Aper Alwerrknge (Palmers)

Aper Alwerrknge (Palmers)

1 Design

The infrastructure reviews have been undertaken against current relevant standards for typical sub-divisions. The following standards have been used in undertaking the reviews.

Sewerage and water supply

- Water Services Association of Australia – Sewerage Code – WSA 02 Part 1: Planning and Design
- Power and Water Corporation supplement to WSA 02
- Water Services Association of Australia – Sewerage Pumping Station Code – WSA 04 -2005 Part 1: Planning and Design
- Power and Water Corporation supplement to WSA 04
- Water Services Association of Australia – Water Supply Code – WSA 03 2002 Part 1: Planning and Design
- Power and Water Corporation supplement to WSA 03
- Power and Water Corporation Indigenous Community Engineering Guidelines (2008)
- Department of Housing and Community Development Indigenous Community Engineering Guidelines (ICEG 2014, updated September 2016)
- Power and Water Corporation Essential Services Infrastructure Assessment and Upgrade Guidelines (for Town Camps in Urban Communities, 2009)
- Power and Water Corporation Standard Drawings
- Australian Standards

Electrical services

Electrical infrastructure has been assessed against AS/NZS3000 Wiring Rules and against PWC Service, Installation and Metering Rules and URD Design Standards where possible.

With one exception, all town camps are each a single lot and compliance with AS/NZS3000 is sufficient to address potential safety concerns.

As such application of PWC URD Design Standards will mainly apply to the incoming supply and bulk or initial multi-metering panels if provided.

URD Design Standards for internal reticulation and street lighting have probably been applied in most cases for convenience rather than compliance.

For the purposes of this report, the demand per dwelling allowances of URD Design Standards have been used to estimate incoming supply and overall distribution capacity requirements.

The following standards apply:

- Australian Standards
- Power Networks Design and Construction Guidelines, Power and Water Corporation
    - NP001.1_Design and Construction of Network Assets – General Requirements
    - NP001.3_General Specification for Overhead Electrical Reticulation
    - NP001.6_General Specification for URD Subdivisions
    - NP003_Installation Rules_V3
    - NP007_Service Rules

- NP027_Capture of Newly Installed Street Lighting Information
- NP041_Guidelines for Electrical Design Consultants

Further referral to the guidelines in this report will be designated by the guidelines number, NP001.1.

Communications

- National Broadband Network Website viewed 21 January 2017 (http://www.nbnco.com.au/) – NBN rollout maps

Council guidelines

In addition to the above standards, the following Council guidelines will be used where applicable.

- Alice Springs Town Council – Subdivision and Development Guidelines, November 2012

General

It should be noted that if the town camps are proposed to be subdivided and services assets gifted to Power and Water Corporation (PWC) for operation and maintenance, all of these services will need to fully meet PWC standards. With the exception of a few town camps that have recently been upgraded, this will require the full replacement and/or realignment of most services.

2 Condition assessment

2.1 Rating assessment matrix

A condition rating matrix was developed and used to assess all municipal infrastructure. The same rating was used for all services to maintain consistency in assessments. Table 1 below shows the condition rating and operability.

Table 1 Condition rating

Condition rating		Operability
1	Very Poor	Not operational
2	Poor	Not fully operational or requires immediate maintenance to keep operational
3	Good	Fully operational, may require routine maintenance
4	Very Good	Fully operational, may require maintenance in the next six months
5	Excellent	New, fully operational

2.2 Civil assessment limitations

The civil infrastructure condition investigations were subject to a number of limitations. These include:

- Only accessible services have been investigated. This includes inspecting the top of sewer manholes, side entry pits, etc., however, does not include opening pits to inspect infrastructure below ground.
- No physical testing of the sewer, water or stormwater network was undertaken.
- No survey or service locating was undertaken.

As there was no survey, potholing or CCTV undertaken on the underground infrastructure there is insufficient information to make determinations on the asset condition. The condition assessments discussed in this report are only for the accessible services and do not necessarily represent the condition of the underground infrastructure. For the majority of the town camps, other than a few that have recently been upgraded it was found that the underground services are generally undersized and it is likely, due to their age, that the these services are in poor condition. Either factor would trigger the need for a complete replacement to meet current relevant standards.

2.3 Electrical assessment limitations

The electrical infrastructure condition investigations were subject to a number of limitations. These include:

- Inspections were carried out without the assistance of an electrical tradesman.
- Only accessible services were investigated. Assessments were of a visual nature and no pit covers were removed.
- Overhead equipment was assessed from ground level.
- Switchboards were not opened and no assessment of the internal connections or bus ratings was made.
- Electrical infrastructure was assessed down to the meter for multi-meter panels and down to the termination, overhead pole or distribution pillar, of the supply cable to a meter located at a dwelling.

3 Current infrastructure issues

Power and Water Corporation (PWC) have advised of the following concerns and issues in regard to the sewerage, water and electrical infrastructure at all town camps.

3.1 Ownership and maintenance

PWC stated there has always been confusion regarding the ownership and responsibilities of the internal sewer, water and electrical infrastructure. PWC have advised that they have no legal tenure on the majority of assets in any town camps and that the owner is essentially that of the land owner or leaseholder. This is further discussed for each type of infrastructure for each town camp.

The ownership and who is responsible for the maintenance of the sewage pump stations and street lighting is a major concern. In most town camps it was found that PWC have been maintaining the assets on an in-kind basis, although there are no maintenance or access agreements in place and the infrastructure is generally not compliant to PWC standards.

3.2 Access to infrastructure

PWC advised that due to the uncertainty surrounding ownership and responsibility of the sewerage, water and electrical infrastructure, each town camp is seen as a single lot with multiple houses on it. There are no formal road reserves or easements where the municipal infrastructure should be located. PWC therefore have no legal right to enter the town camps to work on the infrastructure, nor can PWC stop others from working on the infrastructure. There is a risk that the maintenance undertaken by others may be to a lower standard than PWC.

It should be noted that there are currently no legal services easements within the town camps, except for a few cases where a town service passes through the town camp. Therefore it is recommended that easements are created over any infrastructure owned by PWC and any future assets to be gifted to PWC, to allow the service providers access to the infrastructure.

3.3 Existing infrastructure

PWC have stated that although the existing sewerage and water infrastructure appears to comply with relevant standards in some locations, the capacity cannot be assumed to meet PWC requirements due to the potential for underground substandard condition and/or grading of pipework. It is likely that these assets will need to be fully replaced to PWC standards to ensure sufficient capacity.

The planning process currently allows construction within the town camps on Commonwealth land without requiring service authority (PWC) approvals. This means that there has been no opportunity for PWC to recover contributions towards required upgrades to headworks servicing the developments and these upgrades have been paid for by PWC in the past. This inconsistency needs to be addressed for future developments within the town camps to ensure PWC are able to continue to provide adequate services.

3.4 Safety concerns

PWC have expressed concerns with safety of PWC staff and contractors working within the camps. PWC have employed procedures such as multiple people / vehicles to attend the site, with police or housing safety officers as required. This

generally leads to a delayed response time and increased cost to respond to and remediate emergency situations.

PWC have also raised the concern that if others work on water infrastructure within the town camps and do not apply the correct sanitation procedures they not only risk contaminating the entire water supply network within the town camp, at some town camps with direct connections to the town supply, they risk contaminating the entire town's water supply.

4 Available information

As the site investigations were limited to accessible / visible services, information on below ground services (such as electrical cables, sewer pipes, water supply pipes, etc.) were determined from available information. This information included:

- Serviced Land Availability Program (SLAP) maps,
- Department of Family & Community Services - Connecting Neighbours Program – Essential Services Scoping Study Report Volume 1 April 2005,
- Connecting Neighbours Project – Infrastructure Assessment and Recommendation Report - Arup Pty Ltd, April 2005,
- Alice Springs Town Camp Sewage Pumping Station Assessments, Byrne Design, 2014,
- Drawings supplied by NT Department of Infrastructure - Technical Records,
- Drawings supplied by Power and Water Corporation,
- Bennett Design inspection reports and population data.

Aurecon undertook a site investigation of the Palmers Camp on 19 November 2016 to inspect roads, stormwater drainage, electrical services, sewerage and water supply, and community structures. The following sections detail the outcomes of this investigation and the assessments of the infrastructure.

The civil and electrical inspection reports can be found in the Appendices.

5 Sewerage

5.1 Ownership and boundaries

The sewer infrastructure at Palmers Camp consists of a DN150 PVC gravity main, a pump station, and a DN50 PVC rising main. The housing connections and any other gravity main is owned by the Aper-Alwerrknge Association Incorporated, however it is the responsibility of Tangentyere Council Incorporated to maintain these assets. Power and Water Corporation noted that they have been maintaining the sewage pump station, although there is no maintenance agreement in place. The sewage pump station was inspected with a representative from PWC.

The following image shows the sewerage infrastructure in Palmers Camp.



Figure 1 Sewer infrastructure

5.1.1 Connection methods and billing

PWC advised that they currently charge a single sewerage bill based on the number of houses, which for Palmers is seven houses. The sewerage bill is charged to the Department of Housing and Community Development.

It is not known what contribution the residents make towards the sewerage bills.

5.2 Existing infrastructure condition assessment

The sewer infrastructure inspection was limited to inspecting the condition of the pump station, as all other sewerage infrastructure is below ground or within private property. The assets that were inspected had the following conditions:

Table 2 Sewer condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Pump station		1				1



Figure 2 Sewage pump station, condition: *poor*



Figure 3 Sewage pump station, condition: *poor*

The pump station was rated in poor condition for a number of reasons:

- No safety grid beneath chamber lid
- No handrails
- Corrosion on chamber lid
- No davit crane
- No overhead light

- Fence in poor condition

The lining of the wet well was not inspected but is assumed to be in poor condition due to the condition of the surrounding infrastructure.

5.3 Current performance and risks

5.3.1 Current sewer network performance

The current capacity of the sewer network was calculated based on the following design assumptions:

- The adopted minimum grade for the pipework is 1.0%, as advised by Power and Water Corporation.
- The Equivalent Population (EP) has been calculated assuming one household equates to 9 EP, based on discussions with Power and Water Corporation.
- The capacity has been assessed by calculating the current flow rate, and the maximum flow rate when the sewer pipe flows full. The result is then a percentage of how much of the pipe is currently being used.
- Manning's roughness coefficient of the pipework is 0.012, as recommended by PWC for PVC pipes.
- Where the sewer pipe grade, size or material is not known, it is assumed to be non-compliant to PWC standards.
- As Palmers Camp disposes to a pump station, the capacity of the pump station has also been assessed.

The current number of houses in is 6, this multiplied by 9 EP per house gives a total current EP of 54. The capacity of the existing sewer was then calculated. The percentage shows how much of the pipe capacity is currently being used.

Table 3 Existing sewer capacity

Catchment	Current total EP	Diameter of connection (mm)	Adopted PWC minimum slope (%)	Q_{full} (L/s)	Current Q (L/s)	Current capacity (%)
Catchment 1	54	150	1.0	16.50	0.87	5%

Table 3 above shows that the capacity of the existing sewer network is adequate for the current peak population. As the current capacity is relatively low, it is likely that the minimum self-cleansing velocity is not achieved.

5.3.2 Current sewage pump station performance

The capacity of the pump station was checked against the following criteria, based on PWC guidelines:

- Less than 12 pump starts per hour (for pumps less than 15kW),
- Minimum velocity 0.9 m/s,
- Maximum velocity 2.5 m/s,
- Overflow storage equal to three hours of peak dry weather flow.

The pump flow rate was not known so an assessment of the current capacity could not be undertaken. The rising main is undersized and non-compliant, and there is no overflow storage which is also non-compliant to PWC standards.

It should be noted that an investigation was undertaken by Byrne Design in 2014 to confirm the capacity and compliance of the sewage pump stations. The Byrne

Design report details the works required to the pump station wet well, collection chamber, and generally around the compound (e.g. lighting, hand rails, etc) to bring it up to relevant standards. PWC confirmed that none of the recommended upgrades from the Byrne Design report have been constructed.

5.4 Future demands

As no new developments are currently planned for the community, there are no additional upgrades required to cater for future demand.

5.5 Recommended works

Major upgrades would be required to bring the sewage pump station up to PWC standards. A previous report by Byrne design stated that the pump station was going to be removed and replaced with a new gravity main instead. It is not known if this is going ahead, however it is recommended that removing the pump station and installing a new gravity main is investigated. The cost estimates are based on removing the pump station and installing a new gravity main to connect to the town sewer off Basso Road.

6 Water supply

6.1 Ownership and boundaries

The water main servicing Palmers town camp is a DN100 PVC approximately 80 m long with an additional 20 m of DN50 copper pipe connecting onto the end of the PVC pipe. Refer to Appendices for the existing water reticulation layout plan.

The water supply assets within Palmers are believed to be owned by Aper-Alwerrknge Association Incorporated, but are the responsibility of Tangentyere Council Incorporated to maintain. The water is supplied from PWC owned water mains outside of the community.

6.1.1 Connection methods and billing

Through consultation with PWC, it has been determined that the water supply to Palmers is charged using a fixed daily rate for a total of seven house water meters and a single bulk water meter. PWC have advised that the house water meters are sub meters, meaning that the daily rate charged against the house meters is subtracted from the bulk meter to ensure water usage is not charged twice.

It is proposed that PWC continues to measure the water supply to the entire community, as opposed to individual lots within the community. Under this scheme, the water bill for the entire community is the responsibility of the governing body, being Aper-Alwerrknge Association Incorporated for Palmers community. It will be up to governing body to assign bills to residents accordingly.

It is recommended that the individual lot meters are installed in addition to the proposed use of a bulk water meter. This will assist the governing body with distributing bills to residents, the identification of any leaks in the network, and meeting PWC standards should the town camp be subdivided in the future.

During the inspection no residential lot water meters were found. Six new residential lot meters should be installed to cover the existing dwellings. Note, some water meters may have been present however not visible due to overgrown flora, restricted property access or being buried in boxes. Consequently water meters may have not been discovered during the inspection.

6.2 Existing infrastructure condition assessment

The site investigation for the water infrastructure included assessing the condition of any air valves, fire hydrants, tanks, taps, and water meters. The assessment was limited to services that could be accessed above ground; no excavation of below ground services was undertaken.

The condition of each asset is as follows:

Table 4 Water asset condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Air valves		1				1
Fire hydrants			1			1
Water meter (bulk)			1			1



Figure 4 Air valve, condition: *poor*



Figure 5 Water meter (bulk), condition: *good*



Figure 6 Fire hydrant, condition: *poor*

During the inspection the air valve was found to be leaking, maintenance should be undertaken to repair this leak. Additional maintenance is required on the fire hydrant which needs to be repainted.

6.3 Current performance and risks

The current capacity of the water supply was calculated based on the following design assumptions:

- The nominal peak day flow is 1300 L/capita/day, based on PWC's supplement to WSA 03 2002. This value is for the southern region of NT. It was assumed that the nominal peak day flow of 1300 L/capita/day also applies to water usage within the community, although it is possible that this value could be higher in real life due to a lack of controls to reduce water usage.
- The Equivalent Population (EP) has been calculated assuming one household equates to 9 EP, based on discussions with Power and Water Corporation.
- The peak hour factors are listed in PWC's Supplement to WSA 03-2002, and they depend on the population range of the community. The peak hour factor of 3.0 has been adopted, for populations less than 500.
- The maximum flow velocity used for calculating the incoming flow capacity is 1.4 m/s. PWC supplement to WSA 03-2002 states that flow velocities should generally not exceed 1.4 m/s during peak hour demand.
- The water meter has PWC's minimum pressure guaranteed value of 15 m.

Table 5 shows the properties used to analyse Palmers water supply demand. The pipe size and type has been obtained from drawings supplied by Technical Records and is shown in Appendices.

Table 5 Current water demand

Total dwellings	EP	Demand (l/s)	Peak hour demand (l/s)	Fire flow demand (l/s)	Pipe size & type	Length (m)
6	18	0.27	0.81	25	DN100 PVC	80
3	18	0.27	0.81	N/A	DN50 copper	20

Table 6 Current water demand analysis

Demand	Pipe	Velocity (m/s)	Headloss (m)	Pressure (m)
Peak hour demand	DN100	0.15	0.03	14.97
	DN50	0.61	0.35	14.62
Fire flow demand	DN100	3.18	13.43	1.57

The network supplies adequate pressure with peak hour demand. However, the velocity in the DN100 PVC pipe, under fire flow conditions, exceeds the maximum 1.4 m/s as per PWC standards. Furthermore, under PWC standards, DN100 PVC is not permitted for use in firefighting. Therefore, it is recommended that the entire water service is replaced with a DN150 PVC looped main installed in the road reserve and in accordance with PWC standards.

The existing water main servicing the community is a dead end main, therefore non-compliant with PWC standards. It is proposed that the existing network is re-aligned with a DN150 looped main.

The assessment of water supply for firefighting has been based on the size of the water mains and the condition of the accessible fire hydrants. Additional hydrants have been recommended where it appears the existing number of hydrants are insufficient. In the case of Palmers it is expected that an additional fire hydrant will be required to provide adequate coverage.

6.4 Future demands

As no new developments are currently planned for the community, there are no additional upgrades required to cater for future demand.

6.5 Recommended works

The infrastructure that was assessed as very poor or poor is recommended to be upgraded to prevent failure in the future. The following maintenance works are recommended;

- Repair existing air valve
- Repaint one fire hydrant

The water supply is not compliant with PWC standards and it is proposed that a DN150 PVC looped main is installed. The new water reticulation network should include a bulk water meter to measure the water usage for the entire community, along with additional residential lot water meters and an additional fire hydrant. The cost estimates for upgrades at Palmers include;

- Install up to six new residential lot water meters
- Replace water main with DN150 PVC, approximately 200 m
- Install new DN150 water meter at community boundary
- Install one new fire hydrant

7 Roadworks

7.1 Ownership and boundaries

It is the current understanding that the roads and road furniture are owned by the Aper-Alwerrknge Association Incorporated, however are the responsibility of Tangentyere Council Incorporated to maintain.

7.2 Existing infrastructure condition assessment

The road network within Aper-Alwerrknge (Palmers) community lies adjacent to the Mount Nancy community and consists of one sealed road called Untyeye Court. There are informal tracks which appear to be used frequently but are not covered in this inspection and report.

Road furniture including signs, speed bumps and car parks were also inspected. Table 7 below summarise the condition of the road furniture as assessed during the site inspection.

Table 7 Roadworks condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Carpark			1			1
Sign				3		3



Figure 7 Carpark, condition: *good*



Figure 8 Sign, condition: *very good*



Figure 9 Entrance sign, condition: *very good*

The carpark is in good condition and suitable for the required usage. The three signs around the community are all in very good condition and do not require any repairs.

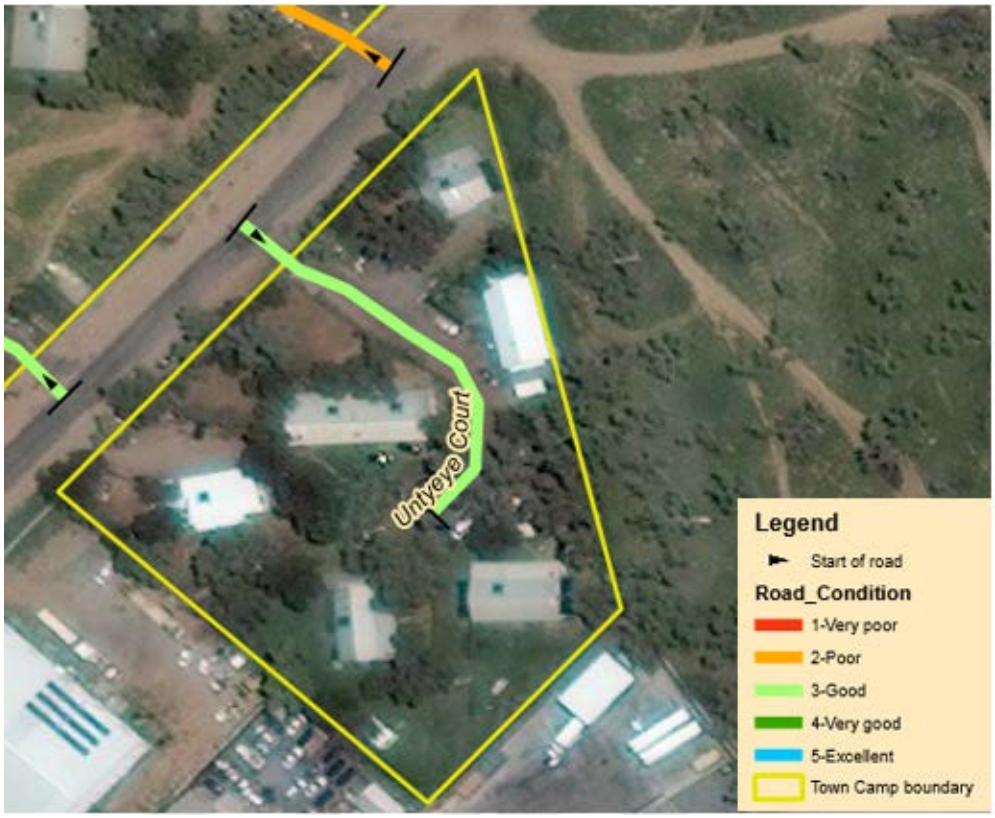


Figure 10 Community road network

Table 8 below details the condition of the roads within Palmers community for specific segments. Figure 10 shows a map of the community's road with its condition rating, road name, and chainage direction. Note, the percentage refers to the percentage of that particular road segment which experiences the defect.

Table 8 Road network condition assessment

Road name	Chainage start (km)	Chainage end (km)	Condition (1 to 5)	Defects and associated condition
Untyeye Court	0.0	0.09	3	-20% of the road has edge breaks (2) -1 large pothole (2)



Figure 11 Pavement, condition: *good*



Figure 12 Pothole, condition: *poor*

7.3 Current performance and risks

The main and only road into Palmers was rated as having good condition, although there were significant edge breaks and a large pothole.

The layout of the road network is sufficient for the current number of houses.

It was noted during the site inspections that a number of unsealed 'short-cuts' had been created and were regularly used. It is not recommended that these paths are formalised.

It is also recommended that a road safety audit is undertaken to determine where signage, line marking, etc. are required.

7.4 Future demands

As no new developments are currently planned for the community, there are no additional upgrades required to cater for future demand.

7.5 Recommended works

The infrastructure that was assessed as very poor or poor is recommended to be upgraded to prevent failure in the future. The following works are recommended to upgrade the current infrastructure;

- Repair 45 m of edge breaks
- Fill and reseal one large pothole as seen in Figure 12
- Clean entrance sign as seen in Figure 9

In order to allow for a longer term sustainable road network a significant upgrade would be required. It is recommended that a long term design which incorporates a

full two lane road network, with all appropriate road furniture, line-marking, kerbs and gutters is constructed. A cost estimate to reinstate the base and subbase material, reseal with a two coat spray seal surface, construct subsoil drainage, line marking and signage has been included. Note that these works will need to be fully designed, the cost estimate is for budgetary purposes only and only indicates the construction phase. A footpath next to the road is also recommended to provide a safe trail for pedestrians.

As the maximum road width within the Palmers community is 6 m, this means that all 90 m of the road network will need to be upgraded to a 7.2 m wide road. The stormwater drainage infrastructure upgrades that are closely associated with the road upgrade i.e. kerb and gutters, side entry pits and underground drainage pipes are included in the stormwater section of this report.

8 Stormwater drainage

8.1 Ownership and boundaries

There were no stormwater drainage assets at Palmers.

Any stormwater drainage infrastructure outside of the community is the responsibility of Alice Springs Town Council to maintain.

8.2 Current performance and risks

The detailed performance of the stormwater network cannot be fully analysed without significant hydraulic and hydrodynamic modelling, which is outside the scope of this project.

The Alice Springs Town Council's general design philosophy for stormwater drainage is that the system is based on a network of sealed roads, kerb and gutters, side entry pits and underground drainage pipes, including grassed open channels and diversion drains. It is recommended that kerbs and gutters, side entry pits and underground pipes are installed to help reduce flooding in the community. The cost estimates allow for 100 m of stormwater drainage.

8.3 Future demands

As no new developments are currently planned for the community, there are no additional upgrades required to cater for future demand.

8.4 Recommended works

The following works are recommended to upgrade or improve the current infrastructure:

- Construct kerbs and gutters, side entry pits, and underground drainage.

9 Community structures

9.1 Ownership and boundaries

The community structures within Palmers are owned by the Aper-Alwerrknge Association Incorporated, however are the responsibility of Tangentyere Council Incorporated to maintain.

9.2 Existing infrastructure condition assessment

The site investigation for the community structures included assessing the condition and features of playgrounds, basketball courts and shade structures. The following table shows the condition rating given to the community structures.

Table 9 Community structures condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Basketball court				1		1
BBQ area			1			1
Playground				1		1



Figure 13 BBQ area, condition: *good*



Figure 14 Playground, condition: *very good*



Figure 15 Basketball court, condition: *very good*

9.3 Current performance and risks

The playground, basketball court and BBQ area are currently in good and very good condition. There was some rubbish lying around these areas at the time of the inspection.

9.4 Future demands

As no new developments are currently planned for the community, there are no additional upgrades required to cater for future demand.

9.5 Recommended works

The following works are recommended to upgrade the community structures:

- General clean of playground, BBQ area and basketball court
- Install net on basketball ring
- Repair BBQ

10 Electrical services

10.1 Ownership and boundaries

The following points, from Network Policy NP003 Installation Rules Section 3, define the typical shared ownership of electrical infrastructure by Power and Water Corporation (PWC) and customers.

- The point of supply is defined as the point where PWC makes the electrical supply available. For domestic supply, this is normally one of the following:
- A point of attachment of an overhead service on to a building or pole on which a metering panel is fitted.
- A point of attachment of an overhead service on to a pole forming part of unmetered aerial consumer's mains.
- A nominated point on a distribution substation located on the customer's lot.
- A point of connection of an underground service in a metering panel, including underground services originating at an overhead line.
- A point of connection of an underground service in a pillar or junction box forming part of unmetered consumer's mains, located on the customer's lot.
- A point on a Power and Water pillar located on the customer's lot.

Typically, distribution infrastructure upstream of the Point Of Supply is owned and maintained by PWC and infrastructure below the point of supply is owned and maintained by the customer.

In many cases PWC have defined a Point Of Supply to ensure that they retain responsibility for aerial high voltage infrastructure, and aerial low voltage infrastructure where installed with aerial high voltage infrastructure, to minimise the possibility of the community or it's contractors coming into contact, either deliberately or inadvertently, with aerial high voltage infrastructure.

In other cases isolation facilities are present or desired by PWC to define the Point of Supply at or near the boundary of the town camp.

PWC advise that most of Tennant Creek/Alice Springs Town Camps have undergone upgrades under the SIHIP program with the intent to normalise the services to look like an urban subdivision but have never been formally handed over to PWC for operations and maintenance.

The Aper Alwerrknge community electrical reticulation system is supplied from the PWC network from pole mount transformer in out of community boundary, to unmetered consumer's mains run to LV distribution pillars and underground reticulation to prepaid meters on dwellings.

PWC advise that the Point Of Supply is the LV terminals of the substations and that they own and are responsible for the first pole mount substation and upstream infrastructure.

PWC recommend that a GBS (Gas Break Switch) be provided upstream of the first transformer to establish a demarcation point.

PWC advise that street lighting is supplied from unmetered LV infrastructure and is the responsibility of the lot holder and not PWC.

All meters, whether pre- or post-paid are the property of PWC.

Aper Alwerrknge community are responsible for maintain all unmetered and metered LV infrastructure including the main switchboard, metering panel

(excluding meter), LV distribution feeders, distribution pillars, consumers mains and consumer switchboards and street lights.

10.2 Existing infrastructure condition assessment

The Table 10 shows the condition rating given to the Distribution Panels. The distribution panel 66.67% operational rating and 33.33% minor repairs to distribution pillar, bolts.

Table 10 Distribution panel condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Distribution panels		1	1	1		3

Table 11 shows the condition rating given to the street lights. The street lights were of a low voltage overhead feeder design, sodium lamp type S70D, with lamp covers protected by cages. The street lights have an 87.5% operational rating and 12.5% inoperable.

Table 11 Street light condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Street light		1	7			8

Table 12 shows the condition rating given to the Metering panels.

Table 12 Meter panel condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Pre-paid meter			2			2
Post-paid meter			3			3
Switchboard			1			1

Table 13 shows the condition rating given to the switchboards associated to dwellings.

Table 13 Switchboard condition assessment (housing footprint)

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Switchboard			2			2

The details of the individual inspections and photographs of each piece of infrastructure are in Appendices.

10.3 Current performance and risks

The electrical infrastructure evaluation was conducted against the following criteria

- Number of dwellings on tenure, the higher value of the funded dwelling and as quoted in the population report was utilised.
- Urban area, NP001.1, 4. Definitions.
- General Specification for URD Subdivisions, NP001.6, 4.3 Substation Size.
- Normal ADMD (After Diversity Maximum Demand) of 4.5 kVA and high cost subdivisions at 7 kVA.
- Transformer ratings were assumed to be correct in Dekho (PWC asset information system) and compared against photographs of test or transformer numbers collected.
- Substation loads were compared against transformer sizes only. No load flow analysis was conducted.
- No load calculations were performed or assessment conducted on overhead or underground cable, visual inspection from the ground only.
- Streetlighting loads were ignored as they are not significant.

The calculated maximum demand of the Aper Alwerrknge (Palmers) community transformer is 16% of rated capacity based on 4.5kVA/dwelling. The calculated maximum demand is within the total capacity of the substation on site.

Table 14 Aper Alwerrknge (Palmers) current demand load vs transformer ratings

Com Id	Community name	Dwellings	Transformer (kVA)	kVA Total @ 4.5kVA	kVA Total @ 7kVA	Comments
19	Aper Alwerrknge (Palmers)	7	200	31.5	49	Transformer is not in boundary of Town Camp [The nearest transformer data to Town Camp is highlighted in yellow].

A tabulated summary of all community transformers is included in Appendices.

There is a risk of equipment not being maintained associated with the non-standard division of responsibilities between the customer and PWC.

The following points from the PWC Metering Rules should be noted:

- The routine maintenance of metering installations and the replacement of any faulty meters is the responsibility of PWC.
- The property owners are responsible for the maintenance and upkeep of meter rooms, boxes and panels (including lids, doors and locking mechanisms).
- The installation of pre-paid metering is a cost to the customer, refer NP010 Meter Manual-Maintenance of Metering Installations, Power and Water Corporation.

10.4 Future demands

As no new developments are currently planned for the community, there are no additional upgrades required to cater for future demand.

10.5 Recommended works

The following maintenance works and upgrades are recommended:

- Replace two 70W street lights.
- Replace one underground pillar
- Install new street lighting - approximately 5 poles

11 Communications

11.1 Ownership and boundaries

Details of Telstra pit and conduit infrastructure within the town camp boundaries were sought but were not forthcoming.

11.2 Existing infrastructure condition assessment

The telecommunications infrastructure assessed included pits and telephone booths. There were no telephone booths found at Palmers.

Appendices contains the individual reports.

Table 15 Telecommunication pit condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Telecommunication pit		1				1

11.3 Current performance and risks

No details of the performance of communications infrastructure were obtained.

11.4 Future demands

The current availability of broadband services at Aper Alwerrknge (Palmers) is displayed in the Figure 16 below. NBN is available to residents via a fixed telecommunication line on application to an appropriate NBN access provider.

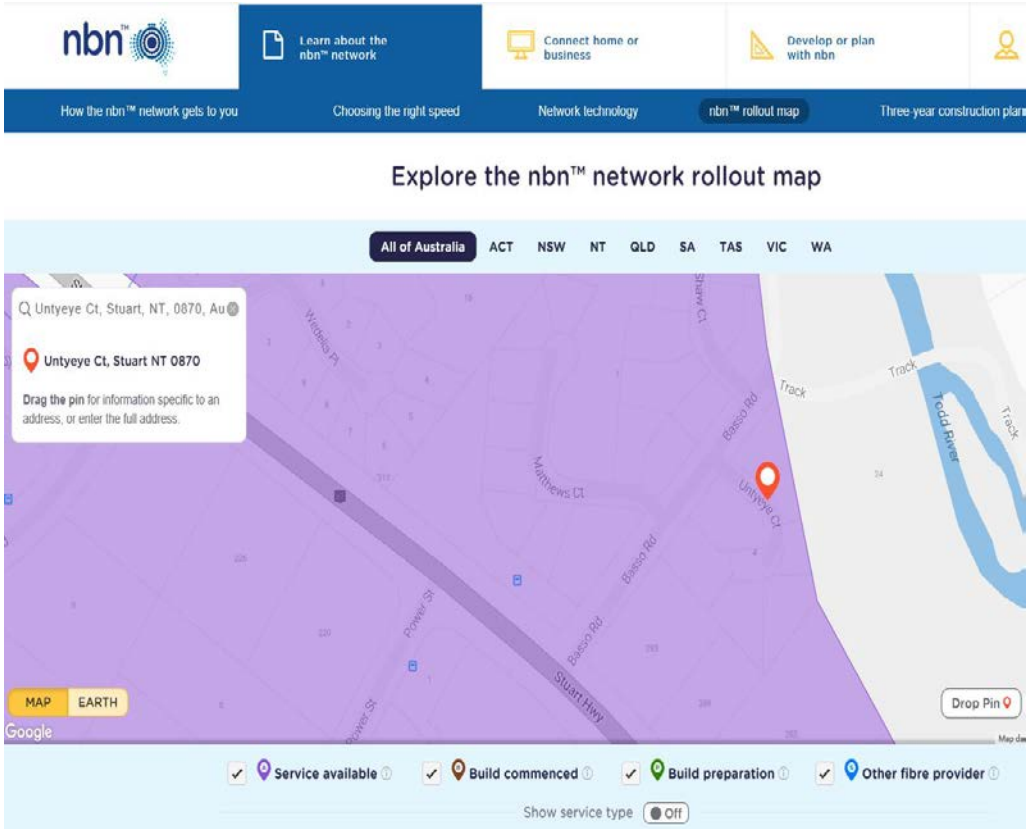


Figure 16 NBN network availability map

The NBN rollout map confirms that NBN is planned to be made available to residents via fixed telecommunications line on application to an appropriate NBN access provider.

11.5 Recommended works

Representatives from NBN's Land Access and Stake Holder management teams are currently engaged with Yilli Housing and NT Housing to look at how camps will be serviced. It is expected that any existing premises in these camps will have some type of NBN service via the NBN brownfields rollout in the future.

No works are required at Aper Alwerrknge (Palmers) because NBN is available to residents via fixed telecommunications line on application to an appropriate NBN access provider.

12 Cost estimates

Table 16 below shows a summary of the cost estimates to undertake the maintenance required to fix the existing infrastructure and to upgrade the existing network to meet current design standards. There are no upgrades required for the future design. The estimates take into account a 30% contingency, are inclusive of GST, and a location factor has been applied to town camps outside of Darwin.

Table 16 Cost estimates

Infrastructure	Maintenance of existing infrastructure	Upgrades to meet current design
Sewerage	$ 0	$ 117,000
Water supply	$ 2,000	$ 157,000
Roadworks	$ 4,000	$ 110,000
Stormwater drainage	$ 0	$ 143,000
Community structures	$ 5,000	$ 0
Electrical	$ 1,000	$ 72,000
Communications	$ 0	$ 0
Miscellaneous provisions	$ 11,000	$ 81,000
Total (including GST)	**$ 23,000**	**$ 680,000**
Grand total	**$ 703,000**	

The cost estimates are a preliminary estimate only. Since Aurecon has no control over the cost of labour, materials, equipment or services furnished by others, or over contractors' methods of determining prices, or over competitive bidding or market conditions, Aurecon cannot guarantee actual costs will not vary from these estimates.

13 Summary

The following works are recommended for Aper Alwerrknge (Palmers) community:

Sewerage

- Decommission and remove existing pump station
- Install new gravity main to connect to the town sewer off Basso Road.

Water supply

- Repair existing air valve
- Repaint one fire hydrant
- Install up to six new residential lot water meters
- Replace water main with DN150 PVC, approximately 200 m
- Install new DN150 water meter at community boundary
- Install one new fire hydrant

Roadworks

- Repair 45 m of edge breaks
- Fill and reseal one large pothole
- Clean entrance sign
- It is recommended that the road is upgraded to a two lane network with all appropriate road furniture, line marking, kerbs, footpaths, etc.

Stormwater drainage

- Construct kerbs and gutters, side entry pits, and underground drainage.

Community structures

- General clean of playground / BBQ area / basketball court
- Install net on basketball ring
- Contract a BBQ technician to ensure BBQ is in working order, if not conduct necessary repairs to make it operational

Electrical services

- Replace two 70W street lights.
- Replace one underground pillar
- Install new street lighting - approximately 5 poles

Communications

- No works are required because NBN is available to residents via fixed telecommunications line on application to an appropriate NBN access provider.

Civil inspection reports



Map by: DMcP P:\GIS\Projects\253963_NT_Town_Camps\253963_003_Civil_DDP.mxd 23/02/2017 12:02 Imagery: Digital Globe WV2 2013-2016

Legend

Town Camp boundary

Sewerage

Pump Station (1)

A3 scale: 1:1,500

0 20 40 60 80 100 m

Note:
Label numbers refer to survey IDs

Date: 23/02/2017 Version: 2

Coordinate system: MGA94 Zone 52

NT Town Camp Infrastructure Assessments: Sewerage

19 - Aper Alwerrknge (Alice Springs)

5003

Map by: DMcP P:\GIS\Projects\253963_NT_Town_Camps\253963_003_Civil_DDP.mxd 23/02/2017 12:02 Imagery: Digital Globe WV2 2013-2016



A3 scale: 1:1,500

0 20 40 60 80 100 m

Note:
Label numbers refer to survey IDs

Date: 23/02/2017 Version: 2
Coordinate system: MGA94 Zone 52

NT Town Camp Infrastructure Assessments: Water

19 - Aper Alwerrknge (Alice Springs)

5004



Map by: DMcP P:\GIS\Projects\253963_NT_Town_Camps\253963_003_Civil_DDP.mxd 23/02/2017 12:02 Imagery: Digital Globe WV2 2013-2016

Legend

Town Camp boundary

Community structures

- BBQ/Table and Chairs (1)
- Playground (1)

Road furniture

- P Car Parks (1)
- Signs (3)

A3 scale: 1:1,500

0 20 40 60 80 100 m

Note:
Label numbers refer to survey IDs

Date: 23/02/2017 Version: 2

Coordinate system: MGA94 Zone 52

NT Town Camp Infrastructure Assessments
Road furniture, stormwater drainage & community structures
19 - Aper Alwerrknge (Alice Springs)

5005

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 19/11/2016 9:36:21 AM

Insp ID: 846	Group 4 - Alice Springs	Aper Alwerrknge (Palmers)

What Water Asset Are you Capturing: Air Valves

Air Valve Diameter (mm):	80
Air Valve Make:	
Air Valve Leak:	Yes
Air Valve Condition:	2 - Poor
Air Valve Comments:	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 19/11/2016 9:30:11 AM

Insp ID: 848 Group 4 - Alice Springs Aper Alwerrknge (Palmers)

Road Name:	Untyeye Court
What are you inspecting:	Car Parks
Carpark Width (m):	7
Carpark Length (m):	8
Carpark Type:	Unsealed
Carpark Condition:	3 - Good
Line marking:	No
Kerbs:	No
General Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 19/11/2016 9:24:42 AM

Insp ID: 851 Group 4 - Alice Springs Aper Alwerrknge (Palmers)

What Water Asset Are you Capturing: Fire Hydrants

Single or Double:	Single
Sluice Valve:	No
Above or Below ground:	Below ground
FH Leakage:	No Access
Bollards around hydrant:	No
FH Condition:	3 - Good
FH Comment:	



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 19/11/2016 9:18:56 AM

Insp ID: 853 Group 4 - Alice Springs Aper Alwerrknge (Palmers)

Road Name:	Untyeye Court
What are you inspecting:	Pavements
Ch From (km):	0
Ch To (km):	0.09
Road Type:	Sealed - spray seal
Section Width (m):	6
Road Condition:	3 - Good
General Comment:	1 speed hump at entrance

Road Defects Section

Defect Type	Defect QTY	Defect Condition	Defect Comments
Edge Breaks	20	2 - Poor	20 percent of road
Potholes		2 - Poor	1 large pothole

Kerbs Section

Kerb Type	Kerb Cond	Kerb Comments
Flush Kerb	2 - Poor	

Shoulders Section

Shoulder Type	Width	Dropoff(mm)	Erosion	Condition	Shoulder Comments
Unsealed				2	

Linemarking Section

Obstruction Section

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 19/11/2016 9:18:56 AM









Northern Territory Town Camps

Civil Infrastructure

Inspection Date 19/11/2016 9:18:56 AM





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 14/11/2016 3:00:22 PM

Insp ID: 248 Group 4 - Alice Springs Aper Alwerrknge (Palmers)

What Sewerage Asset are you capturing:	Pump Station
No of Pumps in Pump Station:	1
Cabinet Condition:	4 - Very Good
Cabinet Comment:	
Alarm Light:	Yes
Alarm Light Condition:	1 - Very Poor
Overhead Light:	No
Overhead Light Condition:	
Light Comments:	Two high level
Davit Crane Present:	No
Davit Crane Capacity (kg):	
Davit Crane Condition:	
Davit Crane Comments:	
Fence TYPE:	Standard Security Fence (3 Strands barbed)
PS Fence Height (m):	1.8
PS Gates Locked:	Yes
PS Fence Condition:	1 - Very Poor
Fence Comment:	
Flow meter type:	
Flow meter condition:	
Flow meter comments:	
Macerator Pump Make/Model:	
Manufacturers Date:	
Macerator Pump:	No
Macerator Pump Condition:	
Macerator Pump Comments:	
Outgoing Pipe Diameter (mm):	50
Valves:	
Outgoing Pipe Comments:	
Water Supply to pump station:	No
Fire hose reel:	No
Access cover locked:	Yes
Safety grid beneath access cover:	No

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 14/11/2016 3:00:22 PM

Condition:	3 - Good
Cabinet Locked:	Yes
Cabinet Lock Condition:	
Hand rails around entrance:	No
Fixed or removable:	
Rail Condition:	
Safety Comments:	

Pump Station Pumps section

Pump Capacity	Pump Make	Manufacture Date	Pump Chain	Condition	Comments
			Yes		





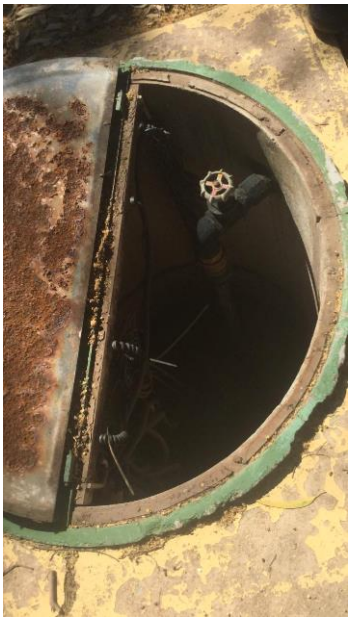
Northern Territory Town Camps

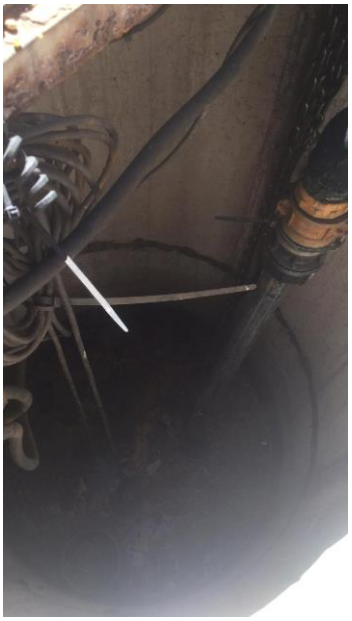
Civil Infrastructure

Inspection Date 14/11/2016 3:00:22 PM





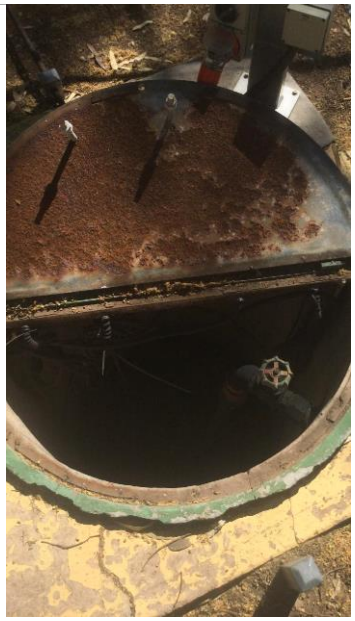




Northern Territory Town Camps

Civil Infrastructure

Inspection Date 14/11/2016 3:00:22 PM







Northern Territory Camps

Civil Infrastructure

Inspection Date 19/11/2016 9:28:16 AM

Insp ID: 849 Group 4 - Alice Springs Aper Alwerrknge (Palmers)

Inspection Type:	Shade Structure
Shade Structure Type:	BBQ Area
Shade Floor Type:	Natural ground
Roof Type:	Not Covered
Width (mm):	4
Length (mm):	1
Appearance:	3
Appearance Comment:	Some rubbish on bbq
Condition:	4 - Very Good
Comment:	I'm playground area





Northern Territory Camps

Civil Infrastructure

Inspection Date 19/11/2016 9:26:05 AM

Insp ID: 850 Group 4 - Alice Springs Aper Alwerrknge (Palmers)

Inspection Type:	Shade Structure
Shade Structure Type:	Play ground
Shade Floor Type:	Rubber Mats
Roof Type:	Shadecloth
Width (mm):	8
Length (mm):	20
Appearance:	4
Appearance Comment:	
Condition:	4 - Very Good
Comment:	

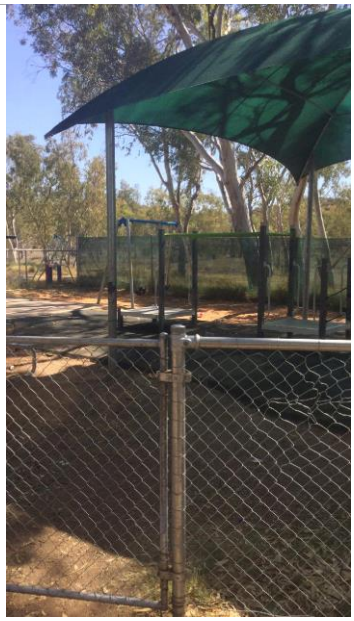




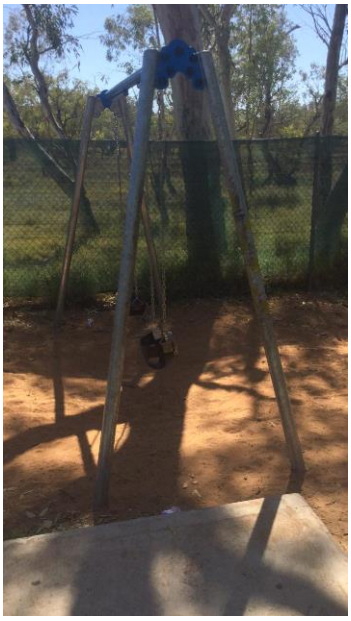
Northern Territory Camps

Civil Infrastructure

Inspection Date 19/11/2016 9:26:05 AM









Northern Territory Camps

Civil Infrastructure

Inspection Date 19/11/2016 9:26:05 AM



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 19/11/2016 9:40:20 AM

Insp ID: 843 Group 4 - Alice Springs Aper Alwerrknge (Palmers)

Road Name:

What are you inspecting: Signs

Type of Sign: Community sign

Sign Condition: 4 - Very Good

Sign Comment:

General Comment:





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 19/11/2016 9:40:36 AM

Insp ID: 844 Group 4 - Alice Springs Aper Alwerrknge (Palmers)

Road Name:

What are you inspecting: Signs

Type of Sign: Community signs

Sign Condition: 4 - Very Good

Sign Comment:

General Comment:







Northern Territory Town Camps

Civil Infrastructure

Inspection Date 19/11/2016 9:39:22 AM

Insp ID: 845	Group 4 - Alice Springs	Aper Alwerrknge (Palmers)

Road Name:	Untyeye Court
What are you inspecting:	Signs
Type of Sign:	Street name
Sign Condition:	4 - Very Good
Sign Comment:	
General Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 19/11/2016 9:33:57 AM

Insp ID: 847	Group 4 - Alice Springs	Aper Alwerrknge (Palmers)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Bulk
Bulk Water Meter Size (mm):	100
Bulk Water Meter Condition:	3 - Good
Bulk Water Meter Comment:	
Lot Number:	
Lot Water Meter Size:	
Lot Water Meter Condition:	
Lot Water Meter Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 19/11/2016 9:33:57 AM









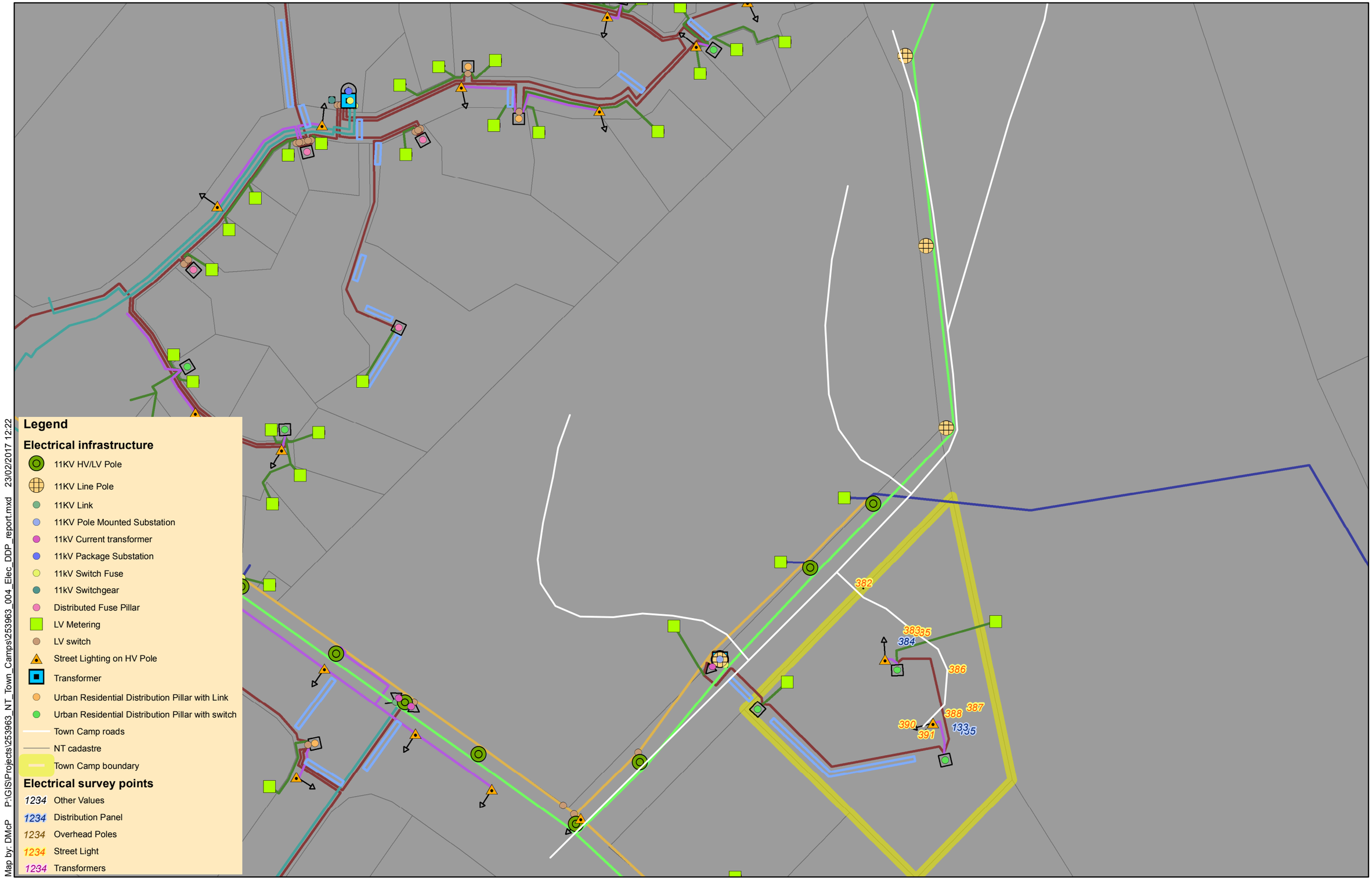
Northern Territory Town Camps

Civil Infrastructure

Inspection Date 19/11/2016 9:33:57 AM



Electrical inspection report



Legend

Electrical infrastructure

- 11KV HV/LV Pole
- 11KV Line Pole
- 11KV Link
- 11KV Pole Mounted Substation
- 11kV Current transformer
- 11kV Package Substation
- 11kV Switch Fuse
- 11kV Switchgear
- Distributed Fuse Pillar
- LV Metering
- LV switch
- Street Lighting on HV Pole
- Transformer
- Urban Residential Distribution Pillar with Link
- Urban Residential Distribution Pillar with switch
- Town Camp roads
- NT cadastre
- Town Camp boundary

Electrical survey points

- 1234 Other Values
- 1234 Distribution Panel
- 1234 Overhead Poles
- 1234 Street Light
- 1234 Transformers

Map by: DMcP P:\GIS\Projects\253963_NT_Town_Camps\253963_004_Elec_DDP_report.mxd 23/02/2017 12:22

A3 scale: 1:1,500

0 20 40 60 80 100 m

Date: 23/02/2017 Version: 3

Coordinate system: MGA94 Zone 52

NT Town Camp Infrastructure Assessments: Electrical

19 - Aper Alwerrknge (Alice Springs)

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 14/11/2016 3:39:10 PM

Insp ID: 133 Group 4 - Alice Springs Aper Alwerrknge (Palmers)

What Category are you capturing:	Distribution Panel
What is Main Distribution Panel installation method:	Outdoor
Is the distribution panel labelled:	Yes
What is Distribution Panel main CB Rating:	63A
What is the main incoming cable type/Size to Distribution Panel:	Unknown
What is the condition of switchboard:	4
Condition Comments:	
What is the condition of cables/glands into switchboard:	3
Cable/Gland Condition Comments:	
Distribution Panels name plate access:	Yes







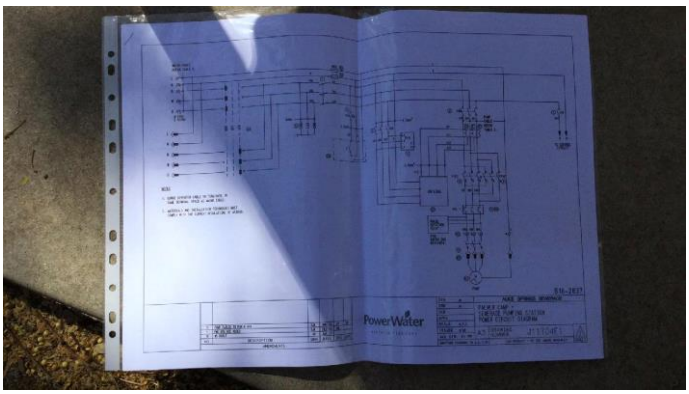


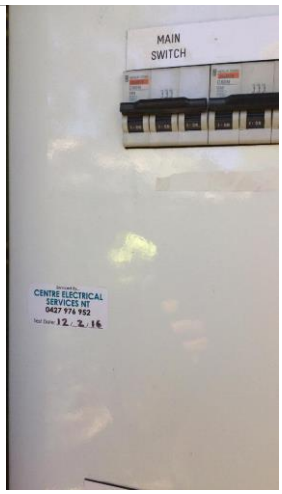
Northern Territory Town Camps

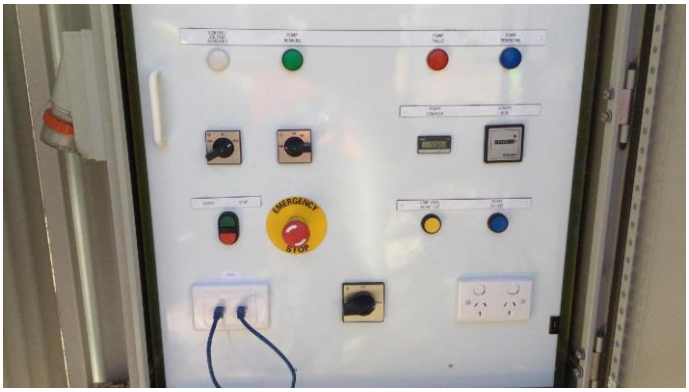
Electrical Infrastructure

Inspection Date 14/11/2016 3:39:10 PM













Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 14/11/2016 3:44:08 PM

Insp ID: 135 Group 4 - Alice Springs Aper Alwerrknge (Palmers)

What Category are you capturing:	Distribution Panel
What is Main Distribution Panel installation method:	Outdoor
Is the distribution panel labelled:	No
What is Distribution Panel main CB Rating:	63A
What is the main incoming cable type/Size to Distribution Panel:	Unknown
What is the condition of switchboard:	3
Condition Comments:	Metering panel
What is the condition of cables/glands into switchboard:	
Cable/Gland Condition Comments:	Unknown
Distribution Panels name plate access:	No









Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 14/11/2016 3:44:08 PM













Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 19/11/2016 10:06:43 AM

Insp ID: 384 Group 4 - Alice Springs Aper Alwerrknge (Palmers)

What Category are you capturing:	Distribution Panel
What is Main Distribution Panel installation method:	Outdoor
Is the distribution panel labelled:	No
What is Distribution Panel main CB Rating:	Unknown
What is the main incoming cable type/Size to Distribution Panel:	Unknown
What is the condition of switchboard:	2
Condition Comments:	Missing bolts
What is the condition of cables/glands into switchboard:	
Cable/Gland Condition Comments:	Unknown
Distribution Panels name plate access:	No









Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 19/11/2016 10:06:43 AM



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 19/11/2016 9:53:17 AM

Insp ID: 389 Group 4 - Alice Springs Aper Alwerrknge (Palmers)

What Comms Category are you capturing:	Distribution
What is distribution method to households:	Underground
Is it Shared with PWC:	
Is there Anti-climb barrier provided for this pole:	
What is Pole construction type:	
Is street light fitted:	
Is there concrete collar around the base of pole:	
What is the condition of tap off to house:	
What is the condition of pole:	
How many Lots are connected to this pole:	
Is there access to Pits to take a photo:	No
What is Pit Condition:	2
Underground Comments:	





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 16/01/2017 11:00:28 AM

Insp ID: 3589 Group 4 - Alice Springs Aper Alwerrknge (Palmers)

What Category are you capturing: Electrical Meters

Meter Type:	Prepaid
Meter Switchboard Cond:	3
Meter Condition:	3
Meter Comment:	Indoor SB, Cond 3
Comments:	





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 16/01/2017 11:03:09 AM

Insp ID: 3643 Group 4 - Alice Springs Aper Alwerrknge (Palmers)

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond:

Meter Condition: 3

Meter Comment: Condition of CB not assessed. Indoor SB, Cond 3

Comments:





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 19/11/2016 10:11:19 AM

Insp ID: 382 Group 4 - Alice Springs Aper Alwerrknge (Palmers)

What Category are you capturing:	Street Light
What is power supply method:	Overhead
What is the lamp type:	S70D 15
What Wattage is the lamp:	70
What is the condition of street lights:	3
What is Street Lighting pole installation height (approximate):	7







Northern Territory Town Camps

Electrical Infrastructure

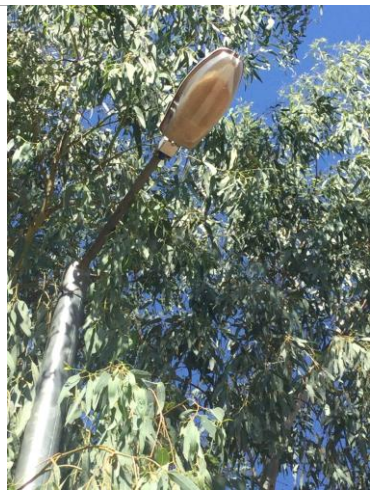
Inspection Date 19/11/2016 10:09:11 AM

Insp ID: 383 Group 4 - Alice Springs Aper Alwerrknge (Palmers)

What Category are you capturing:	Street Light
What is power supply method:	Underground
What is the lamp type:	Unknown
What Wattage is the lamp:	
What is the condition of street lights:	2
What is Street Lighting pole installation height (approximate):	5







Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 19/11/2016 10:04:06 AM

Insp ID: 385 Group 4 - Alice Springs Aper Alwerrknge (Palmers)

What Category are you capturing:	Street Light
What is power supply method:	Overhead
What is the lamp type:	S70D 15
What Wattage is the lamp:	70
What is the condition of street lights:	3
What is Street Lighting pole installation height (approximate):	7









Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 19/11/2016 10:01:49 AM

Insp ID: 386 Group 4 - Alice Springs Aper Alwerrknge (Palmers)

What Category are you capturing:	Street Light
What is power supply method:	Overhead
What is the lamp type:	S70D 15
What Wattage is the lamp:	70
What is the condition of street lights:	3
What is Street Lighting pole installation height (approximate):	7







Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 19/11/2016 10:00:09 AM

Insp ID: 387 Group 4 - Alice Springs Aper Alwerrknge (Palmers)

What Category are you capturing:	Street Light
What is power supply method:	Overhead
What is the lamp type:	S70D 15
What Wattage is the lamp:	70
What is the condition of street lights:	3
What is Street Lighting pole installation height (approximate):	7









Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 19/11/2016 10:00:09 AM



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 19/11/2016 9:56:46 AM

Insp ID: 388 Group 4 - Alice Springs Aper Alwerrknge (Palmers)

What Category are you capturing:	Street Light
What is power supply method:	Underground
What is the lamp type:	M50 07
What Wattage is the lamp:	50
What is the condition of street lights:	3
What is Street Lighting pole installation height (approximate):	5









Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 19/11/2016 9:52:21 AM

Insp ID: 390 Group 4 - Alice Springs Aper Alwerrknge (Palmers)

What Category are you capturing:	Street Light
What is power supply method:	Overhead
What is the lamp type:	S70D 15
What Wattage is the lamp:	70
What is the condition of street lights:	3
What is Street Lighting pole installation height (approximate):	7







Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 19/11/2016 9:50:22 AM

Insp ID: 391 Group 4 - Alice Springs Aper Alwerrknge (Palmers)

What Category are you capturing:	Street Light
What is power supply method:	Overhead
What is the lamp type:	S70D 15
What Wattage is the lamp:	70
What is the condition of street lights:	3
What is Street Lighting pole installation height (approximate):	7







Road map



Map by: DMcP P:\GIS\Projects\253963_NT_Town_Camps\253963_003_Roads_DDP2.mxd 11/02/2017 17:17 Imagery: copyright DigitalGlobe WV 2

A3 scale: 1:1,500

0 20 40 60 80 100 m

Date: 11/02/2017 Version: 1

Coordinate system: GDA 1994

NT Town Camp Road Assessments

19 - Aper Alwerrknge (Alice Springs)

5047

Existing drawings

384 750 E

385 000 E

-23°40'00"

7 382 000 N

Too rocky
5135
For Development
Shed
Pump Station
TOWN OF ALICE SPRINGS
STUART
BRAITLING
MATTHEWS COURT
BASSO ROAD
SHAW COURT
URTHEYE COURT
POWER STREET
STUART HIGHWAY
798
629
4223
9036
9037
9186
9187
2581
5180
5810
3689
8066

LAND USE PLANNING:

APPROX. POSITION OF BUILDING constructed since date of photography

LAND EXCLUDED FROM DEVELOPMENT

GENERAL EXCLUSION/BUFFERS

CULTURAL EXCLUSION AREAS:

Unauthorised entry, works on or use of land where there is a sacred site is an offence under the Northern Territory Aboriginal Sacred Sites Act. For conditions relating to works on or use of land within a Cultural Exclusion Area contact the Aboriginal Areas Protection Authority (AAPA). email enquiries.aapa@nt.gov.au or phone 8999 4332.

This advice does not negate the need for consent for entry, works, or use which may be required under the Aboriginal Land Rights(NT) Act (in the case of Aboriginal land), or another statute.

© NORTHERN TERRITORY OF AUSTRALIA

CADASTRE

Current 123

Proposed 123

Locality LOCALITY

UTILITY SERVICES

ELECTRICITY
LOW VOLTAGE LV
HIGH VOLTAGE HV
WATER RETICULATION
WATER MAIN W
WATER RISING MAIN
SEWER
SEWER MAIN S
SEWER RISING MAIN SS

DIAL BEFORE YOU DIG www.TTOOL.com.au

LEGEND

TOPOGRAPHY

Road Sealed, Bridge
Road Unsealed, Track
Footpath, Drain, Culvert
Wall, Gate, Fence, Cattle Grid
Railway, Disused Railway
Aerodrome Tarmac, Landing Strip
Taxiway, Apron
Pipeline: Oil, Water, Undetermined Gas, Sewage
Building, Building-Shape unconfirmed
Shade Structure, Incomplete Building
Sewage Ponds, Tailings Pond
Oval, Arena, Swimming Pool

High Water Mark, Low Water Mark
Mine; Quarry, Surface Excavation
Contour; Index, Intermediate
Contour; Depression
Top of Bank, Bottom of Bank, Cliff
Watercourse; Perennial, Intermittent, Channel or Canal
WaterBodies; Perennial, Intermittent
WaterBodies; Reservoir, Water Hole
Swamp; Swamp Perennial, Swamp Intermittent
Flat; Mud Flat, Clay/Saltpan, STI
Pole; Power, General, Light
Tank; Water, Elevated, Non-Water, Silo
Manhole, Pylon, Communication Tower, Bore.

AVAILABLE FROM AND PRODUCED BY:

Northern Territory Government

NOTES:
POWER POLES, MANHOLES
SEPTIC TANKS, TOWERS/POSTS
and other similar shaped objects are captured from Aerial Photography and may not be accurately positioned from aerial survey techniques.
These features are suitable as LOCAL SURVEY CONTROL. Their ground location is expected to be within +/-2.5m of their mapped location.

DIAL BEFORE YOU DIG phone 1100 (freecall) or visit www.1100.com.au
For water, sewer, and power information and connection requirements for developments contact Power and Water Corporation, Indigenous Community Development on 1800 245 092, and visit http://www.powerwater.com.au/business

General enquiries, corrections, updates, errors and omissions:
Indigenous Community Land Use Planning, NT Dept of Lands and Planning
TEL: (08) 8999 1300, FAX: (08) 8999 7189, Email: planning@nt.gov.au

This product is a compilation of data holdings from (but not restricted to) NT Dept of Lands and Planning, NT Dept of Housing, Local Government and Regional Services, Power and Water Corporation and Aboriginal Areas Protection Authority.
Whilst every effort has been made to ensure the accuracy of this map, errors and omissions may occur.
No Warranty is given concerning the accuracy of the information herein. Users should refer to the originating bodies or departments regarding the accuracy and currency of the data.

Topographic Information:
Land Information Division
Dept of Lands and Planning
TEL: (08) 8995 5331, FAX: (08) 8995 5366
Email: landinfo.dp@nt.gov.au

Aboriginal Areas Protection Authority:
Top, Regional
Aboriginal Areas Protection Authority
TEL: (08) 8999 4332
Email: enquiries.aapa@nt.gov.au

Cadastral Information:
Office of the Surveyor-General
Dept of Lands and Planning
TEL: (08) 8995 5353, FAX: (08) 8995 5366
Email: landinfo.dp@nt.gov.au

Planning Information:
Indigenous Community Land Use Planning
Dept of Lands and Planning
TEL: (08) 8999 1300, FAX: (08) 8999 7189
Email: planning@nt.gov.au

Power, Water or Sewer Information:
Power and Water Corporation Branch
Power and Water Corporation
TEL: (08) 8924 5094, FAX: (08) 8924 5360

Housing Infrastructure Information:
Infrastructure Delivery Branch
Dept of Housing, Local Government, and Regional Services
TEL: (08) 8995 5313, FAX: (08) 8995 5170
Email: lee.dilgish@nt.gov.au

SOURCE INFORMATION

CONTOUR INTERVAL :		CURRENCY OF TOPOGRAPHY :	10 June 2007
HORIZONTAL DATUM :		SOURCE MAP SCALE :	2500
VERTICAL DATUM :		ZONE UTM :	53
PROJECTION :	Transverse Mercator	DATE GENERATED :	18 June 2012

GDA

0 10 20 30 40 50

Locality Diagram

SERVICED LAND AVAILABILITY PROGRAM

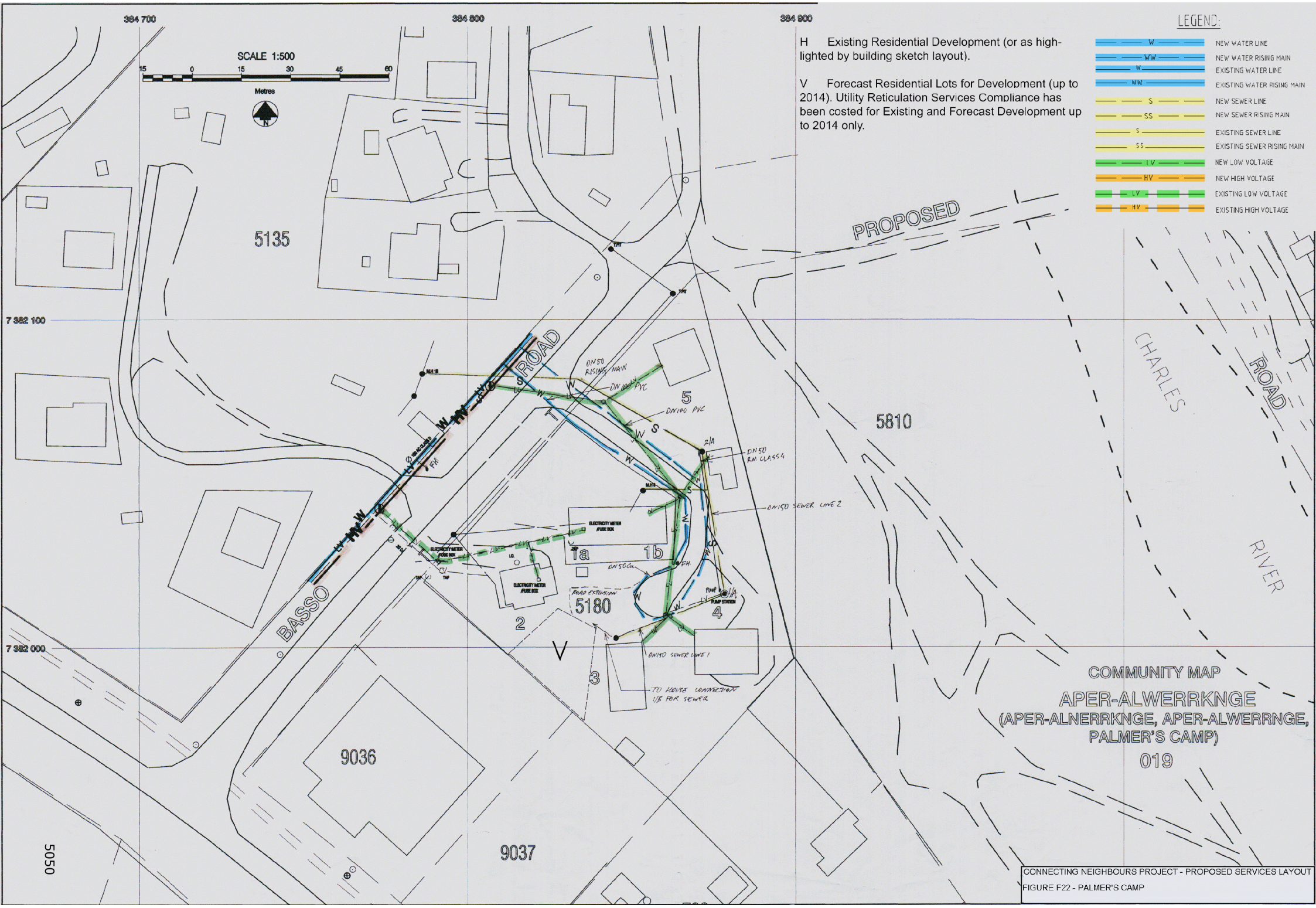
SLAP Map

Aper-Alwerrknge (Alice Springs Town Camp)

Aper Alnerrknge

Alice Springs Town Council

Community ID: 19



H Existing Residential Development (or as high-lighted by building sketch layout).

V Forecast Residential Lots for Development (up to 2014). Utility Reticulation Services Compliance has been costed for Existing and Forecast Development up to 2014 only.

LEGEND:

- W — NEW WATER LINE
- WW — NEW WATER RISING MAIN
- W — EXISTING WATER LINE
- WW — EXISTING WATER RISING MAIN
- S — NEW SEWER LINE
- SS — NEW SEWER RISING MAIN
- S — EXISTING SEWER LINE
- SS — EXISTING SEWER RISING MAIN
- LV — NEW LOW VOLTAGE
- HV — NEW HIGH VOLTAGE
- LV — EXISTING LOW VOLTAGE
- HV — EXISTING HIGH VOLTAGE

COMMUNITY MAP

APER-ALWERRKNGE

(APER-ALNERRKNGE, APER-ALWERRNGE, PALMER'S CAMP)

019

CONNECTING NEIGHBOURS PROJECT - PROPOSED SERVICES LAYOUT

FIGURE F22 - PALMER'S CAMP

EXIST. MANHOLE
I.L. EXIST. OUTLET 592·33
I.L. RISING MAIN INLET 592·97
EXIST. SEWER CONNECTION TO BE DISCONNECTED AND CAPPED.
EPOXY LINE MANHOLE TO SUPERINTENDENT'S SATISFACTION.
I.L. EXIST. INLET 592·34

ROAD

EXISTING TELECOM CABLES

BREAK INTO EXISTING MANHOLE AS DIRECTED BY SUPERINTENDENT - SEE DETAIL ABOVE

EXISTING SEWER MAIN

50 NB RISING MAIN CLASS 12

SAWCUT EXISTING BITUMEN & REINSTATE AFTER COMPLETION

BITUMEN

BITUMEN ACCESS

HOUSE

2/A

PROPOSED HOUSE

DEMOLISH & REMOVE EXIST. MANHOLE. CONNECT NEW TO EXIST. HOUSE CONNECTION.

150 NBSEWER LINE 2

EXISTING WATER MAIN

EXISTING HOUSE (BESSER BLOCK)

SHED

EXISTING HOUSE

BASSO EXISTING

PUMP

1/A

150 NBSEWER LINE 1

CONNECT TO EXIST. HOUSE CONNECTION.

PAWA DISTRIBUTION PILLAR

1/B

HOUSE

HOUSE

T.B.M. Conc. Block RL 592·952

Lot 579

Lot 5180

Lot 798

NOTE: Existing trees to be retained wherever possible.

NOTE: Contractor to locate and reconnect existing house sewer outfalls to new sewer property connections.

CHARLES RIVER

MUIRS VENT TO SUIT – VENT TO BE INSECT PROOF TO SUPERINTENDENTS SATISFACTION.

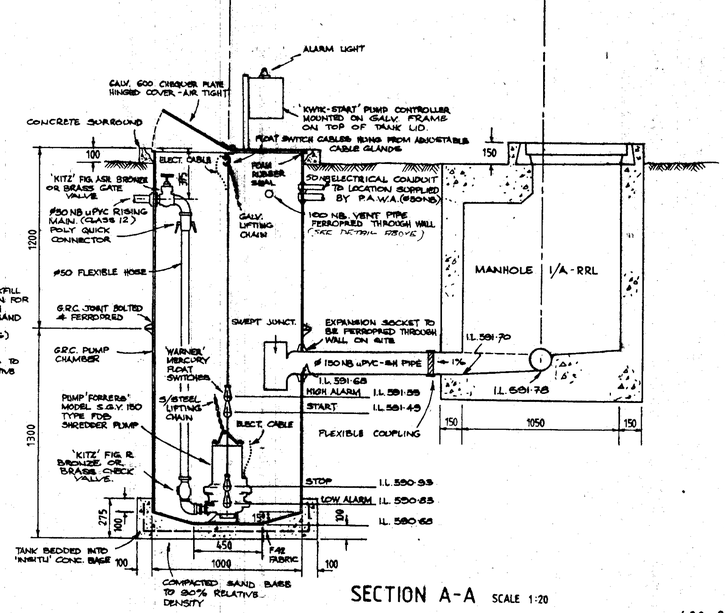
100 mm G.S.P.

3000

600 x 450 CONCRETE

VENT DETAIL

NOTE: RE POWER SUPPLY CONTRACTOR TO PROVIDE AND INSTALL CABLE IN EXISTING CONDUIT TO DISTRIBUTION BOARD AND PAWA TO TERMINATE.



SECTION A-A SCALE 1:20

400-89-13-2178

LEGEND

- Proposed manhole
- Existing manhole
- Proposed sewer line
- Proposed rising main

NOTE All dimensions to be checked on site

Issue	Amendment	Drawn	Date	Chk'd	App'd
A	Rising main inlet to existing manhole.	PJC	11/90		
A	Backfill, sand base & electrical conduit notes on section A-A	"	"		
A	Additional note to contractor	"	"		
B	Distribution pillar location & vent detail added	PJC	1/90		

Director

Survey		
Drawn	D.K. / CGW	6/89
Design	P.J. Castle	9/89
Checked		10/90
Principal		

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Cnr GREGORY TCE. & BATH ST. ALICE SPRINGS N.T. 0870. Phone N° (089) 52 9376

THE TANGENTYERE COUNCIL INC.

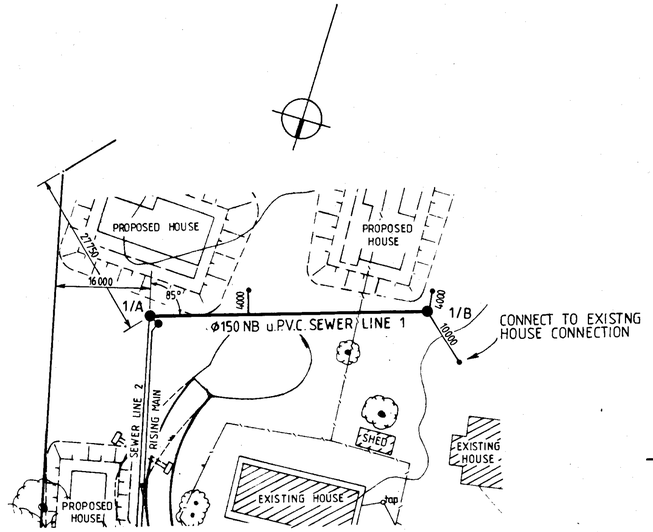
APER-ALWERRKNGE TOWN CAMP

ALICE SPRINGS

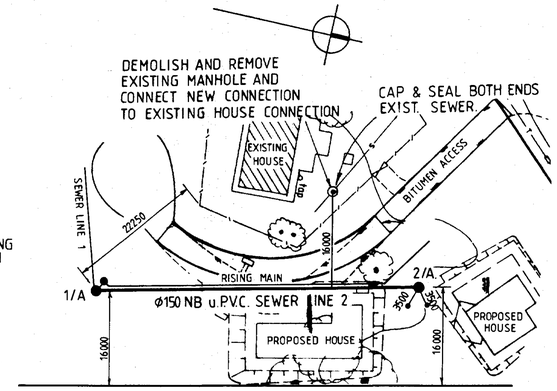
SEWER LAYOUT PLAN

Scale 1:500

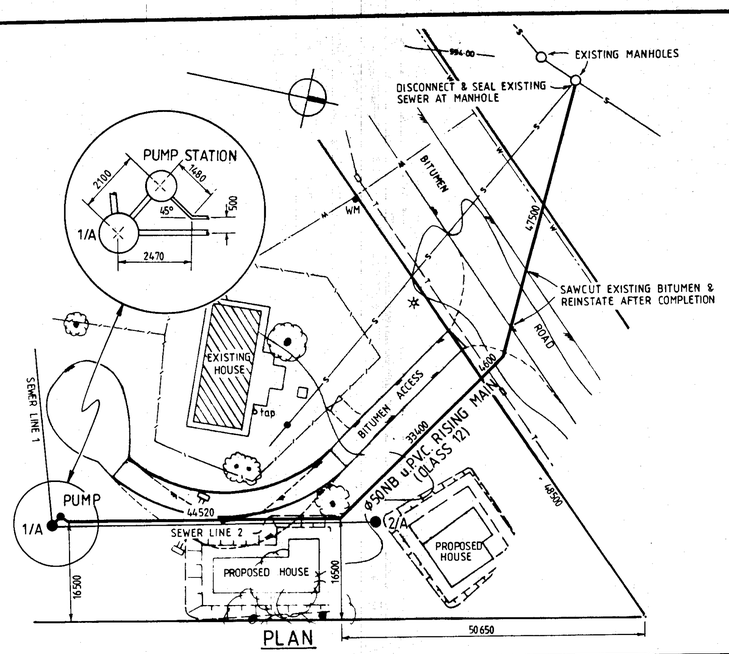
Drg. N° 6510 - 4 - A



PLAN



PLAN



PLAN

MANHOLE NUMBER	1/A	1/B
MANHOLE & COVER TYPE	RRL/CRL	RRL/CRL
MANHOLE DROP TYPE	1	1
LOCATION	APER - ALWERRKNGE	
PIPE TYPE & CLASS	u.P.V.C. - SH	
DIA. - LENGTH - GRADE (mm) (m) (mm/m)	150 - 46·00 - 10·00	
DATUM R.L. 588·00		
DEPTH TO INVERT	1·28	1·20
INVERT LEVEL	591·78	591·95
SURFACE LEVEL	593·06	593·14
CHAINAGE	0·00	16·50
CONNECTIONS		TYPE 1

SEWER LINE 1

MANHOLE NUMBER	1/A	2/A
MANHOLE & COVER TYPE	RRL/CRL	RRL/CRL
MANHOLE DROP TYPE	1	1
LOCATION	APER - ALWERRKNGE	
PIPE TYPE & CLASS	u.P.V.C. - SH	
DIA. - LENGTH - GRADE (mm) (m) (mm/m)	150 - 54·00 - 13·70	
DEPTH TO INVERT	1·28	1·08
INVERT LEVEL	591·78	592·32
SURFACE LEVEL	593·06	593·40
CHAINAGE	0·00	39·25
CONNECTIONS		TYPE 1

SEWER LINE 2

MANHOLE NUMBER	1/A	RISING MAIN PUMP STATION	EXISTING M.H.
MANHOLE & COVER TYPE	RRL/CRL		
MANHOLE DROP TYPE	1		
LOCATION	APER - ALWERRKNGE	BASSO ROAD	Lot 5135
PIPE TYPE & CLASS	u.P.V.C. - CLASS 12		
DIA. - LENGTH - GRADE (mm) (m) (mm/m)	150 - 2·10 - 10·00	50 - 1·48 - 0	50 - 133·60 - 6·84
DEPTH TO INVERT	1·36	1·40	0·35	0·36	1·01	1·09	1·33	1·36	1·45	1·57
INVERT LEVEL	591·70	591·68	592·73	592·73	592·08	592·38	592·61	592·64	592·83	592·97
SURFACE LEVEL	593·06	593·08		593·09		593·47	593·94	594·00	594·28	594·54
CHAINAGE	0·00	2·10		3·58		48·10	81·50	86·10	112·50	133·60
CONNECTIONS			BEND		BEND			BEND		

RISING MAIN

SEWER LINE 2

400-89-16-2179

NOTE All dimensions to be checked on site

Issue	Amendment	Drawn	Date	Chk'd	App'd
1					

Director

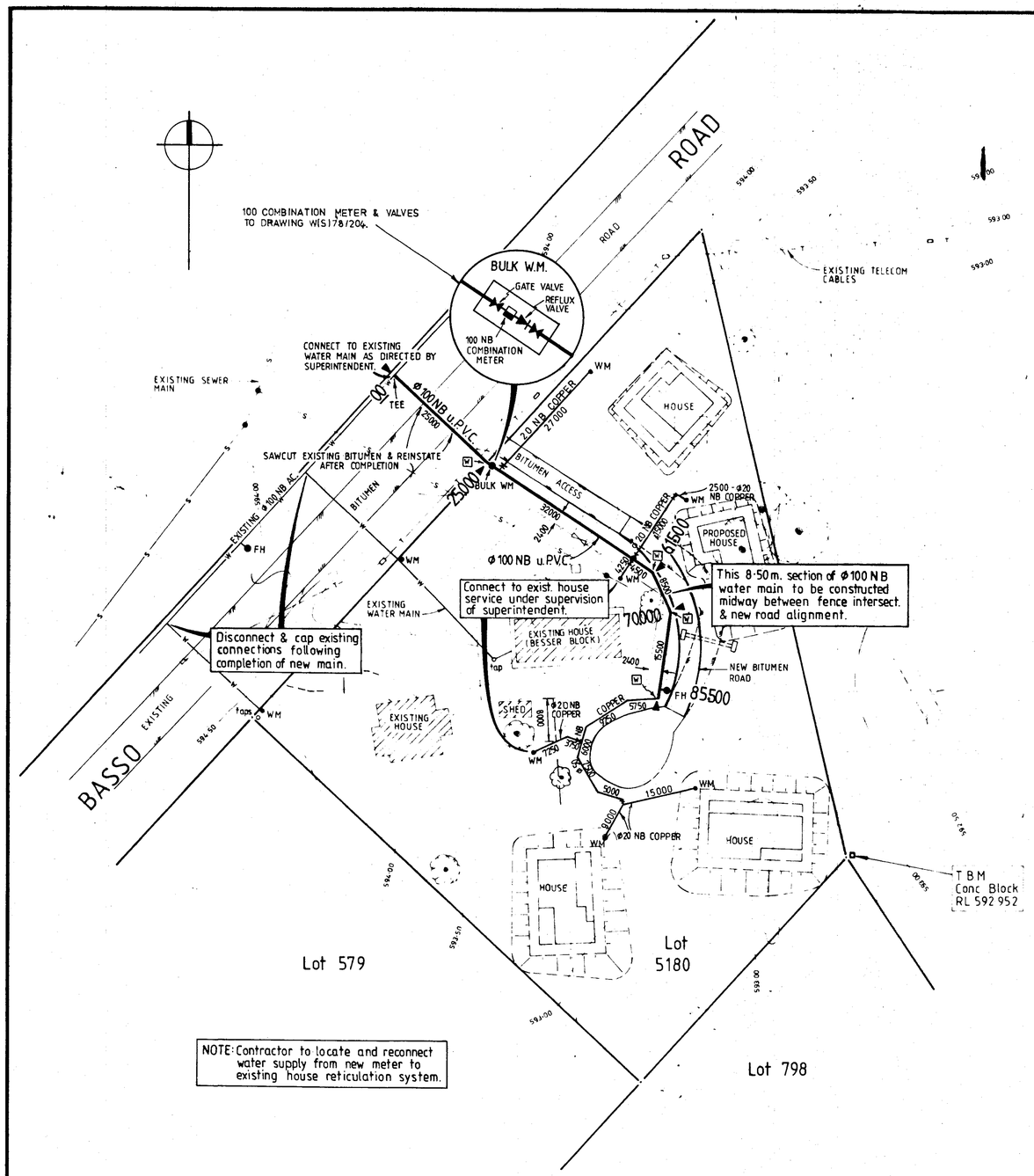
Survey		
Drawn	P.J.Castle	9/89
Design	"	"
Checked		10/89
Principal		

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THE TANGENTYERE COUNCIL INC.
APER-ALWERRKNGE TOWN CAMP
ALICE SPRINGS
SEWER DESIGN - SEWER LINES 1 & 2 + RISING MAIN

Scale HORIZONTAL 1:500 VERTICAL 1:50

Drg. N° 6510 - 5



NOTE: Contractor to locate and reconnect water supply from new meter to existing house reticulation system.

400-89-07-2177

Issue	Amendment	Drawn	Date	Chk'd	App'd
A	Pipe layout around cul-de-sac + Ø20 NB connections.	PJC	1/90		
A	Ø25 NB UPVC changed to Ø25 COPPER.	"	"		
A	Additional notes.	"	"		

NOTE All dimensions to be checked on site

Director		
Survey		
Drawn	D.K. / CGW	6/89
Design	P.J. CASTLE	9/89
Checked		10/89
Principal		

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CONSULTING ENGINEERS AND PLANNERS
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THE TANGENTYERE COUNCIL INC.

APER-ALWERRKNGE TOWN CAMP

ALICE SPRINGS

WATER LAYOUT PLAN

Scale 1:500

Drg. No 6510 - 3 - A

Transformer data

Group	Com Id	Location	Community Name	Dwellings No. (Funded Dwellings)	Dwellings No. (Bennett Design)	New Houses ** (Future Demand)	Primary Volatge Level (KV)	PWC Substation ID	PWC Test Number	Transformer size (KVA)	KVA Total dwellings @ 4.5KVA	KVA Total dwellings @ 7KVA	Comments
1	290	Darwin	Bagot	55	55		11	1924	1735	300	247.5	385	
	344	Darwin	Knuckey Lagoons	18	19	2	11	1771	2163	100	85.5	133	
	347	Darwin	Kulaluk	19	19		11	1092	10607	50	85.5	133	
	403	Darwin	Palmerston Town Camp	20	16		22	10196	10245	100	90	140	Two transformers for this Town Camp. Transformers are not in boundary of Town Camp [The nearest transformers data to Town Camp are highlighted in yellow].
							22	265	11645	25			
	412	Darwin	Railway Dam (One Mile Dam)	5	6	2	11	1041	4378	200	27	42	Transformer is not in boundary of Town Camp [The nearest transformer data to Town Camp is highlighted in yellow].
	427	Adelaide River	Amangal	9	9		22	216	12187	100	40.5	63	Two transformers for this Town Camp.
							22	184	5646	63			
	687	Jabiru	Manabadurma	10	12		11	5050	11107	200	54	84	
	825	Darwin	Minmarama Park	24	24		11	2147	11372	100	108	168	
2	606	Katherine	Warlpiri Transient Camp	9	9		22	6416	4886	100	40.5	63	Two transformers for this Town Camp.
							22	6074	4695	25			
	621	Katherine	Miali Brumby (Kalano)	47	31		22	6133	12247	315	211.5	329	
	640	Pine Creek	Pine Creek Compound	4	4		22	6666	3147	25	18	28	Transformer is not in boundary of Town Camp [The nearest transformer data to Town Camp is highlighted in yellow].
	971	Mataranka	Mulggan	12	9	4	22	6819	5296	16	54	84	
							22	6818	5297	16			
							22	6384	11028	25			
3	215	Tennant Creek	Blueberry Hill (Munji-Marla)	2	2		22	7079	1868	200	9	14	Transformer is not in boundary of Town Camp [The nearest transformer data to Town Camp is highlighted in yellow].
	223	Tennant Creek	Dump Camp (Marla-Marla)	7	7		22	7181	11088	200	31.5	49	
	224	Elliott	Elliott South Camp	12	12		11	7504	4718	200	54	84	Transformer is not in boundary of Town Camp [The nearest transformer data to Town Camp is highlighted in yellow].
	225	Elliott	Elliott North Camp	36	25		11	7505	4715	100	162	252	
	238	Tennant Creek	Kargaru (East Side Camp)	12	12	1	22	7572		200	54	84	
	246	Tennant Creek	Ngalpa Ngalpa	18	21		22	7179		200	94.5	147	Two transformers for this Town Camp.
							22	7033	10904	315			
	271	Tennant Creek	Village Camp	12	12	1	22	7183	11107	200	54	84	
	681	Tennant Creek	Tingkarli	12	12		22	7180		200	54	84	
	684	Tennant Creek	Wuppa	15	15	1	22	7141	11092	100	67.5	105	Two transformers for this Town Camp.
							22	7182	11095	200			
4	3	Alice Springs	Akngwertnarre (Morris Soak)	11	15		11	8596	11336	300	67.5	105	Transformer is not in boundary of Town Camp [The nearest transformer data to Town Camp is highlighted in yellow].
	16	Alice Springs	Anthelk Ewlpaye (Charles Creek)	17	10		11	8569		315	76.5	119	Transformer is not in boundary of Town Camp [The nearest transformer data to Town Camp is highlighted in yellow].
	17	Alice Springs	Anthepe	15	15		22	8598	5874	200	67.5	105	Data extracted from PWC asset information. There was not access to this Town Camp due to ceremony on inspection day.
							22	8597	11244	315			
	19	Alice Springs	Aper Alwerrknge (Palmers)	7	6		11	8405	2939	200	31.5	49	Transformer is not in boundary of Town Camp [The nearest transformer data to Town Camp is highlighted in yellow].
	35	Alice Springs	Ewyenper Atwatye (Hidden Valley)	47	47		11	8622	11202	100	211.5	329	
							11	8623	11203	100			
							22	8625	11205	63			
							11	8626	11204	100			
	47	Alice Springs	Ilparpa	13	13		22	8611	11702	200	58.5	91	
	48	Alice Springs	Ilperle Tyathe (Walpiri)	10	9		11	8001	11209	315	45	70	Transformer is not in boundary of Town Camp [The nearest transformer data to Town Camp is highlighted in yellow].
	50	Alice Springs	Ilyperenye (Old Timers)	10	10		22	8145	3323	100	45	70	
	64	Alice Springs	Bassos	2	2		11	8002	10946	50	9	14	
	69	Alice Springs	Karnte	19	19		22	8282	2345	100	85.5	133	
	87	Alice Springs	Yarrenty Altere (Larapinta Valley)	34	34		11	8617	11334	100	153	238	
							11	8618	11200	63			
							11	8619	11335	100			
							11	8620	11201	100			
	90	Alice Springs	Inarlenge (Little Sisters)	16	22		22	8137	2925	100	99	154	Transformer is not in boundary of Town Camp [The nearest transformer data to Town Camp is highlighted in yellow].
	108	Alice Springs	Mpwetyerre (Abbotts)	6	6		11	8093	11703	315	27	42	Transformer is not in boundary of Town Camp [The nearest transformer data to Town Camp is highlighted in yellow].
	113	Alice Springs	Mount Nancy (Nyewente)	11	12		11	8405	2939	200	54	84	
	129	Alice Springs	Nyewente (Trucking Yards)	26	26		11	8629	11312	300	117	182	
	675	Alice Springs	Hoppys	15	19						85.5	133	There is not any Transformer in boundary of Town Camp. Also it's not shown in PWC asset information.
	676	Alice Springs	Ilpiye Ilpiye (Golders Camp)	15	14		11	8314	369	50	67.5	105	
	1029	Alice Springs	Kunoth	4	4		11	8569		315	18	28	Transformer is not in boundary of Town Camp [The nearest transformer data to Town Camp is highlighted in yellow].
5	222	Borroloola	Mara	28	29	2	11	6187	12610	100	130.5	203	Two transformers for this Town Camp.
							11	6545	10203				
	229	Borroloola	Garawa 1	16	14		11	6546	10166	100	72	112	Two transformers for this Town Camp.
							11	6332	4890	100			
	278	Borroloola	Yanyula	29	29		11	6162	10496	200	130.5	203	Data extracted from PWC asset information. It's outside of Twon Camp, shown only Transformer to this Town Camp.
							11		10167				This transformer is not shown in PWC asset information. It's installed in Boat Ramp Road near to Town Camp and connected to Electrical reticulation of Town Camp.
	992	Borroloola	Garawa 2	11	11		11	6189	2669	25	49.5	77	

** For New house's demand calculation see section 13.4 "Future Demand".

Ewyenper Atwatye (Hidden Valley)

Hidden Valley

1 Design

The infrastructure reviews have been undertaken against current relevant standards for typical sub-divisions. The following standards have been used in undertaking the reviews.

Sewerage and water supply

- Water Services Association of Australia – Sewerage Code – WSA 02 Part 1: Planning and Design
- Power and Water Corporation supplement to WSA 02
- Water Services Association of Australia – Sewerage Pumping Station Code – WSA 04 -2005 Part 1: Planning and Design
- Power and Water Corporation supplement to WSA 04
- Water Services Association of Australia – Water Supply Code – WSA 03 2002 Part 1: Planning and Design
- Power and Water Corporation supplement to WSA 03
- Power and Water Corporation Indigenous Community Engineering Guidelines (2008)
- Department of Housing and Community Development Indigenous Community Engineering Guidelines (ICEG 2014, updated September 2016)
- Power and Water Corporation Essential Services Infrastructure Assessment and Upgrade Guidelines (for Town Camps in Urban Communities, 2009)
- Power and Water Corporation Standard Drawings
- Australian Standards

Electrical services

Electrical infrastructure has been assessed against AS/NZS3000 Wiring Rules and against PWC Service, Installation and Metering Rules and URD Design Standards where possible.

With one exception, all town camps are each a single lot and compliance with AS/NZS3000 is sufficient to address potential safety concerns.

As such application of PWC URD Design Standards will mainly apply to the incoming supply and bulk or initial multi-metering panels if provided.

URD Design Standards for internal reticulation and street lighting have probably been applied in most cases for convenience rather than compliance.

For the purposes of this report, the demand per dwelling allowances of URD Design Standards have been used to estimate incoming supply and overall distribution capacity requirements.

The following apply:

- Australian Standards
- Power Networks Design and Construction Guidelines, Power and Water Corporation
    - NP001.1_Design and Construction of Network Assets – General Requirements
    - NP001.3_General Specification for Overhead Electrical Reticulation
    - NP001.6_General Specification for URD Subdivisions
    - NP003_Installation Rules_V3
    - NP007_Service Rules

- NP027_Capture of Newly Installed Street Lighting Information
- NP041_Guidelines for Electrical Design Consultants

Further referral to the guidelines in this report will be designated by the guidelines number, NP001.1.

Communications

- National Broadband Network Website viewed 21 January 2017 (http://www.nbnco.com.au/) – NBN rollout maps

Council guidelines

In addition to the above standards, the following Council guidelines will be used where applicable.

- Alice Springs Town Council – Subdivision and Development Guidelines, November 2012

General

It should be noted that if the town camps are proposed to be subdivided and services assets gifted to Power and Water Corporation (PWC) for operation and maintenance, all of these services will need to fully meet PWC standards. With the exception of a few town camps that have recently been upgraded, this will require the full replacement and/or realignment of most services.

2 Condition assessment

2.1 Rating assessment matrix

A condition rating matrix was developed and used to assess all municipal infrastructure. The same rating was used for all services to maintain consistency in assessments. Table 1 below shows the condition rating and operability.

Table 1 Condition rating

	Condition rating	Operability
1	Very Poor	Not operational
2	Poor	Not fully operational or requires immediate maintenance to keep operational
3	Good	Fully operational, may require routine maintenance
4	Very Good	Fully operational, may require maintenance in the next six months
5	Excellent	New, fully operational

2.2 Civil assessment limitations

The civil infrastructure condition investigations were subject to a number of limitations. These include:

- Only accessible services have been investigated. This includes inspecting the top of sewer manholes, side entry pits, etc., however, does not include opening pits to inspect infrastructure below ground.
- No physical testing of the sewer, water or stormwater network was undertaken.
- No survey or service locating was undertaken.

As there was no survey, potholing or CCTV undertaken on the underground infrastructure there is insufficient information to make determinations on the asset condition. The condition assessments discussed in this report are only for the accessible services and do not necessarily represent the condition of the underground infrastructure. For the majority of the town camps, other than a few that have recently been upgraded it was found that the underground services are generally undersized and it is likely, due to their age, that the these services are in poor condition. Either factor would trigger the need for a complete replacement to meet current relevant standards.

2.3 Electrical assessment limitations

The electrical infrastructure condition investigations were subject to a number of limitations. These include:

- Inspections were carried out without the assistance of an electrical tradesman.
- Only accessible services were investigated. Assessments were of a visual nature and no pit covers were removed.
- Overhead equipment was assessed from ground level.
- Switchboards were not opened and no assessment of the internal connections or bus ratings was made.
- Electrical infrastructure was assessed down to the meter for multi-meter panels and down to the termination, overhead pole or distribution pillar, of the supply cable to a meter located at a dwelling.

3 Current infrastructure issues

Power and Water Corporation (PWC) have advised of the following concerns and issues in regard to the sewerage, water and electrical infrastructure at all town camps.

3.1 Ownership and maintenance

PWC stated there has always been confusion regarding the ownership and responsibilities of the internal sewer, water and electrical infrastructure. PWC have advised that they have no legal tenure on the majority of assets in any town camps and that the owner is essentially that of the land owner or leaseholder. This is further discussed for each type of infrastructure for each town camp.

The ownership and who is responsible for the maintenance of the sewage pump stations and street lighting is a major concern. In most town camps it was found that PWC have been maintaining the assets on an in-kind basis, although there are no maintenance or access agreements in place and the infrastructure is generally not compliant to PWC standards.

3.2 Access to infrastructure

PWC advised that due to the uncertainty surrounding ownership and responsibility of the sewerage, water and electrical infrastructure, each town camp is seen as a single lot with multiple houses on it. There are no formal road reserves or easements where the municipal infrastructure should be located. PWC therefore have no legal right to enter the town camps to work on the infrastructure, nor can PWC stop others from working on the infrastructure. There is a risk that the maintenance undertaken by others may be to a lower standard than PWC.

3.3 Existing infrastructure

PWC have stated that although the existing sewerage and water infrastructure appears to comply with relevant standards in some locations, the capacity cannot be assumed to meet PWC requirements due to the potential for underground substandard condition and/or grading of pipework. It is likely that these assets will need to be fully replaced to PWC standards to ensure sufficient capacity.

The planning process currently allows construction within the town camps on Commonwealth land without requiring service authority (PWC) approvals. This means that there has been no opportunity for PWC to recover contributions towards required upgrades to headworks servicing the developments and these upgrades have been paid for by PWC in the past. This inconsistency needs to be addressed for future developments within the town camps to ensure PWC are able to continue to provide adequate services.

3.4 Safety concerns

PWC have expressed concerns with safety of PWC staff and contractors working within the camps. PWC have employed procedures such as multiple people / vehicles to attend the site, with police or housing safety officers as required. This generally leads to a delayed response time and increased cost to respond to and remediate emergency situations.

PWC have also raised the concern that if others work on water infrastructure within the town camps and do not apply the correct sanitation procedures they not only risk contaminating the entire water supply network within the town camp, at some town camps with direct connections to the town supply, they risk contaminating the entire town's water supply.

4 Available information

As the site investigations were limited to accessible / visible services, information on below ground services (such as electrical cables, sewer pipes, water supply pipes, etc.) were determined from available information. This information included:

- Serviced Land Availability Program (SLAP) maps,
- Department of Family & Community Services - Connecting Neighbours Program – Essential Services Scoping Study Report Volume 1 April 2005,
- Connecting Neighbours Project – Infrastructure Assessment and Recommendation Report - Arup Pty Ltd, April 2005,
- Alice Springs Town Camp Sewage Pumping Station Assessments, Byrne Design, 2014,
- Drawings supplied by NT Department of Infrastructure - Technical Records,
- Drawings supplied by Power and Water Corporation,
- Bennett Design inspection reports and population data.

Aurecon undertook a site investigation of the Hidden Valley community on 17 November 2016 to inspect roads, stormwater drainage, electrical services, sewerage and water supply, and community structures. The following sections detail the outcomes of this investigation and the assessments of the infrastructure.

The civil and electrical inspection reports can be found in the Appendices.

5 Sewerage

5.1 Ownership and boundaries

The internal sewer network consists of a DN150 PVC main on Lockyer Court, Irretye Court, Tjuwanpa Court, Abbott Court, and the upstream section of Ewyenper Street, and a DN225 PVC main for the remainder of Ewyenper Street. It appears as though this infrastructure is owned by Power and Water Corporation, refer drawings in the Appendices.

The housing connections and any other gravity mains not shown on the PWC drawings, are owned by Ewyenper-Atwatye Association Incorporated, but are the responsibility of Tangentyere Council Incorporated to maintain.

5.1.1 Connection methods and billing

PWC advised that they currently charge a single sewerage bill based on the number of houses, which for Hidden Valley is 57. The sewerage bill is charged to the Department of Housing and Community Development.

It is not known what contribution the residents make towards the sewerage bills.

5.2 Existing infrastructure condition assessment

The sewer infrastructure inspection was limited to inspecting the condition of manhole covers, as all other sewerage infrastructure is below ground. A comprehensive review of all available documentation, including reviewing as-constructed drawings and having discussions with Power and Water Corporation was conducted. The following table compares the assets that have been constructed, according to the as-constructed drawings, and the assets assessed during the inspections conducted by Aurecon.

Table 2 Sewerage assets inspected

Asset type	Number of assets as per documentation	Number of assets assessed during inspection
Manholes	31	15

As per Table 2, a number of manholes were not assessed during the inspections, this is likely due to access limitations such as manholes being located within private property or outside of the town camp. As other manholes along the same sewer line were investigated, it is assumed that all assets have been constructed as per the as-constructed drawings. The condition ratings of the manholes inspected are as follows:

Table 3 Sewer condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Manhole			2	11	3	15



Figure 1 Sewer manhole, condition: *very good*



Figure 2 Sewer manhole, condition: *very good*

The sewer manholes were generally in very good condition. Some manholes were covered in sand or were located within property boundaries. To comply with PWC standards, the pipework and manholes should be within the road reserve.

5.3 Current performance and risks

5.3.1 Current sewer network performance

The current capacity of the sewer network was calculated based on the following design assumptions:

- The adopted minimum grade for the pipework is 1.0%, as advised by Power and Water Corporation.
- The Equivalent Population (EP) has been calculated assuming one household equates to 9 EP, based on discussions with Power and Water Corporation.
- The capacity has been assessed by calculating the current flow rate, and the maximum flow rate when the sewer pipe flows full. The result is then a percentage of how much of the pipe is currently being used.
- Manning's roughness coefficient of the pipework is 0.012, as recommended by PWC for PVC pipes.
- Where the sewer pipe grade, size or material is not known, it is assumed to be non-compliant to PWC standards.

The current number of dwellings in Hidden Valley is 47. This multiplied by 9 EP per house gives a total current EP of 423. The capacity of the existing sewer was then

calculated for the DN150 and DN225 pipes. The percentage shows how much of the pipe capacity is currently being used.

Table 4 Existing sewer capacity

Catchment	Current total EP	Diameter of connection (mm)	Adopted PWC minimum slope (%)	Qfull (L/s)	Current Q (L/s)	Current capacity (%)
Catchment 1	423	150	1.0	16.50	3.97	24%
	423	225	1.0	48.64	4.08	8%

Table 4 above shows that the capacity of the existing sewer network is adequate for the current peak population.

The current pipe is compliant with PWC standards with respect to size and grade, however the alignment of the pipe is not entirely within the road reserve. From the SIHIP program (refer Appendices) it appears as though 3 m wide easements have been created over the existing sewer network so it complies with PWC guidelines. The Land Title, refer Appendices, shows that there are no easements over the sewerage infrastructure.

5.4 Future demands

As no new developments are currently planned for the community, there are no additional upgrades required to cater for future demand.

5.5 Recommended works

No immediate maintenance works are required.

No upgrades to the gravity main are recommended however, if substantial developments are planned for this community, then the pipe alignment may need to be reconsidered and moved to the road reserve. However, since the gravity mains are property of PWC, this would be their responsibility.

6 Water supply

6.1 Ownership and boundaries

The water reticulation servicing the community has recently been upgraded under the SIHIP program. The existing network includes a DN150 PVC looped water main, with two supply points. As constructed drawings, refer Appendices, show that the water main is installed within the road reserve for the majority of the network, excluding a small section which is in a five metre wide water main easement. Although the as-constructed drawing identify an easement, the Lands Titles have no registered easements over the infrastructure.

The water supply assets within Hidden Valley are believed to be owned by Ewyenper-Atwatye Association Incorporated, but are the responsibility of Tangentyere Council Incorporated to maintain.

PWC have advised that they currently maintain the water supply assets to the house meters although there is no formal agreement covering this maintenance. The water is supplied from PWC owned water mains outside of the community.

Figure 3 shows the extent of water services in Hidden Valley.

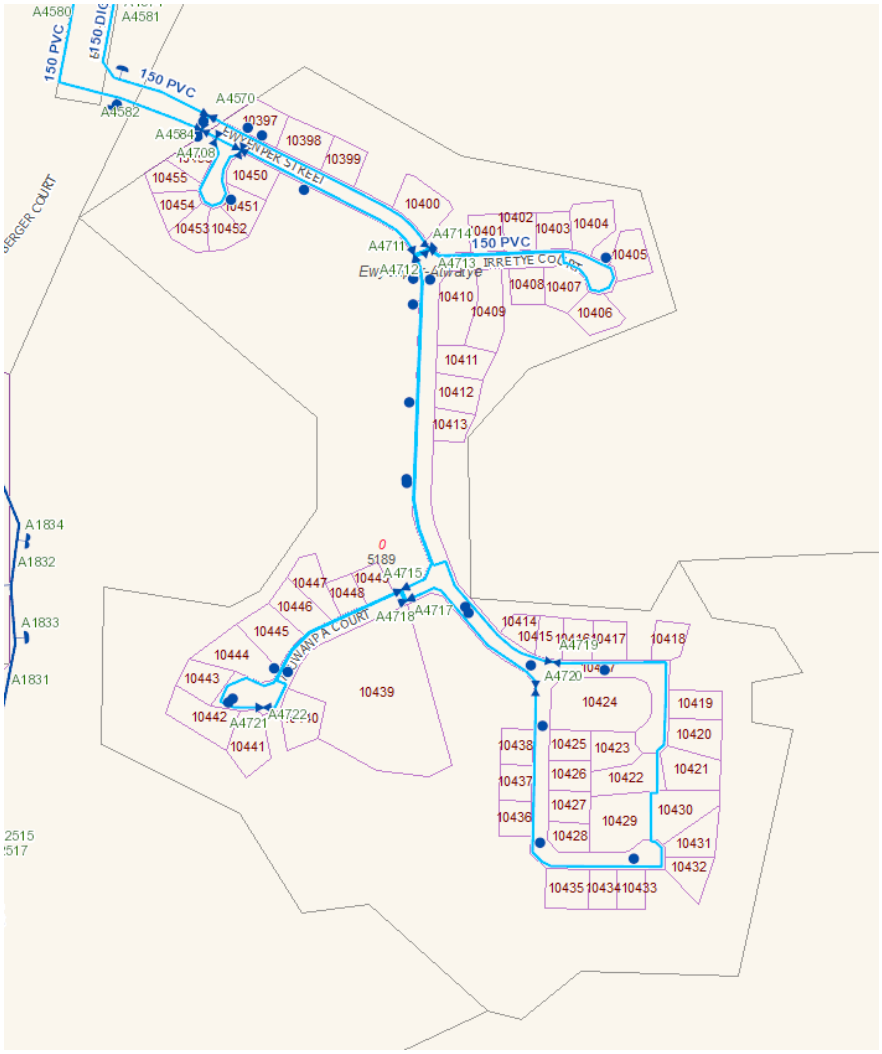


Figure 3 Hidden Valley water supply

6.1.1 Connection methods and billing

Through consultation with PWC it has been determined that the water usage is currently charged as a fixed daily rate for 57 house water meters within Hidden Valley. The bill is issued to Department of Housing. It is not known what contribution the residents make towards water bills.

It is proposed that PWC measures the water supply to the entire community, as opposed to individual lots within the community. This requires the installation a bulk water meter on the water main located at the community boundary. Under this scheme, the water bill for the entire community is the responsibility of the governing body, being Ewyenper-Atwatye Association Incorporated for Hidden Valley. It will be up to governing body to assign bills to residents accordingly.

It is recommended that the individual lot meters are maintained in addition to the proposed use of a bulk water meter. This will assist the governing body with distributing bills to residents, the identification of any leaks in the network, and meeting PWC standards should the town camp be subdivided in the future.

A total of 44 lot water meters were assessed during the inspection. Hidden Valley is believed to contain 47 dwellings. Therefore, up to an additional three water meters are required to be installed to cover the properties without an existing water meter. PWC have advised they currently bill for 57 dwellings, this exceeds the current number of houses at Hidden Valley. Note, some water meters may have been present however not visible due to overgrown flora or restricted property access. Consequently water meters may have not been discovered during the inspection.

6.2 Existing infrastructure condition assessment

The site investigation for the water infrastructure included assessing the condition of any air valves, fire hydrants, tanks, taps, and water meters. The assessment was limited to services that could be assessed above ground; no below ground services were inspected. A comprehensive review of all available documentation, including reviewing as-constructed drawings and having discussions with Power and Water Corporation was conducted. The following table compares the assets that have been constructed, according to the as-constructed drawings, and the assets assessed during the inspections conducted by Aurecon.

Table 5 Water supply assets inspected

Asset type	Number of assets as per documentation	Number of assets assessed during inspection
Fire hydrants	29	21
Water meter (residential lots)	50	44

As per Table 5 a number of fire hydrants and a number of water meters were not assessed during the inspections, this is likely due to overgrown flora or restricted property access as previously discussed.

Of the assets assessed during the inspections, two fire hydrants and a water meter are not shown on the available documentation. The two hydrants are located on the boundary of the camp and thus may not be serviced by this water reticulation network. The water meter is located inside a fenced off portion behind the community centre and may have been part of an abandoned reticulation network.

The condition of each asset is as follows:

Table 6 Water asset condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Fire hydrants		8	6	7		21
Water meter (residential lots)	2	4	34	4		44



Figure 4 Fire hydrant, condition: *poor*



Figure 5 Residential lot water meter condition: *very poor*

In total, 21 fire hydrants were assessed with eight being in poor condition. The poor condition was due to peeling paint and being covered by soil. It is recommended that all eight hydrants in poor condition are cleared of any dirt and repainted.

Two residential lot water meters were in very poor condition and should be replaced. A further four were in poor condition with bent pipes and being in areas clearly affected by fire. It was unclear if all these water meters were in working condition. If so they are expected to require only minor maintenance to restore bent pipes and clear surrounding debris.

6.3 Current performance and risks

The current demand of the community was calculated based on the following design assumptions:

- The nominal peak day flow is 1300 L/capita/day, based on PWC's supplement to WSA 03 2002. This value is for the southern region of NT. It was assumed that

the nominal peak day flow of 1300 L/capita/day also applies to water usage within the community, although it is possible that this value could be higher in real life due to a lack of controls to reduce water usage.
- The Equivalent Population (EP) has been calculated assuming one household equates to 9 EP, based on discussions with Power and Water Corporation.
- The peak hour factors are listed in PWC's Supplement to WSA 03-2002, and they depend on the population range of the community. The peak hour factor of 3.0 has been adopted, for populations less than 500.

Table 7 shows the calculated water demand for Hidden Valley.

Table 7 Current water demand

Total dwellings	EP	Demand (l/s)	Peak hour demand (l/s)
47	423	6.35	19.04

The system is expected to meet PWC flow requirements (fire and peak hour). For cost estimation it is assumed that no works are required to upgrade the capacity of the existing network.

The assessment of water supply for firefighting has been based on the size of the water mains and the condition of the accessible fire hydrants. Additional hydrants have been recommended where it appears the existing number of hydrants are insufficient. In the case of Hidden Valley it is expected that no additional fire hydrants are required at this stage.

6.4 Future demands

As no new developments are currently planned for the community, there are no additional upgrades required to cater for future demand.

6.5 Recommended works

The infrastructure that was assessed as very poor or poor is recommended to be upgraded to prevent failure in the future. The following maintenance works are required:
- Clear dirt from covering fire hydrant
- Repaint eight fire hydrant
- Replace two existing residential water meters
- Repair bent pipes connecting to four water meters

The community is viewed overall as single lot and as previously detailed proposed have the water usage measured as such. In order to measure the water usages as a single lot, a bulk water meter should be installed. As the network has two supply points, one of the supply points should be disconnected and reconnected to the internal network creating a looped main. This allows the single remaining point to be metered. The cost estimates for upgrades at Hidden Valley include;
- Install three new residential water meters
- Install new bulk water meter at community boundary
- Disconnect secondary supply point and extend dead ends to create looped mains

7 Roadworks

7.1 Ownership and boundaries

It is the current understanding that the roads are owned by Ewyenper-Atwatye Association Incorporated, but are the responsibility of Tangentyere Council Incorporated to maintain.

The road infrastructure has been upgraded to comply with Alice Springs Town Council requirements, however the upgrades have not been approved for hand over to the ASTC.

7.2 Existing infrastructure condition assessment

The road network within Ewyenper Atwatye (Hidden Valley) community consists of a mix of sealed and unsealed roads. There are also numerous informal tracks which appear to be used frequently but are not covered in this inspection and report.

Road furniture including signs, foot paths and car parks were also inspected. Table 8 below summarise the condition of the road furniture as assessed during the site inspection.

Table 8 Roadworks condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Carpark			1			1
Sign		1	6	5	1	13



Figure 6 Carpark, condition: *good*



Figure 7 Sign, condition: *poor*

The carpark is in good condition and would only need work to be undertaken if it was deemed necessary to have this carpark sealed, refer to Figure 6.

All the signs within the community are all in good condition or better with the exception of one pictured in Figure 7, which is bent from the base.



Figure 8 Community road network

Table 9 below details the condition of the roads within Ewyenper Atwatye (Hidden Valley) community for specific segments. Figure 8 shows a map of the community's road network with the condition ratings, road name, and chainage direction. Note, the percentage refers to the percentage of that particular road segment which experiences the defect.

Table 9 Road network condition assessment

Road name	Chainage start (km)	Chainage end (km)	Condition (1 to 5)	Defects and associated condition
Abbott Court	0	0.15	4	-Small localized surface failure (no ranking)
	0.15	0.26	4	-<5% of the road has transverse cracking (3) -<5% of the road has longitudinal cracking (no ranking)
Ewyenper Street	0	0.1	3	-10% of the road has edge breaks, most of the edges have been resurfaced (3) -10 potholes that have been filled in (4)
	0.1	0.2	5	None
	0.2	0.4	5	None
	0.4	0.6	4	-1 m^2 surface failure (2)

Road name	Chainage start (km)	Chainage end (km)	Condition (1 to 5)	Defects and associated condition
	0.6	0.8	5	None
	0.8	0.94	5	None
Irretye Court	0	0.16	5	None
Lockyer Court	0	0.06	5	None
Tjjwanpa Court	0	0.1	5	None
	0.1	0.23	4	None



Figure 9 Pavement, condition: *excellent*



Figure 10 Pavement, condition: *very good*

7.3 Current performance and risks

The road network within Hidden Valley is in very good condition. The layout of the road network is sufficient for the current number of houses.

It was noted during the site inspections that a number of unsealed 'short-cuts' had been created and were regularly used. It is not recommended that these paths are formalised.

7.4 Future demands

As no new developments are currently planned for the community, there are no additional upgrades required to cater for future demand.

7.5 Recommended works

The infrastructure that was assessed as very poor or poor is recommended to be upgraded to prevent failure in the future. The following works are recommended to upgrade the current infrastructure;

- General clean of 1000 m of pavement including kerbs, gutters and road reserve
- Replace one sign
- Repair surface failure of localised 1 m2 patch
- Repair 75 m2 of cracking
- Repair 10 m of edge breaks

8 Stormwater drainage

8.1 Ownership and boundaries

The stormwater drainage infrastructure at Hidden Valley is owned by Ewyenper-Atwatye Association Incorporated, but are the responsibility of Tangentyere Council Incorporated to maintain. The stormwater drainage assets outside of Hidden Valley are the responsibility of Alice Springs Town Council to maintain.

8.2 Existing infrastructure condition assessment

The site investigation for the stormwater infrastructure included assessing the condition of swales, culverts, headwalls, and side entry pits (SEP). Only the above ground infrastructure was assessed. As the inspection was undertaken outside of a storm event and no CCTV of the pipes was undertaken, flooding due to blockages or damage to the underground infrastructure could not be assessed. Table 10 below summarises the condition of the stormwater assets as assessed during the inspection.

Table 10 Stormwater condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Culvert			3	4		7
Letterbox pit				1	1	2
SEP				19	15	34
Swale		4	1	2		7



Figure 11 Side entry pit, condition: *very good*



Figure 12 Culvert headwall with safety grate, condition: *very good*



Figure 13 Swale with energy dissipaters, condition: *very good*



Figure 14 Letterbox pit, condition: *excellent*

Generally the stormwater drainage assets were in good and very good condition. Some of the swales were in poor condition due to erosion of loose soils. This could also be a result of the swales being recently constructed. A more detailed stormwater drainage analysis would be required to determine a suitable lining material to reduce the amount of erosion.

8.3 Current performance and risks

The detailed performance of the stormwater network cannot be fully analysed without significant hydraulic and hydrodynamic modelling, which is outside the scope of this project. However based on the condition of the stormwater infrastructure assessed it would appear to be operating adequately.

8.4 Future demands

As no new developments are currently planned for the community, there are no additional upgrades required to cater for future demand.

8.5 Recommended works

The following works are recommended to upgrade or improve the current infrastructure:

- Clear blockages from three side entry pits (between 10 and 20% blocked)
- Clear blockages from five culvert headwalls (currently blocked up to 80%)

9 Community structures

9.1 Ownership and boundaries

The community structures within Ewyenper Atwatye (Hidden Valley) are owned by Ewyenper-Atwatye Association Incorporated, but are the responsibility of Tangentyere Council Incorporated to maintain.

9.2 Existing infrastructure condition assessment

The site investigation for the community structures included assessing the condition and features of playgrounds, basketball courts and shade structures. The following table shows the condition rating given to the community structures.

Table 11 Community structures condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
BBQ area				1		1
Playground	1			1		2



Figure 15 BBQ, condition: *very good*



Figure 16 Playground, condition: *very good*



Figure 17 Playground, condition: *very poor*

9.3 Current performance and risks

The current surrounding areas around the community structures needs to be cleaned due to broken glass and other debris. One of the playgrounds has no shade cloth. It is recommended that a shade cloth is installed to improve the usability of the playground.

9.4 Future demands

As no new developments are currently planned for the community, there are no additional upgrades required to cater for future demand.

9.5 Recommended works

The following works are recommended to upgrade the community structures:

- Repaint one playground
- Rebuild one playground
- Install shade cloth over one of the playgrounds
- General clean and maintenance of both playground areas and BBQ area
- Repair BBQ

10 Electrical services

10.1 Ownership and boundaries

The following points, from Network Policy NP003 Installation Rules Section 3, define the typical shared ownership of electrical infrastructure by Power and Water Corporation (PWC) and customers.

- The point of supply is defined as the point where PWC makes the electrical supply available. For domestic supply, this is normally one of the following:
- A point of attachment of an overhead service on to a building or pole on which a metering panel is fitted.
- A point of attachment of an overhead service on to a pole forming part of unmetered aerial consumer's mains.
- A nominated point on a distribution substation located on the customer's lot.
- A point of connection of an underground service in a metering panel, including underground services originating at an overhead line.
- A point of connection of an underground service in a pillar or junction box forming part of unmetered consumer's mains, located on the customer's lot.
- A point on a Power and Water pillar located on the customer's lot.

Typically, distribution infrastructure upstream of the Point Of Supply is owned and maintained by PWC and infrastructure below the point of supply is owned and maintained by the customer.

In many cases PWC have defined a Point Of Supply to ensure that they retain responsibility for aerial high voltage infrastructure, and aerial low voltage infrastructure where installed with aerial high voltage infrastructure, to minimise the possibility of the community or it's contractors coming into contact, either deliberately or inadvertently, with aerial high voltage infrastructure.

In other cases isolation facilities are present or desired by PWC to define the Point of Supply at or near the boundary of the town camp.

PWC advise that most of Tennant Creek/Alice Springs Town Camps have undergone upgrades under the SIHIP program with the intent to normalise the services to look like an urban subdivision but have never been formally handed over to PWC for operations and maintenance.

The Hidden Valley community electrical reticulation systems is supplied by an overhead reticulation scheme to individual houses. There are four transformers within the camp boundary. Prepaid meters are utilised in Hidden Valley community.

PWC advise that the Point Of Supply is the LV terminals of the substations and that they own and are responsible for the first pole mount substation and upstream infrastructure.

PWC recommend that a GBS (Gas Break Switch) be provided upstream of the first transformer to establish a demarcation point.

PWC advise that street lighting is supplied from unmetered LV infrastructure and is the responsibility of the lot holder and not PWC.

All meters, whether pre- or post-paid are the property of PWC.

Hidden Valley community are responsible for maintain all unmetered and metered LV infrastructure including the main switchboard, metering panel (excluding meter), LV distribution feeders, distribution pillars, consumers' mains and consumer switchboards and street lights.

10.2 Existing infrastructure condition assessment

Table 12 shows the condition rating given to the street lights. The street lights on OH poles were of a low voltage overhead feeder design, sodium lamp type S150, with lamp covers not protected by cages. The street lights have a 75.76% operational rating and 24.24% non-operational rating.

Table 12 Street light on O/H Pole condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Street light on O/H Pole	1	7	25			33

Table 13 shows the condition rating given to the transformer. The transformers were of pole mount substation design. The transformers were visually accessed to be in good condition.

Table 13 Transformer condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Transformer			4			4

Table 14 shows the condition rating given to the Overhead poles. The overhead poles are of Weld Construction (Universal Pole construction) and steel LV construction. The overhead poles have 100% operational rating from the visual inspection.

Table 14 Overhead pole condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Overhead pole			37			37

Table 15 shows the condition rating given to the Metering panels. All assessed meters in this community are prepaid digital meters.

Table 15 Meter Panel condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Pre-paid Meter			21			21
Switchboard		3	8			11

Table 16 shows the condition rating given to the switchboards associated to dwellings.

Table 16 Switchboard condition assessment (housing footprint)

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Switchboard		2	11			13

The details of the individual inspections and photographs of each infrastructure item are included in Appendices.

10.3 Current performance and risks

The electrical infrastructure evaluation was conducted against the following criteria

- Number of dwellings on tenure, the higher value of the funded dwelling and as quoted in the population report was utilised.
- Urban area, NP001.1, 4. Definitions.
- General Specification for URD Subdivisions, NP001.6, 4.3 Substation Size.
- Normal ADMD (After Diversity Maximum Demand) of 4.5 kVA and high cost subdivisions at 7 kVA.
- Transformer ratings were assumed to be correct in Dekho (PWC asset information system) and compared against photographs of test or transformer numbers collected.
- Substation loads were compared against transformer sizes only. No load flow analysis was conducted.
- No load calculations were performed or assessment conducted on overhead or underground cable, visual inspection from the ground only.
- Street lighting loads were ignored as they are not significant.

The calculated maximum demand of the Hidden Valley community transformer is 58% of rated capacity based on 4.5kVA/dwelling. Preparation of record drawings is recommended to confirm actual distribution arrangements.

Table 17 Hidden Valley current demand load vs transformer ratings

Com Id	Community name	Dwellings	Transformer (kVA)	kVA Total @ 4.5kVA	kVA Total @ 7kVA	Comments
35	Ewyenper Atwatye (Hidden Valley)	47	100 100 63 100	211.5	329	Multiple transformers in boundary.

A tabulated summary of all community transformers is included in Appendices.

There is a risk of equipment not being maintained associated with the non-standard division of responsibilities between the customer and PWC.

The following points from the PWC Metering Rules should be noted:

- The routine maintenance of metering installations and the replacement of any faulty meters is the responsibility of PWC.
- The property owners are responsible for the maintenance and upkeep of meter rooms, boxes and panels (including lids, doors and locking mechanisms).
- The installation of pre-paid metering is a cost to the customer, refer NP010 Meter Manual-Maintenance of Metering Installations, Power and Water Corporation.

10.4 Future demands

As no new developments are currently planned for the community, there are no additional upgrades required to cater for future demand.

10.5 Recommended works

The following maintenance works and upgrades are recommended:

- Replace eight 150W street lights.
- Replace three switchboards inside the metering panel
- Replace two switchboards associated to dwellings

11 Communications

11.1 Ownership and boundaries

Details of Telstra pit and conduit infrastructure within the town camp boundaries were sought but were not forthcoming.

11.2 Existing infrastructure condition assessment

The telecommunications infrastructure assessed included pits and telephone booths.

Appendices contains the individual reports.

Table 18 Telecommunication pit condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Telecommunication pit			10			10

Table 19 Telephone booth condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Phone booth						4 (status unknown)

11.3 Current performance and risks

No details of the performance of communications infrastructure were obtained.

11.4 Future demands

The current availability of broadband services at Hidden Valley is displayed in the Figure 18 below. NBN is available to residents via satellite on application to an appropriate NBN access provider.

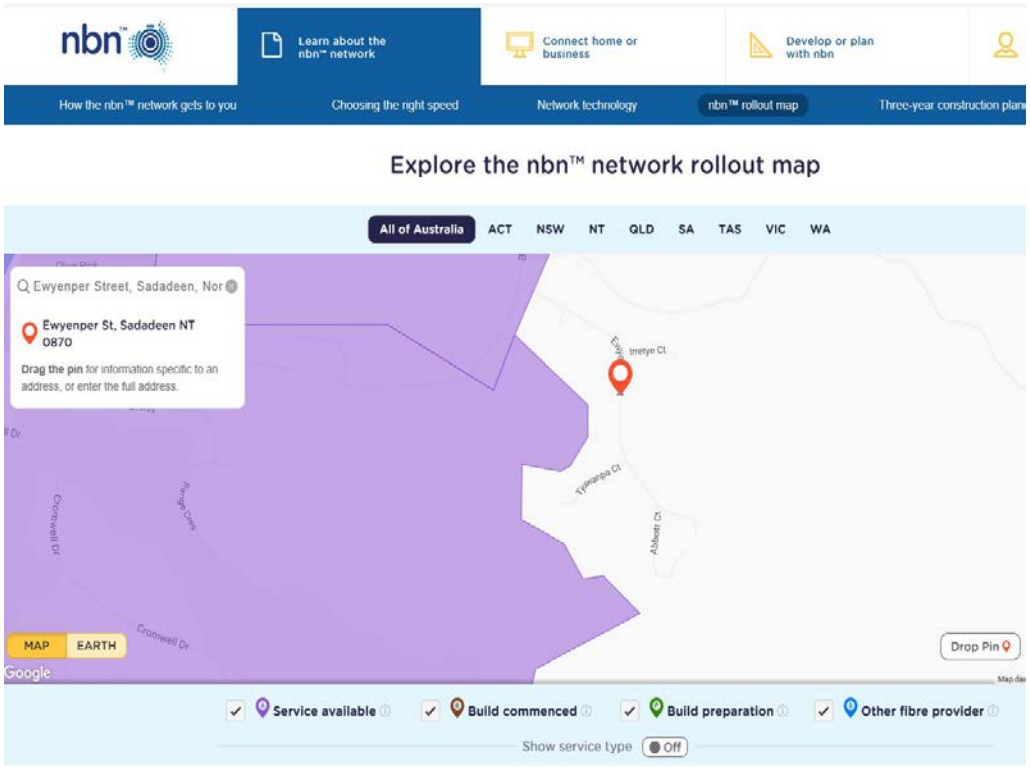


Figure 18 NBN network availability map

NBN is available to residents via satellite on application.

11.5 Recommended works

Representatives from NBN's Land Access and Stake Holder management teams are currently engaged with Yilli Housing and NT Housing to look at how camps will be serviced. It is expected that any existing premises in these camps will have some type of NBN service via the NBN brownfields rollout in the future.

No works are required at Hidden Valley because NBN is available to residents via satellite on application to an appropriate NBN access provider.

12 Cost estimates

Table 20 below shows a summary of the cost estimates to undertake the maintenance required to fix the existing infrastructure and to upgrade the existing network to meet current design standards. There are no upgrades required for the future design. The estimates take into account a 30% contingency, are inclusive of GST, and a location factor has been applied to town camps outside of Darwin.

Table 20 Cost estimates

Infrastructure	Maintenance of existing infrastructure	Upgrades to meet current design
Sewerage	$ 0	$ 0
Water supply	$ 8,000	$ 84,000
Roadworks	$ 18,000	$ 0
Stormwater drainage	$ 9,000	$ 0
Community structures	$ 30,000	$ 0
Electrical	$ 22,000	$ 0
Communications	$ 0	$ 0
Miscellaneous provisions	$ 20,000	$ 20,000
Total (including GST)	**$ 107,000**	**$ 104,000**
Grand total	**$ 211,000**	

The cost estimates are a preliminary estimate only. Since Aurecon has no control over the cost of labour, materials, equipment or services furnished by others, or over contractors' methods of determining prices, or over competitive bidding or market conditions, Aurecon cannot guarantee actual costs will not vary from these estimates.

13 Summary

The following works are recommended for Hidden Valley community:

Sewerage

- No immediate maintenance works or upgrades required.

Water supply

- Clear dirt from covering fire hydrant
- Repaint eight fire hydrant
- Replace two existing residential water meters
- Repair bent pipes connecting to four water meters
- Install three new residential water meters
- Install new bulk water meter at community boundary
- Disconnect secondary supply point and extend dead ends to create looped mains

Roadworks

- General clean of 1000 m of pavement including kerbs, gutters and road reserve
- Replace one sign
- Repair surface failure of localised 1 m2 patch
- Repair 75 m2 of cracking
- Repair 10 m of edge breaks

Stormwater drainage

- Clear blockages from three side entry pits (between 10 and 20% blocked)
- Clear blockages from five culvert headwalls (currently blocked up to 80%)

Community structures

- Repaint one playground
- Rebuild one playground
- Install shade cloth over one of the playgrounds
- General clean and maintenance of both playground areas and BBQ area
- Repair BBQ

Electrical services

- Replace eight 150W street lights.
- Replace three switchboards inside the metering panel
- Replace two switchboards associated to dwellings

Communications

- No works are required because NBN is available to residents via satellite on application to an appropriate NBN access provider.

Civil inspection reports



Map by: DMcP P:\GIS\Projects\253963_NT_Town_Camps\253963_003_Civil_DDP.mxd 23/02/2017 12:02 Imagery: Digital Globe WV2 2013-2016

A3 scale: 1:3,500

0 20 40 60 80 100 m

Note:
Label numbers refer to survey IDs

Date: 23/02/2017 Version: 2

Coordinate system: MGA94 Zone 52

NT Town Camp Infrastructure Assessments: Sewerage

35 - Ewyenper Atwatye (Alice Springs)

5086



Map by: DMcP P:\GIS\Projects\253963_NT_Town_Camps\253963_003_Civil_DDP.mxd 23/02/2017 12:02 Imagery: Digital Globe WV2 2013-2016

Legend

Town Camp boundary

Water

- Fire Hydrants (21)
- Water Meter (45)

A3 scale: 1:3,500

0 20 40 60 80 100 m

Note:
Label numbers refer to survey IDs

Date: 23/02/2017 Version: 2

Coordinate system: MGA94 Zone 52

NT Town Camp Infrastructure Assessments: Water

35 - Ewyenper Atwatye (Alice Springs)

5087



Legend

Town Camp boundary

Community structures

- BBQ/Table and Chairs (1)
- Playground (2)

Road furniture

- Car Parks (1)
- Signs (13)

Stormwater

- Culverts (7)
- Letter Box Pit (2)
- Side Entry Pit (36)
- Swales (7)

Map by: DMcP P:\GIS\Projects\253963_NT_Town_Camps\253963_003_Civil_DDP.mxd 23/02/2017 12:02 Imagery: Digital Globe WV2 2013-2016

A3 scale: 1:3,500

0 20 40 60 80 100 m

Note:
Label numbers refer to survey IDs

Date: 23/02/2017 Version: 2

Coordinate system: MGA94 Zone 52

NT Town Camp Infrastructure Assessments
Road furniture, stormwater drainage & community structures
35 - Ewyenper Atwatye (Alice Springs)

5088

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 11:52:36 AM

Insp ID: 529 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Road Name:	Tjjwanpa Court
What are you inspecting:	Car Parks
Carpark Width (m):	6
Carpark Length (m):	15
Carpark Type:	Unsealed
Carpark Condition:	3 - Good
Line marking:	No
Kerbs:	No
General Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 11:09:22 AM

Insp ID: 548 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	Culverts
Culvert Type:	RCBC
Diameter (mm):	
Width (mm):	1200
Culvert Depth (mm):	750
Culvert Length (m):	21
Culvert Condition:	4 - Very Good
Culvert Blockage (%):	30
Culvert Comments:	
Culvert Head Wall:	Yes
Safety Grate:	No
Headwall Blockage:	30
Headwall Condition:	4 - Very Good
Headwall Comment:	
End Wall:	Yes
End Wall condition:	4 - Very Good
EW Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 11:09:22 AM



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 10:49:34 AM

Insp ID: 559 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	Culverts
Culvert Type:	RCP
Diameter (mm):	650
Width (mm):	
Culvert Depth (mm):	
Culvert Length (m):	41
Culvert Condition:	4 - Very Good
Culvert Blockage (%):	
Culvert Comments:	
Culvert Head Wall:	Yes
Safety Grate:	Yes
Headwall Blockage:	
Headwall Condition:	4 - Very Good
Headwall Comment:	
End Wall:	Yes
End Wall condition:	4 - Very Good
EW Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 10:49:34 AM



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 3:28:33 PM

Insp ID: 648 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	Culverts
Culvert Type:	RCBC
Diameter (mm):	
Width (mm):	1200
Culvert Depth (mm):	
Culvert Length (m):	23
Culvert Condition:	3 - Good
Culvert Blockage (%):	
Culvert Comments:	Thick layer of sand, depth to sand is 450. Couldn't get to bottom of culv
Culvert Head Wall:	Yes
Safety Grate:	No
Headwall Blockage:	
Headwall Condition:	4 - Very Good
Headwall Comment:	Blockage percentage unknown
End Wall:	Yes
End Wall condition:	
EW Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 3:28:33 PM





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 3:16:22 PM

Insp ID: 652 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	Culverts
Culvert Type:	RCP
Diameter (mm):	450
Width (mm):	
Culvert Depth (mm):	
Culvert Length (m):	
Culvert Condition:	4 - Very Good
Culvert Blockage (%):	
Culvert Comments:	
Culvert Head Wall:	Yes
Safety Grate:	Yes
Headwall Blockage:	20
Headwall Condition:	4 - Very Good
Headwall Comment:	Entrance to underground stormrewater drainage
End Wall:	
End Wall condition:	
EW Comment:	





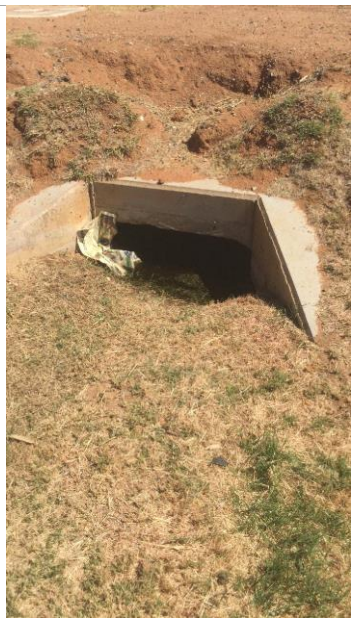
Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 2:49:11 PM

Insp ID: 670 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	Culverts
Culvert Type:	RCBC
Diameter (mm):	
Width (mm):	900
Culvert Depth (mm):	300
Culvert Length (m):	
Culvert Condition:	3 - Good
Culvert Blockage (%):	50
Culvert Comments:	
Culvert Head Wall:	No
Safety Grate:	
Headwall Blockage:	
Headwall Condition:	
Headwall Comment:	
End Wall:	Yes
End Wall condition:	3 - Good
EW Comment:	Ponding from blockage





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 2:40:34 PM

Insp ID: 675 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	Culverts
Culvert Type:	RCP
Diameter (mm):	450
Width (mm):	
Culvert Depth (mm):	
Culvert Length (m):	
Culvert Condition:	3 - Good
Culvert Blockage (%):	80
Culvert Comments:	Outlet from SEP, no upstream headwall
Culvert Head Wall:	
Safety Grate:	
Headwall Blockage:	
Headwall Condition:	
Headwall Comment:	
End Wall:	Yes
End Wall condition:	3 - Good
EW Comment:	



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 2:15:51 PM

Insp ID: 691 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	Culverts
Culvert Type:	RCP
Diameter (mm):	450
Width (mm):	
Culvert Depth (mm):	
Culvert Length (m):	20
Culvert Condition:	4 - Very Good
Culvert Blockage (%):	50
Culvert Comments:	
Culvert Head Wall:	Yes
Safety Grate:	No
Headwall Blockage:	50
Headwall Condition:	3 - Good
Headwall Comment:	Blockage
End Wall:	Yes
End Wall condition:	4 - Very Good
EW Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 2:15:51 PM



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 12:04:33 PM

Insp ID: 525 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Fire Hydrants

Single or Double:	Single
Sluice Valve:	No
Above or Below ground:	Below ground
FH Leakage:	No Access
Bollards around hydrant:	No
FH Condition:	3 - Good
FH Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 11:45:58 AM

Insp ID: 534 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Fire Hydrants

Single or Double:	Single
Sluice Valve:	No
Above or Below ground:	Below ground
FH Leakage:	No Access
Bollards around hydrant:	No
FH Condition:	2 - Poor
FH Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 11:44:33 AM

Insp ID: 535 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Fire Hydrants

Single or Double:	Single
Sluice Valve:	No
Above or Below ground:	Below ground
FH Leakage:	No Access
Bollards around hydrant:	No
FH Condition:	4 - Very Good
FH Comment:	



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 11:34:19 AM

Insp ID: 540 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Fire Hydrants

Single or Double:	Single
Sluice Valve:	
Above or Below ground:	Below ground
FH Leakage:	No Access
Bollards around hydrant:	No
FH Condition:	3 - Good
FH Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 11:01:32 AM

Insp ID: 553 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Fire Hydrants

Single or Double:	Single
Sluice Valve:	No
Above or Below ground:	Below ground
FH Leakage:	No Access
Bollards around hydrant:	No
FH Condition:	2 - Poor
FH Comment:	Only edge on hydrant pit visible



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 10:58:30 AM

Insp ID: 554 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Fire Hydrants

Single or Double:	Single
Sluice Valve:	No
Above or Below ground:	Below ground
FH Leakage:	No Access
Bollards around hydrant:	No
FH Condition:	2 - Poor
FH Comment:	Hardly visible other than indicator on gutter





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 10:03:20 AM

Insp ID: 586 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Fire Hydrants

Single or Double:	Single
Sluice Valve:	No
Above or Below ground:	Below ground
FH Leakage:	No Access
Bollards around hydrant:	No
FH Condition:	3 - Good
FH Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 9:43:22 AM

Insp ID: 591	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Fire Hydrants

Single or Double:	Single
Sluice Valve:	No
Above or Below ground:	Below ground
FH Leakage:	No Access
Bollards around hydrant:	No
FH Condition:	4 - Very Good
FH Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 9:06:12 AM

Insp ID: 609	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Fire Hydrants

Single or Double:	Single
Sluice Valve:	No
Above or Below ground:	Below ground
FH Leakage:	No Access
Bollards around hydrant:	No
FH Condition:	3 - Good
FH Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 4:21:27 PM

Insp ID: 618	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Fire Hydrants

Single or Double:	Single
Sluice Valve:	Yes
Above or Below ground:	Below ground
FH Leakage:	No Access
Bollards around hydrant:	No
FH Condition:	4 - Very Good
FH Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 4:20:19 PM

Insp ID: 619 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Fire Hydrants

Single or Double:	Single
Sluice Valve:	Yes
Above or Below ground:	Below ground
FH Leakage:	No Access
Bollards around hydrant:	No
FH Condition:	4 - Very Good
FH Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 3:56:27 PM

Insp ID: 634	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Fire Hydrants

Single or Double:	Single
Sluice Valve:	No
Above or Below ground:	Below ground
FH Leakage:	No Access
Bollards around hydrant:	No
FH Condition:	3 - Good
FH Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 3:54:07 PM

Insp ID: 636	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Fire Hydrants

Single or Double:	Single
Sluice Valve:	Yes
Above or Below ground:	Below ground
FH Leakage:	No Access
Bollards around hydrant:	No
FH Condition:	4 - Very Good
FH Comment:	









Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 3:54:07 PM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 3:48:09 PM

Insp ID: 641 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Fire Hydrants

Single or Double:	Double
Sluice Valve:	No
Above or Below ground:	Below ground
FH Leakage:	No Access
Bollards around hydrant:	No
FH Condition:	3 - Good
FH Comment:	Mostly covered





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 3:01:47 PM

Insp ID: 664	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Fire Hydrants

Single or Double:	Single
Sluice Valve:	No
Above or Below ground:	Below ground
FH Leakage:	No Access
Bollards around hydrant:	No
FH Condition:	3 - Good
FH Comment:	Not painted





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 2:36:34 PM

Insp ID: 677	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Fire Hydrants

Single or Double:	Single
Sluice Valve:	No
Above or Below ground:	Below ground
FH Leakage:	No Access
Bollards around hydrant:	No
FH Condition:	3 - Good
FH Comment:	Appears to be structurally good





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 2:35:16 PM

Insp ID: 679 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Fire Hydrants

Single or Double:	Single
Sluice Valve:	No
Above or Below ground:	Below ground
FH Leakage:	No Access
Bollards around hydrant:	No
FH Condition:	3 - Good
FH Comment:	Paint pealed off





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 2:20:32 PM

Insp ID: 688 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Fire Hydrants

Single or Double:	Single
Sluice Valve:	No
Above or Below ground:	Below ground
FH Leakage:	No Access
Bollards around hydrant:	No
FH Condition:	3 - Good
FH Comment:	Mostly covered





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 2:04:51 PM

Insp ID: 693	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Fire Hydrants

Single or Double:	Single
Sluice Valve:	No
Above or Below ground:	Below ground
FH Leakage:	No Access
Bollards around hydrant:	No
FH Condition:	3 - Good
FH Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 2:04:05 PM

Insp ID: 694	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Fire Hydrants

Single or Double:	Single
Sluice Valve:	No
Above or Below ground:	Below ground
FH Leakage:	No Access
Bollards around hydrant:	No
FH Condition:	4 - Very Good
FH Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 2:33:04 PM

Insp ID: 700	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Fire Hydrants

Single or Double:	Single
Sluice Valve:	No
Above or Below ground:	Below ground
FH Leakage:	No Access
Bollards around hydrant:	No
FH Condition:	4 - Very Good
FH Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 11:42:13 AM

Insp ID: 536 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	Letter Box Pit
Length (mm):	600
Height (mm):	300
Blockage Percentage (%):	
LB Condition:	5 - Excellent
LB Comments:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 2:45:47 PM

Insp ID: 672	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	Letter Box Pit
Length (mm):	1000
Height (mm):	
Blockage Percentage (%):	
LB Condition:	4 - Very Good
LB Comments:	Drainage grate in road 1000 x 700



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 12:08:06 PM

Insp ID: 522 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Sewerage Asset are you capturing:	Manholes
MH Cover Shape:	Rectangular
Manhole Cover Diam (mm):	
Manhole Length (mm):	1000
Manhole Width (mm):	700
Manhole Condition:	4 - Very Good
Notes on Lid:	
Comments:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 11:29:03 AM

Insp ID: 544 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Sewerage Asset are you capturing:	Manholes
MH Cover Shape:	Rectangular
Manhole Cover Diam (mm):	
Manhole Length (mm):	1000
Manhole Width (mm):	700
Manhole Condition:	4 - Very Good
Notes on Lid:	
Comments:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 11:08:07 AM

Insp ID: 549 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Sewerage Asset are you capturing:	Manholes
MH Cover Shape:	Rectangular
Manhole Cover Diam (mm):	
Manhole Length (mm):	1000
Manhole Width (mm):	700
Manhole Condition:	4 - Very Good
Notes on Lid:	
Comments:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 10:56:29 AM

Insp ID: 557 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Sewerage Asset are you capturing:	Manholes
MH Cover Shape:	Rectangular
Manhole Cover Diam (mm):	
Manhole Length (mm):	1000
Manhole Width (mm):	700
Manhole Condition:	4 - Very Good
Notes on Lid:	Class d
Comments:	



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 10:46:40 AM

Insp ID: 561 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Sewerage Asset are you capturing:	Manholes
MH Cover Shape:	Rectangular
Manhole Cover Diam (mm):	
Manhole Length (mm):	1000
Manhole Width (mm):	700
Manhole Condition:	3 - Good
Notes on Lid:	
Comments:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 10:36:51 AM

Insp ID: 567	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Sewerage Asset are you capturing:	Manholes
MH Cover Shape:	Rectangular
Manhole Cover Diam (mm):	
Manhole Length (mm):	
Manhole Width (mm):	
Manhole Condition:	4 - Very Good
Notes on Lid:	
Comments:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 10:36:51 AM



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 10:16:45 AM

Insp ID: 578	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Sewerage Asset are you capturing:	Manholes
MH Cover Shape:	Rectangular
Manhole Cover Diam (mm):	
Manhole Length (mm):	1000
Manhole Width (mm):	700
Manhole Condition:	4 - Very Good
Notes on Lid:	
Comments:	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 10:01:07 AM

Insp ID: 587 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Sewerage Asset are you capturing:	Manholes
MH Cover Shape:	Round
Manhole Cover Diam (mm):	450
Manhole Length (mm):	
Manhole Width (mm):	
Manhole Condition:	4 - Very Good
Notes on Lid:	
Comments:	Covered with dirt, otherwise very good



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 9:38:19 AM

Insp ID: 595 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Sewerage Asset are you capturing:	Manholes
MH Cover Shape:	Rectangular
Manhole Cover Diam (mm):	
Manhole Length (mm):	1000
Manhole Width (mm):	700
Manhole Condition:	4 - Very Good
Notes on Lid:	Class d
Comments:	

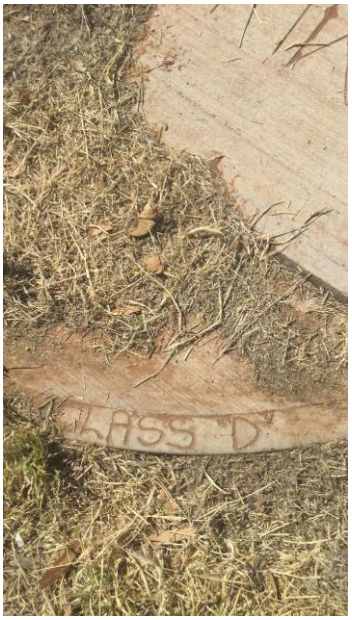
Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 9:19:28 AM

Insp ID: 605 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Sewerage Asset are you capturing:	Manholes
MH Cover Shape:	Rectangular
Manhole Cover Diam (mm):	
Manhole Length (mm):	1000
Manhole Width (mm):	700
Manhole Condition:	4 - Very Good
Notes on Lid:	Class d
Comments:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 9:19:28 AM



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 9:05:03 AM

Insp ID: 611	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Sewerage Asset are you capturing:	Manholes
MH Cover Shape:	Round
Manhole Cover Diam (mm):	450
Manhole Length (mm):	
Manhole Width (mm):	
Manhole Condition:	3 - Good
Notes on Lid:	Class d
Comments:	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 4:18:10 PM

Insp ID: 621 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Sewerage Asset are you capturing:	Manholes
MH Cover Shape:	Rectangular
Manhole Cover Diam (mm):	
Manhole Length (mm):	1000
Manhole Width (mm):	700
Manhole Condition:	5 - Excellent
Notes on Lid:	Class d
Comments:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 4:03:00 PM

Insp ID: 629 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Sewerage Asset are you capturing:	Manholes
MH Cover Shape:	Rectangular
Manhole Cover Diam (mm):	
Manhole Length (mm):	1000
Manhole Width (mm):	700
Manhole Condition:	4 - Very Good
Notes on Lid:	
Comments:	Manhole within boundary





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 3:04:20 PM

Insp ID: 662	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Sewerage Asset are you capturing:	Manholes
MH Cover Shape:	Rectangular
Manhole Cover Diam (mm):	
Manhole Length (mm):	1000
Manhole Width (mm):	700
Manhole Condition:	5 - Excellent
Notes on Lid:	
Comments:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 2:42:21 PM

Insp ID: 674 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Sewerage Asset are you capturing:	Manholes
MH Cover Shape:	Rectangular
Manhole Cover Diam (mm):	
Manhole Length (mm):	1000
Manhole Width (mm):	700
Manhole Condition:	5 - Excellent
Notes on Lid:	
Comments:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 2:22:54 PM

Insp ID: 687 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Sewerage Asset are you capturing:	Manholes
MH Cover Shape:	Rectangular
Manhole Cover Diam (mm):	
Manhole Length (mm):	1000
Manhole Width (mm):	700
Manhole Condition:	4 - Very Good
Notes on Lid:	Class d
Comments:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 12:09:45 PM

Insp ID: 517 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Road Name:	Tjjwanpa Court
What are you inspecting:	Pavements
Ch From (km):	0
Ch To (km):	0.1
Road Type:	Sealed - asphalt
Section Width (m):	6.2
Road Condition:	5 - Excellent
General Comment:	

Road Defects Section

Kerbs Section

Kerb Type	Kerb Cond	Kerb Comments
Kerb and Gutter	4 - Very Good	
Semi mountable Kerb and Gutter	4 - Very Good	

Shoulders Section

Linemarking Section

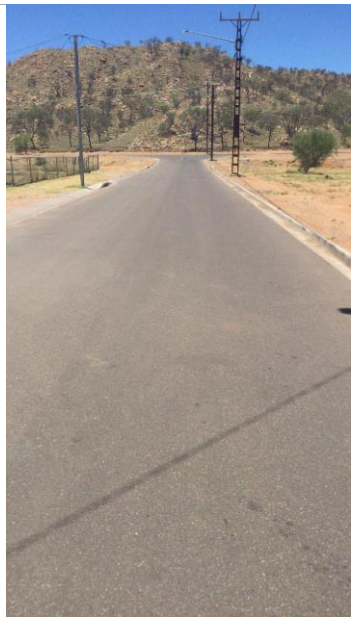
Line Type	Other Line Type	Line Cond	Line Comments
Stop line		3 - Good	

Obstruction Section

Northern Territory Town Camps

Civil Infrastructure

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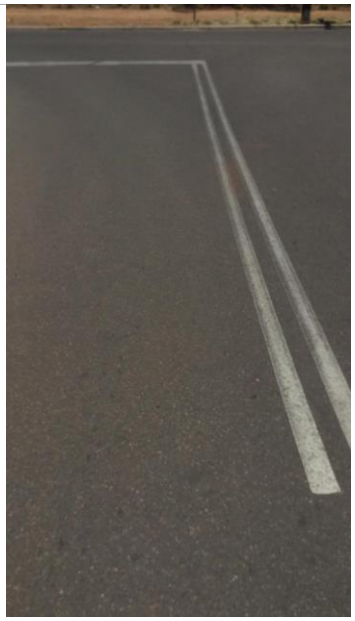


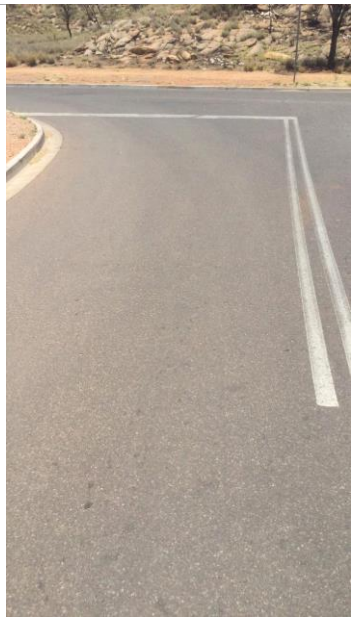


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Civil Infrastructure

Inspection Date 17/11/2016 11:35:48 AM

Insp ID: 538 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Road Name:	Tjjwanpa Court
What are you inspecting:	Pavements
Ch From (km):	0.1
Ch To (km):	0.23
Road Type:	Sealed - asphalt
Section Width (m):	6.2
Road Condition:	4 - Very Good
General Comment:	Build up of sand and leafs in gutters

Road Defects Section

Kerbs Section

Kerb Type	Kerb Cond	Kerb Comments
Kerb and Gutter	4 - Very Good	
Semi mountable Kerb and Gutter	4 - Very Good	

Shoulders Section

Linemarking Section

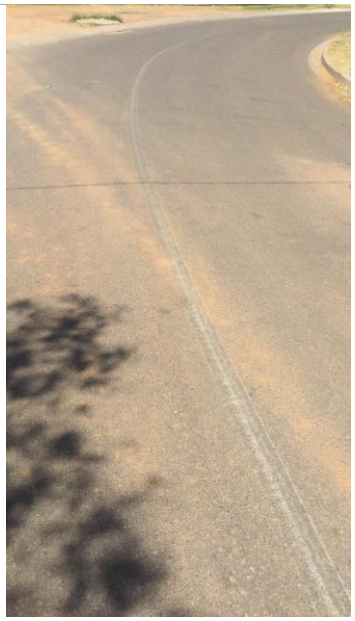
Line Type	Other Line Type	Line Cond	Line Comments
Unbroken lane line		1 - Very Poor	Line marking faded

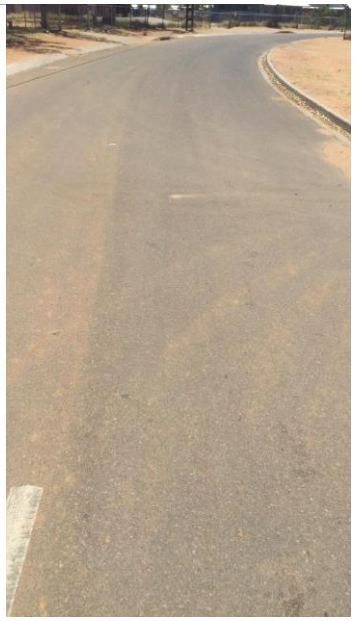
Obstruction Section

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Inspection Date 17/11/2016 10:24:28 AM

Insp ID: 575 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Road Name:	Ewyenper Street
What are you inspecting:	Pavements
Ch From (km):	0.8
Ch To (km):	0.94
Road Type:	Sealed - asphalt
Section Width (m):	6.6
Road Condition:	5 - Excellent
General Comment:	Build up of dirt in gutters

Road Defects Section

Kerbs Section

Kerb Type	Kerb Cond	Kerb Comments
Kerb and Gutter	4 - Very Good	
Semi mountable Kerb and Gutter	4 - Very Good	

Shoulders Section

Linemarking Section

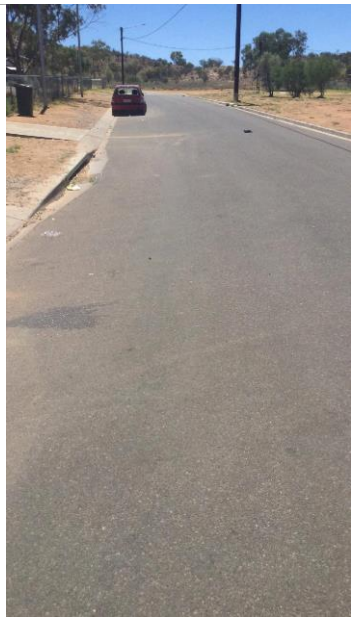
Obstruction Section

Road Obstruction	Other Road Obstruction
other	Broken car

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Inspection Date 17/11/2016 9:43:06 AM

Insp ID: 590 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Road Name:	Abbott Court
What are you inspecting:	Pavements
Ch From (km):	0
Ch To (km):	0.15
Road Type:	Sealed - asphalt
Section Width (m):	6.6
Road Condition:	4 - Very Good
General Comment:	

Road Defects Section

Defect Type	Defect QTY	Defect Condition	Defect Comments
Surfacing Failure			

Kerbs Section

Kerb Type	Kerb Cond	Kerb Comments
Kerb and Gutter	4 - Very Good	
Semi mountable Kerb and Gutter	4 - Very Good	

Shoulders Section

Linemarking Section

Line Type	Other Line Type	Line Cond	Line Comments
Stop line			

Obstruction Section

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Civil Infrastructure

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Inspection Date 17/11/2016 9:11:00 AM

Insp ID: 607 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Road Name:	Abbott Court
What are you inspecting:	Pavements
Ch From (km):	0.15
Ch To (km):	0.26
Road Type:	Sealed - asphalt
Section Width (m):	6.6
Road Condition:	4 - Very Good
General Comment:	

Road Defects Section

Defect Type	Defect QTY	Defect Condition	Defect Comments
Transverse Cracks	5	3 - Good	< 5%
Longitudinal Cracks	5		<5%

Kerbs Section

Kerb Type	Kerb Cond	Kerb Comments
Semi mountable Kerb and Gutter	4 - Very Good	

Shoulders Section

Linemarking Section

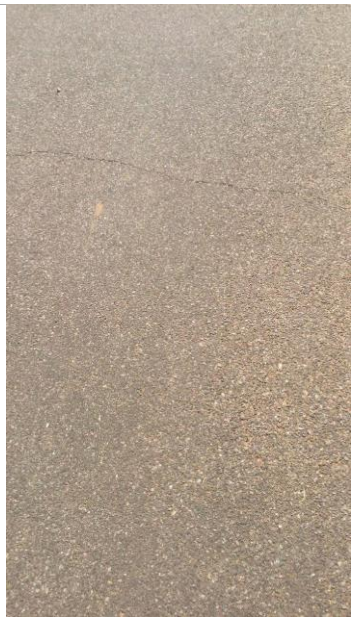
Line Type	Other Line Type	Line Cond	Line Comments
Unbroken lane line			

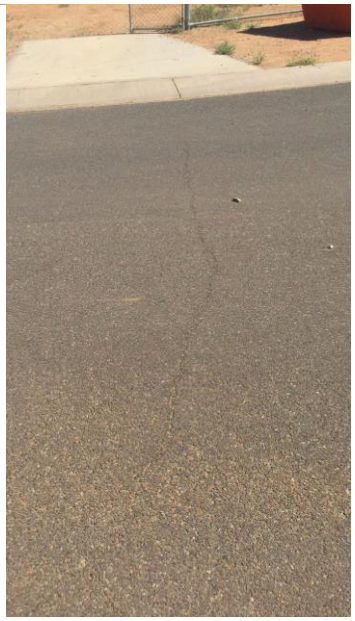
Obstruction Section

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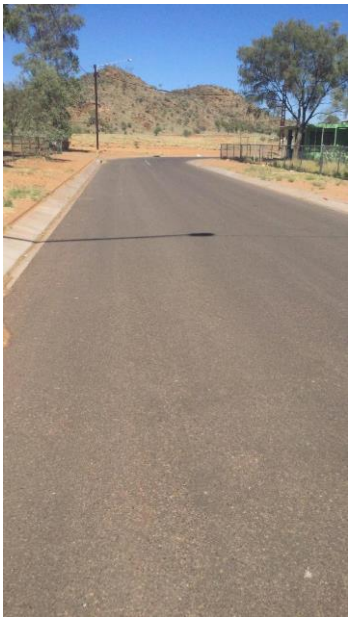
Civil Infrastructure

Inspection Date 17/11/2016 9:11:00 AM









Northern Territory Town Camps

Civil Infrastructure

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Civil Infrastructure

Inspection Date 17/11/2016 4:28:08 PM

Insp ID: 615 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Road Name:	Ewyenper Street
What are you inspecting:	Pavements
Ch From (km):	0
Ch To (km):	0.1
Road Type:	Sealed - asphalt
Section Width (m):	6
Road Condition:	3 - Good
General Comment:	This section is outside main community area, some repairs have been done

Road Defects Section

Defect Type	Defect QTY	Defect Condition	Defect Comments
Edge Breaks	10	3 - Good	Most of road edges have been resurfaced
Potholes	10	4 - Very Good	Potholes filled in

Kerbs Section

Kerb Type	Kerb Cond	Kerb Comments
No kerb		

Shoulders Section

Shoulder Type	Width	Dropoff(mm)	Erosion	Condition	Shoulder Comments
Unsealed					

Linemarking Section

Obstruction Section

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Civil Infrastructure

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Civil Infrastructure

Inspection Date 17/11/2016 4:25:51 PM

Insp ID: 616 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Road Name:	Lockyer Court
What are you inspecting:	Pavements
Ch From (km):	0
Ch To (km):	0.06
Road Type:	Sealed - asphalt
Section Width (m):	6.4
Road Condition:	5 - Excellent
General Comment:	

Road Defects Section

Kerbs Section

Kerb Type	Kerb Cond	Kerb Comments
Semi mountable Kerb and Gutter	5 - Excellent	

Shoulders Section

Linemarking Section

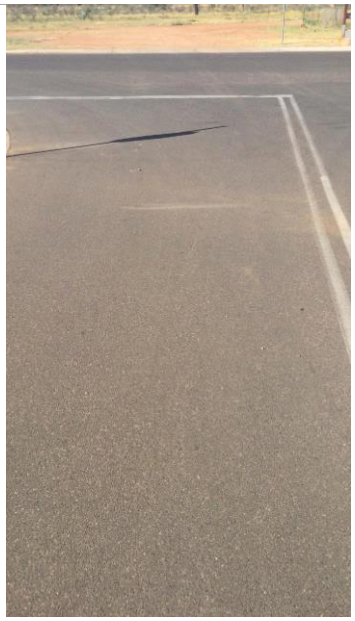
Line Type	Other Line Type	Line Cond	Line Comments
Stop line		3 - Good	

Obstruction Section

Northern Territory Town Camps

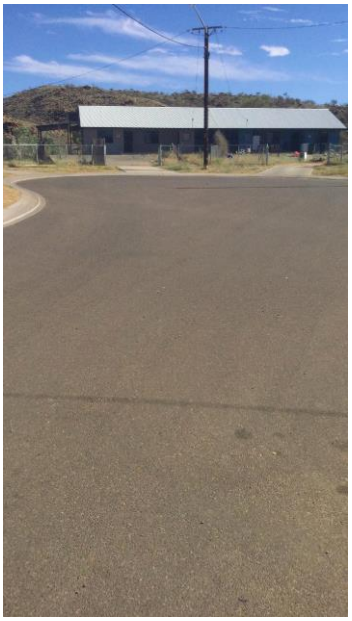
Civil Infrastructure

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Civil Infrastructure

Inspection Date 17/11/2016 4:22:27 PM

Insp ID: 617 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Road Name:	Ewyenper Street
What are you inspecting:	Pavements
Ch From (km):	0.1
Ch To (km):	0.2
Road Type:	Sealed - asphalt
Section Width (m):	10
Road Condition:	5 - Excellent
General Comment:	

Road Defects Section

Kerbs Section

Kerb Type	Kerb Cond	Kerb Comments
Semi mountable Kerb and Gutter	4 - Very Good	
Kerb and Gutter	4 - Very Good	

Shoulders Section

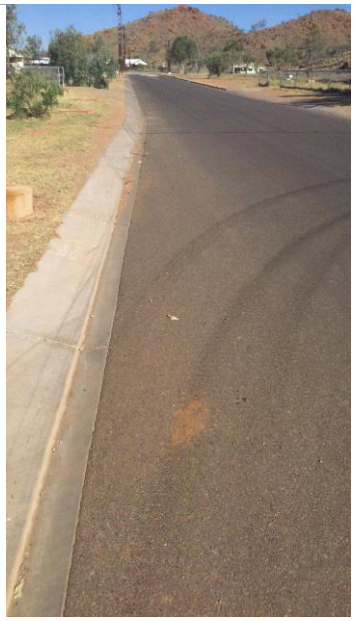
Linemarking Section

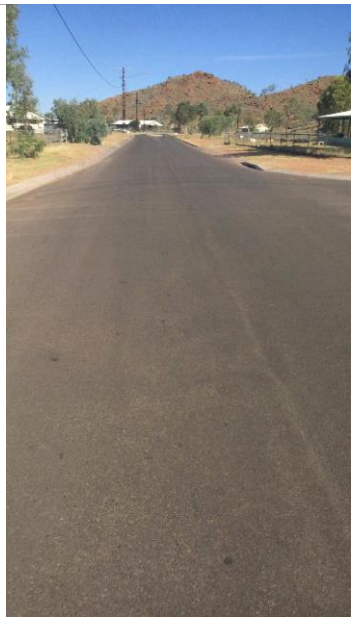
Obstruction Section

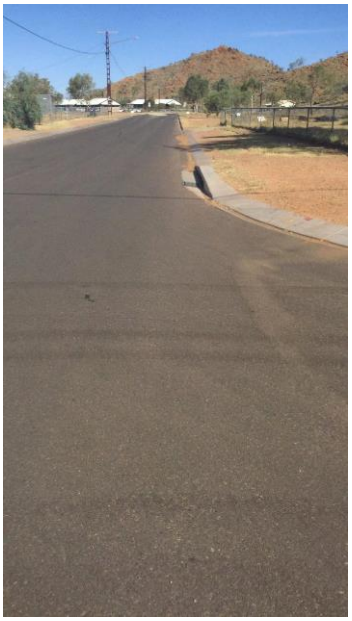
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Civil Infrastructure

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Civil Infrastructure

Inspection Date 17/11/2016 3:41:05 PM

Insp ID: 643 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Road Name:	Ewyenper Street
What are you inspecting:	Pavements
Ch From (km):	0.2
Ch To (km):	0.4
Road Type:	Sealed - asphalt
Section Width (m):	6.4
Road Condition:	5 - Excellent
General Comment:	2 island in section of road

Road Defects Section

Kerbs Section

Kerb Type	Kerb Cond	Kerb Comments
Kerb and Gutter	4 - Very Good	One section of broken kerb

Shoulders Section

Linemarking Section

Line Type	Other Line Type	Line Cond	Line Comments
Unbroken lane line			Around islands only
Edge line		3 - Good	Yellow line marking around islanc

Obstruction Section

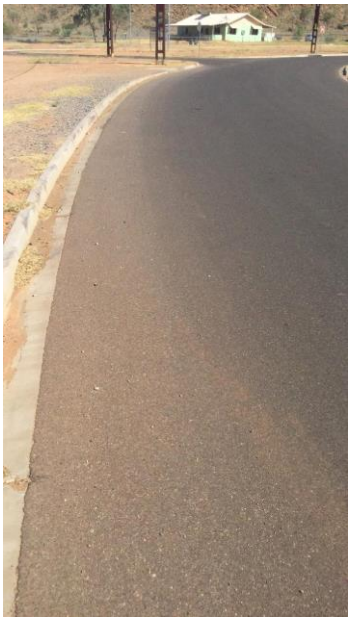
Northern Territory Town Camps

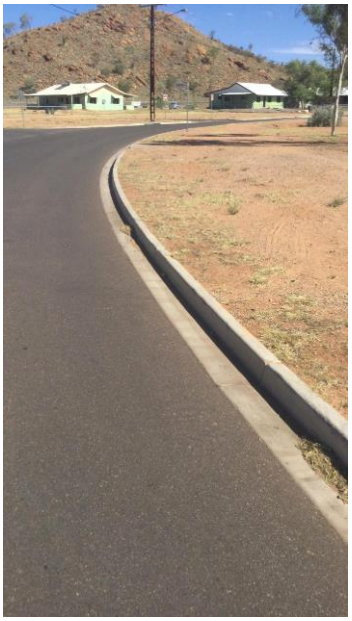
Civil Infrastructure

Inspection Date 17/11/2016 3:41:05 PM





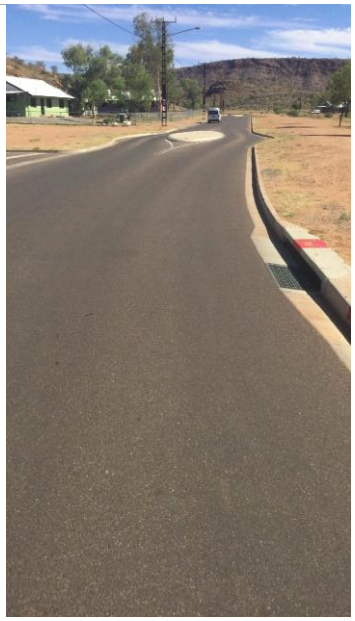




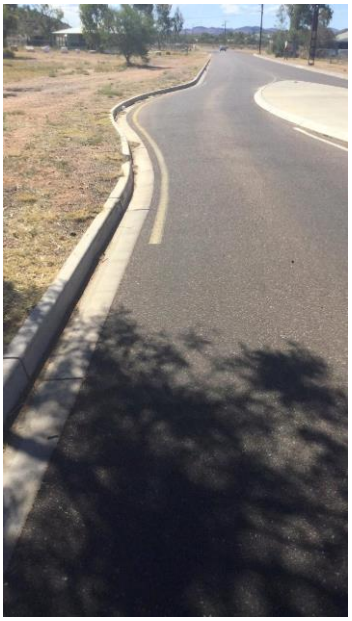
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Civil Infrastructure

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Insp ID: 650 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Road Name:	Irretye Court
What are you inspecting:	Pavements
Ch From (km):	0
Ch To (km):	0.16
Road Type:	Sealed - asphalt
Section Width (m):	6.5
Road Condition:	5 - Excellent
General Comment:	Side street off irretye court also assessed and in excellent condition

Road Defects Section

Kerbs Section

Kerb Type	Kerb Cond	Kerb Comments
Kerb and Gutter	4 - Very Good	Build up of sand in gutters
Semi mountable Kerb and Gutter	4 - Very Good	

Shoulders Section

Linemarking Section

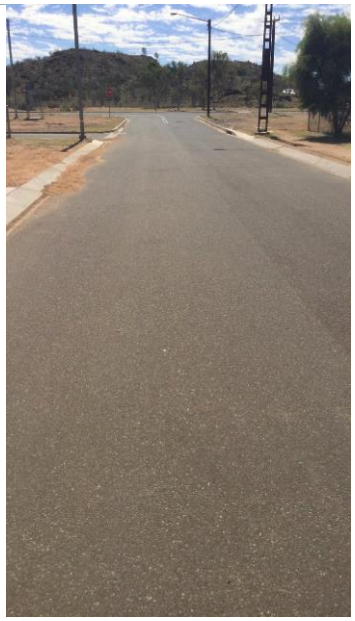
Line Type	Other Line Type	Line Cond	Line Comments
Stop line		4 - Very Good	

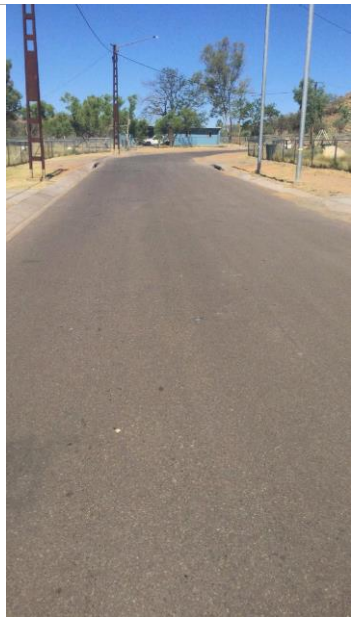
Obstruction Section

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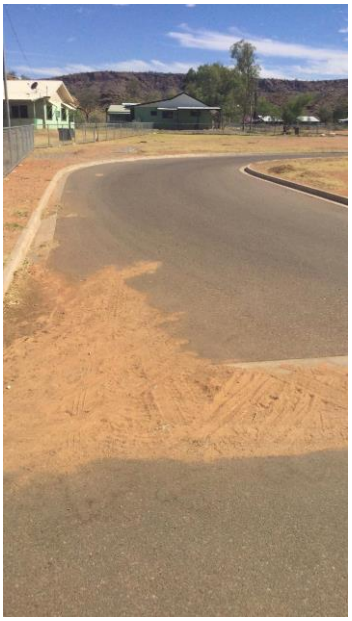
Civil Infrastructure

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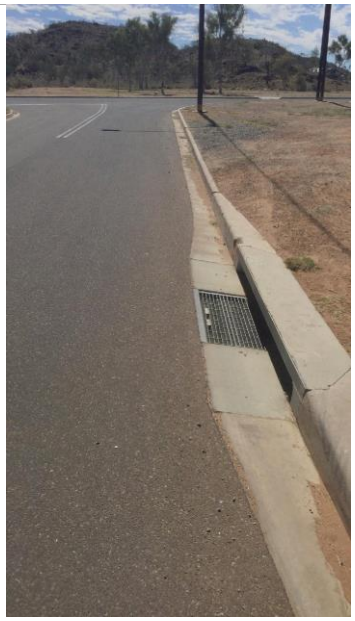




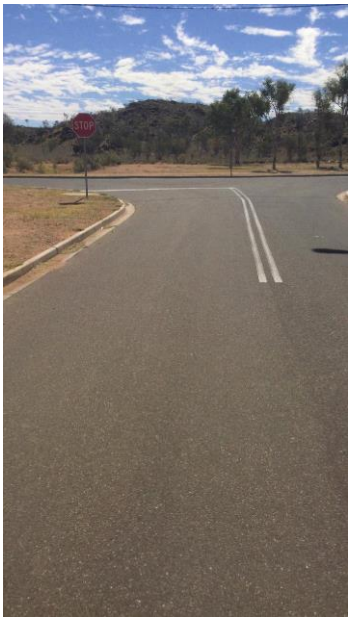
Northern Territory Town Camps

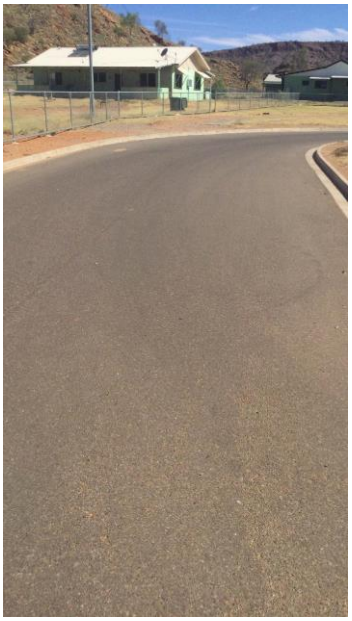
Civil Infrastructure

Inspection Date 17/11/2016 3:18:57 PM





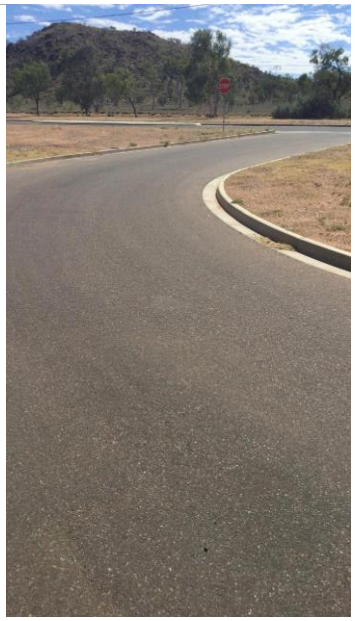




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Civil Infrastructure

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Inspection Date 17/11/2016 1:56:55 PM

Insp ID: 696 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Road Name:	Ewyenper Street
What are you inspecting:	Pavements
Ch From (km):	0.4
Ch To (km):	0.6
Road Type:	Sealed - asphalt
Section Width (m):	7.4
Road Condition:	4 - Very Good
General Comment:	

Road Defects Section

Defect Type	Defect QTY	Defect Condition	Defect Comments
Surfacing Failure	1	2 - Poor	1 metre square

Kerbs Section

Kerb Type	Kerb Cond	Kerb Comments
Kerb and Gutter	4 - Very Good	
Semi mountable Kerb and Gutter	4 - Very Good	

Shoulders Section

Linemarking Section

Line Type	Other Line Type	Line Cond	Line Comments
Unbroken lane line		4 - Very Good	Around island only
Edge line		3 - Good	Yellow edge line around island

Obstruction Section

Northern Territory Town Camps

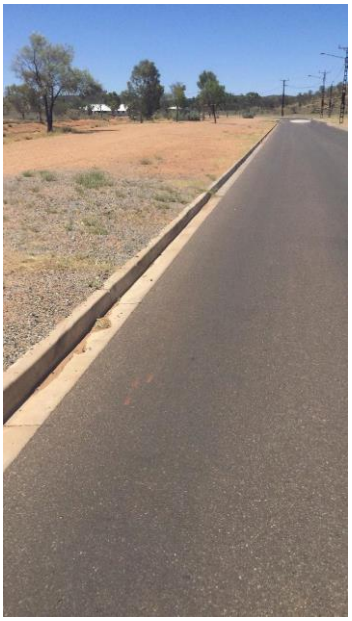
Civil Infrastructure

Inspection Date 17/11/2016 1:56:55 PM









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Inspection Date 17/11/2016 1:56:55 PM





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Civil Infrastructure

Inspection Date 17/11/2016 1:52:47 PM

Insp ID: 697 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Road Name:	Ewyenper Street
What are you inspecting:	Pavements
Ch From (km):	0.6
Ch To (km):	0.8
Road Type:	Sealed - asphalt
Section Width (m):	
Road Condition:	5 - Excellent
General Comment:	

Road Defects Section

Kerbs Section

Kerb Type	Kerb Cond	Kerb Comments
Kerb and Gutter	4 - Very Good	

Shoulders Section

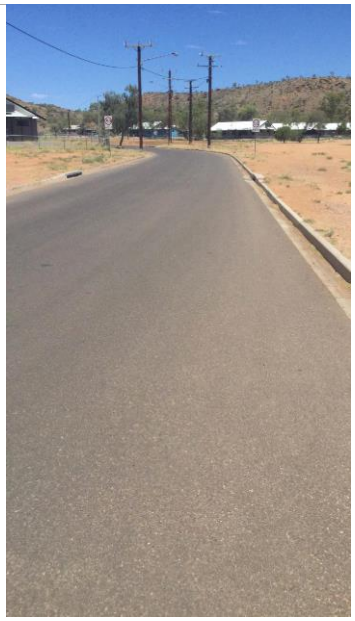
Linemarking Section

Obstruction Section

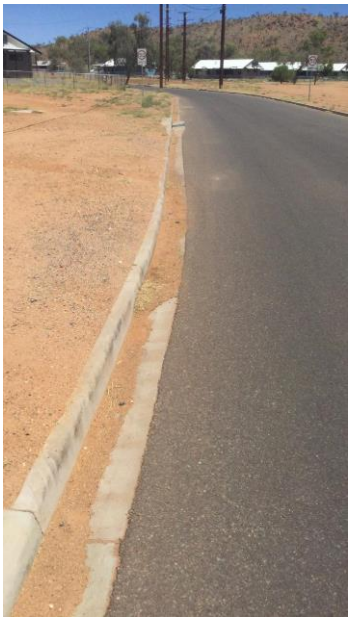
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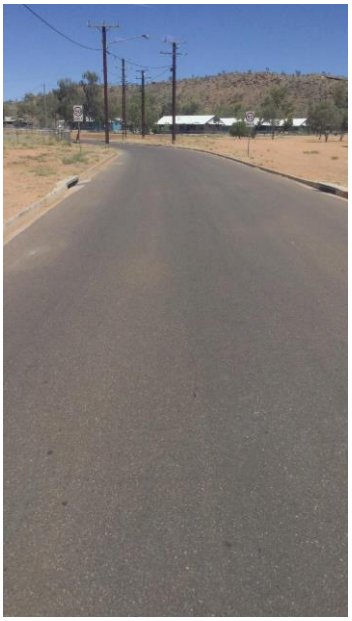
Civil Infrastructure

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Civil Infrastructure

Inspection Date 16/11/2016 11:04:33 AM

Insp ID: 368	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	SEP
Number of Bays:	2
On grade or sag pit:	
Both sides of road:	Both
Condition:	5 - Excellent
Blockage (%):	
Comment:	





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Civil Infrastructure

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Insp ID: 518	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	SEP
Number of Bays:	2
On grade or sag pit:	
Both sides of road:	Right
Condition:	5 - Excellent
Blockage (%):	
Comment:	





Northern Territory Town Camps

Civil Infrastructure

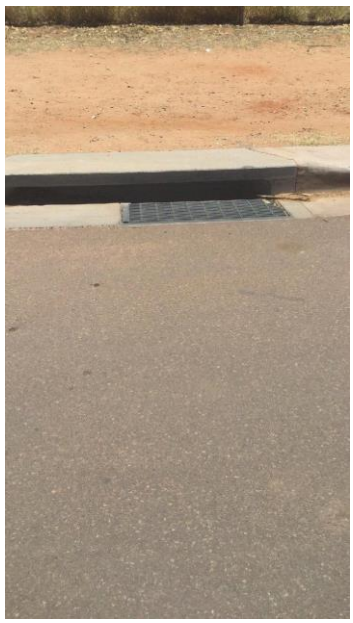
Inspection Date 17/11/2016 12:05:34 PM

Insp ID: 524	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	SEP
Number of Bays:	2
On grade or sag pit:	
Both sides of road:	Both
Condition:	4 - Very Good
Blockage (%):	
Comment:	







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Civil Infrastructure

Inspection Date 17/11/2016 12:03:33 PM

Insp ID: 526	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	SEP
Number of Bays:	2
On grade or sag pit:	
Both sides of road:	Right
Condition:	4 - Very Good
Blockage (%):	
Comment:	





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Civil Infrastructure

Inspection Date 17/11/2016 11:40:29 AM

Insp ID: 537	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	SEP
Number of Bays:	4
On grade or sag pit:	
Both sides of road:	Right
Condition:	4 - Very Good
Blockage (%):	
Comment:	





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Civil Infrastructure

Inspection Date 17/11/2016 11:09:06 AM

Insp ID: 547	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	SEP
Number of Bays:	3
On grade or sag pit:	
Both sides of road:	Both
Condition:	4 - Very Good
Blockage (%):	
Comment:	





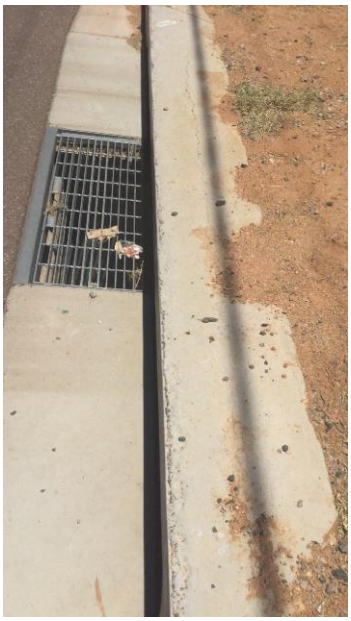
Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 10:58:46 AM

Insp ID: 555	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	SEP
Number of Bays:	3
On grade or sag pit:	
Both sides of road:	Left
Condition:	4 - Very Good
Blockage (%):	
Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 10:57:32 AM

Insp ID: 556	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	SEP
Number of Bays:	2
On grade or sag pit:	
Both sides of road:	Right
Condition:	5 - Excellent
Blockage (%):	
Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 10:45:09 AM

Insp ID: 562 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure: SEP

Number of Bays:

On grade or sag pit:

Both sides of road:

Condition:

Blockage (%):

Comment:





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 10:42:16 AM

Insp ID: 564 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure: SEP

Number of Bays:

On grade or sag pit:

Both sides of road:

Condition:

Blockage (%):

Comment:







Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 10:42:16 AM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 10:38:32 AM

Insp ID: 566 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	SEP
Number of Bays:	2
On grade or sag pit:	
Both sides of road:	Right
Condition:	4 - Very Good
Blockage (%):	
Comment:	







Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 10:38:32 AM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 10:34:46 AM

Insp ID: 570	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	SEP
Number of Bays:	3
On grade or sag pit:	
Both sides of road:	Left
Condition:	4 - Very Good
Blockage (%):	
Comment:	



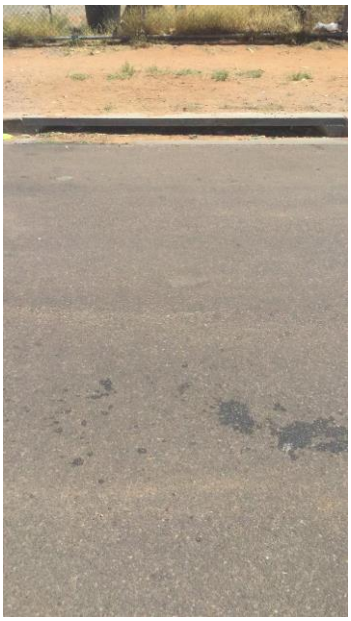
Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 10:31:09 AM

Insp ID: 573	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	SEP
Number of Bays:	3
On grade or sag pit:	
Both sides of road:	Left
Condition:	2 - Poor
Blockage (%):	90
Comment:	Structure good, almost completely blocked





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 10:30:05 AM

Insp ID: 574 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	SEP
Number of Bays:	2
On grade or sag pit:	
Both sides of road:	Right
Condition:	5 - Excellent
Blockage (%):	
Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 10:15:09 AM

Insp ID: 581 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure: SEP

Number of Bays:

On grade or sag pit:

Both sides of road:

Condition:

Blockage (%):

Comment:



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 10:11:14 AM

Insp ID: 583	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	SEP
Number of Bays:	3
On grade or sag pit:	
Both sides of road:	Right
Condition:	4 - Very Good
Blockage (%):	10
Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 10:04:47 AM

Insp ID: 584	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	SEP
Number of Bays:	2
On grade or sag pit:	
Both sides of road:	Right
Condition:	4 - Very Good
Blockage (%):	
Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 9:59:55 AM

Insp ID: 588	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	SEP
Number of Bays:	1
On grade or sag pit:	
Both sides of road:	Right
Condition:	5 - Excellent
Blockage (%):	
Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 9:53:45 AM

Insp ID: 589	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	SEP
Number of Bays:	2
On grade or sag pit:	
Both sides of road:	Right
Condition:	4 - Very Good
Blockage (%):	
Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 9:41:00 AM

Insp ID: 592	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	SEP
Number of Bays:	2
On grade or sag pit:	
Both sides of road:	Both
Condition:	5 - Excellent
Blockage (%):	
Comment:	









Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 9:41:00 AM

Northern Territory Town Camps

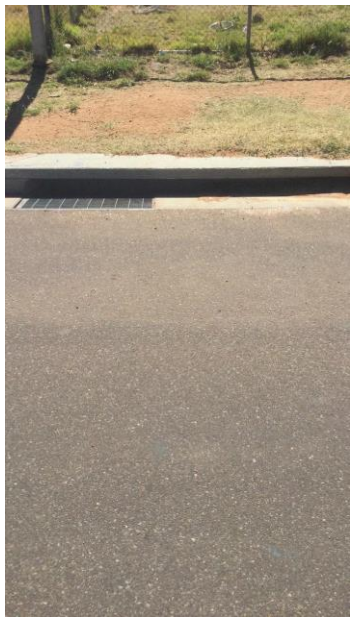
Civil Infrastructure

Inspection Date 17/11/2016 9:36:25 AM

Insp ID: 596	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	SEP
Number of Bays:	3
On grade or sag pit:	
Both sides of road:	Left
Condition:	5 - Excellent
Blockage (%):	10
Comment:	







Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 9:36:25 AM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 9:35:09 AM

Insp ID: 597	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	SEP
Number of Bays:	2
On grade or sag pit:	
Both sides of road:	Right
Condition:	5 - Excellent
Blockage (%):	
Comment:	







Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 9:35:09 AM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 9:27:26 AM

Insp ID: 601	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	SEP
Number of Bays:	2
On grade or sag pit:	
Both sides of road:	Both
Condition:	4 - Very Good
Blockage (%):	
Comment:	









Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 9:27:26 AM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 9:22:35 AM

Insp ID: 603	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	SEP
Number of Bays:	1
On grade or sag pit:	
Both sides of road:	Right
Condition:	4 - Very Good
Blockage (%):	
Comment:	Some build up of sand surrounding pit





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 9:20:58 AM

Insp ID: 604 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	SEP
Number of Bays:	3
On grade or sag pit:	
Both sides of road:	Right
Condition:	4 - Very Good
Blockage (%):	20
Comment:	







Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 9:20:58 AM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 9:07:42 AM

Insp ID: 608	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	SEP
Number of Bays:	3
On grade or sag pit:	
Both sides of road:	Right
Condition:	4 - Very Good
Blockage (%):	
Comment:	







Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 9:07:42 AM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 4:16:13 PM

Insp ID: 623	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure: SEP

Number of Bays:

On grade or sag pit:

Both sides of road:

Condition:

Blockage (%):

Comment:



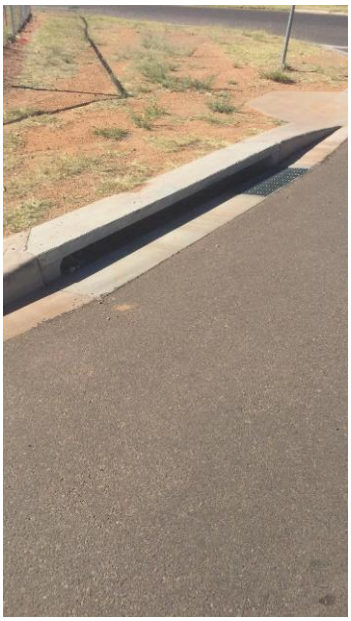
Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 4:04:30 PM

Insp ID: 627	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	SEP
Number of Bays:	4
On grade or sag pit:	
Both sides of road:	Right
Condition:	4 - Very Good
Blockage (%):	
Comment:	





Northern Territory Town Camps

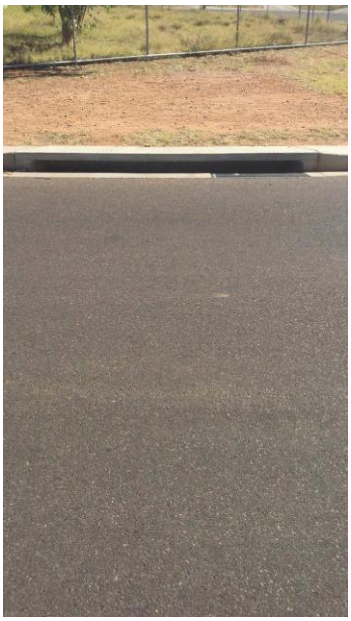
Civil Infrastructure

Inspection Date 17/11/2016 3:52:11 PM

Insp ID: 637 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	SEP
Number of Bays:	4
On grade or sag pit:	
Both sides of road:	Right
Condition:	4 - Very Good
Blockage (%):	
Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 3:37:44 PM

Insp ID: 645	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	SEP
Number of Bays:	2
On grade or sag pit:	
Both sides of road:	Right
Condition:	5 - Excellent
Blockage (%):	
Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 3:35:46 PM

Insp ID: 646	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	SEP
Number of Bays:	3
On grade or sag pit:	
Both sides of road:	Left
Condition:	5 - Excellent
Blockage (%):	
Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 3:14:13 PM

Insp ID: 653	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	SEP
Number of Bays:	3
On grade or sag pit:	
Both sides of road:	Right
Condition:	5 - Excellent
Blockage (%):	
Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 3:11:37 PM

Insp ID: 657	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	SEP
Number of Bays:	3
On grade or sag pit:	
Both sides of road:	Both
Condition:	5 - Excellent
Blockage (%):	
Comment:	









Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 3:11:37 PM

Northern Territory Town Camps

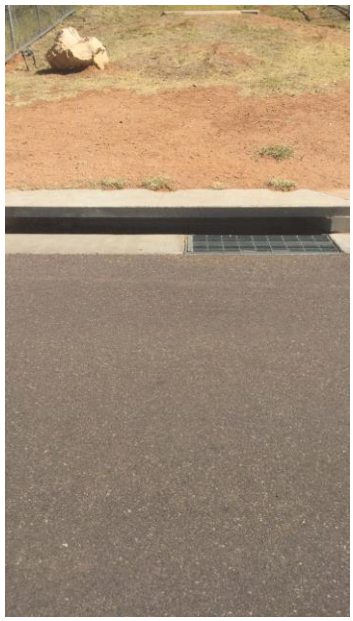
Civil Infrastructure

Inspection Date 17/11/2016 2:54:49 PM

Insp ID: 666	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	SEP
Number of Bays:	2
On grade or sag pit:	
Both sides of road:	Right
Condition:	5 - Excellent
Blockage (%):	
Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 2:47:52 PM

Insp ID: 671	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	SEP
Number of Bays:	3
On grade or sag pit:	
Both sides of road:	Left
Condition:	5 - Excellent
Blockage (%):	
Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 2:34:00 PM

Insp ID: 680	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	SEP
Number of Bays:	3
On grade or sag pit:	
Both sides of road:	Both
Condition:	4 - Very Good
Blockage (%):	
Comment:	









Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 2:34:00 PM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 2:03:14 PM

Insp ID: 695	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	SEP
Number of Bays:	2
On grade or sag pit:	
Both sides of road:	Both
Condition:	5 - Excellent
Blockage (%):	
Comment:	





Northern Territory Camps

Civil Infrastructure

Inspection Date 17/11/2016 11:52:53 AM

Insp ID: 530 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Inspection Type:	Shade Structure
Shade Structure Type:	BBQ Area
Shade Floor Type:	
Roof Type:	Not Covered
Width (mm):	3
Length (mm):	1
Appearance:	4
Appearance Comment:	
Condition:	4 - Very Good
Comment:	





Northern Territory Camps

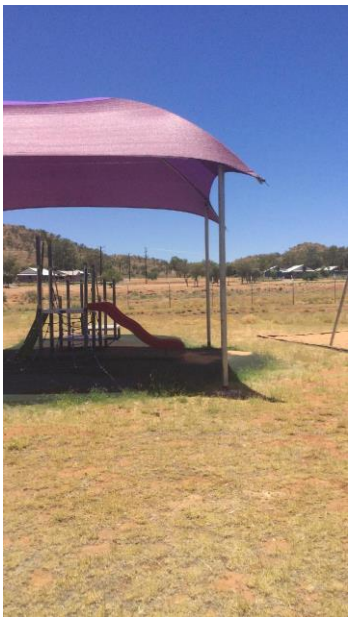
Civil Infrastructure

Inspection Date 17/11/2016 11:50:56 AM

Insp ID: 531 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Inspection Type:	Shade Structure
Shade Structure Type:	Play ground
Shade Floor Type:	Rubber Mats
Roof Type:	Shadecloth
Width (mm):	5
Length (mm):	8
Appearance:	4
Appearance Comment:	
Condition:	4 - Very Good
Comment:	

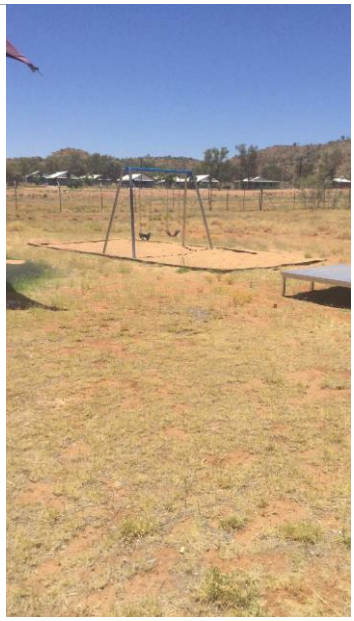




Northern Territory Camps

Civil Infrastructure

Inspection Date 17/11/2016 11:50:56 AM



Northern Territory Camps

Civil Infrastructure

Inspection Date 17/11/2016 11:31:52 AM

Insp ID: 541 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Inspection Type:	Shade Structure
Shade Structure Type:	Play ground
Shade Floor Type:	Natural ground
Roof Type:	Not Covered
Width (mm):	20
Length (mm):	30
Appearance:	2
Appearance Comment:	
Condition:	1 - Very Poor
Comment:	





Northern Territory Camps

Civil Infrastructure

Inspection Date 17/11/2016 11:31:52 AM





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 11:06:19 AM

Insp ID: 551 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Road Name:	Ewyenper Street
What are you inspecting:	Signs
Type of Sign:	Street name
Sign Condition:	4 - Very Good
Sign Comment:	
General Comment:	



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 10:47:41 AM

Insp ID: 560 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Road Name:	Ewyenper Street
What are you inspecting:	Signs
Type of Sign:	50 kph
Sign Condition:	3 - Good
Sign Comment:	Sign on both sides of road
General Comment:	







Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 10:40:08 AM

Insp ID: 565 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Road Name:	Ewyenper Street
What are you inspecting:	Signs
Type of Sign:	Street name
Sign Condition:	5 - Excellent
Sign Comment:	
General Comment:	



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 10:36:05 AM

Insp ID: 568 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Road Name:	Abbott Court
What are you inspecting:	Signs
Type of Sign:	Stop
Sign Condition:	2 - Poor
Sign Comment:	
General Comment:	



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 4:19:17 PM

Insp ID: 620 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Road Name:	Ewyenper Street
What are you inspecting:	Signs
Type of Sign:	Community signs
Sign Condition:	3 - Good
Sign Comment:	
General Comment:	



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 4:17:17 PM

Insp ID: 622 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Road Name:	Lockyer Court
What are you inspecting:	Signs
Type of Sign:	Street name
Sign Condition:	4 - Very Good
Sign Comment:	
General Comment:	



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 4:14:09 PM

Insp ID: 624	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

Road Name:	Lockyer Court
What are you inspecting:	Signs
Type of Sign:	Stop
Sign Condition:	3 - Good
Sign Comment:	
General Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 4:08:02 PM

Insp ID: 625	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

Road Name:	Lockyer Court
What are you inspecting:	Signs
Type of Sign:	Stop
Sign Condition:	3 - Good
Sign Comment:	
General Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 3:39:31 PM

Insp ID: 644	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

Road Name:	Ewyenper Street
What are you inspecting:	Signs
Type of Sign:	50 kph
Sign Condition:	3 - Good
Sign Comment:	
General Comment:	







Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 3:27:22 PM

Insp ID: 649 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Road Name:	Ewyenper Street
What are you inspecting:	Signs
Type of Sign:	Street name
Sign Condition:	4 - Very Good
Sign Comment:	
General Comment:	



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 2:44:00 PM

Insp ID: 673	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

Road Name:	Irretye Court
What are you inspecting:	Signs
Type of Sign:	Stop
Sign Condition:	3 - Good
Sign Comment:	Damages to sign from rocks etx
General Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 2:31:37 PM

Insp ID: 684 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Road Name:	Irretye Court
What are you inspecting:	Signs
Type of Sign:	No entry
Sign Condition:	4 - Very Good
Sign Comment:	Sign on both side of road
General Comment:	Side road off irretye court





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 2:29:19 PM

Insp ID: 685	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

Road Name:	Irretye Court
What are you inspecting:	Signs
Type of Sign:	Stop
Sign Condition:	4 - Very Good
Sign Comment:	
General Comment:	On side street off irretye court





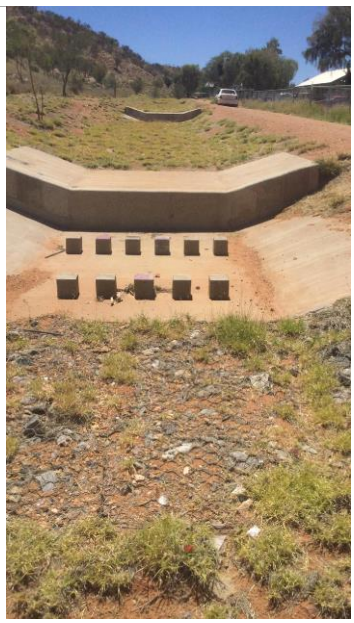
Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 11:01:16 AM

Insp ID: 550 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	Swales
Type of lining:	Grass
Are dimensions uniform along drain:	Yes
Base Width (m):	3
Overall Width (m):	7
Swale Depth (m):	0.7
Length of Batter 1 (m):	2
Length of Batter 2 (m):	2
Swale Condition:	4 - Very Good
Swale Ponding:	No
Drain flooded at time of inspection:	No
Swale Comments:	Grassed base established, drop structures in place





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 11:01:16 AM



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 10:53:19 AM

Insp ID: 558 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	Swales
Type of lining:	No Lining
Are dimensions uniform along drain:	Yes
Base Width (m):	7
Overall Width (m):	17
Swale Depth (m):	1.1
Length of Batter 1 (m):	5
Length of Batter 2 (m):	5
Swale Condition:	2 - Poor
Swale Ponding:	No
Drain flooded at time of inspection:	No
Swale Comments:	Significant erosion of loose soils





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 10:53:19 AM







Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 3:33:44 PM

Insp ID: 647 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	Swales
Type of lining:	Natural Grasses
Are dimensions uniform along drain:	Yes
Base Width (m):	8
Overall Width (m):	14
Swale Depth (m):	0.8
Length of Batter 1 (m):	3
Length of Batter 2 (m):	3
Swale Condition:	3 - Good
Swale Ponding:	No
Drain flooded at time of inspection:	No
Swale Comments:	Some erosion along base of swale





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 2:57:12 PM

Insp ID: 665 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	Swales
Type of lining:	Natural Grasses
Are dimensions uniform along drain:	Yes
Base Width (m):	4
Overall Width (m):	6
Swale Depth (m):	0.4
Length of Batter 1 (m):	1
Length of Batter 2 (m):	1
Swale Condition:	2 - Poor
Swale Ponding:	No
Drain flooded at time of inspection:	No
Swale Comments:	Erosion





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 2:57:12 PM



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 2:51:41 PM

Insp ID: 669 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	Swales
Type of lining:	Grass
Are dimensions uniform along drain:	Yes
Base Width (m):	2
Overall Width (m):	8
Swale Depth (m):	1.1
Length of Batter 1 (m):	4
Length of Batter 2 (m):	4
Swale Condition:	4 - Very Good
Swale Ponding:	No
Drain flooded at time of inspection:	No
Swale Comments:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 2:38:39 PM

Insp ID: 676 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	Swales
Type of lining:	No Lining
Are dimensions uniform along drain:	Yes
Base Width (m):	3
Overall Width (m):	12
Swale Depth (m):	1
Length of Batter 1 (m):	4
Length of Batter 2 (m):	4
Swale Condition:	2 - Poor
Swale Ponding:	No
Drain flooded at time of inspection:	No
Swale Comments:	Erosion along swale

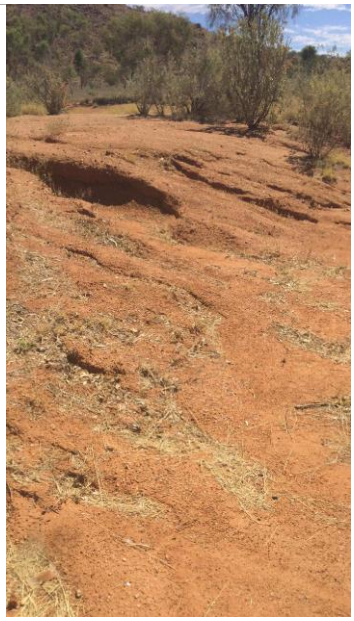




Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 2:38:39 PM





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 2:14:07 PM

Insp ID: 692	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

Stormwater Infrastructure:	Swales
Type of lining:	No Lining
Are dimensions uniform along drain:	Yes
Base Width (m):	1.5
Overall Width (m):	5.5
Swale Depth (m):	1
Length of Batter 1 (m):	2
Length of Batter 2 (m):	2
Swale Condition:	2 - Poor
Swale Ponding:	No
Drain flooded at time of inspection:	No
Swale Comments:	Erosion of loose soils





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 2:14:07 PM





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 12:13:23 PM

Insp ID: 519	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	4
Lot Water Meter Size:	20
Lot Water Meter Condition:	1 - Very Poor
Lot Water Meter Comment:	



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 12:15:48 PM

Insp ID: 520	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	8
Lot Water Meter Size:	20
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 12:13:07 PM

Insp ID: 521	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	6
Lot Water Meter Size:	20
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	



Northern Territory Town Camps

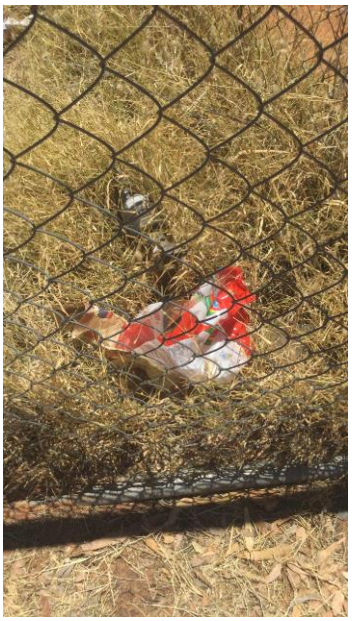
Civil Infrastructure

Inspection Date 17/11/2016 12:07:03 PM

Insp ID: 523 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	10
Lot Water Meter Size:	20
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 12:02:22 PM

Insp ID: 527 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	12
Lot Water Meter Size:	20
Lot Water Meter Condition:	4 - Very Good
Lot Water Meter Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 11:48:14 AM

Insp ID: 532 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	
Lot Water Meter Size:	25
Lot Water Meter Condition:	2 - Poor
Lot Water Meter Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 11:47:03 AM

Insp ID: 533 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	13
Lot Water Meter Size:	20
Lot Water Meter Condition:	4 - Very Good
Lot Water Meter Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 11:27:42 AM

Insp ID: 545	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	15
Lot Water Meter Size:	20
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 11:26:16 AM

Insp ID: 546	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	17
Lot Water Meter Size:	20
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 10:43:50 AM

Insp ID: 563 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	35
Lot Water Meter Size:	20
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 10:33:35 AM

Insp ID: 571	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	37
Lot Water Meter Size:	20
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 10:32:31 AM

Insp ID: 572 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	39
Lot Water Meter Size:	20
Lot Water Meter Condition:	2 - Poor
Lot Water Meter Comment:	



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 10:19:21 AM

Insp ID: 576	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	51
Lot Water Meter Size:	20
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 10:17:56 AM

Insp ID: 577	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	51
Lot Water Meter Size:	20
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 11:30:18 AM

Insp ID: 579	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	15
Lot Water Meter Size:	20
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 10:14:04 AM

Insp ID: 582	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	45
Lot Water Meter Size:	20
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 10:05:03 AM

Insp ID: 585	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	41
Lot Water Meter Size:	20
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 9:39:49 AM

Insp ID: 593	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	3
Lot Water Meter Size:	20
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 9:33:34 AM

Insp ID: 598 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	5
Lot Water Meter Size:	25
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	





Northern Territory Town Camps

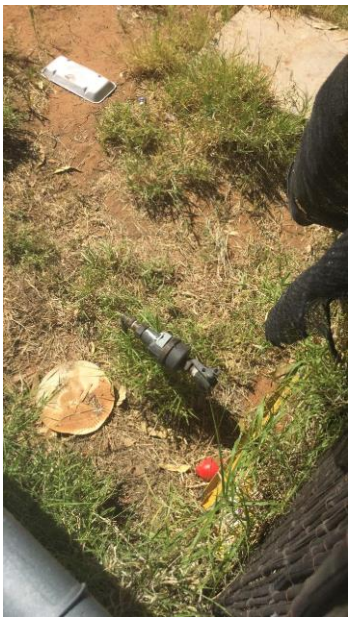
Civil Infrastructure

Inspection Date 17/11/2016 9:32:09 AM

Insp ID: 599 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	7
Lot Water Meter Size:	25
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 9:30:06 AM

Insp ID: 600	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	9
Lot Water Meter Size:	25
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 9:24:51 AM

Insp ID: 602	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	14
Lot Water Meter Size:	25
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 9:18:06 AM

Insp ID: 606	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	13
Lot Water Meter Size:	25
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	





Northern Territory Town Camps

Civil Infrastructure

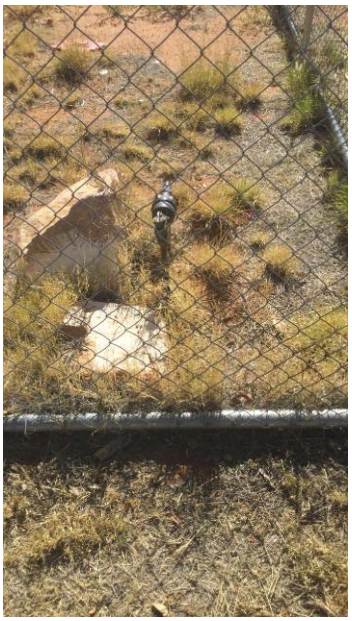
Inspection Date 17/11/2016 9:04:12 AM

Insp ID: 612	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	17
Lot Water Meter Size:	25
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 9:02:59 AM

Insp ID: 613	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	15
Lot Water Meter Size:	20
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 4:04:46 PM

Insp ID: 628 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	
Lot Water Meter Size:	20
Lot Water Meter Condition:	1 - Very Poor
Lot Water Meter Comment:	In open area





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 4:04:46 PM



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 4:01:51 PM

Insp ID: 630	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	6
Lot Water Meter Size:	20
Lot Water Meter Condition:	4 - Very Good
Lot Water Meter Comment:	



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 4:00:54 PM

Insp ID: 631	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	7
Lot Water Meter Size:	20
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	



Northern Territory Town Camps

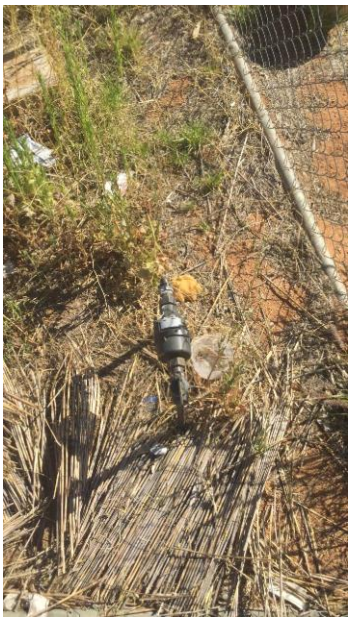
Civil Infrastructure

Inspection Date 17/11/2016 4:00:01 PM

Insp ID: 632	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	5
Lot Water Meter Size:	20
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 3:58:56 PM

Insp ID: 633	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	3
Lot Water Meter Size:	20
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 3:55:18 PM

Insp ID: 635	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	1
Lot Water Meter Size:	20
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	Behind tree no closer image



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 3:50:59 PM

Insp ID: 638	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	3
Lot Water Meter Size:	
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	Overgrown by grass



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 3:49:28 PM

Insp ID: 640	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	5
Lot Water Meter Size:	20
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 3:14:28 PM

Insp ID: 654	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	3
Lot Water Meter Size:	20
Lot Water Meter Condition:	2 - Poor
Lot Water Meter Comment:	Outside fenced area



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 3:11:21 PM

Insp ID: 656 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	5
Lot Water Meter Size:	20
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 3:10:28 PM

Insp ID: 658	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	7
Lot Water Meter Size:	20
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 3:08:50 PM

Insp ID: 659	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	9
Lot Water Meter Size:	20
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	Overgrown grass surrounding





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 3:06:38 PM

Insp ID: 660	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	6
Lot Water Meter Size:	20
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 3:05:36 PM

Insp ID: 661	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	8
Lot Water Meter Size:	20
Lot Water Meter Condition:	2 - Poor
Lot Water Meter Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 3:03:01 PM

Insp ID: 663	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	11
Lot Water Meter Size:	20
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 2:55:05 PM

Insp ID: 667	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	5
Lot Water Meter Size:	20
Lot Water Meter Condition:	4 - Very Good
Lot Water Meter Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 2:53:58 PM

Insp ID: 668	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	3
Lot Water Meter Size:	20
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 2:24:14 PM

Insp ID: 686	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	17
Lot Water Meter Size:	20
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 17/11/2016 2:20:49 PM

Insp ID: 689	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	19
Lot Water Meter Size:	20
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	



Northern Territory Town Camps

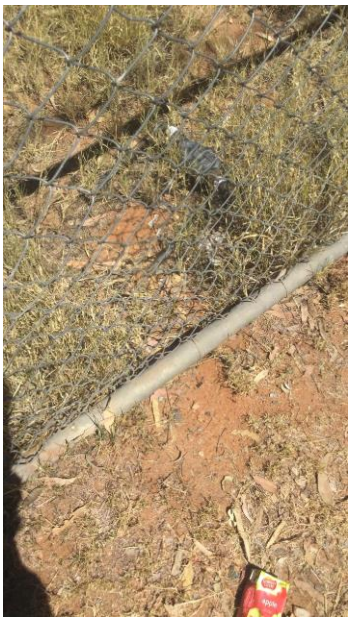
Civil Infrastructure

Inspection Date 17/11/2016 2:18:55 PM

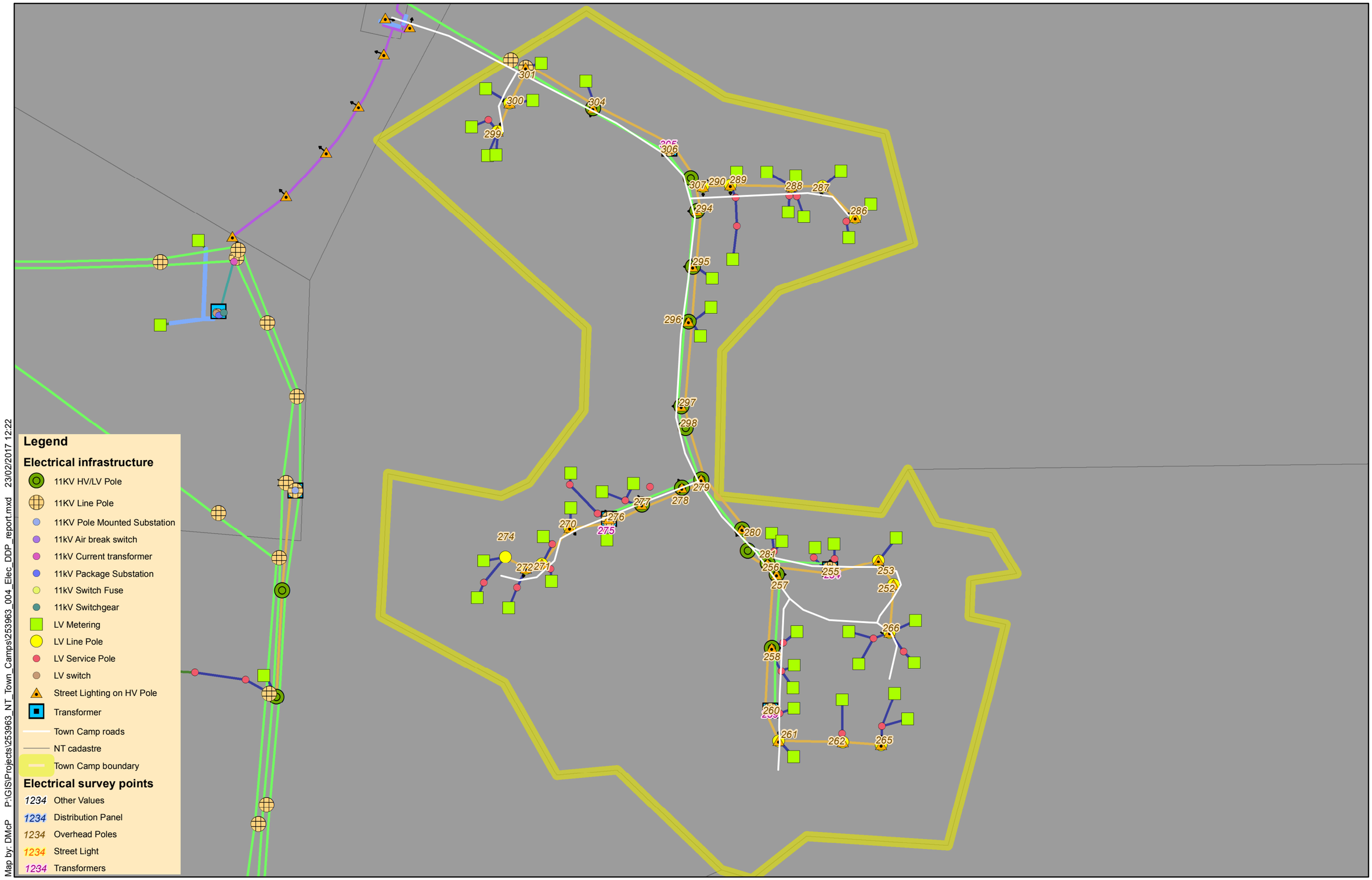
Insp ID: 690	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	21
Lot Water Meter Size:	20
Lot Water Meter Condition:	1 - Very Poor
Lot Water Meter Comment:	



Electrical inspection report



A3 scale: 1:3,500

0 20 40 60 80 100 m

Date: 23/02/2017 Version: 3

Coordinate system: MGA94 Zone 52

NT Town Camp Infrastructure Assessments: Electrical

35 - Ewyenper Atwatye (Alice Springs)

5305

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 9:35:43 AM

Insp ID: 263 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Comms Category are you capturing:	Distribution
What is distribution method to households:	Underground
Is it Shared with PWC:	
Is there Anti-climb barrier provided for this pole:	
What is Pole construction type:	
Is street light fitted:	
Is there concrete collar around the base of pole:	
What is the condition of tap off to house:	
What is the condition of pole:	
How many Lots are connected to this pole:	
Is there access to Pits to take a photo:	No
What is Pit Condition:	3
Underground Comments:	





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 12:39:57 PM

Insp ID: 267	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Comms Category are you capturing:	Distribution
What is distribution method to households:	Underground
Is it Shared with PWC:	
Is there Anti-climb barrier provided for this pole:	
What is Pole construction type:	
Is street light fitted:	
Is there concrete collar around the base of pole:	
What is the condition of tap off to house:	
What is the condition of pole:	
How many Lots are connected to this pole:	
Is there access to Pits to take a photo:	No
What is Pit Condition:	3
Underground Comments:	





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 12:38:32 PM

Insp ID: 268 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Comms Category are you capturing:	Distribution
What is distribution method to households:	Underground
Is it Shared with PWC:	
Is there Anti-climb barrier provided for this pole:	
What is Pole construction type:	
Is street light fitted:	
Is there concrete collar around the base of pole:	
What is the condition of tap off to house:	
What is the condition of pole:	
How many Lots are connected to this pole:	
Is there access to Pits to take a photo:	No
What is Pit Condition:	3
Underground Comments:	





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 12:36:58 PM

Insp ID: 269 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Comms Category are you capturing:	Distribution
What is distribution method to households:	Underground
Is it Shared with PWC:	
Is there Anti-climb barrier provided for this pole:	
What is Pole construction type:	
Is street light fitted:	
Is there concrete collar around the base of pole:	
What is the condition of tap off to house:	
What is the condition of pole:	
How many Lots are connected to this pole:	
Is there access to Pits to take a photo:	No
What is Pit Condition:	3
Underground Comments:	





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 3:36:26 PM

Insp ID: 282	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Comms Category are you capturing:	Distribution
What is distribution method to households:	Underground
Is it Shared with PWC:	
Is there Anti-climb barrier provided for this pole:	
What is Pole construction type:	
Is street light fitted:	
Is there concrete collar around the base of pole:	
What is the condition of tap off to house:	
What is the condition of pole:	
How many Lots are connected to this pole:	
Is there access to Pits to take a photo:	No
What is Pit Condition:	3
Underground Comments:	





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 3:34:34 PM

Insp ID: 283	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Comms Category are you capturing:	Distribution
What is distribution method to households:	Underground
Is it Shared with PWC:	
Is there Anti-climb barrier provided for this pole:	
What is Pole construction type:	
Is street light fitted:	
Is there concrete collar around the base of pole:	
What is the condition of tap off to house:	
What is the condition of pole:	
How many Lots are connected to this pole:	
Is there access to Pits to take a photo:	No
What is Pit Condition:	3
Underground Comments:	





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 3:32:58 PM

Insp ID: 284	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Comms Category are you capturing:	Distribution
What is distribution method to households:	Underground
Is it Shared with PWC:	
Is there Anti-climb barrier provided for this pole:	
What is Pole construction type:	
Is street light fitted:	
Is there concrete collar around the base of pole:	
What is the condition of tap off to house:	
What is the condition of pole:	
How many Lots are connected to this pole:	
Is there access to Pits to take a photo:	No
What is Pit Condition:	3
Underground Comments:	





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 3:32:05 PM

Insp ID: 285	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Comms Category are you capturing:	Distribution
What is distribution method to households:	Underground
Is it Shared with PWC:	
Is there Anti-climb barrier provided for this pole:	
What is Pole construction type:	
Is street light fitted:	
Is there concrete collar around the base of pole:	
What is the condition of tap off to house:	
What is the condition of pole:	
How many Lots are connected to this pole:	
Is there access to Pits to take a photo:	No
What is Pit Condition:	3
Underground Comments:	





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 3:02:18 PM

Insp ID: 291	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Comms Category are you capturing:	Distribution
What is distribution method to households:	Underground
Is it Shared with PWC:	
Is there Anti-climb barrier provided for this pole:	
What is Pole construction type:	
Is street light fitted:	
Is there concrete collar around the base of pole:	
What is the condition of tap off to house:	
What is the condition of pole:	
How many Lots are connected to this pole:	
Is there access to Pits to take a photo:	No
What is Pit Condition:	3
Underground Comments:	





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 4:15:29 PM

Insp ID: 302	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Comms Category are you capturing:	Distribution
What is distribution method to households:	Underground
Is it Shared with PWC:	
Is there Anti-climb barrier provided for this pole:	
What is Pole construction type:	
Is street light fitted:	
Is there concrete collar around the base of pole:	
What is the condition of tap off to house:	
What is the condition of pole:	
How many Lots are connected to this pole:	
Is there access to Pits to take a photo:	No
What is Pit Condition:	3
Underground Comments:	





Northern Territory Town Camps

Communications Infrastructure

Inspection Date 17/11/2016 9:34:34 AM

Insp ID: 264	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Comms Category are you capturing:	General
Telstra Comms Drawing Available:	No
Facility upgrade not in drawings:	No
Which telecoms carriers are present in the town camp:	Telstra
How many Communications Pit(s) are allocated in this town camp:	





Northern Territory Town Camps

Communications Infrastructure

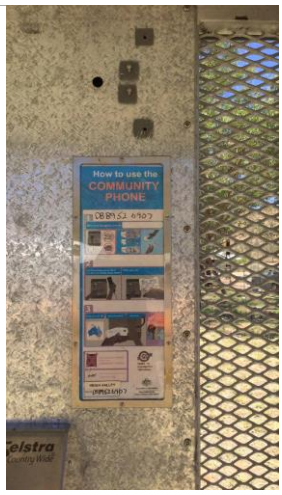
Inspection Date 17/11/2016 12:13:57 PM

Insp ID: 273	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Comms Category are you capturing:	General
Telstra Comms Drawing Available:	No
Facility upgrade not in drawings:	No
Which telecoms carriers are present in the town camp:	
How many Communications Pit(s) are allocated in this town camp:	







Northern Territory Town Camps

Communications Infrastructure

Inspection Date 17/11/2016 3:01:20 PM

Insp ID: 292	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Comms Category are you capturing:	General
Telstra Comms Drawing Available:	No
Facility upgrade not in drawings:	No
Which telecoms carriers are present in the town camp:	
How many Communications Pit(s) are allocated in this town camp:	





Northern Territory Town Camps

Communications Infrastructure

Inspection Date 17/11/2016 4:14:23 PM

Insp ID: 303	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Comms Category are you capturing:	General
Telstra Comms Drawing Available:	No
Facility upgrade not in drawings:	No
Which telecoms carriers are present in the town camp:	
How many Communications Pit(s) are allocated in this town camp:	







Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 18/01/2017 11:22:28 AM

Insp ID: 3621 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond:

Meter Condition: 3

Meter Comment: Condition of CB not assessed.

Comments:



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 18/01/2017 10:48:25 AM

Insp ID: 3622 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond:

Meter Condition: 3

Meter Comment: Condition of CB not assessed. Indoor SB, Cond 2, Blank plates are missing on CB slot.

Comments:





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 18/01/2017 10:25:43 AM

Insp ID: 3623 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond: 3

Meter Condition: 3

Meter Comment:

Comments:





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 18/01/2017 12:44:47 PM

Insp ID: 3624 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond:

Meter Condition: 3

Meter Comment: Condition of CB not assessed.

Comments:



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 18/01/2017 12:29:55 PM

Insp ID: 3625 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

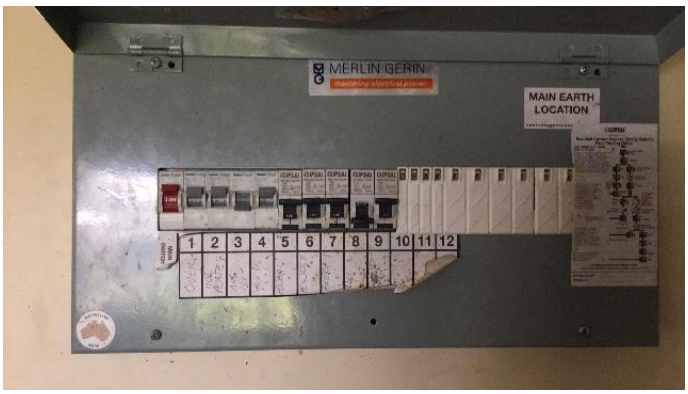
Meter Switchboard Cond:

Meter Condition: 3

Meter Comment: Condition of CB not assessed. Indoor SB, Cond 3

Comments:





Northern Territory Town Camps

Electrical Infrastructure

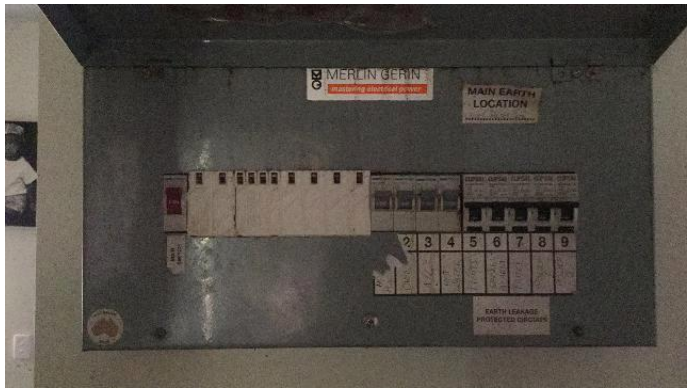
Inspection Date 18/01/2017 12:05:09 PM

Insp ID: 3626 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Category are you capturing: Electrical Meters

Meter Type:	Prepaid
Meter Switchboard Cond:	3
Meter Condition:	3
Meter Comment:	Indoor SB, Cond 3
Comments:	





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 18/01/2017 11:33:46 AM

Insp ID: 3627 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Category are you capturing: Electrical Meters

Meter Type:	Prepaid
Meter Switchboard Cond:	2
Meter Condition:	3
Meter Comment:	Blank plates are missing on CB slot.
Comments:	



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 18/01/2017 11:01:30 AM

Insp ID: 3628 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Category are you capturing: Electrical Meters

Meter Type:	Prepaid
Meter Switchboard Cond:	3
Meter Condition:	3
Meter Comment:	Indoor SB, Cond 3
Comments:	





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 18/01/2017 11:26:06 AM

Insp ID: 3629 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Category are you capturing: Electrical Meters

Meter Type: Electrical

Meter Switchboard Cond:

Meter Condition:

Meter Comment:

Comments:



Northern Territory Town Camps

Electrical Infrastructure

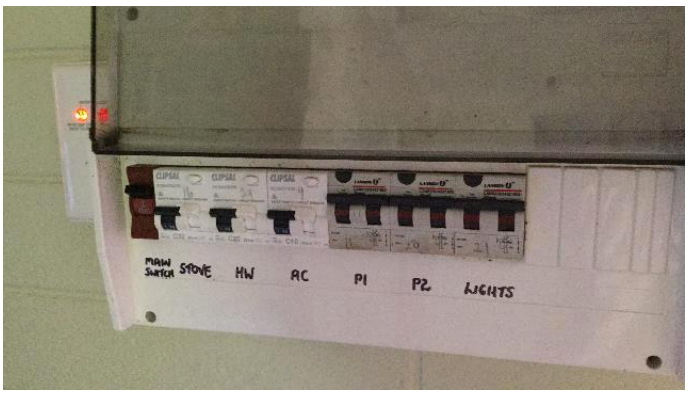
Inspection Date 18/01/2017 11:25:37 AM

Insp ID: 3644 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Category are you capturing: Electrical Meters

Meter Type:	Prepaid	
Meter Switchboard Cond:		
Meter Condition:	3	
Meter Comment:	Condition of CB not assessed.	Indoor SB, Cond 3
Comments:		





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 18/01/2017 11:08:58 AM

Insp ID: 3645 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Category are you capturing: Electrical Meters

Meter Type:	Prepaid	
Meter Switchboard Cond:		
Meter Condition:	3	
Meter Comment:	Condition of CB not assessed.	Indoor SB, Cond 3 (Condition of indoor SB to be confirme
Comments:		





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 18/01/2017 10:35:47 AM

Insp ID: 3646 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

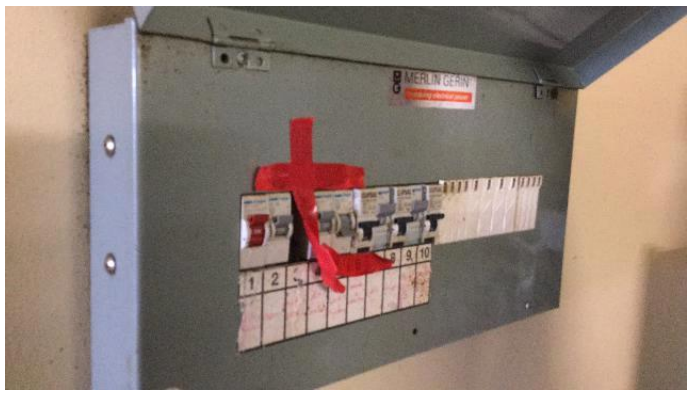
Meter Switchboard Cond:

Meter Condition: 3

Meter Comment: Condition of CB not assessed. Indoor SB, Cond 2, Blank plates are missing on CB slot.

Comments:





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 18/01/2017 11:32:46 AM

Insp ID: 3659 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Category are you capturing: Electrical Meters

Meter Type:	Prepaid
Meter Switchboard Cond:	
Meter Condition:	3
Meter Comment:	Condition of CB not assessed.
Comments:	



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 18/01/2017 11:39:31 AM

Insp ID: 3660	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Category are you capturing: Electrical Meters

Meter Type:	Prepaid	
Meter Switchboard Cond:		
Meter Condition:	3	
Meter Comment:	Condition of CB not assessed.	Indoor SB, Cond 3
Comments:		





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 18/01/2017 11:45:57 AM

Insp ID: 3661 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond: 3

Meter Condition: 3

Meter Comment:

Comments:



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 18/01/2017 11:54:42 AM

Insp ID: 3662 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Category are you capturing: Electrical Meters

Meter Type:	Prepaid
Meter Switchboard Cond:	3
Meter Condition:	3
Meter Comment:	Indoor SB, Cond 3
Comments:	





Northern Territory Town Camps

Electrical Infrastructure

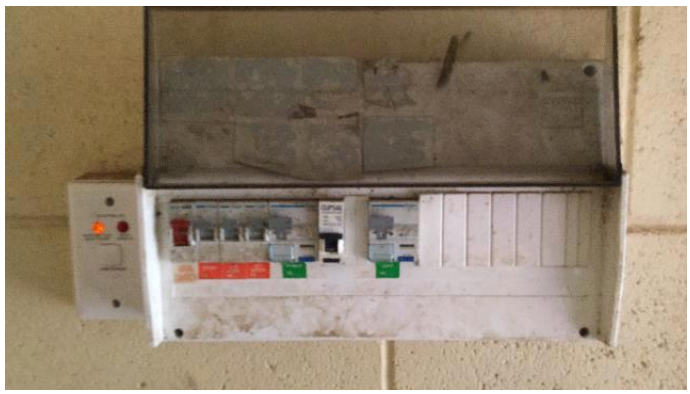
Inspection Date 18/01/2017 12:08:42 PM

Insp ID: 3663 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Category are you capturing: Electrical Meters

Meter Type:	Prepaid
Meter Switchboard Cond:	2
Meter Condition:	3
Meter Comment:	Blank plates are missing on CB slot. Indoor SB, Cond 3
Comments:	





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 18/01/2017 12:32:30 PM

Insp ID: 3664 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

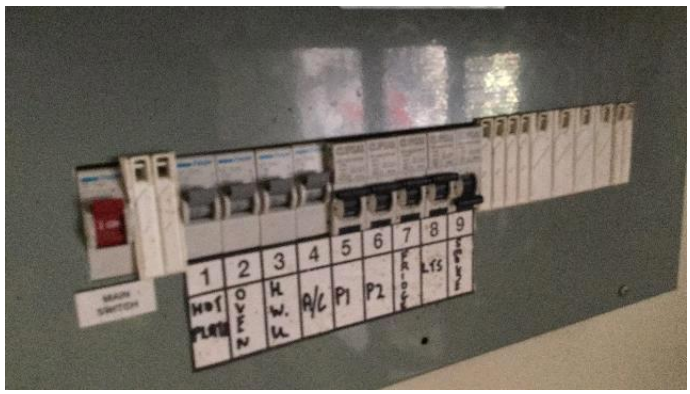
Meter Switchboard Cond:

Meter Condition: 3

Meter Comment: Condition of CB not assessed. Indoor SB, Cond 3

Comments:





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 18/01/2017 12:43:23 PM

Insp ID: 3665 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond: 3

Meter Condition: 3

Meter Comment:

Comments:



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 20/01/2017 8:51:35 AM

Insp ID: 3667 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Category are you capturing: Electrical Meters

Meter Type:	Prepaid
Meter Switchboard Cond:	2
Meter Condition:	3
Meter Comment:	Blank plates are missing on CB slot. Indoor SB, Cond 3
Comments:	





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 23/01/2017 1:58:18 PM

Insp ID: 3671 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond: 3

Meter Condition: 3

Meter Comment:

Comments:





Northern Territory Town Camps

Electrical Infrastructure

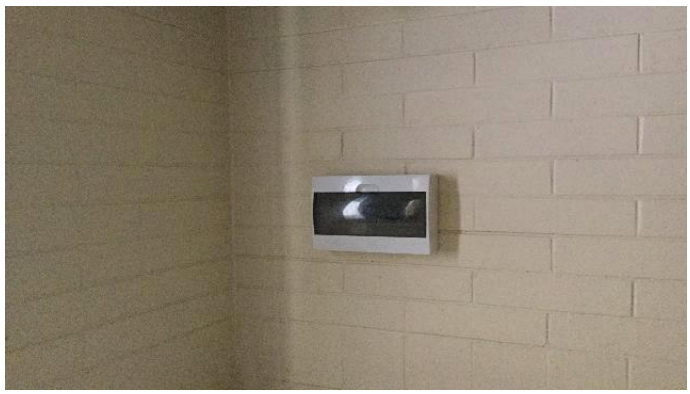
Inspection Date 23/01/2017 1:52:35 PM

Insp ID: 3672 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Category are you capturing: Electrical Meters

Meter Type:	Prepaid
Meter Switchboard Cond:	3
Meter Condition:	3
Meter Comment:	Indoor SB, Cond 3
Comments:	





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 10:41:10 AM

Insp ID: 252 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S70D 11
Street Light Watts	70
Street Light Condition	2
Street Light Height	
What is the type of service:	Three
What is the HV voltage level:	400
What is the arrangement of connected cables:	Twisted
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	0
Overhead Pole Comments:	Surface rusted

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 10:41:10 AM











Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 10:37:16 AM

Insp ID: 253 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S70D 11
Street Light Watts	70
Street Light Condition	3
Street Light Height	
What is the type of service:	Three
What is the HV voltage level:	400
What is the arrangement of connected cables:	Twisted
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	1
Overhead Pole Comments:	Surface rusted

Northern Territory Town Camps

Electrical Infrastructure

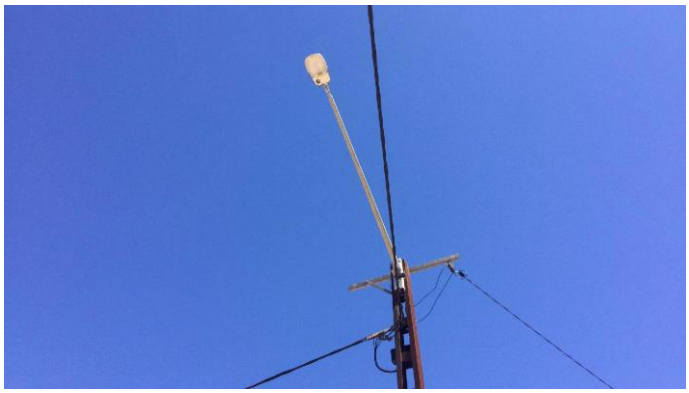
Inspection Date 17/11/2016 10:37:16 AM











Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 10:25:28 AM

Insp ID: 255 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S150C 11
Street Light Watts	150
Street Light Condition	3
Street Light Height	
What is the type of service:	Combined
What is the HV voltage level:	11000
What is the arrangement of connected cables:	Parallel
Are there isolators on the pole:	Yes
What is the Condition:	3
How many Lots are connected to this pole:	2
Overhead Pole Comments:	Surface rusted

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 10:25:28 AM











Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 10:16:36 AM

Insp ID: 256 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S150C 11
Street Light Watts	150
Street Light Condition	2
Street Light Height	
What is the type of service:	Combined
What is the HV voltage level:	11000
What is the arrangement of connected cables:	Parallel
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	2
Overhead Pole Comments:	Surface rusted

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 10:16:36 AM











Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 10:12:15 AM

Insp ID: 257 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S150C 14
Street Light Watts	150
Street Light Condition	2
Street Light Height	
What is the type of service:	Combined
What is the HV voltage level:	11000
What is the arrangement of connected cables:	Parallel
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	0
Overhead Pole Comments:	Surface rusted

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 10:12:15 AM











Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 10:06:15 AM

Insp ID: 258 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S150c 11
Street Light Watts	150
Street Light Condition	3
Street Light Height	
What is the type of service:	Combined
What is the HV voltage level:	11000
What is the arrangement of connected cables:	Parallel
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	1
Overhead Pole Comments:	Surface rusted

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 10:06:15 AM











Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 9:55:20 AM

Insp ID: 260 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S150C 11
Street Light Watts	150
Street Light Condition	2
Street Light Height	
What is the type of service:	Combined
What is the HV voltage level:	11000
What is the arrangement of connected cables:	Parallel
Are there isolators on the pole:	Yes
What is the Condition:	3
How many Lots are connected to this pole:	1
Overhead Pole Comments:	Surface rusted

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 9:55:20 AM











Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 9:50:16 AM

Insp ID: 261 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S70D 11
Street Light Watts	70
Street Light Condition	1
Street Light Height	
What is the type of service:	Three
What is the HV voltage level:	400
What is the arrangement of connected cables:	Twisted
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	1
Overhead Pole Comments:	Surface rusted

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 9:50:16 AM











Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 9:40:59 AM

Insp ID: 262 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S70D 52
Street Light Watts	70
Street Light Condition	3
Street Light Height	
What is the type of service:	Three
What is the HV voltage level:	400
What is the arrangement of connected cables:	Twisted
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	1
Overhead Pole Comments:	Surface rusted

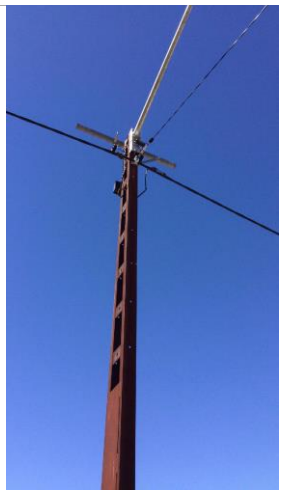
Northern Territory Town Camps

Electrical Infrastructure

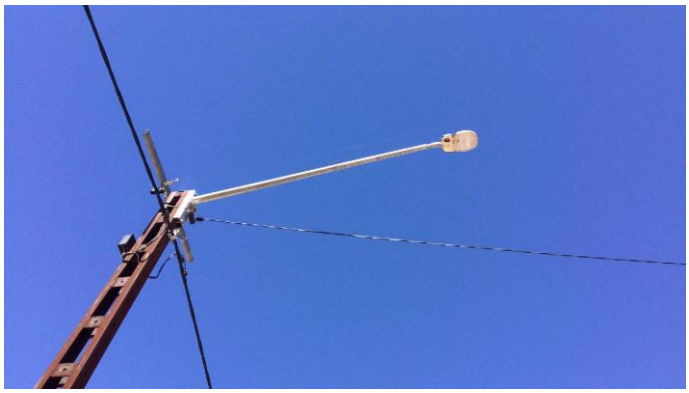
Inspection Date 17/11/2016 9:40:59 AM











Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 9:32:18 AM

Insp ID: 265	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Direct
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S150C 11
Street Light Watts	150
Street Light Condition	3
Street Light Height	
What is the type of service:	Three
What is the HV voltage level:	400
What is the arrangement of connected cables:	Twisted
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	2
Overhead Pole Comments:	Surface rusted

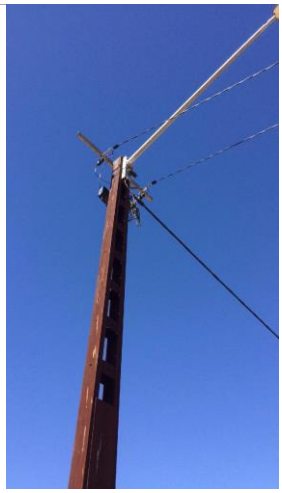
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 9:32:18 AM

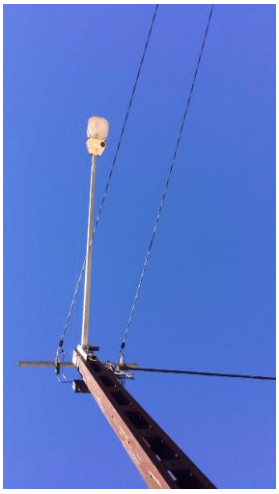












Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 10:46:33 AM

Insp ID: 266 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S150C 11
Street Light Watts	150
Street Light Condition	3
Street Light Height	
What is the type of service:	Three
What is the HV voltage level:	400
What is the arrangement of connected cables:	Twisted
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	4
Overhead Pole Comments:	Surface rusted

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 10:46:33 AM











Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 12:35:34 PM

Insp ID: 270 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S70D 11
Street Light Watts	70
Street Light Condition	3
Street Light Height	
What is the type of service:	Three
What is the HV voltage level:	400
What is the arrangement of connected cables:	Twisted
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	1
Overhead Pole Comments:	Surface rusted

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 12:35:34 PM











Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 12:20:26 PM

Insp ID: 271	Group 4 - Alice Springs	Ewyenper Atwatye (Hidden Valley)

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S70D 11
Street Light Watts	70
Street Light Condition	3
Street Light Height	
What is the type of service:	
What is the HV voltage level:	
What is the arrangement of connected cables:	Twisted
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	2
Overhead Pole Comments:	Surface rusted

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 12:20:26 PM











Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 12:16:39 PM

Insp ID: 272 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S70D 11
Street Light Watts	70
Street Light Condition	3
Street Light Height	
What is the type of service:	Three
What is the HV voltage level:	400
What is the arrangement of connected cables:	Twisted
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	1
Overhead Pole Comments:	Surface rusted

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 12:16:39 PM











Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 11:59:35 AM

Insp ID: 274 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	No
Street Light Power Supply:	
Street Light Type	
Street Light Watts	
Street Light Condition	
Street Light Height	
What is the type of service:	Three
What is the HV voltage level:	400
What is the arrangement of connected cables:	Twisted
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	2
Overhead Pole Comments:	Surface rusted

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 11:59:35 AM









Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 11:34:03 AM

Insp ID: 276 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S70D 11
Street Light Watts	70
Street Light Condition	3
Street Light Height	
What is the type of service:	Combined
What is the HV voltage level:	11000
What is the arrangement of connected cables:	Parallel
Are there isolators on the pole:	Yes
What is the Condition:	3
How many Lots are connected to this pole:	2
Overhead Pole Comments:	Surface rusted

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 11:34:03 AM









Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 11:27:22 AM

Insp ID: 277 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S70D 11
Street Light Watts	70
Street Light Condition	3
Street Light Height	
What is the type of service:	Combined
What is the HV voltage level:	11000
What is the arrangement of connected cables:	Parallel
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	2
Overhead Pole Comments:	Surface rusted

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 11:27:22 AM











Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 11:23:15 AM

Insp ID: 278 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S150C 13
Street Light Watts	150
Street Light Condition	3
Street Light Height	
What is the type of service:	Combined
What is the HV voltage level:	11000
What is the arrangement of connected cables:	Parallel
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	0
Overhead Pole Comments:	Surface rusted

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 11:23:15 AM













Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 11:19:17 AM

Insp ID: 279 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S150C 11
Street Light Watts	150
Street Light Condition	3
Street Light Height	
What is the type of service:	Combined
What is the HV voltage level:	11000
What is the arrangement of connected cables:	Parallel
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	0
Overhead Pole Comments:	Surface rusted

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 11:19:17 AM











Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 11:10:31 AM

Insp ID: 280 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S250C 12
Street Light Watts	250
Street Light Condition	3
Street Light Height	
What is the type of service:	Combined
What is the HV voltage level:	11000
What is the arrangement of connected cables:	Parallel
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	0
Overhead Pole Comments:	Surface rusted

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 11:10:31 AM











Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 11:07:25 AM

Insp ID: 281 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	No
Street Light Power Supply:	
Street Light Type	
Street Light Watts	
Street Light Condition	
Street Light Height	
What is the type of service:	Combined
What is the HV voltage level:	11000
What is the arrangement of connected cables:	Parallel
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	0
Overhead Pole Comments:	Surface rusted

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 11:07:25 AM









Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 17/11/2016 3:30:46 PM

Insp ID: 286 Group 4 - Alice Springs Ewyenper Atwatye (Hidden Valley)

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S150 C 11
Street Light Watts	150
Street Light Condition	3
Street Light Height	
What is the type of service:	Three
What is the HV voltage level:	400
What is the arrangement of connected cables:	Twisted
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	2
Overhead Pole Comments:	Surface rusted