Appendix B
Municipal and essential infrastructure
Elliott North & South Camp
Elliott North Camp

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
- Power and Water Corporation supplement to WSA 04
- Power and Water Corporation supplement to WSA 03
- 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 Urban Residential Development (URD) Design Standards where possible.

With one exception, 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 appear to have been applied in many 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
Further referral to the guidelines in this report will be designated by the guidelines number, NP001.1.

Communications

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

<table>
<thead>
<tr>
<th>Condition rating</th>
<th>Operability</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Very Poor, Not operational</td>
</tr>
<tr>
<td>2</td>
<td>Poor, Not fully operational or requires immediate maintenance to keep operational</td>
</tr>
<tr>
<td>3</td>
<td>Good, Fully operational, may require routine maintenance</td>
</tr>
<tr>
<td>4</td>
<td>Very Good, Fully operational, may require maintenance in the next six months</td>
</tr>
<tr>
<td>5</td>
<td>Excellent, New, fully operational</td>
</tr>
</tbody>
</table>

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,
- 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 Elliott North Camp on Tuesday 29 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
Elliott North Camp’s current sewage disposal system is via septic tanks. There were no drawings of the location or type of septic tank.

It is understood that the septic tanks are owned by Gurungu Aboriginal Land Trust, however are the responsibility of Barkly Regional Council to maintain.

5.1.1 Connection methods and billing
The billing arrangement is not known. It is assumed that the Barkly Regional Council would organise for the septic tanks to be emptied, and a bill issued to the Commissioner of Consumer Affairs. It is not known what contribution the residents make towards this bill.

5.2 Existing infrastructure condition assessment
The condition of the septic tanks was not assessed.

5.3 Current performance and risks
There is no town sewer in the township of Elliott. The septic tank arrangement is common throughout the town. Therefore, the septic tanks in Elliott North Camp should remain until town sewer is installed in Elliott.

The current performance of the septic tank arrangement cannot be assessed.

It is recommended that sewerage infrastructure, including underground pipes, pump stations, and a sewage pond arrangement, is considered if the town is expected to expand.

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
As there is no town sewer in Elliott, constructing a sewer network to PWC standards within the community would not be effective, unless dedicated sewage ponds and associated infrastructure is also constructed. However, if the community or the town is expected to have future developments, it is recommended that a sewer network is installed for the entire town, including the communities. These headworks are expected to be a significant cost.

The cost estimates have focussed only on upgrading the sewer network within Elliott North Camp, assuming that a town sewer network would be provided at the same time a sewer network is provided in Elliott North Camp.
Water supply

6.1 Ownership and boundaries
The reticulation servicing the community is a combination of DN100 and DN150 PVC looped water mains, with a single supply point (refer appendices). The network contains several dead ends and appears to be constructed outside of the road reserve. As-built drawings were not attainable to validate the water mains layout and sizing.

The water supply assets within Elliott North Camp are believed to be owned by Gurungu Aboriginal Land Trust, but are the responsibility of Barkly Regional Council to maintain.

The water is supplied from PWC owned a water main outside of the community. Figure 1 shows the extent of the water reticulation network.

![Figure 1 Elliott North Camp water supply](image)

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 a single bulk water meter at Elliott North Camp. The bill is issued to Barkly Regional Council. It is not known what contribution the residents make towards water bills.
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 the Gurungu Aboriginal Land Trust for Elliott North Camp. It will be up to the governing body to assign bills to residents accordingly.

It is recommended that individual lot meters are maintained in addition to the proposed continuation of using bulk water meters to measure water usage. 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.

Only two lot water meters were assessed during the inspection. It is believed there are 36 dwellings in the community. Therefore, with respect to current PWC guidelines, up to an additional 34 water meters are required to be installed to cover the properties without an existing water meter. 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 accessed above ground; no below ground services were inspected.

The condition of each asset is as follows:

<table>
<thead>
<tr>
<th>Asset</th>
<th>1 Very Poor</th>
<th>2 Poor</th>
<th>3 Good</th>
<th>4 Very Good</th>
<th>5 Excellent</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire hydrants</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td></td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Taps</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Water meter (residential lots)</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>
A fire hydrant and a tap were assessed as being in very poor condition and both should be replaced. Minor repairs are also needed on another tap which has a bent pipe and may require a replacement handle. Further maintenance is required on a single lot water meter to clear calcium build up.

### 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 3 shows the calculated demand.

**Table 3 Current water demand**

<table>
<thead>
<tr>
<th>Total dwellings</th>
<th>EP</th>
<th>Demand (l/s)</th>
<th>Peak hour demand (l/s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>36</td>
<td>324</td>
<td>4.86</td>
<td>14.58</td>
</tr>
</tbody>
</table>
A 10 year plan has been established for water supply throughout the township of Elliott. Significant headworks are planned to provide fire flows throughout the township. The headworks appears to be external upgrades from the community. It is understood that the existing network within the community will have capacity for fire flow demands following the upgrades.

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 Elliott North Camp no additional fire hydrants are expected to be required.

Current PWC standards do not permit DN100 sized pipes for fire flows. Furthermore, the water mains appears to be positioned outside the road reserve. The existing network does not strictly meet current standards. Although the existing network is currently not compliant with PWC standards it is expected that there will be no tangible benefit to the community by upgrading the DN100 PVC pipes to DN150.

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;

- Restore fire hydrant pit
- Replace one tap
- Repair one tap
- Remove calcium build up from one residential lot water meter

The community is viewed a single lot and water usage is proposed to be measured for the entire community at the bulk meter, however, it is also recommended that residential lot water meters are located on the connection to each dwelling. The lot meters will assist with distribution of bills to the residents and identify any leaks within the internal network. The cost estimates for the upgrades at Elliott North Camp include;

- Install up to 34 water meters
7 Roadworks

7.1 Ownership and boundaries
It is the current understanding that the roads within Elliott North Camp are owned by Gurungu Aboriginal Land Trust, however are the responsibility of Barkly Regional Council to maintain.

7.2 Existing infrastructure condition assessment
Road furniture including signs and footpaths were inspected. Table 4 below summarise the condition of the road furniture as assessed during the site inspection.

Table 4 Roadworks condition assessment

<table>
<thead>
<tr>
<th>Asset</th>
<th>1 Very Poor</th>
<th>2 Poor</th>
<th>3 Good</th>
<th>4 Very Good</th>
<th>5 Excellent</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Footpath</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Signs</td>
<td>3</td>
<td></td>
<td>11</td>
<td></td>
<td></td>
<td>14</td>
</tr>
</tbody>
</table>

Figure 5 Footpath, condition: poor
Figure 6 Signs, condition: very good

The footpaths within Elliott North were generally in poor to very poor condition. The footpaths were overgrown with weeds and grass, covered in dirt or debris, and some sections were non-existent. It is recommended that the footpath is repaired for the entire community. This may include sections of rebuilding the footpath, or just a general tidy up.
The signs in the community were generally in very good condition, with the exception of three signs that were in poor condition. It is recommended that the three signs are replaced.

Figure 7 Community road network

Table 5 below details the condition of the roads within Elliott North Camp for specific segments. Figure 7 shows a map of the 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 5 Road network condition assessment

<table>
<thead>
<tr>
<th>Road Name</th>
<th>Chainage Start (km)</th>
<th>Chainage end (km)</th>
<th>Road segment condition (1-5)</th>
<th>Defects and associated condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bindjaeni Court</td>
<td>0</td>
<td>0.12</td>
<td>3</td>
<td>-10% of road has surface cracks (3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-4 m of ruts due to grader/heavy machinery driving over road</td>
</tr>
<tr>
<td>Darliwa Crescent</td>
<td>0</td>
<td>0.1</td>
<td>3</td>
<td>-some stone loss (3)</td>
</tr>
<tr>
<td>Gurungu Street</td>
<td>0.25</td>
<td>0.35</td>
<td>3</td>
<td>-5% of road has surface cracks (2)</td>
</tr>
<tr>
<td></td>
<td>0.35</td>
<td>0.65</td>
<td>3</td>
<td>-10% of road has surface cracks (3)</td>
</tr>
<tr>
<td>Ijibarda Street</td>
<td>0</td>
<td>0.1</td>
<td>3</td>
<td>-5% of road has surface cracks (3)</td>
</tr>
<tr>
<td></td>
<td>0.1</td>
<td>0.2</td>
<td>3</td>
<td>-20 m of kerb and gutters filled with dirt (2)</td>
</tr>
<tr>
<td></td>
<td>0.2</td>
<td>0.3</td>
<td>3</td>
<td>-5% of road has surface cracks (3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-Road has some spray paint, rubbish, dirt in gutters (3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 8 Bindjaeni Court, condition: good

Figure 9 Ijibarda Street, gutters filled with dirt, condition: poor
7.3 **Current performance and risks**
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.

The roads in Elliott North Camp were all generally in good condition. The most common defect was that the pavement had surface cracks and the gutters were filled with dirt in some areas.

It is recommended that the cracks are sealed to prevent further damage to the pavement. It is also recommended that the gutters are cleaned out to improve the stormwater drainage and to prevent blockages in the stormwater drainage pipes.

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;

- Seal cracks on all roads – 550 m² has been allowed for in the cost estimates.
- Clean out gutters – 50 m has been allowed for in the cost estimates.
- Repair and rebuild footpath – approximately 1500 m
- Replace three signs (Keep Left, 20 km/hr, Jingulu St Jibarda St road name sign)
8 Stormwater drainage

8.1 Ownership and boundaries
The stormwater drainage assets within Elliott North Camp are owned by Gurungu Aboriginal Land Trust, however are the responsibility of Barkly Regional 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 6 below summarises the condition of the stormwater assets as assessed during the inspection.

Table 6 Stormwater condition assessment

<table>
<thead>
<tr>
<th>Asset</th>
<th>1 Very Poor</th>
<th>2 Poor</th>
<th>3 Good</th>
<th>4 Very Good</th>
<th>5 Excellent</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Culvert</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>SEP</td>
<td>9</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>13</td>
</tr>
<tr>
<td>Swale</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

Figure 10 Swale, condition: poor
Figure 11 Culvert headwall, condition: very poor
The swale as rated in poor condition due to having trees and debris in the swale. It is recommended that the trees are removed to improve the hydraulic efficiency.

The culverts were rated in poor and very poor condition. Three culverts were blocked up to 50%, 90% and 100% respectively. It is recommended that the culverts, and swales upstream and downstream of the culverts are cleared out.

Approximately 70% of the side entry pits investigated were found to be in poor condition. Although generally the hydraulic capacity was not affected, the side entry pits were damaged and appear to be quite old. It is recommended that the lid and surrounding concrete of all side entry pits assessed as poor are replaced.

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 that it is not currently operating sufficiently. A number of the side entry pits and culverts were blocked, meaning that the stormwater is not getting away as quickly as it should, resulting in ponding.

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 out trees and debris from within swale
- Clear out culverts and headwalls (three)
- Clear out blockage from seven side entry pits
- Replace lids and surrounding concrete of nine side entry pits
Community structures

Ownership and boundaries
The community structures within Elliott North Camp are owned by Gurungu Aboriginal Land Trust, however are the responsibility of Barkly Regional Council to maintain.

The community structures assessed during the site inspections included playgrounds and a basketball court. There are other community facilities such as a football field, workshop and a child care centre in the community.

Existing infrastructure condition assessment
The site investigation for the community structures included assessing the condition and features of the two playgrounds and basketball court. The following table shows the condition rating given to the community structures.

<table>
<thead>
<tr>
<th>Asset</th>
<th>1 Very Poor</th>
<th>2 Poor</th>
<th>3 Good</th>
<th>4 Very Good</th>
<th>5 Excellent</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basketball court</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Playground</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>

Figure 14 Basketball court, condition: poor
9.3 Current performance and risks

The basketball was rated in poor condition due to having broken glass on the court, no basketball hoops, and no shade structure.

Both playgrounds were in good condition, although there was some evidence of rust and paint starting to peel, and they did not have shadecloths.
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:

- Install a shade cloth over the two playgrounds
- General tidy up of the basketball court
- Install new basketball hoops on basketball court
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 its 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 Elliott North Camp community electrical reticulation system is supplied from a pole mounted transformer located within the town camp from which LV overhead reticulation extends to individual dwellings. The town camp has power pole mounted street lights.

PWC advise that the Point Of Supply is the LV terminals of the first transformer where power first enters the town camp.

PWC recommend that a GBS (Gas Break Switch) and LV isolation facilities be provided at a pole outside the town camp 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.

Elliott North Camp community are responsible for all unmetered and metered LV infrastructure including the main switchboard, metering panel (excluding meter), LV distribution feeders, distribution pillars, consumers’ mains and consumer switchboards.
10.2 Existing infrastructure condition assessment

Table 8 shows the condition rating given to the distribution switchboards and/or pillars. The distribution panels had 50% operational rating, one metering panel is redundant.

Table 8 Distribution panel condition assessment

<table>
<thead>
<tr>
<th>Asset</th>
<th>1 Very Poor</th>
<th>2 Poor</th>
<th>3 Good</th>
<th>4 Very Good</th>
<th>5 Excellent</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distribution panels</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>

Table 9 shows the condition rating given to the street lights. The street lights were of a low voltage overhead feeder design, sodium lamp S70D. The street lights have 100% operational rating, from visual inspection in the day time.

Table 9 Street light condition assessment

<table>
<thead>
<tr>
<th>Asset</th>
<th>1 Very Poor</th>
<th>2 Poor</th>
<th>3 Good</th>
<th>4 Very Good</th>
<th>5 Excellent</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Street light</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>

Table 10 shows the condition rating given to the street lights. The street lights were of a low voltage overhead feeder design, sodium lamp S70D. The street lights have 90% operational rating with 10% inoperable.

Table 10 Street light on O/H pole condition assessment

<table>
<thead>
<tr>
<th>Asset</th>
<th>1 Very Poor</th>
<th>2 Poor</th>
<th>3 Good</th>
<th>4 Very Good</th>
<th>5 Excellent</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Street light on O/H pole</td>
<td>2</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td>20</td>
</tr>
</tbody>
</table>

Table 11 shows the condition rating given to the transformer. The transformer is a pole mounted substation design. The transformer was visually assessed to be in good condition.

Table 11 Transformer condition assessment

<table>
<thead>
<tr>
<th>Asset</th>
<th>1 Very Poor</th>
<th>2 Poor</th>
<th>3 Good</th>
<th>4 Very Good</th>
<th>5 Excellent</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transformer</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

Table 12 shows the condition rating given to the overhead poles. The overhead poles are of Welded Construction (Universal Pole construction) and steel consumer service poles.

Table 12 Overhead pole condition assessment

<table>
<thead>
<tr>
<th>Asset</th>
<th>1 Very Poor</th>
<th>2 Poor</th>
<th>3 Good</th>
<th>4 Very Good</th>
<th>5 Excellent</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overhead pole</td>
<td>32</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>32</td>
</tr>
</tbody>
</table>
The meters in Elliott North Camp community were not inspected by Bennett Design (as they did not go to Elliott) or by Aurecon (as access to properties was restricted).

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

Table 13 Switchboard condition assessment (housing footprint)

<table>
<thead>
<tr>
<th>Asset</th>
<th>1 Very Poor</th>
<th>2 Poor</th>
<th>3 Good</th>
<th>4 Very Good</th>
<th>5 Excellent</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switchboard</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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.
- Streetlighting loads were ignored as they are not significant.

The calculated maximum demand of the Elliott North Camp community transformer is 162% of rated capacity based on 4.5kVA/dwelling.

PWC advise that no damage has occurred to this infrastructure.

Table 14 Elliott North Camp current demand load vs transformer ratings

<table>
<thead>
<tr>
<th>Com Id</th>
<th>Community name</th>
<th>Dwellings</th>
<th>Transformer (kVA)</th>
<th>kVA Total @ 4.5kVA</th>
<th>kVA Total @ 7kVA</th>
</tr>
</thead>
<tbody>
<tr>
<td>225</td>
<td>Elliott North Camp</td>
<td>36</td>
<td>100</td>
<td>162</td>
<td>252</td>
</tr>
</tbody>
</table>

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
No new dwellings are currently planned for the community, i.e. no upgrades are proposed to cater for future demands.

10.5 Recommended works
It is recommended that the Elliott North Camp community electrical infrastructure be upgraded to PWC requirements.

The following maintenance works and upgrades are recommended:

• Replace two street lights 70W
• Load monitoring to allow PWC to determine, by assessment, whether the transformer needs to be upgraded or not.
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.

The Appendices contain the individual reports.

Table 15 Telecommunication pit condition assessment

<table>
<thead>
<tr>
<th>Asset</th>
<th>1 Very Poor</th>
<th>2 Poor</th>
<th>3 Good</th>
<th>4 Very Good</th>
<th>5 Excellent</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telecommunication Pit</td>
<td>1</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 16 Phone booth condition assessment

<table>
<thead>
<tr>
<th>Asset</th>
<th>1 Very Poor</th>
<th>2 Poor</th>
<th>3 Good</th>
<th>4 Very Good</th>
<th>5 Excellent</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phone booth</td>
<td>1 (status unknown)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 Elliott North Camp is displayed in the Figure 17 below. NBN is available to residents via satellite on application to an appropriate NBN access provider.
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 Elliott North camp because NBN is available to residents via satellite on application to an appropriate NBN access provider.
12 Cost estimates

Table 17 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 17 Cost estimates

<table>
<thead>
<tr>
<th>Infrastructure</th>
<th>Maintenance of existing infrastructure</th>
<th>Upgrades to meet current design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sewerage</td>
<td>$ 0</td>
<td>$ 1,999,000</td>
</tr>
<tr>
<td>Water supply</td>
<td>$ 6,000</td>
<td>$ 219,000</td>
</tr>
<tr>
<td>Roadworks</td>
<td>$ 232,000</td>
<td>$ 0</td>
</tr>
<tr>
<td>Stormwater drainage</td>
<td>$ 47,000</td>
<td>$ 0</td>
</tr>
<tr>
<td>Community structures</td>
<td>$ 2,000</td>
<td>$ 34,000</td>
</tr>
<tr>
<td>Electrical</td>
<td>$ 2,000</td>
<td>$ 0</td>
</tr>
<tr>
<td>Communications</td>
<td>$ 0</td>
<td>$ 0</td>
</tr>
<tr>
<td>Miscellaneous provisions</td>
<td>$ 49,000</td>
<td>$ 285,000</td>
</tr>
<tr>
<td><strong>Total (including GST)</strong></td>
<td><strong>$ 338,000</strong></td>
<td><strong>$ 2,537,000</strong></td>
</tr>
</tbody>
</table>

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.
Summary

The following works are recommended for Elliott North Camp community:

**Sewerage**
- Install DN150 PVC gravity main, including house connections and connections to new town sewer. This is assuming that town sewer will be provided at the same time the community is upgraded, however the cost estimates are for the community upgrades only.

**Water supply**
- Install up to 34 water meters
- Restore fire hydrant pit
- Replace one tap
- Repair one tap
- Remove calcium build up from one residential lot water meter

**Roadworks**
- Seal cracks on all roads – 550 m² has been allowed for in the cost estimates.
- Clean out gutters – 50 m has been allowed for in the cost estimates.

**Stormwater drainage**
- Clear out trees and debris from within swale
- Clear out culverts and headwalls (three)
- Clear out blockage from seven side entry pits
- Replace lids and surrounding concrete of nine side entry pits

**Community structures**
- Install a shade cloth over the two playgrounds
- General tidy up of the basketball court
- Install new basketball hoops on basketball court

**Electrical services**
- Replace two street lights 70W
- Load monitoring to allow PWC to determine, by assessment, whether the transformer needs to be upgraded or not.

**Communications**
- No works are required because NBN is available to residents via satellite on application to an appropriate NBN access provider.
Civil inspection reports
NT Town Camp Infrastructure Assessments - Sewerage
225 - Gurungu (Elliott North Camp)

Note:
Label numbers refer to survey IDs

Date: 23/02/2017
Version: 2

Legend
Town Camp boundary
Sewerage
Manholes (1)

Imagery: Digital Globe WV2 2013-2016

Legend
Town Camp boundary
Sewerage
Manholes (1)

A3 scale: 1:3,500
NT Town Camp Infrastructure Assessments: Water
225 - Gurungu (Elliott North Camp)

Legend
- Town Camp boundary
- Water
- Water Meter (2)
- Fire Hydrants (8)
- Taps (3)

Note:
Label numbers refer to survey IDs

Coordinate system: MGA94 Zone 52
Map by: DMcP

Imagery: Digital Globe WV2 2013-2016

Date: 23/02/2017 Version: 2

A3 scale: 1:3,500
## Northern Territory Town Camps

### Civil Infrastructure

**Inspection Date**  29/11/2016 10:54:23 AM

<table>
<thead>
<tr>
<th>Insp ID:</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Stormwater Infrastructure:</th>
<th>Culverts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Culvert Type:</td>
<td></td>
</tr>
<tr>
<td>Diameter (mm):</td>
<td></td>
</tr>
<tr>
<td>Width (mm):</td>
<td></td>
</tr>
<tr>
<td>Culvert Depth (mm):</td>
<td></td>
</tr>
<tr>
<td>Culvert Length (m):</td>
<td></td>
</tr>
<tr>
<td>Culvert Condition:</td>
<td>1 - Very Poor</td>
</tr>
<tr>
<td>Culvert Blockage (%):</td>
<td>100</td>
</tr>
<tr>
<td>Culvert Comments:</td>
<td></td>
</tr>
<tr>
<td>Culvert Head Wall:</td>
<td>Yes</td>
</tr>
<tr>
<td>Safety Grate:</td>
<td>No Access</td>
</tr>
<tr>
<td>Headwall Blockage:</td>
<td>100</td>
</tr>
<tr>
<td>Headwall Condition:</td>
<td></td>
</tr>
<tr>
<td>Headwall Comment:</td>
<td></td>
</tr>
<tr>
<td>End Wall:</td>
<td>No</td>
</tr>
<tr>
<td>End Wall condition:</td>
<td></td>
</tr>
<tr>
<td>EW Comment:</td>
<td></td>
</tr>
</tbody>
</table>
## Northern Territory Town Camps

### Civil Infrastructure

**Inspection Date** 29/11/2016 11:19:32 AM

<table>
<thead>
<tr>
<th>Insp ID: 1226</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

- **Stormwater Infrastructure:** Culverts
- **Culvert Type:**
- **Diameter (mm):**
- **Width (mm):**
- **Culvert Depth (mm):**
- **Culvert Length (m):**
- **Culvert Condition:** 2 - Poor
- **Culvert Blockage (%):** 90
- **Culvert Comments:**
- **Culvert Head Wall:** NA
- **Safety Grate:** NA
- **Headwall Blockage:**
- **Headwall Condition:**
- **Headwall Comment:**
- **End Wall:** Yes
- **End Wall condition:** 2 - Poor
- **EW Comment:** Couldn't see culvert dimensions
Northern Territory Town Camps

Civil Infrastructure

**Inspection Date**  29/11/2016 11:41:52 AM

<table>
<thead>
<tr>
<th>Insp ID: 1233</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

- **Stormwater Infrastructure:** Culverts
- **Culvert Type:** RCP
- **Diameter (mm):** 300
- **Width (mm):**
- **Culvert Depth (mm):**
- **Culvert Length (m):**
- **Culvert Condition:** 2 - Poor
- **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:**
## Northern Territory Town Camps

### Civil Infrastructure

**Inspection Date**  
29/11/2016 12:17:36 PM

<table>
<thead>
<tr>
<th>Insp ID: 1242</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

- **Stormwater Infrastructure:** Culverts
- **Culvert Type:** RCP
- **Diameter (mm):** 450
- **Width (mm):**
- **Culvert Depth (mm):**
- **Culvert Length (m):**
- **Culvert Condition:** 2 - Poor
- **Culvert Blockage (%):**
- **Culvert Comments:**
- **Culvert Head Wall:** No
- **Safety Grate:**
- **Headwall Blockage:**
- **Headwall Condition:**
- **Headwall Comment:**
- **End Wall:** Yes
- **End Wall condition:** 2 - Poor
- **EW Comment:**
**Northern Territory Town Camps**

**Civil Infrastructure**

**Inspection Date**  29/11/2016  8:59:42 AM

<table>
<thead>
<tr>
<th>Insp ID:</th>
<th>1187</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

**What Water Asset Are you Capturing:**  Fire Hydrants

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

![Image 1](P:\GIS\Projects\253963_NT\Image found and displayed.jpg)

![Image 2](P:\GIS\Projects\253963_NT\Image found and displayed.jpg)
Northern Territory Town Camps
Civil Infrastructure

**Inspection Date** 29/11/2016 9:31:30 AM

<table>
<thead>
<tr>
<th>Insp ID: 1196</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

What Water Asset Are you Capturing: **Fire Hydrants**

Single or Double: 
Sluice Valve: No
Above or Below ground: **Below ground**
FH Leakage: No Access
Bollards around hydrant: No
FH Condition: 1 - Very Poor
FH Comment: Cover not sitting properly, cover broken
Civil Infrastructure

Northern Territory Town Camps

Insp ID: 1204  Group 3 - Tennant Creek, Elliott  Elliott North Camp

What Water Asset Are you Capturing:  Fire Hydrants

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

FH Comment:  

[Image found and displayed.]
Civil Infrastructure

Inspection Date 29/11/2016 10:21:47 AM

Insp ID: 1209  Group 3 - Tennant Creek, Elliott  Elliott North Camp

What Water Asset Are you Capturing: Fire Hydrants

Single or Double: No

Sluice Valve: No

Above or Below ground: Below ground

FH Leakage: No Access

Bollards around hydrant: No

FH Condition: 3 - Good

FH Comment: Covered in leaves, next to fence
What Water Asset Are you Capturing: Fire Hydrants

Single or Double: 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**  29/11/2016 11:39:41 AM

**Insp ID:** 1232  
**Group 3 - Tennant Creek, Elliott**  
**Elliott North Camp**

**What Water Asset Are you Capturing:**  Fire Hydrants

**Single or Double:**  
**Sluice Valve:** No

**Above or Below ground:** Below ground

**FH Leakage:** No Access

**Bollards around hydrant:** No

**FH Condition:** 3 - Good

**FH Comment:** Erosion around lid
Northern Territory Town Camps

Civil Infrastructure

Inspection Date 29/11/2016 11:58:00 AM

Insp ID: 1238  Group 3 - Tennant Creek, Elliott  Elliott North Camp

What Water Asset Are you Capturing: Fire Hydrants

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

Image found and displayed.
Northern Territory Town Camps

Civil Infrastructure

**Inspection Date**: 29/11/2016 12:32:37 PM

<table>
<thead>
<tr>
<th>Insp ID: 1247</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

What Water Asset Are you Capturing: Fire Hydrants

**Single or Double:**

**Sluice Valve:** No

**Above or Below ground:** Below ground

**FH Leakage:** No Access

**Bollards around hydrant:** No

**FH Condition:** 3 - Good

**FH Comment:** Lid not flat on ground
Northern Territory Town Camps

Civil Infrastructure

Inspection Date 29/11/2016 8:52:13 AM

Insp ID: 1182  Group 3 - Tennant Creek, Elliott  Elliott North Camp

Road Name:

What are you inspecting: Foot Paths

Footpath Width (mm):

Footpath Type: Concrete

Footpath Condition: 1 - Very Poor

Comment: Covered in dirt

General Comment:
<table>
<thead>
<tr>
<th><strong>Insp ID:</strong></th>
<th>1184</th>
<th><strong>Group 3 - Tennant Creek, Elliott</strong></th>
<th><strong>Elliott North Camp</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Road Name:</strong></td>
<td>Ijibarda Street</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>What are you inspecting:</strong></td>
<td>Foot Paths</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Footpath Width (mm):</strong></td>
<td>900</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Footpath Type:</strong></td>
<td>Concrete</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Footpath Condition:</strong></td>
<td>2 - Poor</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Comment:</strong></td>
<td>Broken sections and covered in dirt</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**General Comment:**

![Image of the footpath showing broken sections and covered in dirt](image-url)
Road Name: Walanja Crescent
What are you inspecting: Foot Paths
Footpath Width (mm): 900
Footpath Type: Concrete
Footpath Condition: 2 - Poor
Comment: Overgrown, cracked sections, not maintained
General Comment:
## Northern Territory Town Camps

### Civil Infrastructure

**Inspection Date**  29/11/2016 9:17:00 AM

<table>
<thead>
<tr>
<th>Insp ID:</th>
<th>1193</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

**Road Name:**  Ijibarda Street

**What are you inspecting:**  Foot Paths

**Footpath Width (mm):**  900

**Footpath Type:**  Concrete

**Footpath Condition:**  2 - Poor

**Comment:**  Broken, non-existent sections

**General Comment:**

![Image of Ijibarda Street footpath]
<table>
<thead>
<tr>
<th>Road Name:</th>
<th>Jingulu Street</th>
</tr>
</thead>
<tbody>
<tr>
<td>What are you inspecting:</td>
<td>Foot Paths</td>
</tr>
<tr>
<td>Footpath Width (mm):</td>
<td>900</td>
</tr>
<tr>
<td>Footpath Type:</td>
<td>Concrete</td>
</tr>
<tr>
<td>Footpath Condition:</td>
<td>2 - Poor</td>
</tr>
<tr>
<td>Comment:</td>
<td></td>
</tr>
<tr>
<td>General Comment:</td>
<td></td>
</tr>
</tbody>
</table>
# Northern Territory Town Camps

## Civil Infrastructure

**Inspection Date**  29/11/2016 10:09:15 AM

<table>
<thead>
<tr>
<th>Insp ID: 1206</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

What Sewerage Asset are you capturing: **Manholes**

MH Cover Shape:  
Manhole Cover Diam (mm):  
Manhole Length (mm):  
Manhole Width (mm):  
Manhole Condition:  
Notes on Lid:  
Comments: **Septic tanks**
## Northern Territory Town Camps

### Civil Infrastructure

**Inspection Date**  29/11/2016  8:43:03 AM

<table>
<thead>
<tr>
<th>Insp ID: 1181</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Road Name:</strong></td>
<td>Ijibarda Street</td>
<td></td>
</tr>
<tr>
<td><strong>What are you inspecting:</strong></td>
<td>Pavements</td>
<td></td>
</tr>
<tr>
<td><strong>Ch From (km):</strong></td>
<td>0</td>
<td></td>
</tr>
<tr>
<td><strong>Ch To (km):</strong></td>
<td>0.1</td>
<td></td>
</tr>
<tr>
<td><strong>Road Type:</strong></td>
<td>Sealed - spray seal</td>
<td></td>
</tr>
<tr>
<td><strong>Section Width (m):</strong></td>
<td>6.1</td>
<td></td>
</tr>
<tr>
<td><strong>Road Condition:</strong></td>
<td>3 - Good</td>
<td></td>
</tr>
</tbody>
</table>

### General Comment:

- **Kerb Section**
  - **Kerb Type**
    - **Kerb Cond**: 3 - Good
    - **Kerb Comments**: First 50m flush kerb, then kerb and gutter
  - **Kerb and Gutter**
    - **Kerb Cond**: 3 - Good
    - **Kerb Comments**: First 50m flush kerb, then kerb and gutter

### Road Defects Section

<table>
<thead>
<tr>
<th>Defect Type</th>
<th>Defect QTY</th>
<th>Defect Condition</th>
<th>Defect Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surfacing Cracks</td>
<td>5</td>
<td>3 - Good</td>
<td>5% of road is cracked</td>
</tr>
<tr>
<td>Kerb</td>
<td>20</td>
<td>2 - Poor</td>
<td>20m of dirt covering kerb</td>
</tr>
</tbody>
</table>

### Shoulders Section

### Linemarking Section

### Obstruction Section

---
Northern Territory Town Camps

Civil Infrastructure

**Inspection Date**  29/11/2016 8:43:03 AM
Northern Territory Town Camps

Civil Infrastructure

**Inspection Date**  29/11/2016 8:43:03 AM
### Northern Territory Town Camps

**Civil Infrastructure**

**Inspection Date**  29/11/2016 9:03:51 AM

<table>
<thead>
<tr>
<th>Insp ID: 1189</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

- **Road Name:** Walanja Crescent
- **What are you inspecting:** Pavements
- **Ch From (km):** 0
- **Ch To (km):** 0.1
- **Road Type:** Sealed - spray seal
- **Section Width (m):** 6
- **Road Condition:** 3 - Good

**General Comment:**

#### Road Defects Section

<table>
<thead>
<tr>
<th>Defect Type</th>
<th>Defect QTY</th>
<th>Defect Condition</th>
<th>Defect Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surfacing Cracks</td>
<td>5</td>
<td>5 - Excellent</td>
<td>5% of road has cracks</td>
</tr>
</tbody>
</table>

#### Kerbs Section

<table>
<thead>
<tr>
<th>Kerb Type</th>
<th>Kerb Cond</th>
<th>Kerb Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kerb and Gutter</td>
<td>4 - Very Good</td>
<td></td>
</tr>
</tbody>
</table>

#### Shoulders Section

#### Linemarking Section

#### Obstruction Section
Northern Territory Town Camps

Civil Infrastructure

**Inspection Date**  29/11/2016 9:03:51 AM
Civil Infrastructure

Inspection Date  29/11/2016 9:03:51 AM
### Northern Territory Town Camps

#### Civil Infrastructure

**Insp ID:** 1192  
**Group 3 - Tennant Creek, Elliott**  
**Elliott North Camp**

<table>
<thead>
<tr>
<th>Road Name:</th>
<th>Ijibarda Street</th>
</tr>
</thead>
<tbody>
<tr>
<td>What are you inspecting:</td>
<td>Pavements</td>
</tr>
<tr>
<td>Ch From (km):</td>
<td>0.1</td>
</tr>
<tr>
<td>Ch To (km):</td>
<td>0.2</td>
</tr>
<tr>
<td>Road Type:</td>
<td>Sealed - spray seal</td>
</tr>
<tr>
<td>Section Width (m):</td>
<td>6</td>
</tr>
<tr>
<td>Road Condition:</td>
<td>3 - Good</td>
</tr>
</tbody>
</table>

**General Comment:**

- **Kerbs Section**
  - **Kerb Type**
  - **Kerb Cond**
  - **Kerb Comments**

- **Surfacing Cracks**
  - **Defect QTY**: 5
  - **Defect Condition**: 3 - Good
  - **Defect Comments**: 5% of road has cracks

- **General Appearance**
  - **Defect QTY**: 3
  - **Defect Condition**: 3 - Good
  - **Defect Comments**: Some spray paint, rubbish, dirt in gutters

**Shoulders Section**

**Linemarking Section**

**Obstruction Section**
Civil Infrastructure

**Northern Territory Town Camps**

**Inspection Date**  29/11/2016 9:12:44 AM
Northern Territory Town Camps

Civil Infrastructure

**Inspection Date**  29/11/2016 9:12:44 AM
## Northern Territory Town Camps

### Civil Infrastructure

**Inspection Date**  
29/11/2016 9:33:25 AM

<table>
<thead>
<tr>
<th>Insp ID: 1197</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

- **Road Name:** Ijibarda Street
- **What are you inspecting:** Pavements
- **Ch From (km):** 0.2
- **Ch To (km):** 0.3
- **Road Type:** Sealed - spray seal
- **Section Width (m):** 6
- **Road Condition:** 3 - Good

### General Comment:

**Road Defects Section**

<table>
<thead>
<tr>
<th>Defect Type</th>
<th>Defect QTY</th>
<th>Defect Condition</th>
<th>Defect Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surfacing Cracks</td>
<td>5</td>
<td>3 - Good</td>
<td>5% of road has cracks</td>
</tr>
</tbody>
</table>

**Kerbs Section**

<table>
<thead>
<tr>
<th>Kerb Type</th>
<th>Kerb Cond</th>
<th>Kerb Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kerb and Gutter</td>
<td>3 - Good</td>
<td></td>
</tr>
</tbody>
</table>

**Shoulders Section**

**Linemarking Section**

**Obstruction Section**
Northern Territory Town Camps

Civil Infrastructure

Inspection Date  29/11/2016 9:33:25 AM
**Northern Territory Town Camps**

**Civil Infrastructure**

**Inspection Date** 29/11/2016 9:42:52 AM

<table>
<thead>
<tr>
<th>Insp ID: 1199</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliot North Camp</th>
</tr>
</thead>
</table>

**Road Name:** Ijibarda Street

**What are you inspecting:** Pavements

**Ch From (km):** 0.3

**Ch To (km):** 0.4

**Road Type:** Sealed - spray seal

**Section Width (m):** 6

**Road Condition:** 3 - Good

**General Comment:**

**Road Defects Section**

<table>
<thead>
<tr>
<th>Defect Type</th>
<th>Defect QTY</th>
<th>Defect Condition</th>
<th>Defect Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surfacing Cracks</td>
<td>5</td>
<td>3 - Good</td>
<td>5% of road has cracks</td>
</tr>
</tbody>
</table>

**Kerbs Section**

<table>
<thead>
<tr>
<th>Kerb Type</th>
<th>Kerb Cond</th>
<th>Kerb Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kerb and Gutter</td>
<td>3 - Good</td>
<td></td>
</tr>
</tbody>
</table>

**Shoulders Section**

**Linemaking Section**

**Obstruction Section**
Northern Territory Town Camps
Civil Infrastructure

Inspection Date  29/11/2016 9:42:52 AM
## Northern Territory Town Camps

### Civil Infrastructure

**Inspection Date**  29/11/2016 9:56:53 AM

<table>
<thead>
<tr>
<th>Insp ID:</th>
<th>1203</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

- **Road Name:** Gurungu Street
- **What are you inspecting:** Pavements
- **Ch From (km):** 0.25
- **Ch To (km):** 0.35
- **Road Type:** Sealed - spray seal
- **Section Width (m):** 6
- **Road Condition:** 3 - Good

### General Comment:
- Kerbs Section
  - **Kerb Type:** Kerb Cond
  - **Kerb and Gutter:** 4 - Very Good

### Road Defects Section

<table>
<thead>
<tr>
<th>Defect Type</th>
<th>Defect QTY</th>
<th>Defect Condition</th>
<th>Defect Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surfacing Cracks</td>
<td>5</td>
<td>2 - Poor</td>
<td>5% of road cracked</td>
</tr>
</tbody>
</table>

### Obstruction Section

### Linemaking Section
Northern Territory Town Camps

Civil Infrastructure

Inspection Date 29/11/2016 9:56:53 AM
Northern Territory Town Camps

Civil Infrastructure

**Inspection Date**  29/11/2016 9:56:53 AM
## Northern Territory Town Camps

### Civil Infrastructure

**Inspection Date** 29/11/2016 10:17:57 AM

<table>
<thead>
<tr>
<th>Insp ID</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
<tbody>
<tr>
<td>1208</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Road Name:** Marli Marli Crescent
- **What are you inspecting:** Pavements
- **Ch From (km):** 0
- **Ch To (km):** 0.11
- **Road Type:** Sealed - spray seal
- **Section Width (m):**
- **Road Condition:** 3 - Good

**General Comment:**

### Road Defects Section

<table>
<thead>
<tr>
<th>Defect Type</th>
<th>Defect QTY</th>
<th>Defect Condition</th>
<th>Defect Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surfacing Cracks</td>
<td>5</td>
<td>3 - Good</td>
<td>% of road has cracked</td>
</tr>
</tbody>
</table>

### Kerbs Section

<table>
<thead>
<tr>
<th>Kerb Type</th>
<th>Kerb Cond</th>
<th>Kerb Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kerb and Gutter</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Shoulders Section

### Linemarking Section

### Obstruction Section
Northern Territory Town Camps

Civil Infrastructure

Inspection Date  29/11/2016 10:17:57 AM
Northern Territory Town Camps

Civil Infrastructure

Inspection Date  29/11/2016 10:17:57 AM
**Northern Territory Town Camps**

**Civil Infrastructure**

**Inspection Date**  29/11/2016 10:30:38 AM

<table>
<thead>
<tr>
<th>Insp ID:</th>
<th>1214</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

- **Road Name:** Gurungu Street
- **What are you inspecting:** Pavements
- **Ch From (km):** 0.35
- **Ch To (km):** 0.65
- **Road Type:** Sealed - spray seal
- **Section Width (m):** 6
- **Road Condition:** 3 - Good

**General Comment:**

**Road Defects Section**

<table>
<thead>
<tr>
<th>Defect Type</th>
<th>Defect QTY</th>
<th>Defect Condition</th>
<th>Defect Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surfacings Cracks</td>
<td>10</td>
<td>3 - Good</td>
<td>10% of road has cracks</td>
</tr>
</tbody>
</table>

**Kerbs Section**

<table>
<thead>
<tr>
<th>Kerb Type</th>
<th>Kerb Cond</th>
<th>Kerb Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kerb and Gutter</td>
<td>3 - Good</td>
<td></td>
</tr>
</tbody>
</table>

**Shoulders Section**

**Linemarking Section**

**Obstruction Section**
Northern Territory Town Camps

Civil Infrastructure

**Inspection Date**  29/11/2016 10:30:38 AM
Northern Territory Town Camps

Civil Infrastructure

**Inspection Date** 29/11/2016 10:30:38 AM
## Northern Territory Town Camps

### Civil Infrastructure

**Inspection Date** 29/11/2016 10:47:03 AM

<table>
<thead>
<tr>
<th>Insp ID: 1217</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

- **Road Name:** Gurungu Street
- **What are you inspecting:** Pavements
- **Ch From (km):** 0.25
- **Ch To (km):** 0.45
- **Road Type:** Sealed - spray seal
- **Section Width (m):** 6
- **Road Condition:** 3 - Good

### General Comment:

#### Road Defects Section

<table>
<thead>
<tr>
<th>Defect Type</th>
<th>Defect QTY</th>
<th>Defect Condition</th>
<th>Defect Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surfacing Cracks</td>
<td>10</td>
<td>3 - Good</td>
<td>10% of road has cracks, speed bumps</td>
</tr>
</tbody>
</table>

#### Kerbs Section

<table>
<thead>
<tr>
<th>Kerb Type</th>
<th>Kerb Cond</th>
<th>Kerb Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kerb and Gutter</td>
<td>3 - Good</td>
<td></td>
</tr>
</tbody>
</table>

#### Shoulders Section

#### Linemaking Section

#### Obstruction Section
Northern Territory Town Camps

Civil Infrastructure

Inspection Date 29/11/2016 10:47:03 AM
## Northern Territory Town Camps

### Civil Infrastructure

**Inspection Date** 29/11/2016 10:55:41 AM

**Insp ID:** 1221  **Group 3 - Tennant Creek, Elliott**  **Elliott North Camp**

<table>
<thead>
<tr>
<th>Road Name:</th>
<th>Gurungu Street</th>
</tr>
</thead>
<tbody>
<tr>
<td>What are you inspecting:</td>
<td>Pavements</td>
</tr>
<tr>
<td>Ch From (km):</td>
<td>0.45</td>
</tr>
<tr>
<td>Ch To (km):</td>
<td>0.65</td>
</tr>
<tr>
<td>Road Type:</td>
<td>Sealed - spray seal</td>
</tr>
<tr>
<td>Section Width (m):</td>
<td>6</td>
</tr>
<tr>
<td>Road Condition:</td>
<td>3 - Good</td>
</tr>
</tbody>
</table>

**General Comment:**

**Road Defects Section**

<table>
<thead>
<tr>
<th>Defect Type</th>
<th>Defect QTY</th>
<th>Defect Condition</th>
<th>Defect Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surfacing Cracks</td>
<td>5</td>
<td>3 - Good</td>
<td>5% of road cracked</td>
</tr>
</tbody>
</table>

**Kerbs Section**

<table>
<thead>
<tr>
<th>Kerb Type</th>
<th>Kerb Cond</th>
<th>Kerb Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kerb and Gutter</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Shoulders Section**

**Linemarking Section**

**Obstruction Section**
Northern Territory Town Camps

Civil Infrastructure

Inspection Date  29/11/2016 10:55:41 AM
Northern Territory Town Camps

Civil Infrastructure

**Inspection Date**  29/11/2016 10:55:41 AM
## Northern Territory Town Camps
### Civil Infrastructure

**Inspection Date** 29/11/2016 11:13:10 AM

<table>
<thead>
<tr>
<th>Insp ID: 1224</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

- **Road Name:** Bindjaeni Court
- **What are you inspecting:** Pavements
- **Ch From (km):** 0
- **Ch To (km):** 0.12
- **Road Type:** Sealed - spray seal
- **Section Width (m):** 6
- **Road Condition:** 3 - Good

**General Comment:**

**Road Defects Section**

<table>
<thead>
<tr>
<th>Defect Type</th>
<th>Defect QTY</th>
<th>Defect Condition</th>
<th>Defect Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surfacing Cracks</td>
<td>10</td>
<td>3 - Good</td>
<td>10% road has cracks</td>
</tr>
<tr>
<td>Rutting</td>
<td>4</td>
<td>2 - Poor</td>
<td>Rita due to grader/heavy machinery drivin ove</td>
</tr>
</tbody>
</table>

**Kerbs Section**

<table>
<thead>
<tr>
<th>Kerb Type</th>
<th>Kerb Cond</th>
<th>Kerb Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kerb and Gutter</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Shoulders Section**

**Linemarking Section**

**Obstruction Section**
Northern Territory Town Camps

Civil Infrastructure

Inspection Date  29/11/2016 11:13:10 AM
Northern Territory Town Camps

Civil Infrastructure

Inspection Date  29/11/2016 11:13:10 AM
### Northern Territory Town Camps

#### Civil Infrastructure

**Inspection Date** 29/11/2016 11:48:05 AM

<table>
<thead>
<tr>
<th>Insp ID:</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

**Road Name:** Darliwa Crescent

**What are you inspecting:** Pavements

**Ch From (km):** 0

**Ch To (km):** 0.1

**Road Type:** Sealed - spray seal

**Section Width (m):** 6

**Road Condition:** 3 - Good

**General Comment:**

#### Road Defects Section

<table>
<thead>
<tr>
<th>Defect Type</th>
<th>Defect QTY</th>
<th>Defect Condition</th>
<th>Defect Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stone Loss</td>
<td>5</td>
<td>3 - Good</td>
<td>Some stone loss. Unused road</td>
</tr>
<tr>
<td>Surfacing Cracks</td>
<td>5</td>
<td>3 - Good</td>
<td>5% of road has cracks</td>
</tr>
</tbody>
</table>

#### Kerbs Section

<table>
<thead>
<tr>
<th>Kerb Type</th>
<th>Kerb Cond</th>
<th>Kerb Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kerb and Gutter</td>
<td>3 - Good</td>
<td>Some broke sections</td>
</tr>
</tbody>
</table>

#### Shoulders Section

#### Linemarking Section

#### Obstruction Section
Northern Territory Town Camps

Civil Infrastructure

Inspection Date 29/11/2016 11:48:05 AM
Northern Territory Town Camps

Civil Infrastructure

Inspection Date  29/11/2016 11:48:05 AM
Northern Territory Town Camps

Civil Infrastructure

**Inspection Date**  29/11/2016 11:53:37 AM

<table>
<thead>
<tr>
<th>Insp ID: 1237</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

Road Name: Warlmanpa Street

What are you inspecting: Pavements

Ch From (km): 0

Ch To (km): 0.18

Road Type: Sealed - spray seal

Section Width (m): 6

Road Condition: 3 - Good

General Comment:

**Road Defects Section**

<table>
<thead>
<tr>
<th>Defect Type</th>
<th>Defect QTY</th>
<th>Defect Condition</th>
<th>Defect Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surfacing Cracks</td>
<td>5</td>
<td>3 - Good</td>
<td>5% of road</td>
</tr>
</tbody>
</table>

**Kerbs Section**

<table>
<thead>
<tr>
<th>Kerb Type</th>
<th>Kerb Cond</th>
<th>Kerb Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kerb and Gutter</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Shoulders Section**

**Linemarking Section**

**Obstruction Section**
Northern Territory Town Camps

Civil Infrastructure

Inspection Date 29/11/2016 11:53:37 AM
Northern Territory Town Camps

Civil Infrastructure

Inspection Date  29/11/2016 11:53:37 AM
# Northern Territory Town Camps

## Civil Infrastructure

**Inspection Date**  29/11/2016 12:19:31 PM

<table>
<thead>
<tr>
<th>Insp ID: 1243</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

- **Road Name:** Jingulu Street
- **What are you inspecting:** Pavements
- **Ch From (km):** 0
- **Ch To (km):** 0.25
- **Road Type:** Sealed - spray seal
- **Section Width (m):** 6
- **Road Condition:** 3 - Good

## General Comment:

- Kerbs Section
  - **Kerb Type:** Kerb Cond Kerb Comments
  - **Kerb and Gutter**
  - **Shoulders Section**
  - **Linemarking Section**

## Road Defects Section

<table>
<thead>
<tr>
<th>Defect Type</th>
<th>Defect QTY</th>
<th>Defect Condition</th>
<th>Defect Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surfacing Cracks</td>
<td>5</td>
<td>3 - Good</td>
<td>5% of road</td>
</tr>
</tbody>
</table>

## Obstruction Section
Northern Territory Town Camps

Civil Infrastructure

Inspection Date 29/11/2016 12:19:31 PM
Northern Territory Town Camps

Civil Infrastructure

Inspection Date 29/11/2016 12:19:31 PM
## Northern Territory Town Camps

### Civil Infrastructure

**Inspection Date**: 29/11/2016 8:55:39 AM

<table>
<thead>
<tr>
<th>Insp ID: 1185</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

- **Stormwater Infrastructure**: SEP
- **Number of Bays**: 1
- **On grade or sag pit**:  
- **Both sides of road**: Right
- **Condition**: 3 - Good
- **Blockage (%)**: 10

**Comment:**

[Image of a drainage system]
Northern Territory Town Camps

Civil Infrastructure

**Inspection Date**  29/11/2016 8:57:29 AM

<table>
<thead>
<tr>
<th>Insp ID: 1186</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stormwater Infrastructure:</td>
<td>SEP</td>
<td></td>
</tr>
<tr>
<td>Number of Bays:</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>On grade or sag pit:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Both sides of road:</td>
<td>Left</td>
<td></td>
</tr>
<tr>
<td>Condition:</td>
<td>2 - Poor</td>
<td></td>
</tr>
<tr>
<td>Blockage (%):</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Comment:</td>
<td>Leaves inside pit too, can't tell % blocked. Broken lid</td>
<td></td>
</tr>
</tbody>
</table>
## Northern Territory Town Camps

### Civil Infrastructure

**Inspection Date**  29/11/2016 9:09:52 AM

<table>
<thead>
<tr>
<th>Insp ID</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
<tbody>
<tr>
<td>1190</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Stormwater Infrastructure:** SEP

**Number of Bays:** 1

**On grade or sag pit:**

**Both sides of road:** Left

**Condition:** 2 - Poor

**Blockage (%):** 10

**Comment:**

![Image of stormwater infrastructure](image)
### Stormwater Infrastructure:
- **Type:** SEP
- **Number of Bays:** 2
- **On grade or sag pit:** Sag
- **Both sides of road:** Left
- **Condition:** 2 - Poor
- **Blockage (%):** 50
- **Comment:** Blocked inside. Anecdotal reports of flooding

---

#### Image
![Image of stormwater infrastructure](image)
Northern Territory Town Camps

Civil Infrastructure

**Inspection Date** 29/11/2016 9:52:48 AM

<table>
<thead>
<tr>
<th>Insp ID: 1201</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

- **Stormwater Infrastructure:** SEP
- **Number of Bays:** 2
- **On grade or sag pit:** Both sides of road: Left
- **Condition:** 2 - Poor
- **Blockage (%):** 50
- **Comment:** Blockage inside, concrete damaged
## Northern Territory Town Camps

### Civil Infrastructure

**Inspection Date**  29/11/2016 10:52:13 AM

<table>
<thead>
<tr>
<th>Insp ID: 1219</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stormwater Infrastructure:</td>
<td>SEP</td>
<td></td>
</tr>
<tr>
<td>Number of Bays:</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>On grade or sag pit:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Both sides of road:</td>
<td>Left</td>
<td></td>
</tr>
<tr>
<td>Condition:</td>
<td>2 - Poor</td>
<td></td>
</tr>
<tr>
<td>Blockage (%):</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Comment:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Northern Territory Town Camps

### Civil Infrastructure

**Inspection Date**  29/11/2016 11:00:00 AM

<table>
<thead>
<tr>
<th>Insp ID: 1222</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliot North Camp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stormwater Infrastructure:</td>
<td>SEP</td>
<td></td>
</tr>
<tr>
<td>Number of Bays:</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>On grade or sag pit:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Both sides of road:</td>
<td>Right</td>
<td></td>
</tr>
<tr>
<td>Condition:</td>
<td>2 - Poor</td>
<td></td>
</tr>
<tr>
<td>Blockage (%):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comment:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Northern Territory Town Camps

Civil Infrastructure

**Insp ID:** 1225  **Group 3 - Tennant Creek, Elliott**  **Elliott North Camp**

Stormwater Infrastructure: SEP

Number of Bays: 2

On grade or sag pit:

Both sides of road: Right

Condition: 3 - Good

Blockage (%): 50

Comment: Blocked inside

P:

GIS\Projects\253963_NT

Image found and displayed.
**Northern Territory Town Camps**

**Civil Infrastructure**

**Inspection Date**  29/11/2016 11:29:52 AM

<table>
<thead>
<tr>
<th>Insp ID:</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

- **Stormwater Infrastructure:** SEP
- **Number of Bays:** 1
- **On grade or sag pit:**
- **Both sides of road:** Left
- **Condition:** 3 - Good
- **Blockage (%):** 10

**Comment:**

![Image of stormwater infrastructure](P:\GIS\Projects\253963_NT\Image found and displayed.)
### Northern Territory Town Camps

#### Civil Infrastructure

**Inspection Date** 29/11/2016 11:40:48 AM

<table>
<thead>
<tr>
<th>Insp ID:</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
<tbody>
<tr>
<td>1234</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Stormwater Infrastructure:** SEP

**Number of Bays:** 2

**On grade or sag pit:**

**Both sides of road:** Right

**Condition:** 3 - Good

**Blockage (%):** 20

**Comment:**

![Image found and displayed.

104
## Civil Infrastructure

### Inspection Date
29/11/2016 12:07:56 PM

<table>
<thead>
<tr>
<th>Inspect ID</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
<tbody>
<tr>
<td>1241</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Stormwater Infrastructure:** SEP
- **Number of Bays:** 2
- **On grade or sag pit:**
- **Both sides of road:** Right
- **Condition:** 2 - Poor
- **Blockage (%):** 30
- **Comment:** P:\GIS\Projects\253963_NT Image found and displayed.
### Northern Territory Town Camps

**Civil Infrastructure**

**Inspection Date**  29/11/2016 12:31:12 PM

<table>
<thead>
<tr>
<th>Insp ID: 1246</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

- **Stormwater Infrastructure:** SEP
- **Number of Bays:** 1
- **On grade or sag pit:**
- **Both sides of road:**
- **Condition:** 2 - Poor
- **Blockage (%):** 10

*Comment:* Image found and displayed.
## Civil Infrastructure

**Group 3 - Tennant Creek, Elliott**

<table>
<thead>
<tr>
<th>Stormwater Infrastructure:</th>
<th>SEP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of Bays:</strong></td>
<td>2</td>
</tr>
<tr>
<td><strong>On grade or sag pit:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Both sides of road:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Condition:</strong></td>
<td>2 - Poor</td>
</tr>
<tr>
<td><strong>Blockage (%):</strong></td>
<td>40</td>
</tr>
<tr>
<td><strong>Comment:</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Elliott North Camp**

*Image found and displayed.*
Northern Territory Camps

Civil Infrastructure

**Inspection Date**  29/11/2016 9:20:18 AM

<table>
<thead>
<tr>
<th>Insp ID:</th>
<th>1194</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inspection Type:</td>
<td>Shade Structure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shade Structure Type:</td>
<td>Basket Ball Court</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shade Floor Type:</td>
<td>Concrete</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roof Type:</td>
<td>Not Covered</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Width (mm):</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length (mm):</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appearance:</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appearance Comment:</td>
<td>Glass on court, no basketball hoops, no shade</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Condition:</td>
<td>2 - Poor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comment:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Northern Territory Camps

### Civil Infrastructure

**Inspection Date**: 29/11/2016 10:26:12 AM

<table>
<thead>
<tr>
<th>Insp ID:</th>
<th>1212</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

- **Inspection Type:** Shade Structure
- **Shade Structure Type:** Play ground
- **Shade Floor Type:** Sand
- **Roof Type:** Not Covered
- **Width (mm):**
- **Length (mm):**
- **Appearance:** 3
- **Appearance Comment:** Some rust and paint peeling
- **Condition:** 3 - Good
- **Comment:**

![Image of playground with shade structure](image-url)
### Northern Territory Camps

#### Civil Infrastructure

**Inspection Date** 29/11/2016 12:00:30 PM

<table>
<thead>
<tr>
<th>Insp ID: 1240</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

- **Inspection Type:** Shade Structure
- **Shade Structure Type:** Play ground
- **Shade Floor Type:** Sand
- **Roof Type:** Not Covered
- **Width (mm):**
- **Length (mm):**
- **Appearance:** 3
  - **Appearance Comment:**
- **Condition:** 3 - Good
  - **Comment:**

![Image of the camp structure](image-url)
Northern Territory Town Camps

Civil Infrastructure

**Inspection Date**  29/11/2016  8:51:15 AM

---

**Insp ID:**  1183  
**Group 3 - Tennant Creek, Elliott**  
**Elliott North Camp**

- **Road Name:**  Ijibarda Street
- **What are you inspecting:**  Signs
- **Type of Sign:**  20
- **Sign Condition:**  4 - Very Good
- **Sign Comment:**
- **General Comment:**

![Image of a sign with the number 20]
### Civil Infrastructure

**Inspection Date**  29/11/2016 9:29:37 AM

<table>
<thead>
<tr>
<th>Insp ID: 1195</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road Name:</td>
<td>Ijibarda Street</td>
<td></td>
</tr>
<tr>
<td>What are you inspecting:</td>
<td>Signs</td>
<td></td>
</tr>
<tr>
<td>Type of Sign:</td>
<td>Street name</td>
<td></td>
</tr>
<tr>
<td>Sign Condition:</td>
<td>2 - Poor</td>
<td></td>
</tr>
<tr>
<td>Sign Comment:</td>
<td>Sign bent</td>
<td></td>
</tr>
<tr>
<td>General Comment:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Image found and displayed.
Northern Territory Town Camps

Civil Infrastructure

**Inspection Date**  29/11/2016 9:51:26 AM

<table>
<thead>
<tr>
<th>Insp ID: 1200</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

Road Name: Ijibarda Street

What are you inspecting: Signs

Type of Sign: 20 kph

Sign Condition: 2 - Poor

Sign Comment: Faded, graffiti

General Comment: 

![Image of a sign with the number 20]
## Northern Territory Town Camps

### Civil Infrastructure

**Inspection Date** 29/11/2016 9:54:17 AM

<table>
<thead>
<tr>
<th>Insp ID: 1202</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

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

**General Comment:**

![Image of street signs](P:\GIS\Projects\253963_NT\Image found and displayed.)
## Northern Territory Town Camps
### Civil Infrastructure

**Inspection Date** 29/11/2016 10:06:48 AM

<table>
<thead>
<tr>
<th>Insp ID: 1205</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

**Road Name:** Gurungu Street

**What are you inspecting:** Signs

**Type of Sign:** Keep left

**Sign Condition:** 2 - Poor

**Sign Comment:** Faded, has graffiti

**General Comment:**

![Image](image_url)
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Inspect ID:</td>
<td>1211</td>
</tr>
<tr>
<td>Group:</td>
<td>Group 3 - Tennant Creek, Elliott</td>
</tr>
<tr>
<td>Location:</td>
<td>Elliott North Camp</td>
</tr>
</tbody>
</table>

**Road Name:** Gurungu Street

**What are you inspecting:** Signs

**Type of Sign:** Street name

**Sign Condition:** 4 - Very Good

**Sign Comment:**

**General Comment:**

[Image of a sign with the text 'Gurungu Street' and another sign with partially visible text.]
Northern Territory Town Camps

Civil Infrastructure

**Inspection Date**  29/11/2016 10:28:34 AM

<table>
<thead>
<tr>
<th>Insp ID:</th>
<th>1213</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

**Road Name:** Gurungu 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** 29/11/2016 10:33:58 AM

<table>
<thead>
<tr>
<th>Insp ID: 1215</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road Name:</td>
<td>Ijibarda Street</td>
<td></td>
</tr>
<tr>
<td>What are you inspecting:</td>
<td>Signs</td>
<td></td>
</tr>
<tr>
<td>Type of Sign:</td>
<td>Street name</td>
<td></td>
</tr>
<tr>
<td>Sign Condition:</td>
<td>4 - Very Good</td>
<td></td>
</tr>
<tr>
<td>Sign Comment:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Comment:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Civil Infrastructure

### Northern Territory Town Camps

**Inspection Date**  29/11/2016 10:35:22 AM

<table>
<thead>
<tr>
<th>Insp ID: 1216</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

- **Road Name:** Ijibarda Street
- **What are you inspecting:** Signs
- **Type of Sign:** Street name
- **Sign Condition:** 4 - Very Good
- **Sign Comment:** Two signs

[Image found and displayed.]

[Image found and displayed.]
### Northern Territory Town Camps

#### Civil Infrastructure

**Inspection Date**: 29/11/2016 11:04:32 AM

<table>
<thead>
<tr>
<th>Insp ID: 1223</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

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

**General Comment:**

![Image of Gurungu Street sign](Image)
Civil Infrastructure

Northern Territory Town Camps

Inspect ID: 1229  Group 3 - Tennant Creek, Elliott  Elliott North Camp

Road Name: Gurungu 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: 29/11/2016 11:32:26 AM

Insp ID: 1230
Group 3 - Tennant Creek, Elliott
Elliott North Camp

Road Name: Jingulu 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**: 29/11/2016 11:59:21 AM

**Insp ID**: 1239

**Group 3 - Tennant Creek, Elliott**

**Elliott North Camp**

**Road Name**: Warlmanpa Street

**What are you inspecting**: Signs

**Type of Sign**: Street name

**Sign Condition**: 4 - Very Good

**Sign Comment**: 

**General Comment**: 

![Image of Warlmanpa Street sign](image_url)
Northern Territory Town Camps

Civil Infrastructure

**Inspection Date**  29/11/2016 12:29:56 PM

<table>
<thead>
<tr>
<th>Insp ID: 1245</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

**Road Name:**  Warlmanpa Street

**What are you inspecting:**  Signs

**Type of Sign:**  Street name

**Sign Condition:**  4 - Very Good

**Sign Comment:**

**General Comment:**

[Image of Warlmanpa Street in Elliott North Camp]
Civil Infrastructure

Northern Territory Town Camps

**Inspection Date** 29/11/2016 11:26:38 AM

<table>
<thead>
<tr>
<th>Insp ID: 1227</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

**Stormwater Infrastructure:** Swales

**Type of lining:** Natural Grasses

**Are dimensions uniform along drain:** No

**Base Width (m):**

**Overall Width (m):** 6

**Swale Depth (m):** 2

**Length of Batter 1 (m):**

**Length of Batter 2 (m):**

**Swale Condition:** 2 - Poor

**Swale Ponding:** No

**Drain flooded at time of inspection:** No

**Swale Comments:** Dimensions estimated
## Civil Infrastructure

**Inspection Date** 29/11/2016 10:23:12 AM

<table>
<thead>
<tr>
<th>Insp ID:</th>
<th>1210</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

**What Water Asset Are you Capturing:** Taps

- **Diameter (mm):** 25
- **Tap Leakage:** No
- **Tap Condition:** 1 - Very Poor
- **Tap Comment:** No tap handle
## Northern Territory Town Camps

### Civil Infrastructure

**Inspection Date**  29/11/2016 11:35:56 AM

<table>
<thead>
<tr>
<th>Insp ID: 1231</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

**What Water Asset Are you Capturing:** Taps

- **Diameter(mm):**
- **Tap Leakage:** No
- **Tap Condition:** 2 - Poor
- **Tap Comment:**

![Image of tap](P:\GIS\Projects\253963_NT\Image found and displayed.127)
Northern Territory Town Camps

Civil Infrastructure

**Inspection Date**  29/11/2016 12:22:38 PM

**Insp ID:** 1244  
**Group 3 - Tennant Creek, Elliott**  
**Elliott North Camp**

**What Water Asset Are you Capturing:**  Taps

**Diameter(mm):**  25

**Tap Leakage:**  No

**Tap Condition:**  3 - Good

**Tap Comment:**  Tap works, calcium build up on outside

Image found and displayed.
Northern Territory Town Camps

Civil Infrastructure

**Inspection Date**  29/11/2016 9:01:44 AM

<table>
<thead>
<tr>
<th>Insp ID: 1188</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

**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:**

**Lot Water Meter Condition:**  3 - Good

**Lot Water Meter Comment:**
## Northern Territory Town Camps

### Civil Infrastructure

**Inspection Date**: 29/11/2016 10:10:46 AM

<table>
<thead>
<tr>
<th>Insp ID:</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
<tbody>
<tr>
<td>1207</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Water Meter Details

- **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:** 30
- **Lot Water Meter Size:**
- **Lot Water Meter Condition:** 2 - Poor
- **Lot Water Meter Comment:** Calcium build up outside tap

![Image of water meter and calcium build up](image-url)
Electrical inspection reports
### Electrical Infrastructure

**Northern Territory Town Camps**

**Inspection Date**: 29/11/2016 12:33:49 PM

<table>
<thead>
<tr>
<th>Insp ID:</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
<tbody>
<tr>
<td>664</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **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:**

![Image of underground comments](P:\GIS\Projects\253963_NT)
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 29/11/2016 12:02:16 PM

Insp ID: 670

Group 3 - Tennant Creek, Elliott

Elliott North Camp

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  29/11/2016 11:53:27 AM

Insp ID:  672  Group 3 - Tennant Creek, Elliott  Elliot North Camp

What Category are you capturing:  Distribution Panel

What is Main Distribution Panel installation method:  Pole

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:

What is the condition of cables/glands into switchboard:

Cable/Gland Condition Comments:

Distribution Panels name plate access:
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 29/11/2016 11:53:27 AM
## Northern Territory Town Camps

### Electrical Infrastructure

**Inspection Date**  29/11/2016 11:47:07 AM

<table>
<thead>
<tr>
<th>Insp ID: 673</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliot North Camp</th>
</tr>
</thead>
</table>

- **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:**

![Image 1](image1)

![Image 2](image2)
## Northern Territory Town Camps

### Electrical Infrastructure

**Inspection Date**  29/11/2016 11:11:29 AM

<table>
<thead>
<tr>
<th>Insp ID: 680</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

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:
## Electrical Infrastructure

### Northern Territory Town Camps

#### Inspection Date
29/11/2016 10:43:41 AM

<table>
<thead>
<tr>
<th>Insp ID: 684</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
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</table>

- **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:**

![Image 1](P:\GIS\Projects\253963_NT)

![Image 2](P:\GIS\Projects\253963_NT)
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 29/11/2016 10:43:41 AM
Northern Territory Town Camps

Electrical Infrastructure

**Inspection Date**  29/11/2016 9:59:01 AM

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<th>Insp ID: 692</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
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</table>

What Category are you capturing: **Distribution Panel**

What is Main Distribution Panel installation method: Pole

Is the distribution panel labelled: No

What is Distribution Panel main CB Rating: 32

What is the main incoming cable type/Size to Distribution Panel: unknown

What is the condition of switchboard: 3

Condition Comments: Door unlocked

What is the condition of cables/glands into switchboard: Unknown

Cable/Gland Condition Comments: No

Distribution Panels name plate access: No
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date  29/11/2016 9:59:01 AM
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date  29/11/2016 9:47:43 AM

<table>
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<th>Insp ID: 694</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
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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:
## Electrical Infrastructure

**Northern Territory Town Camps**

**Inspection Date**  29/11/2016 9:46:48 AM

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<td>What is distribution method to households:</td>
<td>Underground</td>
<td></td>
</tr>
<tr>
<td>Is it Shared with PWC:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is there Anti-climb barrier provided for this pole:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What is Pole construction type:</td>
<td></td>
<td></td>
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<tr>
<td>Is street light fitted:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is there concrete collar around the base of pole:</td>
<td></td>
<td></td>
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<tr>
<td>What is the condition of tap off to house:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What is the condition of pole:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>How many Lots are connected to this pole:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is there access to Pits to take a photo:</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>What is Pit Condition:</td>
<td>3</td>
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<tr>
<td>Underground Comments:</td>
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[Image of underground COMMENTS]
Electrical Infrastructure

Northern Territory Town Camps

Inspection Date 29/11/2016 9:28:05 AM

Insp ID: 700  Group 3 - Tennant Creek, Elliott  Elliott North Camp

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:

Image 1

Image 2
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date  29/11/2016 9:27:06 AM

Insp ID:  701  Group 3 - Tennant Creek, Elliott  Elliot North Camp

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  29/11/2016 1:15:26 PM

Insp ID:  656  Group 3 - Tennant Creek, Elliott  Elliott North Camp

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:
**Inspection Date**  29/11/2016 1:14:35 PM

<table>
<thead>
<tr>
<th>Insp ID: 657</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
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</thead>
</table>

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: **S30D 93**
- Street Light Watts: **30**
- Street Light Condition: **1**
- Street Light Height: **148**

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  29/11/2016 1:14:35 PM
## Electrical Infrastructure

### Northern Territory Town Camps

**Inspection Date**  29/11/2016 12:54:43 PM

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<th>Insp ID:</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
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- **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:** 150

- **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

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**Northern Territory Town Camps**

**Electrical Infrastructure**

**Inspection Date**  29/11/2016 12:52:25 PM

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<th>Elliott North Camp</th>
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- **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:** Unknown
  - **Street Light Watts**
  - **Street Light Condition:** 3
  - **Street Light Height:** 152
- **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  29/11/2016 12:52:25 PM
### Northern Territory Town Camps

#### Electrical Infrastructure

**Inspection Date**  29/11/2016 12:48:54 PM

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<td><strong>What Category are you capturing:</strong></td>
<td>Overhead Poles</td>
<td></td>
<td></td>
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<tr>
<td><strong>What is Pole Material type:</strong></td>
<td>Welded</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>What is the condition of pole:</strong></td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>How is the pole planted:</strong></td>
<td>Concrete</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>What is the Condition of plant:</strong></td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Is street light fitted:</strong></td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Street Light Power Supply:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Street Light Type:</strong></td>
<td>S70D 90</td>
<td></td>
<td></td>
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<tr>
<td><strong>Street Light Watts:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Street Light Condition:</strong></td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Street Light Height:</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>What is the type of service:</strong></td>
<td>Three</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>What is the HV voltage level:</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>What is the arrangement of connected cables:</strong></td>
<td>Twisted</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Are there isolators on the pole:</strong></td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>What is the Condition:</strong></td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>How many Lots are connected to this pole:</strong></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Overhead Pole Comments:</strong></td>
<td>Surface rusted</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Northern Territory Town Camps

Electrical Infrastructure

**Inspection Date**  29/11/2016 12:48:54 PM
<table>
<thead>
<tr>
<th>What Category are you capturing:</th>
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<tbody>
<tr>
<td>What is Pole Material type:</td>
<td>Welded</td>
</tr>
<tr>
<td>What is the condition of pole:</td>
<td>3</td>
</tr>
<tr>
<td>How is the pole planted:</td>
<td>Concrete</td>
</tr>
<tr>
<td>What is the Condition of plant:</td>
<td>3</td>
</tr>
<tr>
<td>Is street light fitted:</td>
<td>No</td>
</tr>
</tbody>
</table>

**Street Light Power Supply:**

**Street Light Type**

**Street Light Watts**

**Street Light Condition**

**Street Light Height**

<table>
<thead>
<tr>
<th>What is the type of service:</th>
<th>Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is the HV voltage level:</td>
<td>400</td>
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<tr>
<td>What is the arrangement of connected cables:</td>
<td>Twisted</td>
</tr>
<tr>
<td>Are there isolators on the pole:</td>
<td>No</td>
</tr>
<tr>
<td>What is the Condition:</td>
<td>3</td>
</tr>
<tr>
<td>How many Lots are connected to this pole:</td>
<td>1</td>
</tr>
</tbody>
</table>

**Overhead Pole Comments:**

Surface rusted
Northern Territory Town Camps

Electrical Infrastructure

**Inspection Date**  29/11/2016 12:45:34 PM
## Northern Territory Town Camps

### Electrical Infrastructure

**Inspection Date**  29/11/2016 12:43:19 PM

<table>
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<tr>
<th>Insp ID: 662</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
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- **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:** 158
- **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  29/11/2016 12:43:19 PM
Northern Territory Town Camps

Electrical Infrastructure

**Inspection Date**  29/11/2016 12:41:03 PM

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<tr>
<th>Insp ID: 663</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
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**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 14

**Street Light Watts:** 70

**Street Light Condition:** 3

**Street Light Height:** 160

**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  29/11/2016 12:41:03 PM
## Electrical Infrastructure

**Northern Territory Town Camps**

**Inspection Date** 29/11/2016 12:32:51 PM

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<th>Insp ID: 665</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
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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: **Unknown**
Street Light Watts
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  29/11/2016 12:32:51 PM
## Electrical Infrastructure

### Northern Territory Town Camps

**Inspection Date**  
29/11/2016 12:15:58 PM

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<tr>
<th>Insp ID: 667</th>
<th>Group 3 - Tennant Creek, Elliott</th>
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**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:** 0

**Overhead Pole Comments:** Surface rusted
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date  29/11/2016 12:15:58 PM
### Northern Territory Town Camps

#### Electrical Infrastructure

**Inspection Date**  29/11/2016 12:12:41 PM

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<th>Insp ID:</th>
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- **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 10
  - **Street Light Watts**
  - **Street Light Condition:** 3
  - **Street Light Height:** 166
- **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  29/11/2016 12:12:41 PM
### Northern Territory Town Camps
#### Electrical Infrastructure

**Inspection Date** 29/11/2016 12:09:47 PM

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<tr>
<td>How is the pole planted:</td>
<td>Concrete</td>
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<tr>
<td>What is the Condition of plant:</td>
<td>3</td>
</tr>
<tr>
<td>Is street light fitted:</td>
<td>No</td>
</tr>
<tr>
<td>Street Light Power Supply:</td>
<td></td>
</tr>
<tr>
<td>Street Light Type</td>
<td></td>
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<tr>
<td>Street Light Watts</td>
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<td>Street Light Condition</td>
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<tr>
<td>Street Light Height</td>
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<td>What is the type of service:</td>
<td>Three</td>
</tr>
<tr>
<td>What is the HV voltage level:</td>
<td>400</td>
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<tr>
<td>What is the arrangement of connected cables:</td>
<td>Twisted</td>
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<tr>
<td>Are there isolators on the pole:</td>
<td>No</td>
</tr>
<tr>
<td>What is the Condition:</td>
<td>3</td>
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<tr>
<td>How many Lots are connected to this pole:</td>
<td>0</td>
</tr>
<tr>
<td>Overhead Pole Comments:</td>
<td>Surface rusted</td>
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</table>
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date  29/11/2016 12:09:47 PM
## Electrical Infrastructure

**Northern Territory Town Camps**

**Inspection Date** 29/11/2016 11:56:55 AM

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### Overhead Poles

- **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:** 170

### Overhead Pole Comments

- **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  29/11/2016 11:56:55 AM
### Northern Territory Town Camps

#### Electrical Infrastructure

**Inspection Date**  29/11/2016 11:45:53 AM

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- **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:** 0
- **Overhead Pole Comments:** Surface rusted
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date  29/11/2016 11:45:53 AM
## Electrical Infrastructure

### Northern Territory Town Camps

**Inspection Date**: 29/11/2016 11:44:07 AM

<table>
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What Category are you capturing: **Overhead Poles**

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<thead>
<tr>
<th>What is Pole Material type:</th>
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<tbody>
<tr>
<td>What is the condition of pole:</td>
<td>3</td>
</tr>
<tr>
<td>How is the pole planted:</td>
<td>Concrete</td>
</tr>
<tr>
<td>What is the Condition of plant:</td>
<td>3</td>
</tr>
<tr>
<td>Is street light fitted:</td>
<td>Yes</td>
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</table>

**Street Light Power Supply:**

<table>
<thead>
<tr>
<th>Street Light Type</th>
<th>M80D 06</th>
</tr>
</thead>
<tbody>
<tr>
<td>Street Light Watts</td>
<td>80</td>
</tr>
<tr>
<td>Street Light Condition</td>
<td>3</td>
</tr>
</tbody>
</table>

**Street Light Height**

<table>
<thead>
<tr>
<th>What is the type of service:</th>
<th>Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is the HV voltage level:</td>
<td>400</td>
</tr>
<tr>
<td>What is the arrangement of connected cables:</td>
<td>Twisted</td>
</tr>
<tr>
<td>Are there isolators on the pole:</td>
<td>No</td>
</tr>
<tr>
<td>What is the Condition:</td>
<td>3</td>
</tr>
<tr>
<td>How many Lots are connected to this pole:</td>
<td>1</td>
</tr>
</tbody>
</table>

**Overhead Pole Comments:** Surface rusted
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date  29/11/2016 11:44:07 AM
<table>
<thead>
<tr>
<th>What Category are you capturing:</th>
<th>Overhead Poles</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is Pole Material type:</td>
<td>Steel</td>
</tr>
<tr>
<td>What is the condition of pole:</td>
<td>3</td>
</tr>
<tr>
<td>How is the pole planted:</td>
<td>Concrete</td>
</tr>
<tr>
<td>What is the Condition of plant:</td>
<td>3</td>
</tr>
<tr>
<td>Is street light fitted:</td>
<td>No</td>
</tr>
<tr>
<td>Street Light Power Supply:</td>
<td></td>
</tr>
<tr>
<td>Street Light Type</td>
<td></td>
</tr>
<tr>
<td>Street Light Watts</td>
<td></td>
</tr>
<tr>
<td>Street Light Condition</td>
<td></td>
</tr>
<tr>
<td>Street Light Height</td>
<td></td>
</tr>
<tr>
<td>What is the type of service:</td>
<td>Three</td>
</tr>
<tr>
<td>What is the HV voltage level:</td>
<td>400</td>
</tr>
<tr>
<td>What is the arrangement of connected cables:</td>
<td>Twisted</td>
</tr>
<tr>
<td>Are there isolators on the pole:</td>
<td>No</td>
</tr>
<tr>
<td>What is the Condition:</td>
<td>3</td>
</tr>
<tr>
<td>How many Lots are connected to this pole:</td>
<td>0</td>
</tr>
<tr>
<td>Overhead Pole Comments:</td>
<td>Distribution panel mounted on pole</td>
</tr>
</tbody>
</table>
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date  29/11/2016 11:35:31 AM
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date  29/11/2016 11:35:31 AM
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date  29/11/2016 11:31:30 AM

Insp ID:  677  Group 3 - Tennant Creek, Elliott  Elliott North Camp

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 09
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:  3
Overhead Pole Comments:  Surface rusted
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date  29/11/2016 11:31:30 AM
## Northern Territory Town Camps

### Electrical Infrastructure

**Inspection Date**  29/11/2016 11:26:36 AM

<table>
<thead>
<tr>
<th>Insp ID: 678</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
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<table>
<thead>
<tr>
<th>What Category are you capturing:</th>
<th>Overhead Poles</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is Pole Material type:</td>
<td>Welded</td>
</tr>
<tr>
<td>What is the condition of pole:</td>
<td>3</td>
</tr>
<tr>
<td>How is the pole planted:</td>
<td>Concrete</td>
</tr>
<tr>
<td>What is the Condition of plant:</td>
<td>3</td>
</tr>
<tr>
<td>Is street light fitted:</td>
<td>No</td>
</tr>
</tbody>
</table>

**Street Light Power Supply:**

<table>
<thead>
<tr>
<th>Street Light Type</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Street Light Watts</td>
<td></td>
</tr>
<tr>
<td>Street Light Condition</td>
<td></td>
</tr>
<tr>
<td>Street Light Height</td>
<td>181</td>
</tr>
</tbody>
</table>

| 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  29/11/2016 11:26:36 AM
## Northern Territory Town Camps

### Electrical Infrastructure

**Inspection Date** 29/11/2016 11:24:08 AM

<table>
<thead>
<tr>
<th>Insp ID: 679</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

**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:** M80D 08
- **Street Light Watts:** 80
- **Street Light Condition:** 3
- **Street Light Height:** 183

- **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  29/11/2016 11:24:08 AM
## Electrical Infrastructure

### Northern Territory Town Camps

**Inspection Date**  
29/11/2016 11:00:37 AM

<table>
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<tr>
<th>Insp ID</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
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</thead>
<tbody>
<tr>
<td>681</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**What Category are you capturing:** Overhead Poles

<table>
<thead>
<tr>
<th>What is Pole Material type:</th>
<th>Welded</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is the condition of pole:</td>
<td>3</td>
</tr>
<tr>
<td>How is the pole planted:</td>
<td>Concrete</td>
</tr>
<tr>
<td>What is the Condition of plant:</td>
<td>3</td>
</tr>
<tr>
<td>Is street light fitted:</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Street Light Power Supply:**

<table>
<thead>
<tr>
<th>Street Light Type</th>
<th>S70D 11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Street Light Watts</td>
<td>70</td>
</tr>
<tr>
<td>Street Light Condition</td>
<td>3</td>
</tr>
</tbody>
</table>

**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**  29/11/2016 11:00:37 AM
### Electrical Infrastructure

**Northern Territory Town Camps**

**Inspection Date** 29/11/2016 10:56:15 AM

<table>
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<tr>
<th>Insp ID:</th>
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<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
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- **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:** M80D 06
  - **Street Light Watts:** 80
  - **Street Light Condition:** 1
  - **Street Light Height:** 187
- **What is the type of service:** Three
- **What is the HV voltage level:** 400
- **What is the arrangement of connected cables:**
- **Are there isolators on the pole:** No
- **What is the Condition:** 3
- **How many Lots are connected to this pole:** 3
- **Overhead Pole Comments:** Surface rusted
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date  29/11/2016 10:56:15 AM
### Electrical Infrastructure

**Northern Territory Town Camps**

**Inspection Date** 29/11/2016 10:51:34 AM

<table>
<thead>
<tr>
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<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
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</thead>
</table>

**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:** 1
- **Overhead Pole Comments:** Surface rusted
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date  29/11/2016 10:51:34 AM
## Electrical Infrastructure

### Northern Territory Town Camps

**Inspection Date** 29/11/2016 10:40:21 AM

<table>
<thead>
<tr>
<th>Insp ID: 685</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

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**: SD55
- **Street Light Watts**: 55
- **Street Light Condition**: 3

Street Light Height:

- **Street Light Height**: 191

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 29/11/2016 10:40:21 AM
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 29/11/2016 10:40:21 AM
Northern Territory Town Camps

Electrical Infrastructure

**Inspection Date**  29/11/2016 10:35:18 AM

---

**Insp ID:** 686  
**Group 3 - Tennant Creek, Elliott**  
**Elliott North Camp**

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 **M80D 07**

Street Light Watts **80**

Street Light Condition **3**

Street Light Height **194**

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  29/11/2016 10:35:18 AM
## Northern Territory Town Camps

### Electrical Infrastructure

**Inspection Date** 29/11/2016 10:31:49 AM

<table>
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<tr>
<th>Insp ID: 687</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

**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  29/11/2016 10:31:49 AM
Northern Territory Town Camps

Electrical Infrastructure

**Inspection Date** 29/11/2016 10:24:33 AM

<table>
<thead>
<tr>
<th>Insp ID: 688</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

What Category are you capturing: **Overhead Poles**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>What is Pole Material type:</td>
<td>Welded</td>
</tr>
<tr>
<td>What is the condition of pole:</td>
<td>3</td>
</tr>
<tr>
<td>How is the pole planted:</td>
<td>Concrete</td>
</tr>
<tr>
<td>What is the Condition of plant:</td>
<td>3</td>
</tr>
<tr>
<td>Is street light fitted:</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Street Light Power Supply:**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Street Light Type:</td>
<td>S70D 08</td>
</tr>
<tr>
<td>Street Light Watts:</td>
<td>80</td>
</tr>
<tr>
<td>Street Light Condition:</td>
<td>3</td>
</tr>
</tbody>
</table>

**Street Light Height**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>What is the type of service:</td>
<td>Three</td>
</tr>
<tr>
<td>What is the HV voltage level:</td>
<td>400</td>
</tr>
<tr>
<td>What is the arrangement of connected cables:</td>
<td>Twisted</td>
</tr>
<tr>
<td>Are there isolators on the pole:</td>
<td>No</td>
</tr>
<tr>
<td>What is the Condition:</td>
<td>3</td>
</tr>
<tr>
<td>How many Lots are connected to this pole:</td>
<td>0</td>
</tr>
</tbody>
</table>

**Overhead Pole Comments:** Surface rusted
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date  29/11/2016 10:24:33 AM
### Electrical Infrastructure

**Northern Territory Town Camps**

**Electrical Infrastructure**

**Inspection Date** 29/11/2016 10:19:17 AM

<table>
<thead>
<tr>
<th>Insp ID:</th>
<th>Group 3 - Tennant Creek, Elliott</th>
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</thead>
<tbody>
<tr>
<td>689</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**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  29/11/2016 10:19:17 AM
## Northern Territory Town Camps

### Electrical Infrastructure

**Insp ID:** 690  
**Group 3 - Tennant Creek, Elliott**  
**Elliott North Camp**

<table>
<thead>
<tr>
<th>What Category are you capturing:</th>
<th>Overhead Poles</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is Pole Material type:</td>
<td>Welded</td>
</tr>
<tr>
<td>What is the condition of pole:</td>
<td>3</td>
</tr>
<tr>
<td>How is the pole planted:</td>
<td>Concrete</td>
</tr>
<tr>
<td>What is the Condition of plant:</td>
<td>3</td>
</tr>
<tr>
<td>Is street light fitted:</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Street Light Power Supply:**

<table>
<thead>
<tr>
<th>Street Light Type</th>
<th>S70D 08</th>
</tr>
</thead>
<tbody>
<tr>
<td>Street Light Watts</td>
<td>70</td>
</tr>
<tr>
<td>Street Light Condition</td>
<td>3</td>
</tr>
</tbody>
</table>

**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  29/11/2016 10:14:50 AM
## Electrical Infrastructure

### Northern Territory Town Camps

#### Inspection Date
29/11/2016 10:10:57 AM

<table>
<thead>
<tr>
<th>Insp ID: 691</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

- **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:** M80D 16
- **Street Light Watts:** 80
- **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:** 3

**Overhead Pole Comments:** Surface rusted
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date  29/11/2016 10:10:57 AM
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date  29/11/2016 10:10:57 AM
Northern Territory Town Camps

Electrical Infrastructure

**Inspection Date** 29/11/2016 9:55:19 AM

**Insp ID:** 693  
**Group 3 - Tennant Creek, Elliott**  
**Elliott North Camp**

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: **Unknown**

Street Light Watts

Street Light Condition: 3

Street Light Height: 207

What is the type of service: **Three**

What is the HV voltage level: 400

What is the arrangement of connected cables:

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  29/11/2016 9:55:19 AM
## Northern Territory Town Camps

### Electrical Infrastructure

**Inspection Date**  29/11/2016 9:46:04 AM

<table>
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<tr>
<th>Insp ID: 696</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

**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:** M80D 06
- **Street Light Watts:** 80
- **Street Light Condition:** 3
- **Street Light Height:** 209

- **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  29/11/2016 9:46:04 AM
**Northern Territory Town Camps**

**Electrical Infrastructure**

**Inspection Date**  29/11/2016 9:36:18 AM

<table>
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<tr>
<th>Insp ID:</th>
<th>697</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
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</thead>
</table>

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:** M80D 06
- **Street Light Watts:** 80
- **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:** 3

**Overhead Pole Comments:** Surface rusted
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date  29/11/2016 9:36:18 AM
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date  29/11/2016 9:20:49 AM

| Insp ID: | 703 | Group 3 - Tennant Creek, Elliott | Elliott North Camp |

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:  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 29/11/2016 9:20:49 AM
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date  29/11/2016 1:14:35 PM

<table>
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<tr>
<th>Insp ID: 657</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
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</thead>
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What Category are you capturing:  Overhead Poles

Is street light fitted:  Yes

Street Light Power Supply:
- Street Light Type: S30D 93
- Street Light Watts: 30
- Street Light Condition: 1
- Street Light Height

[Images of overhead poles and street lights]
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date  29/11/2016 1:14:35 PM
Northern Territory Town Camps

Electrical Infrastructure

**Inspection Date**  29/11/2016 12:52:25 PM

<table>
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<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
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</thead>
</table>

What Category are you capturing: **Overhead Poles**

Is street light fitted: **Yes**

Street Light Power Supply: **Unknown**

Street Light Type: **Unknown**

Street Light Watts: **Unknown**

Street Light Condition: **3**

Street Light Height: **Unknown**
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date  29/11/2016 12:52:25 PM
Northern Territory Town Camps

Electrical Infrastructure

**Inspection Date** 29/11/2016 12:48:54 PM

### Insp ID: 660

**Group 3 - Tennant Creek, Elliott**  
**Elliott North Camp**

**What Category are you capturing:** Overhead Poles

- **Is street light fitted:** Yes
- **Street Light Power Supply:**
- **Street Light Type**  
  S70D 90
- **Street Light Watts**
- **Street Light Condition**  
  3
- **Street Light Height**

![Image of Overhead Poles](image1.png)

![Image of Street Light Condition](image2.png)

![Image of Street Light Height](image3.png)
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 29/11/2016 12:48:54 PM
## Northern Territory Town Camps

### Electrical Infrastructure

**Inspection Date** 29/11/2016 12:41:03 PM

<table>
<thead>
<tr>
<th>Insp ID: 663</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

- **What Category are you capturing:** Overhead Poles
- **Is street light fitted:** Yes

### Street Light Power Supply:
- **Street Light Type:** S70D 14
- **Street Light Watts:** 70
- **Street Light Condition:** 3
- **Street Light Height**

![Street Light Images]
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 29/11/2016 12:41:03 PM
Northern Territory Town Camps

Electrical Infrastructure

**Inspection Date**  29/11/2016 12:32:51 PM

<table>
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<tr>
<th>Insp ID: 665</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
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</thead>
</table>

**What Category are you capturing:** Overhead Poles

Is street light fitted: Yes

Street Light Power Supply:

Street Light Type Unknown

Street Light Watts

Street Light Condition 3

Street Light Height

[Images of overhead poles]
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date  29/11/2016 12:32:51 PM
## Northern Territory Town Camps

### Electrical Infrastructure

**Inspection Date** 29/11/2016 12:12:41 PM

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</thead>
</table>

What Category are you capturing: **Overhead Poles**

<table>
<thead>
<tr>
<th>Is street light fitted:</th>
<th>Yes</th>
</tr>
</thead>
</table>

Street Light Power Supply:

Street Light Type  

Street Light Watts

Street Light Condition  

Street Light Height

[Images of overhead poles and street lights]
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date  29/11/2016 12:12:41 PM
<table>
<thead>
<tr>
<th>What Category are you capturing:</th>
<th>Overhead Poles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is street light fitted:</td>
<td>Yes</td>
</tr>
<tr>
<td>Street Light Power Supply:</td>
<td></td>
</tr>
<tr>
<td>Street Light Type</td>
<td>S70D 11</td>
</tr>
<tr>
<td>Street Light Watts</td>
<td>70</td>
</tr>
<tr>
<td>Street Light Condition</td>
<td>3</td>
</tr>
<tr>
<td>Street Light Height</td>
<td></td>
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</table>

**Northern Territory Town Camps**

**Electrical Infrastructure**

**Inspection Date**  29/11/2016 11:56:55 AM

**Insp ID:** 671  **Group 3 - Tennant Creek, Elliott**  **Elliott North Camp**
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date  29/11/2016 11:56:55 AM
Northern Territory Town Camps

Electrical Infrastructure

**Inspection Date** 29/11/2016 11:44:07 AM

| Insp ID: 675 | Group 3 - Tennant Creek, Elliott | Elliott North Camp |

What Category are you capturing: **Overhead Poles**

Is street light fitted: Yes

Street Light Power Supply:

<table>
<thead>
<tr>
<th>Street Light Type</th>
<th>M80D 06</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Street Light Watts</th>
<th>80</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Street Light Condition</th>
<th>3</th>
</tr>
</thead>
</table>

Street Light Height
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date  29/11/2016 11:44:07 AM
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date  29/11/2016 11:31:30 AM

Insp ID:  677  Group 3 - Tennant Creek, Elliott  Elliott North Camp

What Category are you capturing:  Overhead Poles

Is street light fitted:  Yes

Street Light Power Supply:

Street Light Type  S70D 09

Street Light Watts  70

Street Light Condition  3

Street Light Height
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date  29/11/2016 11:31:30 AM
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 29/11/2016 11:24:08 AM

Insp ID: 679

Group 3 - Tennant Creek, Elliott

Elliot North Camp

What Category are you capturing: Overhead Poles

Is street light fitted: Yes

Street Light Power Supply:

Street Light Type M80D 08

Street Light Watts 80

Street Light Condition 3

Street Light Height
Northern Territory Town Camps
Electrical Infrastructure

Inspection Date  29/11/2016 11:24:08 AM
Northern Territory Town Camps

Electrical Infrastructure

**Inspection Date**  29/11/2016 11:00:37 AM

<table>
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<tr>
<th>Insp ID</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
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</thead>
<tbody>
<tr>
<td>681</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

What Category are you capturing:  **Overhead Poles**

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is street light fitted:</td>
<td>Yes</td>
</tr>
<tr>
<td>Street Light Power Supply:</td>
<td></td>
</tr>
<tr>
<td>Street Light Type</td>
<td>S70D 11</td>
</tr>
<tr>
<td>Street Light Watts</td>
<td>70</td>
</tr>
<tr>
<td>Street Light Condition</td>
<td>3</td>
</tr>
<tr>
<td>Street Light Height</td>
<td></td>
</tr>
</tbody>
</table>
Northern Territory Town Camps
Electrical Infrastructure

Inspection Date  29/11/2016 11:00:37 AM
### Electrical Infrastructure

**Northern Territory Town Camps**

**Inspection Date**  29/11/2016 10:56:15 AM

<table>
<thead>
<tr>
<th>Inspect ID:</th>
<th>682</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

**What Category are you capturing:** Overhead Poles

**Is street light fitted:** Yes

**Street Light Power Supply:**

**Street Light Type**

**Street Light Watts** 80

**Street Light Condition** 1

**Street Light Height**
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date  29/11/2016 10:56:15 AM
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date  29/11/2016 10:40:21 AM

Insp ID:  685  Group 3 - Tennant Creek, Elliott  Elliott North Camp

What Category are you capturing:  Overhead Poles

Is street light fitted:  Yes

Street Light Power Supply:
Street Light Type  SD55
Street Light Watts  55
Street Light Condition  3
Street Light Height
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date  29/11/2016 10:40:21 AM
Northern Territory Town Camps

Electrical Infrastructure

**Inspection Date**  29/11/2016 10:35:18 AM

<table>
<thead>
<tr>
<th>Insp ID: 686</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

What Category are you capturing: **Overhead Poles**

Is street light fitted: **Yes**

Street Light Power Supply:
Street Light Type: **M80D 07**
Street Light Watts: **80**
Street Light Condition: **3**
Street Light Height

[Images of street poles and lights]
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date  29/11/2016 10:35:18 AM
### Electrical Infrastructure

#### Northern Territory Town Camps

**Inspection Date** 29/11/2016 10:24:33 AM

<table>
<thead>
<tr>
<th>Insp ID: 688</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

What Category are you capturing: **Overhead Poles**

Is street light fitted: Yes

Street Light Power Supply:

- Street Light Type: S70D 08
- Street Light Watts: 80
- Street Light Condition: 3
- Street Light Height

![Image of Overhead Poles](image1)

![Image of Overhead Poles](image2)

![Image of Overhead Poles](image3)

![Image of Overhead Poles](image4)
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 29/11/2016 10:24:33 AM
Northern Territory Town Camps

Electrical Infrastructure

**Inspection Date** 29/11/2016 10:14:50 AM

| Insp ID: | 690 | Group 3 - Tennant Creek, Elliott | Elliott North Camp |

What Category are you capturing: **Overhead Poles**

Is street light fitted: Yes

Street Light Power Supply:

Street Light Type: S70D 08

Street Light Watts: 70

Street Light Condition: 3

Street Light Height:

![Street Light Image 1](P:\GIS\Projects\253963_NT)

![Street Light Image 2](P:\GIS\Projects\253963_NT)

![Street Light Image 3](P:\GIS\Projects\253963_NT)

![Street Light Image 4](P:\GIS\Projects\253963_NT)
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date  29/11/2016 10:14:50 AM
Electrical Infrastructure

Insp ID: 691  Group 3 - Tennant Creek, Elliott  Elliott North Camp

What Category are you capturing: Overhead Poles

Is street light fitted: Yes

Street Light Power Supply:

Street Light Type: M80D 16
Street Light Watts: 80
Street Light Condition: 3
Street Light Height:
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date  29/11/2016 10:10:57 AM
## Electrical Infrastructure

### Inspection Date
29/11/2016 9:55:19 AM

<table>
<thead>
<tr>
<th>Insp ID: 693</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

- **What Category are you capturing:** Overhead Poles
- **Is street light fitted:** Yes
- **Street Light Power Supply:**
- **Street Light Type:** Unknown
- **Street Light Watts:**
- **Street Light Condition:** 3
- **Street Light Height**

![Images of street lights](image1.png) ![Images of street lights](image2.png)
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 29/11/2016 9:55:19 AM
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date  29/11/2016 9:46:04 AM

<table>
<thead>
<tr>
<th>Insp ID: 696</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

What Category are you capturing:  Overhead Poles

Is street light fitted:  Yes

Street Light Power Supply:
Street Light Type  M80D 06
Street Light Watts  80
Street Light Condition  3
Street Light Height
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date  29/11/2016 9:46:04 AM
Northern Territory Town Camps

Electrical Infrastructure

**Inspection Date** 29/11/2016 9:36:18 AM

<table>
<thead>
<tr>
<th>Insp ID:</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
<tbody>
<tr>
<td>697</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

What Category are you capturing: **Overhead Poles**

Is street light fitted: Yes

Street Light Power Supply:

Street Light Type: M80D 06

Street Light Watts: 80

Street Light Condition: 3

Street Light Height

![Image of Overhead Poles](P:\GIS\Projects\253963_NT)
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date  29/11/2016 9:36:18 AM
## Northern Territory Town Camps

### Electrical Infrastructure

**Inspection Date** 29/11/2016 9:33:00 AM

<table>
<thead>
<tr>
<th>Insp ID: 698</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

**What Category are you capturing:** Street Light

**What is power supply method:** Overhead

**What is the lamp type:** M80D 06

**What Wattage is the lamp:** 80

**What is the condition of street lights:** 3

**What Street Lighting pole installation height (approximate):** 6

![Street Light Image](image1)

![Street Light Image](image2)
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date  29/11/2016 9:30:31 AM

Insp ID: 699  Group 3 - Tennant Creek, Elliott  Elliott North Camp

What Category are you capturing:  Street Light

What is power supply method:  Overhead

What is the lamp type:  S70D 12

What Wattage is the lamp:  70

What is the condition of street lights:  3

What Street Lighting pole installation height (approximate): 256
### Northern Territory Town Camps

#### Electrical Infrastructure

**Inspection Date**  
29/11/2016 9:25:15 AM

<table>
<thead>
<tr>
<th>Insp ID: 702</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott North Camp</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>What Category are you capturing:</th>
<th>Transformers</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is Transformer installation method:</td>
<td>Pole</td>
</tr>
<tr>
<td>If method know:</td>
<td>11SS1P</td>
</tr>
<tr>
<td>What is the condition of the mounting:</td>
<td>3</td>
</tr>
<tr>
<td>What is Transformer Rating:</td>
<td>Unknown</td>
</tr>
<tr>
<td>Is there access to transformers name plate to take a photo:</td>
<td>No</td>
</tr>
<tr>
<td>What is the condition of transformer:</td>
<td>3</td>
</tr>
<tr>
<td>What is cable type to transformer:</td>
<td>PVC insulated black</td>
</tr>
<tr>
<td>What is cable size to transformer:</td>
<td></td>
</tr>
<tr>
<td>Is there switch gear or fusing associated with the transformer:</td>
<td>Cut out fuse</td>
</tr>
<tr>
<td>Transformer Comment:</td>
<td></td>
</tr>
</tbody>
</table>
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 29/11/2016 9:25:15 AM
Road map
Existing drawings
Transformer data
<table>
<thead>
<tr>
<th>Group</th>
<th>Com M</th>
<th>Location</th>
<th>Community Name</th>
<th>Dwellings No. (Funded Dwelling)</th>
<th>Dwellings No. (EnviroClay Design)</th>
<th>New House Incs (Future Demand)</th>
<th>Primary Vol. (kW)</th>
<th>PWC Sub ID</th>
<th>PWC Test Number</th>
<th>Transformer size (kVA)</th>
<th>RYA Total Developments (kVA)</th>
<th>KVA Total Developments (kVA)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>Bugot</td>
<td>Qarun</td>
<td>55</td>
<td>56</td>
<td>1.1</td>
<td>1.924</td>
<td>1753</td>
<td>300</td>
<td>247.5</td>
<td>385</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>Bulurun</td>
<td>Qarun</td>
<td>18</td>
<td>19</td>
<td>1.1</td>
<td>1.775</td>
<td>3545</td>
<td>100</td>
<td>85.6</td>
<td>133</td>
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<td>3</td>
<td>3</td>
<td>T糊涂</td>
<td>Qarun</td>
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<td>10</td>
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<td>91.0</td>
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<td>4</td>
<td>4</td>
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<td>Qarun</td>
<td>20</td>
<td>16</td>
<td>2.2</td>
<td>15996</td>
<td>15483</td>
<td>120</td>
<td>96.1</td>
<td>107</td>
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<td>5</td>
<td>5</td>
<td>T糊涂</td>
<td>Qarun</td>
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<td>16</td>
<td>2.2</td>
<td>285</td>
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<td>77</td>
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<td>T糊涂</td>
<td>Qarun</td>
<td>22</td>
<td>20</td>
<td>2.2</td>
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<td>1300</td>
<td>100</td>
<td>73</td>
<td>110</td>
<td></td>
<td></td>
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<td>7</td>
<td>7</td>
<td>T糊涂</td>
<td>Qarun</td>
<td>23</td>
<td>16</td>
<td>2.2</td>
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<td>960</td>
<td>200</td>
<td>85.0</td>
<td>120</td>
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<td>8</td>
<td>T糊涂</td>
<td>Qarun</td>
<td>24</td>
<td>15</td>
<td>2.2</td>
<td>1127</td>
<td>1300</td>
<td>100</td>
<td>73</td>
<td>110</td>
<td></td>
<td></td>
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<td>T糊涂</td>
<td>Qarun</td>
<td>25</td>
<td>13</td>
<td>2.2</td>
<td>1127</td>
<td>1300</td>
<td>100</td>
<td>73</td>
<td>110</td>
<td></td>
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<td>26</td>
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<td>2.2</td>
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<td>1300</td>
<td>100</td>
<td>73</td>
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<td>11</td>
<td>T糊涂</td>
<td>Qarun</td>
<td>27</td>
<td>13</td>
<td>2.2</td>
<td>1127</td>
<td>1300</td>
<td>100</td>
<td>73</td>
<td>110</td>
<td></td>
<td></td>
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<td>12</td>
<td>T糊涂</td>
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<td>28</td>
<td>13</td>
<td>2.2</td>
<td>1127</td>
<td>1300</td>
<td>100</td>
<td>73</td>
<td>110</td>
<td></td>
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<td>1300</td>
<td>100</td>
<td>73</td>
<td>110</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** For New House’s demand calculations see section 13.4 “Future Demand”.**
Elliott South Camp

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
- Power and Water Corporation supplement to WSA 04
- Power and Water Corporation supplement to WSA 03
- 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 Urban Residential Development (URD) Design Standards where possible.

With one exception, 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 appear to have been applied in many 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

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

<table>
<thead>
<tr>
<th>Condition rating</th>
<th>Operability</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Very Poor Not operational</td>
</tr>
<tr>
<td>2</td>
<td>Poor Not fully operational or requires immediate maintenance to keep operational</td>
</tr>
<tr>
<td>3</td>
<td>Good Fully operational, may require routine maintenance</td>
</tr>
<tr>
<td>4</td>
<td>Very Good Fully operational, may require maintenance in the next six months</td>
</tr>
<tr>
<td>5</td>
<td>Excellent New, fully operational</td>
</tr>
</tbody>
</table>

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,
- 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 Elliott South Camp community on Tuesday 29 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
Elliott South Camp’s current sewage disposal system is via septic tanks. There were no drawings of the location or type of septic tanks.

It is understood that the septic tanks are currently owned by the Commissioner of Consumer Affairs, and are the responsibility of Barkly Regional Council to maintain.

5.1.1 Connection methods and billing
The billing arrangement is not known. It is assumed that the Barkly Regional Council would organise for the septic tanks to be emptied, and a bill issued to the Commissioner of Consumer Affairs. It is not known what contribution the residents make towards this bill.

5.2 Existing infrastructure condition assessment
The condition of the septic tanks was not assessed.

5.3 Current performance and risks
There is no town sewer in the township of Elliott. The septic tank arrangement is common throughout the town. Until this situation changes, the septic tanks in Elliott South Camp should remain until town sewer is installed in Elliott.

The current performance of the septic tank arrangement could not be assessed.

It is recommended that sewerage infrastructure, including underground pipes, pump stations, and a sewage pond arrangement, is considered if the town is expected to expand.

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
As there is no town sewer in Elliott, constructing a sewer network to PWC standards within the community would not be effective, unless dedicated sewage ponds and associated infrastructure is also constructed. However, if the community or the town is undergoes considerable future development, it is recommended that a sewer network is installed for the entire town, including the communities. These headworks are expected to be a significant cost.

The cost estimates have focussed only on upgrading the sewer network within Elliott South Camp, assuming that a town sewer network would be provided at the same time a sewer network is provided within the community.
6 Water supply

6.1 Ownership and boundaries

The water reticulation servicing the Elliott South Camp is believed to be a looped network including DN100 and DN150 PVC pipes, with a single supply point. As-built drawings were not attainable to validate the water mains layout and sizing.

The water supply assets within Elliott South Camp are believed to be owned by the Commissioner of Consumer Affairs, but are the responsibility of Barkly Regional Council to maintain.

The water is supplied from a PWC owned water main outside of the community. Figure 1 shows the extent of water services.

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 a single bulk water meter at Elliott South Camp. The bill is issued to Barkly Regional Council. It is not known what contribution the residents make towards water bills.

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 the Commissioner of Consumer Affairs for Elliott South Camp. It will be up to governing body to assign bills to residents accordingly.

It is recommended that individual lot meters are maintained in addition to the proposed continuation of using bulk water meters to measure water usage. 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 three lot water meters were assessed during the inspection. South Elliott Camp is believed to contain 12 dwellings. Therefore up to an additional 9 residential lot water meters are required to be installed to cover the properties without an existing water meter. 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 accessed above ground; no excavation of below ground services was undertaken.

The condition of each asset is as follows:

Table 2 Water asset condition assessment

<table>
<thead>
<tr>
<th>Asset</th>
<th>1 Very Poor</th>
<th>2 Poor</th>
<th>3 Good</th>
<th>4 Very Good</th>
<th>5 Excellent</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire hydrants</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Taps</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Water meters (residential lots)</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

Figure 2 Fire hydrant, condition: *good*

Figure 3 Tap, condition: *very poor*
A tap was found in very poor condition and should be replaced. Furthermore, two residential water meters require maintenance works to remove calcium build up and leaks.

### 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 3 shows the calculated demand.

<table>
<thead>
<tr>
<th>Total dwellings</th>
<th>EP</th>
<th>Demand</th>
<th>Peak hour demand (l/s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>126</td>
<td>1.89</td>
<td>5.67</td>
</tr>
</tbody>
</table>

A 10 year plan has been established for water supply throughout the township of Elliott. Significant headworks are planned to provide fire flows throughout the township. The headworks appears to be external upgrades from the community.
is understood that the existing network within the community will have capacity for fire flow demands following the upgrades.

Current PWC standards do not permit DN100 sized pipes for fire flows. Furthermore, the water mains appear to be positioned outside the road reserve. The existing network does not strictly meet current standards. Although the existing network is currently not compliant with PWC standards it is expected that there will be no tangible benefit to the community by upgrading the DN100 PVC pipes to DN150.

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 Elliott South Camp no additional hydrants were noted as being 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 recommended;

- Replace one tap
- Repair leak on one lot water meters
- Remove calcium build up on one lot water meter

The community is viewed a single lot and water usage is proposed to be measured for the entire community at the bulk meter, however, it is also recommended that residential lot water meters are located on the connection to each dwelling. The lot meters will assist with distribution of bills to the residents and identify any leaks within the internal network. The cost estimates for the upgrades at Elliott South Camp include;

- Install nine new residential lot water meters
7 Roadworks

7.1 Ownership and boundaries
It is the current understanding that the roads within Elliott South Camp currently owned by the Commissioner of Consumer Affairs, and are the responsibility of Barkly Regional Council to maintain.

7.2 Existing infrastructure condition assessment
The road network within Elliott South Camp consists primarily of sealed roads. It appears the location of the roads have allowed for future developments. There are also numerous tracks which appear to be used frequently which are not included in the inspection and report. Road furniture such as signs were also inspected. Table 4 below summarise the condition of the road furniture as assessed during the site inspection.

Table 4 Roadworks condition assessment

<table>
<thead>
<tr>
<th>Asset</th>
<th>1 Very Poor</th>
<th>2 Poor</th>
<th>3 Good</th>
<th>4 Very Good</th>
<th>5 Excellent</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sign</td>
<td>3</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td>9</td>
</tr>
</tbody>
</table>

The signs in Elliott South community were generally of good and very good condition. It appears as though the road name signs have been recently installed. No upgrades are required. There were no footpaths in the community.
Table 5 below details the condition of the roads within Elliott South Camp for specific segments. Figure 7 above 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 5 Road network condition assessment

<table>
<thead>
<tr>
<th>Road name</th>
<th>Chainage start (km)</th>
<th>Chainage end (km)</th>
<th>Condition 1 to 5</th>
<th>Defects and associated condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wilyugu Street</td>
<td>0.0</td>
<td>0.18</td>
<td>3</td>
<td>-5% of road has surface cracks (3)</td>
</tr>
<tr>
<td>Kulumindini Street</td>
<td>0.0</td>
<td>0.1</td>
<td>3</td>
<td>-5% of road has surface cracks (3)</td>
</tr>
<tr>
<td></td>
<td>0.1</td>
<td>0.27</td>
<td>3</td>
<td>-5% of road has surface cracks (3)</td>
</tr>
</tbody>
</table>
The roads in Elliott South Camp were generally in good condition with minimal defects. The main defect was that 5% of the road has surface cracks. It is recommended that the surface cracks are repaired to prevent future pavement failure.

### 7.3 Current performance and risks
The roads in Elliott South Camp were rated as having good condition, although there was some surface cracking. 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;

- Seal surface cracks – 50 m² has been allowed for in the cost estimates.
8 Stormwater drainage

8.1 Ownership and boundaries
The stormwater drainage assets within Elliott South Camp are currently owned by the Commissioner of Consumer Affairs, and are the responsibility of Barkly Regional 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 6 below summarises the condition of the stormwater assets as assessed during the inspection.

Table 6 Stormwater condition assessment

<table>
<thead>
<tr>
<th>Asset</th>
<th>1 Very Poor</th>
<th>2 Poor</th>
<th>3 Good</th>
<th>4 Very Good</th>
<th>5 Excellent</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Culvert</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>SEP</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
</tbody>
</table>

Figure 10 Culvert endwall, condition: good, blockage: 50%

Figure 11 One bay side entry pit, condition: poor
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.

Of the five side entry pits that were inspected in Elliott South Camp, all were one bay side entry pits, two had broken lids, and all were blocked by at least 10%. It is recommended that the broken lids are fixed and the blockages are cleared.

The culvert was blocked by approximately 50%. The blockages in this culvert should be cleared out, and the swale downstream re-shaped to prevent future blockages.

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:

- Replace two side entry pit lids
- Clear blockages from all five pits
- Clear blockages from culvert
- Reshape swale downstream of endwall
9 Community structures

9.1 Ownership and boundaries
The community structures within Elliott South Camp are owned by the Commissioner of Consumer Affairs, but are the responsibility of Barkly Regional Council to maintain.

9.2 Existing infrastructure condition assessment
The site investigation for the community structures included assessing the condition and features of the playground and basketball court. The following table shows the condition rating given to the community structures.

Table 7 Community structures condition assessment

<table>
<thead>
<tr>
<th>Asset</th>
<th>1 Very Poor</th>
<th>2 Poor</th>
<th>3 Good</th>
<th>4 Very Good</th>
<th>5 Excellent</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Playground</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Basketball Court</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

Figure 12 Basketball court, condition: very good
9.3 Current performance and risks
The playground was given a poor rating due to not having a shade cloth. It appears that a structure is in place for a shade cloth. It is recommended that this structure is reviewed for structural integrity and a new shade cloth installed.

The basketball was in very good condition.

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:

- Check the existing shade cloth structure
- Install new shade cloth
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 its 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.

The Elliott South Camp community electrical reticulation systems is supplied by
overhead reticulation scheme to individual house.

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.

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, not PWC.

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

Elliott South Camp community are responsible for 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 8 shows the condition rating given to the distribution switchboards and distribution pillars.

Table 8 Distribution panel condition assessment

<table>
<thead>
<tr>
<th>Asset</th>
<th>1 Very Poor</th>
<th>2 Poor</th>
<th>3 Good</th>
<th>4 Very Good</th>
<th>5 Excellent</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distribution panels</td>
<td>1 (status unknown)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 9 shows the condition rating given to the street lights. The street lights were of a low voltage overhead feeder design, mercury lamp type, M80D. The street lights have 75% operational rating and 25% inoperable.

Table 9 Street light on O/H pole condition assessment

<table>
<thead>
<tr>
<th>Asset</th>
<th>1 Very Poor</th>
<th>2 Poor</th>
<th>3 Good</th>
<th>4 Very Good</th>
<th>5 Excellent</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Street light on O/H pole</td>
<td>1</td>
<td>1</td>
<td>6</td>
<td>6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 10 shows the condition rating given to the Overhead poles. The overhead poles are of Weld Construction (Universal Pole construction). The overhead poles have 92% operational rating from the visual inspection.

Table 10 Overhead pole condition assessment

<table>
<thead>
<tr>
<th>Asset</th>
<th>1 Very Poor</th>
<th>2 Poor</th>
<th>3 Good</th>
<th>4 Very Good</th>
<th>5 Excellent</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overhead pole</td>
<td>1</td>
<td>12</td>
<td>13</td>
<td>13</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The meters in Elliott South Camp community were not inspected by Bennett Design (as they did not go to Elliott) or Aurecon (as property access was restricted).

The details of the individual inspections and photographs of each infrastructure item are included in the 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 Elliott South Camp community transformer is 27% of rated capacity based on 4.5kVA/dwelling. The calculated maximum demand is within the total capacity of the substation on site.

Table 11 Elliott South Camp current demand load vs transformer ratings

<table>
<thead>
<tr>
<th>Community name</th>
<th>Dwellings</th>
<th>Transformer (kVA)</th>
<th>kVA Total @ 4.5kVA</th>
<th>kVA Total @ 7kVA</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elliott South Camp</td>
<td>12</td>
<td>200</td>
<td>54</td>
<td>84</td>
<td>Transformer is not in boundary of Town Camp [The upstream transformer data not identified to Town Camp].</td>
</tr>
</tbody>
</table>

A tabulated summary of all community transformers is included in the 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 80W street lights.
- Confirm if overhead pole redundant
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.

The Appendices contains the individual reports.

Table 12 Telecommunication pit condition assessment

<table>
<thead>
<tr>
<th>Asset</th>
<th>1 Very Poor</th>
<th>2 Poor</th>
<th>3 Good</th>
<th>4 Very Good</th>
<th>5 Excellent</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telecommunication pit</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>

Table 13 Telephone booth condition assessment

<table>
<thead>
<tr>
<th>Asset</th>
<th>1 Very Poor</th>
<th>2 Poor</th>
<th>3 Good</th>
<th>4 Very Good</th>
<th>5 Excellent</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phone booth</td>
<td>1 (status unknown)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 Elliott South Camp is displayed in the Figure 14 below. NBN is available to residents via satellite on application to an appropriate NBN access provider.
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 Elliott South Camp because NBN is available to residents via satellite on application to an appropriate NBN access provider.
12 Cost estimates

Table 14 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 14 Cost estimates

<table>
<thead>
<tr>
<th>Infrastructure</th>
<th>Maintenance of existing infrastructure</th>
<th>Upgrades to meet current design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sewerage</td>
<td>$ 0</td>
<td>$ 605,000</td>
</tr>
<tr>
<td>Water supply</td>
<td>$ 5,000</td>
<td>$ 58,000</td>
</tr>
<tr>
<td>Roadworks</td>
<td>$ 2,000</td>
<td>$ 0</td>
</tr>
<tr>
<td>Stormwater drainage</td>
<td>$ 13,000</td>
<td>$ 0</td>
</tr>
<tr>
<td>Community structures</td>
<td>$ 17,000</td>
<td>$ 0</td>
</tr>
<tr>
<td>Electrical</td>
<td>$ 2,000</td>
<td>$ 0</td>
</tr>
<tr>
<td>Communications</td>
<td>$ 0</td>
<td>$ 0</td>
</tr>
<tr>
<td>Miscellaneous provisions</td>
<td>$ 19,000</td>
<td>$ 94,000</td>
</tr>
<tr>
<td><strong>Total (including GST)</strong></td>
<td><strong>$ 58,000</strong></td>
<td><strong>$ 757,000</strong></td>
</tr>
<tr>
<td><strong>Grand total</strong></td>
<td><strong>$ 815,000</strong></td>
<td></td>
</tr>
</tbody>
</table>

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 Elliott South Camp community:

**Sewerage**
- Install new sewerage network, including gravity main, housing connections and connection to new external network. This is assuming that an external sewer network will be constructed at the same time the Elliott South Camp sewer network is constructed. The cost estimates are for Elliott South Camp only.

**Water supply**
- Replace one tap
- Repair two residential lot water meters
- Install nine new residential lot water meters

**Roadworks**
- Seal surface cracks – 50 m²

**Stormwater drainage**
- Replace two side entry pit lids
- Clear blockages from all five pits
- Clear blockages from culvert
- Reshape swale downstream of endwall

**Community structures**
- Install new shade cloth

**Electrical services**
- Replace two 80W street lights.
- Confirm if overhead pole redundant

**Communications**
- No works are required because NBN is available to residents via satellite on application to an appropriate NBN access provider.
Civil inspection reports
Legend
- Town Camp boundary
- Water
  - Fire Hydrants (4)
  - Water Meter (3)
  - Taps (2)

A3 scale: 1:2,000

Note: Label numbers refer to survey IDs

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

NT Town Camp Infrastructure Assessments: Water
224 - Elliott South Camp (Elliott South)
224 - Elliott South Camp (Elliott South)

Legend
- Town Camp boundary
- Community structures
  - Basketball court (1)
  - Playground (1)
- Road furniture
  - Signs (9)
- Stormwater
  - Culverts (1)
  - Side Entry Pit (5)

A3 scale: 1:2,000

Note:
- Label numbers refer to survey IDs

Imagery: Digital Globe WV2 2013-2016

NT Town Camp Infrastructure Assessments
Road furniture, stormwater drainage & community structures
## Northern Territory Town Camps

### Civil Infrastructure

**Inspection Date**  29/11/2016 2:22:04 PM

<table>
<thead>
<tr>
<th>Insp ID</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott South Camp</th>
</tr>
</thead>
<tbody>
<tr>
<td>1273</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Stormwater Infrastructure:** Culverts

**Culvert Type:** RCP

**Diameter (mm):** 600

**Width (mm):**

**Culvert Depth (mm):**

**Culvert Length (m):**

**Culvert Condition:** 2 - Poor

**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:**
What Water Asset Are you Capturing: Fire Hydrants

Single or Double: No
Above or Below ground: Below ground
FH Leakage: No Access
Bollards around hydrant: No
FH Condition: 4 - Very Good
FH Comment: Image found and displayed.
What Water Asset Are you Capturing: Fire Hydrants

Single or Double: No
Above or Below ground: Below ground
FH Leakage: No Access
Bollards around hydrant: No
FH Condition: 3 - Good
FH Comment: Fence over lid
Northern Territory Town Camps

Civil Infrastructure

**Inspection Date**  29/11/2016 2:13:13 PM

<table>
<thead>
<tr>
<th>Insp ID</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott South Camp</th>
</tr>
</thead>
<tbody>
<tr>
<td>1271</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**What Water Asset Are you Capturing:**  Fire Hydrants

**Single or Double:**
- Yes

**Sluice Valve:**
- Yes

**Above or Below ground:**
- Below ground

**FH Leakage:**
- No Access

**Bollards around hydrant:**
- No

**FH Condition:**
- 4 - Very Good

**FH Comment:**

P:\GIS\Projects\253963_NT Image found and displayed.
Northern Territory Town Camps

Civil Infrastructure

Inspection Date  29/11/2016 2:33:15 PM

Insp ID:  1278       Group 3 - Tennant Creek, Elliott       Elliott South Camp

What Water Asset Are you Capturing:  Fire Hydrants

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

P:\GIS\Projects\253963_NT Image found and displayed.
## Civil Infrastructure

### Northern Territory Town Camps

**Insp ID:** 1251  
**Group:** 3 - Tennant Creek, Elliott  
**Location:** Elliott South Camp

| Road Name: | Murrului Street |
| What are you inspecting: | Pavements |
| Ch From (km): | 0 |
| Ch To (km): | 0.1 |
| Road Type: | Sealed - spray seal |
| Section Width (m): | 6 |
| Road Condition: | 3 - Good |

**General Comment:** Did form for wrong street (wilyugi) first. This is correct form.

### Road Defects Section

#### Kerbs Section

<table>
<thead>
<tr>
<th>Kerb Type</th>
<th>Kerb Cond</th>
<th>Kerb Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kerb and Gutter</td>
<td>3 - Good</td>
<td></td>
</tr>
</tbody>
</table>

### Shoulders Section

### Linemarking Section

### Obstruction Section
Northern Territory Town Camps

Civil Infrastructure

Inspection Date  29/11/2016 1:25:02 PM
Northern Territory Town Camps

Civil Infrastructure

Inspection Date  29/11/2016 1:25:02 PM
Civil Infrastructure

Northern Territory Town Camps

**Insp ID:** 1268
**Group 3 - Tennant Creek, Elliott**
**Elliott South Camp**

- **Road Name:** Wilyugu Street
- **What are you inspecting:** Pavements
- **Ch From (km):** 0
- **Ch To (km):** 0.18
- **Road Type:** Sealed - spray seal
- **Section Width (m):** 6
- **Road Condition:** 3 - Good

**General Comment:**

**Road Defects Section**

<table>
<thead>
<tr>
<th>Defect Type</th>
<th>Defect QTY</th>
<th>Defect Condition</th>
<th>Defect Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surfacing Cracks</td>
<td>5</td>
<td>3 - Good</td>
<td>5 % of road cracked</td>
</tr>
</tbody>
</table>

**Kerbs Section**

<table>
<thead>
<tr>
<th>Kerb Type</th>
<th>Kerb Cond</th>
<th>Kerb Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kerb and Gutter</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Shoulders Section**

**Linemarking Section**

**Obstruction Section**
Northern Territory Town Camps

Civil Infrastructure

Inspection Date  29/11/2016  2:06:48 PM
Northern Territory Town Camps

Civil Infrastructure

Inspection Date  29/11/2016 2:06:48 PM
## Northern Territory Town Camps

### Civil Infrastructure

#### Inspection Date
29/11/2016 2:28:14 PM

<table>
<thead>
<tr>
<th>Insp ID: 1276</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott South Camp</th>
</tr>
</thead>
</table>

- **Road Name:** Kulumindini Street
- **What are you inspecting:** Pavements
- **Ch From (km):** 0.1
- **Ch To (km):** 0.27
- **Road Type:** Sealed - spray seal
- **Section Width (m):** 6
- **Road Condition:** 3 - Good

### General Comment:

#### Road Defects Section

<table>
<thead>
<tr>
<th>Defect Type</th>
<th>Defect QTY</th>
<th>Defect Condition</th>
<th>Defect Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surfacing Cracks</td>
<td>5</td>
<td>3 - Good</td>
<td>% of road</td>
</tr>
</tbody>
</table>

#### Kerbs Section

<table>
<thead>
<tr>
<th>Kerb Type</th>
<th>Kerb Cond</th>
<th>Kerb Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kerb and Gutter</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Shoulders Section

### Linemarking Section

### Obstruction Section
Northern Territory Town Camps
Civil Infrastructure

Inspection Date  29/11/2016 2:28:14 PM
Northern Territory Town Camps

Civil Infrastructure

Inspection Date 29/11/2016 2:28:14 PM
Civil Infrastructure

Northern Territory Town Camps

Inspection Date 29/11/2016 2:30:26 PM

Insp ID: 1277  Group 3 - Tennant Creek, Elliott  Elliott South Camp

Road Name: Kulumindini Street
What are you inspecting: Pavements
Ch From (km): 0
Ch To (km): 0.1
Road Type: Sealed - spray seal
Section Width (m): 6
Road Condition: 3 - Good

General Comment:

Road Defects Section
Defect Type | Defect QTY | Defect Condition | Defect Comments
--- | --- | --- | ---
Surfacing Cracks | 5 | 3 - Good | 5% of road

Kerbs Section
Kerb Type | Kerb Cond | Kerb Comments
--- | --- | ---
Kerb and Gutter | 3 - Good | 

Shoulders Section
Linemarking Section

Obstruction Section
Northern Territory Town Camps

Civil Infrastructure

Inspection Date  29/11/2016 2:30:26 PM
Northern Territory Town Camps

Civil Infrastructure

Inspection Date 29/11/2016 2:30:26 PM
## Northern Territory Town Camps

### Civil Infrastructure

**Inspection Date**  
29/11/2016 1:55:47 PM

<table>
<thead>
<tr>
<th>Insp ID: 1260</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott South Camp</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stormwater Infrastructure:</strong></td>
<td>SEP</td>
<td></td>
</tr>
<tr>
<td><strong>Number of Bays:</strong></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>On grade or sag pit:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Both sides of road:</strong></td>
<td>Left</td>
<td></td>
</tr>
<tr>
<td><strong>Condition:</strong></td>
<td>2 - Poor</td>
<td></td>
</tr>
<tr>
<td><strong>Blockage (%):</strong></td>
<td>20</td>
<td></td>
</tr>
<tr>
<td><strong>Comment:</strong></td>
<td>P:\GIS\Projects\253963_NT Image found and displayed.</td>
<td></td>
</tr>
</tbody>
</table>

---

Image: A stormwater infrastructure SEP with a blockage of 20%.
<table>
<thead>
<tr>
<th>Stormwater Infrastructure:</th>
<th>SEP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Bays:</td>
<td>1</td>
</tr>
<tr>
<td>On grade or sag pit:</td>
<td></td>
</tr>
<tr>
<td>Both sides of road:</td>
<td>Right</td>
</tr>
<tr>
<td>Condition:</td>
<td>3 - Good</td>
</tr>
<tr>
<td>Blockage (%):</td>
<td>10</td>
</tr>
<tr>
<td>Comment:</td>
<td></td>
</tr>
</tbody>
</table>
Northern Territory Town Camps

Civil Infrastructure

**Inspection Date**  29/11/2016 2:09:16 PM

<table>
<thead>
<tr>
<th>Insp ID:</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott South Camp</th>
</tr>
</thead>
</table>

- **Stormwater Infrastructure:** SEP
- **Number of Bays:** 1
- **On grade or sag pit:**
- **Both sides of road:** Right
- **Condition:** 3 - Good
- **Blockage (%):** 10

Comment:

![Image](P:\GIS\Projects\253963_NT_313.png)
## Northern Territory Town Camps

### Civil Infrastructure

**Inspection Date** 29/11/2016 2:14:54 PM

<table>
<thead>
<tr>
<th>Insp ID</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott South Camp</th>
</tr>
</thead>
<tbody>
<tr>
<td>1272</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Stormwater Infrastructure:** SEP

**Number of Bays:** 1

**On grade or sag pit:**

**Both sides of road:** Left

**Condition:** 2 - Poor

**Blockage (%):** 10

**Comment:** Broken lid
### Civil Infrastructure

**Inspection Date**  29/11/2016 2:25:18 PM

<table>
<thead>
<tr>
<th><strong>Insp ID:</strong></th>
<th><strong>Group 3 - Tennant Creek, Elliott</strong></th>
<th><strong>Elliott South Camp</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Stormwater Infrastructure:</td>
<td>SEP</td>
<td></td>
</tr>
<tr>
<td>Number of Bays:</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>On grade or sag pit:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Both sides of road:</td>
<td>Left</td>
<td></td>
</tr>
<tr>
<td>Condition:</td>
<td>2 - Poor</td>
<td></td>
</tr>
<tr>
<td>Blockage (%):</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Comment:</td>
<td>Broken lid</td>
<td></td>
</tr>
</tbody>
</table>

![Image of a stormwater infrastructure with a broken lid](image)
Northern Territory Camps

Civil Infrastructure

**Inspection Date**  29/11/2016 1:46:46 PM

<table>
<thead>
<tr>
<th>Insp ID: 1261</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott South Camp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inspection Type:</td>
<td>Shade Structure</td>
<td></td>
</tr>
<tr>
<td>Shade Structure Type:</td>
<td>Play ground</td>
<td></td>
</tr>
<tr>
<td>Shade Floor Type:</td>
<td>Sand</td>
<td></td>
</tr>
<tr>
<td>Roof Type:</td>
<td>Shadecloth</td>
<td></td>
</tr>
<tr>
<td>Width (mm):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length (mm):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appearance:</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Appearance Comment:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Condition:</td>
<td>2 - Poor</td>
<td></td>
</tr>
<tr>
<td>Comment:</td>
<td>Shadecloth non existent</td>
<td></td>
</tr>
</tbody>
</table>

Image found and displayed.
## Civil Infrastructure

**Northern Territory Camps**

**Inspection Date** 29/11/2016 2:11:49 PM

<table>
<thead>
<tr>
<th>Insp ID: 1270</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott South Camp</th>
</tr>
</thead>
</table>

- **Inspection Type:** Shade Structure
- **Shade Structure Type:** Basket Ball Court
- **Shade Floor Type:** Concrete
- **Roof Type:** Tin Roof
- **Width (mm):**
- **Length (mm):**
- **Appearance:** 4
- **Appearance Comment:**
- **Condition:** 4 - Very Good
- **Comment:**

![Image of Shade Structure](image_url)
## Northern Territory Town Camps

### Civil Infrastructure

**Inspection Date**: 29/11/2016 1:29:36 PM

<table>
<thead>
<tr>
<th>Insp ID:</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott South Camp</th>
</tr>
</thead>
<tbody>
<tr>
<td>1252</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Road Name**: Murrului Street

**What are you inspecting**: Signs

**Type of Sign**: Give Way

**Sign Condition**: 3 - Good

**Sign Comment**: General Comment:

![Image of a Give Way sign](image_url)
## Northern Territory Town Camps

### Civil Infrastructure

**Inspection Date**  29/11/2016 1:30:29 PM

<table>
<thead>
<tr>
<th>Insp ID: 1253</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott South Camp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road Name:</td>
<td>Murrului Street</td>
<td></td>
</tr>
<tr>
<td>What are you inspecting:</td>
<td>Signs</td>
<td></td>
</tr>
<tr>
<td>Type of Sign:</td>
<td>Street name</td>
<td></td>
</tr>
<tr>
<td>Sign Condition:</td>
<td>4 - Very Good</td>
<td></td>
</tr>
<tr>
<td>Sign Comment:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Comment:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inspect ID: 1254</td>
<td>Group 3 - Tennant Creek, Elliott</td>
<td>Elliot South Camp</td>
</tr>
<tr>
<td>----------------</td>
<td>---------------------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>Road Name:</td>
<td>Murrului Street</td>
<td></td>
</tr>
<tr>
<td>What are you inspecting:</td>
<td>Signs</td>
<td></td>
</tr>
<tr>
<td>Type of Sign:</td>
<td>20 kph</td>
<td></td>
</tr>
<tr>
<td>Sign Condition:</td>
<td>3 - Good</td>
<td></td>
</tr>
<tr>
<td>Sign Comment:</td>
<td>Sign is slightly bent</td>
<td></td>
</tr>
</tbody>
</table>

General Comment:
### Northern Territory Town Camps

**Civil Infrastructure**

**Inspection Date** 29/11/2016 1:39:34 PM

<table>
<thead>
<tr>
<th>Insp ID</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott South Camp</th>
</tr>
</thead>
<tbody>
<tr>
<td>1255</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Road Name:** Kulumindini Street

**What are you inspecting:** Signs

**Type of Sign:** Street name

**Sign Condition:** 4 - Very Good

**Sign Comment:**

**General Comment:**

![Image of Kulumindini Street sign](321)
## Northern Territory Town Camps

### Civil Infrastructure

**Inspection Date** 29/11/2016 1:32:41 PM

<table>
<thead>
<tr>
<th>Insp ID: 1256</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott South Camp</th>
</tr>
</thead>
</table>

- **Road Name:** Murrului Street
- **What are you inspecting:** Signs
- **Type of Sign:** Prescribed area
- **Sign Condition:** 3 - Good
- **Sign Comment:**

**General Comment:**

![Sign Image](image_url)
## Northern Territory Town Camps

### Civil Infrastructure

**Inspection Date**: 29/11/2016 1:45:42 PM

<table>
<thead>
<tr>
<th>Insp ID</th>
<th>Group</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1262</td>
<td>Group 3 - Tennant Creek, Elliott</td>
<td>Elliott South Camp</td>
</tr>
</tbody>
</table>

**Road Name**: Wilyugu Street

**What are you inspecting**: Signs

**Type of Sign**: 20

**Sign Condition**: 4 - Very Good

**Sign Comment**: 

**General Comment**: 

![Image of sign]

323
### Civil Infrastructure

**Inspection Date**  29/11/2016 1:44:24 PM

<table>
<thead>
<tr>
<th>Insp ID:</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott South Camp</th>
</tr>
</thead>
</table>

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

![Image of Murrului Street sign]

P:\GIS\Projects\253963_NT Image found and displayed.
Northern Territory Town Camps

Civil Infrastructure

Inspection Date  29/11/2016 2:04:20 PM

Insp ID:  1267  Group 3 - Tennant Creek, Elliott  Elliott South Camp

Road Name:  Wilyugu Street
What are you inspecting:  Signs
Type of Sign:  Street name
Sign Condition:  4 - Very Good
Sign Comment:
General Comment:
<table>
<thead>
<tr>
<th>Insp ID: 1274</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott South Camp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road Name:</td>
<td>Kulumindini Street</td>
<td></td>
</tr>
<tr>
<td>What are you inspecting:</td>
<td>Signs</td>
<td></td>
</tr>
<tr>
<td>Type of Sign:</td>
<td>Street name</td>
<td></td>
</tr>
<tr>
<td>Sign Condition:</td>
<td>4 - Very Good</td>
<td></td>
</tr>
<tr>
<td>Sign Comment:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Comment:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Northern Territory Town Camps

#### Civil Infrastructure

**Inspection Date**: 29/11/2016 1:43:11 PM

<table>
<thead>
<tr>
<th>Insp ID:</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott South Camp</th>
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</thead>
<tbody>
<tr>
<td>1259</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### What Water Asset Are you Capturing: **Taps**

- **Diameter(mm)**: 25
- **Tap Leakage**: 
- **Tap Condition**: 1 - Very Poor
- **Tap Comment**: No handle

![Image of Tap](image)
Civil Infrastructure

Northern Territory Town Camps

Inspection Date  29/11/2016 2:34:46 PM

Insp ID: 1279
Group 3 - Tennant Creek, Elliott
Elliott South Camp

What Water Asset Are you Capturing: Taps

Diameter(mm): 25
Tap Leakage: No
Tap Condition: 3 - Good
Tap Comment:

![Image of tap](image_path)
Northern Territory Town Camps
Civil Infrastructure

**Insp ID:** 1258  
**Group 3 - Tennant Creek, Elliott**

**Elliott South Camp**

**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:** 153

**Lot Water Meter Size:**

**Lot Water Meter Condition:** 2 - Poor

**Lot Water Meter Comment:** Calcium build up on outside
## Civil Infrastructure

**Northern Territory Town Camps**

**Inspection Date**: 29/11/2016 2:05:10 PM

<table>
<thead>
<tr>
<th>Insp ID: 1266</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliot South Camp</th>
</tr>
</thead>
</table>

**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**: 155
- **Lot Water Meter Size**:
- **Lot Water Meter Condition**: 3 - Good
- **Lot Water Meter Comment**:

![Image of Water Meter](image_url)
# Northern Territory Town Camps

## Civil Infrastructure

**Inspection Date**  29/11/2016 2:35:55 PM

<table>
<thead>
<tr>
<th>Insp ID: 1280</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott South Camp</th>
</tr>
</thead>
</table>

**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:**
- **Lot Water Meter Condition:**  2 - Poor
- **Lot Water Meter Comment:**  Leaking
Electrical inspection reports
NT Town Camp Infrastructure Assessments: Electrical

Legend

Electrical infrastructure
- 11KV HV/LV Pole
- LV Metering
- LV Line Pole
- LV Service Pole
- LV Switch
- Street Lighting on HV Pole
- 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

A3 scale: 1:2,000

Coordinate system: MGA94 Zone 52
Date: 23/02/2017 Version: 3
Northern Territory Town Camps

Electrical Infrastructure

**Inspection Date**  29/11/2016 3:01:04 PM

<table>
<thead>
<tr>
<th>Insp ID: 639</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott South Camp</th>
</tr>
</thead>
</table>

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:

334
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date  29/11/2016 2:02:14 PM

Insp ID:  652  Group 3 - Tennant Creek, Elliott  Elliott South Camp

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:  Unknown

Condition Comments:

What is the condition of cables/glands into switchboard:  Unknown

Cable/Gland Condition Comments:

Distribution Panels name plate access:  No
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 29/11/2016 2:02:14 PM
Northern Territory Town Camps

Electrical Infrastructure

**Inspection Date**  29/11/2016 1:58:02 PM

| Insp ID: 654 | Group 3 - Tennant Creek, Elliott | Elliott South Camp |

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:
## Communications Infrastructure

### Inspection Date
29/11/2016 2:52:04 PM

<table>
<thead>
<tr>
<th><strong>Insp ID:</strong></th>
<th>642</th>
<th><strong>Group 3 - Tennant Creek, Elliott</strong></th>
<th><strong>Elliott South Camp</strong></th>
</tr>
</thead>
</table>

- **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:**

![Communications Pit(s) image](image1.png)
Northern Territory Town Camps

Electrical Infrastructure

**Inspection Date**  29/11/2016 2:55:18 PM

<table>
<thead>
<tr>
<th>Insp ID: 641</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott South Camp</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>What Category are you capturing:</th>
<th>Overhead Poles</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is Pole Material type:</td>
<td>Welded</td>
</tr>
<tr>
<td>What is the condition of pole:</td>
<td>3</td>
</tr>
<tr>
<td>How is the pole planted:</td>
<td>Concrete</td>
</tr>
<tr>
<td>What is the Condition of plant:</td>
<td>3</td>
</tr>
<tr>
<td>Is street light fitted:</td>
<td>Yes</td>
</tr>
<tr>
<td>Street Light Power Supply:</td>
<td></td>
</tr>
<tr>
<td>Street Light Type</td>
<td>M80d 06</td>
</tr>
<tr>
<td>Street Light Watts</td>
<td>80</td>
</tr>
<tr>
<td>Street Light Condition</td>
<td>2</td>
</tr>
<tr>
<td>Street Light Height</td>
<td>339</td>
</tr>
<tr>
<td>What is the type of service:</td>
<td>Three</td>
</tr>
<tr>
<td>What is the HV voltage level:</td>
<td>400</td>
</tr>
<tr>
<td>What is the arrangement of connected cables:</td>
<td>Twisted</td>
</tr>
<tr>
<td>Are there isolators on the pole:</td>
<td>No</td>
</tr>
<tr>
<td>What is the Condition:</td>
<td>3</td>
</tr>
<tr>
<td>How many Lots are connected to this pole:</td>
<td>0</td>
</tr>
<tr>
<td>Overhead Pole Comments:</td>
<td>Surface rusted</td>
</tr>
</tbody>
</table>
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date  29/11/2016 2:55:18 PM
## Northern Territory Town Camps

### Electrical Infrastructure

**Inspection Date**: 29/11/2016 2:51:12 PM

| Insp ID: 643 | Group 3 - Tennant Creek, Elliott | Elliott South Camp |

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:** S50D 08
- **Street Light Watts:** 50
- **Street Light Condition:** 3
- **Street Light Height:** 341

- **What is the type of service:** Three
- **What is the HV voltage level:** 400
- **What is the arrangement of connected cables:**
- **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 29/11/2016 2:51:12 PM
### Northern Territory Town Camps

#### Electrical Infrastructure

**Inspection Date**: 29/11/2016 2:46:46 PM

<table>
<thead>
<tr>
<th>Insp ID</th>
<th>Group 3 - Tennant Creek, Elliott</th>
<th>Elliott South Camp</th>
</tr>
</thead>
<tbody>
<tr>
<td>644</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**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**: Single

**What is the HV voltage level**: 230

**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  29/11/2016 2:46:46 PM
## Electrical Infrastructure

### Northern Territory Town Camps

**Insp ID:** 645  
**Group 3 - Tennant Creek, Elliott**  
**Elliott South Camp**

- **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:** Unknown
  - **Street Light Watts:**
  - **Street Light Condition:** 3
  - **Street Light Height:** 345
- **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  29/11/2016 2:44:05 PM
<table>
<thead>
<tr>
<th>What Category are you capturing:</th>
<th>Overhead Poles</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is Pole Material type:</td>
<td>Welded</td>
</tr>
<tr>
<td>What is the condition of pole:</td>
<td>3</td>
</tr>
<tr>
<td>How is the pole planted:</td>
<td>Concrete</td>
</tr>
<tr>
<td>What is the Condition of plant:</td>
<td>3</td>
</tr>
<tr>
<td>Is street light fitted:</td>
<td>Yes</td>
</tr>
<tr>
<td>Street Light Power Supply:</td>
<td></td>
</tr>
<tr>
<td>Street Light Type</td>
<td>S70D 11</td>
</tr>
<tr>
<td>Street Light Watts</td>
<td>70</td>
</tr>
<tr>
<td>Street Light Condition</td>
<td>3</td>
</tr>
<tr>
<td>Street Light Height</td>
<td>347</td>
</tr>
<tr>
<td>What is the type of service:</td>
<td>Three</td>
</tr>
<tr>
<td>What is the HV voltage level:</td>
<td>400</td>
</tr>
<tr>
<td>What is the arrangement of connected cables:</td>
<td>Twisted</td>
</tr>
<tr>
<td>Are there isolators on the pole:</td>
<td>No</td>
</tr>
<tr>
<td>What is the Condition:</td>
<td>3</td>
</tr>
<tr>
<td>How many Lots are connected to this pole:</td>
<td>3</td>
</tr>
<tr>
<td>Overhead Pole Comments:</td>
<td>Surface rusted</td>
</tr>
</tbody>
</table>