

Broken Hill

National Heritage Values Study



prepared for

Broken Hill City Council

and

The Department of Environment

by

Paul Davies Architects and Heritage Consultants

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PREAMBLE

"The special nature of a planned landscape lies not so much in individual elements but in their combination. It is less about the design of individual buildings (more the purview of architectural historians) or their construction (engineering and building) but is rather about their spatial interrelationships in making something special larger than the mere sum of its parts. The spaces and connections between built structures are of just as much importance as the structures themselves."

'A Method for Assessing the Heritage of Urban Environments: Australian Study of National Heritage Values.'

Freestone, Marsden, Garnaut - March 2008, International Journal of Heritage Studies. Vol 14 No 2.

Broken Hill is a place of National Heritage Significance where the 'spatial interrelationships' of the urban form of the city, the mining landscape and the desert create something special that is much larger than any of its component elements even though some of those elements are of high individual significance.

It is the totality of the City including its remote setting within a desert that is of National heritage value. It is the impressive and readily identifiable in combination with the detail, the minutia and the everyday elements that creates the National value that has been recognised in the National listing.

Theoretically, the National listing makes sense, is clearly articulated in the listing citation and captures the essential National values of the City. Practically, how that is managed beyond specific and identifiable elements of high value is complex as the City comprises thousands of individual property ownerships, local council and state agency ownership and management, Crown Land (alienated and unalienated) and mining leases, all of which form part of the spatial landscape that gives the City of Broken Hill cultural meaning.

This study looks to explore the nature of significance of the whole and the detail and how the various forms of significance can be practically managed and protected using the existing planning frameworks that are available.

In undertaking research for this study, a number of local residents observed¹ that when the National listing was announced that it was made clear that it would not impose greater constraints or controls on the local community. It is difficult to imagine that the National listing could be effective without some change in the way the City is understood and how proposals are considered as the listing affects every aspect of the City.

¹ Conversations that author had over the past three years working at Broken Hill.

This contrasts with the established understanding of heritage listings (both item and precinct²) where specific places and groups of places are mapped usually with quite specific controls on how to protect those places often with guidelines on how to undertake future works.

Most of the Broken Hill Council area, apart from the over-arching National heritage listing, is not heritage listed as heritage items or heritage precincts. Consequently, unless a place is an individual item or within a heritage precinct there are no heritage controls. As a result places that are part of the National heritage listing do not have any form of heritage control or management.

This study looks to establish a framework for managing National values that does not place unreasonable or undue controls on the city but which allows the National values to be managed and protected at all levels.

A key aspect of the National listing of the City has been the kudos gained as being the first (and only) Nationally listed City in Australia. This has been seen in tourism promotion and in material produced by the Council. This study has not specifically considered the role of tourism both general and cultural in National values as tourism arises from the recognition of heritage value rather than creating that value. However, as Broken Hill is changing from a mining city and is redefining its role, tourism and in particular cultural tourism is likely to be a major element in the City's future and a more nuanced understanding of the broad heritage and cultural values of the City will be an important element in securing a sound future for the place.

This study has set out that the National values of the City are complex and broad and include what is often over-looked and that it is the completeness of the place, seen in most aspects of City life, that supports National values. To ensure that these values are not lost, the study makes recommendations about reviewing and expanding the range and type of controls that currently operate to reflect National values.

² The current legislative frameworks for heritage listings recognises both item and precinct listing at Local, State and National levels. Heritage items can be gazetted in LEP, State and National Legislation. Heritage Precincts (or Heritage Conservation Areas) can be gazetted in LEP and State legislation with a different set of controls and guidelines that are not as onerous as an item listing. Precincts are recognised in National legislation but are not distinguished from item listings.

1.0 INTRODUCTION

The National Values study brief has set out a range of matters to be considered in looking at how the National heritage listing of Broken Hill can be understood in both the strategic and day-to-day management of the cultural heritage assets of the city.

Broken Hill was gazetted as a National heritage place under the Environment Protection and Biodiversity Conservation Act 1999 in 2015 and is the first and only city to be included on the register.

The aims of the study as set out in the study application are:

The project aim is to clearly articulate the National Heritage values at Broken Hill by identifying and explaining the value of key themes, places and associations and then to develop a methodology, guidelines/controls and protocols to maintain and conserve the heritage values of the city. The outcome of the project will be to:

- i. develop the National heritage themes with practical explanations and guidance on how they apply to all aspects of Broken Hill
- ii. provide an analysis and schedule of places of specific National Heritage value within the listing (noting the listing is the whole of the Broken Hill Council area)
- iii. provide guidelines for a range of activities within the council area that protect and enhance National heritage values, these would (in time) be published guides for residents, applicants and for use in assessment of application that establish key considerations if works are proposed within the city
- iv. establish a protocol for how to assess National Heritage values as part of the overall assessment process of proposals and strategic documents within the City Council area. The protocol will include assessment checklists, guidance, how and when to refer applications for National assessment etc.

The study falls into several parts:

- this report that provides the background and explores National Heritage values
- production of information and protocols to assist government, council and owners in how the National values apply.

The National heritage listing citation is articulate and presents a well-thought-out and clear set of values that cover the broad range of areas for which the city is of National significance. Some of these values are physical: the 'place' and its physical evidence - the environmental, landscape and built elements of the city and its setting. Other values are more ephemeral, for example: how Broken Hill has impacted the economic growth of Australia.

The Broken Hill National heritage listing is also the first and only listing for a place as complex as a City where there is no common ownership or management of the elements that make up the place and where the place comprises many different ownerships and management systems. This is in contrast to most Nationally listed places where there is a discrete ownership and management, for example, a National Park or a specific building and its site.

While Broken Hill Council manages the City (the National heritage place) as a local government authority, its role is limited in regard to the detailed management of National values. The limit is a statutory one and relates to preparing Strategic Planning (through LEPs and the like) at its most

conceptual level to assessing applications for work from owners at a day to day working level. National heritage values do not presently form a direct part of the local statutory planning controls or assessments although they are referenced in the Broken Hill Development Control Plan.

The NSW State Government and Council have the ability to lead by example by ensuring that any plans or works they propose and undertake on public land respond to the reasons the City was Nationally heritage listed, however, this is not a statutory requirement.

The Federal legislation (Act) under which the City was listed does not provide detailed guidance on what implications or actions may arise from the listing. There is a requirement to submit proposals for consideration to the Federal Department of Environment but only if the applicant satisfies a range of criteria and forms a view that National Values are significantly impacted by the proposal.

This is a provision that would appear to relate to more straight-forward sites where an action, such as building a new tourist centre in a National Park with its infrastructure, by way of example, can be reasonably easily assessed in relation to potential impacts on identified National values.

In a whole city context, the legislation is not clear as to whose responsibility making an application is - an owner (private, a corporation or a government agency) or Council - and what type of proposed works would trigger such a referral.

The question of how the values set out in the listing citation could be affected by any proposal is also not addressed in legislation. If taken on a single site or 'place' basis, most works that take place in the City are unlikely to have a noticeable effect on the stated National heritage values. Altering or demolishing one small residence could not be reasonably argued to change the National values of the city. However, changing or demolishing a whole street of residences is likely to have an impact and changing many such buildings across the city will inevitably have a significant, if gradual adverse impact.

A recent example of small individual change that has a cumulative effect is the extensive roof replacement across the whole of the city after the severe hail damage of several years ago. The slow and gradual replacement of roofs as part of the evolution of the city has been part of the character of the place, it has taken place quite randomly with very small overall incremental change. Where hundreds of roofs have been replaced in a short time frame there is potential for a visual impact on the character of the city and, consequently, on heritage values - National and local.

The impact is not that a roof is changed - that is, as noted, part of the evolution of the place - but rather how each roof is changed, what materials are used and how that affects the character and visual values of the City. In this example there are questions about type of material, colour, finish, and if metal roofing is used, how sheets are laid and then how details are retained, removed or changed. These are detailed issues but collectively have potential to impact heritage values. This example is explored in detail later in the report as it allows the character of the city, that is central to the National listing, to be explored.

The report also considers ways in which National heritage values can be managed within the existing statutory frameworks as it is not presumed that the Act under which the National listing sits is likely to be changed nor the Department of Environment resourced to consider the range of matters that will arise through this listing.

The report looks at the various stated values, how they are evidenced in the city, particularly in relation to physical material, and sets out thresholds for what potential actions may adversely affect a National value.

A key aspect of the work is to propose material that will assist community, council and government to consider potential impacts on National values within an understood and clear framework. This material is in the form of information, check lists and material that explains the concept and application of National Values.

A conclusion that the report draws is that the values set out in the citation are not simply related to the most impressive, the iconic or the highly recognised places and elements of the city, they relate to almost every aspect of the city from the hand-made additions to a small cottage to major civic and mining structures. It is the collective value of the often inconsequential that makes Broken Hill of such value. The potential loss of the detail and ephemeral elements is a potential loss of National values.

The City falls into a set of related but distinct place types. Each contributes to the overall National values but they do so in quite different ways. An overview of the place types that have been identified in response to the citation are:

- v. The desert that surrounds the built form of the City and which forms part of the City area.
- vi. The mining landscape and features.
- vii. The central commercial core of the City focussed around Argent Street.
- viii. Specific groups of buildings such as hotels or churches.
- ix. The areas of housing that demonstrate phases of development, wealth, etc.
- x. Landscape, particularly the Greening of the Hill.
- xi. Innovation evidenced on the mine sites but also on many smaller sites.
- xii. Evidence of a self-sufficient community seen in sport, recreation and social facilities.
- xiii. The impact of unionism and the rise of safety and welfare seen in specific buildings and sites.
- xiv. Migrant sites.

Project Outcomes

The study proposal set out the following overall project outcomes:

1. A detailed understanding of how National heritage values apply to the day-to-day projects and activities of the city;
2. Publication of what National heritage values mean to the community and what is required to address them in works or projects;
3. Publication of guidelines and protocols on how to consider National heritage values when preparing or assessing applications for works;
4. Clarification on how to make an application where works are likely to affect National heritage values and how Broken Hill Council can make assessments of when proposals should be referred for Federal agency assessment;
5. Clarification of how mining heritage (not specifically Nationally listed but part of the overall listing) is to be managed as sites and features become redundant and end their useful life, as mining heritage is one of the key themes that has not been explored in detail in relation to National values;

6. A framework for strategic planning to ensure that National heritage values form the basis of future planning (currently planning is based on local issues with very limited State issues); and
7. An understanding of how similar issues have been addressed in other cities that are heritage listed to provide a benchmark for Broken Hill.

Each of these is addressed later in the report noting that some of these areas require considerable future work outside this current study.

The following sections of the study explore the wording of the National Citation and the themes that arise from it.

2.0 THE NATIONAL HERITAGE LISTING

The National Heritage listing information comprises a listing data sheet that sets out the information noted below and a map defining the area to which the listing applies (figure 1).³ The information contained in the citation data sheet is the basis on which to define and understand the National heritage values of the place. The citation is comprehensive and, while it notes some specific elements, is largely concerned with the thematic and overarching heritage values of the City. This provides a sound basis to understand National significance, but the citation does not (and cannot) provide detail on how significance may be understood in relation to the various areas and specific elements of the City.

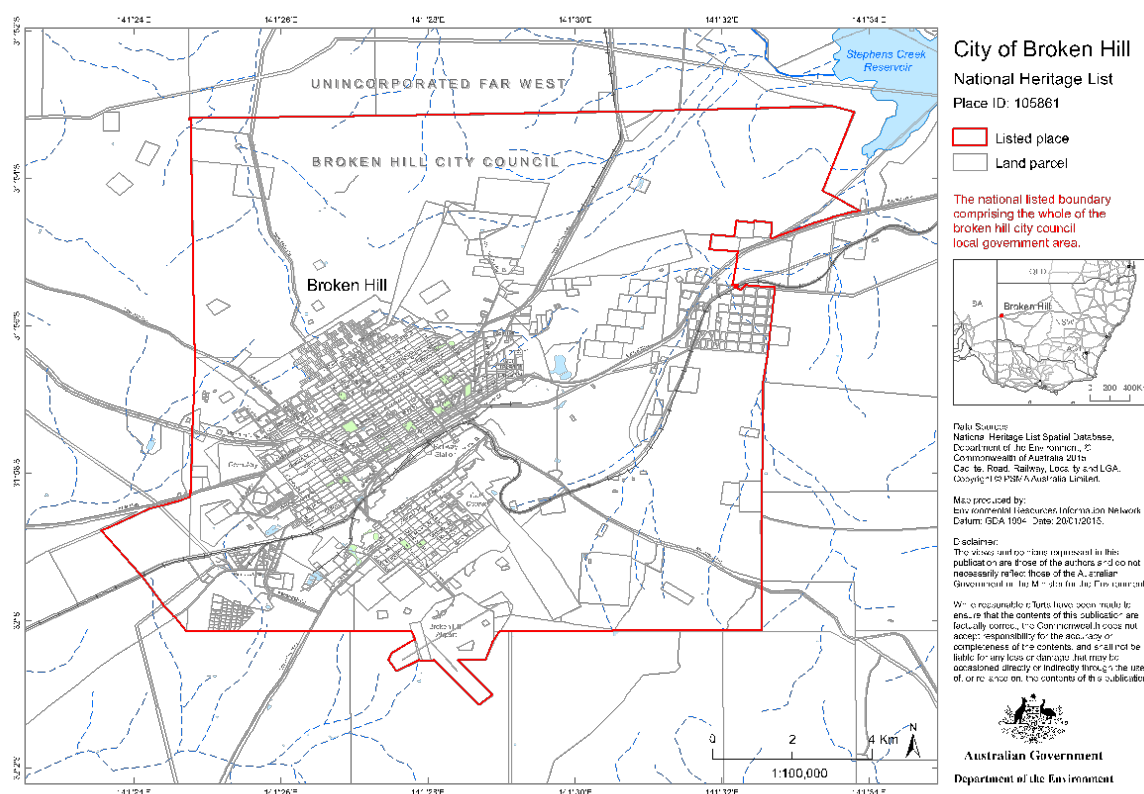


Figure 1 : National Heritage Listing Boundaries. The listing boundary aligns with the Council area boundary. Department of Environment National Heritage List Map. 2015.

As referrals for assessment and approval are specific (in that they are about specific sites, buildings and elements) the following discussion draws out the themes under each criterion with specific examples.

³ The National listing

The National listing data sheet addresses:

- A summary statement of Significance;
- Official Values - addressing the assessment criteria for significance;
- Description;
- History;
- Condition and Integrity;
- Location; and
- Bibliography.

By necessity the sections on Condition and Integrity and Location are brief as they address the whole city.

2.1 National Citation Statement of Significance

The National statement of significance for the City is set out below. The statement is set out in its entirety as each part of the statements sets out themes that in some places are common and in others are noted separately.

The specific themes and elements of each part of the citation are set out in tables after the statements to analyse where specific places and features form the basis of significance and/or where significance is derived from a broader collective value of attributes. The combined list of elements is then set out as a table (table 9) cross referencing the National themes.

The National heritage listing citation provides the following map setting out the listing boundaries. This map is used in various parts of the report to overlay zonings, heritage values and analysis.

Summary Statement of Significance
<p>The City of Broken Hill has outstanding significance to the nation for its role in creating enormous wealth, for its long, enduring and continuing mining operations, and the community's deep and shared connection with Broken Hill as the isolated city in the desert, its outback landscape, the planned design and landscaping of the town, the regeneration areas and particularly the physical reminders of its mining origins such as the Line of Lode, the barren mullock heaps, tailings, skimps and slagheap escarpment and relict structures. It exhibits historic qualities in its ongoing mining operations since 1883, the current and relict mining infrastructure and its landscape setting. It is significant for its industrial past and the adoption of vanguard industrial relations and management policies, together with its role as a pioneer in setting occupational health and safety standards.</p> <p>It demonstrates the principal characteristics of a mining town in a remote location with extensive transport infrastructure and administrative connections to three state capitals and as a rare example of a place subject to Australia's complex Federal system where differing administrative, social and economic influences are expressed in both tangible and intangible forms. It has social significance for its residents as a place of community pride, endurance, and as a remote mining community resilient to major social and economic change. Broken Hill has strong social significance for all Australians as a place where great wealth was created, as well as strong group associations with the Barrier Industrial Council. It exhibits outstanding aesthetic characteristics as a city in an arid desert setting, as the subject of interest for Australian artists, poets, film makers, TV producers and photographers.</p> <p>It has significance as a place where outstanding technical achievement has occurred in refining ore for its minerals including the froth flotation process and the computer controlled on-stream analysis of slurries. Broken Hill is also important as a place of research potential to reveal further information on mineral deposits with its range of complex minerals, It is associated with persons of great importance to Australia's</p>

history, including Albert Morris (arid land regeneration), Charles Rasp (discoverer), Herbert Hoover (mining engineer), WL Baillieu, WS Robinson and MAE Mawby (industrialists), GD Delprat (metallurgist), Percy Brookfield and Eugene O'Neill (unionists). Broken Hill's association with the Barrier Industrial Council as a group is also important.

The Broken Hill zinc-lead-silver ore deposit is one of the world's largest ore bodies and contains an extraordinary array of minerals. It is geologically complex and has national scientific significance. The Broken Hill operation is significant for its immense size and unrecorded mineral species continue to be found. It contributes to an understanding of the formation of the Australian continent and more than 2,300 million years of the earth's history.

Official Values

Criterion A - Events, Processes

The City of Broken Hill contains one of the world's largest deposits of silver/lead/zinc ore bodies. Discovered by Charles Rasp, boundary rider and prospector, Broken Hill continues to be mined today (2010), over 125 years since its discovery in 1883.

The City of Broken Hill is an exciting geological area of national and international renown. It provides a window into 2,300 million years of Earth's history and has recorded the landscapes and geological environments which have evolved in response to eons of geo-chronologic changes.

In the field of mineralogy the Broken Hill deposit has achieved its widest international recognition as one of the world's great "mineralogical rainforests" with approximately 300 mineral species reliably confirmed from the ore body. The Broken Hill ore body is geologically complex, however characteristic environments where minerals exist include the outcropping gossan (the weathered, ragged black outcrop) and the secondary zone. The gossan from the main Line of Lode has national significance for its immense size, and enormous suite of minerals.

The Broken Hill mines have played a decisive role in Australia's mining history and Australia's national development. The wealth and expertise generated by mining at Broken Hill over such a long period has contributed markedly to Australia becoming well known as one of the world's major providers of raw materials. Broken Hill played a decisive role in the origin and growth of some of the world's largest and wealthiest companies, Broken Hill Proprietary Company Limited (now BHP Billiton), Rio Tinto and Pasminco Ltd. Broken Hill is one of Australia's longest lasting mining fields compared with the average life of a mine of some 20 years. The continuous nature of large scale mining over so many years (125) is unique in the Australian context, a record not matched by other mining areas. The Line of Lode proved to be one of the largest silver, lead and zinc mineral deposits in the world. The on-going exploration of the Line of Lode from 1883 provided the basis for the commercial prosperity of the Broken Hill township and the mines that exploited the ore. The continuation of mining activity in Broken Hill is important for the economic prosperity of the city and contributes to its national significance.

The significance of the mining industry to Broken Hill and the nation is represented by the ongoing mining operations, the barren topographical profile, scale and landform of the mullock heaps along the Line of Lode, the Line of Lode itself and the extensive mining leases.

Broken Hill has contributed several world ranking innovative mining and metallurgical practices which were to benefit later lead and zinc mines. In particular, the development and application of the froth flotation processes and the computer controlled on-stream analysis of slurries using radio isotope probes are of world renown. Two generations of professional and technical staff and experienced miners who were trained at Broken Hill subsequently went on to develop other ore bodies in Australia and overseas. The Broken Hill experience generated expertise which spread into many metalliferous and coal mining, engineering, chemical and manufacturing industries, notably steel and its associated industries. The significance of innovative mining practices is demonstrated by the relict mining infrastructure.

Broken Hill is significant as the place where safe working practices legislation and occupational health and safety provisions for workers, particularly miners was developed. Broken Hill has been described as the

'bastion of unionism' and was the site of the two longest miners' strikes (1909 and 1919-20) in Australia's industrial history. The 1919-20 strike of over 600 days resulted in significant gains for the miners: the 35 hour week, and improved underground health and safe working conditions. Some of these gains eventually flowed to other workers throughout Australia. Evidence of the strength of the union movement in Broken Hill is represented by the Barrier Industrial Council, the Trades Hall and the Amalgamated Miners Association Hall, archives held in the Broken Hill City Library and the Barrier Industrial Council's collection of movable cultural heritage, together with the records of the Barrier Daily Truth.

Legislation aimed to protect the community from lead poisoning. However, it was left to the mining companies such as the Sulphide Corporation and the Zinc Corporation rather than the law to implement social welfare programs such as the provision of recreational amenities. Housing demand generated by increased mining activity and the sudden growth of population in the late 19th and early 20th century gave rise to strong support for privately organised co-operative workers housing schemes. In addition, mining companies provided low interest loans for employee housing as well as establishing housing co-operatives and constructing housing for senior staff. Community amenities and housing need is represented by recreational facilities provided by the Zinc Corporation and mine workers' housing schemes.

Other measures aimed at improving the amenity of the Broken Hill community came from the work undertaken by Albert Morris and applied by the Zinc Corporation. As a private individual, and with mining company support, he experimented by fencing and planting areas with native species and showed how regeneration of the denuded landscape could combat the impact of devastating dust storms. This far-sighted innovative regeneration work by Morris from 1936 led the Zinc Corporation to apply regeneration practices at Broken Hill. Subsequently the precedent was used by mining companies and spread throughout Australia, particularly in arid zones.

Albert Morris pioneered research into the propagation and planting of native and exotic species that would grow in arid and semi-arid locations. He promoted ideas for 'green belts' in Broken Hill. Regeneration schemes, planted to protect Broken Hill from major dust storms, now partially surround the City and continue the intent of the program to revegetate the surrounding landscape degraded through removal of vegetation cover for mining operations and heavy grazing. The significance of Morris' work is demonstrated by the plantations, the creation of popular recreational facilities and the extensive regeneration areas surrounding Broken Hill.

An adequate water supply for Broken Hill, a constant concern from the 1880s onwards for both the population and for mining functions, was dogged by official dilatoriness. Initially water was provided from soakage sites, then carted in to Broken Hill on the Silverton Tramway as well as being piped from Government dams, and provided separately by private enterprises. A Government funded 99km pipeline from Menindee (1952) provides a water supply which permits an enhanced level of civic amenity and parkland irrigation, as well as providing for ongoing mining operations.

The remoteness of Broken Hill posed significant difficulties for transporting ore and concentrates to sea ports. In 1886, to overcome the impasse between the railway interests of NSW and South Australia, the mining companies, using the Victorian Companies Act, established the Silverton Tramway Company Ltd. This narrow gauge track, via Silverton (NSW) and Cockburn (SA) focussed Broken Hill exports on the South Australian town of Port Pirie and drew the community of Broken Hill into the Adelaide and South Australian sphere of influence. In 1927 NSW eventually connected its standard gauge rail network to Broken Hill providing links to Newcastle and the steel works in that city. In 1970 the east-west railway corridor was completed establishing a standard gauge connection from Sydney to Perth, with a major stop at Broken Hill. The Silverton Tramway Company is represented by the Broken Hill Railway Museum and its collection in Sulphide Street and the standard gauge east-west link is represented by the Broken Hill railway station in Crystal Street and adjacent railway infrastructure. The very remoteness of Broken Hill was the reason for its use during WW II as the site to store Australia's gold bullion reserves.

Elements which embody events and processes include the complex geology and mineral deposits, ongoing mining operations and their ever-changing nature, adaptive re-use of mining facilities, relict mining infrastructure, the Line of Lode and remaining gossan outcrops, and mining leases, the city layout within the

planned urban grid and tree lined streets, the residential character, mining company housing and the revegetation areas.

Table 1 : Sites, Places and Objects Associated with Events and Processes

Item	Site	Objects (not sites)
Geology and mineral deposits	Line of Lode.	Mineral collections.
Mining Industry	Ongoing mining operations, The barren topographical profile, scale and landform of the mullock heaps along the Line of Lode, The Line of Lode, The extensive mining leases, Remnant early mining relics.	Specific equipment.
Remoteness	Silverton Tramway remnants, Water infrastructure, Urban form of town, Limited use of materials. Willyama Common	
Transport	Silverton Tramway remnants, Inter-continental railway, Broken Hill Railway stations, Camel transport.	Railway museum collection.
Water supply	Silverton Tramway, Government railway, Dams and Reservoirs, Pipelines (Menindee pipeline in particular), Local water authority.	
Regeneration	Regeneration areas, Environmental protection areas.	
Street form	Street tree plantings.	
Adapted Mining Sites	Use as sports fields, parks and regeneration areas.	

Item	Site	Objects (not sites)
City design and form	City grid, Wide streets, Views, Reliance on parks and civic facilities, Tree plantings, Mining Company housing, Miners housing.	Archives .
Isolation	Tight urban form of the city, Water infrastructure, Limited use of materials such as stone and tin.	
Social Welfare	Mining Company recreation and welfare facilities, Playing fields, Parks, Clubs and Associations buildings and sites, Union buildings, Hospital, Memorials, Places related to specific social uses.	
Government	Government buildings, Government infrastructure.	

Criterion B Rarity

Broken Hill is unique amongst Australian geological deposits for its mineralogical diversity. Broken Hill is the type locality for 19 mineral species, including many rare and uncommon species. The secondary zone of the Broken Hill ore body contains an extensive array of extremely rare well-crystallised minerals, and unrecorded species continue to be found. The rarity of Broken Hill's mineralogy is demonstrated by its mineral deposits and the records of the mining companies.

Broken Hill is a rare example of a long established, almost continuously operated mining town, with a long industrial history and strong union representation. The industrial actions of unions focussed on protecting jobs, improving community amenity and achieving safe and healthy conditions for workers within the mining industry and for workers generally is at a level of intensity unmatched elsewhere in Australia. Broken Hill is also unusual for the way that the Barrier Industrial Council emerged as a social, regulatory and economic force bringing together a range of craft based unions and able to dictate who worked in Broken Hill by: ensuring preferential employment for the locally born; supporting the provision of particular services; and controlling the extent of retail competition. The Barrier Industrial Council policy of not permitting married women to work in Broken Hill survived until a legal challenge forced a change. The rarity of Broken Hill as a town with its strong union presence is represented by the continuing operation of the Barrier Industrial Council, occupational health and safety legislation and safe working practices. The union movement in Broken Hill is also represented by its association with and ownership of the Barrier Daily Truth. Significant fabric representing the past role and ongoing activities of the union movement includes the Trades Hall, the former Broken Hill Council Chambers and the Amalgamated Miners Association Hall.

Broken Hill is a rare example of Australia's complex federal system. Located in the far west of the state, NSW and the Broken Hill City Council provide water and sewer infrastructure and a representative from Broken Hill sits in the NSW Parliament. However, Broken Hill is serviced by rail primarily from South Australia, keeps Central Australian time and Adelaide is its nearest capital city. In the late 19th and early 20th centuries financial interests for Broken Hill mining companies were managed from Melbourne in Victoria, and London provided investment capital. This unusual mix is reflected in the architecture of Broken Hill buildings, where official buildings have recognisable NSW Government Architect characteristics, the residential buildings exhibit design and construction characteristics derived from South Australia, and commercial buildings, such as hotels, show characteristics from Melbourne's late Victorian architectural period.

The example of Broken Hill as an isolated community is emphasised by the unusual measure of transferring gold bullion from coastal capitals during World War II. Its remoteness from sites of possible invasion by the Japanese was seen as a distinct advantage. Australia's gold reserves were stored in Broken Hill from 1942 until 1945 and this transfer was the largest single transfer of gold ever carried out in Australia.

Broken Hill is a rare example of a mining town where 'green belt' regeneration measures were researched, tested and implemented. From the 1930s onwards with the assistance of mining companies, the revegetation of denuded areas adjacent to its urban areas was trialled and shown effective in reducing the adverse effect on dust storms. Albert Morris tested native and exotic species for their capacity to survive arid and semi-arid conditions.

Table 2 : Sites, Places and Objects Associated with Rarity

Item	Site	Objects (not sites)
Minerals	Line of Lode, Mining museums.	Archives, Mining records, Mining museums collections.
The city form	The city layout, The relationship of the city layout to the Line of Lode.	Archives.
Unionism	Trades Hall, Former Broken Hill Council Chambers, Amalgamated Miners Association Hall, Barrier Daily Truth building, Community halls and clubrooms, Memorials.	Archives, Union records.
Complex governance involving NSW, South Australia, Victoria and the Federal Government	Building design: - residential buildings - government buildings - commercial buildings, Transport, particularly rail, Water, Infrastructure.	
Regeneration	Regeneration areas.	

Criterion C - Research
<p>Broken Hill has important research potential for further investigation into its innovative mining practices, its mineralogy and geology, its history of unionism and development of safe mining practices, and its social characteristics.</p> <p>A large collection of mining records and associated material is available to provide information on the methods of construction and the economic reasons for developing and mining along the Line of Lode. This collection has the potential to contribute further to the technical advancement of mining. Mining company records provide research potential into the history and discovery of innovative processes such as the froth flotation. The wide range of relict mining infrastructure on and in the vicinity of the Line of Lode, and the extensive documentary records make the place an important source of information on the development of mining practices, processes, technological advancement, and working conditions. The mining companies are custodians of considerable records of mining operations.</p> <p>Mining and research on the Broken Hill ore body spans an exceptional 120 years, and previously unrecorded mineral species continue to be discovered. Scientific research continues to generate important outcomes including new concepts in ore genesis. Research on the diverse and complex geology of Broken Hill contributes to an understanding of the formation of the Australian continent and more than 2300 million years of the Earth's history.</p> <p>Systematic corporate collecting of unique specimens in the last two decades at Broken Hill has resulted in a valuable repository of, and resource for investigation into, Australia's mineralogical heritage. The Line of Lode is significant for the scientific research potential of the numbers and types of rare minerals found associated with the mineral ore body. Opportunities exist for further research into methods for the efficient extraction of minerals and processes for the treatment of ore bodies.</p> <p>The research values of Broken Hill are represented by mining company and union records.</p>

Table 3 : Sites, Places and Objects Associated with Research

Item	Site	Objects (not sites)
Mining Landscape	Line of Lode, Remnant mining buildings and structures across the city, Geological museum.	Mineral collections, Union archives, Mining archives, City archives.
Regeneration	Regeneration Areas	

Criterion D - Principal characteristics of a class of places
<p>Broken Hill demonstrates the principal characteristics of an evolving mining town. With populations ranging from its early beginning to approximately 35,000 in 1915, to its current population of approximately 20,000 it represents a typical example of mining town growth and contraction, depending on economic circumstances, metal prices, supply and demand, and competition.</p> <p>In 1886, within three years of the discovery of the ore bodies, Broken Hill had been surveyed and a town plan gazetted, adapting the rectilinear town planning grid pattern regulations promulgated by Governor Darling in 1829 for the layout of rural townships. The Broken Hill town plan flanks the Line of Lode and generally parallels the mining leases. Broken Hill municipality was incorporated in 1888 and it was proclaimed a city in 1907. The urban plan of Broken Hill is represented by the wide streets, some doubling as drainage channels to cater for the run off from sudden storms, and the rectilinear grid street pattern.</p> <p>The principal characteristics also include changes to the geo-chronological environment; relict mining infrastructure and the ever-changing nature of the results of mining activity as mining processes change; the patterns of mining leases aligned to the Line of Lode ore body; an administrative and commercial service centre historically based on the mining industry but diversified to service extensive pastoral interests; provision of residential accommodation in proximity to work locations; and despite its remoteness, extensive road, rail and air transportation links to Sydney, Adelaide and Melbourne. The grid pattern town layout has shown itself to be robust and flexible, standing the test of time and responding to social and technological change over 124 years.</p> <p>The characteristics that represent a mining town are also represented by continuing mining operations and their ever-changing nature, the remaining gossan outcrops of the Line of Lode, its relict mining infrastructure, all modes of road and rail transport infrastructure and its role as a centre for the Royal Flying Doctor Service.</p> <p>Although the Broken Hill ore body is geologically complex, it also contains characteristic environments where minerals occur in the outcropping gossan (the weathered, ragged black outcrop of the ore body- the 'Broken Hill').</p>

Table 4 : Sites, Places and Objects Associated with the Principal Characteristics of Classes of Places

Item	Site	Objects (not sites)
Mining Landscape	Line of Lode, Remnant mining buildings and structures across the city, Geological museum. Patterns of mining leases.	Art, Photographs, Film.
City landscape	The development of the City grid, Response to climate in City layout, Relationship of housing to mining, Role of transportation to and from the City.	The physical layout of the City, Street formations and details including drainage systems, Road, rail and air transport.

Criterion E - Aesthetic characteristics

The distinctive aesthetic qualities of the Broken Hill include the mining landscape and the remaining bulk and scale of the Line of Lode with its relict mining infrastructure dominating and in such close proximity to the surrounding townscape, all set in a vast arid landscape. This visual representation of mining activity on the surface and the barren character of the remaining mullock dumps identifies the physical location of the Line of Lode and the below surface mining of the layered mineral deposits.

Broken Hill is a visually cohesive town with late Victorian and Federation era administrative and commercial buildings reflecting the mining wealth, and an unusually uniform and singular scale of residential housing with pockets of 'tin' architecture. The aesthetic urban qualities contrast with the surrounding belts of revegetated countryside, all set in an arid desert landscape in which the vivid colours, brilliant light and vast horizons stretch well beyond the city. The contrast between the built up area and the dominating arid desert landscape is heightened by the sharp, orthogonally distinctive abrupt urban edge.

Broken Hill is a popular centre for artists, poets, film-makers and TV producers and is recognised as a major focus for artistic endeavour. The 'Brushmen of the Bush' is a group of Australian artists located in Broken Hill who popularised paintings of outback Australia. Several major Australian artists with works included in Australian and overseas galleries and private collections are associated with depicting the enthrallingly stark Broken Hill environment. Australian film makers have used Broken Hill and its landscape setting for major and popular works. Through their paintings, poetry, films and TV productions these artists and producers with their nationally recognised reputations demonstrate the strength of their understanding and appreciation of the aesthetic characteristics of Broken Hill and its desert setting.

The aesthetic significance of Broken Hill is demonstrated by: the dramatic and spectacular but ever-changing landscape form and the still massive scale of the barren mullock dumps along the Line of Lode so close to the central business area of the city; the design qualities of the streetscapes; the distinctive character of existing and relict mining infrastructure; and the unusual visual qualities of 'tin' residential and mining architecture. Other features representing the aesthetic significance are the contrast between the scale of the mullock dumps and the central business townscape, both dwarfed by the grander scale of the vast outback landscape setting; the views to and from the Line of Lode along streets and from distant hills; together with close and distant views of mining markers, such as headframes, and mining industry relics. All these factors combined offer evocative and tangible evidence of Broken Hill's industrial character contrasting with its remote landscape setting. Other aesthetic features include historic nineteenth and twentieth century buildings and precincts and the park vistas and streetscapes with memorials and artwork.

Table 5 : Sites, Places and Objects Associated with Aesthetic Qualities

Item	Site	Objects (not sites)
Mining Landscape	Line of Lode, Remnant mining buildings and structures across the city, Geological museum.	Art, Photographs, Film.
City form	Cohesive built form and scale, Distinctive styles of building in civic, commercial and residential, Use of stone and tin, City layout in relation to the Line of Lode, transport and residential amenity,	Art, Photographs, Film, Archives.

Item	Site	Objects (not sites)
	Views within the city, Views to the Line of Lode, Views to the desert, Memorials, City art.	
Desert	Edge areas	
Regeneration	Regeneration areas, Street tree plantings, Parks and reserves.	

Criterion F - Creative or technical achievement
<p>Over many years Broken Hill has been the source of much of the world's knowledge on the extraction of minerals and the application of scientific method to separate minerals from the base ore. The advancement and improvement of mining practices, innovative experimentation in design of industrial plant and buildings, as well as the discovery of new methods of treating difficult ores and the introduction to Australia of overseas practices includes: the use of square set timbering to overcome the problem of unstable ground; the introduction of the froth flotation process for separating mineral ores for the recovery of zinc concentrates from tailings dumps; the selective separation of lead and zinc from refined ore, the selective separation of lead and zinc from the ore as mined; the roasting of slimes to assist in de-sulphurising the slimes; the re-utilisation of slimes through a 'sand plant' whereby slimes were used for backfilling stopes instead of mullock; and pioneering use of rising (slip) form for reinforced concrete; and pioneering the computer controlled on-stream analysis of slurries using radio isotope probes.</p> <p>Broken Hill research and development expertise spread into major metalliferous and coal mining, engineering, chemical and manufacturing industries, notably the steel industry, lead smelting and the electrolytic zinc smelting process. These technological advances also had application for refractories, and for other industrial processes such as timber milling, the production of paper, the manufacture of fertilisers, and cement, as well as for shipping and aircraft. Continuing technological development of mining practices and processes have the potential to enhance the technical achievement values of the place.</p> <p>The work of Albert Morris, eventually supported by mine management, in researching, validating and subsequently implementing regeneration measures to protect both the residential and mining areas from devastating dust storms is a major technical achievement. His work, recognised nationally and internationally, is evident in the 'green belt' surrounding Broken Hill. Regeneration areas, following the principles established by Morris, now provide an edge to Broken Hill urban areas, particularly on the north-western and south-western boundaries.</p> <p>The record of technical achievement is represented by the mining records of mining companies and other academic and community archives. It is also represented by relevant relict mining structures that demonstrate the advancement of technological practices that were invented, applied and/or pioneered at Broken Hill.</p>

Table 6 : Sites, Places and Objects Associated with Creative or Technical Achievement

Item	Site	Objects (not sites)
Innovation in mining	Remnant mine buildings demonstrating specific technologies, Remnant mine infrastructure demonstrating innovation.	Archives, Mining records.
Innovation in Regeneration	Regeneration areas, Planned landscape plantings.	

Criterion G - Social value
<p>The City of Broken Hill is valued for its strong community spirit, self-reliance and for exhibiting the resilience of a remote inland community. For the Australian community Broken Hill symbolises the importance of the Broken Hill mines to the wealth of Australia. Broken Hill also symbolises the challenges and remoteness of the outback, which is a defining element for the community.</p> <p>The steep, barren and dominating mullock heaps, tailings, skimps and slagheap along the Line of Lode and the remnant outcrops of the Line of Lode gossan are highly valued by the community as the industrial and economic heart of the city, and as the reason for Broken Hill's existence. The combination of the dramatic mining infrastructure set in the arid desert plain and undulating landscape of the region is found in visual images, paintings, photographs and films. This imagery is highly valued by the local Broken Hill community and widely recognised by the wider Australian community.</p> <p>There is a deep, enduring and shared link between the existing community, past residents and the 'city in the desert'. This strength, depth and long-held connection between the community and the place Broken Hill and its outback landscape is made tangible by: its remoteness; the design and landscaping of the town with its 'oasis' like character and regeneration areas; an appreciation of the distinctive residential 'tin' architecture recalling the harsh living conditions; and the murals, public art and memorials located throughout the urban area.</p> <p>The social value of Broken Hill is represented by pride in being a Broken Hill resident; the continuous and ongoing mining operations; the adaptation of mining facilities for re-activated or new mining operations; and the resilience of the community to adapt to change and deal with its remoteness in times of adversity. These qualities are represented by the mullock heaps along the Line of Lode, the remaining gossan outcrops of the Line of Lode, the Line of Lode itself; relict mining infrastructure; the extensive arid landscape setting; and the civic amenity and community facilities provided through Broken Hill's planned urban land uses.</p>

Table 7 : Sites, Places and Objects Associated with Social Value

Item	Site	Objects (not sites)
Mining Landscape	Line of Lode physical form, Remnant mining structures.	Art works, Photographs, Film.
Desert Landscape	Crown land surrounding the developed city, Willyama Common.	Art works, Photographs, Film.
City landscape	Distinctive architecture of civic, commercial, mining and residential buildings, Use of iconic materials in all buildings: stone and tin, City art, Memorials, Regeneration areas, Street trees and plantings, Parks.	Sense of oasis, Art works, Photographs, Film.

Criterion H - Significant people

The City of Broken Hill is important for its associations with many individuals who have played a prominent role in the Australian mining industry. Significant people include the lode's discoverer, Charles Rasp; engineer and metallurgist GD Delprat; the American mining engineer Herbert Hoover; Australian industrialists WL Baillieu, WS Robinson and MAE Mawby, union organisers Percy Brookfield and Eugene O'Neill and environmentalist Albert Morris. As a group, the Barrier Industrial Council is also important for its association with Broken Hill.

The significance of important people and groups is represented by their association with mining the Line of Lode, ongoing mining operations, relict mining infrastructure, mining leases, local government and mining records, Barrier Industrial Council records, regeneration areas and Broken Hill City Council records.

Table 8 : Sites, Places and Objects Associated with Significant People

Item	Site	Objects (not sites)
Mining	Line of Lode - as a whole, Evidence of mining leases, Evidence of early mining features, Mining buildings and site features related to individuals and processes, Memorial sites and objects related to significant people, Sites named after significant persons.	Council archives, Other archives, Union records, Mine records.
Unions	Union buildings and sites, Memorials.	Union records.
Environmentalists	Regeneration areas, Recovered mining areas, Street plantings, Park plantings related to environmentalism, Memorials.	Council archives, Other archives, Union records, Mine records.

The following table summarises the separate statements of significance and the themes and places that have been identified. The table sets out the following:

Table 9: Summary of Themes and Significance:

Item/Theme	The items or themes identified in the various statements of significance. The themes have been grouped to bring together all aspects of National significance that relate to a theme.
General Attributes	<p>The key features that represent the value.</p> <p>For example, the Line of Lode is a general attribute of mining that is an entity in itself, but the Line of Lode also contains many other values both general and specific as set out below. The Line of Lode has a particular and very significant National value that is supported by the specific elements of it. While its overall value may be impacted by actions that affect specific places it retains its significance even if a specific place is impacted. Another example could be a heritage conservation area that has a set of values equally as general, as well as containing places that have specific values.</p>
Specific Attributes	The separate features that have individual significance in addition to contributing to a general value. A specific feature may be a building or item or it may be a place that has several significant elements within it such as a park for example that may contain plantings, a bandstand, a building, etc. Often these are the elements and places that are heritage items.
Value Type	<p>Collective - relates to general values across a range of sites</p> <p>Specific - relates to a specific place and its particular values</p> <p>By way of example, the mining buildings and structures of Broken Hill are a relatively straight forward group of places to consider the difference between collective and specific places and values.</p> <p>Mining buildings have a collective value in that, as a complete group and as grouped on the various mine sites, they contribute to a range of values set out in the statement of significance. In summary this can be seen in:</p> <ul style="list-style-type: none"> – the visual and aesthetic impact of the building groupings on the cityscape of Broken Hill and the Line of Lode; – their ability to tell the story of mining on the various sites in a cohesive and understandable way; – their ability to demonstrate the scale of mining on the Line of Lode; – their ability to show the development of mining technologies, forms and periods of development; – their ability to demonstrate the range of mining structures and building types that existed and remain today; – their ability to demonstrate the inter-relationship of elements on a mining site and the variation that exists between the various mine sites. <p>A single remnant mining building would not represent the importance of the complexity and scale of the mining operations, it is the whole of what exists that is of National significance.</p>

	<p>Individual buildings or structures will also have a specific heritage value. Most, but not all structures on the mine sites are individually heritage listed (local Council listing) based on the detailed conservation studies that have taken place on each site over time. Some have been assessed as having State level heritage significance but there is no State listing for any of the mine elements. National significance may have been referenced in studies but very few places are included on the National heritage list. In NSW, there are presently only 27 sites in total included in the National heritage database.</p> <p>A specific mining building or structure may be of historic, visual/aesthetic, technological, etc. significance, or it may have a combination of values. Not every mining structure will have the same value, some will be exceptional, some high, some moderate and some may have relatively low individual heritage value. However, while individually they have varying levels of significance, as a group these structures have exceptional significance.</p> <p>This presents a difficulty in considering National Heritage values where the consideration is a single element or structure.</p>
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2.1.1 Summary

The following table summarises the physical aspects of significance in Broken Hill that arise from the statement of heritage significance in the National citation. The table looks at each major theme, sets out general attributes and then specific attributes and identifies if the value is collective or specific as discussed earlier in the study. The table does not set out each specific element but rather identifies them as groups or types of places that are explored in more detail later in the study.

The table can then be considered in relation to later research in the study that looks at National, State and local themes and how National values can be understood within the context of the Council LEP and Planning system.

The table demonstrates that many places have both collective and specific value.

Table 10 : Summary of Physical Aspects of Significance Arising from the Statement of Significance

Item/Theme	General Attributes	Specific Attributes	Value Type
Mining	Line of Lode	Line of Lode as a whole, Physical form of the Line of Lode, Remaining and remnant mining structures, Remaining and remnant mining infrastructure, Geological museums.	Collective.
	Evidence of Mining leases	The historic and current lease areas of the mines.	Collective.
		Patterns of mining leases.	Collective.
	Evidence of early mining features	Mining buildings as a group, Mining infrastructure,	Collective.

Item/Theme	General Attributes	Specific Attributes	Value Type
		The mines (underground), Residential buildings owned by the Mines.	
	Evidence of early mining features	Specific buildings, structures and infrastructure as identified in heritage schedules, Mining buildings and structures retained as museum exhibits.	Specific.
	Mining buildings and site features related to individuals, technologies and processes	Specific buildings and elements related to persons or technologies.	Specific.
	Memorial sites and objects related to significant people	Specific memorial sites.	Specific.
	Minerals	Mineral museums, Line of Lode.	Specific.
	Sites named after significant persons	Specific sites.	Specific.
	Adapted Mining sites		Collective.
Complex governance involving NSW, South Australia, Victoria and the Federal Government	Building design	Residential buildings.	Collective.
	Provision of Government Services	Government buildings.	Collective.
		Commercial buildings,	Collective.
	Transport	Particularly rail and water.	Collective.
	Government Infrastructure	General.	Collective.
Unionism	Union Buildings	Halls and meeting places.	Specific.
		Trades Hall.	Specific.
		Former Broken Hill Council Chambers.	Specific.
		Barrier Daily Truth building.	Specific.

Item/Theme	General Attributes	Specific Attributes	Value Type
		Amalgamated Miners Association Hall.	Specific.
		Community halls and clubrooms.	Collective.
	Memorials	Specific sites.	Specific. Collective.
Environmental Action	Regeneration areas	Mapped areas around the city on mining leases and in other reserves.	Collective, Specific.
	Recovered mining areas	Former sites.	Specific.
	Street plantings	Planned street plantings across the city.	Specific. Collective.
	Memorials	While they have some value as a group, they are principally specific sites.	Specific.
	Park plantings related to environmentalism	Parks as a group are significant but they are also important individually as they have different characters and functions.	Collective, Specific.
Remoteness	Crown land and reserves around the city within the city boundary	Limited use of materials.	Collective.
		Rail connections.	
		Water infrastructure.	
		Urban form of town.	
	Desert landscape	The whole of the landscape.	
		Willyama Common.	
City form and landscape	Layout of the city in response to the Line of Lode	Street pattern and city form in its various parts.	Collective.
		The development of the City grid.	Collective.
		Response to climate in City layout.	Collective.
		Relationship of housing to mining.	Collective.
		Role of transportation to and from the City.	Collective.

Item/Theme	General Attributes	Specific Attributes	Value Type
	City form in response to Silverton Tramway alignment and reserve	Former railway reserve, Street alignments and buildings around the railway reserve.	Collective.
	Interface of Mining and City development	Line of Lode	Collective.
		Mining Company Housing	Collective. Specific.
		Recreation Sites	Collective. Specific.
		Regeneration Areas	Collective. Specific.
	Use of iconic materials	All buildings that demonstrate those materials.	Collective, Specific.
	Distinctive architecture of mining buildings	All mining buildings and structures.	Collective.
	Distinctive architecture of residential buildings	Residential buildings as a whole particularly prior to the second world war.	Collective.
	Distinctive architecture of civic and commercial buildings	Buildings built during the key development periods of the city.	Collective.
	Buildings that demonstrate the functioning and layout of the city and residential areas	Local retail buildings and centres, Local churches.	Collective. Specific.
	Street tree plantings	Avenues of trees.	Collective. Specific.
	Parks and recreation areas	City formation and planning.	Collective. Specific.
	Cohesive form and scale of the city	The City layout and the layout of each area of the City in relation to the Line of Lode and other features.	Collective.
	Views	To the Line of Lode.	Collective. Specific.

Item/Theme	General Attributes	Specific Attributes	Value Type
		From the Line of Lode across the city and to the desert.	Collective, Specific.
		From key elevated locations within the city.	Collective, Specific.
		Along major streets such as Argent Street.	Collective, Specific.
	Art	Selected murals.	Specific.
		Galleries.	Specific.
		Public art works.	Specific.
		Museums and galleries – public.	Specific.
		Museums and galleries - private.	Specific.
Infrastructure	Water	Dams and reservoirs.	Specific.
		Pipelines.	Specific.
		Pumping Stations and plant.	Specific.
		Silverton Tramway	Specific.
		Menindee Government Railway	Specific.
		Local Water Authority	Collective.
	Power	Power stations	Specific.
		Power lines and infrastructure.	Collective.
Transport	Rail	Sulphide St Station.	Specific.
		Broken Hill Railway Station.	Specific.
		Broken Hill old Railway Station.	Specific.
		Silverton Tramway remaining sites.	Specific.
		Silverton Tramway former Reserve and remnant elements.	Collective.
		Intercontinental Railway	Specific
	Road	Road layout of the City	Collective
	Air	Airport.	Specfic.
	Camel	Mosque.	Specific.
Social Welfare	Clubs and Societies	Band Halls.	Specific

Item/Theme	General Attributes	Specific Attributes	Value Type
		Clubs and Associations buildings and sites	Specific
		Recreation Sites.	Specific
		Entertainment Places	Collective. Specific.
		Mining Company recreation and welfare facilities.	
		Parks.	
		Playing fields.	
		Hospital.	
		Memorials.	
		Places related to specific social uses.	
		Union buildings.	

3.0 ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION ACT 1999

The 'Act' establishes the framework for the National Heritage Listing. It is broad in reach and while it includes cultural heritage (non-indigenous), does so only peripherally.

The following discussion looks at the wording of the Act and how it applies to understanding any statutory requirements that may affect the National Heritage listing of Broken Hill. Items indicated in bold are specifically relevant to the heritage listing of Broken Hill on the National Heritage List.

Section 3 Objects of Act

(1) The objects of this Act are:

- (a) to provide for the protection of the environment, especially those aspects of the environment that are matters of national environmental significance; and
- (b) to promote ecologically sustainable development through the conservation and ecologically sustainable use of natural resources; and
- (c) to promote the conservation of biodiversity; and
- (ca) to provide for the protection and conservation of heritage; and
- (d) to promote a co-operative approach to the protection and management of the environment involving governments, the community, land-holders and indigenous peoples; and
- (e) to assist in the co-operative implementation of Australia's international environmental responsibilities; and
- (f) to recognise the role of indigenous people in the conservation and ecologically sustainable use of Australia's biodiversity; and
- (g) to promote the use of indigenous peoples' knowledge of biodiversity with the involvement of, and in co-operation with, the owners of the knowledge.

(2) In order to achieve its objects, the Act:

- (a) recognises an appropriate role for the Commonwealth in relation to the environment by focussing Commonwealth involvement on matters of national environmental significance and on Commonwealth actions and Commonwealth areas; and
- (b) strengthens intergovernmental co-operation, and minimises duplication, through bilateral agreements; and
- (c) provides for the intergovernmental accreditation of environmental assessment and approval processes; and
- (d) adopts an efficient and timely Commonwealth environmental assessment and approval process that will ensure activities that are likely to have significant impacts on the environment are properly assessed; and
- (e) enhances Australia's capacity to ensure the conservation of its biodiversity by including provisions to:

- (i) protect native species (and in particular prevent the extinction, and promote the recovery, of threatened species) and ensure the conservation of migratory species; and
 - (ii) establish an Australian Whale Sanctuary to ensure the conservation of whales and other cetaceans; and
 - (iii) protect ecosystems by means that include the establishment and management of reserves, the recognition and protection of ecological communities and the promotion of off-reserve conservation measures; and
 - (iv) identify processes that threaten all levels of biodiversity and implement plans to address these processes; and
- (f) includes provisions to enhance the protection, conservation and presentation of world heritage properties and the conservation and wise use of Ramsar wetlands of international importance; and
- (fa) includes provisions to identify places for inclusion in the National Heritage List and Commonwealth Heritage List and to enhance the protection, conservation and presentation of those places; and**
- (g) promotes a partnership approach to environmental protection and biodiversity conservation through:
- (i) bilateral agreements with States and Territories; and
 - (ii) conservation agreements with land-holders; and**
 - (iii) recognising and promoting indigenous peoples' role in, and knowledge of, the conservation and ecologically sustainable use of biodiversity; and
 - (iv) the involvement of the community in management planning.

Definitions

523 Actions

- (1) Subject to this Subdivision, action includes:
- (a) a project; and
 - (b) a development; and
 - (c) an undertaking; and
 - (d) an activity or series of activities; and
 - (e) an alteration of any of the things mentioned in paragraph (a), (b), (c) or (d).

environment includes:

- (a) ecosystems and their constituent parts, including people and communities; and
- (b) natural and physical resources; and
- (c) the qualities and characteristics of locations, places and areas; and
- (d) heritage values of places; and

- (e) the social, economic and cultural aspects of a thing mentioned in paragraph (a), (b), (c) or (d).

heritage value of a place includes the place's natural and cultural environment having aesthetic, historic, scientific or social significance, or other significance, for current and future generations of Australians.

indigenous heritage value of a place means a heritage value of the place that is of significance to indigenous persons in accordance with their practices, observances, customs, traditions, beliefs or history.

place includes:

- (a) a location, area or region or a number of locations, areas or regions; and
- (b) a building or other structure, or group of buildings or other structures (which may include equipment, furniture, fittings and articles associated or connected with the building or structure, or group of buildings or structures); and
- (c) in relation to the protection, maintenance, preservation or improvement of a place - the immediate surroundings of a thing in paragraph (a) or (b).

Arising from the definitions, Broken Hill can be defined as:

Environment

- i. An ecosystem - desert and manmade within the desert
- ii. A place of natural and physical resources - mining, the natural environment
- iii. A place that has characteristics that are important
- iv. A place that has heritage values
- v. A place that demonstrates these attributes through social, economic and cultural values.

Place

- i. A location or area
- ii. A location containing buildings, structures and groups of buildings or structures.
- iii. The setting or context (general) and the setting or context (immediate) around the location and the significant elements within the location

The definitions in the Act are inclusive and provide for a place such as a city to be included on the National Heritage Register for both its broad and specific values. However, the listing, apart from a few references to specific sites, is focussed on the broad contribution of the place to national values.

The questions that arise from this, that are considered later in this study, are:

- i. At what point is a National heritage value impacted by an action?
- ii. What is a significant impact, how is that determined, and who determines it?
- iii. When an impact takes place, what criteria apply to assess whether it is a significant impact?
- iv. For a specific site, how does an owner ascertain whether an action may affect a significant value?
- v. For actions that take place on a broader basis that are not related to single properties, how are significant impacts considered?
- vi. When is an application to the Federal Department required and what form does it take?
- vii. Who is responsible for monitoring compliance under the Act?

- viii. What are the roles of State Government and Local Council in the consideration of National heritage values?

The National heritage listing of Broken Hill has taken place under this Act. The inclusion of cultural heritage and the creation of the National Heritage list is clearly an afterthought in the Act as indicated by the clause numbers which are in addition to the main clauses. The Act is written around environmental and biodiversity protection with almost no detail about built heritage. The Act principally focusses on environmental sites and features. The Act is also written around Commonwealth managed land and Commonwealth actions. Individual persons (single and collective) are also addressed but not in relation to impacts on National cultural heritage if it is not related to Commonwealth ownership or actions.

The Act sets out under Subdivision AA Clause 15B the requirements for approval for activities with a 'significant impact' on a National Heritage Place. The Act does not define what a 'significant impact' may be. It does define an impact but only in terms of who is responsible for an impact, not what an impact actually is. This issue is further discussed at the end of this section.

The Act advises:

Clause 15B

1. A Constitutional Corporation, the Commonwealth or a Commonwealth Agency must not take an action that has, will have or is likely to have a significant impact on the National Heritage values of a National Heritage Place.
2. A person must not for the purpose of trade or commerce:
 - a) between Australia and another country
 - b) between 2 states
 - c) between a State and territory
 - d) between 2 territories

take an action that has, will have or is likely to have a significant impact on the National Heritage values of a National Heritage Place.

3. A person must not take an action in a Commonwealth area or territory that has, will have or is likely to have a significant impact on the National Heritage values of a National Heritage Place.
4. A person must not take an action that has, will have or is likely to have a significant impact on the National Heritage values, to the extent that they are indigenous heritage values of a National Heritage Place.
5. A person must not take an action that has, will have or is likely to have a significant impact on the National Heritage values, to the extent that they are indigenous heritage values of a National Heritage Place in respect of which Australia has obligations under Article 8 of the Biodiversity Convention.

Section 15C of the Act sets out the offences in relation to each of the above. In summary it is an offence in any of the above situations if there is a significant impact on National heritage values.

The Act provisions firstly fall into two areas:

- i. controls for the Commonwealth and Constitutional Corporations

While the Commonwealth has some physical presence in Broken Hill, it is not a significant land-owner nor does it have management of significant areas or places within the heritage listing boundary. Broken Hill is not Commonwealth land nor a territory.

- ii. controls for persons.

The requirements for 'persons' fall into four areas:

- iii. related to trade and commerce that is outside the particular site;
- iv. activities on Commonwealth land or within a territory;
- v. impacts on indigenous heritage values and;
- vi. impacts under the Biodiversity Convention.

In relation to this study that is considering the built and natural National heritage values of Broken Hill the 5 parts of 15C can be analysed as set out below:

Table 11 : Environment Protection and Biodiversity Conservation Act 1999

Act clause section 15B	Comment
1 A Constitutional Corporation, the Commonwealth or a Commonwealth Agency must not take an action that has, will have or is likely to have a significant impact on the National Heritage values of a National Heritage Place.	This clause is relevant if the Commonwealth proposes an action within Broken Hill that is considered to be significant. It is also relevant if a corporation (a trading or financial corporation formed within the limits of the Commonwealth) undertakes works. It does not affect any other works or actions by a person who is not one of the above.
2 A person must not for the purpose of trade or commerce: (a) between Australia and another country (b) between 2 states (c) between a State and territory (d) between 2 territories take an action that has, will have or is likely to have a significant impact on the National Heritage values of a National Heritage Place.	A person is not defined in the Act. Trade is only defined in reference to species or ecological communities. This relates to an action arising from undertaking trade or commerce as set out. For this to be applicable the action would need to arise from trade or commerce. The clause appears to relate to the sale of species and not cultural heritage.
3 A person must not take an action in a Commonwealth area or territory that has, will have or is likely to have a significant impact on the National Heritage values of a National Heritage Place.	Commonwealth area or territory is defined, in relation to Broken Hill, as land owned by the Commonwealth. It is unlikely that a person would be undertaking significant works on land owned by the Commonwealth that was not otherwise subject to Commonwealth control.
4 A person must not take an action that has, will have or is likely to have a significant impact on the National Heritage values, to the extent that they are indigenous heritage values of a National Heritage Place.	This is specifically related to indigenous heritage. Indigenous heritage is not addressed in detail in this paper, but this subclause will apply to Broken Hill indigenous sites.

	<p>This is specifically related to biodiversity.</p> <p>Biodiversity is not addressed in detail in this paper, but this subclause will apply to Broken Hill indigenous sites.</p>
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None of these provisions apply to the State government, a State Government Department, Broken Hill City Council as the local consent authority or an individual.

As Broken Hill is not a place of State Heritage significance in terms of being on the NSW Heritage Act (1977) Schedule as a place or precinct, actions by State Government (unless related to a specifically listed site or place within the City) are not impacted by the legislation.

3.1 Referrals Under the National Act

Making an application under the Act is a two stage process. A referral is first required and then, if that is determined to justify a requirement for consent, a second application is made seeking consent.

The process of referral to the Department of Environment is not set out in the Act. There appear to have been no referrals of proposals for works in Broken Hill since the city was gazetted as a National Heritage Item.

The Department of Environment website provides an information sheet on making referrals with links to several other web pages with further information. The Advice is set out below in full as it is the key document setting out how to engage with the Department.

Environment assessment and approval process

Australia is home to many animals, plants, habitats and places that are found nowhere else on earth and it's important to protect them. The Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) is Australia's national environmental law and it makes sure that 'nationally significant' animals, plants, habitats and heritage places are identified, and any potential negative impacts on them are carefully considered, before changes in land use or new developments are approved.

This means that landowners, developers, companies, individuals and governments must seek Commonwealth approval in addition to state and territory or local government approvals if their plans might significantly impact on matters of national significance.

Find out what is protected. The Australian Government continuously updates this list, and a common set of processes is used for all applications. Do you need approval?

If you are working on a project or development proposal, it's best to contact the department on 1800 803 772 as early as possible to understand the process and investigate ways that improved environmental outcomes can be built into your project from the start.

For more information or to understand if your project needs approval, use [the Protected Matters Search Tool](#) or refer to the [Stakeholder Information Kit](#) webpage.

Does my proposed action need to be referred?

The purpose of the referral process is to determine whether or not a proposed action will need formal assessment and approval under the EPBC Act. Your referral will be the principal basis for the Minister's decision as to whether approval is necessary and, if so, the type of assessment that will be taken.

Start with the following questions:

- Is the proposed action likely to have a significant impact on a matter of national environmental significance?
- Is the proposed action likely to have a significant impact on the environment in general (for actions by Commonwealth agencies or actions on Commonwealth land) or the environment on Commonwealth land (for actions outside Commonwealth land)?

If the answer to both questions is No, approval is not required from the Minister.

If the answer to either question is Yes, the person proposing to take the action makes a referral to the Minister.

Need more information? Setup a pre-referral meeting

Pre-referral meetings

If you are unsure about your proposed action, or wish to make a referral even if you believe your action is not going to have a significant impact, a pre-referral meeting may be useful for you. A pre-referral meeting is optional and can be undertaken at any time prior to submitting a referral.

- When should I seek a pre-referral meeting?
- You may wish to seek a pre-referral meeting if you:

Do not fully understand the assessment and approval process required under the EPBC Act (including the possible expense to you under cost recovery arrangements)

Want to discuss the potential impacts your proposal may have on matters of national environmental significance or other protected matters.

Preparing early and being able to discuss key aspects of your proposal with Departmental assessment officers will help ensure that the referral process and any assessment and approval stages are efficient and potentially reduce cost recovery charges.

How do I set up a meeting?

Please view the following documents if you would like to organise a pre-referral meeting with the Department:

1. [Summary information to assist with a pre-referral meeting – Guidance for proponents and consultants](#)
This guide covers summary information to assist proponents or consultants prepare for a pre-referral meeting.
2. [Information on proposed action template \(DOCX - 111.36 KB\) | \(PDF - 56.4 KB\)](#)
This table to be completed by proponents or consultants, provides information on your project including issues and questions you would like discussed at the pre-referral meeting.
3. [Pre-referral meeting agenda template \(DOCX - 73.04 KB\) | \(PDF - 66.76 KB\)](#)
This suggested agenda template can be modified by proponents or consultants to include additional key areas you would like to discuss during the pre-referral meeting.

The completed table containing information on the proposed action and the modified agenda should be emailed or sent back to the Department (contact details are available in the pre-referral meeting guide as highlighted above). The Department will then organise a suitable meeting date and time and inform you of the final arrangements.

Making a referral

The purpose of a referral is to determine whether your proposed action will need formal assessment and approval under the EPBC Act. Your referral will be the principal basis for the Minister's decision as to whether approval is necessary and, if so, the type of assessment that will be taken.

Note: You may still make a referral if you believe your action is not going to have a significant impact, or if you are unsure.

- [More about making a referral, payments and cost recovery](#)

What happens next?

Decision on your referral

Following the receipt of a valid referral, the Minister has 20 business days to decide if the proposed action triggers the [matters protected](#) by the EPBC Act and requires further assessment and approval.

As part of the 20 business days, the EPBC Act provides a public comment period of 10 business days (with no extensions). This provides an opportunity for relevant Australian, State and Territory government ministers and members of the public to comment on the proposed action.

At the end of the 20 business days, the Department will write to you to advise you of the outcome of your referral and whether or not formal assessment and approval under the EPBC Act is required. The decision will also be available on the public notices page.

- [Public notices: invitations to comment](#)

During the decision process (including comments from the public) the Minister can make one of three decisions:

Not controlled action

If the proposed action is not likely to be significant, approval is not required if the action is taken in accordance with the referral. Consequently, the action can proceed (subject to any state, territory or local government requirements).

Not controlled action - 'particular manner'

If the proposed action is not likely to be significant if undertaken in a particular manner, approval is not required.

Controlled action

If the proposed action is likely to be significant, it is called a 'controlled action'. The matters which the proposed action may have a significant impact on (e.g. Ramsar wetlands or threatened species) are known as the controlling provisions.

Consequently, the proposed action will require approval and is subject to further assessment and approval processes. In most cases, the type of assessment is decided at the same time (decision assessment approach).

Decision on assessment approach

Your proposed action will come to the 'Decision on assessment approach' stage if it is considered a controlled action (because the proposed action is likely to have a significant impact to the matters protected by the EPBC Act).

Proposed actions can be assessed using different methods, depending on a range of considerations, including the complexity of the proposed action. The Minister will let you know which method will be used in assessing your proposed action.

Actions can be assessed using one of the following assessment approach:

- accredited assessment (e.g. [bilateral agreements](#))
- assessment on referral information (assessment undertaken solely on the information provided in the referral form)
- assessment on preliminary documentation (referral form and any other relevant material identified by the Minister as being necessary to adequately assess a proposed action)
- assessment by Environmental Impact Statement (EIS) or Public Environment Report (PER)

- assessment by public inquiry

The process and timing requirements for each type of assessment under the EPBC Act is summarised in the [environment assessment process flowchart](#).

The Department will write to you and advise you about which type of assessment approach your proposed action will be assessed under through a letter and will also be published on the [public notices](#) site.

Decision whether to approve

Following the assessment of your proposed action, the Minister will decide whether to:

- approve your action
- approve your action subject to constraints (e.g. will place conditions on the action)
- not approve your action

The Minister will provide a proposed decision whether or not to approve an action and conditions (if any) to the person proposing to take the action and the designated proponent for comment before making a final decision.

When deciding if a proposed action should be approved, and what conditions to impose (if any), the Minister will consider the impacts of the proposed action on matters protected by the EPBC Act and other economic and social matters. The Minister must take into account:

- the principles of ecologically sustainable development
- the outcomes of the assessment of the impacts of the proposed action
- referral documentation
- community and stakeholder comment
- any other relevant information available on the impacts of the proposed action and
- relevant comments from other Australian Government and state and territory government ministers, and members of the public (such as information on social and economic factors)

The Minister may also take into account the environmental history of the individual or company proposing to take the action, including the environmental history of the executive officers of companies, and parent companies and their executive officers.

Once the Minister has made a decision you will receive a copy of the approval or notice of the refusal. Decisions are published on the Government Notices Gazette and on the [public notices](#) site.

Approved action - post approval

If your action has been given the approval, the approval may or may not have conditions.

The Minister may attach conditions to an approval to protect, repair or mitigate damage to a matter protected by the EPBC Act. Conditions can include bonds or other securities, independent environmental auditing and compliance monitoring.

Compliance monitoring and auditing

The Department closely monitors projects referred and approved under the EPBC Act to ensure compliance with approval conditions as well as compliance with other decisions involving environmental commitments made by approval holders (e.g. 'particular manner decisions').

The Department's annual Compliance Monitoring Plans describe the compliance monitoring activities that are proposed for each financial year.

- [Compliance Monitoring Program 2015-16](#)
- [Compliance auditing](#)
- [Improved compliance and enforcement activities under national environmental law](#)
- [Independent Audit and Audit Report Guidelines](#) - 2015
- [Environmental Management Plan Guidelines](#) - 2014
- [Annual Compliance Report Guidelines](#) - 2014

The key matters that arise from this information are how to undertake a referral which is required before an application can be made. The sequence of events is:

- i. The applicant has to determine if a 'significant impact' is likely to occur from the proposal. If the answer is yes or there is potential for an impact the applicant has the option of a pre-lodgement meeting to seek advice;
- ii. Complete an application form;
- iii. Payment of fee (\$6,577⁴) (there is a review process to have fees reduced or refunded for small applications, however it is a separate process applied for after a referral is made and fees have been paid);
- iv. Assessment of referral by the Department; and
- v. Advise of the decision.

⁴ The fee in November 2020.

If the decision is negative the matter does not proceed and if it is positive a formal application is required to the Department through another process.

In relation to Broken Hill with its multiple property titles and ownership there is no guidance on who would make the initial determination of potential impact. In the case of the mines or perhaps a Council project, a government agency (through land ownership in the case of the mine lease areas) or Council could make an assessment and referral. However, for other owners, the process is not clear and is not known.

The Act does not define what a 'significant impact' may be, however, the advice above links to a glossary⁵ that provides the following information:

Significant impact

A significant impact is an impact which is important, notable, or of consequence, having regard to its context or intensity. Whether or not an action is likely to have a significant impact depends upon the sensitivity, value, and quality of the environment which is impacted, and upon the intensity, duration, magnitude and geographic extent of the impacts. You should consider all of these factors when determining whether an action is likely to have a significant impact on the environment.

When is a significant impact likely?

To be 'likely', it is not necessary for a significant impact to have a greater than 50% chance of happening; it is sufficient if a significant impact on the environment is a real or not remote chance or possibility.

If there is scientific uncertainty about the impacts of your action and potential impacts are serious or irreversible, the precautionary principle is applicable. Accordingly, a lack of scientific certainty about the potential impacts of an action will not itself justify a decision that the action is not likely to have a significant impact on the environment.⁶

The definition has limited value as it is not contained in the Act. It also does not add much assistance in defining significant as the additional terms are synonyms of 'significant'. What it does provide is some context in that an impact is not just on the item or element in question but on the environment in which it is located. It also addresses matters such as intensity, duration, magnitude, and geographic extent of an impact. These are terms that also largely apply to activities that are not related to the built environment, but which would apply to mining activities, vegetation removal, etc.

The glossary explanation is clearly intended to address natural and environmental places but can be applied to built elements. This study has taken the 'environment' of Broken Hill, for the purpose of making assessments, as:

⁵ A glossary explains words and terms used in contrast to a definition that establishes the meaning of a word or term. The glossary forms part of the guideline documents but does not have statutory power.

⁶ The quotes are from the on-line Glossary.

- i. the natural desert environment that surrounds the City and which extends into the city grid
- ii. the city layout
- iii. the mining landscape
- iv. the overall built form of the city in the retail centre through to the residential areas
- v. the regeneration zones and precincts

The provisions of the Act are also quite clearly not intended to be implemented by private owners in a context such as Broken Hill unless they are proposing a large development.

The guideline document also provides links to other explanatory documents that address the range of places covered by the Act. The following excerpts relate specifically to the built and natural heritage of Broken Hill:

What are significant impacts under the EPBC Act?

Australia's national environmental law is called the Environment Protection and Biodiversity Conservation Act 1999 (the EPBC Act). The EPBC Act makes sure that 'nationally significant' animals, plants, habitats and places are identified, and any potential negative impacts on them are carefully considered before changes in land use or new developments are approved.

The Department of Agriculture, Water and the Environment is responsible for managing the environmental assessment and approval process under the EPBC Act.

- *the scale of the action and its impacts*
- *the intensity of the action and its impacts*
- *the duration and frequency of the action and its impacts.*

In particular, you should consider:

- *the environmental context, for example, the sensitivity, value, quality and size of the environment, the site's connectivity to other habitats in the broader landscape and its importance in the conservation of the environment*
- *the nature of the potential impacts that are likely to result from your actions*
- *whether mitigation measures will avoid or reduce these impacts.*

The department recommends taking a conservative approach to analysing whether your project will have a significant impact on the environment. For example, if you think that your actions have the potential to result in a significant impact, or you are not sure, it is best to contact the department early. State and territory protected species lists and heritage lists will also help you identify impacts that you will need to manage or avoid.

Projects should avoid impacts to the environment wherever possible. If environmental impacts resulting from your project are unavoidable, you will need

to tell us about your proposed mitigation and offset strategies as part of the assessment process.

If you wish, you can request a pre-referral meeting, in person in Canberra or over the phone, to discuss your project and ensure that you understand the assessment process and what you will need to provide. Otherwise, you can refer your project directly to the department.

For more information go to the Department's EPBC Act [Environment Assessment and Approvals](#) webpage.

The [Significant impact guidelines](#) provides guidance to determine whether your project is likely to have a significant impact on the environment.

The 'Significant Impact Guidelines' above include the following material in relation to National Heritage Places (of which Broken Hill is included):

Matters of National Environmental Significance

Significant Impact Guidelines 1.1

Environment Protection and Biodiversity Conservation Act 1999

National Heritage places

Approval under the EPBC Act is required for any action occurring within, or outside, a National Heritage place that has, will have, or is likely to have a significant impact on the National Heritage values of the National Heritage place.

The National Heritage List contains places or groups of places with outstanding heritage value to Australia - whether natural, Indigenous or historic⁶ or a combination of these.

Example of National Heritage values - Brewarrina Aboriginal fish traps (Baiaimes Ngunnhu)

The Brewarrina Aboriginal fish traps on the Barwon River in New South Wales, have indigenous National Heritage values. These values include:

- providing an example of a dry-stone fish trap of rare size, design and complexity
- demonstrating an unusual and innovative development in pre-European Aboriginal technology, which exhibits a thorough understanding of dry stone wall construction techniques, river hydrology and fish ecology
- providing a strong social, cultural and spiritual association with Aboriginal people

- *demonstrating a delineation of responsibility for use and maintenance of particular traps between different aboriginal groups under Aboriginal law in accordance with the wishes of the ancestral creation being, Baiame*
- *historical and current use as a significant meeting place for Aboriginal people with connections to the area, and*
- *demonstrating an unusual aspect of Indigenous tradition, arising from the association between an ancestral being and the creation of the built structures of the fish traps.*

*A more comprehensive description of the National Heritage values of the Brewarrina Aboriginal Fish Traps can be found at:
www.environment.gov.au/heritage/places/national/brewarrina/index.html*

Significant impact criteria

An action is likely to have a significant impact on the National Heritage values of a National Heritage place if there is a real chance or possibility that it will cause:

- *one or more of the National Heritage values to be lost*
- *one or more of the National Heritage values to be degraded or damaged, or*
- *one or more of the National Heritage values to be notably altered, modified, obscured or diminished.*

For historic built heritage places in the National Heritage List that are within the Australian jurisdiction, approval will be required where an action that has, will have or is likely to have a significant impact on the National Heritage values of the place will be taken by: a constitutional corporation; the Commonwealth or a Commonwealth agency; or a person for the purposes of trade or commerce between Australia and another country, between States, between Territories, or between a State and a Territory. There are no restrictions on the application of the EPBC Act in relation to natural or Indigenous heritage places in the National Heritage List, or places in a Commonwealth area or Territory, or outside the Australian jurisdiction.

Examples

The following examples provide an indication of levels of impact on National Heritage values that are likely to be significant. They are not intended to be exhaustive.

National Heritage places with natural heritage values

An action is likely to have a significant impact on natural heritage values of a National Heritage place if there is a real chance or possibility that the action will:

Values associated with geology or landscapes

- damage, modify, alter or obscure important geological formations in a National Heritage place
- damage, modify, alter or obscure landforms or landscape features, for example, by clearing, excavating or infilling the land surface in a National Heritage place
- modify, alter or inhibit landscape processes, for example, by accelerating or increasing susceptibility to erosion, or stabilising mobile landforms, such as sand dunes in a National Heritage place
- divert, impound or channelise a river, wetland or other water body in a National Heritage place, and
- substantially increase concentrations of suspended sediment, nutrients, heavy metals, hydrocarbons, or other pollutants or substances in a river, wetland or water body in a National Heritage place; permanently damage or obscure rock art or other cultural or ceremonial features with World Heritage values.

Biological and ecological values

- modify or inhibit ecological processes in a National Heritage place
- reduce the diversity or modify the composition of plant and animal species in a National Heritage place
- fragment or damage habitat important for the conservation of biological diversity in a National Heritage place
- cause a long-term reduction in rare, endemic or unique plant or animal populations or species in a National Heritage place, and
- fragment, isolate or substantially damage habitat for rare, endemic or unique animal populations or species in a National Heritage place.

Wilderness, aesthetic, or other rare or unique environment values

- involve construction of buildings, roads or other structures, vegetation clearance, or other actions with substantial and/or long-term impacts on relevant values, and
- introduce noise, odours, pollutants or other intrusive elements with substantial and/or long-term impacts on relevant values.

National Heritage places with cultural heritage values

An action is likely to have a significant impact on historic heritage values of a National Heritage place if there is a real chance or possibility that the action will:

Historic heritage values

- permanently remove, destroy, damage or substantially alter the fabric⁷ of a National Heritage place in a manner which is inconsistent with relevant values
- extend, renovate, refurbish or substantially alter a National Heritage place in a manner which is inconsistent with relevant values
- permanently remove, destroy, damage or substantially disturb archaeological deposits or artefacts in a National Heritage place
- involve activities in a National Heritage place with substantial and/or long-term impacts on its values
- involve the construction of buildings or other structures within, adjacent to, or within important sight lines of, a National Heritage place which are inconsistent with relevant values, and
- make notable changes to the layout, spaces, form or species composition of a garden, landscape or setting of a National Heritage place in a manner which is inconsistent with relevant values.

Other cultural heritage values

- restrict or inhibit the continuing use of a National Heritage place as a cultural or ceremonial site causing its values to notably diminish over time
- permanently diminish the cultural value of a National Heritage place for a community or group to which its National Heritage values relate
- destroy or damage cultural or ceremonial, artefacts, features, or objects in a National Heritage place, and
- notably diminish the value of a National Heritage place in demonstrating creative or technical achievement.

Fabric means physical material including structural elements and other components, fixtures, fittings, contents and items with historic values.

National Heritage places with Indigenous heritage values

An action is likely to have a significant impact on Indigenous heritage values of a National Heritage place if there is a real chance or possibility that the action will:

Indigenous heritage values

- restrict or inhibit the continuing use of a National Heritage place as a cultural or ceremonial site causing its values to notably diminish over time

- *permanently diminish the cultural value of a National Heritage place for an Indigenous group to which its National Heritage values relate*
- *alter the setting of a National Heritage place in a manner which is inconsistent with relevant values*
- *remove, destroy, damage or substantially disturb archaeological deposits or cultural artefacts in a National Heritage place*
- *destroy, damage or permanently obscure rock art or other cultural or ceremonial, artefacts, features, or objects in a National Heritage place*
- *notably diminish the value of a National Heritage place in demonstrating creative or technical achievement*
- *permanently remove, destroy, damage or substantially alter Indigenous built structures in a National Heritage place, and*
- *involve activities in a National Heritage place with substantial and/or long-term impacts on the values of the place.*

Notes:

- *The above examples are general examples and their application will depend on the individual values of each National Heritage place. Alteration or disturbance which is small in scale may have a significant impact if a feature or component of a National Heritage place embodies values that are particularly sensitive or important.*
- *To have a significant impact on National Heritage values, it is not necessary for an action to impact upon the whole of a National Heritage place, all of the values of a National Heritage place, or a whole value of a National Heritage place. It is sufficient if an action is likely to have a significant impact on a part, element, or feature of a National Heritage place which embodies, manifests, shows, or contributes to the values of that place.*

Further information on National Heritage places

The following information relevant to National Heritage places is available on the department's web site:

General information: www.environment.gov.au/epbc/protect/heritage.html

Australian heritage places inventory: www.heritage.gov.au/ahpi

The guidelines have a general application to Broken Hill in that the city is located within a desert landscape that has distinct natural values that form part of the overall listing. The guidelines in relation to landscape and ecology apply to the City.

A summary of the relevant sections of the guidelines (as set out above) in relation to National Heritage Places with comment on how they apply to Broken Hill is set out in the following table:

Table 12 : National Heritage Guidelines Analysis

Guideline	Comment
National Heritage places with cultural heritage values	
An action is likely to have a significant impact on historic heritage values of a National Heritage place if there is a real chance or possibility that the action will:	Refer to earlier discussion about the meaning of significant impact. The use of the terms "real chance" or 'real possibility' is not precise but also does not reflect the scale of impact. For example a small action to a minor heritage place may have a
	'real chance' of impact but the impact may in relation to broader values be of little consequence.
Historic heritage values	
<ul style="list-style-type: none"> permanently remove, destroy, damage or substantially alter the fabric⁷ of a National Heritage place in a manner which is inconsistent with relevant values 	<p>At face value this could apply to any action that involves a loss of heritage value, however, it has to be understood within the context of being a 'significant impact' and not simply any impact.</p> <p>It may be argued that, for example, the demolition of a building that has recognised heritage value (a scheduled heritage item) involves the permanent removal and destruction of part of the National heritage place and that this must be inconsistent with retaining National heritage values.</p> <p>In contrast, the demolition of a place that has no form of heritage recognition, although it permanently removes an element that is within the National listing area, may not have a significant impact.</p> <p>The sub-clause addresses changes to what exists within the Nationally listed place, it does not address new works.</p>
<ul style="list-style-type: none"> extend, renovate, refurbish or substantially alter a National Heritage place in a manner which is inconsistent with relevant values 	<p>This applies to more minor actions than, say, demolition where a place is not removed or lost, but altered in some way.</p> <p>If the place being altered or affected is a scheduled heritage place it is likely that the statutory controls that exist at local or State level will adequately address change and will not allow changes that affect National, State, or local values.</p>
<ul style="list-style-type: none"> permanently remove, destroy, damage or substantially disturb archaeological deposits or artefacts in a National Heritage place 	<p>This refers to non-Aboriginal archaeology.</p> <p>Archaeology is addressed at National and State levels, but not specifically at local level unless the place is listed as an archaeological site.</p> <p>The existing NSW State Heritage Act controls on archaeology apply across the Nationally listed area and have to be addressed if archaeological material arises on any site irrespective of whether it is a listed heritage place or not.</p> <p>Archaeology</p>

Guideline	Comment
<ul style="list-style-type: none"> involve activities in a National Heritage place with substantial and/ or long-term impacts on its values 	<p>Activities are set out in contrast to construction of a building or similar activity.</p> <p>An activity within this sub-clause may be undertaking further mining (subject also to a range of separate State controls), large-scale subdivision of land with the intent of future development, land clearing (also addressed by other sections of the Act), construction of infrastructure, etc.</p>
<ul style="list-style-type: none"> involve the construction of buildings or other structures within, adjacent to, or within important sight lines of, a National Heritage place which are inconsistent with relevant values, and 	<p>The construction of new buildings or features addresses adding new elements into the Nationally listed area. For most Nationally listed built places the consideration would be around how the new element affects the specific site and any buildings already on it. It is a readily understandable concept.</p> <p>For a city there is an expectation that new elements will be added and the concept of how that may affect significant values is more difficult to understand.</p> <p>The consideration required is whether any particular new work may affect an established heritage value. This requires the values to be set out in such a way that proposals for new work can be assessed against a clearly enunciated value. The sub-clause refers to:</p> <p>‘within’ - all works are within the City and the National listing</p> <p>‘adjacent to’ - is not relevant as the whole Council area is the National place</p> <p>‘within important sight lines of’ – applies both within the City area where there are well-defined sight lines, views and vistas and also from outside the Nationally listed area as the City is seen from the four major approach roads and other vantage points and development that affects those views to the city may have an impact on National values.</p> <p>Key views and sight lines revolve around the Line of Lode and views to and from it from a range of locations in the City.</p>
<ul style="list-style-type: none"> make notable changes to the layout, spaces, form or species composition of a garden, landscape or setting of a National Heritage place in a manner which is inconsistent with relevant values. 	<p>The sub-clause focuses on specific sites to some extent but broadens the concept to landscape and setting.</p> <p>The setting of Broken Hill is the broad desert context with the remnant Line of Lode dominating the centre of the City. However, this is not the only setting of National significance, the setting includes the interface with the desert, the layout of the town, the role of the main street and the response of development to topography, etc.</p> <p>The landscape is the City landscape of street layout, gridded buildings, parks and reserves, regeneration areas, street tree plantings and at its most intimate level individual gardens.</p>

Guideline	Comment
Other cultural heritage values	
<ul style="list-style-type: none"> restrict or inhibit the continuing use of a National Heritage place as a cultural or ceremonial site causing its values to notably diminish over time 	Not applicable.
<ul style="list-style-type: none"> permanently diminish the cultural value of a National Heritage place for a community or group to which its National Heritage values relate 	This may apply, but as the place is a City with a very broad range of values it is only likely to apply in a case which involves demolishing a building or site when that site has a key value, for example, in relation to the development of unionism. In a situation such as this the place is also likely to have other National values that would be affected.
<ul style="list-style-type: none"> destroy or damage cultural or ceremonial, artefacts, features, or objects in a National Heritage place, and 	Not applicable
<ul style="list-style-type: none"> notably diminish the value of a National Heritage place in demonstrating creative or technical achievement. 	This applies to a very broad range of elements in Broken Hill, as the City has been a place of innovation and creative excellence since its inception.
Fabric means physical material including structural elements and other components, fixtures, fittings, contents and items with historic values.	Fabric in this meaning is focussed on the specific place of a building or built element. Within the context of Broken Hill the meaning requires expansion to include the collective built elements of the City and not just the fabric of a specific element or place. This involves a combination of defining the environment of the City and the elements of the City.

This review of the guidelines demonstrates that it is quite difficult to define when a National value is likely to be 'significantly impacted' by proposals except in the most obvious cases where a major change is proposed to a specific listed place.

3.1.1 Applications for Work in Broken Hill

Looking at the last few years of works applications in Broken Hill (outside mining which does not require a consent from council for most activities) provides the following analysis of types of proposals and whether they have potential for a 'significant impact' in terms of:

- i. the size of development,
- ii. type of development,
- iii. the nature of the site and any extant buildings on or around it,
- iv. whether the location is a heritage item or within a heritage precinct.

The information set out is broad in nature but where there is a direct potential for impact it is set out in the comment column.

Other considerations on whether proposals may have a 'significant impact' on National values are addressed later in the report.

Table 13 : Development Applications in Broken Hill 2017-2020 - Analysis by Type of Development

Type of Development	Number of Applications	Total Value of applications	Average value	Comment on type of applications	Potential for impact
Residential					
New House	47	\$5,246,830	\$110,000	Where demolition is involved it may have an impact. New houses range from 160-500k	Generally low but possible
Transportable House	10	\$2,148,134	\$215,000		Generally low
Units	1	\$50,000	-		Low
Dual Occupancy	1	\$180,000	-		Low unless in key location
Residential other - alts and adds	55	\$5,689,119	\$103,000		May affect buildings of significance
Carport, Garage, Shed - residential	212	\$3,323,862	\$15,500		Generally low
Swimming Pools	17	\$496,810	\$29,000		Low
Residential outbuilding	22	\$1,029,235	\$48,000		Low
Totals	365	\$18,163,990	\$49,750		

Type of Development	Number of Applications	Total Value of applications	Average value	Comment on type of applications	Potential for impact
Commercial/ Industrial/ Other					
Shop	2	\$20,000	-	Change to shop fronts	Low
Non-residential buildings other	7	\$2,224,537	-	Satellite dish 850k Roof replacements 660k	Roof works are discussed in the report but have medium to high potential for impact.
Transport Building	1	\$163,546	-	Aircraft hanger	Low
Commercial carpark	1	\$305,000	-	New carpark Removing trees	Potential for impact
Office	1	\$14,000	-		Low
Commercial Building	28	\$8,046,094		YMCA \$3.2m Post office works \$0.5m	Heritage listed and high profile sites have potential for impact
Factory	1	\$0	-		Nil
Warehouse	1	\$24,500	-		Low
Industrial Building	8	\$982,000	\$122,000	Council depot works \$0.62m	Generally low but may have potential impact
Education	1	\$18,167	-	Shed Education works do not generally require DA consent	Low
Religious	3	\$1,070,000	-	Restoration of mosque \$0.1m Reroofing to cathedral bldgs \$0.97k	High potential
Hospital/Health	2	\$17,217,155	-	Demolition of listed building New buildings	High potential

Type of Development	Number of Applications	Total Value of applications	Average value	Comment on type of applications	Potential for impact
Entertainment/ Recreation	4	\$2,950,200		Patton Park 440k ??2.800k	High potential for listed sites
Hotel/Motel	2	\$418,000			Low
Carport, Garage, Shed - commercial	16	\$2,119,811			Generally low
Carport, Garage, Shed - industrial	9	\$2,391,122			Generally low
Commercial outbuilding	10	\$239,900			Generally low
Pergola	42	\$578,339			Low
Shade Sail	10	\$241,951			Low
Signage	34	\$2,161,761		Council lighting of buildings \$1.405m City signs \$0.1m	High potential impact
Total	183	\$41,186,083			

Notes:

- i. A large percentage of the applications are for minor works or for works that have no impact such as new buildings at the waste depot or structures in the industrial area.
- ii. Works such as lighting and signs can have a significant impact.
- iii. Impacts are likely to arise in relation to new government developments but many of these do not require consent.
- iv. Council projects generally have potential for impact as they are mostly in the public realm and often on or around very significant sites and buildings.
- v. The potential for an impact does not mean that there will be an impact, however it does mean that an assessment may be required.

The applications include a number of roof replacements (after the recent hail storms) and a number of demolition applications. The roof works only relate to State listed or major heritage items as for most buildings that have had roof replacements a consent is not required. This however does not mean that roof replacement on a broad scale does not have an impact on National heritage values. Roof applications have only been required for State heritage listed buildings and hundreds of projects have taken place without a requirement for consent.

Demolition always has some potential for impact (apart from minor structures that are not included below) however, there are relatively few demolition applications and only several affected heritage sites.

Demolition applications include:

Houses	8
Hospital	1
Hotel	1
Railway site	1
Other non-minor works	5

One house was approved for demolition that was significant and within a conservation area. It was on the point of collapse and the replacement building was appropriate to ensure values were not reduced in the precinct.

The major demolition that did have an impact on National values was the demolition of the hospital building. As a government project it did not technically require council consent (even though it was applied for). The building was significant but was in poor condition. This is probably the only demolition application that may have been referred under the Act.

Generally, only projects of considerable scale are likely to impact heritage values unless the work is to a place of National significance where minor works may have an impact.

4.0 MAPPING NATIONAL HERITAGE VALUES AND PLACES

The central concept that arises from the National Listing Citation is that the values of Broken Hill are related to almost every aspect of the City as a physical place - both natural and built environments. National values can also be more ephemeral, but in relation to assessment and determining how the cited National values may be impacted, setting out the values of the City in detail is required.

National Values are not limited to or reflected in a list of the most significant buildings, features and places. The former National Heritage Register, the State Register and the LEP heritage listings, while all appropriate and reflecting the period in which they were created, do not set out the full range of specific places that demonstrate the National values nor is any existing heritage schedule complete or comprehensive in identifying important sites. If the current heritage schedules (active and non-active) were to be relied upon, National values would not be adequately protected. Each of the levels of heritage listing is discussed in detail later in the report.

Earlier in this study the concepts of 'collective' and 'specific' values were discussed and how both are included in the National Citation.

4.1 Specific Values

Specific values are relatively easy to map and manage. A schedule of places that exemplify the specific values can be prepared and criteria set out on how to consider works to those places in relation to how National Heritage Values may be impacted. The schedule will be, by necessity, limited to capture the individual places that are the 'most important'. For example, not every miner's cottage in the City can or should be on a heritage schedule as not every example of this type of building will be assessed as an exemplar that requires individual listing.

The places that are already scheduled, with the addition of items identified from this study and the LEP heritage review that is taking place, can satisfy the intent and requirement under the Act to identify and protect specific sites that reflect National heritage values.

The current LEP heritage study review is working thematically to ensure that the articulated National values are all represented in the range of individual sites that are included in the revised heritage schedule.

This report sets out a list of places that are likely to have specific National Heritage value. This is based on a thematic approach deriving from the National citation. As the National themes relate closely to State and local themes, it is possible to have a local heritage schedule that recognises both State and National values that can inform assessments. It is also important to align the values of Local, State and National as much as possible to allow the various schedules and lists to be understood in relation to each other. This also can allow places that are considered to have higher significance (higher than local) to be referred for consideration to other agencies.

A specific value can also be applied to a site such as the 'Line of Lode' where the overall site can have specific values in addition to individual elements of the site also having individual values.

It is however difficult to apply specific values broadly across the City.

4.2 Collective Values

Collective values are much harder to define and manage as they do not relate to specific sites and places even though those places may, in addition to being of specific significance, form part of a collective value.

Broken Hill has been Nationally listed for its value as a 'place'. It can be argued that almost every aspect of the City and its setting contribute to that value and create 'the place'. It is the range of individual places, the variation between elements and the smallest elements as well as the iconic that establish the overall value. Despite the City being 'the heritage place', it is not viable or manageable to, in effect, have every part of the City on a heritage schedule.

If a typical residential street is examined, by way of example, to understand what attributes contribute to its heritage value it may contain the following elements:

- dwellings from different periods and of different styles
- additions to some of the dwellings in a wide range of styles and forms
- ancillary buildings such as garages
- infrastructure such as air-conditioning units
- front and side fences
- gardens and plantings within properties
- driveways
- road formation including kerb and guttering
- street trees
- perhaps a corner shop with street verandah
- bus shelter
- footpath
- street signs
- infrastructure such as power poles

Not all of these items are of specific heritage value although those in italics may be, but the combination of elements, particularly where there is a cohesive group of buildings that are of heritage value forms part of the broad national heritage value that the listing recognises.

It is also not simply a matter of not having any impact on National heritage values; the Act recognises that impacts can and will occur and qualifies an impact by using the term '*significant*'. However, as discussed earlier in the report, the use of the term '*significant*' is not defined in the Act.

For something to be *significant* it has to be *important, notable, momentous, of consequence, or show something important*.⁷ The National Heritage Citation sets out how and why Broken Hill is significant.

⁷ Collins Dictionary definition of significant.

The Act notes:

Objectives

- (a) *to provide for the protection of the environment, especially those aspects of the environment that are matters of national environmental significance.*

Definitions

Heritage value of a place includes the place's natural and cultural environment having aesthetic, historic, scientific or social significance, or other significance, for current and future generations of Australians.

Indigenous heritage value of a place means a heritage value of the place that is of significance to indigenous persons in accordance with their practices, observances, customs, traditions, beliefs or history.

Place includes:

- (a) *a location, area or region or a number of locations, areas or regions; and*
- (b) *a building or other structure, or group of buildings or other structures (which may include equipment, furniture, fittings and articles associated or connected with the building or structure, or group of buildings or structures); and*
- (c) *in relation to the protection, maintenance, preservation or improvement of a place - the immediate surroundings of a thing in paragraph (a) or (b).*

This makes clear that as Broken Hill is included as a 'place' on the National Heritage Register, the place must be significant under the Act.

The 'Place', as set out in the definition above is, for the purpose of this listing:

- the City within its defined boundaries,
- the buildings, groups of building and structures and associated elements,
- the immediate surroundings to these, and
- the desert environment in which the City is located.

Consequently, everything falls within the definition of significant even though not everything has the same level of significance.

When 'significant' is used in the negative, as in "a significant impact", there is an implication that for the impact to be significant, the thing that is subject to the impact must first be significant or the impact would not be of consequence. This is supported in the Act as set out above.

The use of significant here means: '*A significant amount or effect is large enough to be important or affect a situation to a noticeable degree*'.⁸ It is a matter of degree and the extent of impact has to be noticeable.

This will also be relative to the individual level of significance of specific places. An impact may be significant on a specific item of high heritage value where the same impact may be less significant on an item of low heritage value.

While this again is relatively easy to assess in relation to a specific place, it is much harder to understand in relation to the 'collective' values of the City. It also means that there is no simple set of rules or controls that can be applied to establish thresholds that can be used in every situation.

Consequently, guidelines need to address a range of issues to ensure that the various areas of national significance are covered.

⁸ Collins Dictionary definition

5.0 HERITAGE LISTINGS

5.1 National Heritage Listings

The National Heritage list⁹ comprises 129 places within Australia including 27 places within NSW.

The list itself nor any guidelines provide assistance in how to approach a complex site with multiple ownership such as Broken Hill. There is one other precinct listing that also covers multiple property titles at Glenrowan in Victoria. It is the site of the Ned Kelly siege. It is a small precinct with a small number of property titles and is not of the complexity of the Broken Hill listing. There is also a very defined reason for the listing that is not related to the built items that now exist.

The following table looks at the type of places that are included in the National list in relation where they are found and whether they are built, natural or Aboriginal. The table is also divided into states and territories. As noted, there are two observed sites within Australia that have complex ownership, Glenrowan and Broken Hill. In Early 2021, some time after this report was written, The federal Minister gazetted about 100 hectares of land from Macquarie Street through to the Domain in Sydney as a National Heritage site. This is the second complex city site after Broken Hill to be heritage listed where there are a range of owners, noting that most of the land is within State government ownership but managed by a number of different agencies.

Table 14 : Analysis of National Heritage Listings as at the end of 2020

State	Number of listings	City/suburban	Aboriginal	Natural	Built	Complex site ownership
NSW	27	12	5	15	15	1 ¹⁰
Victoria	27	9	5	6	18	1
Queensland	12	0	0	12	1	
South Australia	11	2	1	7	3	
Western Australia	16	1	2	10	3	
Northern Territory	5	0	1	4	0	
ACT	7	4	0	1	6	
Tasmania	13	0	1	6	8	
Other	4	0	0	2	2	
Total	129	29	15	63	46	

The National list is interesting when compared to other heritage schedules as it contains a very high proportion of natural sites such as National Parks where most State and local heritage schedules are

⁹ The list was assessed in May 2020 and may have had new items since that time.

¹⁰ This does not include the Macquarie Street Sydney listing which is also complex.

focussed on the built environment. Consequently, the built items included are few and are all exceptional. The NSW examples of built heritage, apart from Broken Hill include: Cockatoo Island; Cypress Helene Club; Hyde Park Barracks; Moree Baths and Swimming Pool; Old Government House Parramatta; Great North Road; Parramatta Female Factory Precinct; Snowy Mountains Scheme; Sydney Harbour Bridge; Sydney Opera House. NSW has the highest number of built sites on the register across the states and territories.

They are all specific sites or tightly defined precincts with the ability to clearly define heritage values. Even the Snowy Scheme which is a large and complex series of places, falls under a single ownership and management.

There is no other listing like Broken Hill in the NSW listings or across the whole register. The recent listing of Macquarie Street has some similarities but it does not contain the range of sites and multiple ownerships that are found in Broken Hill.

The National heritage listing covers the whole of the council area. While it considers Broken Hill as a place (for the purposes of the Act), it is, in effect, a precinct of interrelated values. The Act schedule does not draw a distinction between individual places and precincts.

5.2 State Heritage Listing

There are a total of 13 individual sites within the Broken Hill Council area registered on the Schedule of the NSW Heritage Act 1977.

While each of the places is of State level significance (when reviewed against the Act criteria), they do not represent the State heritage values of the City as the schedule is quite random in what is included and does not include all or most of the places that do or are likely to have State level significance.

The 13 sites that are heritage listed are:

Table 15 : State Heritage Listings and Themes

State Item	Heritage Listing (in order of SHR listing dates)	RNE	Mining/ Unions	Civic/ Gov/ Transport	Religion	Commercial	Event
Trades Hall	PCO 1981 SHR 1999	RNE 1980	X				
The Kersten Mining + Minerals Museum (Seppelt's Warehouse)	PCO 1982 SHR 1999	RNE	X			X	
Palace Hotel	PCO 1984 SHR 1999	RNE 1982				X	
St Joseph's Convent + Chapel	PCO 1986 SHR 1999	RNE 1982			X		

State Item	Heritage Listing (in order of SHR listing dates)	RNE	Mining/ Unions	Civic/ Gov/ Transport	Religion	Commercial	Event
The former Synagogue	PCO 1989 SHR 1999				X		
Broken Hill Regional Gallery	PCO 1991 SHR 1999	RNE 1982		X		X	
Broken Hill Railway Station and yard group	SHR 1999			X			
The Post Office	SHR 2000	RNE 1978		X			
The former Central Mine Manager's Residence	SHR 2006		X				
Wesley Church and Hall Sulphide St	SHR 2010	RNE 1983			X		
BHP Chimney remains	SHI 2010		X				
The former Mosque	SHR 2010				X		
White Rocks Reserve	SHR 2018						X
Summary			4	3	4	3	1

Observations related to State Heritage listings in Broken Hill

- i. Apart from the BHP Chimney site, there are no mining sites in Broken Hill on the State Heritage Register although several sites are related to mining. Given the importance of mining at Broken Hill to the State and nation this would appear to be a significant omission.
- ii. The State Listings do not reflect the heritage values of Broken Hill. The listings are clearly responsive to proposals to adapt buildings or potentially where there have been threats to buildings. Items in italics in the table are places that have been subject to adaptation and change of use. It is consequently a reactionary schedule rather than a strategic one.
- iii. The listings have not arisen from a heritage study or a thematic approach but are quite random, they are also across 37 years and do not represent a review except for the 1999 listing of former Permanent Conservation Order's.
- iv. Seven of the listings took place at the same time in 1999.
- v. The listings were clearly not based on the RNE listings which are more extensive.
- vi. The places listed on the State register are all important sites but they fall far short of defining what is of State heritage significance in the city.

The State heritage listings are important but do not provide guidance on how to understand the heritage values of the City.

5.3 RNE Listings

Prior to the current Commonwealth Legislation, the Register of the National Estate set out places that were considered to be, at the time of that legislation, to be of National significance. The following table sets out the then-listed places and also shows how the former schedule relates to other heritage schedules.

The National Estate Register was in two sections: listed places and; indicative places. The later were not on the Register but presumably were capable of being listed.

Table 16 : National Estate Heritage Listings for the City of Broken Hill

Listings (former)	Theme	SHR listed	LEP listed	Section 170 listed ¹¹
Civic Group:				
- Post Office	Civic	SHR	LEP 28	YES
- Town Hall	Civic		LEP 220	
- Police Station	Civic/gov		LEP 113	
- Technical College	Education		LEP 212	
- Court House	Civic/gov		LEP 46	
- War Memorial	Civic		LEP 225	
Gaol	Government		LEP 23	YES (multiple listings)
Railway Station (new)	Transport		LEP 49	YES
Trades Hall Blende Street	Unions	SHR	LEP 121	
Astra Hotel 393 Argent St	Hotel		LEP 8	
Bank of SA 215 Argent St (demolished)	Commercial	-	-	-
Bon Marche Building 325 Argent St	Commercial		LEP 228	
Bon Marche Group Argent St	Commercial		LEP 228	
Caledonian Hotel 140 Chloride St	Hotel		LEP 37	
Catholic Cathedral Group Lane St	Religion		LEP 123	

¹¹ Section 170 listing is a government heritage listing under Section 170 of the Heritage Act that requires each State government agency to prepare and maintain a heritage register of significant places. When a site is de-accessioned, the listing ceases.

Listings (former)	Theme	SHR listed	LEP listed	Section 170 listed ¹¹
Crown Hotel 2 Oxide Street	Hotel		LEP 47	
Crown Hotel Group 1-2 Oxide Street	Hotel		LEP 47	
Duke of Cornwall Hotel and timber hall 76-78 Argent St	Hotel		LEP 51	
Imperial Hotel 397 Cobalt Street	Hotel		LEP 81	
Kintore Shaft Eyre Street (relocated)	Mining		LEP 84	
Lawrence and Hanson's Premises 4-10 Chloride Street	Commercial		LEP 229	
Line of Lode Eyre Street	Mining			
Methodist Church Hall Sulphide Street	Religion			
Mount St Joseph Convent of Mercy Lane Street	Religion	SHR	LEP 200	
Palace Hotel 227 Argent Street	Hotel	SHR	LEP 105	
Pig and Whistle Hotel 227 Argent Street	Hotel		LEP 109	
Pirie Building 283-295 Argent Street	Commercial		LEP 110	
Burke Ward Public School Rakow Street	Education		LEP 35	
Sacred Heart Catholic Cathedral Lane Street	Religion		LEP 123	
Silver City Working Man's Club 402 Argent Street	Hotel		LEP 189	
Silver King Hotel 428 Argent Street	Hotel		LEP 190	
Sulphide Street Railway Station	Transport	SHR	LEP 209	
The Old Miners Arms Art Gallery 82 Crystal Street	Hotel		LEP 89	
Trades Hall 34 Sulphide Street	Unions	SHR	LEP 221	
Uniting Church Cobalt Street	Religion		LEP 230	
Uniting Church Group Sulphide Street	Religion			
Walter Sully Emporium 404-408 Argent Street	Commercial	SHR	LEP Q224	
Warehouse 22 Delamore Street	Commercial		LEP 160	
West Darling Hotel 394-400 Argent St façade only	Hotel		LEP 231	

Listings (former)	Theme	SHR listed	LEP listed	Section 170 listed ¹¹
West Darling Hotel Group	Hotel		LEP 231	
Wilcannia Club Hotel 1 Oxide Street	Hotel		LEP 68	
York Hotel Oxide Street	Hotel		LEP 8	

Table 17 : Indicative Places on the former National List but not registered

Indicative Place	Theme	SHR listed	LEP listed	Section 170 listed
AMA Hall 246 Blende St	Unions		LEP 2	
Broken Hill High School Group Garnet St	Education		LEP 24	
Burke Ward Hall Gypsum Street	Civic/unions		LEP 34	
Excelsior Hotel 13 Thomas Street	Hotel		LEP 54	
Gasworks Hotel 213 Mercury Street	Hotel		LEP 62	
Junction Hotel 560 Argent Street	Hotel		LEP 83	
Royal Hotel 350 Argent Street	Hotel		LEP 150	
Seppelt's Warehouse 160 Crystal Street	Commercial	SHR	LEP 129	
Southern Cross Hotel 93 Oxide Street	Hotel		LEP 199	
Union Club Hotel 93 Patton Street	Hotel		LEP 223	

The combination of places that were listed and indicatively listed are largely found in the LEP with several of the buildings also on the SHR. While all of the listings are places of significance, they do not address the question of why they would be included on a National Register in preference to other significant places that are not included.

The data sheets for the listings vary in both the extent and quality of information provided, however there is generally sound material to assist in looking at the specific sites.

A break-down of the themes represented in the listings is in the table below:

Table 18 : Analysis of Historic Themes in former Register of the National Estate

Themes	Number	Comment
Civic/ government	6	Apart from the gaol, this theme is focussed on the civic centre of Argent Street. This is an important precinct but does not represent the range of civic/government sites in the city.
Commercial	8	This is a very small selection of significant commercial buildings but does cover some of the key buildings. The LEP listings for Argent Street provide a more nuanced assessment of the commercial centre of Broken Hill.

Themes	Number	Comment
Hotel	20	Hotels have been separated from commercial as they are the predominant group of places within the listings. However, the 20 places is only a partial representation of the over 60 hotels that existed in the City.
Religion	6	This group comprises the catholic cathedral and convent (3 listings) and 3 Uniting Methodist churches. Of the more than 25 churches in the city (former and current use), this does not represent National values.
Education	3	This represents two schools and the TAFE building. There are a range of education sites of equal significance, some of which are included in current registers.
Mining	2	The Line of Lode is the most significant listing in the former Register and while the data sheet is not highly detailed it captures a core value of the City. There is no similar listing in current State or Local schedules which would seem an anomaly.
Unions	2	Two key sites are identified.
Transport	1	Sulphide Street Station is a very key site, but a single listing of a transport site under-represents a range of sites that were pivotal to the National values and development of the City

The analysis demonstrates that the basis of the listings is again quite random and is not derived from establishing National values. Like many early listings, key sites are identified along with the often more visually pleasing or places that represent the character of the location. This may explain the predominance of hotels, commercial buildings and churches in the schedules.

In contrast, the City listing and the Line of Lode, nominated as items in their entirety (which is not a listing that occurs at State or local level) foreshadowed the later National listing of the City.

5.4 Local Government Heritage Listing

5.4.1 Local Environmental Plan

The LEP contains heritage items and heritage precincts that are set out in a schedule and on maps. This follows the standard pattern of LEP provisions across NSW and the standard Clause 5.10 LEP provisions are included in the LEP as the basic heritage controls. As with all LEP controls, the provisions only apply to places and precincts that identified. Even though an objective within clause 5.10 is to conserve the heritage values of Broken Hill, if a place is not identified, the provisions do not apply.

The LEP listings and precincts were first established in 1988 and were last updated in a 2005 review. A current review, partly based on this study of National values is taking place. Items and Precincts are discussed below.

5.4.2 Development Control Plan

The Broken Hill DCP 2016 provides heritage controls in Section 8. This acknowledges the National heritage listing and was prepared after the National listing was gazetted. It briefly sets out the requirement to make a referral as discussed in the first part of this report.

The DCP structure is:

Introduction

Statement of Significance - from the National citation

- 8.1 Guidelines for all development except mining (items and within HCA's)
- 8.2 Residential Development
- 8.3 Commercial Development
- 8.4 Development in the Mining Zone

The controls are all heritage controls and only apply within the four heritage precincts or to heritage items, most of which are within precincts or on mining leases. This results in the two residential precincts having controls (there are also a few residences in the South Precinct) and 5 individual residential heritage items being subject to controls (others are inside the precincts).

For commercial development, most heritage items are within Argent Street or Broken Hill South Precinct. There are other commercial buildings that are not items within those precincts that are covered by the precinct controls and there are a few commercial buildings outside precincts that are heritage items that the DCP also addresses.

There are around 50-60 heritage items outside precincts that are addressed in section 8.1 - Guidelines for all development. Most of those sites are churches, hotels, parks, etc. The 8.1 controls are quite general but appear to mostly relate to housing and there are no controls that look at civic or public buildings individually or as a group.

As an overall comment on the DCP there is some confusion in the layout between heritage items, heritage precincts and other parts of the City that are not heritage listed. Most DCP's separate items and precincts in relation to controls as there is usually a difference in the requirements for each (Heritage Items usually have greater level of control than a building within a precinct). Many DCP's also have more general controls for residential areas that are not in specific heritage precincts. It would appear that many of the policies for precincts should apply across the council area generally and not just for listed places. These controls would relate to siting, overall form etc.

Precinct controls would then be more targeted and each precinct should be defined setting out its character so that there are reference points for considering the policies and controls against the particular values of each area. Items should then have a more rigorous set of controls and guidelines.

The material within the DCP is a good framework but does not apply to the City in a logical manner.

For example, Section 8.1.4 addresses fences under the broader heading of 'All Development'. The text contains guidance and controls. The comments and controls only apply to residential development. Other significant buildings have fences and they should be addressed in this section

as otherwise there is an inference that other fences are not of sufficient importance to have guidelines or controls.

As there is a section on residential development (8.2) the material on residential fences could be located there or the section on fences could address different building typologies.

The DCP is discussed as later in this report it is recommended that the control of National values should take place through Council and the DCP is a sound way to address this.

National values are broader than the LEP listings (also discussed in detail) and the DCP can reflect the hierarchy of items, precincts and other areas to give guidance across the council area.

A template could be:

8.0 Heritage

8.1 General introduction

8.2 National Heritage Values across the City

Commercial Precincts

Residential Precincts

8.3 Heritage items

8.4 Heritage Conservation Areas

Commercial Precincts

Residential Precincts

Mining Precincts

8.5 Mining sites

8.6 Archaeological Sites

8.7 Aboriginal Sites

Each of the above sections could then contain the material that is set out in the current DCP using a standard order of elements. There would also be the ability to discuss National heritage values further in the introductory sections and establish controls that would apply to the whole council area.

General controls on commercial or residential that are not within heritage listings could be set out under the broader development controls of Section 3.

5.4.3 LEP Heritage Items

The LEP heritage listings have arisen from a range of heritage studies undertaken over 35 years. While many sites are included, the research undertaken to inform the National Heritage listing citation sets out a range of themes (discussed in further detail in this study) that expand earlier understandings of the significance of Broken Hill.

The current review of the LEP heritage listings will expand the schedule of listed places using the National themes as a basis as well as exploring local themes that have not been included previously.

The LEP, in its present form, contains the following approximate grouping of heritage places by major themes of mining, Commercial and civic, residential and other¹². This is a simplification of the State themes that assists in understanding the broad grouping of listings within the Council area:

Table 19 : Analysis of LEP Heritage items by Location

Site Type	Number of Individual Sites	Sites on SHR (for reference)
Mining sites or structures	187	2 - BHP chimney remains - former mine residence
Commercial and Civic Sites around Argent Street	147	6
Residential sites (non-mining)	12	0
Other (beyond Argent Street) - church, civic, reserves, etc.	67	4 churches 1 reserve
Total number of listed sites	412	13

The range of items scheduled represents specific studies that have taken place at key times that have provided detailed information in relation to the Argent Street area (Argent Street study) and the mines (a range of comprehensive conservation management plans that have identified most items of significance). These two aspects of Broken Hill's significance comprise 328 of the 412 or 80% of the LEP listings.

There is a considerable imbalance in the representation of heritage values in the city and in particular National heritage values beyond mining (45% of LEP heritage listings).

The themes that are not adequately addressed that are found in the National citation include:

- i. Housing in its various forms
- ii. Regeneration
- iii. The landscape of the Line of Lode
- iv. The landscape of the desert and its interface with the city
- v. Water and transport
- vi. The social landscape of the City including sport and recreation
- vii. Innovation and resilience

5.4.4 LEP Heritage Precincts

The city has four heritage precincts set out in the LEP. Two are residential in character (C2 and C3), one covers the Argent Street and city centre area (C1) and the fourth (C4) is a mixed precinct including the Patton Street retail area in South Broken Hill, some mining residences and an area of mining recreation facilities. A small number of non-mining residences are also included within the

¹² The themes are based on the NSW Heritage Office themes adapted for Broken Hill.

area. The mining residences and recreation facilities are also part of a heritage item covering an extensive mining area.

An analysis of the four precincts with the overlap of heritage items that are found within each area is:

Table 20 : Analysis of Heritage Precincts

Precinct	Principal Components of Precinct	Number of Heritage Items Within the Precinct Boundaries	Type of Heritage Item
C1 - Argent Street	Commercial Civic Government	129	Commercial 114 Park 1 Civic 4 Government 9 Other 1
C2 - Broken Hill North	Residential	9	Residential 5 Commercial 3 Church 1
C3 - Railwaytown	Residential Commercial	8	Residential 0 Commercial 5 Church 2 Park 1
C4 - Broken Hill South	Commercial Church Park Mining Housing Mining	12	Commercial 6 Civic 2 Church 2 Park 1 Mining Housing 1 Mining 1
Total		158	

Precinct C1 is important, even though it contains a large number of individual items, as it captures the core of the city centre as an entity. This reflects National heritage values even though that is not stated in the documentation.

Precincts C2 and C3 are important as they are the only identification of the role of housing in the city. They are not potentially large enough to cover the significant range of housing sites that exist. Given the very low representation of housing in individual listings, precincts are an essential element in recognising the city's heritage. Heritage significant housing outside the precincts currently has no heritage protection or control.

C4 appears to be an amalgam of several areas that have quite different values as the South Broken Hill retail centre is physically and thematically separate from the mining housing and recreation areas to the south-west. The Patton Street section of the precinct has a number of individual heritage items but the precinct provides an important thematic framework around them.

Interestingly there is no precinct that considers the Line of Lode as an entity. As the National Heritage Values citation places a very high emphasis on the form and structure of the Line of Lode and not as much on individual mines, leases or built elements, recognition of the mining lease areas is an important aspect to managing Broken Hill's heritage. This is further reinforced by the former National Heritage listing of the Line of Lode as an entity in contrast to looking at individual sites.

For clarity it is suggested that heritage conservation areas, which are an excellent way to manage broad values, be divided into the following precinct types with recommendations on how to manage them :

Table 21 : Precinct Recommendations

	Precinct type	Recommendations
i	residential	<ul style="list-style-type: none"> i Create precincts that represent key residential areas that demonstrate a good level of integrity*. ii Represent the range of residential areas that relate to key development periods. iii Be comprehensive enough to demonstrate the extent of housing development. In the City iv Represent the different parts of the city: Broken Hill, BH South and Railwaytown as well as different areas within the main area of Broken Hill.
ii	retail/commercial	<p>Argent Street is largely a precinct of retail/commercial buildings. Patton Street contains retail/commercial, residential and mining sites. It does not include all of the civic buildings in South Broken Hill.</p> <ul style="list-style-type: none"> i The Argent Street Precinct is comprehensive but would benefit from review of boundaries to be more precise about the commercial centre of the city. ii Railwaytown has a single precinct that may benefit from being separated into the civic/retail area and residential areas. iii Patton Street should be separated into the commercial/retail/civic area and could be expanded to better represent the retail and civic life of South Broken Hill. iv Mining parts of the precinct should be excised and either a separate precinct created or included within mining. v Other small groups of local shops and churches could be considered for precinct listing to represent the strong local focus of retailing in some residential areas.
iii	mining	<ul style="list-style-type: none"> i Include as a minimum, the early mining lease areas as a precinct. ii Look at creating a single precinct that covers the full extent of mining leases. iii Consider establishing precincts of mining housing separately. iv Consider former mining areas as precincts that have changed use.
iv	regeneration/ landscape	<ul style="list-style-type: none"> i Establish a precinct to address Morris regeneration areas for their heritage values that is separate to the current LEP environmental zoning.

		<ul style="list-style-type: none"> ii Establish either precincts or linear heritage listings to cover planned street tree plantings in various parts of the City iii Develop heritage policies on trees throughout the City.
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* Integrity in regard to an HCA means a significant number of buildings or sites from the key periods that the precinct is intended to represent to demonstrate those characteristics. Precincts do not have to be complete and may have non-significant or uncharacteristic elements. There is also an expectation that a reasonable number of buildings within the precinct can demonstrate key characteristics.

5.5 Discussion of Heritage Listings

There is a disjunct between the RNE, SHR and LEP heritage listings. While they overlap in places and a number of key places appear on all or several of the registers, in terms of the hierarchy of heritage listings, the heritage values of Broken Hill are significantly under-represented at all levels except the current National City listing.

The National City listing however, by its nature and complexity, does not address detail as can be expected from State and local heritage listings. The reason for listings at different levels is to manage heritage values at those different levels. It is not possible to manage State heritage values in Broken Hill with the current range of listings (set out in Table xxx) as the sites, while significant, do not capture the range of State heritage values.

In relation to the hierarchy of listings a correct model would be:

National Listing

Sets out the National themes.

Establishes a framework for detailed heritage schedules and assessments to be made for places that are of specific National, State or Local significance. Provides a framework to understand how specific places that are not of individual National significance fit within the National listing and then how they should be considered in relation to National values.

Identifies the critical places or precincts within the City that represent National values and lists them.

Sets out the requirements on how to apply for and obtain approval for works that have a significant impact on National values.

Is available to consult with Broken Hill Council on matters relating to National values and receives referrals by agreement unless the application is by a government department or agency who does not need to consult with Council.

State listing

As there is no comprehensive approach to a place such as Broken Hill in how heritage listings of state value are made and given the difficulty of achieving any listing of State significance at this time, the NSW Heritage Office should review and adopt (based on the review) the recommendations from the local heritage study review (currently underway) to include key sites of State heritage significance on the State heritage register. This could be a listing of a range of places at one time in response to the national heritage listing and the heritage study review.

There is a high probability that many of the sites of State significance will align with places of National significance although, as set out in detail later in this study National values can be quite different to State ones.

The objective of further State listings would be to support the National listing by recognising a broader range of places of State significance and to add critical sites and features that may be at risk.

However, if further State listings were not to take place, the framework set out in this study can provide adequate assistance for assessments at Council level to take into account State heritage values.

Local LEP Listing

Adopts the National values as the framework for local heritage listings.

Establishes thresholds for considering each specific place or precinct for its National, State or Local values.

Sets out a schedule of heritage places (using the current LEP Schedule as a starting point) that categorises each place into local, State or National Significance. This will not be on the basis of an assessment process that would be undertaken by the State or Federal agency, but by way of comparison within the framework of overall significance.

Develops a set of guidelines on how to assess places of varying significance levels that is to be used at local council for assessing applications.

This model is based on the following:

- i. As the National values are across the whole City and all levels of significance, the day to day management of heritage values will principally reside with Broken Hill Council who will make assessments as to whether a National Heritage value is significantly impacted by a proposal. Council have responsibility for the LEP heritage schedule; and if it is comprehensive and addresses local, State and National values, Council can identify (with guidance) when values may be impacted and when further assessment, approval, etc may be required. As the City of Broken Hill is the heritage item, it is appropriate for Broken Hill Council to be directly involved in assessing the potential for impacts on heritage values at all levels.
- ii. The only comprehensive heritage schedule is and will, in the future, be maintained by Broken Hill Council. There is, in reality, no potential for comprehensive heritage schedules to be prepared by either the Federal Department of Environment or the NSW Heritage Council. The NSW Heritage Council can only be involved if a place on their register is affected (or there is a referral under another State Act) and the Department of Environment can only assess significant impacts under specific situations. Consequently, Broken Hill Council is the only authority capable of having an overview of all heritage values and the only viable local point of contact for applicants.
- iii. For National values to be potentially impacted, the works proposed have to be:
 - on a specific place that has National value
e.g. Trades Hall - a building individually cited as having National significance
 - on one of a group of places where the group have specific National values
e.g. The Line of Lode
 - affecting a group or class of places that collectively have National value
e.g. Regeneration Areas
- iv. There needs to be a clear understanding of how small cumulative changes to elements of a larger significant group may have a significant impact on National Heritage values.
e.g. Replacing roofs on buildings across the council area after the recent hailstorm.

5.6 Comparable Cities

There are very few places that are similar to Broken Hill. It is distinctive and significant for its mining history, its role in establishing Australian industry and exports, its remoteness and distance from settled areas within a desert environment, its longevity, its size, its connection to three states as well as the Federal Government, the physical presence of the mines in the centre of the City, its lack of essential services such as water and rail access (that is to NSW) and its connection to unionism and the technical innovations in mining that took place there.

There are many places within Australia and elsewhere that demonstrate one or perhaps several of these attributes but nowhere that demonstrates the range of values that are found in Broken Hill. There are numerous former and current mining towns and former towns across the continent that have a range of values from local to State but almost none that satisfy the National criteria as Broken Hill does. This makes comparison with other places difficult.

Most other substantial mining towns within Australia, particularly those that date to the nineteenth century have had later histories after mining ceased to be their major activity which contrasts sharply with Broken Hill that has had a mining history that has defined the place from its discovery to the present day.

The evidence of failed mining is prolific across Australia. Areas that quickly established around mines that initially yielded returns just as quickly disappeared. Most mining had limited duration and once productivity ceased or decreased the associated town and infrastructure diminished, was removed or often was abandoned. Silverton is a case in point where initial hopes were high but as production failed attention shifted to Broken Hill with buildings being relocated to take advantage of a new boom.

On the west coast of Tasmania the early mining towns of Queenstown and Zeehan remain and have managed to create new existences since mining reduced but at greatly reduced population and facilities. The nearby former town of Linda boasted more than 40 hotels at its peak but today has only one building and a ruined brick and stone hotel remaining. This has been a typical pattern around mining towns. Queenstown was the town related to the famous Mt Lyell mine. Commencing activity around 1881 (similar to Broken Hill) by 1900 it had a population of 5,050 with another 5,000 people living in the mining settlements around it. Today the population is about 1,800 and the town operates on tourism, Hydro amongst other activities. The place is remote and difficult to access but had good natural resources. It has some similarities to Broken Hill but does not have the longevity of mining or the growth in population related to mining that Broken Hill experienced.

In Victoria, Ballarat and Bendigo are major towns with fine public, civic and private buildings built on the wealth of mining. While mining is no longer the main activity, their locations have ensured that the infrastructure established has been further developed as they are desirable places to live with good water supplies and a rural setting. Each of these former mining towns has further developed with new buildings and commercial and other uses that see them as important regional centres apart from their mining background. There are many other mining towns across Victoria but none that relate to Broken Hill.

Kalgoorlie in Western Australia, located some 600km from Perth (a similar distance between Adelaide and Broken Hill) was established around gold mining in 1893 and remains a gold mining town. It has a similarly long reliance on mining to Broken Hill. The main street has a fine array of civic and commercial buildings from 1895 into the twentieth century and the wealth of the gold that has

been mined can be seen. It now has a population of around 29,000 people. From its start in 1893 it grew to 2,000 by 1898 and 6,800 by 1903 reflecting the growth of mines. The area was connected quickly to the rail network (1896) and in 1917 it was connected to the eastern states by rail, sometime before Broken Hill was finally connected to Sydney.

There are clear similarities between the cities, their ongoing mining life, their remote desert location, their quick population growth and their reflection of the wealth of the mines in the city built structure. It is perhaps the closest city in Australia in character and history to Broken Hill.

Coolgardie is another West Australian mining town of similar date to Kalgoorlie that also had an illustrious start. However, after only 10-15 years mining failed and the city went into decline despite its fine buildings and early importance. It survives as a tourist town with a population of less than 1,000 and is not comparable to Broken Hill or Kalgoorlie.

Other significant mining towns in Australia are of later date or have declined with the cessation of mining and remain as tourist or ghost towns. There are major mines across the continent but modern mining processes and the provision of transport has meant that a city such as Broken Hill is extraordinarily rare within the development of the country.

5.7 The Role of Government Agencies in Assessing National Heritage Impacts and Values

The Federal Environment Protection and Biodiversity Act 1999 (as amended) establishes that the Department of Environment has the authority to make assessments and determinations on impact but leaves the threshold for making an application up to the person/company/authority undertaking the proposed works. While this could work for a regulated government authority who owns a site that is within the National Register, it is very unlikely to work for a listing such as Broken Hill. There are no known applications for approval of activities or works within the City of Broken Hill so, in effect, the provisions of the Act have had no relevance to how the City changes and develops except in a conceptual way.

The NSW Heritage Office has relatively little influence within the City apart from proposals on the 13 listed sites that require applications and approvals and input into the process of mine closure and remediation (even though these sites are not State heritage listed). The NSW Heritage Act does not provide for the Heritage Office to have a role in locally or Nationally listed places.

Broken Hill Council manages the LEP heritage schedule of presently 420 listed places. This takes place through Council planning and assessment staff reviewing applications and, if in their opinion there is a heritage issue, referring it to the council heritage adviser for comment or assessment. The triggers for referral are if an application affects a place that:

- is a heritage item (local or State);
- is within a heritage precinct;
- appears to have some heritage value even though not a heritage place.

Applications that affect State listed items are referred through either an integrated DA approach or a Section 60 application as set out under the NSW Heritage Act.

Broken Hill Council, as required by the Local Government Act, require applications for all works unless they fall within exempt and complying work or are of such a minor nature that they do not

require approval. If a place is heritage listed or within a heritage precinct, Exempt and Complying provisions do not apply and all activities should require consent.

As may be expected, the standard of applications made to Council is not always high and there is a propensity and history of works taking place without approvals. This does not apply as much to major projects but can be the case for small works, particularly residential works, whether they are heritage listed, within a precinct or not.

A range of works are also exempt from Council approval where they fall under other legislation such as infrastructure installation or State planning policies that provide for works to places such as schools and government buildings. Some agencies consult with Council on proposals as a matter of courtesy but this is not consistent.

As noted earlier Government agencies are required to maintain their own heritage schedules through the Section 170 process which triggers referrals for listed places but there is no statutory requirement to consider National Heritage values in that process. Consequently, it is unlikely that a proposal, say, to modify a Section 170 heritage listed school building, would attract a National heritage referral unless those works were dramatic in their impact.

There is a high correlation between local heritage listing and places that are on Section 170 heritage lists. There are a total of 15 Section 170 listings¹³ comprising: 4 police and justice sites; 6 education sites; 1 railway site; 1 health site; 1 fire station site; and 2 sites related to water infrastructure.

The following table sets out base information on the various agency listings and their usefulness in considering significance.

Table 22 : Section 170 Heritage Listing Analysis

Agency	Number of listings	Developed Statement of Significance and Description of the place	Brief Statement of Significance	Comment
Education	6	0	0	No data
Health	1	-	1	The main building listed has recently been demolished.
Police and Justice	4 (inc multiple listings for gaol)	4	-	Generally good information.
Railway	1	-	1	Limited but clear information.
Water and Infrastructure	2	-	2	Limited but clear information.
Fire	1	-	1	Limited but clear information.

¹³ As set out in the State Heritage Inventory database

The quality of information in the data bases varies considerably but, apart from Police and Justice, does not provide adequate information to make sound assessments about potential impacts of works on heritage values at any level. Consequently, a difficulty arises as Broken Hill Council may be consulted with regard to proposed works on these registers but it is not necessarily a consent authority and does not have a statutory role and may have little background material to consider. As Council is the only agency with an ability to overview all heritage values in the City, a Section 170 listing can remove a group of quite significant places from that oversight.

A summary of the current heritage listings in Broken Hill is:

Table 23 : Summary of Heritage Listings in Broken Hill

Agency	Number of listings	Comment
National	1	The LGA. Values are clearly set out and defined.
State	13	Well-researched detailed listings for most sites.
Section 170	15 places 26 entries	Mixed information based on agency preparing data.
REP	0	No longer used as a listing.
LEP	427 entries	Varied level of entries as set out in the SHI database. More detailed information available in various studies. Current heritage study review is updating and expanding data on each site.

Arising from the analysis of the various schedules, lists and processes involved in each of the heritage schedules that exist, it is clear that Broken Hill Council is the only agency that has the ability to manage National values as they are the only body that maintains a comprehensive heritage schedule where the collective values of the City can be seen in perspective. This is however currently outside their role as a consent authority under the Local Government Act.

The final section looks at how Council may include the assessment of National heritage values in their assessment processes.

6.0 KEY SITE AND PLACE TYPES IN BROKEN HILL THAT HAVE POTENTIAL NATIONAL HERITAGE SIGNIFICANCE

The following sections discuss some of the key place types in Broken Hill in relation to National heritage significance. The earlier analysis of heritage schedules and themes highlighted both key themes and where the heritage schedules did not represent those themes adequately.

There are two groups of themes arising from the analysis.

The first are themes that have a level of representation in the schedules. This may vary from well-represented to partially represented. To better reflect the range of National values it is likely that additional listings will be required to reflect each theme and to create a balanced heritage schedule in the LEP.

The second group are themes that are either not represented or poorly represented. There will be a need to establish schedules of places that respond to these themes and ensure that they are adequately represented in a heritage schedule or the creation of heritage precincts.

As many of the themes apply across the City for their collective value, a precinct approach, as is already seen within the LEP, is likely to be a sound way to capture broad values in ways that are less demanding and more effective than individual heritage listings.

Now that the City is Nationally listed there must be an expectation that the local (and to a lesser extent State) heritage schedules will represent all of the National values to a threshold level that ensures those values are understood and protected.

The following sections look at key place types that reflect National themes to provide background on how well they are represented on current schedules (in particular the LEP schedule) and what additions or other work may be required to fill gaps.

Different place types have significantly different requirements and roles within the National heritage listing and in relation to future management. Also not all places have the same heritage value even though most may contribute to the overall value.

The following sections are not exhaustive but are intended to address major thematic areas that inform how to approach National heritage values when looking at the LEP heritage schedule.

6.1 Mining Sites

6.1.1 Mining Heritage Listings

The National values citation attributes a high level of heritage value to the remnant mining activity, places, buildings and infrastructure of Broken Hill. Mining is the core reason that the place exists and why it is of National significance. While several specific mining elements are mentioned, mainly related to process and key people, the National citation is clear that it is the collective value of the mining elements that is of National significance. It focuses on the iconic form of the Line of Lode and its dominance in the landscape of the city with the array of shaft heads, buildings and infrastructure.

The current heritage listing of mining sites and their features is limited to local LEP listing. There are no mining sites on the State Heritage Register which would seem a major oversight. While the LEP is comprehensive in looking at individual items and elements, it is not comprehensive in how it addresses the Line of Lode or the early lease areas or how the Line of Lode has values that transcend individual sites. This is noted above in the consideration of the LEP heritage precincts as, apart from a small overlap of a LEP precinct on a mine site, the mine leases are not considered for precinct values.

There are now three principal mines operating on the Line of Lode with several historic sites that no longer operate:

- i. North Mine (Perilya) has a central heritage zone or precinct (the general site of specific LEP heritage items 310-341);
- ii. Rasp Mine (items 296-304) and Browne's Shaft (LEP heritage items 261-282) are separately listed but are not active mining sites;
- iii. Delprat's Mine (LEP heritage items 285-295) and parts of the old BHP Pit (LEP heritage items 305-309) are separately listed but are not active mining sites;
- iv. The core area of Central Mine is listed as a heritage zone or precinct (a general site operated by CBM with a number of LEP heritage items 236-280 (with several gaps in the numbers), and
- v. Most of the Zinc Mine site (now operated by Perilya) is included within a broad precinct that includes LEP heritage items 342-414.

While there are some 180 separate mining sites listed in the LEP, the mapping of the heritage items is generic in that they are not each separately located but are within boundaries that contain a number of sites in each location. This is more akin to a precinct listing and potentially precincts or a mining precinct that considers broader values should be developed under the LEP that addresses different values to specific item listings and which can exist in parallel with individual element listings.

It is also not clear if the listing is limited to the element that is subject to the listing or whether it includes any part of the site around the element. As the various listed features are located on large lease areas, the listings do not relate to the lease boundaries. As listing should be contextual for an area such as the Line of Lode it is recommended that a clear hierarchy of heritage listing should be undertaken across all the mining leases to establish the relative value of sites, buildings and features.

A model that could be adopted is:

- i Create a mining heritage conservation area at State and local level that is bounded by the early mining leases (as set out in figures 2, 3 and 4) to recognise the Line of Lode as the pivotal heritage element of the City.
- ii Reviewing the heritage item listings to assess them with more finesse and in relation to the whole of the remaining mining infrastructure rather than on a lease by lease basis.
- iii Develop an overall comprehensive approach to the future of the remnant mining features across the various leases.
- iv Adjust the current listings to reflect the outcome of these studies.

The local heritage mining listings are not detailed in this report as they are extensive and the background material within the various CMP's for the mines is often detailed. Generally, there is good background material to understand the heritage values of the listed mining sites.

The mining heritage listings are also in a state of flux as the mines work towards their 'end of life' and many of the remnant elements become redundant and difficult to manage. This has and will provide inevitable challenges in relation to both specific and broader heritage values.

It could be argued that the remnant mining infrastructure in its totality, at this point in time, is very significant. There has been a long-term view that all or at least the majority of mining structures and elements should be conserved. This is a sound starting point but even a cursory examination of mining sites shows that there are many features and structures that are in extremely deteriorated condition and that clear strategies are required to guide the next ten years of actions.

A consideration of mining as a critical example of the application of local State and National values is set out below.

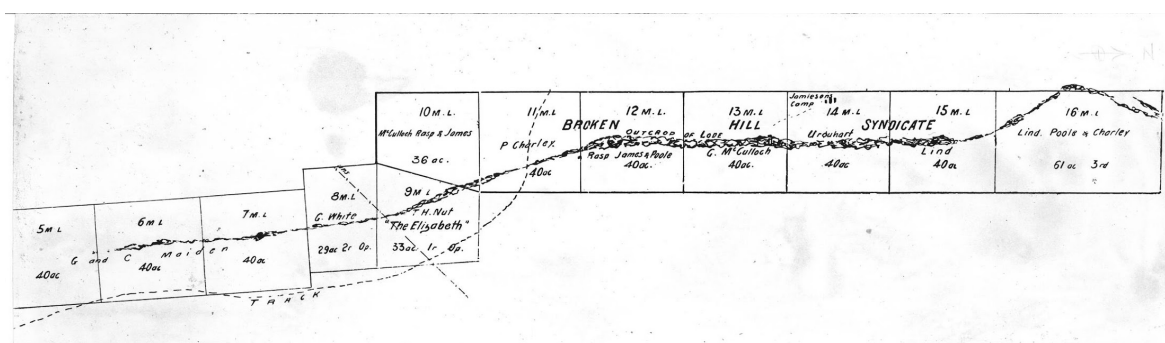


Figure 2 : Early plan of original mining leases on the Line of Lode

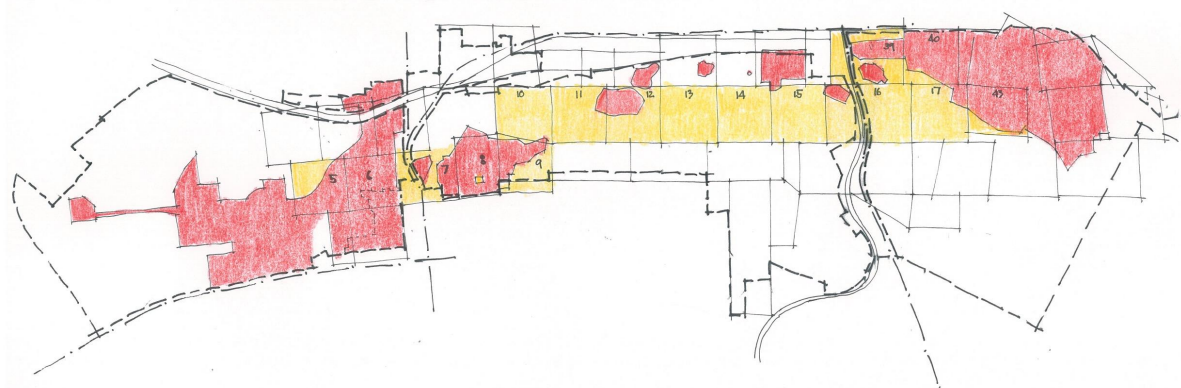


Figure 3 : An overlay drawing of the early mining leases (yellow), overlaid with the locations within the lease area that are Heritage Items within the Broken Hill LEP (red). The extent of the current mining leases is indicated with a heavy dotted line. Paul Davies 2020.

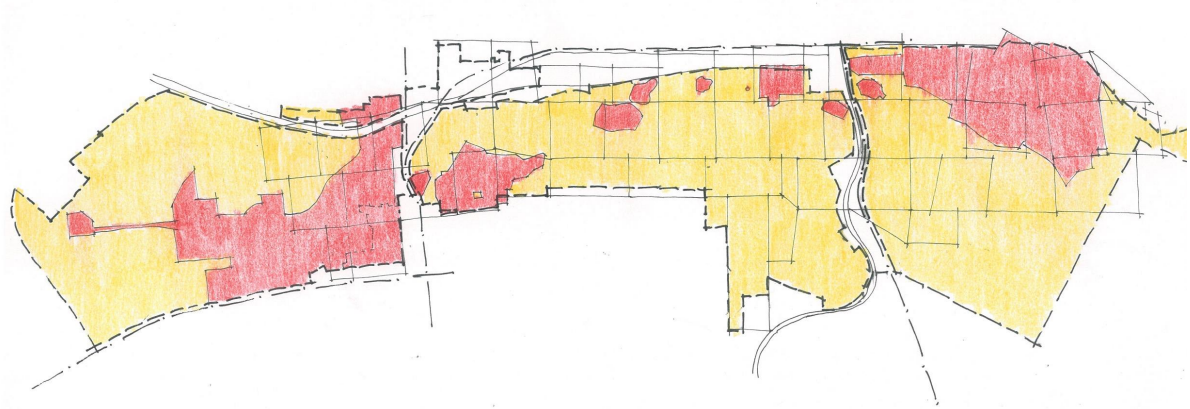


Figure 4 : An overlay drawing of the current mining operation and the locations within the lease areas that are Heritage Items within the Broken Hill LEP. The key mining leases are indicated as an overlay. Paul Davies 2020.

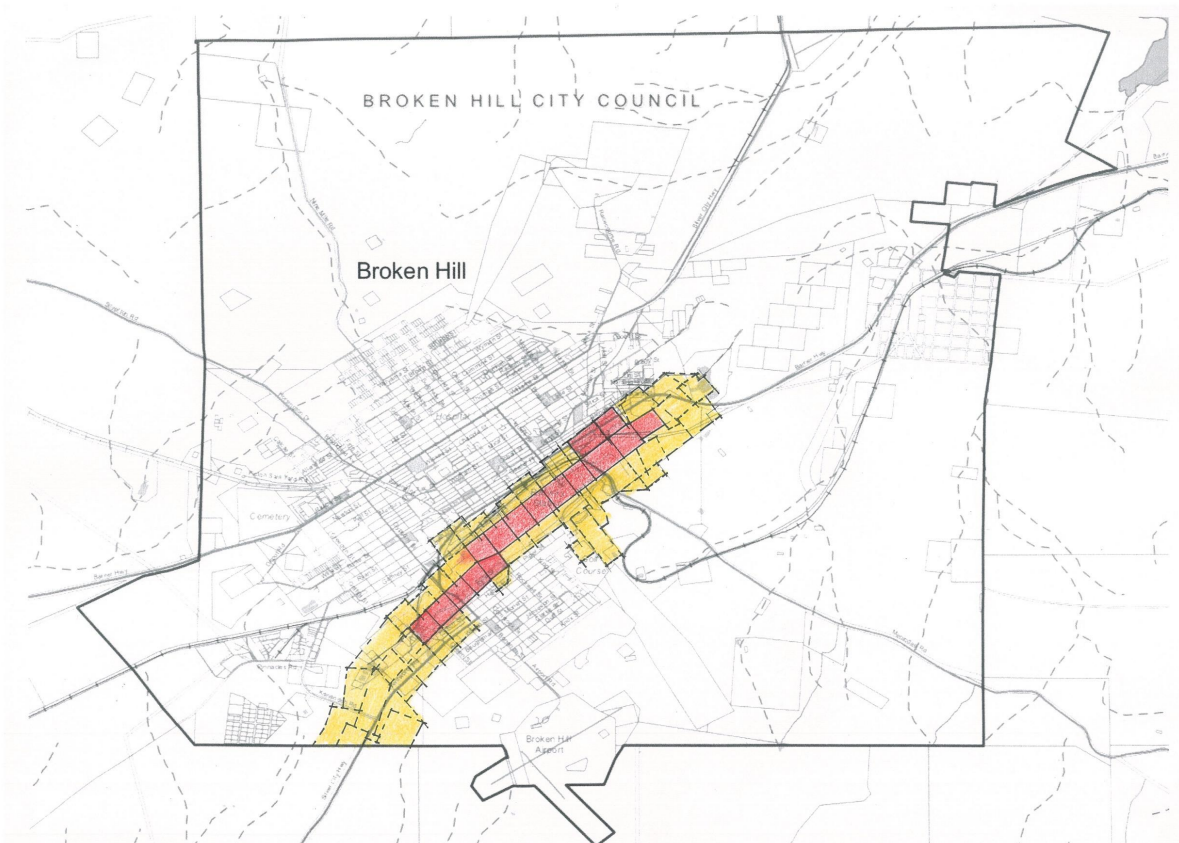


Figure 5: The National Listing map overlaid with the early mining leases on the Line of Lode (red) and the expanded extent of mining leases (yellow). Paul Davies over National Heritage listing map 2020.

6.1.2 Mining Sites Discussion and Examples

As set out earlier in the study, there is a strong argument that all mining sites, features and structures are significant and collectively they are of National significance. They are the physical representation

of why Broken Hill exists and are the tangible evidence of the scale of mining activity. It is also clear from records and photographs that the current infrastructure is a small part of what once existed along the Line of Lode and that the physical impact of built elements on the Cityscape has changed dramatically over time. The dominant form of the Line of Lode in relation to the city centre is now the outline of the lode with the Miners Memorial and a few remnant mining structures. Most of the remaining built elements are on the eastern side of the Lode, at North Mine or at Zinc Mine. The group of structures along Bonanza Street on the southern edge of CBH are an important visual grouping as is Browns Shaft and lookout (Junction Mine) and the structures on the south side of the Menindee Road.

The National listing citation sets out clearly the importance of mining and its now largely remnant elements.

The peak mining period for the city was between 1885 and 1939 when BHP left Broken Hill. Mining has continued successfully but is coming to an end with possibly another 15-20 years of active mining remaining¹⁴. Whatever the precise time frame for the cessation of mining on the Line of Lode, the outcome will be that in time all mining buildings and infrastructure will be closed and will become redundant. There is an obligation on the lessees and Government to remediate the Line of Lode which would normally involve removing all remnant mine infrastructure and returning the sites to a remediated natural form. There is a clear conflict between National heritage values (and local values) and the remediation requirements.

In 2020 there are two major mine operators on the Line of Lode, Perilya and Central Broken Hill. Perilya operates North Mine and the former Zinc Mine to the south and CBH operates the central mine over blocks 10-15.

The following discussion does not focus on any particular mining operation and examples are taken to illustrate issues that exist across the whole of the lease areas.

Most, but not all of the mining infrastructure will be vacated, some has already been abandoned and is in various states of repair. Generally, while infrastructure has a use it is maintained and when it is no longer required, maintenance ceases and places deteriorate. Many of the buildings and site elements are old and have not been maintained for a long time, many features have reached their end of useful life in terms of their use, their structural condition and the failure of building elements and materials. A large number of the structures and elements were not built with a planned long life span.

A key question that arises is: how are National heritage values retained if there is a large-scale change to the mine landscape and, as a result, a loss of built elements and their surrounding infrastructure?

After closure, putting aside the loss of significance of the mine sites not operating as mines, significance will be found in the physical elements that remain, the landscape, and the relationship of the remnant features along the Line of Lode to each other and to the City. The sites will have an interpretive role in relation to National heritage values.

¹⁴ This is an approximate time frame as advised by Perilya and CBM during discussions related to mine elements and their future.

The infrastructure of the mines (that is all built and associated elements) falls into a number of types of places that will have different potential and ability for ongoing use or management.

They are:

- i. Mine production buildings including
 - processing buildings,
 - workshops,
 - store buildings,
 - etc.
- ii. Headframes and winding houses and associated elements
- iii. Infrastructure
 - storage tanks,
 - pipelines,
 - railway tracks,
 - roads,
 - infrastructure around buildings,
 - ruins of earlier buildings and features,
 - site ephemera such as signs, lights and bespoke features
- iv. Staff facilities buildings
- v. Administration Buildings
- vi. Staff residences
 - within mining sites,
 - outside mining sites
- vii. Recreation facilities and structures
 - bowling greens and buildings,
 - ovals and grandstands,
 - tennis courts,
 - parks and associated facilities
- viii. Modern buildings and infrastructure such as the Miners memorial
- ix. Memorials

For the purpose of this discussion the mines themselves (surface and underground) and the land formations are not discussed. An assessment of the nine items above is:

Items i-iii	Present significant challenges in relation to retention, use, maintenance, safety, and management that, if the items are lost or removed, will have a major impact on National heritage values.
Items iv-vii	Have good potential for other uses or ongoing use, for example as part of parks and reserves or other site uses that may be developed. These elements are at relatively low risk of loss or significant impact from change (in comparison to items i-iii).
Item viii	Contains places that have a viable current use.
Item ix	Memorials will need to be retained and generally, due to their locations, will be capable of incorporation into future publicly accessible areas.

The future of items i-iii has to be considered and assessed differently to how an individual significant building in the City may be considered. Under the discussion related to hotels in Broken Hill (later in this study) reasons are set out that may be argued where there is a desire to make substantial change to or demolish a significant building. With the remaining mining infrastructure, the issue of future retention, demolition or other actions needs to be considered across the whole of the mining leases so that what remains after mine closure is sufficient to ensure that National heritage values remain and are seen. This study does not recommend how this should be resolved as that is part of other work in relation to the mines, but it does recognise that how mine structures are managed will be a key issue for the City and its heritage values.

A fundamental objective of planning for mine closures (or substantial closures) must be to retain as much as is possible to provide an understanding of the scale and impact of mining in the City. This will be informed by looking at whole mine sites, groups of buildings and structures and how they relate spatially and functionally, the condition of elements, the ability to re-use structures either with new uses or as part of the landscape (managed ruins), the level of significance of individual elements, future management and maintenance needs, etc.

The question of why disused and redundant structures should be retained is an interesting concept as the usual end of life of mining sites is closure, removal and, to varying levels, remediation of the landscape that remains. There are no other operational mining sites that are on the National heritage schedule and the now historic sites that achieve national or State listings are in ruined or remnant form and their management is related to what has survived rather than having to address what should survive.

Other large and significant industrial sites around Australia have closed and go through the usual process of preparing CMP's, heritage strategies, interpretation plans etc. The results are often the retention of small parts of sites that have specific elements and interpretive value and the development of the majority of the sites for new uses. In urban areas such as Newcastle and Wollongong (for example), disused mining sites are valuable and under pressure for redevelopment. That is unlikely to be the situation in Broken Hill.

Broken Hill exists with a different set of parameters as it is remote, in population decline, in economic decline¹⁵ and there is almost no pressure for development on former mine sites. The City will need to shift from its former mining focus to other activities that will include tourism and potentially new sustainable industry or activities¹⁶. The heritage values of mining in Broken Hill also cannot be confined to a small area that is capable of interpreting the 130 year history of the place.

The approach to the remnant mining features and structures needs to be strategic and carefully planned across the whole of the mining infrastructure of the City.

The first assessment is of the more iconic mining elements that have become redundant and are now tourist sites. These have varying degrees of access and success in their role as tourist attractions at this time:

¹⁵ Economic decline is used in relation to the decline in mining in the City where mining has been the major reason for the success of the City over such a long period. As mining reduces, the economic base of the City will reduce and also will change.

¹⁶ These are observations only in relation to the discussion of the future of mining elements and places.

Table 24 : Examples of Tourist Mining Sites in Broken Hill

Item	Description
Kintore headframe	Relocated from its original site to a park in Blend Street near the Visitor Information Centre. While it is highly accessible, it is removed from its context and has limited interpretive value. A relocated element on the one hand makes it very accessible and safe to access, but if a number of items were relocated it would distort the understanding of mining in the City, where it took place and how it functioned. The site receives a high level of visitation due to its proximity to the Visitor Centre and the availability of parking and facilities. (Figure 5)
Browns Shaft (Junction Mine)	The site contains a number of elements and is also a lookout offering excellent views across the City and North Mine. The headframe, winder house, and a number of other buildings and features remain in varying condition. Long-term maintenance and management will be required if the site is to remain accessible to the public. (Figure 7) There is interpretation available on site that assists in placing the site within a broader context.
Delprat Mine	Located on the access road to the Miners Memorial, the site retains a number of elements including the head frame, winding house, other buildings, base of the early chimney, and many ruins. For a long period below ground mine tours were available, but ageing equipment, the cost of maintenance, increasing safety requirements, and nearby mining operations have closed the site for all access. In its current form it requires considerable work for it to be incorporated into some form of tourist site. It has minimal interpretation but has high potential for access and interpretation.
Block 10 remains	On the entry to the City from the airport, a hillside that was part of block 10 but is now cut off by the main City entry road features some mining ruins and equipment. It is possible to visit the site and there is a Block 10 lookout behind it that provides overviews that are significant. Access is difficult to find and the site is poorly maintained with very little visitor access observed. There is site interpretation that is now deteriorated and damaged.
BHP Chimney	A small remnant chimney associated with the commencement of BHP mining, located close to block 14. Mining is taking place in close proximity and it is away from main access routes. Recent work has included a new shelter structure and interpretation related to the history and role of BHP. The site has high potential for visitation and interpretation as the starting point for mining in Broken Hill.

Some parts of mining sites have public access and have been developed for public or local community use:

Table 25 : Areas on Mining Leases Used for Community Purposes

Item	Description
Zinc Lakes	A major parkland that also formed part of the greening program. It is now used as a public park.
Ovals at several locations	These remain in public use although infrastructure is ageing and will require significant upgrade and maintenance to continue in use. They are all significant.
Miners Memorial and Kiosk	This is a contemporary site that has an ongoing use.
Bowling Greens	There are several sets of greens on leased land that remain in use. They are significant. It is not known if they will remain in use long-term. They are on the edges of lease areas and are easily accessible.
Tennis Courts	There are several sets of courts on leased land that remain in use. They are significant. It is not known if they will remain in use long-term. They are on the edges of lease areas and are easily accessible.
Lookouts	Block 10 lookout Browns Shaft and lookout (Junction Mine) Both of these locations provide for some interpretation and viewing locations onto mining and former mining sites.

Some former mining sites and buildings have been repurposed, sold, and have new uses. They no longer form part of the mining sites but remain as significant mine elements:

Table 26 : De-accessioned mining sites

Item	Description
Residences	Former mine manager's residence now St Anne's Nursing Home. Former mine manager's residence Proprietary Square. (Figure 6)
Block 10	Former mining area now site of static display and lookout.
O'Neill Fields	Former tailings dam, now playing fields.

To explore how National heritage values may be affected by a proposal the following examples from North Mine have been selected for analysis as they represent different aspects of mining heritage value. There is also a discussion of how changes to the overall form of the Line of Lode may affect National values.



Figure 5 : The relocated Kintore Headframe, now situated opposite the Tourist Information Centre surrounded by campervan and caravan parking areas. Conservation and retention of the headframe is achieved however, the siting of the structure is out of context as it is not related to a mining site. Relocating the item would have allowed it to be saved, conserved and seen by visitors, which is more difficult on active sites but as mining moves towards closure, there will be greater potential to retain structures in situ. Placing the structure within a carpark is a poor heritage response to its significance. Generally, the relocation of elements such as this weakens the heritage values of the City even though in this particular instance it has achieved a reasonable outcome despite the very poor recent works to encapsulate the site with parking. This is an example of how heritage values are not considered by Council when other issues arise and the cumulative effect of decisions is to diminish the value of the City.



Figure 6 : The first mine manager's house in Proprietary Square. The house is heritage listed and is of very high significance. The building is derelict, has mining taking place in close proximity and has recently been given to the Broken Hill Historical Society. It is unlikely that they will be able to conserve and restore the house to a suitable standard due to its very poor condition and the amount of funding and organisation required to achieve a suitable outcome. This places the heritage values of the site at high risk from abandonment and vandalism. The loss or further damage to this building would have a significant impact on national heritage values which are embodied in the building and the nearby remnant BHP chimney (recently conserved).



Figure 7 : Brown's Shaft/Junction Mine above Junction Circle housing. The mine is abandoned and a public lookout with interpretation. It is presently in fair condition but the nature of the buildings and elements will result in long-term deterioration and potential loss unless there is ongoing, consistent and significant investment in the site.

North Mine and No 2 Shaft Mill Building

For the purpose of considering a large example of how remnant mining infrastructure could be looked at, the North Mine No 2 Mill Shaft Building is discussed below. The example is not intended to single out this mine or structure above other structures and the analysis is a general one that can apply across all mining sites and elements. However, No 2 Mill is a very large and now abandoned structure that has major conservation issues, consequently it allows a discussion of most of the issues that are likely to arise across the Line of Lode sites.

The No 2 Shaft Mill Building has been assessed¹⁷ as having exceptional significance. The reasons for attributing this level of significance are sound and are not set out in this discussion. It is sufficient to conclude that within the North Mine lease area there are the following heritage listings (LEP). They are separated into buildings/structures and infrastructure elements. They are also separated into the

¹⁷ Perilya (the operator of North Mine) have been preparing heritage strategies arising from the various conservation management plans for their lease areas and the assessments used derive from those documents. It is noted that at the time of writing this report those plans are preliminary and are only used as a basis for the discussion. Final assessments of significance and management are not determined.

four gradings of significance used in the studies¹⁸ and the condition assessments used by Perilya in its draft 2020 Strategic Heritage Management Assessment:

Table 27 : Assessment of North Mine Significance Elements

Level of Significance	Number of Items - Buildings	Condition of Items - Buildings	Number of Items - Infrastructure	Condition of Items - Infrastructure
Exceptional	1	Poor - 1	0	-
High	13	Very Poor - 1 Poor - 2 Fair - 6 Good - 3 Very Good - 1	5	Ruin - 2 Very Poor - 1 Poor - 2
Moderate	4	Ruin - 1 Fair - 2 Good - 1	8	Very Poor - 1 Poor - 3 Fair - 1 Good - 3
Little	0	-	1	Fair - 1
	18	18	13	13

Not surprisingly, the built elements on the site have been assessed as the more significant features. There are no built elements of little significance and only several of moderate significance.

No 2 Mill Building is the only element on the North Mine site that has individual exceptional significance, and it is in poor condition. At this point in time the structure is not accessible due to the risk of injury to visitors from falling fabric; it is a very large building, it was built to accommodate a specific process that is significant, it has not been used for some time, and is not maintained. It could be argued that the building has reached its logical end of life and that the cost of retaining it is likely to be of a magnitude that is difficult to address. It is also a building that will most likely require remediation (due to mining generally and what took place inside it) and is very unlikely to attract a use that could generate funding if any use were to be possible.

However, it is also the most visually dominant building at North Mine and is, with the headframes, a defining structure on the site. It appears to be the largest remaining building along the Line of Lode.

If, for the purpose of discussion, it was proposed to demolish the no 2 Mill Building on the basis of condition, cost of future works to retain it, remediation and difficulty of finding a future use, it is likely that some of the surrounding infrastructure would also be removed as it is of lesser significance, also in poor condition and would be without the context of the Mill building.¹⁹

¹⁸ This refers to the heritage strategy reports being prepared by North Mine (Perilya).

¹⁹ It is noted that this is a hypothetical proposition as there is no proposal to demolish the building.

Of the list of 31 extant heritage items on the North Mine site, there are 14 sites assessed as being in poor or worse condition. They include 1 place of exceptional significance, 8 places of high significance and 5 places of moderate significance.

The management of the balance of the sites then would also need to be considered.

At North Mine there are currently 8 buildings and 1 infrastructure site in fair condition and 6 of those are of high significance. Over time, as all of these items are currently or become redundant, it can be assumed that without significant work they will continue to deteriorate and will fall into worse condition.

At present there are 5 buildings that are in good or very good condition and 1 infrastructure site in good condition. Three of these sites are houses that are in a relatively low risk group as they are adaptable for future use.

If condition and ability to be maintained are key factors for determining what can take place in the future, apart from housing, the only features that are likely to survive longer-term on North Mine are set out in the following table:

Table 28 : North Mine Items in Good Condition

Item	Assessed Significance	Condition of Item
No 3 Shaft Headframe	High	Good
No 3 Loading Station	Moderate	Good
Water tank	Moderate	Good
A tank and shed	Moderate	Good

If the analysis includes places in fair condition the following may remain:

Table 29 : North Mine Items in Fair Condition

Item	Assessed Significance	Condition of Item
No 2 Shaft Headframe	High	Fair
No 2 Shaft Winder House	High	Fair
No 2 Change House and extension	high	Fair
No 2 Mine Ambulance Station	Moderate	Fair
No 3 vent	Moderate	Fair
No 3 Crusher House	Moderate	Fair
No 3 Winder House	Moderate	Fair
No 3 Change House	Moderate	Fair
North Mine Assay Office	Moderate	Fair



Figure 8 : No 2 Headframe and the Mill Building viewed from Browne's Lookout and shaft looking north-east. No 3 Headframe is in the background. Other elements also appear in the photograph. Taken from a popular lookout, where there is interpretation of the view available, the remaining structures provide an impressive mining landscape that contains the last of the major mining buildings and features. The Mill Building dominates the landscape from all directions as illustrated below.



Figure 9 : The north Mine Mill Building and No 2 Headframe viewed from Argent Street where the structures dominate the skyline. Most of this infrastructure is unused and abandoned.



Figure 10 : North Mine with the imposing Mill Building 2 in the centre ground viewed from the north-east on the verge of the Barrier Highway. This view meets visitors as they approach Broken Hill from Sydney.



Figure 11 : A dusk view, also from the verge of the Barrier Highway, where the structures, backlit and illuminated create striking forms on the horizon.

As there is a low correlation between significance and condition, decisions made on a single or even several factors will inevitably result in a random loss of heritage values.

Apart from assessing the major building on the site, a strategy that addresses the matrix of issues from significance to condition and cost is important to avoid the accidental loss of elements through collapse or decisions being made in reaction to urgent events.

The factors that need to be considered in making determinations about what should happen to any significant piece of infrastructure or building are quite complex as they have to address:

- i. specific issues about each place or item,
- ii. the relationship and grouping of places and items that contributes to their significance,
- iii. other issues such as remediation requirements,
- iv. who will manage the sites and elements into the future?
- v. how will the sites/buildings be used?
- vi. how will maintenance and the sites generally be funded?

There are also a number of thresholds that could be adopted in relation to significance:

- i. should everything be retained irrespective of cost and future use?
- ii. what is the minimum retention of buildings/features that needs to take place to retain the National heritage values of the site?
- iii. can parts of buildings or elements be retained rather than whole structures, and would this satisfy significance retention?
- iv. should the focus be on only the most significant elements, irrespective of condition?
- v. should the focus be on the key groups of buildings to maintain a context rather than have isolated items within a remediated landscape?

These are theoretical thresholds and as significance, use and condition do not align on almost any element of the sites, there then must be a matrix that provides a framework on which to base decision making.

For the purpose of this analysis it is assumed that every identified element and building could be retained provided sufficient funds were allocated to undertake whatever works were necessary to conserve each place. Funding is a key consideration, but should not be the determinative consideration when looking at theoretical models on how to retain National heritage values.

It is noted that on the CBH site that one of the headframe structures that was at risk of failure was stabilised using grant funding. This had two significant outcomes, firstly it allowed the head frame, a significant built feature of the site, to be retained so that it can be potentially incorporated into the longer-term remediation and interpretation of the site and it established a basis that could apply over time for future funding of key actions.

While grant funding is important and allows significant elements to be retained, without a long-term strategy on how to manage and maintain these assets, it could be at risk of simply being a delaying process for later decision to remove items.

Generally, funding assistance is easier to obtain when it forms part of a clear strategy with time frames, costings and identified outcomes.

The North Mine site, putting aside the residences, falls into three zones around the three shafts.

Shaft 1 Area

This is a ruin site with the remnants of the early structures. It is likely to remain as a ruin.

Shaft 2 Area

Shaft 2 contains the head frame, winding house, no. 2 mill and a range of smaller elements.

The area is redundant and has no working areas or structures.

The head frame, winding house, and mill are the key visual elements within the landscape. Other elements provide a context and demonstrate the complexity of mining sites.

The group of features has significance.

Individual elements have varying relative significance.

Shaft 3 Area

This is the newest of the mines on the site and the most robust in construction. The mine structures are becoming redundant but some buildings and infrastructure will remain in use until the site closes.

The group focusses around the head frame and winding house but includes offices and amenities which are buildings that may have future uses as they are not specific mine buildings.

The group of features has significance.

It would appear feasible to manage the whole site as an entity, but also to manage each of the three areas as self-contained precincts - making decisions initially on a precinct basis using information about individual items, and then ensuring that the whole site retains its visual form and identity even if some elements were to be removed.

As noted, this is a theoretical look at the sites and is not intended to provide specific guidance on any element, however it highlights the complexity of issues and the high potential impact on National heritage values if site features are lost.

Ruination

There are a range of possible actions between restoration of a place and its removal and loss. If the absolutes of full restoration or complete loss are the 0 and 100 percentiles, various actions can be considered and assessed on a relative basis on a scale between them.

Many of the buildings and site features at North Mine will not have a future use except interpretation. The exceptions are the administration and staff buildings and possibly some of the sheds, tanks and other reusable infrastructure.

The concept of ruination is the selective retention and removal of parts of a place to create a managed ruin that forms part of the interpretation of the site. Where most ruins are the result of neglect and time, this is a selective process that creates an 'instant ruin'. Where costs of retention are high, ruination can offer a cost-effective and high-interpretation value outcome. As many of the mining sites are in various states of ruin at present, this approach allows the more evocative nature of the Line of Lode to remain while managing the whole of the place. For the purpose of this analysis matters such as remediation are not considered however, they do need to be addressed as part of a complete understanding of an industrial site.

For elements and features that do not have a future use, the options between the two extremes that may be viable include:

- i Stabilisation of the element in its current form.
 - this would require a program of sufficient maintenance to retain that form into the future
 - there would need to be funding allocations to undertake required maintenance
- ii Partial demolition to retain aspects of the element of greatest significance.
 - this would require a detailed analysis to understand how the element can be interpreted without the whole feature being in place
 - there is an initial cost in the work and some ongoing commitment to maintain the remaining aspects of the place into the future
- iii Establishing the item as a managed ruin.
 - this may involve substantial removal of fabric and in particular failing fabric and the retention of the elements that have a longer-term potential to remain in situ with limited future works
 - this is likely to apply to masonry features in particular or elements that are quite robust in their materiality
- iv Interpret the element as part of a new use within, say, a park or reserve setting with applied interpretation.
 - this would be subject to a detailed study of how to interpret the element and place
 - it may involve reuse of material
- v Allow focus and funding to be allocated to key sites rather than spread across all sites.
 - it is unlikely that a realistic outcome of mine closure will be the retention of all remaining significant infrastructure consequently, making strategic decisions early in the process on how and where funds will be spent, and as a result how to manage the balance of features, is an essential process to retain significance.

Example

At a purely aesthetic and visual level the two headframes (2 and 3), their winder houses and the No. 2 mill are the defining elements of North Mine as viewed from the public view-points and lookouts. Without them the site would be difficult to understand as a mining site or even to see as having built elements.

If a strategic decision were made (conjectural) that these were the most important elements to retain and should attract the majority of funding that may be available, there would remain significant issues of how to achieve the heritage outcome that was desired.

Head frames are difficult structures to retain. They require high levels of maintenance and become unstable quite quickly after use ceases. There would need to be a considerable financial commitment to achieve a long-term outcome.

No. 2 mill appears to be in an unrecoverable state, even with substantial funding. However, the scale and form of the building is significant. It may be possible to undertake selective removal of fabric and retain the building as a ruin, even though a light-weight structure. Without determining how this may take place in detail, the scale and form of the building may be possible to retain in the context of the headframe and winding house. If dangerous fabric is removed and remediation takes place, the remnant structure may form part of a setting that is evocative and interpretive. This would be in the form of a managed ruin.

6.1.3 Summary

The most important aspects to retain significance on the Line of Lode are:

- i. Making all decisions in relation to the overall values of the Line of Lode across all mining sites;
- ii. Retaining the key individual elements (in forms determined through strategic planning) irrespective of their current condition;
- iii. Retaining a significant number of individual elements to provide a strong visual representation of mining along the Line of Lode;
- iv. Retaining key groups of structures and features;
- v. Identifying across all mining sites strategic areas for funding;
- vi. Identifying across all mining sites elements that can be considered for partial demolition, ruination, or in some cases removal; and
- vii. Developing a comprehensive funding model to allow the above to take place.

6.2 Residential Sites

Broken Hill accommodated around 30,000 people at its height. The accommodation varied from substantial houses, housing provided by the mines, simple worker housing, boarding houses, makeshift houses and early camps. Housing was also relocated, a considerable amount from Silverton as Broken Hill overtook that town and Silverton went into decline.

The town developed in three distinct residential areas defined by the Line of Lode and the Silverton Tramway:

- i. Broken Hill, north of the town centre
- ii. Broken Hill South
- iii. Railway Town

Areas could be further broken down into housing types based on topography, views, aspect etc.

Solomon²⁰, in his 1988 book on Broken Hill, mapped the early development of the town, showing on an overlay plan the occupied areas in 1886 and then in 1888. That drawing is below at figure 13. It demonstrates the rapid increase in development in the city as mining took hold. The illustration also overlays the Solomon plan with the present heritage conservation areas (HCA's). It illustrates that while the residential HCAs capture a range of housing periods and types, they do not include much of the first settled areas with only the northern portion of Railwaytown having any significant overlap.

There are two residential heritage conservation areas (North Broken Hill and Railwaytown) and the Patton Street town centre HCA extends over mining housing areas. General housing in South Broken Hill is not recognised by any form of heritage listing.

²⁰ Solomon RJ, The Richest Lode Broken Hill 1883-1988

3. To provide guidelines for alterations and additions which complement and do not detract from the heritage significance of individually listed heritage items and Heritage Conservation Areas.
4. To protect those items and areas of value to the local community.
5. To encourage new development which complements existing heritage items and Conservation Areas in a current day context.

CITY OF BROKEN HILL

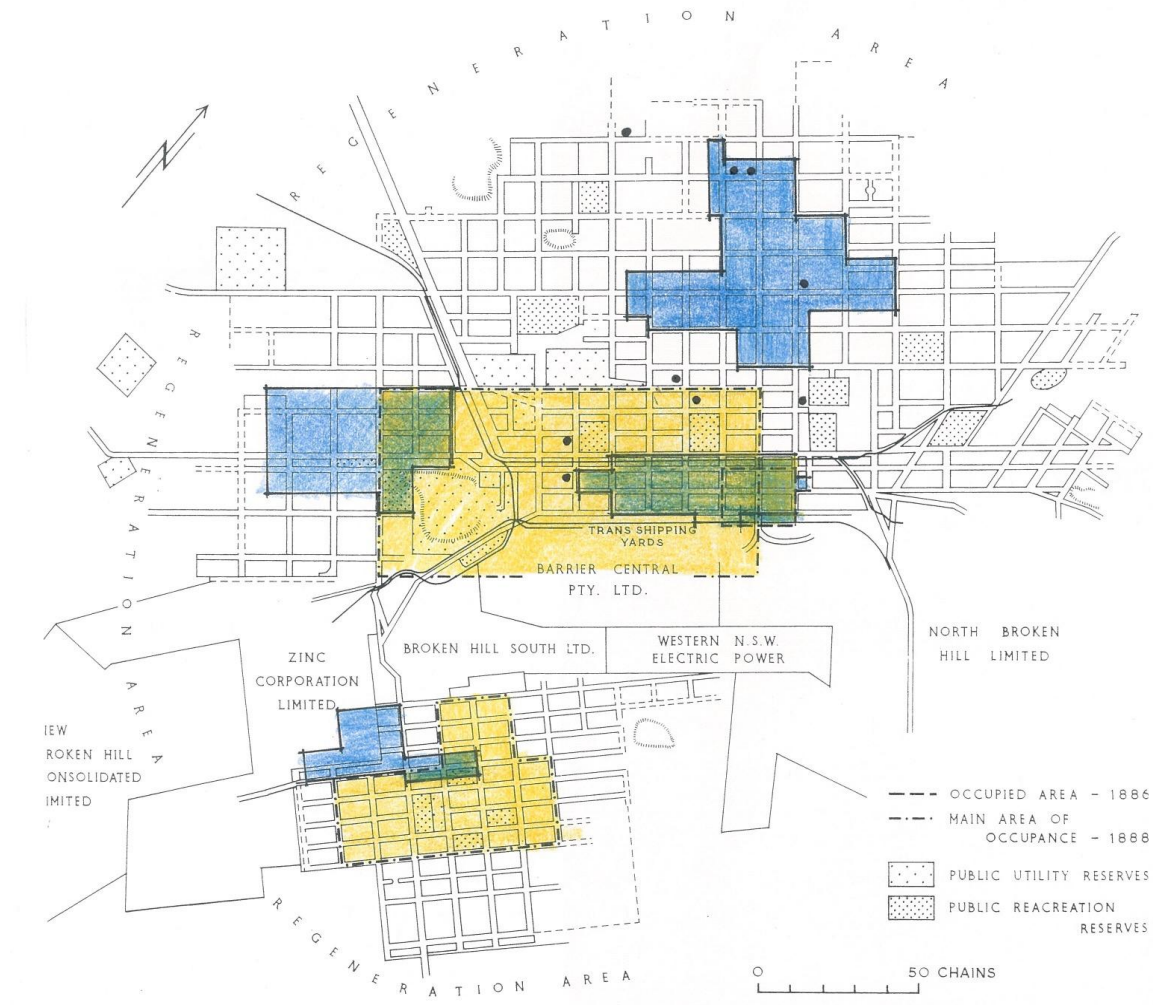


Figure 13 : Solomon drawing showing 1886 and 1888 main settled areas drawn on a council 1950s town plan. The plan drawing key shows the occupied areas at 1886 and 1888.

The coloured overlays are:

Yellow - 1886 and 1888 built up areas;

Blue - HCA's outside the built up areas;

Green - HCA areas that overlap the built up areas;

Black dots are LEP private house heritage listings (excluding mining, education, police etc). Davies overlaid on Solomon.

CITY OF BROKEN HILL

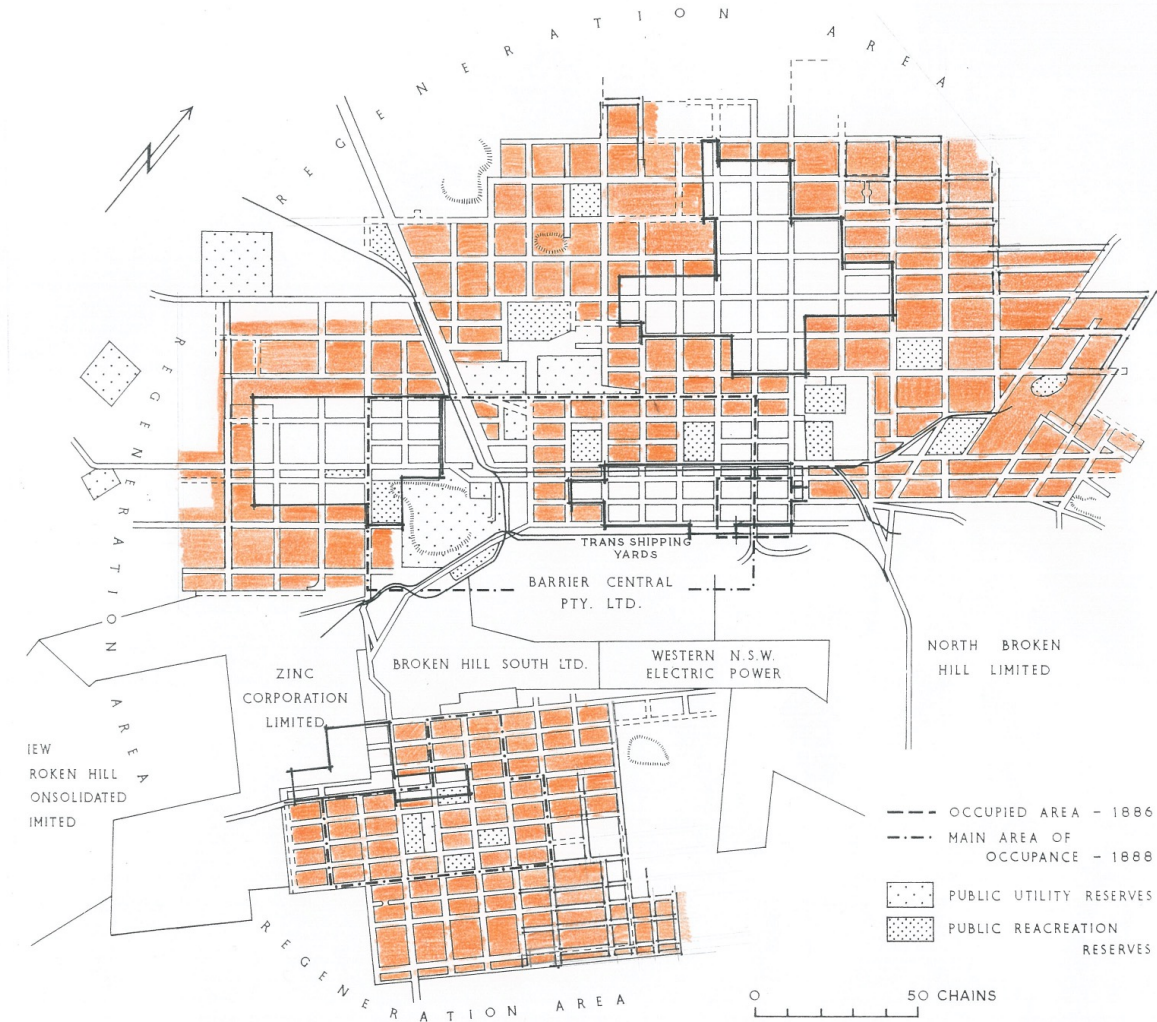


Figure 14 : Overlay of the Solomon map showing the residential areas of the City that are not covered by the residential character controls in the DCP. Paul Davies over Solomon using 1950s town plan as housing generally since the 1950 period is of less heritage significance. Also note the dotted areas that Solomon noted as the early residential areas that are also not included in any current controls. The Solomon plan does not show residential development areas since the 1950s.

Objective 1 is limited to heritage items and their setting and views.

Objective 2 relates both items and precincts to historic themes focussing on care and maintenance of places.

Objective 3 relates to design guidelines for work to items and precincts.

Objective 4 is a broad objective that does not necessarily relate to the LEP heritage listings. If an item or 'area'²² is important it would have to be included in the LEP schedules to be protected or managed under the DCP controls as they are written.

Objective 5 addresses development around heritage items and within HCA's. The reference to a 'current day context' is unclear and probably refers to using contemporary design in contrast to replica styles and forms.

It would be desirable to provide discrete controls for heritage conservation areas in contrast to heritage items so that there is a clear understanding of the different types of listing and the different reasons for listing under each category

6.2.1 .HCA's and Heritage Items

The interface of the central commercial and residential precincts to the north-west, beyond Beryl Street is now blurred through the inevitable creep of commercial uses into the edges of residential land. However, the area between Beryl Street and Chapple/Lane Streets contains a range of the earliest dwellings in the City (refer to Solomon) and they have neither specific nor general heritage protection or recognition. Solomon correctly notes that his drawing is indicative, that not all the mapped areas were fully occupied, and that there was development beyond those areas, it does however, represent the major pattern of growth in the city. This can also be seen in early photographs of the township where small-scale residences extend well outside the mapped area.

The town continued to grow out from the 1888 mapped areas and by early in the twentieth century, apart from the edges of the city that developed in the later part of the twentieth century, the residential areas were largely in place if not completely taken up. This included the large residential heritage conservation area to the north of the city centre.

After the mining booms (up to the 1930s) further residential development took place around the periphery of the city particularly to the north in new subdivisions. While some infill development took place, most newer development was situated around the edges of the City.

It is not clear how the current HCA's were mapped and what precise values they were intended to capture. They include the more major areas of housing and they are reasonably consistent²³ but the mapped precincts exclude large areas of early and significant housing.

The Broken Hill LEP heritage schedule includes 24 residential sites (some with a number of dwellings); they are with reference to each residential area and noting mining housing as a sub-group:

²² The term 'area' is not one used in the LEP and does not have a definition. It appears not to be the same as a precinct or HCA as that terminology would have been used, consequently it appears to be places, other than those listed, that the community may value. However, there is no protection or control under heritage that can be applied.

²³ Consistency refers to the high number of contributory buildings within the precincts and not the particular style or period of buildings.

Table 30 : Analysis of LEP Residential Heritage Items

Location	Number of residential listings	Substantial houses	Worker housing	Mining Housing
Broken Hill	17	10 - 7 general - 2 police houses - 1 bishops house	1 - Terrace housing	6 - Proprietary Square: 2 separate listings - Bachelor's quarters - Junction Circle - North Mine housing - North Mine
Broken Hill South	6	0	0	6 - St Annes - former mine managers residence - South Mine housing - South Mine housing - South Mine housing - Westside Drive housing - 136 Eyre St staff residence
RailwayTown	1	0	1 - Tramway housing group	0

While there are many more individual residential properties that have specific heritage value than are presently listed, a revised schedule of places would still only provide examples of the best, the unusual, use of key materials, the original, etc. The National listing places priority on the collective value of housing and its relationship to the phases of development, remoteness, ingenuity in use of construction and materials, typologies of housing, location of different housing types, and the inter-relationship of buildings, sites and details such as fences and sheds that provide the character that is recognised in the listing.

The two residential heritage precincts come closest to setting out those values and providing a framework for management. However, the precinct boundaries require review to ensure they include the range of values, particularly in relation to early residential development that characterises the City.

6.2.2 Discussion on Residential Heritage Significance

The residential buildings in Broken Hill are unique. Their collective value with regard to National heritage values is exceptional. However, very few residential buildings are heritage listed (on the LEP or SHR) and the precincts, while sound, do not cover the range of buildings that are significant nor do they reflect the phases and historic development of subdivisions and development. Residential buildings are hugely under-represented in current heritage listings for the City.

There has been some sound analysis of residential buildings, but little has translated into heritage listings. There is also good guidance material on how to work with existing residential buildings and how to design infill buildings, but only in relation to the heritage conservation areas. The guidelines do not apply beyond those boundaries and consequently most residential buildings within the City have no controls in relation to heritage or context.

The issues to be considered are:

- i. Which buildings are significant?
- ii. Why are they significant?
- iii. What is different about the residential buildings in Broken Hill to other places?
- iv. As most of the residential buildings have evolved, sometimes greatly, what is their significant form?
- v. Given the number of buildings and the range of building types, should they be protected and, if they should, how should they be protected?

Broken Hill retains an extraordinary layering of residential buildings from first settlement of the mining camp to the present day. Apart from several notable exceptions, the significant period of residential development was from 1885 to the 1930s with a range of styles and typologies across the city. This 50 year period is what sets Broken Hill apart from other mining and, to a lesser extent, rural centres as many of the early buildings remain where many mining settlements were short-lived and either did not have the range of residential buildings seen in Broken Hill or the buildings disappeared as mining ceased. Another key aspect of many of the Broken Hill buildings is the range of changes and additions that have taken place, particularly to the more modest residential buildings.

The following list sets out the more important values related to housing in Broken Hill that have attracted National heritage value:

- i. early miners houses evident from 1885 onwards and remaining today;
- ii. relocated housing from Silverton and elsewhere;
- iii. mine management housing, often early in date and substantial;
- iv. mine workers housing provided by the mines from various periods;
- v. substantial housing, often with gardens, related to significant local business people;
- vi. the influence of Adelaide in the design of residential buildings;
- vii. the reliance on innovation in making housing liveable over time;
- viii. the use of recovered materials and materials from the mines in adding to and adapting housing;
- ix. the longevity of housing, almost no early mining towns survive to the extent that Broken Hill has and it retains large numbers of early residences, now enlarged and adapted, but still legible as early residences;
- x. the changes in subdivision layouts, how re-subdivision took place over time;
- xi. the layering of change seen in many of the early houses with the addition of elements such as verandahs, wings, new cladding, air conditioning, etc.;
- xii. the effect of topography on the location of housing types and how residences were site on specific sites.

There is no other mining town in Australia that has retained its residential infrastructure for such a long period (135 years) with such a high level of integrity.

What is exceptional in Broken Hill is that so many early dwellings survive and are readable in the streetscape as early buildings. This is rare and exceptional and is a core character of the City.

But it is not only early dwellings, most dwellings over the first 50 years of the city's history remain, some in extraordinarily intact form. There is unlikely to be any place in Australia that exhibits this level of early building retention and use. There are also a range of later buildings that add to the layering and significance and demonstrate the ongoing prosperity of the town.

But, at the same time, most of the buildings are quite ordinary, they do not stand out, they are not exemplars and they would not meet most of the criteria in a Sydney or Adelaide suburban heritage study as heritage items for their individual value. If an observer randomly selects a cottage that has an early construction date it is unlikely to attract particular attention as it will not demonstrate any of the features that would usually attract attention in relation to heritage listing. It probably does not have a high level of integrity, it will without doubt be altered or adapted, it will be extended (as most houses were only 1 or 2 rooms when built), it will be improved (probably a new verandah structure, possibly new cladding, rear additions, air conditioning), and it will have site improvements such as fences and gardens and sheds.

It is then the collective value of all these elements combined with the range of early buildings that remain that provides such an evocative and significant residential heritage.



Figure 15 : 1887 photo of the township taken from the Line of Lode showing the apparently random spread of small dwellings with the form of Argent Street in the foreground and Iodide Street extending into the distance. This photograph captures the historic focus of the town and its core structure. The extent of building within 2 years of the discovery of silver is pronounced. It can be seen that the majority of residences are one and two room. BHP image 66.

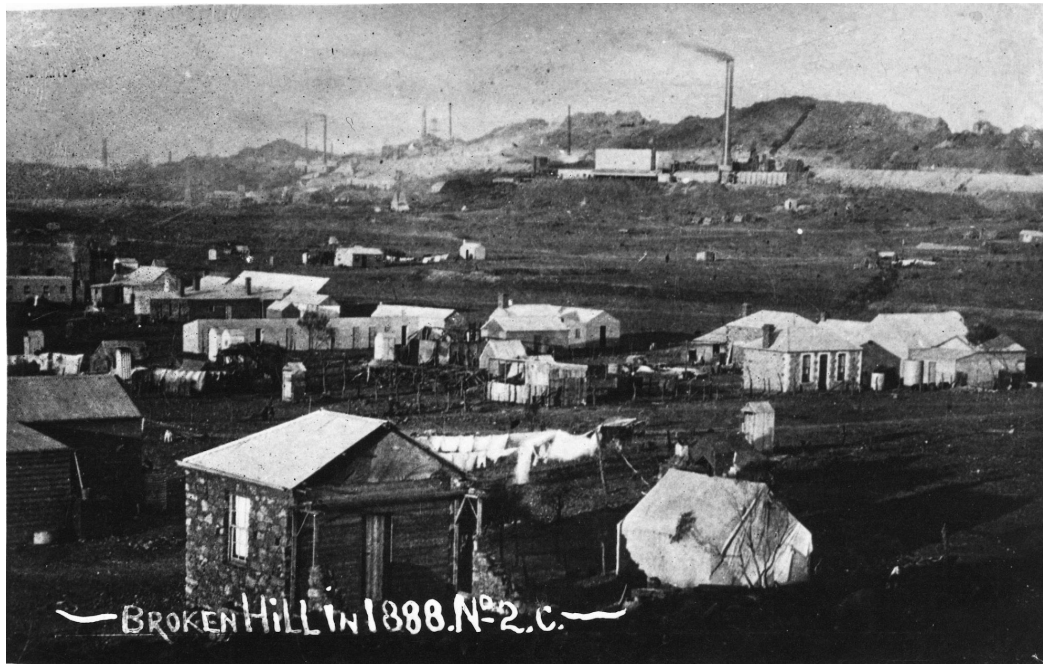


Figure 16 : Dwellings in 1888 showing more detail of the type of buildings being erected. Note in the foreground a tent and a partially complete stone dwelling with a range of stone and timber/iron buildings beyond. Roof forms vary from skillion to hipped to gabled. BH 280



Figure 17 : A clear photo looking along one of the wide streets (Argent Street) showing the arrangement of simple dwellings. BH 280.



Figure 18 : View towards the Line of Lode from Mica Street near Kaolin Street. Many dwellings have had verandahs added to their early unadorned rectilinear forms. BH 286.



Figure 19 : View to the Central Mine from Argent Street at south end c 1880s. BHP



Figure 20 : Similar view to above photo 2019, the cottage in the foreground remains.



Figure 21 : A view down a rear lane from a hilltop illustrating the effect of topography on the layout of the city.

6.2.3 Discussion

Considering the six questions posed earlier in relation to residential development:

i Which buildings are significant?

All residential buildings built between 1884 and the Second World War are significant. They may vary in levels of significance, which will inform how each place should be managed in the future, but they are all significant. This arises from the key operational period of the mines and the development of the City that, with several notable exceptions, was largely in place by the late 1930's.

Residential buildings outside this time period may also be significant but this would be recognised by an individual heritage listing, or as part of a precinct where the values of the building or a group of buildings are identified.

It is difficult however, to include every building as some form of heritage place. It is necessary to identify the key highest value places as heritage items to ensure that the most significant values are managed carefully. It is then necessary to map residential heritage precincts carefully to capture the broad range of places that contribute to National values. It is also necessary to establish guidelines to assist in the management of those values. Precinct listing is the most effective way to manage the broad values of the City.

ii Why are they significant?

Significance, at all levels including National values, resides in the collective value of early residences and how they demonstrate the development of Broken Hill as a mining town. Early town photos show what at first appears a quite random arrangement of tents, shacks, and small cottages, but quickly forms a town grid of development. The grid layout of the town is established early and remains today; extant cottages can be easily identified from early photos, giving a clear understanding of the structure and development of the City.

iii What is different about the residential buildings in Broken Hill to other places?

Many dwellings demonstrate their early construction and form, others an adapted form. The evolution of the buildings is clear and observable in the majority of residential streets.

There has been a relatively low level of loss of significant residential buildings. While this is not rare, as whole suburbs of dwellings from particular periods remain in major cities, it is rare in that most of the building stock is very modest.

The buildings, as noted earlier, use a consistent palette of materials - mostly freestone and iron with some brick - that even with changes gives a homogeneity to the character of the city.

There has also been a repeated pattern of adding to and adapting small residences in contrast to large scale replacement of buildings. While there are a number of buildings that have replaced earlier simple structures, a very large number of early cottages remain.

iv As most of the residential buildings have evolved, sometimes greatly, what is their significant form?

Most heritage listings look for integrity of form and detail to an original or early state. Sometimes, changes are significant, particularly if they relate to a significant intervention or phase of development. While this is a sound approach for the more major residential buildings of Broken Hill, the more modest houses almost without exception have additions, often much larger than the original dwelling. The additions are significant as they tell the story of the growth of the town and

the adaptation that was needed to accommodate families and growing aspirations. Some houses were removed and replaced but most have been adapted, often using materials that were locally available, often second-hand, and often from the mines.

The heritage value of the residential buildings, with a few exceptions, is the form in which these buildings are now found.

v Given the number of buildings and the range of residential building types, how should they be protected?

The recognition and protection of residential buildings is the most difficult area to consider as this group of places makes up the largest group of buildings in the City, they are largely individually owned and planning for residential properties is the most fraught of planning matters. However, they are a critical element of the National heritage value of Broken Hill and have to be considered in relation to their National value.

The two basic levels of heritage protection are heritage items in the LEP and being within an LEP heritage precinct. It is unrealistic to consider any action by the NSW Heritage Council in relation to listings, no matter how significant, as the concept of State listings has almost ceased within NSW as reflected in the very low number of heritage listings within Broken Hill. Individual National listings are not appropriate for most residential buildings.

It would appear if local listings correctly and comprehensively address the National values of the City as well as local matters and there is a framework for referral on matters of National interest if that were required, that there is no need for any additional residential listings at either State or National level. This is a pragmatic approach but recognises that neither the State or Commonwealth have any real ability to operate in the local setting with regard to most heritage issues.

Consequently, the key factors in protecting National (and other) heritage values in relation to residential values but also with regard to all other aspects of heritage value are:

- i. Ensuring that local LEP heritage listings (individual items and precincts) are thorough and comprehensive, that they reflect National (and State where appropriate) heritage values, and that they are clearly articulated within the framework of National values;
- ii. Providing advice, guidelines, and information to the community and council (as the consent authority for most applications for works) to improve the understanding of what heritage value is, why it matters, and why Broken Hill is a National Heritage Item;
- iii. Developing protocols at local Council level to identify National values and when a proposal may impact those values;
- iv. Establishing a clear referral path that is understood and is functional to initially test proposals for National referral and then, if warranted, to make an application for consent.
- v. Setting out thresholds within Council that ensure that Council actions always place the consideration of national heritage values as a high priority in any assessment of any proposal.

There is a persuasive argument that suggests all of the residential buildings discussed above are of high heritage significance as they collectively create the 'sense of place' that demonstrates the history of Broken Hill. It is the large number of similar places that contributes to this heritage value. This tells the story of the scale of mining and of the City.

The following illustrations demonstrate different forms of residential building within the City. They do not cover all typologies and provided to demonstrate the range of residential buildings that exist



Figure 22 : A largely original miner's cottage, now in poor condition, without any substantial upgrade or external change. The housing stock of the City is widely varied but retains a very high level of early buildings that remain readable even though many have been altered. It is not heritage listed nor within a heritage precinct.



Figure 23 : A typical early timber residence with a later 'grand' verandah added. It is not heritage listed nor within a heritage precinct.



Figure 24 : An early (1880's) stone residence that has had additions of a shop (early twentieth century adapted later twentieth century) and a garage late twentieth century) in a prominent corner position. It is not heritage listed nor within a heritage precinct.



Figure 25 : A group of modest cottages showing the range of styles, materials, additions and changes that take place across the City. They are not heritage listed nor within a heritage precinct.



Figure 26 : A row of 6 terrace style houses (forming part of a larger complex in three streets). This form of housing is rare in the City with only a few examples. LEP Heritage Item as a group, noting that the other adjoining examples are not heritage listed.



Figure 27 : A relocated Bank building from Silverton, rebuilt as a residence in Williams Street. Not heritage listed but within a heritage precinct.



Figure 28 : A modest but well-detailed house with return verandah in North Broken Hill. The building is not heritage listed nor within a heritage precinct.



Figure 29 : Group of small cottages with relatively little change but showing the range of incremental changes that typify the residential areas of much of the City. The buildings are not items or located within a heritage conservation area.



Figure 30 : A substantial house in William Street with fine detailing, a significant setting and the addition of well-detailed verandah base and fence. Not heritage listed but within a heritage precinct.



Figure 31 : A more major house located on a corner with views across the town to the Line of Lode. This represents a grander form of housing usually located with aspect and outlook. The building is an LEP heritage item and is not in a precinct.



Figure 32 : The first mine managers house in Proprietary Square (1885). The house is heritage listed and is of very high significance, possibly the most significant house remaining in Broken Hill. The building is derelict, has mining taking place in close proximity and has recently been given to the Broken Hill Historical Society. It is unlikely that they will be able to conserve and restore the house to a suitable standard due to its very poor condition. This places the heritage values of the site at high risk from abandonment and vandalism. The loss or further damage to this building would have a significant impact on National heritage values which are embodied in the building and the nearby remnant BHP chimney (recently conserved). This is a residential building that could have individual National heritage significance.



Figure 33 : Early corner house in elevated location. It is not heritage listed or within a precinct.

6.3 Commercial Sites

The historic commercial centre of Broken Hill is Argent Street²⁴. The street became the centre of commerce and retail very quickly, within a couple of years of the mines opening and has remained the focal point of the City until recently. The construction of two shopping malls between the City Centre and Railwaytown saw a significant decline in the activity and viability of the City Centre. A similar decline was seen in the Patton Street shops in south Broken Hill after the closure of the local supermarket and also the shops in Railwaytown that are in close proximity to the two shopping malls. All three traditional retail/commercial areas now struggle to survive as a result of poor planning decisions.²⁵

South Broken Hill and Railwaytown centres, with several smaller local centres that are discussed later, are important, but it has been Argent Street that has been the focus of the City since inception. This is evidenced by the high quality of buildings, the superb streetscapes, the variety of retail and commercial buildings, the number of hotels and civic buildings and the visibility of the precinct in books, photographs, paintings etc. A simple 'pub test' is to name an iconic feature of Broken Hill and it is likely to be either the desert, the Line of Lode (which overshadows Argent Street) or a building such as the Palace Hotel or the Town Hall façade that are in Argent Street.

²⁴ Argent Street refers to both Argent Street and the Argent Street heritage precinct which extends a block to either side of Argent Street and from Garnet Street to Iodide Street.

²⁵ The significant shifts in use of the main block are:

- the large increase in vacant tenancies indicating the slow decline of the main street and reliance on other centres and on-line shopping;
- the decline in food supply with large supermarkets being developed on the fringes of the City
- a decline in hotels; and
- an increase in government, commercial and medical uses as retail uses reduce.

The overall shift is one from a vibrant retail focus to a provision of service tenancies.

There is no doubt that the Argent Street Precinct as an entity is one of the two or three most iconic elements of Broken Hill and is core to National Heritage values.

Until the 1980s, the Argent Street Central Precinct would have seemed unassailable in its central role in the life of the City, but even at that time there were signs of decline²⁶.

A National heritage value is the centrality of the Argent Street Precinct to the city, its direct and constant relationship to the Line of Lode - the grid layout of the city being determined by the alignment of mining leases - and the proximity of mining to the commercial heart of the City that juxtaposes two of the major City themes.

It is not difficult to define the City core as an element of National significance within the broader city. It is also possible to identify key places or buildings of specific National heritage value.

It is more difficult to define the edges of the Precinct and there is a risk of excluding places that are not as iconic as the Post Office or the Palace Hotel but which are essential elements of the commercial/retail core of the City. It would be wise to establish a broad City Precinct that captures as many National heritage values as possible.

Other retail areas, which are not iconic and do not have the spectacular range of places that Argent Street has, are also potentially of National significance, not for any specific place but for their ability to demonstrate a way of life in a major mining town that relied on local communities, shops, churches, businesses and transport to function. There is no other place in Australia of the remoteness and scale of Broken Hill that has had to create such a complex and complete social network of small communities, all within a single town (not a city until recently) that relied on local facilities as well as being part of a venture that was of National importance.²⁷

Since 1884, Broken Hill has been of National significance. That has never been in doubt. Broken Hill has achieved way beyond any expectations and has created wealth and industry that has placed Australia in an enviable world position. It is the only major mining venture to remain in the country after 135 years of mining²⁸.

There are numerous historic mining sites in Australia that have risen and fallen and mostly disappeared. Broken Hill remains and although mining on the Line of Lode is finally coming to an end (possibly in another 15 years), the place has managed to redefine itself and will have a future post-mining. This is rare in such a remote and difficult location and demonstrates the depth of the cultural, social and economic heritage of the City.

Significant commercial sites include the range of small and large enterprises that supported the growth of mining in the City over its history. They range from significant commercial ventures, the use of mining infrastructure to improve community places, commercial support businesses to small operations providing for local communities. They may not individually be of high heritage significance, but collectively they are a defining element of the National values of Broken Hill,

²⁶ Solomon details the changes in Argent Street in some detail.

²⁷ Broken Hill has been of National importance or significance since the discovery of silver in 1884, this is evident from its history and the role it has played in establishing Australia as a major mining and mineral export nation. The National heritage listing has articulated this significance clearly and placed it within a legislative framework, but the National listing has not created National significance. The National listing has recognised the National significance that already existed.

²⁸ Noting that Kalgoorlie has a slightly shorter history.

particularly in reflecting a social framework that arose initially from need and developed through Unionism and social welfare actions.

Broken Hill is a place of bespoke solutions. In the built area this can be seen in elements such as: gates; fences; signs; bus shelters; lighting; civic improvements; stormwater drainage; use of recovered materials; etc. It can also be seen in the community structure of the City with the extraordinary rise of Unionism and the various societies and organisations to provide for the welfare and social needs of a large working class community. In Broken Hill the minutiae is as important as the iconic.

If the minutiae is not protected and celebrated, the iconic risks becoming no better than a theme park where concepts are dumbed down and presented as 'selective cultural tourism'. Currently, the experience of Broken Hill (if a visitor takes time to look) is of a place that is iconic on the one hand but, more importantly, is an amalgam of the efforts of thousands of residents, businesses, council workers, and mine employees to create a society and cultural life where the City should not, by rights, take place.

There has been a long-term and coordinated program within the city to recover the significance of Argent Street and surrounding areas (in particular). There has been a focus on reinstating missing verandahs that characterised the street, ensuring that additions and new buildings in the City Centre are designed in response to heritage values, repurposing buildings such as the former Sully's Emporium for new cultural uses (the regional art gallery) and looking at main street improvements to activate the city centre. This has had a significant impact on the character and quality of the City and has undoubtedly contributed to the ongoing life of the City Centre however, even though it has achieved a lot, it has not prevented a gradual decline in retail and commercial activity and a significant shift in the type of retail activity that takes place in the City.

Solomon in his study of Broken Hill in 1986-7 looked at the changes in occupancy and use in a section of Argent comparing the 1910 and 1932 land user surveys with the situation in 1986-7. Comparison of that analysis with the same section of Argent Street (Oxide to Chloride Streets) at the end of 2019/2020 shows a change in retail use from a mix of essential retail to peripheral retail uses.

The following table shows a summary of the changes from 1932 to 1987 to 2020.

Table 31 : Argent Street Analysis of Retail and Commercial Use

Use	1932 (Solomon)	%	1987 (Solomon)	%	2020	%
Vacant	2	3%	5	7%	13	17.5%
Clothing/shoes/haberdashery	9	14%	16	22.5%	10	13.5%
Medical/dental/chemist	5	7.5%	7	10%	7	9.5%
Specialist Retail	8	12%	9	12.5%	6	8%
Office/Commercial	2	3%	1	1.5%	6	8%
Government/Institutional	1	1.5%	4	6%	6	8%
Café/restaurant	4	6%	6	8.5%	5	6.75%
Gifts/Interiors (draper)	8	12%	5	7%	5	6.75%

Use	1932 (Solomon)	%	1987 (Solomon)	%	2020	%
Hair/beauty	4	6%	4	6%	5	6.75%
Hotel/accommodation/Club	7	10.75%	3	4.5%	3	4%
Real Estate	1	1.5%	2	3%	2	2.5%
Entertainment (not hotel)	1	1.5%	2	3%	1	1.25%
Newsagent/bookstore	1	1.5%	2	3%	1	1.25%
Industrial	1	1.5%	1	1.5%	1	1.25%
Florist	0	0%	1	1.5%	1	1.25%
Union	0	0%	1	1.5%	1	1.25%
Bank	2	3%	3	4.5%	1	1.25%
Grocer/food/butcher	15	23%	2	3%	0	0%
Supermarket	0	0%	1	1.5%	0	0%

The highlighted areas show shifts in occupancy, green indicating an increase and blue a decrease. Changes are only indicated where there is shift that is significant.

The noticeable changes are the decline in food outlets, the increase in vacancies and the shift to commercial and government tenancies. There has also been a decline in banks and accommodation. Without food stores, the main street quickly loses its day to day shopping value and ceases to be a main street.

The obvious decline of Argent Street (and the other small centres) results in a shift in the focus of the City and a need to add new uses and activities that allow the exceptional value of the built environment, apart from the social setting of the City, to be maintained. This is a core heritage issue as buildings are only maintained and conserved when they have viable and vibrant uses. The decline of the City centre has the potential to adversely impact National heritage values.

6.4 Hotels

The following analysis and discussion looks at the hotels of Broken Hill. The analysis is based on a list of hotels built up to 1900 in the city prepared by Solomon²⁹ in his 1986 analysis of the City. The heritage listings and typology are added as part of this study.

²⁹ Solomon cites a range of sources for this information.

Table 32 : An Analysis of Hotels in Broken Hill

Hotel (in order of construction)	Address	Date established	Delicensed (where known)	Heritage Listing	Typology
Royal	350 Argent St	1885	1924	LEP 150	A
Silver King	428 Argent St	1885		LEP 190	B
Commercial (Astra)	393 Argent St	1886	-	LEP 8	A
Duke of Cornwall	76 Argent St	1886	-	LEP 51	A
Freemasons (West Darling)	26 Oxide St	1886	-	LEP 231	A
Tattersall's	367-377 Argent St	1886	1924	LEP	A
Theatre Royal	347 Argent St	1886	-	LEP 216	A
Crown	2 Oxide St	1887		LEP 47	B
Denver City	376 Argent St	1887	1933	Demolish ed	
Willyama	464 Argent St	1887	-	LEP 102	A
Adelaide	Blende St	1888	1924 ?		
Athletic Club	415 Cobalt St	1888	1924	Demolish ed	
Australian Club		1888	1941		
Barrier Club	Argent St	1888	1924		?
Hegarty's (South BH)	211 Patton St	1888		LEP 196	B
Crystal	92 Crystal St	1888	1924	LEP 48	B
Excelsior	13 Thomas St	1888		LEP 54	B
Gladstone	170 Morrish St	1888	1924	LEP 63	B
Hotel (in order of construction)	Address	Date establishe d	Delicensed	Heritage Listed	Typology
Globe	Cnr Crystal St	1888	1965 ?	Demolish ed	A
Grand	311 Argent St	1888	1960	LEP 64	A
Imperial	397 Cobalt St	1888	-	LEP 81	A
Masonic (Mario's)	172 Beryl St	1888		LEP 88	C
Miners Arms	82 Crystal St	1888		LEP 89	B
Mulga Hill	264 Oxide St	1888	-	LEP 94	B

Hotel (in order of construction)	Address	Date established	Delicensed (where known)	Heritage Listing	Typology
Oriental	Argent St	1888	1960		B
Oxford (Port Adelaide)	Oxide St	1888	1924		
Peter's (Gearins Catholic Club)		1888	1924		
Pig and Whistle	95 Bromide St	1888	-	LEP 109	B
Prince Consort		1888	1912		
Rising Sun	2 Beryl St	1888	-		B
Royal	146 Oxide St	1888	-	LEP101	A
Royal Mail		1888	1924		
Silver Age		1888	1924		
Silver Spade (Criterion)	157 Argent St	1888		Demolish ed	B
South Australian	250 Willis St	1888			B
Southern Cross	93 Oxide St	1888		LEP 199	B
Sportsman's Arms	112 Brazil St	1888	1998		B
Sydney Club	Beryl St	1888			?
Tramway	20 Beryl St	1888	1924		B
Union Club	93 Patton St	1888	2005		B
Weller's Family		1888	1932		
Wentworth		1888	1924		
Wilcannia Club	1 Oxide St	1888	1971	LEP 68	B
Centennial	426 Blende St	1889		LEP 55	B
Crown and Anchor		1889	1924	Demolish ed	
Royal Exchange	320 Argent St	1889	-	LEP 122	A
Brewer's Arms (Northern)	636 Beryl St	1890	-		B
Victoria	Chappell/Oxide Sts	1890	1990		B
All Nations	331 Eyre St	1891			B
Alma	212 Hebbard St	1891	-		B

Hotel (in order of construction)	Address	Date established	Delicensed (where known)	Heritage Listing	Typology
Gasworks	213 Mercury St	1891	1986	LEP 62	B
Hillside	Gypsum/Burke St	1891	1999		B
Newmarket	133 Buck St	1891	1994		B
Tydvil	318 Oxide St	1891	-		B
Allendale		1892	1924		
Cable		1892	1924		
Junction	560 Argent St	1892	-	LEP 83	B
Palace	227 Argent St	1892	-	LEP 105	A
Caledonian	140 Chloride St	1898		LEP 37	B
Freiburg	127-129 Rakow St	1899	1924	LEP 31	B
Federal Palace (Black Lion)	34 Bromide St	1900	-	LEP 17	A
Daydream (Sydney Club)	75-77 Argent St	1880	c1990s	LEP 50	B
Silver City	402 Argent St			LEP 189	A

Key

	Within Argent St Precinct
	Outside city centre
	Location Unknown ³⁰

6.4.1 Hotel Building Typologies

The Broken Hill hotels fall into several key periods of construction and two main building types. Of the list of approximately 60 hotels built between 1885 and 1900 (15 years), 45 of those remain even though not necessarily used as hotels.

There are 24 hotels related to the town centre of which 14 are built on corners.

There are 21 local pubs outside the town centre.

The following analysis can be drawn from the material:

³⁰ Considerable research has been undertaken to ascertain the names and locations of the various hotels. Records do not always agree and have only been added where there is certainty about the accuracy of the material.

15 buildings

- all heritage listed;
- generally, two storey often with two storey verandahs;
- most are located between Sulphide and Iodide Streets to the north-east of the civic buildings with a focus of buildings around Oxide Street;
- some are located on corners but a number are mid-block;
- they offer a larger number of accommodation rooms than other hotel types;
- some have sample rooms for the use of travelling salespeople;
- they have major dining rooms and facilities.

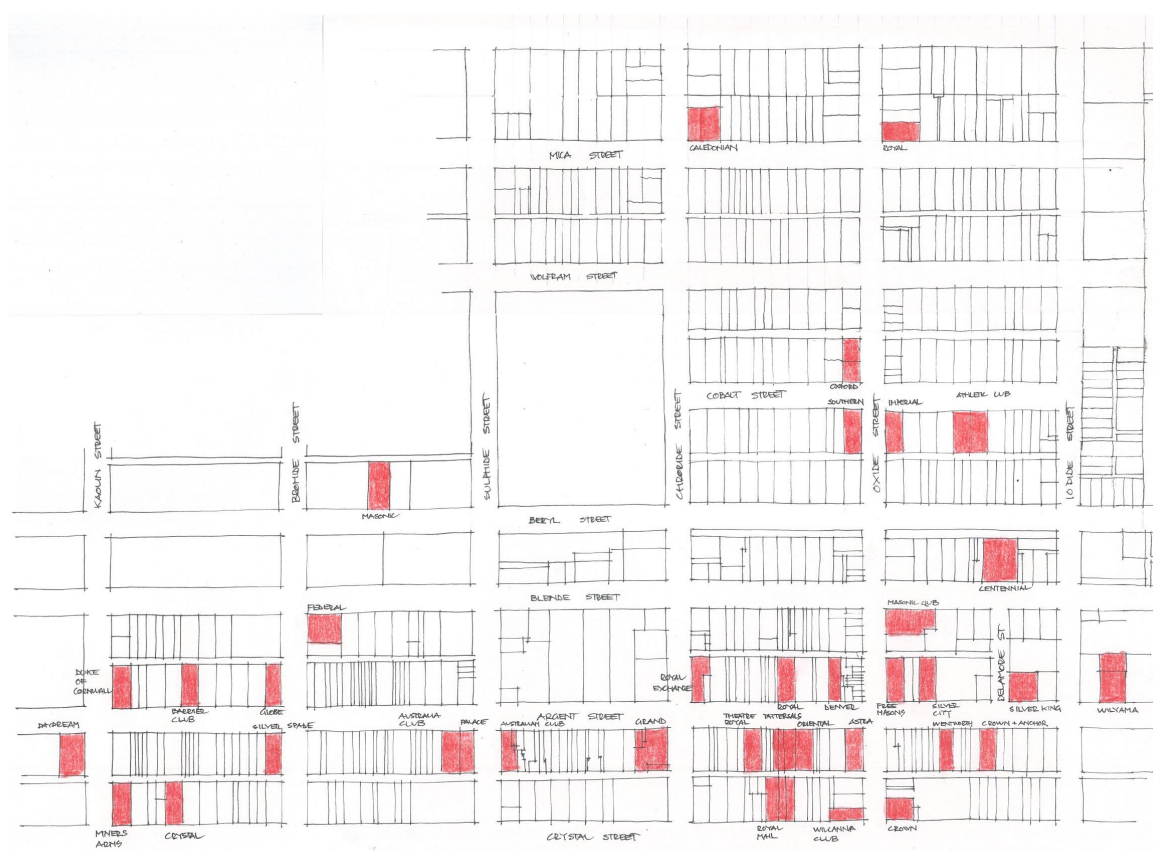


Figure 34 : Location of hotels (historic as not all buildings remain as hotels or are extant) in the Argent Street area and extending north-west along Oxide Street. Paul Davies.



Figure 35 : Theatre Royal Hotel 1927 in Argent Street. Noel Butlin Archives, ANU.



Figure 36 : Grand Hotel 1927 in Argent Street. It has had its verandahs removed with façade alterations since this photo was taken. Noel Butlin Archives, ANU.

B - Local hotels

30 Buildings

- 17 Heritage listed
- generally single storey with wide street verandahs;
- simple building forms, very similar in style to each other;
- mostly located on prominent corners;
- offer some accommodation but generally small number of rooms than city hotels;
- often located near mines or local shops.



Figure 37 : Silver King Hotel corner of Argent and Delamore Streets 1927. Noel Butlin Archives, ANU.



Figure 38 : Victoria Hotel on the corner of Chapple and Oxide Streets 1940. Noel Butlin Archives, ANU.

There is also a crossover in typologies with several larger buildings being found outside the town centre and local corner hotels located within the city. However, there are only local hotels located in South Broken Hill, Railwaytown and north-west of Lane Street.

This brief analysis identifies a range of matters that affect National Heritage Significance.

Apart from mining structures and retail buildings (that take a broad range of forms) hotels or pubs are the most prevalent building form in the City. This is not surprising given that Broken Hill was and is a mining town with a large population of mostly working people.

The hotels served a range of functions apart from bar services with the city hotels in particular offering a broad range of accommodation, dining and other commercial and cultural activities. This is not explored in detail here, but there was a need for hotel accommodation in addition to bar facilities, and accommodation was a key focus of the city hotels in particular.

The available floor plans of the hotels within the city centre provide fascinating information on the range of facilities offered and needed.

Local hotels were quite different. They were local with limited facilities. Small and local area based, they have suffered the greatest level of closure as communities have become mobile and pubs, local shops, local churches etc, have become redundant. The loss of local hotels continues with several closing in the last year.

The South Broken Hill Hotels (5) are all local hotels. Four are close to the Patton Street town centre but not in it (interestingly). The All Nations Hotel was in Eyre Street, near the mine. South Broken Hill has a very particular and somewhat understated character that is reflected in the hotels. There are no hotels (or other buildings) in South Broken Hill that compete with Argent Street in character and scale.

Similarly, Railwaytown only has local hotels. They also relate to the small local centre and are located adjacent to the railway workshops and the small shopping precinct.

A number of hotels are situated specifically in relation to mine access (e.g. Junction Hotel), which is not unusual, but adds another layer of significance to the social and work structure of the town.

Heritage studies often seek to list the 'best', the 'iconic', 'representative examples', etc. This is understandable but does not capture the values of a place such as Broken Hill. Hotels, perhaps more than most non-mining buildings, tell the story of early Broken Hill. They vary from grand to ordinary but all of them are essential to National Significance values as they complete the story of how Broken Hill functioned in a remote and hostile environment. The list of hotels in table 31 illustrates that in the first five years of settling Broken Hill, 46 hotels had been built.

In the last few years one of the local hotels (typology B) within the city area was demolished (with approval) based on a condition issue. The site is now vacant and is unlikely to be infilled so a key corner building has been lost without a sound heritage reason. This example is of interest as it allows the concept of National heritage value to be considered in relation to a specific place that is not under contention.

The Criterion Hotel (also Silver Spade) located on the corner of Argent and Bromide Streets was a single storey local hotel. It had late twentieth century accommodation behind it as a separate building that remains and still provides accommodation.

It was a corner hotel, one of 14 in the city centre (24 hotels in total in the city centre area). Corner sites are amongst the most significant sites within a town and are usually the defining town elements. It was a B typology and formed part of a group of related buildings between Bromide and Kaolin Streets.



Figure 39 : Criterion Hotel (called Argent Motel on the sign) site showing the retained motel wing to the rear and the now vacant corner.

The question that is of interest is does the loss of one of 65 buildings within a group affect a National heritage value? Or, does it affect a local heritage value if not a National one and how do they relate?

Reasons for demolition that are usually put for the demolition of a heritage listed building can be:

- i. it is not structurally sound and there may be a safety issue argued;
- ii. it cannot reasonably be recovered at a cost that can be afforded;
- iii. it no longer has a viable use;
- iv. there is a better use for the site;
- v. retaining the building is an unreasonable impost on the owner;
- vi. there are many examples of similar buildings and the removal of one does not change the overall heritage values of a place;
- vii. the owner (or lessee, etc.) no longer wishes to retain the building on the site.

Similar reasons may be put forward to demolish any building and if the building is not a heritage item or within a heritage precinct, there are almost no controls to refuse such an application.

For this building, built in the core period of hotel construction in Broken Hill, 1888 (33 of the 65 hotels were built in this year and a further 13 were built in the two years either side of this date), in Argent Street, on a prominent corner a linking building between Kaolin and Sulphide Streets, that was a heritage item, a decision to demolish would have to be based on exceptional conditions as the building is unarguably:

- i. a key element of the city form;
- ii. one of a group of very significant buildings that are a core aspect of the National values of the town (as set out in this study and in the listing citation);

- iii. a key building within the Argent Street streetscape that is a central element of National significance;
- iv. a heritage item where there is a very clear expectation under the LEP that demolition, while not prohibited, cannot satisfy the heritage provisions of the Plan.

What then could be, with regard to a building such as this, the circumstances where an action such as demolition may be considered despite the potential impact on local and National heritage values and should such a proposal be referred under the Federal Act for Federal determination?

A quick analysis of the 6 reasons that demolition or a similar action may be argued is set out below:

Table 33 : Reasons for Demolition of Heritage Items

	Reason	Comment
i	it is not structurally sound and there may be a safety issue argued	<p>The most likely reason for a building to be approved for complete or partial demolition is where a place cannot, after assessment and review ,be retained due to the condition of the building. There are buildings that are so badly damaged that repair is not supportable.</p> <p>Most applications for demolition argue structural issues and most are wrong. It is rare that a building has such significant structural issues that it cannot be reasonably repaired and conserved.</p> <p>The more significant the building, the greater the need for a nuanced and carefully considered analysis.</p> <p>Consideration of cost is not part of a condition or structural analysis.</p> <p>Any structural or condition report has to be peer reviewed by a specialist engineer/heritage architect for its validity. Many engineers, for example, will quickly declare a building unsound to the point of demolition as without experience in the conservation of heritage buildings they may not understand the processes and analysis that is required.</p> <p>Most buildings are in poor condition due to a lack of maintenance and care and/or abandonment.</p>
ii	it cannot reasonably be recovered at a cost that can be afforded	<p>Cost is a key concern for an owner/manager but is not always a valid consideration when assessing an action such as demolition.</p> <p>Simply not being able to afford work is not a reason for approval of an action. The site may be sold, assistance may be sought, options for how the building can be retained can be explored.</p> <p>The only valid application of costs is where the cost of work, in relation to the significance of the place, is so high and the building is in such poor condition that retention is deemed unviable in relation to its level of significance.</p>
iii	it no longer has a viable use	<p>In Broken Hill, as the population slowly falls and traditional building uses are no longer viable, a considerable number of buildings, of heritage significance and other non-significant buildings, become</p>

	Reason	Comment
		<p>vacant and difficult to find uses for.</p> <p>The majority of hotels have closed as hotels and many have other uses while some have been demolished (only this example since the heritage listings were gazetted).</p> <p>This is a significant problem as unused buildings are difficult to maintain in the short and long-term.</p> <p>Lack of use is not a reason for demolition. There needs to be a considered effort to find alternative uses or a new owner.</p> <p>There is a significant and increasing risk in Broken Hill of loss of significant buildings as the demand for buildings lessens (with falling population and less commercial and mining activity). There are a range of vacant buildings in the City at present that are significant and whose loss would have a significant adverse impact on national heritage values.</p>
iv	there is a better use for the site	<p>This is not a reason for demolition.</p> <p>It is reasonable to explore how other uses may take place with the significant building remaining.</p>
v	retaining the building is an unreasonable impost on the owner	<p>It is not possible to determine with any accuracy or validity what is reasonable or unreasonable when it comes to an owner's wishes or position on any property. What is reasonable or unreasonable is subjective.</p> <p>For a place that is heritage listed and, in this case, has been heritage listed for more than 30 years, the consequences of being heritage listed are clearly set out in the LEP apart from other legislation and what is reasonable is that the legislation is maintained and places of value are protected.</p>
vi	there are many examples of similar buildings and the removal of one does not change the overall heritage values of a place	<p>There are situations where this argument may be valid, this is explored elsewhere in this study in relation to broader groups of places such as residential development. However, where a place is heritage listed and forms part of a group of places that individually and collectively are of high significance (hotels) at a national level, the loss of any part of the group must have a significant impact on National heritage values.</p> <p>This raises the question of: if National values could be retained with the loss of some examples out of a group of places, which places could be lost, how is that determined, how is a threshold developed, and: is it simply a case where the first applications are the easiest as more similar places exist and each time it gets harder as the remnant gets rarer?</p> <p>The importance of understanding the National themes and how they are physically represented is that it allows an understanding of the places that are essential to the retention of National values and those</p>

	Reason	Comment
		places where greater flexibility may be possible. In the example of the Silver Spade Hotel I would conclude that the loss of any hotel building in its entirety or undertaking major change that removes the essential character and fabric of the place is an action that has a 'significant impact' on National heritage values and should not proceed. Such a proposal should then be referred for consideration as well as assessment at local council level.
vii	The owner (or lessee, etc.) no longer wishes to retain the building on the site	This is not a reason for proposing demolition no matter what the reasons for wanting this may be. With the Silver Spade site, the corner is now vacant and grassed leaving a major gap in the pattern and form of the city centre.

The consideration of a listed place that fits a clear National criterion is reasonably straightforward even though, for this place, the demolition was approved. Later in this study, places that are not as clear in how they relate to a National value are considered.

6.4.2 Summary Hotels

All of the extant hotels and hotel buildings in Broken Hill are of high significance and are a key part of the National heritage value of the city. While there may be a range of responses to proposed changes to these buildings, based on their integrity, use, etc., overall, they should be retained in their significant forms to satisfy the National listing values.



Figure 40 : The Palace Hotel, possibly the most well-known building in Broken Hill through its associations with *The Adventures of Priscilla, Queen of the Desert* as well as its iconic presence in the cityscape.

Potential changes need to be considered against the guidelines set out in this study and developed in future council controls, and any works that affect the form or significant detail of buildings should be assessed for their potential impact on National heritage values.

6.5 Infrastructure Sites

Infrastructure sites include:

- i. Railway sites, current and former
- ii. Sites related to water
- iii. Sites related to power generation
- iv. Council and government owned sites that are not civic or community sites such as tips, workshops, etc.

The provision of infrastructure has been critical to the initial survival and then growth of Broken Hill. Without railways and water, the town would not have survived. The complex and political history of infrastructure in such a remote but important location involving three states and the Commonwealth is unique and falls within a range of National heritage values. While each area of infrastructure can be looked at in detail and specific places added to a list of Nationally significant sites, generally, infrastructure underpins the city's history.

Much of the infrastructure required has also been outside the now listed city area. Stephens Creek Reservoir, the Menindee pipeline, the tramway to Silverton - by way of example - are largely outside the listing boundaries but are key components of the National values of the City. While they may not technically be able to be included in a schedule of places (local or National), they can be included in the understanding of significance and an adjunct list of places is set out in this report where they are considered important to a national value.



Figure 41 : A section of the Menindee pipeline between Stephens Creek Reservoir and the City. This section of pipeline is just outside the City boundary but the whole of the pipeline is integrally linked to the survival of Broken Hill and could be included within the National listing.

Looking beyond the listing of specific sites (such as the Sulphide Street railway station for example) it is the overall role of services such as water and transport that is of National significance. Any remnant elements of early infrastructure that remain are tangible evidence of the importance of infrastructure and contribute to National significance.

The physical remnants of infrastructure can be identified and mapped and listed where required but National values in this area in particular are tied to political decisions, interstate rivalry, financial interests, and the remoteness of the place that in the early decades of mining often left the residents and businesses of the town to rely on their own resources.

The main infrastructure types are discussed briefly below.

6.5.1 Railway Sites, Current and Former

There were two railway systems in Broken Hill: The Silverton Tramway and the NSWGR line. The tramway was constructed in the 1880s and connected to the South Australian railways at Cockburn on the border. Originally built to Silverton, with the discovery of silver at Broken Hill it quickly extended, opening in early 1888, only 3 years after the discovery of silver. For the next 40 years it was the only rail link from Broken Hill to a major city and port.

The tramway extended into the city terminating at Sulphide Street station for most activities but also continuing along the reserve along Beryl Street, bifurcating to head north along Rhodenite Street and east to North Mine. At the western entry to the town the tramway reserve skirted the cemetery running next to Galena Street and turning into Blende Street. There were major workshops and yards on the site of what is now Westside Plaza with a small amount of remnant railway housing remaining in Wills Street. The existing and former tramway reserve (some has been sold for development and some remains in public ownership) contains remnant elements from the tramway use. Beyond the city boundary parts of the tramway formation and features remain.

There is also a strong connection between the tramway and Railwaytown (as the name suggests) with much of the railway workforce living adjacent to the workshops.

The NSWGR line was built in 1919 to Menindee but did not connect to Sydney until 1927. The initial section of line to Menindee was closely linked to bringing water to Broken Hill until a pipeline was constructed. The first Sydney station (1927) is now abandoned and is the only reminder of that first section of line that remains within the city boundaries (other elements of the early line remain outside the city boundary).

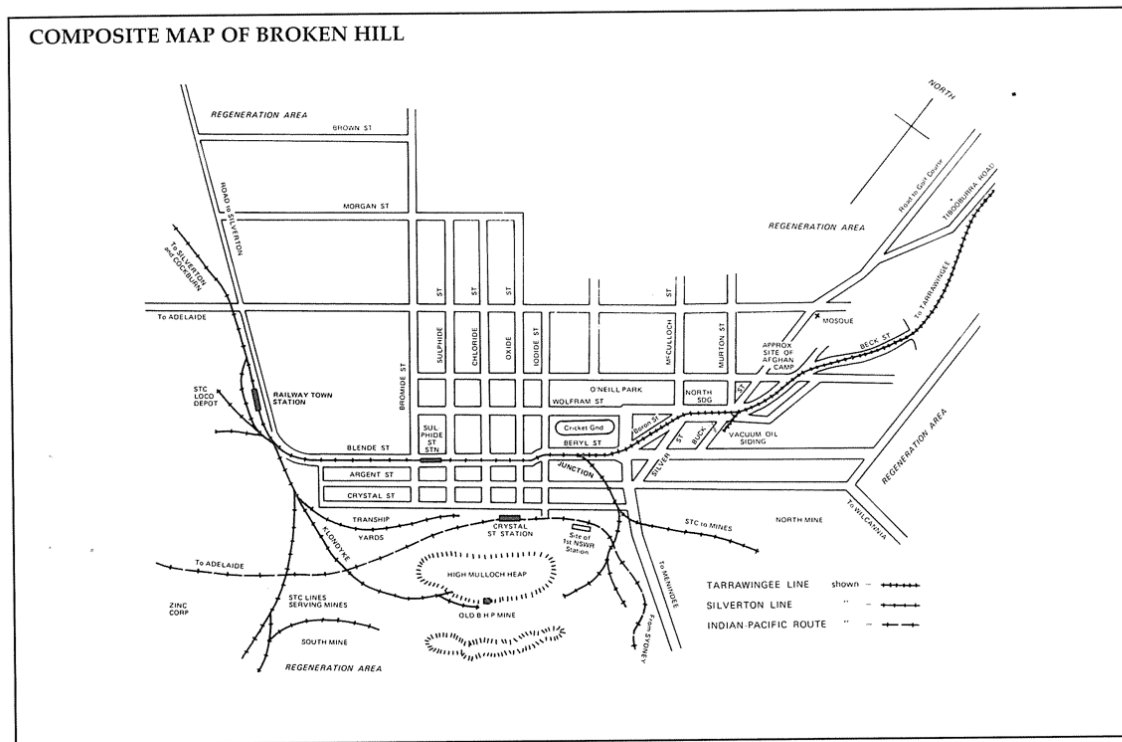
The current Broken Hill Station (1957) is a significant site as it was a key stop in the transcontinental railway.

Both standard gauge stations are of National significance as they are direct evidence in their location and relationship to the politics of rail in NSW and the constant fight against government for the survival of the city.

The remnants of the Silverton Tramway, including the former reserve (both remaining and redeveloped) are of National significance for their contribution to the development of mining, access and transport and their ability to facilitate the growth of Broken Hill into a major town. The tramway is synonymous with mining and the movement of ore and forms an integral part of the core operation of the township. The connection between Broken Hill and Adelaide, encapsulated in the rail link, while the governance of the town was with NSW is also of high significance.



Figure 42 : The now abandoned Sydney Railway Station from the 1920s. This is a site that is of local heritage significance for its built form and as part of the larger NSW Railway system but is a key if small part of National values as it represents the connection of Broken Hill to NSW after the long delay with the Silverton Tramway dominating transport routes from Broken Hill to Adelaide. The history and remaining evidence of early railway connections is of National significance as it reflects National interests and struggles across then colonies and later States.



Reference: Henshaw

Figure 43 : Detail of tramway layout within the city of Broken Hill showing branches to the various mines and the vacuum oil siding. The depot and Railwaytown station are on the left of the diagram. Illustration from *Rails to Wealth* - Lew Roberts

6.5.2 Sites Related to Water

Water has been perhaps the most important element of life in Broken Hill since the Line of Lode was discovered. The scarcity of water over the whole 140 year life of the town has been a defining and constraining element. Other aspects of water management - sewage and drainage - are less significant on a National level as all remote locations have to address these issues and there is nothing related to this at Broken Hill that is unique.

However, the supply of water for such a large town - that grew so quickly - was an issue that at times threatened the viability of mining and the survival of the town. The history of water supply in the City is one of ineptitude, government obfuscation, grand schemes and the 'tyranny of distance'. Broken Hill suffered from being too close to Adelaide but in NSW which created political difficulties as funding needed to be found in Sydney and as the mining profits from the town moved to Adelaide and Melbourne there was little interest in supporting services that would create little or no return to the NSW Government.

The slowness of the rail connection to Sydney and the failure of the NSW Government to address water supply exemplify the problems of State and Commonwealth politics that remain today (as seen in the management of the Murray Darling river system). The history of water supply from 1884 to today is bound up in National (and State) issues and politics. The creation of a State boundary so close to Broken Hill that placed the town 500km from Adelaide and 1200 km from Sydney created an administrative impossibility that is seen in the history of water (and transport). The remaining elements of early water schemes, reservoirs, etc., are the tangible evidence of this and are of National significance.

Many of the items related to water are outside the city boundaries and outside the National heritage listing. However, historically, city boundaries were not that important as projects to provide access and water extended well beyond those boundaries and were managed by Broken Hill. Stephens Creek Reservoir, the Menindee rising main pipeline and pumping system and Umberumberka Creek Reservoir and pipeline are all key elements of the history of water in Broken Hill that are beyond the listing boundaries but should be at least referenced in relation to National heritage values.

The whole of the water supply system is an integral part of National heritage values and demonstrates the complexity of mining in a remote and arid location and the physical and political inter-relationships that affect how remote communities function. While the National heritage listing is for the City of Broken Hill, it cannot be easily separated from the influences that are part of that National value.



Figure 44 : Water Board Building in Blende Street



Figure 45 : Early concrete water tank above Block 10 mine site.

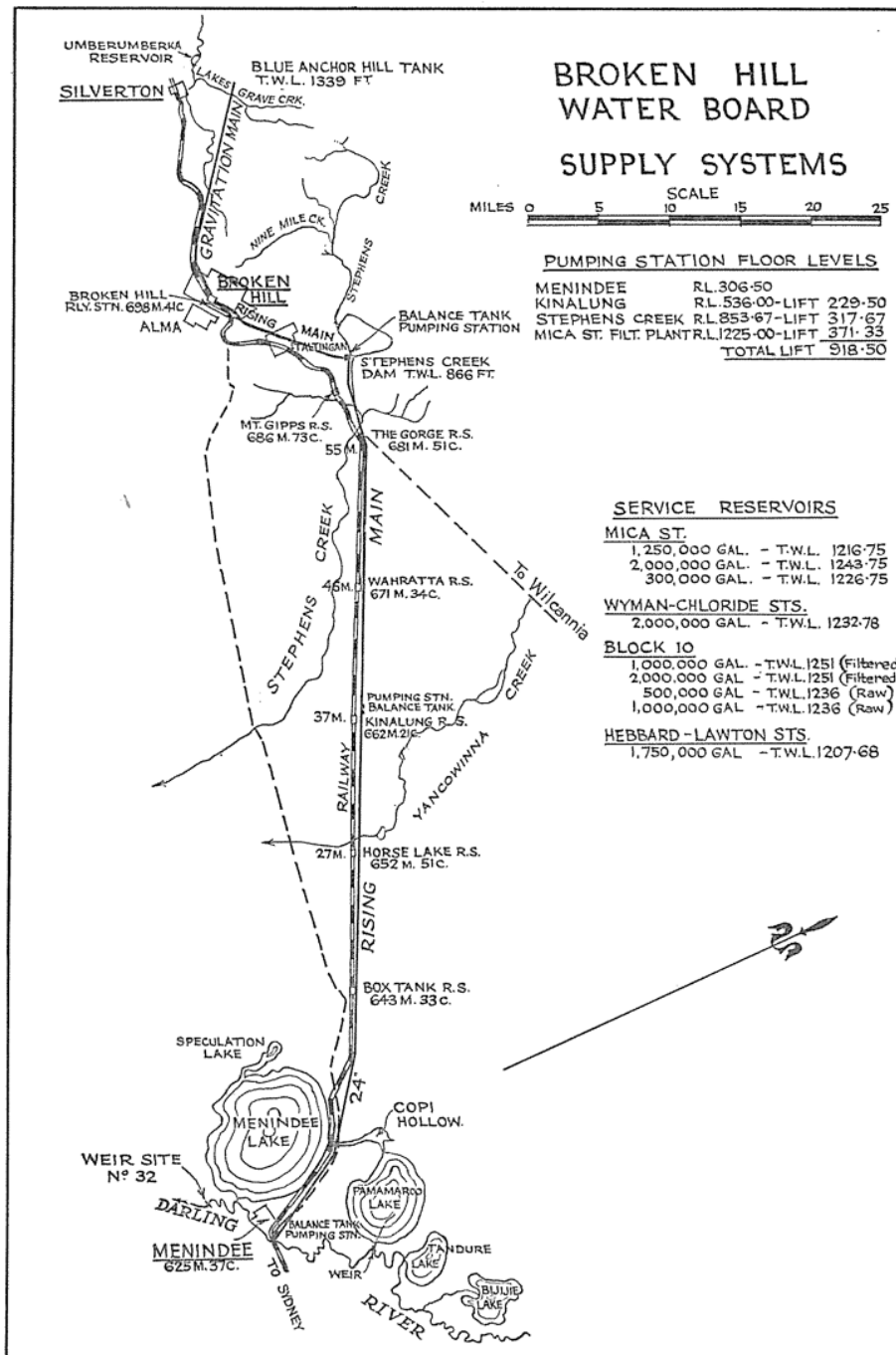


Figure 46 : Map of the Water Board Supply system 1968. The water supply system of Broken Hill was a complex and extensive system drawing water from Menindee Lakes and Umberumberka Reservoir at Silverton with the system of pump stations, pipe lines, holding reservoirs and tanks. Water Carts to Pipelines – The History of the Broken Hill Water Supply 1968 page 94.

6.6 Religious Sites

Broken Hill has had a large number of religious sites, with some buildings now demolished and a number of them repurposed as they have become unused. Within the scope of religious sites are churches, mosques, synagogues, residences, halls, etc.

Church buildings in rural centres and remote areas have been a core part of community life and largely have local significance. Religious sites that have significance beyond a local level are usually recognised for their early date of construction, their architectural excellence, their association with significant persons or events, or their rarity.

The religious buildings in Broken Hill, that have heritage significance fall into several groups:

- i. Church buildings and groups belonging to major Christian church groups or denominations: Catholic, Anglican, Baptist, Methodist, Presbyterian, etc.
- ii. Buildings of non-Christian faiths: mosque, synagogue, etc.

A number of historic religious buildings are heritage listed but not all. The Catholic Cathedral (once parish church) is on the State Heritage Register with several related buildings, as is the Main Uniting Church, and other sites are on the LEP heritage schedule. Both the former Mosque and former Synagogue are also on the State Heritage Register.

Of the Christian buildings, the most interesting group are the large number of Methodist churches (most repurposed and some now operating as Uniting Churches) in the City, as they represent the background and social life of the early community that predominantly comprised miners and associated working class areas. The 7 early churches in this group are a very clear representation of a unique social value that relates to the National heritage values of the city in relation to mining, immigration, and local community life.

However, individually they are a modest group of structures not all of which have, to date, attracted local heritage listing.

The mosque and synagogue are places of National significance in part due to their rarity but also in relation to their representation of the broad migrant base of the City that existed from its earliest development. Both sites are now used as museums. They represent National values through rarity and their ability to demonstrate the extraordinary mix of social groups within such a remote location.

It is the collective value of the range of religious buildings that is of particular National significance.



Figure 47 : Thomas Street Methodist Church building. Closed for many years and having had a range of uses the building forms part of a small local group of shops and church buildings but is at the point of collapse and is not recoverable. Many of the more minor church buildings have been lost.



Figure 48 : Interior of former Mosque prior to conservation works in 2019.



Figure 49 : Former Synagogue, now used as a museum.

6.7 Associations, Lodges, Societies and Orders Sites

Broken Hill was the centre of a very large number of Associations, Lodges, Societies and Orders that were linked principally to the Union movement. They provided social facilities and activities, education, welfare and support to workers and their families. There is relatively little remaining evidence of most of these organisations as they either did not have permanent premises or those sites are long gone as over time the government assumed more responsibility for welfare.

There were more than 40 organisations around 1900 but the only physical sites that remain relate to the larger and longer established groups such as the Masonic Lodge and the Order of Oddfellows.

The City also had numerous clubs related to sport and social clubs including the Barrier Social Democratic Club and the Workingmans Club.

There are several buildings remaining that demonstrate a significant aspect of the industrial social history of the City. They include the Masonic Lodge in Oxide Street and the GUOOF Memorial Hall in Blende Street. Both of these buildings were built in the later part of the twentieth century and as such represent the longevity of the more major associations and the impact they have had on the mining history of the City.

Band buildings were another feature of the town. Several remain, although their use has changed over time. The earliest remaining building is the Amalgamated Miners' Association band hall in Blende Street.

These buildings have an important role in defining National heritage values.



Figure 50 : The GUOOF Memorial Hall in Blende Street. This building from the 1960 period is a fine modernist building in its own right and demonstrates the lasting impact of Union welfare and support for mining and railway families in the City.

6.8 Education Sites

Broken Hill has a number of primary and secondary schools (public and church based), two TAFE campuses, and the School of the Air as educational sites. While a number of the buildings are locally heritage significant, apart from the School of the Air, the sites do not have significance beyond a local level or as part of the collective of educational buildings across the State.

The education buildings generally reflect the Sydney or NSW architectural tradition where other buildings reflect a South Australian design idiom.

The main TAFE campus in the centre of the City in Argent Street forms part of the core group of civic buildings and as part of that group demonstrates National values. This is particularly related to its architectural form as part of the main civic group rather than its use.

While some of the school sites and buildings are heritage listed, others that appear to have significance, are not. Additional school sites are being considered for local heritage listing but that does not affect National heritage values.



Figure 51 : One of the early buildings at Bourke Ward School in Railway Town. Most of the school sites contain a fine range of early buildings as well as later additions. As an overall group of buildings they are likely to have State level heritage significance for the range of buildings, styles and forms and for the extent of the collection of buildings in a remote location, but none of the buildings are of individual National significance.

The School of the Air is the exception as it is significant, not for the design of its buildings, but for the unique service that it has provided in education to central Australia. Established in 1956, the almost makeshift nature of the place informs its significance and relates to the resilience of remote life in Central Australia. Its reach into remote areas, including South Australia and Queensland, established its National value to remote Australia. The school also aligns with the remoteness of Broken Hill.

It appears to be the only educational site that has specific National heritage value in the City.

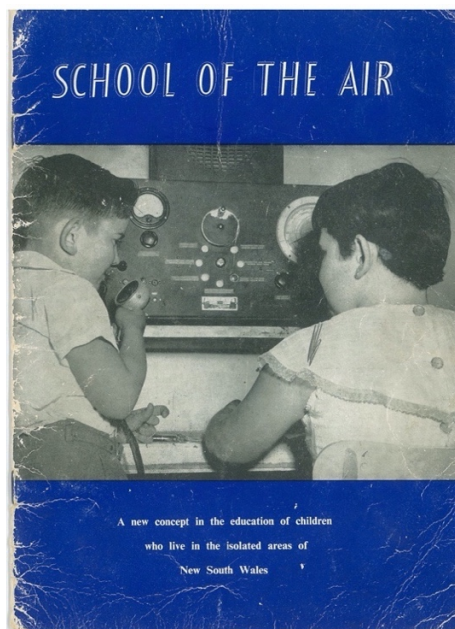


Figure 52 : Brochure cover produced in the early years of the School of the Air. VCN Blight Govt Printer.

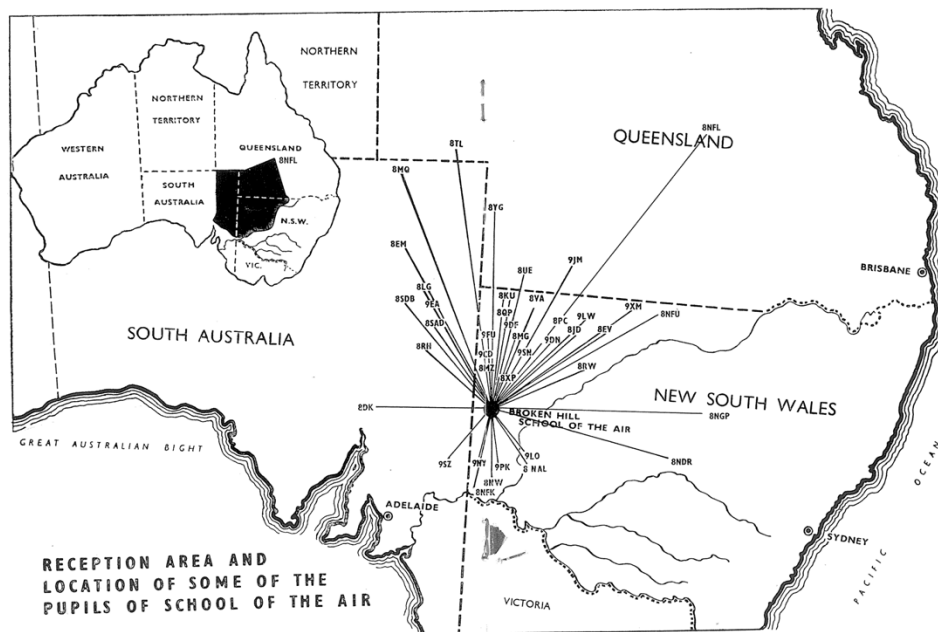


Figure 53 : Map from the brochure above showing the reach of the school into NSW, South Australian and Queensland. VCN Blight Govt Printer.

6.9 Government Sites

The State Government presence in the City was seen principally through education, management of mining leases, transport, police and justice. Initially many facilities were locally supplied - railways, water supply, hospitals, etc. - with government involvement arising after facilities were already in place. Education is discussed separately with the main government built elements of the City being the police station, post office, fire station and the gaol. These are fine buildings, all undoubtedly of State level heritage significance.

The smaller ancillary government buildings in north and South Broken Hill and Railwaytown (post offices, police stations, fire stations), of more modest scale and design, are all locally significant structures.

Individually there are no government buildings of National level significance in the City. However, the main civic group in Argent Street of Post Office, Police Station, TAFE, Town Hall (not a government building) and Courthouse, as a group are exceptionally fine and are important in the National heritage value of the City. The loss or diminution of, or significant change to these buildings and sites could result in an impact on National heritage values to the City.

Later government buildings in the City include the newer hospital buildings, railway stations and the government office building from the 1980s in Blende Street. They have varying levels of heritage significance but are not of individual National significance.



Figure 54 : Early photograph of civic group in Argent Street with a steam tram in the foreground. the scale, design materiality and siting of the civic buildings demonstrates a town of significance and is a statement about the importance of mining and the desire to establish permanence. BHP archives.



Figure 55 : Post Office Building in Argent Street.

6.9.1 Sites Related to Power Generation

There are several former power stations within the City. Power stations were developed to support mining - which had an intense power requirement – railway workshops and the township more generally.

Other towns in remote areas would have had local power stations or generation. Apart from the connection to mining that required significant amounts of power on a constant basis, power generation would appear not to have a particular National heritage value that would not be seen in other remote towns or mining settlements.

The remnant power stations, now that grid power is available, have been re-purposed. One located on Galea Street (related to the Silverton Tramway) is now a hardware store and one in south Broken Hill has been used for film studios and is in private ownership. They are local heritage items which is appropriate.

There is in summary a connection between the scale of power generation and mining that forms part of the heritage significance of the mines but there are no specific National values in the remnant elements.



Figure 56 : Former Mine Power station in south Broken Hill, more recently used for film studio use.



Figure 57 : Former Tramway power station in Galena Street.

6.9.2 Council and Government Owned Sites that are not Civic or Community Sites such as Tips, Workshops, etc.

There are range of service sites such as depots and tips that are the functional aspect of the City. They are typical of the infrastructure found in most country towns and do not have specific heritage values. None appear to have specific heritage value even at a local level. They do not contribute to National Heritage values.

6.9.3 Civic and Community Sites

Most civic and community sites, outside church facilities, are either operated by the Council or by the mining companies or union based organisations. This reflects the strong and long-term relationship (not always amicable) between the mining companies and the unions. There are relatively few facilities outside those operated by either council or the mining companies that require detailed consideration and these facilities, while part of the overall fabric of the National listing, do not have specific National heritage value.

6.9.4 Recreation Sites

Recreation sites in remote or rural communities are not inherently rare, nor are they likely to attract National significance. Communities and councils providing facilities such as ovals, grandstands, racecourses, bowling greens, tennis courts, etc. may be of local significance, or if the place has a specific value may be of State significance but not individually of National significance. In Broken Hill, while a number of parks are locally heritage listed and several ovals and associated structures are listed as part of a precinct or within mining sites on the LEP, there are almost no specific recreation sites that are heritage listed at any level.

Broken Hill is of particular interest in relation to sports and recreation facilities due to its extreme remoteness, the difficulty for many years in travelling for most of the population, and the size of the community. With a population between 20,000 and 30,000 people for a large part of its history combined with the isolation, there was a need for extensive recreation infrastructure. Many of the

facilities were provided by the mines and unions as well as by Council and many of the sites are located on mining lease land. Not all the recreation facilities survive but a significant number do.

There is particular significance in the relationship of recreation sites and mines that forms part of the National significance of the City. There is also a theme through many sites of facilities and features being built either in mining workshops or using material from the mines. This creates a bespoke set of facilities that include buildings, signs, fences, lights, landscaping, etc. built locally without the influence of available standard elements.

An example that illustrates all of these features is Zinc Oval, a site that is heritage listed in the LEP. The site is on a mining lease, was available for public use, and provided a high standard of facilities (still used but now deteriorated) that included:

- i. An oval and a smaller playing field;
- ii. A grandstand, bespoke design;
- iii. A velodrome;
- iv. Decorative landscaping;
- v. Amenities buildings;
- vi. Bespoke light standards, bollards, and fencing;
- vii. An entry drive and memorial gates.

The facilities were built and maintained by the mine and at their peak were an impressive array of elements.

Other facilities located on mining sites were bowling greens and tennis courts.

More broadly the recreation facilities of the township included:

- i. Golf course - South Broken Hill
- ii. Rifle ranges
 - North Broken Hill
 - South Broken Hill
- iii. Racecourse
- iv. Drive-in theatre - no longer in use
- v. Ovals and playing fields (some on reclaimed mining sites)
 - O'Neill Sports Ground
 - Jubilee Oval
 - Picton Sportsground
 - Excelsior Oval - no longer used
 - Hillside Sports Ground
 - Alma Oval
 - Lamb Oval
 - Zinc Oval
- vi. Trotting track (Memorial oval and track)
- vii. Swimming pools
 - Sturt Park – removed
 - North Broken Hill
 - South Broken Hill – removed

viii. Bowling Greens

- Pasminco South Broken Hill
- Proprietary Square

ix. Boule

- South Broken Hill - no longer in use

Recreation facilities also include activities such as local bands and their band halls, of which there were a significant number, and associations such as the Masons, Druids, and Oddfellows who had clubrooms and halls as discussed earlier.

It is not unusual for rural towns to have these facilities, however Broken Hill had extensive facilities that arose from the large mining and railway workforce, which resulted in a concentration of facilities that is not often seen in remote locations.

Some of the facilities have particular heritage value beyond local significance, such as the sites located on mining leases, but the collective value of the sites in relation to National heritage significance is high.



Figure 58 : Grandstand at Zinc Oval, a bespoke structure built on a mining lease by a mining company. Note the seats and railings also built from mine material.



Figure 59 : The velodrome and seating at Zinc Oval.

6.10 Environmental Sites

The environment of Broken Hill is severe and the survival of the town and its population has presented challenges since the first mine was established. The lack of water and the desert extremes with the sudden influx of people placing strains on what local resources existed saw the environment around the city change. This is common in early mining sites.

The work around greening Broken Hill, seen in the establishment of regeneration areas and the extensive programs of planting street trees, along with the creation of public parks and recreation facilities, demonstrates approaches to the environment that were innovative and had a profound impact on the character and quality of the city. They are aspects of National significance that are set out in the listing citation.

The initial planning for the township included large central parks and reserves that were quickly planted and laid out for public recreation and use. Bandstands, paths, lawns and gardens were established over time and as water allowed, Broken Hill was established as a desirable and successful town. These works did take time to establish but as the cover photo illustrates, despite water shortages, considerable effort went into creating sites that marked Broken Hill as a town of substance and permanence - in contrast to the many smaller mining settlements, including Silverton, that were subsumed by the surrounding desert environment once mining failed.

The Town Council also engaged in extensive tree planting in public streets with an early history³¹ noting that by 1908 more than 6,000 trees had been planted along streets. While these were not mapped or identified, many can be seen throughout the City now as well as later tree plantings.

³¹ 1908 History Curtis

There are a wide range of street plantings in the City reflecting changing policies and approaches over time to how to add trees into the City. More recent plantings are generally smaller trees and bushes, presumably not to conflict with power lines. While all plantings have an environmental value to the city that is high, not all trees have heritage value in relation to National values.

There are several major types of plantings that are now seen as mature tree avenues that are of particular value as they either date from early periods of planting or continue patterns of planting using the same species. They reflect early decisions to green the City and form part of the '6,000' tree plantings referenced in the 1908 town history.

The major avenues of street plantings that are an essential part of the National heritage values of the City contain:

- River Red Gums - Eucalypt Camaldulensis;
- Pepper Trees - Schinus Molle; and
- Monterey Pines - Pinus Radiata

Individual trees (not as avenues) were also planted such as Figs.

Later street plantings that are also significant include:

- Canary Island Date Palms - Phoenix Canariensis;
- Bauhinia - Butterfly Tree;
- Tree in a Hurry - Virgilia; and
- Various other eucalypts.

Some of this later group have been used as replacement plantings in some areas or to continue earlier avenue plantings.

The groups of River Red Gums, Pepper trees and Pines are a core character element of the City streets that reflect very significant historical patterns of managing the landscape. There would appear to be no doubt that every tree in this group is of National significance for their collective value and that any removal or loss of trees has a direct impact on the national heritage values of the City.

The entry roads into the City are also planted with rows of eucalypts either in single rows or in places with up to three rows. These are intentional cultural plantings to 'present' the City as a desirable and cultural place for visitors and are an important element of the City's civic form.

6.10.1 Development Control Plan 2016

The Broken Hill DCP sets out objectives, guidelines and controls in relation to trees in recognition of the importance of trees to the City. The two stated objectives are:

- To promote the safety and beautification of streets, parks and reserves
- To maintain and protect trees and shrubs on public land

These are reasonable objectives but do not address the heritage value of the National heritage value of specific groups and avenues of trees. The objective to protect public trees is very sound and is all encompassing however, the historic role of street trees (in particular) is not set out and the guidelines and controls allow significant trees to be removed.

The controls for trees on public land are very important to National heritage values and the DCP requires strengthening and greater finesse in relation to the significant avenues of trees and their protection. The DCP guidelines correctly look to maintain street integrity and unity which reinforces the importance of infilling existing avenues with trees of the same species and the intent to continue to plant, where that is considered appropriate, using historically tested and suitable trees that enhance and reinforce the character of streets that was established early in the life of the city.

Controls that allow the removal of trees where they impact services require rethinking as in the life of the City trees are far more significant than service infrastructure and a sound hierarchy of considerations is required if National values are to be protected.

A sound overall strategy is that no trees that have been identified and mapped as significant should be removed or damaged unless there are exceptional circumstances.

Council should also develop a clear policy on replacement of trees in existing planted avenues (where they have been lost) to reinstate major avenue plantings and to ensure that matching species are used.

It is observed that there is no material in the DCP that looks at the role of avenue plantings in HCA's. A number of HCA streets have avenue plantings of great significance that are not noted or protected apart from general tree controls. If character statements for the HCA's are developed they can identify where street plantings (and other trees) are important to the character of the HCA and how they may be addressed.

Specific issues related to trees and the DCP are discussed below.

6.10.2 Management of Trees in relation to National Heritage Values

The management of trees raises a number of matters that are important to discuss as there has been erosion of avenue plantings across the City over time that has resulted in a loss of National values. These are:

i loss of individual trees

There are a considerable number of 'missing trees' in avenue plantings due to natural loss or other reasons for removal. Where avenues of significant trees exist, it is critical that all remaining trees are retained and managed to ensure their health. If a tree has to be removed due to its poor condition it should be replaced with the same species as soon as possible and maintained to ensure it reaches maturity.

Where trees are missing from avenue plantings, they should be reinstated with a matching species to reinstate the avenue.

As a policy this would ensure the retention of National heritage values.

ii removal of trees due to perceived danger

It is very rare for the need to remove a tree due to danger. Various alternatives can be adopted including pruning and better tree management so that almost no trees should be removed. Given the age and size of many of the avenue plantings, replacement trees could take many decades to approach maturity with the consequent loss of heritage and environmental values to the City at local and National levels.

It could be argued that removal of significant trees (as defined here) is directly in contravention of the National Biodiversity Act requirements.

It is also critical for Council (as the owner of street trees) to maintain them to a high standard to reflect both their National value and their environmental value to the future of the City.

iii removal of trees for development or at the request of adjacent property owners

No avenue planting should be removed for development. A constraint on development is the need to retain trees and work with them in planning for development. This is consistent with almost every local council policy in NSW on trees.

There are a number of heritage values related to street trees (or trees planted in road reserves generally):

- i. the historic value of early intentional plantings in a deliberate plan to transform the desert environment into a townscape;
- ii. the aesthetic value of street trees again within an otherwise harsh environment;
- iii. the pattern of using rows of trees that the early plantings established that has been followed by other plantings as evidenced in a number of locations including the entry roads to the City;
- iv. the physical effort required to grow trees with shortages of water and the high needs of maintenance; and
- v. the evidence of early environmental intent that is rarely seen in early mining towns.

iv selection of tree species

There is excellent historical precedent demonstrating which tree plantings have been successful within the City. There are also high environmental values in relation to both the intentional planting of trees and in the trees that have survived across the City over time.

The various areas of street plantings also demonstrate different approaches to layout with both introduced and endemic trees used. There are avenues of pines, peppercorns, date palms (only a few examples) that will relate to specific periods of planting and cultural expression and also various eucalypt avenues, some of which are now very mature and which appear to relate to the earlier planting programs.

The following mapping and photographs locate significant avenue of street plantings. The mapping does not locate each tree type or specific location but indicates blocks and sides of streets that have rows of trees that represent this value. The various avenues also vary in maturity, condition and intactness, while it may be argued that the more intact avenues have greater significance, National values go more to the intent of creating civic and environmental improvement in a very hostile environment that is found in all extant examples.

The maps are also indicative in that they do not extend to the edges of the Council area. There are significant avenue plantings along the Silver City Highway and the Barrier Highway (north and south approaches to the City, and on parts of the Silverton Road.

The mapping below also illustrates that while there is some overlap between heritage conservation areas and locations of street trees that most of the significant avenue plantings are outside heritage precincts so that they do not have any statutory heritage protection.

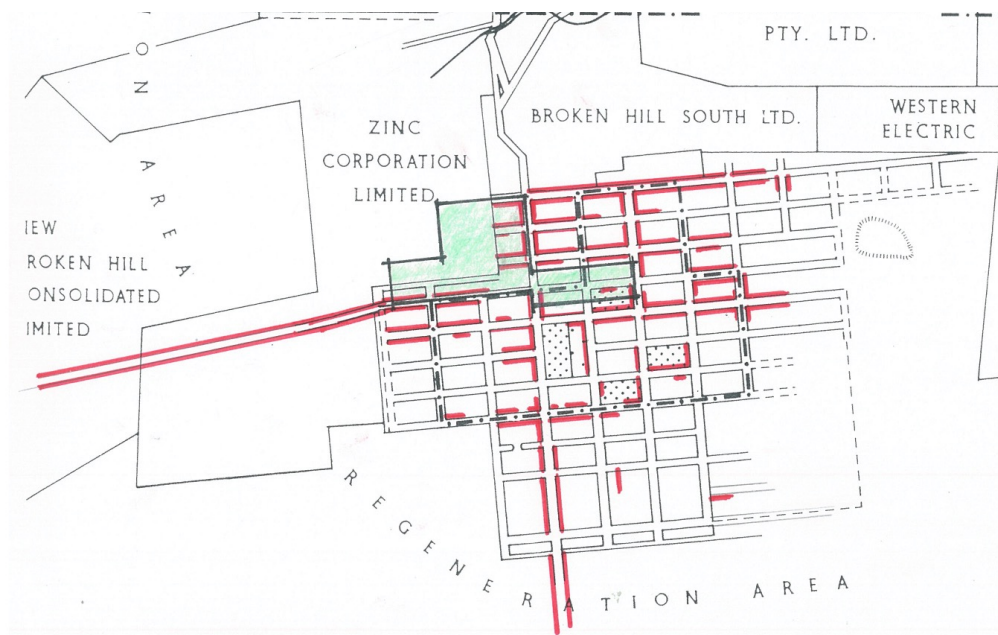


Figure 60 : Map of significant street trees in south Broken Hill. Heritage Conservation areas are shaded green. Map overlaid on 1950 period city map.

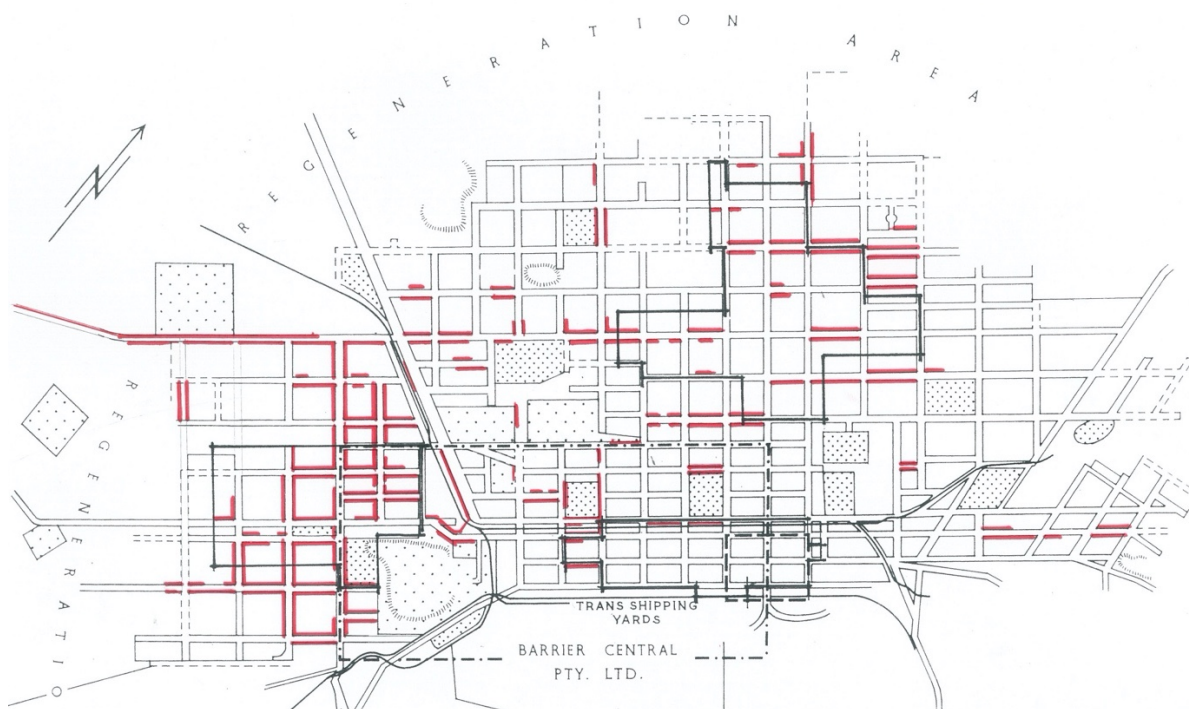


Figure 61 : Map of significant street trees in Broken Hill and Railwaytown. Heritage Conservation areas are outlined in black. Map overlaid on 1950 period city map.



Figure 62 : Tree plantings along the Wentworth Road, in places two and three rows deep that mark the entry to the City. All of the major entry roads have avenue plantings, mostly of eucalypts.



Figure 63 : An avenue of Pines in South Broken Hill.



Figure 64 : An avenue of River Red Gums in South Broken Hill.



Figure 65 : An avenue of River Red Gums that have been cut back for power lines.



Figure 66 : A slightly less intact row of eucalypts.

Parks and Reserves

The current heritage listings of environmental/park/reserve sites are set out below. There are also three individual trees included as heritage items in the LEP that are not considered as they are very specific and do not affect National heritage values. Broken Hill Council manages other small reserves and parks but they are not heritage listed and while they contain some tree plantings are not managed for their cultural or landscape values in the way that the major parks are.

Table 34 : LEP Landscape and Environmental Sites

Location	LEP No	Item type
Council managed sites		
Patton St Park	108	South Broken Hill Park and bandstand
Queen Elizabeth Park	114	North Broken Hill Park and bandstand
Sturt Park	208	Central Broken Hill Park and bandstand
AJ Keast Park	01	Railwaytown Park and bandstand
White Rocks Reserve	233	Reserve on site of historic event. (This is a natural site without introduced plantings)
Mining Sites		
Albert Morris Park (Zinc Lakes)	345	Former lakes made into recreation area within the south mine lease
Avenue of Honour	348	Entry driveway with plantings south mine
Native Plantation Site South Mine	357	Located adjacent to the zinc lakes
Orchard Site	376	Within south mine lease



Figure 67 : The bandstand in Queen Elizabeth Park, a remnant element of the social life of the town. Bandstands were located in each of the four major parks and while many country towns have bandstands the number of structures that were built and remain in Broken Hill are an indication of National values that relate to the way the community developed localised activities.

LEP Environmental Protection

The current LEP heritage listings do not include most of the regeneration areas.

The Broken Hill LEP has, however established a large area around the edges of the city zoned as 'Environmental Protection' (Zone E2). This includes in part some of the Albert Morris regeneration areas, but as a historic element they are not addressed in any heritage schedules or zoning. The areas of E2 are indicated in figure 70.

The LEP objectives for this zone are:

Zone E2 - Environmental Conservation

1 Objectives of zone

- To protect, manage and restore areas of high ecological, scientific, cultural or aesthetic values.
- To prevent development that could destroy, damage or otherwise have an adverse effect on those values.
- To promote the preservation, conservation and enhancement of major landscape features and native fauna and flora in Broken Hill.

There is a clear intent to protect cultural as well as natural values, and while the LEP provision is not explicit, the cultural values can reasonably be, in part, attributed to the Albert Morris regeneration areas where they are included within the zone. However, these areas have a greater value in the history of Broken Hill than is addressed in the zoning. This is recognised in the National Statement of Significance and these areas form a central part of the National listing.

Regeneration - Greening the Hill

Remediation of mining and industrial sites is now a common activity around the world, but the work undertaken particularly around the 1930s to revegetate the edges of the City that interfaced with the desert has had implications for many other sites who have adopted methodologies developed at Broken Hill. The work in particular of Albert Morris, but also others, in developing techniques for revegetation are set out as a key theme of the National listing and have had a profound impact on the City.³²

Earlier heritage studies (for Council) identified both the regeneration areas around the southern edge of the city, and many of the street tree plantings that were established, some at the same time and some earlier, as significant heritage aspects of the city. However, none of these sites have been included on heritage schedules even though nominated. Interestingly, the regeneration areas were included on the National Trust of Australia (NSW) heritage register where there are relatively few other Broken Hill sites on that register indicating the broad level of acknowledgment of the significance of trees and Morris' work..³³

The National values citation sets out one of the key National values of the city as the regeneration work undertaken by Albert Morris (and others). At present there is no direct recognition or protection of this value and there have been recent examples of the removal of vegetation planted as part of these programs which is a loss of National significance. The maps below set out the extent of the greening program and what remains of it today. It is also important to observe that due to the combined effects of drought and lack of maintenance that a large part of these areas is now largely devoid of plantings even though the areas remain with remnant fencing and signs.

In its broadest form, it would appear necessary to map and include on the LEP heritage schedule the following environmental heritage aspects of Broken Hill:

- i. All of the regeneration areas ;
- ii. All of the planned street tree avenues in the city;
- iii. All planned plantings within parks and reserves;
- iv. Willyama Common;
- v. Other identified discrete landscape areas that retain plantings and remnant vegetation.

³² The Greening of the Hill - Re-vegetation Around Broken Hill in the 1930s. Webber. This book provides an excellent history and explanation of the work of Morris and others and the impact it had on the environment of Broken Hill.

³³ The National Trust Register has not been addressed in any detail in this report as it has no statutory role and while across Australia the Trust have identified important heritage places that has led to their protection, they have not considered places in Broken Hill thematically or in relation to National values. It is noted that the National Trust Register predates the LEP, State and AHC lists and when first published in 1976, the Trust had 28 sites included but no mining sites or items.

This would allow both local and national heritage values in relation to regeneration to be protected and managed.



Figure 68 : A 1992 sign indicating the National Trust listing of the regeneration Areas. This is the only listing of these areas and it is non-statutory. The forlorn condition of the reserve is obvious.

Summary

It would appear on review that the Morris regeneration areas are also of State heritage significance and should be nominated for the State Heritage Register and that street trees are of local heritage significance and should be set out and mapped in the LEP.

In relation to National heritage values, the integrated collection of regeneration areas, site improvements on mine sites, council parks and gardens and civic tree plantings are significant and defining elements of Broken Hill and need to be part of the management of the Broken Hill environment.

The environmental setting of the city is also of significance. Edged by desert on all sides and devoid of consistent water, Broken Hill is part of a severe desert environment that is evident around and throughout the city. It is found on vacant land, around buildings, on the mining leasehold land that is not presently being mined, on Willyama Common, and on all of the Crown land that surrounds the city within the city boundaries. It is one of the core character elements of the city and there is constant evidence of the encroachment of the desert into the city. While the desert extends far beyond the city boundaries, the interface of city and desert is a consistent theme and presence that is one of the defining characters of the place.

This is recognised in the National heritage citation.

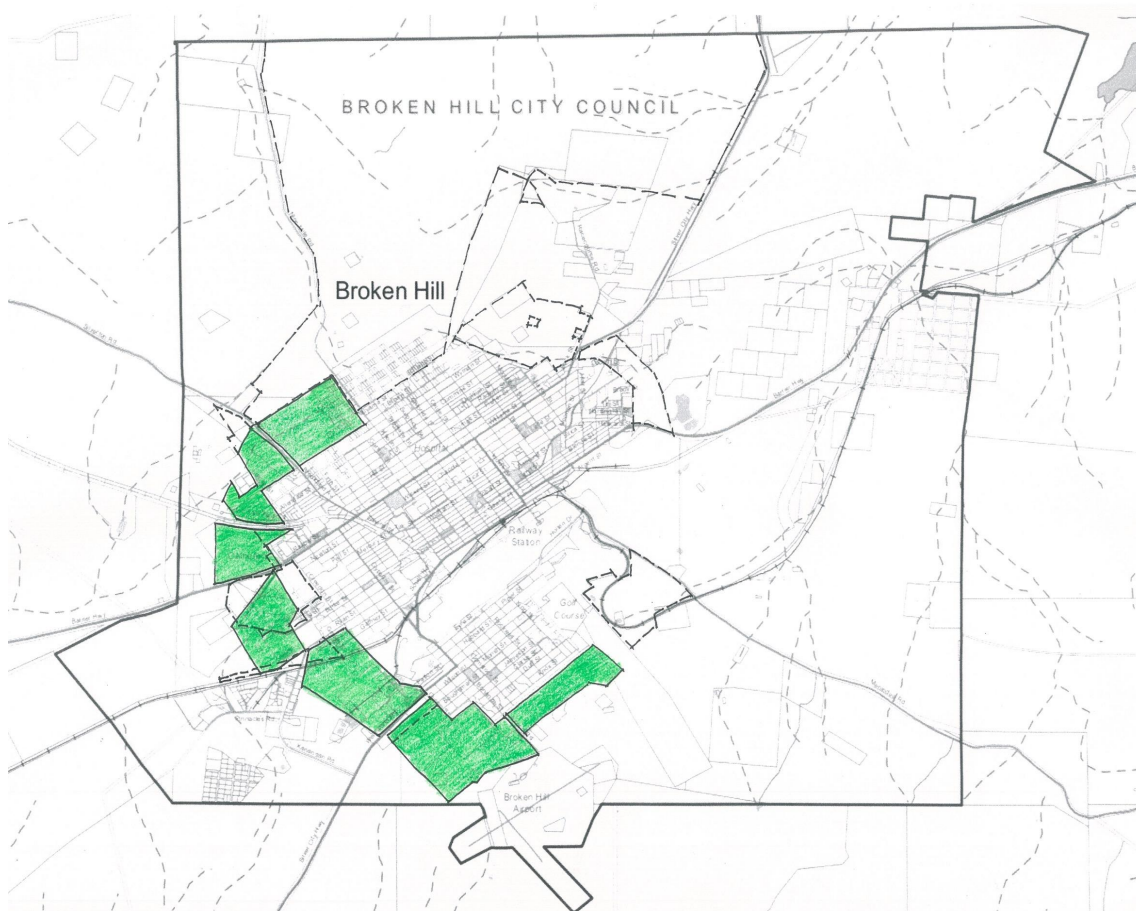


Figure 69 : The 1939 outline of Albert Morris regeneration areas overlaid on the National Heritage Listing map.

Green - Regeneration Areas

Heavy dotted lines - Boundaries of Environmental Conservation Zones within the LEP.

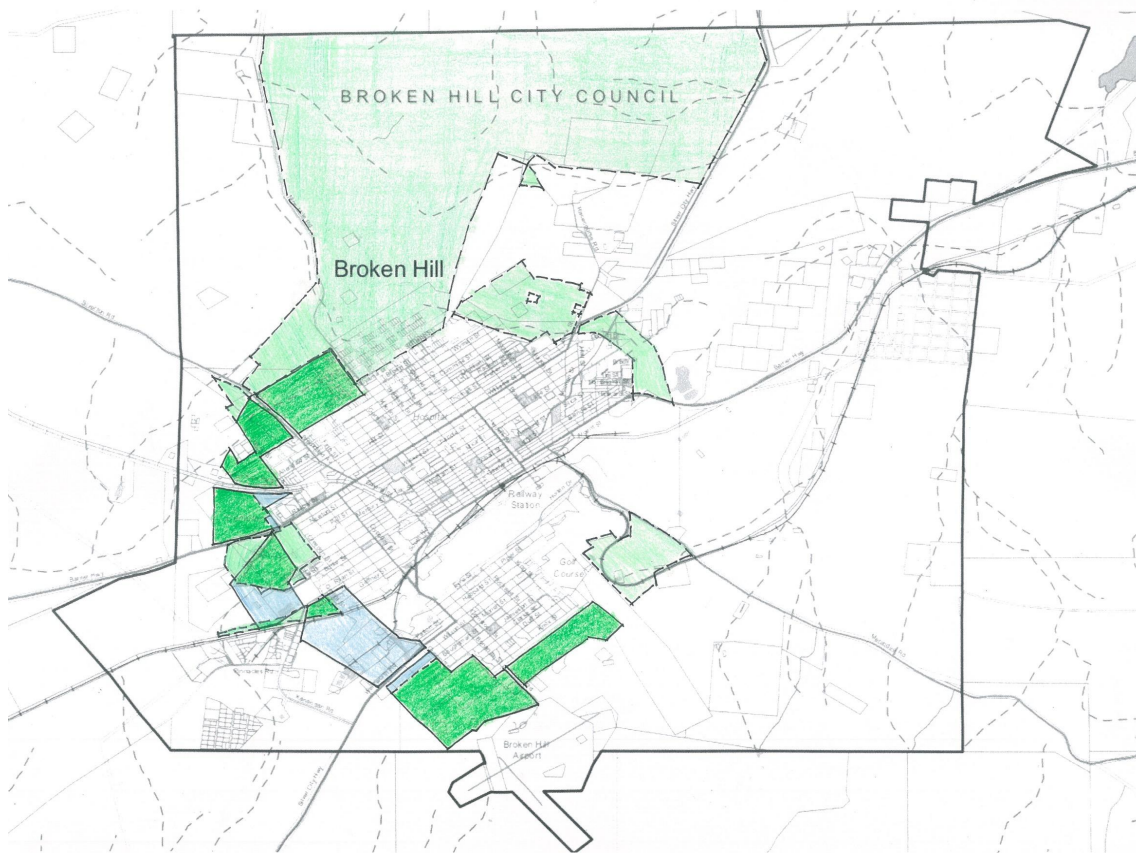


Figure 70 : The extant and removed 1939 Albert Morris regeneration areas with the more recent Environmental Protection Zone overlaid on the National Heritage Listing Map. The drawing does not show regeneration areas within the mine sites such as the Zinc Lake Park.

Green - Original regeneration Areas that are now zoned Environmental Protection

Blue - Former Regeneration Areas that are not part of the Environmental Protection Zone

Light Green - Environmental Protection Zone Areas outside the early regeneration areas

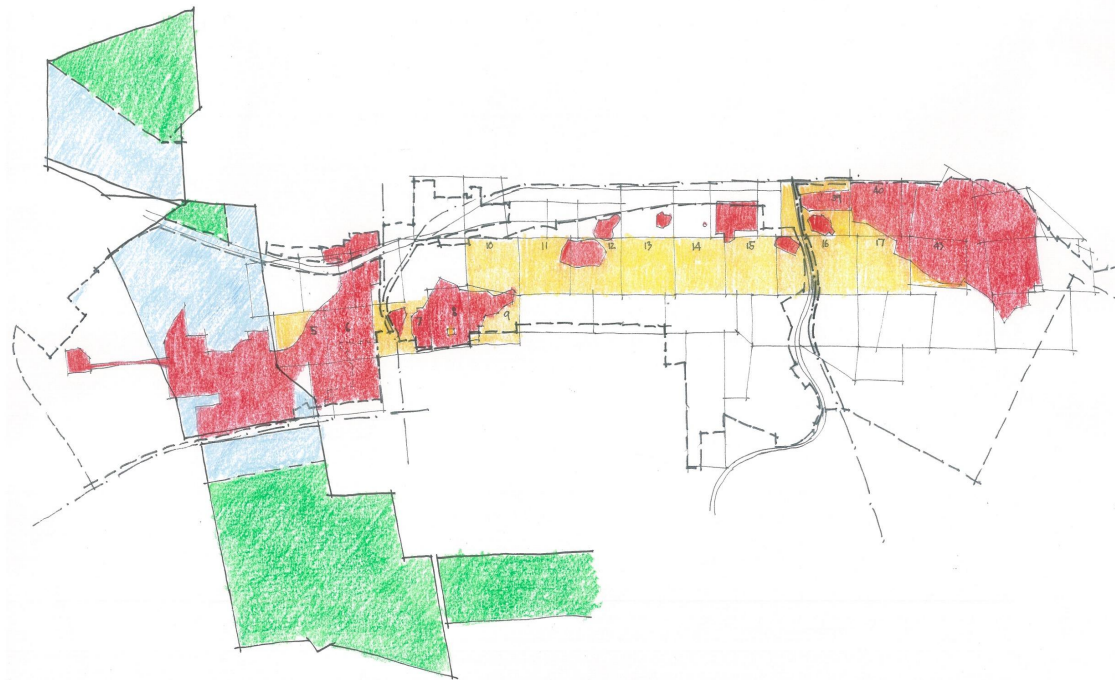


Figure 71 : A more detailed plan of the overlay of current mining operations and the original Morris regeneration areas.

Green - Original regeneration Areas that are now zoned Environmental Protection

Light Blue - Former Regeneration Areas that are not part of the Environmental Protection Zone

Light Green - Environmental Protection Zone Areas outside the early regeneration areas

Red - LEP Heritage Listings

Dotted Line - Outline of Mining Leases

7.0 SCHEDULE OF SPECIFIC PLACES THAT HAVE NATIONAL HERITAGE SIGNIFICANCE

Although a list of places in this study does not have any statutory basis, as part of establishing guidelines on how to manage national values, a schedule of key places in relation to National values can provide a 'first check-list' to consider whether a proposal or an application on a specific place may need to be assessed for significant impacts on National values. If a site is listed it would trigger a closer analysis of whether National values could be impacted by the proposal.

The future guideline documents provide ways in which to consider this but it is not reasonable or practical to have to apply guidelines to every application that may be made. A level of discernment is required for Council staff in particular to make assessments on when National values may be impacted.

It is noted that the schedule below is not limited to places that currently are found in heritage schedules, although most will be. The list informs the heritage study review also being undertaken by Council by identifying places and groups of places that should be assessed for their potential addition to the LEP heritage schedule. The list is also capable of change over time as research is undertaken and places are better understood.

Table 35 : Places of National Heritage Significance

	Place	Other listing references	Description
	SHI Items		
	All current SHI listings	various	While the relative value of the State listings is varied, they are gazetted for having State significance. Several appear below in other categories, those that do not include: <ul style="list-style-type: none"> - Kersten Mining Museum - Palace Hotel - St Joseph's Convent - BH Regional Gallery - Wesley church - White Rocks Reserve
	Mining and Unions		
	Line of Lode original leases		This is referenced in the many of the studies and the Register of the National Estate but has not become a listing at local or state level.
	Line of Lode all extant structures and built elements	LEP 236 - 418	Most elements are individually listed in the LEP but none are on the State Register. However, not all items are included and there are some exceptions that should be reviewed.

	Place	Other listing references	Description
	All Mine owned Housing	LEP 21 LEP 417	Proprietary Square British Flats
		LEP 361 LEP 336 LEP 315	North Mine Housing
		LEP 310	Junction Housing
		LEP 418 SHR	St Annes (former mine manager)
		LEP 410	Zinc Housing A
		LEP 390	Westside Drive Housing
		LEP 381	Rainbow Avenue Housing
		LEP 76	ZC- Bachelors Quarters
			A detailed review of all mine housing is needed to ensure that key buildings are included as there are a number of clear omissions in the current heritage schedules.
	BHP Chimney remains	LEP SHR	Remnant stone chimney on Line of Lode
	Trades Hall	LEP 121 SHR	
	Kintore Headframe	LEP 84	The structures but not the site as the infrastructure was relocated to a non-mining site,
	Regeneration and Greening		
	Regeneration Areas	-	As mapped initially in this report and in more detail in the heritage study review. All remaining areas related to the Morris regeneration should be included even if they are not active.
	Planned Street Tree Plantings	-	As mapped initially in this report and in more detail in the heritage study review. All remaining areas avenues of major trees should be included.
	Zinc Lakes	LEP 345	Albert Morris Park
			Orchard
	Major Parks	LEP 108	Patton Park
		LEP 208	Sturt Park

	Place	Other listing references	Description
		LEP 114	Queen Elizabeth II Park
	Government and Civic		
	Town Hall	LEP 220	Facade
	Post Office	LEP 28 SHR	
	Court House	LEP 46	
	Gaol	LEP 23	
	Cemetery	LEP 40	
	Religion		
	Mosque	LEP 91 SHI	
	Synagogue	LEP 30 SHI	
	Recreation		
	Band Halls	LEP 2	AMA Band Hall
	Other halls and facilities	LEP 58	There are several remaining halls representing early unionism and recreation including: - GUOOF hall
	Transport		
	Silverton Tramway Station	LEP 209 SHR	The collection at the museum is also of high significance. While the collections are not limited to railways, it is the largest collection of material related to the history of Broken Hill.
	Silverton Tramway former corridor, formation and remaining elements	LEP 192 LEP 194 Also unlisted sections	Small parts of the former reserve are listed but after closure and the sale of much of the land for shopping precincts and other development remnant sections remain. The alignment itself with the remnant elements as
			it extends through the city from end to end is an important historic feature.
	Silverton tramway Staff housing group	LEP 193 LEP 222	
	Broken Hill Railway Station	LEP 49	

	Place	Other listing references	Description
	Broken Hill old Railway Station	LEP	
	Water		
	Water pipeline	-	The pipeline largely exists outside the City area but along with Stephens Reservoir and pumping station and other sites is a critical piece of historical infrastructure in the history of the City. It is proposed that associated items outside the City boundary but built and managed by the City should be included as a separate set of entries to address how the City developed and managed it's resources.
	Residential		
	North Broken Hill	LEP Precinct	Broken Hill
	Broken Hill South	LEP Precinct	Broken Hill South
	Railwaytown	LEP Precinct	Railwaytown
	Individual houses		There are few individual listings and few are of State or National significance in their own right.
	Commercial		
	Argent Street group	Precinct	As mapped as a precinct.
	Hotels		
	Hotels	Many are heritage items	As mapped. The collective value of hotels is also very high to the City and impacts on any individual building need to be assessed. Major change or demolition for example would affect National values.
	Education		
	School of the Air	LEP	
	Other Schools	LEP (some)	As a group they represent broader than local values but individually they are not Nationally significant.

8.0 MANAGEMENT OF NATIONAL HERITAGE VALUES

This section looks at a model for managing National heritage values and when referrals should take place for works that have a significant impact on those values.

8.1 Discussion

The management of planning and heritage matters in Broken Hill largely takes place at the local council level. As discussed earlier, there are very few State listed heritage items and no ability for State level management outside those listings (except for inter-government referrals). There has been little clarity on when a National heritage value is affected to a point where a referral is required to the Department of Environment and also as noted, there have been no referrals since the National listing was gazetted.

Most applications or enquiries about work take place at local council level or are works undertaken by Broken Hill Council on sites they manage directly. Even where consents are not strictly required (by a government agency or department) there is usually a referral to Council for comment.

There is also no agency or group in a position to review proposals and applications generally against criteria or guidelines outside the local Council LEP and DCP heritage controls.

However, the Council, from a statutory perspective, is also limited in its ability to consider heritage issues and cannot move beyond the LEP provisions and schedules. Heritage considerations are only available if the place is a listed heritage item, within a heritage conservation area, or adjacent to a heritage place. This leaves most of Broken Hill, even though part of the National heritage listing, without any direct heritage protection or management.

Broken Hill Council has a long history of employing a heritage adviser, for establishing a heritage register and generally managing heritage within the LEP framework. From a statutory perspective, it is difficult for Council to consider impacts on places that are not heritage listed even though there are provisions to protect places through the Interim Conservation Order process³⁴.

At present, the heritage schedule in the LEP derives from the heritage studies undertaken in the 1980 and 1990s and the heritage review in 2007 where some additional places and precincts were established. These significant studies pre-dated the National listing and neither study, understandably, focussed on National heritage criteria. The current National Heritage Schedule did not exist when the studies were undertaken and the Register of the National Estate (as has been discussed earlier) was not a thematic or overall study of National heritage values in the council area even though it would have been considered in those early studies.

A viable method of managing National heritage values would appear to be through the Council assessment and approvals process. However, this would require a number of changes to be made,

³⁴ The Interim Heritage Order is an emergency provision to allow Council to protect a place (that has not been heritage listed) that may be threatened and where there is evidence that the place has potential to be of heritage significance. The intent of the orders is to give time (usually 6 months) for a considered assessment to be made and if a place is of heritage significance to proceed to a heritage listing or if it is not to remove the interim order.

protocols and guidelines to be developed, and advice to be available to ensure that the consideration of National values can be accommodated.

A reason that this approach could be viable is that, even though there is a difference between a local and National value, any place of National significance will inevitably also be of local significance. It is not mandatory, but generally LEP heritage listings include State and National listed places as they also have local value. For State listed places there is a mandatory referral process as part of a development application and a requirement for a separate approval; this does not apply to Nationally listed places but a referral is available to Council if they are able to assess where a significant impact may take place. If there is clarity about when a 'significant impact' on National Heritage values may occur, Council are able firstly to consider this in any assessment they may make of an application and then, if justified, undertake a referral to the Department of Environment.

The key element of this approach is that Broken Hill Council can, with an updated heritage schedule that relates to National heritage values and a better understanding of National heritage values, assess impacts on National values as part of their general heritage assessment. This would address most issues that arise with only major projects requiring referral.

For Broken Hill Council to manage National values in a way that does not result in significant additional assessment requirements a number of matters need to be established. In summary they are:

- i. Council adopts as a policy that National heritage values will be considered in assessing applications and providing advice generally to the local community;
- ii. National heritage values are included in a revised LEP heritage database so that specific key sites with National significance are identified and flagged;
- iii. The LEP heritage schedule is developed using National as well as State and local themes to ensure that National values are captured and balanced across the Council area;
- iv. Broad National heritage values, that is those that are not just site specific, are set out in guidelines that allow Council staff and the community to have access to what National values are and how they apply within Broken Hill;
- v. National significance assessment forms are developed to assist in setting out information when a National value needs to be assessed;
- vi. Thresholds for referral to the Federal Department are articulated to assist Council in making referrals. As the National heritage sites guidelines are complex and quite difficult to navigate (unless the proponent is a government agency who are familiar with these processes), simplifying the requirements in material that is published in the local community is critical to assist in understanding how National values are assessed;
- vii. A pre-referral system is developed to allow Council to seek advice from the Federal Department where a referral may be considered to obtain early advice. There are standard pre-referral processes, but it would be desirable to establish a direct point of contact between Council and the Department to seek less formal advice on matters that may arise;
- viii. Areas of future development or works that are known to be likely to involve a Federal referral be identified and, if required, specific protocols developed to address those issues (e.g. mine closures or major infrastructure projects).

This study is taking place at the same time that the LEP heritage schedule is being reviewed by Council. This is not accidental and the combined work of this study and the heritage study review allows National values to be used in the review process.

Each of the above eight areas is discussed in detail below.

8.1.1 Policy on Adopting National Heritage Values

Council adopts as a policy that National heritage values will be considered in assessing applications and providing advice generally to the local community.

For the process to be workable, Broken Hill City Council has to commit to considering National Heritage Values as part of the day-to-day management of heritage within the Council area.

Council has previously endorsed and supported the National heritage listing and has referenced National values in the DCP. The analysis and work set out in this study is the next step of that endorsement and support.

Council should formally endorse the finalised documents and commit to the assessment of National heritage values. With a Council policy in place that sets out that National heritage values as important, National values can form part of assessments of applications for work with a clear framework for Council staff to operate.

As the work is outside the usual LEP provisions, a Council policy will give the required status to the assessments.

8.1.2 Management of the LEP Heritage Schedule and Heritage Provisions

National heritage values are included in a revised LEP heritage database so that specific key sites with National significance are identified and flagged.

There are two aspects to managing the LEP provisions in regard to heritage generally and National Heritage Values in particular.

The LEP sets out standard heritage provisions that are common across NSW Councils. They have been developed so that there is consistency in the approach to issues such as heritage (and other planning matters), and so that there is a common understanding of how the provisions apply beyond each local council area.

It is difficult and effectively not possible to change the standard Scheme provisions. Each Council can develop specific provisions through a DCP process and it is possible to add to the DCP heritage provisions to address National Heritage values. This process is one controlled by Council which means it is more readily achievable than LEP changes.

However, given the national listing of the whole Council area, there is a strong argument to suggest that this be reflected in the LEP (2013) heritage objectives. This could be as simple as adding a further objective as seen below at subclause (e):

Clause 5.10 Heritage Conservation

Objectives

The objectives of this clause are as follows:

- a) to conserve the environmental heritage of Broken Hill,
- b) to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views,

- c) to conserve archaeological sites,
- d) to conserve Aboriginal objects and Aboriginal places of heritage significance.
- e) 'to conserve the National Heritage values of Broken Hill'

An amendment such as this would allow Council to formally consider National values that could then be set out either in a DCP or in other guidelines or advice documents.

The second aspect of managing the LEP is through Schedule 5 - Heritage Items.

The current heritage study review is using the National themes to inform new listings that may take place but also to include National themes in the data of existing listings where those places are of specific National significance.

A revised schedule will form the basis of future assessments and will include National, State and local values. This will assist owners in understanding if National values are likely to be affected on their properties and also provides a framework against which an application can be assessed as other similar places will be identifiable.

A key to understanding how various levels of significance interact is for searchable schedules to be set out that allow quick comparison.

A data field that identifies National heritage significance and National heritage themes will allow this to take place in searching the database on-line or during an assessment.

At its simplest, a field that simply identifies if a place has a specific National heritage value can be used, similarly to how places that are considered to have State significance can be flagged, even if not entered on the State Heritage Register.

The database would have a field that would note the level of significance of the place - local State or National - and the information within the listing, for places of National value, can expand on the reasons for inclusion.

8.1.3 National Heritage Themes

The LEP heritage schedule is developed using National as well as State and local themes to ensure that national values are captured and balanced across the Council area.

The LEP database is in two forms: information that Council holds; and the SHI online database that is the official information related to a place. In the last year the Broken Hill SHI database has been completed and is online. However, the information in the database is varied and often inadequate. Example 1 in Appendix A (12 houses at Junction circuit) provides no information as to why the places are significant, nor any history. A theme is given as mining and settlement and the date of listing is noted, but no information or illustrations are provided.

In contrast, Example 2 (Bells' Milk Bar in South Broken Hill) has a well-constructed data sheet with history, significance and illustrations sufficient to understand why the place is significant and potentially at what level it is significant.

Most listings fall into the category of little or no information.

While the standard database form does not provide fields for National themes or significance, this can be easily added, particularly if the themes to be used are set out in an explanatory document that links National State and local themes (often which overlap).

The nine National themes apply to Broken Hill at a broad level, and many of the State and local themes that are more detailed in their application also apply. However, not all themes are relevant to the city. The following table sets out the themes as provided by the NSW Heritage Council that start with National themes and then break them down into State and local themes.

Table 36 : National State and Local Themes

National Theme	State Theme	Local Themes	Examples of National Places
1 Tracing the natural evolution of Australia,	Environment - naturally evolved	(1) Features occurring naturally in the physical environment which have significance independent of human intervention	Line of Lode Regeneration areas Recovered Mining Areas Desert Setting
		(2) Features occurring naturally in the physical environment which have shaped or influenced human life and cultures.	Crown land and reserves around the city within the city boundary
2 Peopling Australia	Aboriginal cultures and interactions with other cultures	Activities associated with maintaining, developing, experiencing and remembering Aboriginal cultural identities and practises, past and present; with demonstrating distinctive ways of life; and with interactions demonstrating race relations.	Mining sites Union sites
Convict			
	Ethnic influences	Activities associated with common cultural traditions and peoples of shared descent, and with exchanges between such traditions and peoples.	Mosque Synagogue Methodist chapels Clubs Cemetery
	Migration	Activities and processes associated with the resettling of people from one place to another (international, interstate, intrastate) and the impacts of such movements	Housing

National Theme	State Theme	Local Themes	Examples of National Places
3 Developing local, regional and national economies	Agriculture	Activities relating to the cultivation and rearing of plant and animal species, usually for commercial purposes, can include aquaculture	Rural landscape Revegetation areas Shelterbelt
	Commerce	Activities relating to buying, selling and exchanging goods and services	Main Street Commercial buildings Civic buildings
	Communication	Activities relating to the creation and conveyance of information	Post office
	Environment - cultural landscape	Activities associated with the interactions between humans, human societies and the shaping of their physical surroundings	Desert setting of the city Mining Parks and gardens Tree plantings Revegetation areas
	Events	Activities and processes that mark the consequences of natural and cultural occurrences	Monuments BHP Chimney Trades Hall Line of Lode
Exploration			
Fishing			
Forestry			
	Health	Activities associated with preparing and providing medical assistance and/or promoting or maintaining the well being of humans	Hospital
	Industry	Activities associated with the manufacture, production and distribution of goods	Silverton Railway Industrial sites

National Theme	State Theme	Local Themes	Examples of National Places
	Mining	Activities associated with the identification, extraction, processing and distribution of mineral ores, precious stones and other such inorganic substances.	Line of Lode Evidence of mining leases Evidence of early mining features Mining buildings and site features related to individuals, technologies and processes Memorial sites and objects related to significant people
			Minerals Sites named after significant persons
	Pastoralism	Activities associated with the breeding, raising, processing and distribution of livestock for human use	Pastoral stations
	Science	Activities associated with systematic observations, experiments and processes for the explanation of observable phenomena	Mining research Revegetation areas
	Technology	Activities and processes associated with the knowledge or use of mechanical arts and applied sciences	Mining
	Transport	Activities associated with the moving of people and goods from one place to another, and systems for the provision of such movements	Railway stations and infrastructure Camels, mosque -

National Theme	State Theme	Local Themes	Examples of National Places
	Towns, suburbs and villages	Activities associated with creating, planning and managing urban functions, landscapes and lifestyles in towns, suburbs and villages	Layout of the city in response to the Line of Lode City form in response to Silverton Tramway alignment and reserve Interface of mining and city development Use of iconic materials Distinctive architecture of mining buildings Distinctive architecture of residential buildings Distinctive architecture of civic and commercial buildings Buildings that demonstrate the functioning and layout of the city and residential areas Street tree plantings Parks and recreation areas
			Cohesive form and scale of the city Views Art
4 Building settlements, towns and cities	Land tenure	Activities and processes for identifying forms of ownership and occupancy of land and water, both Aboriginal and non-Aboriginal	Line of Lode Regeneration areas City layout
	Utilities	Activities associated with the provision of services, especially on a communal basis	Water pipeline Water storage Power stations Drainage
	Accommodation	Activities associated with the provision of accommodation, and particular types of accommodation – does not include architectural styles – use the theme of Creative Endeavour for such activities.	Housing Mining housing Miners housing Relocated housing

National Theme	State Theme	Local Themes	Examples of National Places
5 Working	Labour	Activities associated with work practises and organised and unorganised labour	Union buildings Memorials
6 Educating	Education	Activities associated with teaching and learning by children and adults, formally and informally.	Schools TAFE School of the Air
7 Governing	Welfare	Activities and process associated with the provision of social services by the state or philanthropic organisations	
Defence			
	Government and administration	Activities associated with the governance of local areas, regions, the State and the nation, and the administration of public programs – includes both principled and corrupt activities.	Municipal chamber Council offices Departmental office
	Law and order	Activities associated with maintaining, promoting and implementing criminal and civil law and legal processes	Courthouse Police stations Lock-up Protest site Gaol complex Police housing
8 Developing Australia's cultural life	Domestic life	Activities associated with creating, maintaining, living in and working around houses and institutions.	Housing generally
	Creative endeavour	Activities associated with the production and performance of literary, artistic, architectural and other imaginative,	Theatres Cinema Bandstand Rotunda

National Theme	State Theme	Local Themes	Examples of National Places
		interpretive or inventive works; and/or associated with the production and expression of cultural phenomena; and/or environments that have inspired such creative activities .	Library Public hall
	Leisure	Activities associated with recreation and relaxation	Sports grounds Race track Swimming pool Recreation clubs
	Religion	Activities associated with particular systems of faith and worship	Church, monastery, convent, rectory, presbytery, manse, parsonage, hall, , graveyard, monument, church organ, synagogue, temple, mosque, , burial ground
	Social institutions	Activities and organisational arrangements for the provision of social activities	CWA Room, Masonic hall, School of Arts, Mechanic's Institute, museum, art gallery, RSL Club, public hall, historical society collection, public library
	Sport	Activities associated with organised recreational and health promotional activities	Oval, race course, swimming pool, bowling club, bowling green,
9 Marking the phases of life	Birth and Death	Activities associated with the initial stages of human life and the bearing of children, and with the final stages of human life and disposal of the dead.	Hospital Cemetery
	Persons	Activities of, and associations with, identifiable individuals, families and communal groups	A monument to an individual Named places and features

8.1.4 National Heritage Guidelines

Broad National heritage values, that is those that are not just site specific, are set out in guidelines that allow Council staff and the community to have access to what National values are and how they apply within Broken Hill.

The information and guidelines proposed are outlined at Appendix B. They vary from the material available that is published by the Department of Environment, as while that material is useful, it is principally aimed at government agencies and corporations who have processes in place and a familiarity with complex government processes. It is effectively not possible for an individual or even a local government agency to navigate the complexity of the processes set out in the Department material.

To be effective and to reach the constituency of Broken Hill (putting aside the major mining sites which will have a separate process that will include referrals) the process has to be relatively simple and easy to understand.

To illustrate the potential process several examples are cited. One is a theoretical application to construct a new dwelling within a conservation area and adjacent to significant buildings. The second looks at the current proposal to build a new library on the former town hall site in Argent Street. The third is to alter a significant existing building. The first is a small project and the second one of the larger non mining projects to be proposed in the City, the third example is incremental change to a place of significance.

Review Process for Potential Impact on National Significance and a Referral to the Federal Department

Example 1 New residence on a vacant site, potentially the site of an earlier building

Assumptions:

- it is not a heritage item;
- planning controls allow the development;
- the design is contemporary in character.

Process:

1. Check that the site does not have existing values for archaeology
2. Review the location and setting (the vicinity) including matters such as:
 - front and side setbacks to existing buildings;
 - roof forms and scale of development in existing buildings;
 - materiality and colour;
 - number of storeys;
 - car access and garaging patterns in the vicinity.
3. If the proposal is consistent with the existing pattern of development it is unlikely to have an impact on National values. It should be part of the continuity of incremental development that takes place.
4. If the proposal is not consistent with these values, the assessment needs to determine if that non-consistency could be acceptable and retain the heritage values of the area. It is still unlikely to have an impact on National values; however, where new works are not consistent with an identified character as would be found within a heritage conservation area, the assessment needs to consider the cumulative impact of similar proposals on heritage value. One new element may have an impact and it may be argued that it is so small that it in reality has little effect, however, two or five or ten such developments in an area may have a greater impact that does affect broader values.

The threshold issue for assessment, while it would not involve a referral under the Act, does affect the potential for long-term incremental change that will affect heritage values. The only point at which this level of assessment can take place is at local Council level where the LEP and DCP controls allow these concepts to be assessed as they fall way below a threshold for National intervention.

I would suggest that the consideration of the small-scale matters by Council is critical to the maintenance of National heritage values as those values are all encompassing.

Example 2 - New library complex (actual current project)

Assumptions:

- The project has a high level of community and government support;
- The design process, etc., have been properly undertaken;
- The site contains several heritage items that have their own values;
- The site has possible archaeological potential;
- The site is part of an HCA;
- The location has been selected, in part, to facilitate the reactivation of the centre of the City.

Process

1. Ensure that the heritage values of the site are understood and articulated.
2. Ensure that the proposal responds to the heritage values and retains significant elements of the site and buildings including any specific spatial values
3. The site is within an HCA and forms part of the Main Street area; how the site, proposed buildings, open spaces and activities integrate into the existing pattern of the City form needs to be considered.
4. Positive aspects of the proposal that may contribute to the City's future and heritage value need to be set out and considered, as proposals can enhance National values as well as at times having negative impacts.
5. Does the design respond to the form, pattern and scale of the City? If the answer is no it doesn't, it is likely to have an adverse impact.
6. Does the project add design quality or excellence to the city? If the answer is no it doesn't, it is likely to have an adverse impact.
7. Will the project adversely affect other elements of the City that may result in a diminution of National values?

Generally, a project that is well conceived, that has considered potential impacts on the City, and is then designed in response is very unlikely to result in significant impacts on National heritage values.

Example 3 - A change of roofing material to a highly significant building.

Assumptions:

- The proposal is to change an old galvanised corrugated iron roof (painted) to a colorbond roof. The reason for change is it is easier and cheaper to use new materials than old;
- The existing roof is in short sheet lengths and uses traditional lead flashings, etc. The new roof is proposed as long lengths with replaced flashings.

Process

1. Select a roofing material that is consistent with the detail and appearance of the building. For example, restrict the use of colorbond finishes and potentially use galvanised iron even if not painted.
2. Reinstate details such as vents, dormers, ridge detailing etc.
3. Do not use flat sheet flashings behind chimneys etc.
4. Match rainwater goods and profiles to traditional forms.
5. Potentially allow longer sheet usage to minimise joins.

8.1.5 Council Processes

National significance assessment forms are developed to assist in setting out information when a National value needs to be Assessed.

The study concludes that most National values are reflected also at local level in local values and that a sound assessment of local impacts on heritage values will provide a basis for making an assessment of possible impacts on national values.

One of the major differences that arises from consideration of National values is context and looking at how a proposal may affect broader values than those related to a specific site or even a precinct. Considerations around this would be a little different to how assessments currently take place.

Basic training of Council assessment staff in how to consider National values would address a large part of the process. This would be based on the material in this report.

8.1.6 Thresholds and Referrals

Thresholds for referral to the Federal Department are articulated to assist Council in making referrals.

A referral is an onerous and expensive process for an applicant. The application needs to be BOTH considered and comprehensive to achieve a proper response and fees for a referral are high. Referrals are only intended where there is a real risk of a significant impact. Consequently, it is unlikely that referrals will take place unless the work involved is either major and complex or has a very clear and definable impact on a National value.

Examples of such projects could be:

- i. a proposal to demolish mine buildings and structures;
- ii. a proposal to clear vegetation in an identified area of regeneration;
- iii. a proposal for a new building or structure on the Line of Lode;
- iv. demolition of a key building of heritage value within the City.

In reality there are relatively few such works that will be proposed. When they are proposed, the processes required are clear and the guidelines developed through this study will assist in providing an assessment path.

There is also additional time required to lodge and assess a referral, and if an application is then required it will require considerable work, time, and cost.

Unless a proponent is a government department or agency, it is unlikely that they will be aware of the Act requirements in relation to self-assessment and referral, consequently, Council would need to be aware of when a referral may be triggered to be able to advise proponents.

With good Council assessment, it is likely that most assessments would fall within the ability of Council to consider as part of the statutory LEP assessment process. This would particularly apply if the LEP were amended to include reference to National values.

8.1.7 Engagement with the Department of Environment

A pre-referral system is developed to allow Council to seek advice from the Federal Department where a referral may be considered to obtain early advice.

As part of the review of this report it is recommended that a point of contact be established with the Department to allow initial advice if a project arises at Council that, after going through the review processes established at Council, is considered to have a potential for a referral due to 'significant' impacts on national heritage values.

This initial contact is not likely to be used often and will minimise the need for referrals.

8.1.8 Specific Protocols

Areas of future development or works that are known to be likely to involve a Federal referral be identified and if required specific protocols developed to address those issues (e.g. mine closures).

The largest action within the Broken Hill Council area that will impact National values is the imminent closure of the mines. This falls generally outside the control of Broken Hill Council although Council is consulted about how this may occur. The NSW Heritage Office has a role in relation to closures as the sites are leased under the Crown Lands Act and fall under the control of the NSW Lands Department.

There is a requirement for the mining companies to remediate their sites on cessation of use and this potentially fundamentally conflicts with the heritage values of the sites at all levels from local to National. One of the greatest challenges that faces the National listing is how National Mining values can be retained in more than a tokenistic way given the status of much of the infrastructure (as discussed earlier) and the onerous remediation requirements.

The resolution of how to retain mining heritage values, remediate and develop new uses for the Line of Lode once leases cease will be an interesting challenge that will inevitably involve National values and interaction.

9.0 DISCUSSION OF ISSUES

This section of the report draws together the ideas, analysis and discussions in the earlier parts of the study and specifically addresses the questions that were set out as central to determining how to manage National heritage values in Broken Hill.

i At what point is a National heritage value impacted by an action?

Almost any action within Broken Hill has the potential to impact a heritage value. The values of the City are so interlinked and so overarching that every action is likely to have some impact even if it is minor.

The National Act recognises this, relatively crudely, by requiring an action to have a 'significant' impact. The Act, as discussed, unhelpfully does not define 'significant'.

A summary of how National Values may be impacted is:

- i. Work to a place that is of individual importance to National values, as set out in the schedule of this report;
- ii. Work within the public realm that affects an element that has any level of heritage significance - local or state;
- iii. Work within a heritage precinct that affects the values of the precinct;
- iv. Works such as infrastructure that change the setting or environment in which significant features are located.

ii What is a significant impact, how is that determined and who determines it?

There is a considerable difference between a minor and a significant impact in reference to the Act provisions. The Act only addresses impacts that are significant and presumably lesser impacts are not addressed as they would be dealt with by State or local government.

There are then two principal types of significant impacts:

- i. Impacts to a specific element that are large and which have a fairly clear and obvious potential for loss of significance. An example would be a proposal to demolish say the Trades Hall Building where that single action would have a profound effect on the understanding of the City;
- ii. Cumulative impacts of change or loss of elements. A recent example is the large scale replacement of roofs after the hail storms where painted short-sheet galvanised roofs have been largely replaced with single sheet colorbond roofs resulting in a large change to the visual character of the city. Another example is the addition of solar panels to roofs. While this is an activity that has environmental merit, if panels are added to prominent roofs or roofs facing streets it can have a significant visual impact on heritage values.

The first group, as discussed earlier in the report, are relatively straightforward to identify through current approval processes and if a referral was required, it could be made. The most likely areas for this to apply in the immediate future relate to mining structures as they and the mines come to end of serviceable life and the mining structures are considered in more detail.

The second group are more difficult as they are spread across multiple ownerships, building types and uses. They do however fall into several discrete types of issues that can be considered:

Abandoned Buildings and Sites

There are three general groups of abandoned places in the City:

- i. residences;
- ii. commercial and community type buildings;
- iii. mining structures.

There are a considerable number of such sites and structures and the abandonment or cessation of use and consequent decay quickly reaches a point where reinstatement of what may be a significant place becomes difficult to undertake due to cost and condition even apart from finding suitable uses.

If the buildings that are currently unused (not including vacant shops and houses awaiting a new tenant) were lost through demolition, there would be a very significant impact on the overall heritage values of the City that would impact National heritage values. There would be a loss of many individual structures but also a loss of the continuity of elements within the streets and precincts of the city.

As the City has reduced in population and there has been a shift in how people live, shop and access entertainment, a number of buildings and sites have become redundant and have fallen into disrepair including commercial buildings, hotels, community buildings and recreation facilities. As mining has changed and approaches the end of its life on the Line of Lode, many structures and features are redundant and have not had maintenance or repair for long periods of time. As residents desires and requirements for better accommodation are realised, basic and now basic or undesirable dwellings are hard to lease or sell. There has also been a quite significant loss of buildings due to fire, often due to the poor condition of the buildings, faulty electrical systems, etc.

A number of buildings and structures have been demolished in the City including two public swimming pools, the town hall, a hospital building, a corner hotel, churches and a range of community buildings. Most of these buildings have not been replaced or have had quite different forms of development replace them and the overall result is a loss of part of the very close knit arrangement of heritage buildings and sites that has characterised the town.

Broken Hill is unusual in that so much of the early built form remains.

Further losses of buildings and structures as they reach a point of not being viably recoverable will have a significant, even if incremental, impact on National heritage values as each loss weakens the overall value of the place.

Not all buildings abandoned or lost are significant and there will always be a gradual replacement of buildings into the future.

Loss of Significant Buildings

The first major threat to National heritage significance is the almost inevitable loss of significant abandoned structures that will take place unless there is a strategy to address the future of the 'high heritage value' 'at risk' buildings and structures. The focus in this discussion is higher value items but

it must be observed that even the loss of minor elements within local areas will have an adverse impact on the collective National heritage values as well as local heritage values.

Groups of local places (outside the core of the City) that are at high risk are former local or corner shops, some churches and former hotels. As most residences in the City have no heritage protection there is an increasing risk of loss of values as demand for minor buildings reduces over time.

Part of this area of risk is the deterioration of buildings that are in use as their uses become marginal and as generational change takes place. It can be observed that many buildings in the City are poorly maintained and will be difficult to recover. This can arise from many reasons that are not explored in this report. Often when properties are sold there is often a desire from new owners to upgrade and in some situations to bring houses to a liveable state. This can involve significant works or in some cases rebuilding.

The contribution of modest early dwellings to the City's heritage value is large as many remain across the breadth of the City but it is also recognised that those buildings may not meet contemporary expectations for accommodation. The balance between retaining significance and providing for ongoing and reasonable use can be achieved but needs to be considered as part of Council LEP and DCP controls.

The following table identifies a range of buildings that are at risk through not being used or being damaged. Individual residences and corner shops are only included by way of example but even a quick survey of the City illustrates that there are numerous examples of both building types that have been abandoned or are at threat of loss.

Table 37 : A selection of abandoned or near to abandoned buildings and sites.³⁵

Site/Structure	Address	Heritage Listing	Impact
Broken Hill/Broken Hill North			
Commercial/community			
Ice works	Beryl St	yes	High
Blende St warehouse	Blende St	Yes	High
Drive-in theatre	Racecourse Rd	no	Moderate
Marios Hotel	Beryl St	yes	High
Former Magazine Depot	Magazine Road	no	High
Corner Shop	278 Sulphide St		
Corner Shop	Bromide and Cobalt St		
Corner Store	Hebbard and Central Sts		

³⁵ The use of the term abandoned relates to where a building or site has ceased use and is deteriorating or has a marginal use that does not support the future of the building. It is a general description to capture a group of places that are at potential risk.

Site/Structure	Address	Heritage Listing	Impact
Nicholls St Church	Nicholls St	yes	high
Residential			
Iodide Street terrace row	Iodide Street	yes	high
Wolfram St terrace row	Wolfram	no	moderate
Residence	Argent St	no	Moderate
Residence	20 Crystal St		
South Broken Hill			
South Broken Hill supermarket	Patton St	No	low
South Broken Hill Hall – former Methodist Church	261 Patton St	no	low
Alma Institute	Patton St	yes	high
South Boys Club	Central Street	no	low
Community Building	Eyre and Rockwell Sts	no	moderate
House	149 Hebbard St		
House	307 Patton St		burnt
House	286 Wilson St		
House	143 Jamieson St		
Broken Hill			
houses	142, 144 Sulphide St	no	
house	15 Argent St	no	moderate
house	628 Lane St	no	moderate
house	578 Wolfram St	no	moderate
Corner Shop	Oxide St		
Corner Shop	258 Chloride St	no	Moderate
Corner Shop	306 Kaolin St	no	High
Corner Shop	158 Mica Street	no	moderate
Railwaytown			
Army barracks and Excelsior Oval	Morgan St	no	low
Rugby League Park	Rakow St	no	low

Site/Structure	Address	Heritage Listing	Impact
Mining sites			
Central Mine Power Station complex		yes	The major buildings are capable of adaptive re-use but some of the smaller and older buildings are very deteriorated.
Zinc Oval gatehouse		yes	
Zinc Oval Buildings		yes	
Staff building Proprietary Square	Proprietary Square	yes	High
First Mine Managers House	Proprietary Square	yes	High
Proprietary Square	Proprietary Square	yes	High
Browne's Shaft complex (Junction Mine)		yes	High
Delprats Mine complex		yes	High
North Mine buildings		yes	High
CBH Mine Buildings		yes	High
Zinc Mine buildings		yes	High



Figure 72 : A local shop, now boarded up, with early signage, that is unlikely to have a future use and which is consequently at risk of loss.



Figure 73 : An early stone house damaged by fire that is unlikely to be recovered.



Figure 74 : A local former shop, part of a small precinct that contains several shops (one still used) and a church and hall (abandoned) that is unlikely to have a future use.

Incremental Change

Another area of potential threat is the cumulative effect of incremental change to the City. This can be seen in what might otherwise be considered as civic improvements to roads, parks and public areas as well as the changes that take place across privately owned property.

This must be considered in the context of a town that has undergone constant change since it was first settled in 1884 so that change, improvement - both civic and private - and responding to changing needs and tastes is in itself an attribute of the National heritage values of the place. Consequently, change and adding new works and elements does not necessarily impact on National values however, where change takes place and how it occurs can have potential for significant impact when it is undertaken without reference to the underlying heritage values of the City.

As an overall observation about recent civic works in the City, it is apparent that they have been planned, at least initially, without consideration of National heritage values. New works need to be integrated with and enhance heritage values. This can be seen on both heritage listed and non-listed sites. Apart from setting a poor example for private and community projects that are expected to consider these matters, the lack of good contextual design and not working with heritage values damages the National values of the city.

As a principal, the Council or any Government agency should adopt exemplar processes towards works that carefully look at National heritage values (as well as State and local values) in guiding what works should take place, where they should take place and how they should be designed.

As observed earlier this does not suggest that upgrade or change to civic areas should not take place but the onus is on Council and other government agencies to adopt best practice and start with the National value consideration before making commitments to works. This will affect major

works down to minor service and utility upgrades as all decisions should be made in relation to a range of values that are not simply based on ease and cost.

Incremental change is also seen in the addition of new buildings into both commercial and residential areas where the character and design of the buildings is antithetical to the values of the City. As noted earlier, there is a level of protection and guidance for heritage conservation areas, but beyond these relatively small areas there is no control on overall fit and character. This is a potential significant threat to National heritage values as these values extend over the whole City and are not limited to heritage precincts.

As already discussed, the DCP controls for heritage precincts set out a good framework for new development and adaptation. However, these controls should apply across the whole City, reflecting the National value of all residential precincts and ideally more specific controls should be developed for heritage precincts.

Heritage Listing

A third area of threat to broad heritage values, as identified above, is the lack of heritage protection over most of the City. The analysis of heritage conservation areas demonstrates that most residential buildings are not protected for their heritage values and that many of the very significant buildings are not within the currently listed precincts.

There are almost no individual residential heritage listings and the extant precincts do not recognise or protect the heritage values or much of the City, particularly the early settled areas of the City. While there are residential HCA's in Broken Hill central area and Railwaytown there are none in South Broken Hill apart from mining housing (and these are already separately listed).

Most of Broken Hill's significant residential properties have no statutory protection and no controls to manage future development or change. The current precincts contain many fine individual and groups of places but they do not reflect the range of residential values that exist, they also do not reflect the early developed residential areas of the City.

There is a significant long-term risk to National heritage values resulting from the lack of heritage protection for large parts of the City area. Unless this is addressed the National heritage listing in relation to residential properties will remain token.

There are also a range of non-residential buildings that, as a result of the National listing, should be added to current heritage schedules. These are places that are not individually of national significance but, are, as part of the important themes of the City, important within the national framework.

Large-scale change arising from events or technology

The recent roof replacements across the City, while having obvious benefits for many structures that would otherwise not have been able to upgrade, have changed the visual appearance of the City considerably.

The difficulty of a large change taking place over a short period of time is that the slow incremental change that usually takes place and which absorbs a range of elements into the broader established context is not possible. The roof replacements have demonstrated that it is easy to undertake work

that is sound and enhances the City and also to undertake work that is inappropriate and out of character with the values of the City. The relatively small number of places that have heritage listing and which require any form of consent for an action such as a roof replacement results in the great majority of works not requiring approval. This results in the loss of features and details that are significant such as:

- i. painted roofs;
- ii. roof detail that is removed for simplicity;
- iii. colours being used that are not appropriate for the city;
- iv. change of pattern of roofs with the loss of small sheet usage;
- v. in many cases poor workmanship that results in a loss of quality.

The rise in the installation of solar panels is another example of change that if not managed has a major detrimental effect on the visual qualities of the City and by consequence National heritage values.

Again, there are significant benefits from installing good technology but the careful siting and management of installations is critical to retain heritage values. There appears to be little difference in how installations take place on heritage and non-heritage listed sites and the relatively low level of heritage protection means that most installations are not controlled in relation to heritage or cityscape values.

The following example illustrates the potential for visual impact from an installation.



Figure 75 : This example of a solar installation is provided as it illustrates the visual impact of installations where they are highly visible from streets. The site is not a heritage item or within a heritage precinct but is opposite a heritage site. The current Council controls do not require consent for such installations outside heritage sites.



Figure 76 : This example (opposite the example above) of a smaller installation is located on a prominent corner and the site and building is a heritage item. The panels are not on the main house roof but on what appears to be a ballroom or similar.

iii When an impact takes place what criteria apply to assess whether it is a significant impact?

As set out in detail earlier there is no definitive method of establishing when an impact is significant as the term is used in the Act. Most of the discussion and examples in this study look at works that would not reach a threshold for 'significant'. Again, as noted, the major changes are likely to be demolition of mining structures and changes to the mining landscape and possibly large civic or commercial works. It can be reasonably assumed that there will be no referrals for significant works under the Act however, this does not remove the need for some form of assessment to understand if an impact is possible.

For mining activities there is a consent process that is separate from local Council and the Federal Department but which is dealt with by State government agencies. Usually major projects are referred to Council at least for comment and sometimes for direct input even where a consent is not required.

For Government projects there is also usually no requirement for local consent but again most government agencies refer works to the Council for comment and input and on occasion for approval.

Private development and works initiated by Council are dealt with by Council directly and the controls that are in place through the LEP and DCP, with guidance as provided in this report, allows Council to determine firstly if a referral were likely or , if there are impacts on National values but not ones that require a specific referral, how to assess them as part of the usual DA assessment process.

iv For a specific site how does an owner ascertain whether an action may affect a significant value?

This also falls into two quite discrete areas.

For government, mining and large commercial applicants who are experienced in working with government regulation, most applicants have an ability to assess their projects against relevant legislation and make applications and referrals as required. As the determination in the Act is a self-

determining one, the process is a little harder but generally other controls would be in place that would require a large application to consider National Legislation.

For private applications, most applicants would not be aware of the legislation and would not know how to apply it even if it were applicable. The easiest process is for an applicant to consult with Council if they are concerned about a possible impact. Where Council receives an application that may raise issues of National impacts, Council are also able to provide advice and, if an application did trigger a referral, would be able to assist an applicant through that process. This would be an extremely rare occurrence. Most applications and advice will be around minor impacts to National values and the current and potential future controls as well as the material in this study can provide a sound basis for Council staff to identify areas of potential impact that can be raised with applicants.

The statutory basis for this is difficult as the Council LEP and DCP, while referencing National values are limited by the listings and precincts that are gazetted. As has been noted in the analysis in the study impacts to National values can occur anywhere across the Council area and without a specific reference to values in the LEP and DCP, Council are limited in their ability to make assessments even where a national value may be impacted.

v For actions that take place on a broader basis that are not related to single properties how are significant impacts considered?

Many of the areas of potential impact are small and incremental. A number of examples have been cited including roof replacement, solar panel installations, etc. Where there is no requirement for consent there is no ability to manage or provide advice to owners unless they seek it. Broadening the extent of precincts and items will assist in a longer-term and broader management of these issues. It may also be possible to expand the range of works that require consent, however this is rarely popular with residents or council.

Applicants, apart from general dissemination of material about National values are not likely to be aware of these issues. Some of the material accompanying this report that will be available to the community (and Council) to assist in a better appreciation of what does matter about the heritage of Broken Hill.

Council staff, through specific training (potentially undertaken by the heritage adviser) and using material that is set out in this report, should be able to provide better guidance to applicants and explain the importance of balancing incremental change with retaining elements of significance.

The most effective way to manage these issues is for the broader use of heritage conservation areas and for their character and values to be clearly set out as the basis on which decisions will be made about applications. This will not capture every place in the City but will at least allow core areas to be better managed in relation to their National heritage value.

vi When is an application to the Federal Department required and what form does it take?

Putting aside mining sites and the specific issues around their closure and long-term management, it is difficult to predict if any applications would trigger a referral. Purely by way of example considering the proposed Library hub project that Council has initiated may be useful in exploring this issue.

The library is a Council project and is located in the core of a very significant precinct. It is on the site of a heritage item, is surrounded by heritage items, within a heritage precinct and has buildings that collectively and to some extent individually are of National value. At face value there is potential for development to have a 'significant' impact on National heritage values.

However, that does not in itself trigger a referral.

The heritage values of the site and area are fundamentally the same in this location at local, State and National level. There are differences but they are not great. If it were determined that the project had an adverse heritage impact at local level (which is the actual listing of the site) it is unlikely that an approval would be granted without that matter being resolved.

If such an impact were not resolved looking at site and precinct values it would be possible to consider if there were issues arising from the overall National heritage listing that had not already been assessed as part of the local level assessment.

As this area is well understood in terms of heritage value and is the centre of the City it is very unlikely that separate National issues will arise that have not already been considered as part of a local listing. However, there is also the ability to consider broader National significance issues when considering the local controls as they are referenced in the control plans.

Difficulty may arise if a proposal is at odds with the significant form of the City, where an element of inappropriate scale or materiality is proposed, etc. but even in these situations the general local heritage controls will capture most significant potential impacts.

An example of how a National value could be impacted is if the proposal involved say the demolition of the former Town Hall façade. That would be a 'significant' impact on a range of National values and this action should require a referral. This example is used as it is a situation that, even if proposed, would be disallowed by Council for local reasons even before a National consideration was made.

Where heritage values are less obvious and less understood and the place does not have the same focus and profile as the Town Hall site, it is harder to make determinations and also less likely that a National referral would be required.

vii Who is responsible for monitoring compliance under the Act?

Technically the Federal Department is responsible for administering its Act but there appears to be no actual way that a listing such as Broken Hill can be monitored except by Broken Hill Council. Interested parties may identify issues and make submissions but as the Act is self-assessing and relies on a proponent to act, it would be almost impossible to monitor a complex city listing.

Broken Hill Council is also the only body that has a reasonably comprehensive understanding of what is taking place in the City. Even though not always the consent authority, through referrals from government agencies, Council is largely aware of what is taking place across the City.

Council has no statutory role or power in relation to the Federal Act but it can, through inclusion of the National values in the LEP and DCP monitor proposals for works across the City.

One outcome of this report is that it is intended to provide sufficient understanding so that Council staff and councillors can look at proposals within a broader framework than may currently exist.

viii What are the roles of State Government and Local Council in the consideration of National heritage values?

Point seven above concludes that, apart from major changes to mining sites that are imminent, Council is the only body that can exercise an overview of local and National values. This study has also observed that State values, as they are presently addressed through Heritage NSW and the Heritage Council, have almost no statutory impact on the City as so little of the City is listed.

This does not mean that there is disinterest and the financial supporting of heritage advisers and studies demonstrates a support for aspects of the City's heritage. Heritage NSW also have a role in the future of the mining sites through other statutory processes.

Ongoing financial support to ensure that the City has good heritage input would seem a critical exercise. There is a strong argument for enhanced heritage funding due to the National listing. The current grant to provide heritage advice is good but cannot provide the time or continuity to consider larger heritage issues such as broad National values. Funding for the heritage adviser role (currently around 9 days a year) could be expanded or specific grants could be made to fund heritage input and advice on key issues. This could include revising the DCP controls and training staff in better heritage management.

Fundamentally Broken Hill Council is the best placed and preferred agency to have general oversight of all heritage values in the City. This would be enhanced with greater input from State and Federal agencies particularly at a consultative level (that is not through approval processes). Being able to consult with specialist staff on specific issues would be of value to the overall management of heritage values and the inevitable tensions and difficulties that will arise as mining moves closer to cessation, remediation works are proposed and the nature of parts of the City changes.

10.0 SUMMARY RECOMMENDATIONS

The study draws a range of conclusions on how to manage the National Heritage values of Broken Hill. The main recommendation is that because of the very broad listing over a whole city and council area, that the only effective way to manage National values is at Council level through the existing planning framework. The Federal and State approval and referral systems are based around major projects or, for State items, only works to places listed on the State heritage register, consequently, they are not capable of considering the myriad minor works that take place and will be proposed in the future that affect many aspects of National value.

There is no reason that the National values that are set out in the listing citation and explored in further detail in this report cannot be set out within the local LEP and DCP controls and managed at a local level with the ability to refer major matters, that may require State or National referral through that process.

This will require a level of dialogue with State and Federal agencies that would take the form of being able to seek advice when particular issues arose without having to make a formal referral.

The works that may affect a National listing are likely to relate to the closure of the mines in the future and the proposals to remediate, remove elements and in places retain mining infrastructure. Most other possible works would potentially fall below the threshold for a National referral and are most appropriately dealt with at Council level.

Currently the Council controls do not reflect the National values set out in the citation, consequently, there is a need to review and upgrade the current controls.

The recommended actions arising from this study then are:

LEP Provisions

- 1 Broken Hill Council should manage the assessment of National Heritage values through the LEP planning process.
- 2 Broken Hill Council should amend the LEP to specifically include National values. The works required to achieve that review include:

Include in the LEP, under Clause 5.10 Heritage Conservation, a new objective 'e':

Objectives

The objectives of this clause are as follows:

- a) to conserve the environmental heritage of Broken Hill,
 - b) to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views,
 - c) to conserve archaeological sites,
 - d) to conserve Aboriginal objects and Aboriginal places of heritage significance.
 - e) *'to conserve the National Heritage values of Broken Hill as set out in the National Heritage Register citation'*
3. Establish an enlarged and revised heritage schedule in the LEP, Schedule 5 - Heritage Items.

A revised schedule will form the basis of future assessments and will include National, State and local values for each place entered.

This will assist owners in understanding if National values are likely to be affected on their properties and also provides a framework against which an application can be assessed as other similar places will be identifiable.

- 4 Expand the themes within the LEP listings to include those found in the National citation. These are:

- i. Housing in its various forms
- ii. Regeneration
- iii. The landscape of the Line of Lode
- iv. The landscape of the desert and its interface with the city
- v. Water and transport
- vi. The social landscape of the City including sport and recreation
- vii. Innovation and resilience

- 5 Identify specific places that have individual National heritage value within the LEP schedule.

Although a list of places in this study does not have any statutory basis, as part of establishing guidelines on how to manage national values, a schedule of key places in relation to National values can provide a 'first check-list' to consider whether a proposal or an application on a specific place may need to be assessed for significant impacts on National values. If a site is listed it would trigger a closer analysis of whether National values could be impacted by the proposal.

The key factors in protecting National (and other) heritage values in relation to residential values but also with regard to all other aspects of heritage value are:

- i. Ensuring that local LEP heritage listings (individual items and precincts) are thorough and comprehensive, that they reflect National (and State where appropriate) heritage values, and that they are clearly articulated within the framework of National values;
 - ii. Providing advice, guidelines, and information to the community and council (as the consent authority for most applications for works) to improve the understanding of what heritage value is, why it matters, and why Broken Hill is a National Heritage Item;
 - iii. Developing protocols at local Council level to identify National values and when a proposal may impact those values;
 - iv. Establishing a clear referral path that is understood and is functional to initially test proposals for National referral and then, if warranted, to make an application for consent.
 - v. Setting out thresholds within Council that ensure that Council actions always place the consideration of national heritage values as a high priority in any assessment of any proposal.
- 6 Establish enlarged and additional heritage conservation areas within the LEP HCA schedule to reflect the thematic development of the City so that broad values are protected.

DCP Provisions

- 7 Revise the DCP controls for heritage items to respond to local, State and National significance as appropriate to each place. Establish provisions for the range of heritage items that are found in the City.
- 8 Develop additional and upgraded DCP heritage controls for the whole of the Council area that recognises that the whole of the Council area is part of the National heritage listing and requires broad heritage controls that reflect this.
- 9 Develop additional and upgraded DCP heritage controls for heritage conservation areas that:
 - i Reflect the specific needs of heritage conservation areas generally but also the specific controls required for each separate heritage conservation area.
 - ii Provide character statements for each heritage conservation area to assist in understanding the values of each area.
 - iii Address the spatial and landscape form of the city and its various areas including trees and street plantings.
 - iv Map contributory and non-contributory places across the heritage conservation areas to provide clear guidance to owners who wish to undertake work to their property.
 - v Consider local State and National values.
 - vi Develop clear character statements (as required by the NSW Government) for each HCA to set out its specific values.
 - vii Respond to the observations in the following table:

Table 38: Precinct Recommendations

	Precinct type	Recommendations
i	residential	<ol style="list-style-type: none"> i Create precincts that represent key residential areas that demonstrate a good level of integrity*. ii Represent the range of residential areas that relate to key development periods. iii Be comprehensive enough to demonstrate the extent of housing development. In the City iv Represent the different parts of the city: Broken Hill, BH South and Railwaytown as well as different areas within the main area of Broken Hill.

ii	retail/commercial	<p>Argent Street is largely a precinct of retail/commercial buildings. Patton Street contains retail/commercial, residential and mining sites. It does not include all of the civic buildings in South Broken Hill.</p> <ul style="list-style-type: none"> i The Argent Street Precinct is comprehensive but would benefit from review of boundaries to be more precise about the commercial centre of the city. ii Railwaytown has a single precinct that may benefit from being separated into the civic/retail area and residential areas. iii Patton Street should be separated into the commercial/retail/civic area and could be expanded to better represent the retail and civic life of South Broken Hill. iv Mining parts of the precinct should be excised and either a separate precinct created or included within mining. v Other small groups of local shops and churches could be considered for precinct listing to represent the strong local focus of retailing in some residential areas.
iii	mining	<ul style="list-style-type: none"> i Include as a minimum, the early mining lease areas as a precinct. ii Look at creating a single precinct that covers the full extent of mining leases. iii Consider establishing precincts of mining housing separately. iv Consider former mining areas as precincts that have changed use.
iv	regeneration/ landscape	<ul style="list-style-type: none"> i Establish a precinct to address Morris regeneration areas for their heritage values that is separate to the current LEP environmental zoning. ii Establish either precincts or linear heritage listings to cover planned street tree plantings in various parts of the City iii Develop heritage policies on trees throughout the City.

- 10 Establish a template for the DCP controls that includes the following elements (based on the Section 8 heading within the current DCP:

8.0 Heritage

8.1 General introduction

8.2 National Heritage Values

Across the City and Council Area

Commercial Areas

Residential Areas

8.3 Heritage items

8.4 Heritage Conservation Areas

Commercial Precincts

Residential Precincts

Mining Precincts

8.5 Mining sites

8.6 Archaeological Sites

8.7 Aboriginal Sites

Each of the above sections could then contain the material that is set out in the current DCP using a standard order of elements. There would also be the ability to discuss National heritage values further in the introductory sections and establish controls that would apply to the whole council area.

General controls on commercial or residential that are not within heritage listings could be set out under the broader development controls of Section 3.

Mining

- 11 Re-assess the Line of Lode and the mining lease with the intent of:
 - i Creating a mining heritage conservation area at State and local level that is bounded by the early mining leases (as set out in figures 2, 3 and 4) to recognise the Line of Lode as the pivotal heritage element of the City.
 - ii Reviewing the heritage item listings to assess them with more finesse and in relation to the whole of the remaining mining infrastructure rather than on a lease by lease basis.
 - iii Developing an overall comprehensive approach to the future of the remnant mining features across the various leases.
 - iv Adjusting the current listings to reflect the outcome of these studies.
- 12 Adopt the following general approach to retaining heritage values on the Line of Lode the Line of Lode:
 - i. Make all decisions in relation to the overall values of the Line of Lode across all mining sites;
 - ii. Retain the key individual elements (in forms determined through strategic planning) irrespective of their current condition;
 - iii. Retain a significant number of individual elements to provide a strong visual representation of mining along the Line of Lode;
 - iv. Retain key groups of structures and features;
 - v. Identify across all mining sites strategic areas for funding;
 - vi. Identify across all mining sites elements that can be considered for partial demolition, ruination, or in some cases removal; and
 - vii. Develop a comprehensive funding model to allow the above to take place.
- 13 Engage with the mining companies and the NSW Department of Planning to ensure that heritage values on the Line of Lode are not marginalised to satisfy current government policies.
- 14 Assimilate the numerous reports and data into an overall database of mining sites to inform future management.

Environment, Regeneration and Trees

- 15 In its broadest form, it would appear necessary to map and include on the LEP heritage schedule the following environmental heritage aspects of Broken Hill:
 - i. All of the regeneration areas ;
 - ii. All of the planned street tree avenues in the city;
 - iii. All planned plantings within parks and reserves;
 - iv. Willyama Common;
 - v. Other identified discrete landscape areas that retain plantings and remnant vegetation.
 - vi. It would appear on review that the Morris regeneration areas are also of State heritage significance and should be nominated for the State Heritage Register and that street trees are of local heritage significance and should be set out and mapped in the LEP.
- 16 Develop specific management policies in relation to trees.
 - i A sound overall strategy is that no trees that have been identified and mapped as significant should be removed or damaged unless there are exceptional circumstances.
 - ii Where trees are missing from avenue plantings ,they should be reinstated with a matching species to reinstate the avenue.
 - iii Council should also develop a clear policy on replacement of trees in existing planted avenues (where they have been lost) to reinstate major avenue plantings and to ensure that matching species are used.

Council

- 17 Broken Hill Council should engage with the Federal Department of Environment to establish a dialogue to provide advice where there may be potential for a specific issue to require a Federal referral.
- 18 Develop guideline documents arising from the DCP review to assist owners. The future guideline documents provide ways in which to consider this but it is not reasonable or practical to have to apply guidelines to every application that may be made. A level of discernment is required for Council staff in particular to make assessments on when National values may be impacted.
- 19 For Broken Hill Council to manage National values in a way that does not result in significant additional assessment requirements a number of matters need to be established. In summary they are:
 - i. Council adopts as a policy that National heritage values will be considered in assessing applications and providing advice generally to the local community;
 - ii. National heritage values are included in a revised LEP heritage database so that specific key sites with National significance are identified and flagged;
 - iii. The LEP heritage schedule is developed using National as well as State and local themes to ensure that National values are captured and balanced across the Council area;

- iv. Broad National heritage values, that is those that are not just site specific, are set out in guidelines that allow Council staff and the community to have access to what National values are and how they apply within Broken Hill;
 - v. National significance assessment forms are developed to assist in setting out information when a National value needs to be assessed;
 - vi. Thresholds for referral to the Federal Department are articulated to assist Council in making referrals. As the National heritage sites guidelines are complex and quite difficult to navigate (unless the proponent is a government agency who are familiar with these processes), simplifying the requirements in material that is published in the local community is critical to assist in understanding how National values are assessed;
 - vii. A pre-referral system is developed to allow Council to seek advice from the Federal Department where a referral may be considered to obtain early advice. There are standard pre-referral processes, but it would be desirable to establish a direct point of contact between Council and the Department to seek less formal advice on matters that may arise;
 - viii. Areas of future development or works that are known to be likely to involve a Federal referral be identified and, if required, specific protocols developed to address those issues (e.g. mine closures or major infrastructure projects).
- 20 Basic training of Council assessment staff in how to consider National values would address a large part of the process. This would be based on the material in this report and further material that is developed in relation to LEP and DCP amendments.
- 21 Seek ongoing financial support to ensure that the City has good heritage input. There is a strong argument for enhanced heritage funding due to the National listing. The current grant to provide heritage advice is good but cannot provide the time or continuity to consider larger heritage issues such as broad national values. Funding for the heritage adviser role (currently around 9 days a year) could be expanded or specific grants could be made to fund heritage input and advice on key issues. This could include revising the DCP controls and training staff in better heritage management.
- 22 Council should adopt the proposals.

11.0 BIBLIOGRAPHY

Publications and Sources

- Aartsen, Dennis. Broken Hill Streets. East Maitland: Dennis Aartsen, 2016. Print.
- Adams, Christine. Sharing the Lode - The Broken Hill Migrant Story. Broken Hill: Broken Hill Migrant Heritage Committee, 2004. Print.
- BHP Archives. Selection of Photographs.
- Bridges, Roy. From Silver to Steel - The Romance of the Broken Hill Proprietary. Melbourne: George Robertson & Co., 1920. Print
- Broken Hill Archives. Maps, plans and images.
- Carroll, Brian. Built on Silver - A History of Broken Hill South. Melbourne: Hill of Content, 1986. Print.
- Curtis, Leonard Samuel. The History of Broken Hill - Its Rise and Progress. Adelaide: Frearson's Printing House, 1908. Print.
- Dale, George. The Industrial History of Broken Hill. Melbourne: Fraser & Jenkinson, 1918. Print.
- Hardy, Bobbie. Water Carts to Pipelines - The History of the Broken Hill Water Supply. Broken Hill: Broken Hill Water Board, 1968. Print.
- Kearns, R H B. Broken Hill - A Pictorial History. Hawthorndene: Investigator Press. 1982. Print.
- Kearns, R H B. Broken Hill Volume 1 1883-1893 - Discovery and Development. Broken Hill: The Broken Hill Historical Society, 2013. Print.
- Kearns, R H B. Broken Hill Volume 2 1894-1914 - The Uncertain Years. Broken Hill: The Broken Hill Historical Society, 1976. Print.
- Kearns, R H B. Broken Hill Volume 3 1915-1939 - New Horizons. Broken Hill: The Broken Hill Historical Society, 1975. Print.
- Kearns, R H B. Broken Hill Volume 4 1940-1983 - The First Century. Broken Hill: The Broken Hill Historical Society, 1987. Print.
- Kennedy, Brian. Silver, Sin, and Sixpenny Ale - A Social History of Broken Hill, 1883-1921. Carlton: Melbourne University Press, 1978. Print.
- Koenig, Kay. Broken Hill - 100 Years of Mining. New South Wales: Department of Mineral Resources, 1983. Print.
- McCarthy, K. Steaming Down Argent Street - A History of the Broken Hill Steam Tramways 1902-1926. Sutherland: The Sydney Tramway Museum, 1983. Print.
- McDougall & Vines Architectural & Heritage Consultants. Argent Street Urban Design Study
- Heritage Analysis and Recommendations Volume Three
 - Building Inventory Excluding Argent Street. Norwood:

McDougall & Vines Architectural & Heritage Consultants, 1988. Print.

McDougall & Vines Architectural & Heritage Consultants. Argent Street Urban Design Study - Heritage Analysis and Recommendations Volume Two - Building Inventory Argent Street. Norwood: McDougall & Vines Architectural & Heritage Consultants, 1988. Print.

Roberts, Lew. Rails to Wealth - The Story of the Silverton Tramway Company 1886-1972. Melbourne: L E Roberts, 1995. Print.

School of the Air. New South Wales: Department of Education. Print.

Solomon, R J. The Richest Lode - Broken Hill 1883-1988. Sydney: Hale & Iremonger, 1988. Print.

Stokes, Edward. United We Stand - Impressions of Broken Hill 1908-1910. Canterbury: The Five Mile Press, 1983. Print.

Stoneman, John. Chronology of Churches in Broken Hill 1885-1998. Broken Hill: Broken Hill Historical Society, 1998. Speech Transcript.

The Legend of the Sturt Pea. Print.

The Silver City Festival 1883-1958 - Official Souvenir. Print.

The Zinc Corporation Ltd. And New Broken Hill Consolidated Ltd. Broken Hill: 1948. Print.

Vines, Elizabeth. Broken Hill - A Guide to the Silver City. Broken Hill: Broken Hill City Council, 2016. Print.

Webber, Horace. The Greening of the Hill - Re-vegetation Around Broken Hill in the 1930s. Melbourne: Hyland House Publishing, 1992. Print.

Websites

Noel Butlin Archives - Australian National University. Tooth and Company Hotel archives and photographs

Department of Environment Website for details of the Biodiversity Act guidelines, the National heritage citation and map. And the Macquarie Street heritage listing

Broken Hill City Council website.

SixMaps Spatial Systems

Googlemaps

Wikipedia

12.0 APPENDICES

Appendix A - Sample Data Sheets from SHI database

Example 1

12 houses at Junction Circle

Item details

Name of item:	12 Houses at Junction Circle
Other names:	Junction Circle Housing
Type of item:	Built
Group/Collection:	Mining and Mineral Processing
Category:	Mining camp/settlement/housing
Primary address:	, Broken Hill, NSW 2880
Local govt. area:	Broken Hill

All addresses

Street Address	Suburb/town	LGA	Parish	County	Type
	Broken Hill	Broken Hill			Primary Address
North Mine Leases	Broken Hill	Broken Hill			Alternate Address

Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number	Gazette Page
Local Environmental Plan	Broken Hill Local Environmental Plan 2013	1310	30 Aug 13		

References, internet links & images

None

Note: Internet links may be to web pages, documents or images.

Data source

The information for this entry comes from the following source:

Name: Local Government

Database number: 1240350

Example 2

Bells Milk Bar

Item details

Name of item	Bells Milk Bar				
Type of item	Build				
Group/Collection	Retail and Wholesale				
Category	Milk Bar				
Location	Lat: 53.158788 Long: 6.14127822				
Primary address	180 Pallion Street, South Broken Hill NSW 2880				
Local government	Broken Hill				
All addresses					
Street Address	Suburb/Town	LGA	Parish	County	Type
180 Pallion Street	South Broken Hill	Broken Hill			Primary Address

Statement of significance:

Bells Milk Bar is a rare intact example of a post-modernist style milk bar complete with internal fittings, furniture and advertising artwork. The site of Bells Milk Bar has hosted businesses providing cool drinks and refreshments for almost 100 years. Bells Milk Bar has been an institution in Broken Hill since the late 1930s. It contains a collection of milk bar furniture, fittings and equipment and decorating from the 1950s. It has the potential to provide information relating to the design, fabrication and operation of these types of establishments. The building and its contents have state aesthetic and research significance, rarity and representativeness and local historical, historical association and social significance.

State significance updated: 28 May 03

Note: The State Heritage Inventory provides information about heritage items listed by local and State government agencies. The State Heritage Inventory is continually being updated by local and State agencies as new information becomes available. Read the [GEM copyright and disclaimer](#).

History

Historical notes	<p>Frederick Penion established a confectionery and cool drink store in Pallion Street, South Broken Hill in 1922. The business was named "F. Penion Confectioner". It was later acquired by John Joseph Longman who worked for Frederick Penion. John Longman married Pearl Davis who had been employed in the business as an apprentice conical maker since 1903. John enlisted in the army during World War I and was killed in France in 1917. On his death Pearl took over the business.</p> <p>Pearl later married Les Bell, a local maker of the South Broken Hill Kine, and she became known locally as Pearl Bell. The confectionery and conical business came to be known as Pearl Bell's. In 1933 the premises were heavily remodelled and the name of the business was changed to Bell's Milk Bar.</p> <p>In 1950 Pearl's son Les and his wife Mayra inherited the milk bar. They undertook extensive remodeling, including the construction of the post-modern facade and installation of new vinyl clad seats and laminex tables. The business has continued to trade and was acquired by Jason King in 2004. Jason has carried out alterations to return the milk bar to its 1950s glory, including the re-introduction of 1950s era counters, coolers and furniture.</p>
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Peat later married Les Bell and moved to the Gourn Broken Hill Mine and she became known locally as Peaty Bell. The confectionary and cordial business came to be known as 'Peaty Bell's'. In 1938 the premises were heavily remodelled and the name of the business was changed to Bell's Milk Bar.

In 1963 Peaty's son Les and his wife Marjie inherited the Milk Bar. They undertook extensive remodelling including the construction of the post-modern facade and installation of new vinyl clad seats and laminated glass. The business has continued to trade and was acquired by Jason King in 2004. Jason has carried out renovations to return the Milk Bar to its 1960s glory including the re-introduction of 1960s era counters, stools and furniture.

Historic themes

Australian theme (abbrev)	New South Wales theme	Local theme
3 Economy-Developing local, regional and national economies	Commerce-Activities relating to buying, selling and exchanging goods and services	Buildings business is a mining town
6 Culture-Developing cultural institutions and ways of life	Leisure-Activities associated with recreation and relaxation	(none)

Assessment of significance

SIIR Criteria a) (Historical significance)	The site of Bell's Milk Bar was a road business providing cool drinks and refreshments for almost 100 years. Bell's Milk Bar has been an institution in Broken Hill since the late 1920s. It has local historical significance.
SIIR Criteria b) (Associative significance)	Bell's Milk Bar has direct associations with local identity Peaty Bell, who was involved in the business from 1903 until 1963. It has local significance in this regard.
SIIR Criteria c) (Aesthetic significance)	Bell's Milk Bar is a rare intact example of a post-modernist style Milk Bar complete with internal fittings, furniture and advertising artwork. It has state aesthetic significance.
SIIR Criteria d) (Social significance)	Bell's Milk Bar has been a popular meeting place in Broken Hill for 70 years and has local social significance.
SIIR Criteria e) (Research potential)	Bell's Milk Bar contains a collection of Milk Bar furniture, fittings and equipment, and dating from the 1960s. It has the potential to provide information relating to the design, fabrication and operation of these types of eatable venues and has state significance in this regard.
SIIR Criteria f) (Rarity)	Bell's Milk Bar is a rare example of a 1960s Milk Bar still in almost original condition and still operating.
SIIR Criteria g) (Representativeness)	Bell's Milk Bar is representative of Milk Bars built in New South Wales during the mid 20th century.
Integrity/Intactness:	The Milk Bar and attached residence have a high level of integrity.
Assessment criteria:	Items are assessed against the State Heritage Register (SIIR) Criteria to determine the level of significance. Refer to the listings below for the level of statutory protection.

Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number	Gazette Page
Local Environmental Plan	Broken Hill Local Environmental Plan 2013	113	30 Aug 13		

Study details

Title	Year	Number	Author	Inspected by	Guidelines used
Broken Hill Community-Based Heritage Study	2008		Ray Anderson	Ray Anderson	Yes

