WATARRU

COMMUNITY STRUCTURE PLAN No.1

APY Lands, S.A.

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Prepared for: **Watarru Community**

Prepared By: **Taylor Burrell Barnett Town Planning and Design**
187 Roberts Road
SUBIACO WA 6008
Phone: 9382 2911 Fax: 9382 4586
admin@tbbplanning.com.au

In association with: **Arup**

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REPORT LIMITATIONS

This Community Structure Plan has been developed in consultation with the Community and Land Holding Authority as a planning guide for future development within the community. It is proposed to be updated on a five-yearly basis.

This Plan does not commit the State Government to the funding of infrastructure proposed. The funding of proposals will be subject to budgets and infrastructure planning processes.

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STRUCTURE PLAN REPORT

1.0 INTRODUCTION

1.1 Content and Purpose of the Community Structure Plan

The Watarru Community Structure Plan (Structure Plan) provides a framework within which development can proceed in an orderly and planned manner and essential services are protected over the next 5 to 10 years.

The Structure Plan consists of the following:

- A plan depicting the physical layout of the community;
- Strategic direction, objectives and principles of development control
- An explanation of the Structure Plan
- A report for the preparation of the plan including an overview of local and regional context.

The purpose of the Structure Plan is therefore to:

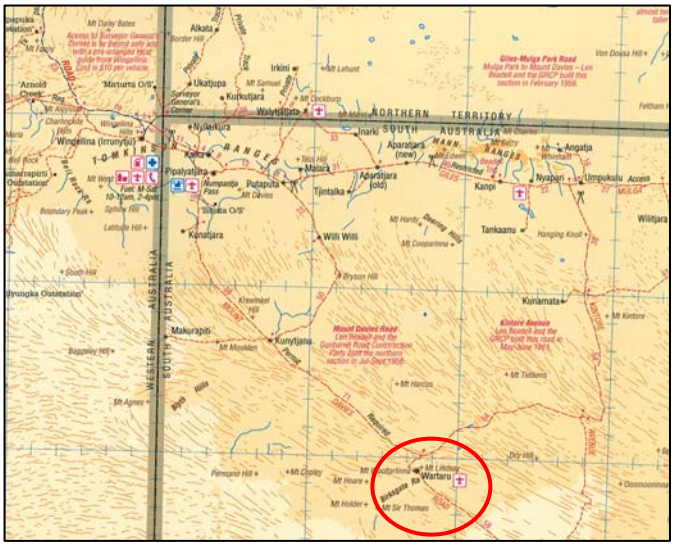
- Establish a vision for the community and a guide to future growth and development;
- Provide a community focus for, and involvement in, the development process;
- Facilitate proper and orderly planning of the community to establish development requirements based on need within social, physical, environmental and economic opportunities and constraints;
- Provide a mechanism for a coordinated approach to the provisions of services and infrastructure and enable access to existing services and infrastructure information; and
- Promote development that maximises health, safety and welfare outcomes for the community.

The Structure Plan provides the community with a plan that forms the basis for co-ordination of future development. The plan, it can be used to assess future development proposals by government agencies, builders, funding bodies and the community.

1.2 The Watarru Community

Watarru is located approximately 200 km south west of Uluru (Ayers Rock) in South Australia. The Community occupies part of the Anangu Pitjantjatjara Yankunytjatjara Lands (APY Lands) in the north west of South Australia.

The Pitjantjatjara country consists of a long chain of mountain ranges, the Musgraves, Mann and Tomkinsons, stretching east to west on the southern side of the Northern Territory border, isolated ranges and hills and extensive sandhill plains.



Location Map (Source: Hema Desert Series)

Watarru Community is located near Mt Lindsay about 90 km east of the Western Australia/South Australia border. It lies approximately 840 km south west of Alice Springs.

Watarru is one of the most remote Aboriginal communities in Australia. Sitting at the base of Mt Lindsay, the community is surrounded by the Great Victoria Desert. The Community was established in the early 1990s by a small family group of Anangu who had returned from other established communities. Watarru is now well established, with a school, store and a solar panel bank providing the community with power. Watarru is also an Indigenous Protected Area (IPA) which ensures that local Anangu maintain their knowledge with country and try to maintain the remnant native flora and fauna species.

Road access is from the Stuart Highway over approximately 650 km of dirt road. During wet weather 4WD is essential. Air access is from Alice Springs on PY Air.

The Watarru Community office can be contacted on 08 8956 7626.

2.0 METHODOLOGY

2.1 Background

Community Structure Plans were prepared for nine of the major communities within the Anangu Pitjantjatjara Yankunytjatjara Lands (APY Lands) in response to the need to establish a clear framework within which to accommodate development. Building works have, in the past, been initiated in some communities by State and Federal Government agencies without reference to clearly defined plans for the physical growth of the communities.

For the Anangu to be able to take responsibility for guiding the development of their communities and to protect places of cultural significance they need to have structure plans in place which are an expression of how they wish to see the physical development of their communities occurring.

Most of the funding for community facilities comes from a variety of sources outside the APY Lands. In the absence of adopted structure plans, some new facilities have been put in place without adequate input from community members and in locations which could be adversely affected by environmental conditions.

It is recognised that due to the remoteness and limited commercial opportunities within the APY Lands that outside funding to sustain the communities will be required for the foreseeable future. In addition, it is anticipated that local communities will continue to have only limited influence on the timing, scale, scope and funding of the infrastructure and development works being undertaken.

Furthermore, the high cost of providing and maintaining infrastructure in communities located great distances away from major urban centres, necessitates that existing infrastructure and facilities are well utilised.

As such, while it was essential to obtain input from the community members on the content of the structure plans, it was also important to seek out and include input from those agencies and authorities with responsibility for the current and future provision of services and infrastructure.

The plans give cause for questions to be asked about the sustainability of the communities, in particular with regard to underground water resources. At the present time there are concerns regarding the sustainability of water supplies in some communities, however there is no definitive data which can be drawn on to answer such questions. Funding is required for investigations to be undertaken across the APY Lands for how to not only provide for future increases in population but also to accommodate current population levels over time.

The structure plans have been prepared during a time of re-evaluation of past policies towards remote Indigenous communities and uncertainty in regards to future funding. The structure plans however provide a robust framework to accommodate physical changes reasonably expected to occur and allow for flexibility when future development pressures arise within the five to ten year life of the plans.

2.2 Tasks

The methodology followed for the preparation of the Community Structure Plans is summarised below:

- Investigation and research.
- Plan formulation and refinement through testing and review.
- Development of a preferred plan.

2.2.1 Stage 1: Preliminary Investigation

- Project Inception meeting with Planning SA and other stakeholders
- Obtain relevant documents, demographic details, community contact details
- Obtain base mapping, aerial photographs and format base plans
- Site visit and undertake site inspection
- Community consultation
- Mapping of physical constraints, opportunities, infrastructure, housing, community facilities
- Documented meeting/s, interviews

2.2.2 Stage 2: Structure Plan - Formulation

- Prepare draft Structure Plan
- Site visit
- Meeting with Community to present draft Structure Plan and receive comments.
- Copies of draft Structure Plan left to be distributed to school, art centre, placed on community notice boards
- Meeting with client
- Client and other stakeholders review structure plan, provide comment

2.2.3 Stage 3: Draft Structure Plan - Review and Revision

- Comments received, modifications made to the Draft Structure Plan
- Draft Report prepared
- Site visit
- Meeting with Community to present revised draft Structure Plan and Report, receive comments
- Copies of revised Plan and draft Report left to be distributed, placed on Community notice boards
- Meeting with client, provide copy of revised Structure Plan, draft Report for comments.

2.2.4 Stage 4: Structure Plan and Report - Finalization

- Comments received from stakeholders, modifications made to final Structure Plan, Report
- Prepare final Structure Plan and Report
- Site visit to address APY Executive meeting
- Copies of Structure Plan and Report issued.

3.0 REGIONAL AND LOCAL CONTEXT

3.1 Land Tenure

Watarru is part of the Anangu Pitjantjatjara Yankunytjatjara Lands (APY Lands) which are incorporated by the Pitjantjatjara Yankunytjatjara Land Rights Act in which the SA Parliament gave title to the APY Lands to Anangu in 1981.

3.2 Anangu Pitjantjatjara Yankunytjatjara Executive Board

The Pitjantjatjara Yankunytjatjara Land Rights Act, 1981, provided for the vesting of title of the Anangu Pitjantjatjara Yankunytjatjara Lands to the people known as Anangu Pitjantjatjara Yankunytjatjara. The Executive Board of Anangu Pitjantjatjaraku Yankunytjatjara was constituted under this Act. The administrative centre of the APY Lands is Umuwa, 30 km from Pukatja.

The APY Executive Board oversees the activities of the various constituent groups serving the needs of the people on the APY Lands. It also helps shape policies regarding economic and social development. The Executive Board comprises elected members from across the APY Lands and they choose their own Chairperson.

Under the Act, the functions of the Executive Board of Anangu Pitjantjatjara Yankunytjatjara are:

- to ascertain the wishes and opinions of traditional owners in relation to the management, use and control of the APY Lands and to seek, where practicable, to give effect to those wishes and opinions;
- to protect the interests of traditional owners in relation to the management, use and control of the APY Lands;
- to negotiate with persons desiring to use, occupy or gain access to any part of the APY Lands; and
- to administer land vested in Anangu Pitjantjatjara.

3.3 AP Services

Anangu Pitjantjatjara Services (Aboriginal Corporation) is located at Umuwa, and has an administration office, works depot and mechanical repair garage. Umuwa is located approximately central to the seven communities on the APY Lands.

AP Services has evolved as the service providing arm of Anangu Pitjantjatjara Yankunytjatjara. This involves project management and coordinating maintenance programs that support APY's responsibility as the land owner/land title holding body, particularly Anangu environmental health and safety. AP Services works very closely with Nganampa Health's UPK section.

AP Services ongoing responsibilities include: road works (including grading and realignment), housing repairs and maintenance, development and construction projects, construction inspection, waste management, homelands essential services, bore maintenance and alternative energy programs and other works related programs as they evolve.

Other projects completed since 1994 are 'one off' projects, such as:

- Pipalyatjara Dust Control
- Relocation and Lighting of the Amata Airstrip

- Septic Tank Survey
- Removal of Asbestos Waste
- Construction of 12 Waste Management Landfills
- Construction of housing
- Nyapari and Pukatja Dust Control
- Town Plan Finalisation

3.4 Community Management

Watarru is controlled by the Governing Council and supported by administration staff. Several people are in funded positions.

Watarru is part of the corporate CDEP with members participating in alternative employment projects.

The Watarru Governing Council representing the Watarru community manages the community. It employs staff through the CDEP for basic maintenance work around the community.

4.0 HUMAN AND ECONOMIC ENVIRONMENT

This part of the report provides background information on Watarru Community. It includes details about its population, economic activities, the transport network and climate. A very brief summary of the history of the community is included. This part of the report is drawn from various other reports and sources.

Watarru is a small community of 62 people remote from other Aboriginal communities.

The APY Lands are located in South Australia's most northern region. They are bordered by Western Australia to the west, Northern Territory border to the north and encompass the Great Victoria Desert to the northeast. They cover an area of 105,000 km^2, which is approximately 10% of the state's total area.

4.1 Community Demographics

A demographic profile for Watarru based upon the 2001 Census of Population and Housing provides some context for the community.

4.1.1 Population

Watarru community had a total population of 62 people at the time of the 2001 Census. There were 48 Indigenous persons representing 77.4% of the population. Non-Indigenous people represented 22.5% of the population.

The median age of people in Watarru is 35, while the median age for the Indigenous population is 30. This is significantly older than the population at Pipalyatjara. There is a large component of the population, particularly men, aged 30 – 59.

The gender ratio is expressed as the number of males per 100 females. The gender ratio for Watarru is 82.4 and the gender ratio for the Indigenous population is 92.3.

These features represent an older population, predominantly men, living at Watarru.

In Watarru, 59.8% of the population were at a different address five years ago, while 49.3% were at a different address one year before. This reinforces the mobile nature of the community population.

4.1.2 Household Status

Occupied private dwellings are used as the basis for this analysis and a family is defined as two or more persons, one of whom is at least 15 years of age, who are related by blood, marriage (registered or de facto), adoption, step or fostering and are usually resident in the same house.

In Watarru 100% of households were family households. The most common type of family is a couple family (with children) (44.4%), followed by one parent family (33.3%).

The mean household size in Watarru is 3.4 persons, while the mean Indigenous household is also 3.4 persons.

This household size is consistent with current assessment of household size when the number of community houses is counted at 12 and accepting a 2001 Indigenous population of 48, indicates an average household size of 4.0 persons per house.

This is not always an accurate reflection of household size as no Watarru household has four persons resident in the family household, 35.7% of households have two persons resident and 21.4% have six or more residents.

Sometimes residents are waiting on accommodation; others might be visiting from affiliated homelands or communities, others might be travelling on lore or other culturally related activities. There may be occasional influxes of visitors during law business and sporting events such as football carnivals. The population can increase by up to 100% during such events. Similarly, when lore business and sporting events occur elsewhere in the APY Lands, attended by Watarru people, the population is temporarily reduced.

4.2 Historical Context

The past half century has been a period of immense and far-reaching change for Aboriginal people who live in the far north-west of South Australia. The culture of the people who live in this area had been subject to minimal change in pre-contact times. They have been protected from some of the major effects of contact by the area's remoteness during the first century of European settlement in South Australia.

Construction of the Mt Davies Road in the 1950s, as part of the works associated with the British atomic tests made the area more accessible.

4.3 Economic Context

4.3.1 Local Economy

Watarru operates a small economy comprising the local store, maintenance workshop, some arts and crafts, occasional tourist accommodation and Indigenous Protected Area (IPA).

The local economy of the area is closely linked to the funding of the IPA and developing tourism ventures based on significant visitor numbers to Uluru and Kata Tjuta and mining ventures.

4.3.2 District Community Facilities

Alice Springs in the Northern Territory is the nearest major town and supports a population of approximately 25,000 plus many more visitors during peak tourist periods. The town comprises approximately 10,000 residences, and has a wide range of education, health, administrative, commercial and sporting facilities.

4.3.3 Land Use

The pre-dominant land uses around Watarru are activities such as weed eradication, feral animal control and cultural heritage conservation activities.

4.4 Transport Network

Watarru is serviced regionally by air, and a strategic freight and tourist road network via the Stuart Highway, Giles-Mulga Park Road and a 135 km secondary access road from Pipalyatjara.

The APY Road Network Study classifies the Pipalyatjara to Watarru Road as a secondary access road. The first 25 km from Pipalyatjara towards Watarru are identified as a high improvement priority.

4.5 Climate

Watarru shares a similar climate to the Giles Weather Station approximately 220 km to the northwest. It has a dry climate with hot summers and mild winters. The annual average rainfall is 283 mm. The average rainfall is higher during the warmer months of the year but there is also considerable variation from year to year.

January is the hottest month, with an average maximum temperature of 37.2° C.

By contrast winters are mild, with July average maximum and minimum temperatures being 19.9°C and 6.8°C respectively.

The wettest months are November to March, with February being the wettest month with an average rainfall of 48.5 mm on five days.

Source: ***Australian Bureau of Meteorology***, 2006

Watarru Landscapes

5.0 EXISTING DEVELOPMENT

The development pattern of the settlement is compact but with generous spaces separating houses, commercial, civic and community activities. Mount Lindsay and other low, rocky hills form a backdrop to the community. The roads have recently been constructed and sealed with associated drainage.

5.1 Housing

Existing housing consists of approximately 12 single community houses and some other visitor accommodation. Another four (4) houses are occupied by administration, clinic, school and police staff.

Watarru is laid out on a spacious pattern with generous separation between house sites.

House sites are mostly rectangular and have areas of approximately 900-1,000m^2 with frontages of 30-35m.

Housing

5.2 School

The Watarru Anangu school has approximately 25 students enrolled and a total of five staff – two teaching and three non-teaching. The Watarru school is an important focal point for residents. According to the Watarru website the School was constructed in 1986. The contact details are;

Postal Address: Watarru Community
PMB 204, via Alice Springs NT 0872
Phone No.: 08 89567881
Fax No.: 08 89562820
E-mail address: admin@watarru.sa.edu.au

Watarru School

Aboriginal FTE Enrolment is 15.0 people. Enrolment numbers vary during each year, but a stable number of around 21 students is usual, with growing numbers in the early years. Staff numbers are three teaching staff, three Aboriginal Education Workers and one Anangu secretary. The first Anangu teacher was appointed in 2003.

Students are generally Anangu with Pitjantjatjara as their first language. Most of them have intermittent hearing problems. They live in large family groups. They generally speak English only at school and a little at the store, clinic or office. Watarru families have links with Amata, Fregon and Pipalyatjara.

Watarru School

An additional element of the resources support structure for these schools is the Anangu Education Services Ernabella Office. This is an administration support service, and training and development centre for English as second language acquisition; secondary education, library management and resource based learning methodology.

The school occupies a central location within the community. The classrooms are quite new. The school will continue to occupy the same site. The school has an adjoining oval, un-grassed but with football goal posts in place.

5.3 Store

Watarru has a well-stocked store to serve residents and visitors. It was constructed in 2001.

5.4 Health Clinic

Nganampa Health Council is an Aboriginal owned and controlled health organisation operating on the Anangu Pitjantjatjara Yankunytjatjara Lands. Across this area, Nganampa Health operates nine clinics, including the Watarru Health Clinic, an aged care respite facility and assorted health related programs including aged care, sexual health, environmental health, health worker training, dental, women's health, male health, children's health and substance abuse prevention. The Watarru clinic is only open twice a week and staffed by nurses from Pipalyatjara.

Clinic

5.5 Office

The Watarru office is a modest but adequate transportable building located adjacent to the store and clinic. It includes a reception, office and some storage, but no ablution facilities. Informal car parking is available from the new road and turn-around area.

Office

5.6 Opens Space and Recreation

Watarru has areas of mature shrubs and trees growing both in and around the community. This contributes to shade and they are used by residents for outside living. Some areas of landscaped public open space are being developed between the office and store and play area.

Children's play areas are mostly contained within the school grounds however there is children's play equipment near the health clinic.

An existing basketball court is located near the centre of the community and the school.

Children's Play Equipment

5.7 Visitor Accommodation

Formal designated visitor or contractor accommodation is available through the community office. Visitors to Watarru from other communities in the APY Lands have a camping area north of the community in the lee of Mt Lindsay. Basic ablution facilities are provided.

Contractor/Visitor Accommodation

5.8 Cultural Purpose Site

There are cultural purpose sites (lore areas) near the community. The lore areas north-west of the community have been noted but are not clearly defined. Anthropological Cultural Heritage Clearance of the community has been undertaken. For future development, information on sites of significance within the area can be obtained from APY.

6.0 EXISTING INFRASTRUCTURE

6.1 Water Supply and Reticulation

The community obtains its water from a total of five bores, two of which are connected to the power supply, two are run by solar power and one is a windmill. The motorised bore pumps are controlled via telemetry link from the overhead tank.

The water is pumped from the bores directly to a 22 kL elevated tank and reticulated under gravity to the community. Adjacent to the overhead tank are two ground tanks used for supplementary storage. These are approximately 90 kL and 200 kL in capacity and filled by a manually controlled transfer pump.

Watarru water storage tanks

The water supply is currently untreated however proposals for disinfection (using ultra violet treatment) and treatment for aesthetic/ chemical characteristics have previously been discussed.

6.2 Effluent Collection & Disposal

Existing on-site sewerage disposal involves individual septic tanks and leach drains. It is not expected that the community will grow to the point of justifying the installation of deep sewerage and wastewater treatment ponds.

6.3 Electrical Generation & Distribution

The power generation facility is a hybrid system incorporating a vast solar panel farm and wind turbines as the renewable components. Two diesel generator sets housed in a steel sea container within the compound are used at times of peak demand and/or low wind/sunlight to provide power and charge the batteries. The genset cannot be run in parallel to the batteries.

Power distribution and street lighting

Power is distributed through the community by aerial bundled cable on standard ETSA Utilities stobie poles. The distribution system is split into two feeders. Property connections are generally underground.

Overhead power has been extended to service proposed building sites in the north-west corner of the community. This new line is not shown on the current survey plan. Any new development must be assessed for future consumption so renewable/diesel generation can be reliably provided and funded.

6.4 Road Network

6.4.1 External

The community can be accessed from Pipalyatjara to the north via approximately 135 km of constructed, but unsealed road. This road is maintained by AP Services. A short cut to Amata, north east of Watarru, is used by light vehicles when weather conditions are favourable. The track is graded from time to time but can be sandy, corrugated and rough.

6.4.2 Internal

The internal road network comprises a series of bitumen sealed roads providing access to the housing and services within the community. These roads are in good condition, having been recently constructed, but there are no kerbs.

A small proportion of the road network is unsealed, particularly the access to the aerodrome. There are also one or two unsealed 'shortcuts' used to cross vacant land within the Community.

New Roads

6.5 Infrastructure Cost contributions

The community raised the issue of government agencies such as Health and Education carrying out development in the community, but not contributing to the capital cost of upgrading the major infrastructure items such as water bores, pumps and generators. Often the demand on services such as water and power are close to operating at their fullest capacity and introduction of significant draws results in services being unable to cope with the additional demands. It is proposed that a headworks levy be introduced for water and electricity. Each new residence constructed by government agencies will need to contribute to a reserve fund for upgrading essential services, based on specific criteria.

6.6 Aerodrome

The aerodrome is located approximately 2.0 km from the community and is unsealed. It provides for urgent medical evacuations, mail services, government and community aircraft charters. It provides essential access as roads to the area become impassable due to flooding.

6.7 Drainage

There is no historical recorded information held with any authorities regarding a flood level for the Community. As evident from the base plan information provided by Sinclair Knight Merz and site visits, there is a recently constructed formal stormwater system in place to cope with stormwater runoff from roads and houses within the Community and the surrounding hills. The NAHS project included the survey, design and construction of roads and drainage, but no kerbing.

Detention Basin

Community representatives have indicated that areas to the western side of the community are flood prone. Based on the anecdotal information provided, flooding is most likely due to a lack of adequate drainage paths to the west.

6.8 Telecommunications

Telstra service is brought in via microwave link and distributed by underground cable through the community. The community is reticulated with Telstra infrastructure and it is understood from community representatives that there are private phone services currently in use in addition to the public phone and the office phones.

Telecommunications radio tower

7.0 OPPORTUNITIES AND CONSTRAINTS

The constraints on the future physical growth of Watarru are detailed below.

7.1 Areas of Cultural Significance

There are areas of cultural significance north west of the community that coincide with the rocky hills. There is no intention for development to extend in that direction for reasons of potential flooding. No future development proposed under the Structure Plan intrudes into this area.

7.2 Land Form

Watarru has a range of rocky hills on its north-western flank, however soil conditions within the community are generally favourable for on site effluent disposal, house and road construction. Rocky outcrops are not a major constraint for location of development or engineering services.

7.3 Localised Flooding

Recent road and stormwater drainage works constructed at Watarru have addressed concerns associated with stormwater being shed from the nearby hills and sheeting through the community. The interceptor drainage system follows the base of the hills diverting water around and away from the community in a westerly direction. Drainage from roads is also directed to detention basins located west and south of Watarru. A storm water channel at the eastern side of the community drains the storm water from within the town.

While no formal flood records are maintained, anecdotal evidence suggests heavy flows no longer pose a threat to residents or property of the community.

7.4 Water Bores

There are several bores developed near Watarru supplying residents with drinking water. The bores are located some distance to the south and north-east of the community. Buffers to the well heads are not shown due to the separation distances. There are no other incompatible uses such as sewage disposal, or fuel storage likely to impact on the ground water source.

7.5 Waste Management

The waste management area is located a short distance north of the community. There is fencing to control where rubbish is dumped and it tends to be in a pit. The pit is filled from time to time, but domestic rubbish can be left uncovered for some time when birds (such as crows) and other animals may scavenge from the site. The site does not have an impact on water source protection, but could benefit from improved management. It would also be beneficial to secure the area and manage dumping in designated areas.

8.0 LAND USE RISK ASSESSMENT AND RESPONSE

Watarru is located in a mostly stable natural environment where extreme events such as cyclones, bushfires and earthquakes are rare occurrences. Nevertheless, the impact of any major unforeseen emergency is likely to be exacerbated by the isolation from a major regional centre. The likelihood of specific hazards and risks can be modified through land use planning. Mitigation through land use planning is one mechanism to reduce future risk.

The most likely hazards to affect Watarru are flood, isolation or fire.

8.1 Flood

Flooding may be defined as the overflowing by water of the normal confines of a stream or other body of water, or the accumulation of water by drainage over areas not normally submerged (DoTARS, 2002). Flooding may be a result of prolonged or heavy rainfall or severe thunderstorms. The most common type of flood in this part of the country is slow onset flood that can last weeks. Flash flooding can result from relatively short intense bursts of rainfall, often from thunderstorms and poses the most serious threat to loss of life.

Flood mitigation is defined as measures aimed at decreasing or eliminating the impact of floods on society and the environment and should aim to reduce all forms of loss to an acceptable minimum.

Mitigation will vary in remote communities according to location and cost of implementing any mitigation measures. This is weighed against the level of risk a particular community is willing to accept. In terms of mitigation, there are three approaches commonly adopted;

- Flood modification,
- Property modification, and
- Response modification.

Land use planning is a property modification measure and can address future risk. It is effective because it is possible to prohibit development of substantial structures in flood areas, or require a modified form of development. It is not always possible to be precise because it relies upon gathering of historical data to determine highest know flood levels. There may already be development that has occurred for other reasons for example proximity to a reliable water supply, infrastructure provision that makes it difficult to re-locate parts or all of a community. Generally uses that will not be adversely affected by potential flood, such sporting ovals, open space, can be located in flood prone areas.

8.2 Isolation

The location of Watarru in the far north west of SA is particularly remote and difficult to access at certain times of the year. When rain causes flooding, access roads can be cut so limiting supplies of essential goods such as fresh food, fuel for generators, and services such as medical attention. The only alternative is air transport and that cannot re-supply communities with heavy or bulky items.

8.3 Access

The level and standard of access roads to remote Aboriginal communities is the primary means to address the issue of isolation. This is directly connected to provision of adequate road funding. Reliability and travel safety is a key issue for roads servicing communities. Poor condition of roads contributes to isolation and in turn safety and sustainability.

The APY Road Network Study classifies the road network hierarchically into major access, secondary access and homeland collector road functions specifies construction standards and identifies improvement priorities.

8.4 Potential Hazards

The Watarru Community Structure Plan integrates a numbers of initiatives that will help reduce the potential for hazards to impact on the community and also to assist with the response to events should they occur. Possible hazards and what they may affect in the community are set out below:

Impact of hazards on:	Hazards and What They Might Affect			
	Fire	Flooding	Storms	Transport Accident
People	x	x	x	x
Houses	x	x	x	
Community Buildings	x	x	x	
Services	x		x	
Environment	x	x		

The Watarru Community Structure Plan integrates a numbers of initiatives that help reduce the potential impact of these hazards on the community and also to assist with the response to events should they occur. These measures include:

- A road pattern which minimises dead end streets (culs de sac) and has a legible layout for pedestrians and drivers;
- The use of buffers to protect areas from incompatible development;
- A layout pattern accommodating existing watercourse flows with development avoided in potential floodways and roads acting as a strategic fire break;
- Good access to the main road and the aerodrome in the case of an emergency;
- Direct access is maintained to the power station area for heavy trucks and machinery avoiding the need for these vehicles to travel though the community centre;
- Location of the waste management away from the community as a protection from fires and from possible impacts on water source areas;
- Water filling points for the community's fire tanker are identified on the plan.

In addition to these initiatives, it is recommended that a number measures are undertaken to reduce risks. These include:

- Giving consideration to upgrading the access road between the aerodrome and community to a sealed standard.

The majority of roads within the community are already sealed and dust has been significantly reduced. However, the community would benefit from a significant increase in tree planting and other revegetation programs to help contain dust from the wider area around the settlement. A landscape buffer has been indicated around the south west margin of the community.

STRUCTURE PLAN

1.0 STRATEGIC DIRECTION

1.1 Community Aspirations or Vision

Watarru is a small and remote community on the APY Lands. There is little passing traffic and these factors have combined to lessen some of the more harmful social impacts affecting Aboriginal communities. Watarru has limited services, but still has a school, health clinic, store, community office, recreation facilities and an airstrip. The community has derived significant benefits from being at the centre of an Indigenous Protected Area.

During the initial visits to the community and discussion with community members, the Community Structure Plan was explained as preparing for future development, making sure that buildings and activities are put in the right place so the people who live in the community can be safe and healthy.

It was explained that the Community Structure Plan is not a management plan, nor does it incorporate a financial program to undertake desired improvements, although it can assist the development of these strategies. The plan relates primarily to future building and infrastructure works and will assist with the consideration of measures for the ongoing sustainability of the community.

In addition to the views and aspirations of the community members, discussions were also held with administrative staff, APY and AP Services, government agencies and service providers regarding their existing and future programmes to fund housing, facilities, and infrastructure.

The types of issues raised included:

- Where should new houses go, do we need different areas for different families?
- Where should we put noisy or smelly activities?
- Are the roads safe, where do the trucks go?
- Where does the drinking water come from and how can we look after it?
- Is there flooding here?
- How should we look after visitors?
- Should there more parks or meeting places?
- Are there 'no-go' areas?
- Are there places for young people and old people?

The community is seeking funding for construction of a swimming pool and has nominated a suitable site close to the school and within the community.

Additional housing and suitable sites were needed. Some older houses have been upgraded for visitors and single men.

Watarru has benefited from declaration of the extensive Indigenous Protected Area.

1.2 Strategic Direction

Watarru has recently been expanded with three new houses constructed this year. It is likely to experience incremental growth in future years, but will remain one of the smaller communities. Although the physical structure of the settlement is small, community members have and will maintain ties to the surrounding country through involvement in the Indigenous Protected Area. Its remoteness has an impact in terms of transporting goods such as food, fuel and building materials, but also tends to insulate the community from some more harmful social influences.

The level of services contained within the community is likely to be limited as a result of its relatively small size and remote location. This will in part reinforce the importance of its connections with other communities within the APY Lands.

While it is not expected that there will be much growth in physical size of the community there are opportunities for the expansion of community enterprises such as possible future tourism related enterprises and for works to improve the local environment through additional landscaping, drainage and stormwater management.

2.0 FUTURE DEVELOPMENT

This section of the report describes the Structure Plan for Watarru. The Structure Plan is included as **Figure 1 Watarru Community Structure Plan.**

2.1 Options Considered

The initial assessment of the community layout was that its location was sustainable and acceptable from servicing, accessibility and potential for future growth point of view. It was concluded that there was no need to relocate parts or all of the community. It is considered in that in the context of its location, history and existing development, future growth would be incremental and capable of being accommodated by way of infill.

There is no immediate funding available for investigation of a major expansion of housing or infrastructure works, however consideration was given in the preparation of the Structure Plan to longer term expansion. Services have been installed and roads constructed for the future development of housing sites.

2.2 The Structure Plan

The Structure Plan has been prepared from an assessment of the site's physical and environmental characteristics, existing infrastructure, regard for the population demographics and constraints (physical, servicing). These principles have guided the form of the plan.

The site is subject to localised flooding from heavy rains, so the area to be developed will be confined to the more elevated parts of the site. Drainage channels have also been constructed and maintained to divert stormwater away from housing areas.

2.3 Land Use Sites

The Structure Plan allocates Land Use Sites throughout the community and provides for objectives for each use type and development guidelines to help in the control of scale and location of buildings on each site.

The Plan identifies preferred locations for land uses. Land Use sites include:

- Housing
- Future Housing
- Community Purposes
- Commercial
- Industry/Utilities
- Parkland/Recreation/Rural

Where an alternative land use is proposed for a site, the Community Council may proceed to consider the suitability of the use taking into account the planning objectives and development guidelines for land uses set out in section 5.0.

2.4 Buffers

The Structure Plan contains buffers as a means of providing separation from incompatible uses or from those that generate noise, smells or other emissions. The buffers also provide protection for sensitive uses or facilities. There is one buffer identified on the plan:

The existing power station located on the north-west side of the community has a buffer of 200m. There are no existing residences located within the buffer.

The current power station location has an impact on the community through a 200m buffer for noise, potentially excluding some residential sites. At the extremity of the noise buffer, some sound from the wind turbine blades is noticeable during the day and this may be heightened at night time.

2.5 Street Network

The formal entrance to Watarru is from the north west, arriving at the store and office.

Access roads to and through the site provide vehicle access to all residences. There are no proposals to extend the road network as it was recently upgraded. There is no clearly defined pedestrian pathway system and consequently walking along the roads is common.

Car parking areas and roads are generally defined with table drains to limit the tendency for informal tracks to develop and so make pedestrian movement safer.

All roads are formed and constructed to a sealed standard. Spillways are formed at the junction of stormwater drains and the roads. Open spillways are used to prevent any accidents with children being trapped and minimise the risk of blocking drains with debris. There is no kerbing of the roads.

Roads/Drains

The existing roads have reasonable permeability and connectivity so that there is little opportunity for shortcuts to develop. These roads generally have been designed to follow existing services. However, there were no inspection openings or markers for services under roads installed. This needs to be addressed in the future.

2.6 Housing Areas

The community has identified immediate demand for four, single-family houses through the development of available land. Filling of some sites might be required, however the houses have been raised on stumps approximately 400 mm above natural ground level. Approximately six (6) additional house sites are identified. At least four 'infill' sites can be provided immediately with services already established.

New Houses

Provision of an adequate water service is not considered a constraint to further residential growth, although it is understood there may be water quality problems to be addressed.

It is proposed that the community form be extended primarily to the north and to a lesser extent consolidated near the centre on higher ground close to community facilities, outside the power station buffer and served by existing sealed roads.

Three other sites to the south east may be developed in the longer term as the demand arises. These sites are currently un-serviced and located near to recently constructed drainage basins and channels.

2.7 Community Purpose Sites

The principal Community Purpose sites identified on the structure plan are:

- School
- Administration building
- Clinic
- Inma church area

Most of these sites are capable of being upgraded or expanded as demand arises and funding becomes available.

The State Government has advised of plans to establish a Rural Transaction Centre in Watarru in the near future.

2.8 Parks and Recreation

The community has some basic recreation facilities including an oval for football, a basketball court and an aquatic centre is planned. These sites are shown on the plan. A children's playground is located near the clinic.

Some smaller pocket parks and landscaped buffers have been identified throughout the community.

The recreation areas are shown as open space to ensure residential development does not encroach further, however it is likely to remain as undeveloped natural space.

The structure plan identifies a swimming pool site near the entrance to the community. An early site was considered near the school however a larger site was thought to be appropriate to accommodate a secure enclosure, change rooms and toilets.

2.9 Commercial

The community's store is located adjacent to the administration office. This store requires service access for trucks. If the shop were to be expanded in the future, the logical direction would be towards the east.

Watarru Store

2.10 Light Industry

The workshop site is used for Light Industrial purposes and this is shown on the Structure Plan. The main site is being used for maintenance associated with CDEP activities. This site is separated from established residential and community purpose uses.

2.11 Development Issues

Issues	Constraints and Opportunities	Upgrading Proposals
Houses Construct new houses to ease overcrowding	Incremental growth in population Old housing stock to be upgraded Fencing of residences	Four new single residences to be built Additional visitor accommodation being provided Most residents prefer their residences to be fenced
Recreation & Open Space	Limited water available for landscape reticulation	Joint funding of Swimming Pool under SRA with Federal Government Health Department
Community Facilities	Visitors Area	Provision for camping facilities separate from residents
Education	School buildings	New recreation facilities (basketball court) under construction

2.12 Required Service Upgrades

2.12.1 Water

Water mains will require extension to service proposed building sites. AP Services has advised that the water and reticulation system in Watarru needs to be assessed for consolidation and re-servicing. Some lots are connected over other lots and the system has developed in an ad hoc manner.

All new water mains should be installed in accordance with the SA Water 'Water Supply Construction Manual'. Setback distances to roads and lots should follow the above manual wherever practicable.

It is recommended that all new lots and services be provided with a water meter.

2.12.2 Electrical

Extensions to the power distribution will be required to service proposed housing sites. It is recommended that new lines follow the new road alignment. This may require realignment of some sections of the existing system.

Installation or modifications of power lines should be done in accordance with ETSA Utilities Technical Standard TS-107 (Overhead Line Design Standard For Transmission & Distribution Systems).

AP Services has advised that new developments should be provided with three phase power connections to balance the load on the hybrid system. Additional lines within the system may be required as some connection points have reached there load capacity.

2.13 Development Priorities

It has been possible to gauge some of the Community's objectives, special needs and requirements through discussions with Watarru Community Council Chairman and Municipal Services Officer.

Immediate Priorities (0 – 1 years)

- Additional housing stock to be provided.
- Ongoing upgrading of housing stock.

Medium Term Priorities (1 – 3 years)

- Swimming pool to be established.
- New indoor recreation centre / community hall required.
- Additional landscaping and dust controls.
- Additional housing in accordance with funding availability.
- Ongoing upgrading of housing stock.

Long Term Priorities (3 – 5 years)

- Additional housing in accordance with funding availability.
- Ongoing upgrading of housing stock.

3.0 POLICY AND ADMINISTRATIVE CONTEXT

3.1 Strategic and Statutory Planning Context

In South Australia, there are in excess of 100 Aboriginal communities, many of which are located on land vested in the Anangu Pitjantjatjara Yankunytjatjara under the Pitjantjatjara Land Rights Act 1981. These communities are outside local government areas planning controls.

The Development Act 1993 provides an assessment process for planning and building throughout the state. It also provides for development plans at a regional and Council level, against which development applications are assessed.

In the case of communities outside local government areas, it is the Development Assessment Commission that must approve any development or building work. The Development Assessment Commission receives development applications from a range of sources associated with Aboriginal communities, including the Office for Aboriginal Housing and contractors. It involves the owners of the land to ensure building plans have the agreement of the relevant community.

3.2 Land Not Within a Council Area (Far North) Development Plan

The Watarru community is located within the Land Not Within a Council Area (Far North) Development Plan Area. The following policies for Far North South Australia apply across the area.

3.2.1 Form of Development

Objective 2: Protection of the environment and minimization of conflict between recreation, tourism and other uses of land.

Objective 4: The economic, social, and cultural interests of the Aboriginal communities safeguarded.

Outside of mining, administrative and service centres, Aboriginal people with traditional ties to the land make up the majority of the population. Provision needs to be made to improve the economic resource base for Aboriginal communities and to protect their culture and heritage.

Development should, whenever appropriate, make special provision to improve the balance and stability of the population and to improve the cultural and economic prospects of affected communities. This will require that all communities and in particular Aboriginal communities, be consulted on all developments which would significantly affect their livelihood, lifestyle or traditional interest in the land. When assessing proposed developments emphasis must be placed on the social impacts as well as other environmental impacts.

Objective 5: Industrial, commercial, tourist and residential development restricted to recognised settlements, so that such development can be efficiently provided with services and interference with pastoral, mining and conservation interests is minimized.

Objective 6: Development which meets adequate standards for public safety, convenience, economy and amenity.

Objective 7: The coordinated provision of roads, public facilities and services in a manner which optimises the use of resources and public funds.

The development of community facilities at new settlements in proximity to existing settlements should be integrated to achieve the best use of resources. As the provision of services, such as electricity, water, sewerage and roads, is very expensive in remote areas, design guides and other means should be used to encourage development which makes the optimum use of available resources.

3.2.2 Waste Disposal (Landfill)

Objective 8: The orderly and economic development of landfill facilities in appropriate locations.

Objective 9: Minimization of environmental impacts from the location, operation, closure and post management of landfill facilities.

3.2.3 Conservation

Objective 11: The identification and management of areas of heritage value or special environmental significance.

The Far North contains many areas, sites and structures which are worthy of preservation. These range from specific localised items, of geological, palaeontological, cultural, archaeological or historical importance, to large areas of sacred, scenic, wilderness, habitat, or other special environmental significance. Because of the vastness and remoteness of the area, many have yet to be identified. Land and development should be managed in a manner which protects the heritage and environmental significance of these items in the long term.

Objective 12: The retention of environmentally-significant areas of native vegetation.

Objective 13: The retention of native vegetation where clearance is likely to lead to problems of soil erosion, soil slip and soil salinisation, flooding or a deterioration in the quality of surface waters.

Objective 14: The retention of native vegetation for amenity purposes, for livestock shade and shelter and for the movement of native wildlife.

3.2.4 Telecommunications Facilities

Objective 18: Telecommunications facilities provided to meet the needs of the community.

Objective 19: Telecommunications facilities located and designed to minimise visual impact on the amenity of the local environment.

Telecommunications facilities are an essential infrastructure required to meet the rapidly increasing community demand for communications technologies. To meet this demand there will be a need for new telecommunications facilities to be constructed.

3.2.5 Renewable Energy

Objective 23: The development of renewable energy facilities, such as wind and biomass energy facilities, in appropriate locations.

Objective 24: Renewable energy facilities located, sited, designed and operated to avoid or minimise adverse impacts and maximise positive impacts on the environment, local community and the State.

3.3 Watarru Community Planning Report December 2001

This report documented community infrastructure such as the bores, water tanks, aerodromeaccess roads and landfill site. It established a plan showing housing sites, roads and associated engineering services.

3.4 Anangu Pitjantjatjara Water Management Plan, May 2002

The Arid Area Catchment Water Management Board has responsibility for 103,000 km^2 that accommodate several large Aboriginal communities. The area is home to a combined population of approximately 2,650 people living in communities of Kalka, Pipalyatjara, Amata, Pukatja, Kaltjiti, Yunyarinyi, Mimili and Iwantja.

The goals of the AP Water Management Plan include:

- Improve knowledge of groundwater resources and implement practices that will sustain groundwater resources.
- Maintain and improve groundwater quality.
- A management recommendation for the purpose of implementing management practices that will maintain the pristine condition of watercourses and surface water.
- Plans for improving community awareness regarding best water management practices.

The Plan makes recommendations for watercourse and surface water management and rehabilitation.

3.5 Watarru Indigenous Protected Area

An Indigenous Protected area is an area of land over which the traditional Aboriginal owners have declared their intent to manage the land for the conservation of biodiversity and cultural values. The following details are taken from the Watarru Indigenous Protected Area fact sheet.

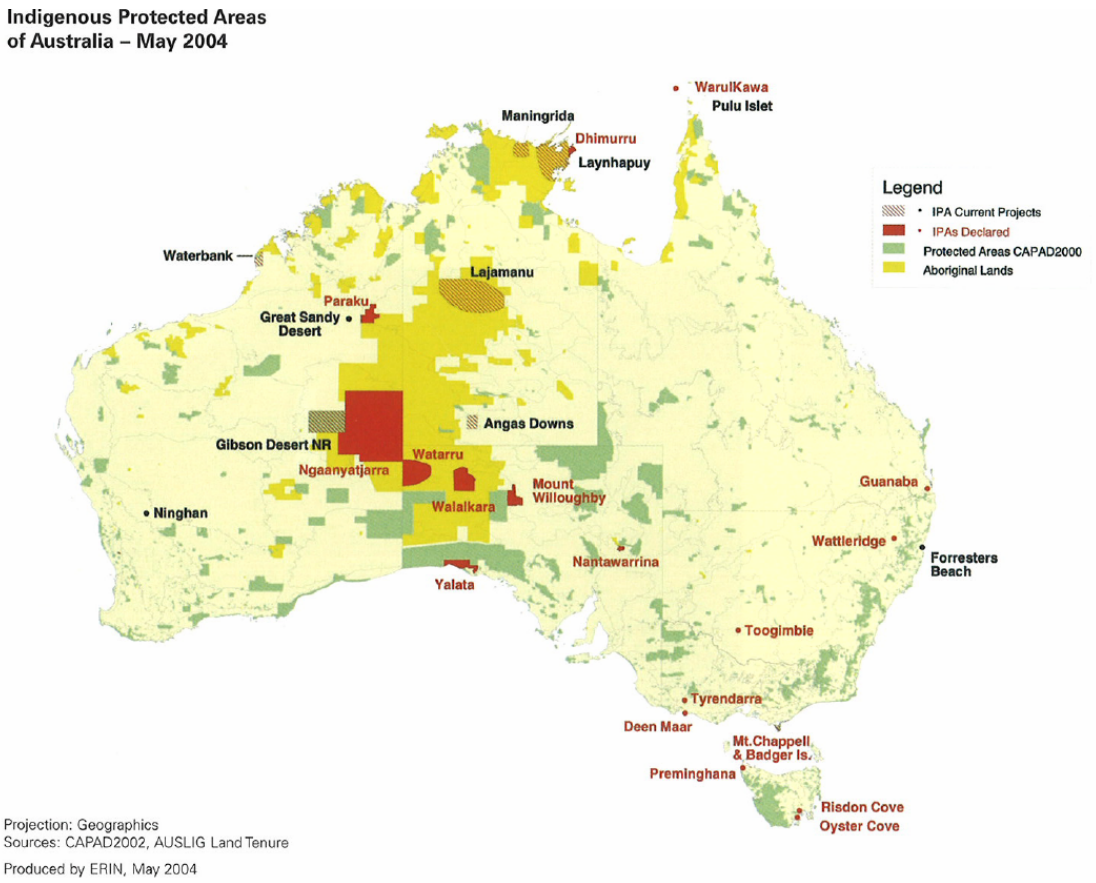
Watarru Indigenous protected area covers 1,280,000 hectares on the Anangu Pitjantjatjara Yankunytjatjara Lands.

Entrance to Watarru

The area lies in the Great Victorian Desert, the traditional lands of the Pitjantjatjara, Ngaanyatjarra and Yankunytjatjara Aboriginal peoples.

Watarru is culturally and biologically significant area containing some of the highest diversities of reptile species found anywhere in the world and supporting populations of rare and endangered species. A number of species of conservation significance have been found on the IPAs, including mallee fowl (Nganamara) (Leipoa ocellata), great desert skink (Egernia kintorei) and the marsupial mole (Itjari Itjari) (Notoryctes typhops). Traditional owners believe other species are likely to be present, including the sand-hill dunnart, mulgara and bilby.

One population of the Great Desert Skink (Egernia Kintorei) has been located on Watarru IPA. [Photo: AP Land Management]



3.5.1 Land Management and Tjukurpa

The traditional owners of Watarru continue to live on and manage their lands in accordance with the traditional law or 'Tjukurpa'. The Tjukurpa is founded upon a time when heroic beings, who combined the attributes of humans and animals, camped and travelled across the APY landscape. As they did, they shaped and created the features of the land. The actions of the heroes established the code of behaviour followed by Anangu today. The code regulates all aspects of life, from resource collection and management of the APY Landscape to social relationships and personal identity. The Tjukurpa is expressed in verbal narratives, through lengthy Inma (song cycles and associated rituals), through art and through the APY Landscape itself. For Anangu, the APY Landscape is the stories, songs and art of the Tjukurpa.

For Anangu at Watarru, the features of the APY Landscape contain evidence of the travels of the ancestors and are the outcome of thousands of years of management under traditional practices governed by the Tjukurpa.

The desert ecosystems represented on the IPA show evidence of having been modified and sustained by Anangu land management practices, including the use of fire, and provide habitat for a wide variety of plant and animal species, including species with remarkable adaptations to the arid environment.

3.5.2 Environmental Values

Spinifex and low shrubs on sand dunes and sand plains dotted with large desert oaks dominate the predominately sandy landscape. In the south, these sand dunes can reach a height of up to 15 metres. Sizeable areas of mulga woodland and other low shrubs also occur on dunes and swales. The Watarru IPA includes a significant part of the Birksgate Range which, along with many rocky outcrops such as Walalkara (the hill from which one of the IPAs gets its name), Mt Illillinna and Yelooginna Hill, form unique habitats for plants and animals, and create water flow-on areas which are rich in biodiversity, supporting bloodwoods, acacias and native grasses.

Natural water holes and soaks provide restricted habitats for a number of rare and unique plant species as well as serving as the main sources of water for both native and feral animals.

In this desert region, reptile species are found in numbers unparalleled anywhere else in the world and are well adapted to the arid environment. Some of the lizard species in the area include the rare giant desert skink and Australia's largest lizard, the perentie (*Varanus giganteus*) which may grow to a length of 2.5 metres.

3.5.3 Working Together

The traditional landowners are working closely with scientists to understand more about the biology of the region and to develop plans for managing the natural and cultural heritage values of the region. There are ongoing biological surveys across both areas to identify animal populations and to keep track of any threatening processes. Traditional Owners working with biologists to survey this little-known area have made some significant discoveries, including locating several new populations of mallee fowl previously thought to be extinct in the area.

The Traditional Owners' extraordinary knowledge of the plants and animals can lead biologists to these rare populations and provide insight into the behaviour of reclusive and difficult-to-observe species.

The environment on the IPA is largely intact, never having been used for grazing and experiencing little other disturbance. The main management issues are maintaining the traditional pattern of fire, maintaining rockholes and soakages, and controlling the populations of feral animals, including rabbits, camels, foxes and cats.

3.5.4 Aboriginal Land Management and IPA

Aboriginal people learned how to patch burn the country from the Tjukurpa of lungkata, the blue tongue lizard. Now, although modern methods are used, the practice of lighting small fires close together during the cool season leaves burnt and unburnt areas in a mosaic pattern. This knowledge is used as a major ecological management tool for the area. Tjukurpa also teaches about the location and care of rockholes and other water sources.

The populations of feral animals on the IPA are relatively low, however, they do have a significant impact in this otherwise undamaged landscape. Feral cats are a threat to species of conservation significance and can dramatically reduce small populations in a short time. Feral camels are able to travel long distances with little water and so can cause impacts in extremely remote areas. Camels, in particular, often foul waterholes and soakages, placing extra stress on the native animals that use those water sources.

As part of the management of these areas, Anangu will travel to the remote locations to maintain the waterholes and soakages. For much of the IPA the location of these water points is known only to the traditional landowners. This activity is an important aspect of managing the threats to biodiversity as it provides an opportunity for monitoring feral and native animal populations and clearing waterholes that feral animals may have damaged.

Patch burning to create a mosaic of different age spinifex is an important tool for Walalkara and Watarru IPAs. [Photo: A P Land Management]

Anangu are interested in developing small-scale tourism ventures through which they can share their knowledge of the country with visitors. They also are working to pass on their wealth of traditional knowledge about the country to their younger generations through managing these areas as Indigenous protected areas.

For more information about Indigenous protected areas, contact the Department of the Environment and Heritage's Community Information Unit on 1800 803 772 or visit the website at: www.deh.gov.au

3.6 Natural Resource Management Plan

The Australian and the South Australian Governments are working together to manage and improve the state's natural resources. The Federal Government Departments of Agriculture, Fisheries and Forestry and the Environment and Heritage jointly administer the Natural Resource Management plan. The Aboriginal Lands Integrated Natural Resource Management Regional Group has been given responsibility for developing and implementing, in consultation with local communities, the Aboriginal Lands Regional Plan for South Australia.

The plan is based on a 'whole of region' approach and addresses significant natural resource management issues incorporating social, environmental and economic problems.

Activities to be undertaken include:

- reducing water pollution and maintaining adequate water supplies;
- cleaning and protecting rock holes for biodiversity and cultural values;
- developing a dust mitigation program for at-risk areas, including revegetation with local native vegetation and stock management;
- developing biodiversity management plans for the Anangu Pitjantjatjara Yankunytjatjara Lands.
- monitoring for native and introduced plants and animals and supporting integrated control of weeds and ferals;
- implementing patch burning for wildfire control and associated benefits.

Some planning has occurred in the Anangu Pitjantjatjara Yankunytjatjara Lands, which has helped to identify priorities for future investments and will provide a guide to similar planning elsewhere in the region to determine how to deliver programs and projects that satisfy the criteria for Natural Heritage Trust funding.

Finalisation of these plans will allow funds to flow to enhance environmental and natural resource standards in the region. The Aboriginal Lands region is therefore well placed to take advantage of these government programs to 2007-08.

4.0 WATARRU COMMUNITY STRUCTURE PLAN – PLANNING OBJECTIVES

4.1 Form of Development

Future development of Watarru will be in the form of consolidation with incremental growth possible north and south of the community. Although four new houses have recently been constructed, additional infill housing sites remain without the need for establishing extended housing areas.

4.2 Integrated Risk Management

The approach to the land use planning of the community is to improve risk reduction while addressing requirements for community safety and sustainability. Specific objectives are:

1. Development is to avoid high risk areas;
2. Development should not cause people to have increased exposure to potential risk;
3. Minimise interference with natural processes in order to reduce risk;
4. Incompatible uses are to be separated;
5. Sensitive land uses and facilities are to be provided with adequate buffers;
6. New development is to incorporate design measures to facilitate a rapid response in an emergency situation.

4.3 Housing Areas

The objectives for the Housing area are to:

1. Provide unconstrained land for housing while avoiding culturally sensitive locations;
2. To provide housing areas convenient to central facilities and amenities;
3. To ensure the design of housing areas provides for privacy, security and an attractive setting;
4. Provide housing areas with proper access to power, water, sewerage, communications and roads;
5. Provide a housing area where is there is minimal disturbance from noise and incompatible activities;
6. Provide housing areas with proper access to water, sewerage, power services, communications and road access.
7. Protect the housing area from incompatible development;
8. To provide for safety of pedestrians in housing area designs.

4.4 Community Activity Areas

The objectives for the land in the Community Activity areas are:

1. To set aside land areas for community uses including civic and cultural activities;
2. To provide an appropriate location for special activity centres, meeting areas and special interest group activities;
3. To provide for schools and other educational or training facilities;
4. To provide an area where visitors from places, other than the community, can stay for a short time.

4.5 Commercial Activity Areas

The objectives for land used for Commercial purposes are:

1. To set aside land areas for commercial uses, including shopping and business activities.

2. To ensure sufficient land is available for vehicle access and parking.
3. To provide areas for people to gather before or after visiting the commercial facilities.

4.6 Utilities/Industry

The objectives for land in the Utilities/Industry areas are:

1. To provide secure and strategic locations for utilities and industry;
2. To make sure that enough land is allocated to provide for major servicing utilities such as water, sewerage, power and telephone;
3. To select sites that are convenient to service and safeguard, but far enough away not to be a nuisance to living areas;
4. To ensure services are protected and not built over.

4.7 Parks/Recreation/Rural

The objectives for land in the Parks/Recreation/Rural area are:

1. Provide areas where community people can play safely;
2. Landscape protection;
3. Assist in control of dust;
4. To set aside areas for informal and passive uses (sitting, walking, talking);
5. To make sure land areas are set aside in the proper location for major recreation uses;
6. To make sure that adequate and appropriate land is set aside for formal and active recreation.

4.8 Storm Water Management

The objectives for stormwater management are the following:

1. Stormwater from properties within the catchment area should be collected and used within the locality of the catchment;
2. Stormwater from the area surrounding the community should be managed through the use of ponding banks to avoid large volumes of stormwater being channelled through the community;
3. The flow of stormwater from hard surfaces within the community should be interrupted by changing the ground profile to arrest the flow and assist with the absorption of stormwater.

5.0 WATARRU COMMUNITY STRUCTURE PLAN – DEVELOPMENT GUIDELINES

5.1 Integrated Risk Management

1. Building on the identified constraints, development is to occur in localities that avoid potential flood risk areas and buffers. Other areas which could expose residents to health risks and where housing is to be avoided include the vicinity around the industrial/workshop area.

2. New housing areas have been located so as to avoid groundwater protection areas and existing bores. Future bores should be located away from areas proposed for future development.

3. Future subdivision design is to facilitate access of emergency vehicles by incorporating where possible interconnected roads and a permeable street pattern. The provision of water tanker filling points should be extended to newly developed areas.

5.2 House Sites

1. House sites should be a sufficient size to meet family, cultural and environment and needs. As a guide, a minimum of 1,000m^2 and preferably 1,100m^2 to 1,200m^2 should be provided for each house site to allow for outdoor living and accommodate rain water tanks.

5.3 Siting of Buildings on Housing Sites

1. Front building setback distances should be staggered where desirable, but should not be less than 6.0 metres from the front (street) or rear boundary.

2. Houses shall be located to maintain privacy from neighbouring dwellings. Houses should be located to take best advantage of prevailing cool breezes. Where possible, houses should be orientated to overlook community facilities and provide privacy from neighbouring dwellings.

3. Preservation of existing trees is important and house siting can be varied to suit the location of trees.

4. Other non-residential buildings shall be located to provide the best access and appearance of the development while minimising the effect on the amenity of the adjoining buildings.

5.4 Stormwater Management

1. To avoid exporting stormwater from the community via the road network, sufficient land should be set aside for harvesting stormwater from the roads at regular intervals.

2. Road verges should be at least 5m to 10m in width unless they are adjacent to open space. Verges should be designed to accommodate the construction of ponding banks, reducing flow velocity and retaining the water that might otherwise flow away via the road system.

3. Sports ovals and other sporting facilities such as basketball courts, adjoining roads and parking areas provide an opportunity to collect water and to use it for irrigation purposes. It can be used to water shade tree in the vicinity of sports facilities or provide landscaped buffers.

5.5 Landscaping

1. Landscaping includes the planting and maintenance of trees, shrubs and grass and may include furniture, barriers and equipment. Existing trees should be preserved and maintained for shade and screening purposes.

2. Stormwater collected from rooves and overflow should be used to maintain landscaped areas. Landscaping also provides shade, helps reduce dust, assists in the control of vehicle movement and creates a more pleasant living environment.

5.6 Fences

1. All residences shall be fenced along the front, side and rear and shall be to the full perimeter of the lot. No front fences shall be higher than 1.2 metres, unless otherwise approved by the Community Council.

6.0 IMPLEMENTATION OF THE COMMUNITY STRUCTURE PLAN

The Watarru Community Structure Plan will be used as a guide to future development and to ensure orderly and proper planning. It will be a guiding document when the Community Council, AP Executive, and Planning SA consider future development proposals for housing, community services and facilities, essential services and road works.

6.1 Application Requirements for Development

Development is not to be carried out on the APY Lands within the areas covered by the Structure Plans until a development application is lodged with the Development Assessment Commission (DAC) relevant fees paid and consent approval is obtained.

Development includes building work, land use changes and subdivision. All development requires Development Plan Consent, buildings and structures also require Building Rules consent.

The DAC considers APY approval advice prior to issuing Development Plan Consent.

Bodies proposing development (including government agencies and service providers) are to put forward a development proposal with relevant documentation to APY. Proposals should be consistent with the current Structure Plan for the Community and APY policies regarding development.

The APY Lands Council shall examine the suitability of the proposal based on the objectives applicable to each use as shown on the Structure Plan and in the development guidelines and consult with its members, Community Councils and Traditional Owners, to ascertain their support. APY may request more information where it considers the application is not adequate for its members to arrive at a view.

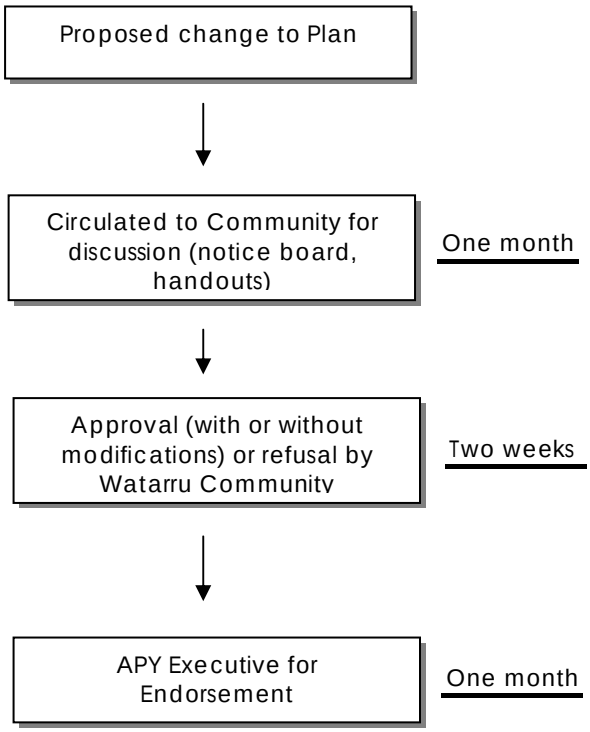
APY will inform the applicant and the DAC in writing whether or not it supports the proposed application. The DAC will assess the application and may grant Development Plan Consent.

6.2 Changes to the Structure Plan

A change to the Structure Plan is to be prepared in a form that can be copied and circulated throughout the Community in such a way as to clearly show the proposed changes. The revised plan shall show the existing situation and how the Plan will look with changes.

From the time the proposed revised plan has been circulated, the Community Council shall not make a decision for at least one month. This time is to let concerned community members tell their elected Community Council members about any concerns they might have for further discussion and consideration at the Council meeting.

Following approval of the revised plan and endorsement by the Community Council, the Amendment shall be submitted to the APY Executive for its endorsement.



ENDORSEMENT

The **Watarru Community** hereby endorses the Watarru Community Structure Plan No. 1 dated .....2007 for the purpose of ensuring the proper and orderly planning of the community area, at the meeting of the Council held on the Thirty First day of May 2007

.....
Chairperson

.....
Municipal Services Officer

The **APY Executive** hereby endorses the Watarru Community Structure Plan No. 1 dated .....20..08 for the purpose of ensuring proper and orderly planning of the community area, at the Meeting held on the 9th day of April 2008

.....
Chairperson.

.....
General Manager

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Davies, A, Harris, R, Kalotas, A, Tregenza, J, (2002) Anangu Pitjantjatjara Water Management Plan (draft)

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Available: http://www.bom.gov.au/weather/wa/giles/climate.shtml

APPENDIX 1
Consultation Process

APPENDIX 1

CONSULTATION PROCESS

PREPARATION OF THE COMMUNITY STRUCTURE PLAN

The format and process have generally followed the methodology and consultation detailed below.

Stage 1 – Stakeholder Consultation, Background Research & Initial Community Meeting

- Watarru Community was initially visited In August 2005, meetings were held with community representatives to inform them of the aims of the project and process to prepare a structure plan. The Stakeholders identified and consulted for issues and advice, included:
  - Anangu Pitjantjatjara Yankunytjatjara Executive Board (APY Executive Board)
  - APY Lands Community Councils
  - Department of Families and Communities (DFC)
  - Department of the Premier and Cabinet - Aboriginal Affairs & Reconciliation Division (DPC-AARD)
  - Office for Aboriginal Housing (OAH)
  - Department for Transport, Energy and Infrastructure (DTEI)
  - Anangu Pitjantjatjara Services (AP Services)
  - Nganampa Health
  - Background research of the community, review of strategic plans and previous studies.
- Background research of the community, review of strategic plans and previous studies.
- Detailed site inspections of the community by town planners and civil engineers to determine the condition of existing infrastructure and assess constraints and opportunities for development.

Stage 2 – Initial Community Consultation

- Attended meeting with MSO, Chris Lloyd and completed field survey - inspected community and associated infrastructure.
- Few residents were present as most were attending a football carnival. Spoke briefly to Chairman of Community Council, Charlie Antjipalya as he was engaged in another meeting.
- Spoke to School Principal.
- Sealed roads and extensive drainage system recently completed.
- Rural Transaction Centre to be constructed to provide some basic Govt services, Police and other visitors.
- High per capita income, most residents employed, Kooka Canyini (?) programme. Budgeting system for payments to residents.
- Greater demands placed on power generation, by more air conditioners, fridges and freezers, DVD players. Electricity generated by combination of solar panel, wind turbines and diesel generators.

Stage 3 – Site Visit 2

Planning Meeting held on 1 November 2005 with community representatives and MSO Chris Lloyd to present preliminary structure plan, inform the community and other interested parties of progress. Draft Structure Plan prepared and distributed for comment.

MSO advised that Plan was generally acceptable, however he advised the community wanted lower density of houses, ie larger house sites with breaks between. Whilst not specific, sites of 30m x 30m with say 10m breaks between was acceptable. So show fewer house sites.

- MSO also advised that the community would be getting four new houses in the coming weeks and identified their sites on the plan.
- He advised of future swimming pool site, part of Shared Responsibility Agreement (SRA) negotiated with Tony Abbott, Federal Minister for Health and outlined ideas for security and maintenance of facility.
- He confirmed that Development Approval for residences and other development was required, suggested that AP Services (Megan) at Umuwa be contacted.
- MSO suggested that one of the items that he would like to see included in the text is an infrastructure contribution requirement for water and power by authorities such as Education and Health. Usually communities operate on very fine margin and any extra load can have significant impact on capacity to supply services, may require upgrade to generating capacity, water storage.
- AP is actual landowner and they should be contacted. (Charles Windeyer, Development officer, Dave Donald or Megan?)
- Sound from wind turbines was particularly noticeable at high speed.
- Options for the community were discussed, including number of additional house sites, size and spacing of sites, swimming pool location, parkland, community facilities, basketball court, rural transaction centre .
- Indigenous Protection area, Canberra, objective is to keep area pristine, reduce feral animal population within 50 km of community. Therefore no stock (cattle, camels, horses, cats) etc.
- In immediate vicinity of community more relaxed towards maintaining that objective.
- The day was very windy resulting in a dust storm. I drove to airstrip and walked around community, however most residents remained indoors.

Meeting with Planning SA and Department for Transport, Energy and Infrastructure

Stage 4 – Site Visit 3

Draft Community Structure plan prepared and distributed to the community for consideration and comment.

The area had received significant rain in the preceding weeks so some water evident in road side drains, community members away on men's lore business.

- MSO (Chris Lloyd) confirmed that the community were generally happy with the plan apart from some minor adjustments as a result of additional funding becoming available for the swimming pool. Swimming pool site to be moved to house site 121 at the entrance to the community as a result of being enlarged.
- Swimming Pool Assessment Team was due to arrive at the community the following week to review and report on various issues such a water quality, quantity, power availability for pumps and filters, construction of on-site effluent disposal, toilets, change rooms. Pool is to be enclosed in a building with security fencing.
- Four houses currently under construction (at lock up stage)
- The Rural Transaction Centre has also been made bigger and will be moved south of the store.

- Full size Basketball court has been constructed adjacent to the school.
- MSO advised that AP Services (Megan) had called him to ask what consultation took place regarding Community Structure Plan with the community. Chris confirmed initial meeting with Chairman, newsletter handouts, draft plans presented to community for their comments and advice.

MSO also advised of recent mining exploration activity (drilling) approximately 12km north of the community and the possible impact that might have if any significant mineral deposits are located. He said that the community did not favour mining but accepted that it would happen and there may be some positive outcomes such as royalties for the State/Country. Services are available such as store, clinic and airstrip that might assist exploration efforts. Community had received some advance payments and this had been placed in a trust account for future benefit of community.

Land Use Based Risk Management

MSO advised not much problem with bushfires as traditional fire burning practices tends to reduce accumulation of fuel, only problem if a prolonged wet season and grass grows. Location of airstrip and road alignments protects southern flanks, Mt Lindsay to west, north is oval and solar array.

- Localized flooding now effectively controlled by drains and detention basins.
- Fuel storage at workshop yard, not near store, solar and wind power generation need to store large volumes of diesel.
- 25km/h speed limit signs in place, road design does not promote speeding in community.
- Meeting to be held with Planning SA (21 April 2006) to discuss format of Community Structure plan for Watarru and any matters requiring special attention.

Stage 5 – Preparation of Final Structure Plan for Endorsement and Approval

Prior to returning to the APY Lands, copies of the revised drafts of the Plans were sent to the communities for consideration. These plans incorporated changes suggested during the March visit.

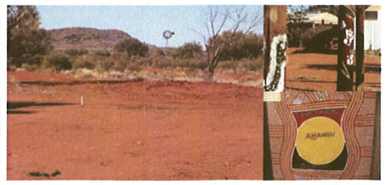
At the APY Executive meeting held at Mimili on 3 May 2006 the project team provided an update on progress of the Community Structure Plans to the representatives from the communities within the APY Lands. The meeting also had in attendance Ken Newman the General Manager of APY other APY staff members and a representative from AP Services.

The following matters were discussed at the meeting:

- Explanation of why Community Structure Plans have been prepared for Pukatja, Kanpi, Nyapari, Amata, Pipalyatjara and Watarru.
- An overview of the process that has been undertaken for preparation of the Community Structure Plans.
- Identification of the major features of the plans.
- Future Community Structure Plans for Yunyarinyi, Indulkana and Mimili.

Watarru - APY Lands, S.A.

COMMUNITY STRUCTURE PLAN No.1



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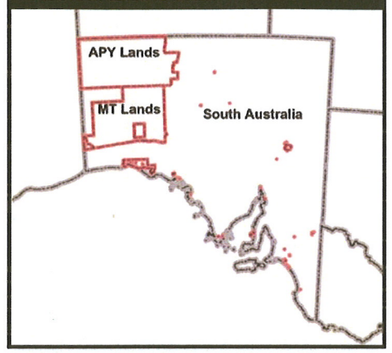

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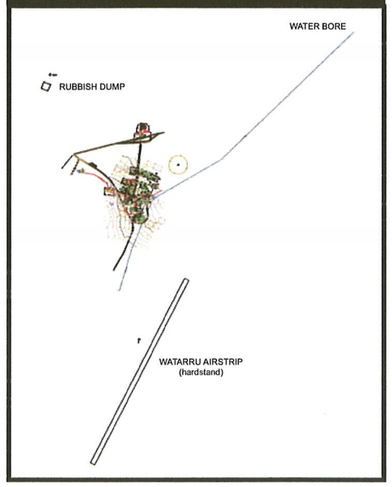

LEGEND

- Community Dwellings
- Other Dwellings
- Non-Residential Buildings
- Serviced House Sites
- Future Housing Areas
- Open Space
- Sealed Roads
- Creeks / Waterways / Drainage Lines
- Landscape Buffer (10m)
- Power Station Buffer (Not suitable for Residential Development)
- Heavy Vehicle Route

Adoption:

Adopted by The Council of The Watarru Community, held on ..... 2006.

Chairperson ..... MSO

Endorsement

APY Executive hereby endorses The Watarru Community Structure Plan No.1, dated.....2006, as a guide for development to ensure proper and orderly planning within the community area.

Chairperson ..... General Manager

TAYLOR BURRELL BARNETT
Town Planning and Design
187 Roberts Road Subiaco
Western Australia 6008
Telephone: (08) 9382 2911
Facsimile: (08) 9382 4266
admin@tbbplanning.com.au

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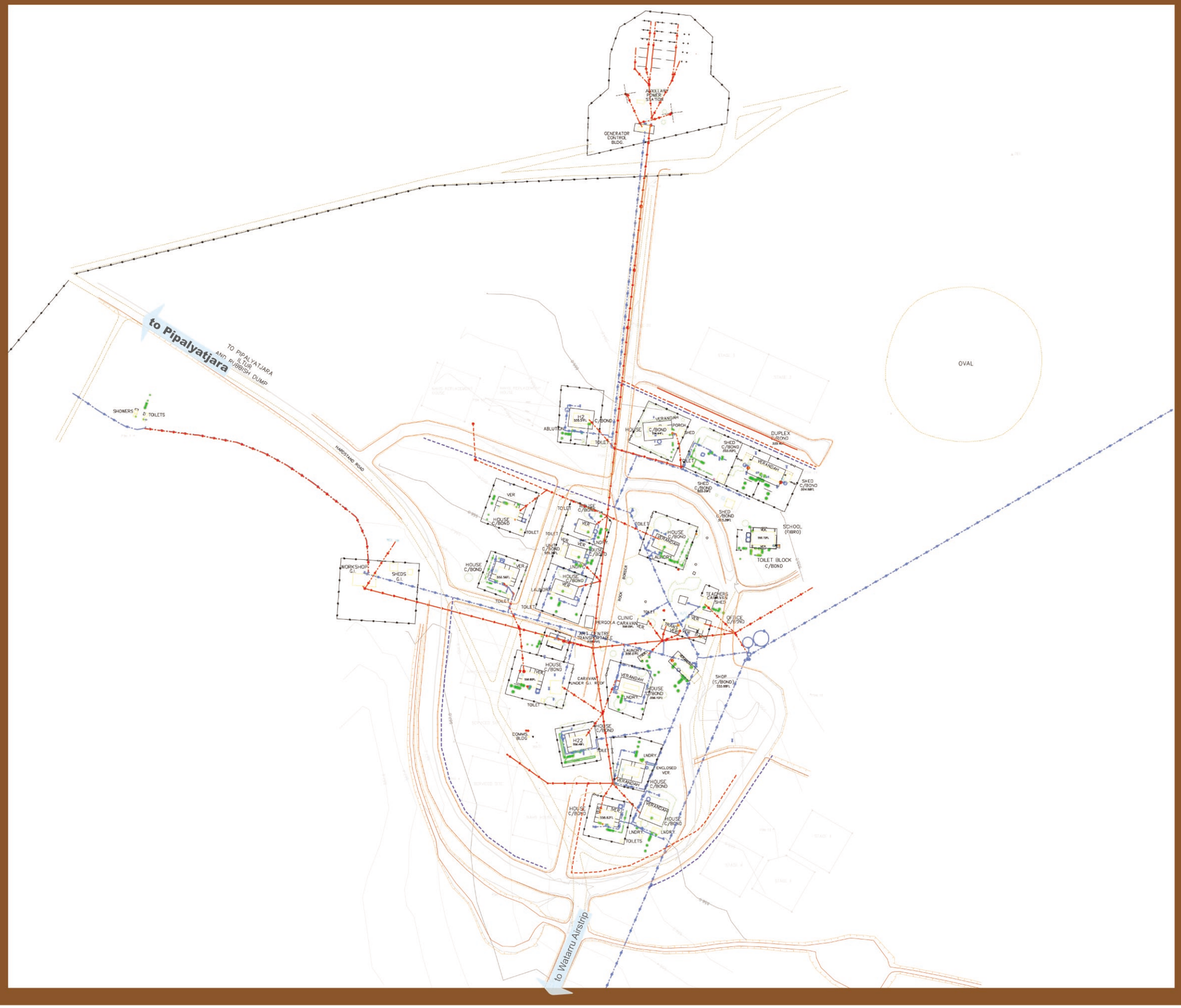

Watarru - Town Structure Plan

SERVICES PLAN

TAYLOR BURRELL BARNETT
Town Planning and Design
167 Roberts Road Subiaco
Western Australia 6008
Telephone: (08) 9382 2911
Facsimile: (08) 9382 4586
admin@tbbplanning.com.au

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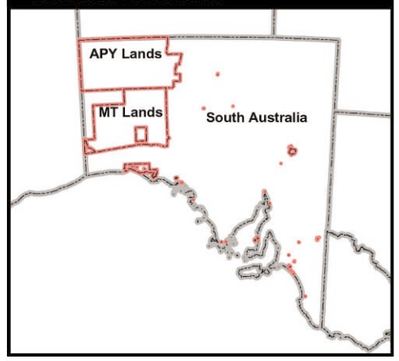

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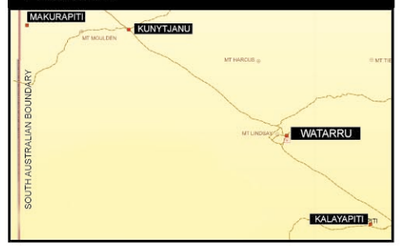

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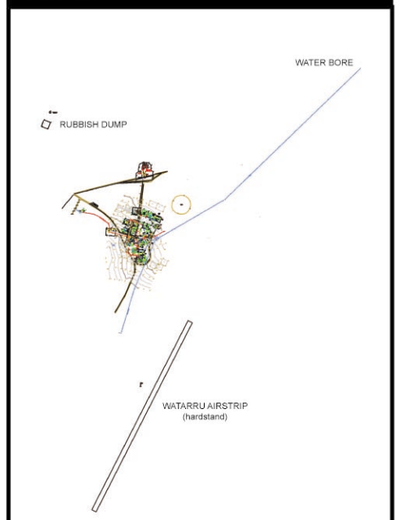

LEGEND

- Water
- Sewer
- Electricity
- Telstra
- Fire Hydrant
- Future Water
- Future Sewer
- Future Electricity
- Existing Underground Power