Singleton Water Licence
Aboriginal Cultural Values Assessment

PUBLIC REPORT TO THE CENTRAL LAND COUNCIL

Singleton Pastoral Lease, Neutral Junction Pastoral Lease, Warrabri Aboriginal Land Trust and Iliyarne Aboriginal Land Trust, Northern Territory, Australia.

SUSAN DALE DONALDSON (ANTHROPOLOGIST)

Environmental & Cultural Services

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WARNING: THIS REPORT CONTAINS REFERENCE TO ABORIGINAL PEOPLE WHO HAVE DIED

Front cover: First Trip to Grandfather's Country with Rangers © Lindy Brodie 2021

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ACRONYMS

AAPA	Aboriginal Areas Protection Authority
AC	Authority Certificate
AIATSIS	Australian Institute of Aboriginal and Torres Strait Islander Studies
ALT	Aboriginal Land Trust
CLC	Central Land Council
DA	Drawdown Area
FPIC	Free, Prior and Informed Consent
GDE	Groundwater dependent ecosystem
GL	Gigalitre
ha	Hectare
ICN	Indigenous Corporation Number
ICOMOS	International Council on Monuments and Sites
km	kilometre
km^2	square kilometres
ML	Megalitre
NOI	Notice of intention
NTG	Northern Territory Government
PL	Pastoral Lease
PPL	Perpetual Pastoral Lease
RNTBC	Registered Native Title Body Corporate
RWA	Restricted Work Area
SWL	Singleton Water Licence
UNESCO	United Nations Educational, Scientific and Cultural Organization
WDWAP	Western Davenport Water Allocation Plan

Executive summary

In September 2020, Fortune Agribusiness Funds Management Pty Ltd (Fortune Agribusiness) applied for a water licence over Singleton Pastoral Lease (PL) located within the Central Plains management zone of the Western Davenport Water Allocation Plan (WDWAP), near Wycliffe Well in the Northern Territory. Whilst the proposed water extraction zone (development wells / bores) is located on Singleton PL, the groundwater drawdown area is estimated by Fortune Agribusiness as extending beyond the water extraction zone to other parts of Singleton PL, and across Neutral Junction PL, Warrabri Aboriginal Land Trust (ALT) and Iliyarne ALT.

In May 2021, the Central Land Council (CLC) was instructed by Aboriginal owners to identify the cultural values associated with the Singleton Water Licence (SWL) area and to consider how these values might be impacted by the granting of the water licence. Anthropological consultant Susan Dale Donaldson was engaged by the CLC to undertake the cultural values assessment.

The cultural values assessment involved a literature review and consultations with 80 Aboriginal owners in June 2021 which identified a complex Aboriginal cultural landscape across the SWL groundwater drawdown area including important cultural values directly associated with groundwater dependent ecosystems (GDEs). The assessment found the SWL area to be situated on the traditional lands for four *Kaytetye* speaking groups (*Anerre, Waake-Akwerlpe, Iliyarne* and *Arlpwe)*. An additional 23 Aboriginal groups were also identified across the broader Western Davenport District as holding kinship and ritual ties to these Kaytetye groups and to the drawdown area.

Traditional Owners' belief in the *Altyerre* (Dreaming) Law and the need to follow the Law is the cornerstone cultural value arising from this assessment and the foundation of all other identified cultural values. Taking care of country into the future according to ancient laws and customs appeases the creator spirits residing at important places. If traditional roles and responsibilities are not carried out by Traditional Owners, and if country is damaged as a result of the actions of Traditional Owners or others, punishment is imposed on senior Traditional Owners by *Altyerre* forces resulting in sickness, injury and even death. Spiritual punishment can lead to psychological stress and guilt linked to people's sense of internal moral failure associated with being responsible for damaging the country belonging to their spiritual ancestors, their actual ancestors, the current generation of kin and their descendants. Social sanctions may also result; Traditional Owners can be forced into temporary or permanent isolation from their traditional group. This was a major theme expressed during this assessment, as described below:

> ‘Aboriginal law is strong. If I do the wrong thing and my trees dies, I’ll be gone. If Dreaming trees get lost, we be gone too. We got to tell them this. Someone will be in trouble, the bloke not listening to us, he will get sick. That’s our law. Our law is in the ground and will not change. When I’m gone my family got him (The Law). Our main word to them is “please take it easy on the water all around the world”.’ *Frankie Holmes Akemarre*

This assessment also revealed the strong spiritual connection between Traditional Owners and sacred sites, the places embodying the *Altyerre* (Dreaming). Background research combined with consultations with Traditional Owners identified 40 sacred sites associated with 20 *Altyerre* mythologies within the drawdown area. Considering not all of the identified sites were visited during the assessment combined with the cultural complexities of the region, it is possible that one or two of the sites identified are actually the same place known by different names. It is also possible that other sites exist within the drawdown area that were not identified during this assessment.

Many of the *Altyerre* tracks traversing the drawdown area interlink with places across the broader cultural landscape. Whilst all of the mythologies across the drawdown area relate to the *Altyerre* creation of the land and water, a number of mythologies specifically relate to water such as ancestors carrying and digging for water, ancestors teaching others how to sing for rain, and groups attending large rain ceremonies. These mythological episodes continue to be re-enacted by Traditional Owners today in ritual, through song, dance, paint, story-telling and by visiting the spiritual ancestors residing at sacred places. Damage to sacred sites can impact Traditional Owners’ spiritual connection to country.

> ‘If we Iliyarne people let our land go dry, other people will growl at us. We need to keep the water until we die so that it can jump over to our children and their children all the way like that. The spirit people will get upset if we let that country go dry. They will make us sick, especially Rodger Tommy the main *kirda* (owner through father), and his sons and daughters. We are his *kwertengerl* (owner through mother) and we watch over that country for him.’ *Heather Anderson Narrurlu*

Each of the 40 sacred sites identified within the drawdown area were beyond the extraction zone and all have features associated with GDE: soakages, bean trees, orange trees, coolibah trees, creeks, swamps, supplejack trees, ghost gum trees, and bloodwood trees. It is understood that sandhills and mulga patches associated with sacred soakages are not GDE features.

The Aboriginal Areas Protection Authority issued the company with a sacred sites Authority Certificate (AC) for the proposed work; the subject land covers an area larger than the extraction zone but less than the estimated groundwater drawdown area (C2019/083). The current assessment identified 5 sacred sites within the AC subject land, not included in the AC. Moreover, a further 32 sacred sites were identified outside the AC subject land within the drawdown zone.

The assessment found that the spiritual connection Traditional Owners have with their country is strengthened by ritual activity which is also linked to the powerful forces of the *Altyerre*. There are a number of ceremonial grounds close to the drawdown area, used in the past, as well as today. Whilst there is a strong belief held by Traditional Owners in the power of ritual, for instance for rainmakers to make rain to increase water supply regardless of secular activities and impacts, many Kaytetye rituals require specific flora and fauna species obtained across the drawdown area. The current proposal to reduce groundwater has the potential to adversely impact GDE species which Traditional Owners customarily require for ritual activity. These potential changes concern the current generation of Traditional Owners, they fear the consequences of not following their ancient Law.

The extraction and drawdown areas have been identified as prime hunting ground by Traditional Owners. A vast array of flora and fauna species utilised by Traditional Owners were documented during this assessment, many of which depend on groundwater. The Wakurlpu and Alekarenge communities in particular utilise their 'back yard', within the drawdown area, to collect natural resources. Continuing to 'go hunting' is vital to the maintenance of good mental, physical and spiritual health for Aboriginal people and an important way to transmit cultural knowledge and practices to younger generations.

The importance of soakage water to Aboriginal people in the region was first documented by Stuart in 1862 when in the vicinity of the Crawford Range and Taylor Creek he recorded 'soakages dug in the Creek by the natives. There is no surface water, but apparently plenty by digging in the bed of the creek'.[1] Aboriginal people's reliance upon and valuing of water and other natural resources in this dry region continued throughout the 1900s (see Bell 1983; Koch & Koch 1993; Olney 1999; Turpin 2000; CLC 2008). The establishment of Warrabri settlement in 1956, now known as Alekarenge (Ali Curung), enabled Kaytetye families and their neighbours to remain on or close to their traditional lands. Others worked and lived on nearby Singleton and Neutral Junction Stations. Historical accounts in the 1960s reveal how the Aboriginal people who call this region 'home' in a traditional sense, were 'apparently prepared to stay at Singleton no matter how bad the conditions'.[2] Oral histories reveal

[1] Stuart 1865:79.
[2] Singleton Station CENSUS F133/22 (65/32); 1967.

that Traditional Owners and their ancestors have never ceased hunting and gathering on their traditional lands which includes collecting water from soaks, springs, swamps and creeks.

There is concern that this culturally important activity will be impacted by a reduction in groundwater and there will be a subsequent loss of associated cultural knowledge. Traditional Owners fear that the bigger animals will go to other areas to find water, and the smaller species will die out. People will feel a sense of shame and loss if they allow species to die out or find a 'new home'.

Traditional Owners have roles and responsibilities to maintain and protect their country including the plants and animals; in Aboriginal thinking, everything is connected and especially to water. Looking after country in a broad sense relates to sustaining the biodiversity through regular burns, cleaning out/covering up soakages and other activities. These cultural activities relate to preserving all aspects of the cultural landscape, including water sources, for future generations so that culturally valued natural resources can be sustained. The potential for Traditional Owners to get sick or die as a result of the believed consequences of non-compliance with the Law, by not looking after the water upon which the plants and animals living on their country rely, was a key theme expressed during this assessment.

As evidenced by existing literature and consultations with Traditional Owners, it is apparent there was much historical seasonal movement between soaks and living areas and ceremonial grounds across the drawdown area and beyond. Seasonal movement was previously a matter of ongoing residence, subsistence and ritual obligation, whereas nowadays seasonal movement to water sources is on a visiting/camping/hunting/ritual basis. Whilst country continues to be accessed for cultural purposes, movement between water sources has reduced. The continued cultural pattern being expressed links people to their past and provides promise for the future of their important cultural practices.

Today there are hundreds of Aboriginal people living close to the drawdown area and or regularly accessing the land for cultural purposes. There is a fear amongst Traditional Owners that their families will not attempt to travel lengthy distances for fear of getting thirsty and dying. Similarly, they fear that people will 'stay in town' if there is no available water on country. Concerns have also been raised by Traditional Owners that if people breakdown in their motor vehicles when out hunting in remote areas, they might not be able to rely on their traditional ecological knowledge to survive because the landscape and its resources may be altered.

> 'Don't they see that there are people living on this land? Living off this land? It's like when the British tested rockets at Maralinga they were blind and didn't see that people were living there. Then they made

the people sick and blind. The birds fell out of the sky. Their country was ruined. Yami Lester was blinded and he had no idea what was happening. Today we know what's about to happen, there is about to be a water crisis. We have to stop it before it happens.' *Maureen O'Keefe Nampijinpa*

Based on in-depth discussions with Traditional Owners when undertaking this assessment, it is clear that Traditional Owners would prefer to sustain the current health of their country and maintain their custodial responsibilities to it by opposing the Singleton Water Licence, rather than the alternative scenario of seeing their country get sick, having their traditional rights and interests eroded, and holding the psychological stress and guilt associated with knowing their descendants may lose important cultural values which have been sustained by Kaytetye people for thousands of years.

Traditional Owners desire to continue their active role in managing their traditional lands and waters for the future benefit of their society and culture. They want to guard the foundation of their ancient religion by defending their cultural values. To enable this to occur, it is recommended that the broad range of cultural values identified be sustained and safeguarded in accordance with national and international cultural heritage management practice (UNESCO 2003; ICOMOS 2017).

Good practice in the field of cultural heritage management includes working in cooperation with Traditional Owners to develop and apply an approach to cultural heritage management inclusive of a broad range of tangible and intangible cultural values. Traditional Owners' cultural values should not only be documented, Traditional Owners themselves should be empowered as active stakeholders and decision makers in matters that affect their land and waters.

1.0 INTRODUCTION

1.1 Background

On 2 September 2020, the Central Land Council (CLC) received a notice of intention (NOI) to make a groundwater extraction licence (water licence) decision. Fortune Agribusiness Funds Management Pty Ltd (Fortune Agribusiness) applied for the water licence over Singleton Station (see Figure 1). The application volume is 39,800 ML (megalitres)/year for agricultural purposes and 200 ML/year for public water supply purposes, a total volume of 40,000 ML/year.

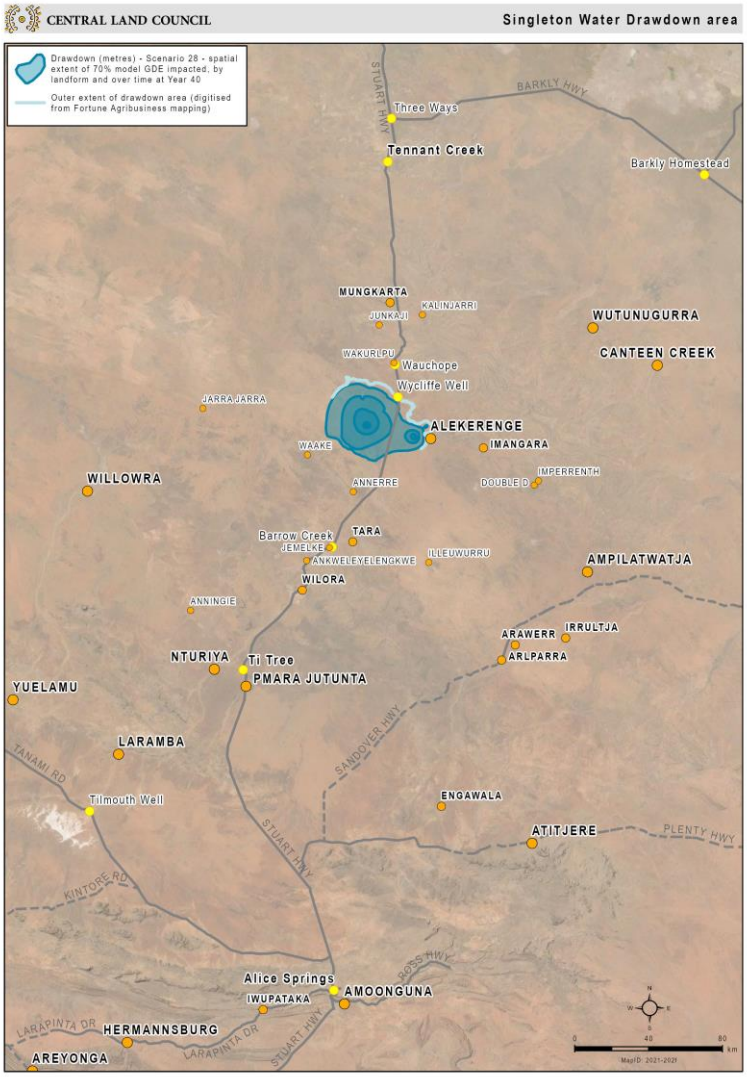

Figure 1 Singleton Water Licence drawdown area and surrounding Aboriginal communities

Source: CLC 2021 [based on Fortune Agribusiness data][3]

[3] Georeferenced from Singleton Horticulture Project Summary Report (August 24:2020) and Groundwater Dependent Ecosystem Mapping and Borefield Design prepared by GHD (Sheet 8 of 12 from Figure 4-9: July 2020).

Singleton Station is situated within the Central Plains management zone of the Western Davenport Water Allocation Plan (WDWAP) (Northern Territory Government (NTG) 2018) and is located in the Central Australia region of the Northern Territory, 100 kilometres (km) south of Tennant Creek and 300 km north of Alice Springs.

According to the WDWAP, the NTG has committed to the long-term sustainable management of the Territory's water resources.[4] The WDWAP applies to the Western Davenport Water Control District (the District), which covers an area of almost 24,500 square kilometres located approximately 150 km south of Tennant Creek. The purpose of the plan is to ensure that water resources are managed in a way that protects and maintains environmental and cultural values while allowing water to be sustainably used for productive consumptive beneficial uses.[5] The objectives of the WDWAP are to:

1. Meet the environmental water requirements of water dependent ecosystems.
2. Protect Aboriginal cultural values associated with water and provide access to water resources to support local Aboriginal economic development.
3. Allocate water for future public water supply and rural stock and domestic purposes.
4. Provide equitable access to water to support ecologically sustainable regional economic development.

Three management zones have been recognised within the WDWAP district based on hydro-geologically distinct environments: the Davenport Ranges, the Southern Ranges and the Central Plains (Figure 2). The major groundwater resource occurs within the Central Plains Management Zone which is the subject of the Fortune Agribusiness water licence over Singleton Station. The WDWAP also acknowledges that a range of important tangible and intangible Aboriginal cultural values exist across the district:

> 'Aboriginal people within the District have a strong connection to country. The cultural landscape of this area includes physical (e.g., sacred sites, ancestor trees and other features such as stone arrangements) and non-physical (e.g. knowledge, practices, songs, ceremony) cultural values. All water sources such as soaks, rock holes, springs and rivers play a major role in the social, spiritual and customary values of the Traditional Owners of the District…the use of a water resource is not only physical and extends to other cultural values through activities such as visiting and maintaining sites, sharing and teaching cultural knowledge, conducting ceremony, or participating in management decisions. The significance of water for Traditional Owners is not limited to surface water and GDEs as it is found throughout the country and in all living things. Water availability also affects many activities, like hunting and harvesting for bush tucker, bush medicine, tool and craft making.' (WDWAP) (NTG 2018:28)

[4] NTG 2018:6.
[5] NTG 2018:6.

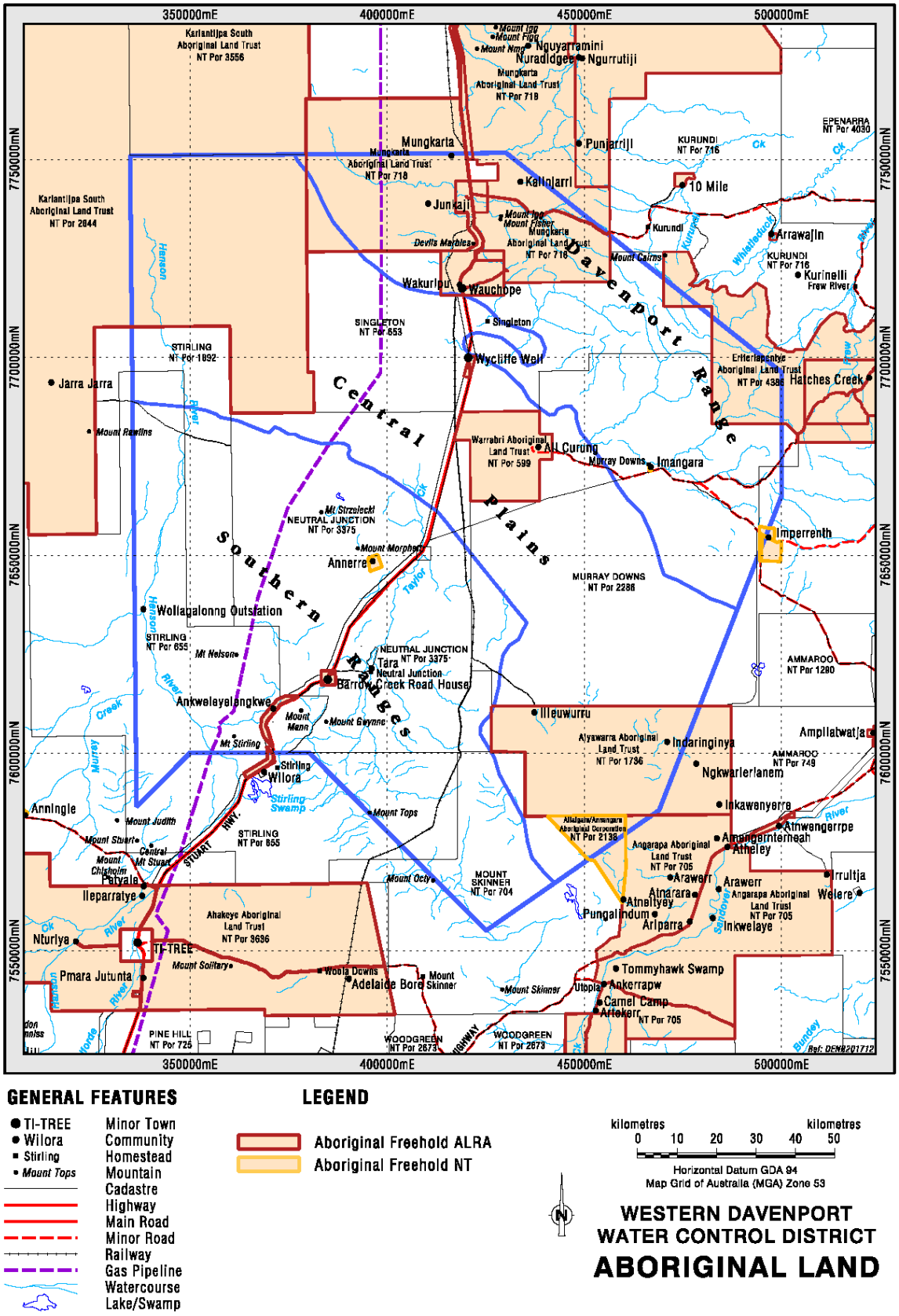

Figure 2 Western Davenport Water Control District

Source: NTG 2018.

Whilst the proposed water extraction zone (the proposed development wells / bores) is located on Singleton PL (see Figure 3), the projected groundwater drawdown area, as estimated by Fortune Agribusiness, extends beyond the water extraction zone to other parts of Singleton PL, and across Neutral Junction PL, Warrabri Aboriginal Land Trust (ALT) and Iliyarne ALT.

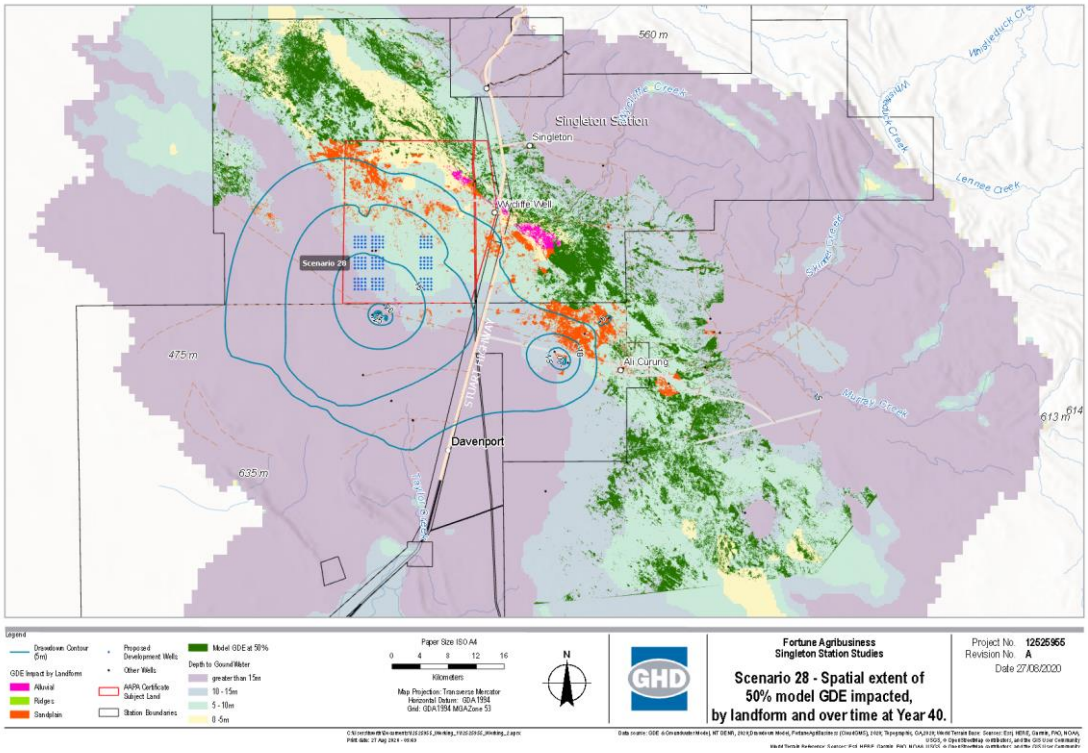

Figure 3 Spatial extent of Development Wells, Drawdown Contours, GDE impact by Landform and AAPA Certificate Subject Land

Source: Fortune Agribusiness 2020:28.

The definition of the drawdown area used in this report is the area identified by Fortune Agribusiness where impacts to GDEs will occur which include the area covered by the drawdown contours and GDE impacts by landforms (see Figure 3). This area was digitised by CLC geospatial staff (see Figure 4) using georeferenced map images submitted by Fortune Agribusiness in its application for the water licence.[6] The "Outer extent of drawdown area" (in Figure 4) is inclusive of GDE impact to alluvial and sandplain landforms described in the project documentation.[7]

[6] Singleton Horticulture Project Summary Report (August 24:2020) and Groundwater Dependent Ecosystem Mapping and Borefield Design prepared by GHD (Sheet 8 of 12 from Figure 4-9: July 2020).
[7] GHD (Sheet 8 of 12 from Figure 4-11: July 2020).

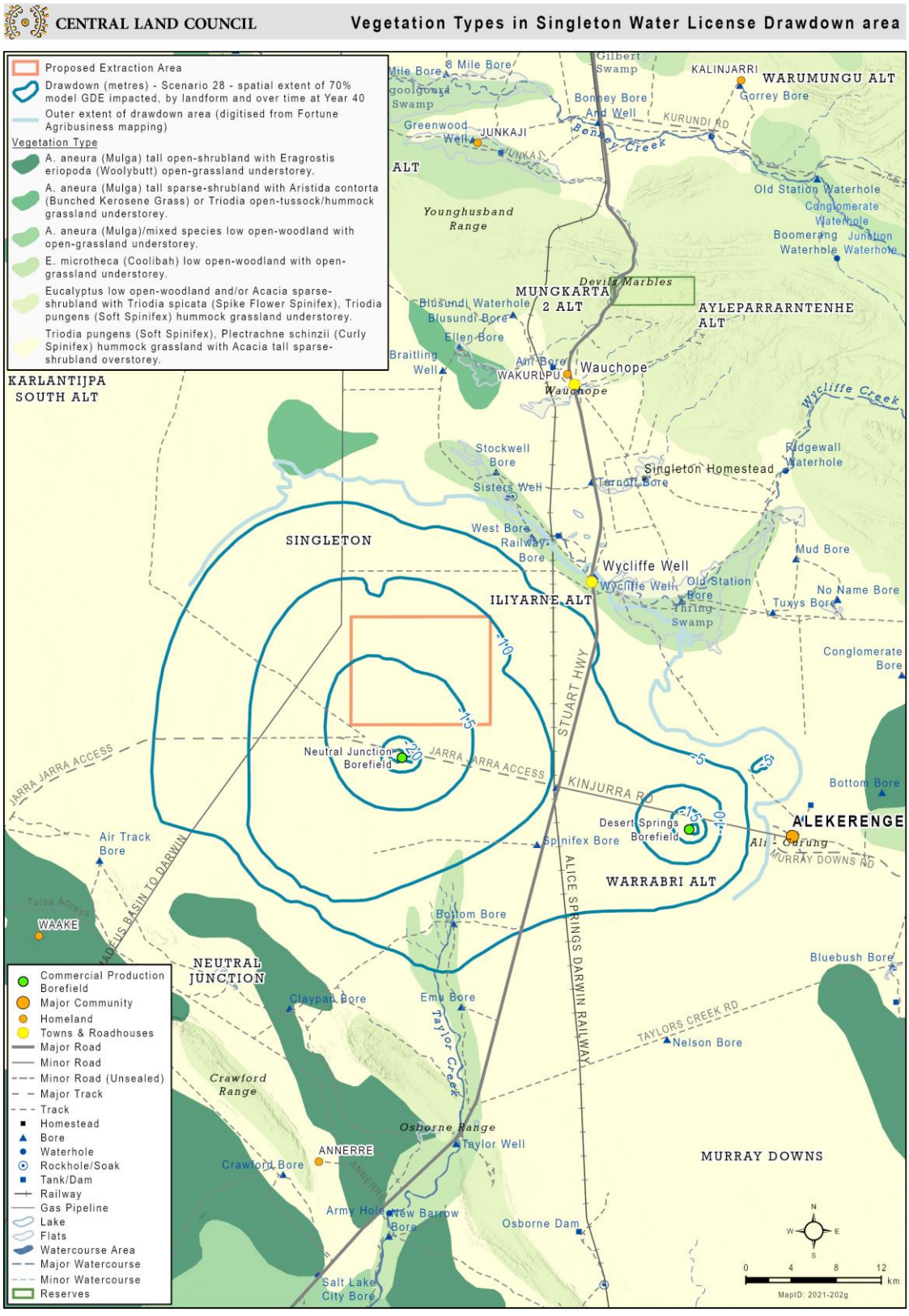

Figure 4 SWL drawdown area and vegetation map

The focus of this assessment, 'the study area', is the drawdown area (see Figure 4) which is predominantly sandplains containing termite mounds, sparse shrubs and low trees including *Acacia anuera* (Mulga), *Triodia basedowii* (Spinifex), *Triodia pungens* (Spinifex*), Triodia bitextura* (Spinifex) and *Eragrostis eriopoda* (Woollybutt).[8] A landform known as 'ghost gum rise' is located in the west of the study area in sandplain country. Alluvial plains are also found in the south of the study area where Taylor Creek forms a floodout, and in the north east of the study area which includes part of Thring Swamp and Wycliffe Creek and associated floodout. This vegetation type has a mixture of a small amounts of *Eragrostis eriopoda* (Woollybutt grass), *Aristida browniana* (Kerosene grass) and *Eucalyptus victrix* (Coolibah) over short grasses and forbs.[9] Both the alluvial plains and sandplains contain soakage water.

This assessment considers the study area in the context of the surrounding cultural landscape affected by the SWL including Wycliffe Sandhill immediately northeast of the drawdown area, the Crawford Ranges to the south, the Hanson River to the west and to the east the Davenport Range. This broader area encompasses Murray Downs PPL to the southeast, the Davenport Range National Park to the east, Kurundi PPL to the northeast, Mungkarta ALT and Devils Marbles (KARLU KARLU) Conservation Reserve to the north, and Karlantijpa South ALT to the west.

Singleton PL and Neutral Junction PL are subject to native title determinations; Mpwerempwer Aboriginal Corporation is the Registered Native Title Body Corporate (RNTBC) managing native title for Singleton PL and the Kaytetye Tywerate Arenge Aboriginal Corporation RNTBC and the Eynewantheyne Aboriginal Corporation RNTBC manage native title across Neutral Junction PL. The Traditional Owners across these determination areas have legal rights to access and travel over any part of the land and waters; live on the land; hunt, gather, take and use the natural resources of the land and waters; access, maintain and protect places and areas of importance on or in the land and waters; engage in cultural activities; conduct ceremonies; hold meetings; teach the physical and spiritual attributes of places and areas of importance; participate in cultural practices relating to birth and death including burial rites; regulate the presence of others at any of these activities on the land and waters; make decisions about the use and enjoyment of the land and waters by Aboriginal people; share and exchange natural resources obtained on or from the land and waters, including traditional items made from the natural resources.[10] The cultural values identified in this assessment are generally reflected in these legal rights.

[8] Pers. comm. Jessica Burdon 27.07.2021.
[9] Pers. comm. Jessica Burdon 27.07.2021.
[10] In Rex on behalf of the Akwerlpe-Waake, Iliyarne, Lyentyawel Ileparranem and Arrawatyen People v Northern Territory of Australia (2010) FCA 911 (Singleton PL).

Fortune Agribusiness obtained a sacred sites Authority Certificate (AC) from the Aboriginal Areas Protection Authority (AAPA) for the proposed works. The AC subject land includes and extends beyond the water extraction zone but does not cover the entire estimated drawdown area (see Figure 3 and section 3.2).

On 8 April 2021, the Controller made its decision on Fortune Agribusiness's water licence application and decided on a staged approach; each stage is two years from the completion of the preceding stage; the final stage will continue until the end of the licence (i.e., from years 7–30 if Fortune Agribusiness proceed through the stages at full pace).

On 7 May 2021, CLC put in a submission seeking a ministerial review of the Water Controller's decision to grant the Singleton Water Licence (SWL). Of note is CLC's position that the Water Controller fails to take into account the impact that the SWL will have on Aboriginal cultural values in the Western Davenport District. Concurrently, the CLC was instructed by Aboriginal owners to further identify the cultural values associated with the SWL area and to consider how these values might be impacted by the granting of the water licence.

Anthropological consultant Susan Dale Donaldson was then engaged by the CLC to undertake the cultural values assessment. Donaldson was requested to prepare a report regarding the cultural landscape of the area affected by the SWL and the extent of the native title holders and traditional owners' rights and interests and their cultural beliefs and practices. The report is to be culturally non-restricted and requires free, prior and informed consent (FPIC) by informants for use in the public domain.

1.2 Methodology

The methodology for this assessment involved reviewing literature; engaging with Aboriginal owners who hold knowledge of the area; analysing all the available evidence and considering how the identified values may be impacted by the proposed work. The approach was based on the Australian Burra Charter Practice Note on Intangible Cultural Heritage and Place (ICOMOS 2017).

LITERATURE REVIEW

The literature review covered a broad range of published and unpublished sources relating to Aboriginal traditional and contemporary life, as well as key project documents, land claim materials, archaeological and historical materials and ecological papers relating to groundwater dependent ecosystems.

Specific project reports reviewed include the WDWAP (NTG 2018); the AAPA Certificate C2019/083 (NTG 2019); the Singleton Horticulture Project summary report (Fortune Agribusiness 2020); and the recent NTG report on the ecological characteristics of potential groundwater dependent vegetation in the Western Davenport Water Control District (Nano et al. 2021).

Historical materials reviewed include Stuart 1865 (1975); Spencer & Gillen (1904); Davidson (1905); Aboriginal Land Commissioner (1982); Flood (1983); Petrick (1983); Bell (1983); Nash (1984); Smith (1987); Aboriginal Land Commissioner (1988); Koch & Koch (1993); Horton (1994); Courto (1996); Mulvaney & Kamminga (1999); records from the National Archives of Australia (NAA); Federal Court of Australia (*FCA 472* 2004); and personal communication with past and present Aboriginal owners.

Anthropological and ecological materials reviewed include The Rainbow-serpent in South-east Australia by Radcliffe-Brown, A. R. (1930); 'Aboriginal Territorial Organization: Estate, Range, Domain and Regime' Stanner, W. E. H. (1965); The Australian Aborigines: A portrait of their Society by Maddock, K. (1972); Tribes and Boundaries in Australia by Peterson N. (ed.) (1976); *The Nutrition of Aborigines in Relation to the Ecosystem of Central Australia* Hetzel, B. & H. Frith 1978 (eds.); The World of the First Australians by Berndt, R. M. & Berndt, C. H. (1988); Bushfires & Bush tucker: Aboriginal Plant Use in Central Australia by Latz, P. (1995); *Nourishing Terrains: Australian Aboriginal Views of Landscape and Wilderness* by Rose, D. (1996); 'Freshwater' in ATSIC Background Briefing Papers- Water Rights Project by Langton, M. (2002); Ngapa Kunangkul: Living Water. Report on the Aboriginal Cultural Values of Groundwater in the La Grange Sub-basin by Yu, S. (2002); United Nations Educational, Scientific and Cultural Organization (UNESCO) *Convention for the Safeguarding of the Intangible Cultural Heritage* (2003); The National Water Initiative and Acknowledging Indigenous Interests in Planning by McFarlane, B. (2004); 'Fresh Water Rights and Biophillia: Indigenous Australian Perspectives' by Rose, D. (2004); Study of Groundwater-Related Aboriginal Cultural Values on the Gnangara Mound, Western Australia by McDonald, E., B. Coldrick & L. Villiers (2005); 'Water Ways in Aboriginal Australia: An Interconnected Analysis' by Touissant, S., Sullivan, P. and Yu, S. (2005); 'Compartmentalising Culture: The Articulation and Consideration of Indigenous Values in Water Resource Management' by Jackson, S. (2006); Cultural Values Associated with Alice Springs Water by Kimber, R. G. (2011); *The Kalpurtu Water Cycle: Bringing Life to the Desert of the South West Kimberley in Country, Native Title and Ecology* by Sullivan, P., H. Boxer (Pampila), W. Bujiman (Pajiman) & D. Moor

(Kordidi) (2012); Burra Charter Practice Note on Intangible Cultural Heritage and Place (ICOMOS 2017); and Framing the Loss of Solace: Issues and Challenges in Researching Indigenous Compensation claims by Pannell, S. (2018).

ENGAGING WITH TRADITIONAL OWNERS

Engagement with Traditional Owners was undertaken according to current Australian best practice in cultural heritage management. This includes consideration of the following documents: Working with Indigenous communities leading practice Sustainable Development Program for the Mining Industry (Australia Government 2016); Guide to Free, Prior and Informed Consent (Oxfam Australia 2010); Ask First: A Guide to Respecting Indigenous Heritage Places and Values (Australian Heritage Commission 2002); and Guidelines for Ethical Research in Australian Indigenous Studies (Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS) 2012).

Qualitative ethnographic research methods were undertaken including participant observation, physical inspection of sites with the Traditional Owners, community meetings, mapping workshops, in-depth one on one interviews and small semi-structured, focus group sessions. The consultant was assisted by CLC staff members to consult 80 Aboriginal people including:

- Kaytetye Traditional Owners from the Anerre, Waake-Akwerlpe, Iliyarne and Arlpwe groups associated with the drawdown area across Singleton PL, Neutral Junction PL, Warrabri ALT and Iliyarne ALT
- members of neighbouring groups Anterrengeny (Alyawarr), Jarra Jarra and Warlapanpa (Kaytetye), Kelantjerrang, Karlu Karlu, Jalyjirra, Miyikampi and Kanturrpa (Warumungu/Warlpiri)
- members of other groups across the region Warupunju and Kunapa (Warumungu); Thankgenerang and Etwerrpe (Kaytetye) and Ngappa (Jingilli/Mudburra), and
- residents of affected communities including Alekarenge, Wauchope, Barrow Creek, Tara, Wilora, Anerre, Waake, Mungkarta, Kalinjarri and Imangara.

Consultations took place within and beyond the drawdown area over the period 8–27 June 2021. Twenty-two sacred sites were visited with Traditional Owners across Warrabri ALT, Singleton PL and Neutral Junction PL; of these 11 were within the drawdown area and 11 beyond it. Many more sites within and beyond the drawdown area were identified through desktop research and / or discussed with Traditional Owners during the consultation period, but not visited. All of the sites visited have features dependent on groundwater.

Background research combined with consultations with Traditional Owners identified 40 sacred sites associated with 20 *Altyerre* [Dreaming] mythologies within the drawdown area. Considering not all of the identified sites were visited during the assessment combined with the cultural complexities of the region, it is possible that one or two of the sites identified are actually the same place known by different names. It is also possible that other sites exist within the drawdown area that were not identified during this assessment. More time on the ground with Traditional Owners would provide further clarity on the cultural landscape in terms of the presence and significance of sacred sites.

Following the identification of current cultural values and how native title rights and interests are exercised today, potential material and non-material loss was investigated. This enabled an understanding of potential impact to native title rights and other cultural values.

ANALYSING AVAILABLE EVIDENCE

Following community engagement, the documented evidence was analysed to determine the cultural values and the relationship between the elements across the cultural landscape. A landscape or a feature may be associated with a number of different heritage themes and cultural activities and the feature's physical form may have been altered over time.

In determining the significance of intangible values across a cultural landscape, its features, and the relationships between them, consideration was also given to how well the themes and historic periods are represented and how the important characteristics of the cultural landscape compare with those of other places. The scale of the significance needs to be determined, i.e., whether the place is of local, regional, state, national or international significance.

IDENTIFYING IMPACTS

The Burra Charter Practice Note on Intangible Cultural Heritage and Place (ICOMOS 2017) does not directly define how intangible values can be harmed or damaged nor does it provide a framework for assessing impacts to intangible values. It does however outline how change to a place may impact on a cultural practice and equally changes to a cultural practice may impact on the cultural significance of a place. Possible changes that might impact on cultural practices include:

- changes to use or access
- changes to the form, fabric or layout of the place
- restrictions on the spaces available for cultural practices.

Generally, impacts can be both positive and negative and may result in the need for management, whether broad landscape processes or small-scale actions. If the existing condition of certain individual features are in poor condition, it may be the case that the proposed works will improve the situation. Processes likely to degrade the values and condition of the landscape and its features also need to be identified. Threats include an increase in usage or the potential to pollute waterways, for instance. Different components of the cultural values across the landscape will almost certainly require different treatments or impact mitigation measures in order to safeguard the identified values. Whilst impact mitigation is not addressed in this assessment, it is worthwhile outlining current best practice framework around ways to sustain and safeguard intangible cultural values nationally and internationally.

The Australian ICOMOS Burra Charter Practice Note on intangible values outlines ways to 'sustain cultural practices' involving collaboration between the associated communities and the place manager/land owner. Suggested management policies and actions may be needed to help sustain the cultural practices including:

- protection of any fabric or parts of the place which are integral to the cultural practices
- introducing cultural protocols such as restrictions on access or activities undertaken in parts of the place
- checking that the circumstances at the place support continuation of the cultural practices.

Similarly, the United Nations Educational, Scientific and Cultural Organization (UNESCO) Convention for the Safeguarding of the Intangible Cultural Heritage (2003) focuses on 'safeguarding' the processes from which the intangible values arise. This approach aims to ensure intangible cultural heritage is continuously recreated and transmitted. For UNESCO safeguarding intangible cultural heritage is about the processes involved in transferring of knowledge, skills and meaning from generation to generation, rather than on the production of its concrete manifestations, such as dance performances, songs, music instruments or crafts. As with the ICOMOS approach above, safeguarding measures must be developed and applied, with the consent and involvement of the community itself. Moreover, safeguarding measures must always respect the customary practices governing the access to heritage, which might, for instance be the case when dealing with sacred or secret intangible cultural heritage manifestations (UNESCO 2003).

2.0 IDENTIFIED ABORIGINAL CULTURAL VALUES

The cultural values assessment identified a complex Aboriginal cultural landscape across the SWL groundwater drawdown area including important cultural values directly associated with groundwater dependent ecosystems (GDEs).[11] The assessment found the SWL area to be situated on the traditional lands for four *Kaytetye* speaking groups (*Anerre, Waake-Akwerlpe, Iliyarne* and *Arlpwe)*. An additional 23 Aboriginal groups, from *Kaytetye, Alyawarr, Warumungu* and *Warlpiri* language regions were also identified across the broader Western Davenport District as being culturally associated with the SWL drawdown area.

2.1 Following the *Altyerre* Law & cultural obligations

Kaytetye people believe that the traditional laws and customs by which they are connected to the land and waters were created in a mythological era known in Kaytetye as *Altyerre* and in English as 'The Dreaming'.[12] The term *Altyerre* covers a range of interconnected concepts including ancestry, mythological beings and their creative journeys when the landscape was given form, religious laws and ritual objects, sacred designs and songs, important places, and codes of social order. Natural features across the landscape are believed to be an embodiment of *Altyerre* power and are thus revered, and cared for so they can be handed onto succeeding generations intact. Whilst the *Altyerre* is the basis of the Kaytetye religious system and directs Kaytetye ritual life, the concept extends across the continent.[13]

> 'When the wild spirit men flew over Iliyarne country they saw no water. Then when the country men, the Iliyarne men flew over they saw the water shining in the sun light. The country showed them the water. The spirit people who live there are tricky ones.' *Heather Anders*on

Traditional Owners' belief in the *Altyerre* is the cornerstone cultural value arising from this assessment and the foundation of all other identified cultural values. 'Sacred sites' (*Ihangkele*) are places where mythological *Altyerre* ancestors reside and, in this region, primarily relates to reliable sources of water (*arntwe*) including *artnwep* (swamps), *ngentye* (soakages) and *elpaye* (creeks), and *ilinjera* (floodouts).

Undertaking cultural obligations such as visiting sacred sites, speaking to the spiritual ancestors and re-enacting mythological stories in song and dance, according to *Altyerre* laws and customs, appeases the creator spirits residing in country (*apmere*).

[11] GDE as defined in Cook and Eamus 2018:1; also pers. comm Ryan Vogwill and Jessica Burton 10.08.2021.
[12] Spencer & Gillen 1904:13–14; Kaytetye orthography in this assessment was developed by Turpin 2000.
[13] See Maddock 1972; Berndt & Berndt 1988; Rose 1996.

The beliefs of present-day Traditional Owners reflect observations made by Spencer and Gillen in 1904. They found that:[14]

> From time immemorial, that is, as far back as ever native traditions go, the boundaries of the tribes have been where they are now fixed. Within them their ancestors roamed about, hunting performing their ceremonies just as their living descendants do at the present day. Very probably this is associated with the fundamental belief that his alcheringa (=*Altyerre*) ancestors occupied precisely the same country which he does now. The spirit parts of these ancestors are still there…The spirit individuals would not permanently leave their old home, and where they are there must he stay.

This observation is significant in the present context as it emphasises how Kaytetye people's traditional connection to the drawdown area is based on religious associations to particular ancestral lands in accordance with an acknowledged system of traditional land ownership. Moreover, permanent waterholes are usually associated with highly restricted *Altyerre* activities and rituals. Whilst no permanent springs were identified within the drawdown area there are many nearby that are associated with highly significant water dreaming mythologies and rituals as Mr Jones explained:

> 'The springs are important places and each have a story. In Warumungu we say *Junjunpartin* for water bubbling up, springing up. We don't really have a word for underground water. Under is *kantangara* and water is *Ngappa*. There is a spring between Karlinjarri and Kurundi. There is a spring at Old Elkedra station where the underground snake scared the station manager away, they were forced to relocate. Another story, Ngappa came underground from the west all the way to KELLY WELL, near the tower, then travelled to a spring where the lightning struck. It then travelled to the east.' *Michael Jones*

Turpin recorded the story about the establishment and subsequent failure of Old Elkedra Station, mentioned by Michael Jones. According to Tommy Thompson (dec.) the station managers built their cattle yards and house near the water edge at NKWARRENY:

> …where the snake lives in the water…the rainbow snake was left alone because he was underwater in a cave, like a well. A big rain came and fell on them; it was huge…It was still the rainy season; the snake rose up from there, from that waterhole, it rose up really high and soon there was a big wind and they

[14] Spencer & Gillen 1904:13–14.

saw lightning and rain. The old men were looking at it while it was standing. First, they woke up the bosses, Bill Riley and Kennedy, then the others…The whitefellas saw the snake, grabbed their rifles and shot at the eye of the huge snake coming out of the waterhole. The snake went down then, during the night time. It was the power of the snake that made the rain flatten the trees and the creek flood. It was the snake that let that water out. The old people who knew about the rainbow snake said 'that's the rainbow snake all right…'…the old people knew the song to sing the snake down. After the snake went down, a rainbow shone there. A rainbow was in the sky…the people left because of the snake…they were heading to ARRTYELER.[15]

An example of the intersection between groundwater dependent ecosystems and the Traditional Owners' obligations under traditional laws and customs relates to a highly significant, ancient coolibah tree at MPWEREMPWER-ANGE swamp close to Wycliffe Creek (see Figures 5 and 6). The Coolibah tree is the home, the main place of residence for the *Altyerre* beings that created MPWEREMPWER-ANGE. The coolibah tree is the subject of Iliyarne family stories, ritual songs and paintings. Iliyarne people also visit the tree and at such times, speak to their spiritual ancestors residing in and around the tree. These ritual acts appease the spiritual ancestors who in turn provide ample lilies for Iliyarne people to collect and consume. An increase in lilies indicates to Traditional Owners that the ancestors are pleased that the Law is being followed and traditional culture is being maintained. These ritual acts also maintain the health of the tree into the future, in accordance with customary law. This in turn leads to a sense of wellness amongst the Iliyarne Traditional Owners.

Figure 5 Mature Coolibah tree in MPWEREMPWER-ANGE swamp, Iliyarne ALT

Source: Photograph by Susan Dale Donaldson.

[15] Turpin 2003:38–52; see also Elkin 1930.

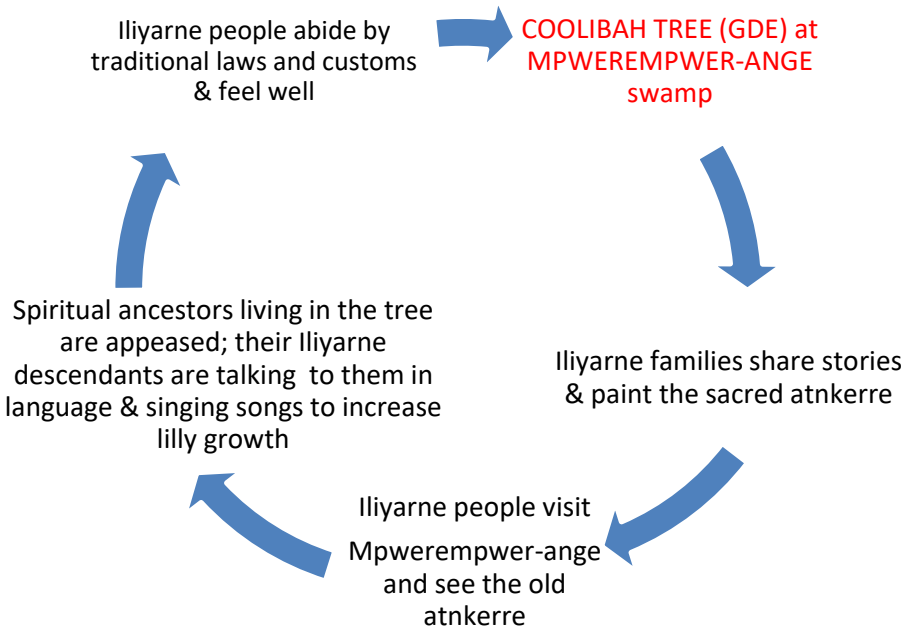

Figure 6 The intersection between the importance of following the Law and groundwater dependent ecosystems

If the *Altyerre* Law is not followed as a result of the actions of Traditional Owners or others, senior Traditional Owners and non-Indigenous people may be punished by *Altyerre* forces resulting in sickness, injury and even death (see Section 3.1).

> 'We know the *Nguramulla* (Spirit people) live in the land and if we don't look after our land, they will feel sad and get sick and so will Traditional Owners. That's why we always look after our country.' *Michael Jones*

> '*Kwertengerl* need to start talking to protect that big coolibah tree at MPWEREMPWER-ANGE. That Dreaming Tree is the Kwerrimpe [ceremonial women] digging lilies. If that tree is touched or injured sickness will come and blindness for Aboriginal people and white people too. That lily wasn't a traveller, it just belongs to this one place. People need to say no to this water or go blind.' *Ned Kelly*

Overall, it is believed that the powerful forces of the *Altyerre* will remain in the land and waters for eternity, but the current generation of Traditional Owners responsible for looking after the land and water will be punished if cultural obligations are not undertaken in their lifetime. All Kaytetye families hold stories about individuals who broke the Law and were punished because they didn't exercise their custodial responsibilities and look after their country.

2.2 Maintaining spiritual connections and protecting sacred sites

Traditional Owners maintain that they have descended from *Altyerre* (Dreaming) ancestors and that their *etnwenge* (a person's spirit) is deeply connected to one's country (*apmere*) and especially to water (*arntwe*).[16] In the *Altyerre* the landscape was given form by the activities of mythical beings, the spiritual ancestors of Kaytetye people today. Across the SWL area, these spiritual ancestral beings were in the form of animals such as possums, kangaroos, dingos, frogs and birds; plants such as the lily, bush plum and orange tree; and natural phenomena such as the wind and rain. The routes taken by ancestral beings and the places where they camped, danced and hunted were transformed into natural features such as rivers and valleys, waterholes and trees. Traditional Owners consider these places associated with ancestral creation, sacred sites.

This assessment revealed a strong spiritual connection between Traditional Owners and 40 sacred sites identified within the drawdown area.[17] Each of the 40 sacred sites were beyond the immediate extraction zone and all have features associated with GDE as outlined below. These sites all have unique Kaytetye names and are associated with at least 20 *Altyerre* mythological episodes as depicted in the dynamic cultural landscape diagram (see Figure 7). Due to sensitivities surrounding cultural knowledge and information the specific name of each *Altyerre* Dreaming track and each sacred site is not described in the diagram (Figure 7); the coloured lines relate to the many *Altyerre* tracks and the 40 dots each represent a sacred site within the drawdown area. It is clear from this image that the SWL drawdown area contains specific cultural values and is concurrently integrated into a broader cultural landscape from which it draws significance.

Most of the identified *Altyerre* tracks traverse the drawdown area and interlink with places across the broader cultural landscape. Some *Altyerre* creation stories cover vast distances whilst others are more localised, marking discrete territories. Across the drawdown area for instance, the *Ankerratye* (Coolibah grub) waited at a soakage on Taylor Creek, and was integral in making rain there. Similarly, the *Aterre* (Cicada) story wasn't a traveller, it always resides at a particular soakage in the Taylor Creek floodout and the *Mpwerempwer* (Lily) resides within a sacred coolibah tree at Thring Swamp [also known as 'Lily Swamp']. These places are within the drawdown area.

Travelling mythologies can relate to vast areas and multiple sacred sites. The *Atherre Aleke* (=Two Dingos) Dreaming for instance is associated with a stretch of country between Western Australia and Alekarenge, traversing close to the drawdown area. The *Ahakeye* (Bush Plum) Dreaming is another extensive traveller and is associated with two important soakages within the drawdown area, close to the extraction zone.

[16] Spencer and Gillen noted 'alcheringa' (1904:11–14,161). In this region, the Dreaming is also known as *Altyerr* (Alyawarr), *Wirnkarra* (Warumungu), and *Jukurrpa* (Warlpiri). See also Sullivan et al. (2012).
[17] 29 sacred sites were identified within the drawdown contour zone and a further 11 sacred sites within the GDE impact by landform zone [total 40 sacred sites across drawdown zone].

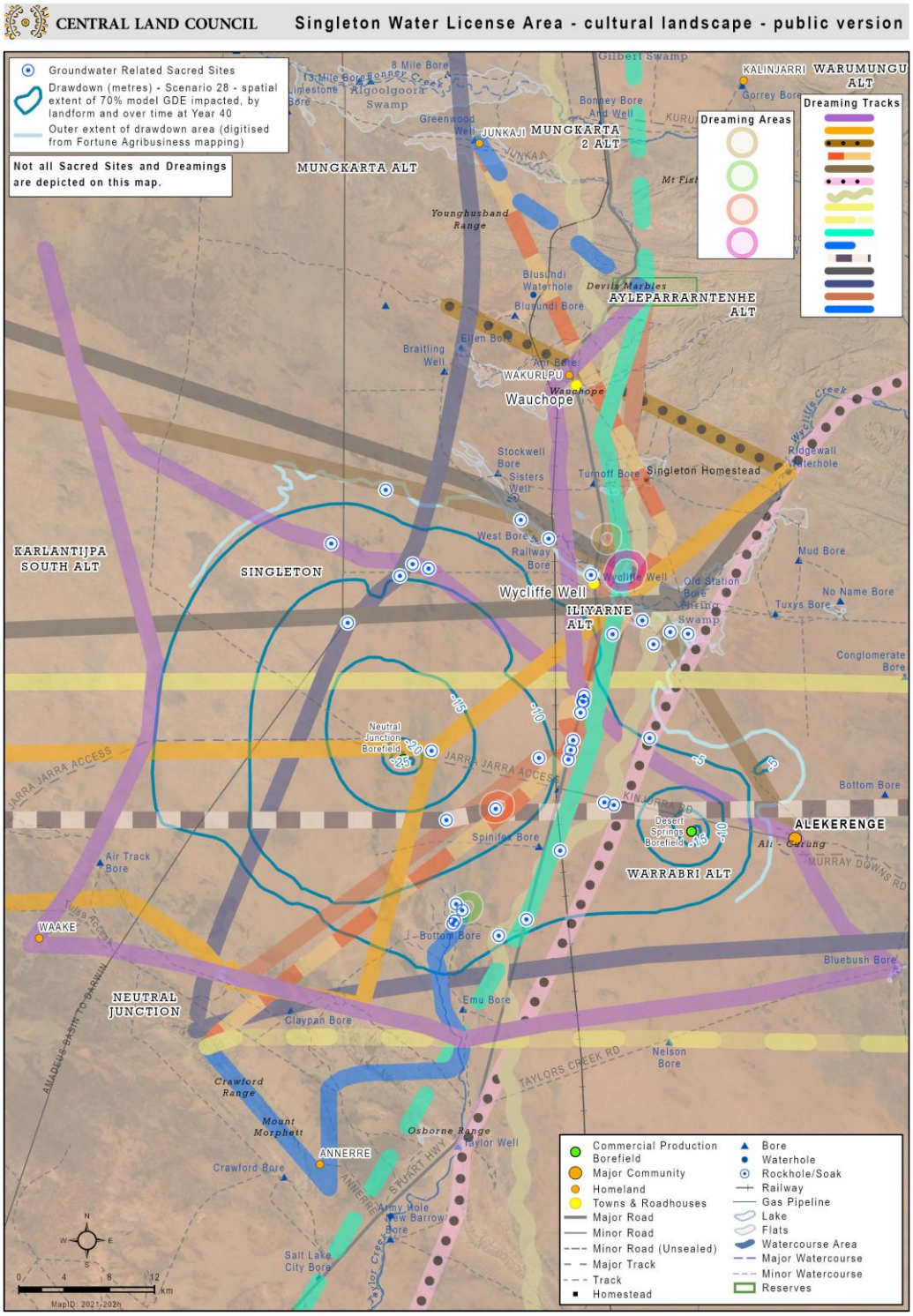

Figure 7 Cultural landscape diagram: Altyerre (Dreaming) activity across the SWL area

Source: CLC 2021 (based on data collected by Donaldson).

Other extensive travellers associated with sacred soakages within the drawdown area include the *Awentyerrenge* (Whirliwind) Dreaming; *Therre Antywempe* (Two Taipans); *Therre Atyewtere* (Two bandicoots); *Anatye* (Yam Dreaming); and the *Atnhelengkwe* (Emu). Whilst the *Ilperalke* (Sugar Bag) Dreaming travelled across the extraction zone and drawdown area, no sacred sites associated with this tradition were identified within the extraction zone or drawdown area. The *Ilperalke* (Sugar Bag) travelled underground close to the drawdown area and rituals associated with this tradition are believed to increase sugar bag (= honey from native bees) supplies across the drawdown area to *Anerre, Waake-Akwerlpe, Iliyarne* and *Arlpwe people* as well as to the people with whom they share their country.

Whilst all of the mythologies across the drawdown area relate to the *Altyerre* creation of the land and water generally, a number of mythologies specifically relate to water. For instance, *Arnkerrthe* (Thorny Devil Lizard) ancestor carried water on his back in preparation for a rain ceremony as he travelled making soakages across the drawdown area*; Kwerrimpe* (Ceremonial Women) dug for water as they travelled and in doing so made a stand of Coolibah trees within the drawdown area; *Therre Arinenge* (Two euro rainmakers) travelled far and wide, including to two soakages within the drawdown area, teaching their neighbours how to make rain and lightning and collecting people for a regional rain ceremony; and the *Akwelye* (Rain) Dreaming specifically travelled around Anerre country, defining the boundaries of that country and creating three important *Akwelye* (Rain) soakages along Taylors Creek within the drawdown area.

Other dreamings have been identified immediately beyond the drawdown area including the travelling *Arinenge* (Euro) Dreaming and the localised *Anemarranenke* (Sand Frog). These two traditions are associated with GDE and form important connections across the cultural landscape, but they were not found to be associated with sacred sites within the drawdown area. Another important Dreaming found within the cultural landscape but beyond the drawdown area, is associated with culturally restricted information and is not outlined in this assessment.

One particular sacred site, a soakage close to the extraction zone and within the drawdown area, is an important yam dreaming site owned by the Anerre group (Figure 14). Anerre people visit the place to clean the soak, to talk to their spiritual ancestors and to teach younger Anerre people about the sacred site. The soakage has been protected by Traditional Owners over the years through these customary actions and by participating in sacred site clearances associated with roadworks. The water collected from the soak embodies *Altyerre* power and is highly valued and therefore protected by Traditional Owners in accordance with their traditional laws and customs.

As noted above, participants also hold linguistic connections to sacred sites and their ongoing use of unique Kaytetye terms and place names to describe the importance of groundwater across the drawdown area was apparent. In 1901 when Spencer and Gillen camped at Wycliffe Well, Gillen recorded the Aboriginal name for Wycliffe Well as 'Nan-pu-lunga' (=INYANPULUNGKU) and noted the presence of one Kaytetye man, his three wives and a child.[18] INYANPULUNGKU is sacred soakage within the drawdown area. Given the cultural sensitivities an exhaustive list of sacred site names is not outlined here. A collation of site types within the drawdown area, described in Kaytetye, has however been produced as a way for the reader to better understand the cultural landscape in relation to GDE and sacred sites (see Table 1). Over half of the sacred sites identified are soakages which continue to be valued by Traditional Owners today as an important source of water as well as spiritual sustenance.

Table 1 Kaytetye GDE terms by known sacred sites within drawdown area

Dominant feature	Number of sites within DA	Other associated sacred features
ngentye (soakage)	28	*Atwerety* (bean tree), *artetye* (mulga tree), *akerleye* (bush orange).
elpaye (creek)	3	Ghost gums and *aylpele* (river red gum).
ilinjera (floodout)	2	-
artnwep (swamp)	1	*Mpwerempwer* (lily)
arrkarakw (bloodwood)	3	-
atnkerre (coolibah tree)	1	*artnwep* (swamp)
Supplejack tree	1	-
Ghost gum tree	1	*elpaye* (creek)
TOTAL	40	-

[18] Gillen 1968:171–172. Gillen named the Aboriginal man 'Spencer'.

In 2003, linguist Myfany Turpin recorded a story told by senior Kaytetye man Tommy Kngwarraye Thompson (now dec.), relating to a spring and the origins of the Kaytetye language.[19] Thompson tells of how the source of the Kaytetye language is associated with a spring called ELKEREMPELKERE, at Barrow Creek:[20]

> …they (the *Kwerrimpe* women) spoke their language; it was Kaytetye…they told each other Dreamtime stories, special stories that had the power to create. From these stories the Kaytetye language and people were born. The *Kwerrimpe* women were talking Kaytetye, laughing, having fun and eating bush onions…From just one bush onion shoot the Kaytetye language and people spread out…The Dreaming at ELKEREMPELKERE is the origin of the Kaytetye language and people.

Today, Kaytetye people expressed a desire to ensure their Kaytetye place names are maintained into the future, and in particular the Kaytetye names of the water sources including the drawdown area. Intergenerational visits to country are one way that Kaytetye people pass on cultural and linguistic knowledge sustaining this important value, which also relates to spiritual connections to country given the places names were allocated in the *Altyerre* past.

Whilst the facts about the extent of groundwater deduction and the groundwater dependence of vegetation are not known at present, it is assumed that at some point of groundwater reduction there will be effects on GDEs and cultural values related to shallow groundwater.[21]

Of the identified 40 sacred sites within the drawdown area, 11 were visited during this assessment between 22 and 24 June 2021. These site features were all groundwater dependent including such as soakages, bean trees, orange trees, coolibah trees, creeks, swamps, ghost gum trees and bloodwood trees.

Figure 8 Kaytetye men at a sacred soakage, Warrabri ALT

Source: Photograph by Susan Dale Donaldson.

[19] Turpin 2003.
[20] Turpin 2003:2–5.
[21] See Nano (Appendix 4: 2021) for a listing of species which are "closely associated with sandplain and alluvial potential GDV". These species are more likely to be affected by groundwater drawdown.

Each of these sites are sacred to Kaytetye people, and in particular to Anerre, Waake-Akwerlpe, Iliyarne and Arlpwe people. Each of these sites are interlinked with the broader cultural landscape. A few examples are shown in Figures 8–10.

Figure 9 Kaytetye women at a sacred soak and red river gum on Taylor Creek, Neutral Junction PL

Source: Photograph by Susan Dale Donaldson.

Figure 10 A sacred soakage and bean tree, Singleton PL

Source: Photograph by Susan Dale Donaldson.

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A further 11 important sacred sites were visited across the broader cultural landscape beyond the drawdown area between 22 and 24 June 2021.

Most of the sites were within 5–10 km from the drawdown area and three significant sites 15–20 km away from the drawdown area were also visited for cultural context.

The site features visited beyond the drawdown area were all groundwater dependent and include soakages, springs, bean trees, fig trees, red river gum trees, coolibah trees, creeks, swamps, and ghost gum trees (see Figures 11–13).

Figure 11 A sacred bloodwood, Warrabri ALT

Source: Photograph by Susan Dale Donaldson.

Figure 12 Kaytetye men at a sacred creek, Iliyarne ALT

Source: Photograph by Susan Dale Donaldson.

As with the sites visited within the drawdown area noted above, each of the sites visited beyond the drawdown area are sacred to Kaytetye people, and in particular to the Anerre, Waake-Akwerlpe, Iliyarne and Arlpwe groups and interlink with the broader cultural landscape including places within the drawdown area.

Figure 13 Kaytetye group at sacred swamp, Iliyarne ALT

Source: Photograph by Susan Dale Donaldson.

The spiritual connection Kaytetye people have to sacred sites, that is the intangible link between a person and a sacred place, is directly associated with the condition of sacred sites (Figure 14).[22] If the state of a sacred site is diminished, the spiritual connection people have to that place is also diminished. Maintaining spiritual connections to country also occurs when mythological episodes are re-enacted by Traditional Owners in ritual, through song, dance, paint, story-telling and by visiting the spiritual ancestors residing at sacred places.

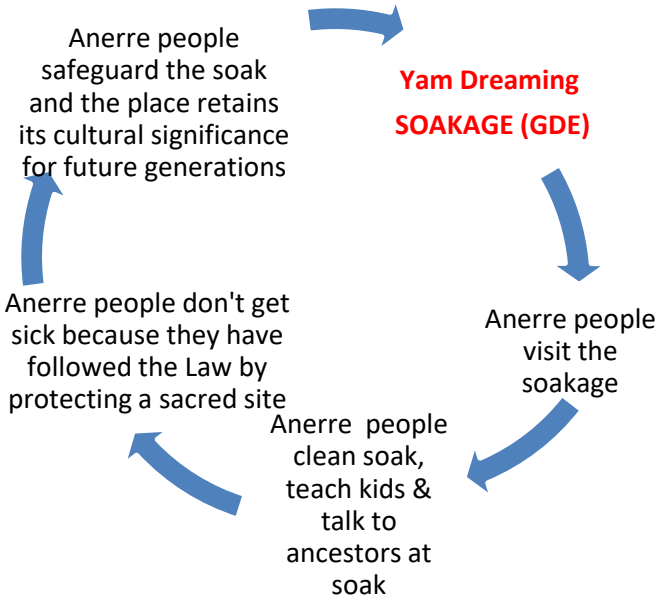


Figure 14 The intersection between the importance of protecting sacred sites and groundwater dependent ecosystems

[22] See also McDonald et al. 2005:2.

2.3 Undertaking rituals associated with groundwater and GDE

The assessment also found that the spiritual connection Traditional Owners have with their *apmere* (country) is strengthened by ritual activity which is also linked to the powerful forces of the *Altyerre*. Kaytetye ceremonies undertaken by men are called *etnherrantye* and women's ceremonies are called *erntweyane.* There are a number of ceremonial grounds close to the drawdown area, used by Traditional Owners or their ancestors in the past. These ritual grounds retain ritual significance and cultural associations and are hoped to be used by Traditional Owners again in the future. The rainmakers undertake rituals to make rain and other ritual leaders undertake rituals to increase species across the drawdown area such as lilies, frogs and bees.

> 'The songs and the ceremonies will be alive forever; nothing can touch them. The rainmakers have powers. In the early days they (stations) not use too much water now they want more, too much. Each one (Aboriginal group) has *Ngappa* (water) dreaming, they follow their line and hand it over.' *Donald Thompson Akemarre*

> 'My grandmother Molly O'Keefe used to dance and sing on Singleton Station at Stockwell Bore. They used to walk from there to the sandhill to get water on the north side.' *Evangeline Presley*

> 'We do ceremony to liven up the bees' wings to make them strong, so they make more honey. We know the different types of honey, from the different flowers. The white gum flowers make sweeter honey than bloodwood flowers. We take the honey and leave the bee house because that's where he lives. That's his place. We call water *Arntwe* in Kaytetye and *Kwaty* in Alyawarr and *Ngappa* in Warumungu and Warlpiri. That's the water that falls from the sky and the water that's in the ground. It's all water. It's all from the Dreaming. It's all precious.' *Frankie Holm*es *Akemarre*

> 'My *tyatye* (mother's fathers) country is Warlapunpa. They have rain makers too. When people dance and paint, they think about their *apmere* (country) and sometimes they cry for that country. When I visit soakages around Warlapunpa I put leaves over the soaks to keep them wet. We danced all night at a bush camp, this side of the railway. The painted designs belonged to Anerre, Kaytetye country.' *Selma Thompson*

> ‘When we do the *Kwaty Awely* (water ceremony for women) the rain comes. My mother taught Selma how to collect white clay for the dancers. The rain is made when the *kwertengerl* chuck the white clay onto the ground. The rain will come quick all over Kaytetye country.’ *Hilda Pwerle*

> ‘I am teaching Selma the *Kwaty Awely* (water ceremony for women) from Warlapunpa country, that’s Kaytetye too. Water Dreaming. They knocked down that *Kwaty* tree on the highway (=KWATY TREES) and that made us sad. It brings us worry because that tree has a spirit and a name. It is Pwerle like me. That story holds the country alive. Pwerle sings for the *Kwaty Awely* and is the main teacher. *Ngampeyarte* are the *kwertengerl*, they are the dancers.’ *Lena Pwerle*

The results of Kaytetye ritual activity were acknowledged by the early pastoralists in the region as described by a senior Kaytetye man:

> ‘If station managers needed rain in the early days, they would ask the rainmakers to make rain and would pay them in food. Birchmore at Kurundi Station, Harris at Murray Downs, Hayes at Neutral Junction, they all did this. They knew Aboriginal law was strong. If the land dried up the rainmakers would sing and the rain would come. After that there would be more water in the soakages and more food around the place. The station managers used to pay the rainmakers to sing for rain. True.’ *Ned Kelly*

While in the region in 1901 Spencer and Gillen witnessed the performance of 88 ‘sacred totemic ceremonies’ some of which related to sacred sites within the drawdown area. They were impressed by how elaborate and enduring were ceremonies concerning initiation, marriage, the increase of species, the maintenance of the ‘alcheringa’ (=*Altyerre*), tree burial and mourning practices. In relation to what is now the broader Western Davenport Water Control District, Spencer and Gillen recorded ‘Aneara which is the great rain making site in the Kaitish tribe’ and ‘the great centre of the rain people’.[23] Details about the Kaytetye *kwerrenarr* (rainbow serpent) are highly restricted and not discussed in this report.

[23] Gillen 1968:147; Spencer & Gillen 1968(1904):158; see also Stanner 1934.

In her 1970s ethnographic study at Alekarenge on women's ritual, Bell discusses a number of characteristics applicable to Kaytetye land and society, including ritual obligation to kin and country, roles and responsibilities in relation to land and the maintenance of the landscape through ceremonial activity.[24] Bell recorded many traditional mythologies including that associated with the *Ahakeye* (=Wild Plum) Dreaming belonging to the Akwerlpe-Waake group.[25] See Figure 15.

Figure 15 Bush plum *Ahakeye* (*Canthium attenuatum*), Warrabri ALT

Source: Photograph by Jessica Burdon (CLC).

Many of these ritual activities require specific flora and fauna species obtained across the drawdown area as observed by Gillen in 1901 who recorded his Aboriginal guides capturing galahs and a duck, and keeping the feathers 'for future ceremonies'.[26] See Figure 16.

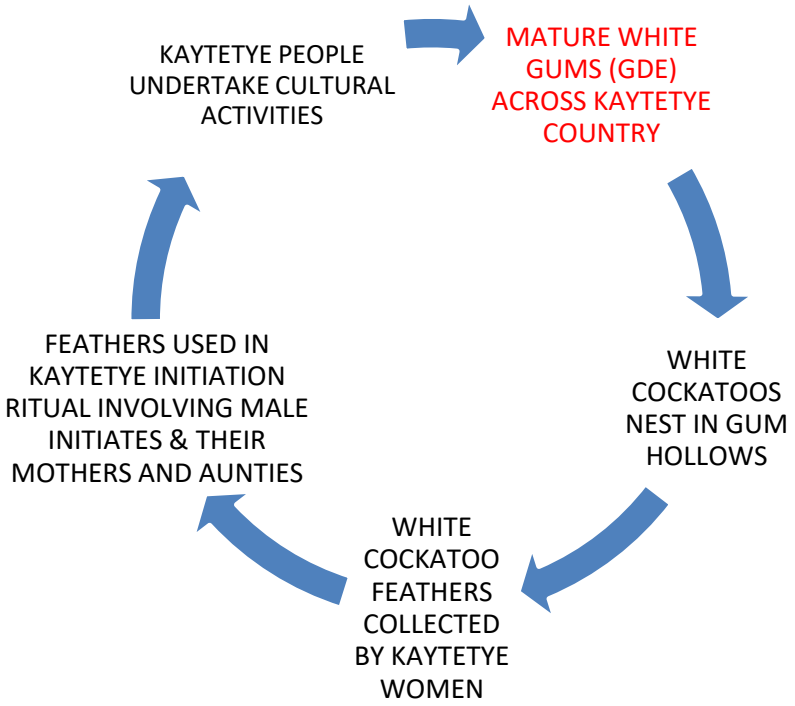


Figure 16 The cyclical interdependence of groundwater dependent ecosystems and ritual activities

[24] Bell 1983 (1993). The research for this work was carried out between 1975 and 1978.
[25] Bell 1983 (1993):131–132.
[26] Gillen 1968:242–247.

Records reveal that many Kaytetye people were born on Neutral Junction and Singleton Stations including Zigfreid Nelson Kemarre, Billy Dobbs Kngwarraye (dec.), Lena Thangale, Joe Murphy Kngwarraye (dec.), Carol Thompson and Cyril Jabangardi. In accordance with Kaytetye customs Lena Thangale's bush name is *Mpwerempwer-ange* (=Lily) after the site on Singleton Station near where she was born in 1930.[27]

> 'My sister Carol was born at a soakage on Taylor Creek called ARWENGANENYE near Emu bore. My mother and father were living in the bush, moving from soak to soak.' *Selma Thompson*

A number of Kaytetye people are known to have died and were buried in the drawdown area. Ritual activities associated with dying on country strengthens spiritual connections to important places and is reinforced by the Kaytetye land tenure model which ensures country is inherited in a systematic way, enabling intergenerational occupation of the same terrain and religious teachings about places and within it.

> 'Bill Crook put down that well at Stockwell (Stockwell Bore Singleton Station). People lived there for a long time, all the Aboriginal families, Kaytetye, Alyawarr…Warumungu. People are buried there. My father worked at Old Singleton. Bill Crook was a good manager. Barry Donahue was cheeky. He took too many Aboriginal wives. The Aboriginal men were stockmen and the women looked after the nanny goats. They all lived across the creek. There are people buried all around Old Singleton. Polly Napaljarri, my aunty, and one Nakamarra, Louise Fitz grandmother…and others, but we don't know who.' *Ned Kelly*

Of great cultural importance to the participants is the belief that the spirits of their deceased [actual] ancestors, their parents, grandparents, great grandparents and so on, have returned to the land and reside in their country in perpetuity. As such, when Traditional Owners visit their country, they feel the spiritual presence of their forebears and through that intangible connection attain a sense of inner comfort. An intangible cultural connection is formed between Traditional Owners and places associated with the spirits of their deceased kin; visiting these places and treating them with respect is another way Traditional Owners maintain kinship connections to past ancestors. An integral aspect of the Kaytetye religion is how the actions of Traditional Owners cause happiness amongst the spirits and strengthen Traditional Owners' connection to country; this is a life-sustaining spiritual force for Traditional Owners.

[27] Pers. comm. 24.3.2006 Mary Kemarre; pers. comm. 01.09.2005 Johnny Nelson Pwerle and Zigfried Nelson Kemarre; CENSUS F133/22 (65/32). Letter dated 04.04.1996 Lovegrove to Welfare in Tennant Creek.

'We remember the old people when we visit places. Somehow, they are still there. If the country dries up, they all finish up, we all finish up'. *Sonny Curtis*

'My mother's spirit came back to this land. She'd be happy that we are here, that we came to look around. The country welcomes we home. This is home. If we lose our home, we would be too sad. If it changes, we feel sick and the old people will feel bad. The spirits in the land feel the same.' *Karen Morrison*

Another Kaytetye ritual is for family members to be given Aboriginal names or 'bush names' (based on the names of sacred sites / natural phenomena) providing another link between people and country. These names were often also the names given to their grandfathers and have been used for countless generations. When sacred sites associated with people's bush names are damaged the intangible link between the person and the place is also impacted; people feel a sense of loss that they will not be allocating these names to future group members if the site is gone. Generations and generation of their ancestors have allocated these names to past kin; Traditional Owners understand the future allocation of this name may be redundant forever.

'*Mpwerempwer-ange* [lily] is Lindy's mother's bush name. We paint that one to tell the story, to teach the kids. I tell the kids stories about coming here with my mother and about their grandfather. We tell them the stories then show them the places so that the story gets fixed in their minds.' *Karen Morrison*

An important value associated with Kaytetye ritual and spirituality is simply being on country and enjoying it with family forging strong bonds between generations of kin. The availability of water and shade trees are linked to this value:

'We love to swim in the creek and hunt for bush turkey and collect ducks. We sit in the shade next to the creek and cook the turkey and duck, have a swim, have a feed.' *Lindy Brodie*

'My father brought me here to THANKWE and we will bring our kids here too. I can't believe this tree is still standing. It is so old. This is the main tree connecting me to my grandpa and to my grandkids. I will feel no good if it dies.' *Brian Jakarra*

The cultural values outlined in section 2.3 are entwined; having fun on country isn't just about fun, it's also about reinforcing and experiencing spiritual connection, transferring knowledge, caring for country and fulfilling ritual obligation. Traditional Owners don't separate these concepts.

2.4 Upholding ecological knowledge associated with collecting natural resources

Another important element in Kaytetye society is the cultural knowledge and practices associated with collecting natural resources; hunting, gathering, sharing, consuming and trading. Upholding cultural knowledge and practices associated with ecological processes is very important to Traditional Owners. Whilst this research did not identify any sacred sites within the immediate extraction area, the extraction area has been identified by Traditional Owners as prime hunting grounds regularly used by Traditional Owners and members of nearby communities.

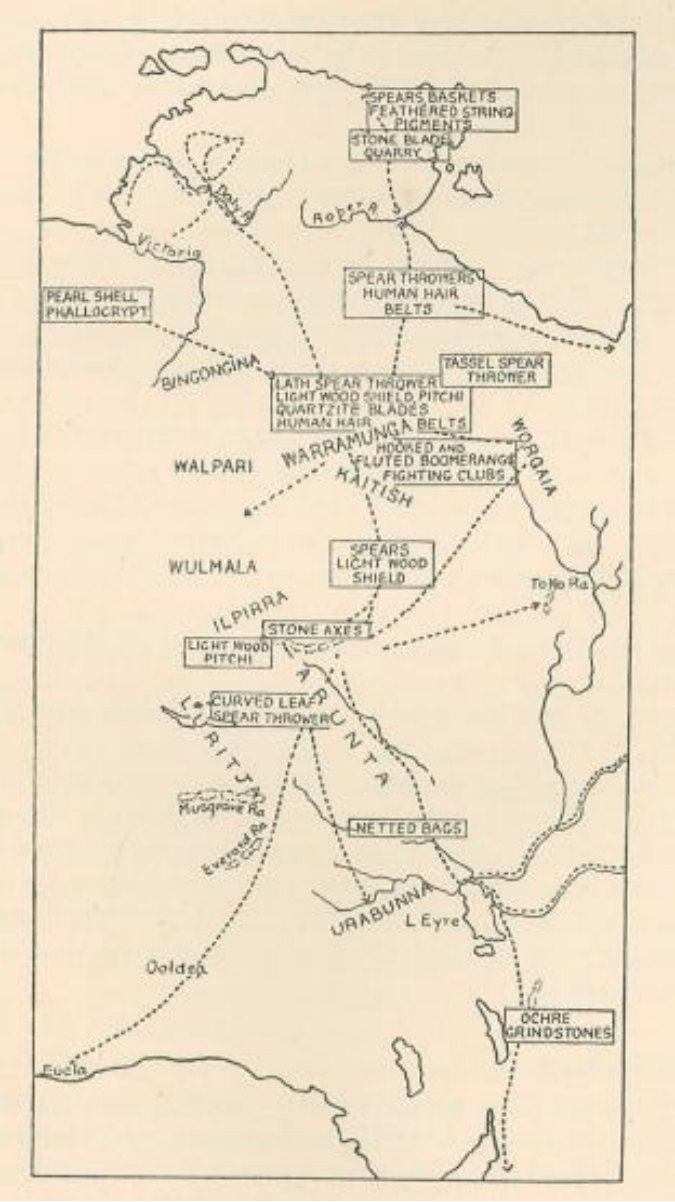
Additionally, the broader drawdown area and the surrounding cultural landscape including Taylor Creek and the sand dune/floodout systems associated with Wycliffe Creek are regionally significant resource rich areas utilised across a range of seasons. A vast array of flora and fauna species utilised by Traditional Owners across the extraction zone and drawdown area were documented during this assessment, many of which are dependent on groundwater. A similar study by McDonald found that water is central to Aboriginal culture and way of life and that groundwater dependent environmental features and ecological processes are themselves Aboriginal cultural values (2005:16).

The importance of soakage water to Aboriginal people in the region was first documented by Stuart in 1862 when in the vicinity of the Crawford Range and Taylor Creek he recorded 'soakages dug in the Creek by the natives. There is no surface water, but apparently plenty by digging in the bed of the creek'.[28] Half a century later Gillen observed a 'very fine and nutritious yam weighing 1–3 lbs of which the blacks are especially fond' growing between Kelly Well and Wycliffe Well.[29]

Aboriginal people's reliance upon and valuing of water and other natural resources in this dry region continued throughout the 1900s (see Bell 1983; Koch & Koch 1993; Olney 1999; Turpin 2000; CLC 2008). The establishment of Warrabri settlement in 1956, now known as Alekarenge (Ali Curung), enabled Kaytetye families and their neighbours to remain on or close to their traditional lands.

[28] Stuart 1865:79.
[29] Gillen 1968:171.

For Aboriginal people living at Wakurlpu and Alekarenge communities in particular the drawdown area is their 'back yard' where they regularly collect natural resources. Continuing to 'go hunting' is vital to the maintenance of good mental, physical and spiritual health for Aboriginal people and an important way to transmit cultural knowledge and practices to younger generations. Being based at Alekarenge in the 1970s, Bell observed Aboriginal people finding frogs in 'cool damp sand' and water sources in 'wide, dry creek beds'.[30] She also found that 'land was a living resource from which people drew sustenance – both physically and spiritually'.[31]



In his investigation into Aboriginal trade relations Frederick McCarthy found that the 'Warramunga–Kaitish tribes' were an important 'distributing group across north Australia'.[32] Hooked boomerangs were traded along what McCarthy termed the 'Central Route' (see Figure 17), which traversed vast distances, including through Kaytetye country. Spencer and Gillen had also noted how boomerangs were 'constantly being traded from one part of the country to another and from one tribe to the other' in the region between Alice Springs and north of Tennant Creek.[33]

Participants in this assessment continue to collect natural resources across the region to make boomerangs and other items to sell and exchange. Many of these items are derived from GDEs present across the extraction and drawdown area including bloodwood trees.

Figure 17 Central Trunk Trading Route

Source: McCarthy 1939:429.

[30] Bell 1983 (1993):22.
[31] Bell 1983 (1993):48.
[32] McCarthy 1939 (Part 1): 405–438; (Part 2):81–104.
[33] Spencer & Gillen 1904:12.

The following quotes were gathered during recent fieldwork for this assessment. They are representative of a wider body of evidence of continuing and contemporary Aboriginal use of country and ecological interconnections (see Figure 19).

'The land of honey that Singleton, and frogs. The land of plenty, our own big garden, that's how I look at it. It is everyone's hunting ground, especially from Alekarenge.' *Maureen O'Keefe Nampijinpa*

'We know what we are looking for because we have been taught. We love sugarbag and if my kids can't taste it, that will make me sad.' *Renele Aplin*

'There are a lot of bush potatoes and bananas in the [site name redacted] area, near Neutral Junction bore fields. We go hunting in that area often.' *Selma Thompson*

Figure 18 Bush potato *Anatye* (*Ipomoea costata*), Neutral Junction Station

Source: Photograph by Jessica Burdon (CLC).

'

'There is good hunting ground west of Wauchope. We collect beans from the bean tree to make jewellery. The bloodwood has everything, it is like a supermarket, it even collects water.' *Maureen O'Keefe*

'We share our country with the Alekarenge mob. They come here to collect sugarbag and water lilies and frogs.' *Karen Morrison*

'The Taylor Creek floodout comes out to the ALYERERNYE area. There are plenty of potatoes here after the rain. It is good open country. People come hunting here all the time from Alekarenge.' *John Duggie*

'We used to camp at the swamp when we were kids and collect ducks and yams. We'd also collect frogs from the Wycliffe sandhill. We would dig down up to 2 metres. I remember jumping into the hole. It was moist at the bottom of the hole where the frogs were.' *David Curtis*

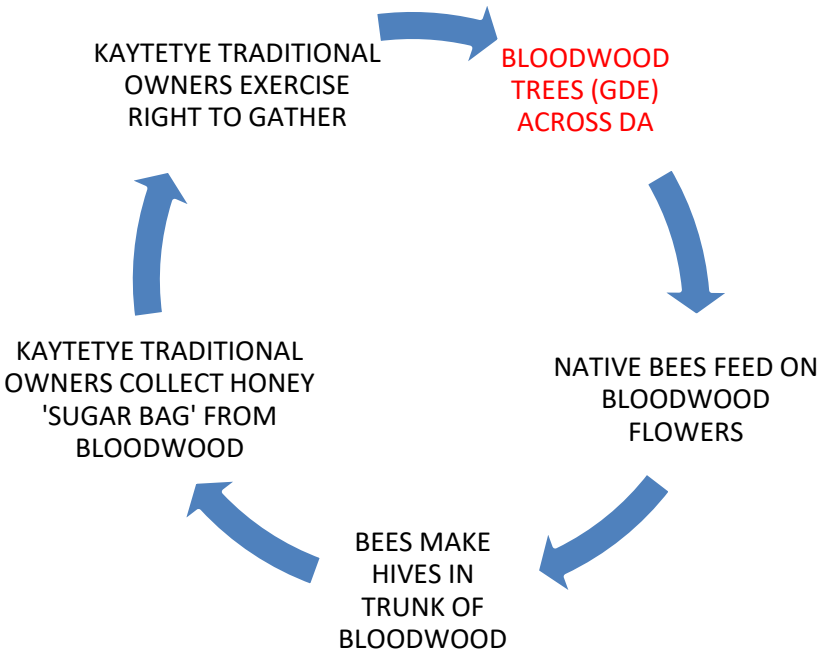


Figure 19 The intersection between the right to use natural resources and groundwater dependent ecosystems

A list of culturally important plant and fungus species observed or discussed within the drawdown area and their indigenous names was collated by Jessica Burdon (CLC) (see Attachment 1). The information is based on field observations, discussions with Traditional Owners and Latz (1995 & 2018). The listed plants are also referenced in Nano et al. (2021) as closely associated with sandplain and alluvial potential Ground Dependent Vegetation (GDV) in the Western Davenport study area.[34]

[34] Pers. comm. Jessica Burdon 27.07.2021.

Food resources obtained from the drawdown area, recorded during this assessment, include roots from the *Mpwerempwer* (Lily), fruit from the *ahakeye* (Bush Plum or Currant/*Canthium latifolium*), fruit from the *nkwerleye* (Bush Plum/*Santalum lanceolatum*), fruit from the *akerleye* (Bush Orange/*Capparis umbonata*), seeds from the *artetye/ntang* (Mulga/*Acacia aneura*) which are ground for making bread, *kayte* (Grub), and *kwardenge* (wild duck eggs),

Figure 20 Bush tomato *anemangkerr* (*Solanum chipendalei*), Warrabri ALT

Source: Photograph by Susan Dale Donaldson.

Figure 21 Cole's Wattle/Soap wattle *Alarrey* (*Acacia colei*), Neutral Junction Station

Source: Photograph by Susan Dale Donaldson.

Tungkarne (Bush Beans), *anatye* (Bush Potato/Ipomea costata), *arlatyeye/arpetye* (Pencil Yam/*Vigna lanceolata*), *ikwarreye* (Wild Banana/*Leichardtia australis*), honey from the *ilperalke* (Sugar Bag), *kartepa* (Bush Coconut from the bloodwood tree), *tharrkarre* (honey from the Grevillea Holly), desert raisin (*Solanum centrale*), *arlkerre* (Bush Tomato/*Solanum chipendalei*), *mpwelengk* (Desert Spadefoot Toad/Notaden nichollsi), *atnhelengkwe* (emu), *atweynterl* (Sand Frog), *kalyeyampe* (another type of frog), *arelwatyerre* (sand goanna), *aherre* (kangaroo), *arwengerrpe* (Bush turkey), *atnhelengkwe* (emu), *enewaylenge* (echidna), *arwengerrpe* (bush turkey), a*rnewetye* (Conkerberries/*Carissa lanceolata*), *kungkarte* (Sweet Bush tea leaf), *alarrey* (Cole's Wattle/*Acacia colei*), *atywenpe* (Perentie lizard) and *tyanywenge* (Bush Tobacco) were also found across the drawdown area. See also species list in Attachment 1.

There are also many Kaytetye terms associated with ecological knowledge and use of groundwater across the drawdown area including *aherbe* (ground), *ahepetewe* (hot weather), *arrertame* (permanent), *kwene* (under), *etwerrpe (*Sandhill/sand), *elye (shade), ahepetewe* (summer), *aherrke* (sun)*, arntweng-areye* (rainy season), *aynterrke* (dry), *arntwe* (fresh water and rain), *angenke* (dig), *kartawerre* (root), *arne* (water vessel), *kwathenke* (drink), *anerre* (rockhole), *artnwep* (swamps), *ngentye* (soakages)*, elpaye* (creeks), *and ilinjera* (floodouts), and *irrigkudu* (green, grassy flatlands). Maintaining the Kaytetye language is linked to Kaytetye people sustaining traditional ecological knowledge into the future.

> 'We say *Kantangara* for under and *Ngappa* for water…so for the underground water in Warumungu we say *ngappa kantangara kuna*.' *Heather Anderson*

Interconnections between water, traditional ecological knowledge, spirituality, survival and GDE was expressed by Traditional Owners throughout the assessment:

> 'The bean trees at the soaks are part of the story and can't be cut. They are Dreaming trees and can't be cut. They were planted in the *Altyerre*; they show us where the soakages are when we are travelling. The trees need the soakages and we need the trees to find the soakages to get water.' *Ned Kelly*

'At ALKETALKERREY we would dig a long way down to get a drink. After we finished there, we would walk to ATYEWANTEYE and stay there for a while. The bean trees at ALKETALKERREY and the orange tree at ATYEWANTEYE can't be touched. We can use the ones away from the soakages, the ones that aren't sacred.' *Donald Thompson*

'We see the large trees and know there is underground water. The old men used to dig for water near the old trees. We don't know what is going to happen if they take that water and what are they using it for? We have to think about it more'. *Brian Tennison*

Figure 22 Northern wild orange *akarley* (*Capparis umbonate*)

Source: Photograph by Jessica Burdon (CLC).

'The *Kwerrimpe* were bush onion ladies, they were Kaytetye and travelled around Kaytetye country. They left onions for us and we still find them along Taylor Creek even when there is no rain. We also get bush plums, bush potatoes, tomatoes, banana, honey ants, sugar bag, coconuts, goanna, turkeys, kangaroos, echidnas, grass seeds, and beans. We use the root of the acacia to make boomerangs and the best sugar bag is in winter from the bloodwood, it is stored in the trunk of the tree like a fridge.' *Selma Thompson*

Figure 23 Woolybutt grass *antyer* (*Eragrotis eriopoda*)

Source: Photograph by Susan Dale Donaldson

'Not all soaks hold water all year around. They can be good after rain but then dry up. There are springs that always have water. I've never thought about where the water comes from, it is just always there. I don't know how the springs will be affected. If the water is taken it's gone forever and we can't get it back. Once it's gone, it's gone.' *Michael Jones*

'I dug for sand frogs in the sand hills at Wycliffe with my grandmother Molly O'Keefe. We used a stick and a crowbar. I was carrying my son in a coolimon at the time. He is now 32! We dug about one metre down, not far and the sand was dry around the frog, but the frog carried water in him.' *Evangeline Presley*

'Our old people originally found water; we can find water too in the same places. Water is precious. We can't give away our water, we have to think of our family and future. We will hold the money in our pocket only a little while.' *Michael Wilson*

'The insects live in the trees and they eat the leaves and flowers from the trees. The flying ants make ant beds and we collect the spinifex wax. The bees make sugar bag. So, the insects need the big trees to survive and we need the insects to make us wax and honey. It is all connected.' *Michael Jones*

'We used the wood from the bloodwood to make boomerangs. The bees also like the bloodwood trees to make sugarbag and we also get bush coconuts from bloodwoods. We can't lose the bloodwoods, they are important for lots of things, even the ones that aren't sacred.' *Michael Jones*

Figure 25 Spinifex wax Atnkere, Warrabri ALT

Source: Photograph by Susan Dale Donaldson.

'Bloodwood sap is used to make a medicine drink. We also get sugar bag from bloodwoods and coconuts.' *Selma Thompson*

Figure 26 Collecting sap Arrkiper from bloodwood tree (*Corymbia opaca*) on Warrabri ALT

Source: Photograph by Susan Dale Donaldson.

Historically Kaytetye people shared important ecological knowledge with early European explorers in good faith.

'The old people at Singleton knew where the water was and showed it to the white explorers. They had a map in their memory from a long time ago.' *Derick Walker*

Figure 24 Bush coconuts (kathip) from bloodwood (*Corymbia opaca*), Singleton Station

Source: Photograph by Jessica Burdon (CLC).

2.5 Continuing customary roles and responsibilities

In 1901 Spencer and Gillen identified 'Kaitish' (=Kaytetye) territory as extending from Barrow Creek in the south to the Davenport Range/Bonney Creek area in the north, and extending either side of the Overland Telegraph Line (see Figure 27).[35]

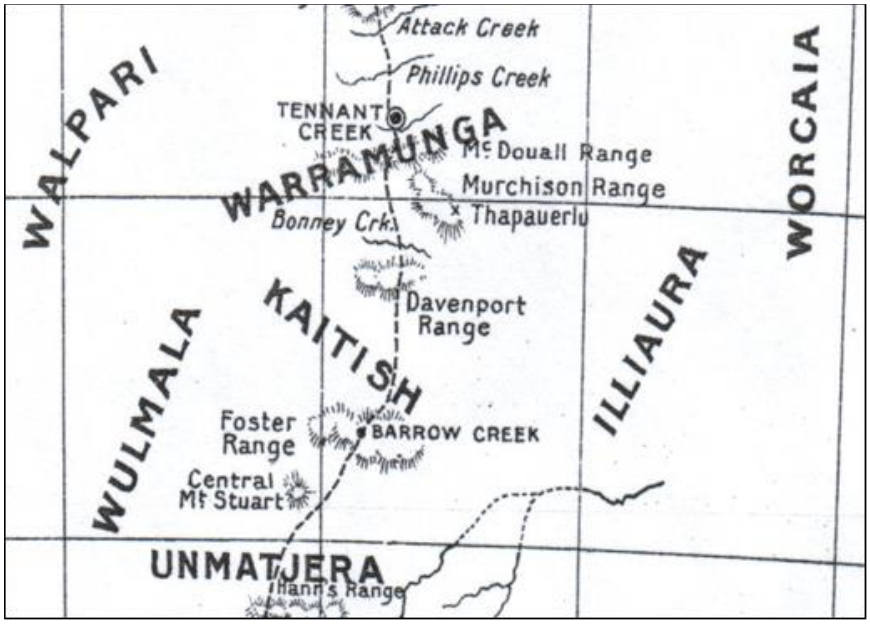


Figure 27 Spencer and Gillen tribal map

Source: Spencer and Gillen 1904.

In the Kaytetye belief system Traditional Owners see themselves as custodians of their land and waters and they have customary roles and responsibilities to maintain and protect their country and the things that live there; in Aboriginal thinking, everything is connected and especially to water. Looking after country in a broad sense relates to sustaining the biodiversity through regular burns, cleaning out/covering up soakages and other activities. These cultural activities relate to preserving all aspects of the cultural landscape, including water sources, for future generations so that culturally valued natural resources can be sustained and sacred sites protected.[36]

[35] Spencer & Gillen 1904: endpaper.
[36] Stanner 1935.

For Traditional Owners, managing country 'proper way' requires being part of making decisions about how country is used and accessed according to ancient laws and customs based on specific land tenure systems. Within each landholding group, people inherit certain roles in relation to land depending on their genealogical link to it. Those people affiliated with land through their father's father (FF) are called *apmerek-artwey (mangaya* in Warumungu and *kirda* in Warlpiri*)* and those affiliated with land through their mother's father (MF) are called *kwertengerl* (*kurdungurlu* in Warumungu and Warlpiri). Those affiliated with the estate through their father's mother (FM) and mother's mother (MM) also hold important connections to country.[37]

Apmerek-artwey are required to pass on the ritual and corporate property of their country to their patrilineal descendants, perform as actors in ceremony and together with their *kwertengerl* make decisions about access to their country's economic and spiritual resources. The role of *kwertengerl* usually involves painting their *apmerek-artwey* for dances and ensuring performances unfold in accordance with Law. *Kwertengerl* are required to ensure sites are protected. Today these complementary roles are also transferred into contemporary non-ritual decision-making processes involving Traditional Owners and their land.

In the 1970s Bell observed rituals associated with the *Ngapa* (=rain) mythology which involved rainbows, rain, lightning and waterholes around the Devils Marbles area.[38] She found that the patrilineal descent-based roles and responsibilities pertaining to country, as outlined above, were defined in the Dreaming and aim to ensure 'the proper management of country – that is, to see the nexus between the use of the land and the maintenance of the land is not threatened'.[39] The link between maintaining areas of importance and GDE was often expressed by Traditional Owners during this assessment (Figure 28).

[37] Bell 1993; Sutton 1993.
[38] Bell 1983 (1993):167.
[39] Bell 1983 (1993):139.

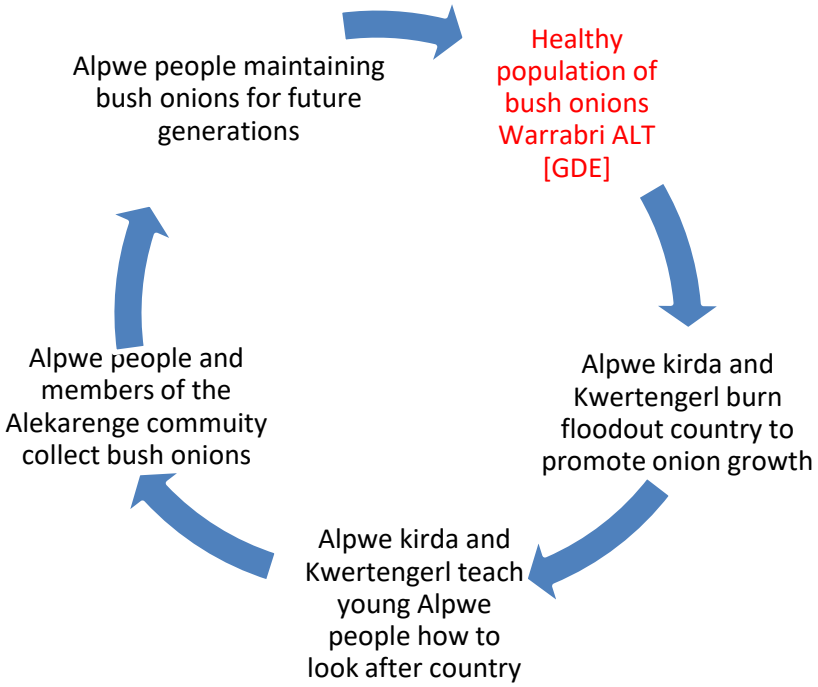


Figure 28 The cyclical interdependence of maintaining areas of importance and groundwater dependent ecosystems

Looking after precious water sources and the range of interconnected species is an important part of Kaytetye people's customary roles and responsibilities, and in particular for *kwertengerl.*

> 'We cover up soakages after they have been dug to protect them from getting damaged by Kangaroo poo, camels, bullocks. We cover them with leaves and branches and logs after the hole has been levelled. We don't want animals falling in the holes and getting trapped either. Anyone passing by can use the soak and cover it up before they leave, ready for the next family. We share our water in the desert with all the families, not just for one person. We keep that water cool for the next family passing by. Some soakages we dig after rain; others are good all year around like ATYEWANTEYE. People lived there because there was water in cold weather and hot weather. We dig that one in from the side, we sit on the side and as we dig, we keep moving in, deeper and deeper. There is a bush orange tree there too.' *Selma Thompson*

> 'There are plenty of bilbies on the Hanson River. They eat witchetty grubs. When the grubs are eaten out, they move on, the whole family moves on. Witchetty grubs grow up in the yellow wattle trees, the turpentine and acacias. Jarra Jarra side they make more witchetty grubs; they sing them up.' *Donald Thompson*

For a Kaytetye person to not be part of decision making in matters that affect their country, then affects their relationship with their country and kin. Today, as in the past, traditional decision-making takes time because it considers complex religious elements, an array of social networks and detailed traditional ecological knowledge systems.

2.6 Being able to live and travel on country

As evidenced by existing literature and consultations with Traditional Owners, it is apparent there was much historical seasonal movement between soaks and living areas and ceremonial grounds across the drawdown area and beyond (see Figure 29). Seasonal movement was previously a matter of ongoing residence, subsistence and ritual obligation, whereas nowadays seasonal movement to water sources is on a visiting/camping/hunting/ritual basis. Whilst country continues to be accessed for cultural purposes, movement between water sources has reduced. The continued cultural pattern being expressed links people to their past and provides promise for the future of their important cultural practices.

As noted earlier in this assessment, the drawdown area traditionally belongs to Kaytetye people associated with four Aboriginal land-owning groups: *Akwerlpe-Waake, Iliyarne, Anerre and Arlpwe*. These four country groups have determined native title rights and interests to the drawdown area in accordance with traditional laws and customs and are deeply intertwined with their neighbouring groups through ritual, mythology, kinship, trade, economic activity, language and shared historical experience.

The broader cultural landscape including the Western Davenport District includes an additional 23 Aboriginal land-owning groups who have kinship and ritual ties to the four immediate groups: Miyikampi, Kanturrpa, Kelantyerrang, Lyentyawel Ileparranem, Arrawajin, Errene, Wurulju, Kwerrkepentye, Pwerrk, Antarrengeny, Rtwerrpe, Arlekwarr, Akalperre, Amakweng, Ahalper, Tyarre Tyarre, Alhalker, Anangker, Atnerlelengk, Akweranty/Anwerret, Akaneng, Ngkwarlerlanem, Arnkawenyerr, Mitartu and Arnapwenty/Imangker.[40]

[40] CLC 2016:4; Kaytej, Warlpiri and Warlmanpa Land Claim 1981. Transcript of Proceedings. Aboriginal Land Commissioner; McLaren Creek Land Claim 1988. Transcript of Proceedings. Aboriginal Land Commissioner; Alyawarr, Kaytetye, Warumungu and Wakay Native Title Claim 2000. Transcript of Proceedings. Transcript Australia; pers. comm. Andrew Fahey 09.08.2021.

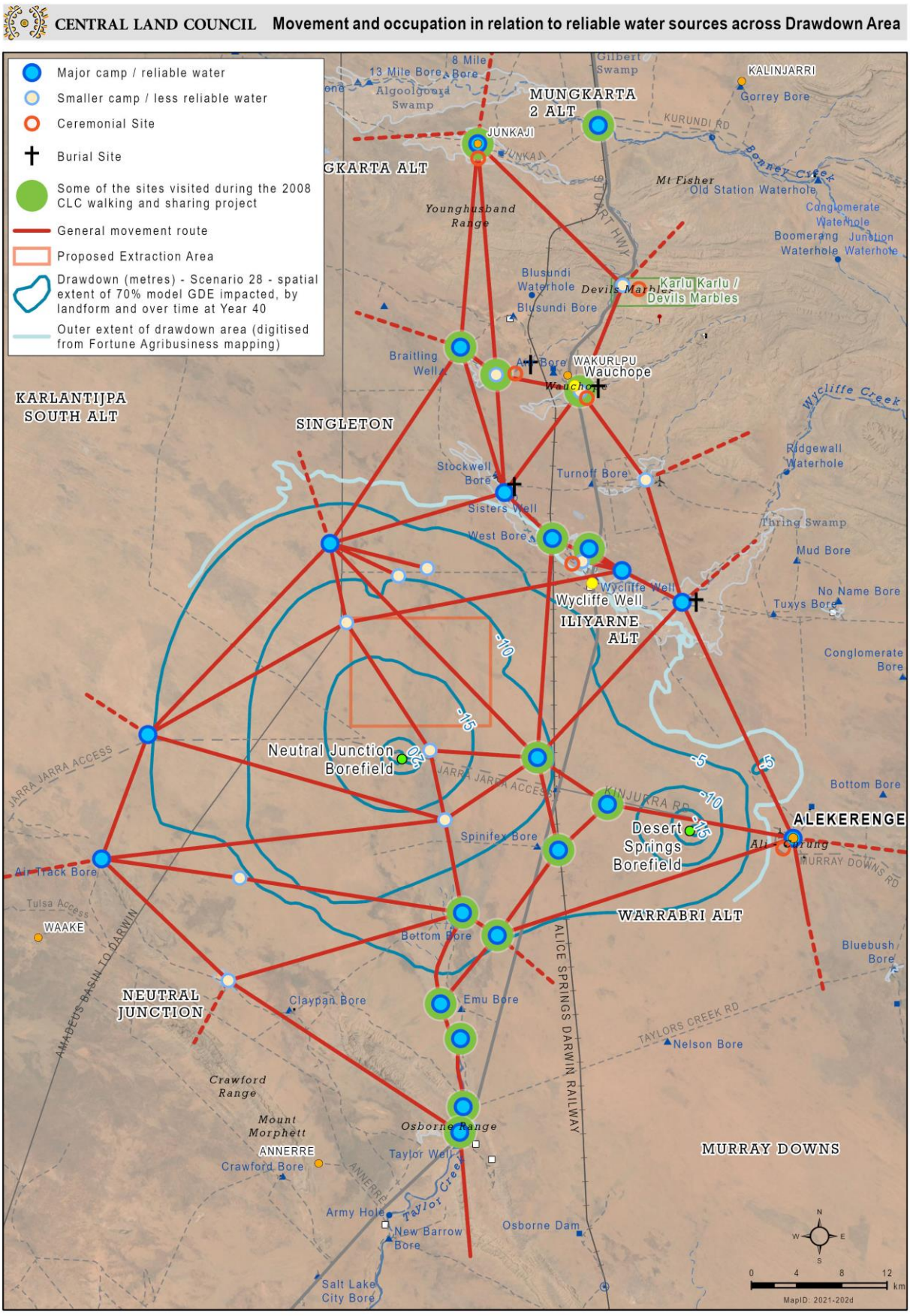


Figure 29 Movement and occupation diagram in relation to reliable water sources across the study area

Source: CLC 2021 (based on data collected by Donaldson).

Human colonisation in Australia's arid zone took place 20,000–30,000 years ago with varying levels of migration and depopulation taking place during the last glacial era followed by a reclamation of rangeland areas.[41] Archaeological excavations at Ingaladdi rock shelter, near Katherine, 800 km north of the study area, indicates human occupation of the area more than 7,000 years ago.[42] Archaeological investigations in the Davenport Ranges National Park immediately to the east of the study area, dated rock engravings as being at least several thousand years old – providing clear evidence of pre-historic Aboriginal use of the region.[43]

Observations of Aboriginal people living within the drawdown area extend back to John McDouall Stuart's 1862 expedition when he documented people hunting and gathering of food and was presented with opossums and birds.[44] Stuart and his party came across 'a beautiful pond of water, and about a mile along the pond the ground was sufficiently firm to allow of the horses going to drink; this is a beautiful sheet of water, 50 yards wide, and seems to be permanent; some of the horses had a swim in it. This I have named Thring's Pond.'[45] Thring Swamp is an important site belonging to the Iliyarne group located on the southern side of Wycliffe Creek on Singleton Station.[46]

While in the vicinity of the Crawford Range and Taylor Creek, Stuart saw 'several natives' and recorded 'soakages dug in the Creek by the natives. There is no surface water, but apparently plenty by digging in the bed of the creek, judging by the number of native wells that he saw with water in them'.[47]

Aboriginal people were observed at Taylor Creek by Renner and his party in 1872, where 'blacks annoyed him very much after he left the Taylor, by constantly setting fire to the grass along the road.' [48] In 1874, during a time of severe drought across the region there was an increase in pressure on water resources. These difficult conditions together with an incident involving ration distribution at Barrow Creek led Kaytetye men to attack and kill two European men who were stationed there. Settlers responded by mounting a reprisal expedition which resulted in a number of Kaytetye people being killed in the region, including at Taylor Creek.[49]

[41] Mulvaney & Kamminga 1999:190–191; Smith 1987:710–711.
[42] Flood 1983:126. See also Horton 1994:493.
[43] Federal Court of Australia (2004) *The Alyawarr, Kaytetye, Warumungu, Wakay Native Title Claim Group v Northern Territory of Australia (2004) FCA 472*:33.
[44] Stuart 1865 (1975):198–215.
[45] Stuart 1863:13.
[46] Stuart 1865:79.
[47] Stuart 1865:79.
[48] Petrick 1983:20.
[49] Aboriginal Land Commissioner 1982:4; Koch & Koch 1993:xiv; Bell 1983 62–65.

In 1896 Eylmann was travelling through Kaytetye territory 19 miles west of Taylor Creek and observed the remains of a living area and 'cave paintings'.[50] After passing through Wycliffe Well where he noted an abundance of food and water Eylmann visited Kelly Well where he found 'an Aboriginal camping place' comprising 'rough huts built from gum tree twigs, and wind breaks' as well as:

> …yam sticks, feathers from emus and galahs, remains of the native pear, broken weapons, ochre and chalk used for painting, small bones, trough-shaped pieces of bark…a hand-sized flat stone…covered on one side with a reddish, easily crushed resin, and a piece of bark that contained this resin in a liquid form…a long heavy club, painted red, decorated with carnelian rings and short diagonal incisions.[51]

In 1899 Spencer and Gillen passed through the region and documented Kaytetye society. They found Palaeolithic and Neolithic objects including spears with stone-flaked heads attached by resin and string; flint/flakes were used like a chisel for decorating coolamons and adze with flints. Knives, specially designed by Kaytetye women, were also documented.[52] Tree burials were also recorded across Kaytetye country.

The initial exploration of Kaytetye territory by Stuart and others was promptly followed by the development of the overland telegraph line and the pastoral and mining industries. Kelly and Wycliffe Wells were constructed in 1875 and the first pastoral lease in the region was at Barrow Creek, granted in 1877.[53] In the 1880s Murray Downs, Elkedra and Frew River stations were established, only to be abandoned a short time later, due to violent clashes between the newcomers and local Aboriginal people. In 1888, George Hayes leased Neutral Junction and Frank Scott, Stirling Station. In 1930, Greenwood Station was established at Bonney Creek (now Mungkarta ALT) and around the same time a grazing licence existed over what is now Singleton Station.[54]

The correlation between permanent (*arrertame)* water (a*rntwe)*, sacred sites and social organisation has been widely documented across Australia.[55] Treating important water sources with reverence and respect, an aspect of Kaytetye laws and customs, ensures future generations of Kaytetye people can survive as a society on the land as well as enjoy spiritual satisfaction. The Kaytetye ideal is to ensure springs, soaks and swamps remain in the original condition provided to them in the past *Altyerre* era, when they were created, so that future generations can enjoy the same qualities. When country changes or is damaged, Traditional Owners feel this is a direct reflection that they haven't followed the Law.

[50] Courto 1996:77.
[51] Courto 1996:78.
[52] Spencer & Gillen 1904:635–641.
[53] Aboriginal Land Commissioner 1982:5–6.
[54] Koch & Koch 1993:xv–xix
[55] Bell 1983 (1993); Rose (2004).

Latz discusses the importance of water in an arid environment. He found that:

> …the locality of water is the most important factor governing the movement of people in the central deserts. Not only must every adult member of a community know exactly where every water source is located, but they must also have a good idea of how much water will be available to them when they arrive. The knowledge is obtained by careful observation of previous rains coupled with many years of experience on the hydrology of the area, evaporation rates and so on. Lack of water is, however, rarely a serious problem in the central desert, at least in normal years. Although large pools of permanent water are scarce the many and varied sources of underground water are relatively plentiful, much more than is generally realised… (Latz 1995:18).

Latz highlights that during droughts a lack of food around permanent water causes people to relocate rather than the depletion of water (1995:18). He identifies a number of plants obtaining water (*Brachychiton*) as well as plants that indicate the presence of underground water (sedge *Cyperus gymnocaulos*) (Latz 1995:65) and plants that are usually found near permanent water sources (wild orange) (1995:140). The later was identified in the current assessment close to a sacred soak as were bean trees.

'There was a big camp at ALKETALKERREY for Kaytetye, Warlpiri and Alyawarr and Warumungu. The soakage was made by the whirly wind from ATWERPE. Anerre come here too. This place is the bush name for Bundy Thompson. People walked here from ATARA in the olden days. If they take the water away or come too close, the bean tree will die and the soak will dry up.' *Ned Kelly*

Figure 30 Bats-wing coral bean tree *atywerety* (*Erythrina vespertilio*)

Source: Photograph by Jessica Burdon (CLC).

Kimber (2011) highlights how 'precious permanent' water sources in the arid region were relied on during times of droughts until 'good rains fell elsewhere in their country' (2011:13). He notes that 'as a consequence of these fluctuations in availability of water to Arrernte people (and indeed all desert peoples), they had learnt to pulse with the seasonal and also drought availability of water' (Kimber 2011:13). He also highlights how 'the key' to each Aboriginal country area 'was a reliable as possible water supply, normally requiring a spring, or very good long-lasting soakages and rock-holes, but could involve a known temporary water.' (Kimber 2011:28).

> 'Iliyarne people used to live at MPWEREMPWER-ANGE and near ANEMARRANENKE it is good open country with plenty of food and good water. They would go between here and ALYERERNYE.' *Donald Thompson*

Drought conditions across the region in the 1920s and the growing practice of European men taking Aboriginal women as wives led to the 1928 violence at Coniston Station on the Lander River. Frederick Brooks was killed by Aboriginal people and this led to the killing of many innocent Aboriginal people.[56] Perry analysed the relationship between groundwater, land use and landforms and found that the dependence of both European and Aborigines on the same small portion of the land in central Australia is one reason for the strength of the land use conflict in the region (Perry 1978:74). Koch and Koch documented how families fleeing the Coniston conflict in 1928 camped at Stockwell Bore JAMPALJARN on Singleton Station on their way to Greenwood where mourners painted themselves white as part of Kaytetye mortuary ritual.[57] Speaking of the reprisals that followed, or a related incident, Johnny Nelson (now deceased) recalled:[58]

> …poor old my old fella, they bin make big business…they didn't know the trouble there. They ran in, they grab them there, make it prisoner they bin have big business, you know…they ran into Murray then. Grab 'em them. Two of them bin shot in the Hanson Creek…(after) showing them all (rock holes and water).

Strong connections were formed to a number of places used to evade conflict at Coniston and Barrow Creek as noted by Bell who found that people's memories were strongly tied to a history of fleeing conflict and seeking refuge at Barrow Creek, Singleton Bore, Wauchope, and Greenwood where rations were distributed in the early 1900s. Traditional Owners today recall the soakages visited by their ancestors fleeing the conflict. One soakage in the drawdown area used for this purpose was ALYERERNYE where people stopped on route to Greenwood [now on McLaren ALT].

Koch and Koch recorded oral histories about Kaytetye people working at the Wauchope wolfram mine, camping and collecting bush tucker at JAMPALJARN (Stockwell Bore) on Singleton Station, and buying melons at the Wycliffe Well farm.[59]

[56] Koch & Koch 1993:xvii.
[57] Koch & Koch 1993:67–70.
[58] Aboriginal Land Commissioner 1982:6 (Exhibit 2).
[59] Koch & Koch 1993:113–114.

'We use to camp here at ALYERERNYE. Husband and wives would dig together, until they found water. First, they'd clear the grass, maybe burn it. The wife would be digging down in the hole, in the soak, and would pass water up to her husband sitting on top. We use a bucket now but they used coolamons they made from the bean tree. Not the sacred ones though. That is an old law and it's still there today. Maureen's mother and aunty were here and Ned Kelly. There is good tucker around here and in the sandhills to the west are plenty potatoes. West of here is Waake and to the east Wakurlpu.' *Donald Thompson*

'Sonny Jakarra can tell you about the old people living along Taylor Creek. My father and grandfather lived there too. People walked all around that area hunting. They would move around the area on foot in those days.' *Selma Thompson*

'People used to travel between ALKETALKERREY and ARLEPWARTE and ATYEWANTEYE. People were living at these places and would dig for water with their coolamons. There was plenty of tucker around, potatoes, conkerberries. People would stay at each place for a month so until the food ran out then move to the next soak. So, if there was plenty of food around people would stay longer before moving on. People couldn't live without food or water.' *Ned Kelly*

Participants in this assessment, and or their ancestors, have direct historical experience with a shortage of water. In 1945 a shortage of water led to the closure of Tennant Creek's 'Six Mile' Aboriginal Reserve resulting in Aboriginal families being relocated to Phillip Creek Native Settlement to the north of Tennant Creek.[60] However, the Phillip Creek site also lacked permanent water and Aboriginal people were moved to 'Warrabri' (now called Alekarenge) in 1956; according to Cliff Williams '…all the bosses decided to move us from Phillip Creek because the water made lots of people get sick'. [61]

Many Kaytetye families also lived and worked on the stations in the vicinity of Alekarenge, including on Singleton and Neutral Junction.[62] In 1961 Pitman wrote that 'Singleton appears to be coming a colony of aged wards…they are unwilling to live at Warrabri…several of the wards have been transported on a number of occasions back to Warrabri, only to return.'[63] The May 1966 census recorded 10 Aboriginal people residing on Singleton Station in 'humpies a quarter of a mile from the Homestead' with people regularly visiting Warrabri and other centres

[60] Aboriginal Land Commissioner 1988:48.
[61] NAA 1959/1897. Warrabri Corroboree Ed. 9/1959. See also Meggitt 1962:28 'The Story of my life', Cliff Williams: See also Aboriginal Land Commissioner 1988:49. NAA 1954/953.
[62] NAA 1957/122. CENSUS 1964.
[63] NAAE 155/20 (1960/86) inspection report, 1961.

around the station.[64] In June 1967 Pederson reported 19 people 'all living as Aboriginal' on Singleton Station. The Aboriginal residents lived in 'whirlies' and all the cooking was done individually over open fires around the whirlies. The Aboriginals 'presented as a reticent, shy group who are apparently prepared to stay at Singleton no matter how bad the conditions'.[65] Station life allowed for the continuation of a traditional lifestyle during that time of the year when people were not undertaking station work.[66]

When Traditional Owners visit a soak today, memories of how the place was visited in the past is recollected and new memories are made. Historical stories about places and the people who lived at particular soakages is an important way for their descendants to connect to their ancestor's country. Family connections were historically formed as men and women worked on Singleton and Neutral Junction Stations.

> 'My father brought me here and we will bring our kids here too. I can't believe this tree is still standing. It is so old. This is the main tree connecting me to my grandpa and to my grandkids. I will feel no good if it dies.' *Brian Jakarra*

> 'I came to THANKWE as a child with my mother and other families from Alekarenge. We camped at THANKWE and collected lots of yams, bush tobacco and ashes from the snappy gums.' *Maureen O'Keefe*

According to the WDWAP, approximately 1,000 people currently live in the District, including around 500 people in the major community of Alekarenge. The District also includes three smaller communities (Imangara, Mungkarta and Tara) and nine outstations (Ankweleyelengkwe, Annerre, Greenwood, Illeuwurru, Imperrenth, Indaringinya, Kalinjarri, Tjuperle and Wakurlpu).[67] The Aboriginal people residing in the district are either Traditional Owners or Aboriginal people with whom Traditional Owners share their land, water and resources including across the drawdown area.

> 'I enjoy being here at Wakurlpu. I can relax here and be with family. It is good for my health and I feel a lot happier being on country.' *Glenis Curtis*

> 'Home is home for Aboriginal people. Wakurlpu is our home, our country. When the country is green, we are happy. Water is like gold to our people.' *Jeffery Curtis*

[64] CENSUS F133/22 (65/32). Inspection report dated 01.09.1966 Cooke. Census 1966.
[65] CENSUS F133/22 (65/32). Census 1967 and 1968.
[66] E155/20, 57/25. Hamilton 1958 and 1960.
[67] NTG 2018:11.

> ‘We have a farm here too at Alekarenge. We need water to keep local jobs. Wages for the locals. What about our children? If we lose water at Alekarenge what will happen to the people in the community? We can’t move people away. This is their country. This is my home, my land. The families hunt around the community and across Singleton Station and Neutral. If the country is damaged, we will keep the law, our law. The law came from the past, we have it now, and it will keep going into the future. We will stay here and the story will stay here too and the names (of places). It will be sad if the animals go and the birds fly to another country. Maybe the rainmakers will make the country green again and the animals will come back. They can make a smoky fire to make clouds to bring on the rain.’ *Michael Williams*

In 2008 the CLC undertook a mammoth cultural teaching project ‘Walking and Sharing Stories from Bonney Creek to Barrow Creek’ which involved 65 Kaytetye, Warumungu, Warlpiri and Alyawarr people walking 140 km over 15 days (see Figure 29). The participants visited 30 soakages along the way and shared cultural and historical stories and undertook cultural practices such as digging soaks to collect water.[68]

After participating in the walk, Ellen Haywood said she enjoyed visiting the soakages because ‘we think back for the old people’. She also found that it was:

> important to learn about their history and to know the knowledge of everywhere where the waterholes are so that they can know whenever their car run out of fuel, they know where to get water and bush tucker as well. How to find food, how to find water and to know which direction we travelling which land, whose land. Sometimes some lands have boundaries that certain people have to carry on and if you’re travelling from another place then they’re the person-owner that has to take the lead.[69]

Ellen also felt:

> …excited and good to see the land that we travelling through and enjoying every walk and every place, every soakage…The best thing is the knowledge to be carried on by young people, handed down from old people to us young people and the stories need to be told about this walk and our history.[70]

[68] CLC September 2008. Walking and Sharing Stories from Bonney Creek to Barrow Creek. *Land Rights News*, p.7.
[69] 20.06.2008 ABC Stateline transcript.
[70] 20.06.2008 ABC Stateline transcript.

Another participant Maureen O'Keefe recalled how her aunty used to:

> travel from each soak until the next one until they reach Barrow Creek. She spent most of her childhood wandering around these hills and these soaks with the Kaytetye people. She brought us back, she revisited them old soaks that she used to go to as a child with these Kaytetye people. She used to tell us stories about it before. Then she thought about it maybe one day we could do a walk and visit those soaks again. It was lovely you know walking all these soaks, visiting. Made me realise then how hard it was then for those people to travel. They had no cars back then and they travelled this dry Australian desert. I thought it was just a desert, I didn't know there were soaks there you know. I didn't know about it until she told me story about it. I was wondering, how did they get water? How did they travel this long distance from Wauchope to Barrow Creek and I was wondering, where did they get water when they were travelling through this land? But I didn't know there were soaks along the way until she told me a story…and I seen it all now, them soaks. I visit a few when I was a little girl, maybe three but now we visit a lot, some in creeks, some in plain country and water floodouts you know.[71]

Sheila Braeden felt that the walk was a good way to teach the next generation about the soakages and other resources. She said:

> …we decided to have this project going for our children so we can teach them and pass the knowledge down to them. So, this project is all about teaching their children so in the future that our great, great grandchildren will teach their children and tell them stories about what we did for them. It's just passing the knowledge on see if we passed away well there is something for them to see…they can learn the knowledge from them as well in different languages and in them days they used to share the land and the resources that were there that used from other different languages, teach the other languages. Different languages have done all same thing, like the same soakages, bush tucker that they had and they're passing it on to their children from different languages. So that's why we got together as Warlpiri, Alyawarr, Warumungu and Kaytetye.[72]

In the words of Tommy Thompson (dec.), who was an integral member of the walk, as a teacher:

> …we got our culture live in our mind, and a map in our mind, and a ceremony on our mind. Everything got all in the mind, no map, that's why you have to remember this country. What people took around when we were kids, mum and dad used to move around looking for food, find food, meat, water, to live, to give

[71] 20.06.2008 ABC Stateline transcript.
[72] 20.06.2008 ABC Stateline transcript.

> us life. Wherever you live in town you have to come back and visit this grandpa's country. You got it free. Everyone can come. You have to find this, it's a different history.[73]

According to Brian Jakarra who also participated in the walk:

> I've learnt a lot about these soakages, what he taught me and told me all the way by listening to him and him telling me all the stories, the stories about the land and the people, how our people, Kaytetye people used to live off the land and how he, as a kid, used to walk around with his mother and father and even mum, Mona, it was their idea to get all the families together, sons and daughters and grandchildren and take them on this walk. Show these soakages and how they used to live. It changed a bit. The soakage never changed the landscape has, mostly by erosions. The soakages some of them I recognise yep since I was a kid…these old people. They really want to pass on their knowledge and the stories, pass it on to the younger kids, the younger generation like to us, to me and so I can pass it on to these other little ones then, when these old people gone, so we can carry 'em on, see? We still got our old people alive. Some of these soakages, I haven't seen them in my life. Only a few that I know of we came past. These other ones just seem to spring up. It's really good so everyone can see it. Around Australia hopefully so people can get to know that we're the smallest tribe in the northern territory, the Kaytetye tribe and setting an example how these other larger language groups can do it. They might do one of these projects one day.

Some of the participants in the current study were involved in the 2008 walk and remember the time fondly. A number of water sites visited in 2008 were visited again in 2021 for the current research, further embedding cultural knowledge and practice associated with important water sources.

> 'We walked to Barrow Creek from Bonney Well stopping at soakages on the way. It was good to listen to the old people's stories and to find the old soaks. I have rain dreaming for the Helen Springs area. Other people have rain dreaming for this area. We all need water. We needed water on the walk.' *Louise Fitz*

[73] 20.06.2008 ABC Stateline transcript.

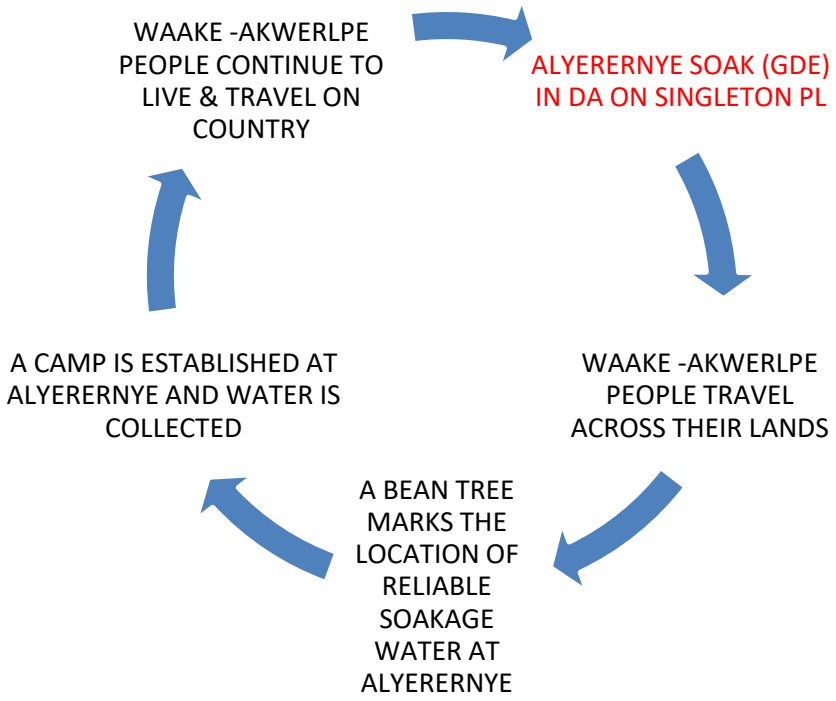


Figure 31 The intersection between the living & travelling and groundwater dependent ecosystems

In a similar study Sullivan found that:

> …fresh water sources are still important for their food resources and recreation. They may be vital from time to time, since an individual's survival can still depend on finding water when vehicles break down, bog in sand, or when people scout around on foot from the base of a bush camp. Just as the importance of water in this arid area has not diminished, the belief system and practices that surround it remain strong also… (Sullivan et al. 2012:47).

3.0 POTENTIAL IMPACTS TO ABORIGINAL CULTURAL VALUES

The following section outlines the impact that the SWL may have on cultural values in relation to the drawdown area, particularly those values affected by groundwater depth. The basis of opinion is the scientific premise that a reduction in groundwater can have 'severe negative impacts on GDEs' as outlined in the technical report specifically relating to the current study area (Nano et al. 2021:1):

> Globally, groundwater dependent ecosystems (GDEs) are recognised for their value as ecological refuges, specialised habitat and areas of high indigenous cultural importance. Particularly in the world's drylands, GDEs are often threatened as human water use increasingly exceeds aquifer recharge rates…Globally, overexploitation of groundwater represents a major threat to GDEs...Drawdown impacts are most pronounced in arid regions, especially following prolonged and severe drought, and in the context of climate change…Lowering water tables have been shown to have severe negative impacts on GDEs…

What Kaytetye cultural values are reliant upon GDEs and how will they be negatively impacted by a reduction in groundwater? The data reviewed has shown that there is a direct and obvious link between Kaytetye cultural values, groundwater and GDEs; they are cyclically interdependent and as such vulnerable to impacts caused by a reduction in groundwater. Moreover, there is a direct link between Traditional Owners exercising many of their determined native title rights, how they use their freehold land, the presence of groundwater and healthy ground dependent ecological systems.

3.1 Emotional and physical responses

This assessment has found a direct cyclical interrelationship between groundwater dependent ecosystems and Traditional Owners' ability to fulfill their cultural obligations in accordance with traditional laws and customs. Because the current proposal may have the effect of dramatically reducing groundwater which will subsequently damage GDEs, the proposal has the potential to undermine and adversely impact Traditional Owners' ability to fulfill customary responsibilities relating to appeasing ancestral spirit beings living in the landscape and at particular sacred sites. Traditional Owners will feel responsible for any damage caused to sacred sites associated with GDE as a result of reduced groundwater, causing cultural and spiritual pain and anxiety.[74] As a result, Traditional Owners believe they may get sick or die as a result of offending ancestral spirit beings and allowing sacred sites to be damaged whilst in their custodial care.

[74] See Mansfield in Pannell 2018: 257.

Traditional Owners' spiritual ancestors living in the land and waters can express their anger when the traditional system is not operating as it should – for example, when rituals are not undertaken according to the rules set down long ago. People can get sick and die if the law is not abided by. Moreover, there is a real fear held by Traditional Owners that the *Altyerre* powers residing in the land and water, across the region, will adversely react to the widespread demise of the biodiversity relying on their groundwater.

The cultural consequences for failing to fulfill the customary responsibilities (often described by Traditional Owners as 'breaking the law') are targeted at individuals whose traditional role it is to appease ancestral spirits; *apmerek–artwey* (*kirda*) and *kwertengerl (kurdungurlu*). All Kaytetye families hold stories about individuals who broke the law and were punished resulting in sickness, injury and even death. These ill-fated outcomes are more powerful, in the eyes of Traditional Owners, than the hard work of the ritual rainmakers, who will continue to make rain. The question is being asked by Traditional Owners, can they make enough rain to fill up the underground water supply? What if the rain makers die as punishment because the land dries out?

Whilst there is a strong belief held by Traditional Owners in the power of ritual, for instance for rainmakers (*angkethemwey*) to make rain *(arntwe)* to increase water supply, and a firm belief in the ongoing force of the *Altyerre* regardless of external activities, it is also apparent that the current generation of Traditional Owners fear the consequences of upsetting the creator spirits by not following the *Altyerre* Law. With a reduction in groundwater, Traditional Owners predict they will see sacred trees 'falling over', soakages drying up, animals finding a new home, bees making less honey, and in turn they may be directly blamed if their country (*apmere*) dries up *(errpatye)*. Emotional responses to breaching cultural rules has been documented and discussed elsewhere (see Pannell 2018). This was a major theme expressed during this assessment, as described below.

Participants in this assessment expressed a range of likely emotional responses if their important cultural values are negatively impacted by a decline in groundwater levels as a result of the SWL. These predictions are based on their previous experience relating to sacred site damage. Traditional Owners believe that their spiritual ancestors residing in the land also have emotions and will be emotionally impacted if country gets sick.[75] There are many Kaytetye terms to describe emotional responses to life events including *arlatnarrerane* (cry), *ampwarrenke* (die), *althere* (homesick), *amperrnge* (sad/unhappy), *nyerre* (shame), *arntetye* (sick), *athamarrerange* (worried), and *atere* (scared).

[75] See Pannell's (2018:263) discussion on the different ways Aboriginal people talk about their emotions and how the mythological beings in the landscape are also believed to have emotions.

Social sanctions may also result; Traditional Owners can be forced into temporary or permanent isolation from their traditional group which can lead to psychological stress and guilt associated with being responsible for damaging the country belonging to their spiritual ancestors, their actual ancestors, their current generation of kin and their descendants.

'I came to this place as a child with my father. This is a water dreaming place. The *Aylpele* (River Red Gum) and soak is the main place in the creek. The Murphy family are related in here too. If this tree dies the owners will go with it but another tree might grow. The story stays the same.' *Brian Jakarra*

Figure 32 Sacred River Red Gum and soakage in Taylor Creek, Neutral Junction PL

Source: Photograph by Susan Dale Donaldson.

With regard to the cyclical concepts described in Figure 6, if the sacred coolibah tree is damaged as a result of a reduction in groundwater on which it depends, Iliyarne Traditional Owners will be unable to fulfill their customary role in accordance with their traditional laws, and as a direct consequence, they believe senior Iliyarne *kirda* will be punished by *Altyerre* forces; they are likely to get sick, suffer ongoing 'bad luck' and potentially die. These forms of punishment are an important aspect of Kaytetye religion and cultural phenomenon. The cultural values associated with sacred trees in particular is of utmost importance to Kaytetye people and are usually diminished as a result of cultural obligations not being undertaken, as described by assessment participants:

‘We got to look out for the owners, they will get sick if they don’t do their job and look after their country.’ *Donald Thompson Akemarre*

‘Aboriginal law is strong. If I do the wrong thing and my trees dies, I’ll be gone. If Dreaming trees get lost, we be gone too. We got to tell them this. Someone will be in trouble, the bloke not listening to us, he will get sick. That’s our law. Our law is in the ground and will not change. When I’m gone my family got him. Our main word to them is “please take it easy on the water all around the world”.’ *Frankie Holmes Akemarre*

‘Country is happy when we talk to it and look after it. I did a painting about how lovely Wycliffe Creek is, with the ducks and the shade trees. Our old people might get sick and *kirda* might die if the shade trees fall. We would be sad as *kwertengerl* for Iliyarne if we lost our shade and our water and if the ducks flew away to find water. We would be sad and feel shame because Iliyarne wouldn’t be their home anymore, they can’t live without water. If the trees die the witchetty grubs die too, they can’t fly away like a duck can…We would feel sad for them too.’ *Lindy Brodie Nungarrayi*

Figure 33 ILIYARNE ILPAIYE, Wycliffe Creek

Source: Photograph by Susan Dale Donaldson.

3.2 Damage to sacred sites

The current research identified 40 sacred sites within the drawdown area, all beyond the extraction zone, associated with over 20 *Altyerre* (Dreaming) mythologies (see Figure 7). The proposal to reduce groundwater has the potential to adversely impact groundwater dependent sacred sites, which Traditional Owners are traditionally responsible for maintaining. As noted above, if a sacred site is damaged or destroyed there is a belief that *apmerek–artwey (kirda)* may get sick or die and *kwertengerl (kurdungurlu)* who inherit the customary role of protecting sites may feel responsible for the damage, which may lead to feelings of hurt and shame, as well as mental illness and social isolation.

Fortune Agribusiness received an Authority Certificate (AC) from AAPA in 2019 for work associated with the Singleton Horticulture Project including water extraction, the use of dams, bores and watercourses and the planting of crops.[76] The AC subject land extends from the southern boundary of Singleton Station north to the Stockwell Bore area, and between the Stuart Highway and the gas pipeline (see Figure 3). This area is larger than the extraction area and much smaller, but not completely overlapped by, the drawdown area.

The current research, as well as that undertaken by AAPA for the project AC, identified no sacred sites within the immediate extraction area. C2019/083 defines ten (10) Restricted Work Areas (RWAs) covering eleven sacred sites. Within these 10 RWA:

- Seven [RWA 1, RWA 2, RWA 3, RWA 4, RWA 6, RWA7 and RWA 8] are beyond the drawdown area in the Wycliffe Creek–Swamp area associated with eight sacred sites featuring ghost gums, bloodwoods, soakages, a 'depression hollow', two sand ridges, creeks, waterholes and swamps[77]; and
- Three [RWA 5, RWA 9 and RWA 10] are within the drawdown area associated with three sacred sites featuring a creek, ghost gums, a waterhole, soakages and bean trees. RWA 10 (AAPA AC 2019/083) is very close to the western extent of the extraction area and consists of GDE features (soak and bean tree).

Of these 11 sacred sites, 10 correlate with research undertaken for the current assessment; the cluster of bloodwood trees within RWA 1 were not recorded, probably because the focus of the current research was the drawdown area and this site lies beyond it.

[76] AAPA AC 2019/083.
[77] There are two sites within RWA 1

Critically, the current assessment identified 5 sacred sites within the AC subject land, not identified in the AC or overlapped by any of the RWAs. These sites are all within the drawdown area and are all associated with GDE features; all are soakages. An additional 32 sacred sites were identified outside the AC subject land and within the drawdown zone.

This assessment also highlighted a potential duplication within the AAPA C2019/083. The status of ten of the sacred sites is described as 'recorded' whilst one is listed as 'other site'. None are 'registered'. The site listed as 'other site' [5756-32] in the AC Appendix and on the AC map is described as a site of cultural significance to Aboriginal people but not one that meets the definition of a sacred site in the NT Sacred Sites Act. The site is described in the AC Appendix as 'a small waterhole / soakage in the main channel of Wycliffe Creek'. A site with the same number is also described in the certificate as 'a small soakage and water hole' subject to RWA 6 [AC para 10]. Research for this assessment found that the soakage, waterhole and creek associated with 5756-32 are associated with the *Atherre Artweye* [=Two Men] and *Aherre* [=Kangaroo] Dreamings and are indeed sacred.

It is notable that AAPA request that the applicant 'should engage an arborist to consider the long-term health of sacred trees both within and outside of the subject land, and in particular trees located within the railway corridor.'[78] Whilst the request is not a condition of the AAPA Certificate, it indicates that AAPA are concerned about sacred sites beyond the subject land into the drawdown area, and in particular sacred features associated with trees.

Given people are spiritually connected to country, if a sacred site is damaged or destroyed the spiritual connection between Traditional Owners and the site is also damaged or destroyed. There would also be a loss or decline in the cultural connection held by the Traditional Owners to the places that are impacted. There is a strong belief that rituals and songs and stories will continue even if sites and species of cultural value are damaged or destroyed, for instance, Possum Dreaming across the region continues to be valued by Aboriginal people, despite the extinction of possums. Another example is when Traditional Owners continue to recite place names in ritual songs relating to sites that are destroyed or their location has been forgotten. Similarly, a sacred bloodwood tree on the highway within the drawdown area has died, however, Traditional Owners believe that a new one will 'spring up' nearby soon to represent the story for that place. However, songs and associated place names are more accurately etched into the minds of the next generation through visitation, by Traditional Owners hearing and feeling and smelling and seeing the site. By remembering the journey to the site and knowing the places before and after.

[78] AAPA AC 2019/083.

Whilst Aboriginal traditions are known to adapt over time to cater for ecological and demographic changes, concerns have been expressed by Traditional Owners about incremental loss. They are well aware of cultural values already lost as a result of colonisation and fear further loss into the future. The ability of Traditional Owners to maintain traditions becomes harder if paralleled to ecological destruction and site damage. Will new trees 'spring up' to replace the ones that have 'fallen'? Will the soakages be recharged with enough rainfall or will they dry out in the long term? Yes, the rainmakers can make rain and the rangers can rehabilitate the natural environment, but how sustainable is this? Kaytetye people's spiritual connections and cultural practices associated with particular sacred sites, which have endured for thousands of years, could be gradually diminished or lost forever with a reduction in groundwater.

Below is a collation of Traditional Owners' comments relevant to an expression of how this cultural value might be impacted and the extent to which site damage preys on people's minds:

> 'I get sad when I know that my uncle and father called the names of soaks they knew and they knew how to find them. I know the names they called but don't know where the sites are. It makes me sad that I'll never find these places again. What story can we leave for Wycliffe country if the sites are gone. We will know the stories and the names but there will be no sites.' *Michael Jones*

> 'Frogs live in the Wycliffe sandhill. There is a big tree standing there. A Dreamtime tree. If the frogs die, we might get sick. If the country goes down, we go down too. If they kill our country, the feeling we have for that country, for the spirits, might makes us sick.' *Karen Morrison*

> 'We are connected to country through the dreaming law. When that Ngapa tree at PANJIRRIJI got damaged the owner, Old Black Hat, he died because that tree got damaged. This happens to our people. Our Law is strong. When they took that devil's pebble away from KUNJARRA Mr Taylor died. We can get sick because the spirit in the tree is connected to our spirit, if the tree dies part of our spirit dies too. So, we try and do our best to look after country and fear the consequences if we don't. *Kirda* might die or get sick and *Kwertengerl* might feel guilty because they haven't done their job, they might get mental health no good.' *Michael Jones*

> 'When they took that KARLU KARLU rock away people got sick. The land went dry and people were having car crashes all the time. When the rock was returned people were happy. My grandmother Molly waited

for that rock to be returned before she died. She died happy. If all the water goes, forever, first we will lose our old people, then other Traditional Owners. We can't let that happen. We need to save our water forever, not lose it forever. We are not interested in money, we want our water to save our lives forever, for all the future generations. They can enjoy swimming in Wycliffe Creek too.' *Evangeline Presley*

'There is spring water at Barrow Creek at ELKEREMPELKERE. They graded too close to it so the water got shut down. The little people, the spirits living at the spring shut that water off because they were angry. They get angry if people do the wrong thing at a sacred site. We have to talk to the spirits for days so that the soil gets wet and then there will be puddles everywhere.' *Hilda Pwerle*

'If we have no soakage water, the story will still be sitting there in the country. Another tree might come up. Our Dreaming is strong and survives. We can still pass on the *Altyerre* and share the stories. That's the same for the ladies too.' *John Duggie*

'The country has spirit. It is alive. The country will get sad and sick and Traditional Owners will get sad and sick if the country dries up. We don't want to see the old people worry. We like to see our country green and the birds will be happy and the old people will be happy. I saw dad talk to the spirits at ELKEREMPELKERE. They are there. He spoke to them in Kaytetye. We belong to that place too. If kids break trees around the spring to make a humpy, they will get sick and we'd have to take them to see a witch doctor to get better.' *Selma Thompson*

Damage to sacred sites can impact Traditional Owners' spiritual connection to country as well as their social relationships. As such, protecting sacred sites is one way for Kaytetye people to maintain their spiritual identity and wellbeing.

'If we Iliyarne people let our land go dry, other people will growl at us. We need to keep the water until we die so that it can jump over to our children and their children all the way like that. The spirit people will get upset if we let that country go dry. They will make us sick, especially Rodger Tommy the main *kirda* (owner through father), and his sons and daughters. We are his *kwertengerl* (owner through mother) and we watch over that country for him.' *Heather Anderson Narrurlu*

'If the land dries up, we will not recognise it. We will not be able to find our sacred sites and soaks. The big sacred trees will fall. If water goes, country gets lost and people die. We die. Where will the animals

go? Big shade trees are important too in summer for people and animals. The coolibah on the highway is called [name redacted], it represents ladies travelling when they were making rain. They were Napurrulas from Anerre country. We have to look after that tree.' *Selma Thompson*

'There is a lot of *Ngappa Wirnkara* (rain dreaming) around the Singleton area. KARLU KARLU, Wakurlpu, Warlaparnpa, all these places were made by *Ngappa Wirnkarra*. Cowboy Sandy had Ngappa Wirnkarra too and the mob at Renner Springs and Anerre in the south. All these places will be affected if there is no water. The story will still be there, still alive, the song will still be there and still be sung, but we will be sad when we get to that place all dead. The story will be weaker for younger people, it will not be as strong as it was for the people before because the places will be ruined. We take them to soakages that are gone and to country that is sick. We have lost other soakages when they put in bores. It is sad to visit these places that are lost, but we keep the story going.' *Michael Jones*

'We need to keep that big tree alive on the sandhill. That tree has a story for Iliyarne country. I paint that tree and sandhill. That's my mother's country. The spirit people are holding the tree roots underneath, they are holding on tight to keep that tree alive.' *Heather Anderson*

When sacred sites associated with people's bush names are damaged the intangible link between the person and the place is also impacted. People feel sad that they will not be allocating these names to future group members if the site is gone.

'Mpwerempwer-ange [lily] is Lindy's mother's bush name. If the land dries up, our lilies will dry out too. We want our kids to see the lilies. It is part of their country. If the lilies all die, it will just be a story from the past about how we collected lilies.' *Karen Morrison*

Figure 34 The importance of sacred sites to Kaytetye people

In summary, the importance of sacred sites to Kaytetye people are multilayered and include being a focal point for mythology and ritual; central to one's inheritance and to the inheritance of one's descendants; a source of spiritual connections and access to the powerful forces of the *Altyerre*; and an important element in the way Traditional Owners exercise their repositionability to their country and to their ancestors (Figure 34). Conversely, if a sacred soakage for instance permanently dries as a result of a reduction in groundwater on which it depends, the Kaytetye Traditional Owners are unable to fulfill their customary role in accordance with their traditional laws, and as a direct consequence senior *kirda* will be punished by *Altyerre* forces; they are likely to get sick, suffer ongoing 'bad luck' and potentially die. The group may also suffer long term and intergenerational emotional and spiritual loss.

3.3 Reduction in species required for ritual activity

A reduction in groundwater has the potential to adversely impact GDE species which Traditional Owners customarily require for ritual activity. Specific items required for ritual (e.g., bird feathers/water) may become scarce and in turn undermine ritual activity. Some ritual items are interchangeable (turkey down feathers > nappy fluff) others are not (water required from specific sacred sites). A reduction in groundwater will undoubtedly have a multitude of negative impacts on this important cultural value including altering and diminishing ritual activities into the future.

> 'We use bird feathers for ceremony; bush turkey (down) feathers, black feathers from the eagle, emu tail feathers. If these birds die or fly away, we would have to seek permission from Warlmanpa, Jingili, Mudburra and Warlpiri mob to get these things from their country. We would have to travel to this which means more work. It would make things harder because we would have to drive a long way.' *Michael Jones Jampin*

> 'We use the white cockatoo feathers for young fella business. We collect the ones that have fallen on the ground. The sons and nephews pass feathers onto their mothers and aunties. We need to look after the white gum trees where the cockatoos nest. If these trees die then the birds will have no nests for their babies and we will have no feathers for our ceremony. We need water to keep the trees and the cockies and our business alive.' *Evangeline Presley*

In regards to sacred water senior Ngappa (water) Dreaming man noted:

> 'My rain dreaming is further north. If they took the water away from my country, I'd have to close down that ceremony; it might not work. We can't let this happen. We can't live without water. Maybe they are trying to kill us.' *Dick Foster*

3.4 Diminishing natural resources required for hunting, gathering and other activities

This assessment identified the extraction area as prime hunting land. The broader drawdown area is also highly valued as a natural resource collection place. The assessment found, like other previous studies across central Australia, that Kaytetye people utilise natural resources for a variety of reasons including for sustenance, medicine, implements, ritual, and trade and exchange.

The Western Davenport Water Allocation Plan (WDWAP) acknowledges this:

> The floodouts and associated vegetation are culturally important to the Traditional Owners, particularly in relation to large trees they support (such as Eucalyptus sp. and Corymbia sp.) and the high importance of these areas to Aboriginal cultural practices and land use. Floodout are generally important hunting areas and also often have ceremonial importance…Soaks are considered one of the most important sources of water in the desert…Significant drying or lowering of the water table could adversely affect the availability of water in soaks and the health of important GDEs… (NTG 2018).

A reduction in groundwater will undoubtedly have a multitude of negative impacts on this important cultural value. Traditional Owners expressed serious concerns about the SWL potential impact to a range of cyclical ecological process which in turn are likely to negatively impact their important hunting and gathering grounds:

> 'We have to speak on behalf of the insects and animals. The insects are working hard, they all have a job to do. You are not going to see all the ants marching along with protest signs, we have to do it for them. You look at the honey bee giving life to others by pollinating flowers. There will be nothing without the bees, and no honey for us. The bees need the gum flowers to make the honey. If our bloodwoods and other gums die, the bees will have no food and can't make honey. We love our sugar bag. It makes me cry when I think of not having any more honey.' *Maureen O'Keefe*

> 'I remember seeing bilby scratching east of Neutral Junction Station and a speckled hare wallaby dead on the Alekarenge road. There should be a flora and fauna survey done across Singleton, Neutral and Warrabri ALT.' *Gladys Brown*

> 'Frogs are vulnerable to change; they might be affected by a loss of groundwater or climate change.' *David Curtis*

Because of the cyclical interrelationship between certain GDE species and places required for the native title right to hunt, gather, take and use the natural resources of the land and waters, if the current proposal reduces groundwater, there is the potential for the proposal to adversely impact GDE species and places which Traditional Owners rely on for sustenance, gaining goods and other items (see Figure 19).

Not a lot of data was collected on trade, however, there is an obvious link between a reduction in resources and people's ability to access resources for trade. Having said that, Aboriginal society has proven to be adaptable to change in regards to economic opportunities and a reduction in certain species currently valued as tradable items may lead to other items becoming more valuable in their absence.

The drawdown area, including Taylor Creek and the sand dune/floodout systems associated with Wycliffe Creek are regionally significant resource rich areas across a range of seasons. The Wauchope and Alekarenge communities in particular utilised their 'back yard' to collect natural resources and to maintain spiritual well-being. Traditional Owners take and use the natural resources across the drawdown area on a seasonal basis. There is concern that this culturally important activity will be impacted and associated knowledge lost. It is feared that the bigger animals will go to another Country to find water, and the smaller species will die out. People will feel a sense of shame and loss if they allow species to die out or find a 'new home'.

'Water is precious for life. If we have no water, we will die. Our pencil yams and bush bananas will die and the animals that can travel will go to green country.' John Duggie

Figure 35 Snail shell at MPWEREMPWER-ANGE swamp, Iliyarne ALT

Source: Photograph by Susan Dale Donaldson.

There is concern that this culturally important activity will be impacted by a reduction in groundwater and a subsequent loss of associated cultural knowledge and practice. The wellbeing of the local community who regularly access the drawdown area will also be negatively impacted given hunting and associated activities promotes a healthy lifestyle both physically and mentally. Moreover, Traditional Owners fear that the bigger animals will go to another Country to find water, and the smaller species will die out. People will feel a sense of concern, loss, sadness and shame if they allow some species to die out and others to find a 'new home'.

'When the wind blows from the east animals from the west can smell the water and come to the swamp for a drink and a rest. We worry about all the birds and animals, kangaroo and goanna, if the swamp dried up. We love collecting conkerberries, passionfruit, sugarbag, lilies, frogs and witchetty grub around MPWEREMPWER-ANGE.' *Heather Anderson*

Figure 36 Bush banana *alkwarre* (*Marsdenia australis*), Neutral Junction Station

Source: Photograph by Susan Dale Donaldson.

'In the early days spring water was drunk with grass straws. The zebra finches will take you to water. We would cover up the soak with clay so that the water didn't evaporate. The sun would suck the water up if we didn't cover it over. Old people will tell you, if there is no water in the ground, certain trees will hold water in dry times. When the water is all gone, special trees will get killed off, we are seeing this already. The animals that can't escape to find water will die. The crabs in the mud might die and the bilbies. There used to be bilbies at Greenwood when I was growing up. They live in small groups and eat witchety grubs. How will they survive without water? If there are no roos, we won't go hunting. If there is no water, it will be hard to hunt.' *Sonny Curtis Jappanangka*

'It makes me feel sad for country if country has no water. We live in a desert. We need that water.' *Cedric Tennison*

Figure 36 Conkerberry anwekety (Carissa lanceolata)

Source: Photograph by Jessica Burdon (CLC).

Kaytetye people also expressed a contextual view of the current proposal and potential impacts, with an obvious understanding of broader environmental processes:

> 'We already have cattle messing up our creeks, so now we can't drink from them. That makes our underground water coming up into our soaks and springs even more important. They picked the place where we need our water for the swamps and springs, it will be all sucked dry. We are going to have a water crisis. If we lose our water forever, we suffer forever, for generations to come. We are fighting for their future now. This water belongs to everyone, the plants and human beings. How cruel can the government be? You wouldn't let your child get thirsty; they are meant to be the big daddy looking after us.' *Maureen O'Keefe*

> 'We have noticed some of our landmark trees drying out and dying in the hot weather. The climate is getting hotter and it will continue to get hotter into the future so we will need more water for our plants and reduce evaporation. I am not against farming or irrigation, but this water allocation is too much. The government isn't taking into consideration climate change and the concerns of our people. Our springs and soaks will be affected, they are already being affected by the change in weather. Once the water table starts dropping, given the connections underground, all the water will head to Singleton and other current bore fields will be affected too. Our yams, bush potatoes they are in certain areas all year around, they have to depend on the groundwater. How will they be affected? Our trees in swampy areas, the witchety grubs live in them. Without the trees our food source is lost. I'd be upset to lose our bush foods. The allocation is excessive. I am against it.' *David Curtis*

'If we have no water, we will be very concerned about the things that can't travel too far, like the crabs, witchetty grubs and mussels. They will die. A bird can fly away but a little crab can't go far.' *Michael Jones Jampin*

Figure 37 Crab (*Austrothelphusa transversa*) holes in the bank of the Wycliffe Creek

Source: Photograph by Jessica Burdon (CLC).

3.5 A loss for future generations of Kaytetye people

Because of the cyclical interrelationship between certain GDE species and the Traditional Owners' right to maintain areas of importance for future generations, if the current proposal will have the effect of dramatically reducing groundwater, there is potential for adverse impacts to GDE species which Traditional Owners are traditionally responsible for looking after (see Figure 28).

Traditional Owners expressed that a reduction in underground water will make it very difficult for *apmerek-artwey* and *kwertengerl* to fulfill their customary obligations in relation to ensuring there is a future water supply and good hunting ground and for their descendants, just as their ancestors did:

> 'When you add it all up, all the water they want to take out of the ground across the region, it is too much. What about our future? What about the future of our grandkids? We need to look after our water.' *Rodger Tommy Jungarrayi*

> 'The old people, including my father, dug water out of the soaks with coolamons and then covered them up to keep the water cool and to save the water from being ruined from kangaroos, dust and grass. They lived around Taylors Creek. That's all Anerre country. A little bird called *Ngeymarre* lives along that creek. It is a little zebra finch. There is a story about that *Ngeymarre*.' *Selma Thompson*

The potential for Traditional Owners to feel shamed as a result of not looking after the water upon which the plants and animals living on their country rely, was a key theme expressed during this assessment. Traditional Owners feel that a reduction in underground water will make it very difficult for *apmerek-artwey* and *kwertengerl* to fulfil their customary obligations in relation to water and the life that water sustains. What will they pass onto their grandchildren?

> 'The old people before us looked after the country proper way. They had to look after their country for us, that was their job. Things are getting harder and harder. If they take the water, how are we going to look after our country?' *Sonny Curtis Jappanangka*

> 'The rangers have a focus on prevention where wildlife and plants are concerned. This water licence isn't going to help them in the job they do. It all comes down to water. We have to preserve underground water. People can use it but not to this level. It is very irresponsible of the Northern Territory Government to do that. Small scale is not too bad. This is awful. Sucking water out of an arid zone makes no sense. We can't be certain it can be recharged and rain is not as reliable as it used to be. I can't believe the government did this. Aboriginal people should have control over water, it is part of our country. Water is for all people; no-one can live without water. Also, it is a real worry that if the underground water is removed, the ground might fall in. Sink holes. Not having control over the use of water will cause people stress and stress kills people. It will be a huge problem.' *David Curtis*

> 'It will be hard for Aboriginal people to care for their country because having no underground water is a hard problem to fix. The rangers work hard, but this will be a big problem for them. We might need water monitors so that the problem doesn't get bad. We worry about our future and the future of our grandchildren.' *Jorna Murphy Nappangarti*

Wakurlpu *kirda* Billy Boy Foster (dec.) highlighted the important role *kwertengerl* plays in looking after sacred sites and the repercussions of not:[79]

> …young men are being taught the *Ahakeye* Dreaming, they are being taught by the *kirda* and *kwertengerl, kirda* is doing the dancing, but *kwertengerl* got to do his job because that's Aboriginal Law…if *kirda* do wrong…*kwertengerl* go crook on him…The marbles are the plums…if they are damaged there would be

[79] Warumungu Land Claim, Transcript 1985:3413, 3416–17, 3441–2, 3415–8.

big trouble for the *kwertengerl*… look after the sacred *ahakeye* objects stored at [site name redacted].

Visiting country with children to teach laws and customs will also be undermined if species are reduced and sites are damaged. Summer teaching including learning how to swim, requires shade trees and water, both may be reduced.

'Allocating this much water will weaken our native title and dry up our land rights land. If certain bush tucker depends on that water, like sugar bag, the people responsible for that dreaming will be upset. My dreaming is sugar bag. I can eat sugar bag, but I wouldn't eat the last one. If the sugar bag disappears, I will still have my totem, but no sugar bag to eat and share.' *David Curtis*

'Certain people have responsibilities for the country, caring for it. If this happens, no-one has control and they can't care for their country. If they can't care for their country, they get stressed. We thought we had land rights but what good is land without water? Aboriginal people still are not safe. We are forever fighting.' *David Curtis*

'We need to look after our country, but it's like a small hose fighting a fierce bush fire…what if the rainmakers get sick and die too?' *Michael Jones*

3.6 Decline in ability to live on and travel on the land

Because of the cyclical interrelationship between certain GDE species and places and Traditional Owners' desire to continue to travel over their land and waters and to live on the land, if the current proposal will have the effect of dramatically reducing groundwater, there is the potential to adversely impact GDE species and places which Traditional Owners traditionally rely on when undertaking these important activities which they value (see Figure 31).

There is a fear that people will not attempt to travel lengthy distances in fear of getting thirsty and dying. It is thought that this right would be less enjoyable to exercise if the land is dry, and country would be accessed less often. There is a fear that people will 'stay in town' if there is no available water on country.

'We are worried about how taking so much groundwater and how that will affect our water supply at Kalinjarri Outstation where our family lives. Not only Kalinjarri, but McLaren Creek, Alekarenge and Wakurlpu also. There are people living in all these places. They also go hunting around their areas and if there is not water then there will be no animals to hunt.' *Sandra Morrison*

'We have a community outstation at Wakurlpu. If the water levels drop our water goes salty and if that happens, we will not be able to live there. We would have no drinking water and wouldn't be able to grow anything. If the water drops at Singleton, the water levels under the surrounding communities will get pulled to Singleton and reduce the water in the communities.' *David Curtis Jungarrayi*

'How can we survive without water at our outstation here at Wakurlpu. This is our country. More of our family is moving back. How can the country survive without water? We are very worried about losing our water. Our water. If we have less water our Wakurlpu community water pressure will be even less. It is already very low. Some days we have to wait half a day to get any pressure. If there is no water, it doesn't look as though we could live there, on our country.' *Sonny Curtis*

'Don't they see that there are people living on this land? Living off this land? It's like when the British tested rockets at Maralinga they were blind and didn't see that people were living there. Then they made the people sick and blind. The birds fell out of the sky. Their country was ruined. Yami Lester was blinded and he had no idea what was happening. Today we know what's about to happen, there is about to be a water crisis. We have to stop it before it happens.' *Maureen O'Keefe Nampijinpa*

Concerns have also been raised by Traditional Owners that if people break down in their motor vehicles when out hunting in remote areas, they might not be able to rely on their traditional ecological knowledge to survive because the landscape and its resources may be altered.

'When I was eight years old, three men walked from Warrabri to Wauchope and they couldn't find any water. One of them died of thirst. They never found the body. People need water to travel or they might die.' *Michael Jones*

'When we had no motor car, we used to walk from soak to soak, if they take the water away, we will die half way.' *Sonny Curtis*

4.0 CONCLUSION

The drawdown area extends across Singleton PL, Neutral Junction PL, Warrabri ALT and Iliyarne ALT. These lands have been through either the Aboriginal land rights or native title process which found and/or determined that the drawdown area traditionally belongs to Kaytetye people associated with the Akwerlpe-Waake, Iliyarne, Anerre and Arlpwe groups. These four country groups have rights and responsibilities to the drawdown area in accordance with traditional laws and customs and are deeply intertwined with their neighbouring groups through ritual, mythology, kinship, trade, economic activity, language and shared historical experience.

Traditional Owners' belief in the *Altyerre* Law and the associated spiritual power imbued in the cultural landscape is the cornerstone cultural value arising from this assessment and the foundation of all other identified cultural values. Key cultural values for Traditional Owners identified in this assessment are following the *Altyerre* Law; maintaining spiritual connections and protecting sacred sites; undertaking ritual activity; upholding ecological knowledge associated with collecting natural resources; continuing customary roles and responsibilities; and being able to live on country and travel across country.

Background research combined with consultations with Traditional Owners identified 40 sacred sites associated with 20 *Altyerre* [Dreaming] mythologies within the drawdown area. Considering not all of the identified sites were visited during the assessment combined with the cultural complexities of the region, it is possible that one or two of the sites identified are actually the same place known by different names. It is also possible that other sites exist within the drawdown area that were not identified during this assessment. More time on the ground with Traditional Owners would provide further clarity on the cultural landscape in terms of the presence and significance of sacred sites.

Many of the *Altyerre* tracks traversing the drawdown area interlink with places across the broader cultural landscape. All of the sites are located beyond the immediate water extraction zone and all have features associated with GDE including *ngentye* (soakages), *elpaye* (creeks), *ilinjera* (floodouts), *artnwep* (swamps), *arrkarakw* (bloodwoods) and *atnkerre* (coolibah trees).

If there is a reduction in groundwater, Traditional Owners' feel that these important places may change forever and their ability to maintain their cultural values in accordance with their traditional laws and customs will be hindered because many culturally relevant species, sacred places and cultural practices rely on groundwater, directly and indirectly. Of particular concern to Traditional Owners are the consequences associated with breaking the Law if sacred sites are damaged; they hold a strong belief that *apmerek–artwey (kirda)* who hold the

customary role of passing country onto the next generation, may get *arntetye* (sick) or *ampwarrenke* (die). Similarly, spiritual consequences for *kwertengerl (kurdungurlu)* who hold the customary role of protecting sites may feel responsible leading to feelings of *amperrnge* (sadness/unhappy) and *nyerre* (shame), and potential mental illness and social isolation or *althere* (homesickness).

The subject land for the Aboriginal Areas Protection Authority sacred sites Authority Certificate for the proposed work covers an area larger than the extraction zone but less than the estimated groundwater drawdown area (C2019/083). The current assessment identified 5 sacred sites within the AC subject land, not included in the AC. A further 32 sacred sites were identified outside the AC subject land and within the drawdown zone.

Based on in-depth discussions with Traditional Owners when undertaking this assessment, it is clear that Traditional Owners would prefer to sustain the current health of their country and maintain their custodial responsibilities to it by opposing the Singleton Water Licence, rather than the alternative scenario of seeing their country get sick, having their traditional rights and interests eroded, and holding the psychological stress and guilt associated with knowing their descendants may lose important cultural values which have been sustained by Kaytetye people for thousands of years.

Traditional Owners desire to continue their active role in managing their traditional lands and waters for the future benefit of their society and culture. They want to defend their cultural values and guard the foundation of their ancient religion. To enable this to occur, it is recommended that the broad range of cultural values identified be sustained and safeguarded in accordance with national and international cultural heritage management practice (UNESCO 2003; ICOMOS 2017).

In relation to the protection of 'cultural uses' of water, the WDWAP recognises that there are cultural values which relate to GDEs and will have additional requirements for cultural use protection such as soaks, ceremonial areas and hunting grounds, and that further work is required to ensure that these requirements are understood including ongoing monitoring to identify any changes or threats to these values being protected.[80] The plan also recognises Aboriginal people are custodians for water places and places relying on water.[81]

Good practice in the field of cultural heritage management includes working in cooperation with Traditional Owners to develop and apply an approach to cultural heritage management inclusive of a broad range of tangible and intangible cultural values. Traditional Owners' cultural values should not only be documented, Traditional Owners themselves should be empowered as active stakeholders and decision makers in matters that affect their land and waters.

[80] NTG 2018:28.
[81] NTG 2018:29.

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ATTACHMENT 1
List of plant and fungus species associated with the SWL Drawdown Area

List of plant and fungus species associated with the SWL drawdown area

This list of culturally important plant and fungus species observed or discussed within the Singleton Water Licence District and their indigenous names were collated by Jessica Burdon (CLC). The information is based on field observations, discussions with Traditional Owners, and Latz (1995 & 2018). The listed plants are referenced in Nano et al. (2021) as closely associated with sandplain and alluvial potential GDV in the Western Davenport study area. **Plants not referenced in Nano et al. (2021) are shown with an asterisk *.**

Genus	species	Family	Common name	Kaytetye	Alyawarra
Abutilon	otocarpum	MALVACEAE	lantern flower		*akeley-akeley*
Acacia	aneura	MIMOSACEAE	mulga	*artetye*	*artety*
Acacia	colei	MIMOSACEAE	Cole's Wattle, Soap wattle	*elkerte*	*alarrey*
Acacia	cowleana	MIMOSACEAE	sickle-leaved wattle	*elkerte*	*alerrey*
Boerhavia	coccinea	NYCTAGINACEAE	Tar vine		*ayep*
Capparis	umbonata	CAPPARACEAE	northern wild orange		*akerley*
Canthium	attenuatum	RUBIACEAE	native currant/bush plum		*ahakeye*
Carissa	lanceolata	APOCYNACEAE	conkerberry	*arnewetye/ perlape*	*arnwekty*

Chrysopogon	fallax	POACEAE	goldenbeard grass		*iylayemp-iylay, iylenty, lyayepelyay*
Corymbia	aparrerinja	MYRTACEAE			*Ilwemp*
Orymbia	opaca	MYRTACEAE	bloodwood		*arrkarakw*
Cymbopogon	ambiguus	POACEAE	native lemon grass	*arineng-arinenge*	*aherr-aherr/Apmwerr*
Cyperus	bulbosus	CYPERACEAE	bush onion	*erreyakwerre/ yerrakwerre*	*irreyakwerr*
Dactyloctenium	radulans	POACEAE	button grass		*apwert-arlkwenh*
Eragrostis	leptocarpa	POACEAE	love grass		*awertaw*
Eragrostis	eriopoda	POACEAE	woollybutt		*alyatywereng, antyer*
Eremophila	longifolia	MYOPORACEAE	Emu bush		*arlarterr, itnwerreng*
Eremophila	latrobei	MYOPORACEAE	Native fuchsia		*akwenthey, therrpeyt*
Erythrina	vespertilio	FABACEAE	bean tree, bats wing coral tree		*atwerety, Atjuritj*
Eucalyptus	camaldulensis	MYRTACEAE	river red gum	*aylpele*	*alperr*
Eucalyptus	victrix	MYRTACEAE			*ankerru*
Grevillea	striata	PROTEACEAE	beefwood		*irltenty*
Hakea	chordophylla	PROTEACEAE	northern corkwood	*ntyweyampe*	*ntyweyamp*
Hakea *	*macrocarpa*	*PROTEACEAE*	*Dogwood Hakea*		*andrreum*

Ipomoea	muelleri	CONVOLVULACEAE			*anaytapaytap*
Ipomoea*	*costata*	*CONVOLVULACEAE*	*Bush potato*		*anajara*
Melaleuca	lasiandra	MYRTACEAE			*dunkwerrk*
Muehlenbeckia	florulenta	POLYGONACEAE			*Inculdj*
Marsdenia*	*australis*	*ASCLEPIADACEAE*			*alkwarrer*
Pisolithus*	*tinctorius*	*SCLERODERMATACEAE*			*arrank-arrank, irrkweng*
Podaxis *	*pistillaris*	*TULOSTOMATACEAE*			*pwenkapw, pwengapweng*
Pterocaulon	serrulatum	ASTERACEAE			*inteng*
Rhyncharrhena	linearis	APOCYNACEAE	bush bean	*werrpe*	
Santalum	lanceolatum	SANTALACEAE			*alkwa*
Senna	artemisioides	FABACEAE			*apwen, arey-arey, areyawarr*
Solanum	chipendalei	SOLANACEAE			*akatyerr*
Streptoglossa	bubakii	ASTERACEAE			*inteng*
Tinospora	smilacina	MENISPERMACEAE			*atnwerl*
Triodia	pungens	POACEAE	soft spinifex	*alatyite*	*alatyeyt*
Ventilago	viminalis	RHAMNACEAE			
Yakirra	*australiensis*		Bunch Panic, Bilby grass		*alwepenh, yakerr*