REPORT OF AN ABORIGINAL HERITAGE SURVEY FOR A PROPOSED TELSTRA FIBRE OPTIC CABLE CERVANTES TO WONGONDERRAH, WESTERN AUSTRALIA

A report prepared for SWALSC upon behalf of Telstra

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DISCLAIMER

All of the information contained in this report is believed to be correct and accurate at the time it was recorded. The author does not take responsibility or accept any liability for errors or omissions contained in the report based upon information supplied by others.

*Note: This report, in terms of its assessment under section 5 of the Western Australian Aboriginal Heritage Act 1972, should be read in conjunction with the archaeological report by O’Reilly (2013).

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GLOSSARY OF TERMS

The Proponent – Telstra
The Consultant – Brad Goode & Associates Pty Ltd
AHA – Western Australian Aboriginal Heritage Act 1972
ACMC – Aboriginal Cultural Material Committee
CHMP – Cultural Heritage Management Plan
DAA – Department of Aboriginal Affairs
DEC – Department of Environment and Conservation
EPA – Environmental Protection Authority
NTC – Native Title Claim
SWALSC – South West Aboriginal Land and Sea Council
TP – Telstra Peg
EXECUTIVE SUMMARY

Telstra (‘the proponent’) is seeking to lay new fibre optic cable between the Cervantes Telstra Exchange and the Wongonderrah Regenerator on the Brand Highway, in the Shire of Dandaragan, Western Australia.

The proponent wishes to determine whether any sites or places of Aboriginal heritage significance, as defined by section 5 of the Western Australian Aboriginal Heritage Act 1972 (AHA), will be affected by this proposed work thereby fulfilling their obligations under AHA.

Specifically the fibre optic cable installation was planned to be trenched and ploughed into the road reserve along Aragon Street and Seville Street in a south easterly direction north of Lake Thetis to Indian Ocean Drive, south east through the Nambung National Park and heading east along Wongonderrah Road to the Brand Highway, a distance of 44km.

The scope of the survey was amended on the 8th of May 2013 as the Department of Environment and Conservation (DEC) would not allow access to the Nambung National Park. The amendment the cable path now follows Seville Street in a northeast direction until it reaches private property adjacent to the Beekeepers Reserve, where it turns southeast, then south, then east and exits on Nambung Road. From Nambung Road the cable runs parallel with Nambung Road along a power line corridor to Mumbinea Road and then turns south, then east to re-join the original line on Wongonderrah Road. The amended section is a distance of 31km (see Figure 1: Location Map).

A search of the DAA Aboriginal Sites Register was conducted for this project on the 13th of March 2013, in order to determine if there were any previously recorded Aboriginal heritage sites that would be affected by the project proposal (see Appendix 1: Sites Register Searches). A second search was conducted on the 27th of June 2013 for the amended route. These Sites Register searches revealed there to be no registered sites or places located within the survey corridor for both routes.

As a result of the ethnographic consultations conducted in April 2013 and July 2013 one new ethnographic site of significance as defined by section 5b and 32.2b and 39.3 of the AHA was recorded and several places with significant mythological values were reported.

Lake Thetis (at Cervantes) was identified to contain the eggs of the ‘Waakgardy’ as represented by Stromatolite’s. A historical camping area and a suspected shell midden were also reported to the southwest of the lake and to the north (see Appendix 3 for a map of the sites extent).

In terms of its significance ‘Lake Thetis’ is reported to be a part of a regional Rainbow Serpent (Waakgardy) songline. Several other places located on this songline were reported but could not be fully recorded as they were some distance away from the survey area and were outside of the scope of this project.

In relation to this songline and places reported, the Yued informants advised that it is known to them that the Waakgardy came from the north and created Mount Lesueur, rested in Lake Thetis and laid its eggs in the lake before forming the islands off Jurien Bay. The Waakgardy then moved down the coast and cut through the land to create the Nambung River. The Waakgardy then went across to Dandaragan and finished in the hills there. The eggs in Lake Thetis are represented by the Stromatolite’s. The traditional owners also reported Lake Thetis northern shores contains shell middens and that the surrounds of the lake was a Yued camping area.

As a result of this report the Yued native title claim group requested that Lake Thetis be reported to the DAA to be registered as a site under section 5b, 39.2b and 39.3 of the AHA.
As an outcome of the survey the traditional owners advised that it was their view that Mount Lesueur, the Nambung River, the Pinnacles, and several hills near Dandaragan, Coonmadodo Swamp, Bullfrog Well, and Cockleshell Gully were also sites within the meaning of section 5 of the AHA.

However as these places specific locations and extents could not be fully recorded during this survey there is at present insufficient information for these places to be registered under the AHA. Further and more detailed ethnographic work would be required in order for these places to be assessed as sites within the meaning of section 5 of the AHA.

SWALSC who represent the Yued native title group in heritage matters may wish to consider commissioning this work to support this registration.

During the survey the Yued representatives identified that all the waterway crossings truncated by the fibre optic cable to have generalised significance in association with the Rainbow Serpent beliefs (Waakgardy) and requested that proprietary rituals and monitoring be conducted at these locations to mitigate effects to cultural values (see Table 1: Monitoring Areas).

During the survey no sites of significance as defined by section 5 of the AHA were determined to be affected by the cable path or the amended cable path.

As a result of this ethnographic Aboriginal heritage survey it is recommended that the DAA register Lake Thetis at Cervantes as a site of significance as defined by section 5b, 39.2b and 39.3 of the Western Australian Aboriginal Heritage Act 1972.

As this site will not be affected by the installation of the fibre optic cable proposed it is recommended that Telstra can proceed with their work with no management required under the AHA in relation to this site.

It is further recommended that Telstra give consideration to the following management requests of the Yued WC97/71 native title claim group representatives to conduct proprietary rituals and monitoring where the cable will intersect watercourses that are ephemeral tributaries of the Nambung River.

It is further recommended that SWALSC give consideration to commissioning further ethnographic work to assist the Yued native title claim group to register Mount Lesueur, the Nambung River, the Pinnacles, Coonmadodo Swamp, Bullfrog Well, Cockleshell Gully and several unnamed hills near Dandaragan that have been reported to be sites of significance located upon a regional songline known to run through the native title claim area.

Without this further work the information to date would unlikely meet the definition of a site within the meaning of section 5 of the AHA. However should this further work be conducted it is highly likely that these places would be defined as sites in relation to section 5 and afforded the protection of the Act.
REPORT OF AN ABORIGINAL HERITAGE SURVEY FOR A PROPOSED TELSTRA FIBRE OPTIC CABLE FROM CERVANTES TO WONGONDERRAH, WESTERN AUSTRALIA.

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REPORT

Report of an Aboriginal Heritage Survey for a Proposed Telstra Fibre Optic Cable from Cervantes to Wongonderrah, Western Australia

ISSUE

Telstra (‘the proponent’) is seeking to lay new fibre optic cable between the Cervantes Telstra Exchange and the Wongonderrah Regenerator on the Brand Highway, in the Shire of Dandaragan, Western Australia.

The proponent wishes to determine whether any sites or places of Aboriginal heritage significance, as defined by section 5 of the Western Australian Aboriginal Heritage Act 1972 (AHA), will be affected by this proposed work thereby fulfilling their obligations under AHA.

REPORT OBJECTIVES

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

To report on consultations held with representatives of the Yued WC97/71 native title claim group in order to determine if any new Aboriginal Heritage sites or places will be affected by the above project proposal.

To report upon management recommendations should any sites of significance as defined by section 5 of the AHA be identified to be affected by the installation of the fibre optic cable.

To report upon significance assessments of the sites or places should the proponent be required to make application under section 18 of the AHA for consent to use the land that may contain an Aboriginal site.

BACKGROUND

On the 15th of January 2013, Mr Sean O’Hara from the South West Aboriginal Land and Sea Council (SWALSC), on behalf of Telstra, requested that Brad Goode & Associates Pty Ltd conduct a ‘Site Avoidance’ Aboriginal heritage survey for the proposed installation of a fibre optic cable from the Telstra Exchange in Cervantes to the Wongonderrah Telstra Regenerator on the Brand Highway at Cooljarloo.

Specifically the fibre optic cable installation is planned to be trenched and ploughed into the road reserve from the Telstra Exchange near the intersection of Aragon Street and Seville Street in Cervantes in a south easterly direction passing to the north of Lake Thetis to Indian Ocean Drive. The cable path then runs south along the road reserve of Indian Ocean Drive before turning to the south east through the Nambung National Park and heading in an easterly direction adjacent to Wongonderrah Road and terminating at the Telstra Regenerator south of the Wongonderrah Road and Brand Highway intersection. The cable path comprises a distance of 44km.

A clearing corridor of 20m is defined. Roads and watercourses would be directionally drilled and rock would be sawn. The cable would be installed with a bulldozer with a plough. Following the installation the vegetation would be allowed to regrow, with the cable marked with white cable identification pegs.
As a result of this scope of work the archaeological survey was conducted by Mr Thomas O’Reilly (Senior Archaeologist) and assisted by Mr Brendan Moore (Yued representative) between the 17th and 20th of March, 2013.

The ethnographic consultations were conducted by Mr Brad Goode (Anthropologist) with the assistance of Ms Lisa Butcher (Ethnographic Assistant) and ten representatives of the Yued WC97/71 native title claim group, on the 21st of March, 2013.

The scope of the survey was amended on the 8th May 2013. Telstra was advised by the DEC that it could not put the cable through the Nambung National Park and the Nambung Beekeepers Reserve.

As a result of this amendment the cable path will now begin from a pit on Seville Street in Cervantes and follow Seville Street in a northeast direction to a firebreak between private property and the Beekeepers Reserve then turning to the southeast, then south, then turning east and exiting on Nambung Road. From Nambung Road the cable runs parallel with Nambung Road along a power line corridor to Munbinea Road and the turns south, then east to re-join the original line on Wongonderrah Road. The amended section is a distance of 31km.

As a result of the amended scope the archaeological survey was conducted by Mr Thomas O’Reilly (Senior Archaeologist) and assisted by Mr Chris Shaw (Yued representative) between the 24th and the 26th June 2013.

The ethnographic consultations were conducted by Mr Brad Goode (Anthropologist) with the assistance of Ms Lisa Butcher (Ethnographic Assistant) and ten representatives of the Yued WC97/71 native title claim group, on the 5th of July 2013.

During all surveys Mr Steve Hirning, Mr Chris Holloway or Mr Tony Fairbrother from Telstra assisted the survey teams in the field.
LOCATION

Figure 1: Location of the survey area.
ETNOGRAPHIC & HISTORICAL BACKGROUND

TRADITIONAL NYUNGAR CULTURE

The generic term Nyungar (or Noongar and Nyoongah) means ‘man’ or ‘person’, and is used by Nyungars to distinguish themselves (in linguistic and other terms) from other Indigenous people to the north (Yamatji) and east (Wangkayi, or Wongi) of a line roughly from Jurien Bay to Mullewa to Israelite Bay, and from European ‘strangers’ (Wetjala, or wadjella) (Berndt 1980: 81, Tilbrook 1983).

Thus the south-west of Western Australia is considered to form a distinct cultural bloc defined by the distribution of the Nyungar language. Before Nyungar was used as a group or linguistic name the pioneer anthropologist Daisy Bates reported that south-west people recognised themselves, their language and culture, as ‘Bibbulmun’ (Bates 1985). Bates considered that the Bibbulmun were the largest homogenous group in Australia.

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

In his 1933 reminiscences, the pioneer settler J.E. Hammond described the Aboriginal people of the south-west as

... one big tribe. Their territory was bounded on the west by the coast line from Perth to some distance east of Albany, and on the east side by a sort of zig-zag line from east of Albany to Perth. There was a no-man’s-land of some few miles in width between them and the next tribe (Hammond 1933: 16).

In 1974, the South Australian Museum ethnologist Norman Tindale commented that in Hammond’s first-hand account, his “boundaries and his vocabularies show that seven tribes, as recognized in this work, were included, namely the Whadjuk, Pindjarup, Kaneang, Wardandi, Pibelmen, Minang and Koreng” (Tindale 1974: 142).

Tindale himself (1974) identified thirteen ‘tribal groups’ including the Yued – which he described as an alternative name for Juat – in the south-west, based on socio-linguistic boundaries and minor dialect differences. The Nyungar or Bibbulmun people of the south-west were a distinct group in that their initiation practices varied markedly from their desert and semi-desert dwelling neighbours. Unlike the desert people, the Nyungars did not practise circumcision or sub-incision, following instead a ritual of nasal septum piercing and scarring of the upper body (Bates 1985, 151-162). The people who followed these socio-religious practices have been described in Berndt and Berndt as being “‘true’ South-West Aborigines” (1979: 81).

Bates (1985: 46-51) referred to Nyungar speakers as the Bibbulmun nation occupying the coast between Jurien Bay and a point east of Esperance, while Tindale (1974: 142, 246, 248, 255) was more specific in describing the “Pibelmen” (alternative name Bibbulmun) as inhabiting the area between the Blackwood and Warren Rivers, east to Gardner River and Broke Inlet, on the Scott River and inland to Manjimup and Bridgetown.

The area to the north of what came to be known as Perth, and likewise the Swan River, was associated with the Yued sub-group (Berndt 1980: 82), when European colonisers and missionaries arrived in the 19th century (Moore 2006 [1832]: 182). A century later, Tindale described the Juat/Yued territory as located “at Gingin, Moora, New Norcia, Moore River, and Cape Leschenault; north to about Hill River; inland to near Miling and Victoria Plains” (Tindale 1974: 243).
This territory, Tindale said, covered about 6,500 square miles (16,835 sq. km.). Other alternative names for its people included:

New Norcia tribe, Minnalyungar (general name given by northerners, means “southern people”), Jaburu-jungara (Whadjuk name, where Jaburu = north), Tirarop (one of the terms of their social organization), Jabanwongi (name applied to language) (Tindale 1974: 243).

Tindale’s sources for this information included Daisy Bates, the founding abbot of the New Norcia Benedictine Mission, Dom Rosendo Salvado, and a pioneer of the Victoria Plains district, H.J. Monger. Salvado and Monger were informants for E.M. Curr’s *The Australian Race*, which was the first major attempt at describing and categorising all the Indigenous peoples of Australia (Tindale 1974: 243; Curr 1886 vol. 1: 318-323).

For the Yued as for other Indigenous groups, the natural world was a projection of the human world in which ritual affiliations came through an individual’s father and such descent groups focused on specific totemic sites in defined country (Bates 2004: [1938], Tindale 1976). When Europeans arrived, this structure of identity and meaning was seriously damaged but not totally destroyed. In other parts of Aboriginal Australia, according to the W.A. anthropologist Kevin Shaw,

the answer to the question ‘who has the right to discuss Aboriginal sites in this region?’ will be framed in terms of the category “traditional owner”. The category can be variously defined at the local level, but usually includes membership of a small group based on the family and on:

1. Place of birth;
2. Patrilineal influences (matrilineal links may be emphasised in some localities);
3. Initiation into the region’s religious lore (Hard Law)

Nowadays no such category based on these criteria exists at the local level in Perth and surrounding environs. Nevertheless, specific persons in most areas are seen by their fellow Nyungars [sic] as the “right ones to talk about Aboriginal site issues”. The question now arises – on what legitimate basis do these people acquire or earn the role of spokespersons? (Shaw: 1990: permission granted to quote private advisory document).

For Shaw, and for other anthropologists including Dr Barrie Machin with considerable experience working with Nyungar people, “the central element is a long association with country, but more than that, the spokesperson must know it intimately and be able to demonstrate this knowledge” (Machin 2001: 49).

The former governor general and Federal Cabinet minister Sir Paul Hasluck was also a trained historian whose *Black Australians* (1942) was the first serious attempt to analyse the 19th century relationship between Nyungar (and other WA Aboriginal) people and European settlers (Reece 1984: 133). Hasluck, who grew up among Nyungars, commented in 1980 that:

A further outcome of historical events since the first European settlement is that the composition of the Aboriginal population in most places now is very different from what it used to be … Over the years, partly through voluntary movement and partly as a result of official action in bringing people from various parts of the colony into settlements and institutions, the tribal and cultural backgrounds of the population are also mixed. They are not the ‘old’ Aborigines but the ‘new’ Aborigines. Often when one of their spokesmen talks - and talks sincerely and feelingly - of ‘the ways of our people’, he is not in anthropological fact talking about the society, the traditions, the sites or any practices of the Aborigines who inhabited the South-West before 1829. He
is talking of a sense of identity, and of the ideas about their own life which have grown up among these ‘new’ Aborigines in recent years (Hasluck 1980: xxiii).

If Hasluck was correct, then while many heritage reports dealing with Nyungar people have usually dwelt at length on anthropological matters such as totemism and moieties based on animal or bird names such as white cockatoo or crow, and with territorial and Dreaming tracks, it seems meaningless to continue to do so in detail except as points of historical curiosity when dealing with Nyungar people who by their own admission in many cases no longer have other than fragmentary consciousness of many such matters.

In her 2002 guidelines for the Western Australian Aboriginal Cultural Material Committee, however, Linda Villiers noted that the relationship between rivers and other water sources and the associated journeys and activities of the Waugal remained at the core of Nyungar spiritual and religious beliefs, and were the basis for consistent concerns among Aboriginal consultants whenever the issue of rivers was considered. These concerns were “most often expressed in the conditions that are attached to section 18 permits [of the Aboriginal Heritage Act 1972 to disturb sites] and form a common theme.”

Ms Villiers noted that “the majority of [section 18] decisions made are couched in terms of giving agreement for development by recognising the best interests of the wider (non-Aboriginal) community.” There was also, however, “an implicit feeling of resignation to the damage already caused by developments to and on the [Swan] river, as well as the continued lack of understanding on the part of the wider community of the meaning of healthy rivers and waters to the physical and spiritual well-being of each and every Aboriginal person” (Villiers 2002: 6). That the Waugal remains firmly part of modern Nyungar consciousness is further indicated by Chantelle Corbett’s ‘The Wagyl’, in the 2000 anthology of Aboriginal writing, Those Who Remain Will Always Remember.

Conversely, however, comments in 1998 by the anthropologist Dr Edward McDonald are also relevant here. According to Dr McDonald, a ‘cult of the Waugal’ had arisen from feedback between heritage research and contemporary cultural revitalisation, as Nyungar people “urgently applied themselves” to bringing traditional links to country into relationship with current social, economic and political developments in the south west of WA (McDonald et al 1998: 15)

According to Daisy Bates, the Waugal was:

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

Among the Yued of the Moora area, the Waugal is associated particularly with the Moore River, and the name Moora itself is said to be derived from the Yued name for a permanent pool in the river, a place of “good spirit”. A historian of the Moora area has recorded the following story:

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

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

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

The Yued group, like other Aboriginal groups, travelled seasonally within their land, between the Coastal Plain and the Dandaragan Plateau, and exercised a variety of skills such as firing of vegetation and making implements, such as spears and boomerangs to produce food resources. Tracks were established throughout the region, natural springs were extended and wells were developed by the Yued as they utilised resources within their range according to their “own unique concept of land ‘ownership’” (McConnell, et al. 1993: 8).

Relating to the importance of watercourses, ethnohistorical evidence attests that these places served historically as being ideal places for the Yued group to gather, as McConnell (1993) writes:

Generally, Aborigines of the Yued and Amangu “tribes” gathered into their larger sub-tribal groupings during the summer and early autumnal months, having gradually moved in the spring from the Plateau across the Plain to the Coast. Here they tended to locate themselves along swamps and estuaries, where fish were plentiful and where freshwater turtles, frogs, waterfowl, snakes, and lizards were also available. During this time, they fired the vegetation, facilitating the capture of game (McConnell, et al 1993: 8).

Regarding the interaction between groups of the Bibbulmun, Bates (1985) noted that:

Between all these people there was constant intercourse from time immemorial. They assembled at any point between Augusta (Cape Leeuwin) and Cockleshell Gully (Jurien Bay district) for various purposes, either when a certain local food was ripe, or when the spawning season arrived or the swan nesting season, or warrain (edible root) season, etc.; there was in fact a main irregular highway north and south, with branches eastward here and there over the hills wherever relationships extended (Bates 1985: 48).

HISTORY

In terms of European contact, the history of the Yued people (Tindale 1974: 243) began in the 17th century, as in other coastal parts of Western Australia, through the agency of the Dutch United East India Company (Vereenigde Oost-Indische Compagnie, V.O.C.), whose ships were involved in the spice trade with the Indonesian archipelago. In most cases V.O.C. ships ventured too far eastwards while bound from the Cape of Good Hope to ports such as Batavia (now Jakarta) and Surabaya in Java. By one account at least four such ships were in the vicinity of what was later known as the Moore River mouth between 1656 and 1658, and crew members from one vessel, the Emmeloort, are said to have met some Indigenous inhabitants while venturing up to three miles (5 km) inland (anon. thesis 1955: 1)
However a proposed Dutch colony along the south coast in the early 18th century never eventuated (Klaassen 2005: 310-311); the first European settlers at Swan River in 1829 were British – part of their motivation being to keep the French out (Crowley 1962: 484). The Dutch had seen little trading potential in this country and hence did not seek to colonise or explore far inland, and it was not until the arrival of British soldiers and convicts at King George Sound (Albany) in 1826 and colonists at Swan River three years later that significant Nyungar-European interaction began (Battye vol. I 1913: 66-70, 80-88).

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

Moore’s first meeting with an Indigenous inhabitant of the Moora district involved a man named Bingal, of whom Moore said it was ...

...gratifying to record an instance not only of kindness and good fellowship on his part, but of his reliance on the good faith and friendship of white men, whom he now saw for the first time (De Burgh 1976: 5).

This was at a place on the river about 90 miles [145 km] north of Millendon, and just west of the present Moora townsite; Moore considered it some of the best country he had seen in the colony (ibid.; Laurie 1995: 2).

George Grey, later governor of South Australia and New Zealand, formed a similar opinion of the western Yued territory when he passed through it in 1839 on his way to Perth after being shipwrecked at the mouth of the Murchison River. The yam fields (dioscorea sp.) he saw actually extended to the Victoria Plains and Bindoon-Gingin areas; Grey formed the opinion that “more had been done here to secure a provision from the ground by hard manual labour than I could have believed it in the power of uncivilised man to accomplish” (Grey 1841 Vol. II: 12).

Later settlers in these areas used these yam fields as indications of fertile soils suitable for European-style agriculture (Hallam 1979: 13).

The first permanent settlers in the Moora area arrived in 1846, by which time pastoralism had already begun, with people from Toodyay running sheep in the care of shepherds. Gerald de Courcy Lefroy and his brother Anthony had already reconnoitred the country before taking out a 4,000 acre (1620 ha) lease they named Walebing (Laurie 1995: 4).

While on their way to their new property, on the Victoria Plains, the brothers “stopped close to the Priests ... They are foreigners ... They sleep in the open air ... A rum set” (Lefroy 2009: 82). This unflattering description of, among others, Dom Rosendo Salvado, the founder of the Benedictine Mission at New Norcia, was no doubt coloured by the fact that the Lefroys were Irish Ascendancy Protestants, traditionally suspicious of Roman Catholic priests and “foreigners” in general.

Salvado at that time had only just arrived in the Swan River colony from his native Spain. Part of the reason for De Courcy Lefroy’s dismissive attitude is that Salvado was initially trying to
save the souls of the Yued people and convert them to Christianity by sharing their nomadic life in the open air; it is on that basis, according to the editor and translator of his diaries, the Jesuit E.J. Stormon, that

...we largely owe his intimate knowledge of their ways and outlook; he then decided that it would be more effective to build a monastic centre, with a dependent village, and encourage his black friends to settle down as landholders in the vicinity. But nomads do not easily become farmers, and, although some promising beginnings are recorded in the Memorie [Salvado’s diaries], the New Norcia Aborigines never really established themselves continually on the land (Stormon in Salvado 1977: xii).

As elsewhere, the “rapid outgrowth” of the European colony broke up tribal organisation, while

... inroads of measles and other diseases against which they had no immunity sadly reduced their numbers. The result was that Salvado had to work through an inter-tribal society drawn from widely separated districts. Even so, his Mission flourished greatly for many years, helped by the various legislative measures for the protection of Aborigines which he urged upon the Western Australian Government. Long after his death the native bands and singers of New Norcia were famous, and many of the men turned out to be fine stockmen and at least good occasional farm workers (ibid.)

This appreciation of Salvado is endorsed to a large extent by the late professor of anthropology at the University of Western Australia, Ronald Berndt:

Bishop Salvado was a man of his own times: his attitudes and approach to the immediate problems facing him were reflective of those more generally held. But they also expressed more than this – he was intelligent and of an enquiring mind. On one hand he wanted to know more about Aborigines – not simply because this was useful in terms of evangelization, but because he saw them as being theoretically important. On the other hand, he was interested in them as persons, and had an appreciation of at least some areas of their socio-cultural life; and he was concerned about their contact with the settlers and about their place, economically, in the emergent European-dominant society (Berndt in Salvado 1977: 267-268).

As far as the Indigenous inhabitants of the Moore River and Moora areas generally were concerned, the early settler practice of paying Aboriginal people with food, tea and tobacco was a major disruption to traditional life there as elsewhere. Small amounts of flour or sugar would frequently be exchanged for services such as firewood collecting or fetching water. This source of ready food attracted the Aboriginal people into fringe dwelling camps; while they maintained their diet with bush foods and hunting they became increasingly dependent on European foods.

This dependency increased as the settlers cleared more land and further encroached on the Aboriginal means of survival, and ultimately put an end to their traditional economies. As the settler demand for labour increased, Aboriginal people were employed as farm and domestic workers in exchange for goods such as flour, sugar and tobacco. While still practising some aspects of their economies and culture, the fully traditional life of the Yued Nyungar people had ended by the turn of the century (Berndt 1980: 87).

Desire for sugar, flour and other White foods could have even worse consequences in some cases. George Fletcher Moore was involved in his legal capacity in the case of two Nyungar men, Molly Dobbin and Tyoocan, sentenced to imprisonment for stealing flour, sugar and other items in 1838; it was Molly Dobbin’s sentence of seven years which was a major factor in the decision to set up the Aboriginal prison on Rottnest (Moore 2006 [1838]: 446, 447ft). By one account, in Fremantle 40 years later it was still not unusual to see a newly-released Aboriginal
prisoner from Rottnest “shivering half naked in the in the street covered only by a striped shirt and a blanket” (Berson 1978: 39).

The lot of the Yued people generally did not improve with the coming of the new century. Salvado had died in retirement in Rome in 1900; by that time the Benedictines, while still present at New Norcia, were starting to concentrate their missionary efforts in the north of Western Australia, establishing a mission at Drysdale River, now known as Kalumburu, in 1908. There were then “residing at New Norcia and its outstations, Marah and Wyening, about 200 aborigines and half-castes [sic]”, according to Salvado’s successor, Father Fulgentius Torres (Battye vol. 1 1913: 61).

While these people may still have been reasonably well treated, the Aborigines Act of 1905 brought all Western Australian Aboriginal people – including those of the part-descent – under government controls which restricted virtually every aspect of their daily lives – their movements, employment, consumption of alcohol, and even who they could and could not marry (Haebich 1992: 83-89). In Moora the situation became such that in 1912 several local Aboriginal families sent a petition to the State Government complaining about the Act and the conditions under which it forced them to live. They could not, they said, even enter a refreshment booth when travelling by train for fear of being arrested by the police. The petition was ignored (Laurie 1995: 84).

At this time many Moora Aboriginal people lived in a camp within the town; without running water or toilets, conditions there were such that they gave impetus to plans in 1915 by the newly-appointed Chief Protector of Aborigines, A.O. Neville, for a major overhaul of the entire Aboriginal situation in Western Australia. In short, what Neville envisaged in the Moora area was the setting up of a special reserve on the site of a tradition Aboriginal camping ground known as Palm Flats on the Moore River at Mogumber (Laurie 1995: 84-86; anon. thesis 1955: 2-3; Haebich 1992: 144).

Ultimately in 1917 approval was given for a “Native Reserve” of 9,600 acres (3,885 ha) on the banks of the Moore River; the “Moore River Native Settlement” was to accommodate 200 men, women and children who would be taught farming and domestic skills and would ultimately, Neville hoped, become self-sufficient (Laurie 1995: 86; anon. thesis 1955: 5-6). As one historian of the place has commented, however, it

...was essentially to be a penal settlement where young people were sent for a variety of reasons (eg crimes committed while under the influence of liquor). Also, children who had been taken from their parents because of inability to care for them, were sent to Moore River for education and protection. Added to these were the indigent natives and their families who, for want of a better place to go, chose the Reserve (anon. thesis 1955: 5).

Given these unpromising beginnings, government indifference and chronic under-funding of Neville’s department, it is not surprising that the subsequent history of the settlement is largely dismal, particularly once the enforced placement of Aboriginal people there – some of them from the so-called Stolen Generations – began to involve areas outside Moora. As the official historian of Moora, Maxine Laurie, has noted:

Inmates were sent from all over Western Australia and all mixed together with no regard for tribal differences or social problems. Families were broken up and many lost touch with each other. Children were frequently assigned new names on arrival and many never knew their real names or who their families were. Even for those whose parents resided within the camp, official contacts were very limited and closely supervised (Laurie 1995: 172).

During the Great Depression, the Aboriginal unemployed received a lower sustenance rate than their “white” counterparts, and the years 1936-1948 were a particularly oppressive period for
Nyungar people as legislation aimed at assimilating those of the part-descent into the “white” community split up families and caused children to be taken to designated reserves including Moore River.

The Second World War indirectly improved the lot of some Aboriginal people in outback areas of Australia such as the Pilbara and the Northern Territory, as White servicemen entered these areas to counter the threat of Japanese invasion. Many such servicemen, who included some Communists, were horrified at the treatment of Aboriginal station workers and assisted them in organising themselves for the first time so that eventually they would gain the same pay and conditions as white workers, and some would be granted land rights (Hess 1994: 66-67).

But at Moore River and in Moora little changed, except that the settlement was handicapped even further by the absence of experienced men. As a thesis on the Moore River settlement noted:

> Right throughout the history of the settlement, one of the main problems was one concerning staff. There was considerable difficulty in attracting the right type. More often than not it was the labourer, who wanted to earn some wages fairly easily and who did not have the welfare of the natives at heart that was the cause of the trouble (anon. thesis 1955: 17)

In the Moora district generally, farmers made greater use of Aboriginal labour in the early 1940s as White men joined the armed services, but the historian Anna Haebich’s assessment was that most Aboriginal people, in the Midlands area as elsewhere in the south-west in the same period, remained

> ... trapped in a cycle of poverty characterised by long periods of unemployment, deplorable living conditions, malnutrition, disease and premature death. Their children were growing up without schooling or vocational training and they had few prospects of breaking out of this cycle (Haebich 1992: 356).

Conditions improved after 1944 when some Aboriginal people became eligible for full citizenship rights and the social services available to other Australians, provided that these new “citizens” severed their connections with other Aboriginal for whom full citizenship did not become a reality until the 1960s.

In Moora, physical conditions for Aboriginal people began to improve in the 1960s, particularly with the construction of Housing Commission dwellings specifically for Aboriginal people, but by Maxine Laurie’s account “the majority of Aborigines were still unable to break the cycle of unemployment and living conditions remained poor for many years” (Laurie 1995: 259).

For Aboriginal people – Yued descendants and others – the passing of the *Native Title Act 1993* and subsequent amendments have since presented a legal need to define boundaries that conform to native title claimant criteria, meaning there is now a continuous and dynamic re-drawing of the boundaries of the ‘country’ with which Nyungar families associate themselves. While extant boundaries reflect perceived traditional boundaries to some extent, they may also reflect the history of disruption that has prevailed for most Nyungar families since European settlement began. Within the Aboriginal community there is a lack of consensus about the exact boundaries of each family’s and larger tribal group’s ‘country’, and there are often disagreements over areas of overlapping interests.
ARCHIVAL RESEARCH

Archival research involved an examination of the DAA Sites Register, a review of any relevant site files and a review of any unpublished ethnographic reports that relate to the survey area, Western Australia.

SITES REGISTER SEARCH

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

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

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

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

In relation to this survey a search of the DAA Aboriginal Sites Register was conducted for this project on the 13th of March 2013, in order to determine if there were any previously recorded Aboriginal heritage sites that would be affected by the project proposal (see Appendix 1: Sites Register Searches). A second search was conducted on the 27th of June 2013 for the amended route (see Figure 1: Location Map).

These Sites Register searches revealed there to be no registered sites or places located within the survey corridor for both routes.

REVIEW OF RELEVANT SITE FILES

As no sites or places are located within the survey corridor, there are no relevant site files to review.

REVIEW OF RELEVANT ETHNOGRAPHIC REPORTS

Williams, R. 2013, Ethnographic Survey of Drill Lines in Tronox ‘Cooljarloo’ Tenements between Cataby and Jurien, Western Australia with Yued Native Title Claimants (WC97/71), report prepared by Human Terrains Anthropological Consultancy on behalf of Brad Goode and Associates Pty Ltd, June 2013.

This ethnographic survey was conducted by Ms Roina Williams with selected Yued native title claimants for exploration drilling lines that Tronox Pty Ltd proposed to conduct in exploration tenements E70/2490, E70/2491, E70/2345, E70/2346, E70/2604, E70/2549, and mining tenements M70/436, M70/435 and M70/435. A search of the DAA Sites Register located 16 registered sites and 58 heritage places within the survey area. Consultations held with the Yued group identified the waterways, creeks and swamps within and adjacent to the survey area to
have traditional, sacred, mythological, historical and/or contemporary significance and that site recording and reporting was currently in progress. It was recommended that an exclusion zone from the high water mark of the identified watercourses be demarcated.

During the survey, an area around the Minyulo Brook where it feeds into Caro Swamp was identified as having high ethnographic significance to the Yued and that further research and consultation should be carried out, should Tronox wish to explore inside the recommended 150m buffer zone. As a result of the survey, it was advised that continued consultation be conducted should the work program alter or if exploration proceeds to mining.

Goode, B. & Harris, J. 2012, Report of an aboriginal heritage survey of the proposed Waddi & Yandin wind farms in the Shire of Dandaragan, Western Australia, an unpublished report prepared for Wind Prospect WA Pty Ltd.

This Aboriginal heritage survey was conducted in February 2012 by Brad Goode & Associates upon behalf of Wind Prospect WA Pty Ltd in relation to the proposed Yandin Wind Farm and the Waddi Wind Farm in Dandaragan, Western Australia. Spread over two areas of existing farmland the Dandaragan Wind Farms project comprises of up to 151 wind turbines, supporting infrastructure and a central overhead transmission line that feeds into the Western Power grid at a sub-station located to the west of the Brand Highway at Cataby. The Yandin project area is located 4.5km south of Dandaragan, extending over an area of approximately 342km² and the Waddi project area is situated 14kms south of Badgingarra, encompassing an area of approximately 224km² (Goode & Harris 2012: 8).

Previous research and a preliminary consultation with the Yued NTC group in 2008 by AIC had determined that 12 previously recorded Aboriginal heritage sites and other heritage places are located within the boundaries of the Dandaragan Wind Farm project survey areas and the Yued NTC group were concerned about waterways protection and employment and training opportunities should the development proceed (Goode & Harris 2012: 2). As a result the final design layout for the wind farm development avoided all the archaeological sites and places initially identified. The consultations held in 2012 by Brad Goode & Associates determined that heritage Place ID 28326 Minyolo Brook (Bilya) would be directly affected by the central transmission line in the Waddi Survey Area (Goode & Harris 2012: 57). The report recommended that Wind Prospect WA Pty Ltd apply under section 18 of the AHA for consent to the use the land that contains an Aboriginal heritage site.

In relation to cable trenching to service turbines that intersect unregistered tributaries of the Minyulo Brook, the Yued representatives recommended that the proponent seek an alternative solution as they do not support the trenching of living waters. As a result of the survey, it was recommended that directional drilling be implemented to lessen the affect upon cultural values, should avoidance of these tributaries not be possible (Goode & Harris 2012: 38).


This Action Plan for registered sites on Minyulo Brook was commissioned in 2008 in response to increased surface water flows and rising saline groundwater caused by over-clearing for agriculture, combined with mineral sands mining and oil exploration, which threaten Minyulo Brook and Aboriginal sites along it. Moore identified a number of other threats to these sites, specifically declining water quality from upstream agriculture and mining, feral animals, Dieback, recreational users, illegal hunting, illegal taking of artefacts and climate change.

Moore reports that “contrary to reports the sandplain between Moore and Hill Rivers is neither arid nor is it believed to have been sparsely populated by Yued people in the pre contact era” (Moore 2008: 4). Moore uses the Minyulo Brook as backing evidence to this claim and details
the significance of the twenty registered sites located along its extent. Three sites along the
brook, on Vacant Crown Land west of the Brand Highway, were selected as priority in which
this Action Plans makes recommendations to help protect from the above mentioned threats
(Muduldu Myer, Yuccan Djoory and Dwert Djoory).

As a high priority the Action Plan report recommended that the Minyulo Brook be registered as
a mythological site and that monitoring of the water quality be conducted. It was further
recommended that Aboriginal heritage sites are protected during surveys and exploration work
and the DEC implement pest control as a strategy to protect these sites. As a medium term
priority, limited vehicle movement to the sites was recommended for the wetlands during wet
seasons of the year, and as a long term priority the report recommends protecting the bush land
around the sites in perpetuity.

O’Connor, R. 2001, Report on Aboriginal Consultation and Ethnographic Surveys of Proposed
Lancelin to Cervantes Coastal Road, report prepared for Halpern Glick Maunsell Pty

This Aboriginal heritage survey was conducted by O’Connor in 2001 for the proposed route
between Lancelin to Cervantes that follows the coast (now known as the Indian Ocean Drive),
that Halpern Glick Maunsell Pty Ltd commissioned on behalf of Main Roads. There were a
number of alignments that were considered and extensive consultations conducted with selected
informants and representatives of the Kickett 2, Pandawn and Yued native title claimants during
December 1999 to February 2001. This report documents these results in a combined report. As
a result of these surveys, no sites of Aboriginal significance were identified within the path of
the proposed roadworks and all relevant Aboriginal groups had no objections to the project
proceeding.

OUTCOMES OF ARCHIVAL RESEARCH

A search of the DAA Aboriginal Sites Register was conducted on the 13th of March 2013 for the
optic fibre cable route which revealed there to be no previously recorded Aboriginal heritage
sites or places located within the survey corridor (see Appendix 1: Sites Register Searches). A
second search was conducted on the 27th of June 2013 which included the amended route and
confirmed the results of the initial search.

As a result of previous ethnographic surveys conducted in the Dandaragan Shire, areas of
significance to the Yued native title claim group that have been identified are waterways, creeks
(i.e. Minyulo Brook) and swamps that have been reported as having traditional, sacred,
mythological, historical and/or contemporary significance and the reporting and recording of
these sites are currently in progress (Williams 2013, Goode and Harris 2012).

In terms of management recommendations from previous surveys, the Yued group do not
support the trenching of living waters (Goode and Harris 2012: 38) and recommend avoidance
or direction drilling as a mitigating strategy to minimise the effect upon cultural values should
avoidance not be possible.
IDENTIFICATION OF SPOKESPEOPLE

THE RIGHT TO SPEAK ON HERITAGE ISSUES

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

An estate, commonly a sacred site, has a number of individuals who may identify with it and control it. They constitute a group solely in relationship to this estate. Identification refers to a whole set of relationships a person can claim or assert between himself or herself and a place. Because of this multiplicity of claims, land holding groups take essentially the form of bilateral, descending kindred. Membership as a recognised owner is widely extended (cited in Machin 1993: 22).

Myers then goes on to clarify the current perception of ‘ownership’ when he states:

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

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

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

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

- **Yued WC97/71 WAD6192/98 (Registered)**
  Applicants: Malcolm Ryder, Vera Warrell, Charlie Shaw, Dennis Jetta, May Maguire

- **Single Noongar Claim (Area 1) WC03/6 WAD6006/03 (Unregistered and Active)**

SELECTION OF SPOKESPEOPLE FOR THIS SURVEY
Contact was made with Mr Sean O’Hara, a Senior Heritage Officer from SWALSC, as the representative body for the Yued WC97/71 NTC group to acquire a list of appropriate people to attend the ethnographic survey. This list was provided by email (reference ‘FTA 4320’) and those nominated were contacted by phone and in writing to arrange a time and meeting place for the survey. Of the nominated persons, the following 10 people confirmed that they would attend the ethnographic consultations held on the 21st of March, 2013:

**Mr Charlie Shaw** was born in Fremantle to Ms Ruby Mary Shaw from New Norcia. Mr Shaw’s Grandparents are Mr William Shaw from New Norcia and Mrs George Shaw from the Swan Valley. Mr Shaw conducted his schooling in New Norcia and at Clontarf Aboriginal College and is currently employed as a marine diver. Mr Shaw is a Yued Elder and an applicant to the Yued NTC and holds a position as a working party member at SWALSC. Mr Shaw was selected to participate in this survey as he shares a cultural association with the project area through his familial connection to the Dandaragan area.

**Mr Brendan Moore** was born in Moora to parents Mr Colin Moore from Dandaragan and Ms Pamela Billett from Melbourne. Mr Moore’s paternal grandparents are Mr Granville Moore from Burney (England) and Ms Edith Madeline Worrell from Dandaragan. Mr Moore shares a cultural association with the project area through traditional blood ties to apical ancestors Mr William Worrel (*Madeegro*) and Ms Sarah Minyulo. His family also has a long history working in the farming/agricultural industry in Dandaragan. Mr Moore conducted his schooling in Dandaragan and Moora and went on to obtain a PhD in Applied Sciences and International Studies prior to working with the Department of Agriculture for 10 years. Mr Moore was employed with SWALSC for 4.5 years and is currently employed by the City of Fremantle as an Aboriginal Engagement Officer. Mr Moore was selected by SWALSC to participate in this heritage survey.
Mr Gordon Narrier was born in Moora to parents Mr Gordon Wheelack and Ms June Narrier. Mrs June Narrier was born in Moora. Mr Narrier’s maternal grandparents are Mr Alex Churchill Narrier from Moora and Ms Nulla Riddle from Eucla. Mr Narrier was schooled at St Josephs in Moora and studied horticulture at TAFE. Mr Narrier’s cultural association is through his maternal grandmother. Mr Narrier’s apical ancestor is Upona. Mr Narrier is a member of the Yued Working Party and was selected by SWALSC to participate in this survey.

Mr Augustine Jackamarra was born in New Norcia to parents Mr Murray Jackamarra and Ms Agnes Taylor who were both born in New Norcia. Mr Jackamarra’s paternal grandparents are Mr Felix Jackamarra and Ms Philomena Darby both from Mogumber Mission. Mr Jackamarra’s maternal grandparents are Mr Joseph Taylor and Ms Francis Ryder. Mr Jackamarra was schooled in New Norcia and attended agricultural school at Mogumber. Mr Jackamarra’s cultural association is through the Jackamarra family line tracing back to his apical ancestor Mr Felix Jackamarra. Mr Jackamarra is a member of the Yued Working Party and was selected by SWALSC to participate in this survey.

Mrs Beverley Port-Louis (nee Headland) was born in Perth to parents Mr Edward George Headland (Snr) from Walebing and Mrs Veronica Pearl Headland (nee Anderson). Mrs Port-Louis paternal Grandparents were Mr William John Headland from Shark Bay and Mrs Mary Cecilia Headland (nee Wilkes) from Gingin. Her maternal Grandparents were Mr Frederick James from Dandaragan and Mrs Agnes Anderson (nee Williams) from Albany. Mrs Port-Louis conducted her education at Dandaragan and Moora and continued on to ECU, Catholic Education, and worked at the Department of Aboriginal Affairs and the Native Welfare Department. Mrs Port-Louis is currently a Deputy Chair for the Yued Working Party. Mrs Port-Louis shares a cultural association with the project area through her connection to apical ancestor’s Ms Edith Jarrah, Mr Edward Wilkes and Ms Cecilia Munderan, and was selected by SWALSC to participate in this survey.

Ms Diane Joyce Yappo was born in Moora to parents Mr Geoffrey Edward Yappo from Mogumber and Mrs Beverley Joyce Yappo (nee Headland) (now Mrs Port-Louis) from Perth. Ms Yappo’s paternal Grandparents were Mr Joseph Yappo and Ms Bella Ashwin from Lake Darlot, in Leonora. Her maternal Grandparents were Mr Edward George Headland from Walebing and Mrs Veronica Pearl Anderson from Carnamah. Ms Yappo completed her education in Moora and her employment history comprises of positions at Moora KWOY, the Education Department, CMAPA, Centrelink, ATSIC and with the Moora Youth Group. Ms Yappo is a member of the Yued NTC group and is a working party member of SWALSC. Ms Yappo shares a cultural association with the project area through her familial connection to apical ancestors Edward Wilkes, Cecilia Munderan, Edith Jarrah and Weinin and was selected to participate in this survey by SWALSC.

Ms Delores Yappo was born in Moora to parents Mr Joseph Kitchener Anderson and Mrs Philomena Jean Anderson (nee Jackamarra). Ms Yappo’s paternal Grandparents are Mr Frederick James Anderson and Mrs Agnes Anderson (nee Williams) and her maternal Grandparents are Mr Emanuel Jackamarra and Mrs Mary-Anne Jackamarra (nee Yates). Ms Yappo was educated in New Norcia and Moora. On completion of her schooling Ms Yappo lived in Moora and shares a cultural association to the project area through camping, fishing and hunting activities conducted by the Anderson and Jackamarra families. Mrs Dawson claims traditional blood ties to apical ancestors Ms Edith Jarrah and Mr George Anderson and was selected by SWALSC to participate in this survey.

Ms Rhonda Flowers was born in Moora to Mr Donald Flowers and Mrs Delores Flowers (nee Warrell). Ms Flowers’ paternal grandparents are Mr Donald Flowers from Albany and Ms Alice Garlett from Brookton. Ms Flowers’ maternal grandparents are Ms D Ronan (dec) and Mr William Warrell who is from the Dandaragan area. Ms Flowers began her schooling at St Josephs in Moora and completed her high school studies in Perth. Ms Flowers’ cultural
association to the area is through her grandfather Mr William Warrell. Ms Flowers was selected by SWALSC to participate in this survey.

**Ms Veronica Yappo** was born in Moora to parents Mr John Yappo from Meekatharra and Mrs Evelyn Dawson (nee Anderson) from Moora. Ms Yappo’s paternal grandparents are Mr Albert Ashvin Yappo and Ms Thelma Councillor. Ms Yappo’s maternal grandparents are Mr Joseph Kitchener Anderson and Ms Philomena Jackamarra. Ms Yappo attended St Joseph’s Primary School and Balga High School. Since completion of her schooling Ms Yappo has worked in retail and office administration and is currently raising her family. Ms Yappo’s cultural association with the area is through her mother’s familial line and through the teachings she received from her mother and her family especially whilst camping and hunting. Ms Yappo claims traditional blood ties to apical ancestors Ms Edith Jarrah and Mr George Anderson and was selected by SWALSC to participate in this survey.

**Ms Dorinda Barron** was born in Mt Magnet to parents Mr Kevin Barron from Mogumber and Ms Sadie Barron (nee Narrier) from Summers Hill near New Norcia. Ms Barron’s paternal grandparents are Ms Elizabeth Robinson who was born near Carnarvon and Mr Barney Barron from Lake Grace. Ms Barron’s maternal grandparents are Mr Joe Narrier and Ms Jade Nannup who was born in Pinjarra. Ms Barron attended primary school in Mingenew and high school in Midland. After her schooling Ms Barron lived in Moora for five years and is the mother to five children. Ms Barron’s cultural knowledge of the area is through the teachings she received from her parents. Ms Barron claims traditional blood ties to her apical ancestor Upona.
COMMUNITY CONSULTATION

AIMS

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

METHOD

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

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

COMMUNITY CONSULTATION PROCESS

On the 21st March 2013 the consultants, Mr Brad Goode (Anthropologist) assisted by Ms Lisa Butcher (Ethnographic Assistant), met with members of the Yued WC97/71 native title claim group: Mr Charlie Shaw, Mr Brendan Moore, Mr Gordon Narrier, Mr Augustine Jackamarra, Ms Bev Port-Louis, Ms Delores Yappo, Ms Rhonda Flowers, Ms Veronica Yappo, Ms Dorinda Barron and Ms Diane Yappo opposite the Telstra Exchange in Cervantes on the corner of Aragon Street and Seville Street at 8am.

Figure 2: Mr Steve Hirning (Telstra) explaining the path of the fibre optic cable to members of the Yued WC97/71 native title claim group.
To begin the meeting Mr Brad Goode advised the group of the survey requirements with the aid of an air photo map showing the path of the proposed fibre optic cable in relation to previously recorded Aboriginal sites and places.

Mr Hirning advised that Telstra are required to install a new fibre optic cable from the Telstra Exchange in Cervantes to the Telstra Exchange located on the Brand Highway at Wongonderrah as a part of the national broadband initiative to ensure that local customers have access to modern communications technology.

Specifically the fibre optic cable installation is planned to be trenched and ploughed into the road reserve from the Telstra Exchange near the intersection of Aragon Street and Seville Street in Cervantes in a south easterly direction passing to the north of Lake Thetis to Indian Ocean Drive. The cable path then runs south along the road reserve of Indian Ocean Drive before turning to the south east through the Nambung National Park and heading in an easterly direction adjacent to Wongonderrah Road and terminating at the Telstra Exchange south of the Wongonderrah Road and Brand Highway intersection.

The cables are 12mm in diameter. It is proposed that the cable be installed by either trenching to a depth of 1.2m for the cable, or alternatively using a bulldozer to rip then plough the cable into the rip. There is a disc on the back to cut limestone. The cable path is a distance of 44km.

Mr Goode advised that Mr Tom O’Reilly (Archaeologist) and Mr Brendon Moore (Yued Traditional Owner) had conducted an archaeological survey of the cable path and did not locate any archaeological sites or material along the cable path; however, Mr Moore advised that the bush in many places was too thick to see and that he was of the belief that there would be material located near Lake Thetis and where the cable crossed creeks and wetlands.

Figure 3: Pictured centre, Mr Brendon Moore explains to the Yued WC97/71 native title claim group the results of the archaeological inspection.

After this discussion the group proceeded to get into their cars and drive east along Seville Street, stopping at the intersection of Hansen Bay Road. Here Mr Steve Hirning opened up a Telstra pit to show the group where the fibre optic cable would exit existing conduits from the exchange and where the plough trenching would start from.
Here Ms Bev Port-Louis asked Mr Hirning how far the trenching is from Lake Thetis. Mr Hirning advised that the cable runs southeast along a fire break to Indian Ocean Drive past the lake with the closest point approximately 200m away from the lake.

Mr Charlie Shaw said that Lake Thetis was a camping area and a mythological site on an important Yued songline. The group said it was known as a place where the Amangu (WC04/2) and the Yued (WC97/71) groups would come together for ceremonies in pre-contact times (see Ethnographic Background; McConnell, et al. 1993: 8).

Ms Port-Louis said that Lake Thetis was a place that was continually used as a camp ground. At the time of this survey Mr Charlie Shaw said that Mr Fred Mobridge from Moora had camped at the lake.

Following the survey Mr Shaw advised that his family and others still use the lake for camping and cultural ceremonies.

Aboriginal people as Family groups such as Ryder’s, Shaw’s, Worrell’s have actively participated in cultural events at this lake for many years in only just two weeks ago a tribal event took place, as the Shaw’s are tribal to this area only living 37 kilometres away… Facts are Fred Mogridge and Alice (who is a Worrell) families go to this lake regularly to hunt and to do cultural ceremonies, and they do not regard DEC as owning this land., their families and the Shaw’s have no restrictions as it is suggested and visit and camp at this Lake whenever they wish, this also was in the days of no bitumen (pers. comm. Ms A. Shaw 24th November 2013).

Mr Charlie Shaw, the senior man in the group, also advised that middens and artefacts had been previously recorded along the northern margins of the lake when Mr Robert Reynolds (Archaeologist) from the Department of Aboriginal Affairs had conducted a heritage training course with the Yued group three years ago.
Mr Goode advised the group that archival research conducted prior to the survey had shown that the lake and these middens have not been registered on the DAA Sites Register database and asked the group if Mr Reynolds had reported this information as a site under the AHA.

Several people in the group advised that they believed that he had and were mystified why the lake and the associated middens did not show up on the Aboriginal Sites Register. Mr Goode advised that he would make contact with Mr Reynolds and enquire if there was a report from the training course that was yet to be lodged.

Mr Reynolds was contacted and advised that:

Although identified as a midden site by TO’s it is uncertain if these occurrences of shell are the result of human activity. The choice of shell types and consistency of size as well as the absence of stone artefacts means this does not have features typical of midden in this region. However the existence of a small number of isolated artefacts, in the general area as well as mythological associations with the lake confirms its significance to Yued People (pers. comm. Mr R. Reynolds 29th October 2013).

Figure 5: Pictured centre, Mr Gordon Narrier and several Yued men examining the midden reported by Mr Charlie Shaw located along the northern margin of Lake Thetis at coordinates 315650mE 6623796mN.

Mr Goode then asked the group to detail the cultural values and/or narrative that is associated with the lake and asked Mr Shaw to show the consultant the midden area.

Mr Shaw said that ‘Waakgardy,’ the Rainbow Serpent, came from the north and created Mount Lesueur. You can see the line of the serpent in the valley and hill and the colours of the rocks represent the scales of the serpent and the caves represent the breathing holes. Mr Shaw said that the Waakgardy then rested in Lake Thetis and laid its eggs. It then formed the islands off Jurien and moved down the coast and cut through to create the Nambung River. It then went across to Dandaragan and finished in the hills there. Mr Shaw said that the eggs are represented in the lake by the Stromatolite’s which he advised were believed to be in excess of 20000 years old [dated to 3500 by DEC]. Mr Shaw said that Lake Thetis is especially important because there is nowhere else where eggs were laid by the ‘Waakgardy, during its travels.
Mr Shaw then advised that the cable as planned was a long way from the lake (295m) and the reported middens (98m at 207 degrees north) and he did not believe that it would affect the values of the site; he however requested that monitors should supervise the work here in case artefacts were located under the ground. Yued monitors should be employed to supervise the work between Telstra Peg 2 (315536.4mE 6623993mN) and Telstra Peg 6 (316230.4mE 6623738.0mN). Mr Shaw then offered to show the group the middens.

After the inspection of the reported middens near Lake Thetis the Yued survey team advised that they wished to report Lake Thetis as an Aboriginal heritage site under section 5b and 32.2b and 39.3 of the AHA. Mr Shaw then determined the extent of the area by drawing the boundary on the field map (see Appendix 3: Map).

The group advised that the cable as planned was outside this extent and advised that Telstra would not require a section 18 consent notice unless they moved the cable further south of the track that is determined as its current location.

The survey team then continue to follow the cable south along Indian Ocean Drive before stopping on the Highway where the cable turns to the east and runs along a track through the Nambung National Park to the north of the Pinnacles at Telstra Peg 31 (317457mE 6621051mN). Mr Charlie Shaw reported that ‘Nambung’ means twisting and turning which represents the actions of the Rainbow Serpent in creating the Nambung River on this part of the songline.

Mr Shaw also said that Cockleshell Gully [which is on the songline] was known to the Yued as an important pre-settlement trading place (see Bates 1985: 85). Mr Shaw advised that his Great-great-grandfather, a man named ‘Monnop’ used to trade pearl shell/cockleshell with the Amangu, Wadjari, and Yued groups at Cockleshell Gully (see also Bates 1985: 52).

Mr Shaw advised that the songline associated with Lake Thetis also connects to the Pinnacles, and that the Waakgardy Rainbow Serpent is underground at the Pinnacles. There is a wetland and caves there, of which the path of the Rainbow Serpent is documented in Bates and in paperwork which was used as evidence for the native title hearing with the government by SWALSC.

Mr Shaw said that the Yued story about the Pinnacles says that young warriors were told not to go there as it was devils country. However, they didn’t listen. The Pinnacles are the hands of the young warriors who broke the law.

Regarding the Pinnacles area, Mr Brendon Moore said:

It’s a bit of a conundrum. The Pinnacles now has a road going right through an important Yued site. They get ½ million visitors per year making $5 million. Nothing comes back to us and we do not get consulted about the impact of tourism on this place. The Pinnacles are a men’s site yet DEC allow women to have free access. It is wrong for DEC to allow the public to drive over them, just like it is wrong to ride bikes on Wave Rock and they stopped that (pers. comm. Mr B. Moore 21st March 2013).

From here the group continued to follow the cable path along this track to the east stopping at various locations to examine the cable path in relation to topographic features in the landscape.

Between Telstra Peg 45 (320781mE 6620163mN) and Telstra Peg 46 (321017mE 6620042mN) the group advised that the limestone caves crossed by the cable were representative of the Rainbow Serpent breathing holes and were concerned that plough trenching may disturb these caves. Mr Steve Hirning advised that a GPR survey had established that the cable would be at least 2.5m above these caves. All in the group seemed satisfied with this and the survey team continued moving east.
In general the group advised that the sandy track was well chosen as a cable path as it was already cleared and disturbed. Between Telstra Pegs 48 and 62 several small ephemeral creeks and gullies were examined.

Here the group advised that all the waterways in the region were significant in terms of Rainbow Serpent beliefs however no specific narrative was known for this location however several people thought that these creeks were feeders from the Nambung River connecting underground water flows to the Pinnacles to the south. Here the group advised that they would wish water crossings between Telstra Peg 48 (321196.5mE 6619658mN) and Telstra Peg 62 (323366.4mE, 6617892.7mN) to be subject to monitoring. Here due to the proximity to the Pinnacles, men should be selected as the monitors.

During general conversations regarding the region Ms Bev Port-Louis advised that waterways were also birthing sites for Yued women. Ms Port-Louis advised that the Minyulo Brook, Coonmadodo Swamp were birthing places [south east of the Pinnacles and Bullfrog Well, near Wedge Island – see Moore 2007]. Lizzie Frog, a Yued Apical ancestor, was known as a midwife who had delivered children to Yued women at these locations. Mr Charlie Shaw added that Ollie Burnagen also camped at Hangover Bay near where the toilet block is located.

The group continued to follow the track until exciting the Nambung National Park at the corner of Munbinea Road and Wongonderrah Road. Here Ms Dorinda Barron joined the group for lunch. After lunch the group followed the cable path through Banksia and Acacia woodlands along a power line easement and running parallel with Wongonderrah Road.

East of the intersection of Wongonderrah Road and Yerramulah Road the survey team stopped to examine a large wetland which was identified by the group to be part of the Mullering Brook wetland and drainage system. Here some concerns were raised with the selection of the cable path and the effects that ploughing would have upon Yued cultural values. Here Mr Steve Hirning advised that the path chosen for the cable was formerly a cleared firebreak that had naturally re-vegetated and where Telstra had formerly installed a copper phone cable back in the 1970’s. Mr Hirning advised that this route was chosen so as not to have to clear any large Melaleuca trees.
Mr Charlie Shaw as the Elder in the group went with Mr Hirning and the Anthropologist to inspect the path in a 4WD vehicle while the rest of the group remained on Wongonderrah Road. However the path could not be driven due to thick vegetation. During the inspection Mr Shaw asked if this section of the cable installation could be done by directional drilling which he thought would have far less impact upon the wetland.

Mr Hirning however advised that drilling could not be done over this length which was estimated to be 2500m+. Mr Shaw accepted this and advised that Telstra could proceed by ploughing by carefully following the old cleared track and by only clearing what was absolutely necessary and by avoiding all the big trees. Mr Shaw advised that Yued monitors would need to be present between Telstra Peg 157 (341374.0mE 6618565.9mN) and Telstra Peg 166 (343572.7mE 6618580.2mN).

The survey team then followed the cable path to the Telstra exchange on the Brand Highway; no further issues were identified and it was advised that Telstra can proceed as planned adhering to the management recommendations previously detailed.

On the 5th May 2013 Mr David Reynolds Cultural Heritage Manager from Telstra advised the consultants that they were now required to amend the cable path for this project as DEC would not give Telstra clearance to access the Nambung National Park and the Beekeepers Reserve. Subsequently Telstra would have to investigate other options. This would take some time as several landowners and agencies would need to be consulted.

After these issues were resolved Telstra supplied the consultants with an amended cable path on the 19th June 2013. SWALSC authorised the same survey team to be consulted.

Mr Tom O’Reilly (Archaeologist) and Mr Chris Shaw (Yued Traditional Owner) conducted an archaeological inspection of the amended cable path on the 24th June 2013.
Mr Brad Goode (Anthropologist) and Ms Lisa Butcher (Ethnographic Assistant) conducted the Ethnographic consultations for the amended cable path on the 5th July 2013.

The survey team that considered the amended cable path consisted of: Mr Charlie Shaw, Mr Gordon Narrier, Mr Augustine Jackamarra, Mr Brendan Moore, Ms Bev Port-Louis, Ms Delores Yappo, Ms Rhonda Flowers, Ms Veronica Yappo and Ms Diane Yappo.

The survey team met opposite the Telstra Exchange in Cervantes, at the Service Station on the corner of Aragon Street and Seville Street. Mr Anthony (Tony) Fairbrother (Telstra Network Specialist) was also present to provide technical advice.

Mr Brad Goode began the consultations by explaining the reason for the amendment to the cable path.

Mr Goode explained that the amended section of the cable path now follows Seville Street to just past Hansen Road before turning to the east to Indian Ocean Drive. The cable path then runs northwest back to Seville Street running northeast until it turns to the southeast running along a firebreak between the Nambung National Park, Beekeepers Reserve and farms running south to Nambung Road.

The cable path then runs northeast then east along a power line easement before turning south on to Mumbinea Road. The cable then runs east and then south along the Nambung National Park boundary before re-joining Wongonderrah Road where the originally surveyed cable path is intersected, comprising a distance of 31km.

Mr Tony Fairbrother stated that the issue that Telstra had was that DEC would not give the necessary environmental approvals to trench within the Nambung National Park and the Beekeepers Reserve due to environmental concerns.
After the briefing the group got into the vehicles and followed the cable path on Seville Street to the intersection with Gazeley Way where a large pit was located, at Telstra Peg 2 (315859mE 6624475mN).

Mr Fairbrother then explained to the group the nature of fibre optic cables and how they transmit data by beams of light.

![Figure 9: Mr Tony Fairbrother (Telstra Network Specialist) explains the nature of fibre optic cables; looking on is Mr Gordon Narrier from the Yued WC97/71 native title claim group. View to the southwest across Seville Street.](image)

Mr Fairbrother then explains that from Cervantes to this pit on Seville Street there is a pipe in the ground in which the cable can be pulled through from the exchange. He explained that Telstra will run more conduits along Seville Street to where it crosses Indian Ocean Drive so that if the cable is cut it can be repaired easily. The new cable will form a ring cable so if one gets cut the signal can still go through the other that way services inclusive of banking can be maintained.

Mr Fairbrother then explained the cable will go straight into the ground past Indian Ocean Drive but would be buried deep to avoid disturbance. Mr Fairbrother said that the cable has a guaranteed 50 year life span but it could probably last longer. Mr Fairbrother said that the cable is laid in the ploughed trench from a roll on the bulldozer and is rolled out in as long a length as possible. There is approximately 12km of cable per drum, however it is easier to handle shorter lengths. Where it crosses roads by directional drilling the cable is joined. However joining the cable incurs a loss as the signal disintegrates so it is preferable to not do too many joins. The cable can go 150km without the need for an amplifier.

From Indian Ocean Drive where the cable will be ploughed into the ground a stainless steel wire for tracking the cable and to stop lightening damage will also be installed above the cable. The fibreglass backbone of the cable protects it from rodents and the fibrous roots of the Christmas trees.

After this explanation the survey team followed the cable along Seville Street stopping at several points to examine the cable path (Telstra Peg 16 – 316795mE 662537mN).
No ethnographic issues were identified along Seville Street. No management was requested along this section.

The group then stopped at the turn off into the Beekeepers Reserve at Telstra Peg 55 (320014mE 663116mN). Here the cable would be trenched into the firebreak in private property bordering the reserve running southeast. As the area contained lots of limestone a rock saw would be used to install the cable. When the cable is laid the trench it is backfilled with a grader with the limestone then stetting hard and protecting the cable. If there is not enough material left, fill is brought in.

No cultural issues were identified; the group advised that using disturbed land was a good option.

![Figure 10: Mr Goode (anthropologist) discussing the cable path with the Yued WC97/71 native title claim group running along the firebreak bordering the Beekeepers Reserve, Telstra peg 55 (320014mE 663116mN). View to the northeast.](image)

The group continued travelling southeast then south along the track, inspecting the cable path in the firebreak between the farms and the Beekeepers Reserve.

At Telstra Peg 106 (324208mE 6621937mN) the group stopped to examine where a large pit was to be installed where three fencelines intersect. The group advised that this farm was Mr David Hobday and several Yued had worked on this farm. No cultural issues were identified.

The survey team continued following the track to its end onto Nambung Road then turned north and then east to follow the cable path east along a dirt track following a power line corridor crossing Munbinea Road turning south continued and then east stopping at a wetland that crossed the cable path at Telstra Peg 151 (330630.3mE 6621031.5mN).

The wetland covers the track between Telstra Peg 151 (330630.3mE 6621031.5mN) and Telstra Peg 152 (330793.7mE 6621030.5mN). Here it is proposed to trench with an excavator if it is too wet to plough.
Mr Goode asked the group if this proposal would affect any cultural values.

Mr Charlie Shaw said that all the creeks and wetlands in this area that run off to the Nambung River are significant. Mr Shaw advised that the Nambung River is part of the songline associated with Mt Lesueur and Lake Thetis.

Figure 11: The Yued WC97/71 native title claim group consider plans to trench the cable across the wetland, identified as a tributary of the Nambung Brook. View west. Inset picture shows the wetland to the east.

Mr Shaw stated that it is the Yued people’s cultural belief that all the regions permanent waters are significant as it is the belief that they were created by the ‘Waakgardy,’ the Rainbow Serpent. Mr Shaw advised that the Yued people as custodians of the land are responsible for the health of the country and that when they approach or wish to use these watercourses that a sand throwing ritual must be performed or they will get sick.

Mr Goode asked the group if this wetland was a permanent watercourse and a part of this songline.

Mr Brendon Moore stated that the hydrology here has changed, “that is why the farmer has put drains in, however I doubt this would be permanent water.” Mr Charlie Shaw said that “it’s not permanent, I’ve been here before and it’s dry in the summer.”

Mr Brendan Moore said there are paperbarks (Moonda) further up the road that show it is a more permanent wetland. This place has none of that vegetation, indicating that it is likely to be ephemeral. However several people in the group advised this is a small feeder to other ones. It is dry in the summer but it was thought that the water flowed underground.

Mr Charlie Shaw questioned Mr Brendan Moore if monitors should be here when the cable was ploughed or trenched across this wetland.

Mr Brendan Moore advised in the affirmative as this is a wetland, monitoring is required for archaeology but not for mythological values. Mr Moore advised that the historical record shows that Frederick Smith was buried around here somewhere. He was an explorer that walked
through here in 1838. Mr Brendan Moore and Mr Charlie Shaw stated that “the winter water feeds into the Nambung River, settles then goes to sea. It goes to sea by filtering through the sand; there is no river opening.” The old people used the Nambung River as a food and water source and a lot of artefacts have been found there by the Western Australian Museum (WAM).

Mr Brad Goode asked if this wetland has mythological significance.

Mr Brendan Moore said that this is not as important as a permanent wetland. However it is customary for a ritual to be performed before water is used to catch food, drink etc. Mr Moore explained that,

Now we are trying to apply custom to a bulldozer and earth works. There is no traditional lore to say what to do for bulldozers but apply the ritual because of its impact. Lore is in the act of asking. So people in your country for food were never denied access but they had to ask the right people i.e. it’s the right to seek permission not to use. Yes, we would require rituals here (pers. comm. Mr B. Moore 5th July 2013).

Mr Tony Fairbrother advised that Telstra would be happy to allow for a ground breaking ceremony before the work takes place and would be happy to have monitors supervise the work. Mr Charlie Shaw advised that the monitors are required to be a man and a woman and that the working party should be given notice in writing when they are required.

The survey team then continued following the cable path, once again stopping where the cable would intersect a creek.

Mr Brad Goode advised the group that Telstra proposed to directionally drill the cable under this creek located between Telstra Peg 164 (332680.8mE 6620239.1mN) and Telstra Peg 164A (332681.6mE 6620188.2mN). The group were asked to comment upon the effects that this would have upon their cultural values and to detail any management required should Telstra proceed.

![Figure 12: Ms Dianne Yappo and Mr Brendon Moore at the second creek crossing Telstra Peg 164 (332680.8mE 6620239.1mN). Inset picture: Ms Veronica Yappo and Ms Bev Port-Louis performing a sand throwing ritual.](image-url)
Here the group advised that this was more permanent water and held more significance than the previous wetland which was ephemeral; however the creek belonged to the same system. Here the group thought that directional drilling would have less affects upon cultural values as it was a method that would not obstruct the waters flow. All advised that the same management strategies would be required to proceed.

**Figure 13: The Yued WC97/71 native title claim group survey team, the consultant and Mr Fairbrother from Telstra at the completion of the survey.**

**COMMUNITY CONSULTATION OUTCOMES**

As a result of the ethnographic consultations conducted in April 2013 and July 2013 one new ethnographic site of significance as defined by section 5b and 32.2b and 39.3 of the AHA was recorded and several places with significant mythological values were reported.

The mythological site recorded encompasses Lake Thetis (at Cervantes) in its entirety and contains a historical camping area and a suspected shell midden to the north of the lake and to the south of the track where the original fibre optic cable path was proposed (see Appendix 3 for a map of the sites extent).

Lake Thetis is reported to be a part of a regional Rainbow Serpent (‘Waakgardy’) songline. Several other places located on this songline were reported but could not be fully recorded as they were some distance away from the survey area and were outside of the scope of this project.

In relation to this songline and places reported, the Yued informants advised that it is known to them that the Waakgardy came from the north and created Mount Lesueur, rested in Lake Thetis and laid its eggs in the lake before forming the islands off Jurien Bay. The Waakgardy then moved down the coast and cut through the land to create the Nambung River. The Waakgardy then went across to Dandaragan and finished in the hills there. The eggs in Lake Thetis are represented by the Stromatolite’s. The traditional owners also reported Lake Thetis northern shores contains shell middens and that the lake is a Yued camping area.
As a result of this report the Yued native title claim group requested that Lake Thetis be reported to the DAA to be registered as a site under section, 5b, 39.2b and 39.3 of the AHA.

As an outcome of the survey the traditional owners advised that it was their view that Mount Lesueur, the Nambung River, the Pinnacles, and several hills near Dandaragan, Coonmadodo Swamp, Bullfrog Well, and Cockleshell Gully were also sites within the meaning of section 5 of the AHA.

However as these places specific locations and extents could not be fully recorded during this survey there is at present insufficient information for these places to be registered under the AHA. Further and more detailed ethnographic work would be required in order for these places to be assessed as sites within the meaning of section 5 of the AHA. SWALSC who represent the Yued native title group in heritage matters may wish to consider commissioning this work to support this registration as it is currently outside the scope of this survey which is specifically required to address the proposed fibre optic cable path for Telstra.

As the cable path has been amended to now run northeast along Seville Street the installation of the fibre optic cable will not affect Lake Thetis or any of these places as reported above. As such no management is required by Telstra in regards to these sites and places reported.

During the survey the Yued representatives identified that all the waterway crossings truncated by the fibre optic cable to have generalised significance in association with the Rainbow Serpent (*Waakgardy*) however without a specific creation myth about these waterways they will unlikely meet the definition of sites under section 5b of the AHA.

Despite these places not being sites within the meaning of section 5 of the AHA the Yued native title claim group have requested that Telstra recognise their cultural significance to the Yued people and for Telstra to manage this cultural significance by allowing for proprietary rituals and monitoring at the locations specified in the table below (see Table 1).

The purpose of the monitoring is to also to identify any possible cultural material that may exist at these locations due to customary use and to guard against possible skeletal remains being disturbed.

<table>
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<th>Telstra Peg</th>
<th>Easting (mE)</th>
<th>Northing (mN)</th>
<th>Telstra Peg</th>
<th>Easting (mE)</th>
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<td>6621031.5</td>
<td>To 152</td>
<td>330793.7</td>
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<td>To 164A</td>
<td>332681.6</td>
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<td>From 157</td>
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<td>6618565.9</td>
<td>To 166</td>
<td>343572.7</td>
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RECOMMENDATIONS

As a result of this ethnographic Aboriginal heritage survey it is recommended that the DAA register Lake Thetis at Cervantes as a site of significance as defined by section 5a, 5b, 39.2b and 39.3 of the Western Australian Aboriginal Heritage Act 1972.

As this site will not be affected by the installation of the fibre optic cable proposed it is recommended that Telstra can proceed with their work with no management required under the AHA in relation to this site.

It is further recommended that Telstra give consideration to the following management requests of the Yued WC97/71 native title claim group representatives to conduct proprietary rituals and monitoring where the cable will intersect watercourses that are ephemeral tributaries of the Nambung River.

It is further recommended that SWALSC give consideration to commissioning further ethnographic work to assist the Yued native title claim group to register Mount Lesueur, the Nambung River, the Pinnacles, Coonmadodo Swamp, Bullfrog Well, Cockleshell Gully and several unnamed hills near Dandaragan that have been reported to be sites of significance located upon a regional songline known to run through the native title claim area.

Without this further work the information to date would unlikely meet the definition of a site within the meaning of section 5 of the AHA. However should this further work be conducted it is highly likely that these places would be defined as sites in relation to section 5 and afforded the protection of the Act.
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A report prepared for Telstra and the
South West Aboriginal Land and Sea Council

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EXECUTIVE SUMMARY

In January 2013, the South West Aboriginal Land and Sea Council, on behalf of Telstra, commissioned an archaeological survey of a proposed fibre optic cable route that extends from the Cervantes Telstra Exchange to an the Wongonderrah Regenerator on the Brand Highway north of Cataby, Western Australia. While the Wongonderrah Regenerator is approximately 39km to the east-southeast of Cervantes the proposed fibre optic cable route (the survey area) covers a distance of approximately 59km. It is noted here that the western part of the initial fibre optic cable route traversed Nambung National Park. While this part of the initial fibre optic cable route was surveyed, the route was subsequently changed in order to avoid the national park. This report deals only with the fibre optic cable route that avoids the national park.

The proposed fibre optic cable route that was surveyed begins at the Cervantes Telstra Exchange and goes east then northeast along Cervantes Road to Indian Ocean Drive. It crosses Indian Ocean Drive and then parallels Cervantes Road as far as the eastern boundary of the Southern Beekeepers Nature Reserve. It follows the firebreak that parallels this boundary and the adjoining eastern boundary of the Nambung National Park. The proposed fibre optic cable route then heads northeast and east and parallels the southern boundary of a cleared paddock as far as its southeast corner. It then heads north along the eastern boundary of this paddock for a short distance before heading east along a cleared power line track as far as the western edge of a cleared paddock on the east side Munbinea Road. From here it goes south, east and then south again along the edges of cleared paddocks before joining a cleared track that parallels Wongonderrah Road as far as Brand Highway. It then goes south along a fenceline parallel to the east side of Brand Highway as far as the Wongonderrah Regenerator where the proposed fibre optic cable route terminates.

The archaeological survey discussed in this report was undertaken to identify and record any Aboriginal archaeological sites that may be located within the proposed fibre optic cable route in order that Telstra can avoid disturbing them or, as required under Section 18 of the Western Australian Aboriginal Heritage Act 1972, seek the consent of the Minister for Aboriginal Affairs to proceed with activities that may disturb Aboriginal heritage sites.

The archaeological survey of the proposed fibre optic cable route (the survey area) included research at the Heritage and Culture Division, Department of Aboriginal Affairs (WA) to assess and investigate the results of previous archaeological surveys and investigations undertaken in the vicinity of the designated survey area as well as in the wider region. Sources of environmental information were also utilised before a systematic archaeological survey of the designated survey area was conducted.

As a result of research at the Heritage and Culture Division, Department of Aboriginal Affairs (WA) and a search of their Aboriginal Sites Database, it was established that no registered Aboriginal archaeological sites or sites with an archaeological component, are located within the designated survey area. Furthermore, it was also established that no ‘other heritage places’ with an archaeological component are registered at positions that place them within the designated survey area.

As a result of the archaeological survey of the designated survey area, no Aboriginal archaeological sites or material were identified.

It is therefore recommended that Telstra be permitted to proceed with their proposal to place a new Fibre Optic Cable within the fibre optic cable route as defined in this report.

It is also recommended that, in the event of any artefactual material or skeletal material being discovered in the course of cabling or any other activities, work should stop while the Department of Aboriginal Affairs undertake an investigation. In the case of skeletal material being uncovered, work must cease immediately and the Western Australian Police must be notified.
Furthermore, it is recommended that Telstra personnel and contractors be advised of their obligations under section 15 of the Western Australian *Aboriginal Heritage Act 1972*, to report the discovery of any Aboriginal cultural material which may be uncovered in the course of their work or any other activities.
INTRODUCTION

An archaeological survey for Aboriginal archaeological sites was commissioned by the South West Aboriginal Land and Sea Council on behalf of Telstra in January 2013. The primary aim of this survey was to examine Telstra’s proposed fibre optic cable route from the Cervantes Telstra Exchange to the Wongonderrah Regenerator (the survey area) on the Brand Highway north of Cataby, Western Australia and to record and report any Aboriginal archaeological sites that may be located within it. A preliminary assessment of the archaeological significance of any such site(s) will be given and their extent determined in order that Telstra can avoid disturbing them or, as required under Section 18 of the Western Australian Aboriginal Heritage Act 1972, seek the consent of the Minister for Aboriginal Affairs to proceed with activities that may disturb Aboriginal heritage sites.

Telstra proposes to place a new Fibre Optic Cable within the proposed fibre optic cable route between the Cervantes Telstra Exchange and the Wongonderrah Regenerator on the Brand Highway north of Cataby. They specifically plan to utilise existing infrastructure in the vicinity of the Cervantes Telstra Exchange and then propose to trench and bury the remainder of the cable to the Wongonderrah Regenerator following the general alignment of existing sealed and unsealed roads, power line corridors, fire breaks and fenceline tracks. In the following pages the proposed fibre optic cable route is referred to as the survey area. Knowledge of the location and extent of any Aboriginal archaeological sites that exist within the survey area will facilitate the making of management decisions that will ensure that any such sites are not inadvertently impacted upon or disturbed by the installation of the new Fibre Optic Cable or related activities.

As part of the archaeological survey of the proposed fibre optic cable route between the Cervantes Telstra Exchange and the Wongonderrah Regenerator, data was gathered from reports on previous archaeological surveys and investigations undertaken in the vicinity of this proposed route as well as in the wider region. Details of previously recorded and/or registered Aboriginal archaeological sites in the vicinity of the survey area and in the wider region were obtained from the relevant site files held at the Heritage and Culture Division, Department of Aboriginal Affairs (WA) and, where possible, from unpublished reports on previous archaeological surveys. In addition to this, a review of maps, environmental information and academic research carried out within the wider region was also undertaken. The first stage of fieldwork associated with the archaeological survey was conducted in March 2013 by archaeologist Mr Thomas O’Reilly with assistance from Yued Traditional Owner Mr Brendan Moore while the second stage was conducted in June 2013 with assistance from Yued Traditional Owner Mr Chris Shaw. Telstra representative Mr Steve Hirning was present for the duration of the first stage of fieldwork while Mr Tom Warren was present for the second stage.

LOCATION OF SURVEY AREA

The western end of Telstra’s proposed fibre optic cable route (the survey area) between Cervantes and Wongonderrah Regenerator is located at Telstra’s Cervantes Exchange, approximately 176km north-northwest of Perth and 0.9km east of the present coastline (Figure 13). The survey area is 0.02km wide and approximately 59km long with its northern terminus at Telstra’s Wongonderrah Regenerator on the Brand Highway north of Cataby.

From the Cervantes Exchange the proposed fibre optic cable route goes east then northeast along Cervantes Road to Indian Ocean Drive. It crosses Indian Ocean Drive and then parallels Cervantes Road as far as the eastern boundary of the Southern Beekeepers Nature Reserve. It follows the firebreak that parallels this boundary and the adjoining eastern boundary of the Nambung National Park. The proposed fibre optic cable route then heads northeast and east and parallels the southern boundary of a cleared paddock as far as its southeast corner. It then heads north along the eastern boundary of this paddock for a short distance before heading east along a cleared power line track as far as the western edge of a cleared paddock on the east side Munbinea Road. From here it goes south, east and then south again along the edges of cleared
paddocks before joining a cleared track that parallels Wongonderrah Road as far as Brand Highway. It then goes south along a fenceline parallel to the east side of Brand Highway as far as the Wongonderrah Regenerator where the proposed fibre optic cable route terminates approximately 20km north-northwest of Cataby (see Appendix 4: Design Drawings).

Figure 14: Location Plan: Proposed fibre optic cable route Cervantes to the Wongonderrah Regenerator.
ENVIRONMENTAL BACKGROUND

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

The nearest climatic recording station to the western end of the survey area is located in the township of Jurien Bay, approximately 21km to the north. This climatic recording station has recorded weather conditions in the area for over forty years. During the winter months (June-August) the average maximum temperature recorded at this station is 20.0°C and the average minimum is 9.6°C. In the summer (December-February) the equivalent temperatures are 29.6°C maximum and 16.9°C minimum (Bureau of Meteorology, Australia 2013a). It is noted here that Cervantes is located on the coast and as you move inland it is probable that average minimum temperatures will be lower and average maximum temperatures will be higher. This is clear when the monthly averages recorded at the climatic recording station at the Badgingarra Research Station are considered. This recording station is approximately 20km north of the east end of the survey area and is located approximately the same distance from the present coast. It is considered here that the climatic recording station at the Badgingarra Research Station is likely to have recorded climatic conditions similar to those that would have prevailed in and about the eastern end of the survey area in the past. During the winter months (June-August) the average maximum temperature recorded at climatic recording station located at the Badgingarra Research Station is 18.2°C and the average minimum is 7.5°C. In the summer (December-February) the equivalent temperatures are 33.8°C maximum and 16.6°C minimum (Bureau of Meteorology, Australia 2013b).

The survey area is within a region that receives an average annual rainfall of approximately 533mm in the vicinity of its western end and 540mm in the vicinity of its eastern end. At the western end of the survey area, approximately 56.13% of this rain falls in the winter months and less than 6% in the summer (Australian Bureau of Meteorology 2013a). In the vicinity of the eastern end of the survey area, approximately 54.0% of the annual rainfall occurs in the winter months and less than 7% in the summer (Australian Bureau of Meteorology 2013b). The remainder of the annual rainfall over the survey area is distributed between spring and autumn.

**Geology**
The geology of the area in and around the western half of the survey area has been mapped and described on the Hill River – Green Head 1:100 000 map sheet and accompanying notes (Mory 1994) while the geology of the area in and around the eastern half of the survey area has been mapped and described on the Wedge Island 1:100 000 map sheet and accompanying notes (Mory 1995).

In general, the survey area is located on the Perth Basin, a polycyclic basin consisting of a Silurian to early Neocomian sequence deposited in an interior-fracture setting, and an overlying late Neocomian Quaternary sequence laid down in a marginal sag basin (Cockbain 1990:495). That part of the Perth Basin that lies between the Darling Fault and the Indian Ocean is known as the Swan Coastal Plain, a narrow strip of land between 15 and 30km wide, that extends from around Jurien Bay southwards to Busselton (McArthur 1991). Most of the Swan Coastal Plain is covered by Quaternary sediments of fluvial and aeolian deposits that have been deposited in a series of geomorphic entities sub-parallel to the present coastline (McArthur and Bettenay 1974). Five geomorphic entities are recognised by McArthur and Bettenay (1974) the most westerly of which is the Quindalup Dune System that borders the present coastline. This dune system is bounded to the east by the Spearwood Dune System with the Bassendean Dunes lying between this and the Arrowsmith Region, an undulating area east of the Gingin Scarp (Mory 1995).
Geologically, the survey area traverses the geomorphic entities mentioned above. The western end of the survey area is located on the Quindalup Dune System (McArthur and Bettenay 1974) of the Swan Coastal Plain. This dune system, which is up to several kilometers wide near Cervantes, can be characterised as consisting of calcareous sand, generally unconsolidated, and often exhibiting a linear arrangement parallel to the present coastline (McArthur and Bettenay 1974). According to McArthur and Bettenay (1974), individual dunes within the Quindalup Dune System show a gentle windward and steep lee slope due to the prevailing south-westerly winds.

The central western part of the survey area traverses a relatively narrow tract of the Spearwood Dune System that “consists of a core of aeolianite with a hard capping of secondary calcite overlain by variable depths of yellow or brown sand” (McArthur and Bettenay 1974:13). According to Mory (1995:4) the “limestone of the Spearwood Dune System (Tamala Limestone) is exposed in coastal cliffs, but generally it forms low hills following the old dune topography that has been greatly lowered by rain-water solution. That part of the survey area that traverses the Spearwood Dune System is gently undulating.

The majority of the eastern part of the survey area traverses the Bassendean Dune System that is a “low-lying area between the Spearwood Dune System and the Gingin Scarp . . . [and] represent a belt of coastal dunes and associated shoreline deposits, which are probably Early to Middle Pleistocene in age” (Mory 1994:3). According to McArthur and Bettenay (1974) the low dunes or hills of the Bassendean Dune System are interspersed with poorly drained areas.

The eastern end of the survey area traverses the Arrowsmith Region. According to Mory (1995) the Arrowsmith Region

. . . contains hills of Jurassic strata usually capped by laterite discordant with bedding. Some of the hills are flat-topped but on most the laterite surface slopes towards the present drainage system. The area is drained by Mullering Brook, Mount Jetty Creek and a number of other unnamed creeks. These watercourses debouch into numerous swamps or small lakes mostly confined to the Bassendean Dune, a slightly undulating surface comprising generally unconsolidated riverine material (McArthur and Bettenay 1974).

That part of the survey area between Indian Ocean Drive and the cleared paddock adjacent to the eastern boundary of the Nambung National Park is hilly in places but otherwise gently undulating. The remainder of the survey area is relatively flat.

From Telstra’s Cervantes Exchange eastwards to Indian Ocean Drive, the surface geology in and around the survey area can be characterised as grey/white calcareous sand (Figure 14). From Indian Ocean Drive, elevation increases up to the eastern boundary of the Southern Beekeepers Nature Reserve. The surface geology in this part of the survey area is predominantly yellowish/orange sand. Heading down the eastern boundary of the Southern Beekeepers Nature elevation decrease and the surface geology becomes variable with areas of grey/white calcareous sand and other areas of yellowish/orange sand with lots of low limestone outcrops and exposed limestone pavements. There are also numerous limestone boulders throughout. From here to the Wongonderrah Regenerator on the Brand Highway the surface geology can be characterised as predominantly grey/white sands.
Vegetation
According to Beard (1981) the western half of the survey area and its surrounds traverse the Guilderton and Jurien Systems of the Drummond Botanical Subdistrict while the eastern half traverses the Le Sueur System of the Irwin Botanical District. Generally, the vegetation within the Drummond Botanical Subdistrict comprises mainly Banksia spp. low woodland on leached sands with Melaleuca spp. swamps where it is poorly drained. Farther from the coast are woodlands of tuart (Eucalyptus gomphocephala), jarrah (Eucalyptus marginata) and marri (Eucalyptus calophylla) (Beard 1981). The Irwin Botanical District generally contains vegetation that comprises scrub-heath on sandplains near the coast, Acacia-Casuarina thickets further inland and Acacia scrub with scattered trees of Eucalyptus loxophleba on the hard setting loams (Beard 1981).

The Guilderton System has been described by Beard (1981) as a narrow belt that is situated along the coast upon stabilised dunes of calcareous sand. According to Beard (1981: 182) the vegetation within this system has been “much modified by fire”. He goes on to state that “the climax, represented today only by small patches, may have been Callitris preissii low forest. A sub-climax of Acacia spp. thicket with A. rostellifera and A. cyclops has also been much reduced by fire, commonly to a heath of an Acacia lasiocarpa – Melaleuca acerose association” Beard (1981: 182).

The vegetation within the extreme western end of the survey area that traverses the Guilderton System can be characterised as predominantly coastal heath to 1m with some larger Acacia spp. shrubs to 2m and the occasional small tree to 3m. As a consequence surface visibility in this part of the survey area ranged from 10% to 50% amongst the coastal heath and up to 100% along those parts of the survey area that coincided with cleared ground between the coastal heath and existing roads.

The vegetation within the Jurien System has been described by Beard (1981) as comprising Dryandra-Calothamnus heath on shallow soil or ridges, Banksia low woodland of B. attenuata, B. menziesii, B. ilicifolia, Eucalyptus todtiana and Nuytsia floribunda on slopes. In and around that part of the survey area that traverses the Jurien System, the natural vegetation comprised
predominantly Banksia low woodland in various densities. In general there were numerous *Banksias* spp. trees to 4m over various *Acacia* spp. shrubs to 1-2m but mostly 1m. In some parts of the survey area through the Jurien System, all natural vegetation has been removed and replaced with cleared paddocks. As a consequence surface visibility was variable and ranged from 100% along those parts of the survey area that coincided with cleared tracks, power line corridors and fencelines to approximately 30% in places with dense scrub (Figure 15). Elsewhere, surface visibility averaged approximately 70% in parts where the Banksia scrub was very open and up to 80% in cleared paddocks with low stubble and grasses.

The majority of the eastern half of the survey area traverses the Le Sueur System where the vegetation is variable. According to Beard (1981) it comprises heath in which grass trees (*Xanthorrhoea reflexa*) and *Dryandra* spp. are conspicuous on lateritic surfaces, scrub-heath with *Hakea oblique* on sandy middle slope soils with ironstone gravel, *Banksia* low woodland on deep sand in valley bottoms and eucalypt woodland along major drainages. *Eucalyptus calophylla*, *E. wandoo*, *E. loxophleba*, *E. accedens* and *E. rudis* may also be present, singly or in mixture. The natural vegetation, where it remains, observed throughout that part of the survey area that traverses the Le Sueur System can be characterised as predominantly Banksia low woodland in various densities. In general, there were numerous *Banksias* spp. trees to 4m over various *Acacia* spp. shrubs to 1-2m but mostly 1m. The occasional *Eucalyptus* spp. tree to 5m was also observed as were numerous grass trees to ~1m, several Christmas trees (*Nuytsia floribunda*) to 3m and some paperbarks (*Melaleuca* spp.) to 3m. As a consequence surface visibility along this part of the survey area was variable and ranged <10% where the scrub was dense up to approximately 60% in more open parts. The natural vegetation has been removed from remainder (approximately half) of the survey area that traverses the Le Sueur System and replaced with cleared paddocks. As a consequence, surface visibility along this part of the survey area ranged from 80% in cleared paddocks with low stubble and grasses up to 100% along cleared tracks and fencelines.

It is noted here that the survey area traverses, parallels and follows a number of sealed roads, power lines, cleared paddocks and established and well used tracks. As a consequence, parts of the survey area have been universally disturbed as a result of past land use practices.

![Figure 16: Looking SE along firebreak down east side of Southern Beekeepers Nature Reserve.](image)
PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS

DEFINITIONS

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

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

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

A place where stone was obtained for making stone tools is a quarry. Generally quarries contain knapping centres or core reduction areas where knapping was intensive. Quarries are found at occurrences of highly siliceous stone, such as chalcedony, chert, silcrete, quartz, etc. Finished artefacts are not common at quarries and the vast majority of material found at this type of site is waste, called debitage or debris, from making tools or preparing cores for transport off the quarry for later use.

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

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

The decision as to whether a place might or might not constitute a “site” under Section 5 of the Western Australian Aboriginal Heritage Act 1972 is made by the Aboriginal Cultural Material Committee. Excerpts from the Act are included in Appendices 5 and 6. Most types of Aboriginal sites are described in more detail in Appendix 6. It is important to note that all sites, whether known or not, are protected under the Western Australian Aboriginal Heritage Act 1972 and that it is an offence to disturb or conceal a site, or remove artefacts, without appropriate consent.
REGISTERED SITES AND OTHER HERITAGE PLACES

As a result of research undertaken at the Heritage and Culture Division, Department of Aboriginal Affairs (WA) and a search of the DAA Aboriginal Sites Database prior to the archaeological survey of Telstra’s proposed fibre optic cable route between Cervantes and the Wongonderrah Regenerator (the survey area), it was established that no Aboriginal archaeological sites or sites with an archaeological component are registered at positions that place them within the survey area. Furthermore, it was also established that no ‘other heritage places’ with archaeological components are registered at positions that place them within the survey area.

In the wider region around the survey area the Department of Aboriginal Affairs has files on two registered Aboriginal archaeological sites and four ‘other heritage places’ that have archaeological components, all of which are located within approximately 10km of the survey area. Details of these sites and other heritage places are given in Table 2 while additional information pertaining to them was obtained from the relevant files and unpublished reports held at the Department of Aboriginal Affairs. A brief review of these will highlight the types of Aboriginal archaeological sites and other heritage places already known to exist in the vicinity of the survey area as well as their geomorphological context.

Table 2: Registered Aboriginal archaeological sites and other heritage places with archaeological components located within 10km of the survey area.

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</tbody>
</table>

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

According to information contained in the relevant site files, the Wongonderrah Camp and Muralang Pool Camp sites were both recorded during a survey for Aboriginal sites in 1987 at which time they were identified as places where Aboriginal people had camped in the past (O’Connor and Quartermaine 1987). According to the relevant site files, numerous artefacts dating from the recent past, including old kitchen refuse, have been identified at the
Wongonderrah Camp site while an old bough-shade structure was identified at the Muralang Pool Camp site.

According to information contained on the Department of Aboriginal Affairs’ Aboriginal Sites Database, the Coomado Swamp other heritage place contains a man-made structure as well as being recorded as a hunting place, a camp and a birthplace. The Cooljarloo Swamp other heritage place appears on the Department of Aboriginal Affairs’ Aboriginal Sites Database as comprising a hunting place, a camp and source of water. Access to the relevant files pertaining to these two other heritage places is closed and as a result no further details should be given. However, in relation to the Coomado Swamp site, ‘Notes on the recognition of Aboriginal Sites’, published by the Aboriginal Affairs Department (WA), now the Department of Aboriginal Affairs, describes two kinds of man-made structures; stone arrangements and habitation structures. The following descriptions of these types of structures are taken from this publication. There are several types of man-made stone arrangements, ranging from cairns or piles of stones to more elaborate designs. These include heaps or alignments of stones arranged for ceremonial purposes; elongated rock fragments erected as markers to signify special areas; low weirs to trap fish and low walls to provide a hide or shelter for a hunter. Habitation structures were generally uncomplicated, made of branches and sometimes tussocks of grass. These structures are rarely preserved for long periods of time.

According to the Department of Aboriginal Affairs’ Aboriginal Sites Database and the relevant file, the Karong (Carnega) other heritage place contains a man-made structure. However, no specific information pertaining to the man-made structure is given in the relevant file. Similarly, according to the Department of Aboriginal Affairs’ Aboriginal Sites Database and the relevant file, the Kooyar other heritage place contains a man-made structure and an artefact scatter. However, no specific information pertaining to the man-made structure or artefact scatter is given in the relevant file.

In addition to those referred to above, numerous other archaeological surveys and investigations have also been undertaken in the wider region around the survey area (e.g. Anthropos Australis 2009; Biosis Research 2007; Harris 1996, 1998, 1999, 2000; Hook and Veitch 2001; Mattner et al. 2008; Morse and Kee 1986; O’Reilly 2001, 2002, 2004, 2005a, 2005b, 2013; Pickering 1982; Quartermaine 1992; Sauman et al. 2008) which have generally resulted in relatively few Aboriginal archaeological sites being identified. Those that were identified were generally very small artefact scatters associated with drainage features or water sources. The most common type of Aboriginal archaeological material identified as a result of the above mentioned surveys was the occasional isolated artefact.

The surveys referred to above have covered a variety of landforms in various environments, and therefore provide useful information pertaining to possible site patterning characteristics that may be found in similar environments or adjacent areas. The data contained in the reports and files pertaining to the site types, dimensions, assemblages and locations of those registered sites and other heritage places described above can be utilised in an assessment of the archaeological significance of any other Aboriginal archaeological site(s) that may be identified as a result of the archaeological survey of Telstra’s proposed fibre optic cable route between Cervantes and the Wongonderrah Regenerator.
PREVIOUS ARCHAEOLOGICAL RESEARCH

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

The artefact assemblages at the majority of previously recorded sites on the Swan Coastal Plain are dominated by quartz. Many sites also contain a proportion of fossiliferous chert, a superior raw material for artefact manufacture. The sources of this material, believed to lie off the Western Australian coast in the general vicinity of Mandurah, were submerged approximately 6,000 years ago with the last eustatic change, a 140 metre rise in sea level (Glover 1975). Although the timing of the loss of access to this resource is not precise, the presence of fossiliferous chert in an assemblage may indicate the relative age of a site. Hallam (1987) developed a relative dating scheme based on the relative proportions of lithic material and artefact types represented in artefact assemblages that are outlined as follows. Sites classified as Early Phase assemblages include artefacts of fossiliferous chert. Middle Phase assemblages contain backed artefacts and adzes, while Late Phase assemblages are quartz-rich with high proportions of chips. Final Phase assemblages are those with worked glass and/or ceramic artefacts. Assemblages could, of course, belong to more than one phase (Hallam 1987:20). Although there are obvious inadequacies with this approach it is one of the only methods available for assigning a relative date to open artefact scatters.

The majority of previously recorded archaeological sites on the Swan Coastal Plain are usually found on intact or deflated Holocene dunes and represent a general background scatter reflecting single activity episodes or ephemeral activities. Much of the internal complexity of these sites has been destroyed due to natural processes such as aeolian deflation, or from disturbance as a result of development.

The distribution of archaeological sites on the Swan Coastal Plain is not uniform. Larger sites and site clusters are found at highly favourable locations indicating that these locations were occupied repeatedly over a long time frame. Favoured locations on the coastal plain include areas of predictably high productivity, such as those with reliable fish runs and large seasonal game resources (Anderson 1984; Meagher and Ride 1979). At times of plenitude this resource security facilitated the support of large gatherings that served to enhance group identity and cohesion (Gibbs 1987). These favourable locations correspond to the major wetlands, lakes and estuaries of the coastal plain and the rivers that drain into them. The vast majority of sites that have been located are within 500 metres of water sources, indicating that Aboriginal habitation of the area was closely linked to the availability of wetland resources. The high seasonal productivity and the availability of fresh water at wetlands would clearly have made them a focus for Aboriginal habitation.

In addition to the above, archaeological research undertaken in the wider region around Telstra’s proposed fibre optic cable route between Cervantes and the Wongonderrah Regenerator has also focused on areas nearer the present coastline. In 1992, a study of the archaeology of the Geraldton coastal region focused on that area within 20km of the coast between the Irwin River at Dongara in the south and the Hutt River in the north, a distance of
approximately 130km (Schwede 1993). This study revealed that there were sixty-one registered Aboriginal archaeological sites in this area at that time and that the majority of them (75%) were artefact scatters or had an artefact scatter component. Other types of sites identified included middens, burials and art sites.

A second study of the Aboriginal cultural heritage of the Geraldton coastal area was undertaken in 1995. This study focused on the area within 4km to 10km of the coast between Coronation Beach Road in the north and the mouth of the Greenough River in the south but excluding the City of Geraldton (Schwede and von Bamberger 1966). This study revealed that artefact scatters were the dominant site type within the study area and that their assemblages were primarily, if not exclusively, comprised of quartz debitage.

Farther to the south and as a result of a 'thorough intensive foot survey' of tracts of rocky coastline between Geraldton and Cape Naturaliste, which includes that part of the coast immediately west of the survey area, Dortch et. al. (1984) identified ten shell middens with a marked concentration just north of and in the Jurien Bay district. At one of these middens, the Sandland Island Midden, scores of limpets, turban and other shells were observed with numerous quartz and calcrete artefacts (Dortch et. al. 1984). Another midden, the Middle Head Midden, contains a variety of marine shells in stratigraphical association with stone artefacts made predominantly from finely textured calcrete and chert (Morse 1982). Both of these sites have been dated to the Middle Holocene, 4880 ± 90 years Before Present (BP) and 6290 ± 100 BP respectively.

A similar date for the Aboriginal occupation of the Jurien area was obtained as a result of excavations undertaken at Hasting's Cave. These excavations recovered a small amount of archaeological material that was subsequently dated from 6000 to 8000 BP (Baynes 1979).

The results of previous archaeological surveys, studies and research, as well as the data on registered sites and other heritage places presented above, demonstrates the types of Aboriginal archaeological sites already known to exist in the wider region around the survey area. In addition to this, these results, together with the environmental information already discussed, enables predictions to be made about probable site locations and the types of archaeological material and/or sites that could reasonably be expected to be found as a result of the archaeological survey of the Telstra’s proposed fibre optic cable route between Cervantes and the Wongonderrah Regenerator (the survey area). The underlying geology and the vegetation regime within the survey area preclude the likelihood of sites such as rock shelters, engravings or art sites being present. The types of archaeological sites or material, if any, that are most likely to be located within Telstra’s proposed fibre optic cable route between Cervantes and the Wongonderrah Regenerator would be various types of lithic artefacts either singularly or in scatters and possibly shell middens near its western end.

**SURVEY METHODS**

The first stage of fieldwork associated with the archaeological survey of Telstra’s proposed fibre optic cable route between Cervantes and the Wongonderrah Regenerator was undertaken in March 2013 by archaeologist Mr Thomas O’Reilly with assistance from Yued Traditional Owner Mr Brendan Moore while the second stage was conducted in June 2013 with assistance from Yued Traditional Owner Mr Chris Shaw. Telstra representative Mr Steve Hirning was present for the duration of the first stage of fieldwork while Mr Tom Warren was present for the second stage. The methods utilised prior to and during the archaeological survey are outlined below.

Prior to undertaking the field component of the archaeological survey, a search of the Aboriginal Sites Database at the Heritage and Culture Division, Department of Aboriginal Affairs (WA), was made to determine if any Aboriginal archaeological sites, or sites with an
archaeological component, or any other heritage places with an archaeological component, are located within the designated survey area. At the same time, site files pertaining to any registered Aboriginal archaeological sites or sites with an archaeological component in the vicinity of the survey area were also examined as were the files pertaining to other heritage places with an archaeological component. A review of reports detailing the results of previous archaeological surveys and investigations carried out in the vicinity of the survey area was also undertaken as was a review of archaeological research conducted in the wider region.

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

The designated survey area was surveyed for the presence of Aboriginal archaeological sites by walking along the entire length of the proposed fibre optic cable route between Cervantes and the Wongonderrah Regenerator. This was undertaken by two people (archaeologist and Yued Traditional Owner) spaced approximately 5m - 10m apart.

In general, ground visibility throughout the survey area was variable. Along those parts that coincided with established roads, cleared tracks and fencelines it averaged 100%. In those parts of the survey area that were within remnant bush it averaged between <10% and 70%, depending on the type and density of the local vegetation. Within those parts of the survey area that coincided with cleared paddocks, ground visibility averaged between 80% and 100%.

RESULTS

As a result of research undertaken at the Heritage and Culture Division, Department of Aboriginal Affairs (WA) and a search of their Aboriginal Sites Database prior to the archaeological survey of Telstra’s proposed fibre optic cable route between Cervantes and the Wongonderrah Regenerator, it was established that no Aboriginal archaeological sites or sites with an archaeological component are registered at positions that place them within the designated survey area. Furthermore, it was also established that no ‘other heritage places’ with archaeological components are registered at positions that place them within the designated survey area.

As a result of the archaeological survey of Telstra’s proposed fibre optic cable route between Cervantes and the Wongonderrah Regenerator no Aboriginal archaeological sites or material were identified.
CONCLUSIONS

DISCUSSION
An archaeological survey for Aboriginal archaeological sites within Telstra’s proposed fibre optic cable route between Cervantes and the Wongonderrah Regenerator was undertaken on behalf of the South West Aboriginal Land and Sea Council on behalf of Telstra. The first stage of fieldwork associated with the archaeological survey was conducted in March 2013 by archaeologist Mr Thomas O’Reilly with assistance from Yued Traditional Owner Mr Brendan Moore while the second stage was conducted in June 2013 with assistance from Yued Traditional Owner Mr Chris Shaw. Telstra representative Mr Steve Hirning was present for the duration of the first stage of fieldwork while Mr Tom Warren was present for the second stage.

The survey area discussed in this report comprises Telstra’s proposed fibre optic cable route (the survey area) between Cervantes and the Wongonderrah Regenerator. The western end of the survey area is located at Telstra’s Cervantes Exchange, approximately 176km north-northwest of Perth and 0.9km east of the present coastline. The survey area is 0.02km wide and approximately 59km long with its eastern terminus at the Wongonderrah Regenerator on the Brand Highway north of Cataby. In general the survey area parallels and/or follows the alignment of existing sealed and unsealed roads, tracks along road reserves, power line corridors, fencelines and firebreaks between Cervantes and the Wongonderrah Regenerator.

The entire survey area was surveyed and examined for the presence of Aboriginal archaeological sites and/or material by walking along its entire length. Given the degree of surface visibility throughout and the intensity of coverage, it is considered that the archaeological survey was sufficient to locate any Aboriginal archaeological sites present on the surface. It should be noted that sites can be exposed and/or concealed as a result of both wind and water erosion. It is also possible that archaeological material lies below the surface and may be exposed as a result of environmental factors or work undertaken within the surveyed area. Telstra should be aware of this when undertaking trenching and placement of the fibre optic cable within the designated survey area or any other ground disturbing work.

RECOMMENDATIONS

On the basis of the results of the archaeological survey of Telstra’s proposed fibre optic cable route (the survey area) between Cervantes and the Wongonderrah Regenerator and the above discussion it is recommended that;

1) Telstra be allowed to proceed with their proposal to place new Fibre Optic Cable within the proposed fibre optic cable route between Cervantes and the Wongonderrah Regenerator.

2) In the event of any artefactual material or skeletal material being discovered in the course of work associated with the preparation of the proposed fibre optic cable route between Cervantes and the Wongonderrah Regenerator and/or the placement of the new Fibre Optic Cable and/or any other activities, work should stop while the Department of Aboriginal Affairs carry out an investigation of the site. In the case of skeletal material being uncovered, work must cease immediately and the Western Australian Police must be notified.

3) Telstra personnel and contractors be advised of their obligations under section 15 of the Western Australian Aboriginal Heritage Act 1972, to report the discovery of any Aboriginal cultural material which may be uncovered in the course of their work.

* * *
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* * *
APPENDIX 1: SITES REGISTER SEARCHES
Search Criteria

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Aboriginal Heritage Inquiry System
Aboriginal Sites Database

Disclaimer
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Legend

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Accuracy is shown as a code in brackets following the site coordinates.

[Reliable] The spatial information recorded in the site file is deemed to be reliable, due to methods of capture.
[Unreliable] 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.

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Spatial Accuracy
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:Z50' means Easting=5000000, Zone=50.

Sites Shown on Maps
Site boundaries may not appear on maps at low zoom levels
List of Registered Aboriginal Sites with Map

No results
List of Other Heritage Places with Map

No results
Map Showing Registered Aboriginal Sites and Other Heritage Places
### Aboriginal Heritage Inquiry System
#### Aboriginal Sites Database

### Search Criteria

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Sites Shown on Maps

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List of Registered Aboriginal Sites with Map

No Results
Aboriginal Heritage Inquiry System
Aboriginal Sites Database

Search Criteria

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Sites Shown on Maps

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List of Other Heritage Places with Map

No Results
APPENDIX 2: LETTER OF ADVICE

CONSULTATIONS HELD ON 21ST MARCH 2013

21st March 2013

We the undersigned have been consulted by Bradley Goode on behalf of SWALSC for Telstra in regard to the proposed Telstra Optic Fibre Cable Cervantes to Wongonderrah. We would like to make the following recommendations in relation to the Western Australian Aboriginal Heritage Act (1972)

* Lake Thetis has been identified on a site of significance defined by the group, and it will need to be avoided. The group insinuates it will not impact the site.

* No tangible objects have been excavated with cultural significance.

* A campfire has been recorded and will need to be; hence a re-enactment will need to be monitored.

<table>
<thead>
<tr>
<th>Yued WC97/71 Native Title Claim Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charlie Shaw 21.3.2013</td>
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<tr>
<td>Gordon Narrier 21.3.2013</td>
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<td>Augustine Jackamarra 21.3.2013</td>
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<td>Veronica Yappo 21.3.2013</td>
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<tr>
<td>Dorind Berrron 21.3.2013</td>
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<tr>
<td>Dion Yappo 21.3.2013</td>
</tr>
<tr>
<td>Brendan Moore</td>
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CONSULTATIONS HELD ON 5TH JULY 2013

We the undersigned have been consulted by Bradley Goode on behalf of SWALSC for Telstra in regard to the proposed Telstra Optic Fibre Cable Amendment Cervantes to Wongonderrah, Western Australia. We would like to make the following recommendations in relation to the Western Australian Aboriginal Heritage Act (1972):

- Cable path is clear of sites as defined by section 5 of the Act.
- Reports confirm lands as a place of mythological significance - small unlabelled Peg 151=152 should be amended to Peg 151 and Peg 152 should be a female drill.

<table>
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<td>Brendan Moore</td>
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### APPENDIX 3: MAPS OF THE PROJECT AREA IN RELATION TO ABORIGINAL HERITAGE SITES

<table>
<thead>
<tr>
<th>Map Name</th>
<th>Page No.</th>
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<tbody>
<tr>
<td>Map of Aboriginal Sites and Places in relation to Proposed Optic Fibre Cable Route, Cervantes to Wongonderrah, W.A.</td>
<td>68</td>
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<tr>
<td>Map of Monitoring Areas in relation to Proposed Optic Fibre Cable Route, Cervantes to Wongonderrah, W.A.</td>
<td>69</td>
</tr>
<tr>
<td>Map of New Site ‘Lake Thetis’ boundary and reported midden locations, Cervantes, W.A.</td>
<td>70</td>
</tr>
<tr>
<td>Table of Coordinates for Extent of New Site ‘Lake Thetis’</td>
<td>71</td>
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</table>
Map of Monitoring areas in relation to Proposed Optic Fibre Cable Route, Cervantes to Wongongderrah, W.A.

Legend:
- Telstra Pegs Route 2
- Telstra Pegs Route 1
- Aboriginal heritage sites and places
- Original Route 1 to Wongongderrah
- Original Route 1 to Cervantes
- Amended Route 2

Monitoring Area between TP 151 to 152
Monitoring Area between TP 164 and 164A
Monitoring Area between TP 157 to 166

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Map Prepared: 26/09/2013

Coordinate System: GDA 1994 MGA Zone 50
Scale: 1:70,000 (A4)
Map of New Site 'Lake Thetis' boundary and reported midden locations, Cervantes, W.A.

Coordinate System: GDA 1994 MGA Zone 50
Scale: 1:5,000 (A4)
Map Prepared: 29/10/2013

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Legend
- New Site Recording Lake Thetis
- New Site Recording Lake Thetis points
- Midden Locations

Reported Midden 002
315649.6mE 6623796.48mN

Reported Midden 001
315684.5mE 6623802.14mN

Reported Midden 003
315624.42mE 6623805.67mN
TABLE OF COORDINATES OF EXTENT FOR NEW SITE ‘LAKE THETIS’ – extract from DAA Heritage Information Submission Form (2013)

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APPENDIX 4: DESIGN DRAWINGS PROVIDED BY TELSTRA
NOTE -- CONSTRUCTION PERSONNEL ARE NOT PERMITTED TO USE TRACKS WITHIN NAMBUNG NATIONAL PARK AND BEESKERS NATURE RESERVE.

CONSTRUCTION NOTES:
1. NO ADDITIONAL JOINTS UNLESS APPROVED BY DESIGN.
2. ALL AMENDMENTS TO BE MARKED IN RED AND RETURNED TO DESIGNER.
3. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE STATED.
4. SCALES QUOTED DO NOT APPLY TO ALIGNMENT OR SYMBOLS.
5. HAULERS AND JOINTERS ARE TO RECORD SHEATH MEASUREMENTS AT JOINT ENCLOSURES, TERMINATIONS AND ALL LOOPS.
6. EACH SHEET CONTAINS CONSTRUCTION NOTES RELEVANT TO THAT SHEET. CONSTRUCTORS ARE TO READ ALL NOTES CAREFULLY.
7. LOCATE ALL UTILITIES/SERVICES PRIOR TO CONSTRUCTION ACTIVITIES.
8. ALL WORK TO BE UNDERTAKEN IN ACCORDANCE WITH THE PROJECT E.M.P.

NOTE -- INSTALL TRANSPONDERS ALONG ENTIRE ROUTE AS SOILS THROUGHOUT THE PROJECT ARE CORROSIVE, AND MAY DEGRADE TRACE WIRE OVER TIME.

MAP GRID OF AUSTRALIA
ZONE 50 USING GDANSK DATUM (CADASTRE UNADAPTED)

NOTE -- THE STRAIGHT LINE DIAGRAM FOR THIS OPTIC FIBRE CABLE IS ON DRAWING W107414.

FOR CONSTRUCTION
BIBBY SPRINGS EXCHANGE AREA

CERVANTES EXCHANGE AREA

SOUTHERN BEEKEEPERS NATURE RESERVE

NOTE – INSTALL TRANSPODERS ALONG ENTIRE ROUTE AS SOILS THROUGHOUT THE PROJECT ARE CORROSIVE, AND MAY DEGRADE TRACE WIRE OVER TIME.

LOT 3924
DP 210858
Dale River Springs Pty. Ltd.

LOT 3925
DP 210859
Kenneth Hobby
Ph: 08-96524070
Mob: 0417-985356

FOR CONSTRUCTION

CONSTRUCTION NOTES:
1. NO ADDITIONAL COMPLIANCE UNLESS APPROVED BY DESIGN.
2. ALL AMENDMENTS TO BE MARKED IN RED AND RETURNED TO DESIGNER.
3. LOCATE ALL UTILITIES/INFRASTRUCTURE PRIOR TO CONSTRUCTION ACTIVITIES.
4. ALL WORK TO BE PERFORMED IN ACCORDANCE WITH THE PROJECT EMP.

THE AREA MARKED IS INFECTED BY PYTHOTHECIA, "DIEBACK", AS THE CABLE ALIGNMENT PASSES NEAR THE AREA. ENSURE THAT ALL SAFEGUARDS ARE IN PLACE TO PREVENT THE SPREAD OF DIEBACK. REFER TO THE OPERATIONAL DIEBACK PREVENTION MANAGEMENT PLAN FOR IMPLEMENTATION OF PROCEDURES.

DANGER
BEFORE EXCAVATING CHECK FOR UTILITY INFRASTRUCTURE, "TOLL FREE BEFORE YOU DIG" FOR ALL SERVICE LOCATIONS.

MAP GRID OF AUSTRALIA
ZONE 50 USING GDAP DATUM
KAPDASTRE UNADJUSTED
SCALE 1:10000 AT 40

FOR REFERENCE

MAP OF AUSTRALIA
ZONE 50 USING GDAP DATUM
KAPDASTRE UNADJUSTED
SCALE 1:10000 AT 40

FOR CONSTRUCTION

POSSIBLE DIEBACK OBSERVED. NOTE 5.

CLEAN OUT

CLEAN OUT

INTRODUCED FLORA
Archotheca calendula
(cape weed)

INTRODUCED FLORA
Lysinechis aspernus
(pimpemel)
Prior to Flora found between stations 201 and 202.

No clearing outside the 6m corridor required to plough the cable.

Bacopa monnieri Saccaturn

NOTE - INSTALL TRANSPOUNDERS ALONG ENTIRE ROUTE AS SOILS THROUGHOUT THE PROJECT ARE CORROSIVE, AND MAY DEGRADE TRACE WIRE OVER TIME.

DANGEROUS POINT

SAFETY FIRST

MAP GRID OF AUSTRALIA ZONE 50 USING GDOP DATUM (CADASTRE UNADJUSTED)

SCALE 1:2000 MM

FOR CONSTRUCTION

CONSTRUCTION NOTES:
1. NO ADDITIONAL JOINTS UNLESS APPROVED BY DESIGNER.
2. ALL AMENDMENTS TO BE MARKED IN RED AND RETURNED TO DESIGNER.
3. LOCATE ALL UTILITIES/SERVICES PRIOR TO CONSTRUCTION ACTIVITIES.
4. ALL WORK TO BE PERFORMED IN ACCORDANCE WITH THE PROJECT E.M.P.
APPENDIX 5: OBLIGATIONS RELATING TO SITES UNDER THE W.A. ABORIGINAL HERITAGE ACT 1972

15. Report of findings

Any person who has knowledge of the existence of any thing in the nature of Aboriginal burial grounds, symbols or objects of sacred, ritual or 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.

16. Excavation of Aboriginal sites

(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 excavation 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.

17. Offences relating to Aboriginal sites

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.

18. Consent to certain uses

(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.

(1a) A person is also included as an owner of land for the purposes of this section if –

(a) the person –

(i) is the holder of rights conferred under section 34 of the Dampier to Bunbury Pipeline Act 1997 in respect of the land or is the holder's nominee approved under section 34(3) of that Act; or

(ii) has authority under section 7 of the Petroleum Pipelines Act 1969 to enter upon the land;

or
(b) the person is the holder of a distribution licence under Part 2A of the *Energy Coordination Act 1994* as a result of which the person has rights or powers in respect of the land.

(2) Where the owner of any land gives to the Committee notice in writing that he requires to use the land for a purpose which, unless the Minister gives his consent under 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 it is 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 its recommendation 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) Where the Committee submits a notice to the Minister under subsection (2) he shall consider its 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 subsection (2) and the Committee has not submitted it with its 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 Committee 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) he may apply to the State Administrative Tribunal for a review of the decision.

[(6) repealed]

(7) Where the owner of any land gives notice to the Committee under subsection (2), the Committee may, if it is 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 constitutes an offence against this Act.

* * *
APPENDIX 6: NOTES ON THE RECOGNITION OF ABORIGINAL SITES

Section 4 of the Aboriginal Heritage Act 1972 defines the meaning of "Aboriginal Site" as a place to which this Act applies by the operation of section 5 (see below).

5. Application to places

This Act applies to –

(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 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 which this Act applies are traditionally stored, or to which, under the provisions of this Act, such objects have been taken or removed.

The following notes were taken from ‘Notes on the Recognition of Aboriginal Sites’ published by the W.A. Museum as a guide to the recognition of Aboriginal sites.

Habitation Sites (Artefact Scatters)
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 gnamma 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.

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.

**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 rock 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.

**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 which possums and other arboreal animals sheltered. Some tree trunks bear scars where sections of bark or wood have been removed and which would have been used to make dishes, shield, spear throwers 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 stones 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 from simple cairns or piles of stones to more elaborate designs. Low weirs which detain fish when tides fall 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 locations 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 throughout most of the state. 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 describes 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 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, the taking of photographs of the places or objects or any 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 modeling of the soil, or the digging of pits and trenches. In other places there is no noticeable alteration of the ground surface and Aborigines familiar with the site must be consulted concerning its location.

Mythological Sites
Some of the types of 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 Aboriginal people who are familiar with the associated traditions.

*  *  *

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