

# Northern Territory Town Camps

## Civil Infrastructure

Inspection Date 1/12/2016 7:45:13 AM

Insp ID: 1441

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

Road Name: 238\_4

What are you inspecting: Signs

Type of Sign: Liquor act warning

Sign Condition: 2 - Poor

Sign Comment:

General Comment:



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 1/12/2016 7:44:24 AM

Insp ID: 1442

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

Road Name: 238\_4

What are you inspecting: Signs

Type of Sign: Camp name sign

Sign Condition: 2 - Poor

Sign Comment:

General Comment:



# Northern Territory Town Camps

## Civil Infrastructure

Inspection Date 1/12/2016 7:43:40 AM

Insp ID: 1443

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

Road Name: 238\_4

What are you inspecting: Signs

Type of Sign: Liquor act warning

Sign Condition: 2 - Poor

Sign Comment:

General Comment:



# Northern Territory Town Camps

## Civil Infrastructure

Inspection Date 1/12/2016 7:41:48 AM

Insp ID: 1444

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

Road Name: 238\_4

What are you inspecting: Signs

Type of Sign: Prescribed area

Sign Condition: 3 - Good

Sign Comment: Sign is old

General Comment:



# Northern Territory Town Camps

## Civil Infrastructure

Inspection Date 1/12/2016 7:57:26 AM

Insp ID: 1431

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Water Asset Are you Capturing: Water Meter

Water Meter Type: Lot

Bulk Water Meter Size (mm):

Bulk Water Meter Condition:

Bulk Water Meter Comment:

Lot Number: 8

Lot Water Meter Size: 25

Lot Water Meter Condition: 2 - Poor

Lot Water Meter Comment: Torres and grass covering meter



# Northern Territory Town Camps

## Civil Infrastructure

Inspection Date 1/12/2016 7:54:24 AM

Insp ID: 1433

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Water Asset Are you Capturing: Water Meter

Water Meter Type: Lot

Bulk Water Meter Size (mm):

Bulk Water Meter Condition:

Bulk Water Meter Comment:

Lot Number: 1

Lot Water Meter Size: 25

Lot Water Meter Condition: 3 - Good

Lot Water Meter Comment: Grass overgrown around meter



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 1/12/2016 8:59:05 AM

Insp ID: 1446

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Water Asset Are you Capturing: Water Meter

Water Meter Type: Lot

Bulk Water Meter Size (mm):

Bulk Water Meter Condition:

Bulk Water Meter Comment:

Lot Number:

Lot Water Meter Size: 25

Lot Water Meter Condition: 4 - Very Good

Lot Water Meter Comment: Two water meters, in one lot



# Northern Territory Town Camps

## Civil Infrastructure

Inspection Date 1/12/2016 8:57:42 AM

Insp ID: 1448

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Water Asset Are you Capturing: Water Meter

Water Meter Type: Lot

Bulk Water Meter Size (mm):

Bulk Water Meter Condition:

Bulk Water Meter Comment:

Lot Number:

Lot Water Meter Size: 25

Lot Water Meter Condition: 3 - Good

Lot Water Meter Comment: No handle





## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 1/12/2016 8:56:50 AM

Insp ID: 1449

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Water Asset Are you Capturing: Water Meter

Water Meter Type: Lot

Bulk Water Meter Size (mm):

Bulk Water Meter Condition:

Bulk Water Meter Comment:

Lot Number:

Lot Water Meter Size: 25

Lot Water Meter Condition: 3 - Good

Lot Water Meter Comment:



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 1/12/2016 8:45:20 AM

Insp ID: 1459

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Water Asset Are you Capturing: Water Meter

Water Meter Type: Lot

Bulk Water Meter Size (mm):

Bulk Water Meter Condition:

Bulk Water Meter Comment:

Lot Number: 4

Lot Water Meter Size: 25

Lot Water Meter Condition: 2 - Poor

Lot Water Meter Comment: No tap handle



# Northern Territory Town Camps

## Civil Infrastructure

Inspection Date 1/12/2016 8:43:31 AM

Insp ID: 1460

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Water Asset Are you Capturing: Water Meter

Water Meter Type: Lot

Bulk Water Meter Size (mm):

Bulk Water Meter Condition:

Bulk Water Meter Comment:

Lot Number: 5

Lot Water Meter Size: 25

Lot Water Meter Condition: 2 - Poor

Lot Water Meter Comment: Leaking, calcium build up, no handle



# Northern Territory Town Camps

## Civil Infrastructure

Inspection Date 1/12/2016 8:29:21 AM

Insp ID: 1469

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Water Asset Are you Capturing: Water Meter

Water Meter Type: Lot

Bulk Water Meter Size (mm):

Bulk Water Meter Condition:

Bulk Water Meter Comment:

Lot Number: 16

Lot Water Meter Size: 25

Lot Water Meter Condition: 3 - Good

Lot Water Meter Comment:



# Northern Territory Town Camps

## Civil Infrastructure

Inspection Date 1/12/2016 8:18:47 AM

Insp ID: 1477

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Water Asset Are you Capturing: Water Meter

Water Meter Type: Lot

Bulk Water Meter Size (mm):

Bulk Water Meter Condition:

Bulk Water Meter Comment:

Lot Number:

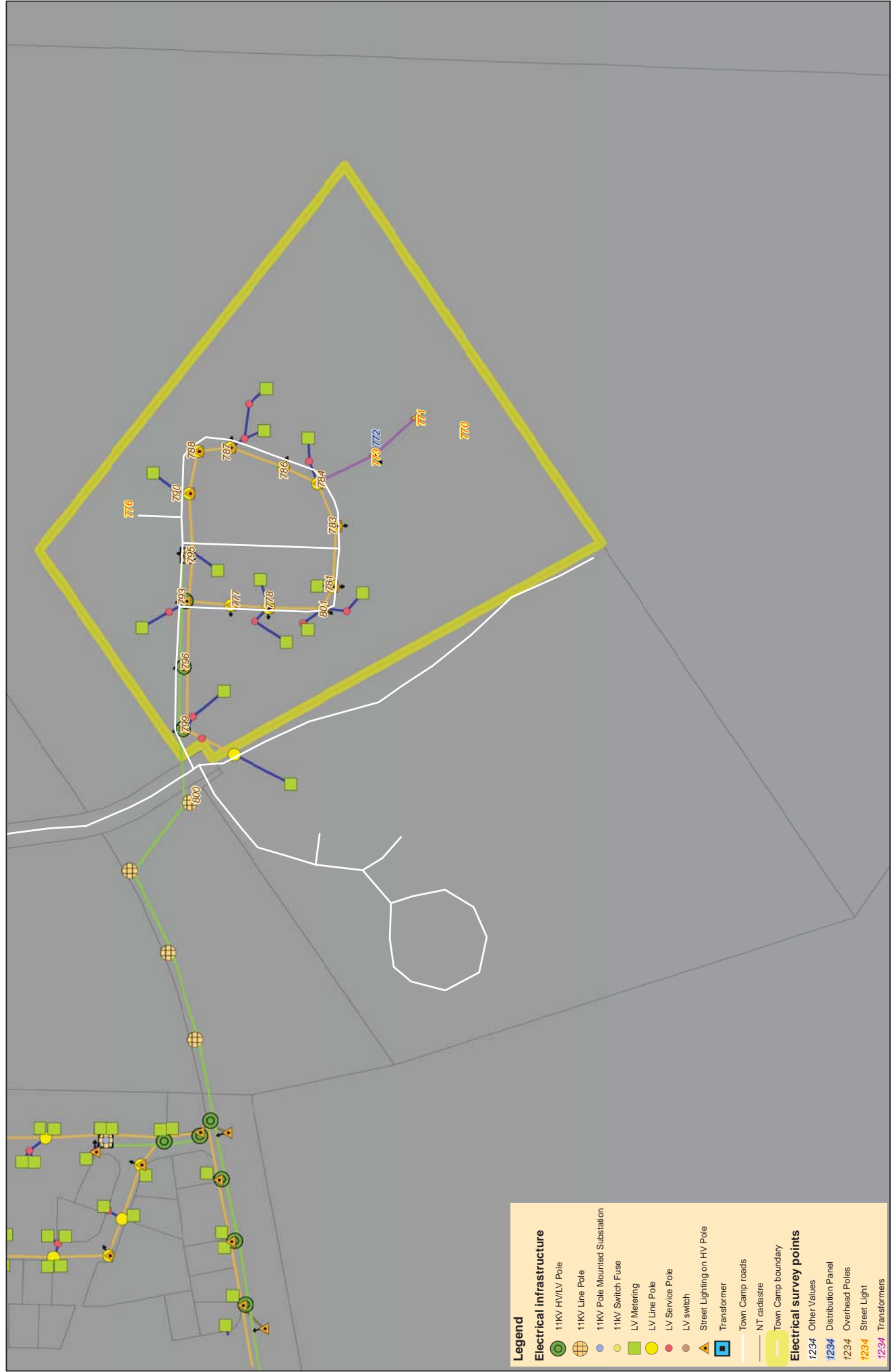
Lot Water Meter Size: 25

Lot Water Meter Condition: 3 - Good

Lot Water Meter Comment: Two water meters



# Electrical inspection reports



Map by: DMCP P:\GIS\Projects\253963\_NT\_Town\_Camps\253963\_004\_Elec\_DDP\_report.mxd 23/02/2017 12:22

**Legend**

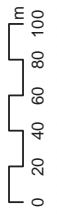
**Electrical infrastructure**

- 11kV HV/LV Pole
- 11kV Line Pole
- 11kV Pole Mounted Substation
- 11kV Switch Fuse
- LV Metering
- LV Line Pole
- LV Service Pole
- LV switch
- Street Lighting on HV Pole
- Transformer
- Town Camp roads
- NT cadastre
- Town Camp boundary

**Electrical survey points**

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

A3 scale: 1:3,000



Date: 23/02/2017 Version: 3  
Coordinate system: MGA94 Zone 52

# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 1/12/2016 9:42:44 AM

Insp ID: 772

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Category are you capturing: Distribution Panel

What is Main Distribution Panel installation method:

Outdoor

Is the distribution panel labelled:

No

What is Distribution Panel main CB Rating:

Unknown

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

Unknown

What is the condition of switchboard:

Condition Comments:

What is the condition of cables/glands into switchboard:

Cable/Gland Condition Comments:

Distribution Panels name plate access:





# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 1/12/2016 9:37:31 AM

Insp ID: 774      Group 3 - Tennant Creek, Elliott      Kargaru (East Side Camp)

What Comms Category are you capturing:      Distribution

What is distribution method to households:      Underground

Is it Shared with PWC:

Is there Anti-climb barrier provided for this pole:

What is Pole construction type:

Is street light fitted:

Is there concrete collar around the base of pole:

What is the condition of tap off to house:

What is the condition of pole:

How many Lots are connected to this pole:

Is there access to Pits to take a photo:      No

What is Pit Condition:      3

Underground Comments:



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 1/12/2016 9:20:43 AM

Insp ID: 779      Group 3 - Tennant Creek, Elliott      Kargaru (East Side Camp)

What Comms Category are you capturing:      Distribution

What is distribution method to households:      Underground

Is it Shared with PWC:

Is there Anti-climb barrier provided for this pole:

What is Pole construction type:

Is street light fitted:

Is there concrete collar around the base of pole:

What is the condition of tap off to house:

What is the condition of pole:

How many Lots are connected to this pole:

Is there access to Pits to take a photo:      No

What is Pit Condition:      3

Underground Comments:



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 1/12/2016 9:19:51 AM

Insp ID: 780      Group 3 - Tennant Creek, Elliott      Kargaru (East Side Camp)

What Comms Category are you capturing:      Distribution

What is distribution method to households:      Underground

Is it Shared with PWC:

Is there Anti-climb barrier provided for this pole:

What is Pole construction type:

Is street light fitted:

Is there concrete collar around the base of pole:

What is the condition of tap off to house:

What is the condition of pole:

How many Lots are connected to this pole:

Is there access to Pits to take a photo:      No

What is Pit Condition:      3

Underground Comments:



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 1/12/2016 8:57:10 AM

Insp ID: 785

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Comms Category are you capturing: Distribution

What is distribution method to households: Underground

Is it Shared with PWC:

Is there Anti-climb barrier provided for this pole:

What is Pole construction type:

Is street light fitted:

Is there concrete collar around the base of pole:

What is the condition of tap off to house:

What is the condition of pole:

How many Lots are connected to this pole:

Is there access to Pits to take a photo: No

What is Pit Condition: 3

Underground Comments:



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 1/12/2016 8:44:57 AM

Insp ID: 789      Group 3 - Tennant Creek, Elliott      Kargaru (East Side Camp)

What Comms Category are you capturing:      Distribution

What is distribution method to households:      Underground

Is it Shared with PWC:

Is there Anti-climb barrier provided for this pole:

What is Pole construction type:

Is street light fitted:

Is there concrete collar around the base of pole:

What is the condition of tap off to house:

What is the condition of pole:

How many Lots are connected to this pole:

Is there access to Pits to take a photo:      No

What is Pit Condition:      3

Underground Comments:



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 1/12/2016 8:38:55 AM

Insp ID: 791

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Comms Category are you capturing: Distribution

What is distribution method to households: Underground

Is it Shared with PWC:

Is there Anti-climb barrier provided for this pole:

What is Pole construction type:

Is street light fitted:

Is there concrete collar around the base of pole:

What is the condition of tap off to house:

What is the condition of pole:

How many Lots are connected to this pole:

Is there access to Pits to take a photo: No

What is Pit Condition: 3

Underground Comments:



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 1/12/2016 8:38:02 AM

Insp ID: 792

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Comms Category are you capturing: Distribution

What is distribution method to households: Underground

Is it Shared with PWC:

Is there Anti-climb barrier provided for this pole:

What is Pole construction type:

Is street light fitted:

Is there concrete collar around the base of pole:

What is the condition of tap off to house:

What is the condition of pole:

How many Lots are connected to this pole:

Is there access to Pits to take a photo: No

What is Pit Condition: 3

Underground Comments:



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 1/12/2016 8:20:13 AM

Insp ID: 798

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Comms Category are you capturing: Distribution

What is distribution method to households: Underground

Is it Shared with PWC:

Is there Anti-climb barrier provided for this pole:

What is Pole construction type:

Is street light fitted:

Is there concrete collar around the base of pole:

What is the condition of tap off to house:

What is the condition of pole:

How many Lots are connected to this pole:

Is there access to Pits to take a photo: No

What is Pit Condition: 3

Underground Comments:





# Northern Territory Town Camps

## Communications Infrastructure

Inspection Date 1/12/2016 9:36:47 AM

Insp ID: 775      Group 3 - Tennant Creek, Elliott      Kargaru (East Side Camp)

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



# Northern Territory Town Camps

## Communications Infrastructure

Inspection Date 1/12/2016 8:21:13 AM

Insp ID: 797

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Comms Category are you capturing:

General

Telstra Comms Drawing Available:

No

Facility upgrade not in drawings:

No

Which telecoms carriers are present in the town camp:

Telstra

How many Communications Pit(s) are allocated in this town camp:



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 6/12/2016 10:57:33 AM

Insp ID: 3523

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

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 6/12/2016 10:47:42 AM

Insp ID: 3524

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

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 6/12/2016 10:37:56 AM

Insp ID: 3525

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Category are you capturing: Electrical Meters

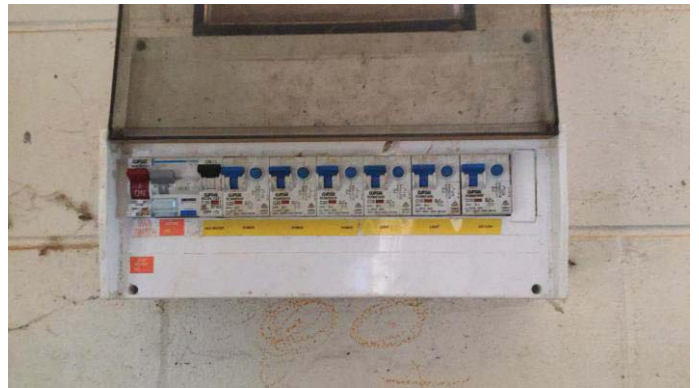
Meter Type: Prepaid

Meter Switchboard Cond: 3

Meter Condition: 3

Meter Comment: Indoor SB, Cond 3

Comments:



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 6/12/2016 10:23:01 AM

Insp ID: 3526      Group 3 - Tennant Creek, Elliott      Kargaru (East Side Camp)

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 6/12/2016 10:08:28 AM

Insp ID: 3527

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

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 6/12/2016 9:56:58 AM

Insp ID: 3528

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

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 6/12/2016 11:07:05 AM

Insp ID: 3537

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

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 6/12/2016 10:45:11 AM

Insp ID: 3539      Group 3 - Tennant Creek, Elliott      Kargaru (East Side Camp)

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 6/12/2016 10:33:21 AM

Insp ID: 3540

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

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 6/12/2016 10:16:32 AM

Insp ID: 3542      Group 3 - Tennant Creek, Elliott      Kargaru (East Side Camp)

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 6/12/2016 9:38:40 AM

Insp ID: 3543

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Category are you capturing: Electrical Meters

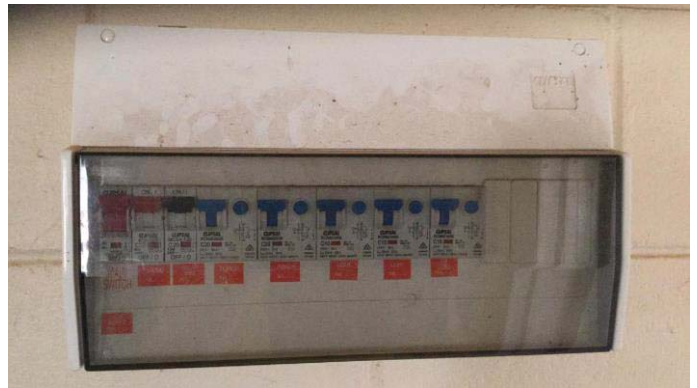
Meter Type: Prepaid

Meter Switchboard Cond: 3

Meter Condition: 3

Meter Comment: Indoor SB, Cond 3

Comments:



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 9/01/2017 2:25:44 PM

Insp ID: 3576

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

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 1/12/2016 9:26:00 AM

Insp ID: 777

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Category are you capturing: Overhead Poles

What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	M125D 10
Street Light Watts	125
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 1/12/2016 9:26:00 AM





## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 1/12/2016 9:23:15 AM

Insp ID: 778

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Category are you capturing: Overhead Poles

What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	M125D 10
Street Light Watts	125
Street Light Condition	3
Street Light Height	
What is the type of service:	Three
What is the HV voltage level:	400
What is the arrangement of connected cables:	Twisted
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	2
Overhead Pole Comments:	Surface rusted

# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 1/12/2016 9:23:15 AM



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 1/12/2016 9:16:57 AM

Insp ID: 781

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Category are you capturing: Overhead Poles

What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	M125D 10
Street Light Watts	125
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 1/12/2016 9:16:57 AM



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 1/12/2016 9:04:01 AM

Insp ID: 783

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Category are you capturing: Overhead Poles

What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	M125D 10
Street Light Watts	125
Street Light Condition	2
Street Light Height	
What is the type of service:	Three
What is the HV voltage level:	400
What is the arrangement of connected cables:	Twisted
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	1
Overhead Pole Comments:	Surface rusted

# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 1/12/2016 9:04:01 AM



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 1/12/2016 9:00:52 AM

Insp ID: 784

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

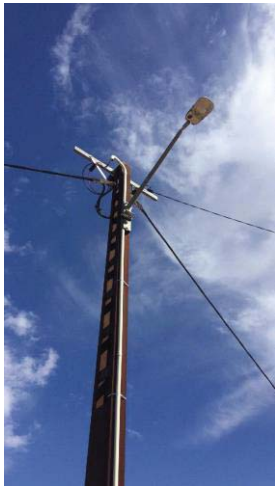
What Category are you capturing: Overhead Poles

What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	M125D 09
Street Light Watts	125
Street Light Condition	2
Street Light Height	
What is the type of service:	Three
What is the HV voltage level:	400
What is the arrangement of connected cables:	Twisted
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	1
Overhead Pole Comments:	Surface rusted

# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 1/12/2016 9:00:52 AM





## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 1/12/2016 8:56:08 AM

Insp ID: 786

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Category are you capturing: Overhead Poles

What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	M125D 10
Street Light Watts	125
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 1/12/2016 8:56:08 AM



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 1/12/2016 8:50:44 AM

Insp ID: 787

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Category are you capturing: Overhead Poles

What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	M125D 10
Street Light Watts	125
Street Light Condition	2
Street Light Height	
What is the type of service:	Three
What is the HV voltage level:	400
What is the arrangement of connected cables:	
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 1/12/2016 8:50:44 AM



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 1/12/2016 8:47:39 AM

Insp ID: 788

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Category are you capturing: Overhead Poles

What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	M125D 09
Street Light Watts	125
Street Light Condition	2
Street Light Height	
What is the type of service:	Three
What is the HV voltage level:	400
What is the arrangement of connected cables:	Twisted
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	0
Overhead Pole Comments:	Surface rusted

# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 1/12/2016 8:47:39 AM



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 1/12/2016 8:43:52 AM

Insp ID: 790

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Category are you capturing: Overhead Poles

What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	M125D 10
Street Light Watts	125
Street Light Condition	2
Street Light Height	
What is the type of service:	Three
What is the HV voltage level:	400
What is the arrangement of connected cables:	Twisted
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	1
Overhead Pole Comments:	Surface rusted

# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 1/12/2016 8:43:52 AM





## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 1/12/2016 8:36:34 AM

Insp ID: 793

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Category are you capturing: Overhead Poles

What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S70D 13
Street Light Watts	70
Street Light Condition	2
Street Light Height	
What is the type of service:	Combined
What is the HV voltage level:	11000
What is the arrangement of connected cables:	Parallel
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	1
Overhead Pole Comments:	Surface rusted

# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 1/12/2016 8:36:34 AM



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 1/12/2016 8:30:10 AM

Insp ID: 795

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Category are you capturing: Overhead Poles

What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	M125D 10
Street Light Watts	125
Street Light Condition	2
Street Light Height	
What is the type of service:	Combined
What is the HV voltage level:	1100
What is the arrangement of connected cables:	Parallel
Are there isolators on the pole:	Yes
What is the Condition:	3
How many Lots are connected to this pole:	1
Overhead Pole Comments:	Surface rusted

# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 1/12/2016 8:30:10 AM



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 1/12/2016 8:24:42 AM

Insp ID: 796

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Category are you capturing: Overhead Poles

What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	M125D 08
Street Light Watts	125
Street Light Condition	2
Street Light Height	
What is the type of service:	Combined
What is the HV voltage level:	11000
What is the arrangement of connected cables:	Parallel
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	0
Overhead Pole Comments:	Surface rusted

# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 1/12/2016 8:24:42 AM



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 1/12/2016 8:19:13 AM

Insp ID: 799

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Category are you capturing: Overhead Poles

What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	M125D 10
Street Light Watts	125
Street Light Condition	2
Street Light Height	
What is the type of service:	Combined
What is the HV voltage level:	11000
What is the arrangement of connected cables:	Parallel
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	1
Overhead Pole Comments:	Surface rusted

# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 1/12/2016 8:19:13 AM





## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 1/12/2016 8:14:53 AM

Insp ID: 800

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Category are you capturing: Overhead Poles

What is Pole Material type: Welded

What is the condition of pole: 3

How is the pole planted: Concrete

What is the Condition of plant: 3

Is street light fitted: No

Street Light Power Supply:

Street Light Type

Street Light Watts

Street Light Condition

Street Light Height

What is the type of service: Three

What is the HV voltage level: 11000

What is the arrangement of connected cables: Parallel

Are there isolators on the pole: 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 1/12/2016 8:14:53 AM



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 1/12/2016 9:14:30 AM

Insp ID: 801

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Category are you capturing: Overhead Poles

What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	M125D 10
Street Light Watts	125
Street Light Condition	3
Street Light Height	
What is the type of service:	Three
What is the HV voltage level:	400
What is the arrangement of connected cables:	Twisted
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	2
Overhead Pole Comments:	Surface rusted

# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 1/12/2016 9:14:30 AM



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 1/12/2016 9:26:00 AM

Insp ID: 777

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Category are you capturing: Overhead Poles

Is street light fitted: Yes

Street Light Power Supply:

Street Light Type M125D 10

Street Light Watts 125

Street Light Condition 3

Street Light Height



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 1/12/2016 9:26:00 AM



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 1/12/2016 9:23:15 AM

Insp ID: 778

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Category are you capturing: Overhead Poles

Is street light fitted: Yes

Street Light Power Supply:

Street Light Type M125D 10

Street Light Watts 125

Street Light Condition 3

Street Light Height



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 1/12/2016 9:23:15 AM





# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 1/12/2016 9:16:57 AM

Insp ID: 781      Group 3 - Tennant Creek, Elliott      Kargaru (East Side Camp)

What Category are you capturing: Overhead Poles

Is street light fitted: Yes

Street Light Power Supply:

Street Light Type M125D 10

Street Light Watts 125

Street Light Condition 3

Street Light Height



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 1/12/2016 9:16:57 AM



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 1/12/2016 9:04:01 AM

Insp ID: 783

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Category are you capturing: Overhead Poles

Is street light fitted: Yes

Street Light Power Supply:

Street Light Type M125D 10

Street Light Watts 125

Street Light Condition 2

Street Light Height



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 1/12/2016 9:04:01 AM



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 1/12/2016 9:00:52 AM

Insp ID: 784

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Category are you capturing: Overhead Poles

Is street light fitted: Yes

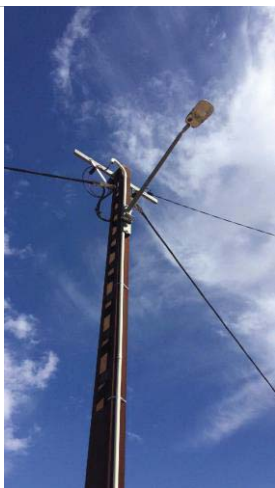
Street Light Power Supply:

Street Light Type M125D 09

Street Light Watts 125

Street Light Condition 2

Street Light Height



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 1/12/2016 9:00:52 AM



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 1/12/2016 8:56:08 AM

Insp ID: 786

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Category are you capturing: Overhead Poles

Is street light fitted: Yes

Street Light Power Supply:

Street Light Type M125D 10

Street Light Watts 125

Street Light Condition 3

Street Light Height



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 1/12/2016 8:56:08 AM





# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 1/12/2016 8:50:44 AM

Insp ID: 787

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Category are you capturing: Overhead Poles

Is street light fitted: Yes

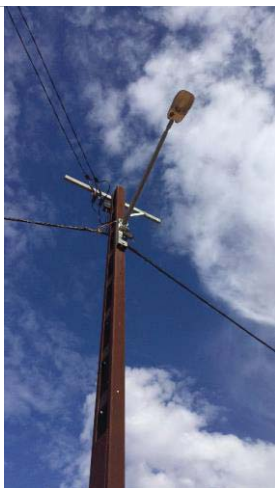
Street Light Power Supply:

Street Light Type M125D 10

Street Light Watts 125

Street Light Condition 2

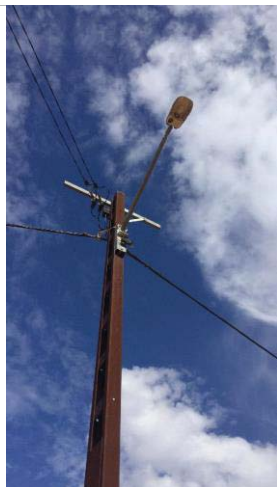
Street Light Height



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 1/12/2016 8:50:44 AM



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 1/12/2016 8:47:39 AM

Insp ID: 788      Group 3 - Tennant Creek, Elliott      Kargaru (East Side Camp)

What Category are you capturing: Overhead Poles

Is street light fitted: Yes

Street Light Power Supply:

Street Light Type M125D 09

Street Light Watts 125

Street Light Condition 2

Street Light Height



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 1/12/2016 8:47:39 AM



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 1/12/2016 8:43:52 AM

Insp ID: 790

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Category are you capturing: Overhead Poles

Is street light fitted: Yes

Street Light Power Supply:

Street Light Type M125D 10

Street Light Watts 125

Street Light Condition 2

Street Light Height



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 1/12/2016 8:43:52 AM



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 1/12/2016 8:36:34 AM

Insp ID: 793

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Category are you capturing: Overhead Poles

Is street light fitted: Yes

Street Light Power Supply:

Street Light Type S70D 13

Street Light Watts 70

Street Light Condition 2

Street Light Height



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 1/12/2016 8:36:34 AM





# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 1/12/2016 8:30:10 AM

Insp ID: 795

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Category are you capturing: Overhead Poles

Is street light fitted: Yes

Street Light Power Supply:

Street Light Type M125D 10

Street Light Watts 125

Street Light Condition 2

Street Light Height



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 1/12/2016 8:30:10 AM



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 1/12/2016 8:24:42 AM

Insp ID: 796      Group 3 - Tennant Creek, Elliott      Kargaru (East Side Camp)

What Category are you capturing: Overhead Poles

Is street light fitted: Yes

Street Light Power Supply:

Street Light Type M125D 08

Street Light Watts 125

Street Light Condition 2

Street Light Height



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 1/12/2016 8:24:42 AM



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 1/12/2016 8:19:13 AM

Insp ID: 799

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Category are you capturing: Overhead Poles

Is street light fitted: Yes

Street Light Power Supply:

Street Light Type M125D 10

Street Light Watts 125

Street Light Condition 2

Street Light Height



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 1/12/2016 8:19:13 AM



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 1/12/2016 9:14:30 AM

Insp ID: 801      Group 3 - Tennant Creek, Elliott      Kargaru (East Side Camp)

What Category are you capturing: Overhead Poles

Is street light fitted: Yes

Street Light Power Supply:

Street Light Type M125D 10

Street Light Watts 125

Street Light Condition 3

Street Light Height



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 1/12/2016 9:14:30 AM





# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 1/12/2016 9:48:38 AM

Insp ID: 770      Group 3 - Tennant Creek, Elliott      Kargaru (East Side Camp)

What Category are you capturing: Street Light

What is power supply method:

Underground

What is the lamp type:

Unknown

What Wattage is the lamp:

What is the condition of street lights:

1

What is Street Lighting pole installation height (approximate):

5



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 1/12/2016 9:46:15 AM

Insp ID: 771

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Category are you capturing: Street Light

What is power supply method:

Underground

What is the lamp type:

M125D 10

What Wattage is the lamp:

125

What is the condition of street lights:

2

What is Street Lighting pole installation height (approximate):

8



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 1/12/2016 9:40:55 AM

Insp ID: 773

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

What Category are you capturing: Street Light

What is power supply method:

Underground

What is the lamp type:

M125D 09

What Wattage is the lamp:

125

What is the condition of street lights:

2

What is Street Lighting pole installation height (approximate):

8



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 1/12/2016 9:34:19 AM

Insp ID: 776

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

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:

1

What is Street Lighting pole installation height (approximate):

5



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 1/12/2016 8:33:28 AM

Insp ID: 794

Group 3 - Tennant Creek, Elliott

Kargaru (East Side Camp)

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:



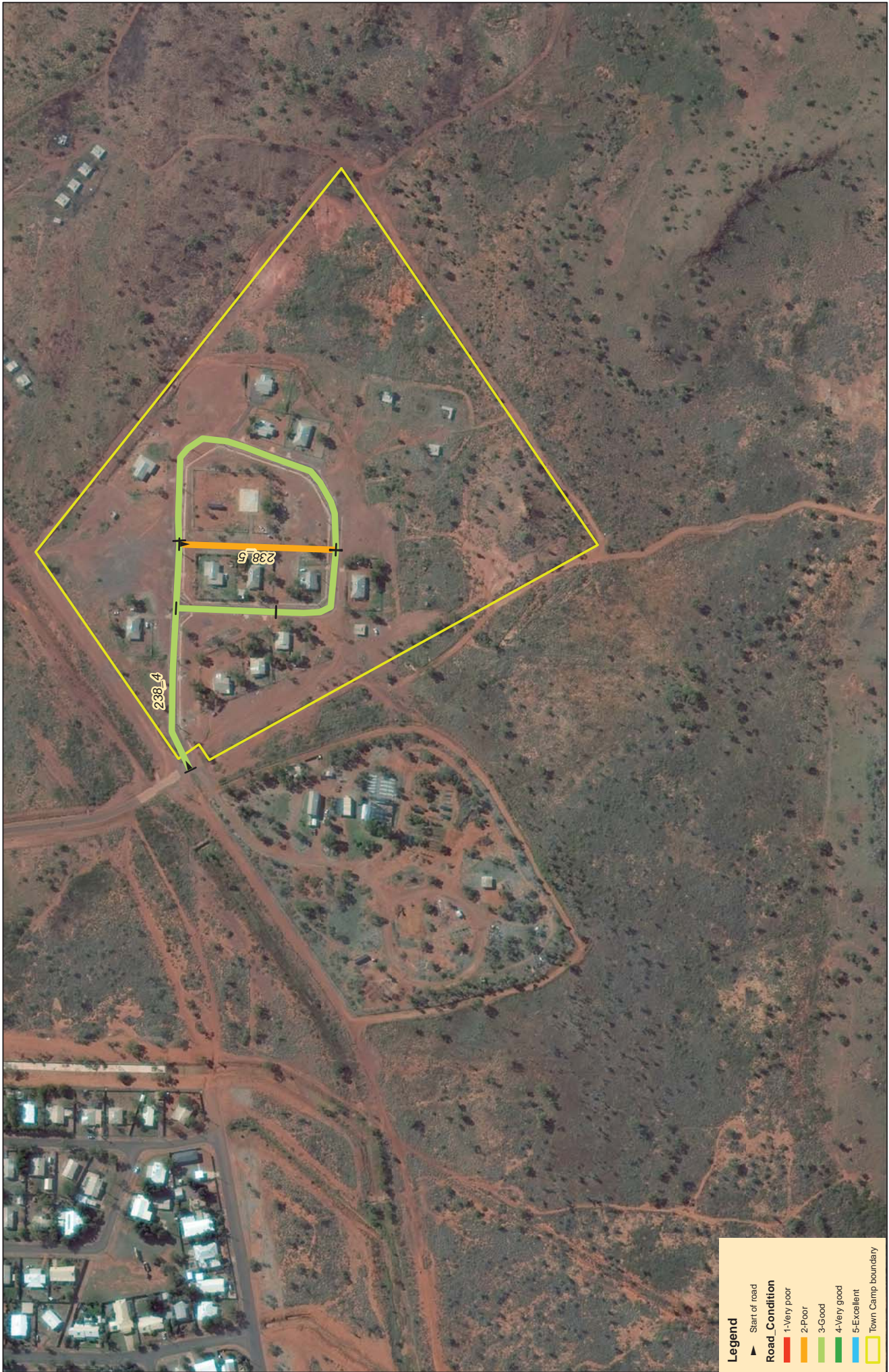
## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 1/12/2016 8:33:28 AM

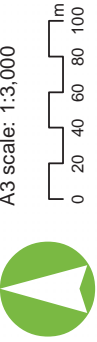


# Road map



**Legend**

- ▲ Start of road
- Road\_Condition**
- 1-Very poor
- 2-Poor
- 3-Good
- 4-Very good
- 5-Excellent
- Town Camp boundary



A3 scale: 1:3,000

Date: 20/02/2017 Version: 1  
Coordinate system: MGA52

**NT Town Camp Road Assessments**  
**238 - Kargaru (Tennant Creek)**



# Existing drawings



**SERVICED LAND AVAILABILITY PROGRAM**  
**SLAP Map**  
**Kargaru (Tennant Creek Town Camp)**  
 East Side Camp  
 Barkly Shire Council  
 Community ID: 288

**Locality Diagram**

**SOURCE INFORMATION**  
 DATE: 22/07/2010  
 DRAWN BY: [Name]  
 CHECKED BY: [Name]  
 APPROVED BY: [Name]

**LEGEND**

- Current**
- Future**
- Proposed**
- Industrial**
- Commercial**
- Residential**
- Special Use**
- Water**
- Drainage**
- Roads**
- Other**

**GENERAL NOTES:**  
 General enquiries, conditions, updates, errors and corrections  
 Kargaru (Tennant Creek) Planning and the Environment  
 TEL: (08) 9499 7800, Email: [Email]

**LEGEND:**

	NEW WATER LINE
	NEW WATER RISING MAIN
	EXISTING WATER LINE
	EXISTING WATER RISING MAIN
	NEW SEWER LINE
	NEW SEWER RISING MAIN
	EXISTING SEWER LINE
	EXISTING SEWER RISING MAIN
	NEW LOW VOLTAGE
	NEW HIGH VOLTAGE
	EXISTING LOW VOLTAGE
	EXISTING HIGH VOLTAGE



- H Existing Residential Development (or as highlighted by building sketch layout).
- V Forecast Residential Lots for Development (up to 2014). Utility Reticulation Services Compliance has been costed for Existing and Forecast Development up to 2014 only.
- F Future Residential Lots Forecast for Development beyond 2014. Utility Reticulation Services shown for future planning only.

**CONNECTING NEIGHBOURS PROJECT - PROPOSED SERVICES LAYOUT**  
**FIGURE F16 - KARGARU**

<b>Scale:</b> 1:250	<b>Client:</b>	<b>DO NOT SCALE</b>	<b>Project:</b>	<b>Client:</b>
<b>Drawn:</b>	<b>Design:</b>	<b>Design:</b>	<b>Project:</b>	<b>Project:</b>
<b>Check:</b>	<b>Check:</b>	<b>Check:</b>	<b>Check:</b>	<b>Check:</b>
<b>Approved:</b>	<b>Approved:</b>	<b>Approved:</b>	<b>Approved:</b>	<b>Approved:</b>
<b>Date:</b>	<b>Date:</b>	<b>Date:</b>	<b>Date:</b>	<b>Date:</b>

This drawing must not be used for construction unless signed as approved.

**GHD**  
Geotechnical  
 Infrastructure  
 Environmental  
 Construction

**Connecting Neighbours Project**  
**Kargaru Services Layout**

Original Size: **A1**  
 Drawing No: **A**

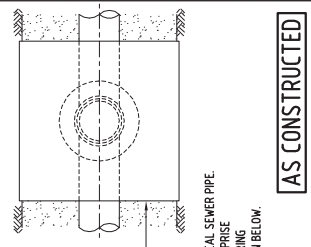
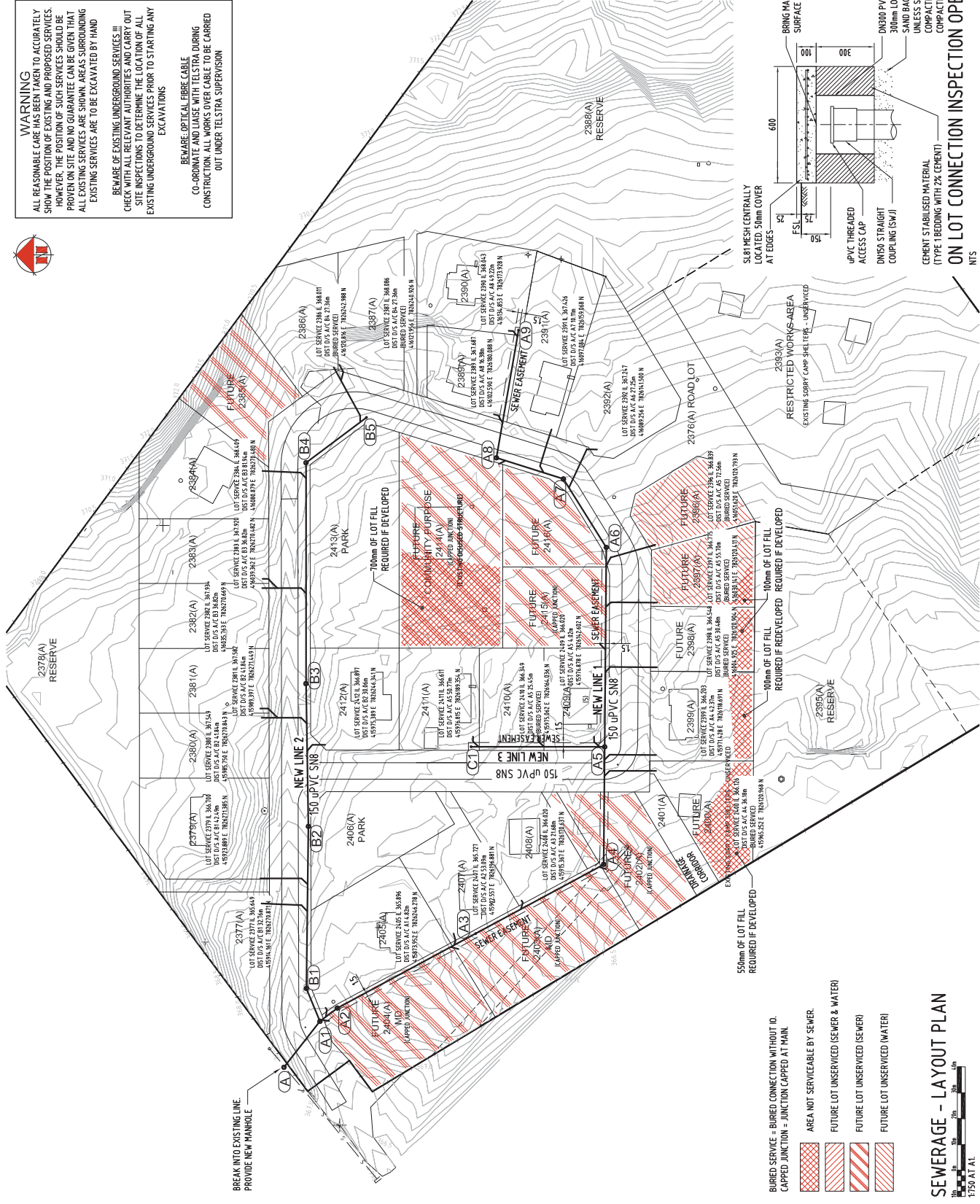
Revision: **A**

SETTING OUT TABLE			
STRUCTURE	EASTING	NORTHING	COMMENTS
A	4.585102	7826248.289	EXISTING ACCESS CHAMBER
A1	4.58668745	7826248.374	NEW ACCESS CHAMBER
A2	4.5873830	7826241.705	NEW ACCESS CHAMBER
A3	4.5902545	7826188.346	NEW MAINTENANCE SHAFT
A4	4.5929235	7826188.895	NEW ACCESS CHAMBER
A5	4.5974595	7826188.888	NEW ACCESS CHAMBER
A6	4.6051484	782637.923	NEW ACCESS CHAMBER
A7	4.6077199	7826154.480	NEW ACCESS CHAMBER
A8	4.6086.005	7826180.85	NEW ACCESS CHAMBER
A9	4.6055.204	7826171.197	NEW ACCESS CHAMBER
B1	4.5881.401	7826253.644	NEW ACCESS CHAMBER
B2	4.5943.911	7826252.006	NEW ACCESS CHAMBER
B3	4.5998.938	7826253.793	NEW ACCESS CHAMBER
B4	4.6084.139	7826253.773	NEW TERMINAL MAINTENANCE SHAFT
B5	4.6101.586	7826230.433	NEW TERMINAL MAINTENANCE SHAFT
C1	4.5974.610	7826190.121	NEW TERMINAL MAINTENANCE SHAFT

**WARNING**  
 ALL REASONABLE CARE HAS BEEN TAKEN TO ACCURATELY SHOW THE POSITIONS OF EXISTING AND PROPOSED SERVICES. THE POSITIONS OF EXISTING SERVICES SHOWN ON THIS DRAWING ARE FOR INFORMATION ONLY AND NO GUARANTEE CAN BE GIVEN THAT ALL EXISTING SERVICES ARE SHOWN. AREAS SURROUNDING EXISTING SERVICES ARE TO BE EXCAVATED BY HAND.

BEWARE OF EXISTING UNDERGROUND SERVICES. IN CHECK WITH ALL RELEVANT AUTHORITIES AND CARRY OUT SITE INSPECTIONS TO DETERMINE THE LOCATION OF ALL EXISTING UNDERGROUND SERVICES PRIOR TO STARTING ANY EXCAVATIONS.

BEWARE OPTICAL FIBRE CABLE CO-ORDINATE AND LIAISE WITH TELSTRA DURING CONSTRUCTION. ALL WORKS OVER CABLE TO BE CARRIED OUT UNDER TELSTRA SUPERVISION.



**ON LOT CONNECTION INSPECTION OPENING DETAIL**  
 NTS

 Department of Planning, Land and Infrastructure Services		SHEET NO. [04, 01] of 26 DRAWING NO. R08-1763 ANCHOR 7 A1003
TEMNANT CREEK KARGARU (238) LOT 2051 KARGARU CAMP ACCESS ROAD TEMNANT CREEK INFRASTRUCTURE DESIGN PROJECT FOR TEMNANT CREEK URBAN LIVING AREAS SEWERAGE LAYOUT PLAN		
CHECKED: JTL DATE: SEPT 2008	CRD: JULY 08 DATE: JULY 08	DATE: JULY 08
DESIGN: DMB PROJECT OFFICER:	DESIGN PROJECT LEADER:	DATE:
 IPT-02-238-CV1-DWG-0021		DATE:
 ABN: 91 988 342 285		DATE:
 Level 1, 80 Smith Street GPO Box 4083 Darwin NT 0801 Telephone: (08) 881 7500 Facsimile: (08) 884 1882 Email: darwin@opusgroup.com.au		DATE:
15.03.2011 DMB 07.12.2011 DMB 29.08.2011 DMB 01.07.2011 DMB 23.05.2011 DMB 23.02.2010 DMB	AMENDMENTS DESCRIPTION DATE INT.	DATE

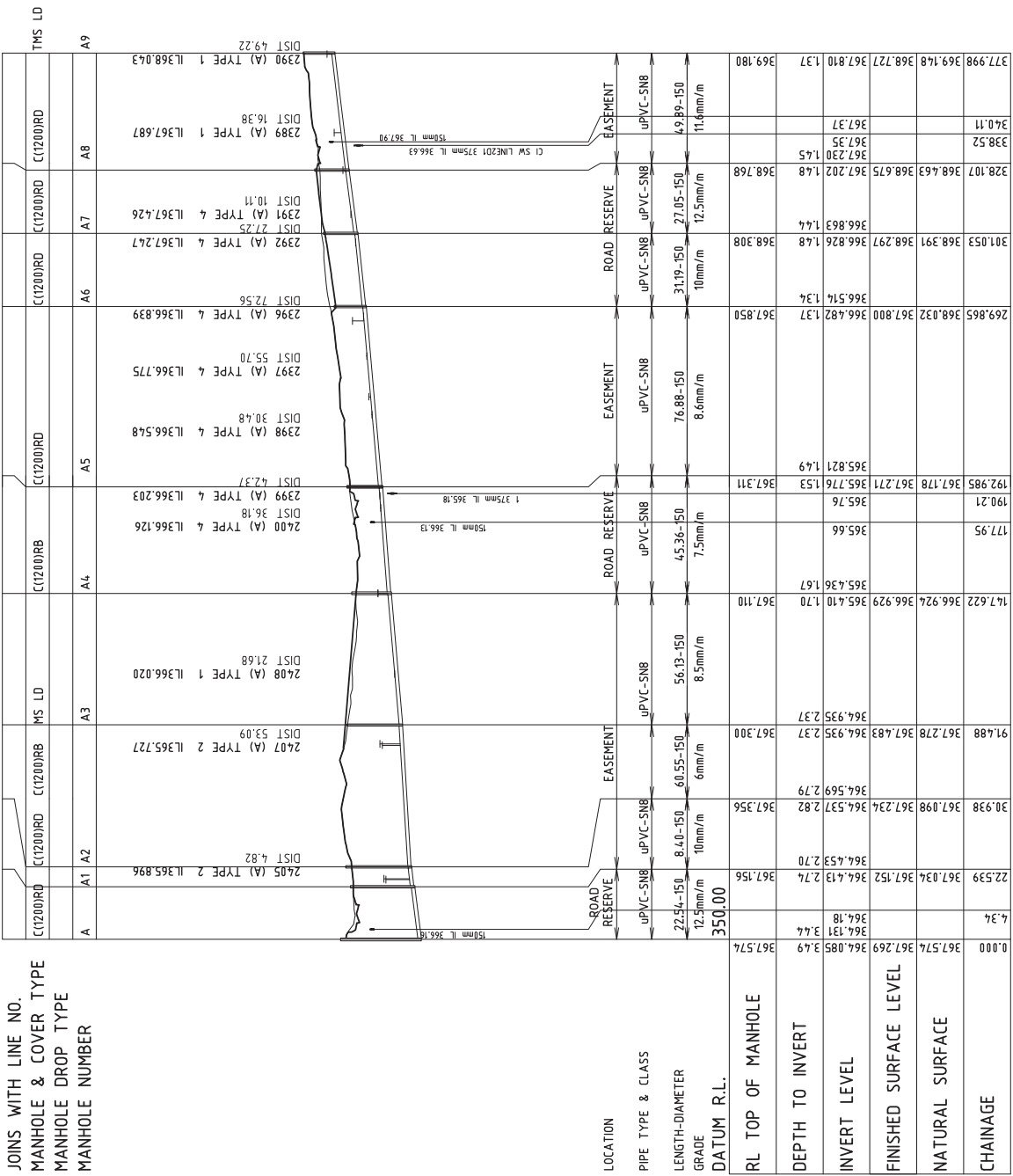
**SEWERAGE - LAYOUT PLAN**  
 1:750 AT A1



- AREA NOT SERVICEABLE BY SEWER.
- FUTURE LOT UNSERVED (SEWER & WATER)
- FUTURE LOT UNSERVED (SEWER)
- FUTURE LOT UNSERVED (WATER)

BURRED SERVICE = BURRED CONNECTION WITHOUT IO. CAPPED JUNCTION = JUNCTION CAPPED AT MAIN.

JOINS WITH LINE NO.  
MANHOLE & COVER TYPE  
MANHOLE DROP TYPE  
MANHOLE NUMBER



SEWERAGE LONGITUDINAL SECTION SHEET 10F 2



LOT NO.	DISTANCE FROM DOWNSTREAM ACCESS CHAMBER (m)	DISTANCE FROM DOWNSTREAM ACCESS CHAMBER NO. (m)	IL OF HOUSE CONNECTION AT EXTENDS INTO PROPERTY (m)	DISTANCE HOUSE CONNECTION EXTENDS INTO PROPERTY (m)	HOUSE CONNECTION TYPE	NOTES
2411	50.77	A5	366.611	0.3m	1	BURIED CONNECTION WITHOUT IO
2410	25.45	A5	366.349	0.3m	1	BURIED CONNECTION WITHOUT IO
2409	4.02	A5	366.020	0.3m	1	BURIED CONNECTION WITHOUT IO
2387	27.36	B4	368.086	2.4m	4	BURIED CONNECTION WITHOUT IO
2386	27.36	B4	368.011	2.4m	4	BURIED CONNECTION WITHOUT IO
2385	81.94	B3	368.611	2.4m	4A	
2384	81.94	B3	368.409	2.4m	4A	
2383	36.82	B3	367.920	2.4m	4A	
2382	36.82	B3	367.934	2.4m	4A	
2381	41.84	B2	367.582	2.4m	4A	
2380	41.84	B2	367.549	2.4m	4A	
2412	30.06	B2	366.832	0.3m	2	
2379	42.49	B1	366.700	2.4m	4A	
2377	32.76	B1	365.649	2.4m	4	
2390	49.22	A8	368.083	0.3m	1	
2389	16.38	A8	367.687	0.3m	1	
2391	10.11	A7	367.426	2.4m	4	
2392	27.25	A6	367.247	2.4m	4	
2396	72.56	A5	366.839	2.4m	4	BURIED CONNECTION WITHOUT IO
2397	55.70	A5	366.775	2.4m	4	BURIED CONNECTION WITHOUT IO
2398	30.48	A5	366.548	2.4m	4	BURIED CONNECTION WITHOUT IO
2399	42.37	A4	366.203	2.4m	4	
2400	36.18	A4	366.126	2.4m	4	BURIED CONNECTION WITHOUT IO
2408	21.68	A3	366.020	0.3m	1	
2407	53.09	A2	365.727	0.3m	2	
2405	4.82	A1	365.896	0.3m	2	
2414	25.80	A7				JUNCTION CAPPED AT MAIN
2402	56.17	A3				JUNCTION CAPPED AT MAIN
2403	54.85	A2				JUNCTION CAPPED AT MAIN
2404	3.19	A1				JUNCTION CAPPED AT MAIN
2415	39.43	A5				JUNCTION CAPPED AT MAIN
2385						NOT SERVICEABLE
2416						UNSERVICED

LINE 1

NO.	DESCRIPTION	DATE	INT.	AMENDMENTS
6	AS CONSTRUCTED	15.03.2012	DMB	
5	AS CONSTRUCTED	12.07.2011	DMB	
4	AS CONSTRUCTED	01.07.2011	DMB	
3	AS CONSTRUCTED	23.05.2011	DMB	
2	RE-ISSUE FOR AUTHORITY APPROVAL, USERAGE REALIGNMENT & STORMWATER RELOCATED	23.02.2010	DMB	
1	ISSUE FOR CONSTRUCTION	21.09.2009	CRD	

FILE NO.	ASSET NO.	SHEET NO.	DRAWING NO.	AMEND.
-	-	C04.02	R08-1764	6

DATE	DESIGN PROJECT LEADER	DATE	PROJECT OFFICER
JULY 08	CPD	SEPT 2008	DMB
JULY 08	CPD	SEPT 2008	DMB

DATE	DESIGN PROJECT LEADER	DATE	PROJECT OFFICER
JULY 08	CPD	SEPT 2008	DMB
JULY 08	CPD	SEPT 2008	DMB

OPUS QANTEC McWILLIAM  
A.B.N. 29 080 342 265  
Level 1, 80 Smith Street  
GPO Box 4983, Darwin NT 0801  
Telephone: (08) 8841 7500  
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territory housing  
Northern Territory Government  
Department of Planning and Infrastructure

TENNANT CREEK  
KARGARU (238) LOT 2051 KARGARU CAMP ACCESS ROAD TENNANT CREEK  
INFRASTRUCTURE DESIGN PROJECT FOR TENNANT CREEK URBAN LIVING AREAS  
SEWERAGE LONGITUDINAL SECTION  
SHEET 10F 2





**AS CONSTRUCTED**

**RESTRICTED WORKS-AREA**  
EXISTING SLOTTED CAMP SHELTERS - UNSERVED  
LOT SERVICE 2393 L 367360  
PRE-APPROVED CONNECTION  
INSTALLS TO BE MADE AT POINT 2A

- AREA NOT SERVICEABLE BY SEWER
- FUTURE LOT UNSERVED (SEWER & WATER)
- FUTURE LOT UNSERVED (SEWER)
- FUTURE LOT UNSERVED (WATER)

**WATER LAYOUT PLAN**

1:500  
0m 5m 10m 15m 20m 25m 30m 35m

No.	DESCRIPTION	DATE	INT.	AMENDMENTS
6	AS CONSTRUCTED	15.02.2012	DMB	
5	AS CONSTRUCTED	12.02.2011	DMB	
4	AS CONSTRUCTED	01.07.2011	DMB	
3	AS CONSTRUCTED	23.05.2011	DMB	
2	RE-ISSUE FOR AUTHORITY APPROVAL (SEWERAGE REALIGNMENT & STORMWATER RELOCATED)	23.10.2010	DMB	
1	ISSUE FOR CONSTRUCTION	21.02.2009	CRD	

FILE No.	ASSET No.	SHEET No.	DRAWING No.	SHEET
-	-	C05.01	R08-1766	6

CREATED	JTL	DATE	SEPT 2008
DESIGNED	DMB	DATE	SEPT 2008
CHECKED	DMB	DATE	SEPT 2008
DATE	JULY 08	DESIGN PROJECT LEADER	PROJECT OFFICER

DRAWN	CRD	DATE	JULY 08
DESIGNED	CRD	DATE	JULY 08
CHECKED	DMB	DATE	SEPT 2008
DATE	JULY 08	DESIGN PROJECT LEADER	PROJECT OFFICER

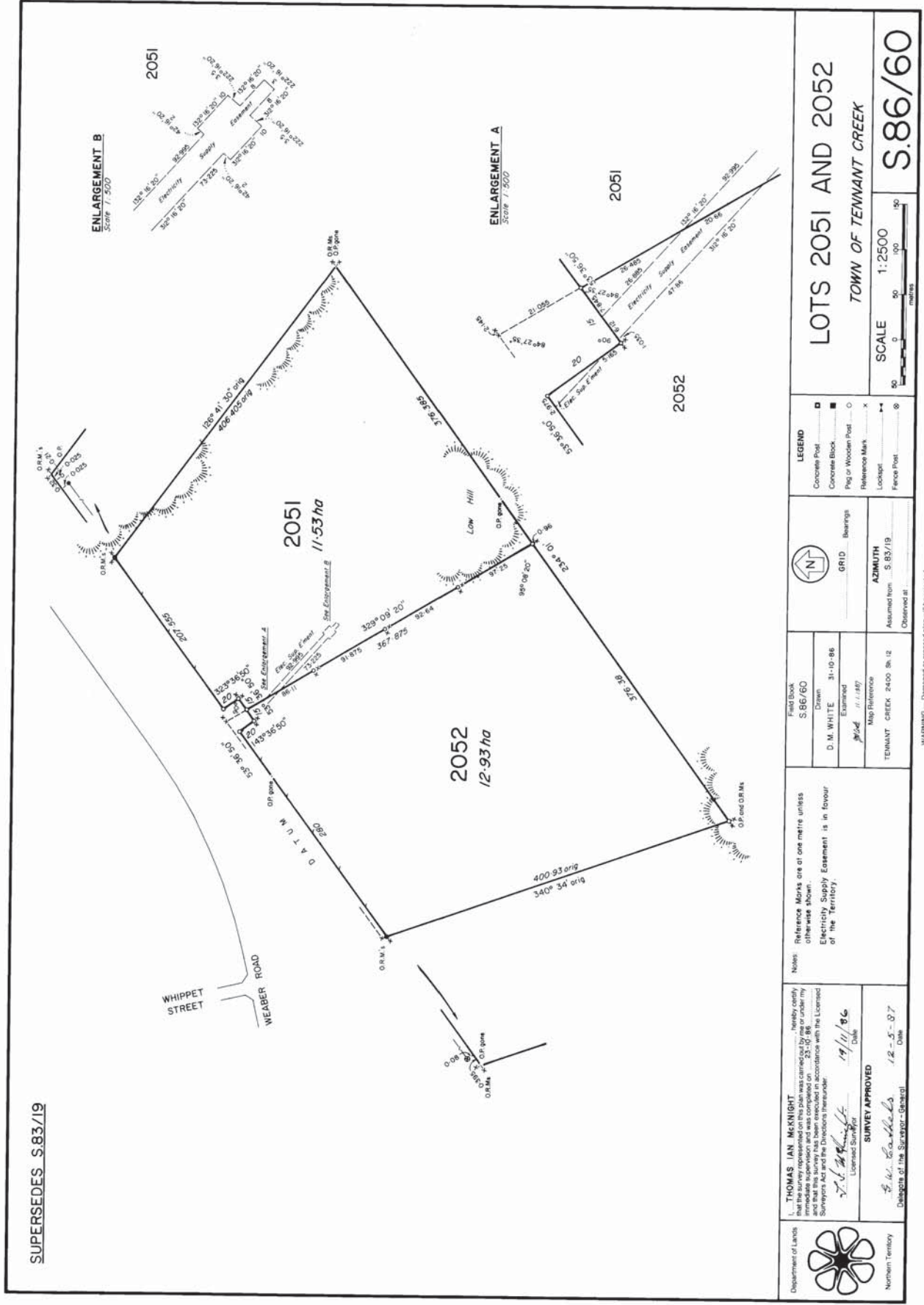
  

**OPUS QANTREC McWILLIAM**  
ALDN 79 005 942 005  
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Darwin NT 0830 Darwin NT 0801  
Telephone: (08) 8981 7500  
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E-mail: darwin@opusqrm.com.au

**AGEMA**  
The Association of Geomatics Engineers and Surveyors  
www.agema.com.au

**territory housing**  
Department of Planning and Infrastructure

**N-08004-01**



<p><b>LOTS 2051 AND 2052</b> TOWN OF TENNANT CREEK</p>	
<p>SCALE 1:2500</p>	<p><b>S.86/60</b></p>

<p><b>LEGEND</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Concrete Post</li> <li><input type="checkbox"/> Concrete Block</li> <li><input type="checkbox"/> Peg or Wooden Post</li> <li><input type="checkbox"/> Reference Mark</li> <li><input type="checkbox"/> Lockpost</li> <li><input type="checkbox"/> Fence Post</li> </ul>
--

<p></p> <p>GRID Bearings</p>	<p><b>AZIMUTH</b></p> <p>Assumed from S.83/19</p> <p>Observed at</p>
------------------------------	--

<p>Field Book S.86/60</p> <p>Drawn D. M. WHITE</p> <p>Examined 11-10-86</p> <p>Map Reference TENNANT CREEK 2400 Sh. 12</p>
--

Notes: Reference Marks are of one metre unless otherwise shown.  
Electricity Supply Easement is in favour of the Territory.

I, **THOMAS IAN MCKNIGHT**, hereby certify that the survey represented on this plan was carried out by me or under my supervision and that this survey has been conducted in accordance with the Licensed Surveyors Act and the Directions thereunder.

*Thomas Ian McKnight*  
Licensed Surveyor  
Date: 19/11/86

**SURVEY APPROVED**

*David G. ...*  
Deputy of the Supervisor-General  
Date: 12-5-87



WARNING - Damaged or created plan will be rejected

1-6-87



Date Registered: 03/12/1996

Volume 501 Folio 041

Duplicate Certificate as to Title issued? Yes

## SEARCH CERTIFICATE

### CROWN LEASE IN PERPETUITY 01103

Lot 2051 Town of Tennant Creek from plan(s) S 86/060

Area under title is 11 hectares 5300 square metres

#### Owner:

Julalikari Housing Incorporated

of C/- Public Officer, 13 Maloney Street, Tennant Creek NT 0860

#### Easements:

Electricity supply Easement to Power and Water Authority

Registered Date	Dealing Number	Description
26/11/1996	364698	Previous title is <b>Register BookCUCL Volume 204 Folio 034</b> Statutory Notice - Prescribed Property
End of Dealings		

**Commencement Date: 5th June, 1992**

**Expiring Date: In Perpetuity**

#### Reservations

1. Reservation of right of entry and inspection.
2. Reservation of all minerals, mineral substances and ores in or under the land including gems, stones, sands, valuable earths and fossil fuels.
3. Reservation of power of resumption.

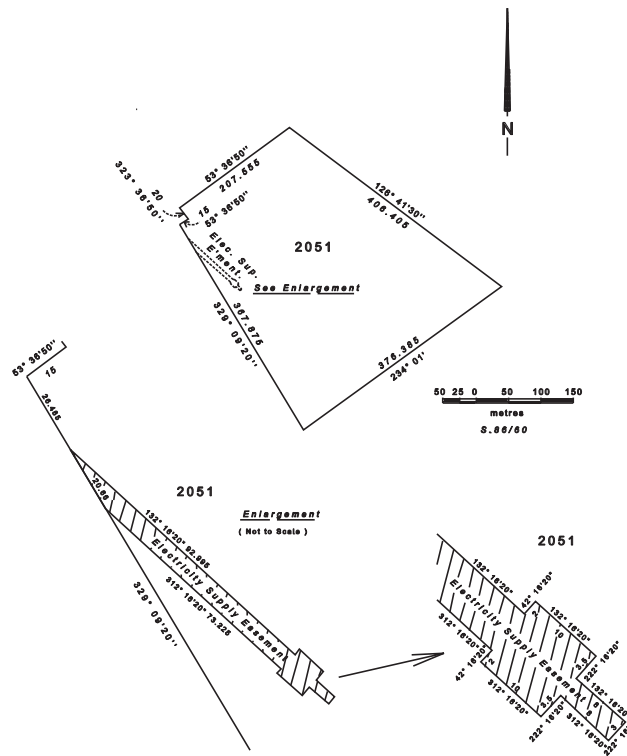
#### Provisions

1. The purpose of the lease ("the lease purpose") is Aboriginal Residential Area and Ancillary.
2. The annual rental of the lease will be ten cents if and when demanded.
3. If the rent, referred to in provision 2 is unpaid for six months or more, the lease will be liable to be forfeited.
4. This lease is granted under and subject to the said Crown Lands Act and the Regulations for the time being in force thereunder, and is conditional upon compliance by the Lessee with the covenants and conditions to be complied with by the Lessee, and will, subject to the said Crown Lands Act and the Regulations, be liable to be determined and forfeited for non-compliance with any such covenant or condition.
5. The Lessee, having paid all rent due to be paid by the Lessee may at any time surrender the lease in the manner prescribed under the Crown Lands Act.
6. For the purposes of sections 63 and 64 of the Crown Lands Act the Lessee agrees that the Minister may at his absolute discretion determine the Lessee's rights in improvements and whether compensation is payable for improvements following surrender, expiry, termination or forfeiture of this lease.

#### Conditions and Covenants

Duplicate Certificate as to Title issued? Yes

1. Subject to the Crown Lands Act the lessee will not use the land for a purpose other than the lease purpose.
2. The Lessee will pay rates and taxes which may at any time become due in respect of the leased land.
3. The Lessee will pay the rent annually in advance.
4. The Lessee will at all times maintain and repair and keep in repair all improvements to the value of two hundred thousand dollars (\$200,000) on the land to satisfaction of the Minister.
5. The Lessee will not situate any building, vehicle, structure, goods or materials within five metres of the leased boundary and the five metre corridor so formed will be landscaped with trees, shrubs and other suitable material to the satisfaction of the Minister and will thereafter maintain the landscaping to the satisfaction of the Minister.
6. The Lessee will provide additional landscaping on the common boundary with Lot 2052 such that a buffer zone 20 metres wide will be created on the leased land to the satisfaction of the Minister and will thereafter maintain the buffer zone to the satisfaction of the Minister.
7. The Lessee will not situate any building, vehicle, structure, goods or materials within the 20 metre wide buffer zone adjoining Lot 2052 without first obtaining approval in writing from the Minister.
8. All development will be in accordance with any Planning Instrument under the Planning Act affecting the land the subject of the lease.
9. The Lessee will in respect of the land included in the lease, ensure that at all times and to the satisfaction of the Minister, the land is kept clean, tidy and free of weeds, debris, dry herbage, rubbish, carcasses of animals and other unsightly or offensive harbour for insects, pests and breeding of mosquitoes.
10. If the Lessee fails to observe and carry out or cause to be observed or carried out the conditions outlined in Condition 9 of the lease, the Territory will have the right to enter onto the demised premises and do all things necessary to that end and the expense and cost thereof, as determined by the Minister, will be borne and payable by the Lessee on demand.



**Date Registered:** 03/12/1996  
**Duplicate Certificate as to Title issued?** Yes

**Volume 501 Folio 041**



NORTHERN TERRITORY OF AUSTRALIA

## Record of Administrative Interests and Information

### Record of Administrative Interests and Information

The information contained in this record of Administrative Interests only relates to the below parcel reference.

**Parcel Reference:** Lot 02051 Town of Tennant Creek plan(s) S 86/060

(See section 38 of the Land Title Act)

Note: The Record of Administrative Interests and Information is not part of the Land Register and is not guaranteed by the Northern Territory of Australia, and the NT Government accepts no Liability for any omission, misstatement or inaccuracy contained in this statement.

Registrar General

### Government Land Register

(none found)

### Custodian - Registrar General (+61 8 8999 6252)

#### Current Title

CUFT 501 041 (order 1)

#### Tenure Type

CROWN LEASE IN PERPETUITY 1103

#### Tenure Status

Current

#### Area Under Title

11 hectares 5300 square metres

#### Owners

Julalikari Housing Incorporated  
C/- Public Officer, 13 Maloney Street, Tennant Creek NT 0860

#### Easements

Electricity supply Easement to Power and Water Authority

#### Scheme Name

(none found)

#### Scheme Body Corporate Name

(none found)

#### Reserved Name(s)

(none found)

#### Unit Entitlements

(none found)

**Transfers**

(none found)

**Tenure Comments**

(none found)

**Historic Titles**

CUCL 204 034 (order 1)

CUCL 200 006 (order 2)

CUCL 200 006 (order 1)

Visit the website [http://www.nt.gov.au/justice/bdm/land\\_title\\_office/](http://www.nt.gov.au/justice/bdm/land_title_office/)

**Custodian - Surveyor General (+61 8 8995 5362)****Address**

TENNANT CREEK

**Survey Plan**

S 86/060

**Survey Status**

Approved

**Parcel Status**

CURRENT

**Parcel Area**

11 hectares, 5300 square metres

**Map Reference**

Code 730 Scale 2500 Sheet 23.31

**Parent Parcels**

Lot 01568 Town of Tennant Creek plan(s) S 83/019

**Parcel Comments**

KARGARU CAMP. SEE S2008/32 LOTS 2376(A) TO 2415(A) FOR PROPOSED TOWN CAMP LEASING.

**Survey Comments**

SUBDIVISION OF LOT 1568 INTO LOTS 2051 AND 2052

**Proposed Easements**

(none found)

**Municipality**

BARKLY SHIRE

**Region**

BARKLY

**Custodian - Valuer General (+61 8 8995 5375)****Owner's Last Known Address**

Department of Housing, PROPERTY RATES OFFICER, GPO BOX 4621, DARWIN NT 0801

**Parcels in Valuation**

Lot 02051 Town of Tennant Creek

**Unimproved Capital Value**

\$120,000 on 01/07/2015  
\$122,000 on 01/07/2012  
\$94,000 on 01/07/2010  
\$55,000 on 01/07/2004  
\$65,000 on 01/07/2001  
\$65,000 on 01/07/1998  
\$58,500 on 01/07/1995  
\$52,500 on 01/07/1992  
\$40,000 on 01/01/1990  
\$26,500 on 01/01/1987

**Valuation Improvements**

01/02/1996 House x 14  
15/09/1988 Residential other  
Improvement type( ABOR)

**Custodian - Property Purchasing (+61 8 8999 6631)****Acquisitions**

(none found)

**Custodian - Building Advisory Service (+61 8 8999 8965)****Building Control Areas**

BBTEN001 - Building Control Area                      TENNANT CREEK BUILDING AREA

**Building Permits**

**Application Number:** 8 of 9  
**Description:** Dwelling - Refurbishments of existing houses ( Houses 1, 2, 4, 6, 7, 8, 13)  
**Number of Residential Units:** 7  
**Australian Bureau of Statistics Type:** Separate House  
**Building Class:** Single Dwelling  
**Area:** 160 square metres  
**Certification:** Single Dwelling - Tier 2 Builders Declaration - *issued on 17/05/2013*

Visit the website <http://www.nt.gov.au/building/>

**Custodian - Town Planning and Development Assessment Services (+61 8 8999 6046)****Planning Scheme Zone**

CL (Community Living)

**Interim Development Control Orders**

(none found)

**Planning Notes**

(none found)

**Planning Applications****File Number**

PA1990/0214

**Type**

Development

**Date Received**

26/04/1990

**Application Purpose**

COMMUNITY FACILITY THIS SITE IS WEABER ROAD

**Application Status**

Approved

**Other Affected Parcels**

(none found)

**Instrument Signed**

28/05/1990

**Instrument Number**

DV3821

**Instrument Issued**

Signed

**Instrument Status**

Completed

**Custodian - Power and Water Corporation (1800 245 092)****Meters on Parcel**

Power Water - Electricity 12

Power Water - Water 1

For Account balances, contact the Power and Water Corporation.

**Custodian - Pool Fencing Unit (+61 8 8924 3641)****Swimming Pool/Spa Status**

(none found)

For more information, contact the Pool Fencing Unit (+61 8 8924 3641).

**Custodian - Mines and Energy (+61 8 8999 5322)**

For information on possible Exploration Licences, contact Mines & Energy or visit the website  
[http://www.nt.gov.au/d/Minerals\\_Energy/](http://www.nt.gov.au/d/Minerals_Energy/)

For information on possible Petroleum Titles, contact Mines & Energy for further details.

**Custodian - NT Environment Protection Authority (+61 8 8924 4218)****Results of site contamination assessment**

(none found)

For further information contact Environment Protection Authority or visit the website  
<https://ntepa.nt.gov.au/waste-pollution/contaminated-land>

**Custodian - Heritage Branch (+61 8 8999 5039)**

**Heritage Listing:**  
(none found)

For further information on heritage places contact Heritage Branch or visit the website  
<https://nt.gov.au/property/land/heritage-register-search-for-places-or-objects>

**Other Interests**

For Account balances, contact Barkly Shire Council





# Transformer data

Group	Com Id	Location	Community Name	Dwellings No. (Frinded Dwellings)	Dwellings No. (Bennett Design)	New Houses ** (Future Demand)	Primary Voltage 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	Knudkey Lagoons	18	19	2	11	1771	2163	100	85.5	133	
	347	Darwin	Kulabuk	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].
	412	Darwin	Railway Dam (One Mile Dam)	5	6	2	22	265	11645	25	27	42	Transformer is not in boundary of Town Camp [The nearest transformer data to Town Camp is highlighted in yellow].
	427	Adelaide River	Almangal	9	9		11	1041	4378	200	40.5	63	Two transformers for this Town Camp.
	687	Jabiru	Manabadurna	10	12		22	184	5646	63	54	84	
	825	Darwin	Minmatama Park	24	24		11	5650	11107	200	108	168	
	606	Katherine	Waripiri Transient Camp	9	9		22	6416	4886	100	40.5	63	Two transformers for this Town Camp.
	621	Katherine	Miali Brumby (Kalano)	47	31		22	6133	12247	315	211.5	329	
2	640	Pine Creek	Pine Creek Compound	4	4		22	6686	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	Mulgagan	12	9	4	22	6819	5296	16	54	84	
	215	Tennant Creek	Blueberry Hill (Munji-Maria)	2	2		22	7079	1968	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 (Ma-la-Maria)	7	7		22	7181	11088	200	31.5	49	Transformer is not in boundary of Town Camp [The nearest transformer data to Town Camp is highlighted in yellow].
	224	Elliott	Elliott North Camp	12	12		11	7505	4715	100	162	252	
	238	Tennant Creek	Kagaru (East Side Camp)	12	12	1	22	7572	200	200	54	84	
	246	Tennant Creek	Ngalapa Ngajala	18	21		22	7179	10904	315	94.5	147	Two transformers for this Town Camp.
	271	Tennant Creek	Village Camp	12	12	1	22	7183	11107	200	54	84	
	681	Tennant Creek	Tingkaril	12	12		22	7180	200	200	54	84	
	684	Tennant Creek	Wuppa	15	15	1	22	7141	11092	100	67.5	105	Two transformers for this Town Camp.
3	3	Alice Springs	Alngwerntjere (Morris Soak)	11	15		11	8596	14386	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 Ewipaye (Charles Creek)	17	10		11	8569	315	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.
	19	Alice Springs	Aper Alwerrkings (Palmers)	7	6		22	8597	11244	315	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	Ewepner Atwalye (Hidden Valley)	47	47		11	8405	2938	200	211.5	329	
	47	Alice Springs	Iparpa	13	13		11	8622	11202	100	58.5	91	
	48	Alice Springs	Iperle Tyathe (Walpiri)	10	9		11	8623	11203	100	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	
4	87	Alice Springs	Yarrenty Altere (Larapitua Valley)	34	34		11	8617	11334	100	153	238	
	90	Alice Springs	Inarlinge (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	Mpwetyerne (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 (Nyeuwents)	11	12		11	8405	2939	200	54	84	
	129	Alice Springs	Nyeuwente (Trucking Yards)	26	26		11	8629	11312	300	117	182	There is not any Transformer in boundary of Town Camp. Also it's not shown in PWC asset information.
	675	Alice Springs	Hoppys	15	19		11	8314	369	50	67.5	105	
	676	Alice Springs	Ilype Ilype (Golders Camp)	15	14		11	8569	315	100	18	28	Transformer is not in boundary of Town Camp [The nearest transformer data to Town Camp is highlighted in yellow].
	1029	Alice Springs	Kunoth	4	4		11	8569	315	100	130.5	203	Two transformers for this Town Camp.
	222	Borroloola	Mara	28	29	2	11	6187	12610	100	72	112	Two transformers for this Town Camp.
	229	Borroloola	Garawa 1	16	14		11	6546	10166	100	130.5	203	Data extracted from PWC asset information. It's outside of Town Camp, shown only Transformer to this Town Camp.
5	278	Borroloola	Yanyula	29	29		11	6162	10496	200	130.5	203	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".

# Ngalpa Ngalpa (Mulga)

# Ngalpa Ngalpa

## 1 Design

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

### Sewerage and water supply

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

### Electrical services

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

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

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

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

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

The following apply:

- Australian Standards
- Power Networks Design and Construction Guidelines, Power and Water Corporation
  - NP001.1\_Design and Construction of Network Assets – General Requirements
  - NP001.3\_General Specification for Overhead Electrical Reticulation
  - NP001.6\_General Specification for URD Subdivisions
  - NP003\_Installation Rules\_V3
  - NP007\_Service Rules
  - NP027\_Capture of Newly Installed Street Lighting Information

- NP041\_Guidelines for Electrical Design Consultants

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

### **Communications**

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

### **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 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 Ngalpa Ngalpa community on Wednesday 30 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 existing internal sewer network within Ngalpa Ngalpa community is believed to be owned by Julalikari Housing Incorporated, but are the responsibility of Far North – T&J Contractors to maintain. The internal network connects to town sewer at the south of the community. The connection to town sewer and the town sewer is owned by Power and Water Corporation.

The pump station within the community is the owned by Julalikari Housing Incorporated, however it appears to be maintained by Power and Water Corporation as they have the keys to the gate. There is no formal maintenance agreement in place.

The Land Title information, refer Appendices, shows that there is a sewerage easement. This does not include the sewer reticulation network within Ngalpa Ngalpa.

#### 5.1.1 Connection methods and billing

PWC advised that they currently charge a single sewerage bill based on the number of houses, which for Ngalpa Ngalpa is 21. The sewerage bill is charged to the Department of Housing and Community Development.

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

### 5.2 Existing infrastructure condition assessment

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

Table 2 Sewerage assets inspected

Asset type	Number of assets as per documentation	Number of assets assessed during inspection
Manholes	26	18

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

Table 3 Sewer condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Manholes			13	5		18
Pump station				1		1



Figure 1 Sewer manhole, condition: *good*



Figure 2 Sewage pump station, condition: *good*



Figure 3 Sewage pump station, condition: *good*

### 5.3 Current performance and risks

#### 5.3.1 Current sewer network performance

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

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

The current number of houses in Ngalpa Ngalpa community is 21, this multiplied by 9 EP per house gives a total current EP of 189. The capacity of the existing sewer was then calculated. The percentage shows how much of the pipe capacity is currently being used.

Table 4 Existing sewer capacity

Catchment	Current total EP	Diameter of connection (mm)	Adopted PWC minimum slope (%)	Q <sub>full</sub> (L/s)	Current Q (L/s)	Current capacity (%)
Catchment 1	189	150	1.0	16.50	2.20	13%

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

#### 5.3.2 Current sewage pump station performance

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

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

Detailed drawings of the sewage pump station were available so an analysis on the current performance could be undertaken. Using the current EP of 189, it appears that the velocity in the rising main does not meet the minimum requirement of 0.9 m/s for self-cleansing. The velocity at this EP is only 0.7 m/s, so the pumps would need to be upgraded to increase the minimum velocity.

It was also found that the overflow storage was not equal to three hours of peak dry weather flow. The overflow storage needs to almost be doubled to provide sufficient emergency storage equal to three hours of peak dry weather flow.

It should be noted that the pump station was designed for an EP of 144, which is less than what has been calculated in this assessment. The design drawings also show that the minimum velocity should be 0.9 m/s, however this does not appear to be achieved. Further analysis would be required to determine the size of the pumps required to increase the minimum velocity in the rising main.

#### **5.4 Future demands**

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

#### **5.5 Recommended works**

The infrastructure that was assessed as Very Poor or Poor is recommended to be upgraded to prevent failure in the future. In this case, there was no infrastructure assessed as requiring immediate maintenance.

Upgrades to the sewage pump station are required so it meets current PWC standards, these include:

- Upgrading two pumps so the minimum velocity is achieved
- Increase the overflow storage capacity

These works will require further engineering design.

## 6 Water supply

### 6.1 Ownership and boundaries

The water supply infrastructure was upgraded to PWC standards as part of the SIHIP program. The reticulation system servicing the community has DN150 PVC pipes with network looping incorporated. The network has multiple supply points which connect to the nearby town camps of Wuppa and Tingkarli.

The water supply assets within Ngalpa Ngalpa are believed to be owned by Julalikari Housing Incorporated, but are the responsibility of Far North – T&J Contractors to maintain. The water is supplied from a DN150 PVC water main outside of the community, which is the responsibility of PWC. Figure 4 shows the extent of the water reticulation network



Figure 4 Ngalpa Ngalpa water main network

#### 6.1.1 Connection methods and billing

Through consultation with PWC it has been determined that the water usage is currently charged as a fixed daily rate for 22 house water meters within Ngalpa Ngalpa. The bill is issued to the Department of Housing and Community Services. It is not known what contribution the residents make towards water bills.

It is proposed that PWC measure the water supply to the entire community, as opposed to individual lots within the community. This requires the installation of a

bulk water meter on the water main located at the community boundary. Under this scheme, the water bill for the entire community is the responsibility of the governing body, being Julalikari Housing Incorporated for Ngalpa Ngalpa. It will be up to governing body to assign bills to residents accordingly.

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

A total of 13 water meters were assessed during the inspection. Bennett Design reported 21 dwellings in the community. Therefore, up to eight additional water meters are required to cover the properties without an existing water meter. Note, some water meters may have been present however, not visible due to overgrown flora or restricted property access. Consequently, water meters may not have been discovered during the inspection.

## 6.2 Existing infrastructure condition assessment

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

Table 5 Water supply assets inspected

Asset type	Number of assets as per documentation	Number of assets assessed during inspection
Fire hydrants	7	7
Water meter (residential lots)	21	16

As per Table 5, a number of water meters were not assessed during the inspections, this is likely due to overgrown flora or restricted property access as previously discussed. The condition of each asset is as follows:

Table 6 Water asset condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Fire hydrants		2	6	1		9
Water meter (residential lots)		1	15			16



Figure 5 Fire hydrant, condition: *poor*



Figure 6 Water meter (residential lot), condition: *poor*

Two fire hydrants were assessed as being in poor condition. The assessment was due to the faded and peeling paint on the hydrant hindering the visibility. It is recommended that both hydrants are repainted.

The residential lot meter shown in Figure 6 is itself in good condition, however the bollard protecting the water meter has been bent and should be restored.

### 6.3 Current performance and risks

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

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



Table 7 shows the calculated demand.

Table 7 Current water demand

Total dwellings	EP	Demand (l/s)	Peak hour demand (l/s)
21	189	2.84	8.51

Given the demand on the system is relatively low, it is expected that the network will sufficient capacity to supply adequate pressure throughout the community.

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 Ngalpa Ngalpa no additional hydrants are required at this stage.

The layout and pipe sizes appear to be compliant with PWC standards, the water main does not require any upgrades to improve the system capacity.

#### 6.4 Future demands

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

#### 6.5 Recommended works

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

- Restore bent bollard around water meter
- Repaint two fire hydrants

The community is viewed overall as a large single lot and as previously detailed proposed have the water usage measured accordingly. In order to measure the water usages as a single lot, a bulk water meter should be installed. As the network has three supply points main, two of the supply points should be disconnected and reconnected to the internal network creating a looped main. This allows the single remaining point to be metered. The cost estimates for upgrades at Ngalpa Ngalpa include;

- Disconnect two supply points and reconnect to water main creating a looped network.
- Install new bulk water meter
- Install up to eight new residential lot water meters

## 7 Roadworks

### 7.1 Ownership and boundaries

The roads within Ngalpa Ngalpa are owned by Julalikari Housing Incorporated, however are the responsibility of Far North - T & J Contractors to maintain.

### 7.2 Existing infrastructure condition assessment

Ngalpa Ngalpa consists of sealed roads and unsealed 'short-cuts'. The unsealed 'short-cuts' were not assessed during the inspection as they are not formal roads.

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

Table 8 Roadworks condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Footpath			2	1		3
Signs	2	4	1			7



Figure 7 Sign, condition: *very poor*



Figure 8 Footpath, condition: *good*

The footpaths within the community were generally in good condition. Some small areas of the footpaths were partially covered by dirt and grass. It is recommended that the footpaths are cleared. This is for aesthetic purposes and is not seen as critical maintenance for the infrastructure.

The majority of the signs in the community were in poor condition, two sign posts were missing the sign altogether. It is recommended that a total of six signs are replace.



Figure 9 Ngalpa Ngalpa road network

Table 9 below details the condition of the roads within Ngalpa Ngalpa for specific segments. Figure 9 shows a map of the road network with the condition ratings, road name, and chainage direction. Note, the percentage refers to the percentage of that particular road segment which experiences the defect.



Figure 10 Ngalpa Ngalpa, condition: *good* Figure 11 246\_1, condition: *good*

Table 9 Road network condition assessment

Road name	Chainage start (km)	Chainage end (km)	Road segment condition (1-5)	Defects and associated condition
246_1	0	0.15	3	-general appearance (3) -gutters filled with dirt in some sections
	0	0.1	3	-general appearance (2) -gutters filled with dirt in some sections
	0.1	0.2	3	-20% bleeding (3) -gutters filled with dirt in some sections
	0.15	0.35	3	-general appearance (3) -gutters filled with dirt in some sections
	0.35	0.45	3	-general appearance (3)

Road name	Chainage start (km)	Chainage end (km)	Road segment condition (1-5)	Defects and associated condition
				-gutters filled with dirt in some sections
	0.45	0.55	3	-general appearance (2) -gutters filled with dirt in some sections

### 7.3 Current performance and risks

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

The road conditions were assessed as good. It is recommended that some minor works are undertaken to clear soil and other debris build up in the gutters. This will improve the stormwater drainage and prevent blockages in the stormwater drainage pipes.

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

### 7.4 Future demands

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

### 7.5 Recommended works

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

- Replace six signs
- Clear approximately 50 m dirt covering footpaths
- Clear approximately 500 m of soil and debris build up in gutters

## 8 Stormwater drainage

### 8.1 Ownership and boundaries

The stormwater assets within Ngalpa Ngalpa community are believed to be owned by Julalikari Housing Incorporated, but are the responsibility of Far North – T&J Contractors to maintain.

The stormwater assets outside of the community are property of the Barkly Regional Council.

### 8.2 Existing infrastructure condition assessment

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

Table 10 Stormwater condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Culvert			3			
SEP			3	2		5
Swales			3			



Figure 12 Two bay side entry pit, condition: *good*



Figure 13 Swale, condition: *good*. Ponding due to hose left on nearby.

### 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.

During the site investigation, five side entry pits, three culverts and three swales were inspected. The side entry pits were generally in good – very good condition, however one pit was blocked up to 80%, and another was blocked up to 20%. It is recommended that these pits are cleared of any blockages to prevent blockages in the underground pipes.

One of the swales was experiencing ponding at the time of the survey, however this was due to a tap left on at a nearby property. No works are recommended for the swales.

Only one culvert was blocked by up to 50%. It is recommended that this culvert is cleared of blockages to allow the stormwater to pass through effectively.

### 8.4 Future demands

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

### 8.5 Recommended works

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

- Clear blockages from two side entry pits
- Clear blockages from one culvert

## 9 Community structures

### 9.1 Ownership and boundaries

There are no community structures within Ngalpa Ngalpa community.

### 9.2 Future demands

The future population for Ngalpa Ngalpa is not expected to increase, therefore no community structures are currently required.



## 10 Electrical services

### 10.1 Ownership and boundaries

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

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

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

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

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

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

The Ngalpa Ngalpa community electrical reticulation systems is supplied by a transformer to an overhead reticulation scheme to individual houses and overhead power pole mount street lights ,the second transformer was assumed to be for LV service poles out of camp. Prepaid meters are utilised in Ngalpa Ngalpa community.

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

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

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

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

Ngalpa Ngalpa community are responsible for all unmetered and metered LV infrastructure including the main switchboard, metering panel (excluding meter), LV

distribution feeders, distribution pillars, consumers' mains and consumer switchboards and street lights.

### 10.2 Existing infrastructure condition assessment

The Table 11 shows the condition rating given to the distribution panels. The distribution panels had 100% operational rating.

Table 11 Distribution panel condition assessment

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

Table 12 shows the condition rating given to the street lights. The street lights were of a low voltage overhead feeder design, mercury lamp type, M125D. The street lights have 50% operational rating and 50% inoperable.

Table 12 Street light on O/H pole condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Street light on O/H pole		13	13			26

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

Table 13 Transformer condition assessment

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

Table 14 shows the condition rating given to the Overhead poles. The overhead poles are of Weld Construction (Universal Pole construction) and steel LV distribution poles.

Table 14 Overhead pole condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Overhead pole			26			26

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

Table 15 Meter panel condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Pre-paid meter			11	1		12
Switchboard		1	6			7

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

Table 16 Switchboard condition assessment (housing footprint)

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Switchboard		1	10			11

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 Ngalpa Ngalpa transformer is at 18% of rated capacity based on 4.5kVA/dwelling. A recommended detail audit to be performed to ascertain the exact reticulation and load demand.

Table 17 Ngalpa Ngalpa current demand load vs transformer ratings

Community name	Dwellings	Transformer (kVA)	kVA Total @ 4.5kVA	kVA Total @ 7kVA	Comments
Ngalpa Ngalpa	21	200	94.5	147	Two transformers on main feed into for this Town Camp. Suggesting smaller is T off for lighting and should be checked.

A tabulated summary of all the community transformers in in Appendices.

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

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

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

#### **10.4 Future demands**

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

#### **10.5 Recommended works**

The following maintenance works and upgrades are recommended:

- Replace thirteen street lights 125W
- Replace one switchboard inside the metering panel
- Replace one switchboard 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. There were no telephone booths found at Ngalpa Ngalpa.

The Appendices contain the individual reports.

Table 18 Telecommunication pit condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Telecommunication pit		1	5			6

### 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 Ngalpa Ngalpa is displayed in the Figure 14 below. NBN is available to residents via a fixed telecommunication line on application to an appropriate NBN access provider.

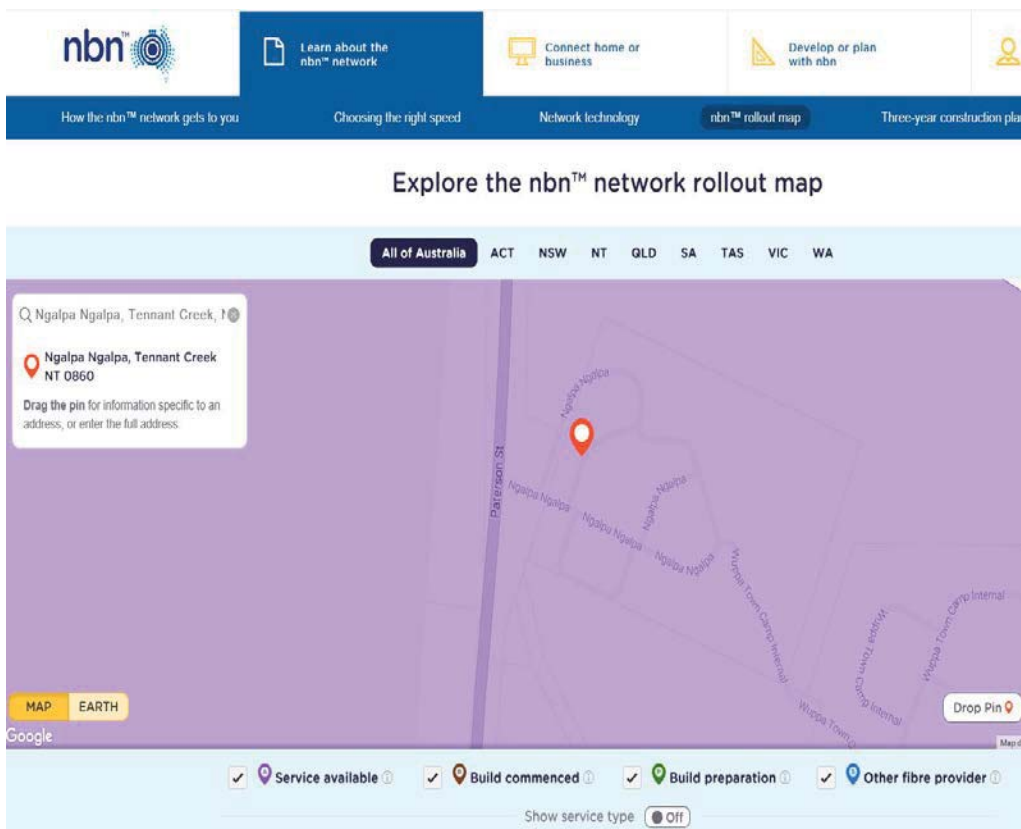


Figure 14 NBN network availability map

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 Ngalpa Ngalpa because NBN is available to residents via fixed telecommunications line on application to an appropriate NBN access provider.

## 12 Cost estimates

Table 19 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 19 Cost estimates

Infrastructure	Maintenance of existing infrastructure	Upgrades to meet current design
Sewerage	\$ 0	\$ 69,000
Water supply	\$ 1,000	\$ 132,000
Roadworks	\$ 33,000	\$ 0
Stormwater drainage	\$ 3,000	\$ 0
Community structures	\$ 0	\$ 0
Electrical	\$ 23,000	\$ 0
Communications	\$ 0	\$ 0
Miscellaneous provisions	\$ 19,000	\$ 36,000
<b>Total (including GST)</b>	<b>\$ 79,000</b>	<b>\$ 237,000</b>
<b>Grand total</b>	<b>\$ 316,000</b>	

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 Ngalpa Ngalpa community:

### Sewerage

- Upgrading two pumps so the minimum velocity is achieved
- Increase the overflow storage capacity

### Water supply

- Restore bent bollard around water meter
- Repaint two fire hydrants
- Disconnect secondary supply point and reconnect to water main creating a looped network.
- Install bulk water meter
- Install up to eight new residential lot water meters

### Roadworks

- Replace six signs
- Clear approximately 50 m dirt covering footpaths
- Clear approximately 500 m of soil and debris build up in gutters

### Stormwater drainage

- Clear blockages from two side entry pits
- Clear blockages from one culvert

### Community structures

- No works required

### Electrical services

- Replace thirteen street lights 125W
- Replace one switchboard inside the metering panel
- Replace one switchboard associated to dwellings

### Communications

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



# Civil inspection reports



**Legend**

- Town Camp boundary
- Sewerage
- Manholes (18)
- Pump Station (1)

A3 scale: 1:2,000



Note:  
Label numbers refer to survey IDs



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

**NT Town Camp Infrastructure Assessments: Sewerage**  
**246 - Ngalpa Ngalpa (Tennant Creek)**



Map by: DMoP P:\GIS\Projects\253963\_NT\_Town\_Camps\253963\_003\_Civil\_DFP.mxd 23/02/2017 12:02 Imagery: Digital Globe WV2 2013-2016

**Legend**

- Town Camp boundary
- Water
- Fire Hydrants (8)
- Water Meter (11)

A3 scale: 1:2,000



Note: Label numbers refer to survey/IDs



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

**NT Town Camp Infrastructure Assessments: Water**  
**246 - Ngalpa Ngalpa (Tennant Creek)**



Map by: DMPF P:\GIS\Projects\253963\_NT\_Town\_Camps\253963\_003\_Civil\_DPF.mxd 23/02/2017 12:02 Imagery: Digital Globe WV2 2013-2016

A3 scale: 1:2,000



Note: Label numbers refer to survey IDs



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

**NT Town Camp Infrastructure Assessments**  
**Road furniture, stormwater drainage & community structures**  
**246 - Ngalpa Ngalpa (Tennant Creek)**

# Northern Territory Town Camps

## Civil Infrastructure

Inspection Date 30/11/2016 1:43:11 PM

Insp ID: 1363

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

Stormwater Infrastructure:	Culverts
Culvert Type:	RCBC
Diameter (mm):	
Width (mm):	1200
Culvert Depth (mm):	600
Culvert Length (m):	13
Culvert Condition:	3 - Good
Culvert Blockage (%):	30
Culvert Comments:	
Culvert Head Wall:	Yes
Safety Grate:	No
Headwall Blockage:	
Headwall Condition:	3 - Good
Headwall Comment:	
End Wall:	Yes
End Wall condition:	3 - Good
EW Comment:	



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 3:47:46 PM

Insp ID: 1385

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

Stormwater Infrastructure:	Culverts
Culvert Type:	RCBC
Diameter (mm):	
Width (mm):	1200
Culvert Depth (mm):	600
Culvert Length (m):	
Culvert Condition:	3 - Good
Culvert Blockage (%):	
Culvert Comments:	Couldn't confirm size
Culvert Head Wall:	Yes
Safety Grate:	Yes
Headwall Blockage:	50
Headwall Condition:	3 - Good
Headwall Comment:	
End Wall:	No Access
End Wall condition:	
EW Comment:	



# Northern Territory Town Camps

## Civil Infrastructure

Inspection Date 30/11/2016 3:25:33 PM

Insp ID: 1393

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

Stormwater Infrastructure:	Culverts
Culvert Type:	RCBC
Diameter (mm):	
Width (mm):	1200
Culvert Depth (mm):	600
Culvert Length (m):	14
Culvert Condition:	3 - Good
Culvert Blockage (%):	20
Culvert Comments:	
Culvert Head Wall:	Yes
Safety Grate:	No
Headwall Blockage:	
Headwall Condition:	3 - Good
Headwall Comment:	
End Wall:	Yes
End Wall condition:	3 - Good
EW Comment:	



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 1:50:07 PM

Insp ID: 1360

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Water Asset Are you Capturing: Fire Hydrants

Single or Double:

Sluice Valve: No

Above or Below ground: Below ground

FH Leakage: No Access

Bollards around hydrant: No

FH Condition: 2 - Poor

FH Comment: Paint peeling





## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 1:24:09 PM

Insp ID: 1372

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Water Asset Are you Capturing: Fire Hydrants

Single or Double:

Sluice Valve: No

Above or Below ground: Below ground

FH Leakage: No Access

Bollards around hydrant: No

FH Condition: 3 - Good

FH Comment: Paint peeling



## Northern Territory Town Camps

### Civil Infrastructure

**Inspection Date** 30/11/2016 3:51:50 PM

**Insp ID:** 1382

**Group 3 - Tennant Creek, Elliott**

**Ngalpa Ngalpa**

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

**Single or Double:**

**Sluice Valve:** No

**Above or Below ground:** Below ground

**FH Leakage:** No Access

**Bollards around hydrant:** No

**FH Condition:** 3 - Good

**FH Comment:** Paint fading



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 3:46:42 PM

Insp ID: 1386

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Water Asset Are you Capturing: Fire Hydrants

Single or Double:

Sluice Valve: No

Above or Below ground: Below ground

FH Leakage: No Access

Bollards around hydrant: No

FH Condition: 2 - Poor

FH Comment: Paint faded, lid not sitting properly



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 3:23:16 PM

Insp ID: 1395

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Water Asset Are you Capturing: Fire Hydrants

Single or Double:

Sluice Valve: No

Above or Below ground: Below ground

FH Leakage: No Access

Bollards around hydrant: No

FH Condition: 3 - Good

FH Comment:



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 3:12:31 PM

Insp ID: 1402

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Water Asset Are you Capturing: Fire Hydrants

Single or Double:

Sluice Valve: No

Above or Below ground: Below ground

FH Leakage: No Access

Bollards around hydrant: No

FH Condition: 3 - Good

FH Comment: Paint faded



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 2:45:07 PM

Insp ID: 1409

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Water Asset Are you Capturing: Fire Hydrants

Single or Double:

Sluice Valve: No

Above or Below ground: Below ground

FH Leakage: No Access

Bollards around hydrant: No

FH Condition: 3 - Good

FH Comment: Paint peeling. Covered with dirt



## Northern Territory Town Camps

### Civil Infrastructure

**Inspection Date** 30/11/2016 2:24:30 PM

**Insp ID:** 1420

**Group 3 - Tennant Creek, Elliott**

**Ngalpa Ngalpa**

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

**Single or Double:**

**Sluice Valve:** No

**Above or Below ground:** Below ground

**FH Leakage:** No Access

**Bollards around hydrant:** No

**FH Condition:** 4 - Very Good

**FH Comment:**



# Northern Territory Town Camps

## Civil Infrastructure

Inspection Date 30/11/2016 1:27:04 PM

Insp ID: 1369

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

Road Name: Ngalpa Ngalpa

What are you inspecting: Foot Paths

Footpath Width (mm): 1200

Footpath Type: Concrete

Footpath Condition: 4 - Very Good

Comment: Needs tidy up

General Comment:





# Northern Territory Town Camps

## Civil Infrastructure

Inspection Date 30/11/2016 3:52:39 PM

Insp ID: 1381

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

Road Name: 246\_1

What are you inspecting: Foot Paths

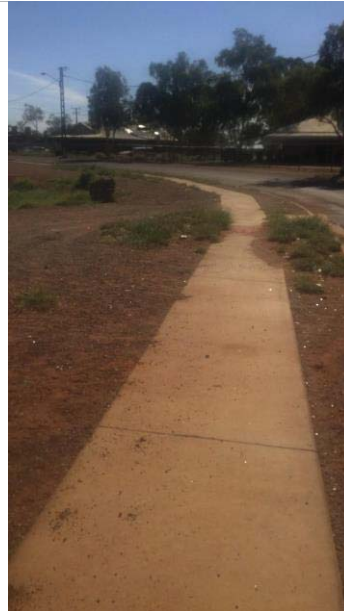
Footpath Width (mm): 1200

Footpath Type: Concrete

Footpath Condition: 3 - Good

Comment: Needs tidy up

General Comment:



# Northern Territory Town Camps

## Civil Infrastructure

Inspection Date 30/11/2016 2:42:21 PM

Insp ID: 1412

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

Road Name: Ngalpa Ngalpa

What are you inspecting: Foot Paths

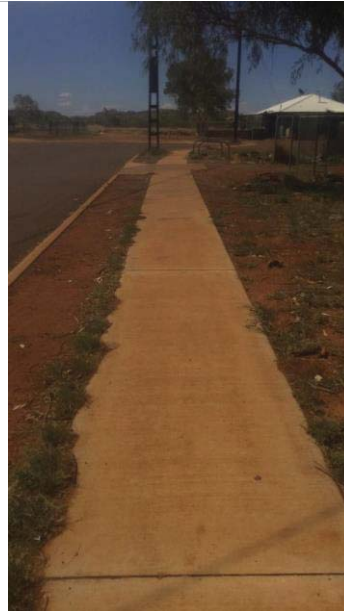
Footpath Width (mm): 1200

Footpath Type: Concrete

Footpath Condition: 3 - Good

Comment:

General Comment:



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 1:56:47 PM

Insp ID: 1355

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

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: 77/B/3

Comments: Graffiti



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 1:51:17 PM

Insp ID: 1359

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Sewerage Asset are you capturing: Manholes

MH Cover Shape: Round

Manhole Cover Diam (mm): 450

Manhole Length (mm):

Manhole Width (mm):

Manhole Condition: 4 - Very Good

Notes on Lid: 77/B/4

Comments:



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 1:35:52 PM

Insp ID: 1365

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

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: 77/A/3

Comments:



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 1:28:46 PM

Insp ID: 1367

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

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: 77/A/2

Comments:



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 3:57:13 PM

Insp ID: 1378

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

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: 77/C/2

Comments:



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 3:53:49 PM

Insp ID: 1379

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

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: Overgrown





## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 3:50:50 PM

Insp ID: 1383

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Sewerage Asset are you capturing: Manholes

MH Cover Shape: Round

Manhole Cover Diam (mm): 450

Manhole Length (mm):

Manhole Width (mm):

Manhole Condition: 3 - Good

Notes on Lid: 77/E/4

Comments:



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 3:45:48 PM

Insp ID: 1387

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Sewerage Asset are you capturing: Manholes

MH Cover Shape: Round

Manhole Cover Diam (mm): 450

Manhole Length (mm):

Manhole Width (mm):

Manhole Condition: 4 - Very Good

Notes on Lid: 77/A/4

Comments:



# Northern Territory Town Camps

## Civil Infrastructure

Inspection Date 30/11/2016 3:29:10 PM

Insp ID: 1391

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

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: 77/10 (or 1D)

Comments:



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 3:17:28 PM

Insp ID: 1399

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

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: 77/B/2

Comments:



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 3:10:42 PM

Insp ID: 1403

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Sewerage Asset are you capturing: Manholes

MH Cover Shape: Round

Manhole Cover Diam (mm): 450

Manhole Length (mm):

Manhole Width (mm):

Manhole Condition: 4 - Very Good

Notes on Lid: 77/D/3/B3

Comments:



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 3:06:30 PM

Insp ID: 1406

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Sewerage Asset are you capturing: Manholes

MH Cover Shape: Rectangular

Manhole Cover Diam (mm):

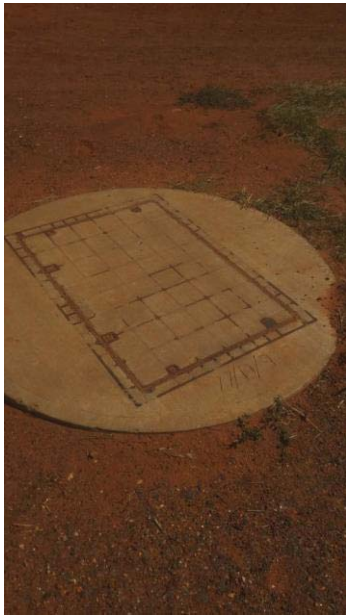
Manhole Length (mm): 1000

Manhole Width (mm): 700

Manhole Condition: 3 - Good

Notes on Lid: 77/D/3

Comments:



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 2:47:41 PM

Insp ID: 1407

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

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 30/11/2016 2:44:08 PM

Insp ID: 1410

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

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: 77/D/3/A1

Comments:





## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 2:42:55 PM

Insp ID: 1411

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Sewerage Asset are you capturing: Manholes

MH Cover Shape: Round

Manhole Cover Diam (mm): 450

Manhole Length (mm):

Manhole Width (mm):

Manhole Condition: 4 - Very Good

Notes on Lid: 77/D3/A2

Comments:



## Northern Territory Town Camps

### Civil Infrastructure

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

Insp ID: 1418

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

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: 77/C/3

Comments:



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 2:15:17 PM

Insp ID: 1421

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

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: 77/C/4

Comments:



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 2:31:08 PM

Insp ID: 1422

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Sewerage Asset are you capturing: Manholes

MH Cover Shape: Round

Manhole Cover Diam (mm): 450

Manhole Length (mm):

Manhole Width (mm):

Manhole Condition: 3 - Good

Notes on Lid: 77/C/5

Comments:



# Northern Territory Town Camps

## Civil Infrastructure

Inspection Date 30/11/2016 1:52:17 PM

Insp ID: 1358

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

Road Name: Ngalpa Ngalpa

What are you inspecting: Pavements

Ch From (km): 0.1

Ch To (km): 0.2

Road Type: Sealed - spray seal

Section Width (m): 7.2

Road Condition: 3 - Good

General Comment: Section of main ngalpa road between loop road

### Road Defects Section

Defect Type	Defect QTY	Defect Condition	Defect Comments
Bleeding	20	3 - Good	20% of road

### Kerbs Section

Kerb Type	Kerb Cond	Kerb Comments
Kerb and Gutter	3 - Good	Gutter filled with dirt

### Shoulders Section

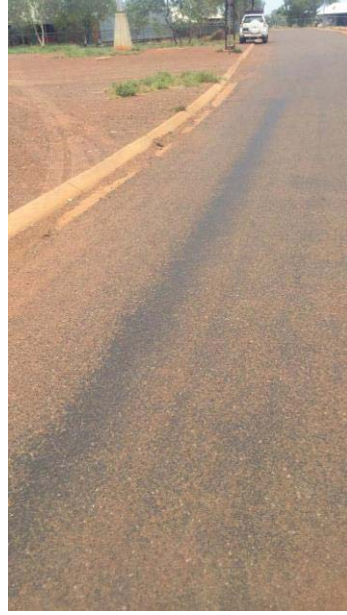
### Linemarking Section

### Obstruction Section

## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 1:52:17 PM



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 1:52:17 PM

# Northern Territory Town Camps

## Civil Infrastructure

Inspection Date 30/11/2016 1:20:24 PM

Insp ID: 1374      Group 3 - Tennant Creek, Elliott      Ngalpa Ngalpa

Road Name: Ngalpa Ngalpa

What are you inspecting: Pavements

Ch From (km): 0

Ch To (km): 0.1

Road Type: Sealed - spray seal

Section Width (m): 6

Road Condition: 3 - Good

General Comment:

### Road Defects Section

Defect Type	Defect QTY	Defect Condition	Defect Comments
General Appearance		2 - Poor	Road looks old, no major defects

### Kerbs Section

Kerb Type	Kerb Cond	Kerb Comments
No kerb		

### Shoulders Section

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

### Linemarking Section

### Obstruction Section



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 1:20:24 PM



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 1:20:24 PM

# Northern Territory Town Camps

## Civil Infrastructure

Inspection Date 30/11/2016 3:54:05 PM

Insp ID: 1380      Group 3 - Tennant Creek, Elliott      Ngalpa Ngalpa

Road Name: 246\_1  
What are you inspecting: Pavements  
Ch From (km): 0  
Ch To (km): 0.15  
Road Type: Sealed - spray seal  
Section Width (m): 7.2  
Road Condition: 3 - Good  
General Comment:

### Road Defects Section

Defect Type	Defect QTY	Defect Condition	Defect Comments
General Appearance		3 - Good	

### Kerbs Section

Kerb Type	Kerb Cond	Kerb Comments
Kerb and Gutter	3 - Good	Gutters filled with dirt in some sections

### Shoulders Section

### Linemarking Section

### Obstruction Section

# Northern Territory Town Camps

## Civil Infrastructure

Inspection Date 30/11/2016 3:54:05 PM



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 3:54:05 PM

# Northern Territory Town Camps

## Civil Infrastructure

Inspection Date 30/11/2016 3:20:38 PM

Insp ID: 1396      Group 3 - Tennant Creek, Elliott      Ngalpa Ngalpa

Road Name: Ngalpa Ngalpa

What are you inspecting: Pavements

Ch From (km): 0.15

Ch To (km): 0.35

Road Type: Sealed - spray seal

Section Width (m): 7.2

Road Condition: 3 - Good

General Comment: Whole length of loop road, not main ngalpa road

### Road Defects Section

Defect Type	Defect QTY	Defect Condition	Defect Comments
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General Appearance		3 - Good	
--------------------	--	----------	--

### Kerbs Section

Kerb Type	Kerb Cond	Kerb Comments
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Kerb and Gutter	3 - Good	Gutter full of dirt in some sections
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### Shoulders Section

### Linemarking Section

### Obstruction Section

## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 3:20:38 PM



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 3:20:38 PM



# Northern Territory Town Camps

## Civil Infrastructure

Inspection Date 30/11/2016 3:07:20 PM

Insp ID: 1405      Group 3 - Tennant Creek, Elliott      Ngalpa Ngalpa

Road Name: Ngalpa Ngalpa

What are you inspecting: Pavements

Ch From (km): 0.35

Ch To (km): 0.45

Road Type: Sealed - spray seal

Section Width (m): 7.2

Road Condition: 3 - Good

General Comment:

### Road Defects Section

Defect Type	Defect QTY	Defect Condition	Defect Comments
-------------	------------	------------------	-----------------

General Appearance		3 - Good	
--------------------	--	----------	--

### 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 30/11/2016 3:07:20 PM



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 3:07:20 PM

# Northern Territory Town Camps

## Civil Infrastructure

Inspection Date 30/11/2016 2:40:02 PM

Insp ID: 1413      Group 3 - Tennant Creek, Elliott      Ngalpa Ngalpa

Road Name: Ngalpa Ngalpa

What are you inspecting: Pavements

Ch From (km): 0.45

Ch To (km): 0.55

Road Type: Sealed - spray seal

Section Width (m):

Road Condition: 3 - Good

General Comment:

### Road Defects Section

Defect Type	Defect QTY	Defect Condition	Defect Comments
-------------	------------	------------------	-----------------

General Appearance		2 - Poor	
--------------------	--	----------	--

### 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 30/11/2016 2:40:02 PM



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 2:40:02 PM

## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 2:06:28 PM

Insp ID: 1377

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Sewerage Asset are you capturing: Pump Station

No of Pumps in Pump Station:

Cabinet Condition: 4 - Very Good

Cabinet Comment:

Alarm Light: Yes

Alarm Light Condition:

Overhead Light: Yes

Overhead Light Condition: 2 - Poor

Light Comments: Broken cover

Davit Crane Present: Yes

Davit Crane Capacity (kg):

Davit Crane Condition: 4 - Very Good

Davit Crane Comments:

Fence TYPE: Standard Security Fence (3 Strands barbed)

PS Fence Height (m): 1.8

PS Gates Locked: Yes

PS Fence Condition: 4 - Very Good

Fence Comment:

Flow meter type:

Flow meter condition:

Flow meter comments:

Macerator Pump Make/Model:

Manufacturers Date:

Macerator Pump:

Macerator Pump Condition:

Macerator Pump Comments:

Outgoing Pipe Diameter (mm): 100

Valves:

Outgoing Pipe Comments:

Water Supply to pump station: Yes

Fire hose reel: No

Access cover locked: Yes

Safety grid beneath access cover: No Access

## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 2:06:28 PM

Condition:

Cabinet Locked: No Access

Cabinet Lock Condition:

Hand rails around entrance: Yes

Fixed or removable:

Rail Condition:

Safety Comments:

Pump Station Pumps section





## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 2:06:28 PM



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 1:35:36 PM

Insp ID: 1364

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

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



## Northern Territory Town Camps

### Civil Infrastructure

**Inspection Date** 30/11/2016 1:33:34 PM

**Insp ID:** 1366

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

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



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 3:49:40 PM

Insp ID: 1384

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

Stormwater Infrastructure: SEP  
Number of Bays: 2  
On grade or sag pit:  
Both sides of road: Right  
Condition: 3 - Good  
Blockage (%): 80  
Comment:



## Northern Territory Town Camps

### Civil Infrastructure

**Inspection Date** 30/11/2016 3:24:33 PM

**Insp ID:** 1394

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

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



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 2:46:19 PM

Insp ID: 1408

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

Stormwater Infrastructure: SEP  
Number of Bays: 2  
On grade or sag pit:  
Both sides of road: Left  
Condition: 4 - Very Good  
Blockage (%): 5  
Comment:



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 1:55:18 PM

Insp ID: 1356

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

Road Name: Ngalpa Ngalpa

What are you inspecting: Signs

Type of Sign: Street name

Sign Condition: 1 - Very Poor

Sign Comment: No sign

General Comment:



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 1:54:37 PM

Insp ID: 1357

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

Road Name: Ngalpa Ngalpa

What are you inspecting: Signs

Type of Sign: Give Way

Sign Condition: 2 - Poor

Sign Comment:

General Comment:





## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 1:27:49 PM

Insp ID: 1368

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

Road Name: Ngalpa Ngalpa

What are you inspecting: Signs

Type of Sign: Give Way

Sign Condition: 2 - Poor

Sign Comment: Bent & has graffiti

General Comment:



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 1:26:13 PM

Insp ID: 1370

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

Road Name: Ngalpa Ngalpa

What are you inspecting: Signs

Type of Sign: Street name

Sign Condition: 1 - Very Poor

Sign Comment: No sign

General Comment:



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 1:25:01 PM

Insp ID: 1371

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

Road Name: Ngalpa Ngalpa

What are you inspecting: Signs

Type of Sign: Speed bump sign

Sign Condition: 2 - Poor

Sign Comment:

General Comment:



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 1:22:53 PM

Insp ID: 1373

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

Road Name: Ngalpa Ngalpa

What are you inspecting: Signs

Type of Sign: Prescribed area

Sign Condition: 2 - Poor

Sign Comment: Graffiti, on a lean , old

General Comment:



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 1:48:38 PM

Insp ID: 1361

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

Stormwater Infrastructure:	Swales
Type of lining:	Natural Grasses
Are dimensions uniform along drain:	No
Base Width (m):	3
Overall Width (m):	12
Swale Depth (m):	1.5
Length of Batter 1 (m):	
Length of Batter 2 (m):	
Swale Condition:	3 - Good
Swale Ponding:	No
Drain flooded at time of inspection:	No
Swale Comments:	Approximate dimensions



# Northern Territory Town Camps

## Civil Infrastructure

Inspection Date 30/11/2016 1:46:52 PM

Insp ID: 1362

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

Stormwater Infrastructure:	Swales
Type of lining:	Natural Grasses
Are dimensions uniform along drain:	No
Base Width (m):	1
Overall Width (m):	15
Swale Depth (m):	1.5
Length of Batter 1 (m):	
Length of Batter 2 (m):	
Swale Condition:	3 - Good
Swale Ponding:	Yes
Drain flooded at time of inspection:	No
Swale Comments:	Approximate dimensions



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 3:27:56 PM

Insp ID: 1392

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

Stormwater Infrastructure:

Swales

Type of lining:

Natural Grasses

Are dimensions uniform along drain:

No

Base Width (m):

2

Overall Width (m):

10

Swale Depth (m):

Length of Batter 1 (m):

Length of Batter 2 (m):

Swale Condition:

3 - Good

Swale Ponding:

No

Drain flooded at time of inspection:

No

Swale Comments:

Dimensions approximate



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 3:43:35 PM

Insp ID: 1388

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Water Asset Are you Capturing: Water Meter

Water Meter Type: Lot

Bulk Water Meter Size (mm):

Bulk Water Meter Condition:

Bulk Water Meter Comment:

Lot Number:

Lot Water Meter Size: 25

Lot Water Meter Condition: 2 - Poor

Lot Water Meter Comment: Bollard is bent, water meter ok





## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 3:35:37 PM

Insp ID: 1389

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Water Asset Are you Capturing: Water Meter

Water Meter Type: Lot

Bulk Water Meter Size (mm):

Bulk Water Meter Condition:

Bulk Water Meter Comment:

Lot Number:

Lot Water Meter Size: 25

Lot Water Meter Condition: 3 - Good

Lot Water Meter Comment:



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 3:34:46 PM

Insp ID: 1390

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Water Asset Are you Capturing: Water Meter

Water Meter Type: Lot

Bulk Water Meter Size (mm):

Bulk Water Meter Condition:

Bulk Water Meter Comment:

Lot Number:

Lot Water Meter Size: 25

Lot Water Meter Condition: 3 - Good

Lot Water Meter Comment: Two water meters, one in each lot



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 3:19:59 PM

Insp ID: 1397

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Water Asset Are you Capturing: Water Meter

Water Meter Type: Lot

Bulk Water Meter Size (mm):

Bulk Water Meter Condition:

Bulk Water Meter Comment:

Lot Number:

Lot Water Meter Size: 25

Lot Water Meter Condition: 3 - Good

Lot Water Meter Comment:



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 3:19:01 PM

Insp ID: 1398

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Water Asset Are you Capturing: Water Meter

Water Meter Type: Lot

Bulk Water Meter Size (mm):

Bulk Water Meter Condition:

Bulk Water Meter Comment:

Lot Number:

Lot Water Meter Size: 25

Lot Water Meter Condition: 3 - Good

Lot Water Meter Comment: Two water meters, in road verge



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 3:14:54 PM

Insp ID: 1400

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Water Asset Are you Capturing: Water Meter

Water Meter Type: Lot

Bulk Water Meter Size (mm):

Bulk Water Meter Condition:

Bulk Water Meter Comment:

Lot Number:

Lot Water Meter Size: 25

Lot Water Meter Condition: 3 - Good

Lot Water Meter Comment: In road verge , two meters



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 3:13:37 PM

Insp ID: 1401

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Water Asset Are you Capturing: Water Meter

Water Meter Type: Lot

Bulk Water Meter Size (mm):

Bulk Water Meter Condition:

Bulk Water Meter Comment:

Lot Number:

Lot Water Meter Size: 25

Lot Water Meter Condition: 3 - Good

Lot Water Meter Comment:



## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 3:10:11 PM

Insp ID: 1404

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Water Asset Are you Capturing: Water Meter

Water Meter Type: Lot

Bulk Water Meter Size (mm):

Bulk Water Meter Condition:

Bulk Water Meter Comment:

Lot Number:

Lot Water Meter Size: 25

Lot Water Meter Condition: 3 - Good

Lot Water Meter Comment:



## Northern Territory Town Camps

### Civil Infrastructure

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

Insp ID: 1416

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Water Asset Are you Capturing: Water Meter

Water Meter Type: Lot

Bulk Water Meter Size (mm):

Bulk Water Meter Condition:

Bulk Water Meter Comment:

Lot Number:

Lot Water Meter Size: 25

Lot Water Meter Condition: 3 - Good

Lot Water Meter Comment:





## Northern Territory Town Camps

### Civil Infrastructure

Inspection Date 30/11/2016 2:28:33 PM

Insp ID: 1417

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Water Asset Are you Capturing: Water Meter

Water Meter Type: Lot

Bulk Water Meter Size (mm):

Bulk Water Meter Condition:

Bulk Water Meter Comment:

Lot Number:

Lot Water Meter Size: 25

Lot Water Meter Condition: 3 - Good

Lot Water Meter Comment:



# Northern Territory Town Camps

## Civil Infrastructure

Inspection Date 30/11/2016 2:25:14 PM

Insp ID: 1419

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Water Asset Are you Capturing: Water Meter

Water Meter Type: Lot

Bulk Water Meter Size (mm):

Bulk Water Meter Condition:

Bulk Water Meter Comment:

Lot Number:

Lot Water Meter Size: 25

Lot Water Meter Condition: 3 - Good

Lot Water Meter Comment:



# Electrical inspection reports



Map by: DMCP P:\GIS\Projects\253963\_NT\_Town\_Camps\253963\_004\_Elec\_DDP\_report.mxd 23/02/2017 12:22

**Legend**

**Electrical infrastructure**

- 11kV HV/LV Pole
- 11kV Line Pole
- 11kV Pole Mounted Substation
- 11kV Switch Fuse
- LV Metering
- LV Line Pole
- LV Service Pole
- LV switch
- Street Lighting on HV Pole
- Transformer
- Town Camp roads
- NT cadastre
- Town Camp boundary

**Electrical survey points**

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

A3 scale: 1:2,000



Date: 23/02/2017 Version: 3  
Coordinate system: MGA94 Zone 52

**NT Town Camp Infrastructure Assessments: Electrical**  
**246 - Ngalpa Ngalpa (Tennant Creek)**

# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 30/11/2016 4:19:31 PM

Insp ID: 736

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

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:

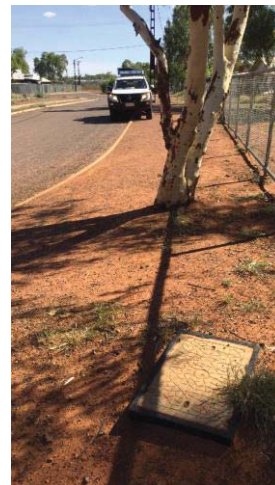
What is the condition of pole:

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 30/11/2016 4:09:00 PM

Insp ID: 739

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

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 30/11/2016 4:07:06 PM

Insp ID: 740

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

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 30/11/2016 3:49:12 PM

Insp ID: 746

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

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 30/11/2016 3:43:56 PM

Insp ID: 748

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

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 30/11/2016 2:49:47 PM

Insp ID: 756

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

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 30/11/2016 2:41:47 PM

Insp ID: 759

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Category are you capturing: Distribution Panel

What is Main Distribution Panel installation method:

Pole

Is the distribution panel labelled:

No

What is Distribution Panel main CB Rating:

80

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:

Cable/Gland Condition Comments:

Unknown

Distribution Panels name plate access:

No



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 2:41:47 PM



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 6/12/2016 2:31:09 PM

Insp ID: 3446      Group 3 - Tennant Creek, Elliott      Ngalpa Ngalpa

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 7/12/2016 9:38:37 AM

Insp ID: 3449      Group 3 - Tennant Creek, Elliott      Ngalpa Ngalpa

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 6/12/2016 2:32:18 PM

Insp ID: 3451

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond:

Meter Condition: 4

Meter Comment: Condition of CB not assessed.

Comments:



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 10/01/2017 1:59:14 PM

Insp ID: 3564

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond:

Meter Condition: 3

Meter Comment: Condition of CB not assessed. Indoor SB, Cond 2, Blank plates are missing on CB slot.

Comments:





# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 10/01/2017 2:44:01 PM

Insp ID: 3565

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Category are you capturing: Electrical Meters

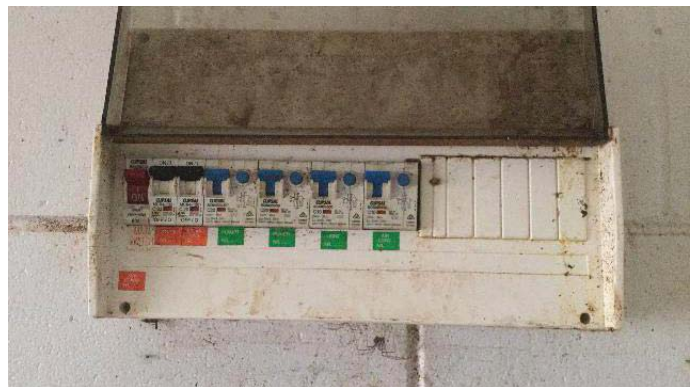
Meter Type: Prepaid

Meter Switchboard Cond: 3

Meter Condition: 3

Meter Comment: Indoor SB, Cond 3

Comments:



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 10/01/2017 2:05:08 PM

Insp ID: 3567

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

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** 10/01/2017 1:42:25 PM

**Insp ID:** 3568

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

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 10/01/2017 1:25:38 PM

Insp ID: 3569

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Category are you capturing: Electrical Meters

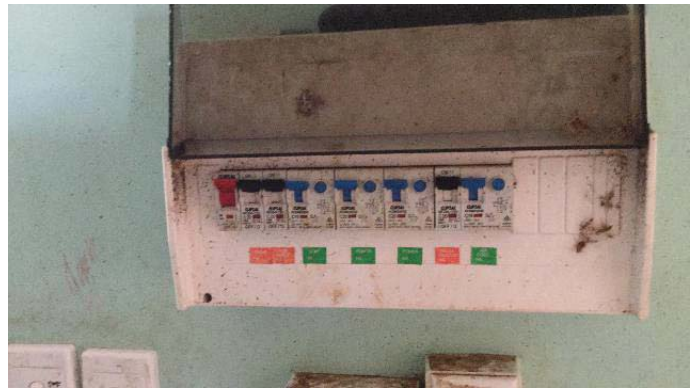
Meter Type: Prepaid

Meter Switchboard Cond: 3

Meter Condition: 3

Meter Comment: Indoor SB, Cond 3

Comments:



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 10/01/2017 8:34:53 AM

Insp ID: 3570      Group 3 - Tennant Creek, Elliott      Ngalpa Ngalpa

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 10/01/2017 8:35:47 AM

Insp ID: 3580

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

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 10/01/2017 8:16:31 AM

Insp ID: 3581

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

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 10/01/2017 1:40:52 PM

Insp ID: 3583      Group 3 - Tennant Creek, Elliott      Ngalpa Ngalpa

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 10/01/2017 1:23:17 PM

Insp ID: 3584      Group 3 - Tennant Creek, Elliott      Ngalpa Ngalpa

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 30/11/2016 4:26:34 PM

Insp ID: 734

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

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	M125D 10
Street Light Watts	125
Street Light Condition	2
Street Light Height	
What is the type of service:	Three
What is the HV voltage level:	400
What is the arrangement of connected cables:	Twisted
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	1
Overhead Pole Comments:	Surface rusted

# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 30/11/2016 4:26:34 PM



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 4:23:11 PM

Insp ID: 735

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

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	M125D 10
Street Light Watts	125
Street Light Condition	2
Street Light Height	
What is the type of service:	Three
What is the HV voltage level:	400
What is the arrangement of connected cables:	Twisted
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	1
Overhead Pole Comments:	Surface rusted

# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 30/11/2016 4:23:11 PM



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 4:18:38 PM

Insp ID: 737

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

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	M125D 10
Street Light Watts	125
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 30/11/2016 4:18:38 PM



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 4:16:04 PM

Insp ID: 738

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

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	M125D 10
Street Light Watts	125
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 30/11/2016 4:16:04 PM



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 4:06:25 PM

Insp ID: 741

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Category are you capturing: Overhead Poles

What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S70D 14
Street Light Watts	70
Street Light Condition	3
Street Light Height	
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 30/11/2016 4:06:25 PM



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 4:01:24 PM

Insp ID: 742

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

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 13
Street Light Watts	70
Street Light Condition	2
Street Light Height	
What is the type of service:	Three
What is the HV voltage level:	400
What is the arrangement of connected cables:	Twisted
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	1
Overhead Pole Comments:	Surface rusted

# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 30/11/2016 4:01:24 PM



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 3:58:04 PM

Insp ID: 743

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Category are you capturing: Overhead Poles

What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S70D 14
Street Light Watts	70
Street Light Condition	2
Street Light Height	
What is the type of service:	Three
What is the HV voltage level:	400
What is the arrangement of connected cables:	Twisted
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	1
Overhead Pole Comments:	Surface rusted

# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 30/11/2016 3:58:04 PM



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 3:54:35 PM

Insp ID: 744

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

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 12
Street Light Watts	70
Street Light Condition	3
Street Light Height	
What is the type of service:	Three
What is the HV voltage level:	400
What is the arrangement of connected cables:	Twisted
Are there isolators on the pole:	
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 30/11/2016 3:54:35 PM



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 3:51:31 PM

Insp ID: 745

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

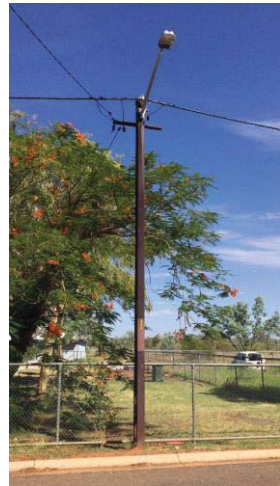
What Category are you capturing: Overhead Poles

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 13
Street Light Watts	70
Street Light Condition	3
Street Light Height	
What is the type of service:	Three
What is the HV voltage level:	400
What is the arrangement of connected cables:	Twisted
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	2
Overhead Pole Comments:	Surface rusted

# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 30/11/2016 3:51:31 PM



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 3:48:30 PM

Insp ID: 747

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

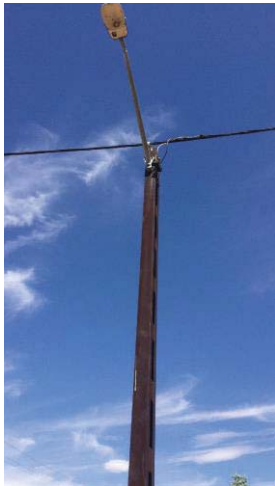
What Category are you capturing: Overhead Poles

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	M125D 10
Street Light Watts	125
Street Light Condition	2
Street Light Height	
What is the type of service:	Three
What is the HV voltage level:	400
What is the arrangement of connected cables:	Twisted
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	
Overhead Pole Comments:	Surface rusted

# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 30/11/2016 3:48:30 PM



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 3:18:46 PM

Insp ID: 750

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

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	M125D 10
Street Light Watts	125
Street Light Condition	2
Street Light Height	
What is the type of service:	Combined
What is the HV voltage level:	11000
What is the arrangement of connected cables:	Parallel
Are there isolators on the pole:	Yes
What is the Condition:	3
How many Lots are connected to this pole:	0
Overhead Pole Comments:	Surface rusted

# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 30/11/2016 3:18:46 PM



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 3:14:39 PM

Insp ID: 751

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

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	M125D 10
Street Light Watts	125
Street Light Condition	3
Street Light Height	
What is the type of service:	Three
What is the HV voltage level:	400
What is the arrangement of connected cables:	Twisted
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	3
Overhead Pole Comments:	Surface rusted



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 30/11/2016 3:14:39 PM



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 3:03:50 PM

Insp ID: 752

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Category are you capturing: Overhead Poles

What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S70D 14
Street Light Watts	70
Street Light Condition	2
Street Light Height	
What is the type of service:	Three
What is the HV voltage level:	400
What is the arrangement of connected cables:	Twisted
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	0
Overhead Pole Comments:	Surface rusted

# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 30/11/2016 3:03:50 PM



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 3:00:35 PM

Insp ID: 753

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

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	M125D 10
Street Light Watts	125
Street Light Condition	2
Street Light Height	
What is the type of service:	Three
What is the HV voltage level:	400
What is the arrangement of connected cables:	Twisted
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	0
Overhead Pole Comments:	Surface rusted

# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 30/11/2016 3:00:35 PM



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 2:57:29 PM

Insp ID: 754

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

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	M125D 10
Street Light Watts	125
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 30/11/2016 2:57:29 PM



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 2:52:13 PM

Insp ID: 755

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Category are you capturing: Overhead Poles

What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S70D 11
Street Light Watts	70
Street Light Condition	2
Street Light Height	
What is the type of service:	Three
What is the HV voltage level:	400
What is the arrangement of connected cables:	Twisted
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	0
Overhead Pole Comments:	Surface rusted



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 30/11/2016 2:52:13 PM



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 2:48:44 PM

Insp ID: 758

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Category are you capturing: Overhead Poles

What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S70D 11
Street Light Watts	70
Street Light Condition	3
Street Light Height	
What is the type of service:	Three
What is the HV voltage level:	
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:	
Overhead Pole Comments:	Surface rusted

# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 30/11/2016 2:48:44 PM



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 2:28:28 PM

Insp ID: 760

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

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	M125D 10
Street Light Watts	125
Street Light Condition	2
Street Light Height	
What is the type of service:	Three
What is the HV voltage level:	400
What is the arrangement of connected cables:	Twisted
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	2
Overhead Pole Comments:	Surface rusted

# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 30/11/2016 2:28:28 PM



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 2:25:34 PM

Insp ID: 761

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Category are you capturing: Overhead Poles

What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S70D 10
Street Light Watts	70
Street Light Condition	3
Street Light Height	
What is the type of service:	Three
What is the HV voltage level:	400
What is the arrangement of connected cables:	Twisted
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	1
Overhead Pole Comments:	Surface rusted

# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 30/11/2016 2:25:34 PM



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 2:22:17 PM

Insp ID: 762

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

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 13
Street Light Watts	70
Street Light Condition	2
Street Light Height	
What is the type of service:	Three
What is the HV voltage level:	400
What is the arrangement of connected cables:	Twisted
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	0
Overhead Pole Comments:	Surface rusted



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 30/11/2016 2:22:17 PM



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 2:19:29 PM

Insp ID: 763

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

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	M125D 10
Street Light Watts	125
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 30/11/2016 2:19:29 PM



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 2:16:25 PM

Insp ID: 764

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

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	M125D 10
Street Light Watts	125
Street Light Condition	2
Street Light Height	
What is the type of service:	Combined
What is the HV voltage level:	11000
What is the arrangement of connected cables:	Parallel
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	0
Overhead Pole Comments:	Surface rusted

# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 30/11/2016 2:16:25 PM



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 2:06:22 PM

Insp ID: 765

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

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	M125D 10
Street Light Watts	125
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 30/11/2016 2:06:22 PM



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 2:03:25 PM

Insp ID: 766

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

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 15
Street Light Watts	70
Street Light Condition	3
Street Light Height	
What is the type of service:	Combined
What is the HV voltage level:	11000
What is the arrangement of connected cables:	Parallel
Are there isolators on the pole:	No
What is the Condition:	3
How many Lots are connected to this pole:	0
Overhead Pole Comments:	Surface rusted



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 30/11/2016 2:03:25 PM



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 1:57:48 PM

Insp ID: 767

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

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	M125D 10
Street Light Watts	125
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 30/11/2016 1:57:48 PM



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 1:51:20 PM

Insp ID: 769

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Category are you capturing: Overhead Poles

What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S70D 11
Street Light Watts	70
Street Light Condition	2
Street Light Height	
What is the type of service:	Combined
What is the HV voltage level:	11000
What is the arrangement of connected cables:	Parallel
Are there isolators on the pole:	Yes
What is the Condition:	3
How many Lots are connected to this pole:	1
Overhead Pole Comments:	Surface rusted

# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 30/11/2016 1:51:20 PM



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 30/11/2016 4:26:34 PM

Insp ID: 734

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Category are you capturing: Overhead Poles

Is street light fitted: Yes

Street Light Power Supply:

Street Light Type M125D 10

Street Light Watts 125

Street Light Condition 2

Street Light Height



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 4:26:34 PM



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 30/11/2016 4:23:11 PM

Insp ID: 735

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Category are you capturing: Overhead Poles

Is street light fitted: Yes

Street Light Power Supply:

Street Light Type M125D 10

Street Light Watts 125

Street Light Condition 2

Street Light Height





## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 4:23:11 PM



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 30/11/2016 4:18:38 PM

Insp ID: 737

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Category are you capturing: Overhead Poles

Is street light fitted: Yes

Street Light Power Supply:

Street Light Type M125D 10

Street Light Watts 125

Street Light Condition 3

Street Light Height



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 4:18:38 PM



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 30/11/2016 4:16:04 PM

Insp ID: 738

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Category are you capturing: Overhead Poles

Is street light fitted: Yes

Street Light Power Supply:

Street Light Type M125D 10

Street Light Watts 125

Street Light Condition 3

Street Light Height



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 4:16:04 PM



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 30/11/2016 4:06:25 PM

Insp ID: 741

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Category are you capturing: Overhead Poles

Is street light fitted: Yes

Street Light Power Supply:

Street Light Type S70D 14

Street Light Watts 70

Street Light Condition 3

Street Light Height



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 4:06:25 PM



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 30/11/2016 4:01:24 PM

Insp ID: 742      Group 3 - Tennant Creek, Elliott      Ngalpa Ngalpa

What Category are you capturing: Overhead Poles

Is street light fitted: Yes  
Street Light Power Supply:  
Street Light Type S70D 13  
Street Light Watts 70  
Street Light Condition 2  
Street Light Height





# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 30/11/2016 3:58:04 PM

Insp ID: 743

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Category are you capturing: Overhead Poles

Is street light fitted: Yes

Street Light Power Supply:

Street Light Type S70D 14

Street Light Watts 70

Street Light Condition 2

Street Light Height



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 3:58:04 PM



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 30/11/2016 3:54:35 PM

Insp ID: 744      Group 3 - Tennant Creek, Elliott      Ngalpa Ngalpa

What Category are you capturing: Overhead Poles

Is street light fitted: Yes  
Street Light Power Supply:  
Street Light Type S70D 12  
Street Light Watts 70  
Street Light Condition 3  
Street Light Height



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 3:54:35 PM



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 30/11/2016 3:51:31 PM

Insp ID: 745

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Category are you capturing: Overhead Poles

Is street light fitted: Yes

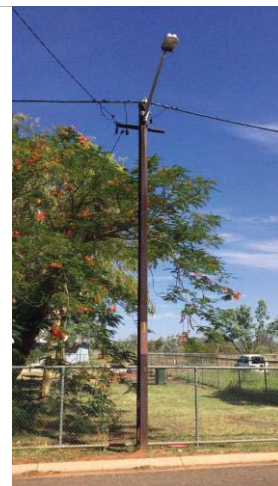
Street Light Power Supply:

Street Light Type S70D 13

Street Light Watts 70

Street Light Condition 3

Street Light Height



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 3:51:31 PM



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 30/11/2016 3:48:30 PM

Insp ID: 747      Group 3 - Tennant Creek, Elliott      Ngalpa Ngalpa

What Category are you capturing: Overhead Poles

Is street light fitted: Yes

Street Light Power Supply:

Street Light Type M125D 10

Street Light Watts 125

Street Light Condition 2

Street Light Height



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 3:48:30 PM





# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 30/11/2016 3:18:46 PM

Insp ID: 750

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Category are you capturing: Overhead Poles

Is street light fitted: Yes

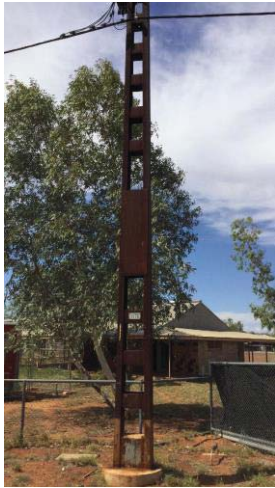
Street Light Power Supply:

Street Light Type M125D 10

Street Light Watts 125

Street Light Condition 2

Street Light Height



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 3:18:46 PM



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 30/11/2016 3:14:39 PM

Insp ID: 751      Group 3 - Tennant Creek, Elliott      Ngalpa Ngalpa

What Category are you capturing: Overhead Poles

Is street light fitted: Yes

Street Light Power Supply:

Street Light Type M125D 10

Street Light Watts 125

Street Light Condition 3

Street Light Height



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 3:14:39 PM



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 30/11/2016 3:03:50 PM

Insp ID: 752

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Category are you capturing: Overhead Poles

Is street light fitted: Yes

Street Light Power Supply:

Street Light Type S70D 14

Street Light Watts 70

Street Light Condition 2

Street Light Height



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 3:03:50 PM



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 30/11/2016 3:00:35 PM

Insp ID: 753

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Category are you capturing: Overhead Poles

Is street light fitted: Yes

Street Light Power Supply:

Street Light Type M125D 10

Street Light Watts 125

Street Light Condition 2

Street Light Height



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 3:00:35 PM





# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 30/11/2016 2:57:29 PM

Insp ID: 754

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Category are you capturing: Overhead Poles

Is street light fitted: Yes

Street Light Power Supply:

Street Light Type M125D 10

Street Light Watts 125

Street Light Condition 3

Street Light Height



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 2:57:29 PM



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 30/11/2016 2:52:13 PM

Insp ID: 755      Group 3 - Tennant Creek, Elliott      Ngalpa Ngalpa

What Category are you capturing: Overhead Poles

Is street light fitted: Yes  
Street Light Power Supply:  
Street Light Type S70D 11  
Street Light Watts 70  
Street Light Condition 2  
Street Light Height



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 2:52:13 PM



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 30/11/2016 2:48:44 PM

Insp ID: 758

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Category are you capturing: Overhead Poles

Is street light fitted: Yes

Street Light Power Supply:

Street Light Type S70D 11

Street Light Watts 70

Street Light Condition 3

Street Light Height



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 2:48:44 PM



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 30/11/2016 2:28:28 PM

Insp ID: 760      Group 3 - Tennant Creek, Elliott      Ngalpa Ngalpa

What Category are you capturing: Overhead Poles

Is street light fitted: Yes

Street Light Power Supply:

Street Light Type M125D 10

Street Light Watts 125

Street Light Condition 2

Street Light Height



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 2:28:28 PM





# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 30/11/2016 2:25:34 PM

Insp ID: 761      Group 3 - Tennant Creek, Elliott      Ngalpa Ngalpa

What Category are you capturing: Overhead Poles

Is street light fitted: Yes  
Street Light Power Supply:  
Street Light Type S70D 10  
Street Light Watts 70  
Street Light Condition 3  
Street Light Height



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 2:25:34 PM



# Northern Territory Town Camps

## Electrical Infrastructure

Inspection Date 30/11/2016 2:22:17 PM

Insp ID: 762

Group 3 - Tennant Creek, Elliott

Ngalpa Ngalpa

What Category are you capturing: Overhead Poles

Is street light fitted: Yes

Street Light Power Supply:

Street Light Type S70D 13

Street Light Watts 70

Street Light Condition 2

Street Light Height



## Northern Territory Town Camps

### Electrical Infrastructure

Inspection Date 30/11/2016 2:22:17 PM

