

Historic Heritage Management Plan
MWH 08129C/2008

Nathan Dam



Converge Heritage and Community undertook this Cultural Heritage Assessment.

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1.0 Introduction

Converge Heritage + Community have been commissioned by MWH to provide a Historical Heritage Management Plan as part of the proposed Nathan Dam project (hereafter referred to as 'Project'). The report provides an investigation of the non-Indigenous cultural heritage values that might be affected by the Project for the Environmental Impact Statement.

1.1 Purpose of the Project

The proposed Nathan Dam is located on the Dawson River approximately 35 km directly north east of Taroom. The Project also consists of a pipeline extending from the dam and carrying water south and east to various locations, some of which might include Wandoan, Miles, Chinchilla and Dalby.

1.2 The Project Area

The Project consists of an inundation area associated with the proposed Nathan Dam and a pipeline corridor that extends from the proposed Nathan Dam to Dalby.

The pipeline begins at the eastern end of the proposed dam and ends at Dalby. Two proposed route options were provided by MWH. The first (Pipeline Alignment Option 1) runs from the dam site south to Wandoan following Nathan Road, and then continues south to Miles and then east through Chinchilla and Dalby. The second (Pipeline Alignment Option 2) shares a similar alignment as Option 1, but it deviates south of Wandoan cross-country to Chinchilla. The extent of the inundation, and the two proposed pipeline route options, are shown below.

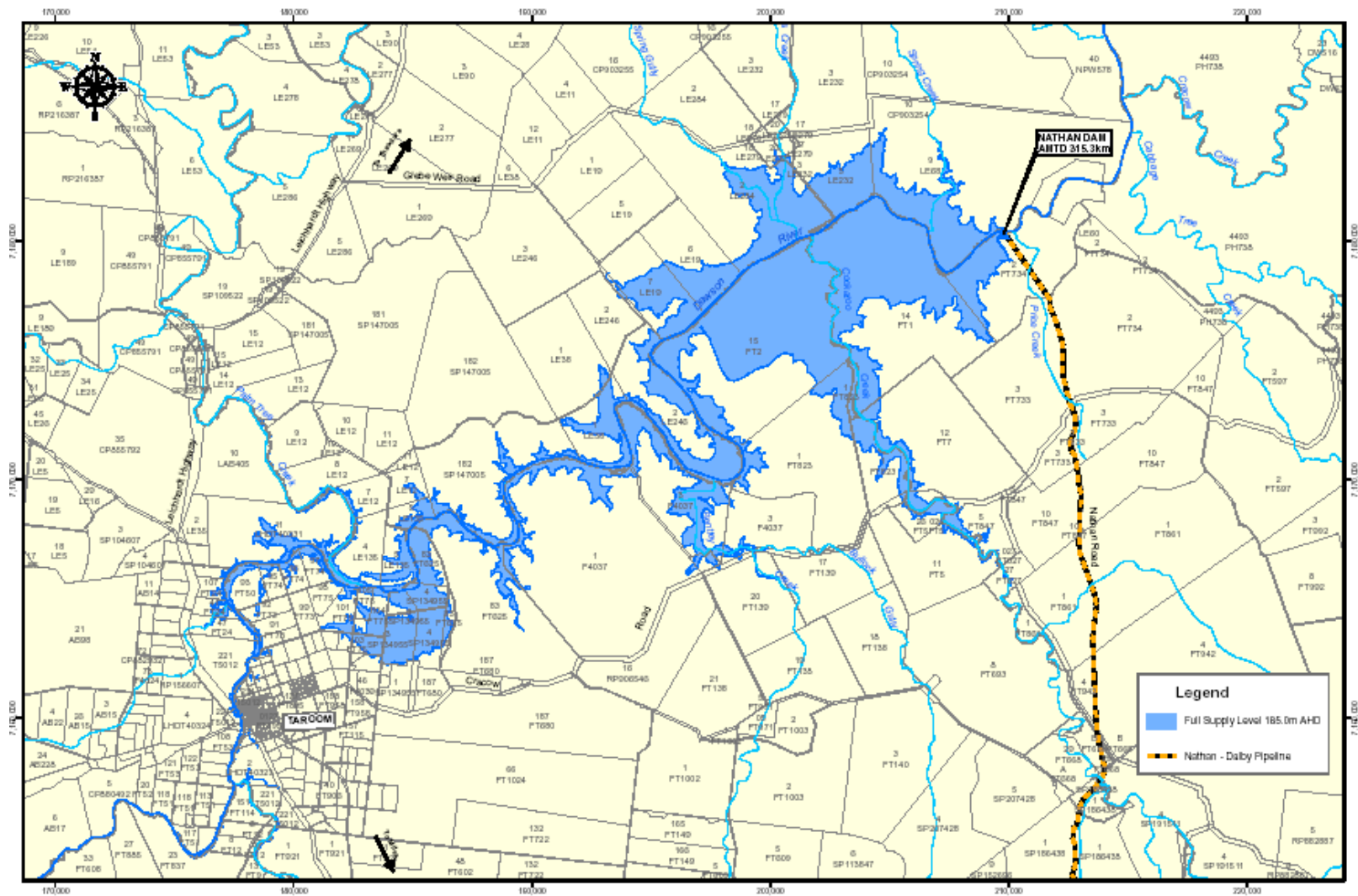


Figure 1: The Inundation Area and Nathan Road Pipeline Alignment

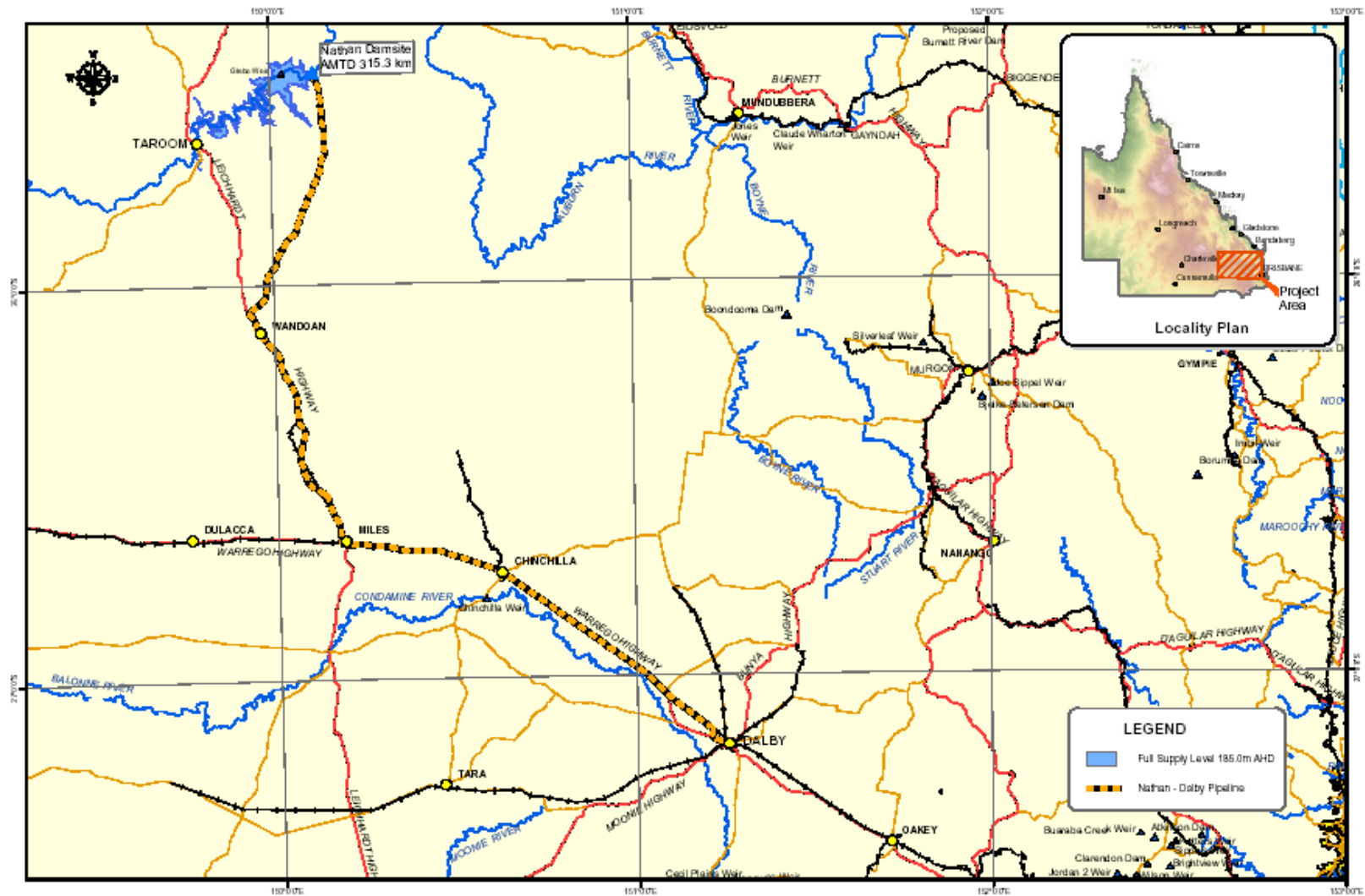


Figure 2: Pipeline Alignment Option 1

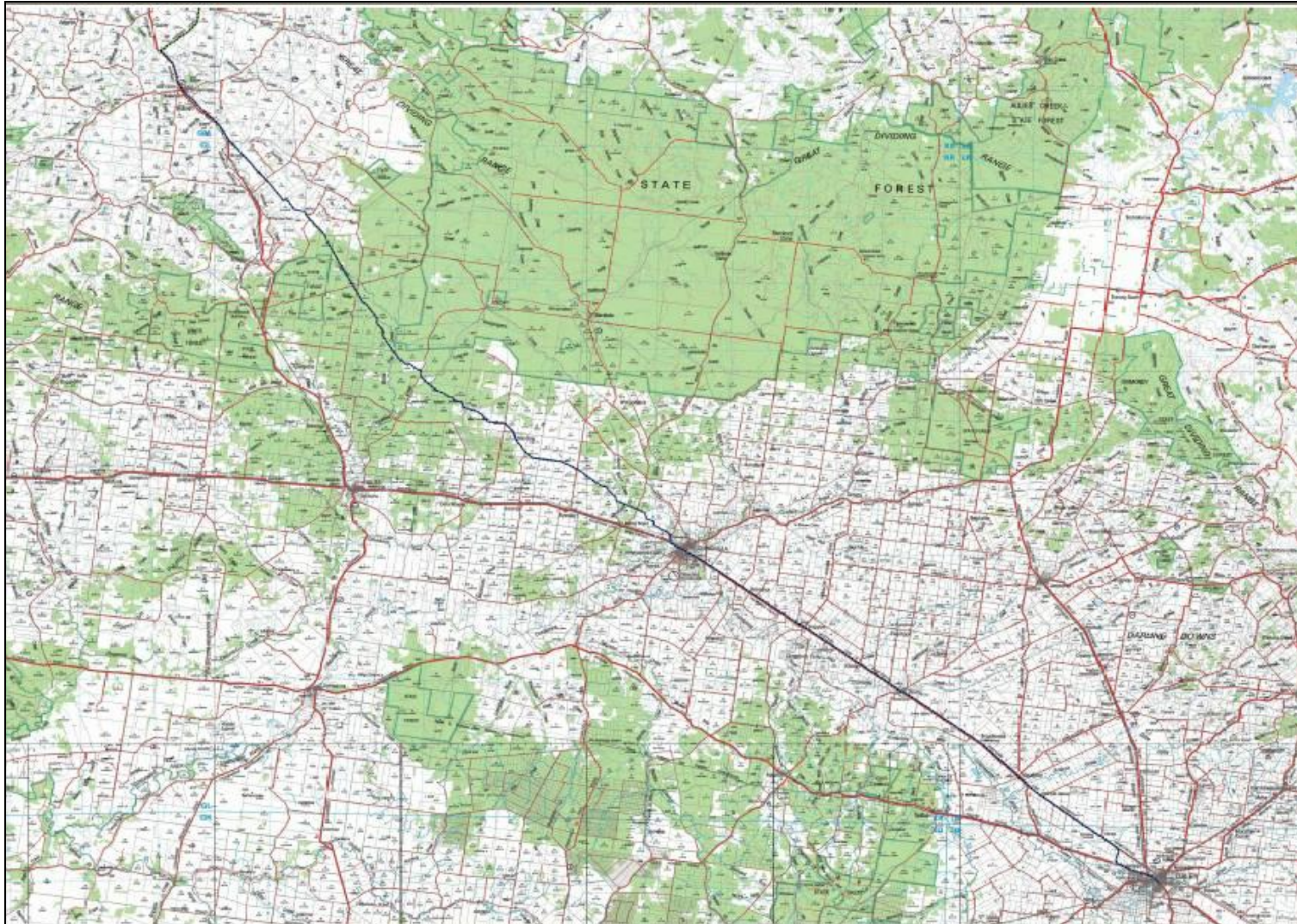


Figure 3: Pipeline Alignment - Option 2 Deviation

1.3 Non-Indigenous Cultural Heritage Investigation – Terms of Reference

Converge has been commissioned to provide a report that describes the existing environmental values for non-Indigenous cultural heritage that may be affected by the Project activities. The requirements of the Terms of Reference (ToR) for this report are:

- Refer to the Australian Heritage Places Inventory;
- Refer the EPA Queensland Heritage Register and other information regarding places of potential non-indigenous cultural heritage significance;
- Refer to the local government heritage register; and
- Refer to any existing literature relating to the affected areas.
- Refer to consultations and negotiations with the local community and historical societies about:
 - Places of non-indigenous cultural heritage significance; and
 - The significance of any non-indigenous cultural heritage places located or identified.
- Include locations of culturally significant sites likely to be impacted by the Project;
- Provide a constraints analysis of the proposed development area to identify and record non-indigenous cultural heritage places;
- Provide the location of mining areas with historical significance, which should be shown on maps; and
- Provide a report of work done which includes background research, relevant environmental data and methodology, as well as results of field surveys, significance assessment and conclusions and management recommendations (having due regard for any confidentiality requirements specified by community representatives).

Additionally, it is requested that the report also provides an assessment of any likely effects on sites of non-Indigenous cultural heritage values, including but not limited to the following:

- Description of the significance of artefacts, items or places of conservation or non-indigenous cultural heritage value likely to be affected by the Project and their values at a local, regional and national level;

- Recommended means of mitigating any negative impacts on non-indigenous cultural heritage values and enhancing any positive impacts;
- Negotiations with Queensland Heritage Council and the EPA regarding management of places of historic heritage significance, taking account also of community interests and concerns; and
- Documented management strategies in accordance with the outcomes of negotiations with Queensland Heritage Council, EPA and the community.

As a minimum, impact assessment, management and protection strategies should satisfy statutory responsibilities and duties of care, including those under the *EPBC Act* and *Queensland Heritage Act 1992*.

1.4 Scope of Study

To identify the non-Indigenous cultural heritage values that may be affected by the Project, Converge conducted a two-stage assessment of the Project area:

- A desktop assessment was conducted to identify key sites and themes. This was undertaken through contextual research and searches of heritage registers, databases and studies (for previously identified sites and places). This process provided indications of the types of sites that exist in the Project area and also assisted in determining local heritage values;
- Visual assessment (field survey) was conducted to 'ground truth' these results and capture a up to date description of both 'known' and previously 'unknown' sites and places, followed by a significance assessment and management options for each site as a result of these discussions.

1.4.1 Defining the Study Area

It was necessary to define a specific Study Area for historic cultural heritage that assisted the approach to research for the contextual history, register searches and the field survey across both the inundation area for the proposed dam and the pipeline corridors.

For the desktop research the extent of investigation is:

- The contextual history (Section 2) discusses the broader region in order to recognise key themes likely to inform cultural heritage values present within the Study Area
- The register search results incorporate registered sites within a 5km buffer zone around the Project area (both inundation area and pipeline). This is to reflect the fact that in rural areas generally fewer sites are registered.

For the visual assessment the extent of investigation is:

- The properties likely to be impacted by the Nathan Dam inundation area.
- The road and rail reserve that will be impacted by the pipeline

1.4.4 Limitations of Study

Pipeline Alignment Option 2 has not yet been surveyed due to the details of this corridor not being known at the time of field survey. There is clear potential for cultural heritage sites to be located within this alignment, and further study will be necessary if this option is to proceed.

1.4.3 Report Structure

To effectively address the Project's ToR the report structure is as follows:

Table 1: Report Structure

REPORT SECTION	CHAPTER	TITLE	PURPOSE
Section A: <i>Investigation of Environment</i>	01	Introduction	This section comprises the desktop analysis and baseline component of the investigation
	02	Historical Background	
	03	Register Searches & Consultation	
	04	Field Survey	
	05	Data Analysis	
Section B: <i>Assessment of Environment</i>	06	Cultural Heritage Significance	This section comprises the analysis of the desktop and baseline information and identifies issues arising from this analysis.
	07	Opportunities and Obligations	

REPORT SECTION	CHAPTER	TITLE	PURPOSE
Section C: Management and Mitigation	08	Impact Assessment	This section presents the impact assessment and management of risk for the project.
	09	General Recommendation	
	10	Site Specific Recommendations	

I.5 Previous Research

The following reports are particularly relevant to this study:

- L'Oste-Brown, Scott and Godwin, Luke. 1995. 'Living Under The Act': Taroom Aboriginal Reserve 1911-1927. Brisbane, Queensland Department of Environment and Heritage, Cultural Heritage Monograph Series, Volume I.
- Ann Wallin & Associates. 1996. Assessment of the Historical Values Associated with the Proposed Nathan Dam Dawson River, Taroom. Report prepared for Hyder Environmental.
- Archaeo Cultural Heritage Services. 2008. Summary of Existing Environment Report for the Glebe Weir Raising Project. Report prepared for MWH.

I.6 Project Team and Report Authors

This was undertaken by Converge Heritage + Community (Converge). The following people contributed to the various activities required to meet the Project's ToR:

- Geoff Ginn (Historico) provided the historical background for the Project, which was reviewed and updated by Craig Barrett;
- David Williams and Craig Barrett completed the visual inspection of the study area between the 3 and 5 November and prepared this report; and
- Benjamin Gall assisted with the content and direction of the project generally.

I.7 Acknowledgements

The authors of this report acknowledge the assistance of:

- Queensland Environmental Protection Agency – Cultural Heritage Branch;
- John Oxley Library;
- Museum of Lands, Mapping and Surveying, Queensland Museum; and
- National Trust of Australia (Queensland).

2.0 Historical Background

The following historical discussion is not intended to be a complete history of the present study area. It is based on a period of library research and is intended to provide a contextual background for the identification and assessment of cultural heritage sites, places and features relevant to the planning and construction of the proposed Nathan Dam.

The proposed inundation area and pipeline routes cover a large area and some of the themes identified in this contextual history are more relevant for particular areas rather than the entire Study Area. As such, discussion of particular themes is concentrated for some areas and given only a brief mention in others. In particular, the history of pastoral activities is much more important for the proposed inundation area, as this will take in a number of large pastoral properties. The majority of the pipeline route, however, follows road and rail corridors, and thus is more affected by the introduction of transport infrastructure and the development of towns that sprung up alongside this infrastructure.

2.1 Exploration

As with most inland districts of Australia west of the Great Dividing Range, the members of an exploration party were the first non-indigenous travellers to traverse the landscape of both the Darling Downs and the Dawson River. Exploration was an important colonial activity, both to establish the basic geography of the Australian continent and to identify basic natural advantages such as watercourses, arable land and grazing country. The routes taken by the early expeditions often followed Aboriginal pathways and consequently confirmed these paths as the first transport corridors for the horses, carts, drays and livestock of the first European 'settlers'. The two explorers relevant in the Study Area are Allan Cunningham, the first European to discover the Darling Downs and Ludwig Leichhardt, who was the first European to enter the region around the Dawson River.

Allan Cunningham was an explorer and naturalist who first arrived in Australia in 1816. He explored much of the area around Sydney and to the north as far as the Hunter River. In 1827, Cunningham undertook an expedition north of the Hunter River and discovered the Darling Downs.

Cunningham described the landscape in glowing terms: “The downs...permanently watered, present flats, which furnish an almost inexhaustible range of cattle pasture at all seasons of the year”. Beyond the flat country, wrote Cunningham, “rise downs of a rich black, and dry soil, and very ample surface; and as they must furnish an abundance of grass, and are conveniently watered...they constitute a valuable and sound sheep pasture” (Quoted in French 1994: 28).

Ludwig Leichhardt, on the other hand, was determined to discover a route between the Darling Downs and Port Essington (Darwin). He and his party set out from Jimbour Station in 1844 and passed through much of the land covered by the Study Area and by November that year, shortly after his 31st birthday, Leichhardt encountered a stream which he named the Dawson River. It seems likely that Leichhardt had in fact encountered Roche Creek, a tributary of Juandah Creek, near the modern property ‘Wongalea’. After several days following the watercourses, observing natural features and vegetation, the party skirted the site of the modern township of Taroom between November 12 and 14 and encountered the true watercourse of the Dawson River on the 13th (Bahnisch and Stiller, 2003: 30).

A day earlier, Leichhardt and Gilbert climbed a hill just north of the modern township of Taroom that provided a clear view of the surrounding district. Gilbert’s description was the first recorded account of the Dawson Valley. He wrote: “One of the most beautifully picturesque and extensive scenes met our anxious gaze... the high ranges rose up and formed a beautiful background to the most pleasing natural picture we have seen” (cited in Fox, 1959: 14). The published accounts of the expedition contain significant descriptions of the local landscape, vegetation and fauna. The Lynd, Gilbert and Murphy Ranges were also named at this time, as well as Palm Tree Creek, Robinson Creek and the Expedition Ranges.

2.2 The Beginnings of Pastoralism

Pastoralism was the first significant European activity in those lands traversed by explorers. The first major location of pastoral activities was the Darling Downs. It was thirteen years before the squatters made their way to the Downs after Cunningham’s discovery, principally because of the difficulties of communication with scattered settlements and transportation of wool for export. The beginning of the pastoral industry in the region began in 1840 with the arrival of the Leslie brothers: Patrick, Walter and George, who took up a large swathe of land. This area was split up amongst the brothers and became the first stations in the district. By 1848 there were 49 pastoral stations on

the Darling Downs (Matthews 1988: 6-7). Some of these covered up to 100,000 acres and the most well-known stations were Jondaryan and Jimbour.

The first encroachment of pastoralism in the Taroom and Wandoan district followed closely on the heels of Leichhardt and his party. The tributaries around the Dawson River offered reliable water for the first generation of squatters keen to run their sheep flocks. Consequently the first pastoral properties were taken up alongside lagoons and larger creeks, as license holders or applicants brought in flocks of sheep overland and pastured them in large unfenced paddocks.

Taroom Station (the name was believed to identify a local lime tree) was leased by William Turner as early as 1845 (Fox, 1959: 21) and then Richard Watson from around 1848, followed by the 55-year old widower William Yaldwyn in the mid-1850s. Taroom Station developed quickly as a major property, especially after Yaldwyn took his seat as a member of the Queensland Legislative Council in 1860. At around this time, to avoid confusion with the growing township of the same name, Taroom Station became known as 'Carrabah' (Randell 1980). Over this period a substantial number of pastoral runs were established in the district including a vast 23,000 acre run of prime grazing land named 'Juandah' (in which the township of Wandoan was eventually established). Juandah Station took in over 700 square miles and, like Taroom Station/ Carrabah, was a major centre of the Central Queensland pastoral economy. Thus a bustling pastoral district, dotted with homesteads, shepherd's huts, holding paddocks and crisscrossed by dray tracks was established less than two decades after Leichhardt and his party had passed through.

2.3 Frontier Conflict

Pastoral expansion into the Dawson inevitably incited conflict between the European intruders and the Indigenous owners of the land. Valuable water holes and watercourses were essential to the success of grazing, but European incursion diminished local game and deprived local Aboriginal communities of access to food resources and sacred or ceremonial sites. On the other hand, the squatters' livestock provided an alternative and apparently plentiful food source, and so Aboriginal raids on sheep pens became commonplace, occasionally accompanied by attacks on the shepherds and outstations themselves. Squatters had little tolerance for such attacks on their property and employees, and consequently, as elsewhere, a state of intermittent conflict occasionally sliding into open warfare developed on the Dawson frontier (Reynolds, 1987: 42).

By 1848 the tribes of the Burnett, Auburn, Condamine, Dawson and Maranoa river districts were in open warfare. Accordingly, the NSW colonial government sent a detachment of Native Mounted Police (NMP) under Captain Frederick Walker to set up depots at various locations across the Leichhardt Pastoral District. Their official task was to maintain law and order, but in practice the punitive patrols and raids of the NMP brought death and devastation to traditional Indigenous communities on the Dawson. Campsites were attacked and violently 'dispersed' by NMP patrols and miscreants and the innocent were alike punished for any trouble real or perceived (Reynolds 1987: 18; Rowley 1970: 157-168).

The NMP's presence at frontier districts like the Dawson River in the 1850s was partially in response to, and partly a cause of, a brutal cycle of retribution and further violence. An infamous attack on the Queensland colonial frontier was that at Horner Bank station to the west of the present Study Area in late 1857. A party of armed warriors of the Jiman attacked the homestead early in the morning of October 27th and killed eleven Europeans: Mrs Fraser and her four daughters, three of her sons, a tutor and two shepherds. These events set the pattern for bloodshed and intermittent violence on the Dawson that was often quite arbitrary and continued for some years.

It is not possible to estimate the true extent of Aboriginal deaths as the result of the 'vigilante' raids and subsequent sporadic violence, but in later years eyewitnesses reported "enough [human] bones at Carrabah to fill a dray." (Fox 1959: 45-6). One local story, for example, reports that a raid on Juandah station by local Indigenous people following the Horner Bank massacre led to a pitched battle and the deaths of approximately 150 Aborigines. These were buried on a ridge west of the homestead.

2.4 Pastoral Developments: 1860s-1920s

By the mid-1860s most of the land suited to pastoral grazing on the Darling Downs and the Dawson River had been occupied. However, a run of droughts was topped by serious financial depression, and a number of debt-ridden properties were foreclosed and came into the hands of the banks.

The great lease-holding pastoralists on superior holdings also found their privileges threatened by free selection as a result of the Survey Law, which was passed in 1861. This law allowed anyone who could afford £1 per acre to select up to 320 acres of Crown land wherever they liked. Squatters responded to this by registering 'dummy runs' in the names of accomplices (Bull 1960: 5).

A further blow to some squatters came with the Lands Act of 1868, under which the government took half the acreage of stations in the settled districts, and cut the resumed portions into farming blocks. This heralded the transformation from a purely grazing economy across Southern and Central Queensland to one of mixed grazing and farming combined with closer settlement, a move which was to receive its greatest momentum around the beginning of the twentieth century (Bull 1960: 5). Nevertheless many of the holdings remained vast by modern standards.

Meanwhile, by the mid -1870s a significant change had occurred as most pastoralists on the Dawson no longer ran sheep. The majority of the large stations in the Taroom District joined the shift to cattle that was typical of Central Queensland pastoralism as a whole at this time (Fox: 1959: 52). A basic reason for the shift to cattle underlined the environmental impacts of European-style pastoralism: the initial flocks of sheep had eaten out the native grasses without allowing time for them to seed, and spear grass had gradually taken over making the land unsuitable for sheep. This combined with drought, fires and threats from dingoes, helped encourage the shift from sheep to cattle (Johansen 2004: 17; Cutler 1977: 1-1).

The success of the pastoral industry in the district was contingent on rain, pests and disease. On Juandah, for example, some 80,000 sheep died in drought conditions, prompting the owners to sell their remaining sheep, convert to cattle, and then sell the lease to the Beechworth storekeeper John Moore in 1883-84 (Rechner 2005: 12-13). Moore in turn suffered losses during the great Federation drought that finally broke on the last day of 1902. By that time, Moore had reputedly lost 20,000 head of cattle and he himself died shortly afterwards (Woodside 1997: 20-1). Prickly pear then took hold at Juandah, and the cost of clearing it from the 285,400 acres of the total holding was estimated at £524,800. Cattle tick was also a significant problem. Throughout the district and region as a whole, stock losses were so great that it took until the end of World War I for cattle numbers to recover (Johansen: 2004, 18).

With better economic conditions and improved management and agricultural techniques, cattle numbers continued to increase during the 1920s. By the middle of that decade Central Queensland had more beef cattle than any other part of northern Australia (Johansen 2004: 19).

2.5 Townships

A number of settlements and townships are present in the Study Area, particularly along the proposed pipeline routes. A number of small townships located along the Warrego Highway, and

several settlements located along the Leichhardt Highway between Miles and Wandoan, are treated separately as they were established principally as rail sidings in the early twentieth century.

2.5.1 Dalby

The township of Dalby was surveyed in 1854, five years before the separation of Queensland from New South Wales. The first land sales took place three years later in 1857 (Matthews 1988: 11). Dalby developed as a key settlement in the Darling Downs region and, as a result, the colonial government developed a plan for a rail line connecting Dalby with Toowoomba in 1864; the line was completed in 1867 (the rail line is considered in more detail below). The town was largely defined by the pastoral activities that occurred around it in the latter half of the nineteenth century; attempts were made at diversifying the local economy, but these generally failed “because of the walling-in of the town by big holdings” (Matthews 1988: 33).

This situation gradually began to change toward the end of the nineteenth century and into the beginning of the twentieth. Much of this change was driven by the various land acts that continued to break up the larger pastoral holdings in an effort to encourage closer settlement and agricultural pursuits. Much of the pastoral land was turned over to dairy cattle and agriculture (particularly wheat) and these activities steadily came to dominate the fortunes of the town in the twentieth century (Matthews 1988: 40).

2.5.2 Chinchilla

The township of Chinchilla was surveyed in 1877. This was only one year before the rail line was constructed to Chinchilla, indicating the significance of rail to the establishment of the town (Hando 1994: 10). One of the principal reasons for the selection of the town at its present site was the availability of water from the Charley’s Creek, which was important for the running of the steam engines that drove the trains in this period (Barron 1978: 6). The rail line remained important to the fortunes of the town; according to one history: “Chinchilla, because of its geographical position, has always been a depot. It has carried train crews, station and shunting staff” (Barron 1978: 8).

Like the other settlements examined in this history, the push for closer settlement by successive Queensland governments helped increase the population of Chinchilla. The township experienced rapid growth in the early twentieth century and the land, once occupied primarily by sheep or beef cattle, was increasingly turned to other industries such as dairying and agriculture. The timber industry also had a large impact on the town. Sawmills were established to take advantage of the

rich sources of hardwood in the area, much of which was milled for rail extensions and rail maintenance. The demand for milled wood led to the creation of a government-owned mill at Barakula (north of the township), which was opened in 1912. Logging and the associated sawmilling industry played an important role in the economic activity of Chinchilla through much of the twentieth century (Barron 1978: 39).

One notable event in the history of the town was the destruction from fire of most of the buildings on Chinchilla Street, directly across from the rail station, in 1922.

2.5.3 Miles

Miles was originally known as 'Dogwood Crossing' and was renamed 'Miles' in 1878 following the arrival of the railway there (Newbery 1992: 61). As with the other town histories, and indeed the Study Area, it was pastoralism that first led to settlement in the district, and it was because of pastoralism that the rail line was continually extended westward. Like Chinchilla, Miles developed in importance because of the rail link. This was reinforced with the creation of a branch line between Miles and Wandoan in 1913-14.

Miles is also situated at the junction of the Warrego Highway and the Leichhardt Highway. These two roads were less substantial in the nineteenth century (when rail dominated transport infrastructure), but the position of the town grew in significance with the rise of the motor car and the creation of main roads in the district. The town became the principal centre of the Murilla Shire (now amalgamated into the Dalby Regional Council).

Like much of the region, dairying, agriculture and timber industries were historically important to the town and the surrounding district.

2.5.4 Wandoan

The push towards closer settlement in the Dawson River district at the end of the nineteenth century resulted in survey and planning of the town settlement in the vicinity of the existing pastoral centre at Juandah in 1902. The first settlers began arriving soon after, though the first sale of town land did not occur until mid-1913 (Fox 1959: 124). Thirty-five town allotments were purchased on June 7 that year (Woodside 1997: 53).

A branch railway line, discussed in more detail below, was planned to Wandoan in the early 1900s and it reached Juandah in 1914. It proved a great stimulus to development in the town, with shops,

hotels, post office, police station and Lands Office appearing in its wake. The official name change from Juandah to Wandoan occurred in 1927, primarily to recognise the township's distinct identity apart from the old pastoral station on which land it was situated.

Settlements also sprung up along the new branch line, such as Guluguba, Giligulgul and Gurulmundi. These settlements developed around rail sidings and varied in size, but all were relatively small. Services provided in the settlements included post offices, butchers and general stores. The establishment of schools provides an indication of the growth of the settlements along the line in this period: Guluguba was opened in 1917 and Gurulmundi in 1928. The majority of the settlers at Gurulmundi relied for their livelihood on a local timber mill. The school closed in 1965.

2.5.4 Taroom

Taroom was the original major township in the district close to the proposed inundation area of the Nathan Dam. It began as a junction of bush tracks that were in use by the time the Leichhardt Pastoral District was proclaimed in 1854. One road roughly followed Leichhardt's path over the Great Divide to Juandah Creek, while another passed through Cockatoo Creek and over the Auburn Range to Burnett's Inn (Gayndah) a route now approximately followed by the Cracow Road. Wool was carted along another track from Roma via Taroom to Banana Station, Rannes and from there to Rockhampton. A mail route, meanwhile, was opened between Condamine and Taroom in 1853. The township also served as a transport junction and as a staging post between Roma and Rockhampton.

The township therefore came into being "as "a direct and natural response to the need of the local dispersed farming [i.e. pastoral] population for a small servicing centre – with simple commercial, transport and communication functions." (Dick 1960: 9) It had a post office by 1856 (one of the earliest settlements in Queensland to do so, after Brisbane, Ipswich, Roma and Condamine) and by 1858 had been declared as a place for Petty Sessions as part of a large Police District embracing Leichhardt and Port Curtis. A rudimentary courthouse, lockup and adjacent hut for the constable were erected, and local pastoralists such as W.H. Yaldwyn, J. Scott, H.C Gregory, E.M. Royds, C. Royds and G.P. Serecold served as magistrates (Fox 1959: 35).

The town was surveyed by Clarendon Stuart in 1860, and sale of the first town allotments held on 25 June the following year. The population of Taroom at this time was 44 males and 19 females (Hardy 198?). Only four 'suburban' allotments were sold at that time, but the local mood remained

positive. By 1864 the population had grown to some 188 men and 68 women. A number of Chinese men had also been employed as shepherds and remained in the district engaged in other occupations. The telegraph line was in operation at the end of 1865, after which Taroom served as the major 'repeating office' for the region as the telegraph services spread further north. Thereafter the township consolidated as the hub of a generally busy and prosperous pastoral district.

2.5.4.1 Taroom Aboriginal Reserve

During the era of closer settlement the Taroom district was also the scene for an early experiment in the Queensland Government's Aboriginal policy. Under the *Aboriginals Protection and Restriction of the Sale of Opium Act of 1897*, persons of Aboriginal descent considered vulnerable or otherwise incapable of independent means could be removed by officials to a reserve, mission or government settlement. The policy was based on the ideas of Archibald Meston, as summarized by L'Oste and Godwin:

...he concluded that the 'wild tribes' who had had little contact with Europeans, should be allowed to continue in their traditional lifestyle. Tribes who had been affected by the European presence, including those affected by the policy of 'dispersal' [typical of the era of frontier conflict], on the other hand, needed government assistance and protection. Therefore he recommended that Aborigines should be isolated from this harmful contact and placed into a series of reserves. In particular, he stated that these reserves should provide a residence for those Aborigines who had succumbed to drink, opium, vagrancy, prostitution or other forms of anti-social behavior. Meston hoped that through this segregation, Aborigines might be restored to his idea of their pristine, traditional state (L'Oste and Godwin 1995: 4-5).

The Taroom Aboriginal Reserve and Government Settlement was established at a site of some 1509 acres, later occupied by the property 'Bundulla' on the Dawson River, some nine miles east of Taroom in 1910. "By the end of 1911 about 200 Aborigines were apparently living on the Reserve. Initially they came from the camp on Bonners Knob and from camps along the Dawson and Palm Tree Creek [and] some were removed from their camps on stations." (Rechner 2005: 226) By the time the settlement reached its peak population in the mid 1920s, its residents had been incarcerated there from as far afield as Cooktown, Windorah, Mitchell, Roma and Rolleston.

Conditions were very basic on the settlement; rations were meagre and dormitory comforts were minimal. Some residents worked as stockmen, station hands and domestic servants on neighbouring properties but others had few opportunities for employment or social interaction.

Forde suggests that the settlement had an extremely high death rate by disease, pneumonia and 'senile decay', citing figures that suggest that between 1912 and 1923 some 447 Aborigines were removed to the Taroom settlement, but that the population in 1925 was only 265 despite further additions by removal from elsewhere (Forde 1990: 16). The influenza epidemic of 1919, for example, killed some 32 residents of the settlement including the European superintendent.

After further land was added to the reserve, it occupied some 6,650 acres of pastoral land, thickly infested with prickly pear, but was intended to be self supporting. Wheat and other crops were grown along the Dawson frontage, along with a citrus orchard, melons and vegetables. With the proposal for the Dawson Valley Irrigation Area (see below) gathering steam in the mid-1920s, the settlement was re-located to Woorabinda in Central Queensland in 1927.

2.6 Challenges to Closer Settlement

Three major impediments to closer settlement in the study area in the first decades of the twentieth century were the difficulties faced by the district's relative isolation and lack of transport infrastructure, the limited and unreliable supply of water beyond the regular rivers and streams, and the presence of biological pests such as the prickly pear. The last of these was solved dramatically in the late 1920s, but the other difficulties have remained persistent and have decisively shaped the pattern of local land use.

2.6.1 Transport Infrastructure

Overcoming isolation and remoteness by serviceable transport routes was another enduring challenge. Postal and then coach services – and the rudimentary roads (more properly tracks in most cases) that carried them – were the first systematic attempts at transport infrastructure in the region. Post offices were established at Dalby in 1854 and Warra by 1856 (French 1990: 103). Cobb & Co, the most well-known of the coach services in the nineteenth century, began services in the Darling Downs in the 1860s. Coaches remained important throughout the nineteenth century and even the early twentieth century wherever trains were absent (and before the advent of the

motor car). For example, four-horse coaches provided the main connection between Taroom and Miles via Juandah in the early decades of the twentieth century.

2.6.1.1 Rail

In the nineteenth century rail was the most significant infrastructure in Queensland. Rail construction, however, began in a modest fashion in the early 1860s, with a line constructed between Ipswich and Bigge's Camp (later Grandchester); the line opened in 1865. Soon after the rail was extended further inland, reaching Dalby in 1868. In 1875 the Western Railway Act was passed allowing for the extension of the line from Dalby to Roma. The rail reached Chinchilla and Miles in 1878, the furthestmost settlements along the line located in the Study Area.

It was not until the early twentieth century that a rail extension was considered to Taroom. Three separate routes were proposed: Miles-Juandah-Taroom (in 1906), Chinchilla-Juandah-Taroom (1908) and Springsure-Rolleston-Taroom (1911-1913). Extensive surveys were carried out, and construction on the Miles-Juandah branch line commenced in 1910. The section Miles-Gilgilgul opened in December 1913, and the remaining section to Juandah was completed and opened to traffic a year later, on December 16, 1914 (Kerr, in Woodside 1997: 50). The planned extension of the remaining 40 miles to Taroom was never implemented, to the obvious detriment of the latter centre.

2.6.1.2 Road

While Juandah/Wandoan received the enormous benefit of a permanent railway, road transport remained dominant in the vicinity of Taroom. Many stretches of the major arterial roads connecting Taroom to other regional centres were unsealed and, like the major road to Wandoan, were "very rough in dry weather and untrafficable following heavy rain" (Dick 1960: 7). Work to seal this road commenced in 1947, but as late as the early 1960s the southern approach to Taroom was gravel only, while the road to the north along the route of the Liechhardt Highway was not sealed at all. The main street of Taroom itself was not sealed until 1958 (1960: 16-17).

At Wandoan, by contrast, major effort at road-building had begun in 1928-29 with the employment of gangs to build the road to the proposed dam site at Nathan Gorge (Woodside 1997: 76). In 1924 the Nathan Gorge Road from the railhead at Wandoan was commenced, and "up to 300 men were

employed and the work was in progress for six years.” (‘Roads and Shire Works’, Wandoan District P & C 1961).

2.6.2 Irrigation Schemes

In the late 1880s the Government surveyors, Henderson, McKinnon and Rigby, undertook surveys of Queensland’s river systems, and the Dawson River won high praise for its fertile black soils of excellent quality. A number of irrigation projects were suggested, but progress was slow, hindered by the 1890s depression and infrastructure challenges. In the meantime, agricultural selectors deprived of regular water during poor seasons were required to excavate their own small dams, which proved of little value. Most could only hope for a bold, government-sponsored irrigation scheme that might unlock the productive potential of their land holdings.

Construction of a large storage dam across the Nathan Gorge on the Dawson River to provide water for an ambitious Dawson Valley Irrigation Scheme was first suggested as early as 1921, when soil tests and diamond drill boring were carried out by government hydraulic engineer Charles Deshon. Given the variability of local rainfall and the suitable geology, the construction of large water storages utilizing the Dawson River and its tributaries was considered a highly advantageous proposal.

In 1926 Sir Matthew Nathan visited Nathan Gorge as the government commenced planning for a dam there. A reserve of some 669 acres “for Official and Departmental Purposes” was gazetted around the gorge itself to prepare for the construction effort (Department of Natural Resources and Water: 1927). A great deal of optimistic promotion was generated in support of the scheme and the region’s agricultural potential.

In the event, however, this was beset by various difficulties and was eventually postponed in favour of smaller weirs built at Theodore (in timber, 1925 and rebuilt 1929) and Orange Creek (1932). A network of irrigation channels was also installed. Later still, the Glebe Weir was built in 1976, and another weir at Gylanda in 1987.

2.6.3 Battling the Prickly Pear

In contrast to the fitful development of the various irrigation schemes, in the late 1920s Queensland scientists achieved a dramatic victory over the prickly pear, a catastrophic biological pest. Prior to that time, the progress of farming selections and agricultural efforts in general had been largely

retarded by the proliferation of the prickly pear, which it was believed had spread into the district after its first appearance in Scone, NSW in the late 1830s where it had been used as an ornamental garden plant (Woodside 1997: 71). Its uncontrollable spread and profusion had reached catastrophic levels by the first decade of the twentieth century, prompting the formation of the Commonwealth Prickly Pear Board in 1920 and major efforts at eradication by the Biological Section of the Queensland Lands Department.

Initial efforts at investigation and control proved fruitless. Indeed, the decades up to the mid-1930s saw declining population numbers in centres such as Taroom and Wandoan, largely because of the infestation of the partially cleared brigalow scrubs by the prickly pear cactus as well as wider economic challenges (Dick 1960: 11).

Relief came in spectacular fashion when the larvae of the cactoblastis moth were released around 1926. In many farming districts the clearing of the prickly pear was considered nearly miraculous and by 1935 “the prickly pear in most areas of the State was under control, and lands that had been ravaged and rendered useless by the pear [were] rejuvenated.” (Woodside 1997: 73-4).

2.7 Developments since World War II

The proposed dam at Nathan Gorge had a deleterious effect on closer settlement and development in Taroom. An article in the Courier Mail in 1958 highlighted the effect of the proposed dam on the township of Taroom: “Progress has passed by this important cattle town of 600 people...which seems doomed to extinction. The boom years have come and gone to leave the old brigalow belt town on the banks of the Dawson River a centre of ancient and deteriorating buildings” (quoted in Rechner 2003: 174). The dam proposal has reemerged in 1963, 1979 and again in 1995. Though development has not ceased altogether in Taroom, and the somewhat dire predictions made in the 1950s have not eventuated, the effect of the proposed dam remains significant.

The diminished fortunes of Taroom in the second half of the twentieth century can be contrasted with those of Wandoan. A quickening pace of settlement and agricultural development was experienced around Wandoan in the aftermath of the Second World War. A circular was issued by the Queensland Department of Public Lands in September 1950 advertising a scheme for “the settlement of eligible and suitable discharged members of the [armed] forces on lands...in the Wandoan-Taroom district. The industry proposed is mixed farming and dairying, and...the aim is 120 farms in the first stage of the scheme. The lands to be made available are largely virgin brigalow

scrub, but there are areas of ringbarked country capable of early production.” (cited in Wandoan District P & C, 1961).

Some 32 resumptions from local leasehold properties were made, and by 1952 some 31 blocks of the proposed 120 farms were occupied by ex-servicemen and their families, averaging around 1200-1300 acres each. These were spread across the local parishes of Wandoan, Jerrard, Juandah, Langhorne and Juliet around Bungabah Creek, and a large number (some 16 selections) in Rochedale Parish (‘Wandoan Closer Settlement’ date: 4). The later Wandoan Group Settlement Scheme ballots of March, June and December 1954 introduced another wave of settlers to the district. These blocks were preferentially offered to “honourably discharged servicemen”. After 1954 the links with the broader ‘War Service Land Settlement Scheme’ were reduced, although the Queensland government continued to favour veterans as the emphasis shifted to a ‘Group Lands’ scheme (‘Wandoan Closer Settlement’, Wandoan District P & C 1961).

The settlement schemes thus introduced around 70 new selectors into the district after the three ballots held in 1954. In all, some 107,000 acres around Wandoan were allotted to these new arrivals that year. In the early years, most of the selections around Wandoan were turned over to dairying, although some blocks pastured sheep. Milk and cream was sent to the local butter factory at Miles. Pig raising was pursued as a complement on many farms in the Wandoan district, and the railways provided the means of transport to the Darling Downs Bacon Association in Toowoomba. Elsewhere, dairying, pig-raising, grain growing and sheep were all attempted, but over time most concentrated on cattle and grain. The ‘soldier settlers’ and selectors under the group settlement schemes who arrived in the early 1950s generated a local population boom and engendered widespread optimism in the district.

By the early 1960s, in fact, Wandoan’s increasing connection to the south was to the detriment of its traditional relationship with the administrative centre at Taroom. “This trend has accompanied closer rural settlement,” the geographer R.S. Dick commented in 1960, the improvement of roads to the south, and the greater growth of services in Miles and Wandoan compared with Taroom. Additionally, the growth of dairying in the Wandoan area has increasingly worked to the advantage of Miles as the sole butter factory is located there. The majority of dairy farmers do their banking in this town and many have accounts with the factory co-operative store. The significance of the cream run in facilitating the ordering and prompt delivery of many goods from Miles [is another factor]. (Dick 1960: 23)

The rail connection between Wandoan and Miles would also have helped in this regard. Coal mining in the Wandoan district from the 1970s onward has also helped ensure the vitality of the township.

3.0 Register Searches

Searches were made of all statutory and non-statutory heritage registers and databases for items of known heritage significance within 5km of the Project Area. Any items within the vicinity (5kms) of the inundation area and pipelines were investigated to provide baseline information about known heritage items within the project area.

3.1 Statutory Heritage Registers

3.1.1 World Heritage List

An on-line search of the World Heritage List was conducted to identify places and sites of cultural heritage significance located within the project area. The World Heritage List is compiled by UNESCO and is an inventory of places considered to have outstanding universal value.

No sites were identified on the World Heritage List within the Project Area.

3.1.2 Commonwealth & National Heritage Lists

On-line searches of the National and Commonwealth Heritage Registers were conducted to identify places and sites of cultural heritage significance located within the Study Area. The National and Commonwealth Heritage Registers are compiled by the Australian Heritage Commission. The National Heritage List is an inventory of natural and cultural heritage places of exceptional value to Australia and the Commonwealth Heritage List is an inventory of natural and cultural heritage places owned or managed by Commonwealth Agencies which are of significant value to Australia.

No sites were identified on the National and Commonwealth Heritage List within the Project Area.

3.1.3 Register of the National Estate

An online search of the (former) Register of the National Estate was conducted to identify places and sites of cultural heritage significance. The (former) Register of the National Estate was compiled by the Australian Heritage Council and is an inventory of Australia's natural and cultural heritage places that are worth conserving for the future. The Register of the National Estate (RNE) was

frozen on 19 February 2007, which means that no new places can be added or removed, however the Register *will continue as a statutory register* until February 2012 (see Chapter 7 for further discussion on historic cultural heritage legislation).

No sites were identified on the Register of the National Estate within the Project Area.

3.1.4 Queensland Heritage Register

Online searches were conducted of the Queensland Heritage Register, administered by the EPA, for places of historic heritage value to the people to Queensland.

8 sites were identified on the Queensland Heritage Register within 5km of the Project Area (refer Table 2).

3.1.5 Local Heritage Registers

Local government areas within the project area were contacted to establish if they held a heritage register of items of local heritage significance.

For those councils which have heritage registers, searches were conducted to locate places of historic heritage value to the local or regional area.

18 sites are listed on the local registers which are within 5 km of the Project Area (refer Table 2).

3.2 Non-Statutory Registers

3.2.1 National Trust of Australia (QLD) Register

The Register of the National Trust of Australia (QLD) was also searched. The National Trust is a community based, non-government organisation which maintains a non-statutory register of heritage places. The listing of a place on the National Trust register, known as 'classification', has no legal force, however it is widely recognised as an authoritative statement of the cultural significance of a place.

Four places listed by the National Trust are located within the Project Area. All except one are listed on the Queensland Heritage Register (refer Table 2).

Table 2: Sites located through register searches within 5km of the Project Area

Place Name	CHL	RNE	QHR	LGA	NTQ
The Glebe Homestead			✓		
Leichhardt Tree			✓		
Chinchilla 'Digger' Statue			✓	✓	
Cactoblastis Memorial Hall			✓	✓	✓
Dalby War Memorial and Gates			✓	✓	✓
St John's Anglican Church			✓	✓	
Former Dalby Town Council Chambers and Offices			✓	✓	
Dalby Swimming Pool Complex			✓	✓	✓
Wandoan Cemetery				✓	
Taroom Cemetery				✓	
Downfall Creek Cemetery				✓	
Brigalow - Canaga Creek Road Cemetery				✓	
Chinchilla Cemetery				✓	
Cemetery Road, Chinchilla				✓	
Baking Board Cemetery				✓	
Dogwood Creek Cemetery, Miles				✓	
Cnr. Racecourse and Hookwood Roads Cemetery, Miles				✓	

Place Name	CHL	RNE	QHR	LGA	NTQ
Hookwood Road Cemetery, Miles				✓	
Macalister Cemetery				✓	
Warra Cemetery				✓	
St Columba's Convent School					✓

4.0 Cultural Heritage Assessment

This chapter provides an overview of the methodology, constraints and results of the field survey. Fieldwork undertaken by Converge staff is based on universally understood and accepted forms of assessment that occur in a series of clearly defined steps including sampling, surveying, site evaluation, recording, impact assessment, and management recommendations.

4.1 Survey Methodology

The survey methodology adopted for this study incorporated a vehicle and pedestrian inspection of the Study Area and analysis of aerial photography. Landmark areas were targeted: for example property boundaries, easements, and known locations of homesteads, mission sites and infrastructure identified through contextual research.

All survey data was recorded in field notebooks and locations of any items or places of historical cultural heritage significance were captured via a hand held global positioning system (GPS), accurate to ± 4 metres. This information was then utilised to create maps outlining the location of sites and features noted during the survey. Areas and items of interest were photographed using a digital camera (*Canon PowerShot A6550IS*) with 12.1 effective mega-pixels. All photographs were logged in a field notebook to be downloaded to a laptop computer for initial storage at the end of each day. Upon completion of the report, these photographs were stored on disk (DVD) in the Converge office.

4.1.1 Sampling Strategy

Sampling strategies (where to look) can be either *purposive*, where specific areas are targeted (for whatever reason), as is done with predictive modelling; or *probabilistic*, where decisions are made to survey without any prior knowledge or predictive model of what heritage resources might exist in the landscape to be surveyed. Archaeological survey strategies usually involve transects across the Study Area chosen at random (probabilistic) to avoid possible bias in the results; or transects within areas (purposive) known to be historically significant, or those designated areas specifically earmarked for development.

For this particular survey, a purposive sampling strategy was employed. Historical and contextual research, including the review of aerial imagery and consultation with leaseholders, enabled a

comprehensive survey of areas known to be of historical interest whilst remaining inside the survey timeframes.

Noted historic cultural heritage areas were recorded with reference to site title, location, environmental context, levels of previous impact, condition and relevant comments including Project details.

4.2 Constraints to the Survey

The alternative Pipeline Alignment (Option 2) was not fully assessed during the field survey (3-5 November 2008) due to access arrangements not in place at this time. Further research and field survey is required if this option is to be progressed, as clear potential is noted in this area. The potential for sites to be located in this area is highlighted by the presence of the Downfall Creek (HAS-33) on the Banana Shire Heritage Register.

The survey was conducted in fine weather, which allowed the assessment to progress smoothly, and all access requests were granted by the relevant landowners.

4.2.1 Ground Surface Visibility

Assessments of ground surface visibility (GSV) provide an indication of how much of the ground surface can actually be seen. GSV is most commonly inhibited by vegetation but other inhibitors may include concrete, gravel and bitumen. Levels of GSV were determined using a percentage scale in that 0% represents zero visibility and 100% represents maximum visibility (bare ground). Therefore: **Zero - 0%; Poor - 1-25%; Moderate - 26-50 %; Fair - 51-75 %; Good - 76-85%; Excellent - 86-100%.** The better the visibility, the more potential there is for locating historical/archaeological material.

Much of the Study Area demonstrated good GSV primarily as a result of long term clearing and grazing in the area and erosion around dry creeks and channels. Areas where GSV was notably lower included areas of dense grass and weed varieties and scrub regrowth.

4.3 Landowner Consultation

Consultation was undertaken with a number of landowners during the course of the field assessment. This was useful in understanding the background of many properties within the Project

area, and also assessing the impact likely to be caused by the Project, which in many cases has been an issue for landowners since the 1920s. Landowners consulted are listed in Table 3.

Table 3: Landowners consulted during the survey

Property	Date	Results of Consultation
Malara	4/11/08	The history and location of sites around Malara Homestead, including the Barkla Camp, Barkla's Bridge, the old road and Dawson River crossings
Jarwood	4/11/08	The history of Spring Creek Homestead and associated sites, and the history of the Williams family.
Bundulla	4/11/08	The location of sites known around the Taroom Aboriginal Mission, and crossings across the Dawson River.
The Glebe	5/11/08	Location of sites and history associated with the Glebe Homestead and Rigby family history
Moorang	5/11/08	The location of the slab hut, built by the landowner's grandfather and inscribed stone.

4.4 Survey Outcomes

Through the course of the desktop research and visual survey, a further 22 sites of historical/archaeological significance (HAS) were identified as being of historic cultural heritage value, in addition to three sites of historic interest (HI).

The HAS and HI sites are in addition to the 21 sites identified through register searches in (outlined in Section 3.4). The HAS and HI sites are listed in Table 3 and mapped in Figures 4-6. A Detailed description into what constitutes a HAS and HI and analysis of these sites and indicators is provided in Chapter 5.0.

Note: Historical Indicators (HI) are places which contribute to the broader discussion of historic cultural heritage places, but are not considered as significant cultural heritage sites on their own. They are included in this report in order to aid further understanding of the context of cultural heritage values in the Study Area.

It is also important to note that many of these sites are indicated by either a centre point or principle location. However, many of these sites consist of multiple components with cultural heritage value, and this table should not be used for impact assessment.

Table 4: Sites Identified during the field survey

Place ID	GPS co-ordinates ¹			Site Name
	Eastings	Northings	WGS 84 Datum	
HAS-1	6992464 to 7048127 to 7107315	328798 to 219615 to 195938	56J	Railway Corridor
HAS-2	7019711	293389	56J	Warra Heritage Precinct
HAS-3	7019672	293194	56J	Leichhardt Camp (Warra)
HAS-4	7040489	263845	56J	Chinchilla Heritage Precinct
HAS-5	7113342 to 7114113	193179 to 193972	55J	Telegraph Alignment (Nathan Road)
HAS-6	7135405	205747	56J	Survey Tree (Nathan Road)
HAS-7	7136800	206308	56J	Survey Tree
HAS-8	7167469	183944	55J	Malara Homestead
HAS-9	7168081	185122	55J	Corduoy Crossing
HAS-10	7168356	182645	55J	Barkla Camp
HAS-11	7175984	195421	55J	Binghi Slab Hut
HAS-12	7185846	206520	56J	Spring Creek Homestead
HAS-13	7167544	186080	55J	Taroom Aboriginal Reserve
HAS-14	7175980	196940	55J	Inscribed Rock (The Glebe)
HAS-15	7169848	206210	56J	Baxter's Hut
HAS-16	7172433	204115	56J	Inscribed Rock (Moorang)
HAS-17	7020064	292956	56J	Warra Mine
HAS-18	7165822	181831	55J	Site of Barkla's Bridge
HAS-19	7074758	207664	56J	Abandoned Homestead Site
HAS-20	7075285	205770	56J	Gurulmundi Township Site
HAS-21	7079214	208541	56J	Survey Trees (Leichhardt Highway)
HAS-22	7081634	207405	56J	Old Leichhardt Highway and Crossing
HAS-23*	7177797	199043	56J	The Glebe Homestead

Place ID	GPS co-ordinates ¹			Site Name
	Eastings	Northings	WGS 84 Datum	
HAS-24*	7160137	178239	55J	Leichhardt Tree, Taroom
HAS-25*	7039904	263541	56J	Chinchilla 'Digger' Statue
HAS-26*	7034139	272881	56J	Cactoblastis Memorial Hall
HAS-27*	6992041	328398	56J	Dalby War Memorial and Gates
HAS-28*	6991968	327954	56J	St John's Anglican Church
HAS-29*	6992164	328102	56J	Former Dalby Town Council Chambers and Offices
HAS-30*	6991969	328320	56J	Dalby Swimming Pool Complex
HAS-31*	7159980	179297	55J	Taroom Cemetery
HAS-32*	7112025	193445	55J	Wandoan Cemetery
HAS-33*	7093315	213814	56J	Downfall Creek Cemetery
HAS-34*	7032921	283613	56J	Brigalow - Canaga Creek Road Cemetery
HAS-35*	7040229	264367	56J	Chinchilla Cemetery
HAS-36*	7040514	266096	56J	Cemetery Road, Chinchilla
HAS-37*	7044106	255817	56J	Baking Board Cemetery
HAS-38*	7048045	219293	56J	Dogwood Creek Cemetery, Miles
HAS-39*	7049317	221174	56J	Cnr. Racecourse and Hookwood Roads Cemetery, Miles
HAS-40*	7049584	220426	56J	Hookwood Road Cemetery, Miles
HAS-41*	7006722	306512	56J	Macalister Cemetery
HAS-42*	7018864	293741	56J	Warra Cemetery
HAS-43*	na	na	56J	St Columba's Convent School
HI-1	7041488	262203	56J	Site of Old Road Bridge
HI-2	7165874	182377	55J	Old Road and Telegraph Alignment
HI-3	7167953	185004	55J	Stone Crossing
* Site identified through heritage registers within 5km of the Project				



Figure 4: Sites along pipeline and inundation area (MWH, 2008)

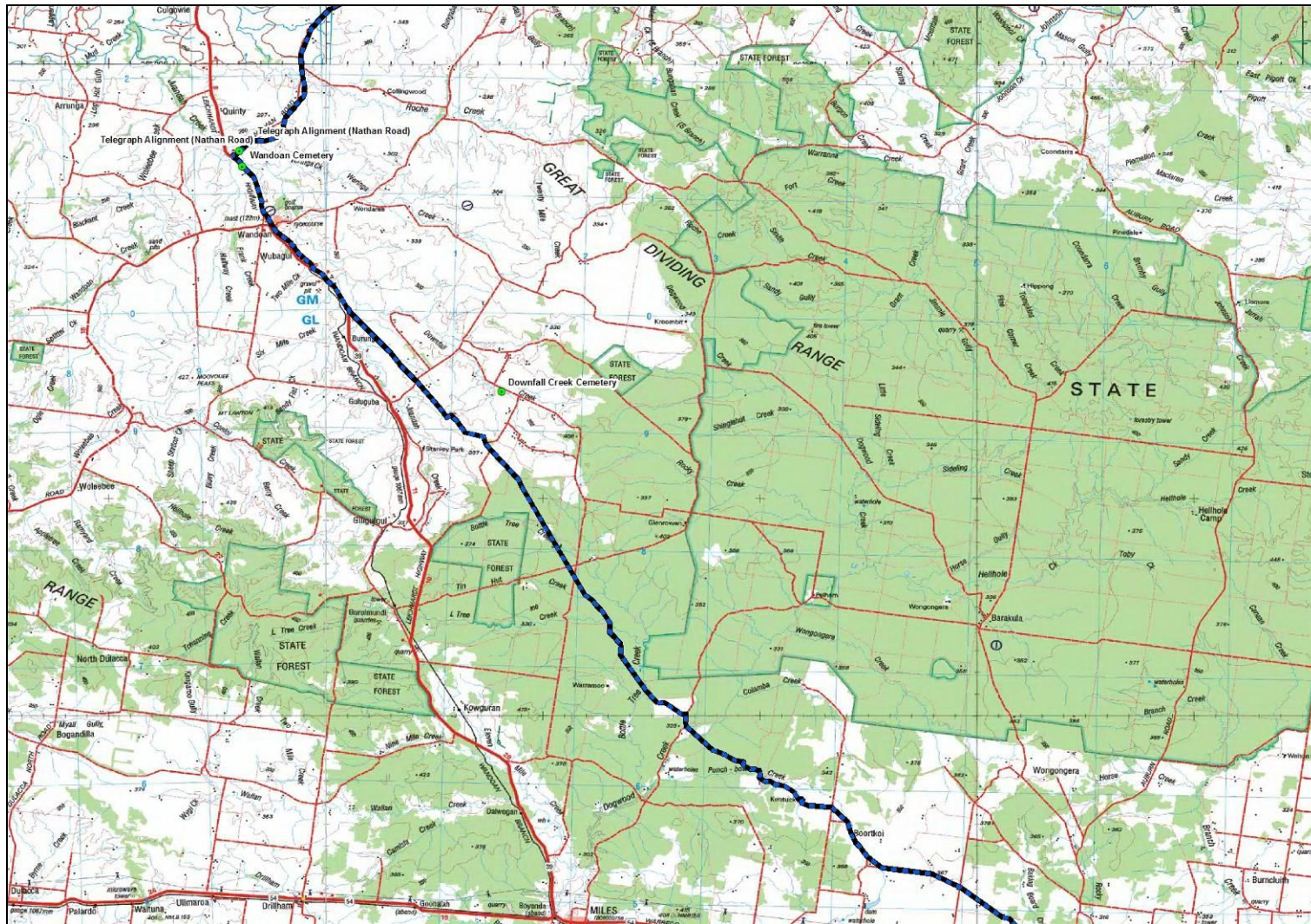


Figure 5: Sites between Wandoan and Miles (showing Pipeline Alignment Option 2 only)

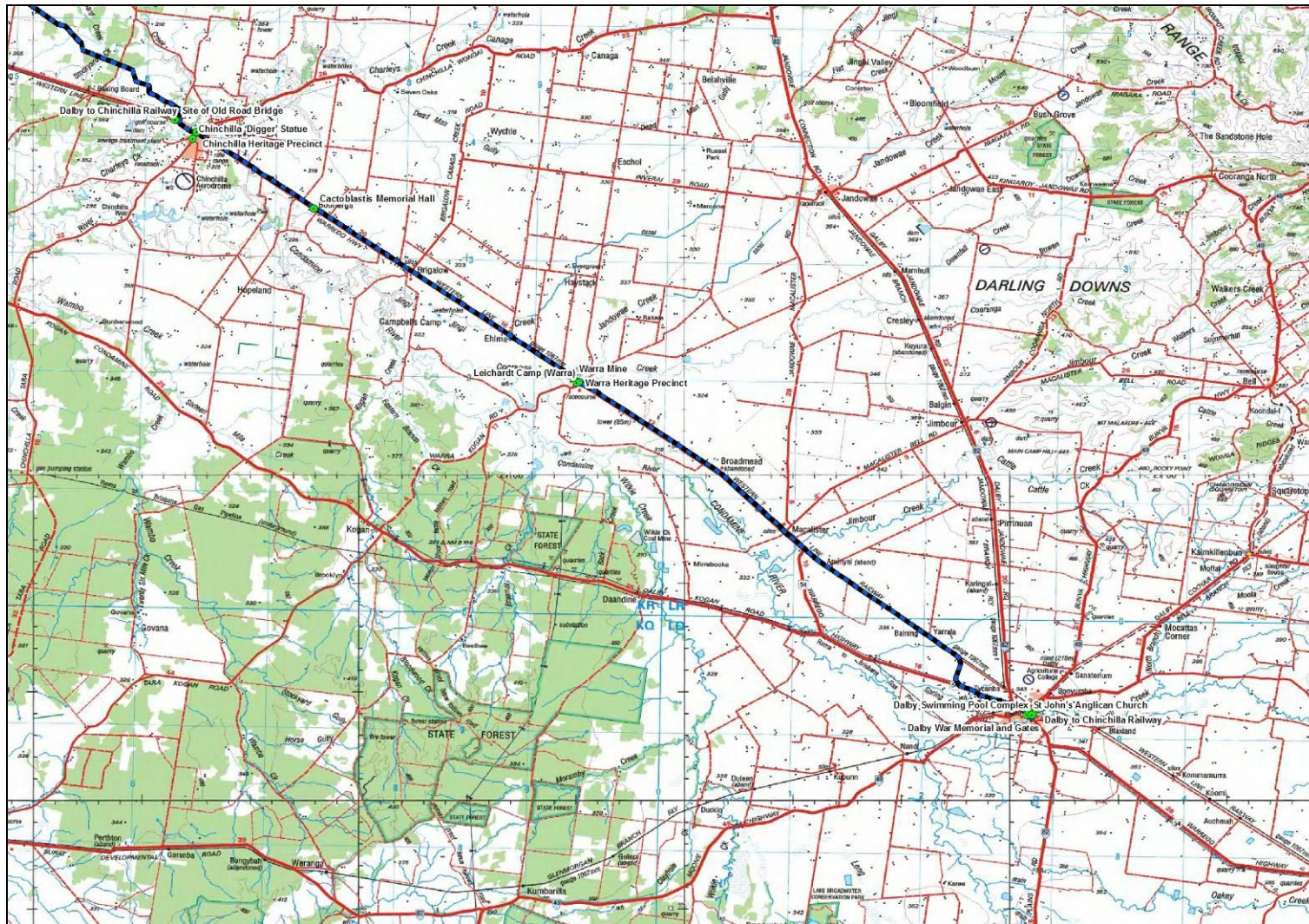


Figure 6: Sites Between Chinchilla and Dalby (showing Pipeline Alignment Option 2 only)

5.0 Analysis of Data

5.1 Historic/ Archaeological Sites

Historic / Archaeological Sites (HAS) are those that which contain suitable heritage value to warrant further assessment and management. These sites have been identified as a result of contextual research, consultation with relevant landowners and best practise cultural heritage assessment techniques.

HAS sites fall into two groups: those that can be defined as a single site, and those that form a larger complex which characterises a certain cultural heritage value of the Study Area.

5.1.1 HAS-1 Railway Reserve (Dalby- Miles- Wandoan)

The railway was extended from Dalby to Miles by 1878 as part of an expansion of the line to Roma. The introduction of the railway prompted the establishment of significant industries along its length, notably mining towards Dalby and timber-getting around Chinchilla as well as large-scale agriculture and dairying. The line is characterised along much of its length by standard Queensland Rail fencing (c1930) and wooden bridge crossings, although these are increasingly replaced with concrete versions between Brigalow and Dalby.

The branch line to Wandoan from Miles was operational by 1914, and opened up more of the region to industries such as dairying and timber-getting and closer settlement. The rail reserve is characterised by similar features to the stretch along the Warrego Highway. However, whilst the rail reserve follows the (Warrego) Highway, in places the Wandoan to Miles rail reserve follows a different alignment to the (Leichhardt) Highway.

Within the urban centres such as Dalby, Warra, Brigalow, Chinchilla, Miles and Wandoan items of cultural heritage value become more substantial and are firmly associated with the development of the townships. The branch between Miles and Wandoan contains smaller settlements associated with the railway sidings that were active in the earlier years of the twentieth century and which depended upon the railway for survival. Together, they have the potential to inform on local industries opened up the railway. These components of the railway reserve include:

- Dalby Station and male toilet block;
- Warra Subway, constructed in 1911-1912;
- Chinchilla Station and roadside store;
- Chinchilla Rail Workers' Quarters;
- Charley's Creek Bridge;
- Bridge Rocky Creek; and
- Railway settlements such as:
 - Dalwogan;
 - Kowguran;
 - Gurimundi;
 - Giligulgul; and
 - Guluguba.

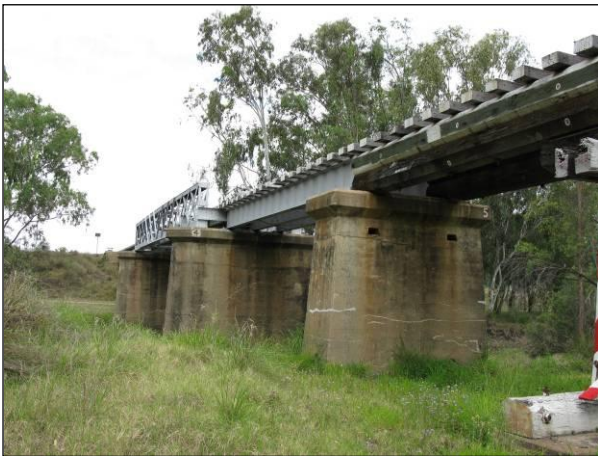


Figure 7: Rocky Creek Bridge



Figure 8: Dalby Passenger Station

5.1.2 HAS-2 Warra Heritage Precinct

Warra is a small town located along the Warrego Highway and railway line. It is clear from the numerous memorials around the town, particularly in the Richard Best Memorial Park, that many features of the town have been removed, relocated or abandoned previously. Nonetheless, it is apparent from both the in-situ and relocated sites within the town that the heritage values are appreciated by the local community. That many of these sites are concentrated within a small central area also demonstrates a community recognition or focal point. Relocated sites and memorials around the town include:

- Site of St Francis Xavier Catholic Church (1913-1980);
- Memorial to Warra Mine (HAS-19) (1914-1919);
- Relocated Haystack School (1910-1968);
- Relocated Holmbush Windmill (1950-2006);
- Relocated Warra Station;
- Relocated Hitching Post from Warra Post Office;
- Site of Webb and Co. Filling Station (marked by original bowser); and
- Memorial to Warra Bakery (the original materials including the oven have been used to construct a communal barbeque)

Several sites around Warra remain in situ and functional, demonstrating the continuation of heritage themes through the town. These include:

- Warra Queensland Country Women's Association;
- Warra Hotel;
- Warra Memorial Hotel;
- Church; and
- Subway (opened 1912).



Figure 9: Subway under railway



Figure 10: Relocated Warra Station



Figure 11: Sites within Warra Heritage Precinct (in blue) (after Google, 2008)

5.1.3 HAS-3 Leichhardt Camp, Warra

This campsite of Ludwig Leichhardt is located on the outskirts of Warra, where it is claimed that on October 4 1844 Leichhardt and his party camped, whilst on the expedition that led from the Darling Downs to Port Essington. Although no physical remains of the camp remain, a reconstruction of a camp fire, complete with a billy can and interpretation signage has been erected by pupils of Warra School.



Figure 12: Memorial to Leichhardt's Camp

5.1.4 Chinchilla Heritage Precinct

Chinchilla developed as a town following the arrival of the railway in 1878. Initially the construction of the railway provided work for the emerging town, although the infrastructure provided the means of exploiting the local resources, and sawmills sprung up along the creeks. Few early buildings survive due to a spate of fires during the 1920s-1930s. In particular, much of the main street was destroyed in this time and consequently the shop frontages do not predate 1922. Post-war, the commercial centre moved south of the railway.

The rail infrastructure has fared much better than the commercial centre. Most notable are the Chinchilla Quarters buildings at the end of Railway St, which are of external frame construction, with a brick chimney located at the north end of the building. A hitching post is still extant to the front of the building. Access to the interior was unavailable during the field survey. Chinchilla Railway Station and associated stores also remain in good condition, as do the stone bridges crossing Rocky Creek and Charley's Creek.



Figure 13: Shopfronts along the Warrego Highway



Figure 14: Chinchilla Rail Workers' Quarters

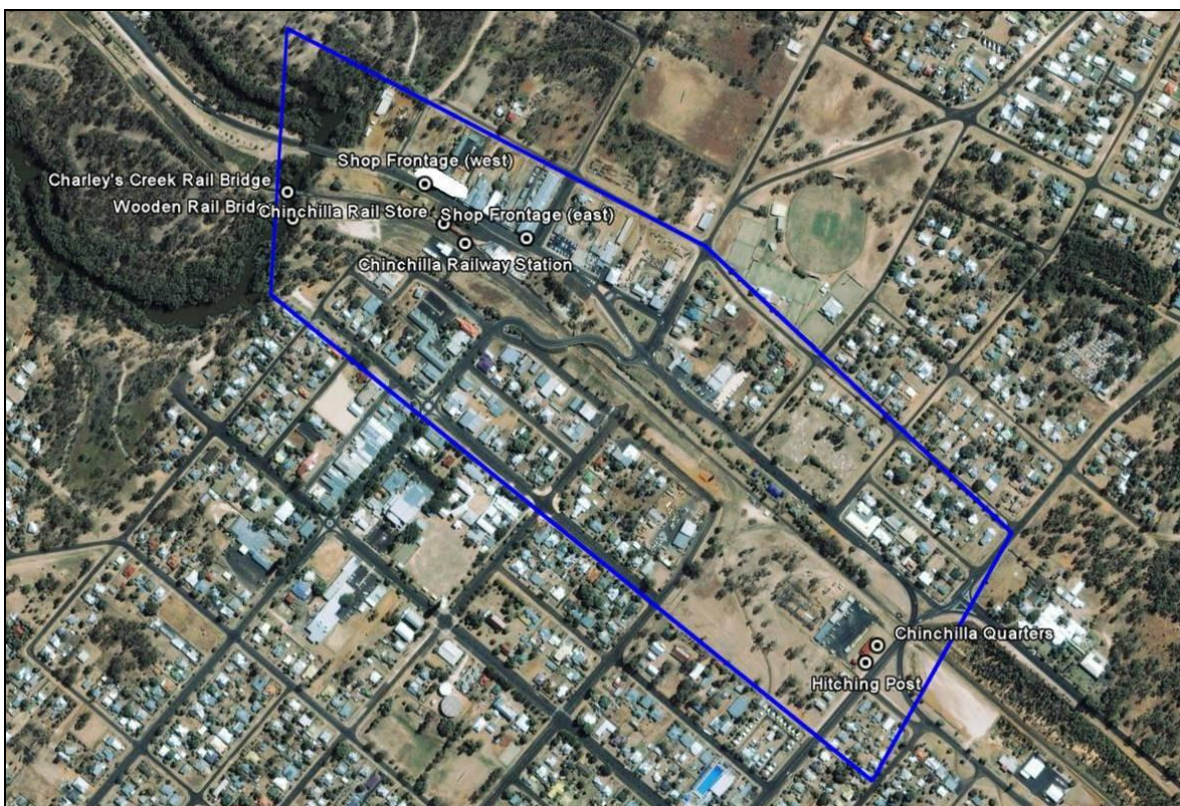


Figure 15: Location of sites within Chinchilla Heritage Precinct (in blue) (after Google, 2008)

5.1.5 HAS-5 Telegraph Alignment, Nathan Road

A telegraph alignment runs along the southernmost stretch of Nathan Road. The telegraph line is most likely constructed from rosewood and two posts still retain their ceramic insulators.



Figure 16: Location of intact telegraph posts and projected alignment (after Google 2008)



Figure 17: Telegraph post and ceramic insulator

5.1.6 HAS-6 Survey Tree

A survey tree was noted along Nathan Road, north of Wandoan. It is inscribed with the government broad arrow survey mark and the marking 'MR17'. It is in moderate condition, as the wood appears to have been attacked by termites. This survey trees (and others located along this stretch of road) are likely to date from either the 1920s or 1930s when Nathan Road was graded in advance of plans for Nathan Dam in 1922. The road was formally gazetted in 1931.



Figure 18: Survey Tree, Nathan Road

5.1.7 HAS-7 Survey Tree

A second survey tree was noted along the Nathan Road easement. Like HAS-6, it is likely to date to the grading of the road in the 1920s, as the survey markings 'MR18' are concurrent with HAS-6. The survey tree appears to have to have been reused, with a previous scar adjacent to the current markings having completely decayed.



Figure 19: Survey Tree, Nathan Road

5.1.8 HAS-8 Malara Homestead

Malara Homestead has historically been used for running sheep, although since the 1990s the homestead has run solely cattle. Components of this site include the current homestead, built in 1911 from labour provided by Taroom Aboriginal Reserve (HAS-13). Despite some exterior modifications, the original house, complete with adze-cut timbers, remains intact. The shed used as a garage demonstrates a similar construction method. A fibro board meat shed remains at the rear of the property, dating from the 1960s.



Figure 20: Malara Homestead



The sheep shed, also constructed of adze-cut timber and corrugated iron cladding, contains a great deal of well preserved original features. These include brands, wool press and shearing equipment, although many features have been converted to electricity. The concrete water tank stand adjacent to the sheds has been hand mixed and was cast in sheets of corrugated iron, which have been since removed. The current slab stockmans' quarters are also extant, and have gone through various cycles of use as shearer's quarters and a permanent residence. The original stock yards are still present, although much of their fabric has been replaced over time.

Figure 21: Interior of Wool Shed, showing wool press

In addition to the residence and the sheep farm, the site also contains evidence of recreational pursuits associated with early twentieth century homesteads, such as the ant mount tennis court and the former bowling green, located at the rear of the property near the start of the Old Road (HI-2) leading to Barkla's Bridge (HAS-18).



Figure 22: Components of Malara Homestead (after Google, 2008)

5.1.9 HAS-9 Corduroy Crossing

A corduroy crossing across the Dawson River, near the former Taroom Aboriginal Reserve, was reported by local landowners. Although it was submerged during the inspection the wooden road was visible beneath the waterline. It is likely to date the early years of the twentieth century.



Figure 23: Corduroy Crossing

5.1.10 HAS-10 Barkla Camp



This Barkla family, who originally established the Malara Homestead (HAS-8), camped at this site before they constructed the homestead. The site is marked by several fence posts, but no other material is visible. Aboriginal cultural heritage material was located within the vicinity of the camp, suggesting that this may also be a contact site.

Figure 24: Site of Barkla Camp

5.1.11 HAS-11 Binghi Slab Hut

The Binghi Slab Hut was constructed c1910 by Ted Barkla for the owners of the property, Charlie and Mary Hay. *Binghi* was run as an outstation of *Palm Tree Station*. It is possible that Aboriginal labour from the Taroom Aboriginal Reserve (HAS-13) was used during the construction of the hut. The hut is divided into three rooms with a small verandah located at the rear and a large timber and corrugated iron awning extending from the front. The hut was constructed with a mix of slab and sawn timber.



Figure 25: Binghi Slab Hut

An outdoor toilet, small timber enclosure with, chicken wire and corrugated iron and the remains of what appears to be a raised garden bed are located at the side and rear of the hut. A larger enclosure, constructed with timber posts and enclosed with chicken wire, is situated close to the front of the hut. A fibro clad house, which was probably constructed in the 1950s or 1960s, is situated immediately adjacent to the hut. A cattle yard and loading ramp are located to the north of the hut.

Figure 26: Binghi Slab Hut, showing the mix of slab and sawn timber used in its construction, and the outdoor toilet

An earlier investigation of the site identified the presence of a timber slab cattle dip, which was probably constructed at the same time as the hut. The dip could not be located, although it may have been dismantled since being identified. Large piles of timber, which appear to have been part of a former cattle yard, were located in at least two locations and it is possible the remains of the dip also present in these piles.



Figure 27: Components of Binghi Homestead (in blue) (after Google, 2008)

5.1.12 HAS-12 Spring Creek Homestead

The Spring Creek Homestead is situated on *Jarwood Station*. The Homestead site includes a house, generator shed and telegraph pole, remains of a former school and original homestead, associated gardens and three grave sites.



The original homestead site was located on the bank of Spring Creek. The station was taken up in the 1880s and the homestead was probably constructed at that time.

Figure 28: *Remains of the former school building and mature palm tree*

There were also several other buildings associated with the homestead, including a school (constructed c1911), the site of which is indicated by stumps and archaeological scatter. A mature palm tree and Yucca garden also appear to be associated with the former school site and homestead.

Two known grave sites are located on the north bank of Spring Creek. The graves are marked by headstones. The first grave is for Elizabeth Agnes Williams, who died in 1908 at the age of 25. The second grave is for Daisy May Williams, who died in 1912, aged 2½ years. A third grave site, of an unknown stockman, is apparently located close to these two graves, but was not located during the survey.



Figure 29: *The grave site and headstone for Elizabeth Agnes Williams*



The existing Spring Creek Homestead was constructed in the 1930s. The house consists of four rooms and is surrounded by a verandah. Some sections of the verandah are enclosed. The house was constructed from sawn timber, principally cypress. Some wallpaper, laid on Hessian and newspaper, remains; it originally formed a decorative ceiling in two rooms.

Figure 30: *Spring Creek Homestead, constructed in the 1930s*

A generator shed and telegraph pole are located on the western side of the house. A vegetable garden was also located at the front of the house. The remains of the garden, and some of the fence line, are still visible.

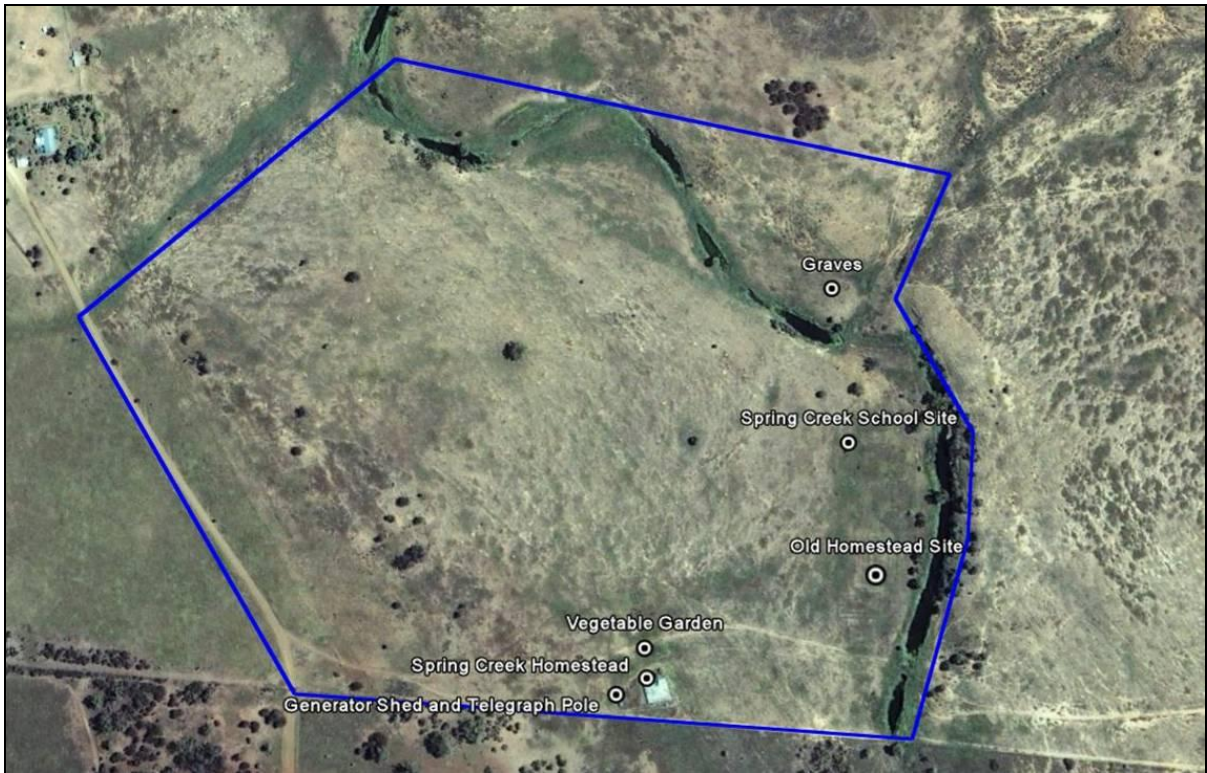


Figure 31: Spring Creek Homestead and related components (after Google, 2008)

5.1.13 HAS-13 Taroom Aboriginal Reserve

The Taroom Aboriginal Reserve and Government Settlement site consists of an extant building, meat shed, cattle yards, the remains of a bore and windmill, an extant windmill and bore (not functioning) and two cemeteries.

The extant building was possibly the former Girls' Dormitory for the Reserve. What appears to be the original fence line and gate surround the building on two sides.



Figure 32: Extant building, possibly the former Girls' Dormitory

The building itself is clad in weatherboards and has a corrugated iron roof. A meat shed located on the eastern side of the building was probably constructed after the Reserve was closed. The interior of the building has been heavily modified over time.

Two cemeteries, 'hill top' and 'lower', are located to the east of the extant building.



The hill top cemetery is marked by a memorial stone and plaque and boundary stones, painted white, which are intended to delineate the boundaries of the cemetery.

Figure 33: Memorial stone and plaque marking the location of the hill top cemetery and listing the names of those that died at the Reserve during its operation

This was the original cemetery for the Reserve. No headstones are present and according to oral testimony only two were ever made for graves in the cemetery (L'Oste-Brown & Godwin 1995: 47). Scatters of historic artefacts, possibly associated with grave sites in the cemetery, were also present.

The lower cemetery is identified by a metal sign erected by the Iman People. According to a study of the Reserve, the lower cemetery was only used between 1918 and 1920 during which time there were several outbreaks of influenza in the Reserve (L'Oste-Brown & Godwin 1995: 47). There are a number of mass graves in this particular cemetery, possibly reflecting the high incidence of death associated with the influenza outbreaks. As with the hill top cemetery, a scatter of historic artefacts was present.



Figure 34: Metal sign at the lower cemetery

Two windmill sites associated with the Reserve remain extant. One of the windmills is intact though it is no longer functioning. This particular windmill is located on the bank of the Dawson

River. Slippery Hole Waterhole is located next to this windmill. This waterhole was associated with the Reserve.

The other site consists of the base of the windmill, situated closer to the extant building. A mature fig tree, also associated with the Reserve, is located near this windmill. These windmills were built for the Reserve and would have provided water for the residents and the crops grown on the Reserve.



Figure 35: Taroom Aboriginal Reserve site (after Google, 2008)

5.1.14 HAS-14 Inscribed Rock (The Glebe)

The inscribed rock is located west of the Glebe Homestead on an elevated rocky outcrop. The rock has '1903' inscribed into its surface. The origin of the inscription is unknown, but it may be associated with George and Marion Rigby, who occupied *The Glebe* in 1901. Interestingly, the leases for both *The Glebe* and another station purchased by the couple, *Balcarris*, were originally issued in joint names in 1902, but in 1903 both leases were issued in George Rigby's name only. Given the picturesque location of the rock, overlooking the Glebe Homestead (HAS-23), it is most likely to have been a memorial to an event associated with the property; it would have been an arduous task to cut a grave into the rock out-crop.



Figure 36: *The Inscribed Rock*

5.1.15 HAS-15 Baxter's Hut

Baxter's Hut is located on *Moorang* Station. The station was originally part of *The Glebe*. *Moorang* was purchased by Robert Baxter in the late 1930s. It is believed that the original core of the hut was constructed by Walter Baxter, grandfather of the current owner, at this time. This core consisted of round bush timbers and some sawn timber. Later additions to the hut included a timber floor, breezeway and two other rooms. The stove recess was enclosed in corrugated iron. Other elements of the hut site include an outdoor toilet, constructed from timber and corrugated iron, and the remains of another building (purpose unknown).



Figure 37: *Baxter's Hut: note the mature trees*

5.1.16 HAS-16 Inscribed Rock (Moorang)

Though this inscribed rock is on *Moorang*, it was originally part of *The Glebe* when that station was much larger than its current size. The inscription, from top to bottom, reads '1912 Rigby 1931'. The rock lies close to a creek line, but away from known historical property boundaries. The significance of the inscription is open to speculation, though George Rigby, the original owner of *The Glebe*, died in 1931. The workmanship of the inscription is of a different quality to that of the inscribed rock on *The Glebe*. (HAS-14)

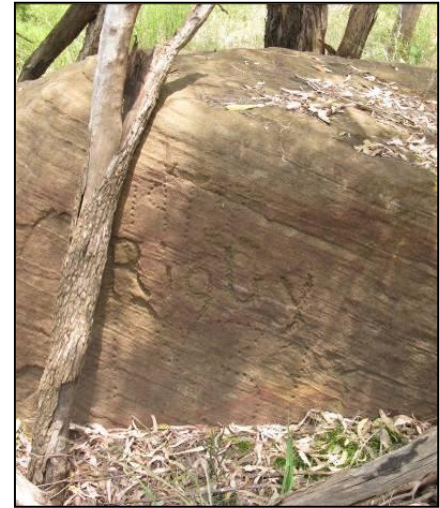


Figure 38: The inscribed rock on Moorang

5.1.17 HAS-17 Warra Mine

The Warra Mine was opened in 1914 by a private company. However, the State Labor government, returned to office in 1915, had promised to develop State-owned coal mines. The government purchased the Warra mine, making it the first State colliery in Queensland (Whitmore 1991: 240). Various difficulties encountered with the mine operation, and wider criticism of State-owned collieries, compelled the government to close the mine in 1919.

5.1.18 HAS-18 Site of Barkla's Bridge



Barkla's Bridge is located to the west of Malara Homestead. According to landholder consultation, the bridge was part of the original road network (see HI-2) connecting the stations north of the Dawson with the township of Taroom. The bridge is a wooden construction. Due to the level of water in the Dawson River at the time of survey, only the outline of the bridge was visible under the water.

Figure 39: The remains of Barkla's Bridge

5.1.19 HAS-19 Abandoned Homestead Site

This abandoned homestead site (or dwellings) lies on the corner of the Leichhardt Highway and Welsh's Road. Located within a cleared paddock the site comprises two dwellings, a shed and holding pens. The layout of the site is peculiar in that the two homesteads are situated adjacent to each other with identical layouts which make it unclear of the exact nature of the site. Both appear to be in situ rather than relocated to the site; this is demonstrated through the stumps marking the sites of the water tanks, which are firmly in the ground next to each dwelling. The tanks have been removed, although one was noted at the eastern fence line. Remnant fencing surrounding the property suggests this may have been a sheep farm, and was most likely surveyed c1914, at the same time as the railway and Gurulmundi (HAS-20).



Figure 40: *Abandoned Homesteads*

5.1.20 HAS-20 Abandoned Gurulmundi Township

The township of Gurulmundi was first surveyed in 1914 when the railway from Miles to Wandoan was constructed through the area. Although a concentration of houses remain clustered around the railway siding and the road, including some new developments, it is clear that the settlement has significantly reduced in size since initially settled. This is most apparent north of the remaining settlement, where a cleared site contains a concentration of archaeological relics dating to the early part of the twentieth century. These include the remains of a telegraph line stretching along the railway line, old machinery and tools and the remains of leather boots. It is likely that these artefacts are associated with abandoned industries once located there. At one stage the town had a strong enough population to warrant a school, a butcher and sawmill. The local forestry and dairy industries were reliant on the rail link with Wandoan and Miles.

The rail siding and Gurulmundi community hall (also used as the QCWA Hall) still remain extant.



Figure 41: The sign at the railway siding at Gurulmundi



Figure 42: Remains of the Gurulmundi Telegraph Line

5.1.21 HAS-21 Survey Trees (Leichhardt Highway)

A stretch of the Leichhardt Highway between Gurulmundi (HAS-20) and the Old Leichhardt Highway Crossing (HAS-22) contains high potential for surviving survey trees along its eastern road reserve. Five were identified during the field survey, and there remains the potential for more. Like the survey trees along Nathan Road (HAS-6-7) they are marked with government broad arrows and the markings 'MR#'.



Figure 43: Example of a survey tree along the Leichhardt Highway

5.1.22 HAS-22 Old Leichhardt Highway Crossing

An old bridge crossing was noted east of the current Leichhardt Highway alignment crossing Juandah Creek. Further inspection revealed two previous highway alignments, one bitumanised and an earlier concrete surface. These alignments are likely to have taken the highway around a hill at the northern end of the alignments, which has since been modified to allow the current alignment.



F

figure 44: Old Leichhardt Highway Crossing

5.1.23 HAS-23 The Glebe Homestead

The Glebe Homestead is a beefwood and Morton Bay ash slab homestead which has been continuously inhabited since 1919. It stands on the site of the original homestead on the property, built by George Rigby in 1901, which burnt down in 1914. The charred wooden stumps from this homestead are visible beneath the north eastern corner of the house. The interior contains some early furniture made from the same materials as the homestead, and the bedroom is decorated with 1930s wallpaper. The layout is typical of a large homestead from this date, containing a central breezeway which has since been enclosed, although the kitchen was incorporated into the design of the house rather than as an external feature.



Figure 45: The Glebe Homestead

The homestead is surrounded by several outbuildings, including a laundry, a shed and shearer's quarters. Of these, the shed is the most notable, containing bark insulation in the roof and many original tools.

The shed is contemporary with the original homestead and served as the Rigby family home during the construction of the current homestead. The laundry is also contemporary with the current homestead and the current landowner believes the shearer's quarters date to the 1920s, although they have possibly been reclad in fibro since.



Figure 46: *Bark insulation used in the shed roof*

Towards the riverbank lies evidence of sheep farming at the Glebe, with the remains of a sheep pens, sheep dip and a wool shed. Like many properties in the region, sheep became financially unviable and the property switched to cattle. A jetty extends out into the water, although this is likely to date to more recent times.



Figure 47: *The Glebe Homestead, and associated structures (after Google, 2008)*

5.1.24 HAS-24 Leichhardt Tree

The Leichhardt Tree in Taroom is named for its association with the explorer Friedrich Wilhelm Ludwig Leichhardt, who is thought to have blazed this tree during his expedition north from the Darling Downs to Port Essington in 1844-46. The scar is no longer clearly visible, although the tree is well presented with interpretation signage.

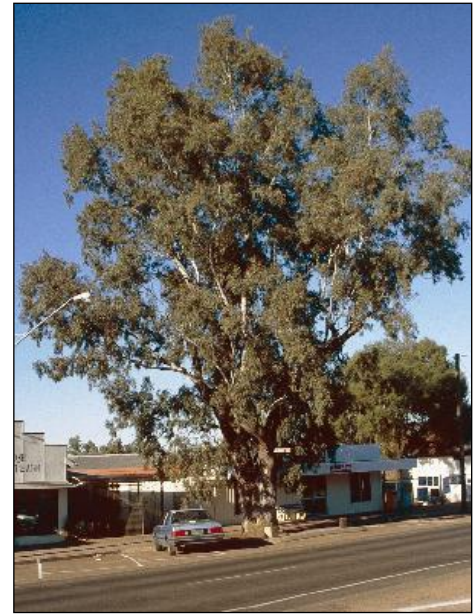


Figure 48: Leichhardt Tree, Taroom (Photo: EPA)

5.1.25 HAS-25 Chinchilla 'Digger' Statue

The Chinchilla 'digger' is located in the front grounds of the Chinchilla RSL Hall in Heeney Street, close to the building, and facing the street. It is a smaller than life-sized sandstone statue of an Australian infantryman with cocked hat and rifle, resting against a tree stump for support [as did most of Queensland's 'digger' statues]. The statue stands on a remnant of the 1919 pedestal: a sandstone block with crossed flags carved on the front face - a common motif on First World War memorials. This in turn rests on another, slightly larger and more recent sandstone block, which has a brass plaque on the street face, with the inscription: Renovated & Relocated by the RSL Women's Auxiliary 1992. The whole rests on a ground-level concrete base, and is surrounded by a metal railing.



Figure 49: Chinchilla 'Digger' Statue (Photo: EPA)

5.1.26 HAS-26 Cactoblastis Memorial Hall

This timber hall was completed in 1936 at Boonarga, a small settlement approximately 12 kilometres southeast of Chinchilla. The hall was erected as a monument to the Cactoblastis moth which overcame prickly pear in Queensland and New South Wales during the late 1920s and early 1930s.

The Cactoblastis Hall is situated on the southwestern side of the Warrego Highway 12 kilometres southeast of Chinchilla. Set back from the highway the building, approximately square in plan, consists of a central dance room with adjoining aisles on the southeastern and northwestern sides. .



Figure 50: *Cactoblastis Memorial Hall*

The hall is a single-storeyed timber building set on timber stumps with a pitched galvanised corrugated iron roof. The building is clad in weatherboards and has timber doors and a variety of windows. Most of the more recent openings are fitted with glass or metal louvres.

5.1.27 HAS-27 Dalby War Memorial and Gates

The First World War Memorial is situated in a park in Dalby facing Patrick Street and was unveiled on 26 July 1922. It also has memorial plaques to soldiers from World War II and the Korean War.

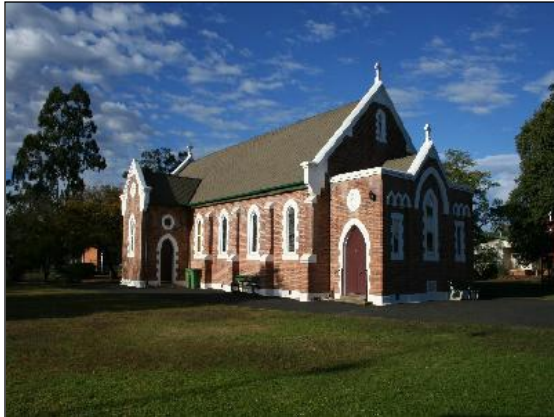
The park is entered from Patrick Street through a set of memorial gates flanked by sandstone pillars surmounted by torch shaped lights. The pillars sit on slightly larger base steps with picked stone faces and smooth-faced margins to the sides and top. They are of similar design to the pedestal of the memorial and capped by the same wide cornice. At the top of the front face of each pillar is a relief carved AIF badge with the date 1914 carved below the emblem on the right, and 1919



Figure 51: *Dalby War Memorial and Gates*

on the left. The swing gates are of wrought iron.

5.1.28 HAS-28 St John's Anglican Church



St John's Church, Dalby is a brick church constructed in 1922-1923 to the design of Harry Marks and is the third church of this name on the site. The previous timber church, built in 1876, remained on the site in a modified form as part of a former parish hall, until it was demolished in February 2003.

Figure 52: St John's Anglican Church (Photo: EPA)

5.1.29 HAS-25 Former Dalby Town Council Chambers and Offices

The former Dalby Town Council Chambers and Offices, the third to be built in the town, were constructed in 1932

It consists of a single storey rendered brick building on the corner of Cunningham and Stuart Streets and Groom Lane. The Cunningham Street section has a symmetrical facade with art deco detailing, consisting of a centrally located, projecting portico with a recessed entrance, flanked by three long, narrow casement windows surrounded by moulded architraves. Fluted pilasters are located on each side of the windows. The double, timber-panelled entrance doors have a breezeway with decorative lead lighting.



Figure 53: Former Council Chambers (Photo: EPA)

5.1.30 HAS-30 Dalby Swimming Pool Complex

The Dalby Swimming pool complex was constructed in 1936 and is the earliest identified Olympic standard pool in Queensland constructed outside Brisbane. The pool complex is in a parkland

setting to the rear of Dalby War Memorial and Gates (HAS-23) and adjacent to Myall Creek. It is part of a large recreational precinct which includes a bowls club and croquet club.



Figure 54: Dalby Swimming Pool Complex frontage

5.1.31 HAS-31 Taroom Cemetery

Taroom Cemetery is located on the corner of Cramner St and the Leichhardt Highway, Taroom (Lot 1 on C8276). The cemetery has been in use since 1891 and is listed upon the local heritage register.

5.1.32 HAS-32 Wandoan Cemetery

Wandoan Cemetery is located along the Leichhardt Highway north of the township of Wandoan (Lot 133 on FT617). It dates from the late 1950s, and probably results from the growth in the town's population with the arrival of the mining industry.

5.1.33 HAS-33 Downfall Creek Cemetery

Located in Lot 54 on FT158. This site was not assessed due to lack of land access along the alternate pipeline option during the field survey.

5.1.34 HAS-34 Brigalow –Canaga Creek Road Cemetery

Located in Lot 185 on LY431. The cemetery serves the settlement of Brigalow.

5.1.35 HAS-35 Chinchilla Cemetery

Located in Lot 188 on C24373 Reserve 155. The cemetery serves the settlement of Chinchilla.

5.1.36 HAS-36 Cemetery Road, Chinchilla

Located in Lot 18 on SPI56049. The cemetery serves the settlement of Chinchilla.

5.1.37 HAS-37 Baking Board Cemetery

Located in Lot 83 on LY566. The site is believed to contain the burials of workers who died constructing the railway.

5.1.38 HAS-38 Dogwood Creek Cemetery, Miles

Located in Lot 123 on BWR613. The cemetery serves the settlement of Miles.

5.1.39 HAS-39 Cnr. Racecourse and Hookwood Roads Cemetery, Miles

Located in Lot 139 on BWR297. The cemetery serves the settlement of Miles.

5.1.40 HAS-40 Hookwood Roads Cemetery, Miles

Located in Lot 107 on BWR424. The cemetery serves the settlement of Miles.

5.1.41 HAS-41 Macalister Cemetery

Located in Lot 31 on LY379. The cemetery serves the settlement of Macalister.

5.1.42 HAS-42 Warra Cemetery

Located in Lot 68 on LY1053. The cemetery serves the settlement of Warra.

5.1.43 HAS-43 St Columba's Convent School, Dalby

Despite its registration on the NTQ heritage register in 2001, the St Columba's Convent School, Jimbour Road, Dalby burnt down in 1998 (www.dalby.catholic.edu.au, accessed 11/11/08). The site was not located in the field survey.

5.2 Sites of Historic Interest

Sites of Historic Interest (HI) do not contain a sufficient level of heritage value to warrant further assessment and management. However, they do inform on cultural heritage values likely to be present elsewhere within the Study Area.

5.2.1 HI-1 Site of Old Road Bridge

An old road bridge was observed to the north of the Warrego crossing of Rocky Creek. The span of the bridge has been removed and only the timber supports and abutments remain.

Figure 55: Remains of old road bridge



5.2.2 HI-2 Old Road and Telegraph Alignment



The location of an old road and telegraph alignment was shown by the landowner, running between the Malara Homestead (HAS-8) and Barkla's Bridge (HAS-18). The alignment was a former, and possibly more direct, route to Taroom. Although no physical evidence is visible today, the route follows some existing fence lines.

Figure 56: Location of old road and telegraph alignment, facing away from Malara property

5.2.3 HI-3 Stone Crossing

The crossing over the Dawson River along Bundulla Road is currently serviced by a wooden road bridge dating from 1993 when the previous wooden bridge was destroyed by a lorry. Some stumps belonging to the earlier bridge are visible underneath the current bridge. To the west of this crossing, however, is a stone ford across the river. It has little remaining integrity; however, it is still serviceable and was briefly used as a replacement crossing prior to the construction of the current bridge.



Figure 57: The site of the stone Dawson River Crossing

5.3 Conclusions

The study located 34 HAS sites, of which 12 were previously known through heritage registers. These included a broad cross-section of site types across all areas of the Project and all require further analysis and management if they are to be impacted. These sites reflect key heritage themes within the Study Area, including pastoralism, exploration, mining and infrastructure development. However, some sites have unique associations with properties within the Study Area, such as the inscribed rocks (HAS-14, 16).

Three HI sites were located during the study. These are not considered significant enough to warrant further significance or impact assessment, however if possible, they should be retained.

These results indicate a broad disbursement of sites throughout the Project Area and support the need for further assessment of the alternative pipeline alignment (see Figure 3)

Several site types were identified in the field survey that can be predicted to be located across more of the Study Area as the Project commences. These include survey trees, telegraph alignments, old road alignments and railway sidings. Further discussion regarding this and other potential is provided in the following sections of the report.

6.0 Significance Assessment

6.1 Preamble

Cultural heritage significance relates to people's perspective of place and sense of value within the context of history, environment, aesthetics and social organisation. Historic sites of cultural heritage significance are attributed an individual significance rating in this chapter, in accordance with the significance criteria contained in the *Queensland Heritage Act, 1992* (QLD Heritage Act) and outlined below.

The places of historic interest located during the survey are not assessed further for significance as these places do not contain enough value to warrant further assessment. The places of historic interest do nevertheless provide an insight into the settlement and land use of the region and therefore guide discussions relating to the historic value of the landscape and potential for further within the Study Area.

Any discussion of cultural heritage significance requires an understanding of the legislation which may or may not impact upon the site under review. National, State and local legislation is discussed in the following chapter.

6.2 Determining Cultural Heritage Significance

A range of standards and criteria are available to assist with determining cultural heritage significance. The assessment contained in this report was prepared in accordance with the principles of the Burra Charter (ICOMOS Australia 1999) and incorporate aspects from the recognised legislative frameworks, such as the *Queensland Heritage Act, 1992* (and subsequent amendments).

As the project area comprises a large area of land it is not possible to prepare an assessment of significance for the Project area as a whole. Rather, each site, complex or precinct identified during the various phases of the Project has been assessed for its level of heritage significance.

The assessment criteria used for this report are outlined below:

- Criterion a) - The place is important in demonstrating the evolution or pattern of Queensland's history;
- Criterion b)- The place demonstrates rare, uncommon or endangered aspects of Queensland's cultural heritage;
- Criterion c) - The place has potential to yield information that will contribute to an understanding of Queensland's history;
- Criterion d) - The place is important in demonstrating the principal characteristics of a particular class of cultural places;
- Criterion e) - The place is important because of its aesthetic significance;
- Criterion f) - The place is important in demonstrating a high degree of creative or technical achievement at a particular period;
- Criterion g) - The place has a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons; and/or
- Criterion h) – The place has a special association with the life or work of a particular person, group or organisation of importance in Queensland's history.

6.3 Determining Archaeological Significance

Archaeological significance is defined under the QLD Heritage Act as *“a place which has the potential to contain an archaeological artefact that is an important source of information about Queensland's history.”* Archaeological assessments consider the sites specific ability to provide information about the past (i.e. the site's research potential). Generally, the following framework for consideration is used when assessing archaeological significance as part of Criterion c (research significance):

- Can the site contribute information that no other source can? (i.e. can it tell us something that we cannot find out from a documentary source, photo or oral recollection?);
- Can the site contribute information that no other archaeological site can? (i.e. how rare is the site's information); and
- Can the site contribute to contemporary research questions (i.e. is the information relevant to questions relating to Australia's / Queensland's history)?

6.4 Significance of Individual Sites and Precincts

Please note that where a site has a pre-existing level of significance defined by its listing upon the Queensland Heritage Register, the significance criteria have been quoted from its EPA listing.

Table 5: Significance assessment of HAS sites

Site	Name	Registered?	Significance Assessment (in relation to the criteria outlined in Section 5.2)	Site Type	Level of Significance
HAS-01	Railway Corridor		<p>Criterion a</p> <p>As a major transport corridor through south-central Queensland, the railway is significant in opening up much of the regions industry and agriculture, as well as helping establish townships</p> <p>Criterion d</p> <p>The railway corridor includes a broad selection of site types that typify the late 19th – early twentieth century railway network in south-central Queensland.</p>	Heritage Site	Local
HAS-02	Warra Heritage Precinct		<p>Criterion e</p> <p>The number of surviving historic structures and memorials in the centre of the Warra Heritage Precinct creates an aesthetic focal point of the town of Warra and visitors passing through.</p> <p>Criterion g</p> <p>The establishment and ongoing maintenance of heritage memorial garden in Richard Best Park demonstrates the significance of Warra's heritage to its current population.</p>	Heritage Site	Local
HAS-03	Leichhardt Camp (Warra)		<p>Criterion h</p> <p>The Leichhardt Camp at Warra is significant for its association with Ludwig Leichhardt,</p>	Heritage Site	State

Site	Name	Registered?	Significance Assessment (in relation to the criteria outlined in Section 5.2)	Site Type	Level of Significance
			the famous explorer, who camped at this location in October 1844 on his expedition to Port Essington.		
HAS-04	Chinchilla Heritage Precinct		Criterion a The development of Chinchilla as a town relates to several themes significant to the settlement of central Southern Queensland, including the development of the railway system, timber-getting and the dairy industry.	Heritage Site	Local
HAS-05	Telegraph Alignment (Nathan Road)		Criterion a This former telegraph alignment is associated with the introduction of telecommunications to remote properties in the central Queensland area. The remnant infrastructure provides the potential for investigations into technology at the time, and for local and regional recording and comparison of typologies of this finite resource.	Heritage Site	Local
HAS-06	Survey Tree (Nathan Road)		Criterion a This survey tree is a tangible example of the surveying of roads and associated development within along Nathan Road. Criterion d This survey tree is representative of the method of marking routes, locations and settlement sites.	Heritage Site	Local
HAS-07	Survey Tree		Criterion a This survey tree is a tangible example of the surveying of roads and associated development along Nathan Road. Criterion d This survey tree is representative of the method of marking routes, locations and settlement sites.	Heritage Site	Local

Site	Name	Registered?	Significance Assessment (in relation to the criteria outlined in Section 5.2)	Site Type	Level of Significance
HAS-08	Malara Homestead		<p>Criterion a</p> <p>The physical evidence of multiple phases of the development of the site demonstrates the evolution of the site from sheep farming to cattle farming; part of the pattern of land use seen across the region. It illustrates the pattern of early European settlement of the region and in many respects Queensland, where the development of pastoral properties preceded agriculture and the establishment of towns.</p> <p>Criterion d</p> <p>Malara demonstrates the principal characteristics of a homestead from the early 1900s, comprising a main house extended through time, with associated sheep shed, worker's cottage, slab garage and other outbuildings, fences, as well as features of interest including a tennis court, sheep dip and bowling green.</p> <p>Criterion g</p> <p>Malara homestead was built with labour from Taroom Aboriginal Reserve, and therefore has a special significance associated with the occupants of the Reserve during this period of Queensland's history.</p>	Heritage Site	State
HAS-09	Corduroy Crossing		<p>Criterion a</p> <p>The corduroy crossing is a tangible example of the surveying of roads and associated development of infrastructure around Taroom.</p> <p>Criterion b</p> <p>The corduroy crossing is significant as corduroy roads are now very rare throughout Queensland.</p>	Heritage Site	Local
HAS-10	Barkla Camp		<p>Criterion h</p> <p>The Barkla Camp is significant for its association with the Barkla family, who camped at this location prior to building Malara Homestead.</p>	Heritage Site	Local

Site	Name	Registered?	Significance Assessment (in relation to the criteria outlined in Section 5.2)	Site Type	Level of Significance
HAS-11	Binghi Slab Hut		<p>Criterion a</p> <p>Binghi Slab Hut, as an early example of outstation in the region, is an important element in the built historic fabric of rural settlements in central Queensland.</p> <p>Criterion d</p> <p>Binghi Slab Hut is a good representative example of the design and technology for the early phase of building used as the settlers moved northward. The main building and its associated structures are largely intact and provide a clear picture of the use and functions of the various part of the complex.</p>	Heritage Site	Local
HAS-12	Spring Creek Homestead		<p>Criterion a</p> <p>The Spring Creek Homestead site shows evidence of multiple phases of development, demonstrating part of the pattern of land use seen across the region. It illustrates the pattern of early European settlement of the region and in some respects Queensland, where the development of pastoral properties preceded agriculture and the establishment of towns.</p> <p>Criterion d</p> <p>Spring Creek demonstrates rare examples of wallpaper, Hessian and newspaper ceilings still extant within the current homestead site.</p> <p>Criterion g</p> <p>The homestead has a special association with the life and work of five generations of the Williams family and early dairying in the area.</p> <p>Archaeological</p> <p>The sites of the school and original homestead have been determined to be an archaeological place because they have potential to contain an archaeological artefact that is an important source of information about Queensland's history. These artefacts may inform on a rural school site and homestead in the late nineteenth century.</p>	Heritage Site	State

Site	Name	Registered?	Significance Assessment (in relation to the criteria outlined in Section 5.2)	Site Type	Level of Significance
HAS-13	Taroom Aboriginal Reserve		<p>Archaeological</p> <p>The Taroom Aboriginal Reserve been determined to be an archaeological place because it has potential to contain an archaeological artefact that is an important source of information about Queensland's history. The internment of Aboriginal burials in a European-style cemeteries and the remaining layout of the Reserve have the potential to inform upon the conditions of life within the Reserve.</p> <p>Criterion a</p> <p>Taroom Aboriginal Mission is an important feature of Queensland's history, demonstrating the systematic enforced removal of Aboriginal people from their country.</p> <p>Criterion g</p> <p>Taroom Aboriginal Mission, especially the two cemetery sites, has a special significance to Queensland's Aboriginal population as a result of their relocation there between 1910-1927.</p> <p>Criterion h</p> <p>The Aborigines removed to Taroom Aboriginal Mission were used as labour on surrounding properties, and apart from other notable roles, played a part in the development of homesteads and pastoralism in the Taroom district, notably at Malara Homestead.</p>	Archaeological Place	State
HAS-14	Inscribed Rock (The Glebe)		<p>Criterion g</p> <p>Whilst enigmatic, the inscribed marker has local significance as a marker, symbolically representing the past in the present.</p>	Heritage Site	Local
HAS-15	Baxter's Hut		<p>Criterion a</p> <p>Baxter's Hut is significant in demonstrating the squatters' role in developing pastoral land around Taroom.</p>	Heritage Site	Local

Site	Name	Registered?	Significance Assessment (in relation to the criteria outlined in Section 5.2)	Site Type	Level of Significance
			Criterion d Baxter's Hut is significant in demonstrating the lower socio-economic class of squatters' residences in the Taroom area.		
HAS-16	Inscribed Rock (Moorang)		Criterion g Whilst enigmatic, the inscribed marker has local significance as a marker, symbolically representing the past in the present. Criterion h The inscribed rock is significant for its association with the Rigby family, who are prominent local landowners.	Heritage Site	Local
HAS-17	Warra Mine		Criterion b Warra Mine is significant as it was the first state-owned mine in Queensland, although the initiative was shelved after five years.	Heritage Site	State
HAS-18	Site of Barkla's Bridge		Archaeological This site has been determined to be an archaeological place because potential to contain an archaeological artefact that is an important source of information about Taroom's history. Despite the impact of flooding on the site, some remains of the bridge were visible from the bank, suggesting that the site holds potential for artefacts to be located in-situ.	Archaeological Site	Local
HAS-19	Abandoned Homestead Site		Criterion a The abandoned homestead site is an important element in the built historic fabric of rural settlements in southern Queensland.	Heritage Site	Local
HAS-20	Gurulmundi Township Site		Archaeological This site has been determined to be an archaeological place because it has potential to	Archaeological	State

Site	Name	Registered?	Significance Assessment (in relation to the criteria outlined in Section 5.2)	Site Type	Level of Significance
			<p>contain an archaeological artefact that is an important source of information about Queensland's history.</p> <p>The site provides the opportunity to study the early development of a rural railway settlement in south-central Queensland. The town was first surveyed in 1914. However, the settlement has since shrunk and remaining artefacts lie in situ in a readily recognisable state and pattern.</p> <p>Gurulmundi is an excellent representative example of an early settlement in this part of Queensland, and its largely undisturbed state allows for further research into early settlement in the area.</p>		
HAS-21	Survey Trees (Leichhardt Highway)		<p>Criterion a</p> <p>The survey trees are a tangible example of the surveying of roads and associated development along Nathan Road.</p> <p>Criterion d</p> <p>The survey trees are representative of the method of marking routes, locations and settlement sites.</p>	Heritage Site	Local
HAS-22	Old Leichhardt Highway and Crossing		<p>Criterion a</p> <p>The former Leichhardt Highway alignments and crossings demonstrate the evolution over time of the route of this principle highway through Central Queensland.</p> <p>Criterion f</p> <p>The different alignments and crossings in this section of the Leichhardt Highway display several different fabrics and design techniques spanning different periods of the regions history.</p>	Heritage Site	Local
HAS-23	The Glebe Homestead	✓	<p>Criterion a</p> <p>The Glebe Homestead, completed by c1920, is important in illustrating the pattern of settlement in the Taroom district, being associated with the pattern of land resumption</p>	Heritage Site	State

Site	Name	Registered?	Significance Assessment (in relation to the criteria outlined in Section 5.2)	Site Type	Level of Significance
			<p>in the district in late 19th and early 20th centuries. The manner in which the homestead was constructed, over a number of years and from materials recycled or obtained from the property, reflects the impact of the Great War of 1914-1918, during which many rural communities in Queensland suffered materials and labour shortages, and the additional impact of the widespread prickly pear infestation on properties in the northwest Darling Downs, which created financial strain for many landholders.</p> <p>Criterion b</p> <p>A machinery shed on the site, which pre-dates the main residence, retains early bark lining beneath a corrugated iron roof, which is a rare surviving example of this form of construction.</p> <p>Criterion c</p> <p>The homestead has the potential to provide the opportunity for further archaeological research, as many of the buildings have survived intact with early machinery and fittings. The remains of an early building, which may be the previous house, are apparent beneath the present main residence.</p> <p>Criterion d</p> <p>The homestead, which comprises a main residence, garden with mature trees and other early plantings, tennis court and outbuildings, is an intact and working example of an early 20th century pastoral head station, constructed during a period of financial, material and manpower shortages, and is important in illustrating its type. The main residence is important as a late example of sawn timber slab construction and of traditional interior finishes, illustrating how traditional bush construction techniques were sustained in rural Queensland for many decades after initial settlement. The idiosyncratic design illustrates an appreciation of local climate conditions, and the whole reflects the need for self-sufficiency and the shortage of materials and labour during the first world war.</p> <p>Criterion e</p> <p>The main residence, set within a garden of mature trees and other early plantings, and outbuildings have aesthetic significance engendered by the rustic materials and</p>		

Site	Name	Registered?	Significance Assessment (in relation to the criteria outlined in Section 5.2)	Site Type	Level of Significance
			picturesque setting in an open rural landscape. (EPA, Accessed 2008)		
HAS-24	Leichhardt Tree, Taroom	✓	<p>Criterion a</p> <p>Leichhardt's exploration of the Dawson River area paved the way for rapid pastoral expansion in the Leichhardt district from the mid-1840s to the early 1850s.</p> <p>Criterion e</p> <p>Estimated to be around 300 years old, the Leichhardt Tree is a familiar landmark in the town of Taroom, making a significant contribution to the streetscape of the town, well-known to all residents and often photographed by travellers.</p> <p>Criterion g</p> <p>Estimated to be around 300 years old, the Leichhardt Tree is a familiar landmark in the town of Taroom, making a significant contribution to the streetscape of the town, well-known to all residents and often photographed by travellers.</p> <p>Criterion h</p> <p>The Leichhardt Tree at Taroom is important for its association with Prussian explorer FW Ludwig Leichhardt, who played an important role in early non-indigenous exploration of the Australian interior, particularly with his epic journey from the Darling Downs to Port Essington, which contributed significantly to European knowledge of the Queensland landscape.</p> <p>(EPA, Accessed 2008)</p>	Heritage Site	State
HAS-25	Chinchilla 'Digger' Statue	✓	<p>Criterion a</p> <p>The Chinchilla 'Digger' Statue, erected in 1919 and funded by the local community, no longer retains a physical connection with the official Chinchilla War Memorial, but does maintain an association with the contribution of the Chinchilla district to the First World War. It has acquired, in its relocation and restoration, a more recent</p>	Heritage Site	State

Site	Name	Registered?	Significance Assessment (in relation to the criteria outlined in Section 5.2)	Site Type	Level of Significance
			association with the local branch of the Returned Services League of Australia. (EPA, Accessed 2008)		
HAS-26	Cactoblastis Memorial Hall	✓	<p>Criterion a</p> <p>As a hall erected to commemorate a significant scientific and economic event [the successful control of prickly pear by the cactoblastis moth], the Cactoblastis Memorial Hall at Boonarga is important in demonstrating the pattern of Queensland's history.</p> <p>Criterion b</p> <p>It demonstrates a rare aspect of Queensland's cultural heritage as the only known building dedicated to an insect.</p> <p>Criterion D</p> <p>It demonstrates the principal characteristics of a timber hall built to service a small rural community.</p> <p>Criterion g</p> <p>As a hall in continuous use since 1936, the place has a strong and special association with the Boonarga community.</p> <p>(EPA, Accessed 2008)</p>	Heritage Site	State
HAS-27	Dalby War Memorial and Gates	✓	<p>Criterion a</p> <p>War Memorials are important in demonstrating the pattern of Queensland's history as they are representative of a recurrent theme that involved most communities throughout the state. They provide evidence of an era of widespread Australian patriotism and nationalism, particularly during and following the First World War.</p> <p>Criterion b</p> <p>This particular digger statue is rare as one of only two in Queensland which are cast in bronze and one of only two known works by London sculptors John Whitehead and Sons in Queensland. It is also an uncommon example of a memorial still situated in its</p>	Heritage Site	State

Site	Name	Registered?	Significance Assessment (in relation to the criteria outlined in Section 5.2)	Site Type	Level of Significance
			<p>intact setting.</p> <p>Criterion d</p> <p>The monuments manifest a unique documentary record and are demonstrative of popular taste in the inter-war period. The memorial at Dalby demonstrates the principal characteristics of a commemorative structure erected as an enduring record of a major historical event. This is achieved through the use of appropriate materials and design elements. As a digger statue it is representative of the most popular form of memorial in Queensland.</p> <p>Criterion e</p> <p>The memorial and its setting are a landmark within Dalby and contribute to the aesthetic qualities of the townscape. The memorial and gates are of aesthetic significance for their high degree of workmanship and design.</p> <p>Criterion g</p> <p>It has a strong and continuing association with the community as evidence of the impact of a major historic event and as the focal point for the remembrance of that event.</p> <p>Criterion h</p> <p>It also has special association with the firms involved in its erection including sculptors John Whitehead and Sons (London), masons J Shill (Dalby) and metalworker Ernest Gunderson (Brisbane) as examples of their work.</p> <p>(EPA, Accessed 2008)</p>		
HAS-28	St John's Anglican Church	✓	<p>Criterion a</p> <p>The site of St John's Anglican Church is important for its association with the early development of Dalby and of the Anglican Church in Queensland, being associated with a group of four early Anglican parishes established on the Darling Downs during the 1850s and 1860s and dedicated to the evangelists - St Matthew, Drayton [600837], St Mark, Warwick [600943], St Luke, Toowoomba [601878] and St John, Dalby. Important as part of a continuing tradition of Anglican worship on the Darling Downs, St John's</p>	Heritage Site	State

Site	Name	Registered?	Significance Assessment (in relation to the criteria outlined in Section 5.2)	Site Type	Level of Significance
			<p>Church (1922-1923) is the third church building for the parish of St John on this site.</p> <p>Criterion d</p> <p>St John's Church is a fine example of a church in the Gothic revival idiom comprising a number of elements typical of this style including a steeply pitched roof, pointed arches, external buttressing to walls, decorative mouldings, lancet windows and fine stained glass.</p> <p>A number of fixtures and fittings gifted to the church from parishioners reflect the importance of the church to the parish including memorial stained glass windows, church furniture and liturgical items.</p> <p>Designed by leading Toowoomba architect Harry Marks, one of a family of prominent Queensland architects, St John's Church is a fine example of his ecclesiastical work.</p> <p>Criterion e</p> <p>Sited prominently in an open grassed setting on a corner in the heart of Dalby, the elegant, well-composed St John's Church, with its steeply pitched roof, fine brickwork and decorative embellishments, is a striking presence in the streetscape of Dalby. With fine stained glass windows, well-crafted furniture, decorative timber panelling and handsome timber roof brackets, the interior of the church provides a contemplative setting for religious observances.</p> <p>(EPA, Accessed 2008)</p>		
HAS-29	Former Dalby Town Council Chambers and Offices	✓	<p>Criterion a</p> <p>The former Dalby Town Council Chambers is significant as it demonstrates the growth and development of Dalby and the surrounding area and the increasing self confidence placed in the town by the Council and by the local population.</p> <p>As the site of the School of Arts prior to the construction of the hall, and with the building housing a School of Arts when constructed, the place demonstrates the continued public use of the property for over 60 years.</p>	Heritage Site	State

Site	Name	Registered?	Significance Assessment (in relation to the criteria outlined in Section 5.2)	Site Type	Level of Significance
			<p>Criterion b</p> <p>The former Dalby Town Council Chambers, a brick and concrete rendered building, is significant as one of only about six buildings extant in Dalby dating from the early 1930s. Other buildings include the former Wambo Shire Council Chambers and the Dalby Fire Station, both of which have Georgian elements in their designs and the former Union Bank. Internally, contributing to its significance, the former meeting room of the Dalby Town Council remains highly intact with timber panelling and screening.</p> <p>Criterion d</p> <p>The former Dalby Town Council Chambers is significant as example of an interwar building with Art Deco elements especially the decorative moulded relief work.</p> <p>Criterion e</p> <p>Located at the corner of Cunningham Street, the unpretentious yet elegant building provides an integral civic contribution to the streetscape.</p> <p>Criterion g</p> <p>Further, it held a long association with the people of Dalby and surrounding areas as a focal point for social, and community functions.</p> <p>Criterion h</p> <p>The former Dalby Town Council Chambers is significant for its association with the well-known Brisbane architectural firm, Hall and Phillips, in practice from 1929-1948. TR Hall had previously been in partnership with GG Prentice as Hall and Prentice.</p> <p>(EPA, Accessed 2008)</p>		
HAS-30	Dalby Swimming Pool Complex	✓	<p>Criterion a</p> <p>The Dalby Swimming Pool complex, constructed and opened in 1936 is important in demonstrating the development of competition swimming in Queensland. As an Olympic standard pool built in the 1930s, it illustrates the surge of public interest both in competitive and recreational swimming during the interwar period.</p>	Heritage Site	Local

Site	Name	Registered?	Significance Assessment (in relation to the criteria outlined in Section 5.2)	Site Type	Level of Significance
			<p>As a facility which demonstrated how artesian water might be used to the advantage of a community, the Dalby Swimming Pool also is important in demonstrating the pattern of Queensland's history.</p> <p>It is also important in illustrating the 1930s expansion of civic work in the former prickly pear belt, following the eradication of this pest in the late 1920s and early 1930s. As land cleared of prickly pear cactus was utilised for agriculture, grazing and dairying, towns throughout the prickly pear belt, especially Dalby, Chinchilla and Miles, experienced renewed growth and prosperity.</p> <p>Criterion b</p> <p>The Dalby Swimming Pool complex is rare as the earliest identified surviving Olympic-sized swimming pool complex in Queensland. It is the earliest known Olympic Pool complex constructed in Queensland outside Brisbane, and retains its two pools (competition and children's), entrance pavilion, and caretaker's residence.</p> <p>Criterion g</p> <p>The Dalby Swimming Pool Complex has a strong association with the community of Dalby and the surrounding area as an important sports venue for swimming events, enabling Dalby swimmers access to wider Australian competition, and has at times attracted Australian/international swimming stars.</p> <p>(EPA, Accessed 2008)</p>		
HAS-31	Taroom Cemetery	✓	<p>Criterion g</p> <p>Taroom Cemetery has an association with the community of Taroom, and has operated as a cemetery for the town since 1891.</p>	Heritage Site	Local
HAS-32	Wandoan Cemetery	✓	<p>Criterion g</p> <p>Wandoan Cemetery has an association with the community of Wandoan, and has operated as a cemetery for the town since the 1950s.</p>	Heritage Site	Local

Site	Name	Registered?	Significance Assessment (in relation to the criteria outlined in Section 5.2)	Site Type	Level of Significance
HAS-33	Downfall Creek Cemetery	✓	Criterion g Downfall Creek Road Cemetery has an association with the community of Downfall Creek.	Heritage Site	Local
HAS-34	Brigalow - Canaga Creek Road Cemetery	✓	Criterion g Brigalow - Canaga Creek Road Cemetery has an association with the community of Brigalow.	Heritage Site	Local
HAS-35	Chinchilla Cemetery	✓	Criterion g Chinchilla Cemetery has an association with the community of Chinchilla.	Heritage Site	Local
HAS-36	Cemetery Road, Chinchilla	✓	Criterion g Cemetery Road, Chinchilla has an association with the community of Chinchilla.	Heritage Site	Local
HAS-37	Baking Board Cemetery	✓	Criterion g Baking Board Cemetery has an association with the community of Baking Board, and contains the burials of many workers who died due to poor hygiene conditions during the construction of the railway..	Heritage Site	Local
HAS-38	Dogwood Creek Cemetery, Miles	✓	Criterion g Dogwood Creek Cemetery, Miles has an association with the community of Miles.	Heritage Site	Local
HAS-39	Cnr. Racecourse and Hookwood Roads Cemetery,	✓	Criterion g Cnr. Racecourse and Hookwood Roads Cemetery, Miles has an association with the community of Miles.	Heritage Site	Local

Site	Name	Registered?	Significance Assessment (in relation to the criteria outlined in Section 5.2)	Site Type	Level of Significance
	Miles				
HAS-40	Hookwood Road Cemetery, Miles	✓	Criterion g Hookwood Road Cemetery, Miles has an association with the community of Miles.	Heritage Site	Local
HAS-41	Macalister Cemetery	✓	Criterion g Macalister Cemetery has an association with the community of Macalister.	Heritage Site	Local
HAS-42	Warra Cemetery	✓	Criterion g Warra Cemetery has an association with the community of Warra.	Heritage Site	Local
HAS-43	St Columba's Convent School	✓	Criterion g St Columba's Convent School opened in 1887 and has served the Dalby Community since this date.. Since the original school burnt down in 1998 it has relocated within the town.	Heritage Site	Local

Chapter 7 Heritage Obligations

Any discussion of cultural heritage significance requires an understanding of the legislation which may impact upon the site under review. This section outlines the relevant information which may affect sites of cultural heritage significance within the Nathan Dam and pipeline project area.

7.1 National Legislation

7.1.1 EPBC Act

The Environment Protection and Biodiversity Conservation (EPBC) Act, 1999 is the key National heritage legislation and is administered by the Commonwealth Department of Environment and Water Resources. The EPBC Act provides a number of statutory and legislative controls, including the National Heritage List and the Commonwealth Heritage List, and applies to places of National heritage value and to those owned or managed by the Commonwealth.

In addition, the following legislation is relevant to heritage:

7.1.2 The Australian Heritage Council Act 2003.

This Act superseded the previous Australian Heritage Commission Act, 1975. The Australian Heritage Council Act, 2003, provides for the establishment of the Australian Heritage Council, which is the principal advisory group to the Australian Government on heritage matters. This Act also provides for the registration of places considered of National significance on the Register of the National Estate (RNE) or the Australian Heritage Places Inventory (AHPI).

Following amendments to the Australian Heritage Commission Act, 1975, the Register of the National Estate (RNE) was frozen on the 19th February 2007, which means that no new places can be added to, or removed, from the RNE. Nonetheless, the RNE will continue as a Statutory Register until February 2012.

During this period the Federal Minister for the Environment, Water, Heritage and the Arts is required to continue considering the Register when making some decisions under the EPBC Act 1999. This transition period allows States, Territories, local governments and the Australian Government to complete the task of transferring places to appropriate heritage registers where necessary and to amend legislation that refers to the RNE as a statutory list. From February 2012,

all references to the RNE Register will be removed from the EPBC Act 1999 and the Australian Heritage Commission Act. The RNE will be maintained after this time on a non-statutory basis as a publicly available archive.

7.2 State Legislation

7.2.1 Queensland Heritage Act 1992

The aim of the Queensland Heritage Act 1992 is to conserve Queensland's historic heritage. The Act provides for the establishment of the Queensland Heritage Council, for the maintenance of a register of places of significance to Queensland's cultural heritage, known as the Queensland Heritage Register, and aims to regulate development of registered places. Under the provisions of the Queensland Heritage Act, any development of a place listed on the Queensland Heritage Register must be done in accordance with the Act.

If a site was found to contain values of state significance and was registered on the Queensland Heritage Register, the Act would apply. A place may be entered in the register if it satisfies one or more of the assessment criteria under Section 35 (1) of this Act.

In November 2003, the Queensland Heritage Act 1992 was augmented by the Queensland Heritage Regulation, 2003, resulting in development applications for privately owned properties on the Register being assessed in accordance with the requirements of the Integrated Development and Assessment System (IDAS) of the Integrated Planning Act 1997.

7.2.2 Archaeological Places

In April 2008, the Queensland Heritage Act 1992 was again amended. The major changes include the way archaeological items and places of local heritage significance are dealt with under the Act.

- Under section 60, places may be considered to be 'archaeological places' if not registered as a State heritage place and are considered to have 'potential to contain an archaeological artefact that is an important source of information about Queensland's history' (s. 60 (b)). Archaeological places can be entered onto the register if they meet those criteria.
- Section 89 requires a person to advise the Chief Executive Officer of the Environmental Protection Agency of an archaeological artefact that is an important source of information

about an aspect of Queensland's history. This advice must be given as soon as practicable after the person discovers the item.

- Section 90 stipulates that it is an offence to interfere with an archaeological artefact once notice has been given of the artefact to the Chief Executive Officer.

The sites within the project area which are assessed as archaeological places are subject to these provisions.

7.2.3 Development Approvals

Development to a registered place, unless it is emergency work or is covered by a General Exemption, requires approval by the Queensland Heritage Council. Approval may be obtained by:

- Lodging an application for an exemption certificate; or
- Lodging a development application.

All applications for works to places of state significance will be assessed through IDAS. The sites within the project area which are listed on the Queensland Heritage Register are subject to these provisions.

7.2.4 Development Exemptions

The Queensland Heritage Act enables work that has no impact on the cultural heritage significance of a registered place to be approved and undertaken under an exemption certificate. The work will not require further approval from the Queensland Heritage Council within the IDAS once an exemption certificate has been issued.

There are a great number of development activities that may be covered by exemption certificates. Under the Queensland Heritage Act, these activities are grouped into six categories:

- Maintenance work;
- Minor repair work;
- Other minor work;
- Development genuinely required for liturgical purposes;

- Development permitted under a heritage agreement; and
- Development that would have no impact on the cultural heritage significance of the place.

For work to have no impact on the cultural heritage significance of a place it must not destroy or otherwise damage what is valued about that place. This work may be of a larger scale or scope than minor works because of:

- Where it is (e.g. not involving important fabric or an important part of the site); or
- The way it is detailed; or
- It may also be of a temporary nature.

The sites within the project area which are listed on the Queensland Heritage Register are subject to these provisions.

7.3 Local Legislation

Under the 2008 amendment of the Queensland Heritage Act, Section 121 provides for the integration of State and local government assessment and approval processes through the IDAS of the Integrated Planning Act. Under the Integrated Planning Act, the default assessment category of all development is exempt (meaning that a Development Application is not required) unless it has been deemed assessable through:

- Table 5, Schedule 8 of the Integrated Planning Act which assesses all aspects of development on a local heritage place, other than development mentioned in Schedule 9 which largely concerns itself with development on State owned land; and
- A local government's planning scheme.

The sites within the project area which are listed on any of the LGA Heritage Schedules are subject to these provisions.

7.3.1 Local Government Amalgamations

In March 2008 the Queensland Government implemented a process of local government amalgamation. This resulted in the alteration of former local government boundaries and the creation of new regional councils. The two newly-created shires of relevance to the Project are Banana Shire Council and Dalby Shire Council.

It is important to note, however, that the Planning Schemes of the former local authorities, in which planning guidelines are provided for places of local heritage significance, remain in effect until March 2009. The Project area covers the former Shire Councils of:

- Dalby (township)
- Wambo
- Chinchilla
- Murilla
- Taroom

The Planning Schemes for each of these areas seeks to preserve cultural heritage by stipulating assessment criteria for proposed development to or near a place of cultural heritage significance. In the case of each of the former Shire Council's Planning Schemes (except Dalby, which does not maintain a list of places), the only items of cultural heritage listed are cemeteries and burial sites, which are identified in Table 2.

Chapter 8 Impact Assessment

This chapter assesses the likely or indicative impact of the proposed Nathan Dam Project on the cultural heritage sites within the Project area.

8.1 Significance of Impact

The significance of impact can be beneficial, adverse or negligible. The criteria adopted for the assessment of Project impacts is presented below in Table 6 .

Table 6 : Significance criteria for impact assessment.

Significance	Criteria
High	Impact is a major problem. These impacts are likely to be important considerations at the National, or State level. If adverse, they are potential concerns to the Project, depending upon the relative importance attached to the issue during the decision making process. Mitigation measures and detailed design work are unlikely to remove all of the impacts upon the affected communities or interests. Residual impacts would predominate.
Moderate	Impact is moderate. While important at a State, regional or local scale, these are not likely to be key decision making issues. They represent issues where impact would be experienced but mitigation measures and detailed design works may ameliorate/enhance some of the consequences upon affected communities or interests. Some residual impacts would still arise. Nevertheless, the cumulative impacts of such issues may lead to an increase in the overall impacts upon a particular area or on a particular resource and hence may become key decision making issues.
Low	Impact recognisable but acceptable. Only local impacts would be included in this category and are unlikely to be of importance in the decision making process. Nevertheless, they are of relevance in enhancing the subsequent design of the Project and in the consideration of mitigation or compensation measures.
None	Minimal change. No impacts or those which are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error.

8.1.1 Nature of Impact

Impact can take the following forms:

- **Direct impact:** where a heritage site, place or precinct will be affected, resulting in modification or damage to, or complete loss of that site or place.

Direct impact on a heritage item, place or precinct is posed by alteration, modification or even destruction of the fabric of the place and its curtilage. In addition, the resumption of curtilage associated with the access and function of a heritage site or place is considered a direct impact.

- **Indirect:** adverse or indirect positive impact where a heritage site or place has its amenity, usefulness, context, and/or function changed.

8.2 Nature of the Proposed Development

The following information describing the Nathan Dam Project is taken from the Terms of Reference which have been developed for the project. The proposed dam is located on the Dawson River about 315 km adopted middle thread distance near Nathan Gorge in Banana Shire about 35 km directly north east of Taroom. A Locality Map is provided as Appendix A. The dam construction type has yet to be determined but will be either mass concrete or roller compacted concrete. Other features of the Project include:

- a yield of 70 000 megalitres (ML) per annum of high priority water at a full supply level of approximately 185.3 m Australian Height Datum based on a capacity of 880 000 ML;
- a water distribution pipeline from the storage south through the Surat Basin; and
- fishways and water outlets (fish migration and water release).

The details may vary as the Project is refined.

8.3 Impact of Project

8.3.1 Cumulative Impact of the Nathan Dam Project

The Project is one of a number of industrial developments and subsequent environmental impact studies over the last ten years in the Southern Central Queensland areas, especially along the Pipeline alignments. These projects have the potential, when considered together, to change the character of the region and incrementally impact on the collection of heritage sites within the Project area.

By operating to best-practice cultural heritage standards of avoiding heritage sites wherever possible, this impact should be minimised. Nonetheless, there are several sites which are particularly vulnerable to cumulative impact:

- *HAS-23 The Glebe Homestead*

This homestead has existed in the shadow of the proposed Project for over eight decades. Despite this, the property has been continuously inhabited since the 1910s. The site is currently owned by the Department of Natural Resources and Water (NRW) who have a statutory responsibility to maintain the property.

- *HAS-1 Railway Corridor*

The railway line, which presently comprises a relatively intact group of elements including the railway alignment, sections of sleepers, sidings, spur lines, culverts, drainage features, loading facilities, fencing and associated soldier settlements, is particularly vulnerable to cumulative impact. The integrity of this corridor could be rapidly eroded by the cumulative impact of developments removing select elements or features of the line. As the significance of this railway line is vested in its integrity as a group of features and its ability to demonstrate a large range of features associated with a railway, its value could be compromised.

- *HAS-5; HAS-6; HAS-7; HAS-21; and HAS 22 (Survey Trees and Infrastructure)*

Like the railway line, these telegraph lines, survey trees and road alignments are susceptible to cumulative impact of multiple projects which may remove select elements, thus compromising the integrity and value of the sites.

8.3.2 Impact on Potential Sites

This investigation has established that there is a high potential for the study area to contain potential sites of heritage significance. These are likely to be remnant sites relating to pastoral and settlement activities, such as historic survey trees, roads and stock routes, homesteads and associated agricultural buildings, remnant boundary fence lines, old station dumps and the remains of early mining activities. Historic sites and places such as mile markers, remote graves and historic camp remnants and associated exotic vegetation, may also potentially be encountered.

8.3.3 Site specific Impact of the Project

Within the Project Area, there are 43 assessed sites which have the potential to be impacted upon by the proposed project (as detailed in the following table).

Assumptions:

- Inundation Area:

The inundation Area due to be impacted by Nathan Dam is primarily along the Dawson River and Cockatoo Creek, east of Taroom. The rise in the river level will impact upon an area defined in Figure I.

- Pipeline Alignments:

At this stage of the Project there are two potential Pipeline Alignments. They differ in alignment between Wandoan and Chinchilla. Pipeline Alignment Route 1 follows a route along the rail and road reserve through Miles, whilst Pipeline Alignment Route 2 cuts cross-country between Wandoan and Miles. Where only one pipeline is likely to impact upon a site the specific pipeline alignment will be referred to. If the site is likely to be impacted by both, then it will refer simply to the 'Pipeline'.

- Pipeline:

Sites directly within the chosen pipeline corridor will experience high, direct impact due to the destructive nature of pipeline construction and heavy traffic associated with construction.

- Pipeline vicinity:

Sites within the immediate vicinity of the pipeline have the potential to be impacted on should the pipeline route need to deviate during construction works, and due to heavy traffic associated with construction.

The following table details the level and type of impact.

Table 7: Impact Assessment

Site #	Site Name	Site Significance	Potential Impact	Impacted By	Type of Impact	Level of Impact
HAS-01	Railway Corridor	Local	The Railway Corridor is sited along the proposed pipeline alignments, principally Pipeline alignment route 1. Features most at risk are the railway crossings and fence lines. It is at particular risk of cumulative impact	Pipeline	Direct	Moderate
HAS-02	Warra Heritage Precinct	Local	The Warra Heritage Precinct is sited within the urban area of Warra and will be within the vicinity of the pipeline. Impact on the subway close to the railway should be avoided.	Pipeline	Direct	Moderate
HAS-03	Leichhardt Camp (Warra)	State	The Leichhardt Camp (Warra) is sited within the urban area of Warra and will be within the vicinity of the pipeline.	Pipeline	Indirect	Low
HAS-04	Chinchilla Heritage Precinct	Local	The Chinchilla Heritage Precinct is sited within the urban area of Chinchilla and will be within the vicinity of the pipeline.	Pipeline	Indirect	Low
HAS-05	Telegraph Alignment (Nathan Road)	Local	The Telegraph Alignment is within the Pipeline route along Nathan Road, and will be directly impacted by the Project.	Pipeline	Direct	High
HAS-06	Survey Tree (Nathan Road)	Local	The Survey Tree is within the Pipeline route along Nathan Road, and will be directly impacted by the Project.	Pipeline	Direct	High
HAS-07	Survey Tree	Local	The Survey Tree is within the Pipeline route along Nathan Road, and will be directly impacted by the Project.	Pipeline	Direct	High

Site #	Site Name	Site Significance	Potential Impact	Impacted By	Type of Impact	Level of Impact
HAS-08	Malara Homestead	State	Malara Homestead is located on the edge of the inundation area. The inundation is unlikely to impact any of the site components identified in this report, although the viability of the property may be impacted.	Inundation Area	Indirect	Moderate
HAS-09	Corduroy Crossing	Local	The Corduroy Crossing is likely to be fully inundated by the Project, and will not remain operational	Inundation Area	Direct	High
HAS-10	Barkla Camp	Local	The Barkla Camp is likely to be impacted upon by a rise in the water level along Palm Tree Creek	Inundation Area	Direct	High
HAS-11	Binghi Slab Hut	Local	The Binghi Slab Hut is likely to be impacted upon by the rise in water level along the Dawson River.	Inundation Area	Direct	High
HAS-12	Spring Creek Homestead	State	Spring Creek Homestead is unlikely to be impacted upon by the Project due to the protection offered by the gorge along the adjoining section of Spring Creek	Inundation Area	Indirect	Low
HAS-13	Taroom Aboriginal Reserve	State	Elements of Taroom Aboriginal Mission may be affected by the Nathan Dam inundation. The windmill and bore close to Slippery Hole waterhole will be submerged, as will the agricultural land which has long been associated with the Mission. Most importantly, elements of the lower cemetery are in danger of inundation.	Inundation Area	Direct	High
HAS-14	Inscribed Rock (The	Local	Due to it's elevated position, the Inscribed	Inundation	None	None

Site #	Site Name	Site Significance	Potential Impact	Impacted By	Type of Impact	Level of Impact
	Glebe)		Rock is unlikely to be impacted by the inundation of the Dawson River	Area		
HAS-15	Baxter's Hut	Local	Baxter's Hut is unlikely to be impacted by the inundation of Cockatoo Creek, although it is likely the inundation may make it inaccessible.	Inundation Area	Indirect	Low
HAS-16	Inscribed Rock (Moorang)	Local	The Inscribed Rock will be inundated by the rise in water levels along Cockatoo Creek.	Inundation Area	Direct	High
HAS-17	Warra Mine	Local	Warra Mine may be directly impacted by the Pipeline due to its proximity to the railway; however, little physical evidence of the mine remains above ground.	Pipeline	Direct	Low
HAS-18	Site of Barkla's Bridge	Local	The site of Barkla's Bridge is likely to be made inaccessible by the inundation along the Dawson River, and any surviving archaeological evidence is likely to be eroded away.	Inundation Area	Direct	High
HAS-19	Abandoned Homesteads Site	Local	The Abandoned Homesteads are likely to be impacted by the Pipeline Alignment Route 1, and a buffer zone should be implemented.	Pipeline Alignment Route 1	Direct	High
HAS-20	Gurulmundi Township Site	State	The township of Gurulmundi is within the vicinity of the Pipeline Alignment Route 1, and should be avoided.	Pipeline Alignment Route 1	Indirect	Low
HAS-21	Survey Trees (Leichhardt Highway)	Local	The Survey Trees are within the Pipeline route along the Leichhardt Highway, and will be directly impacted by the Project.	Pipeline Alignment Route 1	Direct	High
HAS-22	Old Leichhardt	Local	The Old Leichhardt Highway Crossing and	Pipeline	Indirect	Moderate

Site #	Site Name	Site Significance	Potential Impact	Impacted By	Type of Impact	Level of Impact
	Highway and Crossing		Alignments are within the vicinity of the Pipeline Alignment Route 1 and a buffer zone should be established around the site.	Alignment Route 1		
HAS-23	The Glebe Homestead	State	The Glebe Homestead and associated structures will be impacted by the inundation of Nathan Dam, both along the Dawson River and Cockatoo Creek.	Inundation Area	Direct	High
HAS-24	Leichhardt Tree, Taroom	State	The Leichhardt Tree is sited within the urban area of Taroom and will not be impacted by the Project	Inundation Area	None	None
HAS-25	Chinchilla 'Digger' Statue	State	The Chinchilla 'Digger' Statue is sited within the urban area of Chinchilla and it is unlikely that it will be impacted by the Pipeline	Pipeline	Indirect	Moderate
HAS-26	Cactoblastis Memorial Hall	State	The Cactoblastis Memorial Hall is located in Boonarga and is within the vicinity of the Pipeline. A buffer zone should be implemented.	Pipeline	Indirect	Moderate
HAS-27	Dalby War Memorial and Gates	State	The Dalby War Memorial and Gates is sited within the urban area of Dalby and it is unlikely that it will be impacted by the Pipeline.	Pipeline	Indirect	Moderate
HAS-28	St John's Anglican Church	State	St John's Anglican Church is sited within the urban area of Dalby and may be within the vicinity the Pipeline. A buffer zone should be implemented.	Pipeline	Indirect	Moderate
HAS-29	Former Dalby Town Council Chambers	State	The Former Dalby Town Council Chambers	Pipeline	Indirect	Moderate

Site #	Site Name	Site Significance	Potential Impact	Impacted By	Type of Impact	Level of Impact
	and Offices		and Offices are situated within the urban area of Dalby and it is unlikely that it will be impacted by the Pipeline.			
HAS-30	Dalby Swimming Pool Complex	Local	The Dalby Swimming Pool Complex is sited within the urban area of Dalby and it is unlikely that it will be impacted by the Pipeline.	Pipeline	Indirect	Moderate
HAS-31	Taroom Cemetery	Local	Taroom Cemetery is sited within the urban area of Taroom and will not be impacted by the Project	Inundation Area	None	None
HAS-32	Wandoan Cemetery	Local	Wandoan Cemetery is sited within the vicinity of the Pipeline. A buffer zone should be implemented.	Pipeline	Indirect	Low
HAS-33	Downfall Creek Cemetery	Local	Downfall Creek Cemetery is sited within the vicinity of the Pipeline. A buffer zone should be implemented.	Pipeline	Indirect	Low
HAS-34	Brigalow - Canaga Creek Road Cemetery	Local	Brigalow - Canaga Creek Road Cemetery is not within the vicinity of the Pipeline and will not be impacted by the project.	Pipeline	None	None
HAS-35	Chinchilla Cemetery	Local	Chinchilla Cemetery is sited within the vicinity of the Pipeline. A buffer zone should be implemented.	Pipeline	Indirect	Low
HAS-36	Cemetery Road, Chinchilla	Local	Cemetery Road Cemetery, Chinchilla is sited within the vicinity of the Pipeline. A buffer zone should be implemented.	Pipeline	Indirect	Low

Site #	Site Name	Site Significance	Potential Impact	Impacted By	Type of Impact	Level of Impact
HAS-37	Baking Board Cemetery	Local	Baking Board Cemetery is sited within the vicinity of the Pipeline Alignment Route 1. A buffer zone should be implemented.	Pipeline Alignment Route 1	Indirect	Low
HAS-38	Dogwood Creek Cemetery, Miles	Local	Dogwood Creek Cemetery, Miles is sited within the vicinity of the Pipeline Alignment Route 1. A buffer zone should be implemented.	Pipeline Alignment Route 1	Indirect	Low
HAS-39	Cnr. Racecourse and Hookwood Roads Cemetery, Miles	Local	Cnr. Racecourse and Hookwood Roads Cemetery, Miles is not within the vicinity of the Pipeline Alignment Route 1 and will not be impacted by the project.	Pipeline Alignment Route 1	None	None
HAS-40	Hookwood Road Cemetery, Miles	Local	Hookwood Road Cemetery, Miles is not within the vicinity of the Pipeline Alignment Route 1 and will not be impacted by the project.	Pipeline Alignment Route 1	None	None
HAS-41	Macalister Cemetery	Local	Macalister Cemetery is not within the vicinity of the Pipeline and will not be impacted by the project.	Pipeline	None	None
HAS-42	Warra Cemetery	Local	Chinchilla Cemetery is sited within the vicinity of the Pipeline. A buffer zone should be implemented.	Pipeline	Indirect	Low
HAS-43	St Columba's Convent School	Local	St Columba's Convent School situated within the urban area of Dalby. It is no longer extant.	Pipeline	None	None

Chapter 9 General Recommendations

This chapter provides general recommendations to manage identified areas which may be impacted by the proposed Nathan Dam and pipeline Project, along with general mitigation measures for potential impact on unknown sites within the study area. The following chapter gives specific recommendations for managing impact on the individual sites.

9.1 Recommendation 1 – Avoid Cultural Heritage

The best form of cultural heritage management is avoiding any impact on sites and places of heritage significance. It is recommended that the design of the project, including the inundation area of the dam and the route of the pipeline (either route option) take into account each of the heritage sites and places discussed in this report, and, where possible, avoid impact. Sites of State significance in particular should be retained.

9.2 Recommendation 2 – State Significant Sites

State significant sites are protected by the *Queensland Heritage Act 1992* and should be avoided in all cases. All staff should be educated as to where these sites are and what they consist of so that full avoidance of these sites is maintained.

Should any works need to be conducted in these areas they will be governed by Part 6 of the *Queensland Heritage Act* and a qualified heritage consultant should be engaged to advise on mitigation measures (see Chapter 7 – Obligations for further detail). Any works which may potentially disturb these sites will require a project specific Conservation Management Plan which considers available options for the project to mitigate impacts on cultural heritage significance during all phases of the project and includes approval from the EPA through the IDAS.

If a component of the place is to be unavoidably affected by the project then an Archival Recording of these elements should be considered. An Archival Recording consists of a brief history of the site, photographic recording of the site, measured drawings, physical analysis and significance assessment. The New South Wales Heritage Office *How to Prepare Archival Records of Heritage Items* represents current best practice guidelines for an Archival Recording.

9.3 Recommendation 3 – Notification of Archaeological Places

State significant archaeological places require special consideration under the provisions of the *Queensland Heritage Act 1992*, as they represent a heritage asset that *has potential to contain an archaeological artefact that is an important source of information about Queensland's history*. Most importantly, notification to the Chief Executive of the EPA, confirming the location of these sites, is required by the Project under the provisions of Section 89-91 of the *Queensland Heritage Act 1992*.

Additionally, protection of these sites must be ensured by the project and staff made aware of this obligation (as per Recommendation 11). The following table identifies the Archaeological Places identified during this investigation:

Table 8: State Significant Archaeological Sites identified in this report

Site	Name
HAS-12	Spring Creek Homestead Site
HAS-13	Taroom Aboriginal Reserve
HAS-20	Gurulmundi Township Site

****Please note that it is in the interests of the protection of these sites that their location is kept confidential to the public.***

9.4 Recommendation 4 – Locally Significant Sites

Local sites of heritage significance are important to the local community because they reflect themes, events or people that played an important role in the history of the area. Sites associated with historical figures may retain further significance if descendants still live in or close to the area. These sites should be avoided following Recommendation 1. If avoidance is unachievable, any development on or around the site may require a project specific Conservation Management Plan or heritage brief. Depending on the level of significance, a site might also require an Archival Recording.

9.5 Recommendation 5 – Places of Historic Interest

Places of Historical Interest provide indicators of historical activity occurring within an area and generally ground-truth the results of contextual histories. Places of Historical Interest do not warrant listing on a local, State or national heritage register and as such, no heritage management is required for these sites and they are not required to be retained or managed. Nonetheless, Recommendation 1 (avoidance) should be followed wherever possible.

9.6 Recommendation 6 – Protection of Heritage in Project Ownership

Places in this report that are located on land owned by the Project, be they of State, local or potential heritage significance, should be protected and managed by Sunwater in line with the Burra Charter, which represents best practice heritage management principles. Sunwater should seek to educate its staff and contractors on where and what items listed in chapters 3 and 4 are located on Project-owned land. The recommendations noted above continue to apply in the case of Project-owned land.

If Sunwater (or any other relevant Government agency) is considering purchasing new land for the purpose of the Project, a heritage assessment should be carried out as part of the Due Diligence process, to ensure that any heritage obligations are known from the outset.

9.7 Recommendation 7 – Further Assessment

This report has completed the first stage of assessment of the location and management of historic cultural heritage sites for the Nathan Dam and Pipeline Project.

If progressed, further research and a field survey is required to assess Pipeline Alignment Option 2 (deviation), which extends south of Wandoan cross-country to Chinchilla. There is potential for a range of cultural heritage sites likely to be present within the proposed pipeline corridor.

This recommendation also suggests the need for further assessment if any details of the dam and pipeline route are altered in any way.

9.8 Recommendation 8 – Unexpected Finds

Though it is possible places of historic cultural heritage may yet be unexpectedly discovered in this vicinity of the proposed inundation area, the most likely area in which unexpected finds may

occur is along both pipeline route options. The study area (broadly speaking) that constitutes the pipeline corridors has a high potential for historic cultural heritage, particularly in the vicinity of small townships that historically dotted the road and rail networks in the region, old road alignments and survey trees.

These sites may constitute heritage places or archaeological places. In both cases further assessment is required. However, special provisions apply to archaeological places and these must be considered in light of the archaeological provisions of the *Queensland Heritage Act 1992* discussed in Chapter 7.

Unexpected cultural heritage material or sites may be managed using the following measures:

Table 9: Measures to manage unexpected finds

STOP WORK	Immediately
ESTABLISH	A buffer zone of 20 metres around the site
CONTACT	A qualified heritage professional and/or archaeologist as soon as possible
NOTIFY	<p>The heritage professional/archaeologist should notify:</p> <p>the Site Manager/Sunwater;</p> <p>In the case of an archaeological discovery, the EPA should also be notified</p>
ASSESS	<p>The heritage professional/archaeologist should assess the significance of the resource and, depending on the nature of the find, recommend a course of action, such as:-</p> <p>Protect and avoid</p> <p>Investigate, record and remove</p> <p>Excavate, record and preserve</p>
RECOMMENCE	Work once the EPA has approved the course of action

9.9 Recommendation 9 – Archaeologist “On-Call”

It is recommended that a heritage professional and/or historic archaeologist be appointed during construction phases of the project, so that a call-out can be made as soon as potential archaeological material is noted.

9.10 Recommendation 10 – Community Consultation

The project should seek to engage with the local community at all times with regards to their cultural heritage. The project should educate its staff as to why certain items or sites are important to the local community and why they are not to be disturbed or damaged. It should also seek to actively involve the community at all times when matters of historic cultural heritage are involved.

9.11 Recommendation 11 – Training Guidelines

This study recommends that diligence should be practiced during works conducted within the Nathan Dam project area, particularly during any clearing or development phases associated with initial preparation of the project area. This diligence should include specifically instructing crews of their obligations to look for cultural heritage material, and integrating educational leaflets at site training and Workplace Health and Safety meetings. These leaflets should inform the workers what archaeological material and cultural heritage sites may look like and give them clear instructions on what to do if they find any cultural heritage sites.

These leaflets should also outline why items or sites are important to the local community. Project employees and contractors should be encouraged to take an active part in helping to protect the historic cultural heritage sites of the area they will be working in, to better foster a cooperative and mutually respectful relationship between Sunwater and the local community and landholders.

9.12 Recommendation 12 – Management of Cumulative Impact

Cumulative impact can occur around the proposed development site. For example, while a particular project might impact a specific area (in the case of a pipeline), there may be a cumulative impact through associated works (site buildings, heavy vehicle access etc).

There is not expected to be any cumulative impact in relation to the dam inundation area. Cumulative impact is expected, however, along the pipeline corridor (whichever option is selected). Therefore all known sites identified along any of the proposed pipeline corridors, or sites not yet identified (see Recommendation 9.5) are likely to be subject to some form of cumulative impact.

The project should consider cumulative impacts on heritage sites and take appropriate measures wherever possible to avoid impacts. Site specific recommendations detailed in the following chapter should be implemented to ensure that potential cumulative impact to these sites is managed appropriately.

9.13 Recommendation 13 – Regular Monitoring

The Project should undertake a bi-annual survey of all heritage sites and places identified on Project owned land, or on land directly affected by current operations, to ensure that the general recommendations outlined above and those for individual heritage items are being followed and having a positive effect. Any damage to items can be catalogued and actions taken to ensure that the process that caused the damage is not repeated and that training material for staff can be updated with current information. The Nathan Dam and Pipeline Project should develop forms and databases; similar to those it has for Indigenous heritage, to monitor the condition, management and protection of the heritage sites.

9.14 Recommendation 14 – Variation of Project Design

Any variation to the project design outlined in this report, particularly in the vicinity of heritage sites and places, will require reassessment.

10.0 Site Specific Recommendations

This section details specific recommendations for the management of individual sites within the Nathan Dam and Pipeline Project area. This chapter should be read in conjunction with the previous chapter (9.0 – General Recommendations). The site specific recommendations are contained in Table 10.1 on the following pages.

Table 10: Site Specific Recommendations

Site #	Site Name	Site Significance	Type of Impact	Level of Impact	Mitigation / recommendation
HAS-1	Railway Corridor	Local	Direct	Moderate	<p>Avoidance of sites of Local significance should be an immediate priority of the Project.</p> <p>If any works associated with the pipeline construction are likely to impact on sites within the railway corridor (such as buildings, fences and bridges), a project-specific Conservation Management Plan should be prepared by suitably qualified professionals. This Plan should consider options for the Project to mitigate specific impacts on items of cultural heritage significance within the corridor and include liaison with, and approval of, relevant stakeholders, including Queensland Rail.</p>
HAS-2	Warra Heritage Precinct	Local	Direct	Moderate	<p>Avoidance of sites of Local significance should be an immediate priority of the Project.</p> <p>If it is necessary to conduct works within 20m of sites within the Precinct, measures such as protective fencing and staff awareness training should be undertaken</p> <p>If any works associated with the pipeline construction are likely to impact on in situ sites within the Warra Heritage Precinct (such as buildings and the 1912 subway), a project-specific Conservation Management Plan should be prepared by suitably qualified professionals. This Plan should consider options for the Project to mitigate specific impacts on items and of cultural heritage significance and include liaison with, and approval of, relevant stakeholders, particularly the local community.</p>
HAS-3	Leichhardt Camp (Warra)	State	Indirect	Low	<p>Avoidance of sites of State significance should be an immediate priority of the Project.</p> <p>If it is necessary to conduct works within 20m of the site, measures such as protective fencing and staff awareness training should be undertaken.</p>

Site #	Site Name	Site Significance	Type of Impact	Level of Impact	Mitigation / recommendation
HAS-4	Chinchilla Heritage Precinct	Local	Indirect	Low	<p>Avoidance of sites of Local significance should be an immediate priority of the Project.</p> <p>It is considered unlikely that identified sites within the Chinchilla Heritage Precinct will be impacted by the Project. Should any works within the Precinct be required, a Conservation Management Plan for the entire Precinct should be completed to manage any potential impact and include liaison with, and approval of, relevant stakeholders, including the EPA, Queensland Rail and the local community.</p> <p>If it is necessary to conduct works within 20m of a site located within the Precinct, measures such as protective fencing and staff awareness training should be undertaken.</p>
HAS-5	Telegraph Alignment (Nathan Road)	Local	Direct	High	<p>Avoidance of sites of Local significance should be an immediate priority of the Project.</p> <p>If it is necessary to conduct works within 20m of the remaining telegraph poles that mark the alignment (and any other poles discovered during works), measures such as protective fencing and staff awareness training should be undertaken to protect the poles.</p> <p>If works must be carried out that directly affect the poles, then a basic level of photographic recording should be conducted that captures the nature of the item and its context within the cultural environment and within the study area prior to works commencing.</p>
HAS-6	Survey Tree (Nathan Road)	Local	Direct	High	<p>Avoidance of sites of Local significance should be an immediate priority of the Project.</p> <p>If it is necessary to conduct works within 20m of the site, measures such as</p>

Site #	Site Name	Site Significance	Type of Impact	Level of Impact	Mitigation / recommendation
					protective fencing and staff awareness training should be undertaken
					If works must be carried out that directly affect the survey tree, then a basic level of photographic recording should be conducted that captures the nature of the item and its context within the cultural environment and within the study area prior to works commencing.
HAS-7	Survey Tree (Nathan Road)	Local	Direct	High	<p>Avoidance of sites of Local significance should be an immediate priority of the Project.</p> <p>If it is necessary to conduct works within 20m of the site, measures such as protective fencing and staff awareness training should be undertaken</p> <p>If works must be carried out that directly affect the survey tree, then a basic level of photographic recording should be conducted that captures the nature of the item and its context within the cultural environment and within the study area prior to works commencing.</p>
HAS-8	Malara Homestead	State	Indirect	Moderate	<p>Avoidance of sites of State significance should be an immediate priority of the Project.</p> <p>If it is necessary to conduct works within 20m of the site, measures such as protective fencing and staff awareness training should be undertaken</p>
HAS-9	Corduroy Crossing	Local	Direct	High	<p>This site will be subject to inundation if the current plan for the proposed dam proceeds.</p> <p>A basic level of photographic recording should be conducted that captures the nature of the item and its context within the cultural environment and within the study area prior to inundation of the dam commencing.</p>
HAS-10	Barkla Camp	Local	Direct	High	This site will be subject to inundation if the current plan for the proposed dam

Site #	Site Name			Site Significance	Type of Impact	Level of Impact	Mitigation / recommendation
							proceeds.
							A basic level of photographic recording should be conducted that captures the nature of the item and its context within the cultural environment and within the study area prior to inundation of the dam commencing.
HAS-11	Binghi Hut	Slab	Local		Direct	High	<p>This site will be subject to inundation if the current plan for the proposed dam proceeds.</p> <p>A full Archival Recording should be carried out for the Hut. This Recording should be conducted by a suitably qualified professional and follow the New South Wales Heritage Office guidelines for an Archival Recording.</p> <p>Although relocation is not generally prescribed from a heritage perspective, the hut might warrant relocation away from the inundation area, but preferably remaining on the property.</p>
HAS-12	Spring Creek Homestead		State		Indirect	Low	<p>Avoidance of sites of State significance should be an immediate priority of the Project.</p> <p>If it is necessary to conduct works within 20m of the site, measures such as protective fencing and staff awareness training should be undertaken</p> <p>This site has archaeological potential. If any alterations to the Project details occur that directly impact the site, any works on the site should be monitored by a qualified archaeologist. An Archival Recording may also be necessary, depending on the nature of works proposed.</p>
HAS-13	Taroom Aboriginal Reserve		State		Direct	High	<p>Avoidance of sites of State significance should be an immediate priority of the Project.</p> <p>If it is necessary to conduct works within 20m of the site, measures such as</p>

Site #	Site Name	Site Significance	Type of Impact	Level of Impact	Mitigation / recommendation
					<p>protective fencing and staff awareness training should be undertaken.</p> <p>The windmill site located by Slippery Hole Waterhole, and the Lower Cemetery, may be directly affected by the proposed inundation area. It was not possible to accurately gauge whether this is the case based on the mapping information currently supplied. If at all inundated, further advice including the preparation of a project specific Conservation Management Plan for the site will be required.</p> <p>Consultation should be conducted with the landowners and, due to the possible impact on the Lower Cemetery by the inundation; consultation also will need to be undertaken with the relevant Aboriginal communities.</p>
HAS-I4	Inscribed Rock (The Glebe)	Local	None	None	This site will not be affected by the Project and therefore does not require any mitigation.
HAS-I5	Baxter's Hut	Local	Indirect	Low	<p>Avoidance of sites of Local significance should be an immediate priority of the Project.</p> <p>If it is necessary to conduct works within 20m of the site, measures such as protective fencing and staff awareness training should be undertaken.</p>
HAS-I6	Inscribed Rock (Moorang)	Local	Direct	High	<p>This site will be subject to inundation if the current plan for the proposed dam proceeds.</p> <p>A basic level of photographic recording should be conducted that captures the nature of the item and its context within the cultural environment and within the study area prior to inundation of the dam commencing.</p>
HAS-I7	Warra Mine	State	Direct	Low	<p>Avoidance of sites of Local significance should be an immediate priority of the Project.</p> <p>All surface remains of the former mine are no longer extant. However, particular</p>

Site #	Site Name	Site Significance	Type of Impact	Level of Impact	Mitigation / recommendation
					concern may need to be given to the site if any works are undertaken on or near it, due to the possibility of underground mine shafts in the vicinity. Further advice from mining specialists may need to be sought in this regard.
HAS-18	Site of Barkla's Bridge	Local	Direct	High	<p>This site will be subject to inundation if the current plan for the proposed dam proceeds.</p> <p>A basic level of photographic recording should be conducted that captures the nature of the item and its context within the cultural environment and within the study area prior to inundation of the dam commencing</p>
HAS-19	Abandoned Homestead Site	Local	Direct	High	<p>This site will be directly affected by the Proposed pipeline Route Option I.</p> <p>Avoidance of sites of Local significance should be an immediate priority of the Project.</p> <p>Should the Homestead site be unavoidably impacted, a full Archival Recording should be carried out for the Hut. This Recording should be conducted by a suitably qualified professional and follow the New South Wales Heritage Office guidelines for an Archival Recording.</p>
HAS-20	Gurulmundi Township Site	State	Indirect	Low	<p>Avoidance of sites of State significance should be an immediate priority of the Project.</p> <p>This site has archaeological potential. If any alterations to the Project details occur that directly impact the site, any works on the site should be monitored by a qualified archaeologist.</p> <p>If the community hall is impacted, further assessment, including a basic level of photographic recording may also be necessary, depending on the nature of works proposed.</p>

Site #	Site Name	Site Significance	Type of Impact	Level of Impact	Mitigation / recommendation
HAS-21	Survey Trees (Leichhardt Highway)	Local	Direct	High	<p>Avoidance of sites of Local significance should be an immediate priority of the Project.</p> <p>If it is necessary to conduct works within 20m of the site, measures such as protective fencing and staff awareness training should be undertaken</p> <p>If works must be carried out that directly affect any of the survey trees, then a basic level of photographic recording should be conducted that captures the nature of the item and its context within the cultural environment and within the study area prior to works commencing.</p>
HAS-22	Old Leichhardt Highway and Crossing	Local	Indirect	Moderate	<p>Avoidance of sites of Local significance should be an immediate priority of the Project.</p> <p>If it is necessary to conduct works within 20m of the site, measures such as protective fencing and staff awareness training should be undertaken</p> <p>If works must be carried out that directly affect any items associated with the Old Leichhardt Highway and Crossing, then a basic level of photographic recording should be conducted that captures the nature of the item and its context within the cultural environment and within the study area prior to works commencing.</p>
HAS-23	The Glebe Homestead	State	Direct	High	<p>This site will be subject to inundation if the current plan for the proposed dam proceeds.</p> <p>The Glebe Homestead is still a functioning homestead site and has been continuously occupied since 1901. The property is currently owned by NRW and the homestead requires some maintenance work.</p> <p>A project-specific Conservation Management Plan should be prepared by suitably qualified professionals. This Plan should consider options for the Project to mitigate specific impacts on items and of cultural heritage significance and include liaison with, and approval of, relevant stakeholders, particularly the local</p>

Site #	Site Name	Site Significance	Type of Impact	Level of Impact	Mitigation / recommendation
					community. Although relocation is not generally prescribed from a heritage perspective, the Glebe Homestead, outbuildings and contents of the home and outbuildings that have cultural heritage value should be moved to a suitable location that provides an opportunity for continued use. Additionally, a full Archival Recording should be carried out for the Homestead site, which includes all associated structures. This Recording should be conducted by a suitably qualified heritage professional and follow the New South Wales Heritage Office guidelines for an Archival Recording.
HAS-24	Leichhardt Tree, Taroom	State	None	None	This site will not be affected by the Project and therefore does not require any mitigation. If it is necessary to conduct works within 20m of the site, measures such as protective fencing and staff awareness training should be undertaken.
HAS-25	Chinchilla 'Digger' Statue	State	Indirect	Moderate	Avoidance of sites of State significance should be an immediate priority of the Project. If it is necessary to conduct works within 20m of the site, measures such as protective fencing and staff awareness training should be undertaken.
HAS-26	Cactoblastis Memorial Hall	State	Indirect	Moderate	Avoidance of sites of State significance should be an immediate priority of the Project. If it is necessary to conduct works within 20m of the site, measures such as protective fencing and staff awareness training should be undertaken.
HAS-27	Dalby War Memorial and Gates	State	Indirect	Moderate	Avoidance of sites of State significance should be an immediate priority of the Project. If it is necessary to conduct works within 20m of the site, measures such as

Site #	Site Name	Site Significance	Type of Impact	Level of Impact	Mitigation / recommendation
					protective fencing and staff awareness training should be undertaken.
HAS-28	St Johns Anglican Church	State	Indirect	Moderate	<p>Avoidance of sites of State significance should be an immediate priority of the Project.</p> <p>If it is necessary to conduct works within 20m of the site, measures such as protective fencing and staff awareness training should be undertaken.</p>
HAS-29	Former Dalby Town Council Chambers and Offices	State	Indirect	Moderate	<p>Avoidance of sites of State significance should be an immediate priority of the Project.</p> <p>If it is necessary to conduct works within 20m of the site, measures such as protective fencing and staff awareness training should be undertaken.</p>
HAS-30	Dalby Swimming Pool complex	Local	Indirect	Moderate	<p>Avoidance of sites of Local significance should be an immediate priority of the Project.</p> <p>If it is necessary to conduct works within 20m of the site, measures such as protective fencing and staff awareness training should be undertaken.</p>
HAS-31	Taroom Cemetery	Local	None	None	This site will not be affected by the Project and therefore does not require any mitigation.
HAS-32	Wandoan Cemetery	Local	Indirect	Low	<p>Avoidance of sites of Local significance should be an immediate priority of the Project.</p> <p>Under the local Planning Scheme, a minimum 50m separation distance must be maintained between the cemetery and any works.</p>
HAS-33	Downfall Creek Cemetery	Local	Indirect	Low	<p>Avoidance of sites of Local significance should be an immediate priority of the Project.</p> <p>Under the local Planning Scheme, a minimum 50m separation distance must be</p>

Site #	Site Name	Site Significance	Type of Impact	Level of Impact	Mitigation / recommendation
					maintained between the cemetery and any works.
HAS-34	Brigalow-Canaga Creek Road Cemetery	Local	None	None	This site will not be affected by the Project and therefore does not require any mitigation.
HAS-35	Chinchilla Cemetery	Local	Indirect	Low	Avoidance of sites of Local significance should be an immediate priority of the Project. Under the local Planning Scheme, a minimum 50m separation distance must be maintained between the cemetery and any works.
HAS-36	Cemetery, Cemetery Road, Chinchilla	Local	Indirect	Low	Avoidance of sites of Local significance should be an immediate priority of the Project. Under the local Planning Scheme, a minimum 50m separation distance must be maintained between the cemetery and any works.
HAS-37	Baking Board Cemetery	Local	Indirect	Low	Avoidance of sites of Local significance should be an immediate priority of the Project. Under the local Planning Scheme, a minimum 50m separation distance must be maintained between the cemetery and any works.
HAS-38	Dogwood Creek Cemetery, Miles	Local	Indirect	Low	Avoidance of sites of Local significance should be an immediate priority of the Project. Under the local Planning Scheme, a minimum 50m separation distance must be maintained between the cemetery and any works.
HAS-39	Cemetery, cnr	Local	None	None	This site will not be affected by the Project and therefore does not require any

Site #	Site Name	Site Significance	Type of Impact	Level of Impact	Mitigation / recommendation
	Racecourse and Hookwood Roads, Miles				mitigation.
HAS-40	Hookwood Road Cemetery, Miles	Local	None	None	This site will not be affected by the Project and therefore does not require any mitigation.
HAS-41	Macalister Cemetery	Local	None	None	This site will not be affected by the Project and therefore does not require any mitigation.
HAS-42	Warra Cemetery	Local	Indirect	Low	Avoidance of sites of Local significance should be an immediate priority of the Project. Under the local Planning Scheme, a minimum 50m separation distance must be maintained between the cemetery and any works.
HAS-43	St Columba's Convent School	Local	None	None	This site will not be affected by the Project and therefore does not require any mitigation.

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