



**REPORT OF AN ABORIGINAL HERITAGE
SURVEY FOR THE GREAT NORTHERN
HIGHWAY: BINDOON BYPASS: IN THE
YUED NATIVE TITLE CLAIM AREA
(WC1997/071), WESTERN AUSTRALIA**

*A report prepared for the GNH Muchea to Wubin
Integrated Project Team on behalf of Main Roads
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DISCLAIMER

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***Note:** This report, in terms of its assessment under section 5 of the Western Australian Aboriginal Heritage Act (1972), should be read in conjunction with the archaeological report by O'Reilly (2018).

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MAPPING

Datum Used: GDA 1994 MGA Zone 50. Handheld GPS Unit Garmin 64ST (+/- 10m)

GLOSSARY OF TERMS

The Proponent – Main Roads Western Australia
The Consultant – Brad Goode & Associates Pty Ltd
The project – Bindoon Bypass - Great Northern Highway upgrade, Muchea to Wubin, Western Australia
The Act – Western Australian Aboriginal Heritage Act (1972)
ACMC – Aboriginal Cultural Material Committee
AHA – Western Australian Aboriginal Heritage Act (1972)
AHIS – Aboriginal Heritage Inquiry System
Arup – Arup Pty Limited
ASJV – Arup Jacobs Joint Venture
BGA – Brad Goode & Associates Pty Ltd
BP – Before Present
CHMP – Cultural Heritage Management Plan
DPLH- Department of Planning, Lands and Heritage
DAA – Department of Aboriginal Affairs (former)
DPAW – Department of Parks and Wildlife
DBCA – Department of Biodiversity Conservation and Attractions
GNH – Great Northern Highway
GPS – Global Positioning System
Ha – hectares
HIS – Heritage Information Submission
ID – Identification (DPLH ID number for sites, places and reports)
IPT – Integrated Project Team
Jacobs – Jacobs Group (Australia) Pty Ltd
JHA – Job Hazard Analysis
Km – kilometres
MRWA – Main Roads Western Australia
NTC – Native Title Claim
SLK – Straight Line Kilometre (Main Roads unit of measurement)
SWALSC – South West Aboriginal Land & Sea Council
Yued – Yued WC1997/071 Native Title Claim group

EXECUTIVE SUMMARY

The Great Northern Highway (GNH) Muchea to Wubin Integrated Project Team (ITP) on behalf of Main Roads Western Australia (Main Roads) is facilitating planning for a bypass road around the town of Bindoon which is located in the Yued WC1997/071 NTC Area.

To ensure compliance with the Western Australian Aboriginal Heritage Act (1972) Main Roads has commissioned Brad Goode and Associates Pty Ltd (BGA) to conduct a Site Identification Aboriginal Heritage Survey of the Bindoon Bypass project.

The Bindoon Bypass project survey area is defined in two sections BB-A and BB-B. The corridor runs to the west of Bindoon for approximately 45km with a variable width within which the road will be constructed. Specifically BB-A is located between chainages 51150-59500 and BB-B is located between chainages 59500-97350 (the Survey Area).

For BB-A a 100% coverage is required and for BB-B a sample method was adopted based upon the results of a Due Diligence Desktop Risk Assessment which identified high risk areas of unaltered and unsurveyed land and in particular where the alignment intersects a number of watercourses, some of which are registered as Aboriginal heritage sites (see Goode & McGann 2018).

The Bindoon Bypass project is required to improve road safety in the town and to provide heavy haulage vehicles with a viable alternative to travel north and to not have to climb the Bindoon Hill which has unsafe vertical geometry.

In relation to the survey area, a search of the DPLH Aboriginal Sites and Places Register conducted on 7th November 2017 revealed that **3 registered sites** and **9 other heritage places** have DPLH extents that overlay the survey area (see Table 1 and Appendix 1).

Two of these heritage places are **archaeological**, Place ID 3528 Burroloo Well and Place ID 22027 Udumung Brook Artefact 1, and will be reviewed in the accompanying archaeological report by O'Reilly (2018).

The remaining 3 sites and 7 other heritage places are **ethnographic** and are all watercourses that have mythological significance to the Yued people.

The actual watercourse that intersects the survey areas is two branches of the Place ID 20650 Lennard Brook near Gray Road at Lot 18, 20, 25, 103 & 104 and for Site ID 20008 Gingin Brook Waggy Site which is a restricted site that has a large administrative DPLH boundary placed over the survey area. The site intersection area is located near Gray Road on Lots 18, 20 and 21 (BB-A survey area), and on Lots 25, 37, 103 and 104 (BB-B survey area).

The remaining ethnographic sites and places all share the same contiguous DPLH boundary as part of Site Complex ID #42 which groups a number of watercourses together as they share the same mythological significance. This site complex comprises of 2 registered sites, 5 lodged places and 2 stored data places (see Table 1 in Archival Research).

Main Roads will be required to seek consent under Section 18 of the AHA to use the land that is located within the extents of these registered sites and lodged heritage places.

It is recommended that DPLH should consider addressing the confusing situation of multiple site/place names for one water course system, by either amalgamating the data into one combined site or separating individual sites/places into their actual watercourse locations.

As a result of ethnographic consultations held with 12 representatives of the Yued WC1997/071 Native Title Claim group on the 13th and 14th of March 2018, **no new** ethnographic sites of significance as defined by Section 5 of the AHA were identified within the Bindoon Bypass BB-A and BB-B survey areas.

During the ethnographic consultations of the northeast portion of the BB-B survey area, the Yued representatives determined that the proposed crossing of Udumung Brook at 420182mE 6550968mN was a significant habitat for turtles and echidnas. The Yued group advised that a span bridge design is their preferred option at this crossing rather than culverts as it would require less clearing, excavation and disruption to the underground stream. It was further requested that the Yued be given an opportunity to relocate turtles to the Wannamal Wetlands prior to the works occurring at the Udumung Brook. The Udumung Brook was considered generally significant in relation to Waugal beliefs but no data was given in relation to creation myth apart from statements that they believed that all watercourses were home to and created by the Waugal however there was no request from the group at the time of the survey to report the Udumung Brook under the AHA.

In the northern section of the BB-B survey corridor, the proposed alignment crossing an unnamed tributary and wetland southwest of Bindoon Moora Road between Kangaroo Gully Road and Pines Road (unmade road) was identified as a heritage constraint by the Yued people consulted. The Yued were concerned regarding the environmental affects that the alignment will have on this major wetland and requested that an alternative alignment be considered. The Yued also requested that further information be provided to the Working Party before they can make a fully informed decision to support this proposal. No statements were made about this location in regards to its religious values and no requests were made to report the area under the AHA.

At Cullulla Road at 408725mE 6543891mN in the BB-B survey area, the Yued representatives advised that they opposed the 'Emu Spring' from being blocked by the proposal to build a road over the existing dam. The Yued advised that springs are important feeders to the creek system which feeds the Brockman River and they requested that Main Roads avoid impacting upon this spring and ensure that the proposed culvert is adequate to maintain the waters flow.

North of Cook Road at 408832mE 6543695mN in the BB-B survey corridor, a large Christmas (*Nuytsia floribunda*) or Moodjar tree was identified as having important cultural significance to the Yued group and it was requested that this tree be marked on a CHMP and on contractors plans to avoid inadvertently affecting this tree during the project. It was also the view that Main Roads should where possible not affect Moodjar trees due to the cultural significance that they have to the Yued people (see Bates 1985: 223). Despite the mythological associations with Moodjar Trees, due to the commonality of Moodjar trees across the landscape they are not considered as sites under the AHA (see Goode & Greenfeld 2008, 2014).

During the survey one Yued informant reported that his sister had told him of a massacre event that he believed to have occurred at a historical camp initially reported to be located within the BB-B (pers. comm. Ms June Headland March 2018). The informant reported that he was told that 300 Aboriginal people were massacred by two farm hands that gave poisoned flour to the Aboriginal people who made damper out of it and had died, with the bodies falling into the Gingin Brook. Initially the informant located this event on the field map at 'Wannamal Beach', but he seemed to be unsure of the actual location when questioned later and then advised that he thought that it occurred near the Mooliabeenie Road Rail Crossing, further to the south where he reported an Aboriginal camp.

However a review of the historical literature regards this event places the location outside of BB-B to the west of Gingin at the junction of the Moore River and the Gingin Brook (see Historical section page 20, Bates n.d. & Udell 1979:105-6).

In relation to the camp ground reported at Mooliabeenie Road within BB-B, O'Reilly BGA Archaeologist (2018) did not identify any historical artefacts during the archaeological survey of Lot M2106 and Lot 101 that would lead him to the view that the area was formerly used as a camp ground by large numbers of people. Consultation with the sister of the informant revealed that a small itinerant farm workers camp was known at Mooliabeenie Road, however this was later in history than the poisoning event which she advised had occurred at Gingin (pers. comm. Ms June Headland March 2018).

In relation to the reported camp area at 407348mE 6533701mN, the Yued recommended that Ms June Headland and Ms Ruby Ryder are consulted if any work is to occur within Lot M2106, Lot 101 Mooliabeenie Road and Road Reserve PIN 1338961, that Yued monitors should be engaged to supervise any excavations.

In relation to the two crossings of the DPLH extent of Place ID 20650 Lennard Brook and Site ID 20008 Gingin Brook, the Yued advised that they were not aware of any specific stories or values at the locations and they advised that they would support a ministerial consent notice under Section 18 of the AHA subject to Yued monitors being present should the project proceed.

In relation to management of heritage values for the project the Yued representatives requested that Main Roads engage monitors at all creek crossings as all creeks and watercourses are significant to the Yued people and feed into the larger river systems in the vicinity of the project area.

As a result of the surveys the following recommendations in relation to the Western Australian Aboriginal Heritage Act (1972) are made:

It is recommended that Main Roads Western Australia make application under Section 18 of the AHA for consent to use the land that is located within Site ID 20008 Gingin Brook Waggy, Place ID 20650 Lennard Brook, and the DPLH Site Complex ID #42 for the purpose of constructing the Bindoon Bypass project.

It is recommended that this consent is granted based on the proponent giving due consideration to the Yued WC1997/071 NTC group representatives requests that:

- Yued monitors are engaged to observe the initial ground disturbing works in order to observe artefacts that may be uncovered in the vicinity of the watercourse;
- Yued monitors are engaged to observe the initial ground disturbing works in order to mitigate the affect that the road project may have on the cultural values of Site ID 20008 Gingin Brook Waggy and Place ID 20650 Lennard Brook.

In relation to the proposed Bindoon Bypass road alignment, **it is recommended** that Main Roads give consideration to the request from the Yued people and avoid impacting upon an unnamed tributary and the wetland southwest of Bindoon Moora Road between Kangaroo Gully and Pines Road.

Should this not be possible **it is recommended** that Main Roads Road provide further information to the Working Party in relation to this matter.

It is recommended that Main Roads Western Australia give due consideration to the Yued peoples heritage management requests should the project proceed:

- Yued monitors are engaged to observe the initial ground disturbing works at all creek crossings within the BB-A and BB-B project areas, as all creeks and watercourses are

significant to the Yued people and feed into the larger river systems in the vicinity of the project area.

- The Udumung Brook crossing incorporates a bridge span design rather than culverts to reduce the amount of clearing, excavation and disruption to the underground stream at this location and that the Yued are given the opportunity to relocate turtles to the Wannamal Wetlands prior to the works occurring at the Udumung Brook.
- The 'Emu Spring' is not impacted upon by the road alignment and that the proposed culvert is adequate to maintain the waters flow.
- A large Moodjar tree (*Nuytsia floribunda*) identified during the survey north of Cook Road is marked on contractor's plans and that where possible all Moodjar trees are not affected during the proposed works.
- If any work is to occur within the reported 'Mooliabeenie Road Rail Crossing Camp' area within Lot M2106 and Lot 101 Mooliabeenie Road, that Ms June Headland and Ms Ruby Ryder are consulted and that Yued monitors are engaged to supervise any excavations.

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REPORT

Report of an Aboriginal Heritage Survey for the Bindoon Bypass in the Yued Native Title Claim Area (WC1997/071), Western Australia

ISSUE

The Great Northern Highway Muchea to Wubin Integrated Project Team, on behalf of Main Roads Western Australia, is tasked with planning the design and construction of the Bindoon Bypass which is a component of the Great Northern Highway Muchea and Wubin Stage 2 Upgrade Project.

Prior to proceeding the proponent is required to determine if there are any sites or places of significance as defined by section 5 of the AHA will be affected by this proposed work thereby fulfilling their obligations under the Western Australian Aboriginal Heritage Act (1972) [AHA].

REPORT OBJECTIVES

To report on archival research in order to determine if any previously recorded Aboriginal heritage sites or places will be affected by the above project proposal.

To report on consultations held with representatives of the Yued WC1997/071 Native Title Claim group in order to determine if any new Aboriginal heritage sites or places will be affected by the above project proposal.

To report upon management recommendations should any sites or places of significance as defined by section 5 of the AHA be identified to be located within the project area.

To report upon any recommendations and/or the significance of the sites or places should the proponent be required to make application under Section 18 of the AHA for consent to use the land that may contain an Aboriginal Site.

BACKGROUND

On the 31st October 2017, Ms Susan Regan (Environment & Heritage Coordinator) from Jacobs Group (Australia) Pty Ltd made contact with Brad Goode & Associates Pty Ltd and requested that they conduct a staged Aboriginal heritage assessment of the Bindoon Bypass as a component of the Great Northern Highway Muchea and Wubin Stage 2 Upgrade Project.

Specifically the survey is to consider 100% of the survey corridor defined as BB-A located between chainages 51150-59500 which equates to an area of 660.84 hectares.

The survey will then consider a sample survey of the corridor defined as BB-B between chainages 59500-97350 which equates to an area of 3037.24 hectares.

The sample survey of BB-B would be based upon the results of a Due Diligence Desktop Assessment of BB-B which identified high risk areas of unaltered and unsurveyed land and in particular where the alignments intersect a number of watercourses some of which are registered as Aboriginal sites (see Archival Research).

The following reports detail the results of the field surveys of BB-A & BB-B. The Due Diligence Desktop Assessment preceded this report and is reported separately (see Goode & McGann 2018).

LOCATION

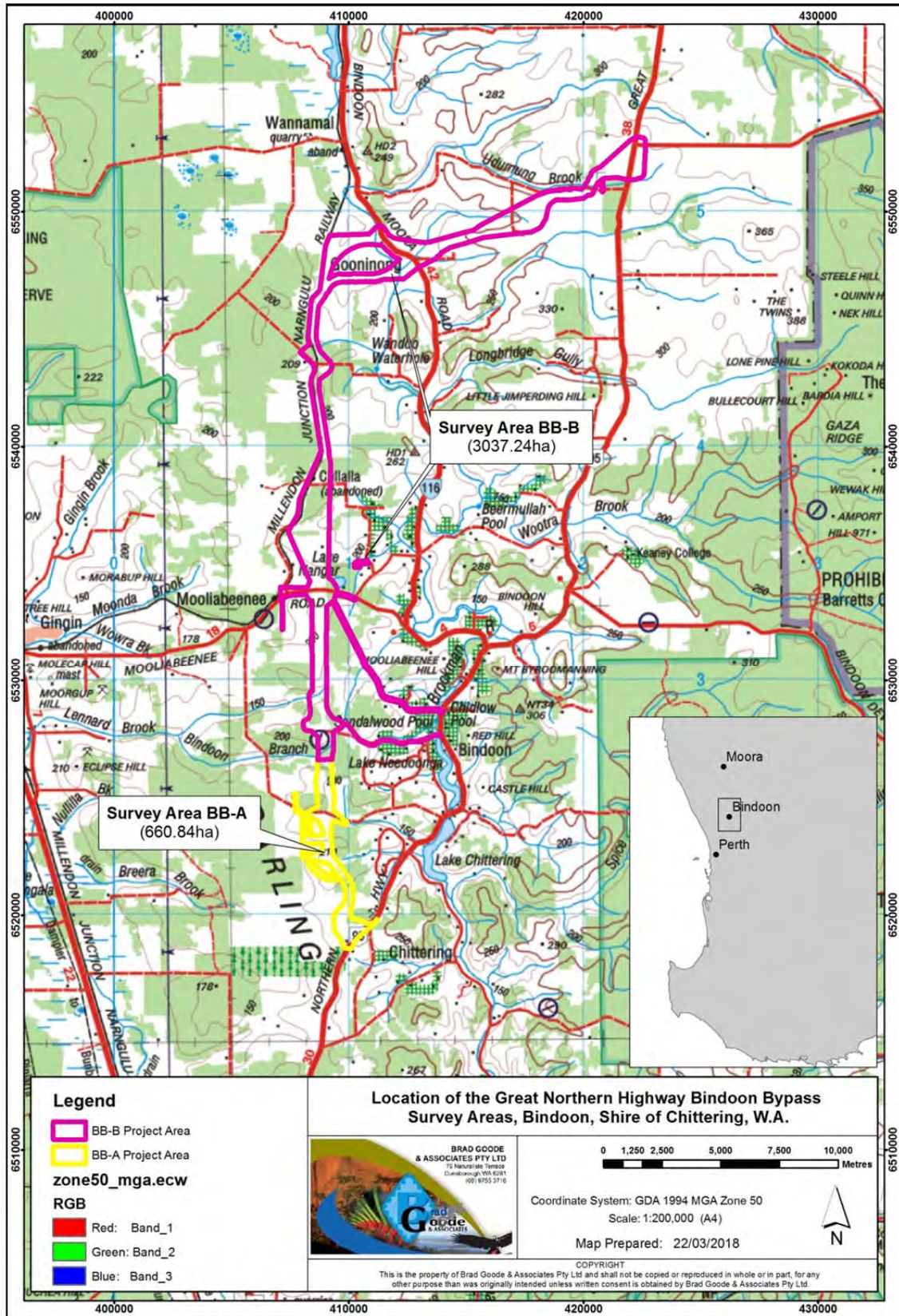


Figure 1: Location of the Great Northern Highway survey areas within the Yued WC1997/071 Native Title Claim, Western Australia.

ETHNOGRAPHIC AND HISTORICAL BACKGROUND

TRADITIONAL YUED CULTURE

The survey areas are located west of Bindoon between Chittering and Wannamal, approximately 93km to the north-east of Perth. The survey area falls within the Yued WC1997/071 Native Title Claim. The Yued NTC is bounded by Leeman in the north, Lake Nedo and Dalwallinu in the northeast, Wongan Hills in the southeast and Coondle, Chittering and Two Rocks in the south and west.

The Yued people form the most northern group of the South Western Aboriginal groups within a distinct cultural bloc defined by the distribution of the Nyungar languages. Before Nyungar was used as a group or linguistic name the South-West people recognised themselves, their language and culture as '*Bibbulmun*' (Bates 1985: 46). The Bibbulmun group was recorded by Ms Daisy Bates as the largest homogenous group in all of Aboriginal Australia (Bates 1966: 59). Their land took in everything to the west of a line drawn from Jurien Bay on the west coast to Esperance on the south coast (Bates 1966: 59). Bates also recorded that, within the Bibbulmun nation, there were more than seventy groups that shared a common language with some local variations (Bates 1985: 47).

The inland tribes were distinguished by the character of the country they occupied. They were either Bilgur (river people, *beel* or *bil*-river), Darbalung (estuary people), or Buyun-gur (hill people – *buya*-rock, stone, hill), but all were Bibbulmun [Nyungar] (Bates 1985: 47).

The Nyungar or Bibbulmun people of the South-West were a distinct group in that their initiation practices varied markedly from their desert and semi-desert dwelling neighbours. Nyungars did not practise circumcision or sub-incision, following instead a ritual of nasal septum piercing and scarring of the upper body (Bates 1985: 151-162). The people who followed these socio-religious practices were described by social anthropologist Mr Ronald M. Berndt as being 'true' South-West Nyungars (Berndt & Berndt 1979: 81).

Bates (1985: 46-51) referred to Nyungar speakers as the Bibbulmun nation occupying the coast between Jurien Bay to a point east of Esperance, while ethnologist Mr Norman Tindale (1974: 142, 246, 248, 255) was more specific in describing the '*Pibelman*' (or Bibbulmun) as inhabiting the area between the Blackwood and Warren Rivers, east to Gardner River and Broke Inlet, on the Scott River and inland to Manjimup and Bridgetown. The area to the north of what came to be known as Perth, and likewise the Swan River, was associated with the Yued sub-group when European colonisers and missionaries arrived in the 19th century (Berndt 1979: 82; Moore 2006: 182).

In 1974 Tindale commented that in Hammond's (1980 [1933]) first-hand account, his "boundaries and his vocabularies show that seven tribes...namely the Whadjuk, Pindjarup, Kaneang, Wardandi, Pibelman, Minang and Koreng" were recognised as 'one big tribe' occupying the Nyungar region (Hammond 1933 cited in Tindale 1974: 142). Tindale (1974) instead identified thirteen 'tribal groups' including the Yued – which he writes as *Juat* – in the South-West, based on socio-linguistic boundaries and minor dialect differences (ibid: 243). Tindale described the Yued as inhabiting an area of approximately 16,900km², "at Gingin, Moora, New Norcia, Moore River, and Cape Leschenault; north to about Hill River; inland to near Miling and Victoria Plains" (ibid: 243).

The founder of the Benedictine Mission at New Norcia, Bishop Rosendo Salvado, wrote in 1851 of his first encounter with the Traditional Owners of the region, describing that in 1846 the "Yued (Juet) ... occupied the area around New Norcia and Moora, Mogumber and the Moore

River generally to the coast. Very close indeed to New Norcia were the Balardong, who took in Wongan Hills, Northam and York” (Salvado 1851 cited in Rooney 2014: 5).

The Bibbulmun Nyungar people of the west coast followed a matrilineal system of descent whereas those of the south coast “below Augusta and the Donnelly River” observed patrilineal descent (Bates 1985: 74-77). Nyungar people were often observed to marry outside of their immediate vicinity, and it seems likely that this served to reinforce alliances with neighbouring groups. Inherent in the marriage relationship was reciprocity, which transferred rights and privileges between groups (Le Souef 1993: 30). Descendants of these marriage relationships continued to affiliate themselves with their parents’ territory and births would take place either in the mothers’ or fathers’ country (ibid). Sites of significance that were located within that territory would therefore hold special meaning “for the children who were regarded as belonging to that territory” (de Gand 2012: 32).

Each socio-linguistic group, sometimes referred to as the ‘tribe’, consisted of a number of smaller groups. These smaller groups were made up of around 12 to 30 persons, related men, their wives and children and, at times, visiting relatives from other groups. These subgroups could be described as a family, a band, a horde, or more correctly the local descent group (Green 1984: 9). For every local descent group there was a tract of land with which they most closely identified themselves with. An individual or a group’s land was called their *Kalla* or fireplace, or their clan estate (Moore 1884: 4).

The traditional Aboriginal notion of boundaries was much more fluid than the rigid land boundaries that are imposed as part of the contemporary Native Title Process. Aboriginal people throughout all of Australia have historically held two distinct and complementary forms of relation to the land; esoteric (sacred, ritual, mythological and ceremonial) and economic (biographical, historical and habitation). Stanner (1965: 2) uses the terms ‘estate’ and ‘range’ to distinguish these two different associations, he writes that the ‘range’ was that land in which the group “ordinarily hunted and foraged to maintain life.” The ‘estate’ refers to the spiritual country and which may be ‘owned’ by either an individual, by the group or by part of the group (ibid: 13). The relationship to ‘estate’ is mostly religious however there is also an economic benefit (ibid). The estate can be considered the country or home of a local descent group, sometimes referred to as the ‘Dreaming place’ and as such includes all religious sites, myths and rituals that occur on or about that land (ibid). In this way ‘estate’ forms part of the Aboriginal ties to Dreaming and place, with Stanner explaining,

There is a clear relationship between the individual and the land, which is expressed in a number of ways. There is a direct link between the mythic heroes and spirits of the dreaming and the land. Relationships with these beings, which are transmitted through birth, descent and marriage (to a lesser extent), are a reciprocal arrangement of rights and obligations and they are vital for claiming rights to the land (Silberbauer 1994: 124).

The link between the individual and the land comes from the conception site, where the animating spirit enters the mother and thus there is a direct connection between the land, spirit and the identity of the individual (Machin 1996: 14). The spiritual ties with the land strengthened economic rights and land usage involved both ritual and social connections (McDonald et al. 1994: 35).

The basis for Aboriginal land use, ownership, spirituality and religious views of the world (and the position of people in it) is based on their Dreaming. In traditional Aboriginal Australia the Dreaming is viewed as a time where ancestral beings created the world and all within it, thereby defining spiritual, social, moral and territorial divisions for its inhabitants (Berndt & Berndt 1999: 137). The Dreaming refers to a distant past when the world had yet to be fully created. Dreamtime stories refer to mythic ancestral beings that roamed the Earth creating the

topographic features of the land, such as rivers and mountains, as well as plant and animal species (ibid). The landscape bears testimony to the struggles of creation and is studded with sacred sites recalling the Dreamtime. The ancestral beings not only transformed the landscape but also infused it with living spirit, creating sacred sites that continue to link all Aboriginal generations with the Dreaming and the eternal spirit beings themselves (ibid). As such the Dreaming is an ideological and philosophical basis for a close emotional connection between Aboriginal people and their land (Machin 1996: 10).

WATER AND ABORIGINAL SIGNIFICANCE

There is no doubt that water, especially fresh water, was of vital importance to traditional Aboriginal people right across Australia. The rivers, pools and wetlands link campsites along walk tracks and are places of mythological and spiritual significance. In the case of the South West, rivers also defined the territories or estates of the Nyungar people (see Dortch 2002; Hallam 1979).

Various authors, in various regions have recorded specific narratives (see Jackson & de Gand 1996; Toussaint et al. 2005) and generalised narratives (see O'Connor et al. 1989; Villiers 2002; Goode 2003) with regards to the importance and significance of water sources from both a mundane and spiritual position. In a mundane sense, rivers, wetlands, springs and soaks are seen by both traditional and contemporary Nyungar people as important places to camp, fish, hunt, and gather food and resources that are made plentiful by the supply of fresh running water (O'Connor et al. 1995: 8, 11).

In regard to the spiritual significance of water across Aboriginal Australia, the Rainbow Serpent is generally deemed as being responsible for both the creation and the ongoing maintenance of the water cycle (Radcliffe-Brown 1926: 19). The Rainbow Serpent as a spirit creature is believed to have excavated and created the beds of the rivers during its travels throughout Australia. It is often the belief that the serpent had reached down from the sky to the waterholes and pools, bringing water to the earth (see Jackson 2004; Goode 2003). Throughout Western Australia the Rainbow Serpent is associated with other myths regarding fertility and is sometimes regarded as male and at others as female. Ceremonies and rituals are performed in order to renew species that are associated with Rainbow serpents (see Reed 2001; Goode 2003).

The Nyungar people of the South-West held one central creator spirit the Waugal (sp. Moore 1842; Berndt 1979), which takes the physical shape of a snake, who transformed the landscape, in particular water sources, as well as infusing it with a living spirit (Bates 1985: 219-221). Bates noted that wherever the Waugal stopped or camped was sacred, and as a consequence, these places were generally avoided, referred to as 'winnaitch' (ibid). Before using or entering a *winnaitch* area Nyungars were recorded as carrying out special rituals, of which contemporary versions continued to be performed (ibid). The Waugal is associated with many of the major rivers in the Darling Range as well as many of the smaller springs, swamps, pools and lakes located on the Swan Coastal Plain (O'Connor et al. 1989: 46).

According to Bates the Waugal was,

...the Great Magic Snake, omnipotent and omniscient, whose 'home' was everywhere – in the land, in the rivers and hills and valleys, in the caves and in the great sea that surrounded ... group lands. *Woggal* the great snake, was the *Bibbulmun* 'diety' [sic] who was beneficent towards the law-abiding and was punisher-in-chief of those who broke totem food law or marriage law, by inflicting fatal sickness, called '*woggalung*' upon the offenders (Bates 1992: 28).

The Waugal is particularly associated with the Moore River, with the name 'Maura' being derived from the Yued word for a permanent pool, a place of "good spirit" (Laurie 1995: 2),

In the creation time, the earth was flat and featureless. WAKAL, the water serpent, rose up from the earth and began his long journey from the north. He came down through Watheroo and Moora, carving out the bed of the river as he went. On his back he carried fish, water snakes, gilgies, turtles and all the creatures of the river. When WAKAL got to MOGUMBER he turned sharply west, gouging out deep holes which today are the deepest holes in the river, which the Nyungars call 'MUR' and the white people call the 'Moore'.

When Wakal arrived near the coast, he turned sharply south. He crossed the coast and went out to sea at Guilderton. WAKAL still lives along the Mur wherever there is permanent water. This was the time the animals and birds were created, formed by their spirit ancestors. WARDANG the crow brought the first Nyungars on his back and left them to care for the land. These were the first Yuat [sic] tribe. Thus Yuat country was divided between the two groups or 'Moeties' called 'Wardangmart' and the 'Marnatjmart'. The first Nyungars, the Yuat tribe, made a survey of their land, marking out its boundaries from Watheroo in the north to Chittering in the south, and from Bolgart in the east right to the western coast (Laurie 1995: 2).

Thus the Waugal was what could be called a Creation Being, associated with water sources (Machin 2001: 35). The health and wellbeing of the Waugal was directly related to the maintenance of groundwater, and that both were intertwined with Nyungar cultural identity. In short, laying waste the country was also a major threat to the spirit of the Waugal, since its life force was present in water – whether surface or subterranean.

In addition, specific places are of particular importance as sites of permanent residence for the Waugal, requiring necessary cultural rites, rituals or practices when approached. The deep river pools in the vicinity of the Moore River settlement are considered to be places where the Waugal permanently resides, including at Shanaway, Kaali Pool, Round Pool, Rocky Coursen, Elbow, Chalk Cliff, Diamond Pool and Kite Pool (Rooney 2014: 161). The Waugal as a mythic creature was revered and often feared by Nyungar people who would have to offer articles of food or sing and throw sand when approaching pools or places where it was known to live as a form of propitiatory ritual in order that no harm would befall those who approached (Bates 1985: 219).

In the Yued area and the wider South West region, most contemporary Waugal reports are of a generalised nature, yet in the minds of the Nyungar informants the significance of the place or water source has not diminished. The Waugal has become or is seen to be present in all water bodies – it is the “benign bringer of water” (McDonald et al. 2000: 18). This change of view is largely based upon Aboriginal people now not knowing the traditional mythical stories about specific places but attributing significance by “reading the country” and assigning general significance (Goode 2003: 30; Villiers 2002: 10-11). This in no way diminishes the importance of Nyungar beliefs about water, the Waugal and the Dreaming, or the sacredness of sites associated with these beliefs. Although there are varied and sometimes different versions of narratives recounted by Aboriginal people about the Waugal and its associations to the water bodies in the region there is a commonality of belief in the serpent's powers as a creator and peoples responsibilities to their deity.

Contemporary Nyungar people believe that as the custodians of the land it is their jural¹ responsibility to “look after water” and to not allow the region's water sources to be threatened (McDonald et al. 2005: 34). This view of jural responsibility is tied to the view that the Waugal will punish those who disrespect water and who allow the natural order to be changed. Nyungar people from the region take the view that water is there for all organisms that depend upon it for survival, not to be used irresponsibly. Failure to respect these core values will ultimately lead to sickness within the Nyungar community (Goode 2003: 26; McDonald et al. 2000: 16-18).

¹ Definition of the term 'jural' – adjective of law; of moral rights and obligations (Geddes & Grosset 2007).

EUROPEAN SETTLEMENT AND NYUNGAR DISRUPTION

In terms of European contact, the history of the Yued people (Tindale 1974: 243) began in the 17th century, as in other coastal parts of Western Australia, through the agency of the Dutch United East India Company (*Vereenigde Oost-Indische Compagnie*, V.O.C.), whose ships were involved in the spice trade with the Indonesian archipelago (Playford 1996: 6). In most cases V.O.C. ships ventured too far eastwards while bound from the Cape of Good Hope to ports such as Batavia (now Jakarta) and Surabaya in Java (Green 1984: 27-28).

By one account at least four such ships were in the vicinity of what was later known as the Moore River mouth between 1656 and 1658, and crew members from one vessel, the *Emmeloort*, are said to have met some Indigenous inhabitants while venturing up to three miles (5 km) inland (anon. thesis 1955: 1).

On the 29th of December 1696 three Dutch East India Company ships anchored off the south side of Rottnest Island under the command of Skipper-Commander Willem de Vlamingh (Crowley 1962: 9). On arrival at Rottnest Island Vlamingh ordered several parties of sailors and soldiers to row across to the mainland of Australia, also known as *Eendrachtsland*. In January 1697 Vlamingh led an expedition from the mouth of the river for a considerable distance upstream, naming the river *Swarte Swaene-Revier*, or the Swan River, due to the hundreds of black swans floating on the river. During this expedition the Dutch sailors observed fires in the distance, human footprints on the banks of the river and on the beach and several huts, with some of the sailors reportedly seeing "...a number of 'naked blacks'" from faraway (ibid).

However, a proposed Dutch colony along the south coast in the early 18th century never eventuated (Klaassen 2005: 310-311). It was not until one hundred and thirty years later in 1827 that exploration of the Swan River region by the British occurred (Crowley 1962: 13). During this expedition along the Swan River Captain James Stirling encountered a group of 30 Aboriginals and various articles of clothing and a number of swans were traded for spears and *womeras* (spear-throwers) (Stirling 1833: 557). The men sighted several deserted encampments where huts still remained and Stirling surmised that the Aboriginals frequented the high grounds during winter and that at this time they were still on the Coast engaged in fishing (Shoobert 2005: 27). During his explorations Stirling accurately charted the Swan and Canning Rivers, naming the latter river after the Prime Minister of England (Crowley 1962: 14).

After his return to Sydney Stirling was placed in command of the proposed Swan River colony in December of 1828 and sent ahead Captain Charles Fremantle to secure the land ahead of the French (Green 1984: 48). In April 1829 Captain Fremantle landed with a party at the Swan River with the purpose of annexing the "whole of the Western part of Australia in the name of Britain" (May 1997: 7). Upon arrival the Canning River was explored and land surveyed before being opened for settlers to purchase for agriculture and farming.

The Irish-born explorer and diarist George Fletcher Moore was among the first of these British colonists to visit the Yued country to the north of Swan River in 1836 (Hercocock et al. 2011: 28). Moore, like other colonists in Western Australia and elsewhere, was fascinated by the idea of an inland sea. He ventured north in April that year from his farm at Millendon, on the upper Swan, in company with a mounted policeman named Hefferon and an Aboriginal guide, Weenat (ibid). They reached the Garban River, which Hefferon suggested be re-named after Moore, and followed it downstream to its junction with Gingin Brook (Cameron 2006: 404; De Burgh 1976: 2-8). Moore's idea that the inland sea might be, "an inlet from the sea to the north, perhaps Shark's Bay – or even from the N.W. Cape" was mistaken, but was remembered 34 years later by the surveyor John (later Lord) Forrest in naming a large salt lake to the north-east of Yued country after the earlier explorer (Cameron 2006: 404; Crowley 1981: 544).

Mr E Barrett-Lennard made the first application for land in the Gingin District in 1831 north of Lake Bambun. However five years later Mr Lennard applied to have his 5,000 acres exchanged

for land at Beverly with his reasons for abandoning his grant due to the isolation of the area and the struggle of getting men to go there to set up a station because it was a “favourable resort of the natives” (Udell 1979: 4-5). George Fletcher Moore also obtained a grant on Lennard’s Brook and later transferred a portion of his grant to land in Toodyay (Udell 1979: 5).

In April 1835 Mr George F. Moore conducted an exploration excursion with Mr E. Lennard and Mr H. Bull to further examine the land around Lennard’s Brook for potential agricultural purposes. Two Aboriginal guides named Gear and Beguin accompanied the team, and were able to provide useful information such as names of places, quality of soil and the location of water (Moore 1835 cited in Shoobert 2005: 421). During their excursion Moore was interested to find out whether Lennard’s Brook was connected to a freshwater lake called “Bambonup” (Lake Bambun) and what type of country surrounded it:

After traversing some miles we found ourselves, not a little to our surprise, on the right or northern bank of a strong running stream at a place called “Gnowlialup” [Creaton and Nullilla Brook]. Hence we must have crossed the course of this stream during the morning yet we did not even see a damp spot in that direction. Upon applying to the natives for information, as to what became of this river, their literal expression was “that it stopped in the sand” (Moore 1835 in Shoobert 2005: 423).

After arriving in the valley of Lennard’s Brook and finding the soil promising, Moore intended to spend the entire day examining the soil and records:

We were proceeding after breakfast with that object, when some natives began to arrive and their numbers continued to increase till they amounted to nearly 100 men, women & children. Many were old familiar acquaintances. All appeared pleased to see us; but it must be confessed that their pleasure seemed mixed with the idea of sharing our provisions (Moore 1835 in Shoobert 2005: 424).

Not being put off from making their examination Moore continued his excursion along the Brook:

After some miles progress, our native companion’s shewed great symptoms of impatience – Where are you going? – To see the ground – It’s all Blackboys and swamp and mud. – But we want to see where this river goes to – It does not go, it “stops in the sand” – We want to get round it – “Far away, far away” was their answer (Moore 1835 in Shoobert 2005: 424).

Moore had concluded that the water courses that they had passed, “presumably the Breera, Nullilla and Lennard’s Brooks became dispersed in the low ground in the summer-time, drying up by a combination of evaporation and absorption, but that in winter the water of the first two would flow into Ellen’s Brook” (Udell 1979: 7). The water of the Lennard’s Brook was found to diverge into two branches; one, running to the south while the other runs to the west “increasing as it proceeds” where it eventually joins the Garban or Garbanup [Gingin Brook] and flows in a westerly direction to the sea (Moore 1835 in Shoobert 2005: 425).

In 1843 William Locke Brockman was granted three blocks of land each of 320 acres, “the first being Swan Location 94 called *Chittering* on the southern end of Lake Chittering; the second Swan Location 99 called *Needonga* on Lake Needonga, and the third Swan Location 98 called *Bindoon*, [later known as Bindoon] all being granted to him in 1843” (Udell 1979: 11). In his quest for an ideal site for a farm, Brockman had originally applied for land on the Brockman River however he had “heard from native people of the bountiful streams to the westward with their fish, ducks and game” (ibid 12). Subsequently Brockman applied for land grants at Gingin to the west of Bindoon after finding the land favourable.

Not long after arriving in Western Australia in 1842, the York and Mortimer families took up leases of land south and east of Lennard's Brook, to the south east of Gingin (ibid 16). By the mid 1850's much of the land in the vicinity of the Gingin and Lennard's Brook were taken up by settlers as grazing pasture for sheep, cattle and horses (ibid 23). Settlers largely chose land near fresh water streams or swamps to establish their camps or 'stations' for the availability of fresh water and fertile soils for growing food (ibid 23-24).

The Yued often assisted explorers and settlers to establish themselves with finding water and food resources. However, sometime serious conflicts arose between the groups as reported in the *Government Gazette* of 12 April 1844, as written by Charles Symmons, Protector of Natives at the time:

Mr Brockman and myself there entered into a judicial examination of the circumstances connected with the death of the native Wabbamarra who had died shortly after being struck on the head by a person named Stoodley, bailiff of the farm at Jinjinup. From the deposition of witnesses it would appear that the blows had been inflicted in the heat of passion, and under the impulse of self-defence, the native having assumed a threatening attitude with his "dowak" (or heavy throwing stick) after received some slight strokes with the thong of a whip, for his refusing to quit the cooking fires of the whites.

Mr James Stoodley was committed on charges of manslaughter and later acquitted... Only two white men and two boys were in residence on Ginginup at the time, in charge of a large flock of sheep and a herd of cattle, and being some thirty miles (51km) from any white habitation. Wabbamarra was a man of importance and said to be chief of his tribe. In a move to placate the native people while keeping official control of the situation, "Jiggarty", a brother of the deceased Wabbamarra, was made native constable of the district as he had great influence with his tribe (Udell 1979: 102).

As part of the justice system procedure at the time, the burial place of Wabbamarra, located about 5 miles from Ginginup Station, was required to be exhumed. Udell (1979: 103) reported about this event that, "The tribesmen finally agreed to this and watched, showing their grief, as the investigators dismantled the grave". The burial place was described in detail in the *Perth Gazette*, 27 April 1844 which described how the strategic placing of shells, weapons and bark around the grave intimated to others that the grave should not be approached.

Another instance of the repercussions of European settler's arrival to the region was an event where farm hands poisoned flour which resulted in the death of a little boy and a dog that ate biscuits made from the flour. This occurred in 1860 further to the west of Gingin at the junction of the Moore River and the Gingin Brook. Udell (1979) reports,

A man named John Death was committed for trial in October 1860 for the murder of a native child at Gingin. The newspaper *Inquirer* 17th October 1860, reported that the man had deliberately placed "strychnia" in some flour which was later taken from his camp by aboriginals and eaten by them. John Death has been employed by Joshua Edwards for three years previous to this date as cattle-minder, camped permanently at Bookenbooken Station. Evidence given at the Quarter Sessions, January 1861, told how Death had been aggravated by the pilfering of his supplied of tea, sugar and flour in his absence. One day he went to Perth knowing that an aboriginal tribe was camped nearby. While he was away, one of the tribesmen named Kiol suggested that they search the hut for tobacco but finding none, another man named Kalyer took some flour – he later told the police that Death had given him permission to do so. Some little time before, John Death had shown a visiting police sergeant, W.R. Piesse, a bag of poisoned flour which he said he kept for dogs; Death had a board outside his hut

with the words “NOTICE, POISON FLOUR MEAL” written in English – a warning of no significance to the aborigines.

The native family later cooked small biscuits made from the flour, and a little boy, one and half years old and a son of Kalyer, ate his portion. A little girl tasted hers but disliking it, give it to their dog. The parents carried the boy Bulbaroo to “Bungarrah” but he died before they reached their destination; the dog also died...

Death was indicted twice on the same charge but curiously, no outcome of this case has been found. He was frequently in trouble with the law, having been charged at various times with cattle stealing and drunkenness. He lived for some years after at Booken-Booken and this troubled man was eventually drowned in the Gingin Brook in July 1872 at the age of fifty years (Udell 1979: 105-106).

Bates (n.d.) also mentions a similar incident in her recounting of the story of ‘Woolber and Banyap’:

Woolber’s wife Banyap had been twice married before he got her. Kanill her first husband, was poisoned by some flour stolen from John Dibb (?) who had placed some poison in it. Two of Banyap’s children also died and some others who had eaten the damper (Bates n.d. typescript).

The railway line reached Gingin in April 1891 before reaching Mooliabeenie Siding sometime around 1894, which is located approximately 9.5km northwest of Bindoon (Heritage Council of WA Place ID 17904). A Station Master’s house was built and local settlers were employed on the railway and at the Station. One of these employees was Mr William R. Turner who married Fanny Jane Hill (daughter of William Hill) in 1894 and later joined the Midland Railway Company as a ganger in 1898. Mr Turner and Mrs Turner were based at Mooliabeenie, and due to their residence being near the Station, Mrs Turner filled the role of Station Master for a time (Udell 1979: 191, 211).

Around 1914 the Ward family lived in a house near the Mooliabeenie Station that was later used as a shop and residence by Mr Warne Leaman. This house was destroyed by fire in 1922 and a new house was built by Mr J. O’Hare close to the siding which was still in operation around 1940. Another store was built in 1946 by Mr Bill Read and Mrs Read resumed duties at the Railway Station and Post office (Heritage Council of WA Place ID 17904, Udell 1979: 211).

With the intrusion of European settlers, the custodians of Yued country were pushed onto the margins of their traditional lands. Family camps were established on the outskirts of the new towns, as well as on new farming stations where the Yued people were able to obtain seasonal and often unpaid work as farmers and domestic workers. Yued historian June Headland reported that Yued camps existed in the vicinity of the Mooliabeenie Rail Siding which were utilised in the 1920s and 1930s by small groups of itinerant seasonal workers who worked in the region (pers. comm. June Headland 5th April 2018).

ARCHIVAL RESEARCH

Archival research involved an examination of the DPLH Sites Register, a review of any relevant site files and a review of any unpublished ethnographic reports that relate to the GNH Bindoon Bypass BB-A and BB-B survey areas in the Shire of Chittering, Western Australia.

SITES REGISTER SEARCH

The DPLH Aboriginal Sites and Places Register categorises places reported to be of importance and significance to Aboriginal people into two separate categories.

The first category contains sites classified as **‘Registered.’** Registered sites have been assessed by the ACMC as meeting the definition of section 5 of the AHA and are fully protected under the law. Disturbance to land that contains such sites requires a Section 18 application for ministerial consent should proponents wish to use the land that contain these sites.

‘Other Heritage Places’ is the second category of places contained upon the Aboriginal Sites Register. These types of places include reported places **‘Lodged’** and awaiting ACMC assessment, and places where the information has been assessed but there is **‘Insufficient information’** to make a final determination under section 5 of the AHA but there is enough information to warrant these places temporary protection in Law. Disturbance to land that contains such places requires a Section 18 application for ministerial consent should proponents wish to use the land that contain these places.

Within the category of ‘Other Heritage Places’ the final category is **‘Stored Data.’** Such places have been assessed by the ACMC but fail to meet the definition of section 5 of the AHA. Places in this category are not sites under the AHA and are not protected in Law. Proponents have no further legal requirements for such places should they wish to use the land unless further information is reported which would lead to such a place being reassessed as a site in terms of the definition of section 5 of the AHA.

A search of the DPLH Aboriginal Sites and Places Register was conducted on 7th November 2017 for the Bindoon Bypass BB-A and BB-B project corridors which revealed **3 registered sites** and **9 other heritage places** with DPLH extents that overlay the project corridors (see Table 1 and Appendix 1).

Two of these heritage places are **archaeological**, Place ID 3528 Burroloo Well and Place ID 22027 Udumung Brook Artefact 1, and will be reviewed in the accompanying archaeological report by O’Reilly (2018).

The remaining 3 sites and 7 other heritage places are **ethnographic** and are reviewed below. These sites and places are associated with watercourses and have mythological significance to the Yued people. The actual watercourse that intersects the BB-A and BB-B survey areas is the Lennard Brook which is located near Gray Road, to the west of Bindoon.

Site ID 20008 Gingin Brook Waggyl Site is a restricted site that has a large administrative DPLH boundary placed over a number of watercourses inclusive of the Lennard Brook. The site intersection area is located near Gray Road on Lots 18, 20 and 21 (BB-A project area), and on Lots 25, 37, 103 and 104 (BB-B project area). Main Roads **will be required to seek consent** under Section 18 of the AHA for consent to use the land that is located within a registered Aboriginal heritage site.

The remaining ethnographic sites and places all share the same contiguous DPLH boundary as part of Site Complex ID #42 which has grouped a number of watercourses together as they share the same mythological significance. This site complex comprises of two registered sites, Site ID 20749 Moore River Waugal, Site ID 21620 Chandala Brook, and five ‘Lodged’ heritage places, Place ID 20650 Lennard Brook, Place ID 21616 Boonanarring Brook, Place ID 21617 Wallering Brook, Place ID 21618 Nullilla Brook, Place ID 21619 Breera Brook, and two

‘Stored Data’ places. Main Roads **will be required to seek consent** under Section 18 of the AHA to use the land that is located within the extents of these registered sites and lodged heritage places.

In relation to the stored data places, Place ID 19138 and Place ID 19183, as these places have been assessed by the ACMC as not meeting the definition of a site under Section 5 of the AHA; Main Roads has **no further obligations** under the AHA in relation to these stored data places.

It is further recommended that DPLH consider addressing the confusing situation of multiple site/place names for one water course, by either amalgamating the data into one combined site or separating individual sites/places into their actual watercourse locations.

Table 1: Summary of Aboriginal heritage sites and places within the project area

ID	Name	Status	Access	Restriction	Location (GDA94 Z50)*		Type
					mE	mN	
Registered Aboriginal Sites							
20008	Gingin Brook Waggyl Site	R	C	Y	NA	NA	Historical, Myth, Camp, Hunting, Plant Resource, Water Source
20749	Moore River Waugal	R	O	N	389582	6549648	Mythological
21620	Chandala Brook	R	O	N	389626	6549540	Mythological
Other Heritage Places							
3528	Burroloo Well	L	O	N	411039	6519849	Artefacts/Scatter, Water Source
20650	Lennard Brook	L	O	N	389582	6549648	Mythological, Natural Feature, Water Source
21616	Boonanarring Brook	L	O	N	396128	6561778	Mythological
21617	Wallerung Brook	L	O	N	396128	6561778	Mythological
21618	Nullilla Brook	L	O	N	396128	6561778	Mythological
21619	Breera Brook	L	O	N	396128	6561778	Mythological
22027	Udumung Brook Artefact I	L	O	N	419398	6550809	Artefacts/Scatter
19138	Wetlands & Watercourses Moore River to Bullsbrook	S	O	N	396128	6561778	Mythological
19183	Red Gully Creek	S	O	N	396128	6561778	Mythological, Plant Resource

* Please note: Coordinates are indicative locations that represent the centre of sites as shown on maps produced by the DPLH – they may not necessarily represent the true centre of all sites. **LEGEND: R** – Registered Site, **I** - Insufficient Information, **S** - Stored Data/Not a Site, **L** - Lodged awaiting assessment, **O** – Access Open, **C** - Closed Access, **N** – File Not Restricted.

REVIEW OF RELEVANT SITE FILES

Site ID 20008 Gingin Brook Waggyl

The Gingin Brook was first recorded by Ms Patricia Baines in February 1984 during an ethnographic report for a Natural Gas Laterals in the Perth Metropolitan Area. Ms Baines records that an Aboriginal informant refers to the *Wakal* in the part of the run that he calls ‘home’, including in the springs in the Dandaragan/Gingin area, as ‘*Kalleep*’ (Baines 1984: 16).

In January 2001 McDonald, Hales & Associates reported that the Gingin Brook Waggy Site is believed to have been created by the *Waugal* (McDonald, Hales & Associates 2001a: 96). During ethnographic consultations held with several members from the Combined Metropolitan Claim it was confirmed that the Brook was considered to be a site of significance due to its associations with the mythical *Waugal*. However, it was reported that, along with the other wetlands in the region, “Beyond a broad statement that the *Waugal* had created them, no specific mythological detail was provided with regard to any of the particular waterways or wetlands” (ibid: 290). As such McDonald concluded that there is likely to be insufficient information available to list the waterways on the DPLH Register of Aboriginal Sites (ibid). In February 2001, McDonald, Hales and Associates added that the Gingin Brook was, “...recalled as being particularly important as a fresh water source and resource area” and where “Nyungars, including his [the informant’s] immediate family, obtained natural resources in the recent and more distant past (McDonald 2001b: 82). This advice was reiterated in an addendum to the report in October 2001, with McDonald again reporting that whilst all wetlands and watercourses along the proposed gas pipeline alignment are sacred due to the belief that they were created by the *Waugal*, no detailed ethnographic information regarding specific mythologies, ceremonies or rituals were provided by the Aboriginal consultants (McDonald 2001c: 35). As such it was recommended that due to the generalised nature of the information provided, “none of the (permanent and ephemeral) wetlands and watercourses between Moore River and Bullsbrook be assessed as Aboriginal sites under Section 5 of the Act”, including the Gingin Brook (ibid).

In December 2001 Mr Ronald Parker from Australian Interaction Consultants recorded information on the Gingin Brook during a report for a Site Avoidance Survey for proposed deviations to the extended Dampier to Bunbury Natural Gas Pipeline Corridor. During consultations held with representatives of the Central Metropolitan Claim and the Yued NTC group the Gingin Brook was identified as a ‘Waggy site’, a watercourse that was created by the Dreamtime creature (AIC 2001: 25). As such the Aboriginal informants expressed their concern about the impact that the proposed works could have on the *Waggy* and requested that the Gingin Brook be registered as a site (ibid). AIC (2001: 31, 32) therefore recommended that the Gingin Brook should be placed on the Interim Register of Aboriginal Sites.

In February 2002, Parker recorded further information on the Gingin Brook, recording that the Swan Valley Nyungah Community identified the Gingin Brook as a “...powerfully spiritual place” (AIC 2002: 15-16). The extent of the Gingin Brook site was identified to be from its headwaters in the Darling Range down to Coonabidgee in the west and included the high water mark and the flood plain level of the brook (ibid: 16). Parker recommended that as the Gingin Brook was identified by the Aboriginal consultants as a place of special spiritual significance, it be considered a registered ethnographic site by the DPLH (ibid: 10).

The Gingin Brook Waggy Site was considered by the ACMC on the 3rd of April 2001 which determined that there was ‘Insufficient Information’ for this to meet the definition of a site under section 5 of the AHA (Resolution ID 3256 Meeting ID 604 held on 3rd of April 2001).

In February 2004 Mr Brian Blurton from the DPLH interviewed Mr William Warrell at Mogumber Farm in order to report the Gingin Brook as an Aboriginal Site to the DPLH. In a transcript of the interview Mr Warrell stated that the Gingin Brook was where his great-grandmother, ‘Biragin’, was born in 1852 and where her daughter, Ollie Nettle, was born in 1883 (Blurton 2004: 3.34). Mr Warrell explained that the Gingin Aboriginal people, referred to as the ‘*Mooro*’ tribe, and other Aboriginal people who migrated from York and Toodyay after white settlement, used the Gingin Brook as their main food source, for hunting cobbler, birds, snakes and the long neck tortoise called ‘*Yukan*’, as well as gathering paperbark to make *Mia-Mias* (ibid: 3.34, 3.33). Mr Warrell stated that there were massacres in Gingin and as such it is a sacred place for Aboriginal people, as well as being a ‘*Jenuk*’ (devil) place where an Aboriginal man passed away after eating a ‘*Mubuan*’ (magic) carpet snake (ibid). Mr Warrell also explained that the Gingin Brook was created by the *Warkal* and that sand was required to be

chucked into the water before using the water and when leaving in order to show respect and avoid harm by the *Warkal* (ibid: 3.33).

On the 6th April 2004 the ACMC again assessed the Gingin Brook, placing it as a Site on the Permanent Register under section 5(b) and 39.2(a) of the AHA (Resolution ID 5659).

The ACMC then reassessed the Gingin Brook on the 22nd of April 2009 and determined it to be a Mythological and Historical Site on the Permanent Register under section 5(b) and 39.2(b)(c) of the AHA (Resolution ID 4563).

In relation to the proposed GNH Bindoon Bypass, Site ID 20008 ‘Gingin Brook Waggy’ has a DPLH site extent overlaying the Lennard Brook, in the northern section of BB-A survey corridor on Lots 18, 20 and 21, and in the southern section of the BB-B survey corridor on Lots 25, 37, 103 and 104 (see figure 2).

Main Roads **will be required to seek consent** under Section 18 of the AHA for consent to use the land that is located within a registered Aboriginal heritage site.

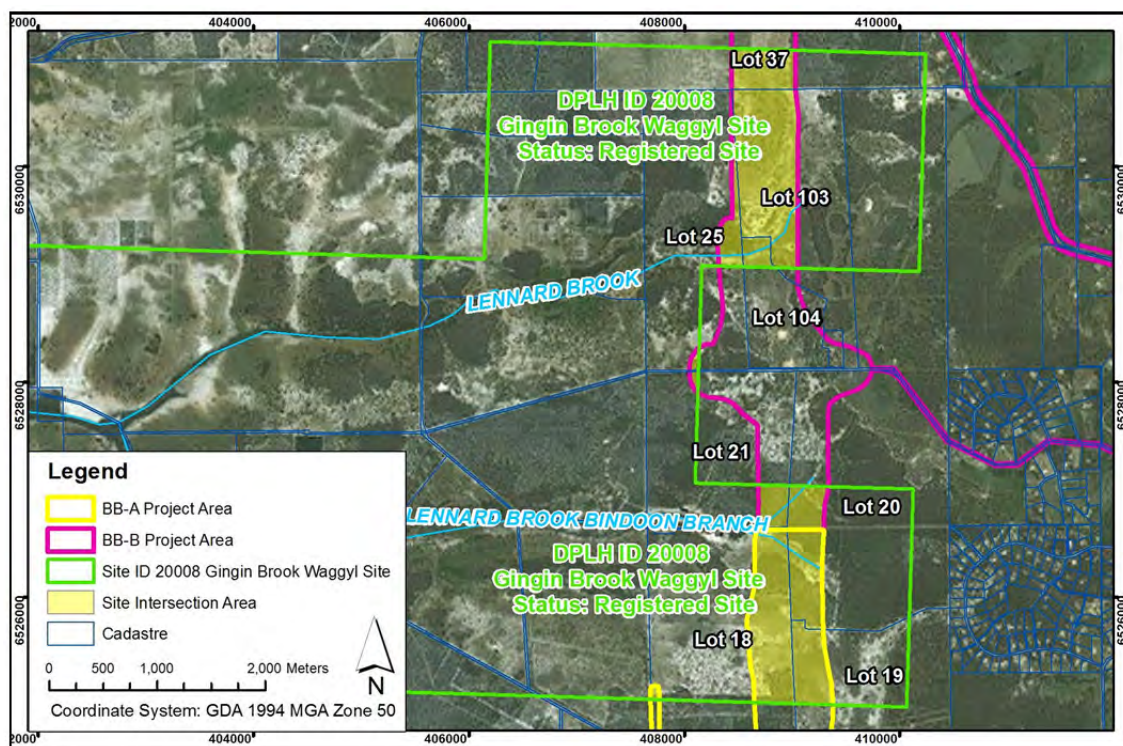


Figure 2: Map of Site ID 20008 Gingin Brook Waggy Site in relation to the Bindoon Bypass BB-A and BB-B project areas.

Site ID 20749 Moore River Waugal

The Moore River Waugal was first reported in 1984 by Patricia Baines during an ethnographic report for a Natural Gas Laterals in the Perth Metropolitan Area. Ms Baines records that an Aboriginal informant referred to the *Wakal* (Baines 1984: 16). The *Wakal* was reported by the Aboriginal informants to have a horse's mane and that the particular *Wakal* found in the Moore River is called '*Kalleep*' (ibid).

In 2001, over three reports on the proposed Dampier to Bunbury Natural Gas Pipeline Corridor Widening Project, McDonald, Hales & Associates reported that the Moore River was believed to have been created by the *Waugal* (McDonald, Hales & Associates 2001a: 96). As well as the Moore River, a number of waterways were reported as being sacred sites by Aboriginal consultants from the Combined Metro Claim, including Gingin Brook, Lennard Brook, Red

Gully, Boonanarring Brook, Wallering Brook, Nullilla Brook, Breera Brook and Chandala Brook, as well as tributaries of the Ellen Brook (ibid). In addition there are numerous unnamed creeks and wetlands between Moore River and Bullsbrook were reported to be sacred due to their creation by the Waugal (ibid). However, McDonald, Hales & Associates reported that, along with the other reported wetlands in the region, “Beyond a broad statement that the Waugal had created them, no specific mythological detail was provided with regard to any of the particular waterways or wetlands” (ibid: 80). As such McDonald, Hales and Associates concluded that there is likely to be insufficient information available to list the waterways on the DPLH Register of Aboriginal Sites (ibid).

Additional information on the Moore River was provided in February 2001 by an Aboriginal informant who reported a series of permanent pools along the Moore River and recalled fishing and collecting fresh water crustaceans at the water sources with adult family members whilst he was a child at the Mogumber Native Settlement (McDonald Hales & Associates 2001b: 81).

On the DPLH’s Aboriginal sites and place registrar the Moore River Waugal is a registered site under section 5(b) and 39.3 of the AHA. Site ID 20479 Moore River Waugal is linked with a number of watercourses within the region as part of Site Complex ID #42 and therefore shares the same contiguous site extent as Place ID 21620 Chandala Brook, Place ID 21616 Boonanarring Brook, Place ID 21617 Wallering Brook, Place ID 21619 Breera Brook, Place ID 20650 Lennard Brook, Place ID 21618 Nullilla Brook, Place ID 19183 Red Gully Creek and Place ID 19138 Wetlands & Watercourses Moore River to Bullsbrook.

In relation to the proposed GNH Bindoon Bypass, Site ID 20749 Moore River Waugal has a DPLH site extent overlaying the Lennard Brook, in the northern section of BB-A survey corridor on Lots 18 and 20, and in the southern section of the BB-B survey corridor on Lots 25, 103 and 104 on Gray Road (see figure 3).

Main Roads **will be required to seek consent** under Section 18 of the AHA for consent to use the land that is located within a registered Aboriginal heritage site.

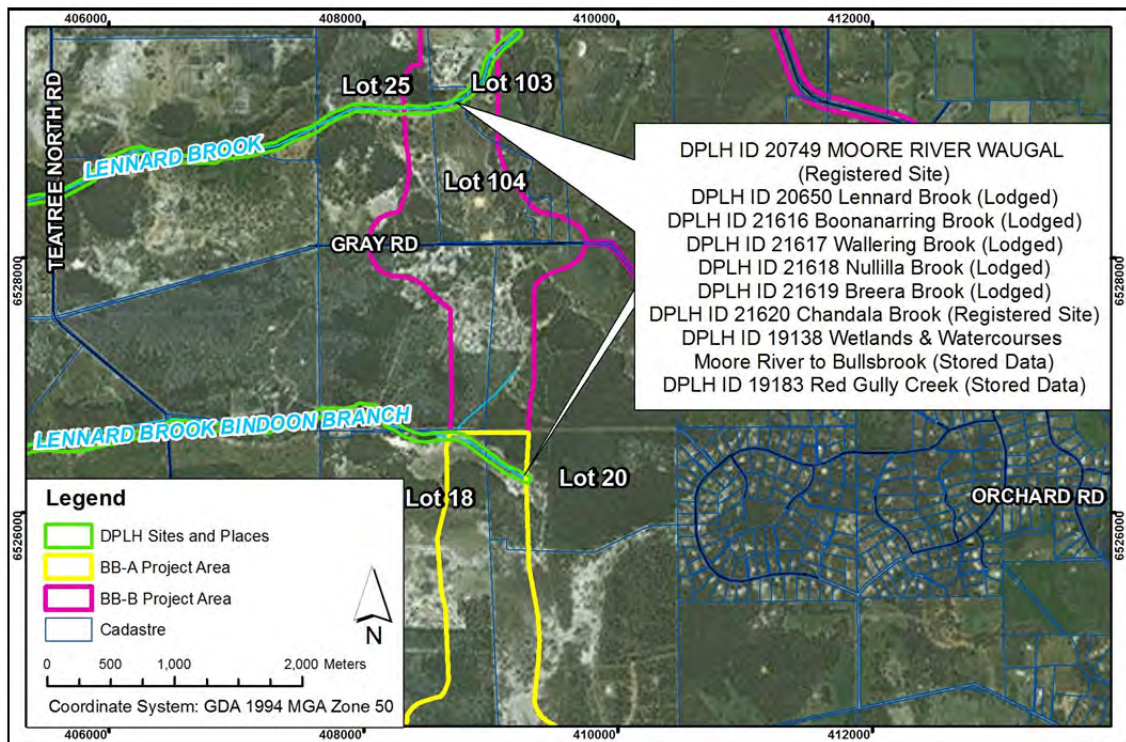


Figure 3: Map of the contiguous DPLH site extents for Site ID 20749 Moore River Waugal and other linked watercourses, within the BB-B and BB-A project areas.

Site ID 21620 Chandala Brook

This registered site is part of Site Complex ID #42 and is not reviewed here as the actual Chandala Brook watercourse is not located within the project areas. However, as this site is 'Registered' on the Aboriginal Sites and Places Register, Main Roads **will be required to seek consent** under Section 18 of the AHA to use the land within the DPLH extent of Site ID 21620 Chandala Brook.

REVIEW OF RELEVANT OTHER HERITAGE PLACES

Place ID 20650 Lennard Brook

This Other Heritage Place is a water course associated with mythological significance that was recorded by McDonald, Hales and Associates in 1999 and again by Mr Ronald Parker in 2002 (see McDonald, Hales & Associates 2001a, 2001b, 2001c, Sauman et al. 2001 and AIC 2002). The site informants for the Lennard Brook in 1999 were not specified (other than the Combined Metro Native Title Claimants and the Independent Nyungar Group) and in 2002 they were noted as Mr R. Bropho, Mr K. Garlett and Mr T. Bodney.

McDonald's informants reported that all wetlands and waterways, including names creeks and rivers such as "Moore River, Gingin Brook, Lennard Brook, Red Gully, Boonanarring Brook, Wallering Brook, Nullilla Brook, Breera Brook and Chandala Brook and tributaries of the Ellen Brook, as well as numerous unnamed creeks and wetlands between Moore River and Bullsbrook" were created by the Waugal. No specific mythology was reported (McDonalds, Hales 2001: 289-290).

During the AIC (2002) survey, the informants Mr R. Bropho, Mr. K. Garlett and Mr T. Bodney requested that the "Red Gully, Gingin Brook, Moonda Brook and Lennard Brook are all placed on the Interim Register of Aboriginal sites under the Act" (Sauman et al. 2001: 11). The Lennard Brook was reported to be created by the Dreamtime figure, the 'Waggy!' (Sauman et al. 2001: 25).

The extent of the heritage place was reported to be the high water mark of the waterway (AIC 2002: 14). The DPLH have mapped the extent of this heritage place as a 30m extent from the centre of the Lennard Brook watercourse, including the Bindoon Branch of the brook, based on the Department of Environment's hydrography dataset.

Place ID 20650 Lennard Brook is currently 'Lodged' on the Other Heritage Place register where it awaits assessment by the ACMC.

In relation to the proposed GNH Bindoon Bypass, Place ID 20650 Lennard Brook intersects Lots 18 and 20 in the BB-A project area, and Lots 25, 103 and 104 on Gray Road in the BB-B project area (see figure 3).

Main Roads **will be required to seek consent** under Section 18 of the AHA for consent to use the land that is located within this Aboriginal heritage place.

Place ID 21616 Boonanarring Brook, Place ID 21617 Wallering Brook, Place ID 21618 Nullilla Brook and Place ID 21619 Breera Brook

The remaining other heritage places that are part of Site Complex ID #42 are not reviewed here as their actual watercourses are not located within the project areas. However, as these heritage places are 'Lodged' on the Aboriginal Sites and Places Register and await assessment by the ACMC regarding their status under the AHA, Main Roads **will be required to seek consent** under Section 18 of the AHA to use the land within the DPLH extent of the following places:

- Place ID 21616 Boonanarring Brook,
- Place ID 21617 Wallering Brook,
- Place ID 21618 Nullilla Brook,
- Place ID 21619 Breera Brook.

REVIEW OF RELEVANT ETHNOGRAPHIC REPORTS

Table 2: Surveys previously conducted within the Bindoon Bypass planning corridor.

ID	Author/Year	Report Title	Type of Survey
21634	O'Connor 2005	Report on an Ethnographic Survey of the Proposed Perth to Darwin National Highway, MRS Boundary to Calingiri Road Section, March 2005.	Ethnographic survey. Field work was carried out over an extended period, November 2004 and January 2005, so that all parties could participate. Two of the groups requested that initial ground disturbance at all creek crossings be monitored. Some of those consulted were also concerned about the impact of the project on the Gngara Mound. The project crosses Ellen Brook and Lennard Brook, both of which were recorded as sites with the DPLH at the time the consultation was conducted.
21948	R & E O'Connor Pty Ltd	Report on an ethnographic survey of proposed road widening and passing lane areas between SLK 37.20 and SLK 146 Great Northern Highway	Ethnographic survey conducted in September 2005 that considered 5 sections of the Great Northern Highway. One section that was surveyed overlays a small portion of the southern end of project area BB-A. No sites or areas of significance were identified during the survey at this location.
22143	AIC 2006	Report on an archaeological and ethnographic survey under the Aboriginal Heritage Act (1972) of a proposed Optic Fibre Cable Route of New Norcia Western Australia, April 2006.	Archaeological and ethnographic survey. Noted that sites listed on the DPLH database in the area are all waterways. Previous surveys limited to infrastructure corridors because the surrounding area is pastoral. Archaeological survey involved pedestrian and vehicular transects. 80% of route covered by these methods.
28510	O'Connor 2010	Report on Ethnographic survey of Proposed Great Northern Highway Roadworks SLK 86 to SLK 118 including repairs to Bridge 681, October 2010.	Ethnographic survey. The author and Yued representatives inspected the entire survey area by vehicle and each creek crossing and Bridge 681 on foot. Bridge 681 is within Site ID 20749 Moore River Waugal, which was already registered at the time of the survey. The Yued representatives requested monitoring of works at creek crossings.
102073	Centre for Social Research 1997	Western Australia Regional Forest Agreement Aboriginal Consultation Project, Vol. 2.	Broad regional study.
102074	Centre for Social Research 1994	Western Australia Regional Forest Agreement Aboriginal Consultation Project, Vol. 1.	Broad regional study.

ID	Author/Year	Report Title	Type of Survey
-	Goode, Huxtable & O'Reilly 2016	Report of an Aboriginal Heritage Survey for the Great Northern Highway Muchea to Wubin Stage 2 Upgrade Project in the Yued Native Title Claim Area (WC1997/071) Western Australia.	Archaeological and Ethnographic survey. See review below.

Goode, B., Huxtable, L. and O'Reilly, T. 2016, *Report of an Aboriginal Heritage Survey for the Great Northern Highway Muchea to Wubin Stage 2 Upgrade Project in the Yued Native Title Claim Area (WC1997/071), Western Australia*, a report prepared for the GNH Muchea to Wubin Integrated Project Team on behalf of Main Roads Western Australia, November 2016.

This Site Identification Aboriginal Heritage Survey was conducted by Brad Goode & Associates from November 2015 to August 2016 for a number of project areas relating to the Great Northern Highway upgrade within the Yued NTC area. These project areas extended from Chittering in the south west to Dalwallinu in the north east. Within the Bindoon area, a number of project areas were surveyed which included a new alignment for the 'Bindoon Bypass' to the east of Bindoon township, offline and online options for the 'Bindoon Hill' road alignment, and road widening and upgrades at 'Little Bindoon Hill'.

As a result of the ethnographic survey held with 8 SWALSC nominated Yued representatives in December 2015, no new ethnographic sites of significance were identified within the Chittering, Bindoon Bypass, Bindoon Hill and Little Bindoon Hill project areas. However, during the consultation concerns were raised by the Yued group regarding the impact that the proposed western offline option for the Bindoon Hill may have on the Brockman River and associated wetlands. As a result, it was requested that the GNH alignment be situated further to the east to avoid impacting upon this waterway (Goode et al. 2016: 95).

During the survey Moodjar trees (or Christmas trees, *Nuytsia floribunda*) were identified within the survey area and it was requested that these trees are not disturbed during the project, due to their spiritual significance to the Yued group in connection with burials (Goode et al. 2016: 90, 95). Previous surveys conducted by BGA have found that despite the mythological associations that Moodjar trees have to the Yued people, due to the commonality of Moodjar trees across the landscape they are not considered sites under the AHA (see Goode & Greenfeld 2008, 2014).

In relation to the Bindoon GNH realignment a number of options were considered and the Yued representatives advised that they could not make a fully informed decision regarding their preferred option and requested that further consultation be conducted when planning of the road corridor is further advanced.

It was further requested by the Yued representatives that loss of native vegetation be mitigated by rehabilitating cleared areas with native plant species on the completion of the proposed works.

In relation to the current survey for the Bindoon Bypass BB-A and BB-B project areas, the Goode, et al. (2016) survey extended from the existing GNH at Spice Road, south of Bindoon Township, and headed north/northeast to Owen Road and GNH intersection. The 'Bindoon Hill' offline and online option survey areas were to the east of Bindoon Moora Road, approximately 3.6km east of the current BB-B survey area.

OUTCOMES OF ARCHIVAL RESEARCH

A search of the DPLH Aboriginal Sites and Places Register was conducted on 7th November 2017 for the Bindoon Bypass BB-A and BB-B project corridors which revealed **3 registered sites** and **9 other heritage places** with DPLH extents that overlay the project corridors (see Table 1 and Appendix 1).

Two of these heritage places are **archaeological**, Place ID 3528 Burroloo Well and Place ID 22027 Udumung Brook Artefact 1, and will be reviewed in the accompanying archaeological report by O'Reilly (2018).

The remaining 3 sites and 7 other heritage places are **ethnographic** and are all watercourses that have mythological significance to the Yued people. The actual watercourse that intersects the BB-A and BB-B survey areas is the Lennard Brook which is located near Gray Road, to the west of Bindoon.

Site ID 20008 Gingin Brook Waggy Site is a restricted site that has a large administrative DPLH boundary placed over a number of watercourses inclusive of the Lennard Brook. The site intersection area is located near Gray Road on Lots 18, 20 and 21 (BB-A project area), and on Lots 25, 37, 103 and 104 (BB-B project area). Main Roads **will be required to seek consent** under Section 18 of the AHA for consent to use the land that is located within a registered Aboriginal heritage site.

The remaining ethnographic sites and places all share the same contiguous DPLH boundary as part of Site Complex ID #42 which has grouped a number of watercourses together as they share the same mythological significance. This site complex comprises of 2 registered sites, 5 lodged places and 2 stored data places:

- Site ID 20749 Moore River Waugal (Registered),
- Site ID 21620 Chandala Brook (Registered),
- Place ID 20650 Lennard Brook (Lodged),
- Place ID 21616 Boonanarring Brook (Lodged),
- Place ID 21617 Wallering Brook (Lodged),
- Place ID 21618 Nullilla Brook (Lodged),
- Place ID 21619 Breera Brook (Lodged),
- Place ID 19138 Wetlands & Watercourses Moore River to Bullsbrook (Stored Data)
- Place ID 19183 Red Gully Creek (Stored Data)

Main Roads **will be required to seek consent** under Section 18 of the AHA to use the land that is located within the extents of these registered sites and lodged heritage places. In relation to the stored data places, as these places have been assessed by the ACMC as not meeting the definition of a site under Section 5 of the AHA; Main Roads has **no further obligations** under the AHA in relation to Place ID 19138 and Place ID 19183.

It is further recommended that DPLH consider addressing the confusing situation of multiple site/place names for one water course, by either amalgamating the data into one combined site or separating individual sites/places into their actual watercourse locations.

Previous surveys conducted by BGA in the project area has revealed that the Yued consider the waterways of the region as having mythological significance in connection with the Waugal and that proponents should avoid impacting upon waterways and wetlands (Goode et al. 2016: 95).

The Yued representatives have previously identified Moodjar Trees (or Christmas trees, *Nuytsia floribunda*) as having spiritual significance in connection with burials (Goode et al. 2016: 90, 95); however due to the commonality of these Moodjar trees in the landscape they are not considered sites under the AHA (see Goode & Greenfeld 2008, 2014).

IDENTIFICATION OF SPOKESPEOPLE

THE RIGHT TO SPEAK ON HERITAGE ISSUES

Various authors have discussed the contemporary problem of who in the Aboriginal Community has the authority to speak on heritage issues within an area. O'Connor et al. (1989: 51) suggest that when this question is posed to people in Aboriginal Australia, answers are usually framed by such terms as 'the Traditional Owners', i.e., those people who are defined by place of birth, or descent. Myers (1986: 128) presents a broader and more contemporary view of 'ownership' based upon descent and association:

An estate, commonly a sacred site, has a number of individuals who may identify with it and control it. They constitute a group solely in relationship to this estate... Identification refers to a whole set of relationships a person can claim or assert between himself or herself and a place. Because of this multiplicity of claims, land holding groups take essentially the form of bilateral, descending kindred. Membership as a recognised owner is widely extended, and therefore groups are not a given.

Myers further clarifies the current perception of 'ownership' when he states:

....such rights exist only when they are accepted by others. The movement of the political process follows a graduated series of links or claims of increasing substantiality, from mere identification and residual interest in a place to actual control of its sacred association. The possession of such rights as recognised by others, called 'holding' (*kanyininpa*) a country, is the product of negotiation (Myers 1986: 128-129).

While the notion of descent is clearly an important criterion within Myers analysis, it must be seen in terms of the contemporary Nyungar situation. Nyungar tradition in the south west has been seriously eroded since colonisation, lines of descent have been broken and previously forbidden and mixed marriages have interconnected many Nyungar groups who would not have traditionally had a close association (Machin 1993: 20). Consequently, in contemporary times the criteria of historical 'association' may in some cases also be regarded as a 'right to speak' on heritage issues within an area:

Traditional subsistence no longer sufficed to support Aboriginals so they combined this with menial work on farms and over time new relationships to land developed. As a consequence, the more recent history associated with their involvement with European agriculture and labour patterns is often more relevant than the pre-contact mode of attachment to an old way of life and the roots of the identity as original owners of the land. Biographical associations are often tied to post-settlement labour patterns and identification. These can predominate. This is part of a dynamic process of ethnicity, identity and tradition (Machin 1995: 11).

O'Connor et al. (1989) identified several criteria for determining contemporary community spokes people. A spokesperson must have a long-term association with an area, usually as a young person, and had extensive contact with a member or members of the 'pivotal generation of the culture transmitters'; those people whom, as children themselves, had contact with people who could pass on their traditional knowledge. A spokesperson must also demonstrate knowledge of the region's natural resources, its hunting, fishing and camping grounds, its local water sources, and the flora. This is important because a person without this knowledge is unlikely to be seen by their fellow Nyungar's as truly being from that country, despite having been born or lived in that area. In some cases, people from outside a specific region have established themselves by political activism. They are accepted by their fellow Nyungar because they may have participated in mainstream white pursuits, such as advanced education, or legal and political careers, that have empowered them within the broader community. As such, these people are a valuable resource to the local Aboriginal Community. The people consulted in this survey fulfil at least one of these criteria.

NATIVE TITLE CLAIMS OVER THE SURVEY AREA

Currently lodged with the Register of Native Title Claims and the Schedule of Applications, held by the Commonwealth Native Title Tribunal, there is one registered Native Title application that overlays the project area. The Schedule of Applications includes registered applications, unregistered applications and applications still undergoing the registration test.

- **Yued WC1997/071 WAD6192/98 (Registered)**

Applicants: Mr Malcolm Ryder, Ms Vera Warrell, Mr Charlie Shaw, Mr Dennis Jetta, Ms May Maguire

SELECTION OF SPOKESPEOPLE FOR THIS SURVEY

As the representative body under the *Native Title Act 1993* for the registered Yued WC1997/071 Native Title Claim group, the South West Aboriginal Land & Sea Council (SWALSC) was required to select Yued representatives to be consulted.:

On the 14th of December 2017 Ms Carolyn Fennelle (Legal Officer) from SWALSC provided Mr JJ McDermott (Heritage Officer) from Main Roads Western Australia with HER.0104 nominating 8 people for the project. At the survey several un-nominated Yued people attended the survey and requested consultation. Main Roads authorised their inclusion to maintain community relations. The following Yued people were invited to attend the ethnographic survey:

Mr Colin Headland was born in Dalwallinu to parents Mr Edward George Headland from Walebing and Mrs Veronica Pearl Headland (nee Anderson) from Carnamah. Mr Headland's paternal Grandparents were Mr William John Headland from Shark Bay and Mrs Mary Cecilia Headland (nee Wilkes). His apical ancestors are Edith Jarrah, Edward Wilkes and Cecilia Munderan. Mr Headland began his education at St Joseph's Convent in Moora and completed his schooling in Midland. Mr Headland was employed with the Moore Shire Council for over 25 years and has worked as a Shearer and Farmer. Mr Headland is a member of the Yued Native Title Claim group and was selected by SWALSC to participate in this survey.

Mr Clinton Ryder was born in Moora to parents Mr Edward James Ryder and Ms Ruby Ryder (nee Narrier) from Moora. Mr Ryder's paternal grandparent is Mr Edward Ryder and his maternal grandparents are Mr Frank Narrier, from Roebourne, and Ms Grace Brown from South Australia. Mr Ryder conducted his schooling in Mullewa and subsequently worked in the Moora area. Mr Ryder has a cultural association with the project area through the cultural knowledge that his mother has shared with him about his family history. Mr Ryder is a member of the Yued NTC group and was selected by SWALSC to participate in this survey.

Mr John Yappo was born in Meekatharra to his parents Mr Albert Yappo, from Mogumber, and Ms Thelma Councillor, from Mullewa. Mr Yappo undertook schooling in Moora where he grew up. Mr Yappo is a member of the Yued Native Title Claim group and was nominated by SWALSC to participate in this survey.

Mr Jason Nannup was born in Subiaco to parents Ms Mary Nannup, born in New Norcia, and Mr Mervyn Nannup, born in Swan River. Mr Nannup's grandparents are Mr Robert Joseph Drayton, from Dalgety Downs Station, and Ms Mary Consuelo Taylor, from New Norcia. Mr Nannup's maternal great-grandparents were Mr Melchoir Taylor, from New Norcia, and Ms Angelina Smith, from Fremantle. Mr Nannup is a member of the Yued NTC group and was selected by SWALSC to participate in this survey.

Ms Stephanie Mippy was born in Subiaco in 1972 to Ms Elaine Mippy from Mogumber and Dutchman Mr John Hofstee. Ms Mippy's maternal grandparents are Mr Edward Mippy and Ms Phyllis Narrier. Ms Mippy undertook schooling at Coogee Beach, Moora and Rockingham and currently works as a court officer for the Aboriginal Legal Services WA. Ms Mippy is a

member of the Yued Native Title Claim group and claims ties to apical ancestor Winjan. Ms Mippy was nominated by SWALSC to participate in this survey.

Ms Kayla Woodley was born in Perth in 1998 to parents Mr Jeremy Woodley and Ms Carrisa Dodd, from Subiaco. Ms Woodley's paternal parents are Mr Patrick Woodley, from Moora, and Ms Sandra Ryder, from Mogumber. Ms Woodley's maternal grandmother is Ms Ivy Dalgety from Geraldton. Ms Woodley undertook schooling in Perth. Ms Woodley is a member of the Yued Native Title Claim group and shares a cultural association with the survey area through her grandfather Mr Patrick Woodley, her great grandfather Mr Andrew Woodley, her great-great grandfather Mr Andrew Woodley Senior and his mother Ms Philomena Yappo. Ms Kayla Woodley was nominated by SWALSC to participate in this survey.

Ms Pamela Narrier was born in Perth to parents Mr Terry Narrier Senior and Ms Patrina Dawson. Ms Narrier's grandparents are Mr Frank Narrier and Ms Evelyn Dawson (nee Anderson). Ms Narrier conducted her schooling in Midland and has worked in the 'Yuat' area. Ms Narrier shares a cultural association with the project area through her familial connections and is a member of the Yued NTC group. Ms Narrier attended the ethnographic survey as a replacement for Ms Patrina Dawson, which was endorsed by SWALSC on the 7th March 2018.

Ms Jennifer Mogridge was born at Moore River Native Settlement to parents Mr John Dalgety, from Dalgety Downs Station in the Murchison/Gascoyne region, and Ms Betty Mogridge, from Moore River Native Settlement. Ms Mogridge's maternal grandparents are Mr Lawrence Mogridge from Quairading, and Ms Rachel Smith from Wickopin. Ms Mogridge conducted her schooling in Moora and has worked various jobs in the Upper Swan and also worked as a historian for the Mogumber Mission. Ms Mogridge is a member of the Yued NTC group and was selected by SWALSC to participate in this survey.

Additional participants also attended the ethnographic survey in support of the SWALSC nominated Yued people:

Mr Quinton Dawson was born in Moora to parents Mr Terry Narrier Senior and Ms Patrina Dawson. Ms Narrier's grandparents are Mr Frank Narrier and Ms Evelyn Dawson (nee Anderson). Mr Dawson shares a cultural association with the project area through his familial connections and is a member of the Yued NTC group.

Mr Patrick Woodley was born in Moora to his parents Mr Andrew Woodley and Ms Rose Woodley (nee Morris), from Wiluna. Mr Woodley's paternal grandparents are Mr Andrew Woodley (Senior) and Ms Philomena Yappo. Mr Woodley grew up and conducted his schooling in Moora. Mr Woodley is a working party member of the Yued NTC group.

Mr Sheldon Narrier was born in Moora to parents Mr Joe Narrier from Moora and Ms Regina Warrell from Moora. Mr Narrier's paternal grandparents are Mr Joe Narrier from Moora and Ms Eunice Woodley from Walebing. Mr Narrier's maternal grandparents are Mr William Warrell and Ms Jenny Modridge from Mogumber. Mr Narrier attended school in Moora and has worked on farms mustering cattle and sheep. Mr Narrier has connections to the Moora survey area through his Narrier, Woodley and Warrell familial connections and is a member of the Yued Native Title Claim group.

Ms Evelyn Rose Dawson was born in Moora to parents Mr Joseph Kitchener Anderson and Mrs Philomena Jean Anderson (nee Jackamarra). Ms Dawson's paternal Grandparents are Mr Frederick James Anderson and Mrs Agnes Anderson (nee Williams) and her maternal Grandparents are Mr Emanuel Jackamarra and Mrs Mary-Anne Jackamarra (nee Yates). Ms Dawson is a working party member of the Yued NTC group and shares a cultural association to the project area through camping, fishing and hunting activities conducted by the Anderson and Jackamarra families. Ms Dawson claims traditional blood ties to apical ancestors Ms Edith Jarraha and Mr George Anderson.

COMMUNITY CONSULTATION

AIMS

- To establish contact with Aboriginal people who retain traditional or current knowledge pertaining to the region.
- To determine if there are any sites or places of significance, as defined by section 5 of the AHA, within the project area.
- To record any ethnographic information provided about identified sites or places.
- To generate consensual recommendations from the Aboriginal community representatives in regards to any Section 18 requests and to record management strategies for identified ethnographic and archaeological sites.

METHOD

To arrange the survey the selected informants were contacted by phone and by registered mail with an onsite meeting arranged. At the commencement of the meeting the informants were briefed as to the details of the project with the aid of the project plans and previously recorded Aboriginal heritage sites and places overlaid upon a large scale aerial photo map.

Ethnographic information was recorded in a notebook and photographs of the survey process were taken. GPS coordinates of any cultural features were recorded in the field and transferred to mapping software ArcView V10 where final maps were produced.

COMMUNITY CONSULTATION PROCESS

On the 13th March 2018 BGA consultants, Mr Brad Goode, Ms Louise Huxtable (Anthropologists) and Ms Sally McGann (Ethno-Archaeologist) met several representatives of the Yued WC1997/071 Native Title Claim group, Mr Clinton Ryder, Mr Colin Headland, Mr John Yappo, Mr Jason Nannup, Ms Stephanie Mippy, Ms Kayla Woodley, Ms Pamela Narrier, Mrs Jennifer Mogridge, Mr Sheldon Narrier, Mr Patrick Woodley and Ms Evelyn Dawson at 10am at the carpark at the Bindoon Town Hall near the Oval in Bindoon.



Figure 4: Mr John Wear (Jacobs Design Manager) with assistance from Ms Sally McGann (BGA) provides the Yued WC1997/071 Native Title Claim group an overview briefing of the project. The briefing took place at the park near the Bindoon Town Hall and Football Oval. View to the south.

Present also was Ms Susan Regan (Jacobs Senior Environment and Heritage Advisor) and Mr John Wear (Jacobs Design Manager) to explain the project and to manage safety requirements as outlined within the JHA safety plan developed for the project.

The survey meeting began with the project anthropologist Mr Brad Goode introducing all parties to each other and also explaining the safety requirements outlined within the JHA.

Mr Goode explained that Jacobs acting for Main Roads had been tasked with the design and construction of the Bindoon Bypass Road as a component of the Great Northern Highway Muchea and Wubin Stage 2 Upgrade Project. Mr Goode explained that the town of Bindoon required a Bypass Road to the west of Bindoon in order to improve road safety in the town and to provide heavy haulage vehicles with a viable alternative to travel north and not to have to climb the Bindoon Hill which has unsafe vertical geometry.

Mr Goode advised that prior to the ethnographic consultations that BGA archaeologists Mr Tom O'Reilly, Mr Stuart Johnston and Ms Sally McGann in company with Yued assistants Mr Chris Shaw, Mr Jason Nannup and Mr Brendon Moore had walked the survey area corridor defined as BB-A & BB-B looking for artefacts and had found only three isolated artefacts but no Aboriginal archaeological sites as defined by Section 5 of the AHA (see map Appendix 3).

Mr Goode explained that the ethnographic survey was required to determine if the survey corridor contained any sacred, ritual, ceremonial or historical sites to the Yued people. Mr Goode explained that the survey would focus on where the road would cross the rivers, creeks and wetlands as these places are known to have significant values to the Yued people. Mr Goode then advised that the survey team would start the field inspection to the north of Bindoon at Hay Flat Road and travel south, looking at a number of water crossings (see Appendix 3).



Figure 5: the Yued WC1997/071 Native Title Claim group asking Mr Wear questions regards the Bindoon Bypass at the initial briefing. View to the Northwest.

Following this briefing Mr Wear then provided the group with an overview of the proposed alignment, advising that this corridor has been endorsed by Main Roads and the government with ASJV being instructed to enter into the environmental and heritage assessment processes which can take up to 2 years to complete.

Mr Wear said that there is no funding at the moment to build the Bypass, however there is funding to undertake the approvals process and to acquire the required land. Mr Wear advised that the proposed Bypass is 45km long and has 11 different intersections. The Bypass crosses one major river, the Brockman River, with there being additional points where box culverts are required across the minor waterways. The Bypass will initially be a single lane carriageway in each direction with a series of overtaking lanes. In 20-30 years' time this will be widened to become a dual carriageway.

Mrs Mogridge enquired into whether the Bypass was planned a long time ago to which Mr Wear responded that the Bindoon Bypass corridor was part of the Perth-Darwin National Highway which was looked at 20 years ago. Mrs Mogridge said that she did a survey 20 years ago with Rory O'Connor and Ted Hart and told them then that it should not affect the rivers and wetlands.

Mr Wear advised that this is unavoidable and that alternative options, including staying online, were looked at, but the current realignment option has been determined to be the one that has the minimal amount of impact of the environment, heritage, and landowners. Mr Wear advised that he will provide more specific information at each location. Mr Wear then concluded the briefing and the survey team proceeded to conduct the field inspection.

The first location visited was a crossing on the Udumung Brook at coordinate 420324mE & 6550902mN. The survey team accessed this via Hay Flat Road.



Figure 6: the Yued WC1997/071 Native Title Claim group inspect a creek crossing at Hay Flat Road where the Hay Flat Road will be terminated so that the Bindoon Bypass becomes the main connection to the Great northern Highway from the west. View to the south to Hay Flat Road. Insert shows Ms Susan Regan showing the group the plans.

Here Mr John Wear informed the group that the Bypass road would cross the Udumung Brook 175m to the south of the current location. Mr Wear advised that at the current location that Hay Flat Road would be terminated, so it would be necessary to build a roundabout and install a number of culverts where the road crossed the brook. The culverts would be 900mm in diameter; the road would be 9m wide with 2m shoulders and would likely require clearing of vegetation. The group discussed culverts and asked how deep the excavations would be for the

installation of the culverts. Mr Wear said that he did not know. The group advised that they did not want the water flow disrupted and were generally not in favour of excavations within the watercourse and the clearing of the vegetation.

In relation to the Bypass the group enquired into whether there have been studies done on the fauna in the area. Ms Regan responded yes, advising that fauna and flora studies were carried out over several years. Ms Mogridge asked if there are turtles where the Bypass road is proposed. Ms Regan responded that none were identified within the road corridor across the Udumung Brook. Ms Mogridge stated, “You wouldn’t see them though, as they are under the mud”.

Mr Headland asked which Yued representatives assisted with the archaeological survey of the Bypass road corridor at this location and then asked if they had found any artefacts. Mr Goode responded that Mr Brendan Moore, Mr Jason Nannup and Mr Chris Shaw assisted. Ms Mogridge stated that “Chris and Brendan don’t live in the area and don’t know the history of the area, including the camping area at Udumung Nature Reserve on Hay Flat Road”. She advised that Mr Joe Ryder and Ms Dawn Anderson would bring their children to the reserve to camp during school holidays and utilised the brook for drinking water, fishing and bathing (Udumung Nature Reserve was recorded in Goode, Huxtable & O’Reilly 2016: 83).

Mr Goode said the planned Bypass road will miss the Udumung Nature Reserve. Ms Mogridge said that it will still infringe on the waterway and enquired into whether the road can be moved to not impact upon the waterway. Mr Wear responded no. Mr Goode enquired into whether there are any religious/cultural stories about the Udumung Brook. Mr Mogridge responded, “There would be, as Aboriginal people had used it for a food source, like Gilgies, and everything, before then white men came and destroyed it for farming”.

The survey team then walked to the north and then to the west, led by Mr Wear to the centre of the proposed Bypass Road corridor at coordinate 420182mE & 6550968mN.



Figure 7: the Yued WC1997/071 Native Title Claim group following the Udumung Brook west to the centre of the Bypass road corridor. Insert shows the discussions at this location 420182mE & 6550968mN.

Whilst walking Mr Yappo informed Ms Huxtable that he is not aware of any Dreaming stories about the Udumung Brook, however in his opinion the brook has significance as a water source as there are freshwater springs located to the east which feed the brook that supplied water to Noongar people that camped at Udumung Nature Reserve, north of Hay Flat Road.

At the centre of the road corridor Mr Wear explained that the Bypass clearing corridor will be 35m wide in either direction from the road centreline. The road height will be 10m where it crosses the wetland in the centre; the road will cut through the hill located to the immediate north to achieve a gentle slope so that the roads vertical geometry is suitable for heavy haulage vehicles. Mr Wear said that 9-10 concrete box culverts would be installed across the brook to allow the water to flow under the road. The edge of the road embankments would be sloped and stabilised with compacted fill. The road is yet to be designed but the alignment is reasonably settled in terms of location in relation to other constraints.



Figure 8: the Yued WC1997/071 Native Title Claim group discussing the Bypass Road with Mr John Wear; View east on the north side of the Udumung Brook.

Mr Colin Headland enquired into whether the box culverts will have a concrete base to sit on and asked how deep the contractor would need to dig into the brook to construct this pad.

Mr Wear responded that the culverts details have not been designed to that extent, so he could not answer this question.

Mr Headland stated culverts lead to pooling of water and it causes problems for the flow of the brook. Mr Wear advised that when the detailed design was completed issues such as this could be addressed.

In terms of the roads design Mr Wear advised that once the alignment is out of the brook that it would then cut through the hill to the north so that the incline is not too great, with the Bypass increasing in height by 1m in 3m increments. This will determine such issues and the cut would be used as fill to raise the road height through the wetland and over the Udumung Brook. The culverts would be then designed to maintain the waters flow.

Mr Headland enquired into what drainage will be used and how the road is being supported if it is raised to a 10m height. Mr Wear responded that there will be no drainage and the foundation of the road will be gravel. Ms Mippy again enquired into how deep the excavations will be to which Mr Wear responded that he is unsure. The Yued advised that they were concerned about excavations into the Udumung Brook and requested that Mr Wear provide the working party with further information in relation to the questions that he was unable to answer.

Mr Goode enquired into whether people camping on the reserve would use the Udumung Brook at this location. Ms Mogridge responded that people used it as water sources as they travelled to the reserve and when living on the reserve.

Mr Headland enquired into why a bridge structure cannot be used to cross the Udumung Brook to which Mr Wear responded that the engineer has advised that it is not required as the waterway is not large enough.

Mr Headland advised that a bridge design which spans the Udumung Brook and does not require culverts is preferable from the viewpoint of the Yued representatives as it would require less clearing, excavation, and disruption to the underground stream. Mr Headland further advised that a bridge with a restricted amount of pylons would be preferable to culverts as it would have localised excavations in the waterway to cross the brook and would, in his opinion, be culturally more appropriate to the Yued.

Mr Wear reiterated that from an engineering perspective there is no need for a bridge structure. Mr Headland said that a bridge could be built in order to preserve the Yued peoples land and to respect their beliefs with regards to the Udumung Brook.

Ms Mippy enquired into whether there are other options when it comes to crossing the Udumung Brook to which Mr Wear responded no, stating that other options are not viable in terms of the lay (topography) of the land. Mr Wear said that to build this road they need to cross the brook somewhere and that this is the best location in terms of all other constraints.

Ms Mogridge advised that the Udumung Brook feeds the swamps further west of where the group is standing and that turtle's travel along the brook to the swamps and wetlands. Ms Mogridge stated that rains and large water flows would get blocked off with culverts and a raised causeway which is why a span design is preferred by the Yued people. Ms Mogridge stated, "Culturally we are against such blockages to waterways".

Mr Wear responded that he is confident that the culverts will not affect the water flow of the brook. Mr Headland disagreed.

Ms Mogridge observed a number of animal tracks along the brook, including echidna diggings and turtles and stated that the health of the brook needs to be maintained to ensure that the future generations of Yued people have access to turtles.

Ms Mippy advised that the turtles have medicinal properties.

Mr Narrier stated,

We don't want the turtles affected here so if the bridge can cross over the brook instead of digging through it then that would be better as opposed to mucking with it, otherwise it will affect what's underneath, the Waugal and the turtle. We have to protect them. So put the bridge over, we don't want the turtles and porcupines being affected.

Mr Goode enquired into what the name of the turtle is to which Mr Narrier responded 'Yakan'. Ms Mippy stated, "The Waugal is the waterway and the turtle is a medicine".

Mr Narrier clarified that the main concern with the works is the animals and the high level of destruction of the habitat that supports wetland species that are customarily important to the Yued people.



Figure 9: Mr Quinton Dawson points out echidna scratching in the bed of the Udumung Brook wetland; view to the west from the northern side of the brook.

Mr Goode enquired into whether there is a religious belief about the turtle to which Ms Mippy responded that they live in the waterways and all creeks and wetlands, and stated, “They are important to us”.

Mr Narrier advised that the *Yakan* is a totem for the Warrell family and is a traditional food and medicine source for the Yued, stating that he was taught how to track them by his grandfather. He stated that the turtles don’t let white men see them and hide from them in the mud.

Mr Goode enquired into how many turtles would be found in the area to which Mr Narrier responded that it depends, however the previous week his Nan had caught 16 turtles in Moora. Ms Mogridge added that the turtles move around and travel. However, she stated, if there are machines here building the bridge the turtles won’t try to run away, instead they will lay down as flat as possible and stay still and likely get killed as a result. Ms Mippy added that they would also dig into the ground and would be crushed during construction.

Ms Regan enquired into whether the Yued representatives see the culverts as providing a safe passage for the wildlife to travel under the road. Mr Headland responded that a bridge would still result in a road with cars being able to go through the area with less damage and clearing to the wetland. Ms Mippy added that the clearing of bush would also result in a loss of habitat for all the animals, not just turtles.

Mr Headland pointed out several large trees and advised that they would be used for birds’ nests and enquired into whether they can be preserved to which Ms Regan responded that the EPA have conditions regarding black cockatoo habitats and nesting hollows which need to be preserved as the government wouldn’t approve the project if there is an impact on the cockatoo habitats. She stated that part of her job it to identify trees which need to be protected. Mr Headland asked about other birds’ nests as well not just cockatoo’s. Ms Regan said they would be considered if the environmental reports made such a recommendation.

Ms Mogridge advised that the Yued representatives are not stopping the project but need to be fully informed and that at present there is not enough information provided.

Mr Goode then enquired into whether there are any places of special importance and significance under the AHA on the brook at this location to which Ms Mogridge responded, “All waterways are special places”.

Mr Headland advised that the adjacent cleared paddocks would have been bush and likely to have been historical campsites. He stated, “How are we going to be able to pass knowledge on if the country and sites aren’t here anymore? Places are more special when they are natural”.

Ms Mogridge agreed and stated, “You should be protecting what has been here forever. That waterway has been here forever. Our people utilised all this area, there’s no two ways about it”.

Ms Mippy enquired into what methods were used to identify wildlife to which Ms Regan responded that desktop and archival research identified what potential animal species could be located within the area and then surveys targeting those species were carried out. She advised that the watercourses in the survey area have been inspected over different seasons since 2016.

Mr Headland stated, “We’re not stopping you from doing it but there is a better way of doing it, for heritage and wildlife. If nothing else, if you don’t take heritage and the environmental impact into account, the better ways (bridge) will save you some gravel”. Mr Headland added that the depth of excavations underneath the culverts is also a concern in terms of subsurface water flows and turtle habitat.

Mr Goode advised that perhaps there could be an opportunity for the Yued representatives to relocate turtles prior to the works occurring; all agreed that this could be done and that they could go to the Wannamal Wetlands. The group then drove to Head Road.



Figure 10: Mr Wear shows the Yued WC1997/071 Native Title Claim group the proposed Bypass Road corridor on his tablet while Ms Regan discusses the plan with the group. View north towards the creek from the southeast road verge.

The survey team then stopped at GPS coordinates 416942mE 6549440mN where the proposed Bypass road alignment crossed Head Road to discuss the works in relation to the creek crossing. The group asked Mr Wear if the road was to affect the water course that is crossed by Head Road. Mr Wear advised the group that the brook will not be crossed here; it will be crossed approximately 430m to the northeast (250m beyond the dam). He advised that there will be two 250-270mm culverts under the Bypass road where it crosses the end of the brook which is largely a catchment.

Ms Mogridge asked if the road would cross the creek. Ms Regan said that the road will cross between the end of the creek and the dam that can be seen in the paddock to the northeast. Mr Wear added that all of the trees along the edge of the creek will remain; no clearing is required. Ms Mippy asked if monitors will be present. Ms Regan responded that the normal process is to have monitors at the watercourses when the works affects Aboriginal heritage. Ms Mippy requested that monitors be present for the works at the watercourses, if not for all vegetation clearing and initial ground disturbing works to observe if any artefacts are uncovered.

Mr Goode asked the Yued representatives if any historical camps are known in this area. Ms Mogridge responded that Yued people would have walked right through here, and would have camped as they travelled. Mr Narrier added that camps would usually be established in areas of bush near the waterways; however he is not aware of any specific camp sites here. His grandfather told him stories and the location of camp sites further towards Moora and at Wannamal Swamp. Ms Mogridge stated that his family came through this area, Sarah Warrell and her mother travelled across this area from Dandaragan and through New Norcia, following the waterways. She added that they would have likely travelled through white men's farms before the farmers fenced them off. There were no heritage issues at this location.

The group then moved to Kangaroo Gully Road, stopping at GPS coordinates 413283mE 6548411mN where the Bypass road is proposed to cross the creek.



Figure 11: Mr Wear shows the Yued WC1997/071 Native Title Claim group the proposed Bypass Road corridor crossing at Kangaroo Gully. The tree behind Ms Huxtable (BGA anthropologist) is where the southern side of the Bypass Road crosses the creek which is unnamed. View north.

Here Ms Mogridge advised the group that this waterway connects up with Udumung Brook and pointed out minnows in the water.

Mr Wear described the required road design and culvert structure and stated that the highest point will be 11 metres. Near the dam there will be a 10 metre cut. There will be a bank of 3 x 1200mm box culverts to cross the creek.

Ms Mippy asked if the road is going above the waterway then are foundations required to be dug into the brook. Mr Wear responded, no, the road will go over the brook with 3 culverts installed. Ms Mippy enquired into whether there will be digging for the culverts to which Ms Regan responded yes. Mr Wear added that there will be 3 x 1200mm culverts at this location.

Mr Headland enquired into the depth of the excavations for the concrete slabs for the culverts to sit on. Mr Wear responded he is not sure, however he said it would likely be 200mm in depth.

Ms Mippy enquired into what the culvert would look like to which Mr Wear responded that they would look like a square box.

Mr Headland observed that there seems to be another creek nearby and advised that it would be likely during the wintertime that the whole area would be flooded. Mr Wear responded that this would be considered in the detailed design, at the moment it was just a determined alignment.

Mr Headland responded that the Yued Working Party will ask the Traditional Owners who came on the survey for the details and that he won't be able to provide them as ASJV have not provided them with enough information. Mr Headland stated that this puts the Yued representatives in a difficult position to which Mr Wear responded that he does not know the details at the moment but would be happy to provide the working party more information when it was available.



Figure 12: View north along the brook at Kangaroo Gully showing the old farm crossing at 413265mN & 6548458mN referred to by the Yued WC1997/071 Native Title Claim group.

In relation to the roads impact upon the creek Ms Mippy enquired into why the existing crossing on the creek can't be used. Mr Wear responded that it was a farmer that built this crossing and that it is not wide enough for a highway. Mr Wear stated that the road at this point needs to be 11m in height to ensure a gentle gradient is achieved. He added that fill from the hill cutting will be used to build up the road height in the valley across the creek.

Mr Headland stated, "If you look at the creek itself, white people have altered it. The water flow has been stopped, farm animals have disturbed it and there are grass and weeds which shouldn't be there. Now the waterway is blocked by this road and can't run".



Figure 13: View showing the creek at Kangaroo Gully that has been modified and invaded by weeds from farming. View south from the proposed Bypass Road crossing location.

Ms Mippy agreed and stated that the farmer has installed a culvert which also isn't allowing water to flow through (see Figure 12).

Mr Goode suggested that the Yued representatives concerns would be taken into account when designing the alignment, particularly the maintenance of the water flow rates and protection of the environment and animals. Mr Goode discussed the Yued representatives' obligations to the environment as custodians and observed that there are cross-cultural differences and communication issues between groups in relation to land management philosophy. Mr Goode advised that while such issues are of concern to all, the purpose of the discussion was to determine if this unnamed creek had any values as defined by Section 5 of the AHA.

As such Mr Goode asked the group if this particular creek was subject to any religious beliefs, was a place where any ritual or ceremonies were known to have formerly occurred or if it was a place that was special to the Yued in relation to habitual or customary use during the post settlement period.

Ms Mogridge stated, "This creek here feeds the Brockman River too. There are all kinds of issues here which we need to talk to our families about. The Brockman River is where our families went; these little feeders are like veins to the Brockman River".

Mr Headland stated, “What I’ve seen since being on numerous committees is that our people are the only ones looking after the rivers. We don’t care if you say span bridges are too expensive as we’re the only ones looking after them. The remaining environment should be protected”.

Ms Mippy added, “We believe that the waterways were created by the Waugal and we get punished if they are disturbed. You guys don’t understand the importance of the waterways to us”.

Ms Mogridge stated, “The water is underground too. If there was no water there would be no *Yandjet* (*Typha augustifolia*) here. People used to get them for food” (sp. Whitehurst 1992: 26) – for further research on traditional use of *Typha* root as a food resource and the variations of spelling of *Yandyett*, *yunjid*, *yanjidee* and *yandyett* (see Macintyre & Dobson 2017).

Mr Headland stated, “Little creeks like these have been affected across the country and have dried up. These creeks all go to the biggest women’s site there is, Minyulo Brook. That brook is the biggest women’s site and our people and women are telling mining companies how important they are and no one will listen. They don’t know our culture and we are telling the stories but it’s a pointless exercise as no one will listen. That brook used to be fresh water and now the mining has destroyed it”.

Ms Mogridge agreed and stated, “Its white man’s way or no way. We want to protect our country and water for future generations. Those trees won’t be here if we don’t protect them”.

Mr Goode enquired into whether there are any places of particular importance or special significance along the creek to which Ms Mogridge responded, “All of the waterways are special to us”.

Mr Headland advised that there are campsites off the GNH and Hay Flat Road so people would have walked across this area to get to them, as they followed the waterways.

Ms Mogridge added that the turtles, *Yakan*, would have been caught along these waterways too.

Mr Headland advised that there were six seasons which dictated when the Yued people would travel to obtain food. He stated that a family group would camp somewhere for a little while to gather and eat food then move on to the next place.

Ms Mogridge agreed and added, “And you never took too much from one place, just enough for a feed, then you would move on to the next waterhole to make sure there would be enough for the next time you pass through”.

Mr Goode advised the Yued representatives that building the bypass would be disruptive to the land but this would be unavoidable as all of us drive on roads. Mr Goode then explained Main Roads obligations under the AHA. Mr Goode explained that the AHA protects places of particular importance and special significance and enquired into whether there are any such places here. Ms Mogridge responded, “You can’t stop progress”. Ms Mippy responded that she personally has not been to this location before and was not aware of any. Mr Headland responded, “If this creek leads to a campsite then we have to protect it”.

Ms Mippy requested that there should be monitors at crossings of the creeks to which Ms Mogridge agreed, stating, “You don’t know what’s underneath”. Ms Mippy stated, “Generally, where there are waterways our mob would have been there. We know what artefacts look like, grinding stones, tree marks and the like so we should be there for clearing and ground disturbing”. Mr Headland agreed, stating, “The top of the ground would have been a different point hundreds of years ago and could have been underneath where we are standing right now”.

No further issues were raised and no Aboriginal heritage sites as defined by Section 5 of the AHA were identified at this location so the survey team moved on.

The group then broke for lunch before driving to the intersection of the Bindoon Moora Road and Pines Road (unmade road) to view where the revised alignment (WP-4) would cross wetlands to the southwest, stopping at GPS coordinates 412162mE 6548073mN.



Figure 14: Ms Susan Regan discusses the proposed Bypass road with the Yued WC1997/071 NTC group on project plans. View SE at the intersection of the Bindoon Moora Road and Pines Road (unmade).

Here Mr Wear advised that due to issues regards access to farms and landowners being unavailable that the survey team cannot get to the actual location where the road will intersect the wetlands about 600m to the south west.

Mr Wear and Ms Regan subsequently explained the proposal on an aerial photo map. The group also walked to the farm fence adjacent to Pine Road where they could see the wetland from.

Mr Wear advised that the road would need to cross a 300m section of the wetland and would need to be built up to 5m in height. The alignment is 50m wide and is heading on a south west/north eastern axis from where the group is standing. The road also has on and off ramps to bring traffic back on to the Bindoon Moora Road to the northeast of where it crosses the wetland.

Mr Headland stated that this is the third location that the Yued representatives have discussed today regarding the alignment crossing the significant Creeks/wetlands, advising that each time the Yued representatives have advised that they do not want the road to disturb the wetlands, “you have ignored our views”.

Mr Wear stated that a 50m long, 5m high bridge is proposed over the central part of the wetland at this location to minimise impacts. Culverts will be installed every 25m on the causeway approaches to the bridge. The culverts will allow the water to continue to flow.

Ms Mippy enquired into what will happen to the vegetation in the wetlands.

Mr Wear advised that vegetation will be cleared underneath the bridge and embankment of the causeway. He stated that to have no impact upon the wetlands the bridge will have to go over the right over the wetlands which are too far.

Mr Wear was asked by the consultants why this place is the favoured location when the original option (WP-4) looked was narrower on the air photo map. Mr Wear stated that numerous studies and hydrological modelling suggests that this is not the case as the original option only looks narrower as its be cleared for farming and that this new alignment has the least affect upon the water flows across the landscape.

Ms Mippy observed that there is cleared farmland adjacent to the wetlands and enquired into why the road can't be situated there. Mr Wear responded that the road has to pass through the wetlands area at some stage and this is the best crossing point. Ms Regan agreed, stating that socially, environmentally and economically, this has been determined by scientific modelling as the best option. Mr Wear stated that if the wetlands cannot be bridged then the hills will have to be cut into further which would affect the nature reserve and cockatoo trees.

Mr Headland stated that Main Roads built a road at Gillingarra and spent an enormous amount of money to make it go across wetlands. He stated that the Bypass will be contracted out, the contractors won't do it properly and it will sink like Gillingarra. Mr Headland stated that you don't know what is underneath; the land changes over seasons and over time, this area often floods and is a lot wider than you think. Mr Headland further stated that he and the rest of the group wants to look at the actual location of the proposed Bypass Road alignment and bridge site across the wetlands more closely as he was unable to make any real comments about the effects from such a distance away. Before leaving the Yued representatives advised that they are unhappy with the Bypass crossing such a major wetlands and asked that an alternative be considered. The group advised that Main Roads should bring this matter before the working party before a decision is made.

Mr Goode asked the group if this wetland had any special values in relation to the AHA. The group once again advised that all wetlands are special in Aboriginal culture and that they cannot provide any further advice until they look at this more closely.

The group then drove west down Cook Road and entered a private property stopping at GPS coordinates 408837mE 6543714mN.



Figure 15: 'Arty' the landowner discusses the road with Mr Wear while the Yued WC1997/071 Native Title Claim group observe. View to the south.

Here the Bindoon Bypass Road would bisect this property on a north/south axis just to the east of the rail line and would cross Emu Springs which would be filled with culverts installed under the road to allow the water to continue to flow into the adjacent creek.



Figure 16: the Yued WC1997/071 Native Title Claim group, the landowner and the consultants walk north to Emu Spring GPS coordinates 408725mE & 6543891mN.

Here the landowner Mr Arty Worth pointed out the spring and advised that it had never been dry in the 17 years that he has owned the property. Ms Regan asks if the dam was man-made. Mr Worth responded by stating that the previous owners had advised him that it was a natural spring but they had expanded it into a dam to supply water to the property.

Mr Wear and Mr Worth discussed the plan and Mr Wear advised that the proposed road will overlay the spring requiring the dam to be filled. The road will be raised to 5m in height at this point. An intersection to connect the Bypass with Cullalla Road from behind the spring which will cross over the rail line is also planned.

Mr Goode then asked the group if they knew of 'Emu Spring' and if they hold any significant cultural values or beliefs in relation to it.

Mr Goode also asked if the group was aware of any important places or historical camps in this locality.

No one knew of the spring, they advised that it should not be blocked as these springs are important feeders to the creek system which feeds the Brockman River.

Mr Colin Headland then reported that he was told that 300 Aboriginal people were massacred by two farm hands that gave poisoned flour to the Aboriginal people who made damper out of it and had died, with the bodies falling into the Gingin Brook. Initially Mr Headland located this event on the field map at 'Wannamal Beach', but he seemed to be unsure of the actual location.

Questioned further Mr Headland could not give a date for this event, stating, "It's going back a while and that's why no Aboriginal people live at Gingin". Mr Headland advised that he had heard that the bodies were buried but he was not aware of the location. Mr Headland advised

that he was told about the event from his sister, Ms June Headland, who was told about it in turn from their father. Mr Colin Headland advised that he believed that Ms June Headland has documented the story in a book that she has published about the Moora Aboriginal people (Headland 1995).

However, the historical literature regards this event places the events location outside of BB-B. Bates (n.d.) states that Woolber's wife Banyap had been married to Kanill, her first husband and that Kanill was poisoned by some flour stolen from John Dibb who had placed some poison in it. Two of Banyap's children also died and some others who had eaten the damper. Udell (1979: 105-106) states that two farm hands poisoned flour which resulted in the death of a little boy and a dog that ate biscuits made from the flour in 1860 further to the west of Gingin at the junction of the Moore River and the Gingin Brook (see Historical section page 20).

Following this discussion Mr Worth marked Wannamal Beach location on the aerial photographic map near the rail line to the north of Barn Road at 408667mE & 6538759mN and advised that "it used to have clear water before the nearby Loose Lettuce Leaf Company sunk bores" which in his opinion drained the water from it.

The group then walked back to the cars to conclude the survey for the day. Here the group stopped to examine a Christmas (*Nuytsia Floribunda*) or *Moodjar* tree located at GPS coordinates 408832mE & 6543695mN. *Moodjar* trees are of cultural significance to the Yued.



Figure 17: the Yued WC1997/071 Native Title Claim group survey team under the large *Moodjar* tree at coordinate 408832mE & 6543695mN; view to the west.

Here Ms Mogridge advised that the *Moodjar* trees should not be touched as they are believed to be potential Yued burial sites.

Ms Mippy agreed and advised that traditionally deceased Yued people would be buried around these trees. However, she stated that as the tree is not flowering it is okay to touch and stand under it; Ms Mogridge and Mr Narrier agreed.

For the benefit of the landowner and the Jacobs representatives Mr Goode explained the mythology surrounding the *Moodjar* tree (see Bates 1985: 223-4) and their significance to the Noongar people as depicted in the anthropological literature.

Mr Goode then provided advice on their inability to meet criteria to be considered an Aboriginal heritage site under Section 5 of the AHA due to their commonality in the landscape and the species being unable to be defined as a specific place which is required for the Act to apply (see Section 5 of the AHA; see also Goode & Greenfeld 2008, 2014).

Mr Goode enquired into whether there is anything particularly significant about this particular tree to which Ms Mippy responded that the tree is the largest she has ever seen which indicates that it has been here for a long time and as such it is highly likely that the Yued peoples' ancestors could be buried underneath it.

Ms Mogridge, Mr Narrier and Mr Headland agreed that the tree's size makes it of special importance and significance as a possible cultural marker to their funerary beliefs and practices. Mr Headland added that he was told stories about the Christmas Trees from his father, including how it acts as a seasonal indicator as when the tree flowers it is time for the Yued people to head to the coast for food.

Mr Wear advised that the tree would not be impacted upon by the proposed Bypass alignment and could be marked on project plans and fenced during construction for preservation.

Mr Goode added that this particular tree could be marked on the Cultural Heritage Management Plan to ensure that it is not disturbed. Mr Worth added that there is another tree of the same size nearby to the south-east. Mr Headland stated that the trees should be fenced off to make sure they are not disturbed during the roads construction.

Ms Mippy requested that a plaque be installed at the base of this tree to show the significance of the tree and as a sign of respect to the Yued people and their ancestors. The story about the trees association with the Red Cockatoo (*Karak*) and its place in Yued mythology could be told in order that people using the highway can have an understanding of Yued culture and beliefs and can be a useful statement of reconciliation.

Mr Narrier added that his grandfather (Mr W. Worrell) recorded stories about the beliefs associated with the *Nuytsia floribunda* with Dwyer Durack for the Native Title Claims court hearing as evidence to the Yued people's claims to this country. Mr Narrier added that there is also a story about the Blue-tongued bobtails bringing snakes to the *Moodjar* trees to kill them. Mr Narrier says that the tree has many mythological aspects in Yued culture and that these trees should be preserved. Mr Headland added that "the Christmas Trees are one of the only trees to come back from a bushfire and is only found in Noongar country; they mark our country so they are important to all Noongar people".

Ms Regan stated that the trees are also considered to be significant for the Black Cockatoos for foraging to which Mr Headland agreed, stating that the Black Cockatoos are found in the season which is at the top of the six seasons. Mr Headland stated, "If the Christmas tree flowers a month before Christmas, instead of at Christmas time, then you'll know you've stuffed the whole area, the environment, up". Ms Regan reiterated that trees of heritage and environmental significance will be marked to be preserved during the roads construction; these ones (*Moodjar*) are outside of the proposed alignment.

This concluded the day's consultations and the survey team returned to Bindoon. The survey team did not locate any new ethnographic sites as defined by Section 5 of the AHA during the day's inspections however ethnographic data was reported in relation to a historical camp and massacre event; however the location and extent of the area remains unclear. The consultants advised the Jacobs staff that further enquiries in relation to these matters were required and that the survey team should visit the 'Wannamal Beach' the next day before continuing south along the project corridor.

On the 14th March 2018 BGA consultants, Mr Brad Goode (Anthropologist) and Ms Sally McGann (Ethno-Archaeologist) met several representatives of the Yued WC1997/071 Native Title Claim group, Mr Clinton Ryder, Mr Colin Headland, Mr John Yappo, Ms Stephanie Mippy, Ms Kayla Woodley, Ms Pamela Narrier, Mrs Jennifer Mogridge, Mr Sheldon Narrier, Mr Patrick Woodley and Ms Evelyn Dawson at 10am at the carpark at the Bindoon Town Hall near the Oval in Bindoon. Present also was Ms Susan Regan (Jacobs Senior Environment and Heritage Advisor), Ms Sara Kelly (Jacobs Environmental Consultant) and Mr John Wear (Jacobs Design Manager) to explain the project.

The first place the survey team travelled to was to the place reported the day before as ‘Wannamal Beach’. Mr Wear led the group to the place that Mr Arty Worth had marked on the field map to the north and east of the Barn Road and Cullalla Road intersection at or near coordinate 408 667mE & 6538 759mN.

However when the group arrived at this location Mr Headland advised that the camp that he knew of was not here but was near the Mooliabeenie Road Rail Crossing, further to the south.

Mr Headland did not wish to visit the ‘Wannamal Beach’, he said that he wished to travel further south to locate the reported camp near the rail crossing, so the survey team travelled south along Cullalla Road before turning to the east across the rail line along Mooliabeenie Road and stopped at a safe spot to discuss the camp location on the map (407725mE & 6537722mN).



Figure 18: Mr Wear orientates Mr Headland to the location of the Bindoon Bypass Road in relation to the rail crossing where Mr Headland had reported a historical Aboriginal camp that may have been where his sister had told him the story about farm hands providing poisoned flour and where he believes a massacre occurred. Insert shows the rail crossing to the west.

Here Mr Wear showed Mr Headland on his electronic tablet that the proposed Bindoon Bypass Road alignment was well to the east (1.65km) of the ‘bush reserve’ to the east and west of the rail crossing where he had reported the historical camps were located. This location is also in the vicinity of the Old Mooliabeenie Road Rail Crossing & Well which is listed on the Heritage Council of Western Australia heritage register and Shire of Chittering municipal inventory as Place Number 14191 ‘Mooliabeenie Shop & Well’ and is located at coordinates 407455mE & 6533810mN.

After looking at the data Mr Headland seemed satisfied that the road corridor was a considerable distance from the rail crossing. Mr Headland said that he did not have any more information about the massacre event but he thought that there were Aboriginal camps formerly located in the bush east and west of the rail line and the old 'Mooliabeenie Shop & Well,' or as he termed it the old rail crossing; however he was unsure of the actual place and extent. Mr Headland then advised that the survey team could move on to the next location.

While traveling in the vehicles Ms Sally McGann was told by Mr Clinton Ryder who had rung Mrs Ruby Ryder that the camp was near the 'Station Masters Old House' (the chimney still stands at 407348mE & 6533701mN pers. comm. Mr Jim Stedman 27th March 2018 Archae-Aus Project Officer who conducted a non-indigenous heritage survey of the project area). Ms Ruby Ryder had told Mr Clinton Ryder that the place was 'Warra,' meaning that you cannot go there.

In relation to this report this place would likely be considered a site under Section 5c of the AHA if it was in fact a large historical camp where an event like this had taken place. However at present there is insufficient information regarding the location of the event, the extent of the reported camping area and the numbers of people concerned. Also the ethnographic data is inconsistent with what is depicted in published Literature (see Historical section page 20).

As such it was recommended by the Yued representatives that Ms June Headland and Ms Ruby Ryder are consulted in regards to the area if any work is to occur within Lot M2106 and Lot 101 Mooliabeenie Road. In terms of management Yued monitors could be engaged to supervise any excavations as there could be burials present or subsurface historical artefacts present.

The survey team then proceeded south along Crest Hill Road to Bindoon for lunch. After lunch the survey team drove west along Gray Road and entered Lot 104 and travelled north and stopped in a paddock at 408724mE & 6529117mN.



Figure 19: the Yued WC1997/071 NTC group survey team walk north towards the Lennard Brook to examine the Bindoon Bypass alignment within the recorded boundary of Place ID 20650 Lennard Brook and the DPLH extent of Site ID 20008 Gingin Brook; view to the north. Insert shows Mr Wear showing the group the alignment plan standing within the road corridor at 408769mE & 6529231mN.

The survey team then walked north towards a windmill next to the brook and then to the east to a point within the boundary of Place ID 20650 Lennard Brook and the DPLH extent of Site ID 20008 Gingin Brook within the road corridor.



Figure 20: Mr Wear talking to the group regards the required culverts at Place ID 20650 Lennard Brook and the DPLH extent of Site ID 20008 Gingin Brook. View to the NE where clearing trees will be required.

Here Mr Wear discusses the road alignment with the Yued survey team. Mr Wear advised that the road at this location runs north/south and requires a 60m wide clearing corridor for the road which is 10m high with sloped shoulders and drainage. A ramp connecting the highway to Gray Road would be built west of the corridor. Both the road corridor and the ramp would bisect the Lennard Brook.

Mr Wear said that culverts would be installed to maintain the flow of the Lennard Brook which he described at this location to be ephemeral with no defined channel and that only flowed in high rainfall events. Mr Wear said that the culverts would be 1200mm x 400mm and would be placed under the alignment which would then cut through the hills on either side of the brook with the material used to raise the road at this location.

Mr Goode with the aid of an aerial photo map then discussed the boundary of the Lennard Brook heritage place (Place ID 20650) within the larger extent for the Gingin Brook site (Site ID 20008) as it is currently mapped at DPLH.

Mr Goode advised that DPLH have mapped a heritage place within a site however the reported values are relating to the brook itself and are the same. Mr Goode explained that the reported ethnographic values relate to the spiritual beliefs that associate with the Waugal as the creation force that protects running water. Mr Goode advised that the cultural values are the same however the administrative boundaries and the status under the AHA are different.

Mr Goode advised that the proponent would require ministerial consent under Section 18 of the AHA to proceed at this location. Mr Goode advised that as a basis for this consent and to mitigate the effects that he was required to report to the ACMC the specific significance of the brook at this location and then to seek advice from the Yued people on how this significance would be affected by the road plan. Mr Goode would then need to document mitigation and management recommendations from the Yued should consent be given and the road proceeds.



Figure 21: the Yued WC1997/071 Native Title Claim group survey team inspect the farm windmill and tank at the spring in the Lennard Brook. View to the north.

Mr Goode then asked Mr Patrick Woodley if there were any specific stories about the Lennard Brook and if there was anything special and significant at this location.

Mr Patrick Woodley said there were camp sites and springs all along the Lennard Brook.

Mr Goode asked if springs are important places and Mr Woodley agreed and pointed out that is why the farmer has a windmill here as it is a water source (see figure 21). Mr Woodley said that while there was no water flowing on the surface that the brook flowed underground all the time. He said that the Yued people knew this and used the springs along its path.

Mr Goode asked if Lennard Brook is more important than the other water courses.

Ms Jennifer Mogridge said yes because it flows through to the Swan River. Ms Mogridge reported that twenty years ago Mr Rory O'Connor and Mr Ted Hart only took them to Kangaroo Gully and said that the road would go between the two hills. Ms Mogridge stated, "They did not take us to this section of the corridor to talk about this brook" which she defined as a part of a path from Yued country at Gingin to the Swan River at Guildford.

The group then asked Mr Wear how many trees along the brook would be cleared and if the farmers windmill (spring) would be affected.

Mr Wear said that the spring is outside of the alignment but the trees where we are standing would be cleared (see figure 20).

Mr Colin Headland also made the point that when the road is being constructed and the cut is done through the hills to the north and south, that the Yued would wish Main Roads to avoid Moodjar Trees. Mr Headland stated, "We would like to monitor this work as Yued people believe that burials are often located near these trees and there are spirits resting in them before they travel to Kurannup" (see Bates 1995: 223).

Mr Headland, Mr Narrier and Mrs Mogridge advised that they are okay with the proposal here but thought that monitors should be here when Main Roads cut through the hills either side of the brook in case artefacts are present from old Yued camps. They said that traditionally the Yued would camp up high next to the springs. All advised that they would support a ministerial consent notice under Section 18 of the AHA here as long as the spring is preserved and that monitors were present.

The survey team then travelled back into Bindoon and then west along Tee Tree Road to Lot 18 and north to coordinate 408920mE & 6526566mN.



Figure 22: (Left photo) the road corridor straddles the fence between Lot 18 and 20 running north/south. The DPLH extent for Place ID 20650 Lennard Brook runs east/west through the centre of the photo. (Right photo) shows the Yued WC1997/071 Native Title Claim group survey team considering the plan.

Here the road corridor once again crossed Place ID 20650 Lennard Brook and the DPLH extent of Site ID 20008 Gingin Brook.

At this location Mr Wear said that the road corridor is 60m wide within Lot 20 which adjoins where the survey team stopped in Lot 18 (see figure 22). Here the corridor bisects the upper reaches of Place ID 20650 Lennard Brook which is largely a catchment where there is no defined creek channel (see figure 23). Mr Wear advised that four 1200mm x 400mm culverts would be put under the road which at the centre of the crossing of the heritage area would be 8m in height.

Mr Goode then asked the Yued people to determine if this place, that is where the road crossed the DPLH defined heritage place as depicted on the map, had any cultural significance in light of the fact that there was no defined and visible water course.

Mr Goode advised that often DPLH use data from the Department of Water that shows a watercourse but it may in fact not be there as the data is not verified in the field. Mr Goode advised that the Lennard Brook would have been reported as a heritage site elsewhere but appears on the map here from such data. Mr Goode asked the group for comment.

In relation to this statement Ms Stephanie Mippy asked Mr Goode which Aboriginal people had reported this place as a heritage place. Mr Goode advised that he was unsure as the site file was not available prior to the survey.

In relation to this place Mr Goode asked the group to determine if this place does in fact have heritage significance even though there is no defined brook at this location. Mr Goode asked the group to provide advice to determine the effects that the work would have upon the cultural and landscape values if the group do believe there are heritage values present.

Mr Sheldon Narrier said that if Yued people have reported this place as a sacred site then it is a sacred site but it would be helpful for us to know who they were to show respect to their decision and to know what they reported.

Mr Colin Headland stated that this place is a catchment that feeds the brook which then feeds the river, so from that perspective it is important.

Mr Patrick Woodley said that the water flow is underground but is still present. Mr Woodley advised that the Waugal which is the water snake travels underground so could be present here. Mr Woodley said that up here being a high point in the valley it is okay to build the road here as long as the water path to the valley is not blocked by the road.

Mr Headland agreed and compared it to a cobweb, describing it as all part of the same thing. Mr Headland stated, "It's all important as the catchment feeds the Lennard Brook further to the west".

The group advised that they were not aware of any stories or specific values at this location and would support a ministerial consent notice under Section 18 of the AHA if required. All advised that as with all water courses within Yued country it would require monitoring.



Figure 23: View south showing Place ID 20650 Lennard Brook in the centre. Note there is no actual creek here: it is a catchment that feeds the creek at the bottom of the valley to the west.

The survey team then drove east along Tea Tree Road turning south along Cockatoo Drive stopping at coordinate 409559mE & 6521914mN within Lot 900. This location was in the centre of the Bindoon Bypass Road alignment running northwest/southeast. The corridor was 60m in width with an undetermined height but as it was relatively flat ground it was not built up to any great height. Once again there was a defined watershed but no creek. This was not previously defined as having any heritage values on the DPLH Aboriginal heritage sites and places data base.

Here Mr Goode asked the group if there were any cultural sites, storied places, or old camps sites that the group knew of. All advised that they had no knowledge of any such places at this location and for that matter on the alignment between here and the Great Northern Highway.

Mr Goode asked the survey team if they knew of Place ID 3528 Burroloo Well, as the DPLH file states that it is the historical campsite but there is no other detail apart from a sketch map showing it at Location 409. The DPLH file described it as a well where there were a few quartz artefact chips recorded.

The group said that they thought that it is near 'Eddie Withnell's yard' opposite the service station. Ms Mogridge stated that Mr Clinton Ryder's Grandfather Mr Frank Narrier had camped at Burroloo Well.

Ms Stephanie Mippy added that she thought that Ms Beverley Yappo had been there on a survey.

The group had no further information about this heritage place. All advised that they did not think it was where DPLH had it currently mapped.

This concluded the survey and the survey team returned to Bindoon.

COMMUNITY CONSULTATION OUTCOMES

As a result of ethnographic consultations held with 12 representatives of the Yued WC1997/071 Native Title Claim group on the 13th and 14th of March 2018, **no new** ethnographic sites of significance as defined by Section 5 of the AHA were identified within the Bindoon Bypass BB-A and BB-B survey areas.

During the ethnographic consultations of the northeast portion of the BB-B survey area, the Yued representatives determined that the proposed crossing of Udumung Brook at 420182mE 6550968mN was a significant habitat for turtles and echidnas. The Yued group advised that a span bridge design is their preferred option at this crossing rather than culverts as it would require less clearing, excavation and disruption to the underground stream. It was further requested that the Yued be given an opportunity to relocate turtles to the Wannamal Wetlands prior to the works occurring at the Udumung Brook. The Udumung Brook was considered generally significant in relation to Waugal beliefs but no data was given in relation to creation myth apart from statements that they believed that all watercourses were home to and created by the Waugal however there was no request from the group at the time of the survey to report the Udumung Brook under the AHA.

In the northern section of the BB-B survey corridor, the proposed alignment crossing an unnamed tributary and wetland southwest of Bindoon Moora Road between Kangaroo Gully Road and Pines Road (unmade road) was identified as a heritage constraint by the Yued people consulted. The Yued were concerned regarding the environmental affects that the alignment will have on this major wetland and requested that an alternative alignment be considered. The Yued also requested that further information be provided to the Working Party before they can make a fully informed decision to support this proposal. No statements were made about this location in regards to its religious values and no requests were made to report the area under the AHA.

At Cullulla Road at 408725mE 6543891mN in the BB-B survey area, the Yued representatives advised that they opposed the 'Emu Spring' from being blocked by the proposal to build a road over the existing dam. The Yued advised that springs are important feeders to the creek system which feeds the Brockman River and they requested that Main Roads avoid impacting upon this spring and ensure that the proposed culvert is adequate to maintain the waters flow.

North of Cook Road at 408832mE 6543695mN in the BB-B survey corridor, a large Christmas (*Nuytsia floribunda*) or Moodjar tree was identified as having important cultural significance to the Yued group and it was requested that this tree be marked on a CHMP and on contractors plans to avoid inadvertently affecting this tree during the project. It was also the view that Main Roads should where possible not affect Moodjar trees due to the cultural significance that they have to the Yued people (see Bates 1985: 223). Despite the mythological associations with Moodjar Trees, due to the commonality of Moodjar trees across the landscape they are not considered as sites under the AHA (see Goode & Greenfeld 2008, 2014).

During the survey one Yued informant reported that his sister had told him of a massacre event that he believed to have occurred at a historical camp initially reported to be located within the BB-B. The informant reported that he was told that 300 Aboriginal people were massacred by two farm hands that gave poisoned flour to the Aboriginal people who made damper out of it and had died, with the bodies falling into the Gingin Brook. Initially Mr Headland located this event on the field map at 'Wannamal Beach', but he seemed to be unsure of the actual location when questioned later and then advised that he thought that it occurred near the Mooliabeenie Road Rail Crossing, further to the south where he reported an Aboriginal camp.

However the historical literature regards this event places the events location outside of BB-B. Bates (n.d.) states that Woolber's wife Banyap had been married to Kanill, her first husband and that Kanill was poisoned by some flour stolen from John Dibb who had placed some poison in it. Two of Banyap's children also died and some others who had eaten the damper. Udell (1979: 105-106) states that two farm hands poisoned flour which resulted in the death of a little boy and a dog that ate biscuits made from the flour in 1860 further to the west of Gingin at the junction of the Moore River and the Gingin Brook (see Historical section page 20).

In relation to the camp ground reported at Mooliabeenie Road within BB-B, O'Reilly BGA Archaeologist (2018) did not identify any historical artefacts during the archaeological survey of Lot M2106 and Lot 101 that would lead him to the view that the area was formerly used as a camp ground by large numbers of people. Consultation with the sister of the informant revealed that a small itinerant farm workers camp was known at Mooliabeenie Road, however this was later in history than the poisoning event which she advised had occurred at Gingin.

In relation to the reported camp area at 407348mE 6533701mN, the Yued recommended that Ms June Headland and Ms Ruby Ryder are consulted if any work is to occur within Lot M2106, Lot 101 Mooliabeenie Road and Road Reserve PIN 1338961, that Yued monitors should be engaged to supervise any excavations.

In relation to the two crossings of the DPLH extent of Place ID 20650 Lennard Brook and Site ID 20008 Gingin Brook, the Yued advised that they were not aware of any specific stories or values at the locations and they advised that they would support a ministerial consent notice under Section 18 of the AHA subject to Yued monitors being present should the project proceed.

In relation to management of heritage values for the project the Yued representatives requested that Main Roads engage monitors at all creek crossings as all creeks and watercourses are significant to the Yued people and feed into the larger river systems in the vicinity of the project area.

RECOMMENDATIONS

As a result of the surveys the following recommendations in relation to the Western Australian Aboriginal Heritage Act (1972) are made:

It is recommended that Main Roads Western Australia make application under Section 18 of the AHA for consent to use the land that is located within Site ID 20008 Gingin Brook Waggy, Place ID 20650 Lennard Brook, and the DPLH Site Complex ID #42 for the purpose of constructing the Bindoon Bypass project.

It is recommended that this consent is granted based on the proponent giving due consideration to the Yued WC1997/071 NTC group representatives requests that:

- Yued monitors are engaged to observe the initial ground disturbing works in order to observe artefacts that may be uncovered in the vicinity of the watercourse;
- Yued monitors are engaged to observe the initial ground disturbing works in order to mitigate the affect that the road project may have on the cultural values of Site ID 20008 Gingin Brook Waggy and Place ID 20650 Lennard Brook.

In relation to the proposed Bindoon Bypass road alignment, **it is recommended** that Main Roads give consideration to the request from the Yued people and avoid impacting upon an unnamed tributary and the wetland southwest of Bindoon Moora Road between Kangaroo Gully and Pines Road.

Should this not be possible **it is recommended** that Main Roads Road provide further information to the Working Party in relation to this matter.

It is recommended that Main Roads Western Australia give due consideration to the Yued peoples heritage management requests should the project proceed:

- Yued monitors are engaged to observe the initial ground disturbing works at all creek crossings within the BB-A and BB-B project areas, as all creeks and watercourses are significant to the Yued people and feed into the larger river systems in the vicinity of the project area.
- The Udumung Brook crossing incorporates a bridge span design rather than culverts to reduce the amount of clearing, excavation and disruption to the underground stream at this location and that the Yued are given the opportunity to relocate turtles to the Wannamal Wetlands prior to the works occurring at the Udumung Brook.
- The 'Emu Spring' is not impacted upon by the road alignment and that the proposed culvert is adequate to maintain the waters flow.
- A large Moodjar tree (*Nuytsia floribunda*) identified during the survey north of Cook Road is marked on contractor's plans and that where possible all Moodjar trees are not affected during the proposed works.
- If any work is to occur within the reported 'Mooliabeenie Road Rail Crossing Camp' area within Lot M2106 and Lot 101 Mooliabeenie Road, that Ms June Headland and Ms Ruby Ryder are consulted and that Yued monitors are engaged to supervise any excavations.

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REPORT ON AN ARCHAEOLOGICAL SURVEY OF THE GREAT NORTHERN HIGHWAY BINDOON BYPASS BB-A AND BB-B PROJECT AREAS AT BINDOON, WESTERN AUSTRALIA



Figure 24: North east portion of the BB-B project area near Hay Flat Road.

*A report prepared for the GNH Muchea to Wubin Integrated Project Team on behalf of
Main Roads Western Australia*

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EXECUTIVE SUMMARY

In December 2017, the Great Northern Highway Muchea to Wubin Integrated Project Team, on behalf of Main Roads Western Australia, commissioned an archaeological survey of the Bindoon Bypass BB-A and BB-B Project Areas in the vicinity of Bindoon, Western Australia. These project areas are part of the larger Great Northern Highway Muchea to Wubin Stage 2 Upgrade Project – Phase 2. As part of this project, Main Roads Western Australia is proposing to construct a new alignment of Great Northern Highway that will bypass Bindoon.

It is noted here that some landowners did not permit access to their properties at the time of the archaeological surveys discussed in this report. As a consequence, the Bindoon Bypass BB-A and BB-B Project Areas referred to in this report do not include these ‘no access’ areas. The ‘no access’ areas are highlighted on the various figures contained within this report.

The BB-A Project Area comprises the southern end of the corridor within which new Great Northern Highway alignment is to be constructed, and extends northwards from the existing Great Northern Highway in the vicinity of the Chittering Roadhouse, to the access road into the Bindoon-Chittering Water Reserve approximately 8km to the north. The BB-A Project Area varies in width from 0.04km to 1.75km, is irregularly shaped and covers not more than 660.84ha.

The BB-B Project Area comprises two discrete survey areas. The larger is a corridor within which the remainder of the new Great Northern Highway alignment is to be constructed and extends northwards for approximately 22.4km from the northern end of the BB-A Project Area to a point approximately 2.5km north of the northern end of Gingilling Road. From here, the corridor extends for another 13.3km to the east, traversing the Bindoon Moora Road before meeting the existing Great Northern Highway in the vicinity of Hay Flat Road. This larger survey area also includes narrow corridors aligned along the length of Crest Hill Road and that part of Gray Road east of the main corridor. The larger part of the BB-B Project Area varies in width from 0.02km along parts of Gray Road to 2.73km where it traverses Mooliabeenee Road. It is irregularly shaped and covers not more than 3027.94ha. The smaller survey area is located in the vicinity of Barn Road and is approximately 1.5km east of the larger area. It has maximum dimensions of 0.61km EW and 0.25km NS and covers 9.3ha.

The archaeological survey discussed in this report was undertaken to identify and record any Aboriginal archaeological sites that may be located within the Bindoon Bypass BB-A and/or BB-B Project Areas, in order that Main Roads Western Australia can avoid disturbing them or, as required under Section 18 of the Western Australian Aboriginal Heritage Act (1972), seek the consent of the Minister for Aboriginal Affairs to proceed with activities that may disturb Aboriginal heritage sites.

The archaeological survey of the project areas named above included research at the Department of Planning, Lands and Heritage (WA) to assess and investigate the results of any previous archaeological surveys and investigations undertaken within any of the project areas as well as in their vicinity and the wider region around them. Sources of environmental information were also utilised before a systematic archaeological survey of each project area was conducted.

As a result of research conducted by Brad Goode and Associates in December 2017 and January 2018 and a search of the Department of Planning, Lands and Heritage (WA) Aboriginal Sites Database, it was established that **no** registered Aboriginal sites with an archaeological component have been registered at positions that places them within any part of any of the project areas named above. However, a search of the Department of Planning, Lands and Heritage (WA) List of Other Heritage Places shows that part of **one** ‘other heritage place’,

Burroloo Well (ID 3528), may overlap the southeast corner of the BB-A Project Area, while **another**, Udumung Brook Artefact 1 (ID 22027) is located within the northeast part of the BB-B Project Area.

According to information contained within the relevant file obtained from the Department of Planning, Lands and Heritage (WA), the Burroloo Well (ID 3528) other heritage place comprises a permanent waterhole just off Great Northern Highway, and a few pieces of quartz close to the waterhole and about 100m downstream on graded firebreaks.

The Burroloo Well (ID 3528) other heritage place was initially reported in 1989 and it is acknowledged by the Department of Planning, Lands and Heritage (WA) that the coordinates they give for the location of this place are unreliable. These coordinates place the Burroloo Well (ID 3528) other heritage place amongst trees in a cleared paddock with no obvious signs of a permanent waterhole. During the course of the archaeological survey described in this report, the location of the Burroloo Well (ID 3528) other heritage place, as given on the List of Other Heritage Places, was targeted and scrutinised for the presence of Aboriginal archaeological material. As a consequence, no Aboriginal archaeological artefacts or material were identified. In addition, no permanent waterhole was identified at or about this location.

It is assumed that the Burroloo Well permanent waterhole, and therefore the Burroloo Well (ID 3528) other heritage place, is located within the Burroloo Well Nature Reserve located approximately 530m to the northeast. A sketch map contained in the relevant file supports this assumption. As a result, it is concluded that the Burroloo Well (ID 3528) other heritage place is not located within nor extend over any part of the BB-A Project Area.

According to information contained within the relevant file obtained from the Department of Planning, Lands and Heritage (WA), the Udumung Brook Artefact 1 (ID 22027) other heritage place comprises a single basalt flake that was identified on the margin of Udumung Brook in 2005. The coordinates given for this other heritage place by the Department of Planning, Lands and Heritage (WA), which they consider to be reliable, places it within a cleared paddock 180m south of Udumung Brook. An analysis of the spatial data contained within the relevant file suggests that the coordinates have not been converted when the datum was changed from AMG 1984 to MGA 1994. Converting the coordinates to MGA 1994 moves the location of the Udumung Brook Artefact 1 (ID 22027) 204m to the northeast and places it adjacent to the southern margin of Udumung Brook. This location is consistent with the information contained within the relevant file.

During the course of the archaeological survey described in this report, the location of the Udumung Brook Artefact 1 (ID 22027) other heritage place, as given on the List of Other Heritage Places, was targeted and scrutinised for the presence of Aboriginal archaeological material. As a consequence, no Aboriginal archaeological artefacts or material were identified. In addition, the location of the Udumung Brook Artefact 1 (ID 22027) other heritage place as determined by converting the given coordinates to MGA 1994, was also targeted and scrutinised for the presence of Aboriginal archaeological material. As a consequence, no Aboriginal archaeological artefacts or material were identified.

It is noted here that information pertaining to the Burroloo Well (ID 3528) and Udumung Brook Artefact 1 (ID 22027) other heritage places has been received by the Department of Planning, Lands and Heritage (WA), but an assessment of this information has not been completed at the time of writing, to determine if these other heritage places meet Section 5 of the Aboriginal Heritage Act (1972).

As a result of the archaeological survey of the Bindoon Bypass BB-A and BB-B Project Areas, **no** Aboriginal archaeological sites were identified. However, three isolated artefacts were identified. These isolated artefacts have no obvious association with any other artefacts and

were found at locations where no demonstrable activity took place. While they have been inferred as artefacts that have been lost, discarded, broken and/or abandoned, they still represent evidence of an Aboriginal presence in the area in the past. Isolated artefacts are not considered to be Aboriginal archaeological sites in this report.

It is recommended that Main Roads Western Australia be allowed to proceed with their proposal to utilise the land contained within the Bindoon Bypass BB-A and BB-B Project Areas, as defined in this report, for the future construction of a new alignment of Great Northern Highway and associated works **on the condition** that they avoid any impact upon or disturbance to the Udumung Brook Artefact 1 (ID 22027) other heritage place.

If any impact upon or disturbance to any part(s) of the Udumung Brook Artefact 1 (ID 22027) other heritage place cannot be avoided, **it is recommended** that Main Roads Western Australia should request that the Department of Planning, Lands and Heritage (WA) assess the information they have received pertaining to the Udumung Brook Artefact 1 (ID 22027) other heritage place, and the information contained in this report, in order to determine if this other heritage place meets Section 5 of the Aboriginal Heritage Act (1972).

If the Department of Planning, Lands and Heritage (WA) assess the Udumung Brook Artefact 1 (ID 22027) other heritage place as a place to which the Aboriginal Heritage Act (1972) **does apply, it is recommended** that Main Roads Western Australia, as required under Section 18 of the Western Australian Aboriginal Heritage Act (1972), apply to the Minister for Aboriginal Affairs for consent to proceed with activities that will disturb Aboriginal heritage sites.

It is also recommended that, in the event of any artefactual material or skeletal material being discovered in the course of road works or any other activities, work should stop while the Department of Planning, Lands and Heritage (WA) undertakes an investigation. In the case of skeletal material being uncovered, work must cease immediately and the Western Australian Police must be notified. Furthermore, **it is recommended** that Main Roads Western Australia personnel and contractors be advised of their obligations under Section 15 of the Aboriginal Heritage Act (1972), to report the discovery of any Aboriginal cultural material which may be uncovered in the course of their work or any other activities.

INTRODUCTION

An archaeological survey for Aboriginal archaeological sites was commissioned by Great Northern Highway Muchea to Wubin Integrated Project Team, on behalf of Main Roads Western Australia, in December 2017. The primary aim of this survey was to examine the Bindoon Bypass BB-A and BB-B Project Areas in the vicinity of Bindoon, Western Australia, and to record and report any Aboriginal archaeological sites that may be located within them. A preliminary assessment of the archaeological significance of any such site(s) will be given and their extent determined in order that Main Roads Western Australia can avoid disturbing them or, as required under Section 18 of the Western Australian Aboriginal Heritage Act (1972), seek the consent of the Minister for Aboriginal Affairs to proceed with activities that may disturb Aboriginal heritage sites.

The Bindoon Bypass BB-A and BB-B Project Areas are part of the larger Great Northern Highway Muchea to Wubin Stage 2 Upgrade Project – Phase 2. As part of this project, Main Roads Western Australia is proposing to construct a new alignment of Great Northern Highway that will bypass Bindoon.

It is noted here that some landowners did not permit access to their properties at the time of the archaeological surveys discussed in this report. As a consequence, the Bindoon Bypass BB-A and BB-B Project Areas referred to in this report do not include these ‘no access’ areas. The ‘no access’ areas are highlighted on the various figures contained within this report.

As part of the archaeological survey of the Bindoon Bypass BB-A and BB-B Project Areas, data was gathered from reports on previous archaeological surveys and investigations that have been undertaken in the past in areas that abut, coincide with or intersect a part or parts of these areas (see Review of Relevant Archaeological Reports). Details of previously recorded and/or registered Aboriginal archaeological sites and other heritage places previously identified within these areas and in the wider region were obtained from the relevant files available from the Department of Planning, Lands and Heritage (WA) and, where possible, from unpublished reports. In addition to this, a review of maps, environmental information and academic research carried out within the wider region was also undertaken in December 2017 and January 2018.

The fieldwork associated with the archaeological survey of the Bindoon Bypass BB-A Project Area was conducted in January 2018 by archaeologists Mr Thomas O’Reilly and Mr Stuart Johnston with assistance from Yued Traditional Owners Mr Chris Shaw and Mr Jason Nannup. The fieldwork associated with the archaeological survey of the Bindoon Bypass BB-B Project Area was conducted in January and February 2018 by archaeologists Mr Thomas O’Reilly and Ms Sally McGann with assistance from Yued Traditional Owners Mr Chris Shaw, Mr Jason Nannup and Mr Brendan Moore.

In the following pages the Bindoon Bypass BB-A and BB-B Project Areas are referred to collectively as the survey areas.

LOCATION OF SURVEY AREAS

The Bindoon Bypass BB-A and BB-B Project Areas are contiguous and extend northwards from the existing Great Northern Highway in the vicinity of the Chittering Roadhouse. They traverse the area to the west and north of Bindoon before the BB-B Project Area meets the existing Great Northern Highway in the vicinity of Hay Flat Road (Figure 25). The exception to this is a very small and discrete survey area in the vicinity of Barn Road to the east of the main survey areas. This small survey area is part of the BB-B Project Area.

The Bindoon Bypass BB-A Project Area comprises the southern end of the corridor within which new Great Northern Highway alignment is to be constructed, and extends northwards

from the existing Great Northern Highway in the vicinity of the Chittering Roadhouse, to the access road into the Bindoon-Chittering Water Reserve approximately 8km to the north. The BB-A Project Area varies in width from 0.04km to 1.75km, is irregularly shaped and covers not more than 660.84ha (Figures 26, 27 and 28). Teatree Road traverses the northern part of this survey area

The BB-B Project Area comprises two discrete survey areas. The larger area varies in width from 0.02km along parts of Gray Road to 2.73km where it traverses Mooliabeenee Road. It is irregularly shaped and covers not more than 3027.94ha. The remainder of the new Great Northern Highway alignment is to be constructed within this larger survey area that also contains two associated corridors aligned along the length of Crest Hill Road and part of Gray Road (Figures 29, 30 and 31). The eastern ends of both these associated corridors are traversed by the Brockman River.

The main part of the larger BB-B survey area extends northwards for approximately 22.4km from the northern end of the BB-A Project Area to a point approximately 2.5km north of the northern end of Gingilling Road (Figures 30, 31, 32 and 33). Gray Road traverses the southern end of this part of the survey area as does Mooliabeenie Road. Slightly further north, Cullalla Road, Gingilling Road and an existing railway line traverse the western margin of this part of the survey area.

Approximately 2.5km north of the northern end of Gingilling Road, the main part of the larger BB-B survey area extends 13.3km to the east, traversing the Bindoon Moora Road and Hay Flat Road before meeting the existing Great Northern Highway in the vicinity of Hay Flat Road (Figures 33, 34 and 35). Udumung Brook traverses the eastern end of this part of the survey area.

The smaller part of the BB-B survey area is located in the vicinity of Barn Road and is approximately 1.5km east of the larger area. It has maximum dimensions of 0.61km EW and 0.25km NS and covers 9.3ha (see Figure 31).

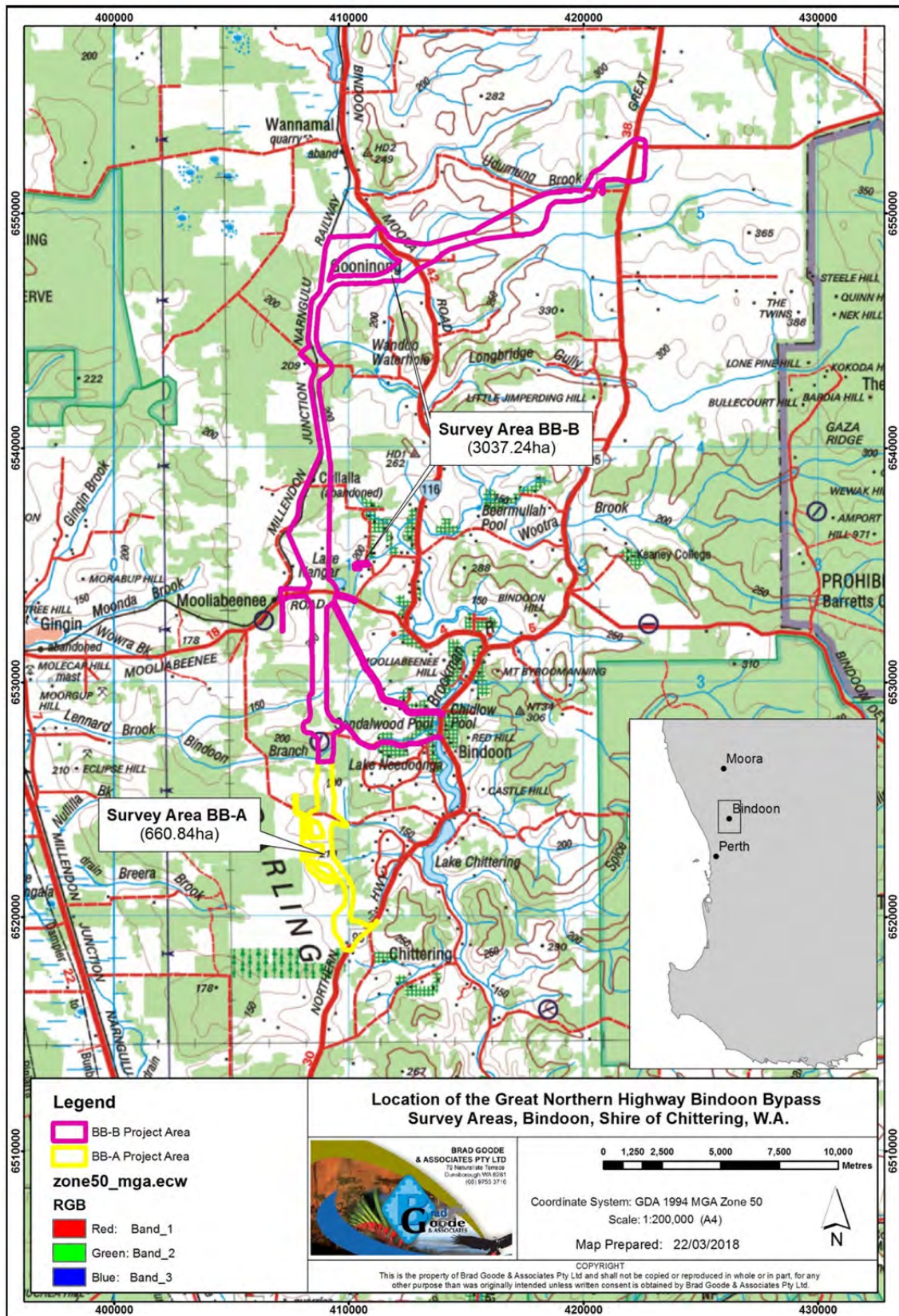


Figure 25: Location Plan: the survey areas.

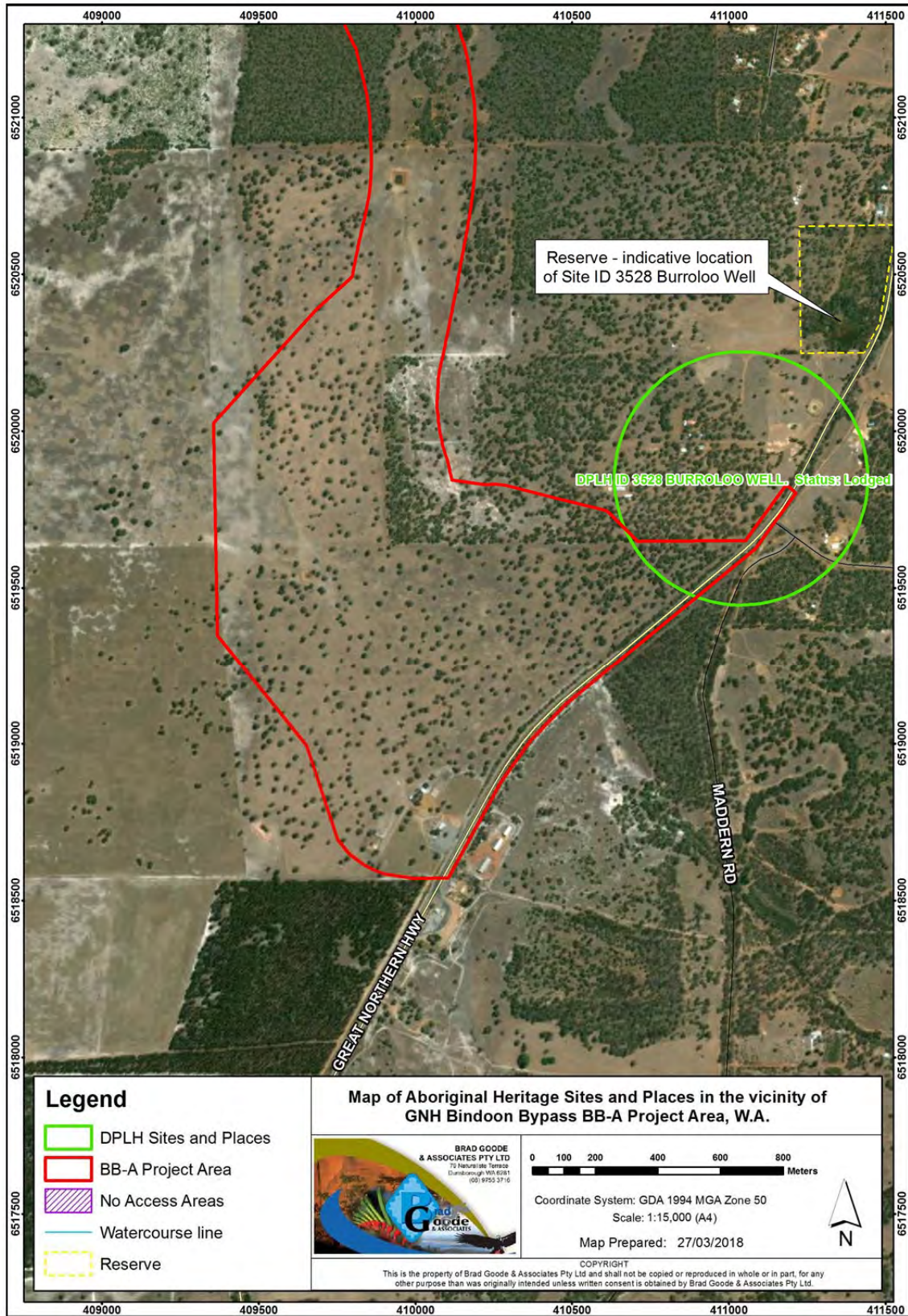


Figure 26: The Bindoon Bypass BB-A Project Area southern end.

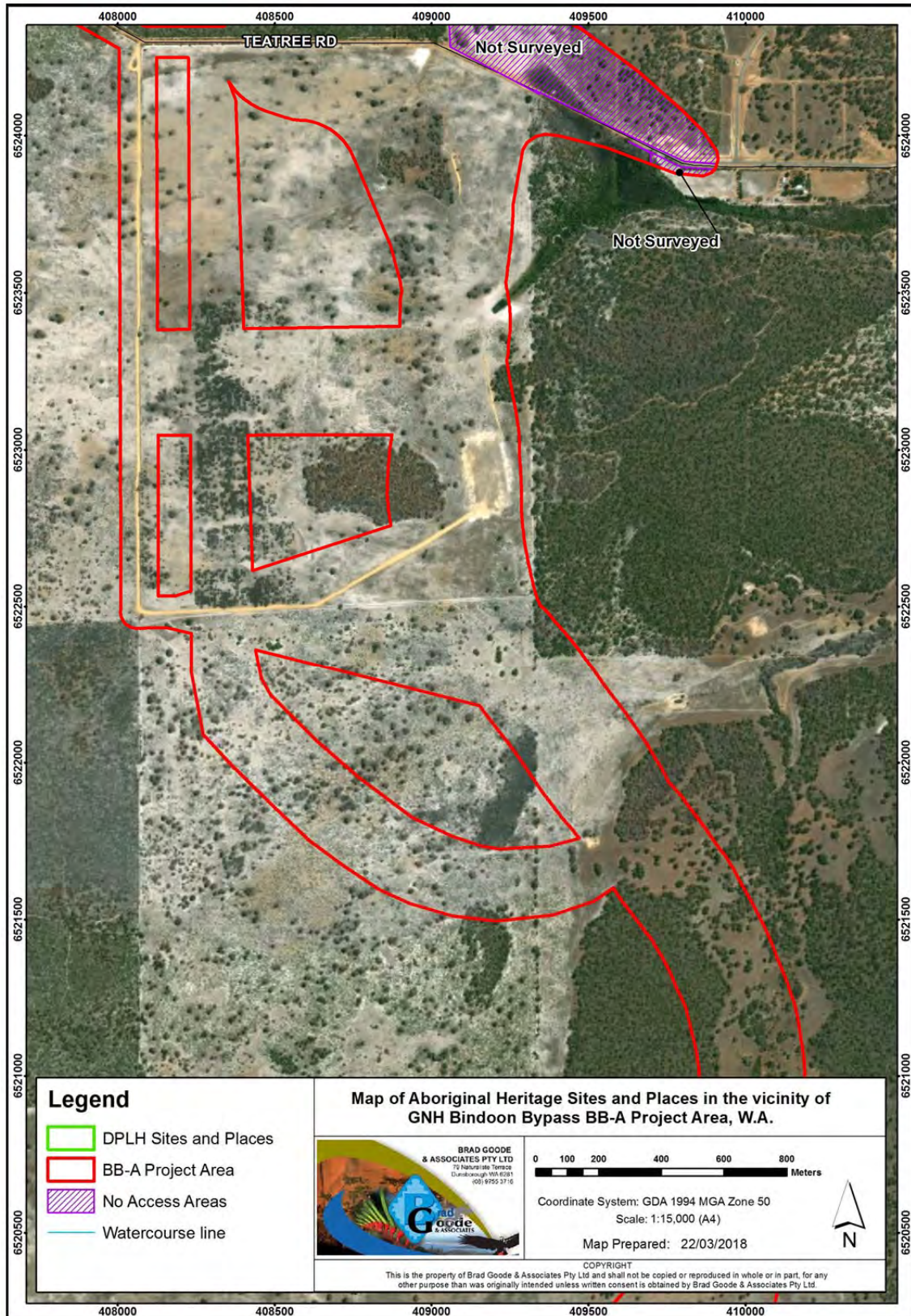


Figure 27: The Bindoon Bypass BB-A Project Area central part.

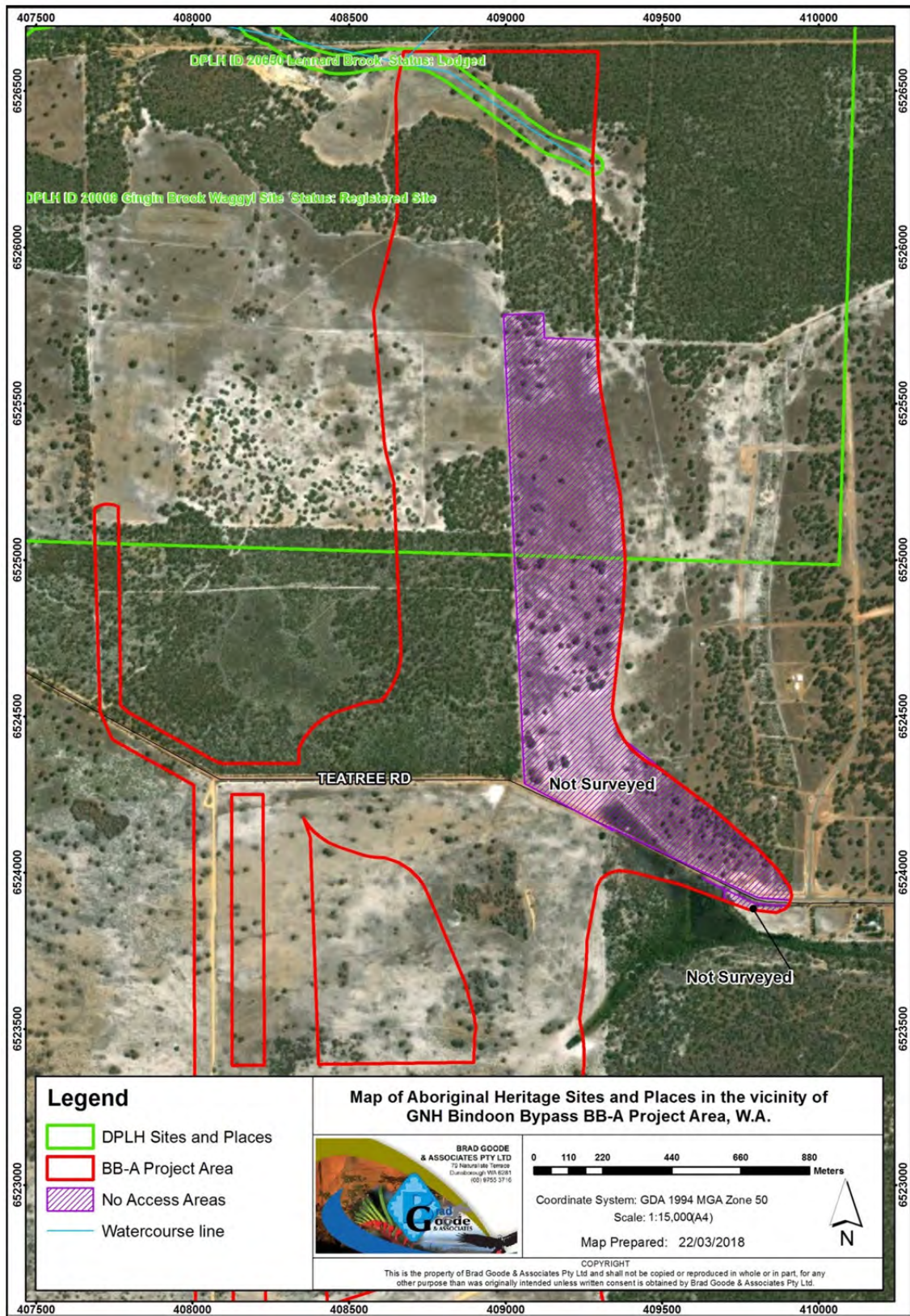


Figure 28: The Bindoon Bypass BB-A Project Area northern part.



Figure 29: The Bindoon Bypass BB-B Project Area: Crest Hill Road and Gray Road eastern ends.

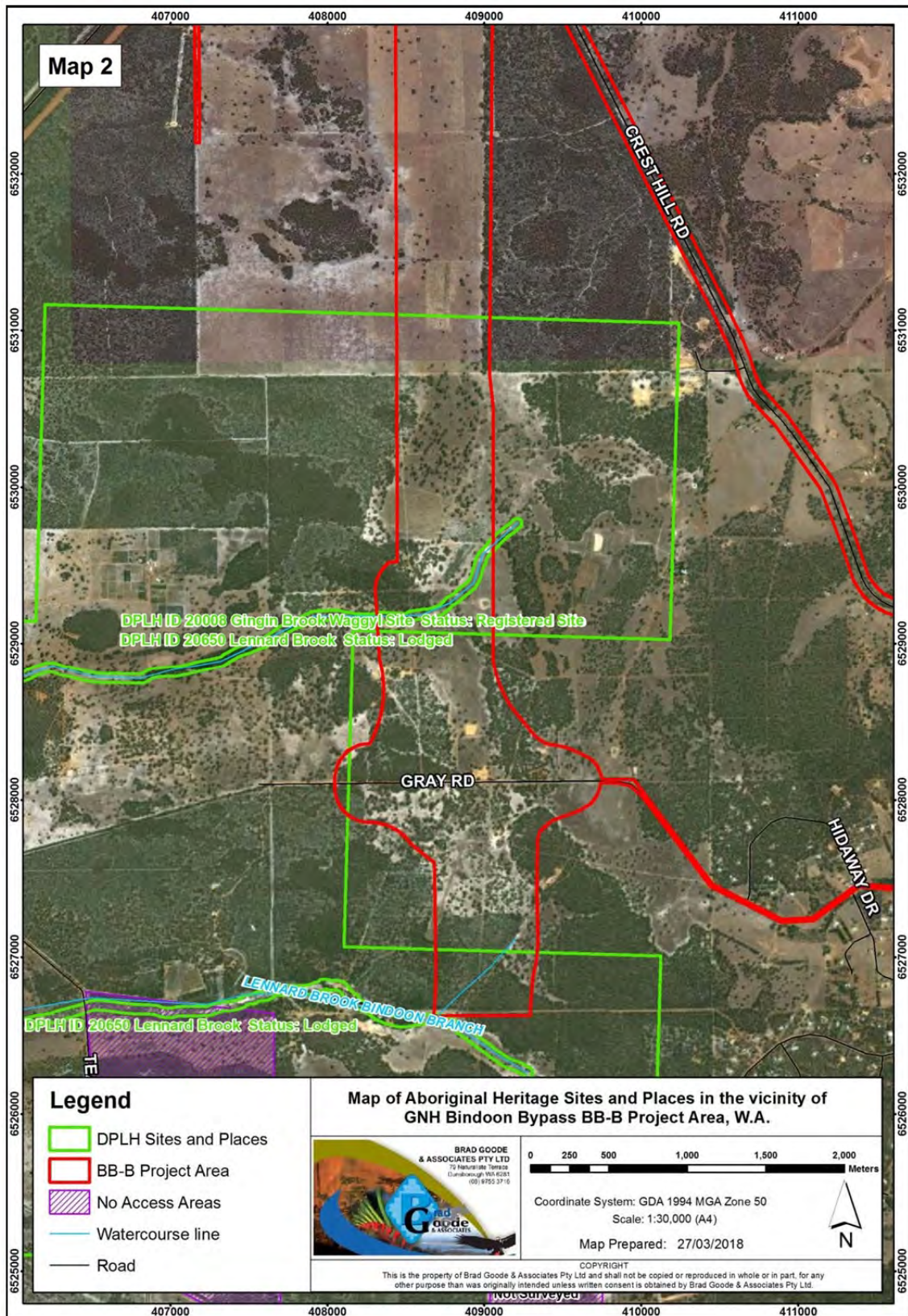


Figure 30: The Bindoon Bypass BB-B Project Area southern end.

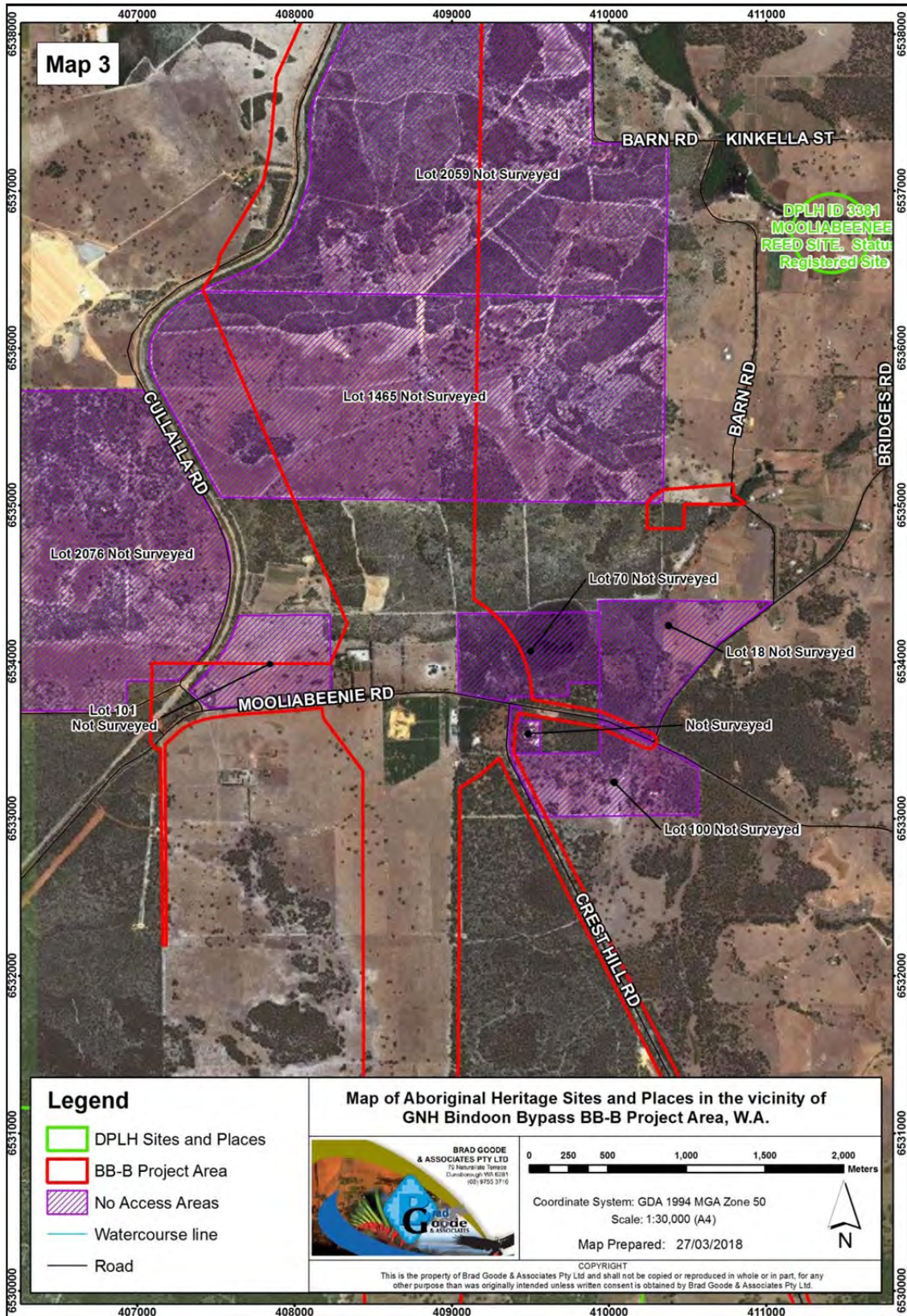


Figure 31: The Bindoon Bypass BB-B Project Area in the vicinity of Mooliabeenie Road.

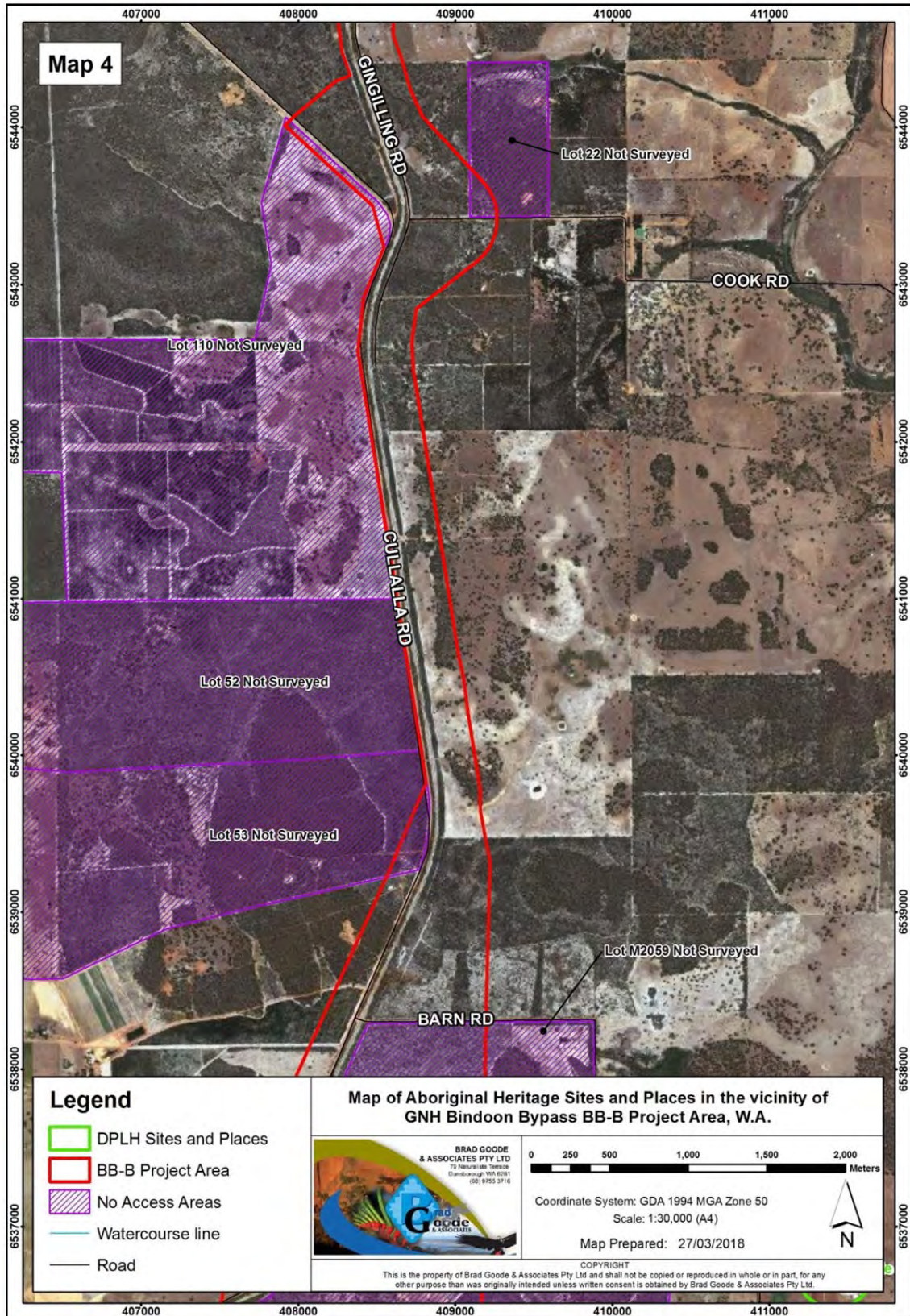


Figure 32: The Bindoon Bypass BB-B Project Area in the vicinity of Barn Road.

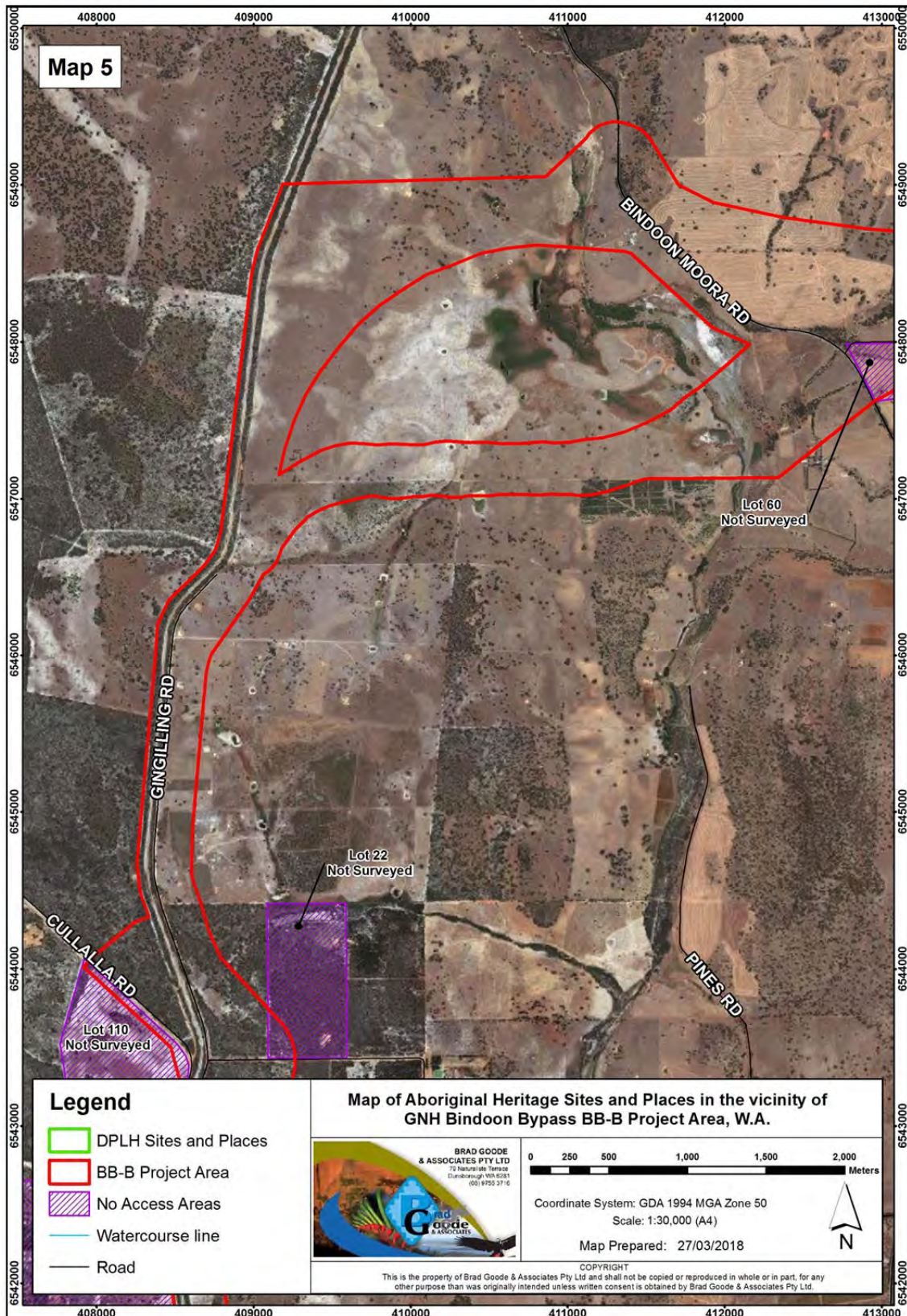


Figure 33: The Bindoon Bypass BB-B Project Area in the vicinity of northern end of Gingilling Road.

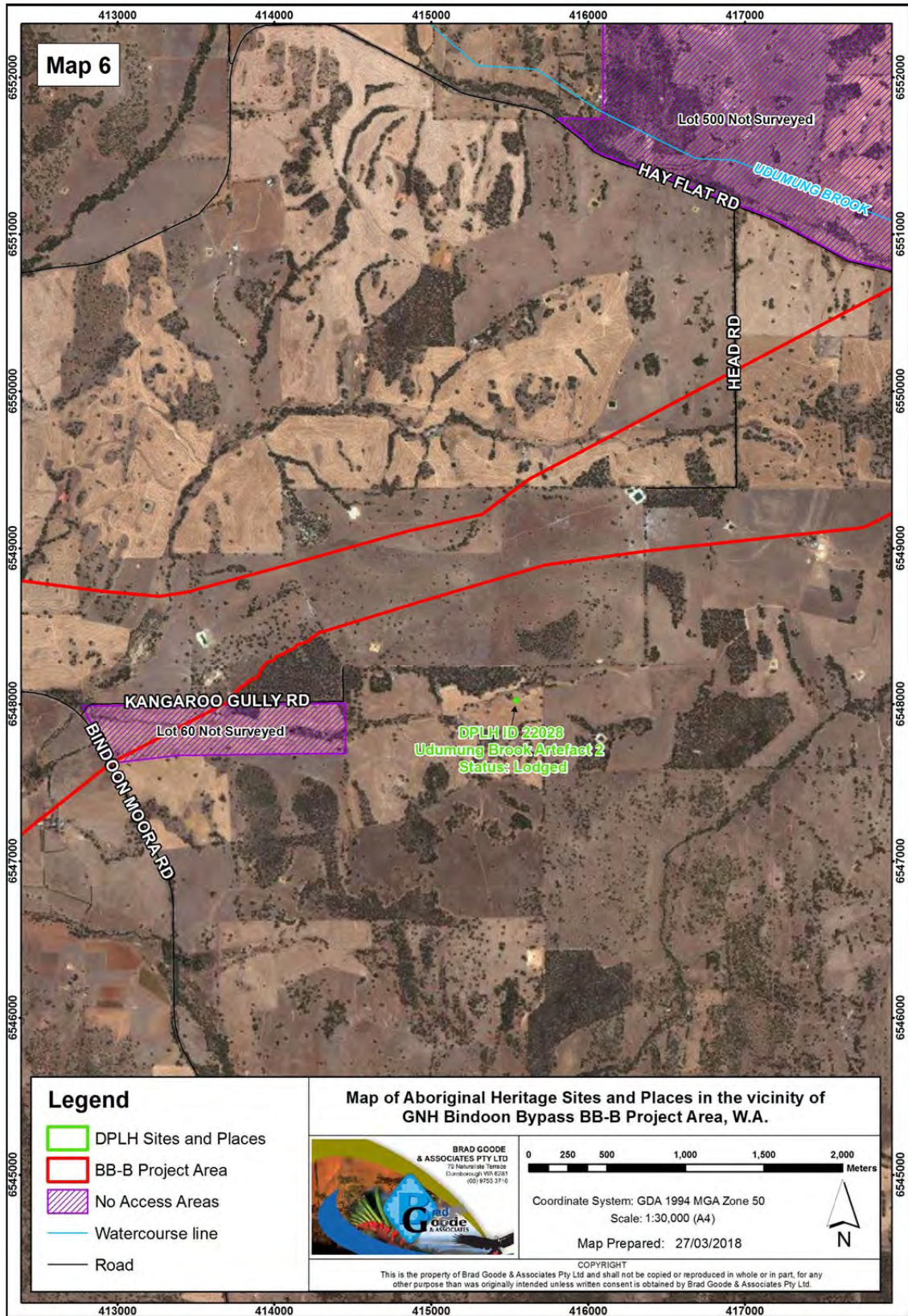


Figure 34: The Bindoon Bypass BB-B Project Area in the vicinity of Bindoon Moora Road.

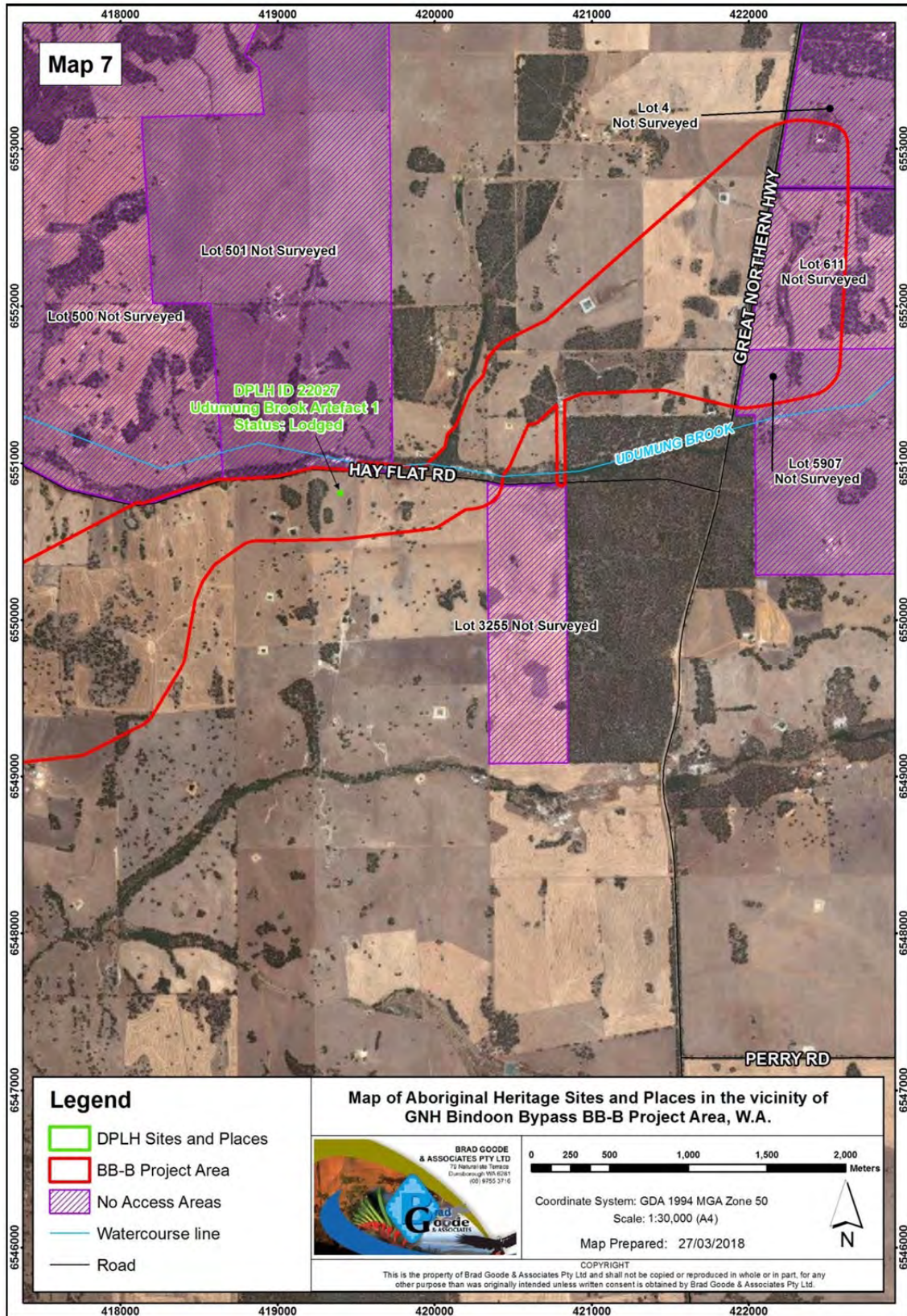


Figure 35: The Bindoon Bypass BB-B Project Area northern end.

ENVIRONMENTAL BACKGROUND

Climate

The survey areas and the region around them lie within a Dry Mediterranean climatic zone averaging between five and six dry months per year (Beard 1981). The climate in this zone is characterised by cool, wet winters and hot, dry summers.

The climatic recording station at Wongan Hills, which is within approximately 50km of the survey areas, has recorded weather conditions for over fifty years. During the winter months (June-August) the average maximum temperature has been 17.7°C and the average minimum 7°C. In the summer (December-February) the equivalent temperatures have been 33.7°C maximum and 17.3°C minimum (Bureau of Meteorology, Australia 2018).

The survey areas are within a region that receives an average annual rainfall of approximately 387mm. Approximately 49% of this rain falls in the winter months, and less than 11% in the summer, the rest being distributed between spring and autumn (Australian Bureau of Meteorology 2018). It is likely that the climatic conditions described above would have been similar to those that prevailed in and about the survey area in the past.

Geology

The geology of the areas in and around the survey areas has been mapped and described on the Perth 1:250 000 map sheet and accompanying notes (Wilde and Low 1978).

In general, the survey areas are located on the undulating plains of the Darling Plateau, “an ancient erosion surface which has been dissected by streams that vary from youthful to mature” (Wilde and Low 1978:2). The Darling Plateau is located on the Western Gneiss Terrane which forms the westernmost part of the Yilgarn Craton, a crustal unit that has been tectonically stable since the Proterozoic (Griffin 1990). The Western Gneiss Terrane consists mainly of repeatedly deformed and metamorphosed banded gneiss, including quartz-rich metasedimentary rocks and banded iron-formation.

The surface geology within the survey areas is variable with sandy colluvium dominating the majority of the Bindoon Bypass BB-A Project Area. The colluvium within the southernmost 2km of this area comprised grey sands with a moderate to dense cover of lateritic pebbles and cobbles on more elevated parts. Numerous piles of lateritic boulders were present throughout the cleared paddocks in this part of the survey area. Abutting the northern margin of these grey sands is a small area of colluvium comprising mixed orange/yellow sand and lateritic pebbles and cobbles. The surface geology throughout the remainder of the BB-A Project Area is dominated by grey/white sands with localised higher ground often having a moderate to dense cover of lateritic pebbles, cobbles and boulders (Figure 36).

The surface geology within the Bindoon Bypass BB-B Project Area can be characterised as grey/white sands with the occasional small patch of yellow/orange sand. A low east-west ridge of grey/white sands extends across the BB-B Project Area just north of Mooliabeenie Road. Other more elevated areas throughout the BB-B Project Area often have a surface geology dominated by a moderate to dense cover of lateritic pebbles, cobbles and boulders. The surface geology within the corridors aligned along the length of Crest Hill Road and part of Gray Road is dominated by lateritic gravel.

The dominant soils within the survey areas are lateritic gravels in a yellow or grey sandy matrix, and red and yellow earths on lower ground and in the vicinity of some drainage features (Beard 1981).

The major drainage features within or adjacent to the survey areas are the Brockman River and Udumung Brook and some of their tributaries (Figures 37 and 38). According to Department of

Planning, Lands and Heritage (WA) mapping, the eastern ends of Lennard Brook extend across parts of the survey areas.

The survey areas discussed in this report have been, and in most cases still are, utilised by the pastoral industry as well as being traversed by a railway line (Figure 39) and various roads, tracks and fences. As a result of these past and current land use practices, a large proportion of the survey areas have been universally disturbed. Some modification of the landscape is likely to have occurred within the remainders of the survey areas.



Figure 36: Looking NW at cleared paddock with grey/white sands in the Bindoon Bypass BB-A Project Area.



Figure 37: Looking north at Brockman River where it crosses Crest Hill Road.



Figure 38: Looking west along Udumung Brook in northern part of Bindoon Bypass BB-B Project Area.



Figure 39: Looking north along rail corridor in Bindoon Bypass BB-B Project Area.

Vegetation

Beard (1981) notes the relationship between specific soil types and vegetation. The survey areas and the districts around them are located within the Mogumber System of the Dale Botanical Subdistrict. Beard (1981) describes the typical vegetation of the Mogumber System as comprising marri-wandoo woodland on plateau and upper slopes with York gum on the lower slopes.

According to Beard (1981:186), on lateritic ridges and breakaways

the woodland tends to open out with development of a dense sclerophyllus understory. On such sites *Eucalyptus accedens* is the principal tree with some *E. wandoo*, and occasionally, *E. drummondii* as a smaller tree. *Dryandra* spp. dominate the understory. On the normal gravel soils of the plateau *Eucalyptus calophylla* and *E. wandoo* are dominant.

As noted above, the large parts of the survey areas have been previously disturbed as a result of past and present land use practices. Vegetation within those parts of survey areas located within paddocks can be characterised as grasses and stubble < 30cm with some *Eucalyptus* spp. trees to 8m (Figure 40). Numerous 'Balgas' or grass trees (*Xanthorrhoea preissii*) to 1.5m and Christmas trees (*Nuytsia floribunda*) to 4m were also present throughout the cleared paddocks south of Teatree Road (Figure 41). As a result, ground visibility was variable throughout the various paddocks and generally averaged between 10% and 50%. However, ground visibility in some paddocks was excellent and averaged 80% or more.

Small patches of remnant bush were also present at various places throughout the survey areas. In general, these patches contained various *Eucalyptus* spp. and *Banksia* spp. trees over low shrubs and some grass trees (Figure 42). Ground visibility was variable throughout these patches and ranged from <10% to as high as 90% in various places. The remnant bush immediately north of Teatree Road is typical of this and contains *Eucalyptus* spp. trees to 10m and *Banksia* spp. trees to 5m over numerous grass trees to 1m and various shrubs to 0.5m (Figure 43). This area also had a variable cover of leaf litter that resulted in ground visibility ranging from 10% to 90% throughout.

The remnant bush on the hill on the south side of the access road into the Bindoon-Chittering Water Reserve is predominantly *Eucalyptus* spp. trees to 8m over a moderately dense understorey of *Dryandra* spp. bushes to 3m, grass trees to 1.5m and various shrubs to 0.5m. Once again, variable quantities of leaf litter resulted in ground visibility in this area ranging from 10% to 90% throughout. It is similar on the north side of the access road with the addition of some *Banksia* spp. trees to 4m.

The vegetation on the low ridge of grey/white sands that extends across the BB-B Project Area just north of Mooliabeenie Road comprises *Banksia* spp. trees to 4m over grass trees to 1m and low shrubs to 0.5m. Ground visibility along this ridge varied from 10% to 70% as a result of leaf litter.

The vegetation within and adjacent to the road reserves contained within the survey areas was generally much denser and typically comprised *Eucalyptus* spp. tree to >10m over various shrubs to 2m and grasses to 0.4m. In general, ground visibility was variable along the various road reserves and ranged from <10% to as high as 60%.

In other parts of the survey areas such as in the vicinity of the Brockman River and Udumung Brook and some of their tributaries, the vegetation was relatively dense. Paperbark trees to 3m over lower shrubs and dense grasses and the occasional stand of tea-trees to 3m predominated in these areas. As a result, ground visibility was very low and averaged <10%. A relatively extensive cover of low halophytes and very dense grasses was present in a low-lying area along the course of a narrow drainage line near the northwest corner of the BB-B Project Area (Figure 44).

Despite the generally low to very low ground visibility encountered in some parts of the survey areas, numerous other areas of very high surface visibility were also present along fence lines, firebreaks, the edges of tracks and in recently harvested paddocks.



Figure 40: Looking south at cleared paddock in Bindoon Bypass BB-A Project Area.



Figure 41: 'Balgas' or grass trees in cleared paddock in Bindoon Bypass BB-A Project Area.



Figure 42: Remnant bush in Bindoon Bypass BB-A Project Area.



Figure 43: Remnant bush immediately north of Teatree Road in the Bindoon Bypass BB-A Project Area.

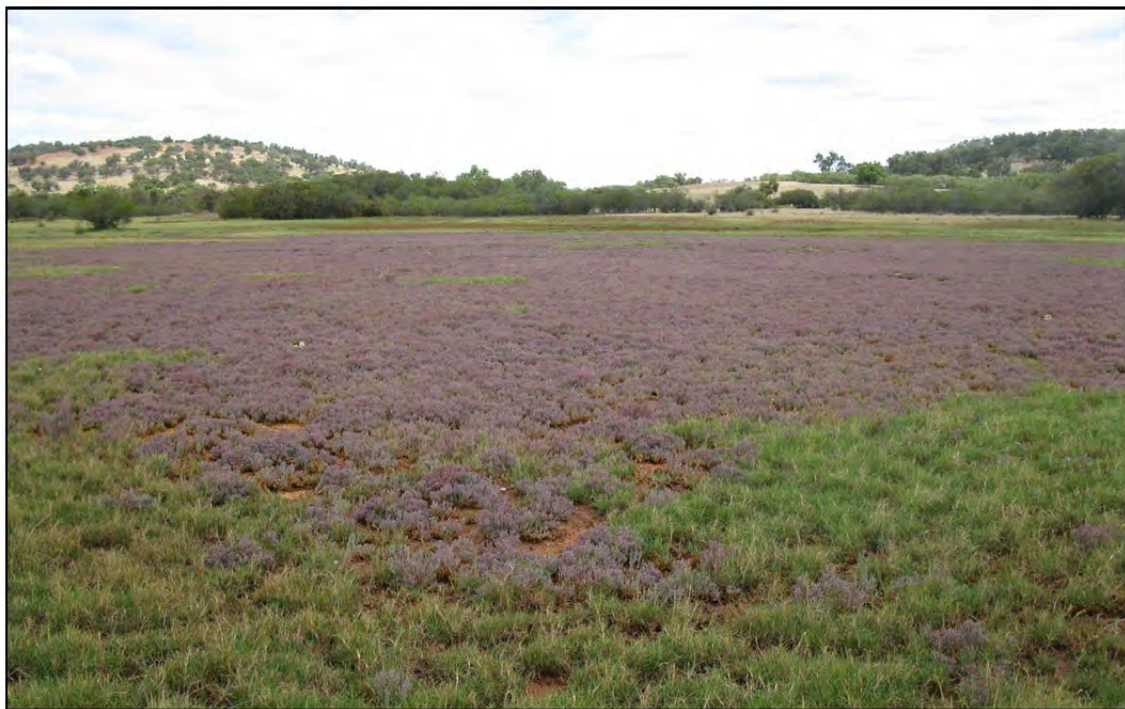


Figure 44: Halophytes and dense grasses in northwest part of the Bindoon Bypass BB-B Project Area.

PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS

DEFINITIONS

Unless otherwise referenced, the following definitions are from 'Notes on the recognition of Aboriginal Sites' published by the Western Australian Museum, Aboriginal Sites Department (1987).

The most common Aboriginal archaeological materials found in Australia are discarded stone tools, or the debris from making such tools by knapping. These artefacts formed a small but durable part of the Aboriginal tool-kit. Often stone tools were used to manufacture other tools from organic materials that have not survived (Flood 1995). Where numerous artefacts occur in context and in association, they constitute an artefact scatter and together comprise the scatter's artefact assemblage.

Artefact scatters generally represent campsites. Large scatters are places that were regularly occupied, sometimes for long periods and represent the accumulation of many overlapping smaller camps. Small scatters are the remains of sites that were briefly occupied, probably on several occasions. Very small scatters may be evidence of an overnight camp, meal-time camp or work area where specific activities were carried out.

Many stone arrangements have been interpreted as ceremonial sites, but this rarely can be established. Stone arrangements can consist of hundreds of stones arranged in elaborate lines or in mounds, or can be a single line or small cluster. Solitary placed or standing stones may have served as a sign; for example, as a warning to avoid a specific site or as an indicator of water. Some stone arrangements are the remains of hunting hides or the bases of huts.

A place where stone was obtained for making stone tools is a quarry. Generally, quarries contain knapping centres or core reduction areas where knapping was intensive. Quarries are found at occurrences of highly siliceous stone, such as chalcedony, chert, silcrete, quartz, *etc.* Finished artefacts are not common at quarries and the vast majority of material found at this

type of site is waste, called debitage or debris, from making tools or preparing cores for transport off the quarry for later use.

Apart from concentrations of artefacts at campsites, there are also solitary artefacts that are distributed at a very low density across the landscape. These form a background scatter that probably represents evidence of dispersed hunting and gathering activities. In some instances, isolated finds are found beside watercourses in a long ribbon known as a ‘creekline scatter’.

For the purposes of the survey discussed in this report, an archaeological “site” is defined as a place where “significant traces of human activity are identified” (Renfrew & Bahn 1991:42). In other words, where there is substantial *in situ* evidence of past Aboriginal occupation or activity. This is a scientific definition, not a legal definition.

The decision as to whether a place might or might not constitute a “site” under Section 5 of the Western Australian Aboriginal Heritage Act (1972) is made by the Aboriginal Cultural Material Committee. Most types of Aboriginal sites are described in more detail in ‘Notes on the recognition of Aboriginal Sites’ published by the Western Australian Museum, Aboriginal Sites Department (1987). It is important to note that all sites, whether known or not, are protected under the Western Australian Aboriginal Heritage Act (1972) and that it is an offence to disturb or conceal a site, or remove artefacts, without appropriate consent.

REGISTERED SITES AND OTHER HERITAGE PLACES

As a result of research conducted by Brad Goode and Associates in December 2017 and January 2018 and a search of the Department of Planning, Lands and Heritage (WA) Aboriginal Sites Database, it was established that **no** registered Aboriginal sites with an archaeological component have been registered at positions that places them within any part of any of the survey areas. However, a search of the Department of Planning, Lands and Heritage (WA) List of Other Heritage Places shows that part of **one** ‘other heritage place’, Burroloo Well (ID 3528), may overlap the southeast corner of the BB-A Project Area, while **another**, Udumung Brook Artefact 1 (ID 22027) is located within the northeast part of the BB-B Project Area. Details of these other heritage places are given in Table 3.

Table 3: Other Heritage Places with an archaeological component potentially located within the survey areas.

ID	Name	File Restricted	Boundary Restricted	Location (GDA94 Zone 50)*		Site Type
				mE	mN	
3528	Burroloo Well	No	No	411039	6519849	Artefact Scatter, Water Source
22027	Udumung Brook Artefact 1	No	No	419398	6550809	Artefact Scatter

* Please note: Coordinates are indicative locations that represent the centre of other heritage places as shown on maps produced by the DPLH – they may not necessarily represent the true centre of all other heritage places.

Place ID 3528 Burroloo Well

According to information contained within the relevant file obtained from the Department of Planning, Lands and Heritage (WA), the Burroloo Well (ID 3528) other heritage place comprises a permanent waterhole just off Great Northern Highway, and a few pieces of quartz close to the waterhole and about 100m downstream on graded firebreaks.

The Burroloo Well (ID 3528) other heritage place was initially reported in 1989 and it is acknowledged by the Department of Planning, Lands and Heritage (WA) that the coordinates they give for the location of this place are unreliable. These coordinates place the Burroloo Well (ID 3528) other heritage place amongst trees in a cleared paddock with no obvious signs of a

permanent waterhole. During the course of the archaeological survey described in this report, the location of the Burroloo Well (ID 3528) other heritage place, as given on the List of Other Heritage Places, was targeted and scrutinised for the presence of Aboriginal archaeological material. As a consequence, no Aboriginal archaeological artefacts or material were identified. In addition, no permanent waterhole was identified at or about this location.

It is assumed that the Burroloo Well permanent waterhole, and therefore the Burroloo Well (ID 3528) other heritage place, is located within the Burroloo Well Nature Reserve located approximately 530m to the northeast (see Figure 26). A sketch map contained in the relevant file supports this assumption. As a result, it is concluded that the Burroloo Well (ID 3528) other heritage place is not located within nor extend over any part of the BB-A Project Area.

Place ID 22027 Udumung Brook Artefact 1

According to information contained within the relevant file obtained from the Department of Planning, Lands and Heritage (WA), the Udumung Brook Artefact 1 (ID 22027) other heritage place comprises a single basalt flake that was identified on the margin of Udumung Brook in 2005. The coordinates given for this other heritage place by the Department of Planning, Lands and Heritage (WA), which they consider to be reliable, places it within a cleared paddock 180m south of Udumung Brook. An analysis of the spatial data contained within the relevant file suggests that the coordinates have not been converted when the datum was changed from AMG 1984 to MGA 1994. Converting the coordinates to MGA 1994 moves the location of the Udumung Brook Artefact 1 (ID 22027) 204m to the northeast and places it adjacent to the southern margin of Udumung Brook. This location is consistent with the information contained within the relevant file.

During the course of the archaeological survey described in this report, the location of the Udumung Brook Artefact 1 (ID 22027) other heritage place, as given on the List of Other Heritage Places, was targeted and scrutinised for the presence of Aboriginal archaeological material. As a consequence, no Aboriginal archaeological artefacts or material were identified. In addition, the location of the Udumung Brook Artefact 1 (ID 22027) other heritage place as determined by converting the given coordinates to MGA 1994, was also targeted and scrutinised for the presence of Aboriginal archaeological material. As a consequence, no Aboriginal archaeological artefacts or material were identified.

It is noted here that information pertaining to the Burroloo Well (ID 3528) and Udumung Brook Artefact 1 (ID 22027) other heritage places has been received by the Department of Planning, Lands and Heritage (WA), but an assessment of this information has not been completed at the time of writing, to determine if these other heritage places meet Section 5 of the Aboriginal Heritage Act (1972).

REVIEW OF RELEVANT ARCHAEOLOGICAL REPORTS

As a result of research conducted by Brad Goode and Associates in December 2017 and January 2018 and a search of the Department of Planning, Lands and Heritage (WA) Heritage Survey Database, it was established that five archaeological surveys have been undertaken in the past in areas that abut, coincide with or intersect a part or parts of the survey areas. The reports on these surveys are reviewed here and their results presented.

Quartermaine, G. 2005, *Report on further Archaeological Investigations for Aboriginal Sites Great Northern Highway H006 Muchea to Walebing Road Widening Programme*, Unpublished Report prepared for Sinclair Knight Merz Pty Ltd [DPLH Survey Report ID 21949].

The further archaeological investigations described in Quartermaine's 2005 report focused on five additional areas along the Great Northern Highway between Muchea and Walebing and that were not included in the original survey of this section of the highway (Quartermaine 2004a).

The five additional areas were all 100m wide (*i.e.* 50m either side of the existing Great Northern Highway) and various lengths. One of these additional areas, SLK 50.4 to SLK 52.46 overlaps the southern margin of the Bindoon Bypass BB-A Project Area. Quartermaine undertook his survey ahead of planned road widening within the five additional areas.

Quartermaine surveyed the five additional areas by walking transects along the length of each area on both sides of the existing Great Northern Highway. As per his previous survey Quartermaine (2005:10) noted “visibility was usually restricted by ground cover vegetation and varied from moderate to low. Disturbance was variously from road works, rail and drain construction and agricultural activity”.

As a result of his further archaeological investigations, Quartermaine identified two scarred trees and one possible scarred tree, none of which are located within the SLK 50.4 to SLK 52.46 survey area. One of the scarred trees is a “mature wandoo tree with an oval shaped scar about 60 centimetres above ground level. The scar measures 70 by 32 centimetres with possible axe marks within the scar” (Quartermaine 2005:11). The second scarred tree is described as a “medium wandoo tree with an irregular scar about 70 centimetres above ground level. The scar measures 65 by 25 centimetres” (Quartermaine 2005:12). The possible scarred tree is described as a “mature wandoo tree with a leaf shaped scar about 165 centimetres above ground level. The scar measures 50 by 15 centimetres” and while “it is less definite that this is a man-made scar than the first site is [it] is considered to be a possible modified tree” (Quartermaine 2005:12).

Quartermaine, G.S. 2004b, *Report on an Archaeological Investigation for Aboriginal Sites MRS Boundary to Calingiri Road Section Perth Darwin National Highway*, Unpublished Report prepared for GHD Pty Ltd [DPLH Survey Report ID 21634].

The archaeological survey described in Quartermaine’s report focused on a 62.2km long corridor that was 500m wide and located between the Metropolitan Region Scheme boundary south of Muchea and the Calingiri Road intersection with Great Northern Highway. This survey was undertaken to assist in the planning of the construction of the Perth Darwin National Highway. The corridor surveyed by Quartermaine overlaps the northwest corner of the Bindoon Bypass BB-A Project Area and the majority of the Bindoon Bypass BB-B Project Area.

According to Quartermaine (2004b:10) the 62.2km long corridor was surveyed for Aboriginal archaeological sites by “gaining access to the area at various points by vehicle and then undertaking pedestrian traverses”. Furthermore, “inspections across a 500 metre wide corridor were made on foot. This enabled a field inspection of at least 20% of the survey area” (Quartermaine 2004b:10). Once again Quartermaine (2004b:10) notes that during his survey “visibility was usually restricted by ground cover vegetation and varied from moderate to low. Disturbance was variously from road works, rail and drain construction and agricultural activity”.

No Aboriginal archaeological sites were identified or recorded by Quartermaine as a result of his survey. However, two isolated artefacts, a basalt flake and a quartz flake were identified. They are the Udumung Brook Artefact 1 other heritage place on the margin of Udumung Brook and the Udumung Brook Artefact 2 other heritage place identified between two small creeks.

Quartermaine, G. 2010, *Report on further Archaeological Investigation for Aboriginal Sites Great Northern Highway H006, Bridge No. 681, Moore River*, Unpublished Report prepared for Main Roads Western Australia [DPLH Survey Report ID 28509].

In his 2010 report, Quartermaine provides the details and results of an archaeological investigation for Aboriginal archaeological sites at the location of Bridge No. 681 over the Moore River. The area surveyed by Quartermaine traverses the eastern end of the Bindoon Bypass BB-B Project Area. This survey was undertaken ahead of proposed bridge maintenance work.

Quartermaine (2010:9) surveyed the Bridge No. 681 survey area by making “pedestrian inspections . . . at regular intervals and in areas of good surface visibility” that enabled all of the survey area to be examined. As a result of this survey no Aboriginal archaeological sites or cultural material were identified.

Australian Interaction Consultants 2006, *Report on an archaeological and ethnographic survey under the Aboriginal Heritage Act (1972) of a proposed Optic Fibre Cable Route of New Norcia, Western Australia*, Unpublished Report prepared for Telstra [DPLH Survey Report ID 22143].

Australian Interaction Consultants conducted an Aboriginal heritage survey for a proposed optic fibre cable route that extends for 13 kilometres from New Norcia to the Wannamal East exchange. The southern end of the area surveyed by Australian Interaction Consultants extends along Great Northern Highway into the eastern end of the Bindoon Bypass BB-B Project Area.

There is little useful information in the above-mentioned report. The archaeological survey involved pedestrian and vehicular transects and Australian Interaction Consultants estimate that 80% of the proposed fibre optic cable route was covered by these methods.

Goode, B., Huxtable, L. and O’Reilly, T. 2016, *Report on an Archaeological Heritage Survey for the Great Northern Highway Muchea to Wubin Stage 2 Upgrade Project in the Yued Native Title Claim Area (WC1997/071), Western Australia*, Unpublished Report prepared for the GNH Muchea to Wubin Integrated Project Team on behalf of Main Roads Western Australia.

The archaeological survey described in this report focused on a number of discrete areas along Great Northern Highway between Muchea and Walebing, and in the vicinity of Bindoon. One of the areas surveyed, the Calingiri Project Area, was centred on the existing Great Northern Highway and traverses the eastern end of the Bindoon Bypass BB-B Project Area. The survey was undertaken ahead of the proposed construction of a new alignment of Great Northern Highway, the widening of some parts of the existing highway, the undertaking of curve improvement and the construction of overtaking lanes.

The archaeological survey of those parts of the survey areas to which access was allowed was completed by walking a series of transects across each of the survey areas. In general, these transects followed the alignment of the various survey corridors that made up each project area. These transects were undertaken by archaeologists and traditional owners spaced at between 30m and 80m intervals, depending on the width of each corridor. The exceptions to this were the larger parts of the Bindoon Hill and Walebing to Bindi Bindi Project Areas where transects had a general east-west alignment with archaeologists and traditional owners spaced on average between 50m and 80m intervals.

In addition to the above, the margins of those parts of the Brockman River, Lake Needonga, Lake Chittering, Udumung Brook and Moore River East that traverse parts of the project areas were targeted and scrutinised for the presence of Aboriginal artefacts and/or cultural material as were those parts of the low-lying saline area adjacent to the Miling Moora Road in the Miling Project Area. The margins of other small and narrow creeks and drainage lines that traverse some parts of the project areas were also targeted and scrutinised for the presence of Aboriginal artefacts and/or cultural material as were areas of high visibility along cleared tracks, fencelines and firebreaks and other opportunistic exposures.

It was noted in the report that surface visibility throughout the project areas was low and ranged from <10% to as high as 20% along the various road reserves. Throughout the various paddocks within the project areas it averaged between 10% and 50% but got as high as 80% in some parts. It was lowest in and around the central part of the Bindoon Hill Project Area online option

where it was generally <5% and only marginally higher at ~10% in areas of dense vegetation associated with some of the lakes and major drainage features mentioned above (Goode, et al. 2016:140).

As a result of the archaeological survey, two Aboriginal archaeological sites were identified and recorded, one within the Calingiri Project Area and one within the Walebing to Bindi Bindi Project Area. These sites, provisionally named Mogumber - Yarawindah Road Scarred Tree and Walebing Scarred Tree are both culturally scarred trees. Neither of these trees are located within the Bindoon Bypass BB-B Project Area.

The Mogumber-Yarawindah Road Scarred Tree is a dead tree that is assumed to be a *Eucalyptus* species. It was identified in remnant bush on the south side of Mogumber-Yarawindah Road and approximately 50m west of Great Northern Highway. What remains of the dead tree is approximately 5m tall. The scar on the Mogumber-Yarawindah Road Scarred Tree faces west and begins approximately 0.96m above ground level. It is approximately 18cm wide, 55cm long and has a single visible axe scar.

The Walebing Scarred Tree is a York Gum (*Eucalyptus loxophleba*) that was identified on the west side of Great Northern Highway at the north end of a large parking area opposite the Walebing Roadhouse. The tree is approximately 12m tall and approximately 10m from the edge of the road. The scar on the Walebing Scarred Tree faces south and begins approximately 0.73m above ground level. It is approximately 15cm wide, 32cm long.

It is estimated that the above-mentioned surveys covered approximately 57% of the Bindoon Bypass BB-B Project Area and a negligible amount of the Bindoon Bypass BB-A Project Area.

PREVIOUS ARCHAEOLOGICAL RESEARCH

The Bindoon Bypass BB-A and BB-B Project Areas are located on the undulating plains near the northern end of the Darling Plateau within the broader southwest region of Western Australia. These project areas are between 50km and 70km east of the present coastline and very close to the eastern margin of the Swan Coastal Plain that lies between the Darling Fault on the western edge of the Darling Range and the Indian Ocean. The Darling Range occupies that area immediately east of the Darling Fault and west of the Darling Plateau.

While little archaeological research has been focused on the northern end of the Darling Plateau and/or in the vicinity of the project areas, there is a relatively large corpus of work that has focused on parts of the Darling Range and Darling Plateau to the south and the adjacent Swan Coastal Plain to the west. The results of this work (discussed below) can potentially provide useful information pertaining to possible site patterning characteristics that may be found in similar environments or adjacent areas. In addition, data contained in the relevant reports pertaining to site types, dimensions, assemblages and locations can be utilised in an assessment of the archaeological significance of any other Aboriginal archaeological sites which may be identified as a result of the archaeological survey of the areas discussed in this report.

Research undertaken by Hallam (1975) utilised ethnohistorical sources to assess past Aboriginal land use across the Swan Coastal Plain, the adjacent Darling Range and the Darling Plateau to the east. As a result, Hallam (1975) proposed that in the past Aboriginal people favoured locations on the Swan Coastal Plain and the Darling Plateau while the jarrah forests of the Darling Range in-between were relatively empty.

An alternative model has been proposed by Anderson (1984), who utilised the results of numerous archaeological surveys and investigations undertaken in the jarrah forests south of Perth as well as in areas on the coastal plain and the Darling Plateau. Some of these are described below.

During the course of archaeological surveys of approximately 280km² of mainly jarrah forest near Boddington and Collie, approximately 160km and 220km south of the survey areas respectively, Pearce (1981, 1982) identified 262 archaeological sites. Of these sites, 257 (98%) are open artefact scatters with the majority identified on gently sloping ground in the vicinity of watercourses or swamps. These sites generally contained less than 100 artefacts with those located near Collie containing only quartz artefacts with the exception of one chert flake and one silcrete flake. While the artefact scatters located in the vicinity of Boddington contain a wider range of lithic material, including dolerite, silcrete, chert, quartzite, calcrete and granite, quartz artefacts still dominated their assemblages. Artefact types noted at sites in both of these locations included flakes, chips, flaked pieces, steep-edged scrapers, bipolar cores and some backed tools.

In another survey of approximately 10km² of jarrah forest in the vicinity of the Harris River Dam, located 12km to 25km north of Collie, Veth et al. (1983) identified 53 archaeological sites. Of these sites, 48 (91%) are open artefact scatters with the majority being on flat or relatively flat and well-drained lateritic ground in the vicinity of watercourses or swamps. The majority (83%) of these sites contain less than ten artefacts all of which are quartz with the exception of a single fossiliferous chert flake. Flakes, chips and flaked pieces dominate the artefact assemblages at these sites.

During a survey of 25 km² in the South Canning jarrah forests approximately 90km south of the survey areas, Anderson (1982) identified 20 archaeological sites, 19 of which are artefact scatters. These artefact scatters are generally located within 100m of the South Canning River or one of its tributaries, on flat or very gently sloping ground with the majority containing less than 100 artefacts. With the exception of a single fossiliferous chert flake and one silcrete flake, artefacts at these nineteen sites are all manufactured on quartz. Artefact assemblages at each of these sites consisted of predominantly primary flakes and chips with a small number of flaked pieces also being observed. Other artefact types noted include flake scrapers, steep-edged scrapers, an adze slug and a single bi-polar core (Anderson 1982).

In the North Dandalup area, approximately 120km south of the survey areas, Anderson (1981) identified 10 archaeological sites in an area of 8km² and all within 100m of the North Dandalup River or its main tributary Kronin Brook. All of these sites are open artefact scatters and like those in the South Canning area, their assemblages have, with the exception of three flakes of European glass, been manufactured exclusively on quartz. The only artefact types present at these sites are flakes, chips or flaked pieces.

Anderson (1984) utilised data derived from the archaeological surveys discussed above to investigate the Aboriginal occupation of the jarrah forest in the region south of Perth. In doing this Anderson compared the occurrence and size of artefact scatters located in the jarrah forests with those located on the Darling Plateau to the east and on the Swan Coastal Plain to the west. Anderson (1984) demonstrated that the dominant site type located in the jarrah forests south of Perth is the small open artefact scatter of almost exclusively quartz artefacts. These sites are interpreted as representing short-term stops by small mobile groups of Aborigines moving through the jarrah forest. This is in contrast with larger sites on the coastal plain that sometimes also contain grinding material, which was not observed at any of the sites located in the jarrah forest, and a wider range of lithic resources. These larger sites represent localities that were visited either more frequently, for longer periods or by larger groups.

Anderson (1984:37) proposes a land-use model to explain the Aboriginal occupation of the jarrah forest in the region south of Perth. This model is based on a synthesis of the archaeological evidence presented above together with ethnohistorical and environmental evidence and, amongst other things, proposes that;

In winter and early spring, when the coastal resources were less abundant, some of the plain-based people moved into the jarrah forest in the Darling Ranges to relieve the

pressure on available food sources; the remainder fragmenting and ranging more widely. The extent of penetration of the forest zone was only about 30-35 km, the area of the densest and most uniform stands of jarrah. The predominantly small sites throughout this section of the forest are evidence of mobility necessitated by less prolific resources and the pursuit of game (Anderson 1984: 37).

Furthermore, Anderson (1984: 37) sees the western plateau [Darling Plateau] area as having a less distinctly seasonal pattern of movement and proposes that the Aboriginal people who occupied it “would possibly have been more nomadic and moved over wider ranges, taking advantage of the large mammal population and plant foods of the open woodlands”. In addition, she sees the eastern margin of the ‘jarrah zone’, where jarrah woodland gradually grades into wandoo woodland, as a zone that was exploited by plateau groups and that individuals and groups of varying sizes moved through the jarrah forest from the Swan coastal plain to the plateau and vice versa for specific trade, social and ritual purposes.

In a broader context, archaeological research conducted in the southwest of Western Australia documents, amongst other things, the antiquity of human occupation in this region. At present the earliest occupation date for the southwest of Western Australia is in the order of 47,000 years Before Present (BP) obtained from archaeological deposits at Devil's Lair (Dortch 2002), located approximately 20km north of Cape Leeuwin in the Leeuwin-Naturaliste Region. Some other sites of Pleistocene age recorded in the southwest include Upper Swan *c.*38,000 BP (Pearce and Barbetti 1981), Helena River *c.*29,000 BP (Schwede 1983) and Kalgan Hall *c.*18,000 BP (Ferguson 1985). There are at least 46 dated archaeological sites in southwestern Australia which together span the period from *c.*38,000 BP to the present (*cf.* Smith 1993). In a wider regional context, these sites provide a more or less continuous record of human occupation of this region.

The results of previous archaeological surveys, studies and research, as well as the data on registered sites and other heritage places presented above, demonstrates the types of Aboriginal archaeological sites already known to exist in the wider region around the survey areas. In addition to this, these results, together with the environmental information already discussed, enables predictions to be made about probable site locations and the types of archaeological material and/or sites that could reasonably be expected to be found as a result of the archaeological survey of the survey areas. The types of archaeological sites or material that are most likely to be located within any of the survey areas would be various types of lithic artefacts either singularly or in scatters, modified trees and possibly small quarries at sources of stone suitable for the manufacture of artefacts.

SURVEY METHODS

The fieldwork associated with the archaeological survey of the Bindoon Bypass BB-A Project Area was conducted in January 2018 by archaeologists Mr Thomas O'Reilly and Mr Stuart Johnston with assistance from Yued Traditional Owners Mr Chris Shaw and Mr Jason Nannup. The fieldwork associated with the archaeological survey of the Bindoon Bypass BB-B Project Area was conducted in January and February 2018 by archaeologists Mr Thomas O'Reilly and Ms Sally McGann with assistance from Yued Traditional Owners Mr Chris Shaw, Mr Jason Nannup and Mr Brendan Moore. The methods utilised prior to and during the archaeological surveys are outlined below.

Prior to undertaking the field component of the archaeological surveys, a search of the Department of Planning, Lands and Heritage (WA) Aboriginal Sites Database was made by Brad Goode and Associates in December 2017 and January 2018, to determine if any Aboriginal archaeological sites, or sites with an archaeological component, or any other heritage places with an archaeological component, are located within any of the survey areas. A review of reports detailing the results of previous archaeological surveys and investigations that

overlapped or intersected with the project areas, was also undertaken. Reports detailing the results of previous archaeological surveys and investigations carried out in the vicinity of the project areas were also reviewed as was the results of archaeological research conducted in the wider region.

Geological and vegetation maps were also examined prior to the field survey to ascertain the physical geography and geomorphology of the land within the project areas. Any areas of interest identified from these maps, or areas identified as having a high probability of containing Aboriginal archaeological sites would subsequently be targeted during the field survey.

It is noted here that some landowners did not permit access to their properties at the time of the archaeological surveys discussed in this report. As a consequence, the Bindoon Bypass BB-A and BB-B Project Areas (and therefore the survey areas) referred to in this report do not include these ‘no access’ areas.

The Bindoon Bypass BB-A Project Area was surveyed for the presence of Aboriginal archaeological sites by walking a series of transects across this survey area. Over the majority of the survey area these transects had a general east-west alignment with archaeologists and traditional owners spaced at approximately 25m intervals. The exceptions to this were that part of the survey area north of 6522500mN and south of Teatree Road where archaeologists and traditional owners were spaced at approximately 50m intervals, and those narrow N-S corridors south of Teatree Road where transects had a general north-south alignment with archaeologists and traditional owners spaced at approximately 50m intervals.

In addition to the above, that part of the Bindoon Bypass BB-A Project Area that has been mapped as containing part of ‘Lennard Brook Bindoon Branch’ was targeted and scrutinised for the presence of Aboriginal artefacts and/or cultural material. However, there was no visible evidence of a ‘brook’ or any other drainage feature in this part of the survey area.

In general, surface visibility throughout the Bindoon Bypass BB-A Project Area was variable. In the various cleared paddocks, it generally averaged between 10% and 50% with some as high as 80% or more. Ground visibility throughout the patches of remnant bush in this survey area was also variable and ranged from <10% to as high as 90% in various places. Places of excellent ground visibility were consistently encountered throughout the survey area along fencelines, fire breaks, cleared tracks and within parts of some paddocks.

The Bindoon Bypass BB-B Project Area was surveyed for the presence of Aboriginal archaeological sites by walking a series of transects across this survey area as well as targeting specific features. The intensity of coverage varied depending on the specific landscape features encountered.

The land adjacent to and within approximately 50m of those parts of the Brockman River and Udumung Brook that traverse the Bindoon Bypass BB-B Project Area were targeted and scrutinised for the presence of Aboriginal artefacts and/or cultural material by walking a series of transects parallel to the river and brook, with archaeologists and traditional owners spaced at approximately 20m intervals. The unnamed streams that traverse the survey area in the vicinity of the Bindoon Moora Road were also targeted and scrutinised for the presence of Aboriginal artefacts and/or cultural material in the same way, as was that part of Lennard Brook that traverses the southern end of the survey area. A soak or well identified north of Cook Road was also targeted and the area within approximately 100m of it surveyed using a series of transects that radiated out from its central point.

Areas of unaltered bushland located at the southern end of the Bindoon Bypass BB-B Project Area, adjacent to Gray Road, in the vicinity of Mooliabeenie Road, north of Barn Road and in the vicinity of Cook Road and Gingilling Road were targeted and scrutinised for the presence of

Aboriginal artefacts and/or cultural material by walking a series of transects across them. These transects had a general east-west alignment with archaeologists and traditional owners spaced at approximately 25m intervals. The exceptions to this were those relatively narrow parts south of Cook Road and on the west side of Cullalla Road north of Barn Road where transects followed the general alignment of Cullalla Road.

Areas of remnant bushland, much of which had been altered by contemporary land use practices and grazing animals, were surveyed for the presence of Aboriginal artefacts and/or cultural material by walking a series of transects across them. These transects had a general east-west alignment with archaeologists and traditional owners spaced at between 50m and 100m intervals depending on the extent of the remnant bush. Very small patches of remnant bush were surveyed by walking meandering transects through them.

The remainder of the Bindoon Bypass BB-B Project Area comprises cleared paddocks and the narrow corridors aligned along Crest Hill Road and part of Gray Road. These parts of the survey area have been universally disturbed or significantly altered as a result of contemporary land use practices. The narrow corridors aligned along Crest Hill Road and part of Gray Road were surveyed by walking transects along each corridor on both sides of the road. These transects followed the general alignment of each road. Cleared paddocks were surveyed by walking a series of transects across them with with archaeologists and traditional owners spaced at between 200m and 400m intervals. These transects had a general east-west alignment.

In general, surface visibility throughout the Bindoon Bypass BB-B Project Area was variable. Throughout the patches of unaltered and remnant bush in this survey area it ranged from <10% to as high as 90% in various places. Similar levels of visibility were encountered in the vicinities of the Brockman River and Udumung Brook. In the various cleared paddocks and in the vicinity of Crest Hill Road and Gray Road, surface visibility generally averaged between 20% and 60%. Places of excellent ground visibility were consistently encountered throughout the survey area along fencelines, fire breaks, cleared tracks and within parts of some paddocks.

RESULTS

As a result of research conducted by BGA in December 2017 and January 2018 and a search of the DPLH Aboriginal Sites Database prior to the archaeological surveys of the Bindoon Bypass BB-A and BB-B Project Areas, it was established that **no** registered Aboriginal sites with an archaeological component are registered at positions that place them within any of these project areas. However, a search of the DPLH List of Other Heritage Places shows that part of **one** 'other heritage place', Burroloo Well (ID 3528), may overlap the southeast corner of the BB-A Project Area, while **another**, Udumung Brook Artefact 1 (ID 22027) is located within the northeast part of the BB-B Project Area. Details of these other heritage places have been given in Table 3.

It is reiterated here that some landowners did not permit access to their properties at the time of the archaeological surveys discussed in this report. As a consequence, the Bindoon Bypass BB-A and BB-B Project Areas (and therefore the survey areas) referred to in this report do not include these 'no access' areas.

During the course of the archaeological survey described in this report, the location of the Burroloo Well (ID 3528) other heritage place, as given on the List of Other Heritage Places, was targeted and scrutinised for the presence of Aboriginal archaeological material. As a result, no Aboriginal archaeological artefacts or material were identified. In addition, no permanent waterhole was identified at or about this location.

It is assumed that the Burroloo Well permanent waterhole, and therefore the Burroloo Well (ID 3528) other heritage place, is located within the Burroloo Well Nature Reserve located approximately 530m to the northeast. A sketch map contained in the relevant file obtained from

DPLH supports this assumption. As a result, it is concluded that the Burroloo Well (ID 3528) other heritage place is not located within nor extend over any part of the BB-A Project Area.

During the course of the archaeological survey described in this report, the location of the Udumung Brook Artefact 1 (ID 22027) other heritage place, as given on the List of Other Heritage Places, was targeted and scrutinised for the presence of Aboriginal archaeological material. As a result, no Aboriginal archaeological artefacts or material were identified. In addition, the location of the Udumung Brook Artefact 1 (ID 22027) other heritage place as determined by converting the given coordinates to MGA 1994, was also targeted and scrutinised for the presence of Aboriginal archaeological material. As a result, no Aboriginal archaeological artefacts or material were identified.

As a result of the archaeological survey of the Bindoon Bypass BB-A and BB-B Project Areas, **no** Aboriginal archaeological sites were identified. However, three isolated artefacts were identified. Details of these isolated artefacts are given in Table 4.

The first isolated artefact identified was a longitudinally broken quartz flake (Figure 45) that was identified on a low sandy rise adjacent to a flooded area next to a very narrow drainage feature in the northwest corner of the Bindoon Bypass BB-B Project Area. The other isolated artefacts were a single platform core and a flake, both manufactured on dolerite and both identified in a cleared paddock at the eastern end of the Bindoon Bypass BB-B Project Area.

Table 4: Isolated artefacts identified within the survey areas.

Isolated Artefact No.	Artefact Type	Material	Situation	Location (GDA94 Zone 50)*	
				mE	mN
1	Longitudinally broken flake	Quartz	Low sandy rise adjacent to narrow drainage feature	411020	6549105
2	Single platform core	Dolerite	Cleared paddock	421742	6551911
3	Flake	Dolerite	Cleared paddock	421727	6551902



Figure 45: Isolated artefact 1: a longitudinally broken quartz flake.



Figure 46: Isolated artefact 2: single platform dolerite core.



Figure 47: Isolated artefact 3: dolerite flake.

CONCLUSIONS

DISCUSSION

It has been demonstrated above that the Burroloo Well (ID 3528) other heritage place is not located within nor extend over any part of the BB-A Project Area. As a consequence, no further action is required pertaining to this other heritage place.

The Udumung Brook Artefact 1 (ID 22027) other heritage place comprises a single basalt flake that was identified on the margin of Udumung Brook in 2005. No artefact of any description was identified at or about the position of this other heritage place as given on the Department of Planning, Lands and Heritage (WA) List of Other Heritage Places, or at this position after its conversion to MGA 1994 coordinates. Given that this basalt flake was initially identified in 2005, it is possible that rain, sheet wash, the brook flooding or other natural processes have either concealed the artefact or resulted in its movement to another place. It is also possible that other agencies such as contemporary land use practices or animal activity have similarly resulted in the basalt flake being either concealed or moved to another place.

Regardless of the reason why the Udumung Brook Artefact 1 (ID 22027) basalt flake is no longer visible at or about the position where it was initially identified, it remains a place to which the Aboriginal Heritage Act (1972) may apply. As previously stated, information pertaining to the Udumung Brook Artefact 1 (ID 22027) other heritage place has been previously received by the Department of Planning, Lands and Heritage (WA), but an assessment of this information has not been completed to determine if this other heritage place meets Section 5 of the Aboriginal Heritage Act (1972). As a consequence, it will be necessary for Main Roads Western Australia to avoid any impact upon or disturbance to the place where the Udumung Brook Artefact 1 (ID 22027) other heritage place was identified until such time as the Department of Planning, Lands and Heritage (WA) determine that this is a place to which the Aboriginal Heritage Act (1972) **does not** apply.

As a result of the archaeological survey described in this report, **no** Aboriginal archaeological sites were identified. These isolated artefacts have no obvious association with any other artefacts and were found at locations where no demonstrable activity took place. While they have been inferred as artefacts that have been lost, discarded, broken and/or abandoned, they still represent evidence of an Aboriginal presence in the area in the past. The isolated artefacts described in this report do not meet the definition of a site as used in this report.

The Bindoon Bypass BB-A and BB-B Project Areas, as defined in this report, were surveyed and examined for the presence of Aboriginal archaeological sites and/or material by walking a series of transects across each part of each project area. In Bindoon Bypass BB-A Project Area these transects had a general east-west alignment with archaeologists and traditional owners spaced at approximately 25m intervals. Some small areas were surveyed with transects at 50m intervals. In addition to this, that part of the Bindoon Bypass BB-A Project Area that has been mapped as containing part of 'Lennard Brook Bindoon Branch' was targeted and scrutinised for the presence of Aboriginal artefacts and/or cultural material. However, there was no visible evidence of a 'brook' or any other drainage feature in this part of the survey area.

The Bindoon Bypass BB-B Project Area was surveyed for the presence of Aboriginal archaeological sites by walking a series of transects across this survey area as well as targeting specific features. The intensity of coverage varied depending on the specific landscape features encountered. For example, the land adjacent to and within approximately 50m of those parts of the Brockman River and Udumung Brook that traverse the Bindoon Bypass BB-B Project Area were targeted and scrutinised for the presence of Aboriginal artefacts and/or cultural material by walking a series of transects parallel to the river and brook, with archaeologists and traditional owners spaced at approximately 20m intervals. The unnamed streams that traverse the survey

area in the vicinity of the Bindoon Moora Road were also targeted and scrutinised for the presence of Aboriginal artefacts and/or cultural material in the same way, as was that part of Lennard Brook that traverses the southern end of the survey area. Areas of unaltered bushland were generally surveyed by walking a series of east-west aligned transects across them with archaeologists and traditional owners spaced at approximately 25m intervals. Areas of remnant bushland, much of which had been altered by contemporary land use practices and grazing animals, were also surveyed by walking a series of east-west aligned transects across them. However, in these parts archaeologists and traditional owners spaced at between 50m and 100m intervals. The remainder of the Bindoon Bypass BB-B Project Area comprises cleared paddocks and the narrow corridors aligned along Crest Hill Road and part of Gray Road. These parts of the survey area have been universally disturbed or significantly altered as a result of contemporary land use practices. The narrow corridors aligned along Crest Hill Road and part of Gray Road were surveyed by walking transects along each corridor on both sides of the road. These transects followed the general alignment of each road. Cleared paddocks were surveyed by walking a series of generally east-west aligned transects across them with archaeologists and traditional owners spaced at between 200m and 400m intervals.

In general, surface visibility throughout the survey areas was variable. In the various cleared paddocks, it generally averaged between 10% and 60% with some as high as 80% or more. Ground visibility throughout the patches of remnant bush ranged from <10% to as high as 90% in various places. Along the Crest Hill Road and Gray Road corridors surface visibility generally averaged between 20% and 60%. Places of excellent ground visibility were consistently encountered throughout the survey area along fencelines, fire breaks, cleared tracks and within parts of some paddocks.

Given the degree of surface visibility throughout and the intensity of coverage, it is considered that the archaeological survey of the Bindoon Bypass BB-A and BB-B Project Areas, as defined in this report, was sufficient to locate any Aboriginal archaeological sites present on the surface. It should be noted that sites can be exposed and/or concealed as a result of both wind and water erosion. It is also possible that archaeological material lies below the surface and may be exposed as a result of environmental factors or work undertaken within the surveyed areas. Main Roads Western Australia should be aware of this when undertaking future road and associated works within the survey areas or any other ground disturbing work.

RECOMMENDATIONS

On the basis of the results of the archaeological survey of the Bindoon Bypass BB-A and BB-B Project Areas, as defined in this report and the above discussion, the following recommendations are made:

It is recommended that Main Roads Western Australia be allowed to proceed with their proposal to utilise the land contained within the Bindoon Bypass BB-A and BB-B Project Areas, as defined in this report, for the future construction of a new alignment of Great Northern Highway and associated works **on the condition** that they avoid any impact upon or disturbance to the Udumung Brook Artefact 1 (ID 22027) other heritage place.

If any impact upon or disturbance to any part(s) of the Udumung Brook Artefact 1 (ID 22027) other heritage place cannot be avoided, **it is recommended** that Main Roads Western Australia should request that the Department of Planning, Lands and Heritage (WA) assess the information they have received pertaining to the Udumung Brook Artefact 1 (ID 22027) other heritage place, and the information contained in this report, in order to determine if this other heritage place meets Section 5 of the Aboriginal Heritage Act (1972).

If the Department of Planning, Lands and Heritage (WA) assess the Udumung Brook Artefact 1 (ID 22027) other heritage place as a place to which the Aboriginal Heritage Act (1972) **does apply, it is recommended** that Main Roads Western Australia, as required under Section 18 of the Western Australian Aboriginal Heritage Act (1972), apply to the Minister for Aboriginal Affairs for consent to proceed with activities that will disturb Aboriginal heritage sites.

It is also recommended that, in the event of any artefactual material or skeletal material being discovered in the course of road works or any other activities, work should stop while the Department of Planning, Lands and Heritage (WA) undertakes an investigation. In the case of skeletal material being uncovered, work must cease immediately and the Western Australian Police must be notified. Furthermore, **it is recommended** that Main Roads Western Australia personnel and contractors be advised of their obligations under Section 15 of the Aboriginal Heritage Act (1972), to report the discovery of any Aboriginal cultural material which may be uncovered in the course of their work or any other activities.

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APPENDIX 1: DPLH ABORIGINAL SITES AND PLACES REGISTER SEARCH

Search Criteria

3 Registered Aboriginal Sites in Shapefile - BB_Non_Indigenous_Survey_Area

Disclaimer

The *Aboriginal Heritage Act 1972* preserves all Aboriginal sites in Western Australia whether or not they are registered. Aboriginal sites exist that are not recorded on the Register of Aboriginal Sites, and some registered sites may no longer exist.

The information provided is made available in good faith and is predominately based on the information provided to the Department of Planning, Lands and Heritage by third parties. The information is provided solely on the basis that readers will be responsible for making their own assessment as to the accuracy of the information. If you find any errors or omissions in our records, including our maps, it would be appreciated if you email the details to the Department at heritageenquiries@daa.wa.gov.au and we will make every effort to rectify it as soon as possible.

South West Settlement ILUA Disclaimer

Your heritage enquiry is on land within or adjacent to the following Indigenous Land Use Agreement(s): Yued People ILUA.

On 8 June 2015, six identical Indigenous Land Use Agreements (ILUAs) were executed across the South West by the Western Australian Government and, respectively, the Yued, Whadjuk People, Gnaala Karla Booja, Ballardong People, South West Boojarah #2 and Wagyl Kaip & Southern Noongar groups, and the South West Aboriginal Land and Sea Council (SWALSC).

The ILUAs bind the parties (including 'the State', which encompasses all State Government Departments and certain State Government agencies) to enter into a Noongar Standard Heritage Agreement (NSHA) when conducting Aboriginal Heritage Surveys in the ILUA areas, unless they have an existing heritage agreement. It is also intended that other State agencies and instrumentalities enter into the NSHA when conducting Aboriginal Heritage Surveys in the ILUA areas. It is recommended a NSHA is entered into, and an 'Activity Notice' issued under the NSHA, if there is a risk that an activity will 'impact' (i.e. by excavating, damaging, destroying or altering in any way) an Aboriginal heritage site. The Aboriginal Heritage Due Diligence Guidelines, which are referenced by the NSHA, provide guidance on how to assess the potential risk to Aboriginal heritage.

Likewise, from 8 June 2015 the Department of Mines, Industry Regulation and Safety (DMIRS) in granting Mineral, Petroleum and related Access Authority tenures within the South West Settlement ILUA areas, will place a condition on these tenures requiring a heritage agreement or a NSHA before any rights can be exercised.

If you are a State Government Department, Agency or Instrumentality, or have a heritage condition placed on your mineral or petroleum title by DMIRS, you should seek advice as to the requirement to use the NSHA for your proposed activity. The full ILUA documents, maps of the ILUA areas and the NSHA template can be found at <https://www.dpc.wa.gov.au/lantu/Claims/Pages/SouthWestSettlement.aspx>.

Further advice can also be sought from the Department of Planning, Lands and Heritage at heritageenquiries@daa.wa.gov.au.

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Coordinate Accuracy

Coordinates (Easting/Northing metres) are based on the GDA 94 Datum. Accuracy is shown as a code in brackets following the coordinates.



List of Registered Aboriginal Sites

Terminology (NB that some terminology has varied over the life of the legislation)

Place ID/Site ID: This a unique ID assigned by the Department of Planning, Lands and Heritage to the place.

Status:

- Registered Site: The place has been assessed as meeting Section 5 of the *Aboriginal Heritage Act 1972*.
- Other Heritage Place which includes:
 - Stored Data / Not a Site: The place has been assessed as not meeting Section 5 of the *Aboriginal Heritage Act 1972*.
 - Lodged: Information has been received in relation to the place, but an assessment has not been completed at this *stage* to determine if it meets Section 5 of the *Aboriginal Heritage Act 1972*.

Access and Restrictions:

- File Restricted = No: Availability of information that the Department of Planning, Lands and Heritage holds in relation to the place is not restricted in any way.
- File Restricted = Yes: Some of the information that the Department of Planning, Lands and Heritage holds in relation to the place is restricted if it is considered culturally sensitive. This information will only be made available if the Department of Planning, Lands and Heritage receives written approval from the informants who provided the information. To request access please contact heritageenquiries@daa.wa.gov.au.
- Boundary Restricted = No: Place location is shown as accurately as the information lodged with the Registrar allows.
- Boundary Restricted = Yes: To preserve confidentiality the exact location and extent of the place is not displayed on the map. However, the shaded region (generally with an area of at least 4km²) provides a general indication of where the place is located. If you are a landowner and wish to find out more about the exact location of the place, please contact the Department of Planning, Lands and Heritage.
- Restrictions:
 - No Restrictions: *Anyone* can view the information.
 - Male Access Only: Only *males* can view restricted information.
 - Female Access Only: *Only* females can view restricted information.

Legacy ID: This is the former unique number that the former Department of Aboriginal Sites assigned to the place. This has been replaced by the Place ID / Site ID.

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Aboriginal Heritage Inquiry System

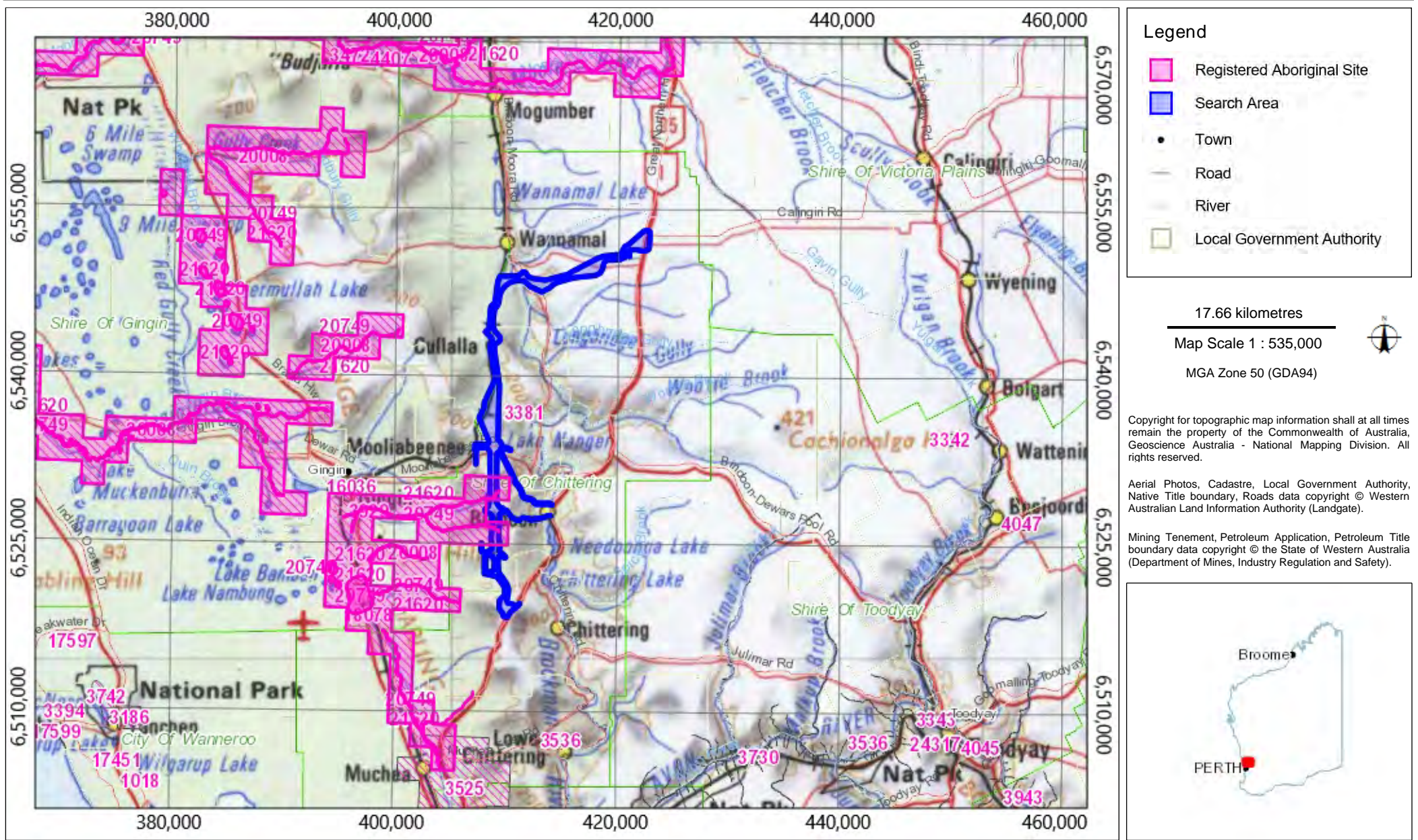
List of Registered Aboriginal Sites

ID	Name	File Restricted	Boundary Restricted	Restrictions	Status	Type	Knowledge Holders	Coordinate	Legacy ID
20008	Gingin Brook Waggyl Site	Yes	Yes	No Gender Restrictions	Registered Site	Historical, Mythological, Camp, Hunting Place, Plant Resource, Water Source	*Registered Knowledge Holder names available from DAA	Not available when location is restricted	
20749	MOORE RIVER WAUGAL	No	No	No Gender Restrictions	Registered Site	Mythological	*Registered Knowledge Holder names available from DAA	389582mE 6549648mN Zone 50 [Reliable]	
21620	Chandala Brook	No	No	No Gender Restrictions	Registered Site	Mythological	*Registered Knowledge Holder names available from DAA	389626mE 6549540mN Zone 50 [Reliable]	



Aboriginal Heritage Inquiry System

Map of Registered Aboriginal Sites



List of Other Heritage Places

Search Criteria

9 Other Heritage Places in Shapefile - BB_Non_Indigenous_Survey_Area

Disclaimer

The Aboriginal Heritage Act 1972 preserves all Aboriginal sites in Western Australia whether or not they are registered. Aboriginal sites exist that are not recorded on the Register of Aboriginal Sites, and some registered sites may no longer exist.

The information provided is made available in good faith and is predominately based on the information provided to the Department of Planning, Lands and Heritage by third parties. The information is provided solely on the basis that readers will be responsible for making their own assessment as to the accuracy of the information. If you find any errors or omissions in our records, including our maps, it would be appreciated if you email the details to the Department at heritageenquiries@daa.wa.gov.au and we will make every effort to rectify it as soon as possible.

South West Settlement ILUA Disclaimer

Your heritage enquiry is on land within or adjacent to the following Indigenous Land Use Agreement(s): Yued People ILUA.

On 8 June 2015, six identical Indigenous Land Use Agreements (ILUAs) were executed across the South West by the Western Australian Government and, respectively, the Yued, Whadjuk People, Gnaala Karla Booja, Ballardong People, South West Boojarah #2 and Wagyl Kaip & Southern Noongar groups, and the South West Aboriginal Land and Sea Council (SWALSC).

The ILUAs bind the parties (including 'the State', which encompasses all State Government Departments and certain State Government agencies) to enter into a Noongar Standard Heritage Agreement (NSHA) when conducting Aboriginal Heritage Surveys in the ILUA areas, unless they have an existing heritage agreement. It is also intended that other State agencies and instrumentalities enter into the NSHA when conducting Aboriginal Heritage Surveys in the ILUA areas. It is recommended a NSHA is entered into, and an 'Activity Notice' issued under the NSHA, if there is a risk that an activity will 'impact' (i.e. by excavating, damaging, destroying or altering in any way) an Aboriginal heritage site. The Aboriginal Heritage Due Diligence Guidelines, which are referenced by the NSHA, provide guidance on how to assess the potential risk to Aboriginal heritage.

Likewise, from 8 June 2015 the Department of Mines, Industry Regulation and Safety (DMIRS) in granting Mineral, Petroleum and related Access Authority tenures within the South West Settlement ILUA areas, will place a condition on these tenures requiring a heritage agreement or a NSHA before any rights can be exercised.

If you are a State Government Department, Agency or Instrumentality, or have a heritage condition placed on your mineral or petroleum title by DMIRS, you should seek advice as to the requirement to use the NSHA for your proposed activity. The full ILUA documents, maps of the ILUA areas and the NSHA template can be found at <https://www.dpc.wa.gov.au/lantu/Claims/Pages/SouthWestSettlement.aspx>.

Further advice can also be sought from the Department of Planning, Lands and Heritage at heritageenquiries@daa.wa.gov.au.

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Coordinate Accuracy

Coordinates (Easting/Northing metres) are based on the GDA 94 Datum. Accuracy is shown as a code in brackets following the coordinates.



Terminology (NB that some terminology has varied over the life of the legislation)

Place ID/Site ID: This a unique ID assigned by the Department of Planning, Lands and Heritage to the place.

Status:

- Registered Site: The place has been assessed as meeting Section 5 of the Aboriginal Heritage Act 1972.
- Other Heritage Place which includes:
 - Stored Data / Not a Site: The place has been assessed as not meeting Section 5 of the Aboriginal Heritage Act 1972.
 - Lodged: Information has been received in relation to the place, but an assessment has not been completed at this stage to determine if it meets Section 5 of the Aboriginal Heritage Act 1972.

Access and Restrictions:

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- File Restricted = Yes: Some of the information that the Department of Planning, Lands and Heritage holds in relation to the place is restricted if it is considered culturally sensitive. This information will only be made available if the Department of Planning, Lands and Heritage receives written approval from the informants who provided the information. To request access please contact heritageenquiries@daa.wa.gov.au.
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- Restrictions:
 - No Restrictions: Anyone can view the information.
 - Male Access Only: Only males can view restricted information.
 - Female Access Only: Only females can view restricted information.

Legacy ID: This is the former unique number that the former Department of Aboriginal Sites assigned to the place. This has been replaced by the Place ID / Site ID.

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Aboriginal Heritage Inquiry System

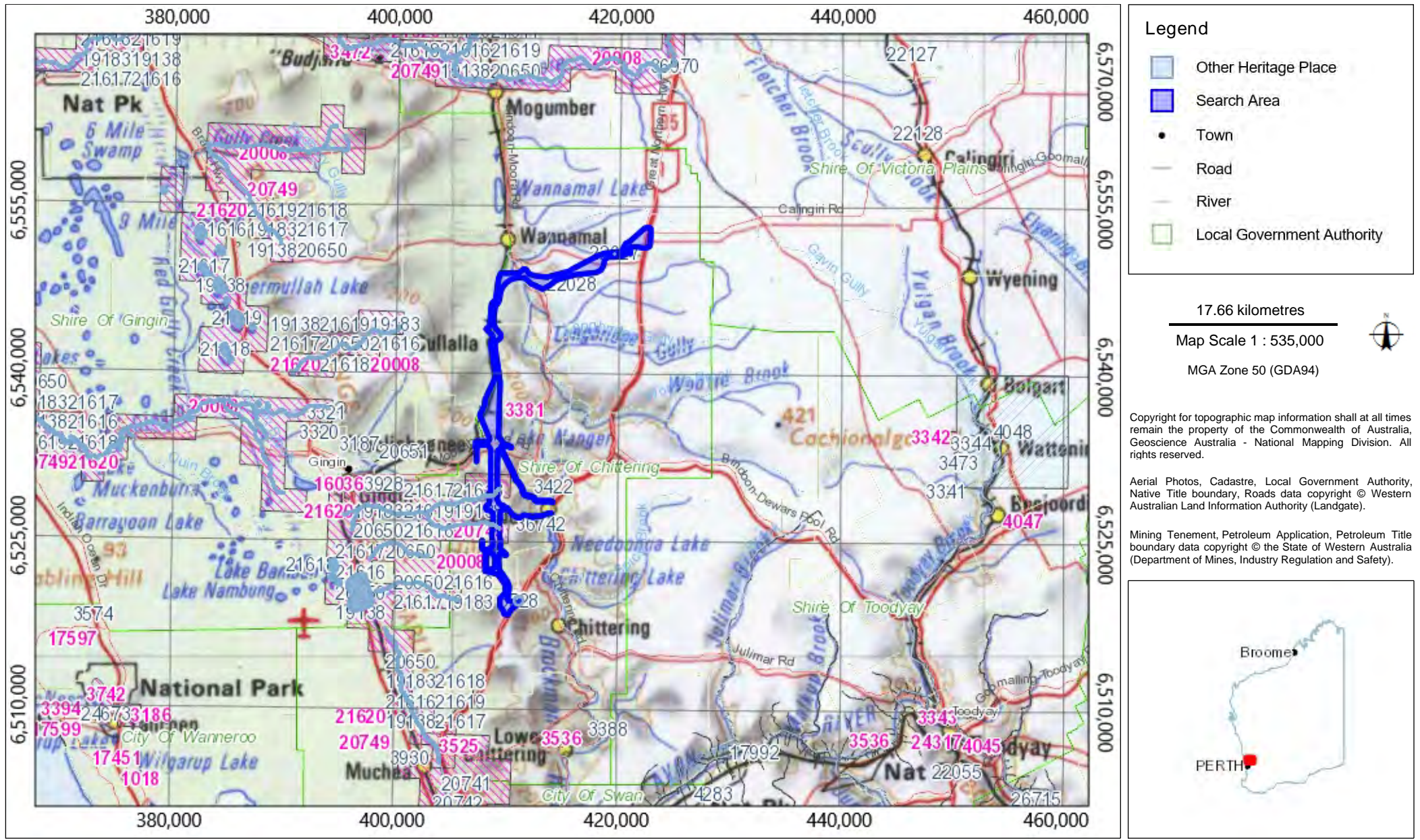
List of Other Heritage Places

ID	Name	File Restricted	Boundary Restricted	Restrictions	Status	Type	Knowledge Holders	Coordinate	Legacy ID
3528	BURROLOO WELL.	No	No	No Gender Restrictions	Lodged	Artefacts / Scatter, Water Source	*Registered Knowledge Holder names available from DAA	411039mE 6519849mN Zone 50 [Unreliable]	S02524
19138	Wetlands & Watercourses Moore River to Bullsbrook	No	No	No Gender Restrictions	Stored Data / Not a Site	Mythological	*Registered Knowledge Holder names available from DAA	396128mE 6561778mN Zone 50 [Reliable]	
19183	Red Gully Creek	No	No	No Gender Restrictions	Stored Data / Not a Site	Mythological, Plant Resource	*Registered Knowledge Holder names available from DAA	396128mE 6561778mN Zone 50 [Reliable]	
20650	Lennard Brook	No	No	No Gender Restrictions	Lodged	Mythological, Natural Feature, Water Source, Other: Creek	*Registered Knowledge Holder names available from DAA	389582mE 6549648mN Zone 50 [Reliable]	
21616	Boonanarring Brook	No	No	No Gender Restrictions	Lodged	Mythological	*Registered Knowledge Holder names available from DAA	396128mE 6561778mN Zone 50 [Reliable]	
21617	Wallerung Brook	No	No	No Gender Restrictions	Lodged	Mythological	*Registered Knowledge Holder names available from DAA	396128mE 6561778mN Zone 50 [Reliable]	
21618	Nullilla Brook	No	No	No Gender Restrictions	Lodged	Mythological	*Registered Knowledge Holder names available from DAA	396128mE 6561778mN Zone 50 [Reliable]	
21619	Breera Brook	No	No	No Gender Restrictions	Lodged	Mythological	*Registered Knowledge Holder names available from DAA	396128mE 6561778mN Zone 50 [Reliable]	
22027	Udumung Brook Artefact 1	No	No	No Gender Restrictions	Lodged	Artefacts / Scatter	*Registered Knowledge Holder names available from DAA	419398mE 6550809mN Zone 50 [Reliable]	



Aboriginal Heritage Inquiry System

Map of Other Heritage Places



APPENDIX 2: LETTER OF ADVICE

Brad Goode & Associates Pty Ltd
 Consulting Anthropologist
 Heritage Assessments

79 Naturaliste Terrace
 DUNSBOROUGH WA 6281
 (08) 9755 3716
 bradnlee@westnet.com.au
 ACN: 134 732 040
 ABN: 41 134 732 040

15th March 2018

We the undersigned have been consulted by Brad Goode & Associates Pty Ltd on behalf of Main Roads regarding the Great Northern Highway Upgrade Muchea to Wubin Project – Bindoon Bypass BB-A and BB-B sections. We would like to make the following recommendations in relation to the Western Australian *Aboriginal Heritage Act 1972*:

Yued identify crossing of Wongaroo Gully as a heritage constraint & require further information to WPT to make a decision.

Support S-18 for roads & Culverts across Lennard Brook ID 20050 ID 20008.

Request monitors at all creeks & river crossings

No other Ethno sites as defined by SS AHA in corridor

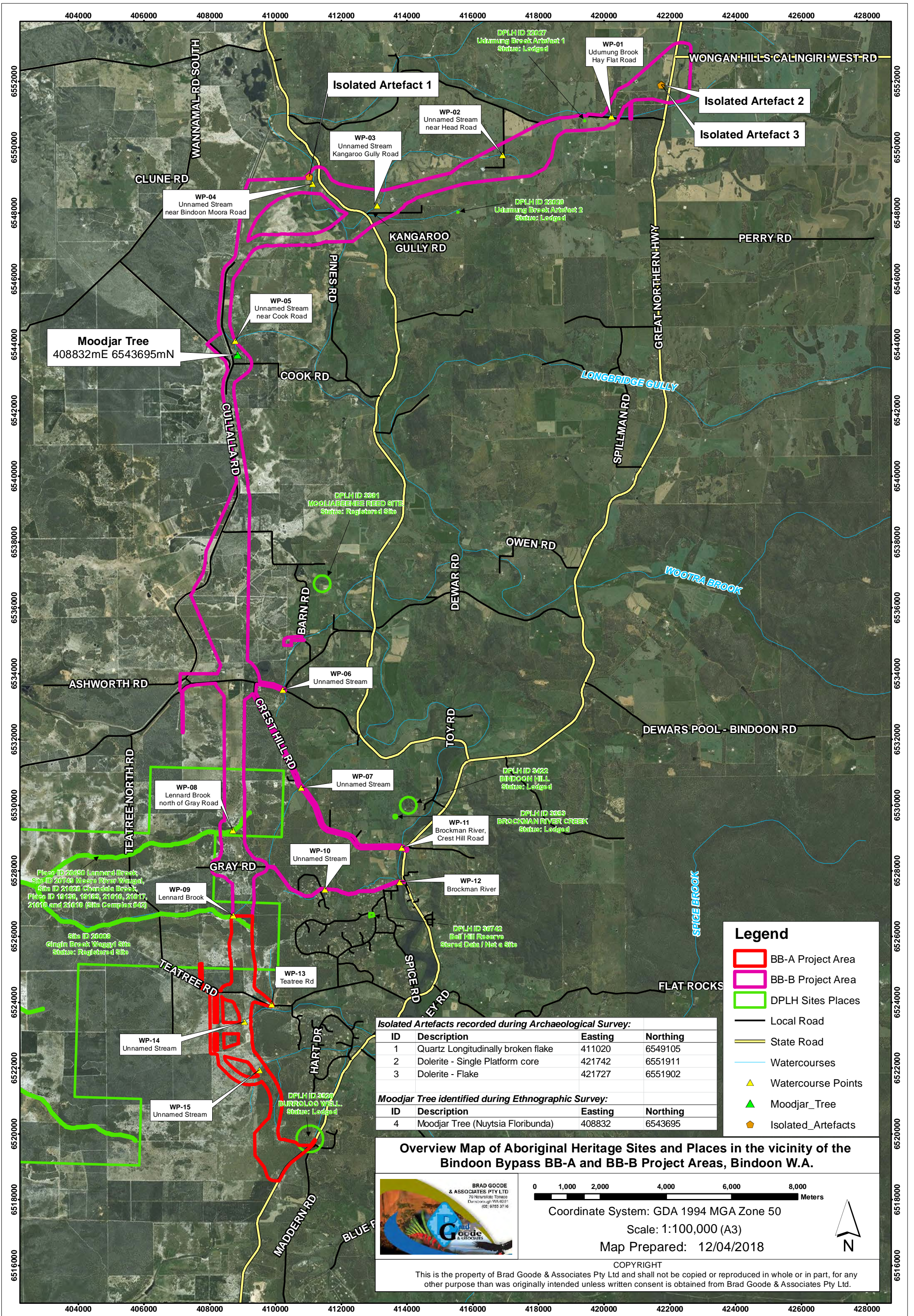
Avoid Maatlababeenee Camp at Rail crossing

Yued WC1997/071 Native Title Claim group		
Colin Headland	.03.2018	<i>[Signature]</i>
Clinton Ryder	.03.2018	<i>[Signature]</i>
John Yappo	.03.2018	<i>[Signature]</i>
Jason Nannup	.03.2018	<i>[Signature]</i> J Nannup 1 Day
Jennifer Mogridge	.03.2018	<i>[Signature]</i>
Stephanie Mippy	.03.2018	<i>[Signature]</i>
Pamela Narrier	.03.2018	<i>[Signature]</i>
Kayla Woodley	.03.2018	<i>[Signature]</i>

[Handwritten names]
 Sheldon Narrier
 Quinton Dawson
 Patrick Woodley

[Handwritten signatures]
 S Narrier
 Quinton Dawson
 P Woodley

APPENDIX 3: MAP OF THE PROJECT AREA IN RELATION TO ABORIGINAL HERITAGE SITES



Moodjar Tree
408832mE 6543695mN

Isolated Artefact 1

Isolated Artefact 2

Isolated Artefact 3

Legend

- BB-A Project Area
- BB-B Project Area
- DPLH Sites Places
- Local Road
- State Road
- Watercourses
- ▲ Watercourse Points
- ▲ Moodjar_Tree
- ◆ Isolated_Artefacts

Isolated Artefacts recorded during Archaeological Survey:

ID	Description	Easting	Northing
1	Quartz Longitudinally broken flake	411020	6549105
2	Dolerite - Single Platform core	421742	6551911
3	Dolerite - Flake	421727	6551902

Moodjar Tree identified during Ethnographic Survey:

ID	Description	Easting	Northing
4	Moodjar Tree (Nuytsia Floribunda)	408832	6543695

Overview Map of Aboriginal Heritage Sites and Places in the vicinity of the Bindoon Bypass BB-A and BB-B Project Areas, Bindoon W.A.

BRAD GOODE & ASSOCIATES PTY LTD
70 Northgate Terrace
Dunedin 9010
(03) 9755 3716

0 1,000 2,000 4,000 6,000 8,000
Meters

Coordinate System: GDA 1994 MGA Zone 50
Scale: 1:100,000 (A3)
Map Prepared: 12/04/2018

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