Northern Territory Town Camps

Civil Infrastructure

Inspection Date 21/11/2016 3:35:17 PM

Insp ID: 862	Group 4 - Alice Springs	Ilyperenye (Old Timers)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Bulk
Bulk Water Meter Size (mm):	100
Bulk Water Meter Condition:	4 - Very Good
Bulk Water Meter Comment:	RPZD installed
Lot Number:	
Lot Water Meter Size:	
Lot Water Meter Condition:	
Lot Water Meter Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 21/11/2016 3:35:17 PM







Northern Territory Town Camps

Civil Infrastructure

Inspection Date 21/11/2016 3:28:25 PM

Insp ID: 864	Group 4 - Alice Springs	Ilyperenye (Old Timers)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	
Lot Water Meter Size:	20
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	

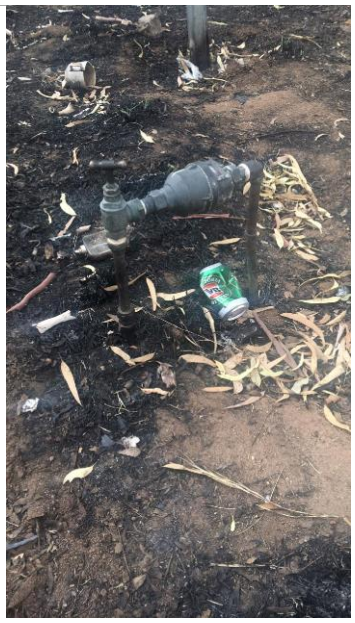




Northern Territory Town Camps

Civil Infrastructure

Inspection Date 21/11/2016 3:28:25 PM



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 21/11/2016 2:43:27 PM

Insp ID: 876	Group 4 - Alice Springs	Ilyperenye (Old Timers)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	
Lot Water Meter Size:	20
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 21/11/2016 2:27:48 PM

Insp ID: 882	Group 4 - Alice Springs	Ilyperenye (Old Timers)

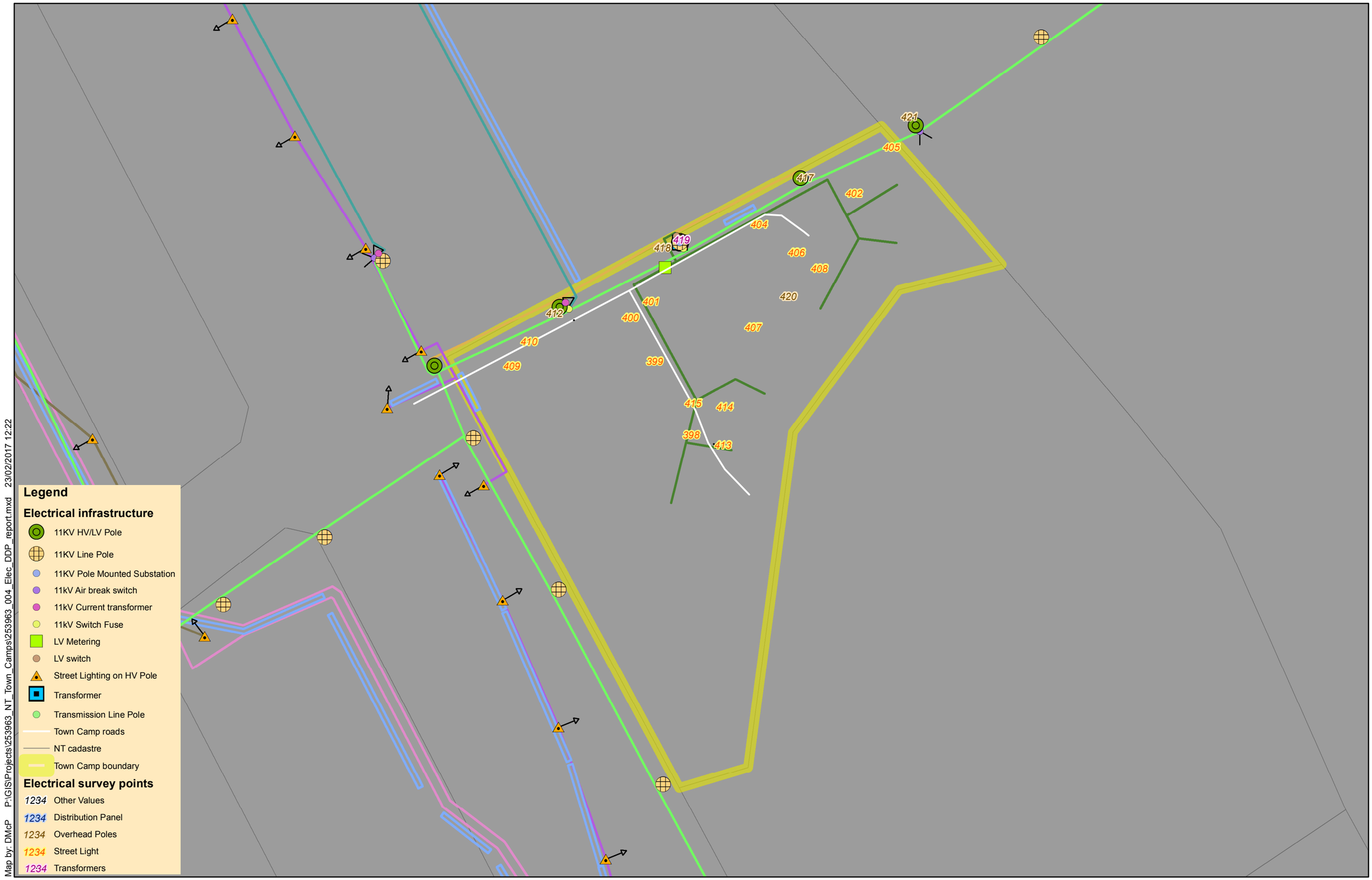
What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	
Lot Water Meter Size:	20
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	





Electrical inspection report



A3 scale: 1:1,500

0 20 40 60 80 100 m

Date: 23/02/2017 Version: 3

Coordinate system: MGA94 Zone 52

NT Town Camp Infrastructure Assessments: Electrical

50 - Ilyiperenye (Alice Springs)

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 22/11/2016 10:56:19 AM

Insp ID: 3423 Group 4 - Alice Springs Ilyperenye (Old Timers)

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

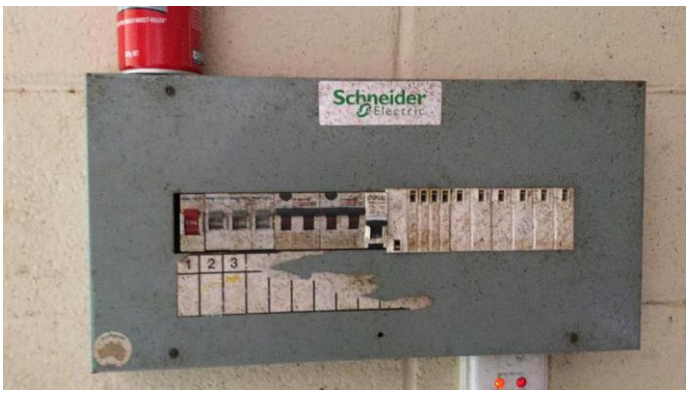
Meter Switchboard Cond:

Meter Condition:

Meter Comment: Type & Condition of meter to be confirmed as meter box's door is locked. Indoor SB, Con

Comments:





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 22/11/2016 10:26:24 AM

Insp ID: 3424 Group 4 - Alice Springs Ilyperenye (Old Timers)

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 22/11/2016 11:08:20 AM

Insp ID: 3425	Group 4 - Alice Springs	Ilyperenye (Old Timers)

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 22/11/2016 11:21:25 AM

Insp ID: 3426 Group 4 - Alice Springs Ilyperenye (Old Timers)

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 22/11/2016 11:37:23 AM

Insp ID: 3427 Group 4 - Alice Springs Ilyperenye (Old Timers)

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond:

Meter Condition:

Meter Comment: Type & Condition of meter to be confirmed as meter box's door is locked.

Comments:



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 22/11/2016 10:19:49 AM

Insp ID: 3428	Group 4 - Alice Springs	Ilyperenye (Old Timers)

What Category are you capturing: Electrical Meters

Meter Type:	Prepaid
Meter Switchboard Cond:	2
Meter Condition:	3
Meter Comment:	Blank plates are missing on CB slot.
Comments:	



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 22/11/2016 11:50:10 AM

Insp ID: 3429	Group 4 - Alice Springs	Ilyperenye (Old Timers)

What Category are you capturing: Electrical Meters

Meter Type:	Prepaid
Meter Switchboard Cond:	2
Meter Condition:	3
Meter Comment:	Blank plates are missing on CB slot.
Comments:	



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 22/11/2016 11:46:29 AM

Insp ID: 3430 Group 4 - Alice Springs Ilyperenye (Old Timers)

What Category are you capturing: Electrical Meters

Meter Type:	Prepaid
Meter Switchboard Cond:	2
Meter Condition:	3
Meter Comment:	Blank plates are missing on CB slot.
Comments:	



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 22/11/2016 11:25:55 AM

Insp ID: 3432 Group 4 - Alice Springs Ilyperenye (Old Timers)

What Category are you capturing: Electrical Meters

Meter Type:	Prepaid
Meter Switchboard Cond:	2
Meter Condition:	3
Meter Comment:	Blank plates are missing on CB slot.
Comments:	



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 22/11/2016 11:09:33 AM

Insp ID: 3433 Group 4 - Alice Springs Ilyperenye (Old Timers)

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 21/11/2016 4:01:42 PM

Insp ID: 412 Group 4 - Alice Springs Ilyperenye (Old Timers)

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Direct
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	Unknown
Street Light Watts	
Street Light Condition	3
Street Light Height	
What is the type of service:	Three
What is the HV voltage level:	11000
What is the arrangement of connected cables:	Parallel
Are there isolators on the pole:	Yes
What is the Condition:	3
How many Lots are connected to this pole:	
Overhead Pole Comments:	

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 21/11/2016 4:01:42 PM









Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 21/11/2016 3:45:08 PM

Insp ID: 417 Group 4 - Alice Springs Ilyperenye (Old Timers)

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Direct
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	Unknown
Street Light Watts	
Street Light Condition	3
Street Light Height	
What is the type of service:	Three
What is the HV voltage level:	11000
What is the arrangement of connected cables:	Parallel
Are there isolators on the pole:	Yes
What is the Condition:	3
How many Lots are connected to this pole:	
Overhead Pole Comments:	

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 21/11/2016 3:45:08 PM











Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 21/11/2016 3:41:19 PM

Insp ID: 418 Group 4 - Alice Springs Ilyperenye (Old Timers)

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Direct
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	Unknown
Street Light Watts	
Street Light Condition	3
Street Light Height	
What is the type of service:	Three
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:	
Overhead Pole Comments:	

Northern Territory Town Camps

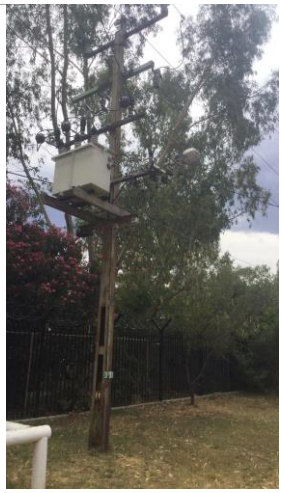
Electrical Infrastructure

Inspection Date 21/11/2016 3:41:19 PM











Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 21/11/2016 3:24:12 PM

Insp ID: 420	Group 4 - Alice Springs	Ilyperenye (Old Timers)

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Steel
What is the condition of pole:	5
How is the pole planted:	Concrete
What is the Condition of plant:	5
Is street light fitted:	No
Street Light Power Supply:	
Street Light Type	
Street Light Watts	
Street Light Condition	
Street Light Height	
What is the type of service:	Single
What is the HV voltage level:	
What is the arrangement of connected cables:	Twisted
Are there isolators on the pole:	No
What is the Condition:	
How many Lots are connected to this pole:	
Overhead Pole Comments:	

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 21/11/2016 3:24:12 PM







Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 21/11/2016 2:57:36 PM

Insp ID: 421	Group 4 - Alice Springs	Ilyperenye (Old Timers)

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Direct
What is the Condition of plant:	3
Is street light fitted:	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:	
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:	6
Overhead Pole Comments:	

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 21/11/2016 2:57:36 PM













Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 21/11/2016 2:57:36 PM



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 21/11/2016 4:01:42 PM

Insp ID: 412 Group 4 - Alice Springs Ilyperenye (Old Timers)

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









Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 21/11/2016 3:45:08 PM

Insp ID: 417 Group 4 - Alice Springs Ilyperenye (Old Timers)

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









Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 21/11/2016 3:45:08 PM



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 21/11/2016 3:41:19 PM

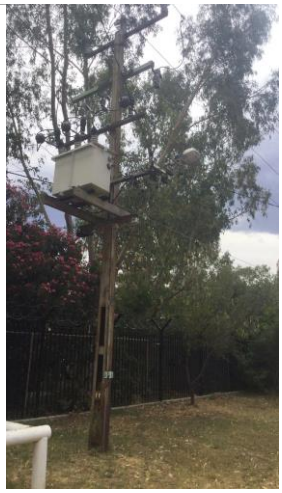
Insp ID: 418 Group 4 - Alice Springs Ilyperenye (Old Timers)

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









Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 21/11/2016 3:41:19 PM



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 21/11/2016 4:03:06 PM

Insp ID: 411	Group 4 - Alice Springs	Ilyperenye (Old Timers)

What Category are you capturing: Pits and Conduits

Comments: Poor reo exposed



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 21/11/2016 4:11:10 PM

Insp ID: 398 Group 4 - Alice Springs Ilyperenye (Old Timers)

What Category are you capturing:	Street Light
What is power supply method:	Overhead
What is the lamp type:	S70 D15
What Wattage is the lamp:	70
What is the condition of street lights:	5
What is Street Lighting pole installation height (approximate):	8





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 21/11/2016 4:10:48 PM

Insp ID: 399	Group 4 - Alice Springs	Ilyperenye (Old Timers)

What Category are you capturing:	Street Light
What is power supply method:	Overhead
What is the lamp type:	S70 D 15
What Wattage is the lamp:	70
What is the condition of street lights:	5
What is Street Lighting pole installation height (approximate):	8





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 21/11/2016 4:10:24 PM

Insp ID: 400	Group 4 - Alice Springs	Ilyperenye (Old Timers)

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





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 21/11/2016 4:10:03 PM

Insp ID: 401	Group 4 - Alice Springs	Ilyperenye (Old Timers)

What Category are you capturing:	Street Light
What is power supply method:	Overhead
What is the lamp type:	S70 D15
What Wattage is the lamp:	70
What is the condition of street lights:	5
What is Street Lighting pole installation height (approximate):	8





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 21/11/2016 4:09:11 PM

Insp ID: 402	Group 4 - Alice Springs	Ilyperenye (Old Timers)

What Category are you capturing:	Street Light
What is power supply method:	Overhead
What is the lamp type:	S70 D 15
What Wattage is the lamp:	70
What is the condition of street lights:	5
What is Street Lighting pole installation height (approximate):	8





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 21/11/2016 4:08:15 PM

Insp ID: 404 Group 4 - Alice Springs Ilyperenye (Old Timers)

What Category are you capturing:	Street Light
What is power supply method:	Overhead
What is the lamp type:	S70 D 15
What Wattage is the lamp:	70
What is the condition of street lights:	5
What is Street Lighting pole installation height (approximate):	8





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 21/11/2016 4:07:44 PM

Insp ID: 405	Group 4 - Alice Springs	Ilyperenye (Old Timers)

What Category are you capturing:	Street Light
What is power supply method:	Overhead
What is the lamp type:	S70 D15
What Wattage is the lamp:	70
What is the condition of street lights:	5
What is Street Lighting pole installation height (approximate):	8





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 21/11/2016 4:07:20 PM

Insp ID: 406 Group 4 - Alice Springs Ilyperenye (Old Timers)

What Category are you capturing:	Street Light
What is power supply method:	Overhead
What is the lamp type:	S70 D 15
What Wattage is the lamp:	70
What is the condition of street lights:	4
What is Street Lighting pole installation height (approximate):	8





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 21/11/2016 4:06:56 PM

Insp ID: 407	Group 4 - Alice Springs	Ilyperenye (Old Timers)

What Category are you capturing:	Street Light
What is power supply method:	Overhead
What is the lamp type:	S70 D15
What Wattage is the lamp:	70
What is the condition of street lights:	5
What is Street Lighting pole installation height (approximate):	8





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 21/11/2016 4:06:32 PM

Insp ID: 408 Group 4 - Alice Springs Ilyperenye (Old Timers)

What Category are you capturing:	Street Light
What is power supply method:	Overhead
What is the lamp type:	S70 D 15
What Wattage is the lamp:	70
What is the condition of street lights:	5
What is Street Lighting pole installation height (approximate):	8





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 21/11/2016 4:05:56 PM

Insp ID: 409 Group 4 - Alice Springs Ilyperenye (Old Timers)

What Category are you capturing:	Street Light
What is power supply method:	Overhead
What is the lamp type:	S 70 D15
What Wattage is the lamp:	70
What is the condition of street lights:	5
What is Street Lighting pole installation height (approximate):	8





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 21/11/2016 4:04:12 PM

Insp ID: 410	Group 4 - Alice Springs	Ilyperenye (Old Timers)

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





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 21/11/2016 3:57:35 PM

Insp ID: 413	Group 4 - Alice Springs	Ilyperenye (Old Timers)

What Category are you capturing:	Street Light
What is power supply method:	Overhead
What is the lamp type:	S70 D15
What Wattage is the lamp:	70
What is the condition of street lights:	5
What is Street Lighting pole installation height (approximate):	8





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 21/11/2016 3:55:57 PM

Insp ID: 414	Group 4 - Alice Springs	Ilyperenye (Old Timers)

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





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 21/11/2016 3:53:00 PM

Insp ID: 415	Group 4 - Alice Springs	Ilyperenye (Old Timers)

What Category are you capturing:	Street Light
What is power supply method:	Overhead
What is the lamp type:	S70 D 15
What Wattage is the lamp:	70
What is the condition of street lights:	5
What is Street Lighting pole installation height (approximate):	8





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 21/11/2016 3:37:29 PM

Insp ID: 419 Group 4 - Alice Springs Ilyperenye (Old Timers)

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:	
Is there access to transformers name plate to take a photo:	No Access
What is the condition of transformer:	2
What is cable type to transformer:	Black insulated single core
What is cable size to transformer:	
Is there switch gear or fusing associated with the transformer:	Surge suppressor a and drop out fuses
Transformer Comment:	









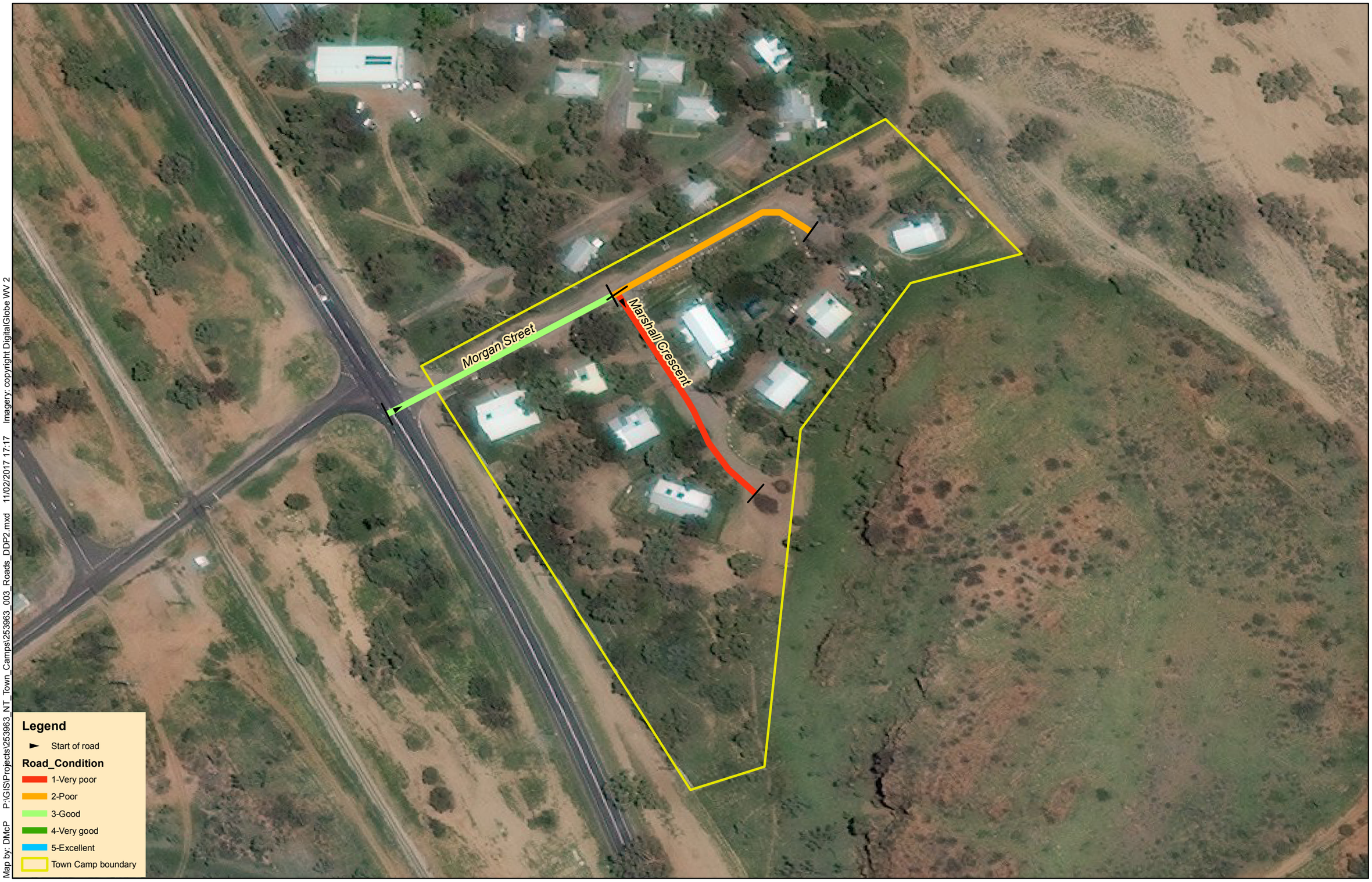
Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 21/11/2016 3:37:29 PM



Road map



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

A3 scale: 1:1,500

0 20 40 60 80 100 m

Date: 11/02/2017 Version: 1

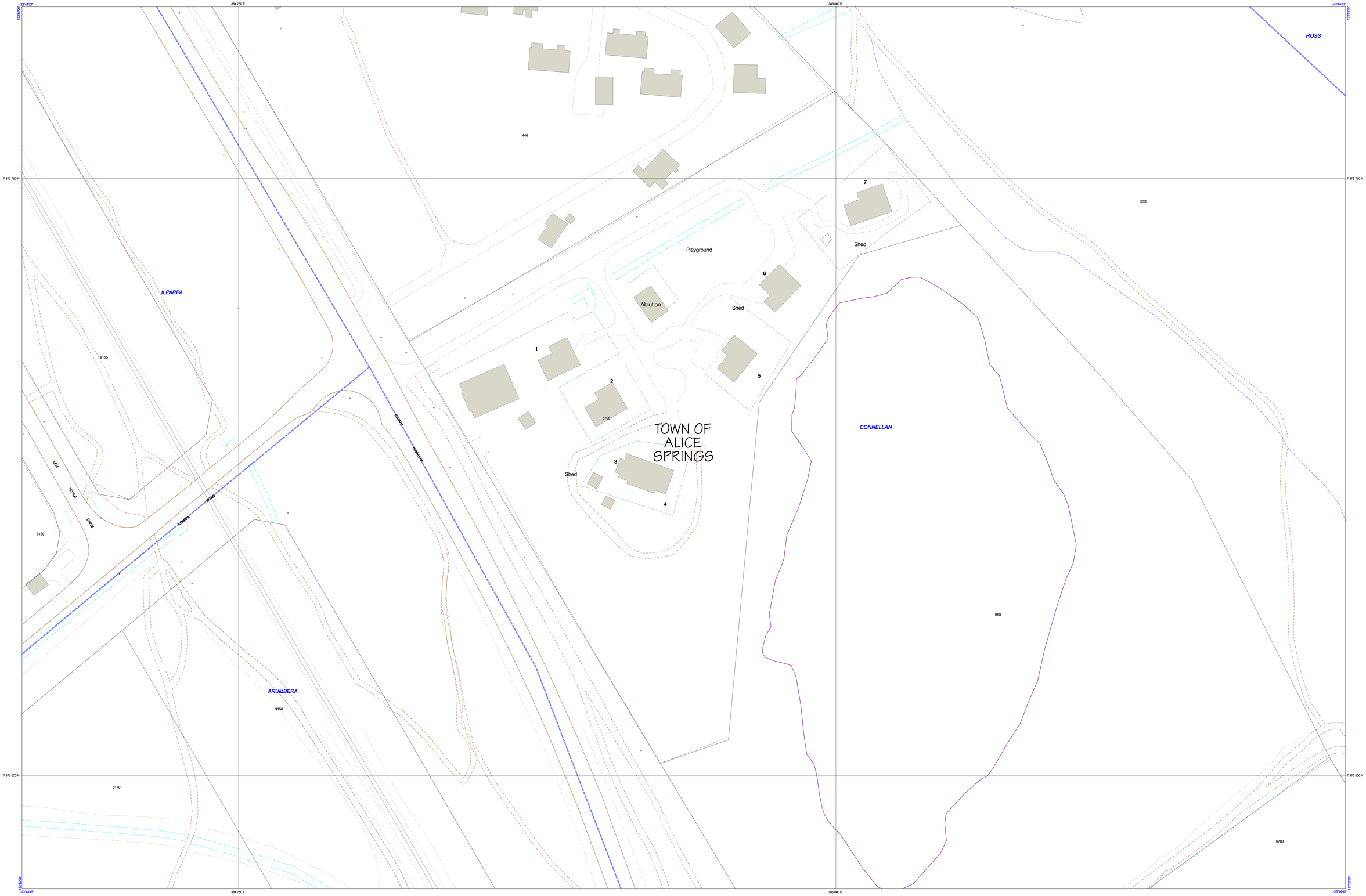
Coordinate system: GDA 1994

NT Town Camp Road Assessments

50 - Ilyiperenye (Alice Springs)

2604

Existing drawings



LAND USE PLANNING:

APPROX. POSITION OF BUILDING constructed since date of photography

LAND EXCLUDED FROM DEVELOPMENT:

GENERAL EXCLUSION/BUFFERS

CULTURAL EXCLUSION AREAS:

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

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

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LEGEND

CADASTRE
- Current — 123
- Proposed — 123
- Locality — LOCALITY

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

DIAL BEFORE YOU DIG www.1100.com.au

TOPOGRAPHY
- Road Sealed, Bridge
- Road Unsealed, Track
- Footpath, Drain, Culvert
- Wall, Gate, Fence, Cattle Grid
- Railway, Disused Railway
- Aerodrome Tarmac, Landing Strip
- Taxiway, Apron
- Pipeline: Oil, Water, Undetermined Gas, Sewage
- Building, Building-Shape unconfirmed
- Shade Structure, Incomplete Building
- Sewage Ponds, Tailings Pond
- Oval, Arena, Swimming Pool
- High Water Mark, Low Water Mark
- Mine; Quarry, Surface Excavation — PS
- Contour; Index, Intermediate
- Contour; Depression
- Top of Bank, Bottom of Bank, Cliff
- Watercourse; Perennial, Intermittent, Channel or Canal
- WaterBodies; Perennial, Intermittent
- WaterBodies; Reservoir, Water Hole
- Swamp; Swamp Perennial, Swamp Intermittent
- Flat; Mud Flat, Clay/Saltpan, STI
- Pole; Power, General, Light
- Tank; Water, Elevated, Non-Water, Silo
- Manhole, Pylon, Communication Tower, Bore.

AVAILABLE FROM AND PRODUCED BY:

Northern Territory Government

NOTES:
POWER POLES, MANHOLES, SEPTIC TANKS, TOWERS/POSTS and other similar shaped objects are plotted from the best data available and have their locations confirmed from aerial survey techniques.
These features are suitable as LOCAL SURVEY CONTROL. Their ground positions are expected to be within +/-0.3m of their mapped locations.

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

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

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

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

Cadastral Information:
Office of the Surveyor-General
Dept of Lands and Planning
TEL: (08) 8995 5305, FAX: (08) 8995 5395
Email: landinfo.dpl@nt.gov.au

Power, Water or Sewer Information:
Remote Operations Planning Branch
Power and Water Corporation
TEL: (08) 8924 5594, FAX: (08) 8924 5360

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

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

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

SOURCE INFORMATION

CONTOUR INTERVAL :		CURRENCY OF TOPOGRAPHY :	16 June 2008
HORIZONTAL DATUM :		SOURCE MAP SCALE :	2500
VERTICAL DATUM :		ZONE UTM :	53
PROJECTION :	Transverse Mercator	DATE GENERATED :	19 June 2012

N

GDA

0 10 20 30 40 50

Locality Diagram

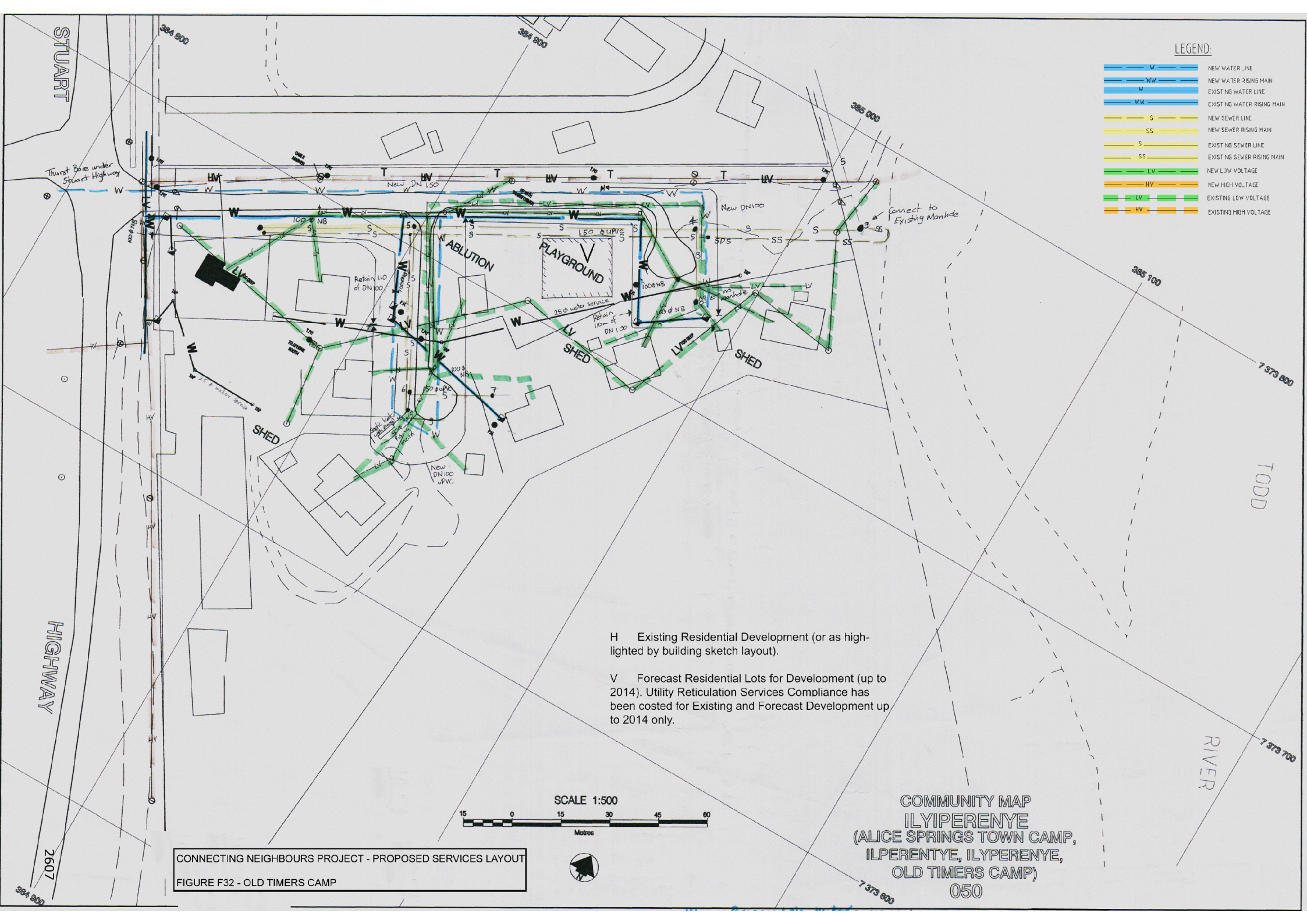


SERVICED LAND AVAILABILITY PROGRAM
SLAP Map
Ilyiperenye (Alice Springs Town Camp)

Alice Springs Town Camp

Alice Springs Town Council

Community ID: 50


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
STUART
HIGHWAY
TODD
RIVER
384 800
385 000
385 100
7 373 600
7 373 700
Thrust Bore under Stuart Highway
New DN150
New DN100
Connect to Existing Manhole
ABLUTION
PLAYGROUND
SHED
SHED
SHED
Retain 110 of DN100
Retain 110m of DN100
250 water service
150 ø uPVC
100 ø NB
1000 NB
no manhole
SPS
New DN100 uPVC
SCALE 1:500
15 0 15 30 45 60
Metres
H Existing Residential Development (or as high-lighted by building sketch layout).
V Forecast Residential Lots for Development (up to 2014). Utility Reticulation Services Compliance has been costed for Existing and Forecast Development up to 2014 only.
CONNECTING NEIGHBOURS PROJECT - PROPOSED SERVICES LAYOUT
FIGURE F32 - OLD TIMERS CAMP
COMMUNITY MAP
ILYIPERENYE
(ALICE SPRINGS TOWN CAMP, ILPERENTYE, ILYPERENYE, OLD TIMERS CAMP)
050
2607

Transformer data

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

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

Inarlenge (Little Sisters)

Inarlenge (Little Sisters)

1 Design

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

Sewerage and water supply

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

Electrical services

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

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

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

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

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

The following apply:

- Australian Standards
- Power Networks Design and Construction Guidelines, Power and Water Corporation
  - NP001.1_Design and Construction of Network Assets – General Requirements
  - NP001.3_General Specification for Overhead Electrical Reticulation
  - NP001.6_General Specification for URD Subdivisions
  - NP003_Installation Rules_V3
  - NP007_Service Rules
  - NP027_Capture of Newly Installed Street Lighting Information
  - NP041_Guidelines for Electrical Design Consultants

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

Communications

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

Council guidelines

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

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

General

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

2 Condition assessment

2.1 Rating assessment matrix

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

Table 1 Condition rating

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

2.2 Civil assessment limitations

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

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

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

2.3 Electrical assessment limitations

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

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

3 Current infrastructure issues

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

3.1 Ownership and maintenance

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

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

3.2 Access to infrastructure

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

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 Inarlenge community on 24 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 Appendicies.

5 Sewerage

5.1 Ownership and boundaries

The sewer infrastructure at Little Sisters is owned by the Inarlenge Community Incorporated, however is the responsibility of Ingkerreke Outstations Resource Services to maintain.

The external sewer network is owned and maintained by Power and Water Corporation. PWC does not own any infrastructure within the community.

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 Inarlenge is 22. 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 and pump stations, as all other sewerage infrastructure is below ground. The assets that were inspected had the following conditions:

Table 2 Sewer condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Manhole		2	5	1		8



Figure 1 Sewer manhole, condition: *good*



Figure 2 Sewer manhole, condition: *good*

The manholes in Little Sisters were generally in good condition. Two manholes were in poor condition due to being covered by dirt, and steel reinforcement around the concrete pit. It is recommended that these are cleaned up.

The SIHIP program produced detailed drawings of the sewerage infrastructure upgrades required at Little Sisters. From the site inspection undertaken, it appears that these upgrades have not been constructed.

5.3 Current performance and risks

5.3.1 Current sewer network performance

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

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

The current number of houses in Little Sisters is 22, this multiplied by 9 EP per house gives a total current EP of 198. There was no information showing the existing network pipe diameter, so it was assumed to be DN100 and non-compliant and PWC require a DN150 diameter pipe.

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

Table 3 Existing sewer capacity

Catchment	Current total EP	Diameter of connection (mm)	Adopted PWC minimum slope (%)	Q_{full} (L/s)	Current Q (L/s)	Current capacity (%)
Catchment 1	198	100	1.0	5.60	2.24	40%

Table 3 above shows that the capacity of the existing sewer network is adequate for the current peak population.

It is recommended that the existing sewer network is upgraded to a DN150 PVC reticulation main, including new housing connections and manholes, and connection to the town sewer.

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 following works are recommended:

- Construct new DN150 reticulation main, including housing connections and manholes, and connection to town sewer. Approximately 1,000 m required.
- Clear dirt and steel from two manholes

6 Water supply

6.1 Ownership and boundaries

The water supply infrastructure was upgraded to PWC standards as part of the SIHIP program. The water main servicing Little Sisters community is a DN150 PVC ring main, with two supply points connecting to external DN200 pipes (refer Appendicies).

The water supply assets within Little Sisters are believed to be owned by Inarlenge Community Incorporated, but are the responsibility of Ingkerreke Outstations Resource Services to maintain. The water is supplied from PWC owned water mains outside of the community. Figure 4 shows the extent of water services.

PWC have advised they currently maintain the water assets up to the residential lot water meters, although there is no formal agreement covering this maintenance.



Figure 3 Little Sister water supply

6.1.1 Connection methods and billing

Through consultation with PWC it has been determined that the water usage is currently charged as a fixed daily rate for 22 house water meters within Little Sisters. The bill is issued to the Department of Housing and Community Development. 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 one of the water mains located at the community boundary and looping the other main. Under this scheme, the water bill for the entire community is the responsibility of the governing body, being Inarlenge Community

Incorporated for Little Sisters. It will be up to governing body to assign bills to residents accordingly.

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

A total of 18 residential lot water meters were assessed during the inspection. Bennett Design reported that Little Sister contains 22 dwellings. Therefore, up to an additional four water meters are required to be installed to cover the properties without an existing water meter. Note, some water meters may have been present however not visible due to overgrown flora or restricted property access. Consequently water meters may have not been discovered during the inspection.

6.2 Existing infrastructure condition assessment

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

The condition of each asset is as follows:

Table 4 Water asset condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Fire hydrant			4	4		8
Water meter (residential lots)			5	13		18
Water meter (bulk)	1		2			3



Figure 4 Fire hydrant, condition: *good*



Figure 5 Residential lot water meter, condition: *good*



Figure 6 Water meter (bulk), condition: *very poor*

The bulk water meter, shown in Figure 7 above, is disconnected and thus assessed as being in very poor condition. Assuming the water main is now redundant, the water meter and exposed pipework should be removed and the water main capped.

Four fire hydrants require some minor maintenance work, including clearing the concrete area of loose soil, as well as repainting the hydrant cover.

6.3 Current performance and risks

The current peak hour demand 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 5 shows the peak hour water demand for Little Sisters.

Table 5 Current water demand

Total dwellings	EP	Demand (l/s)	Peak hour demand (l/s)
22	198	2.97	8.91

The water reticulation is expected to have sufficient capacity for PWC flow requirements including peak hour and fire flow.

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 Inarlenge no additional hydrants are required at this stage.

The water reticulation network layout and sizes are compliant with PWC standards.

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;

- Clear sand from covers of four fire hydrants
- Repaint four fire hydrants
- Remove defunct water meter and cap decommissioned pipe

The community is viewed overall as a large single lot and as previously detailed it is proposed to have the water usage measured as a single lot. In order to do so, a bulk water meter should be installed. As the network is ring main, one of the supply points should be disconnected and reconnected to the internal network creating a looped main. This allows the single remaining point to be metered. The cost estimates for the upgrades at Little Sisters include:

- Install bulk water meter at community boundaries
- Disconnect secondary supply point and reconnect to water main creating a looped
- Install four new residential lot water meters

7 Roadworks

7.1 Ownership and boundaries

It is the current understanding that the roads at Little Sisters are owned by the Inarlenge Community Incorporated, however it is the responsibility of Ingkerreke Outstations Resource Services to maintain.

7.2 Existing infrastructure condition assessment

The road network within Inarlenge community consists of a sealed road circuiting the community. There are also numerous informal tracks which appear to be used frequently but are not covered in this inspection and report.

Road furniture including signs were also inspected. Table 6 below summarise the condition of the road furniture as assessed during the site inspection.

Table 6 Roadworks condition assessment

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



Figure 7 Sign, condition: *very poor*



Figure 8 Sign, condition: *very good*

The majority of signs within the community are at a poor or very poor condition and therefore require cleaning to remove graffiti or replacing.

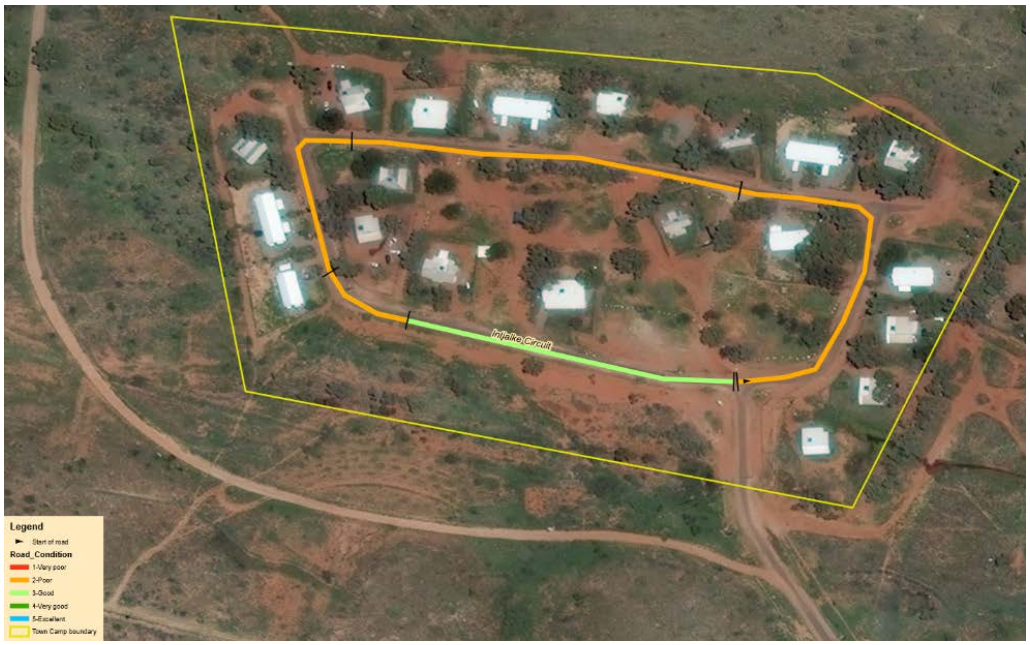


Figure 9 Community road network

Table 7 below details the condition of the roads within Inarlenge community for specific segments. Figure 10 shows a map of the community's road network with the condition ratings, road name, and chainage direction.

Table 7 Road network condition assessment

Road name	Chainage start (km)	Chainage end (km)	Condition (1 to 5)	Defects and associated condition
Intjalke Circuit	0	0.2	2	-10% of the road has surface cracking (2) -10% of the road has edge breaks (3)
	0.2	0.4	2	-5% of the road had surface cracks (3)
	0.4	0.55	2	-5% of the road has surface cracking (2) -5 potholes (3) -10% of the road has edge breaks (3)
	0.5	0.72	3	-5% of the road has surface cracking (3)

7.3 Current performance and risks

The road network in Inarlenge is in poor condition as there were edge breaks, surface cracking and some potholes. As the roads have surface cracking, there may be more significant issues to do with the subgrade or drainage that will require remediation before the road can be resealed.

The layout of the road network is sufficient for the current number of houses, although the condition of the road is poor.

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

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

7.4 Future demands

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

7.5 Recommended works

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

- Repair 165 m^2 of surface cracking
- Repair 35 m of edge breaks
- Fill and reseal five potholes
- General clean of 720 m of pavement and road reserve
- Replace three signs

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

As the maximum road width within the Inarlenge community is 3.8 m, this means that all 720 m of the road network will need to be upgraded to a 7.2 m wide road. The stormwater drainage infrastructure upgrades that are closely associated with the road upgrade i.e. kerb and gutters, side entry pits and underground drainage pipes are included in the stormwater section of this report.

8 Stormwater drainage

8.1 Ownership and boundaries

The stormwater drainage infrastructure at Little Sisters is owned by the Inarlenge Community Incorporated, however is the responsibility of Ingkerreke Outstations Resource Services to maintain

8.2 Existing infrastructure condition assessment

The site investigation for the stormwater infrastructure included assessing the condition of swales, culverts, headwalls, and side entry pits (SEP). Only the above ground infrastructure was assessed. As the inspection was undertaken outside of a storm event and no CCTV of the pipes was undertaken, flooding due to blockages or damage to the underground infrastructure could not be assessed. Table 8 below summarises the condition of the stormwater assets as assessed during the inspection.

Table 8 Stormwater condition assessment

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



Figure 10 Culvert endwall, condition: *very poor*



Figure 11 Culver headwall, condition: *very poor*

The culvert was rated in very poor condition due to being completely blocked. It is recommended that the culvert is cleaned out and the swales reformed on both the upstream and downstream sides of the culvert.

The SIHIP program designed stormwater drainage for the community, however it appears as though the infrastructure has not been built.

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.

The Alice Springs Town Council's general design philosophy for stormwater drainage is that the system is based on a network of sealed roads, kerb and gutters, side entry pits and underground drainage pipes, including grassed open channels and diversion drains. It is recommended that kerbs and gutters, side entry pits and underground pipes are installed to help reduce flooding in the community. The cost estimates allow for 750 m of stormwater drainage.

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:

- Construct kerb and gutters, side entry pits, and underground drainage.
- Clear blockages from culvert and reshape swale upstream and downstream of culvert

9 Community structures

9.1 Ownership and boundaries

The community structures at Little Sisters are owned by the Inarlenge Community Incorporated, however it is the responsibility of Ingkerreke Outstations Resource Services to maintain.

9.2 Existing infrastructure condition assessment

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

Table 9 Community structures condition assessment

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



Figure 12 Basketball court, condition: *very good*



Figure 13 Playground, condition: *good*



Figure 14 Shade structure, condition: *very good*

9.3 Current performance and risks

The basketball court and shade structure were in very good condition, however 'key' lines should be painted on the basketball court floor. One play ground was in poor condition and should be upgraded, the other was in good condition and requires only a general tidy up.

9.4 Future demands

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

9.5 Recommended works

The following works are recommended to upgrade the community structures:

- Paint 'key' lines in basketball court
- Upgrade the equipment in one playground
- Clean and maintain the other playground to ensure all graffiti and rubbish is removed
- General clean of all community structures and the area surrounding them

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 Inarlenge (Little Sisters) community electrical reticulation systems is supplied by an overhead HV distribution line from PWCs distribution network. The Point of Supply and demarcation betwwen PWC infrastructure and community infrastructure is a LV switch on the output of the transformer. Overhead LV reticulation scheme to runs to individual houses. Prepaid meters are utilised in Inarlenge (Little Sisters) community.

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.

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

10.2 Existing infrastructure condition assessment

The Table 10 shows the condition rating given to the Distribution Panels. The distribution panels had 50% operational rating and 50% un-operational rating.

Table 10 Distribution panel condition assessment

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

Table 11 shows the condition rating given to the street lights. The street lights were of a low voltage overhead feeder design, sodium lamp type S50D & S70D, with lamp covers protected by cages. The street lights have an 88% operational rating and 12% un-operational rating.

Table 11 Street light condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Street light	1	2	8	14		25

Table 12 shows the condition rating given to the street lights. The street lights on OH poles were of a low voltage overhead feeder design, sodium lamp type S70D, with lamp covers protected by cages. The street lights have an 87% operational rating and 13% in non-operational rating.

Table 12 Street light on O/H pole condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Street light on O/H pole		1	7			8

Table 13 shows the condition rating given to the Overhead poles. The overhead poles are of steel LV construction and Weld Construction (Universal Pole construction). The overhead poles have 100% operational rating from the visual inspection.

Table 13 Overhead pole condition assessment

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

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

Table 14 Meter Panel condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Pre-paid meter			19			19

Switchboard		2	5		7

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

Table 15 Switchboard condition assessment (Housing footprint)

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Switchboard		3	5			8

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

10.3 Current performance and risks

The electrical infrastructure evaluation was conducted against the following criteria

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

The calculated maximum demand of Inarlenge (Little Sisters) transformer is at 99% of rated capacity based on 4.5kVA/dwelling and current needs are met. A recommended detail audit to be performed to ascertain the exact reticulation and load demand.

Table 16 Inarlenge (Little Sisters) current demand load vs transformer ratings

Com Id	Community name	Dwellings	Transformer (kVA)	kVA Total @ 4.5kVA	kVA Total @ 7kVA	Comments
90	Inarlenge (Little Sisters)	22	100	99	154	Transformer is not in boundary of Town Camp [The nearest transformer data to Town Camp is highlighted in yellow].

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

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 transformer near to Inarlenge (Little Sisters) community is owned by PWC and PWC should be made aware of the loading of this transformer and have it assessed for the load and if this transformer should be upgraded or replaced.

The following maintenance works and upgrades are recommended:

- Replace three street lights 50W & one street lights 70W.
- Replace two switchboards
- Replace two switchboards inside the metering panel
- Replace three switchboards associated to dwellings
- Install new street lighting - approximately 36 poles

11 Communications

11.1 Ownership and boundaries

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

11.2 Existing infrastructure condition assessment

The telecommunications infrastructure assessed included pits and telephone booths.

Appendicies contains the individual reports.

Table 17 Telecommunication pit condition assessment

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

Table 18 Telephone booth condition assessment

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

11.3 Current performance and risks

No details of the performance of communications infrastructure were obtained.

11.4 Future demands

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

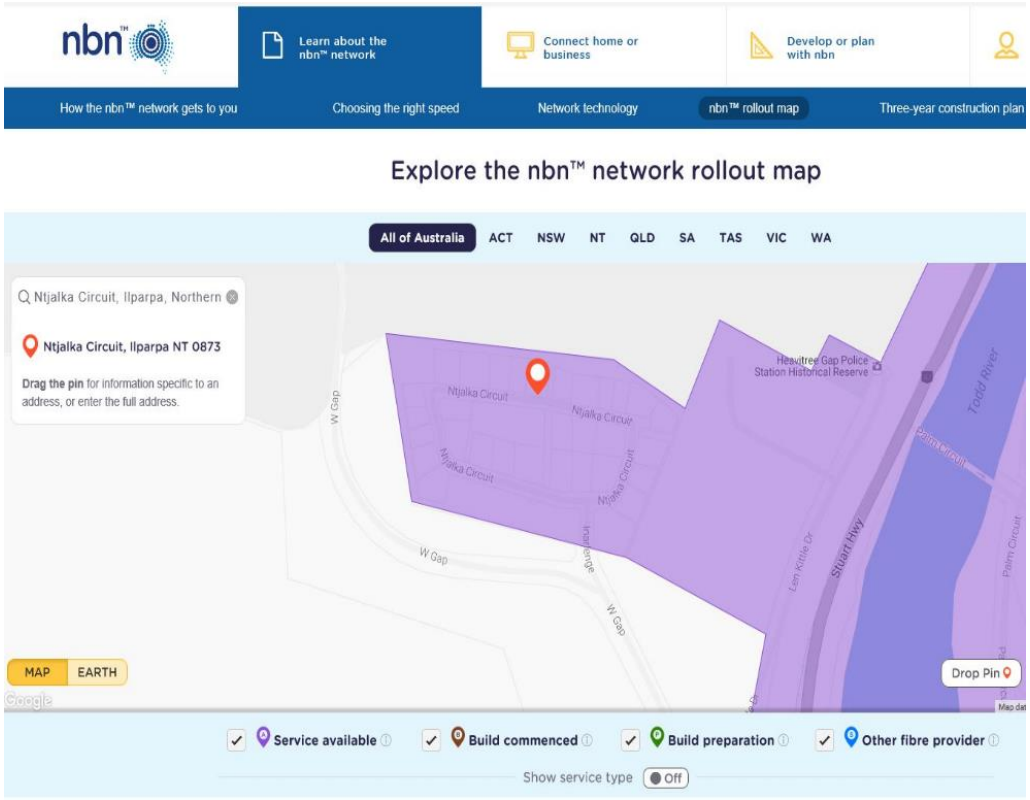


Figure 15 NBN network availability map

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

No works are required at Inarlenge (Little Sisters) 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	$ 1,000	$ 761,000
Water supply	$ 9,000	$ 89,000
Roadworks	$ 23,000	$ 873,000
Stormwater drainage	$ 14,000	$ 887,000
Community structures	$ 14,000	$ 0
Electrical	$ 53,000	$ 587,000
Communications	$ 0	$ 0
Miscellaneous provisions	$ 23,000	$ 393,000
Total (including GST)	**$ 137,000**	**$ 3,590,000**
Grand total	**$ 3,727,000**	

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

13 Summary

The following works are recommended for Little Sisters community:

Sewerage

- Construct new DN150 reticulation main, including housing connections and manholes, and connection to town sewer. Approximately 1,000 m required.
- Clear dirt and steel from two manholes

Water supply

- Clear sand from covers of four fire hydrants
- Repaint four fire hydrants
- Remove defunct water meter and cap decommissioned pipe
- Install bulk water meter at community boundaries
- Disconnect secondary supply point and reconnect to water main creating a looped
- Install four new residential lot water meters

Roadworks

- Repair 165 m^2 of surface cracking
- Repair 35 m of edge breaks
- Fill and reseal five potholes
- General clean of 720 m of pavement and road reserve
- Replace three signs
- It is recommended that the road is upgraded to a two lane network with all appropriate road furniture, line marking, kerbs, footpaths, etc.

Stormwater drainage

- Construct kerb and gutters, side entry pits, and underground drainage.
- Clear blockages from culvert and reshape swale upstream and downstream of culvert

Community structures

- Paint 'key' lines in basketball court
- Upgrade the equipment in one playground
- Clean and maintain the other playground to ensure all graffiti and rubbish is removed
- General clean of all community structures and the area surrounding them

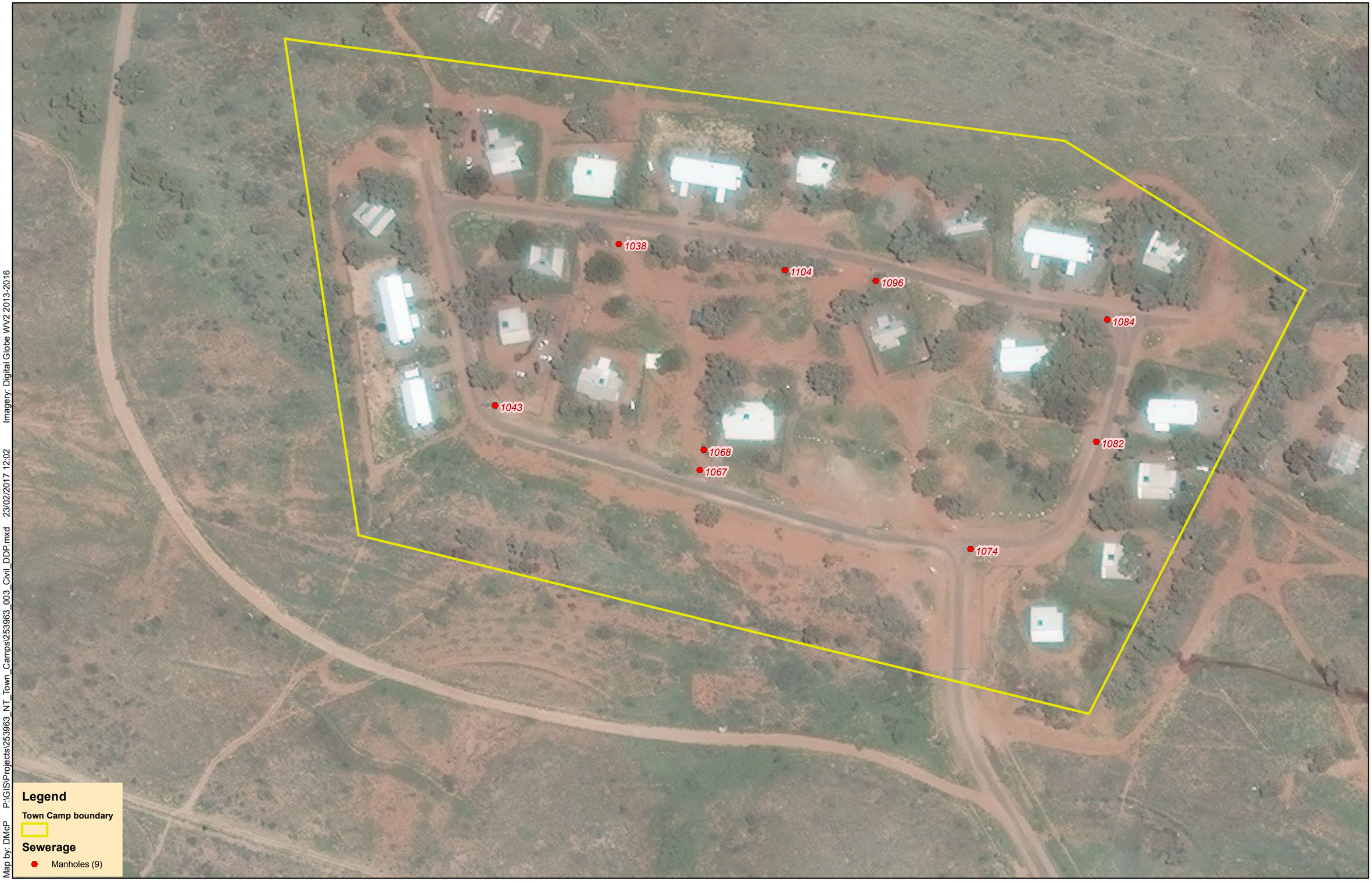
Electrical services

- Replace three street lights 50W & one street lights 70W.
- Replace two switchboards
- Replace two switchboards inside the metering panel
- Replace three switchboards associated to dwellings
- Install new street lighting - approximately 36 poles
- Confirm power usage of current demand by:
  - Detail demand profile, metered readings of power utilisation.
  - Design- Reports; Detail Audit per individual camp per house – 22 dwellings

Communications

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

Civil inspection reports



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

A3 scale: 1:1,500

0 20 40 60 80 100 m

Note:
Label numbers refer to survey IDs

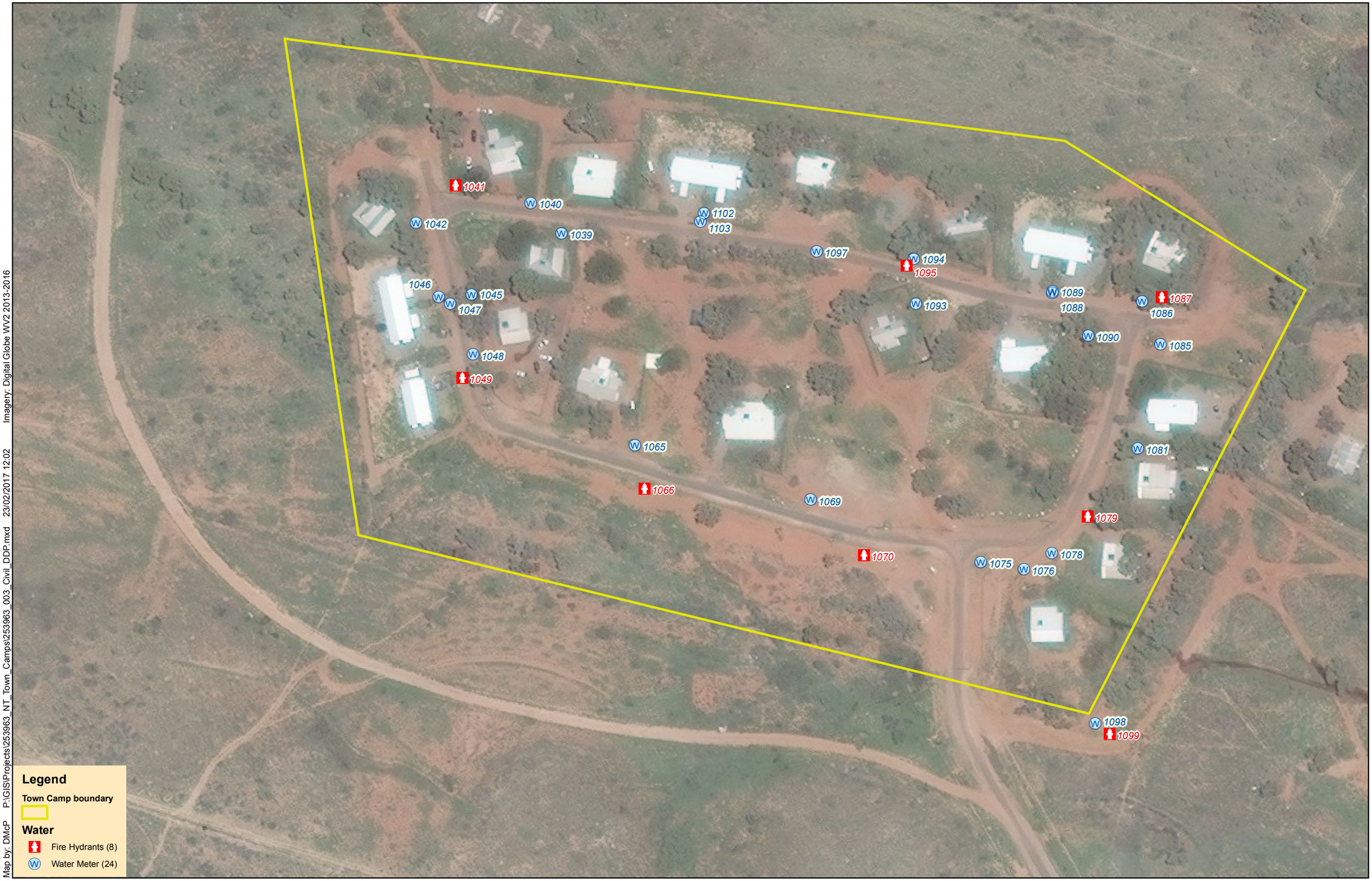
Date: 23/02/2017 Version: 2

Coordinate system: MGA94 Zone 52

NT Town Camp Infrastructure Assessments: Sewerage

90 - Inarlenge (Alice Springs)

2641



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

A3 scale: 1:1,500

0 20 40 60 80 100 m

Note:
Label numbers refer to survey IDs

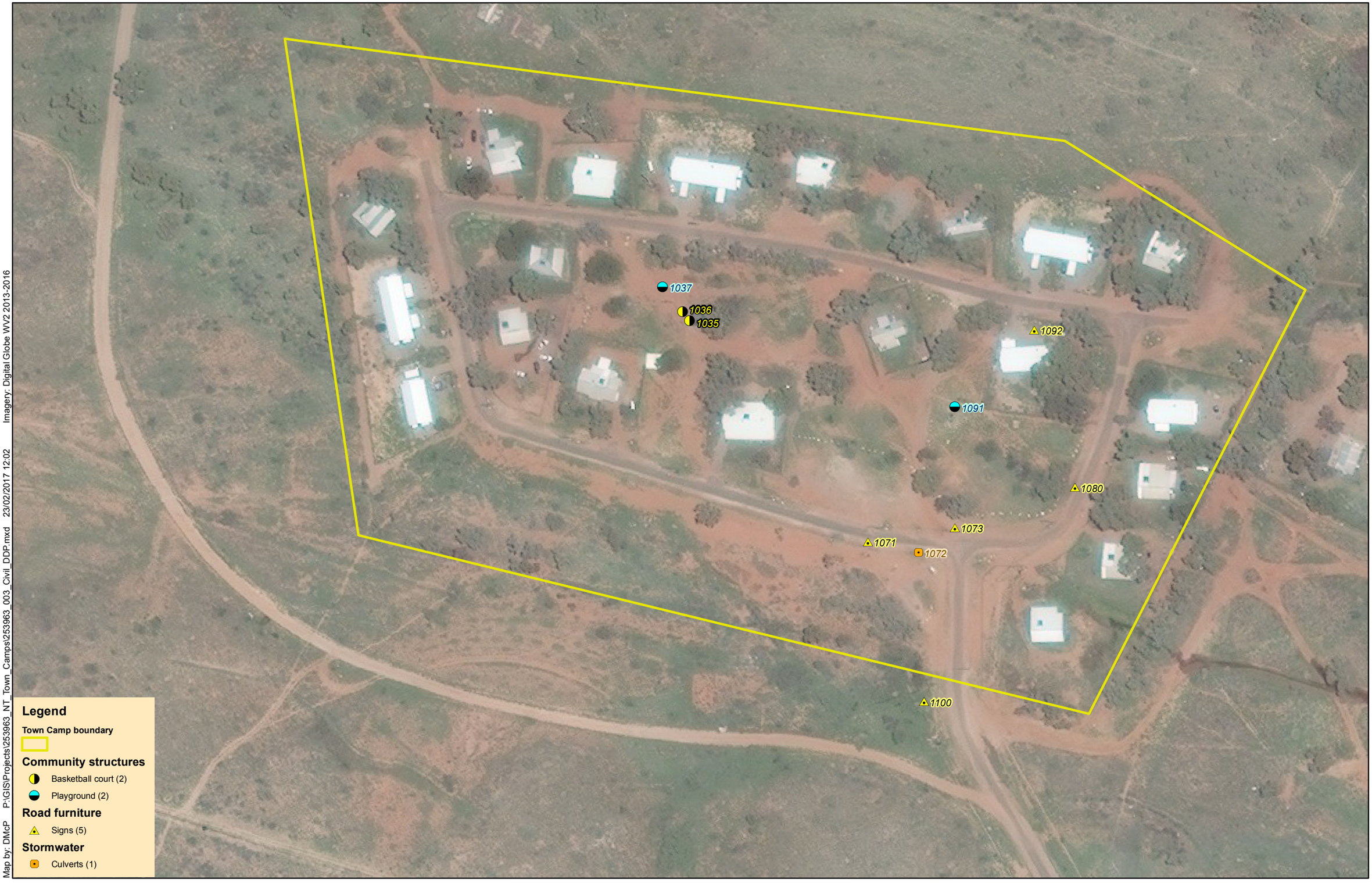
Date: 23/02/2017 Version: 2

Coordinate system: MGA94 Zone 52

NT Town Camp Infrastructure Assessments: Water

90 - Inarlenge (Alice Springs)

2642



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

A3 scale: 1:1,500

0 20 40 60 80 100 m

Note:
Label numbers refer to survey IDs

Date: 23/02/2017 Version: 2

Coordinate system: MGA94 Zone 52

NT Town Camp Infrastructure Assessments
Road furniture, stormwater drainage & community structures
90 - Inarlenge (Alice Springs)

2643

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 12:18:33 PM

Insp ID: 1072	Group 4 - Alice Springs	Inarlenge (Little Sisters)

Stormwater Infrastructure:	Culverts
Culvert Type:	RCBC
Diameter (mm):	
Width (mm):	
Culvert Depth (mm):	
Culvert Length (m):	
Culvert Condition:	1 - Very Poor
Culvert Blockage (%):	
Culvert Comments:	
Culvert Head Wall:	
Safety Grate:	
Headwall Blockage:	
Headwall Condition:	
Headwall Comment:	
End Wall:	
End Wall condition:	
EW Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 10:56:27 AM

Insp ID: 1041	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Water Asset Are you Capturing: Fire Hydrants

Single or Double:	Single
Sluice Valve:	No
Above or Below ground:	Below ground
FH Leakage:	No Access
Bollards around hydrant:	Yes
FH Condition:	3 - Good
FH Comment:	Bollard very poor condition, only for location





Northern Territory Town Camps

Civil Infrastructure

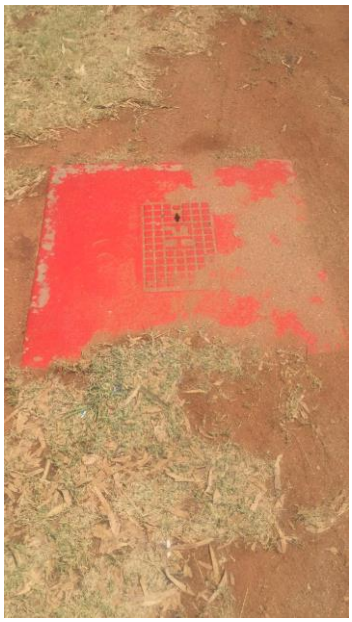
Inspection Date 24/11/2016 10:37:27 AM

Insp ID: 1049	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Water Asset Are you Capturing: Fire Hydrants

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





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 12:26:21 PM

Insp ID: 1066	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Water Asset Are you Capturing: Fire Hydrants

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



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 12:21:22 PM

Insp ID: 1070	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Water Asset Are you Capturing: Fire Hydrants

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



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 12:08:29 PM

Insp ID: 1079 Group 4 - Alice Springs Inarlenge (Little Sisters)

What Water Asset Are you Capturing: Fire Hydrants

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







Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 12:08:29 PM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 11:49:22 AM

Insp ID: 1087 Group 4 - Alice Springs Inarlenge (Little Sisters)

What Water Asset Are you Capturing: Fire Hydrants

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







Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 11:49:22 AM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 11:35:01 AM

Insp ID: 1095	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Water Asset Are you Capturing: Fire Hydrants

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





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 12:45:01 PM

Insp ID: 1099 Group 4 - Alice Springs Inarlenge (Little Sisters)

What Water Asset Are you Capturing: Fire Hydrants

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



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 11:01:59 AM

Insp ID: 1038 Group 4 - Alice Springs Inarlenge (Little Sisters)

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





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 10:52:33 AM

Insp ID: 1043	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Sewerage Asset are you capturing:	Manholes
MH Cover Shape:	Round
Manhole Cover Diam (mm):	600
Manhole Length (mm):	
Manhole Width (mm):	
Manhole Condition:	2 - Poor
Notes on Lid:	
Comments:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 12:25:22 PM

Insp ID: 1067	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Sewerage Asset are you capturing:	Manholes
MH Cover Shape:	Round
Manhole Cover Diam (mm):	600
Manhole Length (mm):	
Manhole Width (mm):	
Manhole Condition:	3 - Good
Notes on Lid:	
Comments:	





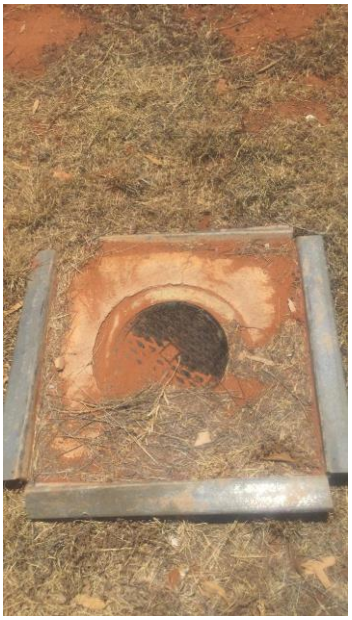
Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 12:24:20 PM

Insp ID: 1068	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Sewerage Asset are you capturing:	Manholes
MH Cover Shape:	Round
Manhole Cover Diam (mm):	250
Manhole Length (mm):	
Manhole Width (mm):	
Manhole Condition:	2 - Poor
Notes on Lid:	
Comments:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 12:24:20 PM



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 12:14:51 PM

Insp ID: 1074 Group 4 - Alice Springs Inarlenge (Little Sisters)

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





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 12:04:54 PM

Insp ID: 1082 Group 4 - Alice Springs Inarlenge (Little Sisters)

What Sewerage Asset are you capturing:	Manholes
MH Cover Shape:	Round
Manhole Cover Diam (mm):	600
Manhole Length (mm):	
Manhole Width (mm):	
Manhole Condition:	3 - Good
Notes on Lid:	
Comments:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 11:53:07 AM

Insp ID: 1084 Group 4 - Alice Springs Inarlenge (Little Sisters)

What Sewerage Asset are you capturing:	Manholes
MH Cover Shape:	Round
Manhole Cover Diam (mm):	600
Manhole Length (mm):	
Manhole Width (mm):	
Manhole Condition:	3 - Good
Notes on Lid:	
Comments:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 11:33:59 AM

Insp ID: 1096	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Sewerage Asset are you capturing:	Manholes
MH Cover Shape:	Round
Manhole Cover Diam (mm):	600
Manhole Length (mm):	
Manhole Width (mm):	
Manhole Condition:	3 - Good
Notes on Lid:	
Comments:	





Northern Territory Town Camps

Civil Infrastructure

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

Insp ID: 1104 Group 4 - Alice Springs Inarlenge (Little Sisters)

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:	Class d
Comments:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 10:46:05 AM

Insp ID: 1044 Group 4 - Alice Springs Inarlenge (Little Sisters)

Road Name:	Intjalke Circuit
What are you inspecting:	Pavements
Ch From (km):	0.4
Ch To (km):	0.55
Road Type:	Sealed - spray seal
Section Width (m):	3.5
Road Condition:	2 - Poor
General Comment:	

Road Defects Section

Defect Type	Defect QTY	Defect Condition	Defect Comments
Surfacing Cracks	5	2 - Poor	5 percent
Potholes	5	3 - Good	
Edge Breaks	10	3 - Good	10 percent

Kerbs Section

Kerb Type	Kerb Cond	Kerb Comments
Flush Kerb	3 - Good	

Shoulders Section

Shoulder Type	Width	Dropoff(mm)	Erosion	Condition	Shoulder Comments
Unsealed		90		2	

Linemarking Section

Obstruction Section

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 10:46:05 AM





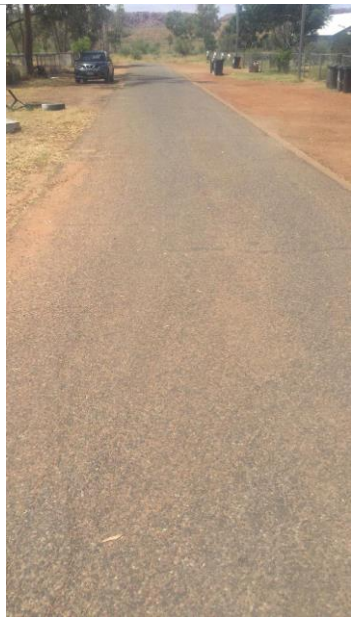




Northern Territory Town Camps

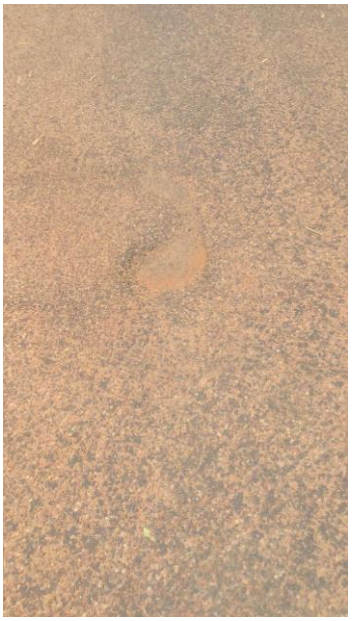
Civil Infrastructure

Inspection Date 24/11/2016 10:46:05 AM









Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 10:46:05 AM





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 12:28:38 PM

Insp ID: 1064 Group 4 - Alice Springs Inarlenge (Little Sisters)

Road Name:	Intjalke Circuit
What are you inspecting:	Pavements
Ch From (km):	0.5
Ch To (km):	0.72
Road Type:	Sealed - spray seal
Section Width (m):	3.8
Road Condition:	3 - Good
General Comment:	Residents requested additional speed humps

Road Defects Section

Defect Type	Defect QTY	Defect Condition	Defect Comments
Surfacing Cracks	5	3 - Good	5 percent

Kerbs Section

Kerb Type	Kerb Cond	Kerb Comments
Flush Kerb	2 - Poor	

Shoulders Section

Shoulder Type	Width	Dropoff(mm)	Erosion	Condition	Shoulder Comments
Unsealed		50		3	

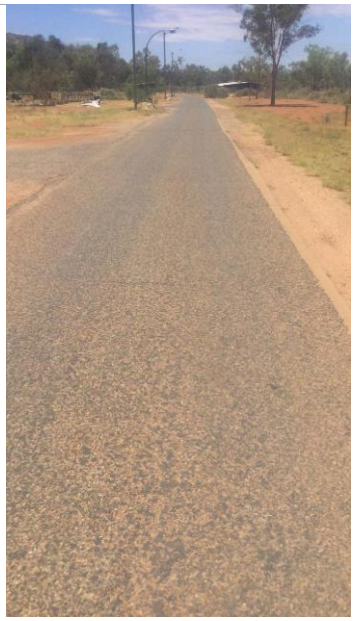
Linemarking Section

Obstruction Section

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 12:28:38 PM









Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 12:28:38 PM





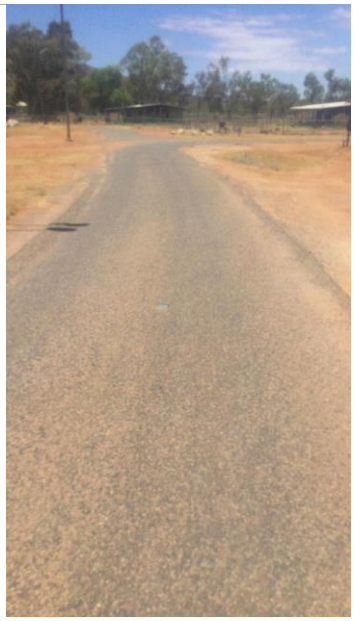




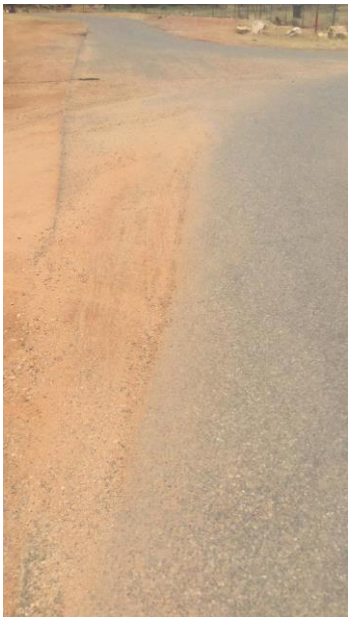
Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 12:28:38 PM







Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 11:54:45 AM

Insp ID: 1083 Group 4 - Alice Springs Inarlenge (Little Sisters)

Road Name:	Intjalke Circuit
What are you inspecting:	Pavements
Ch From (km):	0
Ch To (km):	0.2
Road Type:	Sealed - spray seal
Section Width (m):	3.8
Road Condition:	2 - Poor
General Comment:	

Road Defects Section

Defect Type	Defect QTY	Defect Condition	Defect Comments
Surfacing Cracks	10	2 - Poor	10 percent
Edge Breaks	10	3 - Good	10 percent

Kerbs Section

Kerb Type	Kerb Cond	Kerb Comments
Flush Kerb	2 - Poor	

Shoulders Section

Shoulder Type	Width	Dropoff(mm)	Erosion	Condition	Shoulder Comments
Unsealed		100		1	

Linemarking Section

Obstruction Section

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 11:54:45 AM









Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 11:54:45 AM





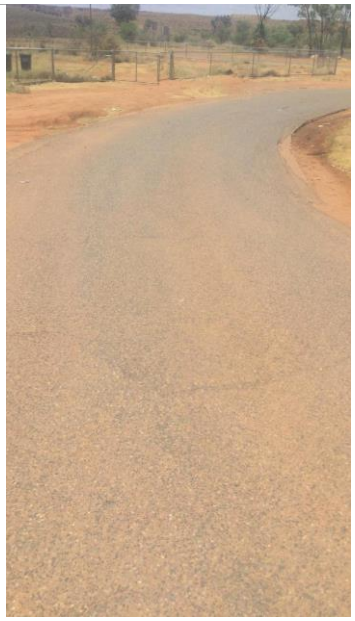




Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 11:54:45 AM









Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 11:54:45 AM



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 11:16:19 AM

Insp ID: 1105 Group 4 - Alice Springs Inarlenge (Little Sisters)

Road Name:	Intjalke Circuit
What are you inspecting:	Pavements
Ch From (km):	0.2
Ch To (km):	0.4
Road Type:	Sealed - spray seal
Section Width (m):	3.8
Road Condition:	2 - Poor
General Comment:	Residents requesting speed humps as drivers go very fast along long straight road, tress at about 4 m

Road Defects Section

Defect Type	Defect QTY	Defect Condition	Defect Comments
Surfacing Cracks	5	3 - Good	5 percent

Kerbs Section

Kerb Type	Kerb Cond	Kerb Comments
Flush Kerb	2 - Poor	

Shoulders Section

Shoulder Type	Width	Dropoff(mm)	Erosion	Condition	Shoulder Comments
Unsealed		130		2	

Linemarking Section

Obstruction Section

Road Obstruction	Other Road Obstruction
Trees	

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 11:16:19 AM









Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 11:16:19 AM









Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 11:16:19 AM







Northern Territory Camps

Civil Infrastructure

Inspection Date 24/11/2016 11:08:37 AM

Insp ID: 1035	Group 4 - Alice Springs	Inarlenge (Little Sisters)

Inspection Type:	Shade Structure
Shade Structure Type:	
Shade Floor Type:	
Roof Type:	Shadecloth
Width (mm):	6
Length (mm):	6
Appearance:	4
Appearance Comment:	
Condition:	4 - Very Good
Comment:	Shade cover near basketball court





Northern Territory Camps

Civil Infrastructure

Inspection Date 24/11/2016 11:08:37 AM





Northern Territory Camps

Civil Infrastructure

Inspection Date 24/11/2016 11:07:10 AM

Insp ID: 1036	Group 4 - Alice Springs	Inarlenge (Little Sisters)

Inspection Type:	Shade Structure
Shade Structure Type:	Basket Ball Court
Shade Floor Type:	Concrete
Roof Type:	Not Covered
Width (mm):	5
Length (mm):	7
Appearance:	3
Appearance Comment:	Graffiti
Condition:	4 - Very Good
Comment:	





Northern Territory Camps

Civil Infrastructure

Inspection Date 24/11/2016 11:05:13 AM

Insp ID: 1037 Group 4 - Alice Springs Inarlenge (Little Sisters)

Inspection Type:	Shade Structure
Shade Structure Type:	Play ground
Shade Floor Type:	Sand
Roof Type:	Tin Roof
Width (mm):	15
Length (mm):	20
Appearance:	3
Appearance Comment:	
Condition:	3 - Good
Comment:	Only partially covered





Northern Territory Camps

Civil Infrastructure

Inspection Date 24/11/2016 11:05:13 AM





Northern Territory Camps

Civil Infrastructure

Inspection Date 24/11/2016 11:42:46 AM

Insp ID: 1091 Group 4 - Alice Springs Inarlenge (Little Sisters)

Inspection Type:	Shade Structure
Shade Structure Type:	Play ground
Shade Floor Type:	Sand
Roof Type:	Not Covered
Width (mm):	15
Length (mm):	15
Appearance:	1
Appearance Comment:	Sand pit overgrown with grass
Condition:	2 - Poor
Comment:	Swings broken





Northern Territory Camps

Civil Infrastructure

Inspection Date 24/11/2016 11:42:46 AM









Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 12:20:23 PM

Insp ID: 1071	Group 4 - Alice Springs	Inarlenge (Little Sisters)

Road Name:	Intjalke Circuit
What are you inspecting:	Signs
Type of Sign:	Pedestrian Sign
Sign Condition:	2 - Poor
Sign Comment:	
General Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 12:16:20 PM

Insp ID: 1073	Group 4 - Alice Springs	Inarlenge (Little Sisters)

Road Name:	Intjalke Circuit
What are you inspecting:	Signs
Type of Sign:	Street name
Sign Condition:	4 - Very Good
Sign Comment:	Sign appears to be facing wrong way
General Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 12:07:53 PM

Insp ID: 1080	Group 4 - Alice Springs	Inarlenge (Little Sisters)

Road Name:	Intjalke Circuit
What are you inspecting:	Signs
Type of Sign:	Pedestrian Sign
Sign Condition:	1 - Very Poor
Sign Comment:	
General Comment:	



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 11:40:23 AM

Insp ID: 1092	Group 4 - Alice Springs	Inarlenge (Little Sisters)

Road Name:	Intjalke Circuit
What are you inspecting:	Signs
Type of Sign:	20 kph
Sign Condition:	1 - Very Poor
Sign Comment:	
General Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 12:43:18 PM

Insp ID: 1100	Group 4 - Alice Springs	Inarlenge (Little Sisters)

Road Name:	West Gap
What are you inspecting:	Signs
Type of Sign:	Community sings
Sign Condition:	4 - Very Good
Sign Comment:	
General Comment:	





Northern Territory Town Camps

Civil Infrastructure

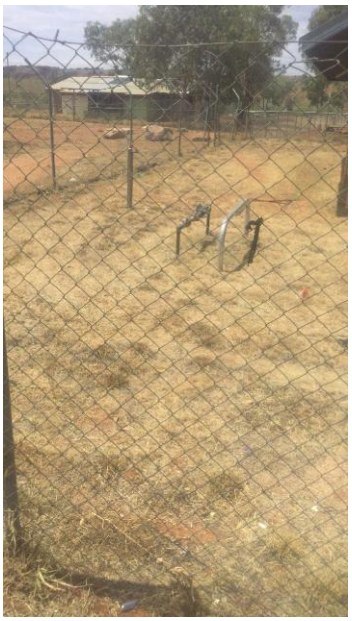
Inspection Date 24/11/2016 11:00:13 AM

Insp ID: 1039 Group 4 - Alice Springs Inarlenge (Little Sisters)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Bulk
Bulk Water Meter Size (mm):	50
Bulk Water Meter Condition:	3 - Good
Bulk Water Meter Comment:	RPZD installed
Lot Number:	
Lot Water Meter Size:	
Lot Water Meter Condition:	
Lot Water Meter Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 10:57:58 AM

Insp ID: 1040	Group 4 - Alice Springs	Inarlenge (Little Sisters)

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:	31
Lot Water Meter Size:	25
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	





Northern Territory Town Camps

Civil Infrastructure

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

Insp ID: 1042 Group 4 - Alice Springs Inarlenge (Little Sisters)

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:	27
Lot Water Meter Size:	25
Lot Water Meter Condition:	4 - Very Good
Lot Water Meter Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 10:44:08 AM

Insp ID: 1045	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	10
Lot Water Meter Size:	25
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 10:42:58 AM

Insp ID: 1046 Group 4 - Alice Springs Inarlenge (Little Sisters)

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:	25
Lot Water Meter Size:	25
Lot Water Meter Condition:	4 - Very Good
Lot Water Meter Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 10:41:50 AM

Insp ID: 1047	Group 4 - Alice Springs	Inarlenge (Little Sisters)

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:	23
Lot Water Meter Size:	25
Lot Water Meter Condition:	4 - Very Good
Lot Water Meter Comment:	





Northern Territory Town Camps

Civil Infrastructure

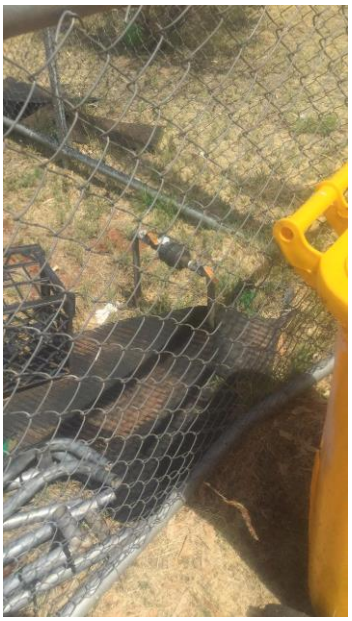
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Insp ID: 1048	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	21
Lot Water Meter Size:	25
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 12:27:19 PM

Insp ID: 1065	Group 4 - Alice Springs	Inarlenge (Little Sisters)

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:	4 - Very Good
Lot Water Meter Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 12:27:19 PM







Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 12:22:32 PM

Insp ID: 1069	Group 4 - Alice Springs	Inarlenge (Little Sisters)

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:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 12:22:32 PM



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 12:13:03 PM

Insp ID: 1075	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Bulk
Bulk Water Meter Size (mm):	50
Bulk Water Meter Condition:	1 - Very Poor
Bulk Water Meter Comment:	Disconnected
Lot Number:	
Lot Water Meter Size:	
Lot Water Meter Condition:	
Lot Water Meter Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 12:13:03 PM





Northern Territory Town Camps

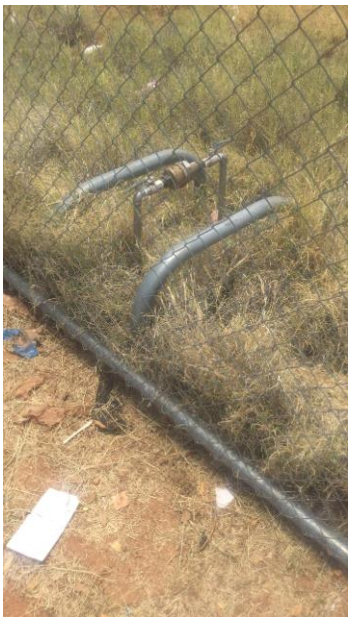
Civil Infrastructure

Inspection Date 24/11/2016 12:11:32 PM

Insp ID: 1076	Group 4 - Alice Springs	Inarlenge (Little Sisters)

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:	65
Lot Water Meter Size:	25
Lot Water Meter Condition:	4 - Very Good
Lot Water Meter Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 12:11:32 PM



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 12:10:15 PM

Insp ID: 1078	Group 4 - Alice Springs	Inarlenge (Little Sisters)

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:	63
Lot Water Meter Size:	25
Lot Water Meter Condition:	4 - Very Good
Lot Water Meter Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 12:06:10 PM

Insp ID: 1081 Group 4 - Alice Springs Inarlenge (Little Sisters)

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:	61
Lot Water Meter Size:	25
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	Heavily overgrown with grass





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 11:50:32 AM

Insp ID: 1085 Group 4 - Alice Springs Inarlenge (Little Sisters)

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:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 11:50:48 AM

Insp ID: 1086	Group 4 - Alice Springs	Inarlenge (Little Sisters)

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:	55
Lot Water Meter Size:	25
Lot Water Meter Condition:	4 - Very Good
Lot Water Meter Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 11:48:03 AM

Insp ID: 1088	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	51
Lot Water Meter Size:	25
Lot Water Meter Condition:	4 - Very Good
Lot Water Meter Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 11:47:05 AM

Insp ID: 1089 Group 4 - Alice Springs Inarlenge (Little Sisters)

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:	53
Lot Water Meter Size:	25
Lot Water Meter Condition:	4 - Very Good
Lot Water Meter Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 11:46:09 AM

Insp ID: 1090	Group 4 - Alice Springs	Inarlenge (Little Sisters)

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:	

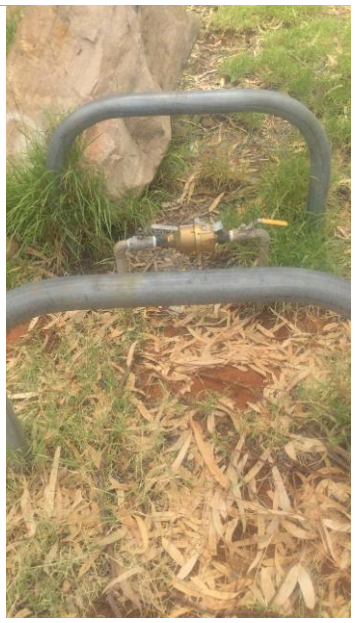




Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 11:46:09 AM



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 11:37:20 AM

Insp ID: 1093 Group 4 - Alice Springs Inarlenge (Little Sisters)

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:	22
Lot Water Meter Size:	25
Lot Water Meter Condition:	4 - Very Good
Lot Water Meter Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 11:36:01 AM

Insp ID: 1094	Group 4 - Alice Springs	Inarlenge (Little Sisters)

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:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 11:36:01 AM



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 11:31:50 AM

Insp ID: 1097	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	41
Lot Water Meter Size:	25
Lot Water Meter Condition:	4 - Very Good
Lot Water Meter Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 12:45:47 PM

Insp ID: 1098	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Bulk
Bulk Water Meter Size (mm):	50
Bulk Water Meter Condition:	3 - Good
Bulk Water Meter Comment:	
Lot Number:	
Lot Water Meter Size:	
Lot Water Meter Condition:	
Lot Water Meter Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 12:45:47 PM





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 11:30:48 AM

Insp ID: 1102	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	39
Lot Water Meter Size:	25
Lot Water Meter Condition:	4 - Very Good
Lot Water Meter Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 11:29:57 AM

Insp ID: 1103	Group 4 - Alice Springs	Inarlenge (Little Sisters)

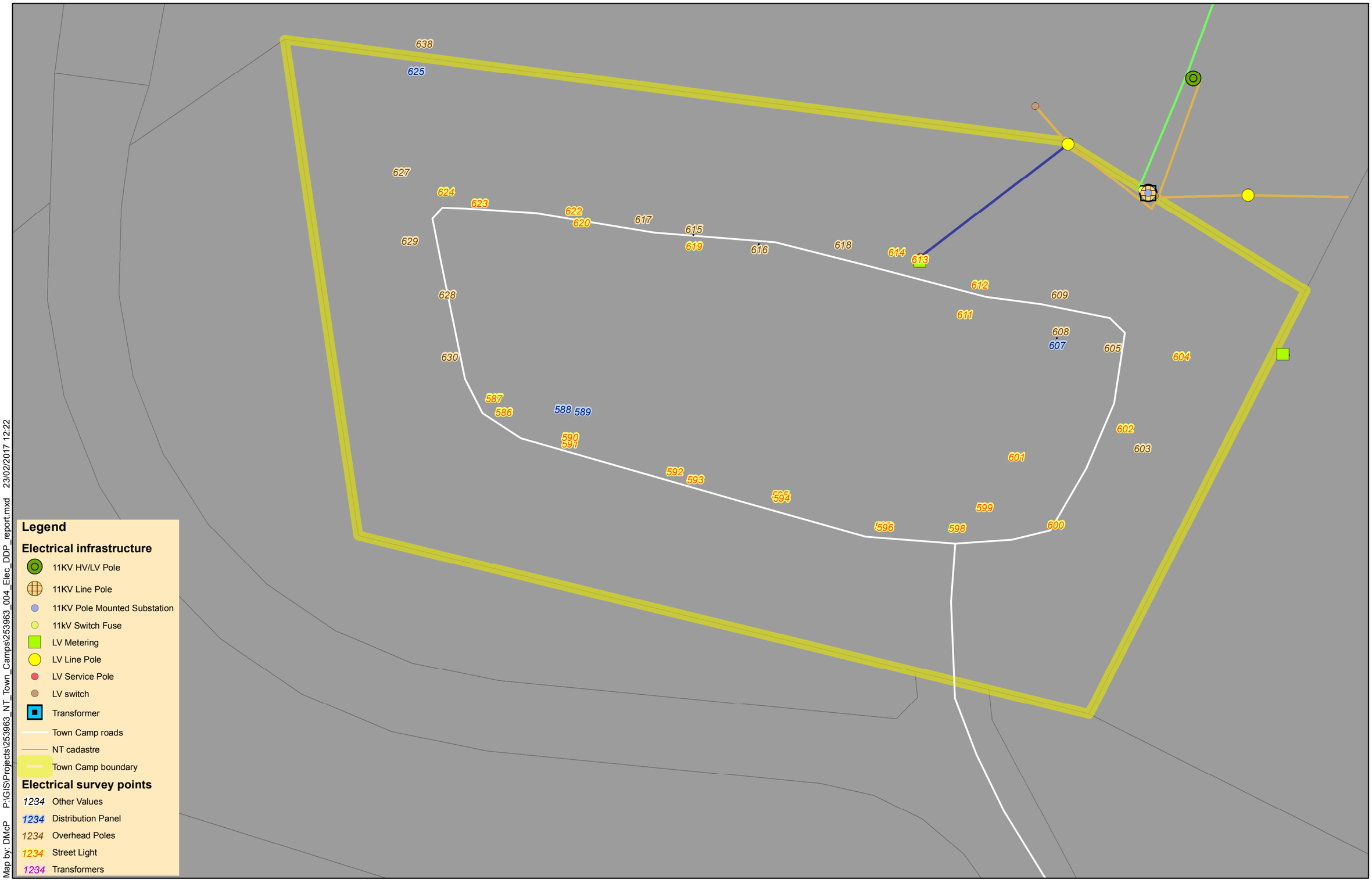
What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	37
Lot Water Meter Size:	25
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	





Electrical inspection report



A3 scale: 1:1,500

0 20 40 60 80 100 m

Date: 23/02/2017 Version: 3

Coordinate system: MGA94 Zone 52

NT Town Camp Infrastructure Assessments: Electrical

90 - Inarlenge (Alice Springs)

2726

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 1:05:06 PM

Insp ID: 588 Group 4 - Alice Springs Inarlenge (Little Sisters)

What Category are you capturing:	Distribution Panel
What is Main Distribution Panel installation method:	Outdoor
Is the distribution panel labelled:	No
What is Distribution Panel main CB Rating:	
What is the main incoming cable type/Size to Distribution Panel:	
What is the condition of switchboard:	2
Condition Comments:	
What is the condition of cables/glands into switchboard:	3
Cable/Gland Condition Comments:	
Distribution Panels name plate access:	No Access









Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 1:05:06 PM





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 1:02:20 PM

Insp ID: 589 Group 4 - Alice Springs Inarlenge (Little Sisters)

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









Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 12:22:11 PM

Insp ID: 607 Group 4 - Alice Springs Inarlenge (Little Sisters)

What Category are you capturing: Distribution Panel

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





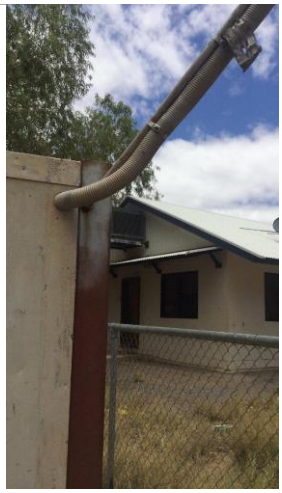




Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 12:22:11 PM



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 12:13:48 PM

Insp ID: 610	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Comms Category are you capturing:	Distribution
What is distribution method to households:	Underground
Is it Shared with PWC:	
Is there Anti-climb barrier provided for this pole:	
What is Pole construction type:	
Is street light fitted:	
Is there concrete collar around the base of pole:	
What is the condition of tap off to house:	
What is the condition of pole:	
How many Lots are connected to this pole:	
Is there access to Pits to take a photo:	Yes
What is Pit Condition:	3
Underground Comments:	



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 11:35:48 AM

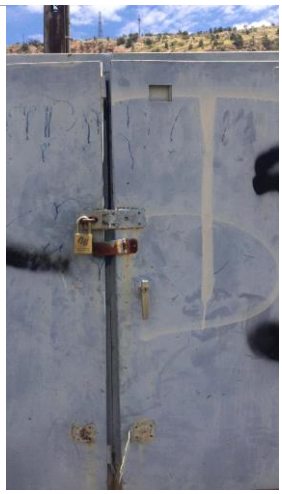
Insp ID: 625 Group 4 - Alice Springs Inarlenge (Little Sisters)

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









Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 11:35:48 AM





Northern Territory Town Camps

Communications Infrastructure

Inspection Date 24/11/2016 12:23:10 PM

Insp ID: 606	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Comms Category are you capturing:	General
Telstra Comms Drawing Available:	No
Facility upgrade not in drawings:	NA
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 23/11/2016 8:14:16 AM

Insp ID: 3434 Group 4 - Alice Springs Inarlenge (Little Sisters)

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond: 3

Meter Condition: 3

Meter Comment:

Comments:





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 23/11/2016 8:12:08 AM

Insp ID: 3435 Group 4 - Alice Springs Inarlenge (Little Sisters)

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond:

Meter Condition: 3

Meter Comment: Condition of CB not assessed.

Comments:



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 23/11/2016 8:28:09 AM

Insp ID: 3436	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Category are you capturing: Electrical Meters

Meter Type:	Prepaid
Meter Switchboard Cond:	2
Meter Condition:	3
Meter Comment:	Blank plates are missing on CB slot.
Comments:	



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 23/11/2016 8:26:32 AM

Insp ID: 3437 Group 4 - Alice Springs Inarlenge (Little Sisters)

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond: 3

Meter Condition: 3

Meter Comment:

Comments:





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 23/11/2016 8:37:05 AM

Insp ID: 3438 Group 4 - Alice Springs Inarlenge (Little Sisters)

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

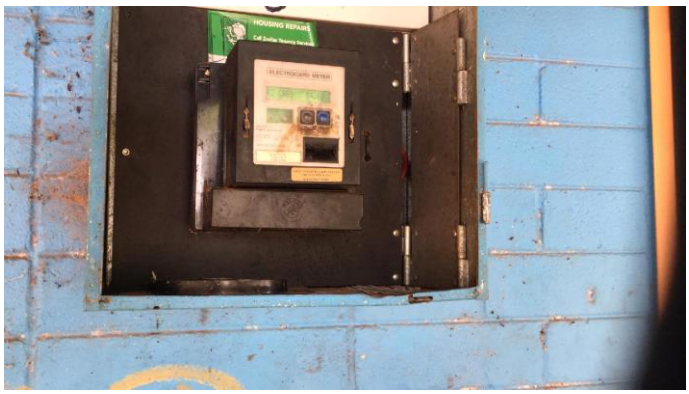
Electrical Infrastructure

Inspection Date 23/11/2016 8:39:23 AM

Insp ID: 3439	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Category are you capturing: Electrical Meters

Meter Type:	Prepaid
Meter Switchboard Cond:	3
Meter Condition:	3
Meter Comment:	
Comments:	





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 23/11/2016 8:52:02 AM

Insp ID: 3440 Group 4 - Alice Springs Inarlenge (Little Sisters)

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond:

Meter Condition: 3

Meter Comment: Condition of CB not assessed.

Comments:



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 23/11/2016 8:59:46 AM

Insp ID: 3441 Group 4 - Alice Springs Inarlenge (Little Sisters)

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 23/11/2016 9:06:36 AM

Insp ID: 3442 Group 4 - Alice Springs Inarlenge (Little Sisters)

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

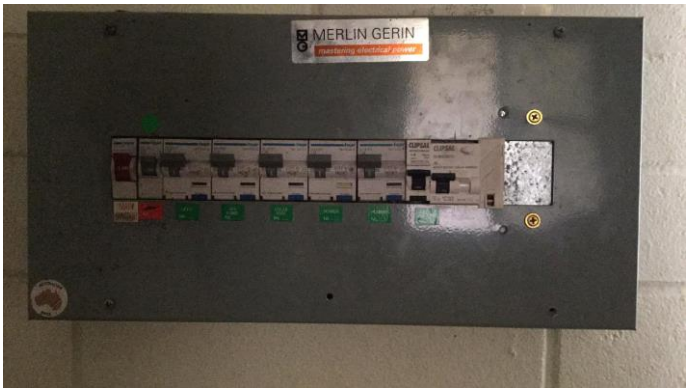
Meter Switchboard Cond:

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 23/11/2016 9:08:09 AM

Insp ID: 3443 Group 4 - Alice Springs Inarlenge (Little Sisters)

What Category are you capturing: Electrical Meters

Meter Type:	Prepaid
Meter Switchboard Cond:	3
Meter Condition:	3
Meter Comment:	Needs Cleaning
Comments:	





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 23/11/2016 9:20:49 AM

Insp ID: 3444 Group 4 - Alice Springs Inarlenge (Little Sisters)

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond:

Meter Condition: 3

Meter Comment: Condition of CB not assessed.

Comments:



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 23/11/2016 9:27:06 AM

Insp ID: 3445 Group 4 - Alice Springs Inarlenge (Little Sisters)

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond:

Meter Condition: 3

Meter Comment: Condition of CB not assessed.

Comments:



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 23/11/2016 9:17:37 AM

Insp ID: 3454 Group 4 - Alice Springs Inarlenge (Little Sisters)

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

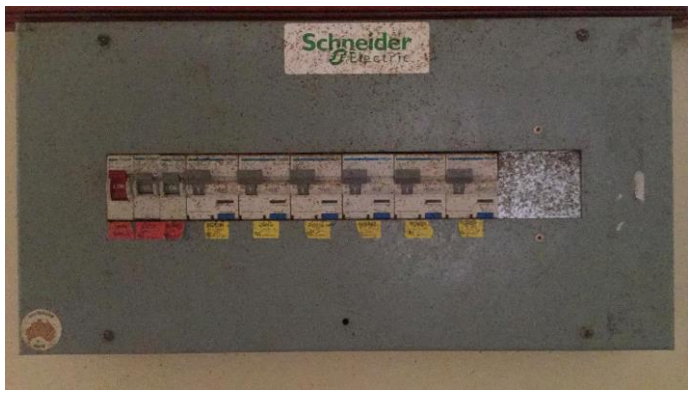
Meter Switchboard Cond:

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 23/11/2016 9:26:30 AM

Insp ID: 3462	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Category are you capturing: Electrical Meters

Meter Type:	Prepaid
Meter Switchboard Cond:	2
Meter Condition:	3
Meter Comment:	Blank plates are missing on CB slot.
Comments:	



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 23/11/2016 8:52:21 AM

Insp ID: 3463 Group 4 - Alice Springs Inarlenge (Little Sisters)

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond:

Meter Condition:

Meter Comment: Type & Condition of meter to be confirmed as meter box's door is locked.

Comments:



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 23/11/2016 8:58:18 AM

Insp ID: 3464 Group 4 - Alice Springs Inarlenge (Little Sisters)

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 23/11/2016 8:38:16 AM

Insp ID: 3465 Group 4 - Alice Springs Inarlenge (Little Sisters)

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond:

Meter Condition:

Meter Comment: Type & Condition of meter to be confirmed as meter box's door is locked.

Comments:



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 23/11/2016 8:23:35 AM

Insp ID: 3466 Group 4 - Alice Springs Inarlenge (Little Sisters)

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 23/11/2016 7:30:55 AM

Insp ID: 3467	Group 4 - Alice Springs	Inarlenge (Little Sisters)

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 19/01/2017 2:21:07 PM

Insp ID: 3608 Group 4 - Alice Springs Inarlenge (Little Sisters)

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

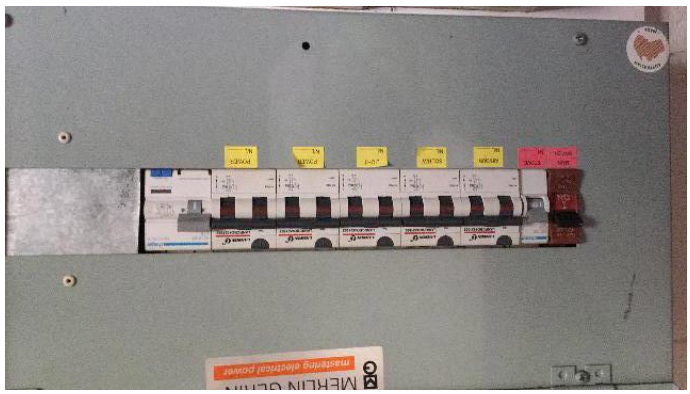
Meter Switchboard Cond:

Meter Condition: 3

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

Comments:





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 19/01/2017 2:01:42 PM

Insp ID: 3609	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Category are you capturing: Electrical Meters

Meter Type: Prepaid

Meter Switchboard Cond:

Meter Condition: 3

Meter Comment: Condition of CB not assessed.

Comments:



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 12:31:53 PM

Insp ID: 603	Group 4 - Alice Springs	Inarlenge (Little Sisters)

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

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 12:31:53 PM







Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 12:26:12 PM

Insp ID: 605	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Steel
What is the condition of pole:	4
How is the pole planted:	Concrete
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	Unknown
Street Light Watts	
Street Light Condition	3
Street Light Height	
What is the type of service:	Single
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:	
How many Lots are connected to this pole:	
Overhead Pole Comments:	415

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 12:26:12 PM







Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 12:19:32 PM

Insp ID: 608	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Steel
What is the condition of pole:	4
How is the pole planted:	Direct
What is the Condition of plant:	3
Is street light fitted:	No
Street Light Power Supply:	
Street Light Type	
Street Light Watts	
Street Light Condition	
Street Light Height	
What is the type of service:	Single
What is the HV voltage level:	
What is the arrangement of connected cables:	Twisted
Are there isolators on the pole:	No
What is the Condition:	
How many Lots are connected to this pole:	
Overhead Pole Comments:	Overhead to distribution panel

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 12:19:32 PM









Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 12:16:44 PM

Insp ID: 609	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Steel
What is the condition of pole:	4
How is the pole planted:	Direct
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S70 D15
Street Light Watts	70
Street Light Condition	3
Street Light Height	
What is the type of service:	Single
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:	
How many Lots are connected to this pole:	
Overhead Pole Comments:	

Northern Territory Town Camps

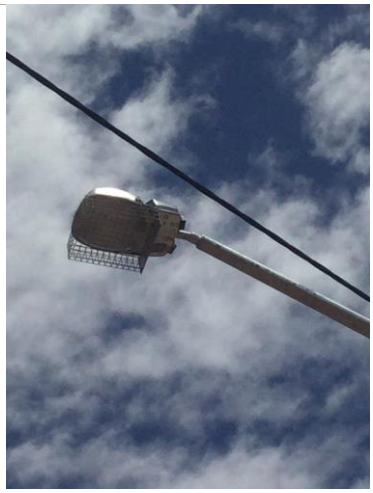
Electrical Infrastructure

Inspection Date 24/11/2016 12:16:44 PM









Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 12:06:21 PM

Insp ID: 615 Group 4 - Alice Springs Inarlenge (Little Sisters)

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Steel
What is the condition of pole:	4
How is the pole planted:	Direct
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:	
What is the arrangement of connected cables:	Twisted
Are there isolators on the pole:	No
What is the Condition:	
How many Lots are connected to this pole:	
Overhead Pole Comments:	415

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 12:06:21 PM







Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 12:05:56 PM

Insp ID: 616 Group 4 - Alice Springs Inarlenge (Little Sisters)

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Steel
What is the condition of pole:	4
How is the pole planted:	Direct
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S70 D15
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:	
How many Lots are connected to this pole:	
Overhead Pole Comments:	415

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 12:05:56 PM









Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 12:05:25 PM

Insp ID: 617	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Steel
What is the condition of pole:	4
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	S70 D15
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:	
How many Lots are connected to this pole:	
Overhead Pole Comments:	415

Northern Territory Town Camps

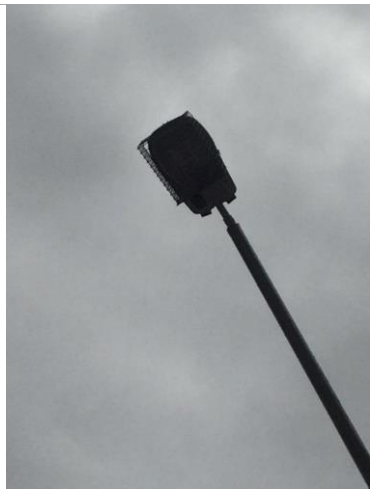
Electrical Infrastructure

Inspection Date 24/11/2016 12:05:25 PM









Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 12:04:24 PM

Insp ID: 618	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Steel
What is the condition of pole:	4
How is the pole planted:	Concrete
What is the Condition of plant:	2
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:	
What is the arrangement of connected cables:	Twisted
Are there isolators on the pole:	No
What is the Condition:	
How many Lots are connected to this pole:	
Overhead Pole Comments:	Drop out fuses

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 12:04:24 PM





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 11:29:04 AM

Insp ID: 627	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Steel
What is the condition of pole:	4
How is the pole planted:	Direct
What is the Condition of plant:	
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S70 D15
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:	
How many Lots are connected to this pole:	
Overhead Pole Comments:	Crimp for light

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 11:29:04 AM









Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 11:25:20 AM

Insp ID: 628 Group 4 - Alice Springs Inarlenge (Little Sisters)

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Steel
What is the condition of pole:	4
How is the pole planted:	Direct
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S70 D15
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:	
How many Lots are connected to this pole:	
Overhead Pole Comments:	Drop out fuses

Northern Territory Town Camps

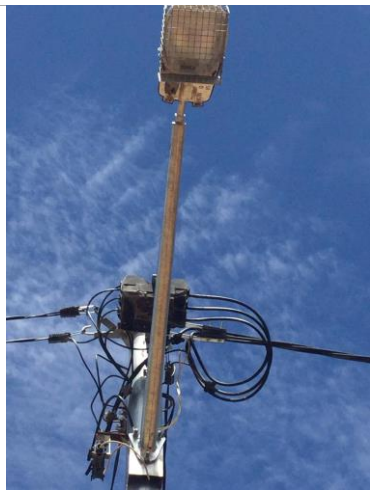
Electrical Infrastructure

Inspection Date 24/11/2016 11:25:20 AM











Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 11:24:15 AM

Insp ID: 629 Group 4 - Alice Springs Inarlenge (Little Sisters)

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Steel
What is the condition of pole:	4
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	S70 D15
Street Light Watts	70
Street Light Condition	2
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:	
How many Lots are connected to this pole:	
Overhead Pole Comments:	crimp for light

Northern Territory Town Camps

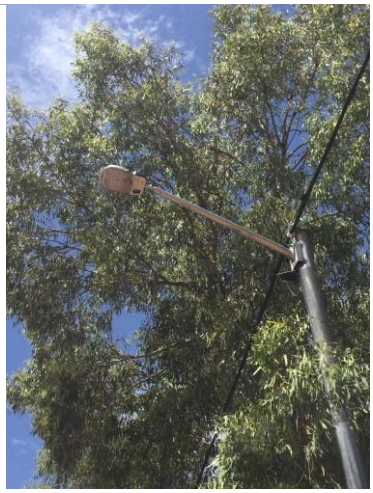
Electrical Infrastructure

Inspection Date 24/11/2016 11:24:15 AM









Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 11:14:08 AM

Insp ID: 630	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Steel
What is the condition of pole:	4
How is the pole planted:	Direct
What is the Condition of plant:	3
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S70 D15
Street Light Watts	70
Street Light Condition	3
Street Light Height	
What is the type of service:	Single
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:	
How many Lots are connected to this pole:	
Overhead Pole Comments:	

Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 11:14:08 AM









Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 11:33:34 AM

Insp ID: 638 Group 4 - Alice Springs Inarlenge (Little Sisters)

What Category are you capturing:	Overhead Poles
What is Pole Material type:	Welded
What is the condition of pole:	3
How is the pole planted:	Direct
What is the Condition of plant:	3
Is street light fitted:	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:	
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:	
Overhead Pole Comments:	Fuses for overhead to underground transition

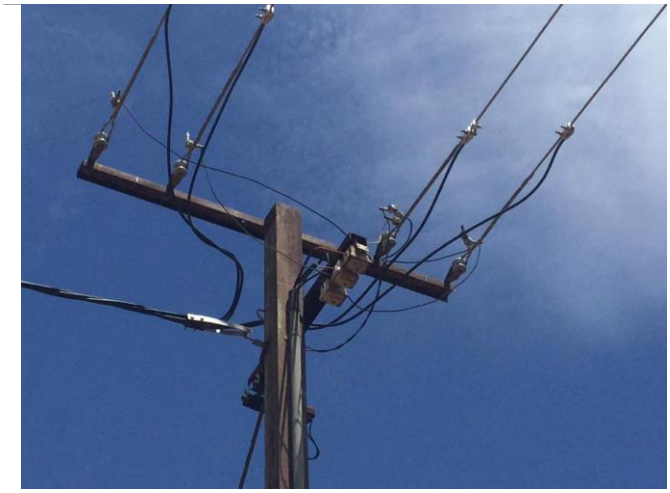
Northern Territory Town Camps

Electrical Infrastructure

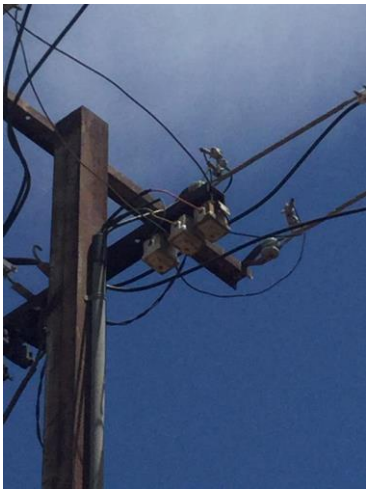
Inspection Date 24/11/2016 11:33:34 AM











Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 12:26:12 PM

Insp ID: 605	Group 4 - Alice Springs	Inarlenge (Little Sisters)

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







Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 12:16:44 PM

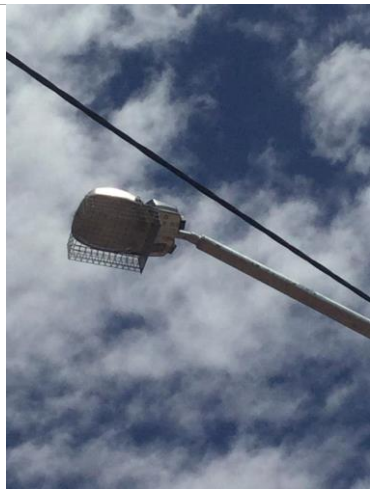
Insp ID: 609	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Category are you capturing:	Overhead Poles
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S70 D15
Street Light Watts	70
Street Light Condition	3
Street Light Height	









Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 12:05:56 PM

Insp ID: 616	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Category are you capturing:	Overhead Poles
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S70 D15
Street Light Watts	70
Street Light Condition	3
Street Light Height	









Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 12:05:25 PM

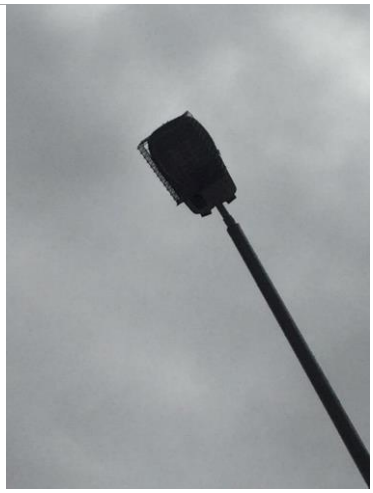
Insp ID: 617	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Category are you capturing:	Overhead Poles
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S70 D15
Street Light Watts	70
Street Light Condition	3
Street Light Height	









Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 11:29:04 AM

Insp ID: 627	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Category are you capturing:	Overhead Poles
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S70 D15
Street Light Watts	70
Street Light Condition	3
Street Light Height	









Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 11:25:20 AM

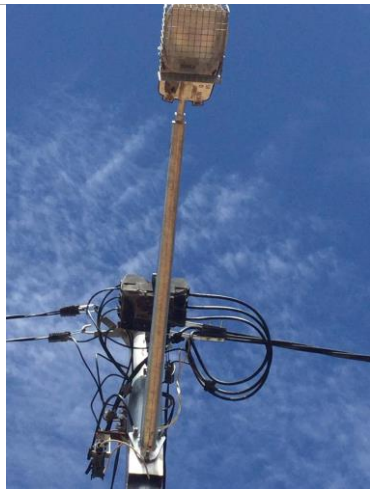
Insp ID: 628	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Category are you capturing:	Overhead Poles
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S70 D15
Street Light Watts	70
Street Light Condition	3
Street Light Height	





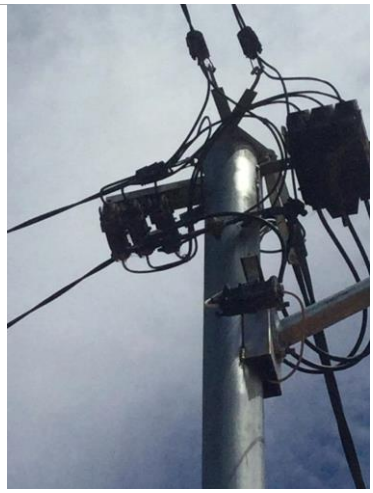




Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 11:25:20 AM



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 11:24:15 AM

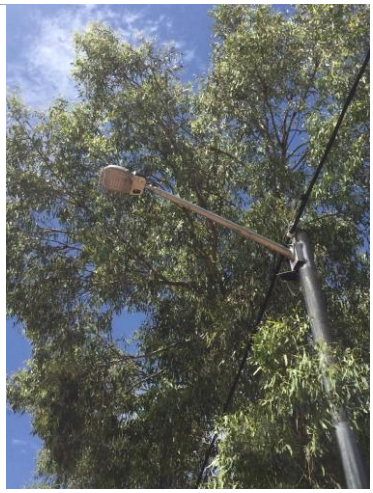
Insp ID: 629	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Category are you capturing:	Overhead Poles
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S70 D15
Street Light Watts	70
Street Light Condition	2
Street Light Height	









Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 11:14:08 AM

Insp ID: 630	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Category are you capturing:	Overhead Poles
Is street light fitted:	Yes
Street Light Power Supply:	
Street Light Type	S70 D15
Street Light Watts	70
Street Light Condition	3
Street Light Height	









Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 1:08:54 PM

Insp ID: 586 Group 4 - Alice Springs Inarlenge (Little Sisters)

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









Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 1:07:16 PM

Insp ID: 587	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Category are you capturing:	Street Light
What is power supply method:	Overhead
What is the lamp type:	S70 D15
What Wattage is the lamp:	70
What is the condition of street lights:	4
What is Street Lighting pole installation height (approximate):	8







Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 1:00:17 PM

Insp ID: 590	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Category are you capturing:	Street Light
What is power supply method:	Underground
What is the lamp type:	S50D 05
What Wattage is the lamp:	50
What is the condition of street lights:	3
What is Street Lighting pole installation height (approximate):	6







Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 12:58:07 PM

Insp ID: 591	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Category are you capturing:	Street Light
What is power supply method:	Overhead
What is the lamp type:	S70 D15
What Wattage is the lamp:	70
What is the condition of street lights:	4
What is Street Lighting pole installation height (approximate):	8







Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 12:55:23 PM

Insp ID: 592	Group 4 - Alice Springs	Inarlenge (Little Sisters)

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







Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 12:53:36 PM

Insp ID: 593	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Category are you capturing:	Street Light
What is power supply method:	Overhead
What is the lamp type:	S70 D15
What Wattage is the lamp:	70
What is the condition of street lights:	4
What is Street Lighting pole installation height (approximate):	8







Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 12:51:16 PM

Insp ID: 594 Group 4 - Alice Springs Inarlenge (Little Sisters)

What Category are you capturing:	Street Light
What is power supply method:	Underground
What is the lamp type:	S70
What Wattage is the lamp:	70
What is the condition of street lights:	3
What is Street Lighting pole installation height (approximate):	6







Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 12:49:12 PM

Insp ID: 595 Group 4 - Alice Springs Inarlenge (Little Sisters)

What Category are you capturing:	Street Light
What is power supply method:	Overhead
What is the lamp type:	S70
What Wattage is the lamp:	70
What is the condition of street lights:	4
What is Street Lighting pole installation height (approximate):	8







Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 12:47:31 PM

Insp ID: 596 Group 4 - Alice Springs Inarlenge (Little Sisters)

What Category are you capturing:	Street Light
What is power supply method:	Underground
What is the lamp type:	S50
What Wattage is the lamp:	50
What is the condition of street lights:	3
What is Street Lighting pole installation height (approximate):	6







Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 12:45:44 PM

Insp ID: 597	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Category are you capturing:	Street Light
What is power supply method:	Overhead
What is the lamp type:	S70 D15
What Wattage is the lamp:	70
What is the condition of street lights:	4
What is Street Lighting pole installation height (approximate):	8







Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 12:43:35 PM

Insp ID: 598 Group 4 - Alice Springs Inarlenge (Little Sisters)

What Category are you capturing:	Street Light
What is power supply method:	Overhead
What is the lamp type:	S70 D15
What Wattage is the lamp:	70
What is the condition of street lights:	4
What is Street Lighting pole installation height (approximate):	8







Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 12:41:24 PM

Insp ID: 599 Group 4 - Alice Springs Inarlenge (Little Sisters)

What Category are you capturing:	Street Light
What is power supply method:	Underground
What is the lamp type:	
What Wattage is the lamp:	50
What is the condition of street lights:	2
What is Street Lighting pole installation height (approximate):	5





Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 12:40:04 PM

Insp ID: 600	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Category are you capturing:	Street Light
What is power supply method:	Overhead
What is the lamp type:	S70 D15
What Wattage is the lamp:	70
What is the condition of street lights:	4
What is Street Lighting pole installation height (approximate):	8







Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 12:37:26 PM

Insp ID: 601	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Category are you capturing:	Street Light
What is power supply method:	Overhead
What is the lamp type:	S70 D15
What Wattage is the lamp:	70
What is the condition of street lights:	4
What is Street Lighting pole installation height (approximate):	8







Northern Territory Town Camps

Electrical Infrastructure

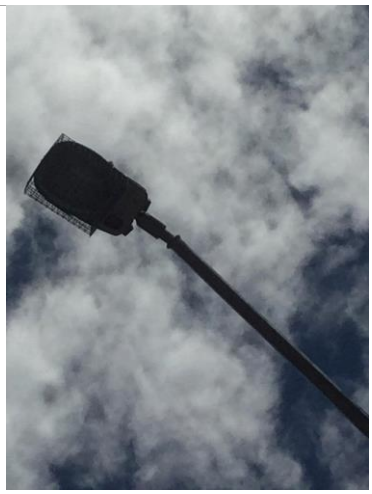
Inspection Date 24/11/2016 12:34:39 PM

Insp ID: 602	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Category are you capturing:	Street Light
What is power supply method:	Overhead
What is the lamp type:	S70 D15
What Wattage is the lamp:	70
What is the condition of street lights:	4
What is Street Lighting pole installation height (approximate):	8







Northern Territory Town Camps

Electrical Infrastructure

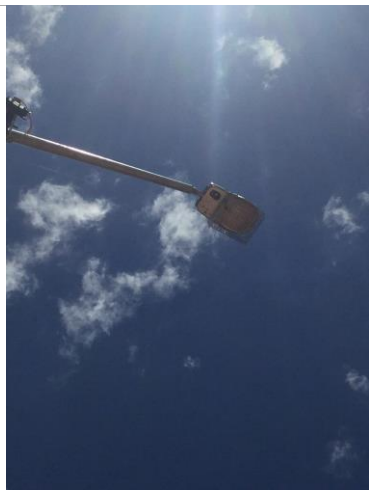
Inspection Date 24/11/2016 12:28:16 PM

Insp ID: 604	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Category are you capturing:	Street Light
What is power supply method:	Overhead
What is the lamp type:	S70 D15
What Wattage is the lamp:	70
What is the condition of street lights:	4
What is Street Lighting pole installation height (approximate):	8







Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 12:13:10 PM

Insp ID: 611	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Category are you capturing:	Street Light
What is power supply method:	Underground
What is the lamp type:	
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 24/11/2016 12:12:03 PM

Insp ID: 612	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Category are you capturing:	Street Light
What is power supply method:	Overhead
What is the lamp type:	S70 D15
What Wattage is the lamp:	70
What is the condition of street lights:	4
What is Street Lighting pole installation height (approximate):	8







Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 12:09:55 PM

Insp ID: 613 Group 4 - Alice Springs Inarlenge (Little Sisters)

What Category are you capturing:	Street Light
What is power supply method:	Underground
What is the lamp type:	S50
What Wattage is the lamp:	50
What is the condition of street lights:	3
What is Street Lighting pole installation height (approximate):	6







Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 12:08:19 PM

Insp ID: 614	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Category are you capturing:	Street Light
What is power supply method:	Overhead
What is the lamp type:	S70 D15
What Wattage is the lamp:	70
What is the condition of street lights:	4
What is Street Lighting pole installation height (approximate):	8



Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 11:58:44 AM

Insp ID: 619	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Category are you capturing:	Street Light
What is power supply method:	Underground
What is the lamp type:	S50
What Wattage is the lamp:	50
What is the condition of street lights:	2
What is Street Lighting pole installation height (approximate):	6







Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 11:44:17 AM

Insp ID: 620	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Category are you capturing:	Street Light
What is power supply method:	Underground
What is the lamp type:	S50 05
What Wattage is the lamp:	50
What is the condition of street lights:	3
What is Street Lighting pole installation height (approximate):	6





Northern Territory Town Camps

Electrical Infrastructure

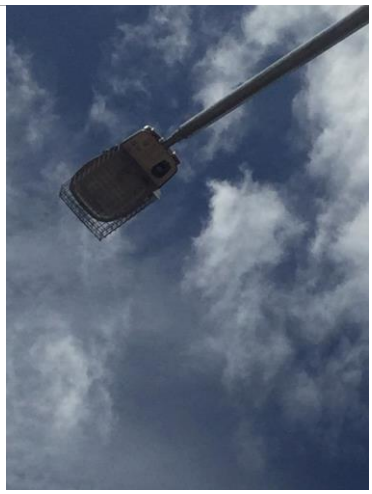
Inspection Date 24/11/2016 11:42:31 AM

Insp ID: 622	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Category are you capturing:	Street Light
What is power supply method:	Overhead
What is the lamp type:	S70 D15
What Wattage is the lamp:	70
What is the condition of street lights:	4
What is Street Lighting pole installation height (approximate):	8







Northern Territory Town Camps

Electrical Infrastructure

Inspection Date 24/11/2016 11:40:03 AM

Insp ID: 623	Group 4 - Alice Springs	Inarlenge (Little Sisters)

What Category are you capturing:	Street Light
What is power supply method:	Underground
What is the lamp type:	S50 04
What Wattage is the lamp:	50
What is the condition of street lights:	3
What is Street Lighting pole installation height (approximate):	6







Northern Territory Town Camps

Electrical Infrastructure

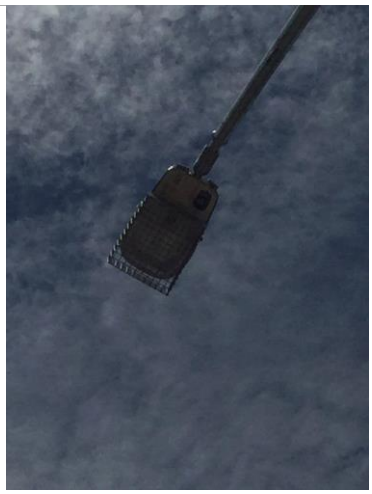
Inspection Date 24/11/2016 11:38:17 AM

Insp ID: 624	Group 4 - Alice Springs	Inarlenge (Little Sisters)

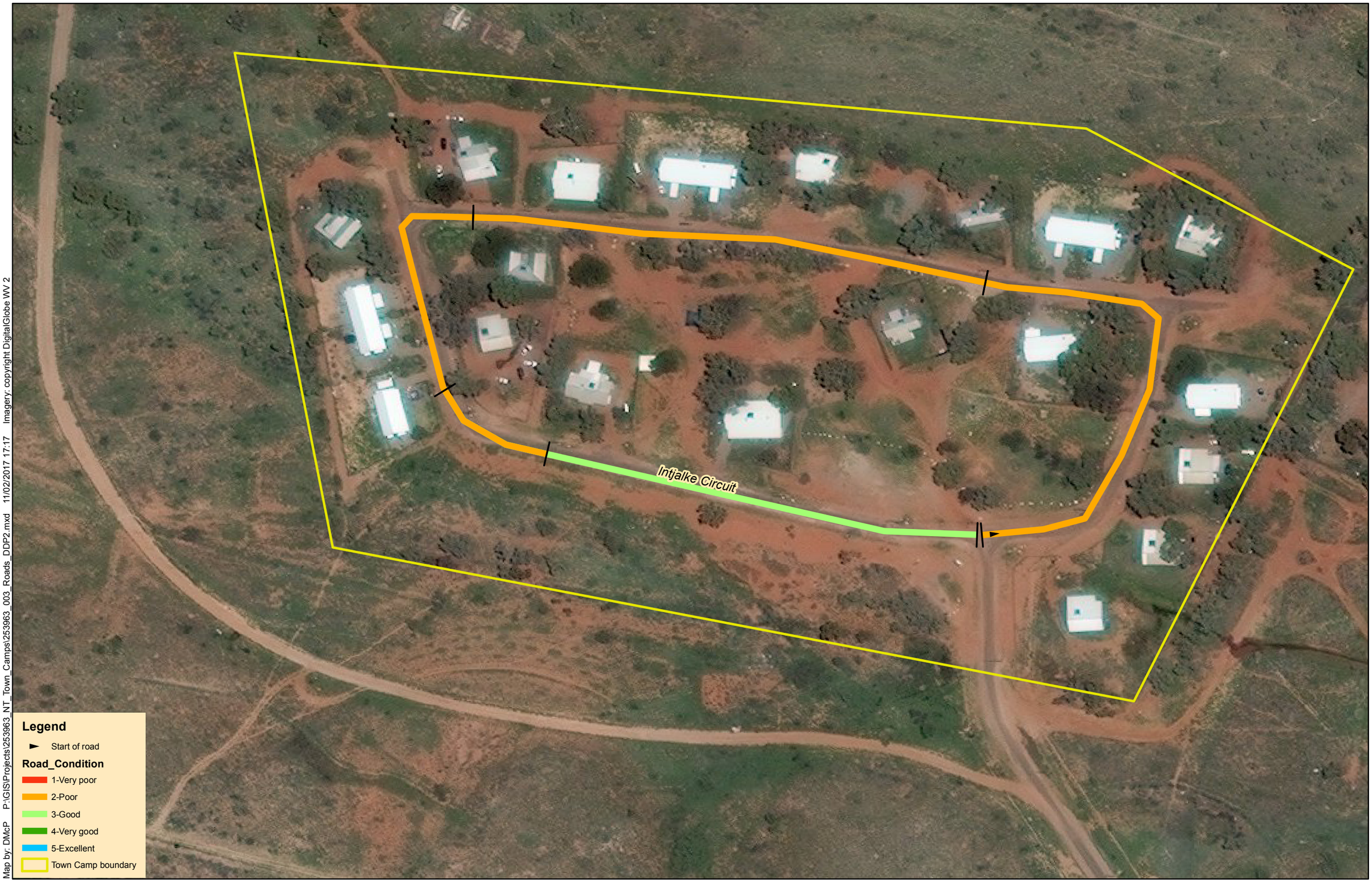
What Category are you capturing:	Street Light
What is power supply method:	Overhead
What is the lamp type:	S70 D15
What Wattage is the lamp:	70
What is the condition of street lights:	4
What is Street Lighting pole installation height (approximate):	8







Road map



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

A3 scale: 1:1,500

0 20 40 60 80 100 m

Date: 11/02/2017 Version: 1

Coordinate system: GDA 1994

NT Town Camp Road Assessments

90 - Inarlenge (Alice Springs)

2818

Existing drawings

-22°43'57"
383 500 E
383 750 E
7 375 500 N
7 375 250 N
8542
8212 FLYNN
8240
8391
7902
3701
1020
Shed
Community Use
Ablution
NTUALKA CIRCUIT
ILPARPA
14 TOWN OF ALICE SPRINGS
1
2
3
4
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6
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10200
10201

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

LAND EXCLUDED FROM DEVELOPMENT:
GENERAL EXCLUSION/BUFFERS
CULTURAL EXCLUSION AREAS:
Unauthorised entry, works on or use of land where there is a sensitive site is an offence under the Northern Territory Aboriginal Sacred Sites Act. For conditions relating to works on or use of land within a Cultural Exclusion Area contact the Aboriginal Areas Protection Authority (AAPA) email enquiries.aapa@nt.gov.au or phone 8999 4332.
This advice does not negate the need for consent for entry, works, or use which may be required under the Aboriginal Land Rights(NT) Act (in the case of Aboriginal land), or another statute.

© NORTHERN TERRITORY OF AUSTRALIA

CADASTRE
Current 123
Proposed 123
Locality LOCALITY
UTILITY SERVICES
ELECTRICITY
LOW VOLTAGE LV
HIGH VOLTAGE HV
WATER RETICULATION
WATER MAIN W
WATER RISING MAIN W
SEWER
SEWER MAIN S
SEWER RISING MAIN S S

DIAL BEFORE YOU DIG
www.1100.com.au

LEGEND

TOPOGRAPHY
Road Sealed, Bridge
Road Unsealed, Track
Footpath, Drain, Culvert
Wall, Gate, Fence, Cattle Grid
Railway, Disused Railway
Aerodrome Tarmac, Landing Strip
Taxiway, Apron
Pipeline: Oil, Water, Undetermined Gas, Sewage
Building, Building-Shape unconfirmed
Shade Structure, Incomplete Building
Sewage Ponds, Tailings Pond
Oval, Arena, Swimming Pool
High Water Mark, Low Water Mark
Mine; Quarry, Surface Excavation
Contour; Index, Intermediate 75
Contour; Depression
Top of Bank, Bottom of Bank, Cliff
Watercourse; Perennial, Intermittent, Channel or Canal
Waterbodies; Perennial, Intermittent
Waterbodies; Reservoir, Water Hole
Swamp; Swamp Perennial, Swamp Intermittent
Flat; Mud Flat, Clay/Saltpan, STI
Pole; Power, General, Light
Tank; Water, Elevated, Non-Water, Silo
Manhole, Pylon, Communication Tower, Bore.

AVAILABLE FROM AND PRODUCED BY:
Northern Territory Government

NOTES:
POWER POLES, MANHOLES, SEPTIC TANKS AND TANK STANDS and other similar shaped objects are captured from Aerial Photography and have their locations confirmed from aerial survey techniques.
All Cadastral Boundaries are LOCAL SURVEY CONTROL. Their ground location is expected to be within +/-0.3m of their mapped location.

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

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

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

Topographic Information:
Land Information Division
Dept of Lands and Planning
TEL: (08) 8999 5331, FAX: (08) 8995 5366
Email: landinfo.dlp@nt.gov.au

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

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

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

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

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

SOURCE INFORMATION

CONTOUR INTERVAL :		CURRENCY OF TOPOGRAPHY :	16 Jun 2008 , 10 Jun 2007
HORIZONTAL DATUM :		SOURCE MAP SCALE :	2500
VERTICAL DATUM :		ZONE UTM :	53
PROJECTION :	Transverse Mercator	DATE GENERATED :	19 June 2012

N
GDA
0 10 20 30 40 50

Locality Diagram

SERVICED LAND AVAILABILITY PROGRAM
SLAP Map
Inarlenge (Alice Springs Town Camp)
Little Sisters
Alice Springs Town Council
Community ID: 90



COMMUNITY MAP

INARLENGE

(ALICE SPRINGS TOWN CAMP, LITTLE SISTERS)

CONNECTING NEIGHBOURS PROJECT - PROPOSED SERVICES LAYOUT 090

FIGURE F31 - LITTLE SISTERS

2821

GENERAL NOTES

1. Design and construction of the water and sewerage works shall be carried out in accordance with the Power and Water Connection Code and associated documents.
2. All levels given are to AHD.
3. All dimensions are in millimetres unless shown otherwise.
4. It is not guaranteed that all services have been shown on the drawing.
5. Seven working days notice must be given to Services Development, Power and Water (facsimile: 8951 7347 - Southern Region), with a "Notice of intention to start work" prior to commencement of work. (Form available on the Connection Code website).
6. Prior to commencement of site works the contractor is to arrange and attend a meeting with Power and Water, the Hydraulic Certifier and the Developer.
7. AAPA Sacred Sites certificates are to be in place prior to commencing construction and those certificates must allow for the future ongoing operation maintenance and replacement of water and sewer infrastructure by Power and Water.
8. Obtain permit(s) from the relevant road authority prior to road excavation.
9. Prior to commencement of works the constructor shall check the location of all underground services and check and confirm the material, diameter, alignment, level and location of existing water and sewer pipework At the connection points. This information is to be provided to the certifier and Power and Water.
10. All water and sewer works shall be carried out exactly as shown on the latest amendment of the approved design drawings. They must be signed "Approved for Construction" by a Power and Water Officer. Any change to the approved design must be approved by a Power and Water Officer prior to construction.
11. Minimum cover to pipe is 750mm in road reserve, trafficable areas, and open drains; 600mm in other areas.
12. All materials used in construction of the water and sewer works are to be approved products as specified and listed in Power and Water's "Water & Sewer Mains Product Manual".
13. Ensure all as constructed information has been picked up by the surveyor prior to backfilling.
14. Certifier to contact Services Development, Power and Water, to arrange for handover inspections. Seven working days notice must be provided prior to handover inspections. As constructed drawings and all other certification and testing documentation must be provided to Services Development, Power and Water prior to the request for a handover inspection.
15. As constructed drawings to be certified by the Certifying Engineer. 'As Constructed' survey by a registered surveyor. Provide as hard copy 1xA3 paper 1xA1 mylar film as well as digital microstation dgn. Co-ordinates to MGA94 and levels to AHD. See Water and Sewer notes for specific requirements. Show separation distances and levels for intersecting services. Show all other values required to certify compliance of the works. Provide manufacturer and model details for all main components of water and sewer systems.
16. Connections to existing water and sewer mains will only be carried out when all works upstream of the connection are complete in accordance with the approved design drawings, and have satisfactorily passed all required testing and final handover inspection.
17. Power and Water personnel shall install all water and sewer connections to existing mains. The constructor is responsible for all connection fees, materials and labour for excavation, backfilling, and reinstatement.
18. At no stage shall any contractor be allowed to carry out work on Power and Water infrastructure.

WATER

1. Water pipes shall be ductile iron cement-lined (DICL) with a minimum flange rating of PN16, or PVC-O PN16 with DICL fittings, unless noted otherwise. All ductile iron pipes and fittings shall be wrapped in polyethylene sleeving according to drawing no's W1-2-17A and W1-2-17B.
2. Water mains shall be offset from property boundaries a distance of 2.4m in road reserves and 1.5m in private property, except where shown otherwise on the drawings.
3. All bends, tees and end caps to be supported by thrust blocks. The epoxy coating on the fitting shall be fully protected by a felt or geotextile barrier when the thrust block is poured and thrust blocks must not overlap the joint.
4. Watermains shall be laid over storm water pipes where the alignments cross.
5. All watermain pipes under carriageways are to be DICL and extend 1.0m (min) beyond the back of the kerb.
6. Valve and hydrant marker posts to be clearly labelled with offset distance from marker to fitting. Marker posts in accordance with Power and Water Products Manual SV.75x75x2.5 SHS galvanised post, FH 100x50x2.0 RHS galvanised post.
7. Stainless steel trace wire 1.6mm diameter to be jointed with purpose made lugs and tested for electrical continuity. Test to be witnessed by the certifier. The wire is to be brought to the surface (looped) at all valves and fire hydrants. The wire is to remain clear of the valve stem and key during operation.
8. Watermains including all lot services to be hydrostatically tested to 1000kPa, disinfected, flushed and bacteriologically tested to Power and Water requirements; see Customer Handout No.5.
9. For vacant lots where there is no intention to build in the near future, finish the water service at a stainless steel ball valve which is to be turned off, plugged with a threaded plug and wrapped in plastic. The valve is to be located 300m within the lot boundary. Marker tape and stainless steel trace wire to be brought to the surface directly above the valve. Provide accurate as constructed location dimensions for terminated services and service isolation valves.
10. The following changes apply to Power and Water Standard Drawing No W1-1-13. Readitap connectors fitted with SS ball valves for all connections off new mains. For new connections off existing mains use a DR brass ferrule cock. Fit a SS ball valve 300mm inside the property boundary immediately prior to the riser section.
11. Service upstand pipes shall be protected by temporary posts or fencing and the pipe plugged with a threaded brass cap until the installation of the meter.
12. Reconnect all existing on lot plumbing only to the new water meter. Self-certifying plumber to certify that all cross boundary connections have been removed and that the water meter supplies water to only that lot. This certification is required for every lot individually.
13. As constructed drawings for water are to show position (co-ordinates to MGA94 and levels to AHD) for all valves, fire hydrants, tees, bends, line ends. Show separation distances/levels for intersecting services. Show all other values required to certify compliance of the works. Provide manufacturer and model details for all main components.
14. Certification documentation must include as constructed drawings, hydrostatic test results, disinfection test results, microbiological test results, compaction test results, trace wire continuity test results, bedding grading curves, concrete test results, other inspection reports and photographs, survey data for lot connections as well as the overall certification itself.

SCHEMATIC SCHEDULE

MAINS
- (M1) = NEW DN150 PVC-M WATER MAIN
- (M2) = NEW DN150 DICL WATER MAIN

TEE
- (T1) = NEW DN150 FLANGED 'T' WITH THRUST BLOCK

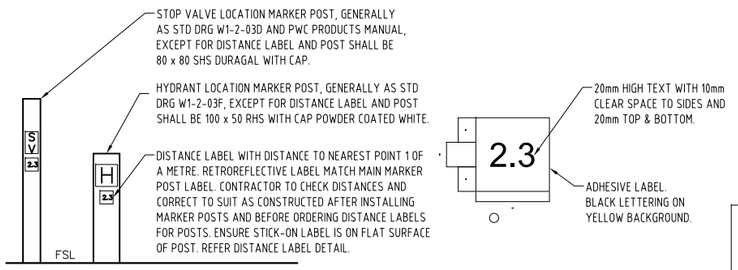
VALVE
- (V1) = NEW DN150 FLANGED SLUICE VALVE

CONNECTOR
- (C1) = NEW DN150 SOCKET TO FLANGE CONNECTOR

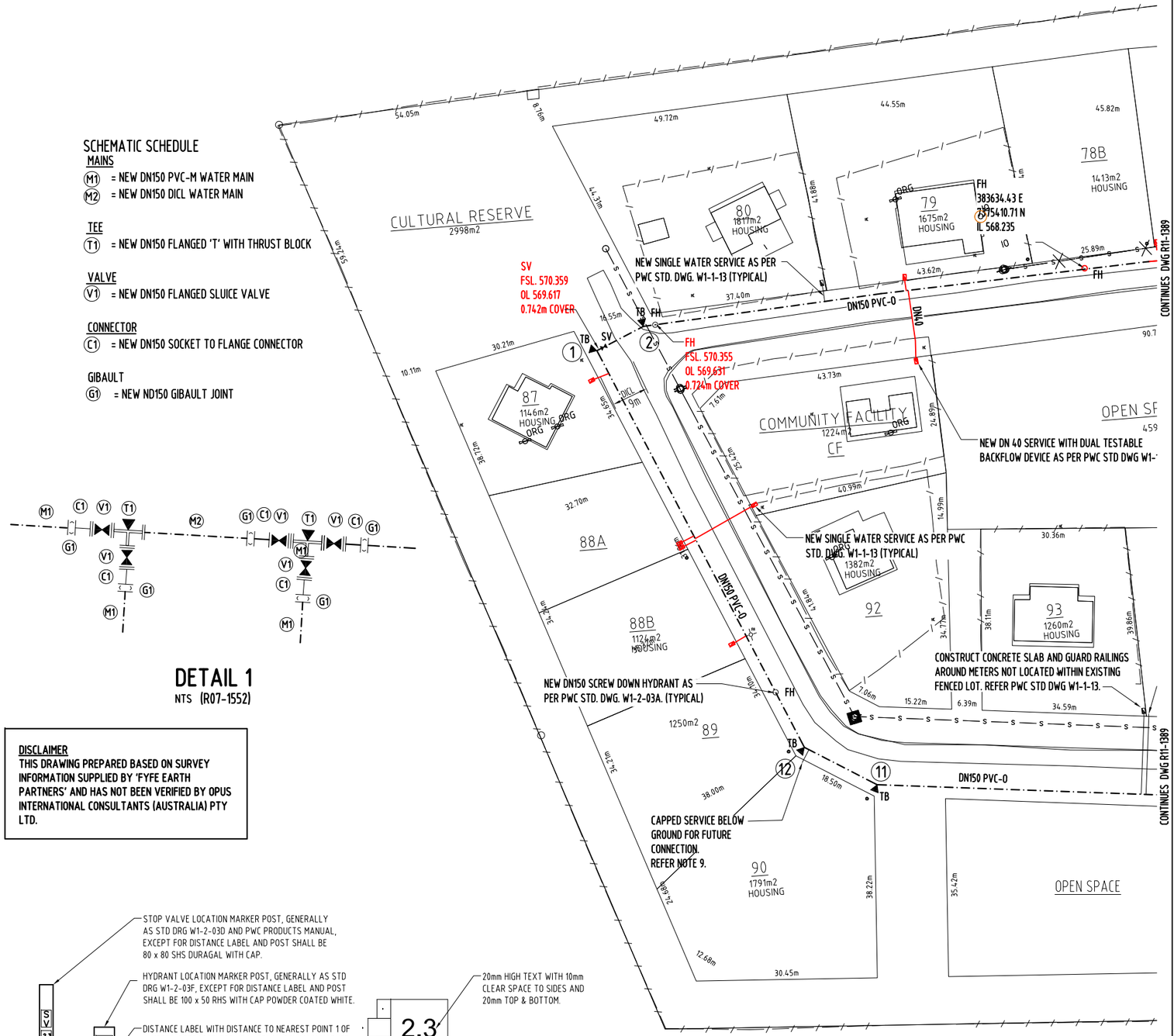
GIBAULT
- (G1) = NEW ND150 GIBAULT JOINT

DETAIL 1
NTS (R07-1552)

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MARKER POST DETAIL
NTS



WARNING
REASONABLE CARE HAS BEEN TAKEN TO ACCURATELY SHOW THE POSITION OF EXISTING AND PROPOSED SERVICES. HOWEVER, THE POSITION OF SUCH SERVICES SHOULD BE PROVEN ON SITE AND NO GUARANTEE CAN BE GIVEN THAT ALL EXISTING SERVICES ARE SHOWN. AREAS SURROUNDING EXISTING SERVICES ARE TO BE EXCAVATED BY HAND.

PART SITE PLAN
5m 0m 5m 10m 15m 20m 25m
1:500 AT A1.

AS CONSTRUCTED

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REV	DATE	REVISION DESCRIPTION	ORIG	CKD	ENG	QA	APPD
-	11-04-2013	AS CONSTRUCTED	OAR	GWE	DMB	JPD	DMB

SHEET: A1 SCALE: AS SHOWN

Northern Territory Government
Department of Planning and Infrastructure
territory housing

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Strategic Indigenous Housing and Infrastructure Program

ACONEX NO: TA-12-090-CVL-DWG-0107

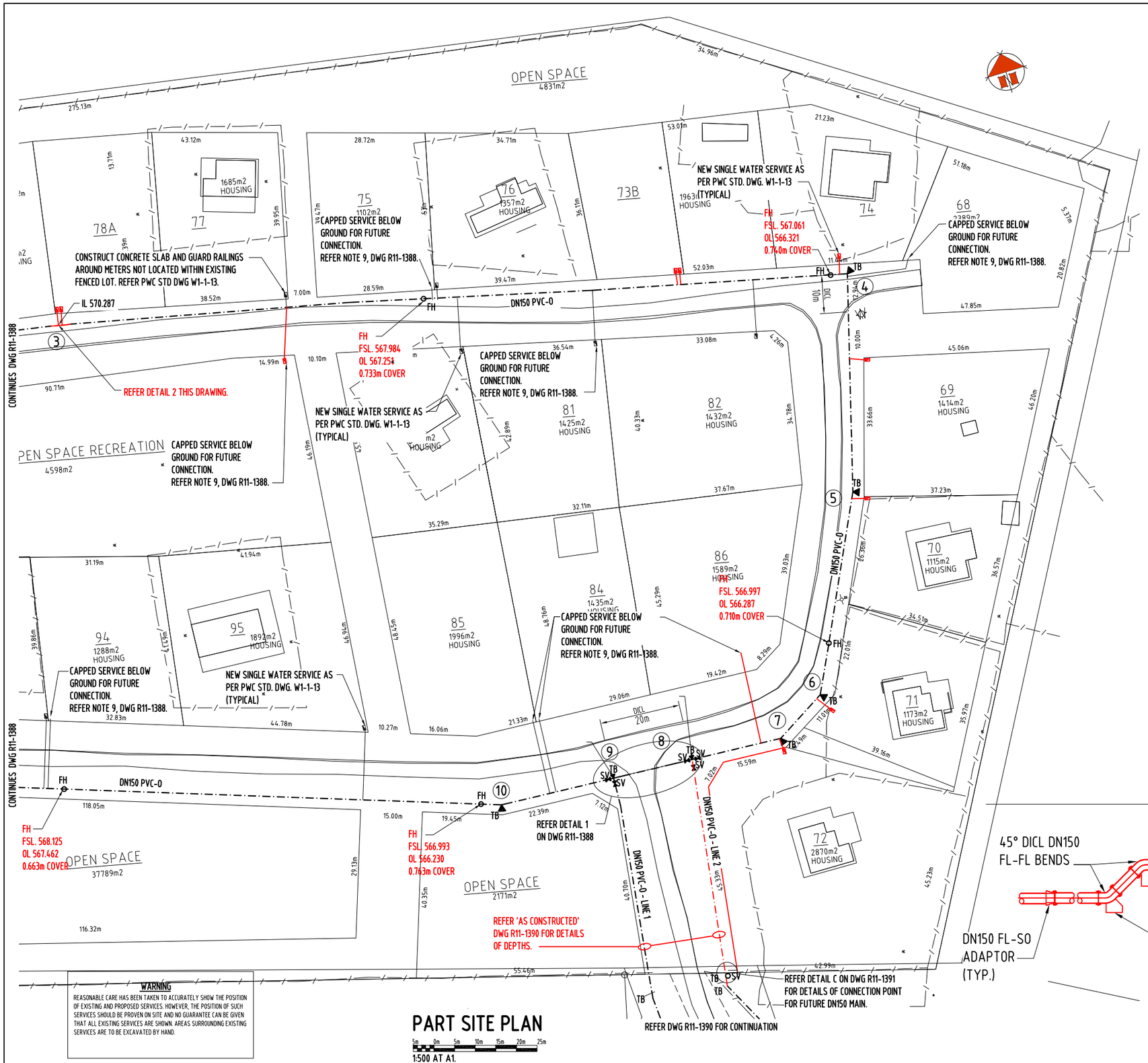
DPI NO: R11-1388

ALICE SPRINGS PACKAGE 12 LITTLE SISTERS
INARLENGE (90) - LOT 3701 COMMONAGE ROAD ALICE SPRINGS
WATER SUPPLY LAYOUT PLAN - SHEET 1

DRAWING NO: 0107

REV: 2822

O:\0500 DESIGN, ENGINEERING & TECHNICAL\0504 CIVIL\CORRESPONDENCE\OUTGOING_COMPLIANCE CERTIFICATES\LITTLE SISTERS\IDT\05 - WORKS AS EXECUTED\OPUS AS CON\20130430\R11-1388_0107_2013.DWG



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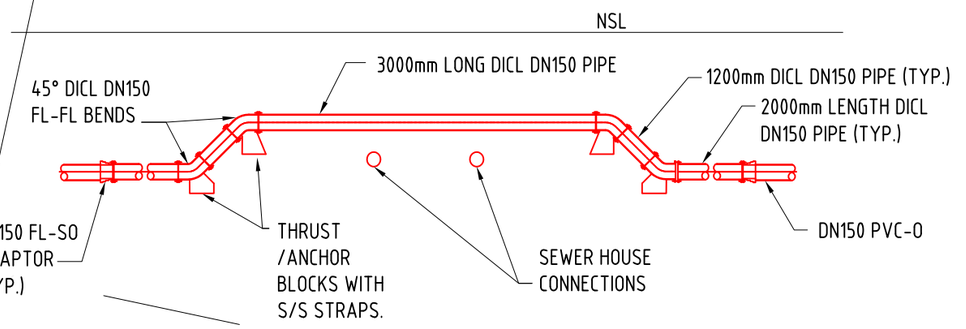
SCHEDULE OF PARTS

NAME	EASTING	NORTHING	DESCRIPTION
1	383530.52	7375415.80	DN150 90° BEND
2	383540.87	7375418.61	DN150 22.5° BEND
3	383647.92	7375409.17	DN150 45° FL-FL BEND
	383648.56	7375409.08	DN150 45° FL - FL BEND
	383651.78	737540.67	DN150 45° FL - FL BEND
	383652.73	7375408.63	DN150 45° FL - FL BEND
4	383839.47	7375380.40	DN150 90° BEND
5	383829.52	7375328.49	DN150 11.25° BEND
6	383811.11	7375281.89	DN150 22.5° BEND + DN150 11.25° BEND
7	383799.57	7375274.05	DN150 22.5° BEND + DN150 11.25° BEND
8	383777.59	7375273.39	DN150 FLANGED 'T'
9	383757.94	7375273.00	DN150 FLANGED 'T'
10	383728.04	7375273.33	DN150 11.25° BEND
11	383568.51	7375314.11	DN150 22.5° BEND
12	383555.29	7375324.54	DN150 22.5° BEND + DN150 11.25° BEND

WARNING
REASONABLE CARE HAS BEEN TAKEN TO ACCURATELY SHOW THE POSITION OF EXISTING AND PROPOSED SERVICES. HOWEVER, THE POSITION OF SUCH SERVICES SHOULD BE PROVEN ON SITE AND NO GUARANTEE CAN BE GIVEN THAT ALL EXISTING SERVICES ARE SHOWN. AREAS SURROUNDING EXISTING SERVICES ARE TO BE EXCAVATED BY HAND.

PART SITE PLAN

5m 0m 5m 10m 15m 20m 25m
1:500 AT A1.



DETAIL 2
NTS

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-	11-04-2013	AS CONSTRUCTED	OAR	GWE	DMB	JPD	DMB

SHEET: A1 SCALE: AS SHOWN

Northern Territory Government
Department of Planning and Infrastructure
territory housing

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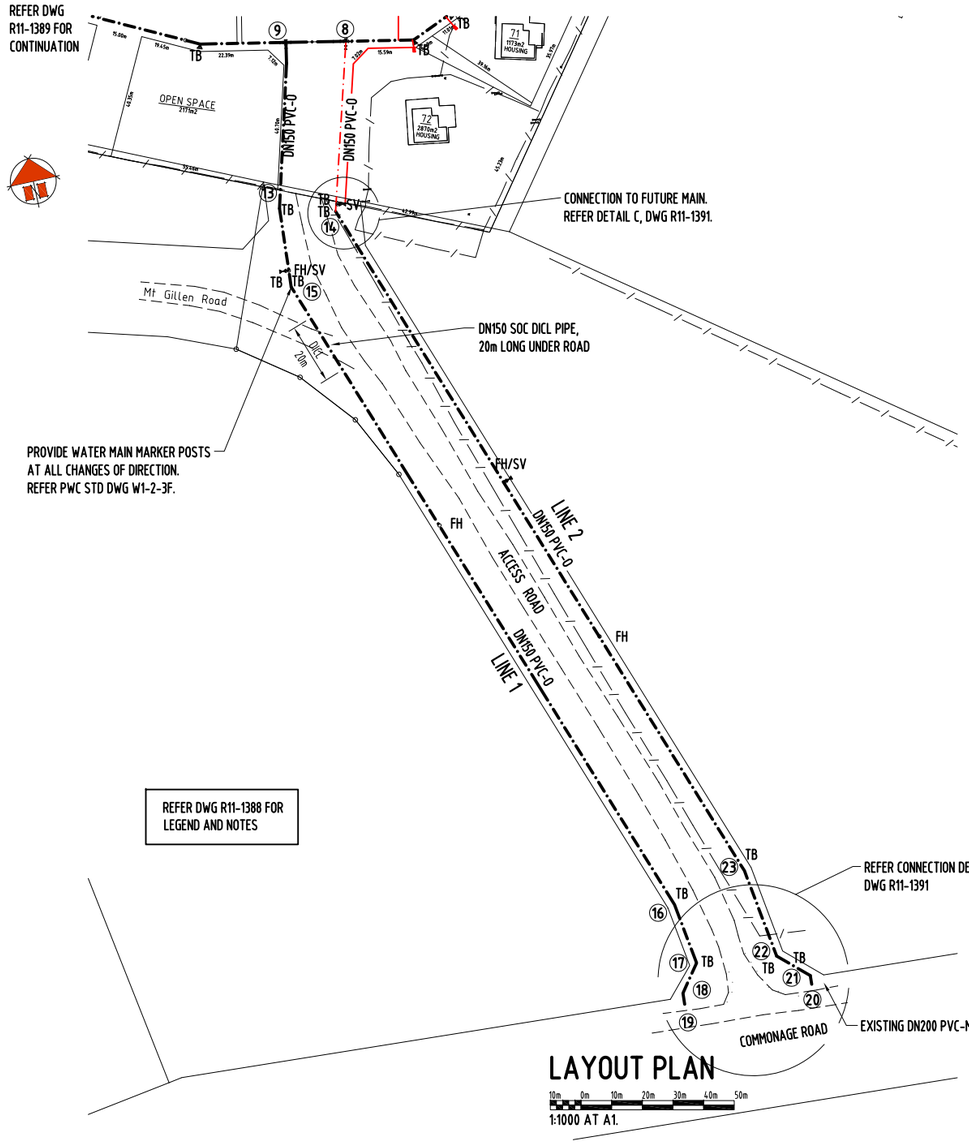
ACONEX NO: TA-12-090-CVL-DWG-0108

DPI NO: R11-1389 POWER AND WATER DWG. No. B07-4373

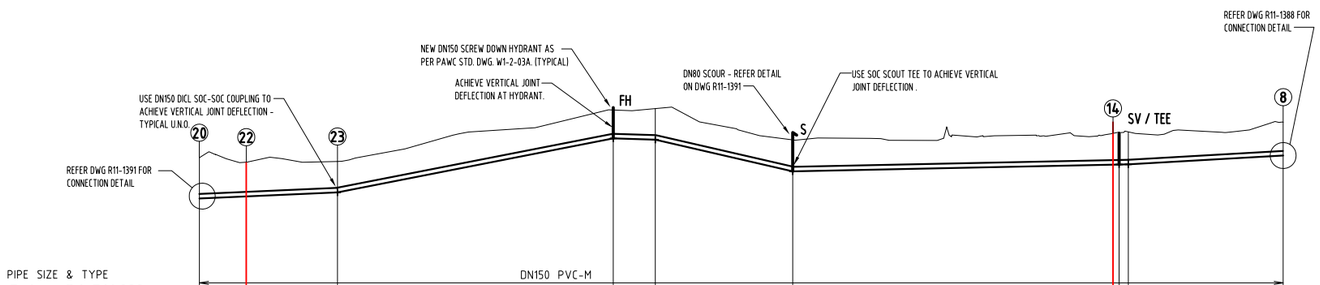
ALICE SPRINGS PACKAGE 12 LITTLE SISTERS
INARLENGE (90) - LOT 3701 COMMONAGE ROAD ALICE SPRINGS
WATER SUPPLY LAYOUT PLAN - SHEET 2

DRAWING NO: 0108 REV: 2823

O:\0500 DESIGN, ENGINEERING & TECHNICAL\0504 CIVIL\CORRESPONDENCE\OUTGOING_COMPLIANCE CERTIFICATES\LITTLE SISTERS\IDT\05 - WORKS AS EXECUTED\OPUS AS CON\20130430\R11-1389_0108_2013TT.DWG



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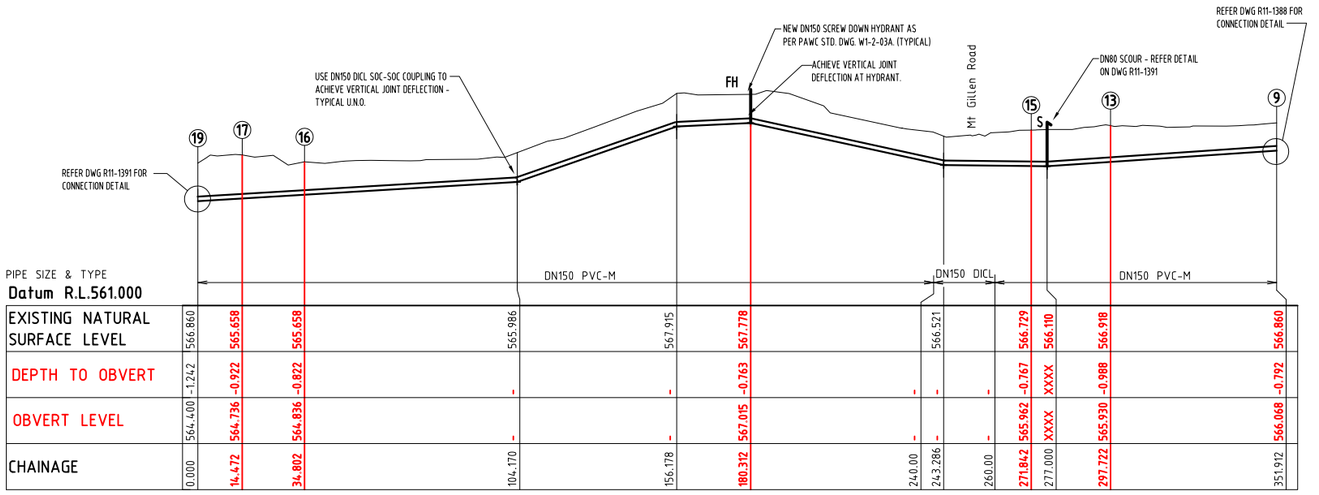
PIPE SIZE & TYPE — DN150 PVC-M

Datum R.L.561.000

EXISTING NATURAL SURFACE LEVEL	565.831	565.762	565.789	567.44	567.431	566.699	566.675	566.675	566.671	566.839
DEPTH TO OBVERT	-1.331	-0.798	-0.753	-0.702	-	-0.991	-0.710	-0.705	-	-0.719
OBVERT LEVEL	564.500	564.964	565.036	566.738	-	565.708	565.965	565.970	-	566.120
CHAINAGE	0.000	15.270	45.016	135.002	148.688	193.977	297.997	300.000	303.005	353.527

LONGITUDINAL SECTION - WATER LINE 2

10m 0m 10m 20m 30m 40m 50m
1m 0m 1m 2m 3m 4m 5m
HORIZONATAL 1:1000 AT A1
VERTICAL 1:100 AT A1



PIPE SIZE & TYPE — DN150 PVC-M | DN150 DICL | DN150 PVC-M

Datum R.L.561.000

EXISTING NATURAL SURFACE LEVEL	566.860	565.658	565.658	565.986	567.915	567.778	566.521	566.729	566.110	566.918	566.860
DEPTH TO OBVERT	-1.242	-0.922	-0.822	-	-	-0.763	-	-0.767	XXXX	-0.988	-0.792
OBVERT LEVEL	564.400	564.736	564.836	-	-	567.015	-	565.962	XXXX	565.930	566.068
CHAINAGE	0.000	14.472	34.802	104.170	156.178	180.312	240.00	243.286	260.00	271.842	277.000	297.722	351.912

LONGITUDINAL SECTION - WATER LINE 1

10m 0m 10m 20m 30m 40m 50m
1m 0m 1m 2m 3m 4m 5m
HORIZONATAL 1:1000 AT A1
VERTICAL 1:100 AT A1

SCHEDULE OF PARTS

NAME	EASTING	NORTHING	DESCRIPTION
8	383777.59	7375273.39	DN150 FLANGED TEE WITH THRUST BLOCK
9	383757.94	7375273.00	DN150 FLANGED TEE WITH THRUST BLOCK
13	383756.04	7375219.03	DN150 11.25° SOC BEND
14	383774.57	7375220.04	DN150 22.5° FLANGED BEND
15	383759.94	7375193.55	DN150 22.5° SOC BEND
16	383884.77	7374991.96	DN150 11.25° SOC BEND
17	383891.48	7374974.13	DN150 45° SOC BEND
18	383888.28	7374966.07	DN150 45° SOC BEND
19	383889.44	7374966.26	EXISTING TEE - CONFIRM ON SITE
20	383930.40	7374968.74	EXISTING TEE - CONFIRM ON SITE
21	383929.21	7374968.47	DN150 45° SOC BEND
22	383917.93	7374975.55	DN150 45° SOC BEND
23	383907.61	7375003.20	DN150 11.25° SOC BEND

PROVIDE WATER MAIN MARKER POSTS AT ALL CHANGES OF DIRECTION. REFER PWC STD DWG W1-2-3F.

AS CONSTRUCTED

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REV	DATE	REVISION DESCRIPTION	ORIG	CKD	ENG	QA	APPD
-	11-04-2013	AS CONSTRUCTED	DAR	GWE	DMB	JPD	DMB

SHEET: A1 SCALE: AS SHOWN

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Strategic Indigenous Housing and Infrastructure Program

ACONEX NO: TA-12-090-CVL-DWG-0109

DPI NO: R11-1390 POWER AND WATER DWG. No. B07-4375

ALICE SPRINGS PACKAGE 12 LITTLE SISTERS
INARLENGE (90) - LOT 3701 COMMONAGE ROAD ALICE SPRINGS
WATER SUPPLY FROM COMMONAGE ROAD
PLAN AND LONGITUDNAL SECTIONS

DRAWING NO: 0109 REV: 2824

O:\0500 DESIGN, ENGINEERING & TECHNICAL\0504 CIVIL\CORRESPONDENCE\OUTGOING_COMPLIANCE CERTIFICATES\LITTLE SISTERS\IDT\05 - WORKS AS EXECUTED\OPUS AS CON\20130430\R11-1390_0109_2013.DWG



SEWER LAYOUT PLAN

1:500 AT A1.

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REV	DATE	REVISION DESCRIPTION	ORIG	CKD	ENG	QA	APPD
-	11-04-2013	AS CONSTRUCTED	OAR	GWE	DMB	JPD	DMB

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Strategic Indigenous Housing and Infrastructure Program

ACONEX NO: TA-12-090-CVL-DWG-0111

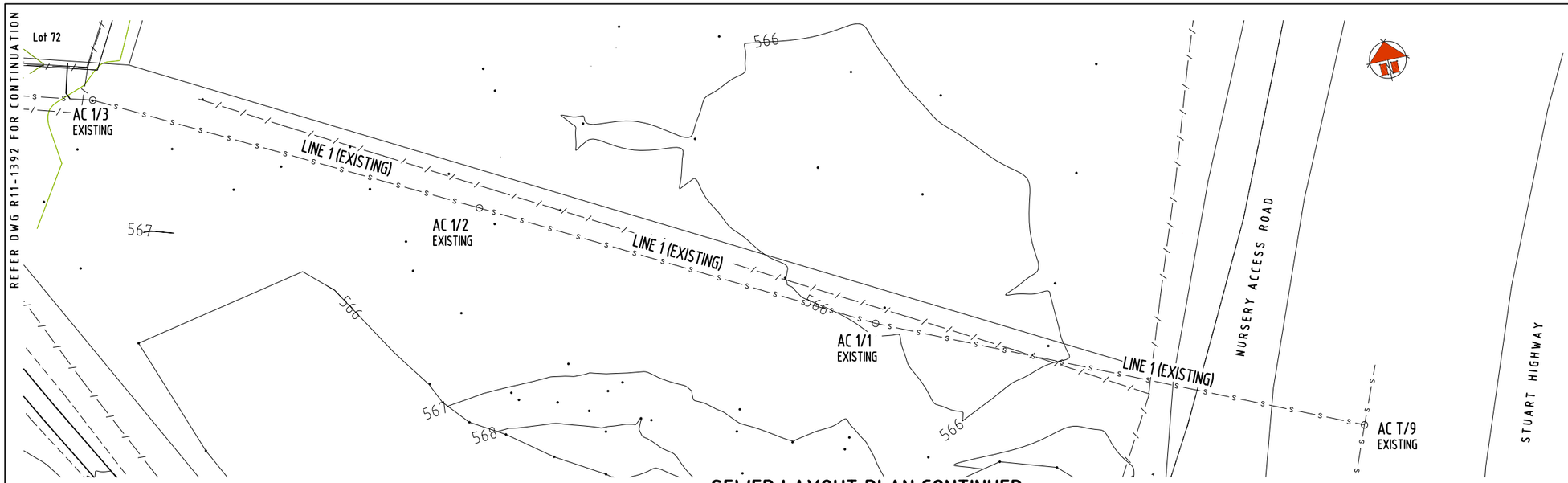
DPI NO: R11-1392

ALICE SPRINGS PACKAGE 12 LITTLE SISTERS
INARLENGE (90) - LOT 3701 COMMONAGE ROAD
SEWER LAYOUT PLAN

DRAWING NO: 0111

REV: 2825

O:\0500 DESIGN, ENGINEERING & TECHNICAL\0504 CIVIL\CORRESPONDENCE\OUTGOING_COMPLIANCE CERTIFICATES\LITTLE SISTERS\IDT\05 - WORKS AS EXECUTED\OPUS AS CON\20130430\TA A1 TITLESHEET.DWG



SEWER LAYOUT PLAN CONTINUED

5m 0m 5m 10m 15m 20m 25m

1:500 AT A1.

SEWER MANHOLE SETOUT TABLE

AC No	TYPE	NORTHING	EASTING
AC 1/11	CRD	7375399.753	383619.931
AC 1/10	CRD	7375393.765	383690.537
EX. AC 1/9	CRD	7375388.623	383720.634

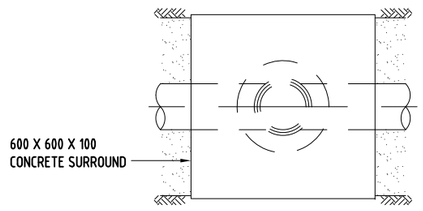
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GENERAL NOTES

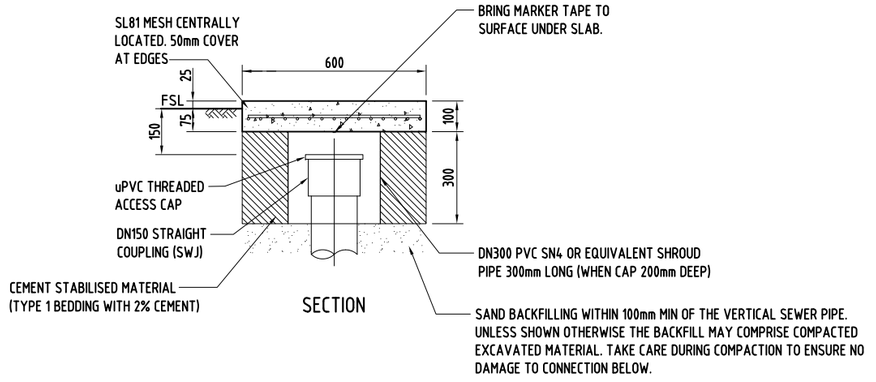
1. Design and construction of the water and sewerage works shall be carried out in accordance with the Power and Water Connection Code and associated documents.
2. All levels given are to AHD.
3. All dimensions are in millimetres unless shown otherwise.
4. It is not guaranteed that all services have been shown on the drawing.
5. Seven working days notice must be given to Services Development, Power and Water (facsimile: 8951 7347 - Southern Region), with a "Notice of intention to start work" prior to commencement of work. (Form available on the Connection Code website).
6. Prior to commencement of site works the contractor is to arrange and attend a meeting with Power and Water, the Hydraulic Certifier and the Developer.
7. AAPA Sacred Sites certificates are to be in place prior to commencing construction and those certificates must allow for the future ongoing operation maintenance and replacement of water and sewer infrastructure by Power and Water.
8. Obtain permit(s) from the relevant road authority prior to road excavation.
9. Prior to commencement of works the constructor shall check the location of all underground services and check and confirm the material, diameter, alignment, level and location of existing water and sewer pipework At the connection points. This information is to be provided to the certifier and Power and Water.
10. All water and sewer works shall be carried out exactly as shown on the latest amendment of the approved design drawings. They must be signed "Approved for Construction" by a Power and Water Officer. Any change to the approved design must be approved by a Power and Water Officer prior to construction.
11. Minimum cover to pipe is 750mm in road reserve, trafficable areas, and open drains; 600mm in other areas.
12. All materials used in construction of the water and sewer works are to be approved products as specified and listed in Power and Water's "Water & Sewer Mains Product Manual".
13. Ensure all as constructed information has been picked up by the surveyor prior to backfilling.
14. Certifier to contact Services Development, Power and Water, to arrange for handover inspections. Seven working days notice must be provided prior to handover inspections. As constructed drawings and all other certification and testing documentation must be provided to Services Development, Power and Water prior to the request for a handover inspection.
15. As constructed drawings to be certified by the Certifying Engineer. 'As Constructed' survey by a registered surveyor. Provide as hard copy 1xA3 paper 1xA1 mylar film as well as digital microstation dgn. Co-ordinates to MGA94 and levels to AHD. See Water and Sewer notes for specific requirements. Show separation distances and levels for intersecting services. Show all other values required to certify compliance of the works. Provide manufacturer and model details for all main components of water and sewer systems.
16. Connections to existing water and sewer mains will only be carried out when all works upstream of the connection are complete in accordance with the approved design drawings, and have satisfactorily passed all required testing and final handover inspection.
17. Power and Water personnel shall install all water and sewer connections to existing mains. The constructor is responsible for all connection fees, materials and labour for excavation, backfilling, and reinstatement.
18. At no stage shall any contractor be allowed to carry out work on Power and Water infrastructure.

SEWERAGE

1. All gravity sewer pipes shall be PVC class SN8 with styrene-butadiene rubber ring joints (SBR) unless otherwise noted.
2. Sewer centreline shall be offset from property boundaries 1.6m in road reserves and 1.5m in private property except where otherwise noted.
3. Manhole and maintenance shaft covers and slabs shall finish at: finished surface level in road reserves and footpaths; match cross fall to a maximum of 2 degrees (42mm across the diameter of a 1200mm MH cover); 150mm above surface level in private property and open space.
4. Ensure there are no low points created around manholes by grading of surrounding finished surface level.
5. Adjust all existing manhole lid levels to comply with requirements above.
6. For existing manholes replace all cracked, damaged, and circular lids and tapers with new rectangular lids.
7. All lot service connections new and existing must be DN 150. A new inspection opening in accordance with the standard detail is to be provided for every lot whether the service is new or existing. Ensure level and location of the IO is picked up by the Surveyor for every lot service.
8. Existing lot sanitary drains are only to be connected upstream of the new IO.
9. Inscribe the cover of the maintenance hole/shaft cover with the identifying number as shown on the drawings.
10. Use heavy duty inspection opening option for drawing no's W2-1-05, W2-1-06 and W2-2-07.
11. For manhole coating use Elaston W80 spray polyurethane elastomer or Power and Water approved equivalent. Apply in 2 coats each of 2mm thickness in contrasting colours. Spray in a continuous application with no dry joints.
12. Self-certifying plumber to certify that all lot sanitary drainage runs through the new sewer connection IO, that there are no cross boundary connections. The certifier together with the surveyor and plumber are to certify that the sewer service does not run through adjacent lots except where the approved design specifically shows this.
13. As constructed drawings for sewer are to show position (co-ordinates to MGA 94 levels to AHD) for all access chambers, access shafts, inspection openings, service junctions, separation distances and levels for intersecting services. Show all other values required to certify compliance of the works. Show finished surface levels at lot corners to verify sewer lot coverage. Provide manufacturer and model details for all main components of the sewer system.
14. Certification documentation must include as constructed drawings, hydrostatic test results, prover test results, CCTV reports, compaction test results, bedding grading curves, concrete reports & test results, other inspection reports and photographs, survey data for lot connections as well as the overall certification itself. Checks confirming compliance of sewer gradients with design, confirming lot service levels with design and that the lot connection level with lot finished surface levels provide lot coverage.



PLAN



SECTION

ON LOT CONNECTION INSPECTION OPENING DETAIL

NTS

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REV	DATE	REVISION DESCRIPTION	ORIG	CKD	ENG	QA	APPD
-	11-04-2013	AS CONSTRUCTED	OAR	GWE	DMB	JPD	DMB

SHEET: A1 SCALE: AS SHOWN

Northern Territory Government
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ACONEX NO: TA-12-090-CVL-DWG-0112

DPI NO: R11-1393

ALICE SPRINGS PACKAGE 12 LITTLE SISTERS
INARLENGE (90) - LOT 3701 COMMONAGE ROAD ALICE SPRINGS
SEWERAGE - NOTES, DETAILS AND SETOUT TABLE

DRAWING NO: 0112 REV: 2826

0:\0500 DESIGN, ENGINEERING & TECHNICAL\0504 CIVIL\CORRESPONDENCE\OUTGOING_COMPLIANCE CERTIFICATES\LITTLE SISTERS\IDT\05 - WORKS AS EXECUTED\OPUS AS CON\20130430\TA A1 TITLESHEET.DWG

JOINS WITH LINE NO.													
MANHOLE & COVER TYPE	C(1200)RB EXISTING				C(1200)RB EXISTING				C(1200)RB EXISTING				C(1200)RB EXISTING
MANHOLE DROP TYPE	1				1				1				1
MANHOLE NUMBER	T-9				MH 1/1				MH 1/2				AC 1/3

REFER DWG R11-1392 FOR PROPERTY CONNECTION NOTES

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LOCATION	EASEMENT				EASEMENT				EASEMENT				
PIPE TYPE & CLASS	uPVC-SN8 (EXISTING)				uPVC-SN8 (EXISTING)				uPVC-SN8 (EXISTING)				
LENGTH-DIAMETER	100.07-150				86.66 -150				80.35 -150				
GRADE	6mm/m				6mm/m				6mm/m				
DATUM R.L.	557.00												
RL TOP OF MANHOLE	567.429			566.115				566.319				566.610	
DEPTH TO INVERT	5.08	5.08		3.17	3.13			2.81	2.78			2.59	
INVERT LEVEL	562.198	562.198		562.799	562.839			563.359	563.389			563.870	
FINISHED SURFACE LEVEL	567.279			565.965				566.169				566.460	
NATURAL SURFACE	567.279			565.965				566.169				566.460	
CHAINAGE	0.00			100.07				186.74				267.09	

SEWER 'LINE 1' LONGITUDINAL SECTION

5m 0m 5m 10m 15m 20m 25m
0.5m 0m 0.5m 1.0m 1.5m 2.0m 2.5m
HORIZONATAL 1:500 AT A1
VERTICAL 1:50 AT A1

AS CONSTRUCTED

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REV	DATE	REVISION DESCRIPTION	ORIG	CKD	ENG	QA	APPD
-	11-04-2013	AS CONSTRUCTED	OAR	GWE	DMB	JPD	DMB

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ACONEX NO: TA-12-090-CVL-DWG-0113

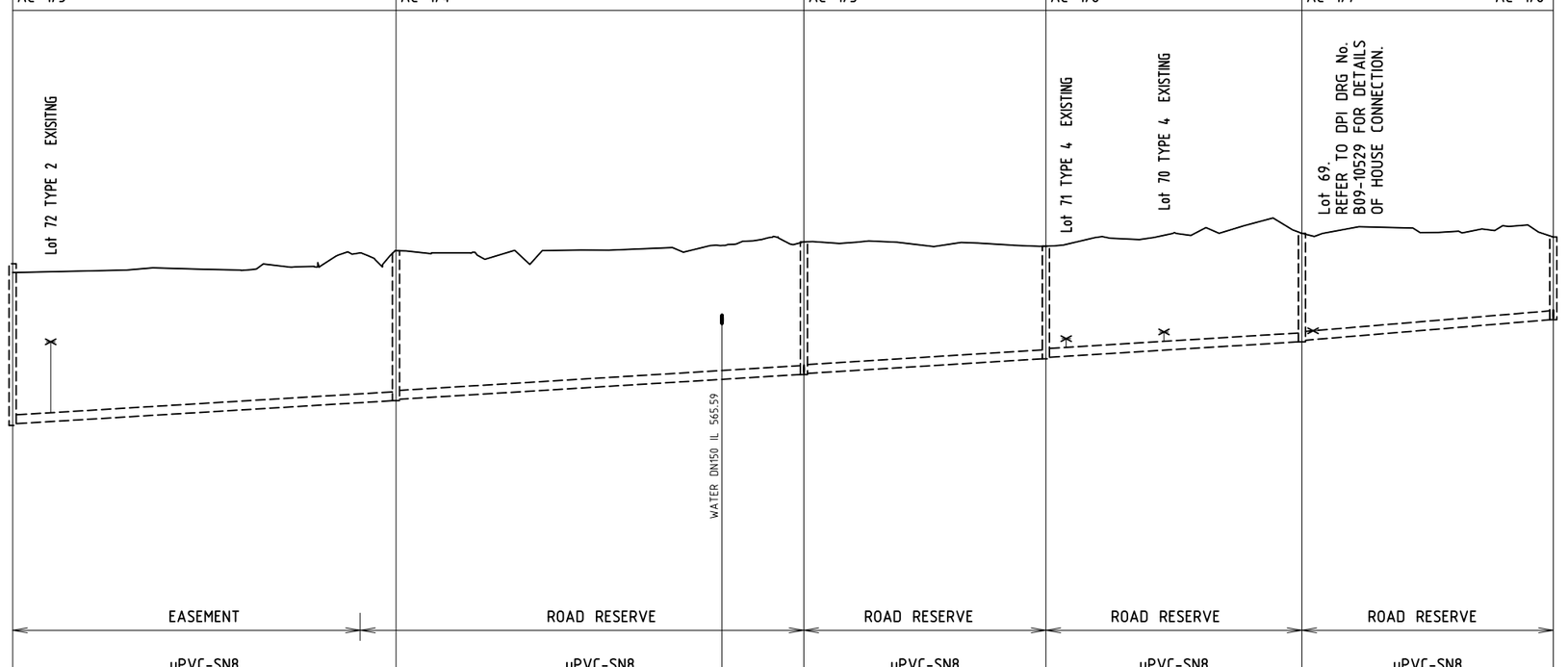
DPI NO: R11-1394

ALICE SPRINGS PACKAGE 12 LITTLE SISTERS
INARLENGE (90) - LOT 3701 COMMONAGE ROAD ALICE SPRINGS
SEWERAGE - LONGITUDINAL SECTIONS
SHEET 1 OF 4

DRAWING NO: 0113 REV: 2827

O:\0500 DESIGN, ENGINEERING & TECHNICAL\0504 CIVIL\CORRESPONDENCE\OUTGOING_COMPLIANCE CERTIFICATES\LITTLE SISTERS\IDT\05 - WORKS AS EXECUTED\OPUS AS CON\20130430\TA A1 TITLESHEET.DWG

JOINS WITH LINE NO.			Existing Line 2			Existing Line 1	
MANHOLE & COVER TYPE	C(1200)RB EXISTING	C(1200)RD EXISTING	C(1200)RD EXISTING	C(1200)RD EXISTING	C(1200)RD EXISTING	C(1200)RD EXISTING	
MANHOLE DROP TYPE	1	1	1	1	1	1	
MANHOLE NUMBER	AC 1/3	AC 1/4	AC 1/5	AC 1/6	AC 1/7	AC 1/8	



REFER DWG R11-1392 FOR PROPERTY CONNECTION NOTES

DISCLAIMER
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LOCATION		EASEMENT	ROAD RESERVE		ROAD RESERVE	ROAD RESERVE	ROAD RESERVE	ROAD RESERVE
PIPE TYPE & CLASS		uPVC-SN8	uPVC-SN8		uPVC-SN8	uPVC-SN8	uPVC-SN8	
LENGTH-DIAMETER		64.97-150	69.13-150		41.01-150	43.38-150	42.60-150	
GRADE		6mm/m	6.1mm/m		6mm/m	6mm/m	8.2mm/m	
DATUM R.L.	558.00							
RL TOP OF MANHOLE	566.610	566.831	566.831	566.981	566.906	567.125	567.063	
DEPTH TO INVERT	2.59	2.56	2.54	2.52	2.25	2.23	1.91	1.88	1.84	1.81	1.40
INVERT LEVEL	563.870	563.900	564.289	564.314	564.65	564.733	564.752	564.999	565.025	565.286	565.313	565.661	
FINISHED SURFACE LEVEL	566.460	566.831	566.831	566.981	566.906	567.125	567.063	
NATURAL SURFACE	566.460	566.831	566.831	566.981	566.906	567.125	567.063	
CHAINAGE	267.09	332.05	387.30	401.18	442.19	485.58	528.17	

SEWER 'LINE 1' LONGITUDINAL SECTION

5m 0m 5m 10m 15m 20m 25m
0.5m 0m 0.5m 1.0m 1.5m 2.0m 2.5m
HORIZONATAL 1:500 AT A1
VERTICAL 1:50 AT A1

AS CONSTRUCTED

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REV	DATE	REVISION DESCRIPTION	ORIG	CKD	ENG	QA	APPD
-	11-04-2013	AS CONSTRUCTED	OAR	GWE	DMB	JPD	DMB

SHEET: A1 SCALE: AS SHOWN

Northern Territory Government
Department of Planning and Infrastructure
territory housing

TERRITORY ALLIANCE
building together

Strategic Indigenous Housing and Infrastructure Program

ACONEX NO: TA-12-090-CVL-DWG-0114

DPI NO: R11-1395

ALICE SPRINGS PACKAGE 12 LITTLE SISTERS
INARLENGE (90) - LOT 3701 COMMONAGE ROAD ALICE SPRINGS
SEWERAGE - LONGITUDINAL SECTIONS
SHEET 2 OF 4

DRAWING NO: 0114 REV: 2828

O:\0500 DESIGN, ENGINEERING & TECHNICAL\0504 CIVIL\CORRESPONDENCE\OUTGOING_COMPLIANCE CERTIFICATES\LITTLE SISTERS\IDT\05 - WORKS AS EXECUTED\OPUS AS CON\20130430\TA A1 TITLESHEET.DWG

REFER DWG R11-1392 FOR PROPERTY CONNECTION NOTES

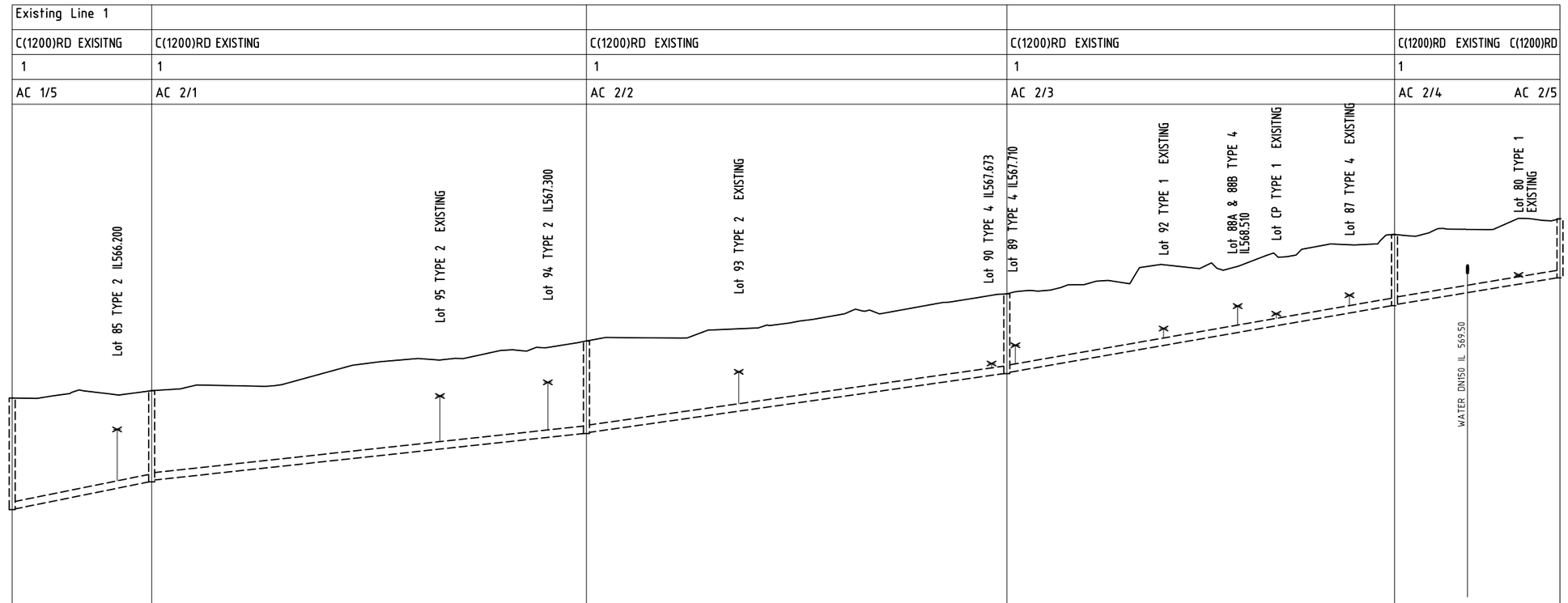
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| | | |

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

REFER DWG R11-1392 FOR PROPERTY CONNECTION NOTES

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| | | |

Transformer data

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

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

Nyewente (Trucking Yards)

Nyewente (Trucking Yards)

1 Design

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

Sewerage and water supply

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

Electrical services

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

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

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

URD Design Standards for internal reticulation and street lighting appear to have been applied in many cases for convenience rather than compliance.

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

The following standards apply:

- Australian Standards
- Power Networks Design and Construction Guidelines, Power and Water Corporation
  - NP001.1_Design and Construction of Network Assets – General Requirements
  - NP001.3_General Specification for Overhead Electrical Reticulation
  - NP001.6_General Specification for URD Subdivisions
  - NP003_Installation Rules_V3
  - NP007_Service Rules
  - NP027_Capture of Newly Installed Street Lighting Information
  - NP041_Guidelines for Electrical Design Consultants

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

Communications

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

Council guidelines

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

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

General

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

2 Condition assessment

2.1 Rating assessment matrix

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

Table 1 Condition rating

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

2.2 Civil assessment limitations

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

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

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

2.3 Electrical assessment limitations

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

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

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

3 Current infrastructure issues

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

3.1 Ownership and maintenance

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

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

3.2 Access to infrastructure

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

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

3.3 Existing infrastructure

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

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

3.4 Safety concerns

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

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

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

4 Available information

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

- Serviced Land Availability Program (SLAP) maps,
- Department of Family & Community Services - Connecting Neighbours Program – Essential Services Scoping Study Report Volume 1 April 2005,
- Connecting Neighbours Project – Infrastructure Assessment and Recommendation Report - Arup Pty Ltd, April 2005,
- 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 Nyewente (Trucking Yards) community on 24 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 Appendicies.

5 Sewerage

5.1 Ownership and boundaries

The sewerage infrastructure at Trucking Yards has recently been upgraded to meet PWC requirements. The sewerage assets within Trucking Yards are believed to be owned by Nyewente Association Incorporated, but are the responsibility of Ingkerreke Outstations Resource Services to maintain.

PWC have advised that they are currently maintaining the sewerage assets up the housing connection, although there is no formal agreement in place. The following image shows the extent of sewer infrastructure PWC currently maintain. Any other gravity mains, or housing connections that are not shown, are maintained by Ingkerreke Outstations Resource Services.

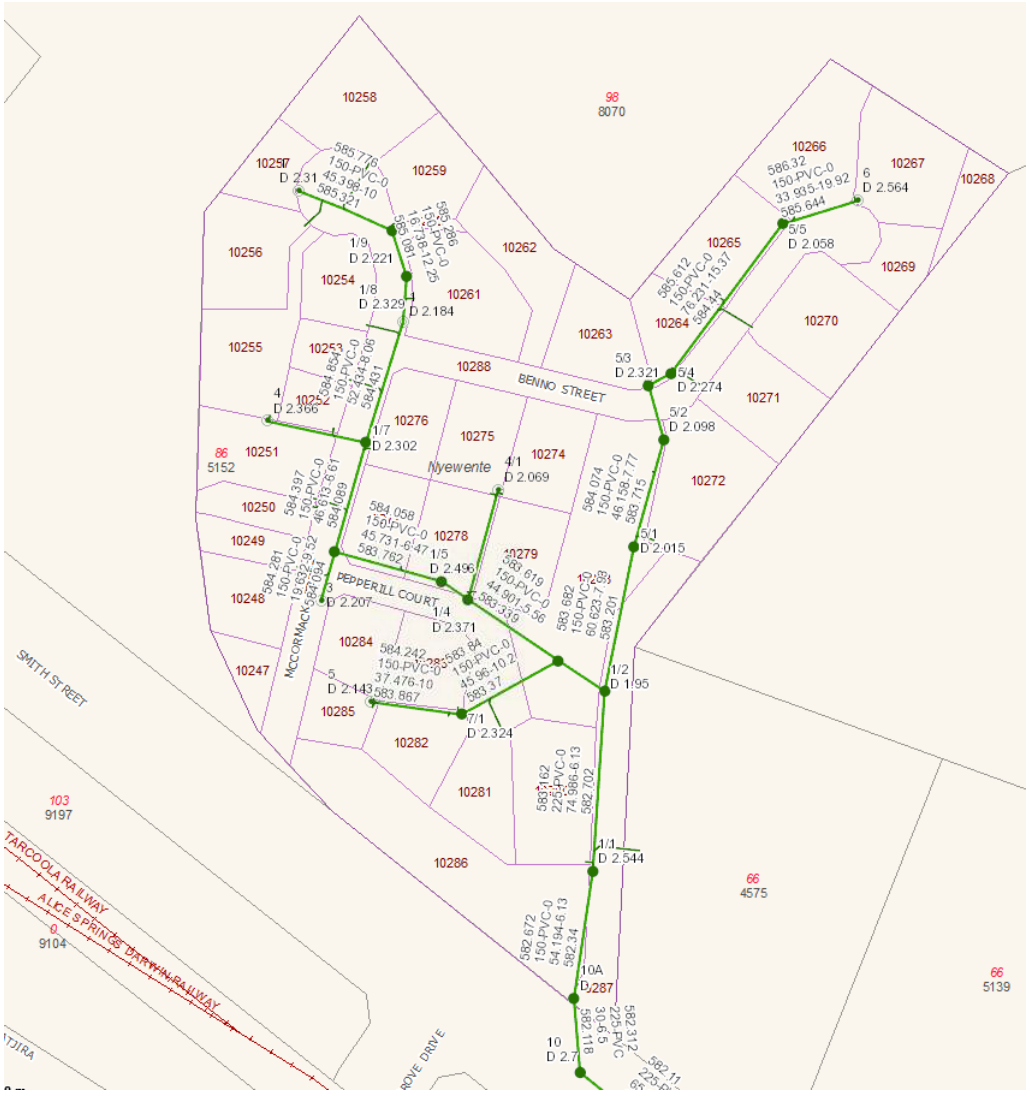


Figure 1 PWC maintained sewerage infrastructure

5.1.1 Connection methods and billing

PWC advised that they currently charge a single sewerage bill based on the number of houses, which for Trucking Yards is 26 houses plus one other. 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	23	13

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, or being covered by dirt, grass or debris. 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.

One of the manholes inspected was not shown on the available documentation. This appears to have been a part of an abandoned network.

The condition ratings of the manholes inspected are as follows:

Table 3 Sewer condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Manhole	1		1	10	1	13



Figure 2 Sewer manhole, condition: *very good*



Figure 3 Sewer manhole, condition: *very good*

The sewerage infrastructure has recently been upgraded as per the SIHIP detailed design drawings. The infrastructure was generally in very good condition and compliant with PWC requirements.

One manhole was rated in very poor condition and should be upgraded.

5.3 Current performance and risks

5.3.1 Current sewer network performance

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

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

The current number of houses in Trucking Yards is 26, this multiplied by 9 EP per house gives a total current EP of 234. 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_{full} (L/s)	Current Q (L/s)	Current capacity (%)
Catchment 1	234	150	1.0	16.50	2.57	16%

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

The sewer network is compliant with PWC standards.

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 following upgrades are recommended:

- Repair one manhole

6 Water supply

6.1 Ownership and boundaries

The water supply infrastructure was upgraded to as part of the SIHIP program. The water mains servicing Trucking Yards are DN150 PVC pipes with network looping incorporated throughout the community and two supply points, refer Appendicies. The as-constructed drawings indicate a section of the water main inside a 5 m wide dedicated water easement. The Land Titles, refer Appendicies, show that there are no easements within the community.

The water supply assets within Trucking Yards are believed to be owned by Nyewente Association Incorporated, but are the responsibility of Ingkerreke Outstations Resource Services to maintain.

PWC have advised that they are currently maintaining the water supply assets up the housing connection, although there is no formal agreement in place.

The following image shows the extent water infrastructure PWC currently maintain on an in-kind basis.



Figure 4 Trucking Yards water supply

6.1.1 Connection methods and bills

Through consultation with PWC it has been determined that the water usage is currently charged as a fixed daily rate for 27 house water meters within Trucking Yards. 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 DN150 bulk water meter on the water mains located at the community boundary. Under this scheme, the water bill for the entire community is the responsibility of the governing body, being Nyewente Association Incorporated for Trucking Yards. It will be up to governing body to assign bills to residents accordingly.

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

A total of 22 lot water meters were assessed during the inspection. Trucking Yards is believed to contain 26 dwellings. Therefore, up to an additional four water meters are required to be installed to cover the properties without an existing water meter. Note, some water meters may have been present however not visible due to overgrown flora or restricted property access. Consequently water meters may have not been discovered during the inspection.

6.2 Existing infrastructure 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	8	7
Water meter (residential lots)	30	24

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

One of the fire hydrants inspected is not shown on the available documentation. This asset appears to have been a part of an abandoned network.

The condition of each asset is as follows:

Table 6 Water asset condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Fire hydrant			2	5		7
Water meter (residential lots)		2	13	8		22



Figure 5 Fire hydrant, condition: *poor*



Figure 6 Residential lot water condition: *poor*

Two fire hydrants were assessed as being in good condition. One of these required clearing of soil partially covering the hydrant, and both require repainting. A third fire hydrant was found to be in very good condition however, the concrete surrounding the hydrant lid has not been painted and should be painted red.

Two residential lot water meters were seen to be poor condition due to overgrown grass surrounding the asset. Minor maintenance is required to clear the grass area around these two water meters.

6.3 Current performance and risks

The current peak hour water demand 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 peak hour demand.

Table 7 Current water demand

Total dwellings	EP	Demand (l/s)	Peak hour demand (l/s)
26	234	3.51	10.53

The water reticulation is expected to have sufficient capacity for PWC flow requirements including peak hour and fire flow.

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 Trucking Yards no additional hydrants are envisaged at this stage.

The water reticulation network layout and sizes are compliant with PWC standards.

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;

- Clear soil from coving two fire hydrants
- Repaint three fire hydrants
- Clear overgrown grass from two residential water meters

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 is ring main, one of the supply points should be disconnected and reconnected to the internal network creating a looped main. This allows the single remaining point to be metered. The cost estimates for the upgrades at Trucking Yards include:

- Install up to four new residential lot water meter
- Disconnect secondary supply point and reconnect to water main creating a looped
- Install new bulk water meter at community boundaries

7 Roadworks

7.1 Ownership and boundaries

It is the current understanding that the road infrastructure at the Trucking Yards is owned by Nyewente Association Incorporated, however is the responsibility of Ingkerreke Outstations Resource Services to maintain.

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

7.2 Existing infrastructure condition assessment

The road network within the Trucking Yards consists of a network of sealed roads, including footpaths.

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

Table 8 Roadworks condition assessment

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



Figure 7 Sign, condition: *very poor*



Figure 8 Footpath, condition: *very good*

The collection of signs varied in condition from good to very poor. The two poor and one very poor signs will need to be replaced.

The footpath is in very good condition and requires no immediate maintenance.

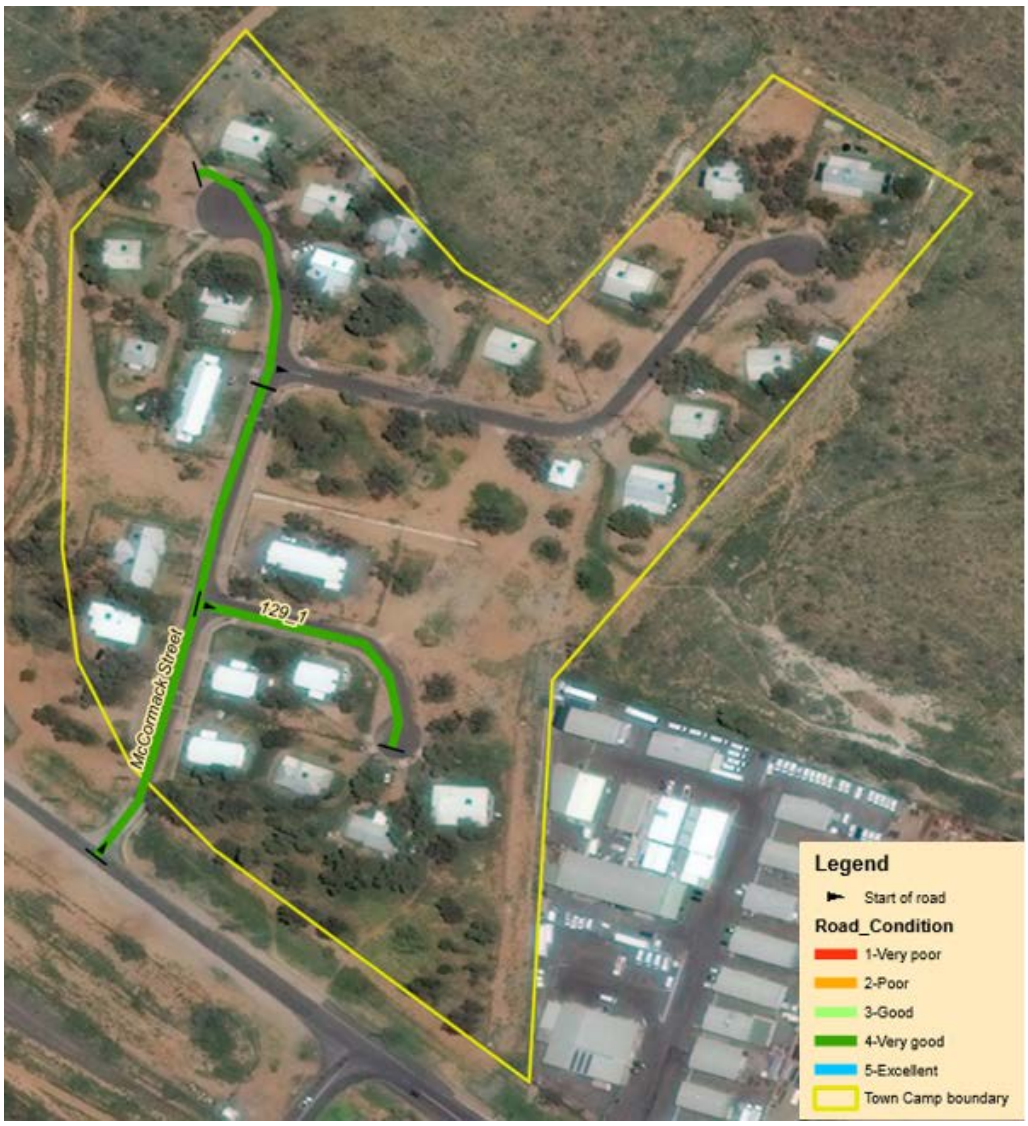


Figure 9 Community road network

Table 9 below details the condition of the roads within Nyewente community for specific segments. Figure 9 shows a map of the community's road network with the condition ratings, road name, and chainage direction. One of the roads in Trucking Yards could not be assessed due to dangerous dogs.

The driveway cross overs unless specifically stated are the same rating as the road in that area. In the areas that the pavement that had no kerbs, the driveways have no layover kerbs and are informal, therefore were not assessed.

Table 9 Road network condition assessment

Road name	Chainage start (km)	Chainage end (km)	Condition (1 to 5)	Defects and associated condition
129_1	0.00	0.11	4	-<5% of the road has surface cracking (4)
McCormack Street	0.00	0.20	4	-5% of the road has surface cracking (4)
	0.20	0.30	4	-1 pothole that has already been filled in (4) -<5% of the road has surface cracking (4)



Figure 10 Pavement, condition: *very good*

7.3 Current performance and risks

The road network in the Trucking Yards community was rated as having very good condition, although there were some surface cracking and gutters filled with dirt. As the roads had some cracking, there may be more significant issues to do with the subgrade or drainage that will require remediation before the road can be resealed.

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

It is 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;

- General clean 400 m of pavement and road reserve to ensure there is no rubbish, graffiti or broken glass. Including removing dirt from gutters.
- Replace one road sign

8 Stormwater drainage

8.1 Ownership and boundaries

The stormwater drainage assets within Trucking Yards are believed to be owned by Nyewente Association Incorporated, but are the responsibility of Ingkerreke Outstations Resource Services to maintain. The stormwater drainage infrastructure has recently been upgraded as per the SIHIP program.

8.2 Current performance and risks

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
Swale				1		1
SEP			2	16	2	20
Letterbox pit				1		1



Figure 11 Swale with concrete invert, condition: *very good*



Figure 12 Side entry pit, condition: *very good*

The SIHIP program designed stormwater drainage for the community which appears to have been constructed as the infrastructure was generally new and in very good condition. There were some side entry pits and a concrete lined swale that require blockages / dirt to be cleared out.

8.3 Current performance and risks

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

8.4 Future demands

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

8.5 Recommended works

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

- Clear blockages from seven side entry pits

9 Community structures

9.1 Ownership and boundaries

The road community structures at the Trucking Yards are owned by Nyewente Association Incorporated, however they are the responsibility of Ingkerreke Outstations Resource Services to maintain.

9.2 Existing infrastructure condition assessment

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

Table 11 Community structures condition assessment

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



Figure 13 Basketball court, condition: *good*



Figure 14 Playground, condition: *very poor*



Figure 15 BBQ area, condition: *very good*



Figure 16 Playground, condition: *good*

9.3 Current performance and risks

The community structures were generally in good or very good condition, except for one playground which was in very poor condition due to broken equipment, poor flooring, and no shade cloth. The other playground appears to be used more regularly. Some general maintenance and cleaning is required, while one playground should have the equipment repaired.

9.4 Future demands

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

9.5 Recommended works

The following works are recommended to upgrade the community structures:

- Paint 'key' lines on basketball court
- General clean of all community structures and surrounding areas to ensure all rubbish, graffiti and broken glass is removed
- Repair damages to several items in the playground
- Repair tears to the shade sail over one of the playgrounds

10 Electrical services

10.1 Ownership and boundaries

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

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

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

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

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

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 Nyewente (Trucking Yards) community electrical reticulation systems is supplied from PWCs overhead HV distribution neywork. Overhead LV distribution is provided to meters of individual houses.

PWC advise that the Point Of Supply is the HV isolation switch on pole LP-100204 at the lot boundary where the power first enters and upstream infrastructure.

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

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

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

10.2 Existing infrastructure condition assessment

Table 12 shows the condition rating given to the street lights. The street lights on OH poles were of a low voltage overhead feeder design, sodium lamp type S70D, with lamp covers protected by cages. The street lights have a 100% operational rating.

Table 12 Street light on O/H pole condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Street light on O/H pole			16			16

Table 13 shows the condition rating given to the transformer. The transformer was of pole mount substation design. The transformer was 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			1			1

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

Table 14 Overhead pole condition assessment

Asset	1 Very Poor	2 Poor	3 Good	4 Very Good	5 Excellent	Total
Overhead pole			20	8		28

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			16			16
Switchboard		3	10			13

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

Table 16 Switchboard condition assessment (Housing footprint)

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

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

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 Nyewente (Trucking Yards) transformer is at 39% of rated capacity based on 4.5kVA/dwelling and current needs are met.

Table 17 Trucking Yards community current demand load vs transformer ratings

Com Id	Community name	Dwellings	Transformer (kVA)	kVA Total @ 4.5kVA	kVA Total @ 7kVA	Comments
129	Nyewente (Trucking Yards)	26	300	117	182	

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

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 three switchboards inside the metering panel
- Replace two switchboards associated to dwellings

11 Communications

11.1 Ownership and boundaries

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

11.2 Existing infrastructure condition assessment

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

Appendicies contains the individual reports.

Table 18 Telecommunication pit condition assessment

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

11.3 Current performance and risks

No details of the performance of communications infrastructure were obtained.

11.4 Future demands

The current availability of broadband services at Nyewente (Trucking Yards) is displayed in the Figure 17 below. NBN is available to residents via a fixed telecommunication line on application to an appropriate NBN access provider.

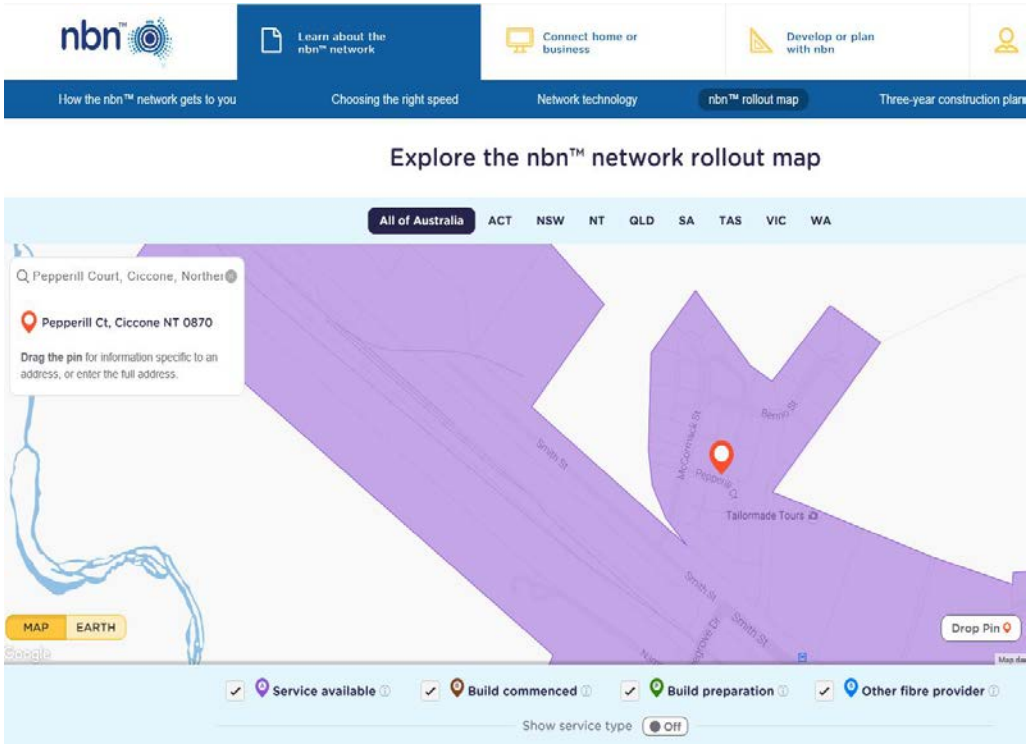


Figure 17 NBN network availability map

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

No works are required at Nyewente (Trucking Yards) 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, to upgrade the existing network to meet current design standards, and to upgrade the existing network to cater for the future design (included in current upgrades). The estimates take into account a 30% contingency, are inclusive of GST. 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	$ 3,000	$ 0
Water supply	$ 2,000	$ 97,000
Roadworks	$ 13,000	$ 0
Stormwater drainage	$ 5,000	$ 0
Community structures	$ 13,000	$ 0
Electrical	$ 13,000	$ 0
Communications	$ 0	$ 0
Miscellaneous provisions	$ 15,000	$ 21,000
Total (including GST)	**$ 64,000**	**$ 118,000**
Grand total	**$ 182,000**	

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

13 Summary

The following works are recommended for Trucking Yards community:

Sewerage

- Repair one manhole

Water supply

- Clear soil from coving two fire hydrant
- Repaint three fire hydrants
- Clear overgrown grass from two residential water meters
- Install up to four new residential lot water meter
- Disconnect secondary supply point and reconnect to water main creating a looped
- Install new bulk water meter at community boundary

Roadworks

- General clean 400 m of pavement and road reserve to ensure there is no rubbish, graffiti or broken glass. Including removing dirt from gutters.
- Replace one road sign

Stormwater drainage

- Clear blockages from seven side entry pits

Community structures

- Paint 'key' lines on basketball court
- General clean of all community structures and surrounding areas to ensure all rubbish, graffiti and broken glass is removed
- Repair damages to several items in the playground
- Repair tears to the shade sail over one of the playgrounds

Electrical services

- Replace three switchboards inside the metering panel
- Replace two switchboards associated to dwellings

Communications

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

Civil inspection reports



Map by: DMcP P:\GIS\Projects\2539963_NT_Town_Camps\2539963_003_Civil_DDP.mxd 23/02/2017 12:02 Imagery: Digital Globe WV2 2013-2016

A3 scale: 1:2,000

0 20 40 60 80 100 m

Note:
Label numbers refer to survey IDs

Date: 23/02/2017 Version: 2

Coordinate system: MGA94 Zone 52

NT Town Camp Infrastructure Assessments: Sewerage

129 - Nyewente (Alice Springs)

2867



Map by: DMcP P:\GIS\Projects\2539963_NT_Town_Camps\2539963_003_Civil_DDP.mxd 23/02/2017 12:02 Imagery: Digital Globe WV2 2013-2016

A3 scale: 1:2,000

0 20 40 60 80 100 m

Note:
Label numbers refer to survey IDs

Date: 23/02/2017 Version: 2

Coordinate system: MGA94 Zone 52

NT Town Camp Infrastructure Assessments: Water

129 - Nyewente (Alice Springs)

2868



Legend

Town Camp boundary

Community structures
- BBQ/Table and Chairs (1)
- Basketball court (1)
- Playground (2)

Road furniture
- Footpaths (1)
- Signs (7)

Stormwater
- Letter Box Pit (1)
- Side Entry Pit (11)
- Swales (1)

Map by: DMcP P:\GIS\Projects\2539963_NT_Town_Camps\2539963_003_Civil_DDP.mxd 23/02/2017 12:02 Imagery: Digital Globe WV2 2013-2016

A3 scale: 1:2,000

0 20 40 60 80 100 m

Note:
Label numbers refer to survey IDs

Date: 23/02/2017 Version: 2

Coordinate system: MGA94 Zone 52

NT Town Camp Infrastructure Assessments
Road furniture, stormwater drainage & community structures
129 - Nyewente (Alice Springs)

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 3:22:32 PM

Insp ID: 1107	Group 4 - Alice Springs	Nyewente (Trucking Yards)

What Water Asset Are you Capturing: Fire Hydrants

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





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 2:54:21 PM

Insp ID: 1117	Group 4 - Alice Springs	Nyewente (Trucking Yards)

What Water Asset Are you Capturing: Fire Hydrants

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





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 2:41:34 PM

Insp ID: 1123	Group 4 - Alice Springs	Nyewente (Trucking Yards)

What Water Asset Are you Capturing: Fire Hydrants

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





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 4:05:14 PM

Insp ID: 1140	Group 4 - Alice Springs	Nyewente (Trucking Yards)

What Water Asset Are you Capturing: Fire Hydrants

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





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 3:43:11 PM

Insp ID: 1147 Group 4 - Alice Springs Nyewente (Trucking Yards)

What Water Asset Are you Capturing: Fire Hydrants

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









Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 3:43:11 PM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 3:36:08 PM

Insp ID: 1152	Group 4 - Alice Springs	Nyewente (Trucking Yards)

What Water Asset Are you Capturing: Fire Hydrants

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





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 25/11/2016 8:52:48 AM

Insp ID: 1169	Group 4 - Alice Springs	Nyewente (Trucking Yards)

What Water Asset Are you Capturing: Fire Hydrants

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





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 3:04:45 PM

Insp ID: 1111	Group 4 - Alice Springs	Nyewente (Trucking Yards)

Road Name:	McCormack Street
What are you inspecting:	Foot Paths
Footpath Width (mm):	1200
Footpath Type:	Concrete
Footpath Condition:	4 - Very Good
Comment:	On right hand side only starting from ch 0
General Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 3:04:45 PM





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 25/11/2016 9:21:17 AM

Insp ID: 1154 Group 4 - Alice Springs Nyewente (Trucking Yards)

Stormwater Infrastructure:	Letter Box Pit
Length (mm):	450
Height (mm):	200
Blockage Percentage (%):	
LB Condition:	4 - Very Good
LB Comments:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 2:55:29 PM

Insp ID: 1116	Group 4 - Alice Springs	Nyewente (Trucking Yards)

What Sewerage Asset are you capturing:	Manholes
MH Cover Shape:	Round
Manhole Cover Diam (mm):	450
Manhole Length (mm):	
Manhole Width (mm):	
Manhole Condition:	5 - Excellent
Notes on Lid:	
Comments:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 2:51:57 PM

Insp ID: 1119 Group 4 - Alice Springs Nyewente (Trucking Yards)

What Sewerage Asset are you capturing:	Manholes
MH Cover Shape:	Rectangular
Manhole Cover Diam (mm):	
Manhole Length (mm):	1000
Manhole Width (mm):	700
Manhole Condition:	4 - Very Good
Notes on Lid:	
Comments:	Lid not sitting flush





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 2:51:57 PM



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 2:40:22 PM

Insp ID: 1124	Group 4 - Alice Springs	Nyewente (Trucking Yards)

What Sewerage Asset are you capturing:	Manholes
MH Cover Shape:	Round
Manhole Cover Diam (mm):	450
Manhole Length (mm):	
Manhole Width (mm):	
Manhole Condition:	4 - Very Good
Notes on Lid:	
Comments:	Loose screws





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 2:34:41 PM

Insp ID: 1127 Group 4 - Alice Springs Nyewente (Trucking Yards)

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:	Lid not sitting flush





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 4:23:27 PM

Insp ID: 1129	Group 4 - Alice Springs	Nyewente (Trucking Yards)

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





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 4:18:02 PM

Insp ID: 1132	Group 4 - Alice Springs	Nyewente (Trucking Yards)

What Sewerage Asset are you capturing:	Manholes
MH Cover Shape:	
Manhole Cover Diam (mm):	
Manhole Length (mm):	
Manhole Width (mm):	
Manhole Condition:	1 - Very Poor
Notes on Lid:	
Comments:	Size Unknown





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 4:09:49 PM

Insp ID: 1136	Group 4 - Alice Springs	Nyewente (Trucking Yards)

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



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 3:44:36 PM

Insp ID: 1145 Group 4 - Alice Springs Nyewente (Trucking Yards)

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





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 3:44:36 PM



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 3:42:14 PM

Insp ID: 1148 Group 4 - Alice Springs Nyewente (Trucking Yards)

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





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 25/11/2016 9:19:50 AM

Insp ID: 1155 Group 4 - Alice Springs Nyewente (Trucking Yards)

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:	Class d
Comments:	





Northern Territory Town Camps

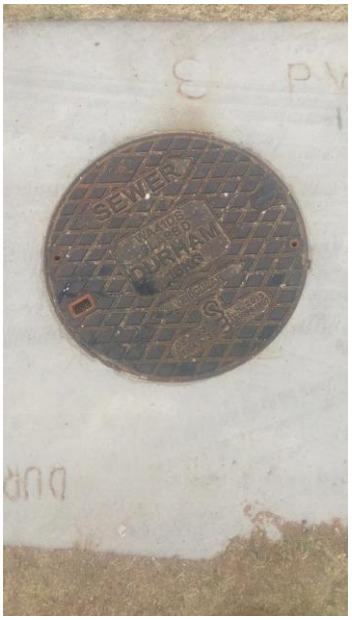
Civil Infrastructure

Inspection Date 25/11/2016 8:57:49 AM

Insp ID: 1164 Group 4 - Alice Springs Nyewente (Trucking Yards)

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:	Class d
Comments:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 25/11/2016 8:53:52 AM

Insp ID: 1168 Group 4 - Alice Springs Nyewente (Trucking Yards)

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





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 25/11/2016 8:46:18 AM

Insp ID: 1174	Group 4 - Alice Springs	Nyewente (Trucking Yards)

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





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 2:45:37 PM

Insp ID: 1120 Group 4 - Alice Springs Nyewente (Trucking Yards)

Road Name:	McCormack Street
What are you inspecting:	Pavements
Ch From (km):	0.2
Ch To (km):	0.3
Road Type:	Sealed - asphalt
Section Width (m):	6
Road Condition:	4 - Very Good
General Comment:	Last 70m is dirt track not formal road (.30-.37)

Road Defects Section

Defect Type	Defect QTY	Defect Condition	Defect Comments
Potholes	1	4 - Very Good	Pothole filled in
Surfacing Cracks	5	4 - Very Good	Less than 5 percent

Kerbs Section

Kerb Type	Kerb Cond	Kerb Comments
Semi mountable Kerb and Gutter	4 - Very Good	Some build up of leafs and dirt

Shoulders Section

Linemarking Section

Obstruction Section

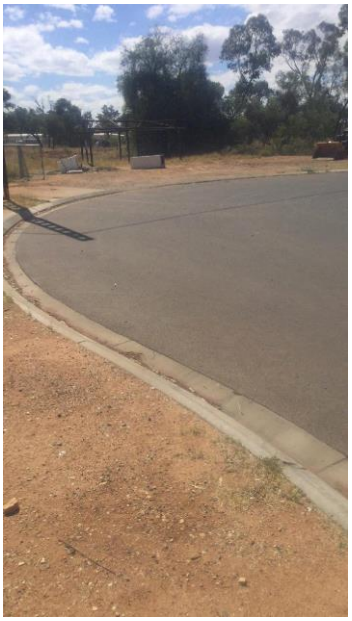
Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 2:45:37 PM





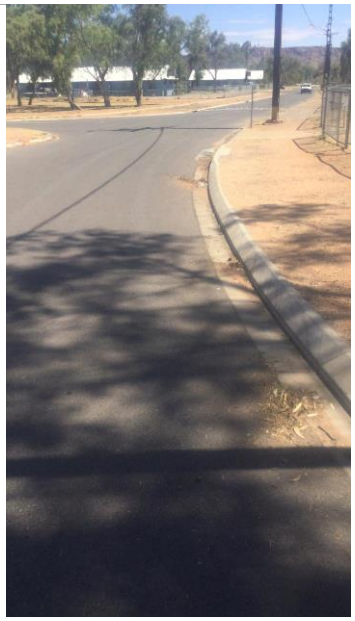


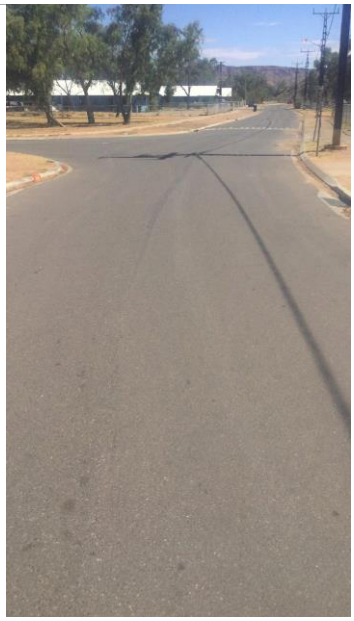


Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 2:45:37 PM







Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 4:11:00 PM

Insp ID: 1135 Group 4 - Alice Springs Nyewente (Trucking Yards)

Road Name:	129_1
What are you inspecting:	Pavements
Ch From (km):	0
Ch To (km):	0.11
Road Type:	Sealed - asphalt
Section Width (m):	6.5
Road Condition:	4 - Very Good
General Comment:	

Road Defects Section

Defect Type	Defect QTY	Defect Condition	Defect Comments
Surfacing Cracks	5	4 - Very Good	Less than 5 percent

Kerbs Section

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

Shoulders Section

Linemarking Section

Line Type	Other Line Type	Line Cond	Line Comments
Give way line		3 - Good	At t intersection only

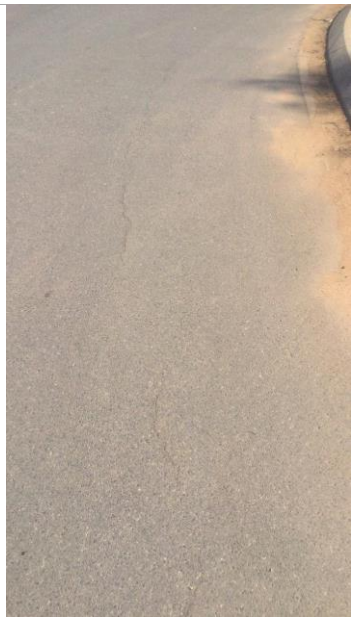
Obstruction Section

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 4:11:00 PM







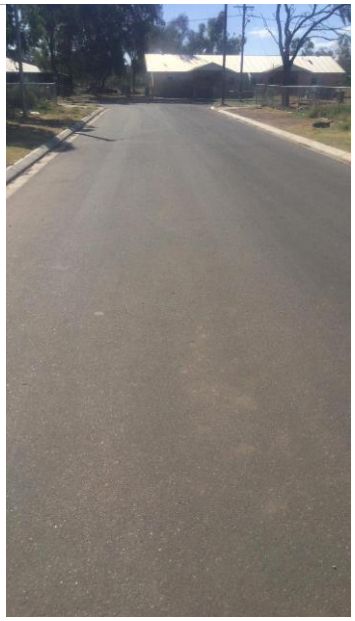


Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 4:11:00 PM









Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 4:11:00 PM



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 25/11/2016 9:07:21 AM

Insp ID: 1158 Group 4 - Alice Springs Nyewente (Trucking Yards)

Road Name:	McCormack Street
What are you inspecting:	Pavements
Ch From (km):	0
Ch To (km):	0.2
Road Type:	Sealed - asphalt
Section Width (m):	6.8
Road Condition:	4 - Very Good
General Comment:	2 speed humps however not large enough to slow down cars

Road Defects Section

Defect Type	Defect QTY	Defect Condition	Defect Comments
Surfacing Cracks	5	4 - Very Good	5 percent

Kerbs Section

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

Shoulders Section

Linemarking Section

Line Type	Other Line Type	Line Cond	Line Comments
		2 - Poor	

Obstruction Section

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 25/11/2016 9:07:21 AM







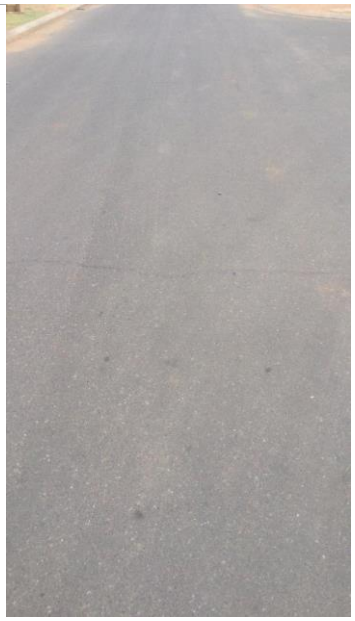


Northern Territory Town Camps

Civil Infrastructure

Inspection Date 25/11/2016 9:07:21 AM









Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 3:20:55 PM

Insp ID: 1108	Group 4 - Alice Springs	Nyewente (Trucking Yards)

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





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 2:53:14 PM

Insp ID: 1118	Group 4 - Alice Springs	Nyewente (Trucking Yards)

Stormwater Infrastructure:	SEP
Number of Bays:	2
On grade or sag pit:	
Both sides of road:	Both
Condition:	4 - Very Good
Blockage (%):	40
Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 3:51:51 PM

Insp ID: 1141 Group 4 - Alice Springs Nyewente (Trucking Yards)

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





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 3:47:45 PM

Insp ID: 1144	Group 4 - Alice Springs	Nyewente (Trucking Yards)

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





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 3:39:49 PM

Insp ID: 1150	Group 4 - Alice Springs	Nyewente (Trucking Yards)

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









Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 3:39:49 PM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 3:38:21 PM

Insp ID: 1151	Group 4 - Alice Springs	Nyewente (Trucking Yards)

Stormwater Infrastructure:	SEP
Number of Bays:	2
On grade or sag pit:	
Both sides of road:	Both
Condition:	3 - Good
Blockage (%):	20
Comment:	Grate not sitting down





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 25/11/2016 9:04:55 AM

Insp ID: 1160	Group 4 - Alice Springs	Nyewente (Trucking Yards)

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









Northern Territory Town Camps

Civil Infrastructure

Inspection Date 25/11/2016 9:04:55 AM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 25/11/2016 8:59:06 AM

Insp ID: 1163 Group 4 - Alice Springs Nyewente (Trucking Yards)

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







Northern Territory Town Camps

Civil Infrastructure

Inspection Date 25/11/2016 8:59:06 AM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 25/11/2016 8:49:30 AM

Insp ID: 1172	Group 4 - Alice Springs	Nyewente (Trucking Yards)

Stormwater Infrastructure:	SEP
Number of Bays:	2
On grade or sag pit:	
Both sides of road:	Both
Condition:	4 - Very Good
Blockage (%):	20
Comment:	









Northern Territory Town Camps

Civil Infrastructure

Inspection Date 25/11/2016 8:49:30 AM

Northern Territory Town Camps

Civil Infrastructure

Inspection Date 25/11/2016 8:45:14 AM

Insp ID: 1175	Group 4 - Alice Springs	Nyewente (Trucking Yards)

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





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 25/11/2016 8:41:53 AM

Insp ID: 1178	Group 4 - Alice Springs	Nyewente (Trucking Yards)

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



Northern Territory Camps

Civil Infrastructure

Inspection Date 24/11/2016 3:12:02 PM

Insp ID: 1109	Group 4 - Alice Springs	Nyewente (Trucking Yards)

Inspection Type:	Shade Structure
Shade Structure Type:	BBQ Area
Shade Floor Type:	Concrete
Roof Type:	Not Covered
Width (mm):	3
Length (mm):	7
Appearance:	3
Appearance Comment:	
Condition:	4 - Very Good
Comment:	



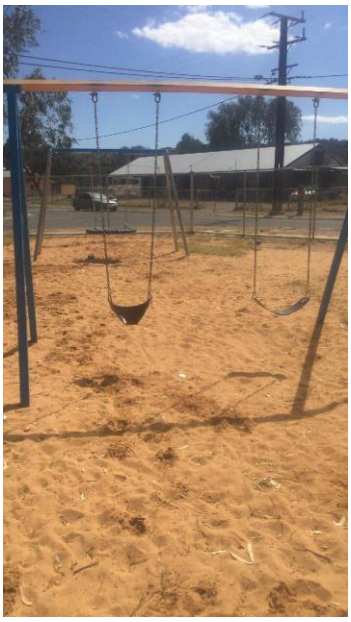
Northern Territory Camps

Civil Infrastructure

Inspection Date 24/11/2016 3:08:43 PM

Insp ID: 1110 Group 4 - Alice Springs Nyewente (Trucking Yards)

Inspection Type:	Shade Structure
Shade Structure Type:	Play ground
Shade Floor Type:	Rubber Mats
Roof Type:	Shadecloth
Width (mm):	20
Length (mm):	25
Appearance:	3
Appearance Comment:	
Condition:	3 - Good
Comment:	Damages to several items



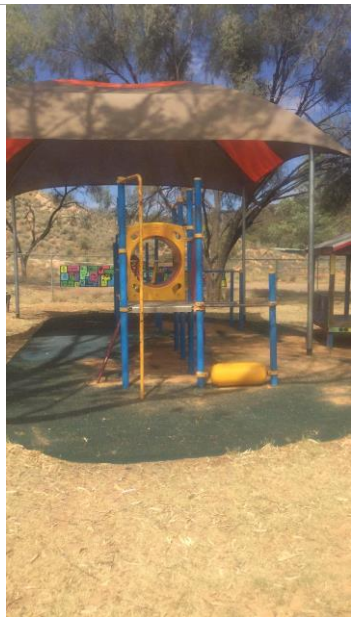


Northern Territory Camps

Civil Infrastructure

Inspection Date 24/11/2016 3:08:43 PM







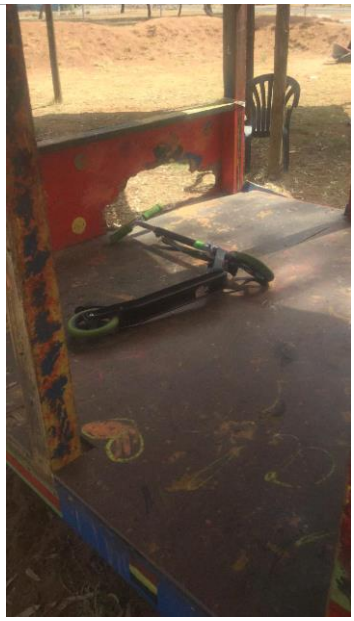


Northern Territory Camps

Civil Infrastructure

Inspection Date 24/11/2016 3:08:43 PM







Northern Territory Camps

Civil Infrastructure

Inspection Date 25/11/2016 9:17:00 AM

Insp ID: 1156 Group 4 - Alice Springs Nyewente (Trucking Yards)

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





Northern Territory Camps

Civil Infrastructure

Inspection Date 25/11/2016 9:14:10 AM

Insp ID: 1157	Group 4 - Alice Springs	Nyewente (Trucking Yards)

Inspection Type:	Shade Structure
Shade Structure Type:	Basket Ball Court
Shade Floor Type:	Concrete
Roof Type:	Not Covered
Width (mm):	5
Length (mm):	8
Appearance:	3
Appearance Comment:	
Condition:	3 - Good
Comment:	Concrete surface uneven





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 3:02:33 PM

Insp ID: 1113 Group 4 - Alice Springs Nyewente (Trucking Yards)

Road Name:	McCormack Street
What are you inspecting:	Signs
Type of Sign:	Street name
Sign Condition:	3 - Good
Sign Comment:	
General Comment:	



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 3:33:35 PM

Insp ID: 1153 Group 4 - Alice Springs Nyewente (Trucking Yards)

Road Name:	Benno Street
What are you inspecting:	Signs
Type of Sign:	Pedestrian Sign
Sign Condition:	1 - Very Poor
Sign Comment:	
General Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 25/11/2016 9:06:06 AM

Insp ID: 1159 Group 4 - Alice Springs Nyewente (Trucking Yards)

Road Name:	McCormack Street
What are you inspecting:	Signs
Type of Sign:	Community signs
Sign Condition:	3 - Good
Sign Comment:	
General Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 25/11/2016 9:03:23 AM

Insp ID: 1161	Group 4 - Alice Springs	Nyewente (Trucking Yards)

Road Name:	McCormack Street
What are you inspecting:	Signs
Type of Sign:	Speed hump
Sign Condition:	3 - Good
Sign Comment:	
General Comment:	



Northern Territory Town Camps

Civil Infrastructure

Inspection Date 25/11/2016 9:01:41 AM

Insp ID: 1162 Group 4 - Alice Springs Nyewente (Trucking Yards)

Road Name:	McCormack Street
What are you inspecting:	Signs
Type of Sign:	Speed hump and 20kph
Sign Condition:	2 - Poor
Sign Comment:	
General Comment:	







Northern Territory Town Camps

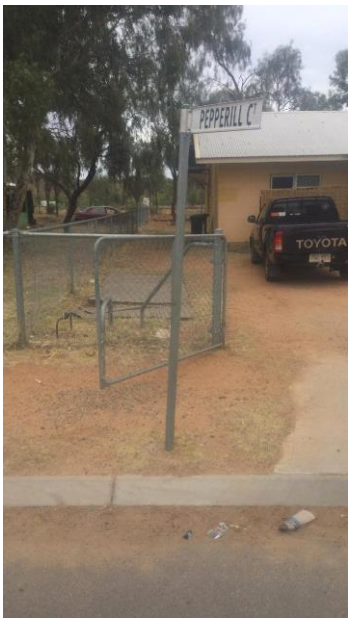
Civil Infrastructure

Inspection Date 25/11/2016 8:55:02 AM

Insp ID: 1167	Group 4 - Alice Springs	Nyewente (Trucking Yards)

Road Name:	McCormack Street
What are you inspecting:	Signs
Type of Sign:	Street name
Sign Condition:	3 - Good
Sign Comment:	Facing slightly wrong direction
General Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 25/11/2016 8:50:56 AM

Insp ID: 1171 Group 4 - Alice Springs Nyewente (Trucking Yards)

Road Name:	McCormack Street
What are you inspecting:	Signs
Type of Sign:	Dual lanes
Sign Condition:	2 - Poor
Sign Comment:	
General Comment:	







Northern Territory Town Camps

Civil Infrastructure

Inspection Date 25/11/2016 8:46:06 AM

Insp ID: 1173 Group 4 - Alice Springs Nyewente (Trucking Yards)

Stormwater Infrastructure:	Swales
Type of lining:	Concrete
Are dimensions uniform along drain:	Yes
Base Width (m):	0.4
Overall Width (m):	1.2
Swale Depth (m):	0.1
Length of Batter 1 (m):	0.4
Length of Batter 2 (m):	0.4
Swale Condition:	4 - Very Good
Swale Ponding:	No
Drain flooded at time of inspection:	No
Swale Comments:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 3:23:37 PM

Insp ID: 1106	Group 4 - Alice Springs	Nyewente (Trucking Yards)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	5
Lot Water Meter Size:	
Lot Water Meter Condition:	
Lot Water Meter Comment:	Unable to see through overgrown grass





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 3:03:18 PM

Insp ID: 1112	Group 4 - Alice Springs	Nyewente (Trucking Yards)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	15
Lot Water Meter Size:	20
Lot Water Meter Condition:	4 - Very Good
Lot Water Meter Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 3:01:17 PM

Insp ID: 1114	Group 4 - Alice Springs	Nyewente (Trucking Yards)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	
Lot Water Meter Size:	20
Lot Water Meter Condition:	2 - Poor
Lot Water Meter Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 2:55:14 PM

Insp ID: 1115	Group 4 - Alice Springs	Nyewente (Trucking Yards)

What Water Asset Are you Capturing: Water Meter

Water Meter Type:	Lot
Bulk Water Meter Size (mm):	
Bulk Water Meter Condition:	
Bulk Water Meter Comment:	
Lot Number:	
Lot Water Meter Size:	20
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	50 mm in 20 out





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 2:44:22 PM

Insp ID: 1121	Group 4 - Alice Springs	Nyewente (Trucking Yards)

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:	20
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	





Northern Territory Town Camps

Civil Infrastructure

Inspection Date 24/11/2016 2:42:58 PM

Insp ID: 1122	Group 4 - Alice Springs	Nyewente (Trucking Yards)

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:	18
Lot Water Meter Size:	20
Lot Water Meter Condition:	3 - Good
Lot Water Meter Comment:	



