ABORIGINAL HERITAGE SURVEY:

MORLEY ELLEN BROOK RAILWAY LINE

Report Prepared by R. & E.O’Connor Pty Ltd,
PO Box 815, Nedlands, WA 6909.
Email: rocej@iinet.net.au
Tel/Fax (08)93871415.

For
Metronet,
Public Transport Authority,
140 William Street,
Perth,
WA 6000.

April 2019

This report is subject to the provisions of the Australian Copyright Act (Cth) 1968.

Aboriginal readers are advised that this report includes references to, and the names of, deceased Aboriginal persons.
ABSTRACT

Metronet is the long-term blueprint for connecting Perth’s suburbs, reducing road congestion and meeting the Metropolitan Area’s future planning needs. As part of that programme, Public Transport Authority proposes construction of a new railway from a junction east of Bayswater Station on the Midland Railway Line to Ellenbrook (the Morley Ellenbrook Line) – a distance of approximately twenty-one kilometres.

In February 2018, the Authority commissioned R & E O'Connor Pty Ltd to carry out an Aboriginal heritage analysis of the Morley Ellenbrook Line alignment and produce a report assessing construction constraints arising from consideration of that heritage. The report listed Registered Aboriginal Sites and Other Heritage Places in the vicinity of the alignment. Following a recommendation of that report, in March 2019 the Authority commissioned R & E O'Connor Pty Ltd to arrange and carry out an Aboriginal heritage consultation and field survey of the alignment and associated infrastructure. The survey was completed in April 2019.

Searches of the Register of Aboriginal Sites for the Project area and surrounding land were carried out as a component part of the survey. Register extracts are included in this report as Appendix Four. As currently planned, the Project will intersect with three registered Aboriginal Sites, as follows.

- Site Number 3692, “Bennett Brook in Toto’;
- Site Number 552, “Lord Street North 2”; and
- Site Number 551, “Lord Street North 1”.
The Aboriginal Heritage Inquiry System shows the alignment intersecting also with Site Number 3840, “Bennett Brook Camp Area”. The footprint of that site, however, is exaggerated in that system and the site is, in fact, outside the alignment. No other Aboriginal heritage sites were identified by the Aboriginal groups within, or in close proximity to, the proposed railway alignment.

A consultative process and field survey of the proposed railway alignment was carried out with SWALSC/Whadjuk Working Party nominees and Registered Knowledge Holders for the above three relevant Aboriginal sites. The groups were consulted regarding the project, visited the Aboriginal sites and inspected the proposed railway alignment and proposed geotechnical investigation areas. All three groups gave conditional approval for the proposed railway alignment and geotechnical works. The conditions attached to those approvals are as follows.

- Two Nyungar monitors should be on site when geotechnical investigations are taking place in areas where the ground surface has not been previously disturbed.
- There should be Nyungar monitors for all new ground disturbance associated with railway construction.
- Another Nyungar meeting to discuss final plans should take place when the Bennett Brook crossing is designed.
- There should be Nyungar names for the proposed railway stations and Nyungar involvement in artwork there.
- When the precise locations of the stations are finalised, a further heritage survey of them should be carried out.

One group also added the following condition to their consent.
• There should be minimal disturbance to the area in which Site 552 is located. Disturbance between the existing access footpath and Lord Street should be minimised.

The following recommendations are based upon the consideration of the contents of the Register of Aboriginal Sites, the findings of the consultative process and the field surveys with the Aboriginal groups.

Recommendation One: Public Transport Authority should submit a Notice pursuant to Section 18 of the *Aboriginal Heritage Act 1972* to the Aboriginal Cultural Material Committee in respect of the proposed alignment of the Morley Ellenbrook Railway Line.

Recommendation Two: The Aboriginal Cultural Material Committee should recommend to the Minister that formal consent for the Morley Ellenbrook Railway Line should be granted, on the grounds that the representatives of the relevant Aboriginal groups have given their conditional approval, that disturbance to Aboriginal heritage sites will be minimised by the Public Transport Authority and that the proposed railway extension will be of benefit to the general community.

Recommendation Three: That the Minister should grant the requested Consent on the grounds that it is clearly in the interests of the general community to provide public transport that will reduce traffic density, with associated reductions to pollution and to road trauma.

Recommendation Four: That Public Transport Authority should arrange for two Nyungar monitors to be on site when geotechnical investigations are taking place in areas where the ground surface has not been previously disturbed.
Recommendation Five: That Public Transport Authority should arrange for two Nyungar monitors to be on site for all new ground disturbance associated with railway construction.

Recommendation Six: That Another Nyungar meeting to discuss final plans should take place when the Bennett Brook railway crossing and bridge are designed.

Recommendation Seven: That an Aboriginal heritage field survey of the stations along the Morley Ellenbrook Railway should be carried out when their locations and dimensions are established.
TABLE OF CONTENTS

1.0 BACKGROUND
   1.1 Introduction 1
   1.2 Research Brief 2
   1.3 Potential Impacts 5

2.0 SOCIAL AND HISTORICAL BACKGROUND
   2.1 Anthropological Considerations 7
   2.2 Significance 8
   2.3 Native Title 10

3.0 THE SURVEY
   3.1 Methodology 12
   3.2 Existing Database 13
   3.3 Field Inspection and Meetings 16
   3.4 Results of Survey - Geotechnical 33
   3.5 Results of Survey – Rail Alignment 34
   3.6 Impacts of Project 35

4.0 CONCLUSIONS AND RECOMMENDATIONS 37

References

Figure One: The Project - Overview
Figure Two: Geotechnical Investigations
Figure Three: Proposed Bennett Brook Crossing
Figure Four: Aboriginal Site 552
Figure Five: Aboriginal Site 551
Appendix One: Notes on the *Aboriginal Heritage Act 1972*
Appendix Two: Notes on the Recognition of Aboriginal Sites
Appendix Three: Signed Statements
Appendix Four: Register of Aboriginal Sites Extracts
Appendix Five: SWALSC Reply to PTA Activity Notice
Appendix Six: Data on Site 552
Appendix Seven: Data on Site 551
Appendix Eight: Geotechnical Investigations Programme
1.0 BACKGROUND

1.1 Introduction

Metronet is the long-term blueprint for connecting Perth’s suburbs, reducing road congestion and meeting the Metropolitan Area’s future planning needs. It will ensure that consideration of land-use outcomes is embedded in the design of new infrastructure. As part of that programme, Public Transport Authority (PTA) proposes construction of a new railway from a junction east of Bayswater Station on the Midland Railway Line to Ellenbrook (the Morley Ellenbrook Line – “the Project”) – a distance of approximately twenty-one kilometres (21kms). The Project will provide local residents and employees with better connections and more public transport. It addresses the following three local issues:

- Current transport connections are insufficient to cope with expected population growth;
- The radial design of the current passenger rail network creates service gaps and reduces system resilience, limiting passenger mobility; and
- Economic and population growth pressures are leading to increased congestion and crowding across the transport system, adversely impacting the productivity of the system.

In February 2018, PTA commissioned R & E.O’Connor Pty Ltd to carry out an Aboriginal heritage analysis of the Project and produce a report assessing construction constraints arising from consideration of that heritage. The report listed Registered Aboriginal Sites and Other Heritage Places in the vicinity of the Project and included
the following recommendation. *At an early stage of planning, PTA should issue to SWALSC (South West Aboriginal Land and Sea Council) an Activity Notice pursuant to Section 8 of the Noongar Standard Heritage Agreement in respect of the proposed Railway Line. A consultative Aboriginal heritage survey should be carried out with the Whadjuk Representatives nominated by SWALSC as a result of the Activity Notice. Given that the Project will involve a crossing of Bennett Brook, ... it may be necessary to consult more widely than the standard eight representatives appointed by SWALSC.*

The above Activity Notice was submitted to SWALSC on 25 January 2019 and the reply, which included the names and contact details of eight Whadjuk nominees to participate in the consultative Aboriginal heritage survey, was sent on 25 February 2019. The reply and list of nominees are included below as Appendix Five. Following receipt of these communications from SWALSC, PTA commissioned R & E O’Connor Pty Ltd to arrange and carry out the Aboriginal heritage consultation and field survey of the Project. This report details the methodology, execution and results of that process.

1.2 Research Brief

The Project area, as detailed in the Activity Notice submitted to SWALSC in accordance with the requirements of the Whadjuk Noongar Standard Heritage Agreement, is shown in Figure One. Figure Two shows the proposed locations of geotechnical investigations; Figure Three shows the proposed crossing of Bennett
Brook and interface of the Project with registered Aboriginal Site Number 3692; Figure Four shows the interface of the Project with Registered Aboriginal Site Number 552; Figure Five shows the interface of the Project with Registered Aboriginal Site Number 551. As shown on Figure One, the current proposal is for six stations to be constructed to service the suburbs through which the proposed railway will pass: namely Morley, Noranda, Malaga, Bennett Springs, Whiteman Park and Henley Brook. The northern terminus will be in the existing suburb of Ellenbrook. From its junction with the Midland Line, the proposed railway will cross to the centre of Tonkin Highway, where provision already exists between the two carriageways for its construction. It will leave that northward alignment at the proposed Malaga Station to the north of Marshall Road and follow a roughly eastward alignment through cleared former pasture land to the south of Whiteman Park to cross Bennett Brook close to the western end of Cranleigh Street in the suburb of Bennett Springs. From the Bennett Brook crossing, the route passes through existing privately-owned land, to again turn generally northward along the western side of existing Lord Street, to cross Gnangara Road and enter the suburb of Ellenbrook, where the terminus will be located.

In respect of the Project, as thus described, the research brief required R & E O’Connor Pty Ltd to carry out the following duties.

- Assist PTA with the implementation of the Noongar Standard Heritage Agreement (NSHA) as it applies to proposed formal consultations between PTA and the Whadjuk Working Party (WWP), whose legal representative is SWALSC.
- Liaison with SWALSC as required.
• Arrange for on-site consultations with the relevant Whadjuk representatives as advised by SWALSC.

• Arrange for similar consultations with Knowledge Holders listed in the Department of Planning, Lands and Heritage.

• Liaise with attendees to advise meeting times and locations.

• Facilitate and minute consultation sessions.

• Pay all required consultation fees to attendees.

• At the completion of the briefings provide a report which

  1. Provides the context for the consultations:

  2. Contains detailed minutes of the consultations:

  3. Provides a concise summary of key items raised during the consultations:

  4. Provides recommendations for PTA regarding significant matters raised during the consultations:

  5. Provides payment records for any consultation fees paid to attendees: and

  6. Is suitable to support a Section 18 Application under the Aboriginal Heritage Act 1972 (AHA), should such an application be required.

• Assist with the drafting of a Section 18 Notice, as required.

It is noted that, for a report to be suitable to inform a Notice pursuant to Section 18 of the AHA as required above, it, and the consultative process and surveys which it details, should be in such a format that it assists the ACMC to:

• Form an opinion as to whether there is any Aboriginal site on the land in question: and
• Evaluate the importance and significance of any such site.

1.3 Potential Impacts of Proposed Works

The Project is detailed in 1.2 above. As can be seen from Figure One, the major part of the proposed works will take place within or alongside an existing road corridor and/or road reserve. Therefore, in terms of the Aboriginal Heritage Due Diligence Guidelines, issued on 30 April 2013 by Department of Premier and Cabinet and Department of Indigenous Affairs, the proposed works will take place within a Built Environment, defined as urban environment, towns, metropolitan region. Outside of that existing "built environment", the works will constitute Significant Disturbance, defined as (inter alia) creation of new roads or tracks, new public access ways, bridges, culverts...land clearing over more than a small area...(and) major landscaping/contouring. In such a situation, the Aboriginal Heritage Risk Matrix defines the risk of disturbance to an Aboriginal site as Medium and recommends that the proponent should review the landscape and the proposed activity. The Precautionary Principle applies. Refer to the AHIS and contact the DIA (now DPLH). A range of actions may be recommended, including no action, consultation with the relevant Aboriginal people, an Aboriginal heritage survey or modification of the proposed activity to avoid or minimise site impact. The Guidelines define the above Precautionary Principle as follows: to apply a precautionary approach to the assessment of risk to Aboriginal heritage ensures all aspects of potential risk are considered and appropriate steps are applied to avoid or minimise damage to Aboriginal sites. Application of that Principle in this case involved
submission of an Activity Notice to SWALSC for referral to the WWP and the carrying out of an Aboriginal consultative process and heritage survey as advised by SWALSC.
2.0 SOCIAL AND HISTORICAL BACKGROUND.

2.1 Anthropological Considerations

The Aboriginal political geography of Southwestern Australia has been described in O'Connor (1984), O'Connor, et al., (1985) and O'Connor and Quartermaine (1986 and 1987). The following summarised points are relevant to the present exercise.

2.1.1 Southwestern Aborigines were a distinct sociocultural group in pre-contact times, although dialectal variation occurred within a single southwestern language family.

2.1.2 A regional system of land tenure, based on either kinship or dialectal units existed.

2.1.3 Territorial separateness disappeared soon after European settlement, due to population movements, deaths and the development of fringe camps (and later settlements and “missions”).

2.1.4 The development of a widely-scattered population of people of mixed-ethnic background, who live in the southwest of this State, see themselves as sharing a common identity and refer to themselves as “Nyungars”, occurred during the nineteenth century. Contradicting that tendency, families were still seen by other Nyungars as “belonging” to specific areas on the basis of connections with the traditional past.

2.1.5 Continuity with that traditional past, knowledge of regional mythology and knowledge of areas of religious significance were passed to the present senior adult generation of Nyungars by a pivotal generation of culture transmitters. Among these, in the Metropolitan Region, were Maitland Sandy, Chitty Hedland, Daglish Granny,
Sam Broomhall, Herbert Dyson, Bulyil, Wandi, Lottie Harris and Ollie Worrell and George Winjan and Kitty in the Peel Region.

2.1.6 There is now a determination among the present senior adult generation to protect remaining areas of significance from development. That generation includes, among others, the senior members of the Bropho, Bodney, Wilkes, Corunna, Morich, Garlett, Jacobs and Gidgup families.

2.2 Significance

Significance is attributed by Aboriginal people to areas in the South West region on the basis of former or current domestic usage, or on the basis of relevance to traditional ritual or mythology. Broadly speaking, this distinction can be viewed as a series of dichotomies between historical and mythological, human and supernatural, or mundane and sacred areas. Thus, one area may be viewed as significant from a historical/human/mundane viewpoint, and another from a mythological/sacred viewpoint.

In addition to the above, a substantial number of Aboriginal sites are mentioned in Hammond (1933), Moore (1885), Bates (numerous dates) and other historical sources. Any sites not known to contemporary Aborigines cannot reasonably be classified as “sites of significance to living Aborigines”. However, rediscovery or realisation of the existence of such sites could lead to an attribution of significance. Thus, the neat compartmentalisation resulting from European academic disciplines may not fit absolutely the Aboriginal models: any archaeological or historical site in the survey region could also be potentially significant to Aboriginal people.
In the course of a previous survey in the Mandurah area, however, a further aspect of significance, which the present author terms “generalised significance” was encountered. This has been touched upon in O’Connor and Quartermaine (1989), but not considered there in detail. The Aboriginal elders from the Mandurah area referred to the undeniable fact that the region’s wetlands and rivers were Aboriginal food and water resources, access tracks and campsites. They also pointed out that those areas were spiritual repositories, not in the sense of the ubiquitous Waugal myth, which has been previously recorded in relation to the Swan, Murray and Serpentine Rivers, but in a more general sense which draws on the fundamentals of Aboriginal philosophico-religious belief. In this belief system all living creatures, including humans, share a common spiritual essence and therefore, by extension, every living being represents a part of the wider spiritual universe. The region’s wetlands, as breeding grounds for numerous living creatures, are therefore repositories of this spiritual essence realised generationally by individuals. This consideration is relevant to the present survey, as the Project will involve a crossing of Bennett Brook and activity within, and in close proximity to, other wetlands.

The above concept is clearly a development from the commonly held notion that significance is only attributable specifically. However, if Section Five of the Aboriginal Heritage Act (AHA) is carefully considered, it is clear that it would be difficult to argue that areas to which this generalised significance is attributed are not Aboriginal sites within the meaning of the Act, as they are clearly being described by the Aboriginal people concerned as “sacred” places “of importance and special significance to persons of Aboriginal descent”. Nonetheless, the author has been notified by the (then) Department of Indigenous Affairs that the Aboriginal Cultural
Material Committee has received legal advice that an attribution of generalised significance by Aboriginal people is insufficient to meet the requirements of Section 5 (b) of the Act. There is therefore a potential dissonance between “Aboriginal sites”, as defined by Aboriginal people, and “Aboriginal sites”, as defined by the Act.

2.3 Native Title Matters

On 8 June 2015 the Government of Western Australia signed six individual Indigenous Land Use Agreements (ILUA) with the six native title groups whose Applications for Determination of Native Title covered the South West Region of the State. These groups are the Yued, Gnaala Karla Booja, South West Boojarah, Wagyl Kaip, Ballardong and Whadjuk. The areas of proposed works considered in this report lie wholly within the area covered by the Whadjuk ILUA. Most components of the above settlement of the Applications will not commence until the ILUAs are successfully registered, an outcome currently being delayed by ongoing legal action. For the avoidance of doubt, this report notes that, regardless of the ultimate outcomes of that legal action, the AHA still applies and will continue to apply at all times.

Under the ILUA, the NSHA created a new uniform approach to Aboriginal heritage surveys, providing all involved parties with a clear and timetabled framework about their obligations in respect of Aboriginal heritage matters and how to deal with those obligations. The implementation of the NSHA came into effect from the settlement date of the ILUAs, namely 8 June 2015. All WA Government land users are required to enter into and follow the NSHA if there is a risk that a proposed
activity will unlawfully impact upon an Aboriginal site. Accordingly PTA, as a Government Agency, entered into a NSHA with SWALSC, as representative of the Whadjuk People, and an Activity Notice was duly issued to that Council in respect of the Project area on 25 January 2019.
3.0 THE SURVEY

3.1 Methodology

The survey included four separate stages, as follows:

(i) examination of existing ethnographic database;

(ii) On-site consultation with Whadjuk representatives nominated by SWALSC after consideration of the Activity Notice and with representatives of other Perth families listed in the Register of Aboriginal Sites as Knowledge Holders for Bennett Brook and for Aboriginal Sites 551 and 552;

(iii) inspection of areas of proposed works by the above Nyungar consultants in the company of the author and PTA Officers, where appropriate;

(iv) report preparation.

As noted above, on 25 February 2019 SWALSC replied to the PTA Activity Notice in respect of the Project, advising the need for an Aboriginal heritage survey of the Project area and nominating a Site Identification Survey methodology. That field methodology is described in the *Aboriginal Heritage Procedures Manual (2002)* as follows.

*Ethnographic research involves the identification and recording of Aboriginal sites, as defined under the Aboriginal Heritage Act, through interviews and field inspections with Aboriginal Consultants. This process has been termed a “site identification survey”

During the ethnographic research process, the Aboriginal Consultants are asked about their associations with the area under consideration and whether they know of the existence of any places that might be considered Aboriginal sites. If such places are identified, the Aboriginal Consultants are asked to provide details of their nature and extent. Although the ethnographer may record detailed cultural
information about the place(s), this will not necessarily be communicated to the proponent, as it may be deemed highly culturally sensitive by the Aboriginal Consultants.

3.2 Existing Aboriginal Heritage Database

Searches of the Register of Aboriginal Sites for the Project area and surrounding land were carried out as a component part of the survey. Register extracts are included below as Appendix Four. As currently planned, the Project will interface with three registered Aboriginal Sites, as follows.

- Site Number 3692, “Bennett Brook in Toto”, a mythological site held under Restricted Access. This site was recorded by the present author in 1984. It was described as extending approximately seven kilometres from the Bennett Brook/Swan River confluence to Mussel Pool in Whiteman Park. It comprises the brook and also its banks on either side (Author’s Note: the registration was later altered to include the headwaters of the system beyond Mussel Pool). The entire brook is an area of significance to Aboriginal people... (as) it was formed by the creative activities of Waugal, whose spiritual essence still exists there. As noted in 1.2 above, the proposed rail alignment will cross Bennett Brook close to the western end of Cranleigh Street in the suburb of Bennett Springs. The proposal is for an eighty metres (80m) long and twenty metres (20m) wide structure that will cross the watercourse in a single span with piers each side of that course. There will be no piles or other structures within the watercourse. An additional ten metres (10m) will be required on either side of the twenty metres width to enable construction. The proposed crossing is shown in Figure Three.
• Site Number 552, “Lord Street North 2”, a ceremonial, water source and mythological site held under Open Access and located at 401815E 6477745N. It was recorded on the basis of information given by the late Robert Bropho to D. Lantzke and A. Walster in 1995. It was described as a ceremonial and mythological site ...of ten metres diameter...a permanent pool surrounded by reeds, blackboys and paperbarks. Mr Bropho reported the location of the site to the ethnographer and stated that it is sacred because it is a source of fresh water and is therefore a Dugatch (Waugal) dreaming. He said that the wetlands where the Dugatch lives are where the fresh water comes from to fill the watercourses. Another unnamed Aboriginal consultant reported that this is a kangaroo increase site as well as a Waugal site. Further data regarding this site, extracted from the Aboriginal Site File at DPLH, are included below as Appendix Six. Figure Four shows the interface of the Project with this site, as depicted in the Register of Aboriginal Sites. This report notes that the footprint of Site 552 in that Register includes the swamp associated with the permanent water body nominated by the late Mr Bropho. That water body in question is located in the northwest corner of the site as depicted. It is therefore approximately eighty metres (80m) to the west of the limit of potential ground disturbance associated with the project.

• Site Number 551, “Lord Street North 1”, a ceremonial site, meeting and camping ground, held under Open Access and located at (MGA Zone 50) 401793E 6479040N. It was also recorded on the basis of information from the late Robert Bropho by D. Lantzke and A. Walster in 1995. It was described as a ceremonial and spiritual site...of approximately 40 metres radius from the centroid grid reference...a stand of paperbarks and ti-trees. Mr Bropho
believes (this site) to be a ceremonial site. He believes that it was an initiation ground in the days before his great grandfather. He also reports that this area is "sacred"... the ti-trees around this area are a symbolic representation of some of the old people who used the meeting ground... he requested that it should be preserved as it was sacred and of great importance to him. He was not specific about the boundaries of the ceremonial grounds. No other Aboriginal consultant reported this site. Further data regarding this site, extracted from the Aboriginal Site File at DPLH, are included below as Appendix Seven. As shown in Figure Five, the proposed Railway Line passes through Site 552, although the new Lord Street alignment, along which the proposed railway will pass, has already been constructed through it. In the course of the survey herein reported, elder Farley Garlett recalled visiting Arthur Hill and Ethel Garlett there when he was young. They had a permanent camp there. He believed that the "corroboree ground" was within what is now Whiteman Park, near Mussel Pool.

Registered Aboriginal Site Number 3840, "Bennett Brook Camp Area", requires detailed consideration. It is a multiple-component site with the following features: artefact scatter, ceremonial, fish trap, historical, man-made structure, mythological, skeletal material/burial, camp, hunting place, plant resource and water source. It is held under Restricted Access in the Register. The footprint of this site shown in the publicly available version of the Register intersects with the southeastern sector of Registered Aboriginal Site 3692 and therefore with the Railway Line corridor where it crosses Bennett Brook and continues east to Lord Street. It was recorded by the present author in 1984, where its southern part was described as.
bounded on its southern side by a notional line joining the footbridge site (author's note: Pyerton Footbridge across Bennett Brook) through Pyerton Training Centre, to Esther Street: on its northern side by Harper Street Extension: on its western side by Lord Street and on its eastern side by Bennett Brook. The northern sector of the site was described as having Benara Road as its southern boundary, Patricia Street extension as its northern boundary, Bennett Brook as its eastern boundary and Lord Street as a notional western boundary. The actual site is therefore outside the Railway Line survey corridor.

3.3 Field Inspection and Consultative Meetings

The list of nominated Whadjuk representatives supplied by SWALSC to PTA is included below in Appendix Five. All persons nominated were contacted either by R.O’Connor or by T.Hart in the week ending 15 March 2019. Initial contacts were made by telephone and SMS messages and/or Emails were then sent confirming the meeting arrangements. The consultative meeting and survey were arranged for 10:00 on the morning of 8 April 2019. Ms. M.Collard did not attend on the day: all other nominated persons attended. The meeting commenced in the car park at the Bayswater Hotel at 10:05. Present were Whadjuk representatives Mr A.Chippon, Ms. J.Jacobs, Ms. C.Martin, Mr B.Moore, Ms. C.Nelson, Mr B.Ugle and Mr I.Vegg. Mr G.Bennell attended as an observer. PTA was represented by Ms. M.Ludlow, Mr K.Aitchison, Mr B.Laslett, Mr M.Erskine and Project Engineer Mr R.Maher. Meeting Conveners R. O’Connor and T.Hart also attended. R.O’Connor and T.Hart introduced all present and R.O’Connor gave a brief explanation of the Project and what was to be
accomplished today. Ken Aitchison (KA) outlined the purpose of Gnaarla Biddi and the Nyungar engagement strategy of PTA, which he was leading. The following discussion then took place.

B.Laslett (BL) explained that two Activity Notices had been submitted to SWALSC – one for the geotechnical investigations and the other for the entire rail route. He commenced explanation of that route, referring to the map and noted that PTA has arranged a minibus to carry the group along the proposed route.

Andrew Champion (AC): How much walking will be involved today.

Miranda Ludlow (ML) showed the Project map and explained how the Project passes along existing infrastructure and where it crosses relatively undisturbed land. ROC suggested that the group should inspect the undisturbed land on foot.

Cheryl Martin (CM): Does it start here at Bayswater?

ML: Yes. There will be a spur line from here. We will see where it comes from the existing line during the bus trip.

CM: There have already been skeletons dug up at Bayswater Station.

ML: How long ago?

Cindy Nelson (CN) and CM: the Museum has the remains that came from Bayswater.

CN: Can our people be acknowledged at the stations? Our old people who lived around here and in places along where the line goes.

ML: Yes, the PTA is aware of that matter and also of Nyungar involvement in architectural design and public art.

KA: There is Nyungar input into naming of places in the proposals being considered by Gnaarla Biddy. All the stations are different, so there will be different opportunities.

Ian Vagg (IV): Will there be monitoring of ground disturbance?

ML: That is one of the matters we can talk about during the day.
CM spoke of a private development in a swamp area in Albany which had uncovered artefacts, but there had been no monitors on site to deal with the discovery.

B. Ugle (BU): There were more than 300 artefacts found on a sand dune during construction of Tonkin Highway. We don’t know what happened to them. GMP Construction was the contractor to Main Roads there. They removed the artefacts.

A general discussion of the need for monitors to be on site for major ground disturbance followed and the bus trip commenced at 10:50. Driving past the Forrestfield-Airport Link works east of Bayswater Station, ML and BL explained that the new line would be constructed between the two existing Midland Railway lines and would pass on a bridge structure across to the centre of Tonkin Highway. The bus then drove along that highway, where the proposed railway will be constructed in the existing space between the two carriageways.

BU: Why not follow along Beechboro Road right up to Gnangara Road. There could be a station at Beechboro.

ML: Because of a need to serve the future greater population areas and also because of considerations of space and bus availability.

A general discussion of the stations followed. BL explained that the precise locations and spread of all stations had not yet been finalised.

After the bus turned off Tonkin Highway and the former pasture land which the proposed railway will traverse was shown to participants, Brendan Moore (BM) asked: why not go along Reid Highway instead of going through less disturbed land? Or Marshall Road?

Ross Maher (RM) explained the engineering constraints being dealt with at the planning stage.
ML: The other constraint that we had to consider was avoiding Horse Swamp and the Bennett Brook catchment area. These are significant wetlands.

RM: There are other engineering constraints – the Reid Highway and Tonkin Highway junction was not designed with a railway in mind. Also Marshall Road has two powerlines running alongside it. Adding a railway would take further from its public availability.

BM: Are we going to look at the station locations? You said earlier that we don’t know exactly where each of them will go.

ML: Precise locations and dimensions are not yet fixed.

ROC: Comments made during the journey suggest that we need to look again at the stations when we know their precise locations and dimensions.

ML: Yes. We can look further at that.

ROC: So, what do we need to accomplish today?

ML: We need to look at the alignment of the railway in general and hear of any major issues regarding heritage. We need to agree to the geotech work. We need clarity regarding the wishes of the Nyungars regarding the registered Aboriginal sites – for example where the piers can go at Bennett Brook crossing and buffer zones for laydown areas and works areas.

The bus was parked at Cranleigh Street in the suburb of Bennett Springs at 11:45 and the group assembled at the proposed Bennett Brook crossing.

RM explained that the proposal was for a single span bridge to cross the waterway, without any piers being located within it. He showed a photograph of a similar structure near New Norcia and also an engineering design plan. He said that the structure would be eighty metres long and twenty metres wide, but that an additional ten metres would be required on either side for construction purposes. The precise
location of the structure is not yet fixed, but it would be within fifty metres upstream and downstream from the point where the group was standing.

BM: You need to note that by us asking questions about these technical data, that doesn’t mean that we are giving our approval for the bridge. The Bennett Brook is a very important sacred site for our people.

A general discussion of the importance of Bennett Brook and the need to protect the wetlands and waterways of the Swan Coastal Plain followed.

RM discussed the water table and the calculated width of the waterway during maximum flood events. Explained that the structure would be designed to avoid impact on the waterway upstream and downstream,

ML: Information is being collected from monitoring bores across this area in order to verify the situation.

BU: How much vegetation disturbance will there be?

RM: The bridge as designed is twenty metres wide and there would be a ten metres wide construction area on either side, giving a forty metres wide construction corridor.

BM: Has PTA considered bypassing Bennett Brook to the south?

RM and ML: Yes. That was considered, but that would lead to a crossing of the Swan River and also disturbance to a greater amount of housing.

A general discussion of Bennett Brook and local flooding followed. It was noted that the piers can be further from the waterway in areas where it is narrow.

CM: What we do today has impacts stretching into the future. We have only one planet and water is vital to us all.

BM: If bridge is built make sure there is no impact upstream or downstream.
The group then walked across the proposed alignment from the Bennett Brook crossing to Beechboro Road, across the former pasture lands. The proposed geotechnical investigation sites were inspected on the way. Following that walk, lunch was taken in Whiteman Park at 13:35. At 14:25 the group walked to Registered Aboriginal Site 552. Referring to the map of the Project, ME explained where the group was standing and where the Aboriginal site is located. ROC explained the history of the site and the group walked to the waterhole as described in the Aboriginal Site File. The group was satisfied that the proposed railway alignment will not extend as far as the waterhole. BM asked ROC to revisit the Aboriginal Site File and ensure that the waterhole is included within the site as delineated in that file. At 15:50 the group walked to Registered Aboriginal Site 551 and inspected it. A private meeting between the Whadjuk representatives and the anthropologist was then held. The following items were resolved and repeated to the PTA representatives.

- The proposed railway route is at a sufficient distance from Site 552. As Site 551 has already been partially obliterated by construction of new Lord Street and the proposed railway alignment is within that area of previous disturbance, its alignment through that site is also approved.

- Geotechnical investigations are approved, subject to Nyungar monitors being present for all ground disturbance associated with those investigations where they occur in previously undisturbed areas. There should be two monitors per day engaged by PTA and they should be selected from the relevant families on a rotational basis. There was a discussion of the monitoring programme carried out by the Forrestfield-Airport Link Joint Venturers. The families want input through WWP into the selection of the organisers of the monitoring programme in this case.
• A full field survey of all proposed railway stations should be carried out when their precise locations and dimensions are known.

• Regarding Bennett Brook, the Whadjuk representatives stated that protocols arising from Nyungar law require them to defer to "the elders" regarding the proposed bridge which will span the waterway. The elders in question are the senior members of the families listed in the Register of Aboriginal Sites as Knowledge Holders for Bennett Brook.

• The remainder of the proposed alignment is approved, subject to Nyungar monitors being present on site as requested above for the geotechnical investigations.

A signed attendance record which verifies the group's conditional approval for the Project as outlined above is included in Appendix Three of this report.

On 9 April 2019, the second group assembled in the carpark at Bayswater Hotel at 10:00. Present were the following Registered Knowledge Holders for the Aboriginal sites within or near to the Project: Mr A.Corunna, Ms. V.Corunna, Ms. B.Bropho and Mr R.Baker (Mr I.Hayward-Jackson, former Culture and Heritage Worker for the Swan Valley Circle of Elders, joined the group later in the morning – see below). PTA was represented by Ms. M.Ludlow, Mr K.Aitchison, Mr B.Laslett, Ms. S.Dodd, Mr M.Erskine and Project Engineer Mr R.Maher. Meeting Conveners R. O'Connor and T.Hart also attended.

ML, BL and ME introduced the Project to the assembled group, referring to the same map as has been used for the Whadjuk meeting. KA explained the Metronet Nyungar engagement initiative and spoke of the formation of the Gnarla Biddi reference group.
Vanessa Corunna (VC): Where you cross to the south of Whiteman Park there are large numbers of kangaroos. What will happen to them?

ML: Explained that Whiteman Park authorities are considering action to deal with the large and increasing population of kangaroos in the area. The railway will be fenced on either side.

VC: Were other possible alignments considered?

ML: A southern option which would avoid Bennett Brook would involve a crossing of the Swan River. The alignment has been chosen to avoid as much as possible impact on rivers and wetlands. [refers to map] The curve here is to avoid Horse Swamp, which is an environmentally sensitive wetland.

Bella Bropho (BB): Mussel Pool is a men’s area. There was a men’s corroboree ground there; a ceremonial site. If you look at the reports on the survey of Whiteman Park you will find that. That’s not an area for women.

At 10:35 the group boarded the minibus provided by PTA and repeated the inspection of the railway junction, link to Tonkin Highway and proposed rail alignment between the two carriageways of that highway carried out on the previous day.

BB: Are we going to look at the Stations today?

ROC: because we don’t know the precise locations and sizes of all of them, it was decided by the group yesterday that we would return at a later date when those details are known and carry out a full survey of them.

VC: Will there be opportunities for Aboriginal employment on this project?

ML: Yes. Ken Aitchison is working with the Gnarla Biddi group. Part of their brief is Nyungar employment.

A general discussion of Aboriginal employment followed and the group arrived at Cranleigh Street in Bennett Springs 11:05, where they were joined by Iva Hayward-
Jackson. Mr Corunna, who is of advanced age and infirm, remained in the bus with one PTA officer. The other members of the group then walked to the proposed location of the railway bridge over Bennett Brook.

ML: Explained the dimensions and location of the structure, noting that its precise location is not firmly established, but that it will be within fifty metres (50m) upstream or downstream from where the group was standing.

Iva Hayward-Jackson (IHJ): All creeks and wetlands are sacred to us and going into their beds is warra – tabu. It is a pity that we might be the last Nyungars to see this beautiful place as it is today. I don’t care what SWALSC says about development – this is sacred to us and to our ancestors. It is really important to protect what we can as the suburbs are expanding and doing away with our world. This survey is tokenism – it is part of a Government process. We get nothing but lose our lands and waterways. The paperbarks here are important to us because they speak of the waters underneath and we are the people of the wetlands. Water was and is our life.

VC: That is correct. We are associated with the waters and the paperbark trees. All industries want to cross and use our waterways. Nobody has worried about protecting our wetlands. We are excluded from the planning processes. Look around and you must feel how different this place is. We have an emotional connection to this place. The trees and the land are talking to us – and to you if you listen.

IHJ: This basin is where the Waugal’s belly touched the earth and formed it.

BB: It does get really emotional because you can feel it. Waugal is present. Development is the biggest killer and we always lose out.

VC: Our kids get no opportunities on these projects; no work; no equality of opportunity. We have no input. Our ancestors’ spirits are here listening today.
BB: The stories of Waugal are in the underground streams. They are all connected and flowing to the rivers. Development is the root of all evil because it is slowly destroying that connection.

VC: We don’t even get access unless the Government brings us here.

IHJ: We represent our own families but we are being slowly absorbed into SWALSC. But we are resistant to that and we are the ones that know the stories. SWALSC is injecting poison into our families. They are not our nominated bosses.

BB: The old laws said that you must get permission to go into another group’s country. This is our country.

VC: My family is descended from the traditional owners of this area. We are traditional owners connected to this land and we are unable to get opportunities for our families and that is disrespect for our culture. There are no opportunities for our kids – I know because I work in that field. Their situation is hopeless. They have no work and get involved in drugs and that leads to jail or suicide. It is a hopeless situation. For our kids to get a job is nearly impossible because of hidden racism. They could be feeding into this country. Whiteman Park management has never spoken to us about how they manage our country.

IHJ: The paperbarks are associated with our people and the reeds are the Waugal’s whiskers. Europeans turned our wetlands into dumps. When you build this bridge save what you have in your power to protect. Protect what you can. Keep all disturbance to the barest minimum. We need involvement in the entire project; monitoring of the entire project from beginning to end.

ROC: I think we should ask KA to talk to Iva, Vanessa and Bella. Can you (i.e. PTA Officers) facilitate that?
RM: Produced photograph of bridge type and explained that there would be no piers within the waterway. He showed on the ground where the piers are likely to be.

IHJ: Do you have flood data?

RM: Not at this stage, but we will be doing modelling to determine these matters.

IHJ: We don’t know the exact location of the bridge yet. If you do more research, then we should meet again to talk more about the crossing. We need to nut this out together and get the best possible outcome; the least destruction possible. Animals that live here – reptiles too – need to be protected. We should avoid pesticides. Also need to install rubbish traps and work with Local Government regarding filters and ongoing monitoring of surface waters.

ME: There are monitoring bores upstream and downstream from here.

IHJ: It would be good to bring that information to the next meeting.

ROC: yesterday I walked across the paddocks from here to Beechboro Road with the Nyungar representatives. When we finish here I want to walk the corner from Cranleigh Street to where the alignment joins Lord Street. It would be good if you can all walk with me.

ML: Pointed out on map where Horse Swamp is located.

12:25 the group walked from Cranleigh Street as requested by ROC and then took lunch at Whiteman Park. Mr Albert Corunna, who was unwell, discussed the Project with ROC and VC and gave his conditional approval for it to proceed. He was then taken home by Ms. S.Dodd. At 13:45 the remaining members of the group walked to Site 552, where IHJ called out loudly and broke the surface of the water with a stick in order to notify the Waugal of our presence. Again, concern was expressed that the waterhole is not central to the site as depicted in the register of Aboriginal Sites and ROC was instructed to liaise with DPLH in that regard. Concern was also expressed.
in regard to the possible impact of construction on the swampland between the western side of Lord Street and the waterhole. The group requested that PTA should minimise the impact of construction on that swamp area and should also have lay-down areas and machinery parking places to its north and south, rather than between it and the railway alignment on Lord Street. The group then visited Site 551 and inspected it. It was noted that new Lord Street had already been constructed through the site and that the proposed railway alignment would be within the area of existing disturbance. At 14:50, the Nyungar representatives met privately with the anthropologist and the following resolutions were agreed.

- All geotechnical works are approved, subject to two Aboriginal monitors being on site when those works take place in areas not previously disturbed.

- Regarding Bennett Brook, there is approval in principle for the bridge, but another meeting should be held when definite proposals regarding location and dimensions are decided. The meeting should be in PTA offices, with video presentation, so infirm elders can attend and participate. PTA should aim for minimal disturbance to Bennett Brook and surrounds.

- There should be minimal disturbance to the area in which Site 552 is located. Disturbance between the existing access footpath and Lord Street should be minimised.

- The remainder of the alignment is approved, subject to monitors being on site for all ground disturbance associated with the Project in previously undisturbed areas.

- Specific surveys should be carried out for the stations when their precise locations are known.

- Employment programmes should give priority to traditional owners.
• There should be Nyungar cultural input into artwork and nomenclature for the stations.

As with the Whadjuk group, a signed attendance record which verifies the Registered Knowledge Holders’ conditional approval for the Project as outlined above is included in Appendix Three of this report.

On 10 April 2019, the third group assembled in the carpark at Bayswater Hotel at 10:00. Present were the following Registered Knowledge Holders for the Aboriginal sites within or near to the Project: Ms. T.Bodney, Ms. E.Colbung, Mr R.Wilkes, Mrs O.Wilkes and Mr F.Garlett. Ms. L.Wilkes and a relative of Ms. Colbung attended as observers. PTA was represented by Ms. M.Ludlow, Mr K.Aitchison, Mr B.Laslett, and Mr M.Erskine. Project Engineer Mr R.Maher joined the group at proposed Bennet Brook crossing. Meeting Conveners R. O’Connor and T.Hart also attended.

Richard Wilkes (RW) gave a short history of Aboriginal association with the Bayswater area and said: we were a big tribe from this area and we still have foot on our land here. We still try to look after it and our rivers and waters.

ML: Thanked RW for his introduction and introduced the Project, again referring to the maps of the proposed alignment.

KA: Introduced himself and spoke of Gnarla Biddi group and PTA’s ongoing Nyungar involvement programme.

Tanya Bodney (TB): Well I’m happy that you have invited us here. My father is an elder of the Perth area and we were never spoken to about Yagan Square or other big developments here because he didn’t join up with the SWALSC group.
ML: Yes, because PTA is a State Government Agency, we are bound by the ILUAs signed by the State Government with the Nyungar people. But we are also talking to the Knowledge Holders for the area the railway passes through. They are registered at DPLH. ROC has identified them to us.

RW: Land and Sea Council bypassed our people and didn’t speak to the elders.

KA: Spoke of his aims for Gnarla Biddi.

RW: This is all a step in the right direction.

KA: There is a lot of goodwill on the part of PTA.

ML: I know these are pretty words that you have heard before, but we want to see them turn into action.

Farley Garlett (FG): What is the process for getting involved with PTA if somebody has a business.

KA: Actual construction is done by contractors. But PTA is building a Nyungar business register. If you go on the internet you can find that and apply.

FG: A problem is that a lot of our people don’t have internet access.

KA: We will be giving our register to the contractors and instructing them to use it to provide small business access and employment to Nyungar people.

FG: I have spent years in the mining industry in liaison. That industry forced contractors to employ Aboriginal people. It has been a success story. Mining industry is a major employer of Aboriginal people today.

KA: We have already engaged on person to do just that – Mark Bateman.

RW: Bayswater was a meeting place for our people. Isn’t it funny that pubs were built in places where our people met. They were built to solicit the sale of alcohol to our people, who never had it before. Then when you spent your money they got the Police to lock you up for drinking.
Lynley Wilkes (LW): How many Nyungar people are employed on this initiative?
ML: At this stage, one.
LW: Will there be traineeships at PTA?
ML: Yes.
FG: Traineeships are alright – but only as long as they lead to full-time work. In the past they have been used by contractors just to get Government work. They train a few kids and then let them go when the work is finished. The mining industry trains and then employs young people.
At 10:50 the group boarded the bus and repeated the inspection of the railway junction, link to Tonkin Highway and proposed rail alignment between the two carriageways of that highway carried out on the two previous days. At 11:20 the group reached Cranleigh Street and walked to the proposed Bennett Brook rail crossing.
RW: Asked for silence as he invoked the ancestral spirits and called on the Waugal to protect the group.
Several people together: What kind of bridge is going to be built? Are you tunneling under the creek?
RW: No tunnel; definitely not. We never want that kind of row again.
ML: A tunnel was considered early in planning, but rejected. A long bridge structure with piers on either side of the creekline is proposed. Engineer Ross Maher will be here to answer your questions shortly. I have a photograph of a similar bridge at New Norcia [shows].
FG: If there are no piles in the creek, how far back will the piers be?
ML: Explained.
RW: On very hot days railway lines bend if they are too long.
ML: Planning will take those matters into consideration.

TB: There have to be culverts to allow animals to pass through.

LW: Underpasses for animals.

TB: [refers to photograph of bridge] If you are putting rocks at the edges of the bridge they should be from this area.

RW: We don’t like to see earth or rocks being brought into our country from other areas.

FG: We would like to know where those materials come from.

LW: We should be compensated for the use of our sand and materials. They are from our country.

RW: You should be fair. Something should come back to us. A fair figure to work on and use. What size is this?

ME: Bridge will be twenty metres wide and eighty metres long, with a ten metres construction corridor on each side.

RW: I have been right here before but it wasn’t for a railway.

A discussion followed as RW tried to recall the reason for his previous visit.

ML: It may have been for the route of the dedicated bus service for Whiteman Park.

RW: Yes, that’s it. A bus service road. I think we said “no” to that. They were doing too much in the creek.

11:30 Engineer Ross Maher joined the assembled group and introduced himself. He said the final design and location for the bridge was still being planned, but that it would be within fifty metres upstream of downstream from the meeting point. He pointed out where the bridge piers are likely to be located.
RW: Spoke of Nyungars being left out of WA society from the early days. They were “shunted” into Missions and settlements as if they were aliens. Now we are being included and I say let’s give it a go.

A discussion of water-flow in Bennett Brook during rains followed. RW showed how far back from the creekline he had seen floodwaters in the past.

TB: How deep will the piles be?

RM: Probably ten metres because of the type of land here.

LW: When drilling, you are going to upset the spirits and the environment. This is our culture.

RW: Yes, but the railway is needed. I’ve already said “yes”.

RM: We’ll make sure that the structure doesn’t affect the water upstream of downstream.

RW: Yes. Give it a go. Thank you for asking us.

General agreement with RW’s comments followed and the question of monitoring of earthworks was again raised.

ROC: PTA has already begun planning for monitoring works.

RW: Good and you need to get the right families and the right people involved.

ML: We will ensure that we do that.

LW: There should be a mixture of elders and young people for monitoring.

RW: We need to have Nyungar names for the stations and the railway.

The group then returned to the bus and took lunch at Whiteman Park. After lunch, Site 552 was inspected and the group agreed with the requests in its regard made by the Nyungar representatives on the previous day. The group inspected Site 551 from the Lord Street side at 13:40. FG recalled visiting his aunt Ethel Garlett and her partner Arthur Hill at their camp there when he was young. He recalled that a large number of
Nyungars had camped there. The bus was then parked in the Potter’s House Churchyard at Marshall Road and some members of the group inspected on foot the proposed railway alignment to the west of Beechboro Road. The Nyungar representatives then approved the Project, subject to the following conditions.

- There should be Nyungar monitors for all new ground disturbance associated with railway construction – one senior and one junior person.
- There should be Nyungar monitors for all geotechnical works where they take place in previously undisturbed ground.
- Another Nyungar meeting to discuss final plans should take place when the Bennett Brook crossing is designed.
- There should be Nyungar names for the proposed railway stations.
- When the precise locations of the stations are finalised, a further heritage survey of them should be carried out.

Again, a signed attendance record which verifies the Registered Knowledge Holders’ conditional approval for the Project as outlined above is included in Appendix Three of this report.

3.4 Results of Survey – Geotechnical Investigations

Proposed locations of geotechnical investigations are included below as Appendix Eight. Advice from DPLH is that none of the proposed locations is located within a Registered Aboriginal Site. If that is the case, then Ministerial Consent pursuant to Section 18 of the *Aboriginal Heritage Act 1972* is not required for the proposed geotechnical works. All locations in previously undisturbed ground have
been visited on foot by the survey teams and the author of this report. As a result of those inspections, conditional approval for the proposed geotechnical investigations has been received from all three groups. The condition in all three cases was that two Nyungar monitors should be on site when the investigations are taking place in areas where the ground surface has not been previously disturbed.

3.5 Results of Survey – Railway Alignment

The Aboriginal Heritage Inquiry System shows that the proposed railway alignment intersects with the footprint of four Registered Aboriginal sites, namely:

- Site Number 3692, “Bennett Brook in Toto”;
- Site Number 552, “Lord Street North 2”;
- Site Number 551, “Lord Street North 1”; and
- Site Number 3840, “Bennett Brook Camp Area”.

The last-named, however, is in fact outside the proposed alignment and therefore requires no further consideration in this report. Ministerial Consent pursuant to Section 18 of the Aboriginal Heritage Act 1972 will be required before any activities as described in Section 17 of that Act can lawfully take place within the remaining three Aboriginal sites.

Three Aboriginal groups, including the SWALSC/Whadjuk Working Party nominees and Registered Knowledge Holders for the above three relevant Aboriginal sites were consulted regarding the Project, visited the Aboriginal sites and inspected the proposed railway alignment. All three groups have given conditional approval for
the proposed railway alignment. The conditions attached to those approvals are as follows. No additional Aboriginal heritage sites were identified by the groups within, or in close proximity to, the proposed alignment.

- There should be Nyungar monitors for all new ground disturbance associated with railway construction.
- Another Nyungar meeting to discuss final plans should take place when the Bennett Brook crossing is designed.
- There should be Nyungar names for the proposed railway stations and Nyungar involvement in artwork there.
- When the precise locations of the stations are finalised, a further heritage survey of them should be carried out.

One group also added the following condition to their consent.

- There should be minimal disturbance to the area in which Site 552 is located. Disturbance between the existing access footpath and Lord Street should be minimised.

3.6 Impacts of the Project

The impact of construction of a railway bridge across Bennett Brook will be twofold – spiritual and environmental/physical. The spiritual impact, which is a totally Nyungar consideration arising from their traditional beliefs, will be minimised to the satisfaction of the Aboriginal groups by construction of a bridge spanning the creek and by the placement of the supporting piers outside that waterway. The fact that the structure will be designed in such a way that it will have no impact upon the water-
flow upstream or downstream from the bridge was also seen by the Nyungar representatives as a sufficient mitigation of impact. However, the environmental/physical impact will be permanent, in that the bridge will be a permanent structure and paperbark trees associated with the waterway will be removed in the twenty metres wide stretch where it is located. Impacts on the ten metres wide construction corridor on either side of the bridge will be temporary, as vegetation will regrow there.

Where the railway alignment passes to the east of Site 552, impacts will be minimal. The Nyungar representatives were satisfied that the waterhole that is the focus of that site will not be impacted in any way, as it is some eighty metres from areas of proposed works. Impacts to the swamp areas associated with that waterhole will be confined to the western margin of the existing new Lord Street. Public Transport Authority intends to minimise those impacts as much as possible.

As can be seen clearly from Figure Five, new Lord Street has been constructed through Site 551. The proposal at this point is for the railway to be constructed on the western half of Lord Street. In that case, there will be no new impacts to the Aboriginal site. However, construction may involve a degree of lateral intrusion westwards from the existing disturbance area. The Aboriginal groups have requested that such intrusion should be kept to the minimum necessary for safe construction to occur.
4.0 CONCLUSIONS AND RECOMMENDATIONS

Metronet is the long-term blueprint for connecting Perth’s suburbs, reducing road congestion and meeting the Metropolitan Area’s future planning needs. As part of that programme, Public Transport Authority proposes construction of a new railway from a junction east of Bayswater Station on the Midland Railway Line to Ellenbrook (the Morley Ellenbrook Line) – a distance of approximately twenty-one kilometres.

In February 2018, the Authority commissioned R & E O’Connor Pty Ltd to carry out an Aboriginal heritage analysis of the Morley Ellenbrook Line alignment and produce a report assessing construction constraints arising from consideration of that heritage. The report listed Registered Aboriginal Sites and Other Heritage Places in the vicinity of the alignment. Following a recommendation of that report, in March 2019 the Authority commissioned R & E O’Connor Pty Ltd to arrange and carry out an Aboriginal heritage consultation and field survey of the alignment and associated infrastructure. The survey was completed in April 2019.

Searches of the Register of Aboriginal Sites for the Project area and surrounding land were carried out as a component part of the survey. Register extracts are included in this report as Appendix Four. As currently planned, the Project will intersect with three registered Aboriginal Sites, as follows.

- Site Number 3692, “Bennett Brook in Toto”;
- Site Number 552, “Lord Street North 2”; and
- Site Number 551, “Lord Street North 1”.

The Aboriginal Heritage Inquiry System shows the alignment intersecting also with Site Number 3840, “Bennett Brook Camp Area”. The footprint of that site, however, is exaggerated in that system and the site is, in fact, outside the alignment. No other Aboriginal heritage sites were identified by the Aboriginal groups within, or in close proximity to, the proposed railway alignment.

A consultative process and field survey of the proposed railway alignment was carried out with SWALSC/Whadjuk Working Party nominees and Registered Knowledge Holders for the above three relevant Aboriginal sites. The groups were consulted regarding the project, visited the Aboriginal sites and inspected the proposed railway alignment and proposed geotechnical investigation areas. All three groups gave conditional approval for the proposed railway alignment and geotechnical works. The conditions attached to those approvals are as follows.

- Two Nyungar monitors should be on site when geotechnical investigations are taking place in areas where the ground surface has not been previously disturbed.
- There should be Nyungar monitors for all new ground disturbance associated with railway construction.
- Another Nyungar meeting to discuss final plans should take place when the Bennett Brook crossing is designed.
- There should be Nyungar names for the proposed railway stations and Nyungar involvement in artwork there.
- When the precise locations of the stations are finalised, a further heritage survey of them should be carried out.

One group also added the following condition to their consent.
• There should be minimal disturbance to the area in which Site 552 is located. Disturbance between the existing access footpath and Lord Street should be minimised.

The following recommendations are based upon the consideration of the contents of the Register of Aboriginal Sites, the findings of the consultative process and the field surveys with the Aboriginal groups.

Recommendation One: Public Transport Authority should submit a Notice pursuant to Section 18 of the Aboriginal Heritage Act 1972 to the Aboriginal Cultural Material Committee in respect of the proposed alignment of the Morley Ellenbrook Railway Line.

Recommendation Two: The Aboriginal Cultural Material Committee should recommend to the Minister that formal consent for the Morley Ellenbrook Railway Line should be granted, on the grounds that the representatives of the relevant Aboriginal groups have given their conditional approval, that disturbance to Aboriginal heritage sites will be minimised by the Public Transport Authority and that the proposed railway extension will be of benefit to the general community.

Recommendation Three: That the Minister should grant the requested Consent on the grounds that it is clearly in the interests of the general community to provide public transport that will reduce traffic density, with associated reductions to pollution and to road trauma.

Recommendation Four: That Public Transport Authority should arrange for two Nyungar monitors to be on site when geotechnical investigations are taking place in areas where the ground surface has not been previously disturbed.
Recommendation Five: That Public Transport Authority should arrange for two Nyungar monitors to be on site for all new ground disturbance associated with railway construction.

Recommendation Six: That another Nyungar meeting to discuss final plans should take place when the Bennett Brook railway crossing and bridge are designed.

Recommendation Seven: That an Aboriginal heritage field survey of the stations along the Morley Ellenbrook Railway should be carried out when their locations and dimensions are established.
REFERENCES

Bates, D.

1944  *The Passing of the Aborigines*. London: John Murray

Bates, D.


Brown, S.


Green, N.


Hammond, J.


Moore, G.


O'Connor, R.

O’Connor, R  

O’Connor, R., C.Bodney and L.Little  

O’Connor, R. and G.Quartermaine.  
1986 Aboriginal Site Survey - Mandurah to Pinjarra. Prepared for Main Roads Department.

O’Connor, R. and G.Quartermaine.  

O’Connor, R., C.Bodney and G.Quartermaine.  

O’Connor, R., G.Quartermaine and A.Yates.  
Figure One:

Overview of Morley Ellenbrook Railway Project
Station locations are indicative for planning purposes only
Figure Two:

Geotechnical Investigations
Station locations are indicative for planning purposes only.
Figure Three:

Proposed Bennett Brook Crossing
Figure Four:

Aboriginal Site 552
Morley Ellenbrook Line
Geotech Investigation Locations

Legend
- Optoe 7A Aligment
- 40m Buffer either side of alignment 7A
- Proposed Environmental Study Area
- Aboriginal Heritage - Registered Site
- Connector

Geotech Investigation Locations

CPT036

Date Printed: 6/6/2019
Created By: David Fotheringham
Scale 1:2,500
Figure Five:

Aboriginal Site 551
Morley Ellenbrook Line
Geotech Investigation Locations

Legend

- Option 7A Alignment
- 40m Buffer either side of alignment 7A
- Proposed Environmental Study Area
- Aboriginal Heritage - Registered Features

Geotech Investigation Locations

- CPT
- TP

Public Transport Authority

Date Printed: 04/04/2019
Created By: David Fotheringham
Scale: 1:2,500

Unwin Information Systems (GIS): City of Swan

© City of Swan, 2018
City of Swan - Privacy Policy
City of Swan - Accessibility Policy
City of Swan - Disclaimer
City of Swan - Terms of Use
City of Swan - Copyright Notice
Appendix One:

Notes on the *Aboriginal Heritage Act, 1972*
APPENDIX I

OBLIGATIONS RELATING TO SITES UNDER THE ABORIGINAL HERITAGE ACT, 1972

Report of Findings

"15. Any person who has knowledge of the existence of anything in the nature of Aboriginal burial grounds, symbols or objects of sacred, ritual of ceremonial significance, cave or rock paintings or engravings, stone structures or arranged stones, carved trees, or of any other place or thing to which this Act applies or to which this Act might reasonably be suspected to apply shall report its existence to the Registrar, or to a police officer, unless he has reasonable cause to believe the existence of the thing or place in question to be already known to the Registrar."

Excavation of Aboriginal Sites

"16. (1) Subject to Section 18, the right to excavate or to remove any thing from an Aboriginal site is reserved to the Registrar.

(2) The Registrar, on the advice of the Committee, may authorise the entry upon and excavating of an Aboriginal site and the examination or removal of any thing on or under the site in such manner and subject to such conditions as the Committee may advise."

Offences Relating to Aboriginal Sites

"17. A person who-

(a) Excavates, destroys, damages, conceals or in any way alters any Aboriginal site; or

(b) In any way alters, damages, removes, destroys, conceals, or who deals with in a manner not sanctioned by relevant custom, or assumes the possession, custody or control of, any object on or under an Aboriginal site,

commits an offence unless he is acting with the authorisation of the Registrar under Section 16 or the consent of the Minister under Section 18."

Consent to Certain Uses

"18. (1) For the purposes of this section, the expression "the owner of any land" includes a lessee from the Crown, and the holder of any mining tenement or mining privilege, or of any right or privilege under the Petroleum Act, 1967, in relation to the land."
(2) Where the owner of any land gives to the Trustees notice in writing that he requires to use the land for a purpose which, unless the Minister gives his consent in this Section, would be likely to result in a breach of Section 17 in respect of any Aboriginal site that might be on the land, the Committee shall, as soon as they are reasonably able, form an opinion as to whether there is any Aboriginal site on the land, evaluate the importance and significance of any such site, and submit the notice to the Minister together with their recommendations in writing as to whether or not the Minister should consent to the use of the land for that purpose, and, where applicable, the extent to which and the conditions upon which his consent should be given.

(3) When the Committee submit a notice to the Minister under subsection (2) of this section he shall consider their recommendation and having regard to the general interest of the community shall either -

(a) Consent to the use of the land the subject of the notice, or a specified part of the land, for the purpose required, subject to such conditions, if any, as he may specify; or

(b) Wholly decline to consent to the use of the land the subject of the notice for the purpose required,

and shall forthwith inform the owner in writing of his decision.

(4) Where the owner of any land has given to the Committee notice pursuant to the subsection (2) of this section and the Committee have not submitted it with their recommendation to the Minister in accordance with that subsection the Minister may require the Committee to do so within a specified time, or may require the Trustees to take such other action as the Minister considers necessary in order to expedite the matter, and the Committee shall comply with any such requirement.

(5) Where the owner of any land is aggrieved by a decision of the Minister made under subsection (3) of this section he may, within the time and in the manner prescribed by the rules of court, appeal from the decision of the Minister to the Supreme Court which may hear and determine an appeal.

(6) In determining an appeal under subsection (5) of this section the Judge hearing the appeal may confirm or vary the decision of the Minister against which the appeal has been made or quash the decision of the Minister, and may make such order as to the costs of the appeal as he sees fit.

(7) Where the owner of the any land gives notice to the Committee under subsection (2) of this section, the Committee may if they are satisfied that it is practicable to do so, direct the removal of any object to which this Act applies from the land to a place of safe custody.

(8) Where consent has been given under this section to a person to use any land for a particular purpose nothing done by or on behalf of that person pursuant to, and in accordance with any conditions attached to, the consent constitute an offence against the Act."
Appendix Two:

Notes on the Recognition of Aboriginal Sites
APPENDIX 2

Notes on the Recognition of Aboriginal Sites

There are various types of Aboriginal Sites, and these notes have been prepared as a
guide to the recognition of those types likely to be located in the survey area.

An Aboriginal Site is defined in the Aboriginal Heritage Act, 1972, in Section 5 as:

"(a) Any place of importance and significance where persons of Aboriginal descent
have, or appear to have, left any object, natural or artificial, used for, or made for or
adapted for use for, any purpose connected with the traditional cultural life of the
Aboriginal people, past or present;

(b) Any sacred, ritual or ceremonial site, which is of importance and special
significance to persons of Aboriginal descent;

(c) Any place which, in the opinion of the Committee is or was associated with the
Aboriginal people and which is of historical, anthropological, archaeological or
ethnographical interest and should be preserved because of its importance and
significance to the cultural heritage of the state;

(d) Any place where objects to this Act applies are traditionally stored, or to which,
under the provisions of this Act, such objects have been taken or removed."

Habitation Sites

These are commonly found throughout Western Australia and usually contain
evidence of tool-making, seed grinding and other food processing, cooking, painting,
engraving or numerous other activities. The archaeological evidence for some of these
activities is discussed in details under the appropriate heading below.

Habitation sites are usually found near an existing or former water source such as a
gamma hole, rock pool, spring or soak. They are generally in the open, but they
sometimes occur in shallow rock shelters or caves. It is particularly important that
none of these sites be disturbed as the stratified deposits which may be found at such
sites can yield valuable information about the inhabitants when excavated by
archaeologists.

Seed Grinding

Polished or smoothed areas are sometimes noticed on/near horizontal rock surfaces.
The smooth areas are usually 25cm wide and 40 or 50cm long. They are the result of
seed grinding by the Aboriginal women and indicate aspects of past economy.
Habitation Structures

Aboriginal people sheltered in simple ephemeral structures, generally made of branches and sometimes of grass. These sites are rarely preserved for more than one occupation period. Occasionally rocks were pushed aside or used to stabilise other building materials. When these rocks patterns are located they provide evidence for former habitation sites.

Middens

When a localised source of shellfish and other foods has been exploited from a favoured camping place, the accumulated ashes, hearth stones, shells, bones and other refuse can form mounds at times several metres high and many metres in diameter. Occasionally these refuse mounds or middens contain stone, shell or bone tools. These are most common near the coast, but examples on inland lake and river banks are not unknown.

Stone Artefact Factory Sites

Pieces of rock from which artefacts could be made were often carried to camp sites or other places for final production. Such sites are usually easily recognisable because the manufacturing process produces quantities of flakes and waste material which are clearly out of context when compared with the surrounding rocks. All rocks found on the sandy coastal plain, for example, must have been transported by human agencies. These sites are widely distributed throughout the State.

Quarries

When outcrops of rock suitable for the manufacture of stone tools were quarried by the Aborigines, evidence of the flaking and chipping of the source material can usually be seen in situ and nearby. Ochre and other mineral pigments used in painting rock surfaces, artefacts and in body decoration are mined from naturally occurring seams, bands and other deposits. This activity can sometimes be recognised by the presence of wooden digging sticks or the marks made by these implements.

Marked Trees

Occasionally trees are located that have designs in the bark which have been incised by Aborigines. Toeholds, to assist the climber, were sometimes cut into the bark and sapwood of trees in the hollow limbs of which possums and other arboreal animals sheltered. Some tree trunks bear scars where section of bark or wood have been removed and which would have been used to make dishes, shield, spearthrowers and other wooden artefacts. In some parts of the state wooden platforms were built in trees to accommodate a corpse during complex rituals following death.
Burials

In the north of the state, it was formerly the custom to place the bones of the dead on a ledge in a cave after certain rituals were completed. The bones were wrapped in sheets of bark and the skull placed beside this. In other parts of Western Australia the dead were buried, the burial position varying according to the customs of the particular area and time. Natural erosion, or mechanical earthmoving equipment occasionally exposes these burial sites.

Stone Structures

If one or more stone are found partly buried or wedged into a position which is not likely to be the result of natural forces, then it is probable that the place is an Aboriginal site and that possibly there are other important sites nearby. There are several different types of stone arrangements ranging simple cairns or piles of stones to more elaborate designs.

Low weirs which retain fish when tides fell are found in coastal areas. Some rivers contain similar structures that trap fish against the current. It seems likely that low stone slab structures in the south west jarrah forests were built to provide suitable environments in which to trap some small animals. Low walls or pits were sometimes made to provide a hide or shelter for a hunter.

Elongated rock fragments are occasionally erected as a sign or warning that a special area is being approached. Heaps or alignments of stones may be naturalistic or symbolic representations of animals, people or mythological figures.

Paintings

These usually occur in rock shelters, caves or other sheltered situations which offer a certain degree of protection from the weather. The best known examples in Western Australia occur in the Kimberley region but paintings are also found through most of the states. One of several coloured ochres as well as other coloured pigments may have been used at a site. Stencilling was a common painting technique used throughout the state. The negative image of an object was created by spraying pigment over the object which was held against the wall.

Engravings

This term described designs which have been carved, pecked or pounded into a rock surface. They form the predominant art form of the Pilbara region but are known to occur in the Kimberleys in the north to about Toodyay in the south. Most engravings occur in the open, but some are situated in rock shelters.
Caches

It was the custom to hide ceremonial objects in niches and other secluded places. The removal of objects from these places, or photography of the places or objects or any other interference with these places is not permitted.

Ceremonial Grounds

At some sites the ground has been modified in some way by the removal of surface pebbles, or the modelling of the soil, or the digging of pits and trenches. In other places there is not noticeable alteration of the ground surface and Aborigines familiar with the site must be consulted concerning its location.

Mythological Sites

Most sites already described have a place in Aboriginal mythology. In addition there are many Aboriginal sites with no man-made features which enable them to be recognised. They are often natural features in the landscape linked to the Aboriginal Account of the formation of the world during the creative "Dreaming" period in the distant past. Many such sites are located at focal points in the creative journeys of mythological spirit beings of the Dreaming. Such sites can only be identified by the Aboriginal people who are familiar with the associated traditions.
Appendix Three:

Signed Statements
Date: 10-4-2019

The proposed Glenbrook Railway has been inspected by the following elders of the Seaweed Coastal Almea Group:

and has been:

Approved

Approved subject to the following conditions ✓

Not approved for the following reasons:
- Monitor for all above ground disturbance (one demo, one junior)
- Monitor for all geotech
- Another meeting when Bennett Brook crossing designed
- Pyjoner names for stations
- Further survey for stations

NAME
Richard Wilkes
Drew Wilkes
Esandra Gibbins
Tanya Bodney
Farley Goulter

SIGNATURE
Richard Wilkes
Drew Wilkes
Tanya Bodney
Farley Goulter
Date: 10-4-2019

The following members of the Swan Coastal Plains Group have received the sum of $520 per person per day as reimbursement of expenses incurred attending an Aboriginal heritage survey of the proposed Eldrich Rock Railway project.

Name
Richard Wilkes
Olivia Wilkes
Tanya Booney
Escandra Collins
Fantasy Goodlett

Signature
Richard Wilkes
Olivia Wilkes
Tanya Booney
Escandra Collins
Fantasy Goodlett
Date: 9-4-9

The proposed Eikenboom Railway has been inspected by the following elders of the Lekang Pack Group

and has been:

Approved

Approved subject to the following conditions

Not approved for the following reasons

Conditions:
- Monitor for geotech works in new disturbance areas.
- Monitor for all ground disturbance in undisturbed areas.
- Specific surveys for stations: Aboriginal cultural input.
- Bennett Brook further meeting when definite plans - need involvement in final plans. Meeting in 8th Room with video information/presentation.
- Minimal disturbance at Bennett Brook and Land St. Wagal.
- Avoid disturbance between footpath and road.

Traditional owners priority for employment.

A. Corunna

I. H. Jackson

Vanessa Corunna

Bella Bropho

P. H. Baker

NAME

SIGNED

Eleonore

Bella Bropho

P. H. Baker
Date: 9-4-2019

The following members of the Gunan River Group have received the sum of $520 per person per day as reimbursement of expenses incurred attending an Aboriginal heritage survey of the proposed Reconciliation Rail Project project.

Name                  Signature
A. Corunna          Albert Corunna
L. Jackson          Bella Bropho
Bella Bropho
Vanessa Corunna
V. Robert Baker
Date: 8-4-19

The following members of the [signature]

Group have received the sum of $520 per person per day as reimbursement of expenses incurred attending an Aboriginal heritage survey of the proposed [signature] project.

Name
Cheryl Mandic
Cindy Nelson
Joanne Jacobs
Brendan Moore
Ivan Vagg
Tom Vigle
Andrew Champion

Signature
Cheryl Mandic
Cindy Nelson
Joanne Jacobs
Brendan Moore
Ivan Vagg
Tom Vigle
Andrew Champion

Project APPROVED:

Conditions of approval:
- Monitor all geotech work - 2 per day - rotational programme to be approved by WWP.
- Stations require specific survey.
- Track alignment - well monitored for all initial ground disturbance in undisturbed original ground.
- Bennett Brook - group will not make formal decision until Ngangara elders have given their decision. They will comply with elders' decision.
Appendix Four:

Register of Aboriginal Sites Extract
Search Criteria
Registered Aboriginal Site ID 3692

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 heritagematters@dpwh.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): Whadjuk 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 Boorja, Ballardong People, South West Boorajar #2 and Wajari 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 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.minerals.wa.gov.au/SouthWestNLA/Title-Or-SiteSearchPages/default.aspx.

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

Copyright
Copyright in the information contained herein is and shall remain the property of the State of Western Australia. All rights reserved.

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:
  - Storied 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 the Department of Planning, Lands and Heritage.
- 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.
## List of Registered Aboriginal Sites

<table>
<thead>
<tr>
<th>ID</th>
<th>Name</th>
<th>File Restricted</th>
<th>Boundary Restricted</th>
<th>Restrictions</th>
<th>Status</th>
<th>Type</th>
<th>Knowledge Holders</th>
<th>Coordinate</th>
<th>Legacy ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>3692</td>
<td>BENNETT BROOK: in toto</td>
<td>Yes</td>
<td>Yes</td>
<td>No Gender Restrictions</td>
<td>Registered Site</td>
<td>Mythological</td>
<td>*Registered Knowledge Holder names available from DAA</td>
<td>Not available when location is restricted</td>
<td>302254</td>
</tr>
<tr>
<td>ID</td>
<td>Name</td>
<td>File Restricted</td>
<td>Boundary Restricted</td>
<td>Restrictions</td>
<td>Status</td>
<td>Type</td>
<td>Knowledge Holders</td>
<td>Coordinate</td>
<td>Legacy ID</td>
</tr>
<tr>
<td>----</td>
<td>---------------------</td>
<td>-----------------</td>
<td>---------------------</td>
<td>-----------------------</td>
<td>-------------</td>
<td>---------</td>
<td>-------------------</td>
<td>----------------</td>
<td>-----------</td>
</tr>
<tr>
<td>551</td>
<td>LORD STREET NORTH 1</td>
<td>No</td>
<td>No</td>
<td>No Gender Restrictions</td>
<td>Registered Site</td>
<td>Ceremonial</td>
<td>*Registered Knowledge Holder names available from DAA</td>
<td>401793mE 6479040mN Zone 50 [Reliable]</td>
<td>S02916</td>
</tr>
</tbody>
</table>
## List of Registered Aboriginal Sites

<table>
<thead>
<tr>
<th>ID</th>
<th>Name</th>
<th>File Restricted</th>
<th>Boundary Restricted</th>
<th>Restrictions</th>
<th>Status</th>
<th>Type</th>
<th>Knowledge Holders</th>
<th>Coordinate</th>
<th>Legacy ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>552</td>
<td>LORD STREET NORTH 2.</td>
<td>No</td>
<td>No</td>
<td>No Gender Restrictions</td>
<td>Registered Site</td>
<td>Ceremonial, Mythological, Water Source</td>
<td>*Registered Knowledge Holder names available from DAA</td>
<td>401874mE: 6477636mN Zone 50 [Reliable]</td>
<td>502917</td>
</tr>
</tbody>
</table>
### List of Registered Aboriginal Sites

<table>
<thead>
<tr>
<th>ID</th>
<th>Name</th>
<th>File Restricted</th>
<th>Boundary Restricted</th>
<th>Restrictions</th>
<th>Status</th>
<th>Type</th>
<th>Knowledge Holders</th>
<th>Coordinate</th>
<th>Legacy ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>3840</td>
<td>BENNETT BROOK: CAMP AREA</td>
<td>Yes</td>
<td>Yes</td>
<td>No Gender Restrictions</td>
<td>Registered Site</td>
<td>Artefacts / Scatter, Ceremonial, Fish Trap, Historical, Man-Made Structure, Mythological, Skeletal Material / Burial, Camp, Hunting Place, Plant Resource, Water Source</td>
<td>*Registered Knowledge Holder names available from DAA</td>
<td>Not available when location is restricted</td>
<td>SD1957</td>
</tr>
</tbody>
</table>
Appendix Five:

SWALSC Reply to PTA Activity Notice
26 February 2019

Miranda Ludlow
Environmental Manager, Infrastructure Planning & Land Services
Public Transport Authority
PO Box 8125
Perth Business Centre WA 6849

By Email: Miranda.Ludlow@ptd.wa.gov.au

Dear Miranda

Activity Notice Response – Morley to Ellenbrook Line Project – Geotechnical Investigation and Construction Activities

Issued pursuant to the Noongar Standard Heritage Agreement (NSHA) between the Public Transport Authority (PTA) and the South West Aboriginal Land and Sea Council (SWALSC), (on behalf of the Whadjuk Agreement Group). We refer to the Activity Notice above, received by the SWALSC on 25 January 2019.

Activity Notice Response under clause 8.3 of the Noongar Standard Heritage Agreement.

<table>
<thead>
<tr>
<th>Clause</th>
<th>Key Statements</th>
<th>SWALSC Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.3(a)</td>
<td>Requirement for Survey.</td>
<td>Yes.</td>
</tr>
<tr>
<td>8.3(d)(i)</td>
<td>Extent that the Activity Program consists of Low Ground Disturbing Activities.</td>
<td>Limited or no low ground disturbing activity.</td>
</tr>
<tr>
<td>8.3(d)(iv)</td>
<td>Estimate of costs to conduct the Survey.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>8.3(d)(v)</td>
<td>Election by SWALSC to contract the Aboriginal Heritage Service Provider (AHSP) or perform the functions of the ABHS.</td>
<td>SWALSC does not elect either to be the Aboriginal Heritage Service Provider or to contract the Aboriginal Heritage Service Provider.</td>
</tr>
<tr>
<td>8.3(d)(vii)</td>
<td>Names and contact details of Aboriginal Consultants for the Survey.</td>
<td>As provided.</td>
</tr>
</tbody>
</table>

To discuss, please contact me at carolyn.fennelle@noongar.org.au or on 93587400.

Yours sincerely

Carolyn Fennelle
Senior Legal Officer
South West Aboriginal Land & Sea Council
<table>
<thead>
<tr>
<th>Name</th>
<th>Mobile Phone</th>
<th>Email Address</th>
<th>Street Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Champion, Andrew (Mr)</td>
<td>0487 974 326</td>
<td></td>
<td>69 Stevens St WHITE GUM VALLEY WA 6162</td>
</tr>
<tr>
<td>Collard, Marion Frances (Ms)</td>
<td>0411 886 214</td>
<td></td>
<td>7 Honour Ave WYALKATCHEM WA 6485</td>
</tr>
<tr>
<td>Jacobs, Joanne Doreen May (Ms)</td>
<td>0449 756 520</td>
<td><a href="mailto:jannejacobs@gmail.com">jannejacobs@gmail.com</a></td>
<td>13 Cromer Gardens Parmelia WA 6167</td>
</tr>
<tr>
<td>Martin, Cheryl Ann (Ms)</td>
<td>0455 961 184</td>
<td></td>
<td>1194 Old Mandurah Rd BALDIVIS WA 6171</td>
</tr>
<tr>
<td>Moore, Brendan (Mr)</td>
<td>0427 200 875</td>
<td><a href="mailto:brendonm@fremantle.wa.gov.au">brendonm@fremantle.wa.gov.au</a></td>
<td>147 Hampton Road SOUTH FREMANTLE WA 6162</td>
</tr>
<tr>
<td>Nelson, Cindy</td>
<td>0407 084 357</td>
<td></td>
<td>Unit 2-11 Wellington St MIDVALE WA 6056</td>
</tr>
<tr>
<td>Ugle, Benjamin Joel (Mr)</td>
<td>0491 388 934</td>
<td><a href="mailto:uglebenny@gmail.com">uglebenny@gmail.com</a></td>
<td>28 Meldrum Way KOONDOOLA WA 6064</td>
</tr>
<tr>
<td>Vagg, Ian Charles (Mr)</td>
<td>0487 297 520</td>
<td></td>
<td>10 Prestige St PINGELLY WA 6308</td>
</tr>
</tbody>
</table>
Appendix Six:

DATA on Site 552
the meeting ground. Aboriginal Consultant #1 requested that LS#1 be preserved as it was sacred and of great importance to him. He was not specific about the boundaries of the 'ceremonial grounds'. No other Aboriginal Consultant reported this site. It was also not reported by Bates (1985) in her description of initiation rites in the Swan Valley. Bates reported a Beedawong (initiate) ceremony ground (S02135) on the banks of the Swan River, near Midland Junction. This camp, known as Wardawardong, has been discussed in a number of reports on the area by McDonald, Hales and Associates (1991; 1992).

**Relationship to Proposed Alignment**

This site is located in the centre of the road reserve for the proposed alignment.

LS#2 Kangaroo Increase and Waugal Site. (GR 401676E 6477596N)

Site Type: Ceremonial and Mythological

Site Dimensions: 10 metre diameter.

A permanent pool surrounded by reeds, blackboys and paperbarks.

**Ethnographic Significance**

Aboriginal Consultant #1 reported the location of LS#2 to the ethnographer and stated that it is sacred because it is a source of fresh water and is therefore a Dugatch (Waugal) dreaming. He said that the wetlands where the Dugatch lives are where the fresh water comes from to fill the water courses. Aboriginal Consultant #1 stated that Mussel Pool (S2195) is the centre of the wetlands here and that all of the other water sources feed into it. This site corresponds to the site described by Aboriginal Consultant #4. However, their descriptions of the site vary.

Aboriginal Consultant #4 reported LS#2 as a Kangaroo Increase Site as well as a Waugal Site. The heroes of the creative epoch, the Dreamtime, left behind power in certain places which could be reactivated to encourage the renewal of plants, animals, people and the natural elements. These are places are known in anthropology as 'increase sites'. Aboriginal Consultant #4 claims that LS#2 is a Kangaroo Increase Site and is important in maintaining the kangaroo population of the area.
Aboriginal Consultant #4 gave the same information as Aboriginal Consultant #1 regarding the associations this site has with the Waugal.

**Relationship to Proposed Alignment**

This site is located in the western half of the road reserve for the proposed alignment. Aboriginal Consultant #4 requested that a 400 metre buffer be maintained around the site, and that during construction some means of protecting the integrity of the site, such as fencing, be provided. Aboriginal Consultant #4 was also concerned that some measures be taken, both during and after construction, to ensure the safety of the kangaroos in Whiteman Park. He suggested that this might take the form of fencing to stop the kangaroos from jumping onto construction sites and the main road.

3.3.3 Wetlands

There are two schools of thought held by Nyungar people regarding the significance of wetlands. One school holds that all sources of freshwater are sacred because the Waugal created them, the other holds that only the specific places where the Waugal still lives are sacred. Aboriginal Consultant #3 expressed views compatible with the former school.

Aboriginal Consultant #3 informed the ethnographer that he saw wetlands and places where water had once been, such as old creek channels, as sacred, as they had all been created by a/the Waugal. He told the ethnographer that a cousin and a nephew of his saw a Waugal in 1961 in the Swan River, next to the Bunbury Bridge, and believes that such creatures continue to inhabit all sources of freshwater. This Aboriginal Consultant requested that as many wetlands as possible be conserved. He requested that if it were only possible to conserve limited parts of the wetlands that these consist of areas where there were larger pools of freshwater, and that 30 metre buffers around these areas be maintained.

Aboriginal Consultants #8 and #9 did not locate any sites during this survey. They stated that they had already covered one section of the proposed alignment,
Site Registry Status

Site ID: 552  Old Site: S02917

Access: ☑ OPEN  □ CLOSED
Status: □ Interim Register  ☑ Permanent Register  □ Archived Data
Gender: No Gender Restrictions

Resolution Details
Resolution Id: 5032  ACMC Meeting Id: 684
Resolution: 92123  ACMC Meeting: 10/10/1995

Site Accession
Section 5(a)  □  Section 39.2(a)  □  Not a Site  □
Section 5(b)  ☑  Section 39.2(b)  ☑  Insufficient Information  □
Section 5(c)  ☑  Section 39.2(c)  ☑
Section 5(d)  □  Section 39.2(d)  □

Entry Date: 11/10/2004

Section 5 Trustee
Section 39.2 Trustee
### REGISTER OF ABORIGINAL SITES

#### Search Criteria

- **Site ID**: 552

#### Disclaimer

Copyright in the information contained herein is and shall remain the property of the Government of Western Australia. All rights reserved. This includes, but is not limited to, information from the Register of Places and Objects (often known as the 'Sites Register') established and maintained under the *Aboriginal Heritage Act 1972* (AHA).

Aboriginal sites exist that are not recorded on the Sites Register, and some registered sites may no longer exist. Consultation with Aboriginal communities is on-going to identify additional sites. The AHA protects all Aboriginal sites in Western Australia whether or not they are registered.

#### Legend

<table>
<thead>
<tr>
<th>Status</th>
<th>Access (&quot;Acc&quot;)</th>
<th>Restriction (&quot;Res&quot;)</th>
<th>II/NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Closed</td>
<td>N No Restriction</td>
<td>Insufficient Info</td>
</tr>
<tr>
<td>P</td>
<td>Open</td>
<td>M Male Only</td>
<td>NA Not a Site</td>
</tr>
<tr>
<td>S</td>
<td>Vulnerable</td>
<td>F Female Only</td>
<td></td>
</tr>
</tbody>
</table>

#### Index coordinates are indicative locations and may not necessarily represent the centre of sites, especially for sites with an access code "closed" or "vulnerable". Map coordinates (Lat/Long) and (Easting/Northing) are based on the GDA 94 datum. The Easting / Northing map grid can be across one or more zones. The zone is indicated for each Easting on the map, i.e. '5000000:250' means Easting=5000000, Zone=50.

Reliable ("R") - The spatial information recorded in the site file is deemed to be reliable, due to methods of capture.

Unreliable ("U") - The spatial information recorded in the site file is deemed to be unreliable due to errors of spatial data capture and/or quality of spatial information reported.

#### Site Details

<table>
<thead>
<tr>
<th>Site ID</th>
<th>Status</th>
<th>Acq</th>
<th>Res</th>
<th>Site Name</th>
<th>Resolution</th>
<th>11/ NA</th>
<th>05</th>
<th>39</th>
<th>Site Type</th>
<th>Additional Information</th>
<th>Informants</th>
<th>Recorders</th>
<th>Easting Northing</th>
<th>Field Code Site No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>552</td>
<td>P</td>
<td>O</td>
<td>N</td>
<td>LORD STREET NORTH</td>
<td>95123</td>
<td>B</td>
<td>B</td>
<td>C</td>
<td>Ceremonial,</td>
<td>Water Source</td>
<td></td>
<td></td>
<td>401815mE</td>
<td>S02917</td>
</tr>
</tbody>
</table>

**Date:** 15/03/1995

[Lantke, Donald (Mr)],

[Valster, Annaliese (Ms)]
Appendix Seven:

DATA on Site 551
Aboriginal Sites
Site Verification Report

Site Identifier: 551
Site Number: S02916

Site Name: LORD STREET NORTH 1

Site Recorder(s): Lantzke, Donald (Mr)
Walster, Annalise (Ms)

Consultation
Person(s) Consulted:

Site Details
Site Considered Dangerous: Yes [ ] No [x]
Site Has Been Restricted: Yes [ ] No [x]
Other Restrictions: No Gender Restrictions

Site Type
- Ceremonial [x]
- Mythological [ ]
- Repository / Cache [ ]
- Fish Trap [ ]
- Man-Made Structure [ ]
- Painting [ ]
- Engraving [ ]
- Modified Tree [ ]
- Artefacts [ ]
- Midden / Scatter [ ]
- Quarry [ ]
- Grinding Patches / Grooves [ ]
- Historical [ ]

Additional Information
- Archeological Deposit [ ]
- Massacre [ ]
- Ochre [ ]
- Birthplace [ ]
- Meeting Place [ ]
- Plant Resource [ ]
- Camp [ ]
- Mission [ ]
- Shell [ ]
- Hunting Place [ ]
- Named Place [ ]
- Rockshelter [ ]
- Natural Feature [ ]
- Water Source [ ]
- Other: [ ]

Before Present Dating:
Site Record Creation Date: 02/7/1998
Last Updated: 23/12/2005
### Search Criteria

**Site ID = 551**

### Disclaimer

Copyright in the information contained herein is and shall remain the property of the Government of Western Australia. All rights reserved. This includes, but is not limited to, information from the Register of Places and Objects (often known as the ‘Sites Register’) established and maintained under the *Aboriginal Heritage Act 1972* (AHA).

Aboriginal sites exist that are not recorded on the Sites Register, and some registered sites may no longer exist. Consultation with Aboriginal communities is on-going to identify additional sites. The AHA protects all Aboriginal sites in Western Australia whether or not they are registered.

### Legend

<table>
<thead>
<tr>
<th>Status</th>
<th>Access</th>
<th>Restriction</th>
<th>I/NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Closed</td>
<td>N</td>
<td>NA</td>
</tr>
<tr>
<td>P</td>
<td>Open</td>
<td>M</td>
<td></td>
</tr>
<tr>
<td>S</td>
<td>Vulnerable</td>
<td>Female Only</td>
<td></td>
</tr>
</tbody>
</table>

### Index Coordinates

Index coordinates are indicative locations and may not necessarily represent the centre of sites, especially for sites with an access code "closed" or "vulnerable". Map coordinates (Lat/Long) and (Easting/Northing) are based on the GDA 94 datum. The Easting / Northing map grid can be across one or more zones. The zone is indicated for each Easting on the map. I.e. ‘50000000:250’ means Easting=5000000, Zone=50.

Reliable ("R") - The spatial information recorded in the site file is deemed to be reliable, due to methods of capture.

Unreliable ("U") - The spatial information recorded in the site file is deemed to be unreliable due to errors of spatial data capture and/or quality of spatial information reported.

### Site Data

<table>
<thead>
<tr>
<th>Site ID</th>
<th>Status</th>
<th>Acc</th>
<th>Res</th>
<th>Site Name</th>
<th>Resolution</th>
<th>59</th>
<th>Site Type</th>
<th>Additional Information</th>
<th>Informants</th>
<th>Recorders</th>
<th>Easting/ Northing</th>
<th>Field Code Site No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>551</td>
<td>P</td>
<td>O</td>
<td>N</td>
<td>LORD STREET NORTH</td>
<td>95123</td>
<td>B</td>
<td>B</td>
<td>Ceremonial</td>
<td>[Lantzke, Donald (Mr.), [Walser, Annaliese (Ms)]</td>
<td></td>
<td>401793mE</td>
<td>S02316</td>
</tr>
</tbody>
</table>

Date: 15/03/1995

© Copyright Government of Western Australia

Report Produced: 30/12/2005 8:04:00 AM by MAH
The ethnographer attended a meeting of the Balloruk People Inc on the morning of 8 April 1995, where consultation took place with the aid of a Main Roads Department map.

The Nyungar Circle of Elders has been consulted directly by the Shire of Swan.

3.3 Ethnographic Survey Findings

In this section both the archival and field research are discussed. In respect to the former, the discussion includes site number, site name and a brief description. The locations of sites recorded during field research have been located using a hand held GPS (Global Positioning System). It is important to note that the AMG coordinates given by a hand held GPS are only accurate to within ±100 metres.

3.3.1 Archival research findings

No ethnographic sites have been previously recorded on the alignment.

3.3.2 Ethnographic Survey Findings

Two new ethnographic sites (LS#1-2) were recorded within the road reserve of the proposed alignment (Figure 5).

LS#1 Ceremonial ‘Initiation’ Ground (GR 401654E 6478891N)

Site Type: Ceremonial and Spiritual.
Site Dimensions: approximately 40 metre radius from the grid reference.
A stand of paperbarks and ti-trees.

Ethnographic Significance.

Aboriginal Consultant #1 believes that LS#1 is a ceremonial site. He believes that this area was an ‘initiation ground’ in the days before his great grandfather. He also reports that this area is ‘sacred’. Aboriginal Consultant #1 reports that the ti-trees around the area are a symbolic representation of some of the old people who used
the meeting ground. Aboriginal Consultant #1 requested that LS#1 be preserved as it was sacred and of great importance to him. He was not specific about the boundaries of the 'ceremonial grounds'. No other Aboriginal Consultant reported this site. It was also not reported by Bates (1985) in her description of initiation rites in the Swan Valley. Bates reported a Beedawong (initiate) ceremony ground (S02135) on the banks of the Swan River, near Midland Junction. This camp, known as Wardawardong, has been discussed in a number of reports on the area by McDonald, Hales and Associates (1991; 1992).

**Relationship to Proposed Alignment**
This site is located in the centre of the road reserve for the proposed alignment.

**LS#2 Kangaroo Increase and Waugal Site. (GR 401676E 6477596N)**
Site Type: Ceremonial and Mythological
Site Dimensions: 10 metre diameter.
A permanent pool surrounded by reeds, blackboys and paperbarks.

**Ethnographic Significance**
Aboriginal Consultant #1 reported the location of LS#2 to the ethnographer and stated that it is sacred because it is a source of fresh water and is therefore a Dugatch (Waugal) dreaming. He said that the wetlands where the Dugatch lives are where the fresh water comes from to fill the water courses. Aboriginal Consultant #1 stated that Mussel Pool (S2195) is the centre of the wetlands here and that all of the other water sources feed into it. This site corresponds to the site described by Aboriginal Consultant #4. However, their descriptions of the site vary.

Aboriginal Consultant #4 reported LS#2 as a Kangaroo Increase Site as well as a Waugal Site. The heroes of the creative epoch, the Dreamtime, left behind power in certain places which could be reactivated to encourage the renewal of plants, animals, people and the natural elements. These are places are known in anthropology as 'increase sites'. Aboriginal Consultant #4 claims that LS#2 is a Kangaroo Increase Site and is important in maintaining the kangaroo population of the area.
Appendix Eight:

Geotechnical Investigations Programme
Abbreviations

TP: Test/Trial Pit using excavator. Ground disturbance 4m x 1m.

BH: Bore Hole using drill rig. Ground disturbance 150mm diameter.

BH-PZ: Bore Hole that is turned into piezometer for groundwater measurement using drill rig. Ground disturbance 150mm diameter.

CPT: Cone Penetrometer Test. Ground disturbance 100mm diameter. No soil brought to surface.

Above-ground vegetation disturbance:

CPT and TP: 8m x 8m.

BH: 12m x 5m.
<table>
<thead>
<tr>
<th>Point_ID</th>
<th>Test_Type</th>
<th>Location</th>
<th>Structure</th>
<th>Easting_PC</th>
<th>Northing_P</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPT006</td>
<td>CPT</td>
<td>Bayswater</td>
<td>Viaduct_Dive</td>
<td>59997.85</td>
<td>267191.13</td>
</tr>
<tr>
<td>CPT005</td>
<td>CPT</td>
<td>Bayswater</td>
<td>Viaduct</td>
<td>59675.18</td>
<td>267207.32</td>
</tr>
<tr>
<td>BH001</td>
<td>BH_PZ</td>
<td>Bayswater</td>
<td>Ramp</td>
<td>59082.11</td>
<td>267212.14</td>
</tr>
<tr>
<td>CPT004</td>
<td>CPT</td>
<td>Bayswater</td>
<td>Portal_section</td>
<td>59565.50</td>
<td>267227.38</td>
</tr>
<tr>
<td>CPT007</td>
<td>CPT</td>
<td>Bayswater</td>
<td>Dive_structure</td>
<td>60091.10</td>
<td>267256.34</td>
</tr>
<tr>
<td>CPT003</td>
<td>CPT</td>
<td>Bayswater</td>
<td>Portal_section</td>
<td>59315.61</td>
<td>267254.77</td>
</tr>
<tr>
<td>BH003</td>
<td>BH_PZ</td>
<td>Bayswater</td>
<td>Dive</td>
<td>60135.28</td>
<td>267315.09</td>
</tr>
<tr>
<td>CPT008</td>
<td>CPT</td>
<td>Bayswater</td>
<td>Tunnel</td>
<td>60169.08</td>
<td>267405.57</td>
</tr>
<tr>
<td>BH004</td>
<td>BH</td>
<td>Bayswater</td>
<td>Tunnel</td>
<td>60170.16</td>
<td>267513.23</td>
</tr>
<tr>
<td>CPT009</td>
<td>CPT</td>
<td>Bayswater</td>
<td>Tunnel</td>
<td>60146.72</td>
<td>267651.49</td>
</tr>
<tr>
<td>BH005</td>
<td>BH</td>
<td>Bayswater</td>
<td>Tunnel</td>
<td>60135.60</td>
<td>267750.23</td>
</tr>
<tr>
<td>CPT010</td>
<td>CPT</td>
<td>Bayswater</td>
<td>Tunnel_Dive</td>
<td>60127.17</td>
<td>267900.21</td>
</tr>
<tr>
<td>BH006</td>
<td>BH</td>
<td>Bayswater</td>
<td>Dive</td>
<td>60122.71</td>
<td>268000.13</td>
</tr>
<tr>
<td>CPT012</td>
<td>CPT</td>
<td>Tonkin_Hwy</td>
<td>Rail_at-grade</td>
<td>60025.24</td>
<td>269243.35</td>
</tr>
<tr>
<td>CPT015</td>
<td>CPT</td>
<td>Tonkin_Hwy</td>
<td>Morley_East_Stn</td>
<td>59797.63</td>
<td>269630.95</td>
</tr>
<tr>
<td>CPT016</td>
<td>CPT</td>
<td>Tonkin_Hwy</td>
<td>Rail_at-grade</td>
<td>59646.49</td>
<td>269887.92</td>
</tr>
<tr>
<td>CPT020</td>
<td>CPT</td>
<td>Tonkin_Hwy</td>
<td>Rail_at-grade</td>
<td>59543.43</td>
<td>272245.83</td>
</tr>
<tr>
<td>BH008</td>
<td>BH</td>
<td>Tonkin_Hwy</td>
<td>Rail_at-grade</td>
<td>59512.52</td>
<td>272736.04</td>
</tr>
<tr>
<td>BH009</td>
<td>BH</td>
<td>Tonkin_Hwy</td>
<td>Rail_at-grade</td>
<td>59508.07</td>
<td>273087.03</td>
</tr>
<tr>
<td>BH011</td>
<td>BH</td>
<td>Tonkin_Hwy</td>
<td>Dive</td>
<td>59506.21</td>
<td>273791.84</td>
</tr>
<tr>
<td>CPT021</td>
<td>CPT</td>
<td>Whiteman_Park</td>
<td>Dive_Tunnel</td>
<td>59509.20</td>
<td>274010.66</td>
</tr>
<tr>
<td>BH012</td>
<td>BH</td>
<td>Whiteman_Park</td>
<td>Tunnel</td>
<td>59511.82</td>
<td>274172.22</td>
</tr>
<tr>
<td>BH013</td>
<td>BH</td>
<td>Whiteman_Park</td>
<td>Malaga_Stn</td>
<td>59515.82</td>
<td>274426.50</td>
</tr>
<tr>
<td>CPT023</td>
<td>CPT</td>
<td>Whiteman_Park</td>
<td>Malaga_Stn</td>
<td>59527.89</td>
<td>274665.75</td>
</tr>
<tr>
<td>CPT056</td>
<td>CPT</td>
<td>Whiteman_Park</td>
<td>Rail_at-grade</td>
<td>59653.92</td>
<td>274836.63</td>
</tr>
<tr>
<td>CPT057</td>
<td>CPT</td>
<td>Whiteman_Park</td>
<td>Rail_at-grade</td>
<td>59809.23</td>
<td>274897.99</td>
</tr>
<tr>
<td>BH014</td>
<td>BH</td>
<td>Whiteman_Park</td>
<td>Overpass</td>
<td>60205.18</td>
<td>274998.33</td>
</tr>
<tr>
<td>CPT024</td>
<td>CPT</td>
<td>Whiteman_Park</td>
<td>Rail_at-grade</td>
<td>60279.98</td>
<td>275014.70</td>
</tr>
<tr>
<td>CPT049</td>
<td>CPT</td>
<td>Whiteman_Park</td>
<td>Rail_at-grade</td>
<td>63364.85</td>
<td>274610.71</td>
</tr>
<tr>
<td>BH016</td>
<td>BH_PZ</td>
<td>Whiteman_Park</td>
<td>Rail_at-grade</td>
<td>63693.66</td>
<td>274610.94</td>
</tr>
<tr>
<td>CPT032</td>
<td>CPT</td>
<td>Whiteman_Park</td>
<td>Rail_at-grade</td>
<td>63914.78</td>
<td>274698.46</td>
</tr>
<tr>
<td>TP014</td>
<td>TP</td>
<td>Whiteman_Park</td>
<td>Rail_at-grade</td>
<td>60499.04</td>
<td>275070.06</td>
</tr>
<tr>
<td>TP015</td>
<td>TP</td>
<td>Whiteman_Park</td>
<td>Rail_at-grade</td>
<td>60744.53</td>
<td>275134.25</td>
</tr>
<tr>
<td>BH015</td>
<td>BH_PZ</td>
<td>Whiteman_Park</td>
<td>Viaduct</td>
<td>62939.95</td>
<td>274631.37</td>
</tr>
<tr>
<td>CPT026</td>
<td>CPT</td>
<td>Whiteman_Park</td>
<td>Henley_Springs_Stn</td>
<td>62315.85</td>
<td>274898.63</td>
</tr>
<tr>
<td>TP017</td>
<td>TP</td>
<td>Whiteman_Park</td>
<td>Rail_at-grade</td>
<td>61961.30</td>
<td>275101.04</td>
</tr>
<tr>
<td>TP016</td>
<td>TP</td>
<td>Whiteman_Park</td>
<td>Rail_at-grade</td>
<td>61539.31</td>
<td>275158.92</td>
</tr>
<tr>
<td>CPT025</td>
<td>CPT</td>
<td>Whiteman_Park</td>
<td>Rail_at-grade</td>
<td>61043.19</td>
<td>275161.84</td>
</tr>
<tr>
<td>CPT034</td>
<td>CPT</td>
<td>Whiteman_Park</td>
<td>Rail_at-grade</td>
<td>64168.03</td>
<td>275001.04</td>
</tr>
<tr>
<td>CPT033</td>
<td>CPT</td>
<td>Whiteman_Park</td>
<td>Horse_Swamp</td>
<td>64051.50</td>
<td>274804.76</td>
</tr>
<tr>
<td>CPT035</td>
<td>CPT</td>
<td>Whiteman_Park</td>
<td>Viaduct</td>
<td>64091.81</td>
<td>276132.05</td>
</tr>
<tr>
<td>BH017</td>
<td>BH</td>
<td>Whiteman_Park</td>
<td>Whiteman_Park_Stn</td>
<td>64037.44</td>
<td>276313.80</td>
</tr>
<tr>
<td>CPT036</td>
<td>CPT</td>
<td>Whiteman_Park</td>
<td>Viaduct</td>
<td>63965.43</td>
<td>276553.20</td>
</tr>
<tr>
<td>CPT037</td>
<td>CPT</td>
<td>Whiteman_Park</td>
<td>Rail_at-grade</td>
<td>63776.72</td>
<td>277309.89</td>
</tr>
<tr>
<td>CPT038</td>
<td>CPT</td>
<td>Whiteman_Park</td>
<td>Rail_at-grade</td>
<td>63817.25</td>
<td>277935.45</td>
</tr>
<tr>
<td>TP021</td>
<td>TP</td>
<td>Whiteman_Park</td>
<td>Rail_at-grade</td>
<td>63762.70</td>
<td>278379.68</td>
</tr>
<tr>
<td>CPT039</td>
<td>CPT</td>
<td>Whiteman_Park</td>
<td>Rail_at-grade</td>
<td>63724.14</td>
<td>279149.10</td>
</tr>
<tr>
<td>CPT040</td>
<td>CPT</td>
<td>Whiteman_Park</td>
<td>Henley_Brook_Station</td>
<td>63543.35</td>
<td>279818.97</td>
</tr>
<tr>
<td>CPT029</td>
<td>CPT</td>
<td>Whiteman_Park</td>
<td>Rail_at-grade</td>
<td>63459.93</td>
<td>280082.27</td>
</tr>
<tr>
<td>CPT047</td>
<td>CPT</td>
<td>Whiteman_Park</td>
<td>Viaduct</td>
<td>63369.69</td>
<td>280552.78</td>
</tr>
<tr>
<td>BH019</td>
<td>BH</td>
<td>Whiteman_Park</td>
<td>Viaduct</td>
<td>63367.77</td>
<td>280829.65</td>
</tr>
<tr>
<td>CPT044</td>
<td>CPT</td>
<td>Whiteman_Park</td>
<td>Viaduct</td>
<td>63363.20</td>
<td>280399.69</td>
</tr>
<tr>
<td>BH018</td>
<td>BH_PZ</td>
<td>Whiteman_Park</td>
<td>Rail_at-grade</td>
<td>63557.01</td>
<td>280421.02</td>
</tr>
<tr>
<td>CPT050</td>
<td>CPT</td>
<td>Ellenbrook</td>
<td>Verdan_Vista</td>
<td>63688.58</td>
<td>282181.27</td>
</tr>
<tr>
<td>BH021</td>
<td>BH_PZ</td>
<td>Ellenbrook</td>
<td>Dive</td>
<td>63845.80</td>
<td>282351.04</td>
</tr>
<tr>
<td>BH022</td>
<td>BH_PZ</td>
<td>Ellenbrook</td>
<td>Ellenbrook_Stn</td>
<td>63990.11</td>
<td>282509.69</td>
</tr>
<tr>
<td>CPT051</td>
<td>CPT</td>
<td>Ellenbrook</td>
<td>Tunnel</td>
<td>64078.16</td>
<td>282604.10</td>
</tr>
<tr>
<td>CPT045</td>
<td>CPT</td>
<td>Whiteman_Park</td>
<td>Gnaragara_Rd_Viaduct</td>
<td>63355.97</td>
<td>281069.88</td>
</tr>
<tr>
<td>CPT048</td>
<td>CPT</td>
<td>Whiteman_Park</td>
<td>Gnaragara_Rd_Viaduct</td>
<td>63353.29</td>
<td>280487.19</td>
</tr>
<tr>
<td>CPT046</td>
<td>CPT</td>
<td>Whiteman_Park</td>
<td>Drumpeyler_Viaduct</td>
<td>63338.76</td>
<td>281392.49</td>
</tr>
<tr>
<td>CPT041</td>
<td>CPT</td>
<td>Whiteman_Park</td>
<td>Drumpeyler_Viaduct</td>
<td>63398.09</td>
<td>281811.49</td>
</tr>
<tr>
<td>Code</td>
<td>Method</td>
<td>Location</td>
<td>Feature</td>
<td>Depth (mm)</td>
<td>Dip (m)</td>
</tr>
<tr>
<td>---------</td>
<td>--------</td>
<td>-------------------</td>
<td>--------------------</td>
<td>------------</td>
<td>----------</td>
</tr>
<tr>
<td>CPT043</td>
<td>CPT</td>
<td>Whiteman_Park</td>
<td>Drumpellier_Viaduct</td>
<td>63339.84</td>
<td>281601.10</td>
</tr>
<tr>
<td>BH020</td>
<td>BH</td>
<td>Whiteman_Park</td>
<td>Drumpellier_Viaduct</td>
<td>63335.30</td>
<td>281499.52</td>
</tr>
<tr>
<td>BH007</td>
<td>BH_PZ</td>
<td>Ellenbrook</td>
<td>Underground_Turnaround</td>
<td>64242.83</td>
<td>282984.77</td>
</tr>
<tr>
<td>CPT053</td>
<td>CPT</td>
<td>Ellenbrook</td>
<td>Underground_Turnaround</td>
<td>64217.54</td>
<td>282888.67</td>
</tr>
<tr>
<td>CPT052</td>
<td>CPT</td>
<td>Ellenbrook</td>
<td>Underground_Turnaround</td>
<td>64163.56</td>
<td>282755.32</td>
</tr>
<tr>
<td>CPT055</td>
<td>CPT</td>
<td>Ellenbrook</td>
<td>Underground_Turnaround</td>
<td>64273.10</td>
<td>283102.98</td>
</tr>
<tr>
<td>CPT028</td>
<td>CPT</td>
<td>Whiteman_Park</td>
<td>Viaduct</td>
<td>63048.30</td>
<td>274610.76</td>
</tr>
<tr>
<td>BH023</td>
<td>BH_PZ</td>
<td>Whiteman_Park</td>
<td>Tunnel_under_road</td>
<td>59559.03</td>
<td>274736.78</td>
</tr>
<tr>
<td>CPT058</td>
<td>CPT</td>
<td>Whiteman_Park</td>
<td>Malaga_St</td>
<td>60013.05</td>
<td>274948.72</td>
</tr>
</tbody>
</table>