Manabadurma

Manabadurma

1 Design

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

Sewerage and water supply

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

Electrical services

Electrical infrastructure has been assessed against AS/NZS3000 Wiring Rules and against PWC Service, Installation and Metering Rules and 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

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

2.2 Civil assessment limitations

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

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

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

2.3 Electrical assessment limitations

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

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

3 Current infrastructure issues

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

3.1 Ownership and maintenance

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

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

3.2 Access to infrastructure

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

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

3.3 Existing infrastructure

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

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

3.4 Safety concerns

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

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

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

4 Available information

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

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

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

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

5 Sewerage

5.1 Ownership and boundaries

The sewer network at Manabadurma is believed to be owned by the Director of National Parks, but is the responsibility of Warnbi Aboriginal Corporation to maintain.

There are no sewer assets owned by PWC in or around Manabadurma community.

Drawings of the sewer network at Manabadurma could not be obtained.

5.1.1 Connection methods and billing

The current payment arrangement for sewerage services in Manabadurma is not known since PWC are not responsible for billing services.

5.2 Existing infrastructure condition assessment

The sewer infrastructure inspection was limited to inspecting the condition of manholes covers, as all other sewerage infrastructure is below ground. A total of two manholes were inspected, with condition ratings as follows:

Table 2 Sewer condition assessment

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

Figure 1 Sewer manhole, condition: *good*

Figure 2 Sewer manhole, condition: *good*

5.3 Current performance and risks

As there was no information available on the current sewer network, the current performance and capacity could not be assessed.

It is assumed that the current network is non-compliant to PWC standards and therefore should be upgraded to ensure compliance and capacity.

5.4 Future demands

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

5.5 Recommended works

Assuming that the current sewer network is not up to PWC standards, the following works would be required at a minimum;

- Install approximately 400 m of DN150 PVC reticulation main
- Connect to existing trunk main

It is not known whether a pump station or any other ancillary works would be required, so they therefore have not been allowed for in the cost estimates.

6 Water supply

6.1 Ownership and boundaries

The water supply network at Manabadurma is believed to be owned by the Director of National Parks, but is the responsibility of Warnbi Aboriginal Corporation to maintain.

There are no water supply assets owned by PWC in or around Manabadurma community.

6.1.1 Connection methods and billing

The current payment arrangement for water services in Manabadurma is not known since PWC is not responsible for billing of services.

6.2 Existing infrastructure condition assessment

Table 3 below summarise the condition of the water supply assets assessed during the site inspection.

Table 3 Water supply condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Water meter (residential lots)		5	1			6

Figure 3 Water meter (lot), condition: *poor*

6.3 Current performance and risks

As there was no information available on the current water reticulation network, so therefore the current compliance and capacity could not be fully assessed.

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 Manabadurma no fire hydrants were found during the audit. New fire hydrants are required and should be installed. Three new hydrants have been incorporated into the cost estimates.

6.4 Future demands

As no new developments are currently planned for Manabadurma, 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;

- Clear debris from five existing lot water meters.

Limited information on the existing network is available. It is assumed that the current network is non-compliant and should be upgraded to a DN150 PVC looped water main. Water usage is proposed to be measured with a bulk water meter located at the community boundary. Additionally, residential lot water meters should be installed on the connection to each dwelling which will assist with bill distribution to residents and identifying any leaks in the internal network. The cost estimates for the upgrades at Manabadurma include;

- Install DN150 PVC looped main, approximately 2000 m.
- Install three new fire hydrants
- DN150 bulk water meters connecting to new water main.
- Install additional six residential lot meters.

7 Roadworks

7.1 Ownership and boundaries

It is the current understanding that the roads within Manabadurma community are owned by the Director of National Parks, but are the responsibility of Warnbi Aboriginal Corporation to maintain.

7.2 Existing infrastructure condition assessment

The road network within Manabadurma community consists of spray sealed roads.

There was no road furniture, such as signs, footpaths or carparks found at Manabadurma. As there are no kerbs along the road, the driveways to the individual dwellings are informal and there are no layover kerbs.

Figure 4 Pavement, condition: *poor*

Figure 5 shows a map of Manabadurma community's road network this can also be observed in Appendices.

Figure 5 Road network condition map

Table 4 below details the condition of the roads within Manabadurma community for specific segments.

The value displayed in brackets under the *'Defects and associated condition'* column represents the condition for that particular defect type. This rating will not necessarily be the same condition rating for the road segment. The percentages shown are percentage of the road that is affected by the defect, within that road segment.

Table 4 Road network condition assessment

Road Name	Chainage Start (km)	Chainage end (km)	Road segment condition (1-5)	Defect and associated condition (1-5)
Manabadurma	0.6	0.75	2	-7 potholes (2) -10% of road has edge breaks (2) -20% of road has pavement failure and therefore is deforming (2) -This section of road is shown above in Figure 4.
	0.75	0.85	2	-20% of road is deformed (2) -2 potholes (2) -4 potholes forming around patches (2) -20% the general appearance of the road is poor as sand and dirt is over the road (2)

Road Name	Chainage Start (km)	Chainage end (km)	Road segment condition (1-5)	Defect and associated condition (1-5)
	0.85	0.95	3	-50% of road is covered in dirt (2) -20% of road mostly at driveways has edge breaks (2)
	0.95	1.05	2	-3 significant sized potholes (2)
	1.05	1.12	2	-50% of road has dirt, rubbish (2) -20% of road is deformed (2)
Road to 'dry camp' contains potholes.				

7.3 Current performance and risks

The road in Manabadurma was rated as having poor condition with only one section of the loop rated in good condition. There were significant edge breaks and some potholes on almost all sections of road.

As the roads have undulation and pavement failure, there may be more significant issues to do with the subgrade or drainage that will require remediation before the road can be resealed.

The layout of the road network is sufficient for the current number of houses, although the condition of the road is poor. It is recommended that the road is upgraded to a formal two lane network.

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 Manabadurma, there are no additional upgrades required to cater for future demand.

7.5 Recommended works

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

- Repair approximately 12 potholes
- Repair 35 m of edge breaks
- Reseal approximately 365 m2 of road to repair deformation
- General tidy up of approximately 435 m of road

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

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

As the maximum road width within the Manabadurma community is 6 m, this means that all 520 m of the road network will need to be upgraded to a 7.2 m wide road. The stormwater drainage infrastructure upgrades that are closely associated with the road upgrade i.e. kerb and gutters, side entry pits and underground drainage pipes are included in the stormwater section of this report.

8 Stormwater drainage

8.1 Ownership and boundaries

There is currently no stormwater drainage assets within the Manabadurma community.

8.2 Current performance and risks

The general design philosophy for stormwater drainage is that the design is based on a system of sealed roads, kerb and gutter, side entry pits and underground drainage. This infrastructure currently does not exist at Manabadurma and there would be major headworks required if stormwater drainage is to be incorporated. It is recommended that a stormwater drainage network is constructed at Manabadurma.

8.3 Future demands

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

8.4 Recommended works

It is recommended that underground stormwater drainage, including kerb and gutter, and side entry pits are constructed to reduce flooding and ponding issues within Manabadurma community.

9 Community structures

9.1 Ownership and boundaries

It is the current understanding that the community structures within Manabadurma community are owned by the Director of National Parks, but are the responsibility of Warnbi Aboriginal Corporation 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 BBQ area. Table 5 shows the condition rating given to the community structures.

Table 5 Community structures condition assessment

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

Figure 6 BBQ area, condition: *poor*

Figure 7 Playground, condition: *poor*

9.3 Current performance and risks

The playground was rated to have 'poor' appearance, due to the paint peeling, debris and weeds. It appears as though the equipment had been burnt as a result of a fire so the condition was rated as poor.

The BBQ area was rated 'poor' in appearance and did not appear to be functional.

9.4 Future demands

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

9.5 Recommended works

The following works are recommended to upgrade the current infrastructure;

- Replace playground equipment
- Install new shade structure over the playground
- Landscape maintenance around the BBQ area and playground
- Repair BBQ

10 Electrical services

10.1 Ownership and boundaries

The following points, from Network Policy NP003 Installation Rules Section3, define the typical shared ownership of electrical infrastructure by Power and Water Corporation (PWC) and customers.

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

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

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

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

The Manabadurma community electrical reticulation systems is supplied by the Jabiru Town Development Authority network via pole mount transformer. Unmetered consumer's mains run to a main switchboard with outgoing LV feeders to distribute the individual houses through predominate overhead reticulation and outgoing LV feeders to LV distribution pillars and underground reticulation to prepaid meters on dwellings.

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

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.

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

Manabadurma community electrical reticulation systems is responsibility of the Jabiru Town Development Authority network.

10.2 Existing infrastructure condition assessment

Table 6 shows the condition rating given to the distribution switchboards and distribution pillars. The distribution pillars have 100% operational rating and 100% had minor maintenance issues to address. Refer to Appendices.

Table 6 Distribution panel condition assessment

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

Table 7 shows the condition rating given to the street lights. The street lights are supplied via underground LV reticulation and are generally (6) metres high with sodium lamp S70D and with lamp covers protected by cages. The street lights have 100% operational rating based on daytime visual inspection.

Table 7 Street light condition assessment

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

Table 8 shows the condition rating given to the overhead poles. The street light on overhead power poles are supplied via overhead LV reticulation and are a mixture of mercury and sodium lamp, M80 and S70.

The street lights on overhead power poles have 100% operational rating based on daytime visual inspection.

Table 8 Street light on O/H pole condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Street light on O/H pole			9			9

Table 9 shows the condition ratings given to transformers. The transformer is a pole mount type with a main switchboard at the base of the pole.

The transformer has 100% operational rating based on the visual inspection.

Table 9 Transformer condition assessment

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

Table 10 shows the condition rating given to the Overhead pole. The overhead poles are of Weld Construction (Universal Pole construction) and steel overhead LV distribution.

The overhead poles have 100% operational rating based on visual inspection.

Table 10 Overhead pole condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Overhead pole			14			14

Error! Reference source not found. shows the condition rating given to the Metering panels. All assessed meters in this community are prepaid digital meters.

Table 11 Meter panel condition assessment

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

Error! Reference source not found. shows the condition rating given to the switchboards associated to dwellings.

Table 12 Switchboard condition assessment (housing footprint)

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

The details of the individual inspections and photographs of each 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 Manabadurma 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 13 Manabadurma current demand load vs transformer ratings

Com Id	Community name	Dwellings	Transformer (kVA)	kVA Total @ 4.5kVA	kVA Total @ 7kVA
687	Manabadurma	12	200	54	84

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

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

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

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

10.4 Future demands

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

10.5 Recommended works

The following maintenance works and upgrades are recommended:

- Replace three switchboards inside the metering panel
- Replace two switchboards associated to dwellings
- Install new street lighting - approximately 26 poles

11 Communications

11.1 Ownership and boundaries

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

11.2 Existing infrastructure condition assessment

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

Appendices contains the individual reports.

Table 14 Telecommunication pit condition assessment

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

11.3 Current performance and risks

No details of the performance of communications infrastructure were obtained.

11.4 Future demands

The current availability of broadband services at Manabadurma is displayed in the Figure 8 below. NBN is available to residents via satellite on application to an appropriate NBN access provider.

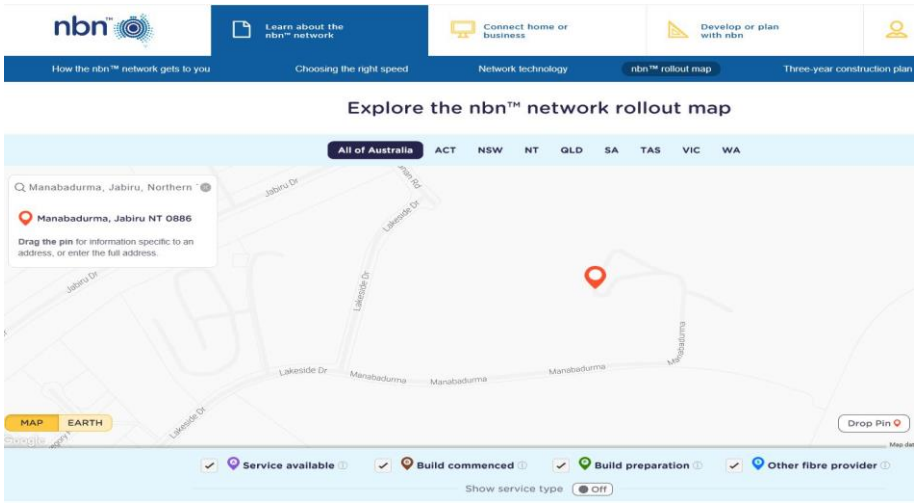


Figure 8 NBN network availability map

NBN is available to residents via satellite on application.

11.5 Recommended works

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

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

12 Cost estimates

Table 15 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 15 Cost estimates

Infrastructure	Maintenance of existing infrastructure	Upgrades to meet current design
Sewerage	$ 0	$ 440,000
Water supply	$ 2,000	$ 1,756,000
Roadworks	$ 107,000	$ 883,000
Stormwater drainage	$ 0	$ 781,000
Community structures	$ 9,000	$ 32,000
Electrical	$ 18,000	$ 521,000
Communications	$ 0	$ 0
Miscellaneous provisions	$ 30,000	$ 543,000
Total (including GST)	**$ 166,000**	**$ 4,956,000**
Grand total	**$ 5,122,000**	

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

13 Summary

The following works are recommended for Manabadurma community:

Sewerage

- Install approximately 400 m of DN150 PVC reticulation main, including connection to existing trunk main

Water supply

- Clear debris from five existing lot water meters
- Install DN150 PVC looped main, approximately 2000 m
- Fire hydrant in accordance with AS2419.1, approximately 3
- DN150 bulk water meter connecting to new water main
- Install additional six residential lot meters

Roadworks

- Repair approximately 12 potholes
- Repair 35 m of edge breaks
- Reseal approximately 365 m2 of road to repair deformation
- General tidy up of approximately 435 m of road
- It is recommended that the road is upgraded to a two lane network with all appropriate road furniture, line marking, kerbs, footpaths, etc.

Stormwater drainage

- It is recommended that underground stormwater drainage, including kerb and gutter, and side entry pits are constructed to reduce flooding and ponding issues within Manabadurma community.

Community structures

- Replace playground with an entirely new one
- Install new shade structure over the playground
- Landscape maintenance around the BBQ area and playground
- Repair BBQ

Electrical services

- Replace three switchboards inside the metering panel
- Replace two switchboards associated to dwellings
- Install new street lighting - approximately 26 poles

Communications

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

Civil inspection reports

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

A3 scale: 1:4,000

0 20 40 60 80 100 m

Note:
Label numbers refer to survey IDs

Date: 23/02/2017 Version: 2

Coordinate system: MGA94 Zone 52

NT Town Camp Infrastructure Assessments: Sewerage

687 - Manaburdurma (Jabiru)

6536

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

A3 scale: 1:4,000

0 20 40 60 80 100 m

Note:
Label numbers refer to survey IDs

Date: 23/02/2017 Version: 2

Coordinate system: MGA94 Zone 52

NT Town Camp Infrastructure Assessments: Water

687 - Manaburdurma (Jabiru)

6537

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

A3 scale: 1:4,000

0 20 40 60 80 100 m

Note:
Label numbers refer to survey IDs

Date: 23/02/2017 Version: 2

Coordinate system: MGA94 Zone 52

NT Town Camp Infrastructure Assessments
Road furniture, stormwater drainage & community structures
687 - Manaburdurma (Jabiru)

6538

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 9/12/2016 9:10:53 AM

Insp ID: 1829 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

What Water Asset Are you Capturing: Fire Hydrants

Single or Double:

Sluice Valve:

Above or Below ground:

FH Leakage:

Bollards around hydrant:

FH Condition:

FH Comment:

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 9/12/2016 9:17:50 AM

Insp ID: 1826 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

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

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 9/12/2016 9:00:38 AM

Insp ID: 1834 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

What Sewerage Asset are you capturing:	Manholes
MH Cover Shape:	Rectangular
Manhole Cover Diam (mm):	
Manhole Length (mm):	700
Manhole Width (mm):	1000
Manhole Condition:	3 - Good
Notes on Lid:	6/N5
Comments:	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 9/12/2016 8:36:26 AM

Insp ID: 1822 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

Road Name:	Manaburdurma
What are you inspecting:	Pavements
Ch From (km):	0.6
Ch To (km):	0.75
Road Type:	Sealed - asphalt
Section Width (m):	6
Road Condition:	2 - Poor
General Comment:	

Road Defects Section

Defect Type	Defect QTY	Defect Condition	Defect Comments
Potholes	7	2 - Poor	
Edge Breaks	10	2 - Poor	10% of road
Deformation	20	2 - Poor	20% of road has pavement failure

Kerbs Section

Kerb Type	Kerb Cond	Kerb Comments
No kerb		

Shoulders Section

Linemarking Section

Obstruction Section

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 9/12/2016 8:36:26 AM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 9/12/2016 8:36:26 AM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 9/12/2016 9:15:06 AM

Insp ID: 1827 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

Road Name:	Manaburdurma
What are you inspecting:	Pavements
Ch From (km):	1.05
Ch To (km):	1.12
Road Type:	Sealed - spray seal
Section Width (m):	4.5
Road Condition:	2 - Poor
General Comment:	

Road Defects Section

Defect Type	Defect QTY	Defect Condition	Defect Comments
General Appearance	50	2 - Poor	50% of road has dirt , rubbish
Deformation	20	2 - Poor	20% of road

Kerbs Section

Kerb Type	Kerb Cond	Kerb Comments
No kerb		

Shoulders Section

Linemarking Section

Obstruction Section

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 9/12/2016 9:15:06 AM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 9/12/2016 9:15:06 AM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 9/12/2016 9:02:26 AM

Insp ID: 1831 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

Road Name:	Manaburdurma
What are you inspecting:	Pavements
Ch From (km):	0.95
Ch To (km):	1.05
Road Type:	Sealed - spray seal
Section Width (m):	4.5
Road Condition:	2 - Poor
General Comment:	

Road Defects Section

Defect Type	Defect QTY	Defect Condition	Defect Comments
Potholes	3	2 - Poor	

Kerbs Section

Kerb Type	Kerb Cond	Kerb Comments
No kerb		

Shoulders Section

Linemarking Section

Obstruction Section

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 9/12/2016 9:02:26 AM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 9/12/2016 9:02:26 AM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 9/12/2016 8:54:41 AM

Insp ID: 1835 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

Road Name:	Manaburdurma
What are you inspecting:	Pavements
Ch From (km):	0.85
Ch To (km):	0.95
Road Type:	Sealed - spray seal
Section Width (m):	4.5
Road Condition:	3 - Good
General Comment:	

Road Defects Section

Defect Type	Defect QTY	Defect Condition	Defect Comments
General Appearance	50	2 - Poor	Road covered in dirt, approx 50% of road
Edge Breaks	20	2 - Poor	20% of road , at driveways

Kerbs Section

Kerb Type	Kerb Cond	Kerb Comments
No kerb		

Shoulders Section

Linemarking Section

Obstruction Section

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 9/12/2016 8:54:41 AM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 9/12/2016 8:54:41 AM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 9/12/2016 8:40:50 AM

Insp ID: 1836 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

Road Name:	Manaburdurma
What are you inspecting:	Pavements
Ch From (km):	0.75
Ch To (km):	0.85
Road Type:	Sealed - asphalt
Section Width (m):	6
Road Condition:	2 - Poor
General Comment:	

Road Defects Section

Defect Type	Defect QTY	Defect Condition	Defect Comments
Deformation	20	2 - Poor	20% of road
Potholes	2	2 - Poor	
Patching	4	2 - Poor	Potholes forming around patches
General Appearance	20	2 - Poor	Sand and dirt on road

Kerbs Section

Kerb Type	Kerb Cond	Kerb Comments
No kerb		

Shoulders Section

Linemarking Section

Obstruction Section

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 9/12/2016 8:40:50 AM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 9/12/2016 8:40:50 AM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 9/12/2016 9:44:43 AM

Insp ID: 1837 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

Road Name: Manaburdurma

What are you inspecting: Pavements

Ch From (km):

Ch To (km):

Road Type: Sealed - spray seal

Section Width (m): 4.5

Road Condition: 2 - Poor

General Comment:

Road Defects Section

Defect Type	Defect QTY	Defect Condition	Defect Comments
Potholes		1 - Very Poor	At entrance to 'dry camp'. No road listed on co

Kerbs Section

Kerb Type	Kerb Cond	Kerb Comments
No kerb		

Shoulders Section

Linemarking Section

Obstruction Section

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 9/12/2016 9:44:43 AM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 9/12/2016 9:44:43 AM

Northern Territory Camps

Civil Infrastructure

Inspection Date 9/12/2016 9:12:35 AM

Insp ID: 1828 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

Inspection Type:	Shade Structure
Shade Structure Type:	BBQ Area
Shade Floor Type:	Concrete
Roof Type:	Not Covered
Width (mm):	
Length (mm):	
Appearance:	2
Appearance Comment:	
Condition:	2 - Poor
Comment:	Does not look functional

Northern Territory Camps

Civil Infrastructure

Inspection Date 9/12/2016 9:08:00 AM

Insp ID: 1830 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

Inspection Type:	Shade Structure
Shade Structure Type:	Play ground
Shade Floor Type:	Natural ground, grass
Roof Type:	Not Covered
Width (mm):	
Length (mm):	
Appearance:	2
Appearance Comment:	
Condition:	2 - Poor
Comment:	Looks like has had fire beneath it, equipment burnt and melted

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 9/12/2016 9:20:50 AM

Insp ID: 1823	Group 1 - Darwin, Jabiru, Adelaide River	Manabadurma

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:	In pit, lid broken

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 9/12/2016 9:20:02 AM

Insp ID: 1824 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	5
Lot Water Meter Size:	
Lot Water Meter Condition:	2 - Poor
Lot Water Meter Comment:	In pit. Lid not on pit

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 9/12/2016 9:18:44 AM

Insp ID: 1825 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	6
Lot Water Meter Size:	
Lot Water Meter Condition:	2 - Poor
Lot Water Meter Comment:	IN pit. Lid broken

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 9/12/2016 9:05:47 AM

Insp ID: 1832 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

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:	2
Lot Water Meter Size:	
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	In pit, could not measure

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 9/12/2016 9:03:55 AM

Insp ID: 1833 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

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:	30
Lot Water Meter Condition:	2 - Poor
Lot Water Meter Comment:	In pit, pit lid broken

Northern Territory Town Camps

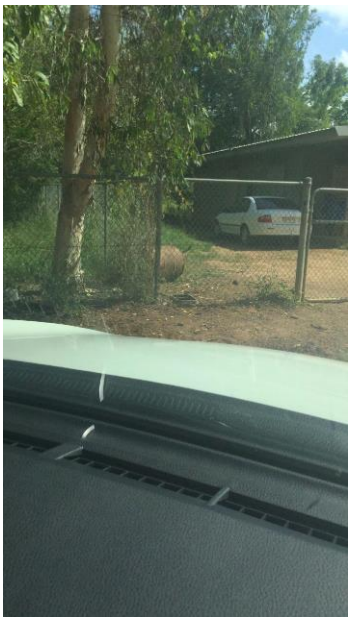
Civil Infrastructure

Inspection Date 9/12/2016 9:49:23 AM

Insp ID: 1838 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	9
Lot Water Meter Size:	
Lot Water Meter Condition:	2 - Poor
Lot Water Meter Comment:	In pit



Electrical inspection report

Legend

Electrical infrastructure

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

Electrical survey points

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

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

A3 scale: 1:4,000

0 20 40 60 80 100 m

Date: 23/02/2017 Version: 3

Coordinate system: MGA94 Zone 52

NT Town Camp Infrastructure Assessments: Electrical

687 - Manaburdurma (Jabiru)

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 10:16:16 AM

Insp ID: 1015	Group 1 - Darwin, Jabiru, Adelaide River	Manabadurma

What Comms Category are you capturing:	Distribution
What is distribution method to households:	Underground
Is it Shared with PWC:	
Is there Anti-climb barrier provided for this pole:	
What is Pole construction type:	
Is street light fitted:	
Is there concrete collar around the base of pole:	
What is the condition of tap off to house:	
What is the condition of pole:	
How many Lots are connected to this pole:	
Is there access to Pits to take a photo:	No
What is Pit Condition:	3
Underground Comments:	

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 10:05:48 AM

Insp ID: 1018 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

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:	3
Condition Comments:	
What is the condition of cables/glands into switchboard:	3
Cable/Gland Condition Comments:	
Distribution Panels name plate access:	No

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 9:29:35 AM

Insp ID: 1036 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

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

Northern Territory Town Camps

Communications Infrastructure

Inspection Date 9/12/2016 10:28:29 AM

Insp ID: 1012	Group 1 - Darwin, Jabiru, Adelaide River	Manabadurma

What Comms Category are you capturing:	General
Telstra Comms Drawing Available:	No
Facility upgrade not in drawings:	No
Which telecoms carriers are present in the town camp:	
How many Communications Pit(s) are allocated in this town camp:	

Northern Territory Town Camps

Communications Infrastructure

Inspection Date 9/12/2016 9:37:54 AM

Insp ID: 1027 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

What Comms Category are you capturing:	General
Telstra Comms Drawing Available:	No
Facility upgrade not in drawings:	No
Which telecoms carriers are present in the town camp:	
How many Communications Pit(s) are allocated in this town camp:	

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 15/12/2016 8:21:42 AM

Insp ID: 3453 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond: 3

Meter Condition: 4

Meter Comment: Good protection on Meter

Comments:

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 15/12/2016 8:49:16 AM

Insp ID: 3557 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond: 1

Meter Condition: 3

Meter Comment: Blank plates are missing on CB slot. Indoor SB, Cond 2, Blank plates are missing on CB slo

Comments:

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 15/12/2016 8:54:03 AM

Insp ID: 3558 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond: 2

Meter Condition: 3

Meter Comment: Blank plates are missing on CB slot.

Comments:

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 15/12/2016 9:27:38 AM

Insp ID: 3559 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond: 2

Meter Condition: 3

Meter Comment: Blank plates are missing on CB slot. Indoor SB, Cond 2, Blank plates are missing on CB slot

Comments:

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 15/12/2016 8:04:49 AM

Insp ID: 3561 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

What Category are you capturing: Electrical Meters

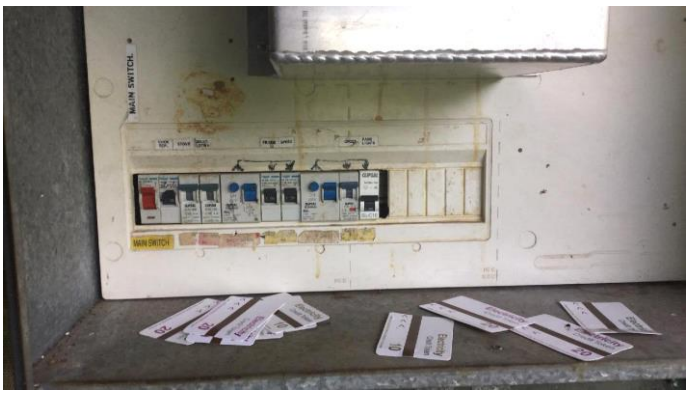
Meter Type: Prepaid

Meter Switchboard Cond: 3

Meter Condition: 3

Meter Comment:

Comments:



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 10:26:18 AM

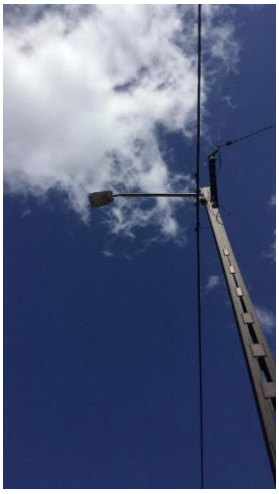
Insp ID: 1013 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

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 04
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 9/12/2016 10:26:18 AM



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 10:20:39 AM

Insp ID: 1014 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

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 07
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 9/12/2016 10:20:39 AM

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 10:14:40 AM

Insp ID: 1016 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

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 9/12/2016 10:14:40 AM

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 10:02:51 AM

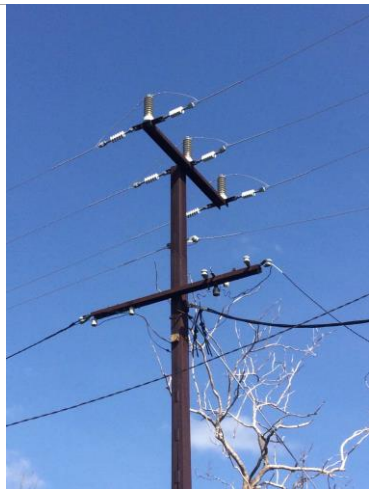
Insp ID: 1019 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

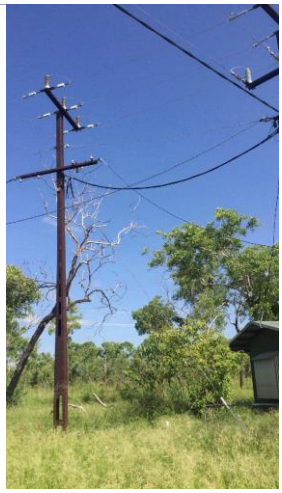
What Category are you capturing:	Overhead Poles
What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	No
Street Light Power Supply:	
Street Light Type	
Street Light Watts	
Street Light Condition	
Street Light Height	
What is the type of service:	Combined
What is the HV voltage level:	11000
What is the arrangement of connected cables:	Parallel
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	0
Overhead Pole Comments:	Surface rusted

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 10:02:51 AM





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 9:59:56 AM

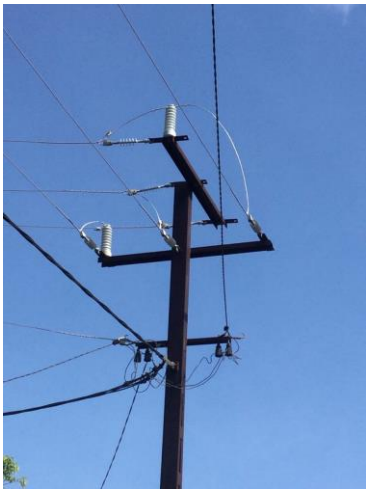
Insp ID: 1020 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	No
Street Light Power Supply:	
Street Light Type	
Street Light Watts	
Street Light Condition	
Street Light Height	
What is the type of service:	Combined
What is the HV voltage level:	11000
What is the arrangement of connected cables:	Parallel
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	2
Overhead Pole Comments:	Surface rusted

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 9:59:56 AM



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 9:54:07 AM

Insp ID: 1022 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	No
Street Light Power Supply:	
Street Light Type	
Street Light Watts	
Street Light Condition	
Street Light Height	
What is the type of service:	Combined
What is the HV voltage level:	11000
What is the arrangement of connected cables:	Parallel
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	0
Overhead Pole Comments:	Surface rusted

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 9:54:07 AM

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 9:51:34 AM

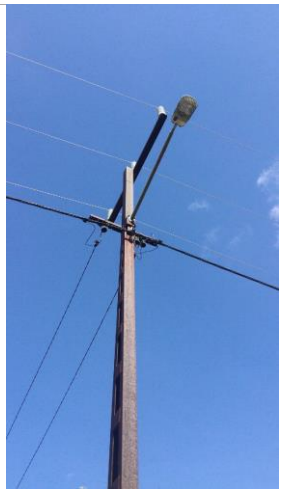
Insp ID: 1023 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

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:	Combined
What is the HV voltage level:	11000
What is the arrangement of connected cables:	Parallel
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	2
Overhead Pole Comments:	Surface rusted

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 9:51:34 AM



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 9:48:38 AM

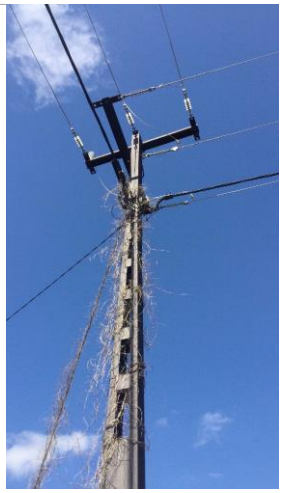
Insp ID: 1024 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

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:	
Is street light fitted:	No
Street Light Power Supply:	
Street Light Type	
Street Light Watts	
Street Light Condition	
Street Light Height	
What is the type of service:	Combined
What is the HV voltage level:	11000
What is the arrangement of connected cables:	Parallel
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	1
Overhead Pole Comments:	Surface rusted

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 9:48:38 AM



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 9:45:22 AM

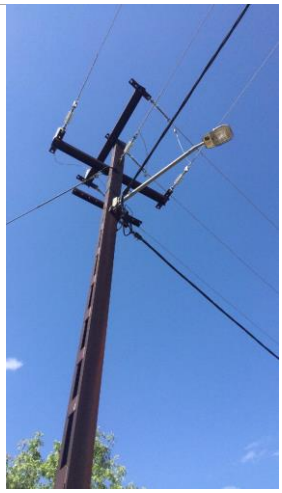
Insp ID: 1025 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

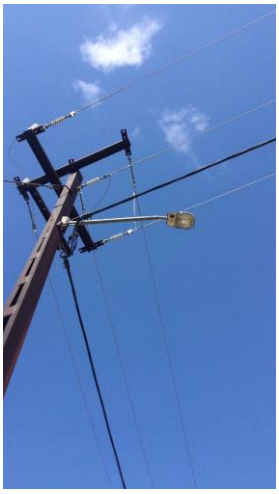
What Category are you capturing:	Overhead Poles
What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S70D 06
Street Light Watts	
Street Light Condition	3
Street Light Height	
What is the type of service:	Combined
What is the HV voltage level:	11000
What is the arrangement of connected cables:	Parallel
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	0
Overhead Pole Comments:	Surface rusted

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 9:45:22 AM





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 9:42:30 AM

Insp ID: 1026 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	No
Street Light Power Supply:	
Street Light Type	
Street Light Watts	
Street Light Condition	
Street Light Height	
What is the type of service:	Combined
What is the HV voltage level:	11000
What is the arrangement of connected cables:	Parallel
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	0
Overhead Pole Comments:	Surface rusted

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 9:42:30 AM

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 9:36:59 AM

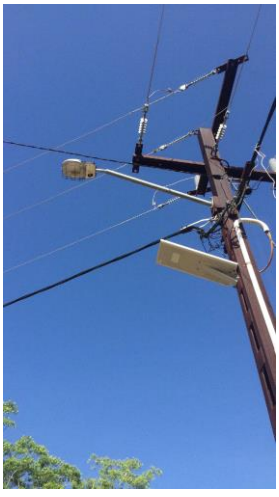
Insp ID: 1028 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

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 06
Street Light Watts	
Street Light Condition	3
Street Light Height	
What is the type of service:	Combined
What is the HV voltage level:	11000
What is the arrangement of connected cables:	Parallel
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	1
Overhead Pole Comments:	Surface rusted

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 9:36:59 AM



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 9:32:34 AM

Insp ID: 1029 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

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:	Combined
What is the HV voltage level:	11000
What is the arrangement of connected cables:	Parallel
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	1
Overhead Pole Comments:	Surface rusted

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 9:32:34 AM

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 9:19:55 AM

Insp ID: 1032 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

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:	Combined
What is the HV voltage level:	11000
What is the arrangement of connected cables:	Parallel
Are there isolators on the pole:	Yes
What is the Condition:	3
How many Lots are connected to this pole:	0
Overhead Pole Comments:	Surface rusted

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 9:19:55 AM

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 9:16:17 AM

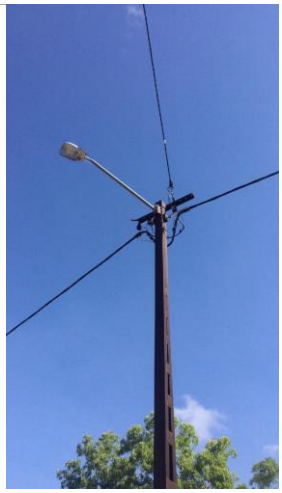
Insp ID: 1033 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

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 05
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:	0
Overhead Pole Comments:	Surface rusted

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 9:16:17 AM



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 10:26:18 AM

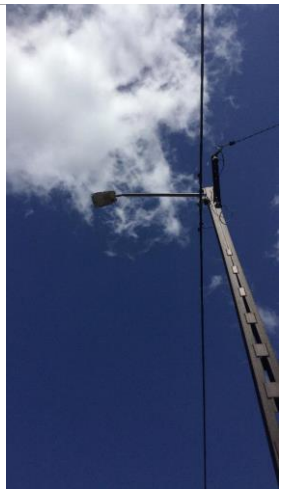
Insp ID: 1013 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

What Category are you capturing:	Overhead Poles
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	M80D 04
Street Light Watts	
Street Light Condition	3
Street Light Height	

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 10:26:18 AM



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 10:20:39 AM

Insp ID: 1014 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

What Category are you capturing:	Overhead Poles
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S70D 07
Street Light Watts	
Street Light Condition	3
Street Light Height	

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 10:14:40 AM

Insp ID: 1016 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

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	

Northern Territory Town Camps

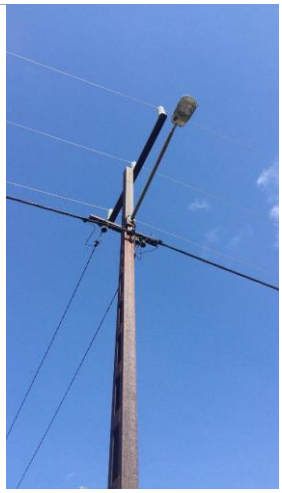
Electrical Infrastructure

Inspection Date 9/12/2016 9:51:34 AM

Insp ID: 1023 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

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	



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 9:51:34 AM

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 9:45:22 AM

Insp ID: 1025 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

What Category are you capturing: Overhead Poles

Is street light fitted: Yes

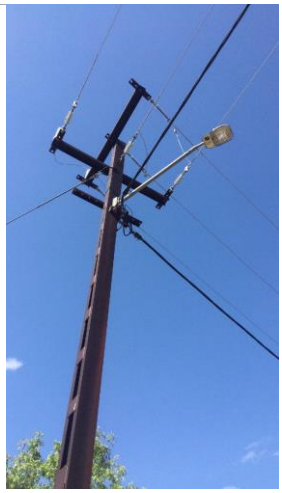
Street Light Power Supply:

Street Light Type S70D 06

Street Light Watts

Street Light Condition 3

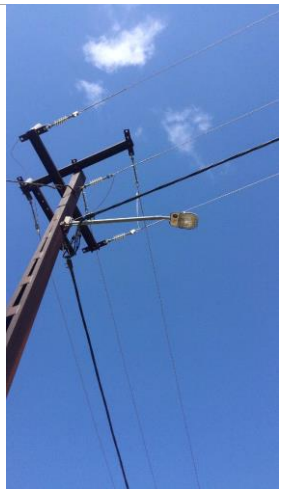
Street Light Height



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 9:45:22 AM



Northern Territory Town Camps

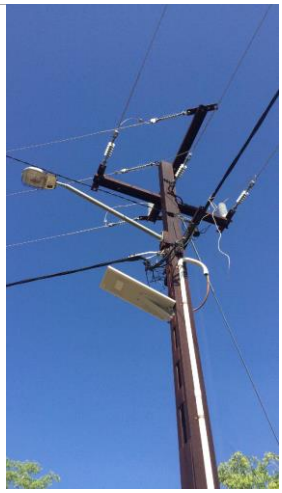
Electrical Infrastructure

Inspection Date 9/12/2016 9:36:59 AM

Insp ID: 1028 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

What Category are you capturing: Overhead Poles

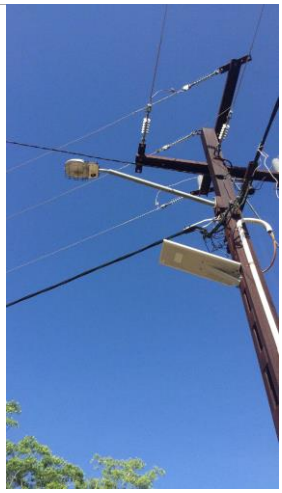
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S70D 06
Street Light Watts	
Street Light Condition	3
Street Light Height	



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 9:36:59 AM



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 9:32:34 AM

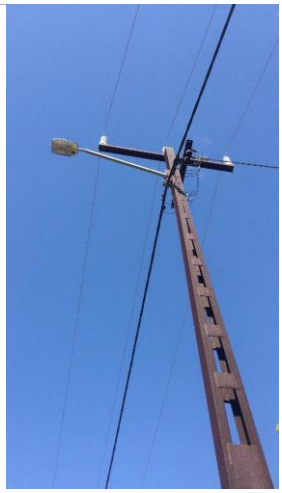
Insp ID: 1029 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

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	

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 9:32:34 AM



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 9:19:55 AM

Insp ID: 1032 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

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	

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 9:19:55 AM

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 9:16:17 AM

Insp ID: 1033 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

What Category are you capturing:	Overhead Poles
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S70D 05
Street Light Watts	
Street Light Condition	3
Street Light Height	

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 9:16:17 AM

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 10:07:52 AM

Insp ID: 1017 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

What Category are you capturing:	Street Light
What is power supply method:	Underground
What is the lamp type:	S70D 06
What Wattage is the lamp:	70
What is the condition of street lights:	3
What is Street Lighting pole installation height (approximate):	6

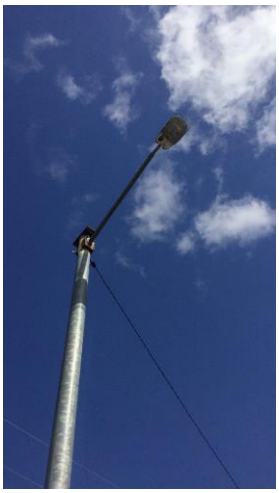
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 9:57:04 AM

Insp ID: 1021 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

What Category are you capturing:	Street Light
What is power supply method:	Overhead
What is the lamp type:	S70D 06
What Wattage is the lamp:	70
What is the condition of street lights:	3
What is Street Lighting pole installation height (approximate):	6



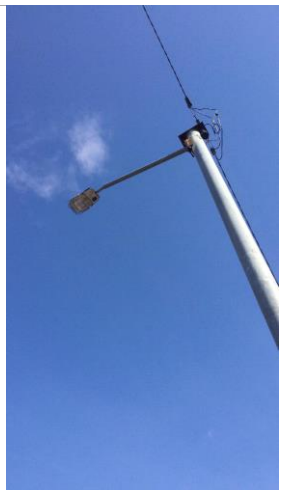
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 9:12:34 AM

Insp ID: 1034 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

What Category are you capturing:	Street Light
What is power supply method:	Overhead
What is the lamp type:	S70D 06
What Wattage is the lamp:	70
What is the condition of street lights:	3
What is Street Lighting pole installation height (approximate):	6



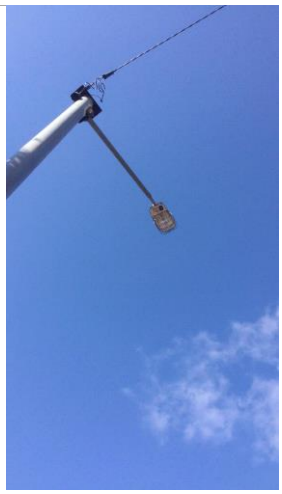
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 9:09:17 AM

Insp ID: 1035 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

What Category are you capturing:	Street Light
What is power supply method:	Overhead
What is the lamp type:	S70D 08
What Wattage is the lamp:	70
What is the condition of street lights:	3
What is Street Lighting pole installation height (approximate):	6



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 9:25:31 AM

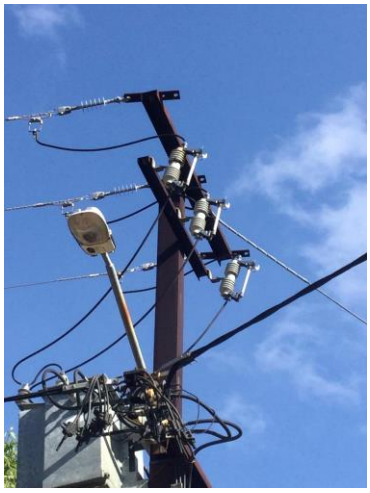
Insp ID: 1031 Group 1 - Darwin, Jabiru, Adelaide River Manabadurma

What Category are you capturing:	Transformers
What is Transformer installation method:	Pole
If method know:	11SS1P
What is the condition of the mounting:	3
What is Transformer Rating:	Unknown
Is there access to transformers name plate to take a photo:	No
What is the condition of transformer:	3
What is cable type to transformer:	PVC insulated black
What is cable size to transformer:	
Is there switch gear or fusing associated with the transformer:	Cut out fuse
Transformer Comment:	

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/12/2016 9:25:31 AM



Road map

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

A3 scale: 1:4,000

0 20 40 60 80 100 m

Date: 11/02/2017 Version: 1

Coordinate system: GDA 1994

NT Town Camp Road Assessments

687 - Manaburdurma (Jabiru)

6631

Existing drawings

-12°30'54"
265 750 E
266 000 E
8 598 750 N
8 598 500 N
-12°40'06"

12
5
6
13
4
3
2
1
10
16
17
7
8
9
18
11
15
14
2304

Community Use

part
TOWN OF
JABIRU

Jabiru

LAND USE PLANNING:
APPROX. POSITION OF BUILDING constructed since date of photography

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

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

© NORTHERN TERRITORY OF AUSTRALIA

CADASTRE
Current 123
Proposed 123
Locality LOCALITY

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

DIAL BEFORE YOU DIG www.1100.com.au

LEGEND

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

High Water Mark, Low Water Mark
Mine; Quarry, Surface Excavation
Contour; Index, Intermediate 75
Contour; Depression
Top of Bank, Bottom of Bank, Cliff
Watercourse; Perennial, Intermittent, Channel or Canal
WaterBodies; Perennial, Intermittent
WaterBodies; Reservoir, Water Hole
Swamp; Swamp Perennial, Swamp Intermittent
Flat; Mud Flat, Clay/Saltpan, STI
Pole; Power, General, Light
Tank; Water, Elevated, Non-Water, Silo
Manhole, Pylon, Communication Tower, Bore.

AVAILABLE FROM AND PRODUCED BY:

Northern Territory Government

NOTES:
POWER POLES, MANHOLES, SEPTIC TANKS, TOWERS/PYLONS and other similar shaped objects are shown in their true position. Features are here their locations confirmed from aerial survey techniques.
These features are suitable as LOCAL SURVEY CONTROL. Their ground positions should be to within +/-0.2m of their recorded values.

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

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

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

Topographic Information:
Land Information Division
Dept of Lands and Planning
TEL: (08) 8995 5331, FAX: (08) 8995 5398
Email: landinfo.dpl@nt.gov.au

Aboriginal Areas Protection Authority:
The Registrar
Aboriginal Areas Protection Authority
TEL: (08) 8999 4332
Email: enquiries.aapa@nt.gov.au

Cadastral Information:
Office of the Surveyor-General
Dept of Lands and Planning
TEL: (08) 8995 5353, FAX: (08) 8995 5395
Email: landinfo.dpl@nt.gov.au

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

Power, Water or Sewer Information:
Remote Operations Planning Branch
Power and Water Corporation
TEL: (08) 8924 5084, FAX: (08) 8924 5360

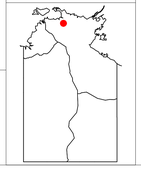
Housing Infrastructure Information:
Infrastructure Delivery Branch
Dept of Housing, Local Government, and Regional Services
TEL: (08) 8999 5013, FAX: (08) 8995 5110
Email: tie.dhlgrs@nt.gov.au

SOURCE INFORMATION

CONTOUR INTERVAL :		CURRENCY OF TOPOGRAPHY :	17 June 2010
HORIZONTAL DATUM :		SOURCE MAP SCALE :	2500
VERTICAL DATUM :		ZONE UTM :	53
PROJECTION :	Transverse Mercator	DATE GENERATED :	20 June 2012

N
0 10 20 30 40 50
GDA

Locality Diagram



SERVICED LAND AVAILABILITY PROGRAM
SLAP Map
Manabadurma
Jabiru Town Camp
West Arnhem Shire Council
Community ID: 687

Transformer data

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

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

Bagot

Bagot

1 Design

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

Sewerage and water supply

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

Electrical services

Electrical infrastructure has been assessed against AS/NZS3000 Wiring Rules and against PWC Service, Installation and Metering Rules and 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 these documents in this report will be by the document number NP001.1.

Communications

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

Council guidelines

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

- Darwin City Council – Subdivision and Development Guidelines, September 2005

General

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

2 Condition assessment

2.1 Rating assessment matrix

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

Table 1 Condition rating

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

2.2 Civil assessment limitations

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

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

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

2.3 Electrical assessment limitations

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

- Inspections were carried out without the assistance of an electrical tradesman.
- Only accessible services were investigated. Assessments were of a visual nature and no pit covers were removed.
- Overhead equipment was assessed from ground level.
- Switchboards were not opened and no assessment of the internal connections or bus ratings was made.

- Electrical infrastructure was assessed down to the meter for multi-meter panels and down to the termination, overhead pole or distribution pillar, of the supply cable to a meter located at a dwelling.

3 Current infrastructure issues

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

3.1 Ownership and maintenance

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

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

3.2 Access to infrastructure

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

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

3.3 Existing infrastructure

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

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

3.4 Safety concerns

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

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

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

4 Available information

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

- Serviced Land Availability Program (SLAP) maps,
- Department of Family & Community Services - Connecting Neighbours Program – Essential Services Scoping Study Report Volume 1 April 2005,
- Connecting Neighbours Project – Infrastructure Assessment and Recommendation Report - Arup Pty Ltd, April 2005,
- 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 Bagot community on 7 November 2016 to inspect roads, stormwater drainage, electrical services, sewerage and water supply, and community structures. The following sections detail the outcomes of this investigation and the assessments of the infrastructure.

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

5 Sewerage

5.1 Ownership and boundaries

The sewer infrastructure at Bagot is owned by Bagot Community Incorporated, however is the responsibility of Yilli Rreung Housing Aboriginal Corporation to maintain.

Power and Water Corporation own the connections and the external town sewer network. The connections all discharge into a rising main that eventually discharges to Ludmilla wastewater treatment plant.

Bagot community has a reticulated sewer servicing the majority of the lots. The community is separated into four catchments with four connections to the external sewer network at the boundaries of Bagot community, as per the drawing from the Connecting Neighbours report (refer Appendices). PWC are aware of only three connections (Catchment 1, Catchment 2 and Catchment 3). Due to access limitations they have not been able to confirm the connection for Catchment 4. For the purpose of this assessment, it was assumed that four connections were currently being used.

The catchments and connections are shown on the following map with the green arrows indicating where the sewer connects to the town sewer. There were no detailed engineering drawings available to confirm the size or grade of internal reticulation network.

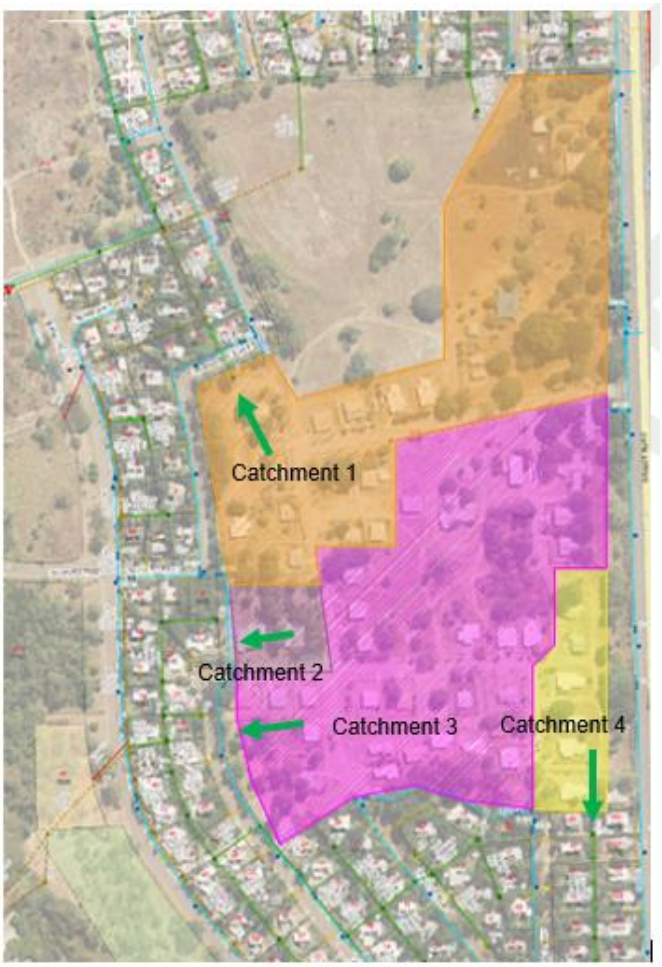


Figure 1 Bagot community sewer catchments

5.1.1 Connection methods and billing

PWC advised that they currently charge a single sewerage bill based on a total number of houses or sanitary fixtures, which for Bagot community is 83. The sewerage bill is charged to Bagot Community Inc. (Meertens Chartered Accountants).

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

5.2 Existing infrastructure condition assessment

The sewer infrastructure inspection was limited to inspecting the condition of manhole covers, as all other sewerage infrastructure is below ground. A total of 15 manholes were inspected, with condition ratings as follows:

Table 2 Sewer condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Manhole		1	6	7	1	15

Out of the 15 sewer manholes inspected, 12 were rectangular, with dimension 1000 x 700 mm, and three circular with a 700 mm diameter. All three circular manholes were assessed as being in *'good'* condition.

Figure 2 Round sewer manhole, condition: *good*

Figure 3 Rectangular sewer manhole, condition: *poor*

5.3 Current performance and risks

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

- The adopted minimum grade for the pipework is 1.0%, as advised by Power and Water Corporation.
- The Equivalent Population (EP) has been calculated assuming one household equates to 9 EP, based on discussions with Power and Water Corporation.

- The capacity has been assessed by calculating the current flow rate, and the maximum flow rate when the sewer pipe flows full. The result is then a percentage of how much of the pipe is currently being used.
- Manning's roughness coefficient of the pipework is 0.012, as recommended by PWC for PVC pipes.
- Where the sewer pipe grade, size or material is not known, it is assumed to be non-compliant to PWC standards.

As there are four connections to the external PWC network, the current population for each catchment had to be estimated in order to assess the loads at each connection.

An EP allowance has also been made for the buildings and infrastructure within the community. This was based on PWC standards on equivalent populations for non-residential development and is equal to 0.5 EP per person.

Table 3 Catchment equivalent population

Catchment	Connection point to PWC network	Number of houses	Equivalent Population (EP)	Other infrastructure	EP allowance for other infrastructure	EP
Catchment 1	Corner of Maranungu Street and Harney Street	13	135	Ablution block Shed Workshop Builder's yard Basketball court	68	270
Catchment 2	Cardo Court (north)	-	-	Child care centre Women's centre	30	30
Catchment 3	Cardo Court (south)	25	243	Community centre Community store Offices Clinic	122	365
Catchment 4	Mosec Street	6	63	-	-	63

The capacity of the existing sewer was then calculated. The percentage shows how much of the pipe capacity is currently being used by Bagot community.

Table 4 Existing sewer capacity

Catchment	EP	Diameter of connection (mm)	Adopted PWC minimum slope (%)	Q_{full} (L/s)	Current Q (L/s)	Current capacity (%)
Catchment 1	270	150	1.0	16.50	2.31	14%
Catchment 2	30	150	1.0	16.50	0.56	3%
Catchment 3	365	150	1.0	16.50	3.63	22%
Catchment 4	63	150	1.0	16.50	0.97	6%

Table 4 shows that the capacity of the existing sewer network is adequate for the current peak population. However this does not take into account the additional loads from the neighbouring properties around Bagot community.

The following table shows the total sewer flows in the pipework, taking into account the properties neighbouring Bagot community, before discharging into the rising main. The table shows that the capacity of the existing network is sufficient.

Table 5 Sewer capacity including downstream loads

Catchment	EP from outside Bagot community	Diameter of connection (mm)	Current Q from outside Bagot community (L/s)	Total Q (including Bagot community) (L/s)	Current capacity (%)
Catchment 1	No other connections	150	-	2.31	14%
Catchment 2	Connects to catchment 3	-	-	-	-
Catchment 2 and 3	280	150	2.94	7.15	43%
Catchment 4	102	150	1.40	2.48	15%

As there were no drawings available which show the internal network pipe size or grade, based on its age, it was assumed the system is non-compliant to PWC standards.

PWC have advised that the sewer network at Bagot experiences high infiltration. This was observed recently when PWC checked the system at the Bagot boundary and saw significant infiltration of clear water. It is expected that there are illegal stormwater connections that are causing the high infiltration.

PWC commented that the underground pipework including house drains are expected to be in poor condition and / or have issues with stormwater connections.

The high infiltration and poor condition of the pipework is suspected to be reducing the capacity of the Bagot reticulation system.

It is recommended that the network is upgraded to meet PWC standards and to ensure sufficient capacity.

5.4 Future demands

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

5.5 Recommended works

5.5.1 Works required to existing infrastructure for current demand

The infrastructure that was assessed as very poor or poor is recommended to be upgraded to prevent failure in the future. In this case, only one sewer man hole requires concrete patching.

It is recommended that the sewer network is upgraded to a DN150 PVC gravity main with new connections to the external sewer, house connections and manholes. It is estimated that approximately 2.5 kilometres of new pipework would be required.

6 Water supply

6.1 Ownership and boundaries

The water supply infrastructure at Bagot is owned by Bagot Community Incorporated, however is the responsibility of Yilli Rreung Housing Aboriginal Corporation to maintain. The water is supplied from PWC owned water mains outside of the community. Figure 4 shows the water services surrounding Bagot community. Detailed engineering drawings of the internal reticulation network for Bagot community were not attainable. It is believed that the internal network is made up of several loops of DN100 pipes.

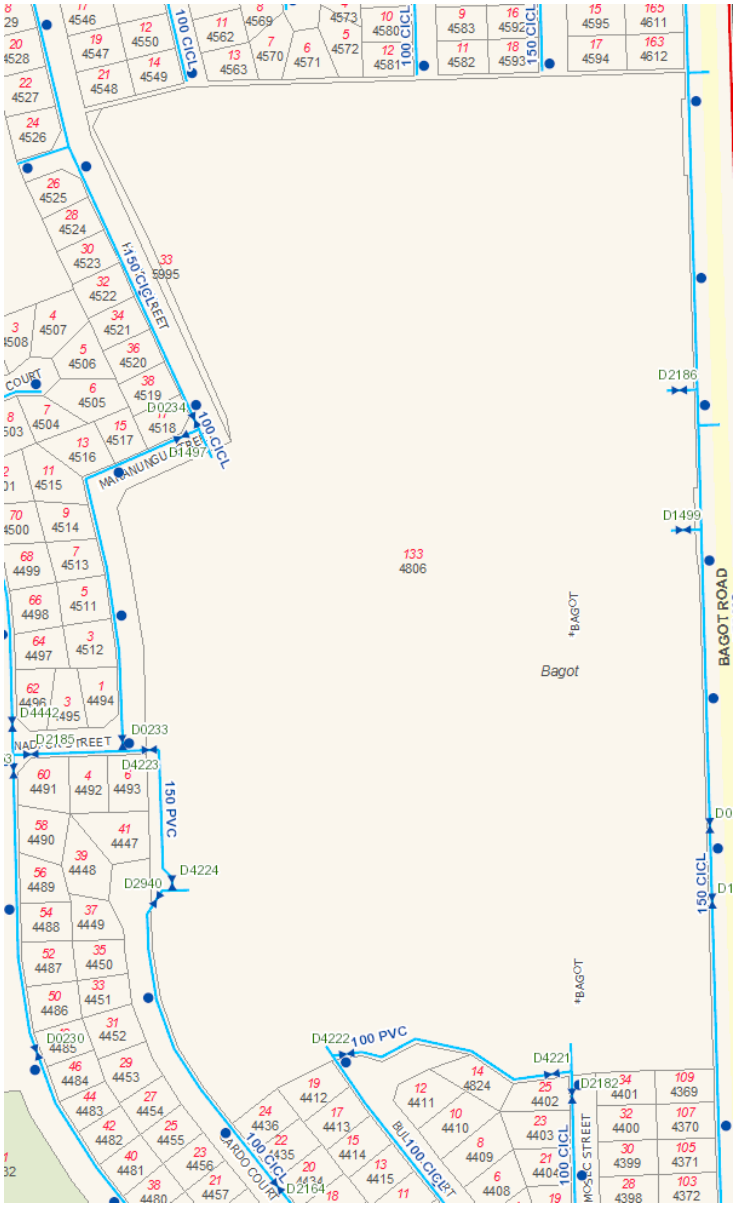


Figure 4 PWC water supply

6.1.1 Connection methods and billing

PWC advised that they currently charge a single water bill to the Bagot Community Inc. (Meertens Chartered Accountants). It is not known what contribution the

residents make towards the water bills. It is understood that the water usage is measured at the bulk water meter located on the community boundary.

Bagot community is believed to have a total of 55 dwellings, therefore to meet current PWC standards the installation of up to 54 residential lot water meters would be required to ensure each lot has its own meter. Some of these lots may already have residential lot meters which were not identified during the site inspections.

It is proposed that PWC measures 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 Bagot Community Incorporated. It is up to governing body to assign bills to residents accordingly. This is the recommended connection method and billing approach for Bagot community. It is not known what contribution the residents currently make towards the water bill.

It is recommended that the installation of individual lot meters is included in addition to the proposed continuation of using bulk water meters. This will assist with the governing body 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.

6.2 Existing infrastructure condition assessment

The site investigation for the water infrastructure included assessing the condition of 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 6 Water asset condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Air valves			1			1
Fire hydrants		2	5	4		11
Tanks			2			2
Taps			1			1
Water meter (bulk)			1	3		4
Water meter (residential lots)				1		1

Figure 5 Bulk water meter, condition: very *good*

Figure 6 Fire hydrant, condition: *poor*

Figure 7 Tap, condition: *good*

Figure 8 Water tank, condition: *good*

All the fire hydrants at Bagot community were above ground hydrants. PWC Essential Services Infrastructure Assessment Guidelines (2009) state the above ground hydrants should be removed and replaced with screw down (below ground) fire hydrants. This totals to the replacement of 11 fire hydrants to comply with PWC standards.

6.3 Current performance and risks

As the water network has multiple supply points, loops and no reliable network plan, an accurate analysis of the capacity and compliance could not be conducted. It is recommended that pipe layout and sizes are confirmed on site for detailed hydraulic modelling.

For cost estimate purposes it is assumed the entire water supply network is to be replaced with DN150 looped mains. With considerations to the size of the Bagot community, it is expected that the replacement network will requires several supply points, which has been assumed to be three for cost estimate purposes.

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. No additional hydrants were noted as being required at this stage, however as previously detailed the existing fire hydrants should be replaced with below ground hydrants.

6.4 Future demands

As no new developments are currently planned for the Bagot 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 works are recommended to repair and upgrade the current infrastructure;

- Replace network with DN150 looped mains, approximately 3000 m
- Assumed to be made up of three separate looped main, each with a new bulk water meter
- Replace 11 fire hydrants with screw down fire hydrants
- Install up to 54 residential lot water meters

7 Roadworks

7.1 Ownership and boundaries

The Roadworks at Bagot are owned by Bagot Community Incorporated, however are the responsibility of Yilli Rreung Housing Aboriginal Corporation to maintain.

7.2 Existing infrastructure condition assessment

The road network within Bagot community consists primarily of sealed roads as well as a single unsealed road. There are also numerous tracks which appear to be used frequently which are not included in the inspection and report. Road furniture, including signs, footpaths and carparks were also present in the community. Table 7 below summarise the condition of the road furniture as assessed during the site inspection.

Table 7 Roadworks condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Sign	1	3		1	1	6
Footpath		1	3	13		17
Carpark	1	1	3			5

Figure 9 Sign, condition: *very poor*

Figure 10 Footpath, condition: *poor*

The signs throughout Bagot community vary in condition however most of them are in poor condition or worse, mostly due to missing signs, and should be replaced.

The footpath network throughout Bagot community was rated good or very good with the exception of one section of footpath (Figure 10) which requires landscape maintenance.

The carpark shown in Figure 11 was rated the worst condition out of all the carparks within Bagot community. It is recommended that the car park and drive way are resealed.

The driveway cross overs unless specifically stated are the same rating as the road in that area. Since most of the road network in Bagot community is kerbed, driveway crossovers were also present.

Figure 11 Carpark, condition: v*ery poor*

Figure 12 Pavement, condition: *very poor*

Figure 13 Bagot community road network

Figure 13 shows a map of Bagot community's road network. Table 8 below details the condition of the roads. The value in brackets in the defects column shows the condition rating of that particular defect.

Table 8 Road network condition assessment

Road Name	Chainage start (km)	Chainage end (km)	Condition (1 to 5)	Defects and their condition (1-5)
290_1	0.0	0.1	4	
	0.1	0.2	3	
	0.2	0.3	3	
	0.3	0.4	4	

Road Name	Chainage start (km)	Chainage end (km)	Condition (1 to 5)	Defects and their condition (1-5)
	0.4	0.5	4	-2 large potholes (1)
290_2	0.0	0.05	1	
Bagot Road	0.0	0.14	3	-5% of the road is cracked (3)
Unnamed 1	0.0	0.1	4	-5% of the road is cracked (3)
Unnamed 2	0.0	0.1	3	-5% of the road has cracks, approximately 10-20mm wide (3)
Unnamed 3	0.0	0.1	3	-5% of the road has cracks, approximately 10-20mm wide (3)
Unnamed 4	0.0	0.15	3	-5% of the road has surface cracking approximately 10mm wide (3) -2 edge breaks approximately 2m long (3)
	0.15	0.25	3	-Transverse cracks throughout (2) -5% of the road has surface cracks (3)
Unnamed 5	0.0	0.3	3	-Loose rocks along the road (4)

7.3 Current performance and risks

The road network is sufficient for the current number of houses although a number of defects were impacting the performance of the road. It was noted during the site inspections that a number of unsealed 'short-cuts' had been created and were regularly used. It is not recommended that these paths are formalised.

7.4 Future demands

As no new developments are currently planned for the Bagot 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;

- Replace two speed bump signs
- Replace two custom "Welcome to Bagot Community' signs
- Repair two potholes, as shown in Figure 12
- General tidy up of road
- General tidy up of foot paths
- Reseal carpark pavement, as shown in Figure 11

8 Stormwater drainage

8.1 Ownership and boundaries

The stormwater drainage assets within Bagot community are owned by Bagot Community Incorporated, however are the responsibility of the Yili Rreung Housing Aboriginal Corporation to maintain. Beyond the boundaries of the community the stormwater assets are the property of the City of Darwin.

8.2 Existing infrastructure condition assessment

The site investigation for the stormwater infrastructure included assessing the condition of swales, culverts and side entry pits (SEP). As per Section 4 only the above ground infrastructure was assessed. As the inspection was undertaken outside of a storm event, flooding due to blockages or damages to the underground infrastructure could not be assessed. Table 9 below summarises the condition of the stormwater assets as assessed during the inspection.

Table 9 Stormwater condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Swale			1			1
Culvert			1	1		2
SEP	1	7	14	8		30

Figure 14 Side entry pit, condition: *very poor*

Figure 15 Culvert, condition: *good*

Figure 16 Swale, condition: *good*

8.3 Current performance and risks

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

8.4 Future demands

As no new developments are currently planned for the Bagot 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:

- It is recommended that the swale in the north area of Bagot community is cleaned out, including removing any trees and debris from within the drain. This will improve the hydraulic efficiency of the drain and ensure stormwater can flow away quickly.
- Replace one side entry pit (1 bay), as shown in Figure 14.
- Clear blockages from eight side entry pits.
- Replace concrete lids of two side entry pits.
- Tidy up the top of two side entry pits (remove rubbish, dirt, weeds, etc.).

The endwall to the RCP and RCBC culvert arrangement in the north of Bagot community is cracked and displaced on one side. Hydraulically, this does not affect the drainage but could lead to damage to the unsealed road if not repaired. Currently it is not recommended to be repaired, however should be monitored over the following years.

9 Community structures

9.1 Ownership and boundaries

The community structures within Bagot community are owned by Bagot Community Incorporated but are responsibility of the Yili Rreung Housing Aboriginal Corporation to maintain.

Bagot community also has a child care centre, women's centre, community centre, community store, offices, a clinic, basketball court, playground, and builder's yard with a shed and workshop. The site inspections were based on outdoor community structures only, such as the playground and basketball court.

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 10 Community structures condition assessment

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

Figure 17 Basketball court, condition: *good*

Figure 18 Playground, condition: *poor*

9.3 Current performance and risks

The playground was rated to have very poor appearance, due to the paint peeling, rubbish, weeds, and lack of a shade cloth (although the posts are in place for a shade cloth). The fencing around the playground was also partially broken. However the equipment appeared to still be in a usable condition.

The basketball court was rated in good appearance. However, at the time of the inspection there was some rubbish and broken glass on the court, and there were small holes in the shade cloth and fencing.

9.4 Future demands

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

9.5 Recommended works

The following works are recommended to upgrade the community structures:

- Repaint the playground equipment
- Install a new shade cloth over the playground
- Repair holes in basketball court shade cloth
- Repair playground fence
- Repair basketball court fence
- General tidy up (remove weeds, rubbish, dirt, etc.) from both the playground and the 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 to minimise the possibility of the community or it's contractors coming into contact, either deliberately or inadvertently, with aerial high voltage infrastructure.

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

The Bagot community electrical reticulation system is supplied from the PWC network via underground HV cable to a pad mounted transformer. Unmetered consumer mains run to a main switchboard with outgoing LV feeders to LV distribution pillars and underground reticulation to prepaid meters on dwellings.

Some dwellings have multiple prepaid meters, presumably because they supply other dwellings or are multiple dwellings.

PWC advise that the Point Of Supply is the LV terminals of the substation and that they own and are responsible for the pad mounted substation and upstream infrastructure.

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.

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

10.2 Existing infrastructure condition assessment

Table 11 shows the condition rating given to the Distribution Panels-urban distribution pillars. The distribution pillars have 100% operational rating and 38% of the pillars had only minor maintenance issues to address, including bolt replacement and labelling, refer Appendices.

Table 11 Distribution panel condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Distribution panels			5	8		13

Table 12 shows the condition rating given to the street lights. The street lights are supplied via underground LV reticulation and are generally eight (8) metres high with sodium lamp S250C00 and with lamp covers protected by cages. The street lights have 100% operational rating, from daytime visual inspection.

Table 12 Street light condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Street light			14	2		16

The transformer was a pad mounted type with a main switchboard in the same fenced compound. The transformer was visually assessed to be in good condition.

Table 13 Transformer condition assessment

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

Table 14 shows the condition rating given to the metering panels. All assessed meters in this community are prepaid digital meters.

Table 14 Meter panel condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Pre-paid meter	1		45	1		47
Switchboard	2	8	27	1		38

Table 15 shows the condition rating given to the switchboards associated to dwellings.

Table 15 Switchboard condition assessment (housing footprint)

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Switchboard	2	2	19	1		24

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

10.3 Current performance and risks

The electrical infrastructure evaluation was conducted against the following criteria

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

The calculated maximum demand of the Bagot community transformer is 82.5% of rated capacity based on 4.5kVA/dwelling. The calculated maximum demand is within the total capacity of the substation on site.

Table 16 Bagot current demand load vs transformer ratings

Com Id	Community Name	Dwellings	Transformer (kVA)	kVA Total @ 4.5kVA	kVA Total @ 7kVA
290	Bagot	55	300	247.5	385

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

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

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

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

10.4 Future demands

As no new developments are currently planned for Bagot 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 one prepaid digital meter
- Replace ten switchboards inside the metering panel
- Replace four switchboards associated to dwellings

11 Communications

11.1 Ownership and boundaries

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

11.2 Existing infrastructure condition assessment

The telecommunications infrastructure assessed included pits and telephone booths. The individual inspection reports can be found in Appendices.

Table 17 Telecommunication pit condition assessment

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

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 Bagot is displayed in Figure 20 below. NBN is available to residents via a fixed telecommunication line on application to an appropriate NBN access provider.

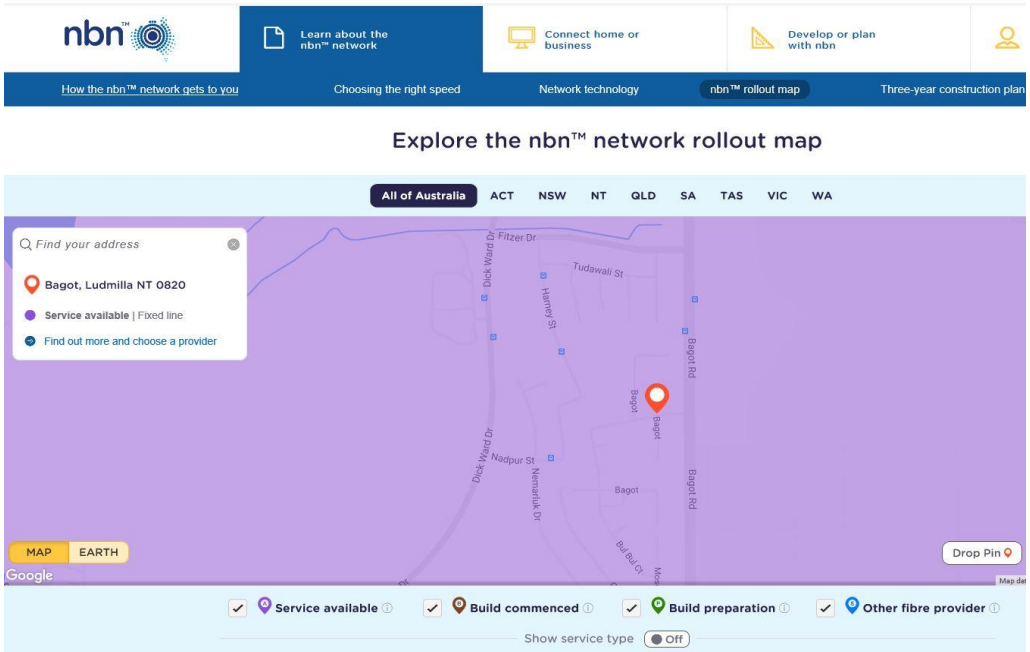


Figure 19 NBN network availability map

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

11.5 Recommended works

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

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

12 Cost estimates

Table 18 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 and demand. As there are no developments planned for the near future, there are no cost estimates for upgrades to cater for future demand. The estimates take into account a 30% contingency, and are inclusive of GST.

Table 18 Cost estimates

Infrastructure	Maintenance of existing infrastructure	Upgrades to meet current design
Sewerage	$ 1,000	$ 1,902,000
Water supply	$ 0	$ 2,209,000
Roadworks	$ 18,000	$ 0
Stormwater drainage	$ 26,000	$ 0
Community structures	$ 29,000	$ 0
Electrical	$ 37,000	$ 0
Communications	$ 0	$ 0
Miscellaneous provisions	$ 23,000	$ 503,000
Total (including GST)	**$ 134,000**	**$ 4,614,000**
Grand total	**$ 4,748,000**	

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

13 Summary

A summary of the works required at Bagot community is as follows;

Sewerage

- Concrete patching on existing manhole
- Upgrade sewer network to DN150 PVC with new manholes, housing connections and connections to external network.

Water supply

- Replace network with DN150 looped mains, approximately 3000 m
  - Assumed to be made up of three separate looped main, each with a new bulk water meter
- Replace 11 fire hydrants with screw down fire hydrants
- Install up to 54 residential lot water meters

Road and road furniture

- Replace two speed bump signs
- Replace two custom "Welcome to Bagot Community' signs
- Repair two potholes
- General tidy up of road
- General tidy up of foot paths
- Reseal carpark pavement

Stormwater drainage

- Clean out swale and reshape batters
- Replace one side entry pit
- Clear blockages from eight side entry pits
- Replace two side entry pit concrete lids
- Tidy up of the two side entry pits

Community structures

- Repaint the playground equipment
- Install a new shadecloth over the playground
- Repair holes in basketball court shade cloth
- Repair playground fence
- Repair basketball court fence
- General tidy up (remove weeds, rubbish, dirt, etc.) from both the playground and the basketball court.

Electrical services

- Replace one prepaid digital meter
- Replace ten switchboards inside the metering panel
- Replace four switchboards associated to dwellings

Communications

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

Civil inspection reports

Map by: DMcP P:\GIS\Projects\253963_NT_Town_Camps\253963_003_Civil_DDP.mxd 23/02/2017 08:41 Imagery: Nearmap 11/06/2016

A3 scale: 1:3,000

0 20 40 60 80 100 m

Note:
Label numbers refer to survey IDs

Date: 23/02/2017 Version: 1

Coordinate system: MGA94 Zone 52

NT Town Camp Infrastructure Assessments: Sewerage

290 - Bagot (Darwin)

6669

Map by: DMcP P:\GIS\Projects\253963_NT_Town_Camps\253963_003_Civil_DDP.mxd 23/02/2017 08:41 Imagery: Nearmap 11/06/2016

Legend

Town Camp boundary

Water

- Air Valves (1)
- Fire Hydrants (10)
- Tanks (2)
- Water Meter (5)
- Taps (1)

A3 scale: 1:3,000

0 20 40 60 80 100 m

Note:
Label numbers refer to survey IDs

Date: 23/02/2017 Version: 1

Coordinate system: MGA94 Zone 52

NT Town Camp Infrastructure Assessments: Water

290 - Bagot (Darwin)

6670

Map by: DMcP P:\GIS\Projects\253963_NT_Town_Camps\253963_003_Civil_DDP.mxd 23/02/2017 08:41 Imagery: Nearmap 11/06/2016

Legend

- Town Camp boundary

Community structures

- Basketball court (1)
- Playground (1)

Road furniture

- Car Parks (4)
- Footpaths (16)
- Signs (5)

Stormwater

- Culverts (2)
- Side Entry Pit (30)
- Swales (1)

A3 scale: 1:3,000

0 20 40 60 80 100 m

Note:
Label numbers refer to survey IDs

Date: 23/02/2017 Version: 1

Coordinate system: MGA94 Zone 52

NT Town Camp Infrastructure Assessments
Road furniture, stormwater drainage & community structures
290 - Bagot (Darwin)

6671

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 1:29:43 PM

Insp ID: 55 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Water Asset Are you Capturing: Air Valves

Air Valve Diameter (mm):	100
Air Valve Make:	Vent-o-mat 025 RBX 2511
Air Valve Leak:	No
Air Valve Condition:	3 - Good
Air Valve Comments:	

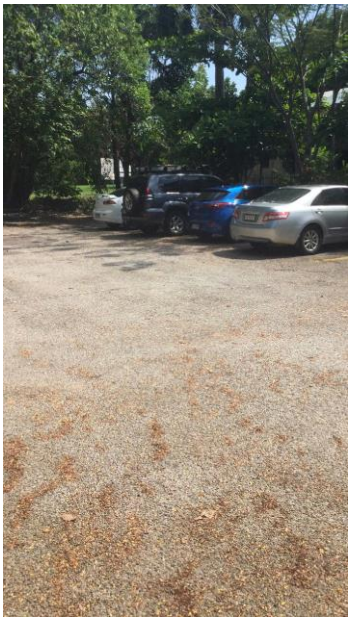
Northern Territory Town Camps

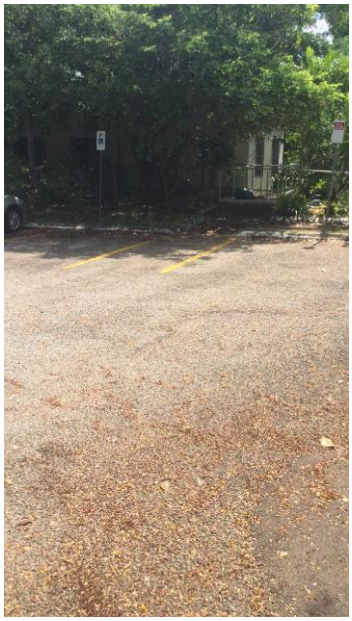
Civil Infrastructure

Inspection Date 7/11/2016 10:24:53 AM

Insp ID: 22 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Road Name:	Bagot
What are you inspecting:	Car Parks
Carpark Width (m):	20
Carpark Length (m):	10
Carpark Type:	Sealed - spray seal
Carpark Condition:	3 - Good
Line marking:	Yes
Kerbs:	Yes
General Comment:	Only some line marking





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 10:24:53 AM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 10:24:40 AM

Insp ID: 30 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Road Name:	Bagot
What are you inspecting:	Car Parks
Carpark Width (m):	
Carpark Length (m):	
Carpark Type:	Sealed - spray seal
Carpark Condition:	1 - Very Poor
Line marking:	No
Kerbs:	No
General Comment:	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 4:15:03 PM

Insp ID: 112 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Road Name:	
What are you inspecting:	Car Parks
Carpark Width (m):	10
Carpark Length (m):	50
Carpark Type:	Unsealed
Carpark Condition:	2 - Poor
Line marking:	No
Kerbs:	No
General Comment:	Shared driveway

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 4:15:03 PM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 4:14:59 PM

Insp ID: 113 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Road Name:	
What are you inspecting:	Car Parks
Carpark Width (m):	20
Carpark Length (m):	30
Carpark Type:	Sealed - spray seal
Carpark Condition:	3 - Good
Line marking:	No
Kerbs:	No
General Comment:	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 4:14:59 PM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 3:51:12 PM

Insp ID: 107 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Stormwater Infrastructure:	Culverts
Culvert Type:	RCBC
Diameter (mm):	
Width (mm):	900
Culvert Depth (mm):	470
Culvert Length (m):	5.2
Culvert Condition:	4 - Very Good
Culvert Blockage (%):	0
Culvert Comments:	
Culvert Head Wall:	Yes
Safety Grate:	No
Headwall Blockage:	
Headwall Condition:	3 - Good
Headwall Comment:	
End Wall:	Yes
End Wall condition:	2 - Poor
EW Comment:	Cracked and displaced

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 3:51:12 PM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 3:53:04 PM

Insp ID: 109 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Stormwater Infrastructure:	Culverts
Culvert Type:	RCP
Diameter (mm):	450
Width (mm):	
Culvert Depth (mm):	
Culvert Length (m):	5.2
Culvert Condition:	3 - Good
Culvert Blockage (%):	
Culvert Comments:	Group of 3
Culvert Head Wall:	Yes
Safety Grate:	No
Headwall Blockage:	
Headwall Condition:	2 - Poor
Headwall Comment:	
End Wall:	Yes
End Wall condition:	2 - Poor
EW Comment:	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 10:11:42 AM

Insp ID: 19	Group 1 - Darwin, Jabiru, Adelaide River	Bagot

What Water Asset Are you Capturing: Fire Hydrants

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

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 10:20:02 AM

Insp ID: 20 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Water Asset Are you Capturing: Fire Hydrants

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

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 11:28:41 AM

Insp ID: 43 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Water Asset Are you Capturing: Fire Hydrants

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

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 1:47:57 PM

Insp ID: 60 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Water Asset Are you Capturing: Fire Hydrants

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

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 12:23:20 PM

Insp ID: 72 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Water Asset Are you Capturing: Fire Hydrants

Single or Double:	Single
Sluice Valve:	No
Above or Below ground:	Above ground
FH Leakage:	No
Bollards around hydrant:	No
FH Condition:	3 - Good
FH Comment:	Paint faded, no cap

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 2:00:54 PM

Insp ID: 96 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Water Asset Are you Capturing: Fire Hydrants

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

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 2:24:33 PM

Insp ID: 97 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Water Asset Are you Capturing: Fire Hydrants

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

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 3:39:04 PM

Insp ID: 100 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Water Asset Are you Capturing: Fire Hydrants

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

Northern Territory Town Camps

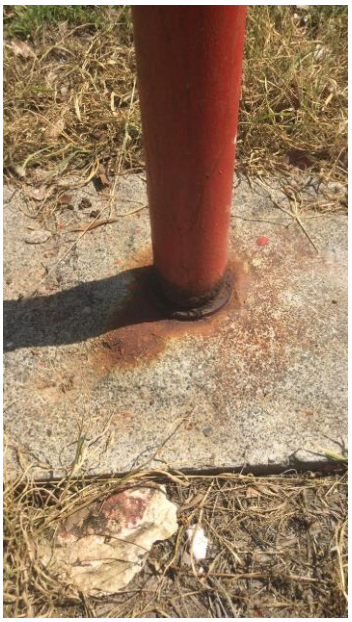
Civil Infrastructure

Inspection Date 7/11/2016 2:35:28 PM

Insp ID: 103 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Water Asset Are you Capturing: Fire Hydrants

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



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 2:31:07 PM

Insp ID: 104	Group 1 - Darwin, Jabiru, Adelaide River	Bagot

What Water Asset Are you Capturing: Fire Hydrants

Single or Double:	Single
Sluice Valve:	
Above or Below ground:	Above ground
FH Leakage:	No
Bollards around hydrant:	No
FH Condition:	4 - Very Good
FH Comment:	Valve located next to hydrant, valve type unknown, dirt coving valve

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 9:28:50 AM

Insp ID: 6 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Road Name:	290_1
What are you inspecting:	Foot Paths
Footpath Width (mm):	1180
Footpath Type:	Concrete
Footpath Condition:	4 - Very Good
Comment:	
General Comment:	

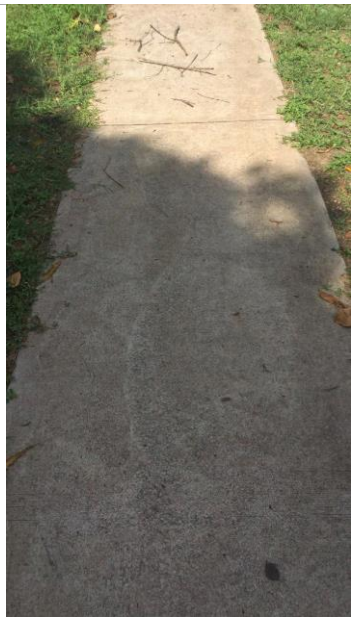
Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 9:48:32 AM

Insp ID: 10	Group 1 - Darwin, Jabiru, Adelaide River	Bagot

Road Name:	290_1
What are you inspecting:	Foot Paths
Footpath Width (mm):	1200
Footpath Type:	Concrete
Footpath Condition:	4 - Very Good
Comment:	Very small area of overgrowth on footpath
General Comment:	



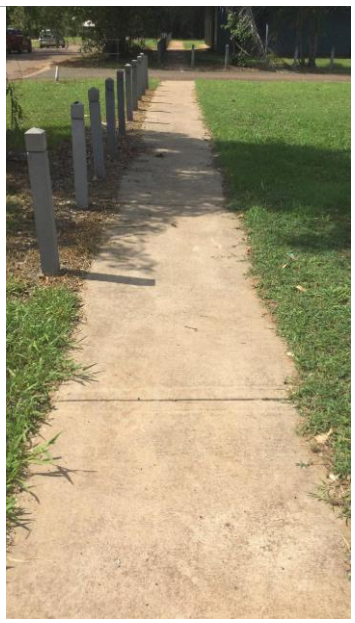
Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 10:02:35 AM

Insp ID: 13 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Road Name:	Bagot
What are you inspecting:	Foot Paths
Footpath Width (mm):	1200
Footpath Type:	Concrete
Footpath Condition:	4 - Very Good
Comment:	
General Comment:	Bollard on side of footpath



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 10:04:37 AM

Insp ID: 15 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Road Name:	Bagot
What are you inspecting:	Foot Paths
Footpath Width (mm):	1200
Footpath Type:	Concrete
Footpath Condition:	4 - Very Good
Comment:	
General Comment:	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 1:22:48 PM

Insp ID: 57 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Road Name:

What are you inspecting: Foot Paths

Footpath Width (mm): 1200

Footpath Type: Concrete

Footpath Condition: 4 - Very Good

Comment:

General Comment:

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 12:28:57 PM

Insp ID: 58 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Road Name:	
What are you inspecting:	Foot Paths
Footpath Width (mm):	1200
Footpath Type:	Concrete
Footpath Condition:	3 - Good
Comment:	Overgrown
General Comment:	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 12:21:48 PM

Insp ID: 73 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Road Name:	290_1
What are you inspecting:	Foot Paths
Footpath Width (mm):	1200
Footpath Type:	Concrete
Footpath Condition:	4 - Very Good
Comment:	Some overgrowth on path
General Comment:	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 12:20:07 PM

Insp ID: 74 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Road Name:	290_1
What are you inspecting:	Foot Paths
Footpath Width (mm):	1200
Footpath Type:	Concrete
Footpath Condition:	4 - Very Good
Comment:	
General Comment:	

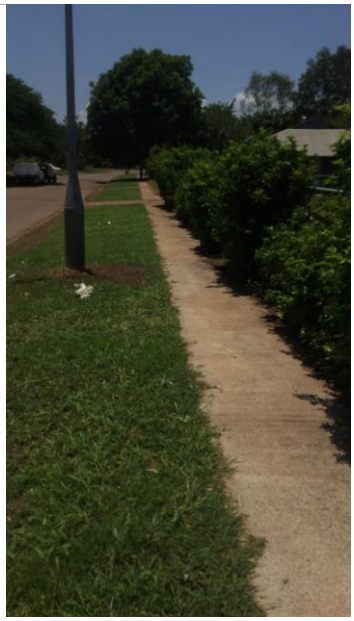
Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 12:03:00 PM

Insp ID: 76	Group 1 - Darwin, Jabiru, Adelaide River	Bagot

Road Name:	290_1
What are you inspecting:	Foot Paths
Footpath Width (mm):	1200
Footpath Type:	Concrete
Footpath Condition:	2 - Poor
Comment:	Path is good. Overgrown, can't walk on it.
General Comment:	



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 12:01:20 PM

Insp ID: 77 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Road Name:	290_1
What are you inspecting:	Foot Paths
Footpath Width (mm):	1200
Footpath Type:	Concrete
Footpath Condition:	4 - Very Good
Comment:	
General Comment:	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 2:26:05 PM

Insp ID: 90 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Road Name:

What are you inspecting: Foot Paths

Footpath Width (mm): 1200

Footpath Type: Concrete

Footpath Condition: 4 - Very Good

Comment:

General Comment:

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 2:24:41 PM

Insp ID: 91 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Road Name:

What are you inspecting: Foot Paths

Footpath Width (mm): 1200

Footpath Type: Concrete

Footpath Condition: 4 - Very Good

Comment:

General Comment:

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 2:28:14 PM

Insp ID: 105 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Road Name:

What are you inspecting: Foot Paths

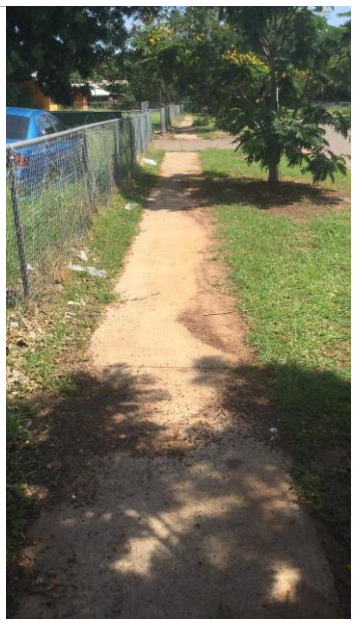
Footpath Width (mm): 1200

Footpath Type: Concrete

Footpath Condition: 3 - Good

Comment:

General Comment:



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 2:27:27 PM

Insp ID: 106 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Road Name:

What are you inspecting: Foot Paths

Footpath Width (mm): 1200

Footpath Type: Concrete

Footpath Condition: 4 - Very Good

Comment:

General Comment:

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 4:12:08 PM

Insp ID: 110 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Road Name:	
What are you inspecting:	Foot Paths
Footpath Width (mm):	1200
Footpath Type:	Concrete
Footpath Condition:	3 - Good
Comment:	Some overgrown and a crack
General Comment:	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 4:12:10 PM

Insp ID: 111 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Road Name:

What are you inspecting: Foot Paths

Footpath Width (mm): 1200

Footpath Type: Concrete

Footpath Condition: 4 - Very Good

Comment:

General Comment:

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 9:49:08 AM

Insp ID: 9	Group 1 - Darwin, Jabiru, Adelaide River	Bagot

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

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 10:51:23 AM

Insp ID: 25 Group 1 - Darwin, Jabiru, Adelaide River Bagot

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

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 10:31:43 AM

Insp ID: 29 Group 1 - Darwin, Jabiru, Adelaide River Bagot

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

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 10:12:24 AM

Insp ID: 33 Group 1 - Darwin, Jabiru, Adelaide River Bagot

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

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 11:01:13 AM

Insp ID: 35 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Sewerage Asset are you capturing:	Manholes
MH Cover Shape:	Square
Manhole Cover Diam (mm):	
Manhole Length (mm):	1000
Manhole Width (mm):	700
Manhole Condition:	3 - Good
Notes on Lid:	
Comments:	Rubbish over manhole, structurally okay

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 10:58:16 AM

Insp ID: 37 Group 1 - Darwin, Jabiru, Adelaide River Bagot

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

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 12:05:56 PM

Insp ID: 47 Group 1 - Darwin, Jabiru, Adelaide River Bagot

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

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 2:10:34 PM

Insp ID: 65 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Sewerage Asset are you capturing:	Manholes
MH Cover Shape:	Rectangular
Manhole Cover Diam (mm):	
Manhole Length (mm):	1000
Manhole Width (mm):	700
Manhole Condition:	2 - Poor
Notes on Lid:	
Comments:	Footpath concrete broken around lid

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 1:53:01 PM

Insp ID: 67 Group 1 - Darwin, Jabiru, Adelaide River Bagot

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

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 1:26:21 PM

Insp ID: 70 Group 1 - Darwin, Jabiru, Adelaide River Bagot

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

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 11:59:32 AM

Insp ID: 78 Group 1 - Darwin, Jabiru, Adelaide River Bagot

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

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 11:27:46 AM

Insp ID: 81 Group 1 - Darwin, Jabiru, Adelaide River Bagot

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

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 10:59:36 AM

Insp ID: 85 Group 1 - Darwin, Jabiru, Adelaide River Bagot

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

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 2:02:14 PM

Insp ID: 95 Group 1 - Darwin, Jabiru, Adelaide River Bagot

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

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 9:20:28 AM

Insp ID: 2 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Road Name:	290_1
What are you inspecting:	Pavements
Ch From (km):	0
Ch To (km):	0.1
Road Type:	Sealed - asphalt
Section Width (m):	7.2
Road Condition:	4 - Very Good
General Comment:	

Road Defects Section

Kerbs Section

Kerb Type	Kerb Cond	Kerb Comments
Kerb and Gutter	3 - Good	Some minor defects

Shoulders Section

Linemarking Section

Line Type	Other Line Type	Line Cond	Line Comments
Give way line		4 - Very Good	

Obstruction Section

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 9:20:28 AM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 9:20:28 AM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 9:58:39 AM

Insp ID: 16 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Road Name:	Bagot
What are you inspecting:	Pavements
Ch From (km):	0
Ch To (km):	0.14
Road Type:	Sealed - asphalt
Section Width (m):	7.2
Road Condition:	3 - Good
General Comment:	Gutters are blocked with leaves and debris

Road Defects Section

Defect Type	Defect QTY	Defect Condition	Defect Comments
Surfacing Cracks	5	3 - Good	5% of road is cracked

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 7/11/2016 9:58:39 AM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 9:58:39 AM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 10:45:42 AM

Insp ID: 28 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Road Name:	290_1
What are you inspecting:	Pavements
Ch From (km):	0.1
Ch To (km):	0.2
Road Type:	Sealed - asphalt
Section Width (m):	7.2
Road Condition:	3 - Good
General Comment:	Speed bump

Road Defects Section

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 7/11/2016 10:45:42 AM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 10:45:42 AM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 11:47:21 AM

Insp ID: 44 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Road Name:	290_1
What are you inspecting:	Pavements
Ch From (km):	0.3
Ch To (km):	0.4
Road Type:	Sealed - asphalt
Section Width (m):	7.2
Road Condition:	4 - Very Good
General Comment:	2 speed humps with line marking and no signs

Road Defects Section

Kerbs Section

Kerb Type	Kerb Cond	Kerb Comments
Kerb and Gutter	3 - Good	

Shoulders Section

Linemarking Section

Obstruction Section

Road Obstruction	Other Road Obstruction
Trees	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 11:47:21 AM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 11:47:21 AM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 11:52:43 AM

Insp ID: 45 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Road Name:	290_2
What are you inspecting:	Pavements
Ch From (km):	0
Ch To (km):	0.5
Road Type:	Sealed - asphalt
Section Width (m):	7.2
Road Condition:	1 - Very Poor
General Comment:	

Road Defects Section

Defect Type	Defect QTY	Defect Condition	Defect Comments
Potholes	2	1 - Very Poor	Large potholes

Kerbs Section

Kerb Type	Kerb Cond	Kerb Comments
Semi mountable Kerb and Gutter	3 - Good	

Shoulders Section

Linemarking Section

Obstruction Section

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 11:52:43 AM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 11:52:43 AM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 1:47:42 PM

Insp ID: 68 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Road Name:

What are you inspecting: Pavements

Ch From (km): 0

Ch To (km): 0.1

Road Type: Sealed - asphalt

Section Width (m): 7.2

Road Condition: 4 - Very Good

General Comment: Speed bump

Road Defects Section

Defect Type	Defect QTY	Defect Condition	Defect Comments
Surfacing Cracks	5	3 - Good	5% of road cracked

Kerbs Section

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

Shoulders Section

Linemarking Section

Obstruction Section

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 1:47:42 PM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 1:47:42 PM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 1:20:48 PM

Insp ID: 71 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Road Name:

What are you inspecting: Pavements

Ch From (km): 0

Ch To (km): 0.1

Road Type: Sealed - asphalt

Section Width (m): 7.2

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 has cracks. Crack width approx 10-2

Kerbs Section

Kerb Type	Kerb Cond	Kerb Comments
Kerb and Gutter	3 - Good	Some defects

Shoulders Section

Linemarking Section

Obstruction Section

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 1:20:48 PM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 1:20:48 PM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 12:12:34 PM

Insp ID: 75 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Road Name:	290_1
What are you inspecting:	Pavements
Ch From (km):	0.4
Ch To (km):	0.5
Road Type:	Sealed - asphalt
Section Width (m):	7.2
Road Condition:	4 - Very Good
General Comment:	

Road Defects Section

Kerbs Section

Kerb Type	Kerb Cond	Kerb Comments
Kerb and Gutter	3 - Good	Some concrete damage

Shoulders Section

Linemarking Section

Obstruction Section

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 12:12:34 PM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 12:12:34 PM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 11:19:06 AM

Insp ID: 82 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Road Name:	290_1
What are you inspecting:	Pavements
Ch From (km):	0.2
Ch To (km):	0.3
Road Type:	Sealed - asphalt
Section Width (m):	7.2
Road Condition:	3 - Good
General Comment:	Speed bump , no speed bump signs

Road Defects Section

Kerbs Section

Kerb Type	Kerb Cond	Kerb Comments
Kerb and Gutter	3 - Good	Some defects

Shoulders Section

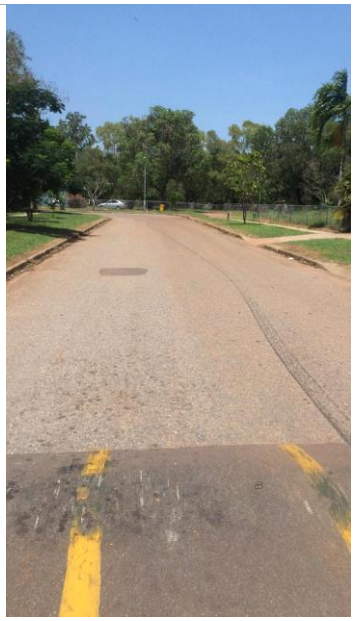
Linemarking Section

Obstruction Section

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 11:19:06 AM



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 11:19:06 AM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 2:05:34 PM

Insp ID: 92 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Road Name:

What are you inspecting: Pavements

Ch From (km): 0

Ch To (km): 0.15

Road Type: Sealed - asphalt

Section Width (m): 7.2

Road Condition: 3 - Good

General Comment: Speed hump with line marking but not signs

Road Defects Section

Defect Type	Defect QTY	Defect Condition	Defect Comments
Surfacing Cracks	5	3 - Good	10
Edge Breaks	2	3 - Good	2 m

Kerbs Section

Kerb Type	Kerb Cond	Kerb Comments
Kerb and Gutter	3 - Good	Some overgrowth

Shoulders Section

Linemarking Section

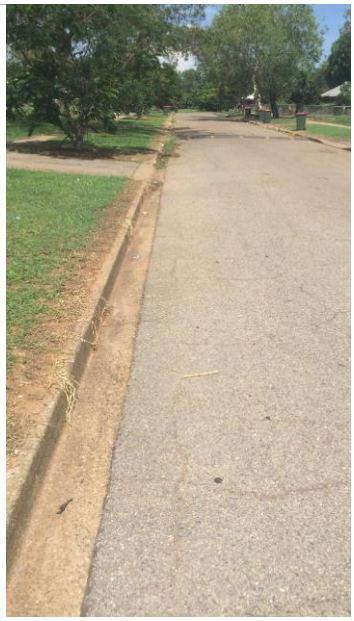
Obstruction Section

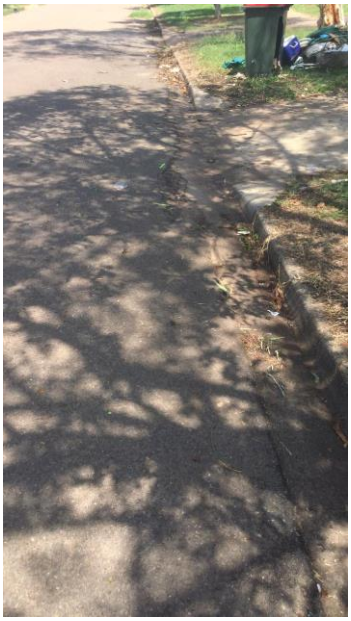
Road Obstruction	Other Road Obstruction
Trees	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 2:05:34 PM





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 2:05:34 PM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 2:32:47 PM

Insp ID: 98 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Road Name:

What are you inspecting: Pavements

Ch From (km): 0.15

Ch To (km): 0.25

Road Type: Sealed - asphalt

Section Width (m): 7.2

Road Condition: 3 - Good

General Comment:

Road Defects Section

Defect Type	Defect QTY	Defect Condition	Defect Comments
Transverse Cracks	2	2 - Poor	
Surfacing Cracks	5	3 - Good	5% of road is cracked

Kerbs Section

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

Shoulders Section

Linemarking Section

Obstruction Section

Road Obstruction	Other Road Obstruction
Trees	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 2:32:47 PM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 2:32:47 PM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 3:42:23 PM

Insp ID: 102 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Road Name:	290_3
What are you inspecting:	Pavements
Ch From (km):	0
Ch To (km):	0.3
Road Type:	Unsealed
Section Width (m):	3
Road Condition:	3 - Good
General Comment:	

Road Defects Section

Defect Type	Defect QTY	Defect Condition	Defect Comments
		4 - Very Good	Loose rocks on road

Kerbs Section

Shoulders Section

Shoulder Type	Width	Dropoff(mm)	Erosion	Condition	Shoulder Comments
Unsealed				4	Grassed land

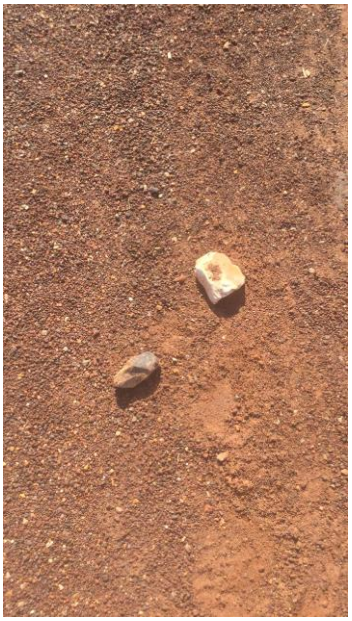
Linemarking Section

Obstruction Section

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 3:42:23 PM



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 3:42:23 PM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 9:36:07 AM

Insp ID: 3 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Stormwater Infrastructure:	SEP
Number of Bays:	1
On grade or sag pit:	On Grade
Both sides of road:	Left
Condition:	3 - Good
Blockage (%):	0
Comment:	Cracked lid

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 9:39:49 AM

Insp ID: 8	Group 1 - Darwin, Jabiru, Adelaide River	Bagot

Stormwater Infrastructure:	SEP
Number of Bays:	2
On grade or sag pit:	On Grade
Both sides of road:	Right
Condition:	4 - Very Good
Blockage (%):	0
Comment:	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 9:50:53 AM

Insp ID: 11 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Stormwater Infrastructure:	SEP
Number of Bays:	2
On grade or sag pit:	
Both sides of road:	Both
Condition:	2 - Poor
Blockage (%):	80
Comment:	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 10:07:45 AM

Insp ID: 17 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Stormwater Infrastructure:	SEP
Number of Bays:	2
On grade or sag pit:	Sag
Both sides of road:	Right
Condition:	3 - Good
Blockage (%):	40
Comment:	Weeds growing at entrance

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 10:55:46 AM

Insp ID: 26 Group 1 - Darwin, Jabiru, Adelaide River Bagot

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

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 10:49:25 AM

Insp ID: 27 Group 1 - Darwin, Jabiru, Adelaide River Bagot

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

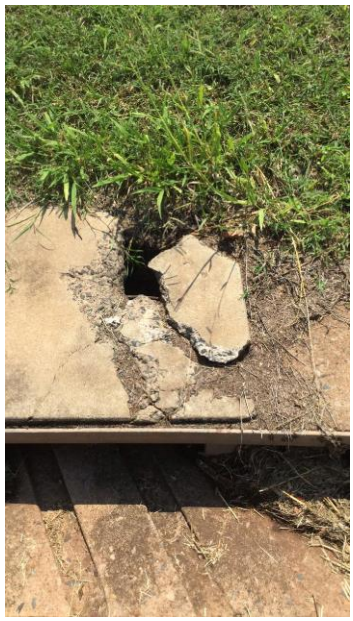
Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 10:22:06 AM

Insp ID: 31 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Stormwater Infrastructure:	SEP
Number of Bays:	3
On grade or sag pit:	
Both sides of road:	Left
Condition:	2 - Poor
Blockage (%):	10
Comment:	



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 10:20:44 AM

Insp ID: 32 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Stormwater Infrastructure:	SEP
Number of Bays:	2
On grade or sag pit:	
Both sides of road:	Right
Condition:	3 - Good
Blockage (%):	60
Comment:	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 10:09:46 AM

Insp ID: 34 Group 1 - Darwin, Jabiru, Adelaide River Bagot

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

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 11:23:11 AM

Insp ID: 41 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Stormwater Infrastructure:	SEP
Number of Bays:	3
On grade or sag pit:	
Both sides of road:	Left
Condition:	3 - Good
Blockage (%):	70
Comment:	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 11:27:10 AM

Insp ID: 42 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Stormwater Infrastructure:	SEP
Number of Bays:	2
On grade or sag pit:	
Both sides of road:	Right
Condition:	3 - Good
Blockage (%):	20
Comment:	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 12:01:27 PM

Insp ID: 46	Group 1 - Darwin, Jabiru, Adelaide River	Bagot

Stormwater Infrastructure:	SEP
Number of Bays:	2
On grade or sag pit:	
Both sides of road:	Right
Condition:	4 - Very Good
Blockage (%):	30
Comment:	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 12:08:08 PM

Insp ID: 49 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Stormwater Infrastructure:	SEP
Number of Bays:	2
On grade or sag pit:	
Both sides of road:	Left
Condition:	3 - Good
Blockage (%):	30
Comment:	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 12:11:56 PM

Insp ID: 50	Group 1 - Darwin, Jabiru, Adelaide River	Bagot

Stormwater Infrastructure:	SEP
Number of Bays:	4
On grade or sag pit:	
Both sides of road:	Left
Condition:	3 - Good
Blockage (%):	30
Comment:	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 12:14:56 PM

Insp ID: 51 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Stormwater Infrastructure:	SEP
Number of Bays:	2
On grade or sag pit:	
Both sides of road:	Right
Condition:	2 - Poor
Blockage (%):	100
Comment:	Structurally okay, completely blocked

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 12:22:39 PM

Insp ID: 52 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Stormwater Infrastructure:	SEP
Number of Bays:	2
On grade or sag pit:	
Both sides of road:	Right
Condition:	3 - Good
Blockage (%):	60
Comment:	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 12:21:11 PM

Insp ID: 53 Group 1 - Darwin, Jabiru, Adelaide River Bagot

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

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 1:23:34 PM

Insp ID: 56 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Stormwater Infrastructure:	SEP
Number of Bays:	1
On grade or sag pit:	Sag
Both sides of road:	Left
Condition:	1 - Very Poor
Blockage (%):	70
Comment:	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 1:56:33 PM

Insp ID: 61	Group 1 - Darwin, Jabiru, Adelaide River	Bagot

Stormwater Infrastructure:	SEP
Number of Bays:	2
On grade or sag pit:	
Both sides of road:	Left
Condition:	3 - Good
Blockage (%):	10
Comment:	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 1:52:36 PM

Insp ID: 62 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Stormwater Infrastructure:	SEP
Number of Bays:	2
On grade or sag pit:	
Both sides of road:	Right
Condition:	4 - Very Good
Blockage (%):	10
Comment:	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 1:51:10 PM

Insp ID: 63	Group 1 - Darwin, Jabiru, Adelaide River	Bagot

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

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 11:57:44 AM

Insp ID: 79 Group 1 - Darwin, Jabiru, Adelaide River Bagot

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

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 11:54:58 AM

Insp ID: 80 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Stormwater Infrastructure:	SEP
Number of Bays:	2
On grade or sag pit:	
Both sides of road:	Right
Condition:	4 - Very Good
Blockage (%):	0
Comment:	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 11:17:13 AM

Insp ID: 83 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Stormwater Infrastructure:	SEP
Number of Bays:	2
On grade or sag pit:	
Both sides of road:	Right
Condition:	3 - Good
Blockage (%):	90
Comment:	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 11:04:41 AM

Insp ID: 84 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Stormwater Infrastructure:	SEP
Number of Bays:	2
On grade or sag pit:	
Both sides of road:	Left
Condition:	3 - Good
Blockage (%):	50
Comment:	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 10:58:39 AM

Insp ID: 86 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Stormwater Infrastructure:	SEP
Number of Bays:	2
On grade or sag pit:	
Both sides of road:	Left
Condition:	2 - Poor
Blockage (%):	90
Comment:	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 2:20:23 PM

Insp ID: 87	Group 1 - Darwin, Jabiru, Adelaide River	Bagot

Stormwater Infrastructure:	SEP
Number of Bays:	3
On grade or sag pit:	
Both sides of road:	Left
Condition:	
Blockage (%):	30
Comment:	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 2:18:13 PM

Insp ID: 88	Group 1 - Darwin, Jabiru, Adelaide River	Bagot

Stormwater Infrastructure:	SEP
Number of Bays:	1
On grade or sag pit:	
Both sides of road:	Right
Condition:	2 - Poor
Blockage (%):	90
Comment:	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 2:04:20 PM

Insp ID: 93	Group 1 - Darwin, Jabiru, Adelaide River	Bagot

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

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 2:03:20 PM

Insp ID: 94 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Stormwater Infrastructure:	SEP
Number of Bays:	1
On grade or sag pit:	
Both sides of road:	Right
Condition:	2 - Poor
Blockage (%):	90
Comment:	

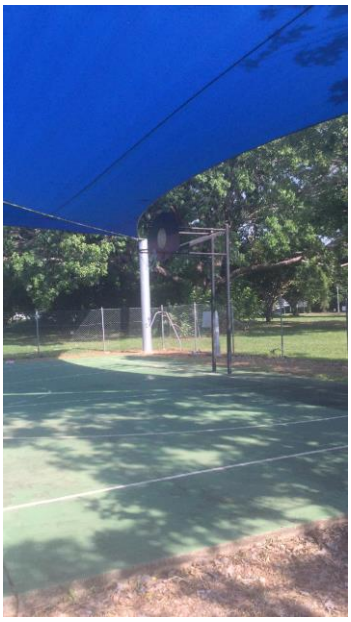
Northern Territory Camps

Civil Infrastructure

Inspection Date 7/11/2016 4:02:50 PM

Insp ID: 108 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Inspection Type:	Shade Structure
Shade Structure Type:	Basket Ball Court
Shade Floor Type:	Concrete
Roof Type:	Shadecloth
Width (mm):	32
Length (mm):	50
Appearance:	3
Appearance Comment:	Some rubbish and broken glass
Condition:	3 - Good
Comment:	Small cuts in shade cloth and areas of broken fencing



Northern Territory Camps

Civil Infrastructure

Inspection Date 7/11/2016 4:02:50 PM

Northern Territory Camps

Civil Infrastructure

Inspection Date 7/11/2016 4:20:22 PM

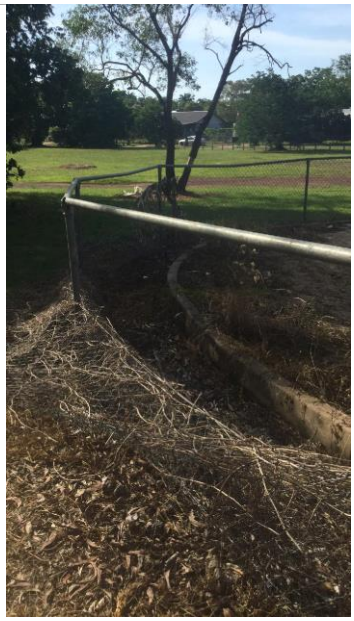
Insp ID: 114 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Inspection Type:	Shade Structure
Shade Structure Type:	Play ground
Shade Floor Type:	Sand
Roof Type:	Shadecloth
Width (mm):	10
Length (mm):	15
Appearance:	1
Appearance Comment:	Over grown, paint peeling, fencing partially broken
Condition:	2 - Poor
Comment:	Play equipment usable

Northern Territory Camps

Civil Infrastructure

Inspection Date 7/11/2016 4:20:22 PM



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 9:32:06 AM

Insp ID: 5 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Road Name:	290_1
What are you inspecting:	Signs
Type of Sign:	Welcome signs
Sign Condition:	2 - Poor
Sign Comment:	Punctures and graffiti
General Comment:	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 9:25:53 AM

Insp ID: 7 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Road Name:	290_1
What are you inspecting:	Signs
Type of Sign:	Give Way
Sign Condition:	5 - Excellent
Sign Comment:	
General Comment:	

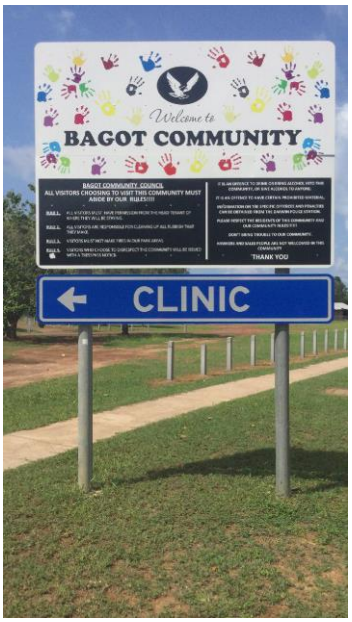
Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 9:58:35 AM

Insp ID: 12 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Road Name:	290_1
What are you inspecting:	Signs
Type of Sign:	Community sign
Sign Condition:	4 - Very Good
Sign Comment:	
General Comment:	



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 10:48:17 AM

Insp ID: 23 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Road Name:	290_1
What are you inspecting:	Signs
Type of Sign:	Sped hump
Sign Condition:	2 - Poor
Sign Comment:	Graffiti
General Comment:	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 10:49:56 AM

Insp ID: 24 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Road Name:	290_1
What are you inspecting:	Signs
Type of Sign:	Speed hump
Sign Condition:	1 - Very Poor
Sign Comment:	Sign not on post
General Comment:	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 3:46:23 PM

Insp ID: 101 Group 1 - Darwin, Jabiru, Adelaide River Bagot

Stormwater Infrastructure:	Swales
Type of lining:	Natural Grasses
Are dimensions uniform along drain:	No
Base Width (m):	1
Overall Width (m):	3.3
Swale Depth (m):	0.7
Length of Batter 1 (m):	1
Length of Batter 2 (m):	1
Swale Condition:	3 - Good
Swale Ponding:	No
Drain flooded at time of inspection:	No
Swale Comments:	Trees blocking swale

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 3:46:23 PM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 11:09:37 AM

Insp ID: 38 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Water Asset Are you Capturing: Tanks

Water Tank Material: Plastic

Water Tank Diameter: 3

Water Tank Height: 3

Water Tank Volume: 22000

Leaking: No

Water Tank Condition: 3 - Good

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 11:13:51 AM

Insp ID: 39 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Water Asset Are you Capturing: Tanks

Water Tank Material: Plastic

Water Tank Diameter: 3

Water Tank Height: 3

Water Tank Volume: 22000

Leaking: No

Water Tank Condition: 3 - Good

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 10:08:58 AM

Insp ID: 18	Group 1 - Darwin, Jabiru, Adelaide River	Bagot

What Water Asset Are you Capturing: Taps

Diameter(mm):

Tap Leakage: No

Tap Condition: 3 - Good

Tap Comment:

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 11:15:28 AM

Insp ID: 40	Group 1 - Darwin, Jabiru, Adelaide River	Bagot

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Bulk
Bulk Water Meter Size (mm):	50
Bulk Water Meter Condition:	3 - Good
Bulk Water Meter Comment:	RPZD installed
Lot Number:	
Lot Water Meter Size:	
Lot Water Meter Condition:	
Lot Water Meter Comment:	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 1:35:08 PM

Insp ID: 54	Group 1 - Darwin, Jabiru, Adelaide River	Bagot

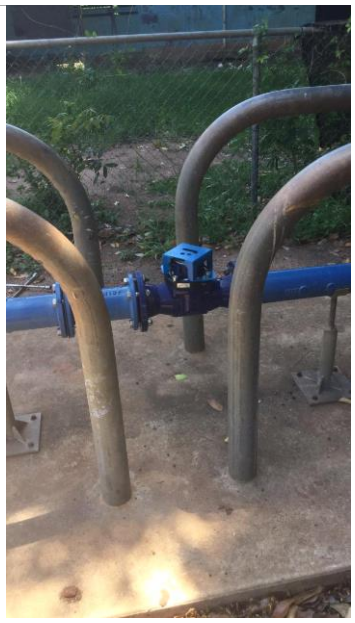
What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Bulk
Bulk Water Meter Size (mm):	80
Bulk Water Meter Condition:	4 - Very Good
Bulk Water Meter Comment:	
Lot Number:	
Lot Water Meter Size:	
Lot Water Meter Condition:	
Lot Water Meter Comment:	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 1:35:08 PM



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 1:38:41 PM

Insp ID: 59	Group 1 - Darwin, Jabiru, Adelaide River	Bagot

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Bulk
Bulk Water Meter Size (mm):	100
Bulk Water Meter Condition:	4 - Very Good
Bulk Water Meter Comment:	Check valves either side
Lot Number:	
Lot Water Meter Size:	
Lot Water Meter Condition:	
Lot Water Meter Comment:	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 1:38:41 PM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 1:56:17 PM

Insp ID: 66	Group 1 - Darwin, Jabiru, Adelaide River	Bagot

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Bulk
Bulk Water Meter Size (mm):	50
Bulk Water Meter Condition:	4 - Very Good
Bulk Water Meter Comment:	
Lot Number:	
Lot Water Meter Size:	
Lot Water Meter Condition:	
Lot Water Meter Comment:	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 1:37:13 PM

Insp ID: 69	Group 1 - Darwin, Jabiru, Adelaide River	Bagot

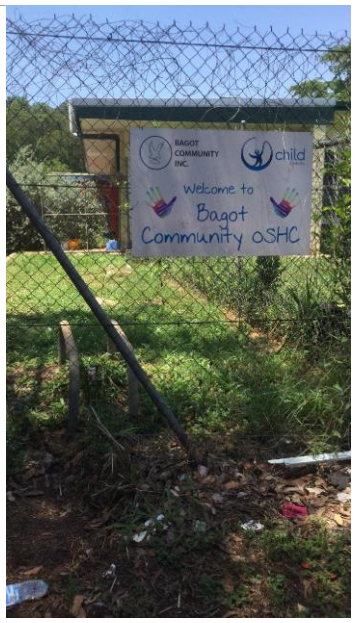
What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	67
Lot Water Meter Size:	
Lot Water Meter Condition:	4 - Very Good
Lot Water Meter Comment:	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 7/11/2016 1:37:13 PM



Electrical inspection report

A3 scale: 1:3,000

0 20 40 60 80 100 m

Date: 23/02/2017 Version: 3

Coordinate system: MGA94 Zone 52

NT Town Camp Infrastructure Assessments: Electrical

290 - Bagot (Darwin)

6812

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 10:37:15 AM

Insp ID: 1 Group 1 - Darwin, Jabiru, Adelaide River Bagot

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:	
What is the condition of switchboard:	4
Condition Comments:	Minor damage
What is the condition of cables/glands into switchboard:	
Cable/Gland Condition Comments:	Unknown underground
Distribution Panels name plate access:	No

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 10:37:15 AM

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 11:17:27 AM

Insp ID: 5 Group 1 - Darwin, Jabiru, Adelaide River Bagot

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:	3
Condition Comments:	Missing bolts
What is the condition of cables/glands into switchboard:	2
Cable/Gland Condition Comments:	Unknown
Distribution Panels name plate access:	No

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 11:17:27 AM

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 11:41:10 AM

Insp ID: 8 Group 1 - Darwin, Jabiru, Adelaide River Bagot

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 underground
What is the condition of switchboard:	3
Condition Comments:	Missing bolts and cracked bolt hole
What is the condition of cables/glands into switchboard:	
Cable/Gland Condition Comments:	Unknown
Distribution Panels name plate access:	No

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 11:41:10 AM

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 12:06:17 PM

Insp ID: 9 Group 1 - Darwin, Jabiru, Adelaide River Bagot

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 u/g
What is the condition of switchboard:	4
Condition Comments:	
What is the condition of cables/glands into switchboard:	
Cable/Gland Condition Comments:	Unknown
Distribution Panels name plate access:	No

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 12:06:17 PM

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 12:33:12 PM

Insp ID: 11 Group 1 - Darwin, Jabiru, Adelaide River Bagot

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 underground
What is the condition of switchboard:	4
Condition Comments:	
What is the condition of cables/glands into switchboard:	
Cable/Gland Condition Comments:	
Distribution Panels name plate access:	No

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 12:33:12 PM

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 12:15:50 PM

Insp ID: 13 Group 1 - Darwin, Jabiru, Adelaide River Bagot

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:	Na
What is the main incoming cable type/Size to Distribution Panel:	Unknown underground
What is the condition of switchboard:	3
Condition Comments:	Missing bolts,cracked Bolt hole
What is the condition of cables/glands into switchboard:	
Cable/Gland Condition Comments:	Unknown underground
Distribution Panels name plate access:	No

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 12:15:50 PM

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 12:51:19 PM

Insp ID: 17 Group 1 - Darwin, Jabiru, Adelaide River Bagot

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:	
What is the main incoming cable type/Size to Distribution Panel:	
What is the condition of switchboard:	4
Condition Comments:	
What is the condition of cables/glands into switchboard:	
Cable/Gland Condition Comments:	
Distribution Panels name plate access:	No

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 12:53:55 PM

Insp ID: 18 Group 1 - Darwin, Jabiru, Adelaide River Bagot

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:	4
Condition Comments:	
What is the condition of cables/glands into switchboard:	
Cable/Gland Condition Comments:	Unknown u/g
Distribution Panels name plate access:	No

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 1:54:29 PM

Insp ID: 20	Group 1 - Darwin, Jabiru, Adelaide River	Bagot

What Comms Category are you capturing:	Distribution
What is distribution method to households:	Underground
Is it Shared with PWC:	
Is there Anti-climb barrier provided for this pole:	
What is Pole construction type:	
Is street light fitted:	
Is there concrete collar around the base of pole:	
What is the condition of tap off to house:	
What is the condition of pole:	
How many Lots are connected to this pole:	
Is there access to Pits to take a photo:	No
What is Pit Condition:	3
Underground Comments:	

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 1:54:29 PM

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 1:55:21 PM

Insp ID: 21 Group 1 - Darwin, Jabiru, Adelaide River Bagot

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:	4
Condition Comments:	Minor damage onbody
What is the condition of cables/glands into switchboard:	
Cable/Gland Condition Comments:	Unknown
Distribution Panels name plate access:	No

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 1:55:21 PM

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 2:02:28 PM

Insp ID: 22	Group 1 - Darwin, Jabiru, Adelaide River	Bagot

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:	Yes
What is Pit Condition:	3
Underground Comments:	

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 2:06:40 PM

Insp ID: 23 Group 1 - Darwin, Jabiru, Adelaide River Bagot

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:	Yes
What is Pit Condition:	3
Underground Comments:	

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 2:10:04 PM

Insp ID: 24 Group 1 - Darwin, Jabiru, Adelaide River Bagot

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:	4
Condition Comments:	Damage on body
What is the condition of cables/glands into switchboard:	
Cable/Gland Condition Comments:	Unknown
Distribution Panels name plate access:	No

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 2:15:00 PM

Insp ID: 25 Group 1 - Darwin, Jabiru, Adelaide River Bagot

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:	3
Condition Comments:	Damage on body
What is the condition of cables/glands into switchboard:	
Cable/Gland Condition Comments:	Unknown
Distribution Panels name plate access:	No

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 2:15:00 PM

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 2:13:45 PM

Insp ID: 28 Group 1 - Darwin, Jabiru, Adelaide River Bagot

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:	
What is the main incoming cable type/Size to Distribution Panel:	
What is the condition of switchboard:	4
Condition Comments:	
What is the condition of cables/glands into switchboard:	
Cable/Gland Condition Comments:	
Distribution Panels name plate access:	No

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 2:10:34 PM

Insp ID: 29 Group 1 - Darwin, Jabiru, Adelaide River Bagot

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:	
What is the main incoming cable type/Size to Distribution Panel:	
What is the condition of switchboard:	3
Condition Comments:	Missing bolts
What is the condition of cables/glands into switchboard:	
Cable/Gland Condition Comments:	
Distribution Panels name plate access:	No

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 2:30:25 PM

Insp ID: 31	Group 1 - Darwin, Jabiru, Adelaide River	Bagot

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 7/11/2016 3:13:46 PM

Insp ID: 35 Group 1 - Darwin, Jabiru, Adelaide River Bagot

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:	
What is the main incoming cable type/Size to Distribution Panel:	
What is the condition of switchboard:	3
Condition Comments:	
What is the condition of cables/glands into switchboard:	
Cable/Gland Condition Comments:	
Distribution Panels name plate access:	No

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 21/11/2016 4:14:21 PM

Insp ID: 427 Group 1 - Darwin, Jabiru, Adelaide River Bagot

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 Access
What is Pit Condition:	2
Underground Comments:	

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 2:24:18 PM

Insp ID: 3324 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond: 3

Meter Condition: 3

Meter Comment: 2 Digital Meters.

Comments:

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 2:22:18 PM

Insp ID: 3325 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond: 3

Meter Condition: 3

Meter Comment:

Comments:

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 2:43:28 PM

Insp ID: 3326 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond:

Meter Condition: 3

Meter Comment: Condition of CB not assessed.

Comments:

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 2:41:00 PM

Insp ID: 3327 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond:

Meter Condition: 3

Meter Comment: Condition of CB not assessed.

Comments:

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 2:23:00 PM

Insp ID: 3328 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond:

Meter Condition: 3

Meter Comment: Condition of CB not assessed.

Comments:

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 2:52:03 PM

Insp ID: 3329 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

Meter Type:	Prepaid
Meter Switchboard Cond:	2
Meter Condition:	3
Meter Comment:	Blank plates are missing on CB slot. Indoor SB, Cond 3
Comments:	

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 2:50:28 PM

Insp ID: 3330 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond:

Meter Condition: 3

Meter Comment: Condition of CB not assessed.

Comments:

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 3:45:48 PM

Insp ID: 3331 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond: 3

Meter Condition: 3

Meter Comment:

Comments:

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 3:18:57 PM

Insp ID: 3343 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond: 3

Meter Condition: 3

Meter Comment: Indoor SB, Cond 3

Comments:

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 10:55:31 AM

Insp ID: 3344 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

Meter Type:	Prepaid
Meter Switchboard Cond:	2
Meter Condition:	3
Meter Comment:	Indoor Switchboard Needs upgraded to equip with RCD.
Comments:	

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 11:34:26 AM

Insp ID: 3345 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

Meter Type: Electrical

Meter Switchboard Cond:

Meter Condition:

Meter Comment: Switchboard, Cond 2

Comments:

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 11:33:49 AM

Insp ID: 3346 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

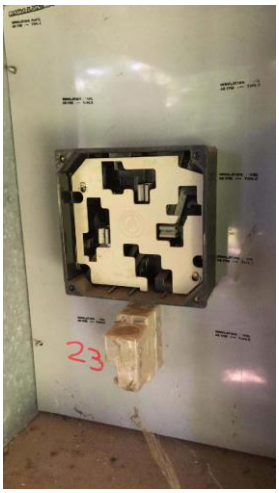
Meter Type: Prepaid

Meter Switchboard Cond: 1

Meter Condition: 1

Meter Comment: Out of order.

Comments:



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 1:56:04 PM

Insp ID: 3347 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond: 2

Meter Condition: 3

Meter Comment: 3 Digital Meters. Blank plates are missing on CB slot.

Comments:

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 1:57:38 PM

Insp ID: 3348 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond: 3

Meter Condition: 3

Meter Comment:

Comments:

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 1:42:33 PM

Insp ID: 3349 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond: 3

Meter Condition: 3

Meter Comment:

Comments:

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 1:39:47 PM

Insp ID: 3350 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

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

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 2:07:25 PM

Insp ID: 3351 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond: 3

Meter Condition: 3

Meter Comment:

Comments:

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 1:43:58 PM

Insp ID: 3352 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond: 3

Meter Condition: 3

Meter Comment:

Comments:

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 2:49:00 PM

Insp ID: 3353 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

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

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 3:05:08 PM

Insp ID: 3354 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

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

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 3:24:04 PM

Insp ID: 3355 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

Meter Type:	Prepaid
Meter Switchboard Cond:	3
Meter Condition:	4
Meter Comment:	Indoor SB, Cond 3
Comments:	

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 8/11/2016 12:34:10 PM

Insp ID: 3356 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

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

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 8/11/2016 12:51:39 PM

Insp ID: 3357 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond: 3

Meter Condition: 3

Meter Comment:

Comments:

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 8/11/2016 12:53:37 PM

Insp ID: 3358 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

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

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 8/11/2016 12:31:08 PM

Insp ID: 3359 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

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

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 8/11/2016 1:05:20 PM

Insp ID: 3360 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond: 3

Meter Condition: 3

Meter Comment:

Comments:

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 8/11/2016 12:20:57 PM

Insp ID: 3361 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond: 4

Meter Condition: 3

Meter Comment: 2 Digital Meters. Indoor SB, Cond 4

Comments:

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 8/11/2016 12:39:59 PM

Insp ID: 3362 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

Meter Type: Electrical

Meter Switchboard Cond:

Meter Condition:

Meter Comment:

Comments:

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 8/11/2016 1:44:02 PM

Insp ID: 3363 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond: 3

Meter Condition: 3

Meter Comment: 2 Digital Meters. Indoor SB, Cond 3

Comments:

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 8/11/2016 1:46:33 PM

Insp ID: 3364 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

Meter Type:	Prepaid
Meter Switchboard Cond:	3
Meter Condition:	3
Meter Comment:	2 Digital Meters. Indoor SB, Cond 3
Comments:	

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 8/11/2016 2:28:25 PM

Insp ID: 3365 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond: 3

Meter Condition: 3

Meter Comment: Indoor SB, Cond 3

Comments:

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 8/11/2016 2:09:27 PM

Insp ID: 3366 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond: 3

Meter Condition: 3

Meter Comment: Indoor SB, Cond 3

Comments:

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 8/11/2016 2:43:58 PM

Insp ID: 3367 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

Meter Type:	Prepaid	
Meter Switchboard Cond:	2	
Meter Condition:	3	
Meter Comment:	Condition of CB not assessed.	Indoor SB Needs upgraded to equip with RCD.
Comments:		

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 8/11/2016 2:08:18 PM

Insp ID: 3368 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

Meter Type: Electrical

Meter Switchboard Cond:

Meter Condition:

Meter Comment:

Comments:

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 8/11/2016 2:47:30 PM

Insp ID: 3369 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

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

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 8/11/2016 2:15:32 PM

Insp ID: 3373 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond: 2

Meter Condition: 3

Meter Comment: Blank plates are missing on CB slot. Indoor SB, Cond 3

Comments:

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 8/11/2016 2:01:44 PM

Insp ID: 3374 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond:

Meter Condition: 3

Meter Comment: Condition of CB not assessed.

Comments:

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/11/2016 11:02:43 AM

Insp ID: 3379 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond: 3

Meter Condition: 3

Meter Comment:

Comments:

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 9/11/2016 11:27:55 AM

Insp ID: 3380 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

Meter Type:	Prepaid
Meter Switchboard Cond:	2
Meter Condition:	3
Meter Comment:	Blank plates are missing on CB slot.
Comments:	

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 18/11/2016 2:39:30 PM

Insp ID: 3400 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond: 1

Meter Condition: 3

Meter Comment: Blank plates are missing on CB slot.

Comments:

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 18/11/2016 2:38:19 PM

Insp ID: 3402 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond:

Meter Condition: 3

Meter Comment: Condition of CB not assessed.

Comments:

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 18/11/2016 2:27:46 PM

Insp ID: 3403 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond:

Meter Condition: 3

Meter Comment: 2 Digital Meters, Condition of CB not assessed. Indoor SB, Cond 3

Comments:

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 18/11/2016 1:58:52 PM

Insp ID: 3404 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond:

Meter Condition: 3

Meter Comment: 2 Digital Meters, Condition of CB not assessed.

Comments:

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 18/11/2016 1:42:48 PM

Insp ID: 3405 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond: 2

Meter Condition: 3

Meter Comment: 2 Digital Meters, Blank plates are missing on CB slot. . Indoor SB, Cond 3

Comments:

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 18/11/2016 1:31:00 PM

Insp ID: 3406 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond: 3

Meter Condition: 3

Meter Comment: Indoor SB, Cond 3

Comments:

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 18/11/2016 1:27:46 PM

Insp ID: 3407 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond: 3

Meter Condition: 3

Meter Comment:

Comments:

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 18/11/2016 1:14:22 PM

Insp ID: 3408 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond: 3

Meter Condition: 3

Meter Comment:

Comments:

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 18/11/2016 1:04:16 PM

Insp ID: 3409 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond:

Meter Condition: 3

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

Comments:

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 18/11/2016 12:47:07 PM

Insp ID: 3410 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond: 3

Meter Condition: 3

Meter Comment: Indoor SB, Cond 2, Blank plates are missing on CB slot.

Comments:

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 18/11/2016 12:34:34 PM

Insp ID: 3411 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing: Electrical Meters

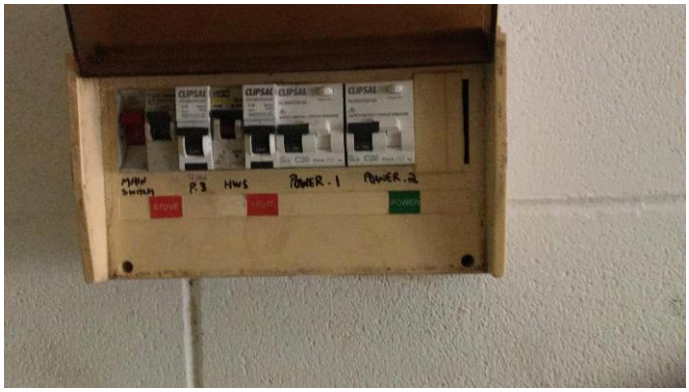
Meter Type: Prepaid

Meter Switchboard Cond: 2

Meter Condition: 3

Meter Comment: 3 Digital Meters, Blank plates are missing on CB slot. Indoor SB, Cond 2, Blank plates are

Comments:



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 10:30:55 AM

Insp ID: 2 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing:	Street Light
What is power supply method:	Underground
What is the lamp type:	M80D 11
What Wattage is the lamp:	80
What is the condition of street lights:	3
What is Street Lighting pole installation height (approximate):	6

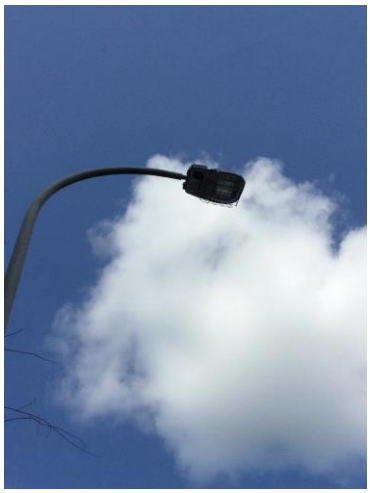
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 10:23:58 AM

Insp ID: 3 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing:	Street Light
What is power supply method:	Underground
What is the lamp type:	M80D 11
What Wattage is the lamp:	80
What is the condition of street lights:	3
What is Street Lighting pole installation height (approximate):	6



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 10:16:10 AM

Insp ID: 4 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing:	Street Light
What is power supply method:	Underground
What is the lamp type:	S250C00
What Wattage is the lamp:	
What is the condition of street lights:	4
What is Street Lighting pole installation height (approximate):	8

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 11:20:41 AM

Insp ID: 6 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing:	Street Light
What is power supply method:	Underground
What is the lamp type:	M80D 11
What Wattage is the lamp:	80
What is the condition of street lights:	3
What is Street Lighting pole installation height (approximate):	6

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 11:36:42 AM

Insp ID: 7 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing:	Street Light
What is power supply method:	Underground
What is the lamp type:	M80D 11
What Wattage is the lamp:	80
What is the condition of street lights:	3
What is Street Lighting pole installation height (approximate):	6

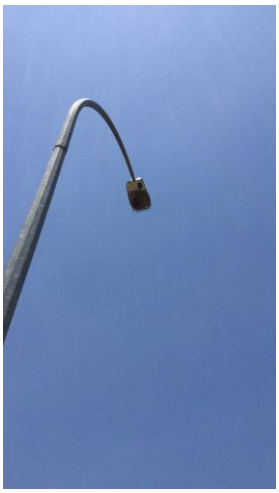
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 12:11:00 PM

Insp ID: 10 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing:	Street Light
What is power supply method:	Underground
What is the lamp type:	M80D 10
What Wattage is the lamp:	80
What is the condition of street lights:	3
What is Street Lighting pole installation height (approximate):	6



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 12:30:39 PM

Insp ID: 12 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing:	Street Light
What is power supply method:	Underground
What is the lamp type:	M80D 11
What Wattage is the lamp:	80
What is the condition of street lights:	3
What is Street Lighting pole installation height (approximate):	6

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 12:48:56 PM

Insp ID: 14 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing:	Street Light
What is power supply method:	Underground
What is the lamp type:	M80D11
What Wattage is the lamp:	80
What is the condition of street lights:	3
What is Street Lighting pole installation height (approximate):	6

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 12:50:34 PM

Insp ID: 16 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing:	Street Light
What is power supply method:	Underground
What is the lamp type:	M80D 11
What Wattage is the lamp:	80
What is the condition of street lights:	3
What is Street Lighting pole installation height (approximate):	6

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 12:58:29 PM

Insp ID: 19 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing:	Street Light
What is power supply method:	Underground
What is the lamp type:	M80D 11
What Wattage is the lamp:	80
What is the condition of street lights:	3
What is Street Lighting pole installation height (approximate):	6

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 2:23:38 PM

Insp ID: 26 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing:	Street Light
What is power supply method:	Underground
What is the lamp type:	M80D11
What Wattage is the lamp:	80
What is the condition of street lights:	3
What is Street Lighting pole installation height (approximate):	6

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 2:08:18 PM

Insp ID: 30 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing:	Street Light
What is power supply method:	Underground
What is the lamp type:	M80D11
What Wattage is the lamp:	80
What is the condition of street lights:	4
What is Street Lighting pole installation height (approximate):	6

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 2:52:38 PM

Insp ID: 32 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing:	Street Light
What is power supply method:	Underground
What is the lamp type:	M80D 11
What Wattage is the lamp:	80
What is the condition of street lights:	3
What is Street Lighting pole installation height (approximate):	6

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 2:58:40 PM

Insp ID: 33 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing:	Street Light
What is power supply method:	1
What is the lamp type:	M80D 11
What Wattage is the lamp:	80
What is the condition of street lights:	3
What is Street Lighting pole installation height (approximate):	6

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 3:07:07 PM

Insp ID: 34 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing:	Street Light
What is power supply method:	Underground
What is the lamp type:	M80D 11
What Wattage is the lamp:	80
What is the condition of street lights:	3
What is Street Lighting pole installation height (approximate):	6

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 3:12:09 PM

Insp ID: 36 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing:	Street Light
What is power supply method:	Underground
What is the lamp type:	M80D 11
What Wattage is the lamp:	80
What is the condition of street lights:	3
What is Street Lighting pole installation height (approximate):	6

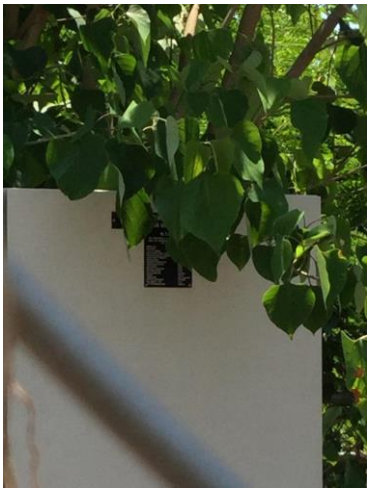
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 12:42:23 PM

Insp ID: 15 Group 1 - Darwin, Jabiru, Adelaide River Bagot

What Category are you capturing:	Transformers
What is Transformer installation method:	Outdoor
If method know:	11SS1P
What is the condition of the mounting:	3
What is Transformer Rating:	Unknown
Is there access to transformers name plate to take a photo:	No
What is the condition of transformer:	3
What is cable type to transformer:	Unknown
What is cable size to transformer:	
Is there switch gear or fusing associated with the transformer:	Metering panel
Transformer Comment:	Fenced no access, yard maintenance required

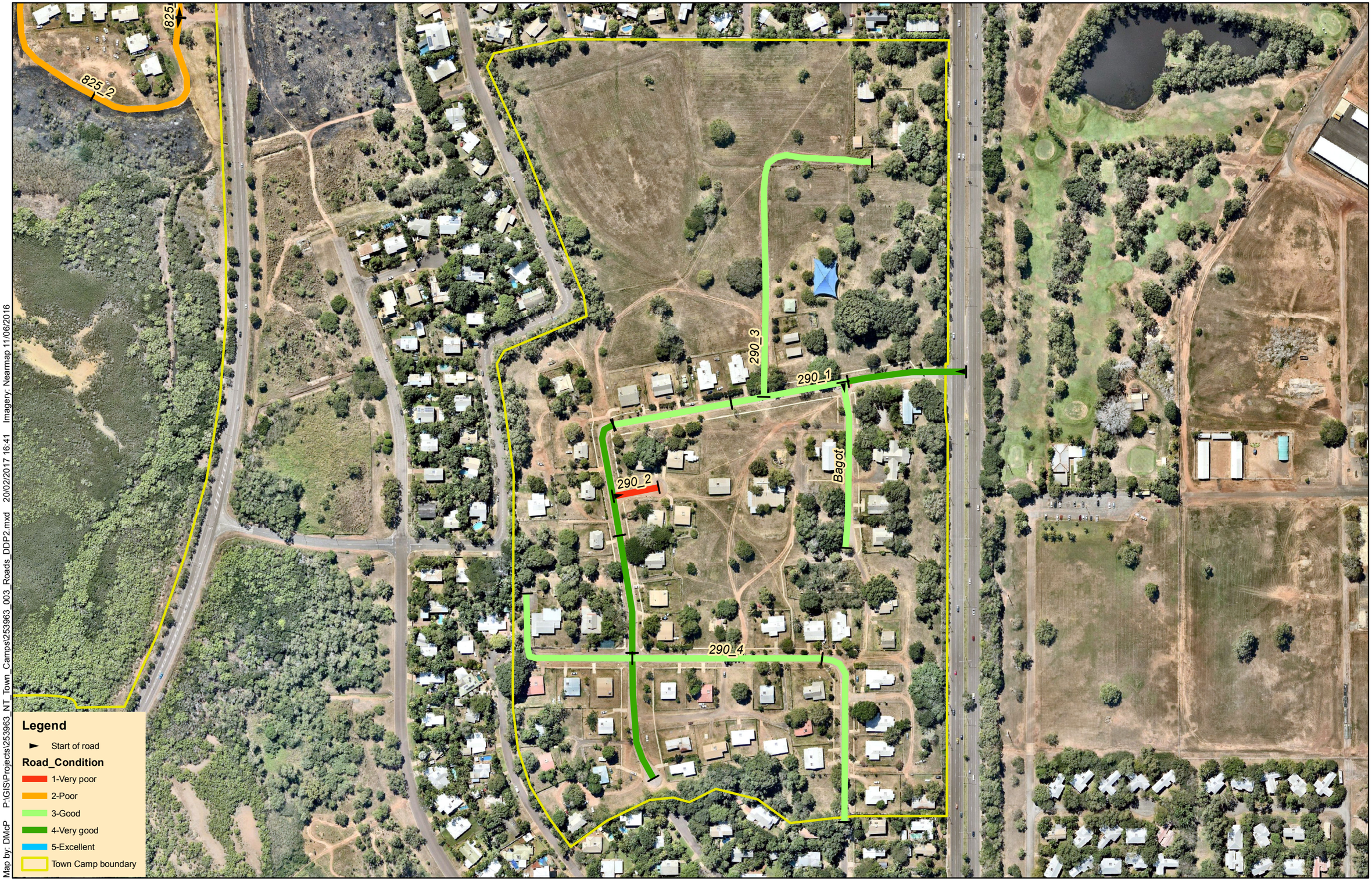


Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 7/11/2016 12:42:23 PM

Road map



Map by: DMcP P:\GIS\Projects\253963_NT_Town_Camps\253963_003_Roads_DDP2.mxd 20/02/2017 16:41 Imagery: Nearmap 11/06/2016

A3 scale: 1:3,000

0 20 40 60 80 100 m

Date: 20/02/2017 Version: 1

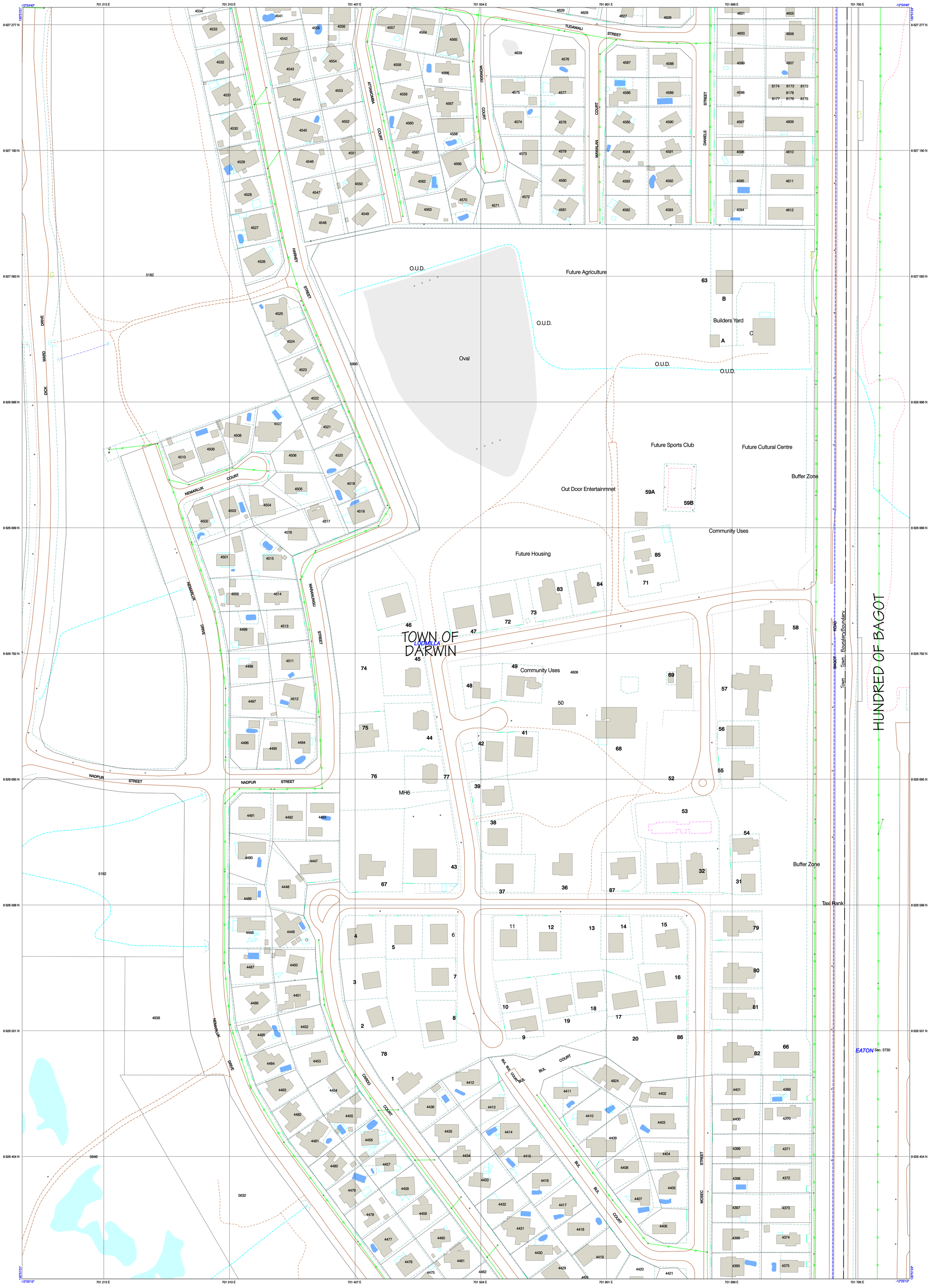
Coordinate system:MGA52

NT Town Camp Road Assessments

290 - Bagot (Darwin)

6910

Existing drawings



LEGEND

LAND USE PLANNING:

APPROX. POSITION OF BUILDING constructed since date of photography

LAND EXCLUDED FROM DEVELOPMENT

GENERAL EXCLUSION BUFFERS

CULTURAL EXCLUSION AREAS:

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

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

CADASTRE

Current 123

Proposed 123

Locality LOCALITY

TOPOGRAPHY

Road Sealed, Bridge

Road Unsealed, Track

Footpath, Drain, Culvert

Wall, Gate, Fence, Cattle Grid

Railway, Disused Railway

Aerodrome Tarmac, Landing Strip

Taxiway, Apron

Pipeline: Oil, Water, Undetermined Gas, Sewage

Building, Building-Shape unconfirmed

Shade Structure, Incomplete Building

Sewage Ponds, Tailings Pond

Oval, Arena, Swimming Pool

High Water Mark, Low Water Mark

Mine; Quarry, Surface Excavation

Contour; Index, Intermediate 75

Contour; Depression

Top of Bank, Bottom of Bank, Cliff

Watercourse; Perennial, Intermittent, Channel or Canal

Water Body; Perennial, Intermittent

Water Body; Reservoir, Water Hole

Swamp; Swamp Perennial, Swamp Intermittent

Flat; Mud Flat, Clay/Saltpan, STI

Pole; Power, General, Light,

Tank; Water, Elevated, Non-Water, Silo

Manhole, Pylon, Communication Tower, Bore.

UTILITY SERVICES

ELECTRICITY

LOW VOLTAGE LV

HIGH VOLTAGE HV

WATER RETICULATION

WATER MAIN W

WATER RISING MAIN W W

SEWER

SEWER MAIN S

SEWER RISING MAIN S S

DIAL BEFORE YOU DIG www.1100.com.au

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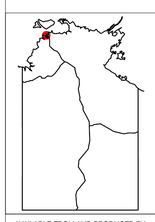
Locality Diagram



AVAILABLE FROM AND PRODUCED BY:

Dept Lands, Planning and the Environment
Land Information Division
3rd Floor NAB House, Darwin
GPO Box 1680 Darwin NT 0801
http://www.nt.gov.au/dlpe

Northern Territory Government

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

General enquiries, corrections, updates, errors and omissions:

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

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

Cadastral Information:
Office of the Surveyor-General
Dept of Lands, Planning and the Environment
TEL: (08) 8995 5353
FAX: (08) 8995 5365
Email: landinfo@nt.gov.au

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

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

Aboriginal Areas Protection Authority:
The Registrar
Aboriginal Areas Protection Authority
TEL: (08) 8999 4332
Email: enquiries.aapa@nt.gov.au

Housing Infrastructure Information:
Infrastructure Delivery Branch
Dept of Housing, Local Government &
Regional Services
TEL: (08) 8999 5013
FAX: (08) 8999 5110
Email: les.dhlgrs@nt.gov.au

NOTES: POWER POLES, MANHOLES, SEPTIC TANKS, TOWERS/POSTS and other similar shaped objects are captured from Aerial Photography and have locations confirmed from aerial survey techniques. These features are suitable as LOCAL SURVEY CONTROL. Their ground location is expected to be within +/-0.3m of their mapped location.

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

SOURCE INFORMATION

CURRENCY OF TOPOGRAPHY :	3 Jun 2011
SOURCE MAP SCALE :	976
ZONE UTM :	52
CONTOUR INTERVAL :	
HORIZONTAL DATUM :	GDA94
VERTICAL DATUM :	AHD
PROJECTION :	Transverse Mercator
DATE GENERATED :	18 June 2013

N

GDA

0 10 20 30 40 50
metres

SERVICED LAND AVAILABILITY PROGRAM

SLAP Map

Bagot (Darwin Town Camp)

Darwin City Council

Community ID : 290