

Mallee Environmental Watering Projects Hattah Lakes Wetland System, Northwest Victoria Due Diligence Assessment Historical Archaeology



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Date of Completion: 8 October 2013

HV Project No: 4296

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Executive Summary

This historic archaeological due diligence assessment report has been prepared for proposed water management options – regulators and embankment banks – on the Hattah Lakes wetland system, North-west Victoria (Map 1).

A report on the Hattah Lakes Water Management Options has been prepared by GHD Pty. Ltd (August 2012), which details the concept development and design of necessary structures in order to provide appropriate environmental watering in the Hattah Lakes system.

Jo Bell Heritage Services (JBHS) has been commissioned by the Mallee Catchment Management Authority (Mallee CMA) to prepare a due diligence assessment report for historic archaeological values that may lie within an approximate 100m radius of the proposed structures, as identified in the GHD investigation.

The current report is not designed to be a detailed cultural heritage assessment report. It is simply a due diligence assessment of proposed structure locations to be used as a planning tool – to identify any heritage values within the relevant areas in order to feed back into the detailed design process for each of the structures.

There are two areas within the Hattah Lakes system where structures may be sited to provide the best outcome from environmental watering. These are:

- Chalka Creek North, and
- North Bitterang.

Parts of the Hattah Kulkyne National Park including the North Bitterang activity area has previously been assessed for historic archaeological sites.

A review of the Victorian Heritage Register (VHR) and the Victorian Heritage Inventory (VHI) shows no previously recorded historic archaeological sites within 100m of a proposed structure.

The site inspection was undertaken between 24 - 26 February 2013 by Jo Bell (JBHS) and Kenneth Stewart (TLM Indigenous Facilitator).

No new historic archaeological sites were identified within 100m of a proposed structure during the site inspection.

Management recommendations are provided in Section 7 and are reproduced below.

Recommendations

No previously recorded historic archaeological sites were identified within 100m of the activity area locations and no new sites were discovered during the site inspection.

No further areas of potential sensitivity for historic archaeological sites were identified within the activity area.

There is no requirement for further historic archaeological assessment for the areas considered in this report.

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1.0 INTRODUCTION

This historic archaeological due diligence assessment report has been prepared for proposed water management options – regulators and embankment banks – on the Hattah Lakes wetland system in Murray-Kulkyne Park and Hattah-Kulkyne National Park, North-west Victoria (Map 1). The Hattah Lakes system is one of six icon sites identified under the Murray-Darling Basin Ministerial Council's (MDBMC) The Living Murray initiative (TLM). The initiative is a response to concerns about the environmental and economic health of the River Murray system (MDBA 2010:1).

The works and measures program aims to improve the health of the River Murray system by making the best use of water for the environment. Watering of the Hattah Lakes area is a sub-project of the larger program.

1.1 Activity Description

A report on the Hattah Lakes Water Management Options has been prepared by GHD Pty. Ltd (August 2012), which details the concept development and design of necessary structures in order to provide appropriate environmental watering in the Hattah Lakes system.

Structures would include embankments on tracks, regulators and crossings, and culverts.

However, the current study is not being undertaken for these activities. It is simply a planning study to inform the detailed design process.

1.2 Sponsor (Commissioning Agency)

Jo Bell Heritage Services (JBHS) has been commissioned by the Mallee Catchment Management Authority (Mallee CMA) to prepare a due diligence assessment report for historic archaeological values that may lie within an approximate 100m radius of the proposed structures, as identified in the GHD investigation.

1.3 Owner / Occupier of Land Where the Activity Area is Located

The Hattah Lakes wetland system is located within Hattah-Kulkyne National Park and Murray-Kulkyne Park. Both parks are managed by Parks Victoria. The activity area lies within the municipality of the Rural City of Mildura.

1.4 Aims and Objectives of the Assessment

The current report is not designed to be a detailed cultural heritage assessment report. It is simply a due diligence assessment of proposed structure locations to be used as a planning tool – to identify any historic archaeological values within the relevant areas in order to feed back into the detailed design process for each of the structures (see Appendix 1 for project brief).

1.5 Cultural Heritage Advisor

The cultural heritage advisor commissioned to prepare this report is Joanne Bell, Director, Jo Bell Heritage Services Pty. Ltd. Jo has a BA (Hons) in Archaeology and over fifteen years professional experience in the cultural heritage industry, including the preparation of historic archaeological reports. The authors of this report are Bridget Grinter and Jo Bell. Bridget Grinter has a BA (Hons) in Archaeology and over 3 years experience in the cultural heritage industry, including historical archaeology.

1.6 Location and Description of the Activity Area

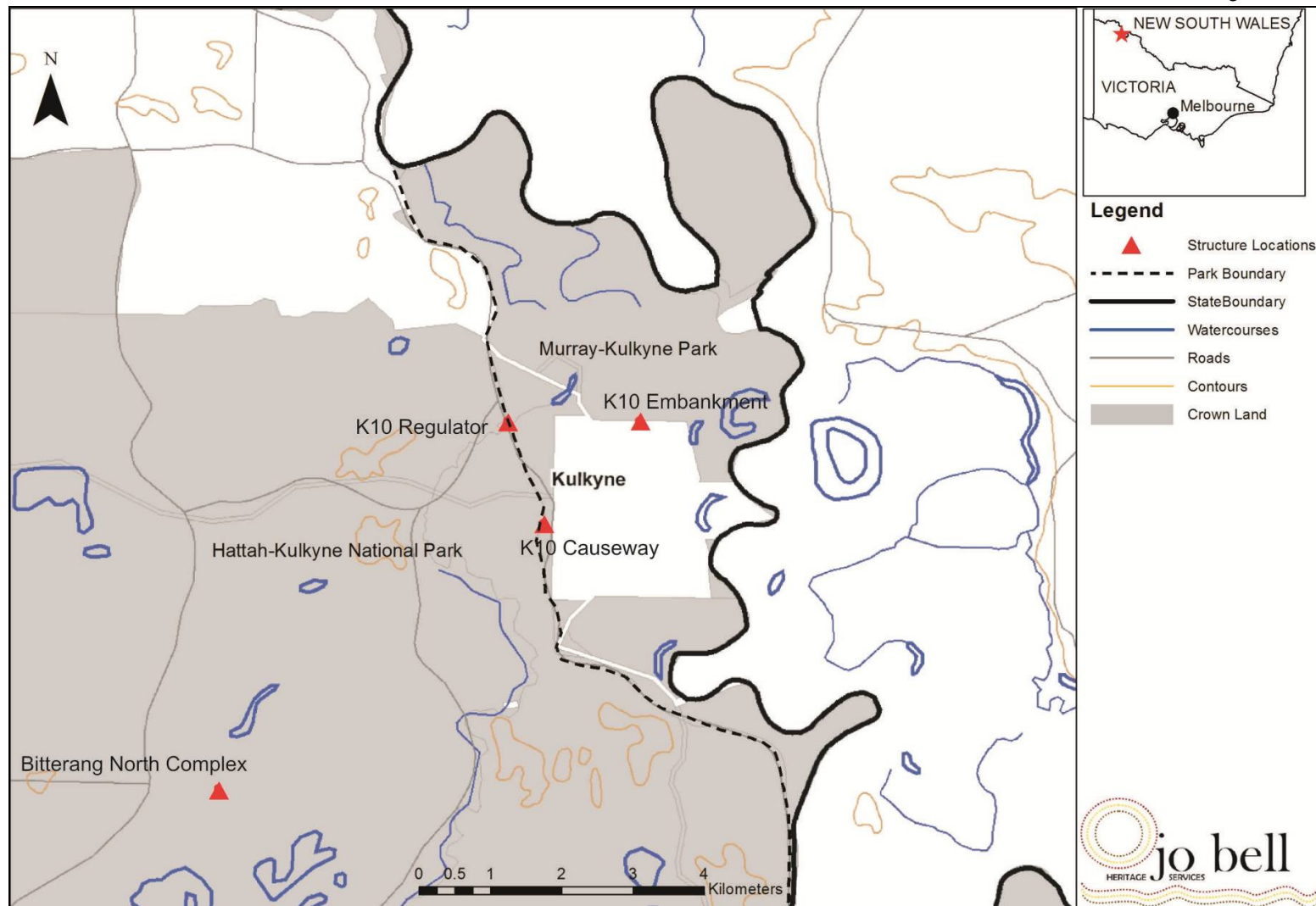
The Hattah Lakes wetland system is a system of about 20 shallow lakes on the floodplain of the Murray River approximately 100km south-east of Mildura. The lakes comprise a total area of 49,500 hectares and are located within the Hattah-Kulkyne National Park and Murray-Kulkyne Park. Twelve of the lakes are listed as a Ramsar Site. Hattah Lakes are listed as a significant ecological asset (SEA) in The Living Murray program (MDBC website accessed 4/4/13).

The lakes are fed by the River Murray via Chalka Creek (GHD 2012:1). The wetland system comprises shallow lakes, streams and temporary swamps bordered by riverine forest (MDBC website accessed 4/4/13) (see Map 1).

Within each of the two areas that have been highlighted for watering, a number of structures have been proposed for each area in order to provide for the management of water through the system.

There are two areas on the floodplain where structures may be sited to provide the best outcome from environmental watering. These are:

- Chalka Creek North, and
- North Bitterang.



Map 1: Hattah Lakes wetland system showing locations of proposed structures

1.6.1 Chalka Creek North

The Chalka Creek North Area comprises three separate locations. All locations are sited on crown land (Figure 1). The following description (Table 1) is taken from information provided in the GHD report (2012; Table 1), and other information supplied by GHD via Mallee CMA.

Name	Type	Top Width (m)	Eastings / Northings (GDA97)
K10 Regulator – Raak Crossing	Concrete Structure with earthen embankment and sheet pile cutoff wall combined with Embankment	840m	630797.541 / 6170259.148
K10 River Track Causeway	Embankment with box culvert and stop logs	720m	631302.847 / 6168829.524
K10 Embankment	Embankment with box culverts and stop logs	460m	632653.319 / 6170271.751

Table 1: Chalka Creek North structure locations (co-ordinates refer to the centre of each structure, be it a regulator, culvert or embankment)

1.6.2 North Bitterang Complex Area

The North Bitterang Complex Area comprises one location, sited on crown land (Figure 2). The following description (Table 2) is taken from the GHD (2012: Table 2) report and information supplied by GHD via Mallee CMA.

Name	Type	Top Width (m)	Eastings / Northings (GDA97)
Lake Bitterang Regulator	Regulator /Crossing and embankment under road	77m	626736.452 / 6165092.971

Table 2: North Bitterang structure locations (co-ordinates refer to the centre of each structure, be it a regulator, culvert or embankment)

1.7 Date and Location of Survey

The site inspection was conducted between 24 February and 26 February 2013. The site inspection was to cover a 100m radius of all structure locations. The methodology and results of the site inspection are presented in Section 5.

1.8 Existing Conditions

The activity area comprises four locations across two areas. The Chalka Creek North locations are situated on the border of the Murray-Kulkyne Park and Hattah-Kulkyne National Park, except for the K10 Embankment which is located on the border of Murray-Kulkyne Park and non-park land. The North Bitterang Complex Area is located within Hattah-Kulkyne National Park.

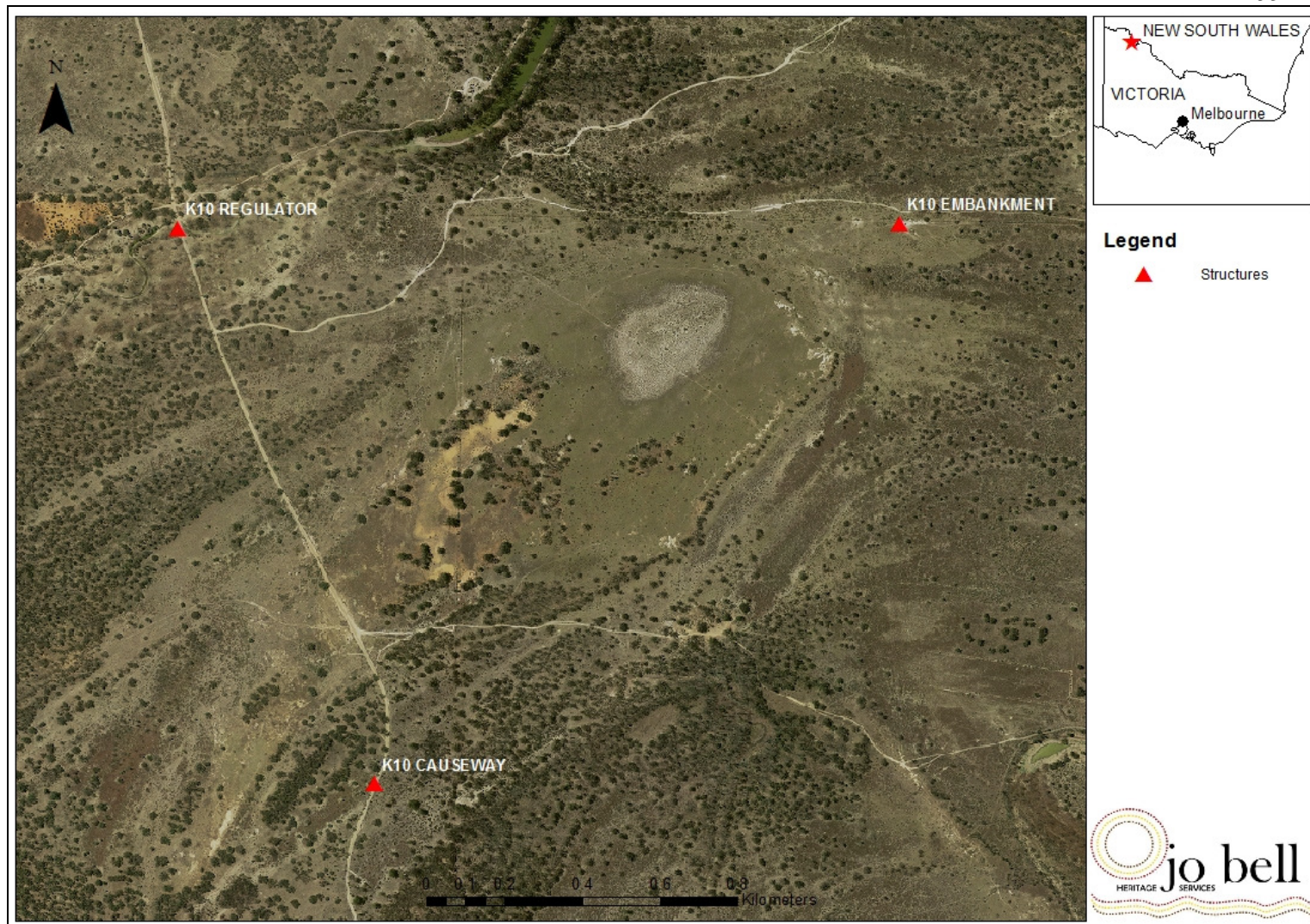


Figure 1: Chalka Creek North area showing proposed structure locations

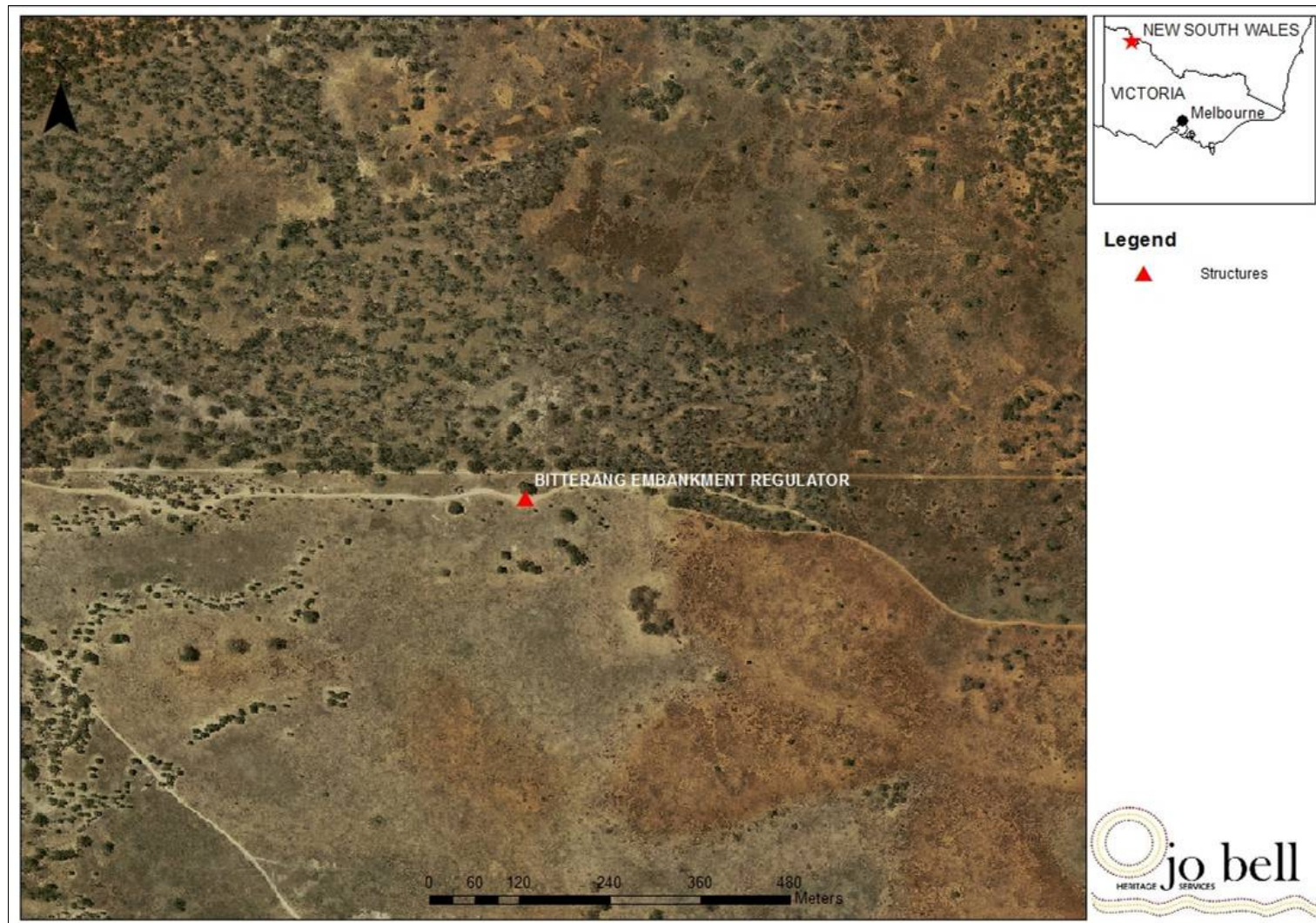


Figure 2: North Bitterang complex area showing proposed structure location

2.0 BACKGROUND INFORMATION

2.1 Geology & Geomorphology

The Hattah Lakes wetland system is located on a relatively flat floodplain, comprising a system of lakes linked by interconnecting anabranch creeks to the River Murray (MDBC website accessed 4/4/13).

The project area is predominantly situated on unnamed Holocene-aged alluvial deposits (Qa1), laid down during episodes of flooding of the lakes (DSE website accessed 12/4/13). The associated geomorphology of all areas consists of Riverine Plain Present Floodplain landform unit (4.1FDcfQ2-1) (DSE website accessed 12/4/13). Map 2 shows the stylised geology for the areas.

2.2 Climate & Hydrology

The climate of north-western Victoria is classified as semi-arid with hot summers and mild winters, and a low but reasonably uniform rainfall. Given the generally low relief, there is little climatic variation. Average annual rainfall recorded at Robinvale is 306.8mm (BOM Online, accessed 12/4/13). Droughts, or prolonged periods of low rainfall, are natural features of the Mallee (LCC 1987: Chapter 5).

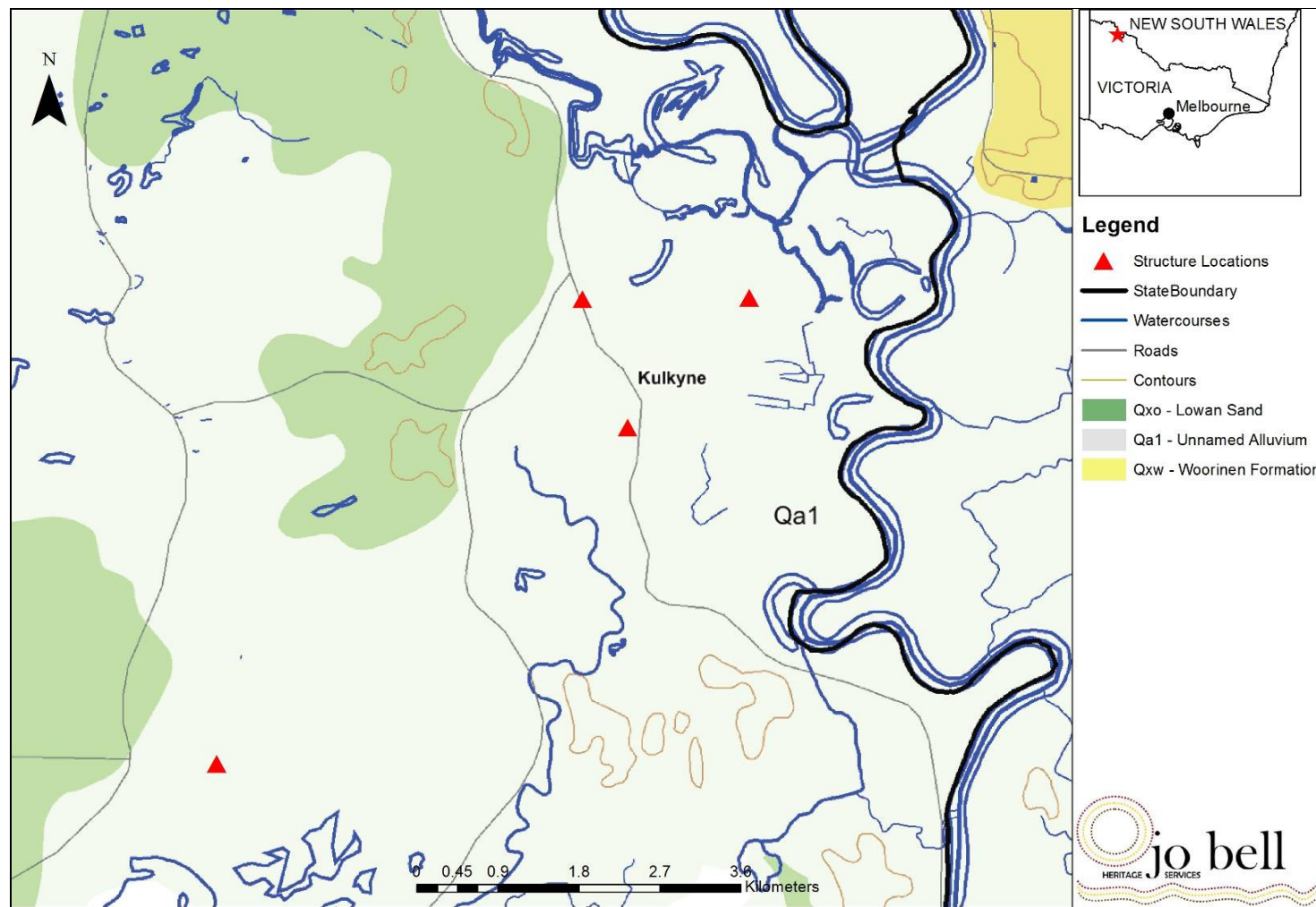
Very little climate data is available for the region within 50km of the activity area, so temperatures for Mildura are given. Mean maximum temperatures range from 32.1°C (January) to 15.3°C (July). Mean minimum temperatures range from 16.5°C (January) to 5.3°C (July) (BOM Online, accessed 12/4/13).

2.3 Vegetation

The activity area lies within the Robinvale Plains Bioregion. A variety of vegetation communities are found within the activity area, reflecting the specific micro-landforms and local hydrology of the different locations. The North Bitterang area supports Woorinen Mallee vegetation (EVC 824) which is associated with calcareous dunefields; and also Riverine Chenopod Woodland (EVC 103) (DSE Biodiversity Maps, accessed 12/4/13). The K10 Regulator site contains Riverine Grassy Woodland (EVC 295). The K10 Embankment area supports Riverine Chenopod Woodland and Grassy Riverine Forest (EVC 106). The K10 Causeway site comprises Riverine Grassy Woodland and Riverine Chenopod Woodland.

Black box and chenopod woodland are located in all areas of the Hattah-Kulkyne National Park, although River Red Gums are confined to areas around the lakes, owing to their greater water requirements (MDBC website accessed 12/4/13). The drier parts of the Hattah Lakes system (away from the lakes and floodplains) supports Mallee eucalyptus species with a native grass and sedge understorey (MDBC website accessed 12/4/13).

The EVC mapping does not appear to indicate any major changes from the pre-1750 condition to the present day. There have been no wildfires or prescribed burns since 1970 (DSE Biodiversity Maps accessed 12/4/13).



Map 2: Geology of the Activity Area (source: GeoVic Online, accessed 12/4/13)

3.0 HISTORICAL BACKGROUND

3.1 Pre-Contact period

Prior to European colonisation, Aboriginal people occupied all aspects of the Victorian landscape. However, there is some conjecture amongst the usual references, about the identity of traditional owner groups from the region.

Howitt (1904) has indicated that the *Leitchi-Leitchi* (Latji Latji) people occupied the area around Kulkyne on the southern bank of the Murray. Tindale (1974) suggests that Latji Latji were located along Chalka Creek to Mildura and at Kulkyne, with members of Ngintait people largely occupying the southern bank of the Murray from above Paringa to near Mildura, at Ned's Corner and Salt Creek in NSW. Clark (1990:414) records a similar area for *Ngindadj* (Ngintait), citing correspondence between Musgrove of Tareena Police Station and R.H. Mathews during the late 1890s (among others). According to William Thomas, *Yariyari* (Nyeri Nyeri or Jarijari) were located about 120 miles beyond Swan Hill towards or near South Australia (cited in Clark 1990:397), although Tindale places them somewhat to the south near Annuello and Pine Plains (1974:205). *Wergaia* speakers are recorded to the south of Ngintait and Latji Latji by Clark (1990:353), although they attended ceremonies with Latji Latji clans and were linked through marriage (Clark 1990:338). Cameron in Clark (1990:394) says that 'Itha-itha, Wathi-wathi, Muthi-muthi, Ta-ta-thi and Keramin were different languages, a member of any one of them spoke two or three, and could understand more'. He also believed that Dadi Dadi were closely related to their northern neighbours, the Barkinji people and shared rituals and ceremonies in common (Cameron 1899:277 in Clark 1990:394). By 1863, according to Mr J. Green, in a report to the Aboriginal Protectorate, there were 50 surviving Aboriginal people from the Kulkyne area (Smyth 1878:43).

It should be acknowledged that contemporary Aboriginal individuals do not necessarily accept the information contained in historical sources.

3.2 Squatting / Pastoral era

According to Spreadborough & Anderson (1983), the northern end of the Hattah Lakes system in which the activity area falls was originally within the Gayfield/ Kulkyne pastoral run, which was gazetted in 1849 with an estimated area of 64,000 acres (Figure 3). It was licensed three months prior to the NSW Orders-In-Council of 1847. This was taken up by James Crawford in 1847. In 1851 T.J. Keene & R. Orr acquired both the Kulkyne and the adjoining Mournpool runs. In 1856 Keene's interest was transferred to Richard Youl. However, by 1864 George Urquhart had purchased the lease. His tenure was short-lived and he sold the run in 1866 to Henry Miller M.L.C and Donald Leslie, who were the last rateable owners (Ryan 1979:16). In 1883 the licence was forfeited.

All the 'best land' had been taken up by the 1870s and with the threat of a land tax on large estates (introduced in 1877), many squatters had over-reached themselves and were heavily in debt. 'By the beginning of the 1880s the number of runs had been halved and the area of pastoral occupation reduced by two-thirds. Leasehold was then limited to the 'poor' country in the Mallee (Dingle 1984:63). At the same time, the explosion of the rabbit population meant that the Mallee region 'had degenerated into a gigantic rabbit warren and was virtually worthless for grazing' (Dingle 1984:110).

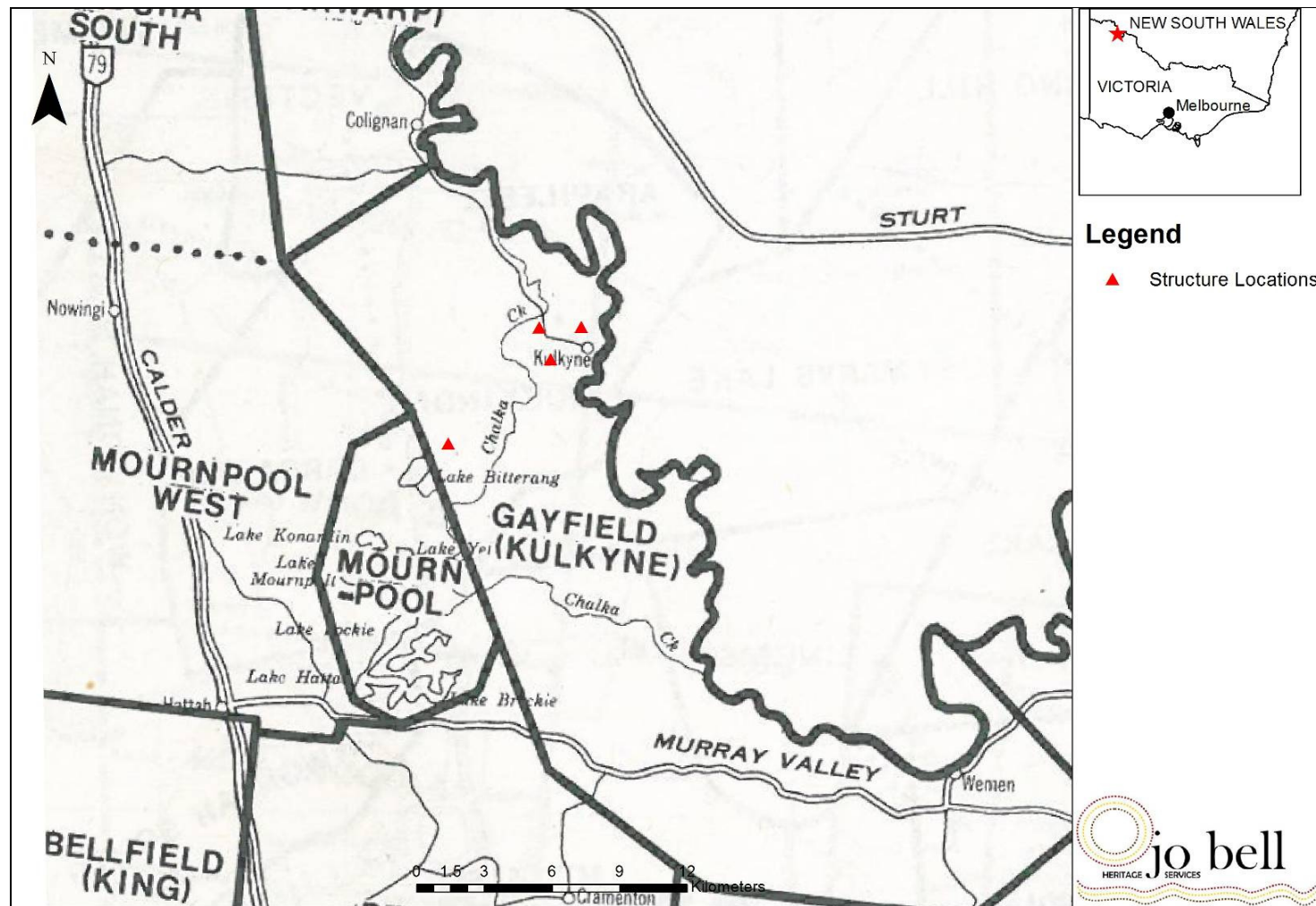


Figure 3: Pastoral Runs and Stations in the Hattah Lakes Region (source: Spreadborough & Anderson 1983)

3.3 Transport

According to the LCC (1987:45), 'riverboats made a significant contribution to the development of the northern Mallee, being the main form of transport for produce and supplies in and out of the region between 1853 and the 1880s – that is, prior to the major expansion of the railway system'. The railway line to Mildura was completed in 1903.

The Millewa South railway line was constructed in 1929 for the purpose of closer settlement of the Sunset Country but was later abandoned. The line was generally used for transporting salt and gypsum (DCNR 1996:20).

3.4 Closer Settlement and Agriculture

During the 1860s new legislation (Land Acts) resulted in some of the original pastoral lease grants becoming freehold blocks. The substantial pine log constructed, Kulkyne Homestead was built on a 320 acre freehold parcel around 1867 (Holmes 2009:8). A woolshed, sheep wash, several huts and sheds were also constructed (Bardwell 1980:8). The homestead underwent refurbishment in 1894 (*Ibid*).

According to the Sunraysia Daily (Blayde 1933) by 1871 Kulkyne Station was managed by a Mr Ross, who along with his family was apparently living there. An Aboriginal King Plate or gorget engraved with 'Mr Ross, King of Kulkyne and Mornpool' and dated circa 1865 exists as evidence of his tenure (Holmes 2009:10). A King Plate was presented by European settlers to Aboriginal people as gifts from as early as 1820 with the recipient often adopting the name of their employer, in this case, Mr Ross (Troy 1993:7). The plates were used to cement relationships between the groups and also exhibited recognition of services rendered or the expectation of future services (Troy 1993:7). The Kulkyne King Plate has a handmade chain and unusual pointed base giving it a shield-like appearance (Troy 1993:50).

Land degradation caused by drought, overgrazing and rabbit infestation led to the decline of Kulkyne station, a common problem in the Mallee between 1877-1882 and 1895-1902 (Bardwell 1980:8). Numbers of sheep kept on the run rose from an initial 8,000 in 1847 to 25,000 in 1877, however by 1882 severe drought had wreaked its toll and there were no sheep at all on the property (*Ibid*).

Due to the declining health of Miller his four Mallee blocks with the remaining leasehold of Kulkyne was sold to Alexander McEdward in 1887 (Holmes 2009:12). In 1910 the run, consisting of 120,000 acres including the 320 acre homestead block was taken over by the Australian Mercantile and Lands Co. with Charley Thompson as manager (*Ibid*). The station was subsequently subdivided into three blocks in 1913, and the land was leased out (*Ibid*). The company retained eight miles of Murray River frontage extending south twenty-five miles into Raak country (*Ibid*). The homestead was of little use to the company so Mr Thompson purchased the 320 acres freehold and homestead and secured a crown attachment of 1000 acres (*Ibid*). The station changed hands several times after Charley Thompson's death in 1933 but remained largely intact until Robert Edward Byrne purchased several allotments including the homestead in 1940 (*Ibid*).

During World War II the outbuildings, along with pit sawn fencing materials were used for charcoal production because of severe fuel shortages (*Ibid*). The property changed hands in 1945 and again in 1955 to Harold Alexander of Hattah who is cited as the present owner by Ryan (1979:42). Since 1955 there has been no record of either manager or owners occupying the homestead (Ryan 1979). Agistment or leased grazing was permitted in

Kulkyne State Forest between 1957 and 1974 (Bardwell 1980:8). The homestead was destroyed by fire in 1983 (Holmes 2009:15).

3.5 Timber Cutting

The Kulkyne State Forest was formed in 1919, when 96 hectares of land was dedicated, and another 3,012 hectares were added in 1924 (Bardwell 1980:13). Timber from the Hattah-Kulkyne area was used by locals in the construction of buildings and to fuel the riverboats that brought supplies to the region (*Ibid.*). Between 1924 and 1941 most of the mature trees were taken to supply fuel for the irrigation pumping station at Mildura (*Ibid.*). Red gum from the forest was used for railway sleepers and native pine was taken for posts and trellises (*Ibid.*). In 1941, under pressure by conservation interests Kulkyne Forest became a game reserve. During the same period demand for wood resources plummeted in the area, and timber cutting virtually ceased within the forest (*Ibid.*).

3.6 National Park

A campaign by the Victorian National Parks Association and the Sunraysia Field Naturalists' Club culminated in the declaration of the Hattah Lakes National Park in 1960 (*Ibid.*). The new park was 17,800 hectares in size and only included part of the Kulkyne Forest, however much larger areas were protected in 1980 with the formation of Murray-Kulkyne Park (1550 hectares) and Hattah-Kulkyne National Park (48,000 hectares) (*Ibid.*; LCC1987:47).

3.7 Historic Plans

The State Library of Victoria, the Public Records Office of Victoria and the Central Records Office (TPC online) were searched for available historical plans. A 1933 plan of the Parish of Kulkyne shows that the Chalka Creek sites are located within Murray-Kulkyne Park (Figure 4). However the K10 Embankment site straddles the boundary between the Park and a parcel belonging to E.R. Uebergang.

A plan (n.d.) of Hattah Lakes National Park and Kulkyne Forest shows the Bitterang structures to be north of Lake Bitterang within an area of 'State Park' (Figure 5). To the west of the lake are the inscriptions 'Good Flat Open Rolling Mallee' and 'Scrub Pine and Mallee'. Kulkyne Forest is to the east of the state forest, and Hattah Lakes National Park is situated to the west. An embankment is shown to the east of Lake Bitterang.

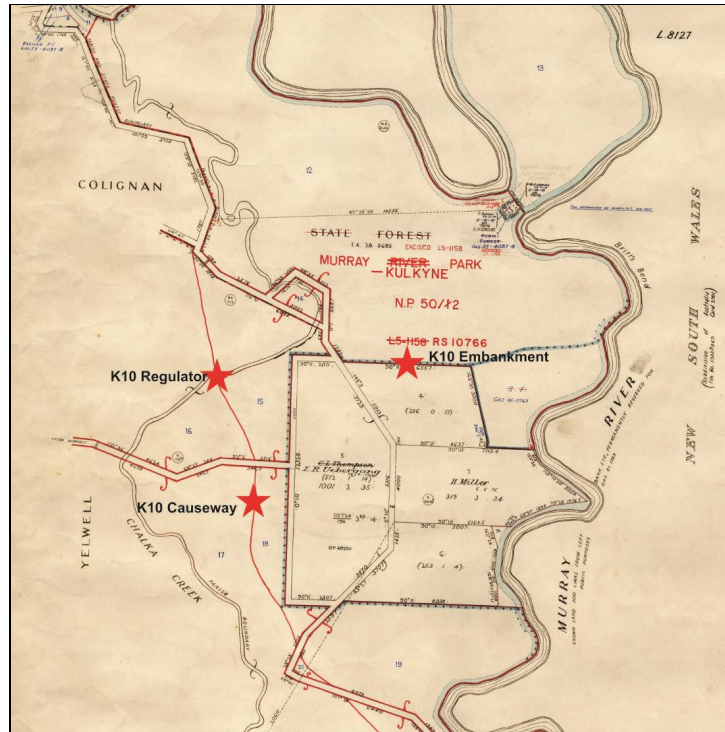


Figure 4: 1933 Plan – Kulkynne, County of Karkaroc (source: TPC online accessed 12/4/13: Plan 3601 Sheet No. K158(2))

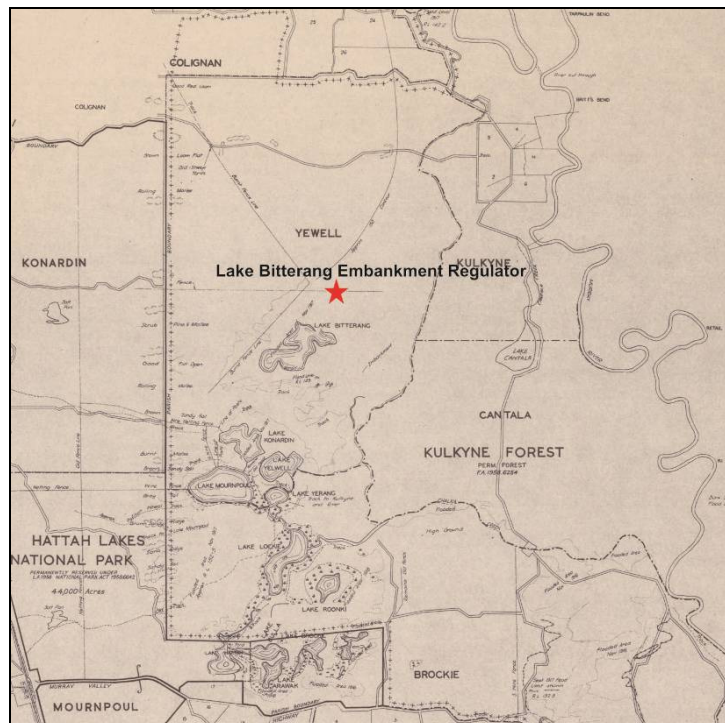


Figure 5: A plan of Hattah Lakes National Park and Kulkynne Forest (n.d.) (source: TPC online accessed 12/4/13: Plan: N.P. 6/2)

4.0 ARCHAEOLOGICAL BACKGROUND

4.1 Previous Archaeological Investigations

Heritage Victoria was contacted in relation to previous archaeological investigations that have been undertaken in the region of the Hattah Lakes system. The results indicate that parts of the Hattah Lakes have been the subject of historical and archaeological investigation in the past. In 1979 Ryan produced a paper researching the history of Kulkyne Station. An historic report was produced by Bardwell (1980) giving an overview of historical land practices in Hattah-Kulkyne NP and Murray-Kulkyne Park. Ward (1986) undertook a review of historical sites in the Mallee region. In 2002 Edmonds undertook a desktop assessment of historical sites in the Hattah Lakes, which could not be accessed but the results of which are found in later reports by the same author. Edmonds & Brooke (2007) completed an historic cultural heritage investigation of various water regulation structures in the parks. They discovered two new historical places (H7328-0007 & H7328-0008) during their survey. A management project undertaken by SKM for historic cultural heritage in the Hattah Lakes system included a survey of specific areas in the parks (Holmes 2009). According to the author six historic sites were recorded during this study (H7328-0009; -0011; 0012; -0013; -0015; -0016), however this is ambiguous as earlier in the report he says that site H7328-0011 – H7328-0013 were recorded previous to that study.

4.2 Registers of Cultural Heritage Places

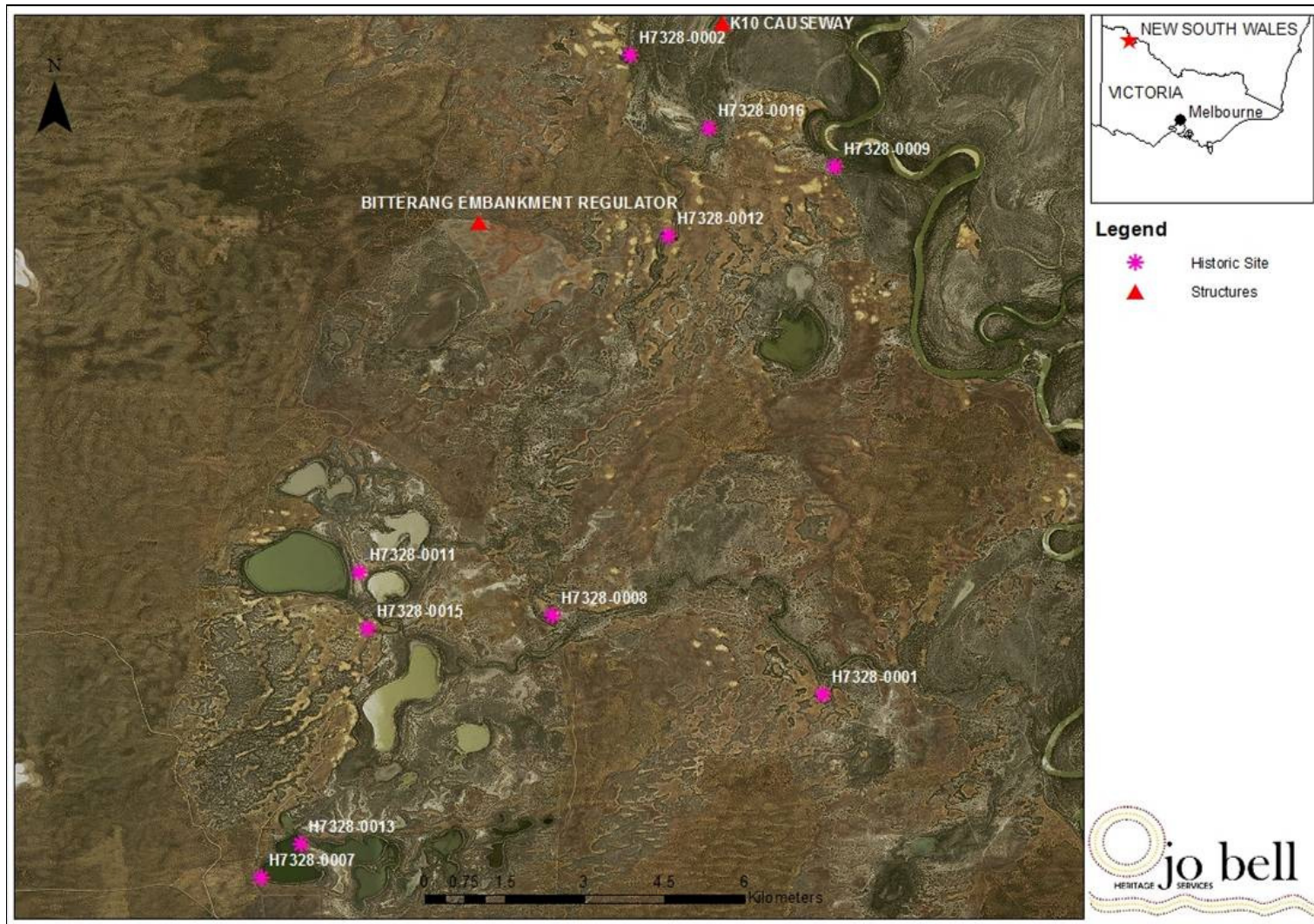
The Victorian Heritage Register (VHR) and Victorian Heritage Inventory (VHI) form part of the Victorian Heritage Database (VHD), maintained by Heritage Victoria. Also listed on the database are National Trust registrations and items on the Victorian War Heritage Inventory. These were searched on 1 May 2013 by Bridget Grinter.

There are ten historic sites recorded in the Hattah Lakes system listed on the VHI (Map 3). There are a further two National Trust sites listed on the VHD. Although Kulkyne Homestead is not situated in either of the parks, it is relevant to this study.

The project brief required that only a 100m radius of the proposed structures be made. While the eleven sites lie outside the 100m boundary, they are close by and are therefore included to provide context for the historic archaeological record. These are detailed in Table 3.

The Australian Heritage Places Inventory – the National Heritage List, Commonwealth Heritage List and World Heritage List - and the Mildura Shire Heritage Overlay, were also reviewed. Four sites occurring within the Hattah Lakes region were registered in the Mildura Shire overlay:

- * HO117 - Brighton's Block,
- * HO118 – Brighton's Bridge,
- * HO119 - 'Florence Annie' wreck, and
- * HO120 – Mahon Homestead Site.



Map 3: Historical sites registered on the Heritage Inventory within the Hattah Lakes system

VHD Number	Place Name	Place Type	Listing Authority
H7328-0001	Hattah-Kulkyne Military Internment Camp	Death / Internment	Victorian Heritage Inventory
H7328-0002	Moonah Track & Wattle Track Charcoal Pits	Natural Resources	Victorian Heritage Inventory
H7328-0007	Lake Hattah Pump Station	Water Supply	Victorian Heritage Inventory
H7328-0008	Chalka Historic Scatter	Pastoralism	Victorian Heritage Inventory
H7328-0009	Nowingi Historic Scatter	Pastoralism	Victorian Heritage Inventory
H7328-0011	Second Mornpool Homestead Site	Pastoralism	Victorian Heritage Inventory
H7328-0012	Beltons Bridge	Pastoralism	Victorian Heritage Inventory
H7328-0013	Hattah Nature Road Site	Pastoralism	Victorian Heritage Inventory
H7328-0015	Mahons Burial Marker	Phase of Life	Victorian Heritage Inventory
H7328-0016	Kulkyne Drop Log Stockyards	Pastoralism	Victorian Heritage Inventory
B2627	Kulkyne Homestead	Homestead Building	National Trust
B2628	Kulkyne Grave	Isolated Grave / Burial Site	National Trust

Table 3: Previously recorded Historical places within the Hattah Lakes system

4.0 SITE INSPECTION

5.1 Project Aims

The aim of the project was not to carry out a detailed cultural heritage assessment. It was simply to prepare a due diligence assessment of proposed structure locations to be used as a planning tool – to identify any historic archaeological values within the relevant areas in order to feed back into the detailed design process for each of the structures.

5.2 Field Methodology

The site inspection was undertaken between 24 February and 26 February 2013 by Jo Bell (JBHS) and Kenneth Stewart (TLM Indigenous Facilitator).

In accordance with the project brief, an approximate 100m radius of each proposed structure location was inspected on foot for potential historic archaeological values.

Any identified heritage values were to be provenanced using a differential GPS, photographed and described. Site cards were then to be submitted to Heritage Victoria as required.

Details of the site inspection of both areas are provided in the next section, including survey coverage and ground surface visibility.

5.3 Results

5.3.1 Chalka Creek North

The three structure locations that formed the Chalka Creek North activity area resulted in no historic features being identified. Plates 1-3 provide context for the areas. Site inspection details are found in Table 4.



Plate 1: K10 Regulator location facing south (J. Bell 24/02/13)



Plate 2: K10 Causeway location facing south (J. Bell 24/02/13)



Plate 3: K10 Embankment location, facing east (J. Bell 26/02/13)

Structure Name	Structure Type	Ground Surface Visibility / Description	Places Identified	Further Area of CHS identified
K10 Regulator – Raak Crossing	Concrete structure with earthen embankment and sheet pile cutoff wall combined with embankment	Good to excellent ground surface visibility, track is capped, floodplain with grey clays	None	None
K10 River Track Causeway	Embankment with box culvert and stop logs	Good to excellent ground surface visibility, track is capped, floodplain with grey clays	None	None
K10 Embankment	Embankment with box culverts and stope logs	100% ground surface visibility on track- not capped. Off track 40%visibility- pigface, lignum, spars and isolated mature Black Box of no great age.	None	None

Table 4: Results of Chalka Creek North site inspection of historical archaeological sites within 100m of proposed structures

5.3.2 North Bitterang

No historic archaeological sites were located at the North Bitterang location (Plate 4). The area contains an existing embankment that was constructed in accordance with Cultural Heritage Management Plan 10455 prepared under the *Aboriginal Heritage Act* 2006. The entire area has been disturbed by land clearance and subsequently by construction of the embankment. The area is significantly disturbed by these processes.



Plate 4: North Bitterang activity area, facing west (J. Bell 26/02/13)

5.4 Discussion and Recommendation

No historic archaeological sites were discovered during the site inspection. No areas of potential sensitivity for historic archaeological sites were identified during the site inspection.

5.5 Interpretation and Discussion

No historic archaeological sites were recorded within 100m of a proposed structure during the site inspection.

No further areas of potential sensitivity were identified for historic archaeological sites during the site inspection.

5.0 LEGISLATIVE REQUIREMENTS

There is both State and Commonwealth legislation that relates to cultural heritage in Victoria.

Commonwealth Legislation

The Australian Heritage Council was established by the *Australian Heritage Council Act 2003*. This replaced the Australian Heritage Commission as the government's independent expert advisory body on heritage matters when the new Commonwealth heritage system was introduced in 2004 under amendments to the *EPBC Act 1999 (Environment and Heritage Legislation Amendment Act (No.1) 2003)*.

The Amendment Act also established the National Heritage List and the Commonwealth Heritage List.

The National Heritage List and Commonwealth Heritage List is compiled and maintained by the Department of the Sustainability, Environment, Water, Population and Communities and can be searched using the Australian Heritage Database.

State Legislation

The Heritage Act 1995 is administered by Heritage Victoria and provides for the protection and conservation of places and objects of cultural heritage significance and the registration of those places and objects either on the Victorian Heritage Inventory or the Victorian Heritage Register.

A Consent from the Executive Director of Heritage Victoria is required to disturb or destroy historic archaeological sites, places, buildings or structures listed on the Victorian Heritage Inventory.

A Permit from the Executive Director of Heritage Victoria is required to modify, disturb or destroy historic archaeological sites, places, buildings or structures listed on the Victorian Heritage Register. Permit applications must be approved by the Heritage Council.

Fees apply for the issue of Consents and Permits and a conservation bond is required for artefacts from an historic archaeological site. The issue of a Permit or Consent is not automatic and will be subject to the provision of adequate supporting documentation.

All historic archaeological sites in Victoria older than 50 years are protected under *the Heritage Act*, regardless of whether they are listed on a register or list. It is an offence to knowingly disturb, damage or excavate an historical archaeological site without obtaining the appropriate Consent from the Executive Director, Heritage Victoria.

6.0 MANAGEMENT RECOMMENDATIONS

Since the aim of the current study was to simply identify cultural heritage values within 100m of a proposed structure in order to feed into the detailed design process, detailed management recommendations cannot be made in relation to development or harm.

However, since the assessment found no historic archaeological sites or areas of potential sensitivity for historic archaeological sites within the proposed activity areas, there is no requirement for further historic archaeological assessment for the areas considered in this report.

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Legislation – Victorian

- *The Heritage Act 1995*
- *The Aboriginal Heritage Act 2006*

Legislation – Federal

- *Australian Heritage Council Act 2003*
- *Environment, Planning and Biodiversity Conservation Act 1999*
- *Environment and Heritage Legislation Amendment Act (No. 1) 2003*

Websites

- Bureau of Meteorology - www.bom.gov.au/
- DSE Interactive Maps - www.dse.vic.gov.au
 - Includes: Explore Victoria Online-GeoVic
DSE Biodiversity Interactive Maps
- Murray Darling Basin Commission (MDBC) website -
http://www2.mdbc.gov.au/subs/dynamic_reports/foundation_report/4.html

Historic Plans – SLV and VAC

- 1933 Parish of Kulkyne, County of Karkarooc. Plan 3601, Sheet K158(2)
- N.d. Hattah Lakes National Parks and Kulkyne Forest. Plan NP 6/2.

Registers

- Victorian Heritage Register
- Victorian Heritage Inventory
- National Heritage List
- Commonwealth Heritage List
- World Heritage List
- National Trust (Victoria) Register
- Mildura Local Planning Scheme – Heritage Overlay

8.0 APPENDICES

Appendix 1: Project Brief

PROJECT DETAILS



1. PROJECT DETAILS:

Project Name	Heritage assessment for Mallee Environmental Watering Projects		
Project No	1582-2-100	Contract No	12.1074
Project Manager	Nicholas Sheahan		

2. EXECUTIVE SUMMARY / PROJECT ABSTRACT

Indigenous and non-indigenous Cultural Heritage Assessments are required to be undertaken by a suitably qualified archaeologist to inform the Mallee CMA and key stakeholders of the likely impact of proposed works and measures on heritage values at each of five sites (sub projects). The outcome of these five assessments will help inform the design process.

3. INTRODUCTION / BACKGROUND / RATIONALE

A heritage assessment of both indigenous and non-indigenous cultural heritage is required for each of the five sites (sub projects) below. Concept designs have been developed for each of these sub projects which identify the location of each structure within the project. Identifying the heritage values present up to 100m from the currently proposed structures will provide feedback to the detailed design process for each of these structures. Access tracks to structures are not to be assessed at this point in time.

The five sub projects are:

- 1 Watering the Lindsay island Floodplain
- 2 Watering the Wallpolla Island Floodplain
- 3 Watering the Hattah Lakes – Chalka Cteek North 2 prev. disturbed footprints.
- 4 Watering the River Redgums Sites – Burra Creek
- 5 Watering the River Redgums Sites – Belsar/ Yungera

4. PROJECT OVERVIEW:

Outcomes

The draft Mallee Regional Catchment Strategy 2012-18, 20 year objectives applicable to this project is to protect and enhance the environmental values of the Mallee's watercourses, their associated riparian ecosystems and in turn the social, economic and environmental services that they provide to the community.

Target Audience (if appropriate)

Project Control Board - including Mallee CMA CEO, Department of Sustainability and Environment (DSE) Co-ordinators, DSE Land Managers, Parks Victoria, Murray Darling Basin Authority (MDBA), Aboriginal Affairs Victoria (AAV), Department of Sustainability and Environment Water People and Communities (DSEWPac).

PROJECT DETAILS

Objectives/Aims

To identify European and Indigenous cultural heritage values at proposed structure locations associated with the proposed works and measures, to provide feedback to the design process.

Outputs

Five heritage assessment reports submitted to the Mallee CMA project team.

5. PROJECT APPROACH/REQUIREMENT

Task 1 – Project inception

A project inception meeting will be convened following acceptance of this proposal. The meeting will be used to confirm the work plan outlined below. A data request will also be made, and key organisational contacts related to the project will be defined. It is proposed to undertake the inception meeting via teleconference unless specifically requested otherwise by the client (additional cost to be identified in tender response).

Task 2 – Desktop assessment

For each sub-project, a desktop assessment of known indigenous and non-indigenous heritage values within 100 m each proposed construction site is required. This is to include searches of the Victorian Aboriginal Heritage Register and other relevant databases, as well as a description of the geographic region and the results found.

Task 3 - Site walkover and inspection

For each sub-project, an on-site inspection for heritage values at each proposed construction site is required, to assess for unrecorded heritage values. No sub-surface testing is required as part of this project.

Task 4 - Preparation and submission of site-cards or equivalent

All unrecorded heritage values or artefacts identified by these assessments should be registered according to legislative requirements.

Task 5 – Prepare draft Final Reports

Draft Final Reports will be compiled and submitted to the Mallee CMA for comment. Each sub-project should be presented as a discrete "stand-alone" report.

Task 6 – Submit Final Report

Final Reports will ensue based on one set of consolidated comments from the Mallee CMA.

Sub-project 1 - Watering the Lindsay Island Floodplain, is required to be completed first and presented in draft form to the Mallee CMA before undertaking the remaining 4 sub-projects, as the outcomes from sub-project 1 are required to be delivered earlier. Refer to Item 8 MILESTONES for further detail.

A cost estimate and schedule to undertake the heritage assessment for the proposed environmental works and measures (sub-projects) is requested.

