PRELIMINAY ARBORICULTURAL REPORT

FARNELL ST, FORBES

14 December 2023

Version 2

Prepared for: Land and Housing Corporation
c/- ADW Johnson

Prepared by: Mark Douglas
Douglas Arbor

10 Tobruk Cres, Orange NSW 2800
T 0421 480 750
E mark@douglasarbor.com.au
www.douglasarbor.com.au
ABN 937 997 468 42

Table of Contents

INTRODUCTION

Background

This Preliminary Arboricultural Assessment was prepared for Mathew London of ADW Johnson concerning the development proposed for Farnell St, Forbes.

The site is located in the Forbes Shire Council area, which does not have a tree protection policy for trees on private land.

The report seeks to identify and assess all trees, including street trees and those located in neighbouring properties that could be impacted by development.

The report will assess the trees and their retention value to help guide the potential layout of the development.

In preparing this report, the author is aware of and considers the objectives of the:

- *Forbes Development Control Plan 2013 (Forbes DCP)*
- *Australian Standard AS 4970-2009 Protection of trees on development sites (AS4970)*

The following plans have been provided and referenced:

Title	**Author**	**Date**	**Reference on document**
Constraints Plan	ADW Johnson	23/08/2022	Dwg ref.: QS0502-CONS-001[A] Ver.: A
Detail and Contour Survey Upon Crown Land Lots	ADW Johnson	18/05/2023	Dwg ref.: 240380(2)-DET-001-A Ver.: A Pages 1 - 14
Extent of Works	ADW Johnson	01/08/2023	Dwg ref.: 240380(2)-PSK-006[A] Ver.: A

Methodology

A site visit was conducted on the 13th July, 2023, to assess the relevant trees, collect data and make comments concerning the trees and the site.

The assessment is based upon a visual inspection from ground level using the Visual Tree Assessment (VTA) approach developed by Mattheck & Broeler (1994). The inspection was limited to a visual inspection of the trees without dissection, probing, aerial inspections (climbing) or tree root mapping. The assessment information relates to observations and data collected on the day of the inspection only and does not include changes after that.

Trunk diameter at breast height (DBH) was measured 1.4m above ground level (unless otherwise stated) using a Yamayo Diameter Tape. Tree heights were estimated. Tree Protection Zones (TPZ) were calculated using *AS4790* guidelines.

AS4790 has been used as a benchmark in preparing this report.

Aims

- Identify the trees that have the potential to be impacted by the development, including street trees and private trees growing close to the boundary lines in adjacent properties.
- Assess the trees for their significance and retention value using a Tree, Assessment Rating System (STARS) to help guide the potential layout of the development. Refer to Appendix 2 – STARS.
- Calculate the Tree Protection Zones (TPZ) of all relevant trees.

Tree Protection Zone (TPZ)

Australian Standard AS 4970-2009 Protection of trees on development sites (AS4970) defines the TPZ as *'A specified area above and below the ground and at a given distance from the trunk set aside for the protection of a tree's roots and crown to provide for the viability of a tree to be retained where it is potentially subjected to damage by development.'*

AS4970 states, *'If the proposed encroachment is greater than 10% of the TPZ or inside the SRZ, the project arborist must demonstrate that the tree(s) would remain viable.'*

Structural Root Zone (SRZ)

AS4970 defines the SRZ as *'The area around the base of a tree required for the tree's stability in the ground.'*

OBSERVATIONS

The Site

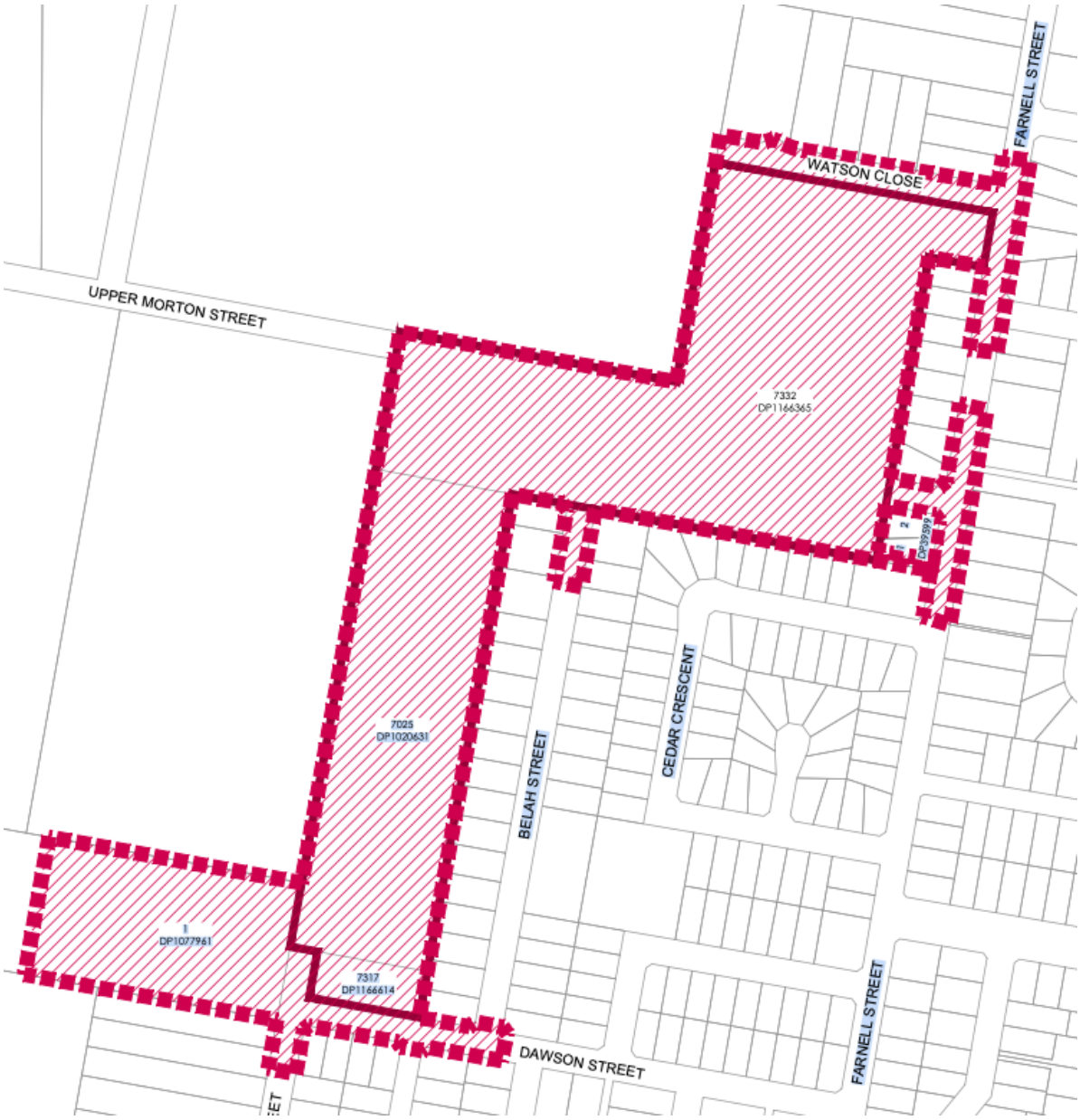


Figure 1 The area marked Red shows the onsite area considered for this report.

The Trees

123 trees or tree groups have been considered for this report.

Only vegetation of tree species of significant size and landscape value have been included. This does not include large shrubs, hedge plants or woody weeds.

Refer to Appendix 1 Tree Schedule for tree data and Appendix 3 - Tree Location Plan.

Onsite Trees

33 trees were found located onsite and may be removed without consent. However, numerous trees with a medium to high retention value should be considered for retention. Refer to Appendix 1.

Protected Trees

90 trees were located close to the boundary line within adjacent properties or are street trees.

Under *AS4970,* these trees must be protected from development impact in accordance with the requirements of *AS4970*. Requirements of tree protection is specified with ARBORICULTURAL IMPACT ASSESSMENT REPORT dated 14 December 2023 by Douglas Arbor.

Mark Douglas

Diploma in Arboriculture (AQF Level 5)
Registered QTRA Assessor
Arboriculture Australia Member – Registered Consulting Arborist
Institute of Australian Consulting Arborists (IACA) Associate Member

Disclaimer: The information in the report is true and accurate to the author's best knowledge. Best professional judgement was used to make recommendations. However, the author of this report is not responsible for any action taken or not taken in reliance on it. This report remains the property of the author and "the Client". It may not be used or reprinted without their express permission.

REFERENCES

IACA, 2010, IACA *Significance of a Tree, Assessment Rating System (STARS)*, Institute of Australian Consulting Arboriculturists, Australia, www.iaca.org.au

Mattheck, C & Breloer, H 1994, *The Body Language of Trees: A handbook for failure analysis*, The Stationary Office, London.

Australian Standard AS4970-2009 – Protection of trees on development sites, 2009.

APPENDIX 1 – TREE SCHEDULE

Tree No.	Botanical Name	Common Name	Age	Height [m]	Canopy [m]	DBH [cm]	Health	Structure	TPZ [m]	ULE	Retention Value	Protection Status	Observations
1	*Fraxinus excelsior 'Raywood'*	Claret Ash	M	7	6	30	Good	Fair	3.6	M	M	No	Onsite tree. Asymmetrical crown
2	*Callistemon viminalis*	Weeping Bottlebrush	M	6	6	45	Good	Good	5.4	M	H	Yes	Growing on boundary line. DBH measured at 0.5cm
3	*Melaleuca sp.*		M	3	2	15	Poor	Poor	2	S	L	Yes	
4	*Fraxinus excelsior 'Raywood'*	Claret Ash	M	4	5	29.21	Good	Fair	3.51	M	H	Yes	Multi trunk
5	*Fraxinus excelsior 'Raywood'*	Claret Ash	M	4	4	20	Good	Fair	2.4	M	H	Yes	
6	*Fraxinus excelsior 'Raywood'*	Claret Ash	M	4	5	26.68	Good	Fair	3.2	M	H	Yes	Multi trunk
7	*Fraxinus excelsior 'Raywood'*	Claret Ash	M	4	5	30	Good	Fair	3.6	M	H	Yes	
8	*Acacia sp.*	Wattle	M	7	6	30	Good	Good	3.6	L	H	Yes	Approximately 2.5m from boundary.
9	*Brachychiton populneus*	Kurrajong	M	7	7	55	Good	Good	6.6	L	H	No	Onsite tree.
10	*Jacaranda mimosifolia*	Jacaranda	M	7	5	30	Good	Good	3.6	M	M	Yes	Approximately 1m from boundary. Canopy over hangs site by 2m
11	*Ceratonia siliqua*	Carob	M	6	7	40	Good	Fair	4.8	L	M	Yes	DBH estimated. 1m from boundary. Canopy overhangs site by 4.5m
12	*Fraxinus excelsior 'Raywood'*	Claret Ash	M	6	5	35	Good	Fair	4.2	M	H	Yes	
13	*Fraxinus excelsior 'Raywood'*	Claret Ash	M	6	5	30	Fair	Fair	3.6	S	M	Yes	
14	*Fraxinus excelsior 'Raywood'*	Claret Ash	M	7	6	35	Fair	Fair	4.2	M	H	Yes	
15	*Fraxinus excelsior 'Raywood'*	Claret Ash	M	7	6	35	Fair	Fair	4.2	M	H	Yes	
16	*Fraxinus excelsior 'Raywood'*	Claret Ash	M	7	5	30	Fair	Fair	3.6	S	M	Yes	
17	*Fraxinus excelsior 'Raywood'*	Claret Ash	M	6	5	30	Fair	Poor	3.6	S	M	Yes	
18	*Fraxinus excelsior 'Raywood'*	Claret Ash	M	5	5	30	Good	Fair	3.6	M	M	Yes	
19	*Melia azedarach*	White Cedar	M	7	7	42.43	Fair	Poor	5.09	S	L	No	Onsite tree. Lopped, history of branch failure. Multi trunk
20	*Melia azedarach*	White Cedar	M	7	7	49.24	Fair	Poor	5.91	S	L	No	Onsite tree. Lopped, history of branch failure, decay in trunk. Multi trunk
21	*Melia azedarach*	White Cedar	M	3	3	15	Fair	Poor	2	S	L	No	Onsite tree.
22	*Melia azedarach*	White Cedar	M	3	3	12.17	Fair	Poor	2	S	L	No	Onsite tree. Stump regrowth. Multi trunk
23	*Melia azedarach*	White Cedar	M	3	3	20	Poor	Poor	2.4	S	L	No	Onsite tree. Dieback, decay in trunk.
24	*Acacia sp.*	Wattle	M	6	6	45	Good	Fair	5.4	L	H	Yes	DBH estimated. Approximately 2m from boundary

Tree No.	Botanical Name	Common Name	Age	Height [m]	Canopy [m]	DBH [cm]	Health	Structure	TPZ [m]	ULE	Retention Value	Protection Status	Observations
25	*Eucalyptus sideroxylon*	Mugga Ironbark	M	10	6	40	Fair	Fair	4.8	M	M	Yes	DBH estimated. Approximately 1m from boundary
26	*Grevillea robusta*	Silky Oak	M	8	6	30	Good	Fair	3.6	L	H	Yes	Approximately 3m from boundary
27	*Ulmus parvifolia*	Chinese Elm	M	8	8	42	Good	Fair	5.04	L	H	Yes	Street tree
28	*Ulmus parvifolia*	Chinese Elm	M	7	7	43	Fair	Fair	5.16	L	H	Yes	Street tree
29	*Fraxinus griffithii*	Evergreen Ash	S	3	2	1	Fair	Fair	2	S	L	Yes	Street trees. Group of 5 small trees
30	*Fraxinus excelsior 'Raywood'*	Claret Ash	S	4	3	20	Good	Good	2.4	M	H	Yes	Street tree
31	*Pistacia chinensis*	Chinese Pistachio	M	3	4	25	Good	Good	3	L	M	No	Onsite tree. DBH measured at 0.5m
32	*Pistacia chinensis*	Chinese Pistachio	M	3	3	25	Fair	Poor	3	M	L	No	Onsite tree. Branch failure, poor structure
33	*Eucalyptus polyanthemos*	Red Box	M		5	35.36	Fair	Poor	4.24	S	L	No	Onsite tree. Major branch failure, broken head. Multi trunk
34	*Eucalyptus polyanthemos*	Red Box	M	7	4	30	Dead	Poor	3.6	D	L	No	Onsite tree. Dead
35	*Eucalyptus polyanthemos*	Red Box	M	7	5	15	Dead	Very Poor	2	D	R	No	Onsite tree. Dead
36	*Eucalyptus polyanthemos*	Red Box	M	7	5	15	Fair	Fair	2	M	M	No	Onsite tree.
37	*Eucalyptus polyanthemos*	Red Box	M	7	5	35.36	Dead	Very Poor	4.24	D	R	No	Onsite tree. Dead. Multi trunk
38	*Sapium sebiferum*	Chinese Tallow Tree	M	5	6	23	Good	Good	2.76	L	H	No	Onsite tree.
39	*Eucalyptus polyanthemos*	Red Box	J	3	3	12.88	Fair	Poor	2	M	R	No	Onsite tree. Stump regrowth. Multi trunk
40	*Eucalyptus polyanthemos*	Red Box	S	4	2	12.21	Fair	Poor	2	M	R	No	Onsite tree. Dieback, stunted, poor structure. Multi trunk
41	*Lagunaria patersonia*	Norfolk Island Hibiscus	M	5	3	20	Good	Good	2.4	M	M	No	Onsite tree.
42	*Pistacia chinensis*	Chinese Pistachio	M	3	4	14.73	Fair	Fair	2	M	M	No	Onsite tree. Multi trunk
43	*Unknown*		M		3	15	Good	Fair	2	M	L	No	Onsite tree. DBH measured at base
44	*Eucalyptus leucoxylon*	Yellow Gum	M	7	7	30	Good	Fair	3.6	L	H	Yes	Private tree approximately 1m from boundary. DBH estimated
45	*Eucalyptus leucoxylon*	Yellow Gum	M	13		55	Good	Good	6.6	L	H	Yes	Private tree approximately 1m from boundary. DBH estimated
46	*Ulmus parvifolia*	Chinese Elm	M	5	6	29	Good	Fair	3.48	M	H	Yes	Street tree
47	*Callistemon viminalis*	Weeping Bottlebrush	M		6	28	Good	Fair	3.36	L	H	Yes	Street tree. Growing on property boundary.
48	*Fraxinus excelsior 'Raywood'*	Claret Ash	S	3	4	13	Fair	Fair	2	S	M	Yes	Street tree
49	*Pyrus calleryana 'Bradford'*	Bradford Callery Pear	S	4	2	12	Good	Good	2	M	H	Yes	Street tree
50	*Pyrus calleryana 'Bradford'*	Bradford Callery Pear	S	4	2	12	Good	Good	2	M	H	Yes	Street tree

Tree No.	Botanical Name	Common Name	Age	Height [m]	Canopy [m]	DBH [cm]	Health	Structure	TPZ [m]	ULE	Retention Value	Protection Status	Observations
51	*Pyrus calleryana 'Bradford'*	Bradford Callery Pear	S	4	2	12	Good	Good	2	M	H	Yes	Street tree
52	*Pyrus calleryana 'Bradford'*	Bradford Callery Pear	S	4	2	12	Good	Good	2	M	H	Yes	Street tree
53	*Pyrus calleryana 'Bradford'*	Bradford Callery Pear	S	4	2	12	Good	Good	2	M	H	Yes	Street tree
54	*Pyrus calleryana 'Bradford'*	Bradford Callery Pear	S	4	2	12	Good	Good	2	M	H	Yes	Street tree
55	*Sapium sebiferum*	Chinese Tallow Tree	M	4	5	25	Good	Good	3	L	H	Yes	Street tree
56	*Sapium sebiferum*	Chinese Tallow Tree	M	5	6	30	Good	Good	3.6	M	H	Yes	
57	*Robinia pseudoacacia*	Black Locust	S	4	4	20	Fair	Fair	2.4	M	M	Yes	Street tree
58	*Unknown*	Conifer	S	4	4	15	Fair	Fair	2	M	M	Yes	Street tree
59	*Fraxinus griffithii*	Evergreen Ash	S	3	3	15	Good	Good	2	M	H	Yes	
60	*Fraxinus griffithii*	Evergreen Ash	S	2	2	12	Good	Good	2	M	H	Yes	
61	*Sapium sebiferum*	Chinese Tallow Tree	M	5	6		Good	Good		L	H	Yes	
62	*Acacia sp.*	Wattle	M	4	4	25	Good	Fair	3	S	L	No	Onsite tree.
63	*Callitris sp.*	Cypress Pine	M	4	3	25	Good	Fair	3	L	M	No	Onsite tree.
64	*Casuarina sp.*	She-oak	M	6	3	25	Good	Fair	3	L	M	No	Onsite tree.
65	*Callitris sp.*	Cypress Pine	M	5	4	30	Good	Fair	3.6	L	M	No	Onsite tree.
66	*Callitris sp.*	Cypress Pine	M	6	4	25	Good	Good	3	L	M	No	Onsite tree.
67	*Callitris sp.*	Cypress Pine	M	7	4	28	Good	Good	3.36	L	M	No	Onsite tree.
68	*Callitris sp.*	Cypress Pine	M	5	3	25	Good	Fair	3	L	M	No	Onsite tree.
69	*Callitris sp.*	Cypress Pine	M	5	2	25	Good	Good	3	L	M	No	Onsite tree.
70	*Callitris sp.*	Cypress Pine	M	5	3	35	Good	Fair	4.2	L	M	No	Onsite tree.
71	*Callitris sp.*	Cypress Pine	M	5	3	35	Good	Poor	4.2	M	M	No	Onsite tree.
72	*Acacia sp.*	Wattle	M	7	8	34.41	Good	Poor	4.13	M	M	No	Onsite tree. Multi trunk
73	*Acacia sp.*	Wattle	M	7	8	38.85	Good	Poor	4.66	M	M	No	Onsite tree. Multi trunk
74	*Acacia sp.*	Wattle	M	8	10	44.82	Fair	Fair	5.38	M	M	No	Onsite tree. Multi trunk
75	*Eucalyptus sideroxylon*	Mugga Ironbark	M	10	5	33	Good	Fair	3.96	L	H	Yes	2m from boundary
76	*Eucalyptus sideroxylon*	Mugga Ironbark	M	10	5	30	Dead	Poor	3.6	D	R	Yes	Dead. 2m from boundary
77	*Eucalyptus sideroxylon*	Mugga Ironbark	M	10	5	30	Dead	Poor	3.6	D	R	Yes	Dead. 2m from boundary
78	*Eucalyptus sideroxylon*	Mugga Ironbark	M	10	5	30	Fair	Poor	3.6	M	M	Yes	

Tree No.	Botanical Name	Common Name	Age	Height [m]	Canopy [m]	DBH [cm]	Health	Structure	TPZ [m]	ULE	Retention Value	Protection Status	Observations
79	*Eucalyptus sideroxylon*	Mugga Ironbark	M	10	5	33	Good	Fair	3.96	L	H	Yes	
80	*Eucalyptus sideroxylon*	Mugga Ironbark	M	10	5	30	Good	Fair	3.6	L	H	Yes	
81	*Eucalyptus sideroxylon*	Mugga Ironbark	M	10	5	30	Dead	Poor	3.6	D	L	Yes	
82	*Eucalyptus sideroxylon*	Mugga Ironbark	M	10	5	36	Poor	Poor	4.32	S	L	Yes	
83	*Eucalyptus sideroxylon*	Mugga Ironbark	M	10	5	30	Poor	Poor	3.6	S	L	Yes	
84	*Eucalyptus sideroxylon*	Mugga Ironbark	M	11	5	38	Good	Fair	4.56	L	H	Yes	
85	*Eucalyptus sideroxylon*	Mugga Ironbark	M	9	6	38	Good	Poor	4.56	M	M	Yes	
86	*Eucalyptus sideroxylon*	Mugga Ironbark	M	9	6	35	Good	Fair	4.2	M	M	Yes	
87	*Eucalyptus sideroxylon*	Mugga Ironbark	M	9	6	35	Dead	Poor	4.2	D	R	Yes	Dead
88	*Eucalyptus sideroxylon*	Mugga Ironbark	M	9	6	35	Fair	Poor	4.2	M	L	Yes	
89	*Eucalyptus sideroxylon*	Mugga Ironbark	M	10	6	35	Good	Fair	4.2	L	H	Yes	
90	*Eucalyptus sideroxylon*	Mugga Ironbark	M	10	6	40	Good	Fair	4.8	L	H	Yes	
91	*Eucalyptus sideroxylon*	Mugga Ironbark	M	7	6	25	Fair	Fair	3	L	H	Yes	
92	*Eucalyptus sideroxylon*	Mugga Ironbark	M	12	6	45	Good	Fair	5.4	L	H	Yes	
93	*Eucalyptus sideroxylon*	Mugga Ironbark	M	4	2	20	Fair	Poor	2.4	M	M	Yes	
94	*Eucalyptus sideroxylon*	Mugga Ironbark	M	10	6	40	Good	Fair	4.8	L	H	Yes	
95	*Eucalyptus sideroxylon*	Mugga Ironbark	M	10	5	35	Good	Fair	4.2	L	H	Yes	
96	*Eucalyptus sideroxylon*	Mugga Ironbark	M	10	5	40	Good	Fair	4.8	L	H	Yes	
97	*Eucalyptus sideroxylon*	Mugga Ironbark	M	8	5	40	Good	Fair	4.8	L	H	Yes	
98	*Eucalyptus sideroxylon*	Mugga Ironbark	M	10	5	45	Good	Fair	5.4	L	H	Yes	
99	*Eucalyptus sideroxylon*	Mugga Ironbark	M	10	5	30	Good	Fair	3.6	L	H	Yes	
100	*Eucalyptus sideroxylon*	Mugga Ironbark	M	7	6	35	Good	Fair	4.2	L	H	Yes	
101	*Eucalyptus sideroxylon*	Mugga Ironbark	M	7	6	35	Poor	Poor	4.2	L	H	Yes	
102	*Eucalyptus sideroxylon*	Mugga Ironbark	M	10	6	40	Good	Fair	4.8	L	H	Yes	2m from boundary
103	*Eucalyptus sideroxylon*	Mugga Ironbark	M	9	5	35	Good	Fair	4.2	L	H	Yes	2m from boundary
104	*Eucalyptus sideroxylon*	Mugga Ironbark	M	10	6	35	Good	Fair	4.2	L	H	Yes	2m from boundary
105	*Eucalyptus cladocalyx*	Sugar Gum	M	10	6	45	Good	Fair	5.4	L	H	Yes	2m from boundary
106	*Schinus molle*	Peppercorn Tree	OM	5	5	25	Fair	Poor	3	S	L	Yes	2m from boundary

Tree No.	Botanical Name	Common Name	Age	Height [m]	Canopy [m]	DBH [cm]	Health	Structure	TPZ [m]	ULE	Retention Value	Protection Status	Observations
107	*Brachychiton populneus*	Kurrajong	M	7	8	55	Good	Good	6.6	L	H	Yes	2m from boundary
108	*Brachychiton populneus*	Kurrajong	M	9	8	55	Good	Good	6.6	L	H	Yes	2m from boundary
109	*Eucalyptus sideroxylon*	Mugga Ironbark	M	10	6	30	Good	Fair	3.6	L	H	Yes	2m from boundary
110	*Eucalyptus sideroxylon*	Mugga Ironbark	M	10	6	30	Good	Poor	3.6	M	L	Yes	2m from boundary
111	*Eucalyptus sideroxylon*	Mugga Ironbark	M	7	3	30	Fair	Fair	3.6	M	H	Yes	2m from boundary
112	*Eucalyptus sideroxylon*	Mugga Ironbark	M	12	6	47	Fair	Fair	5.64	L	H	Yes	2m from boundary
113	*Eucalyptus sideroxylon*	Mugga Ironbark	M	8	6	30	Good	Fair	3.6	L	H	Yes	2m from boundary
114	*Eucalyptus sideroxylon*	Mugga Ironbark	M	11	6	45	Good	Fair	5.4	L	H	Yes	2m from boundary
115	*Eucalyptus sideroxylon*	Mugga Ironbark	M	11	6	45	Good	Fair	5.4	L	H	Yes	2m from boundary
116	*Eucalyptus sideroxylon*	Mugga Ironbark	M	11	6	48	Good	Fair	5.76	L	H	Yes	2m from boundary
117	*Eucalyptus sideroxylon*	Mugga Ironbark	M	6	3	30	Poor	Poor	3.6	S	L	Yes	2m from boundary
118	*Eucalyptus sideroxylon*	Mugga Ironbark	M	6	3	30	Good	Fair	3.6	S	L	Yes	2m from boundary
119	*Eucalyptus sideroxylon*	Mugga Ironbark	M	13	7	65	Good	Fair	7.8	L	H	Yes	2m from boundary
120	*Eucalyptus sideroxylon*	Mugga Ironbark	M	7	5	35	Poor	Poor	4.2	S	L	Yes	2m from boundary
121	*Eucalyptus sideroxylon*	Mugga Ironbark	M	14	8	75	Good	Good	9	L	H	Yes	2m from boundary
122	*Eucalyptus sideroxylon*	Mugga Ironbark	M	10	6	45	Good	Fair	5.4	L	H	Yes	2m from boundary
123	*Eucalyptus sideroxylon*	Mugga Ironbark	M	12	8	45	Good	Good	5.4	L	H	Yes	2m from boundary

Notes on Tree Schedule

Tree No.: Tree identification number used to identify each tree or tree group.

Species: Botanical name and common name of the tree species. Where the species is unknown, "sp." Is indicated after genus.

Age: J – **Juvenile** that is yet to establish. **S** – **Semi-mature** - established tree that has not reached its genetic potential of form and/or size. **M** – **Mature** –tree that has attained its genetic potential for form and size. **OM** – **Over-mature** – tree that shows symptoms of irreversible decline.

Height: Tree height in metres.

Canopy: Average estimated canopy spread in metres. Where the canopy is significantly asymmetrical all directions of canopy radius are estimated.

DBH: Diameter at Breast Height measured at 1.4m above ground unless otherwise noted. Multiple measurements indicate multiple trunks.

Health: G - Good – In good health with no significant health issues noted. **F - Fair** – Some health issues that could be addressed by intervention. **P - Poor** – Significant health issues that could be addressed by intervention. **VP – Very Poor** – Significant health issues unlikely to be addressed by intervention.

Structure: G – Good – No defects noted within the tree. **F – Fair** – Minor defects noted within tree. **P – Poor** – Major defects noted within tree. **VP – Very Poor** – Significant defects have caused tree structure to fail.

ULE: Useful Life Expectancy – The estimated length of time the tree will live with an acceptable level of risk and provide a positive amenity value to the site. **L - Long** – 40 yrs. or more. **M – Medium** – 16 -39 yrs. **S – Short** – 5 -15 yrs. **R – Remove** – tree requires removal.

Retention Value: See STARS below. **H - High, M - Medium, L - Low, R - Remove.**

Protection Status: No - Onsite tree that maybe removed without approval. **Yes –** Offsite tree (private or street tree) requiring protection from development impact.

TPZ: Tree Protection Zone – A defined radial area around a tree within which certain activities are prohibited or restricted to prevent or minimise the potential negative impact on the tree. Calculated as per *AS4970.*

APPENDIX 2 - STARS

IACA Significance of a Tree, Assessment Rating System (STARS)© (IACA 2010)©

In the development of this document IACA acknowledges the contribution and original concept of the Footprint Green Tree Significance & Retention Value Matrix, developed by Footprint Green Pty Ltd in June 2001.

The landscape significance of a tree is an essential criterion to establish the importance that a particular tree may have on a site. However, rating the significance of a tree becomes subjective and difficult to ascertain in a consistent and repetitive fashion due to assessor bias. It is therefore necessary to have a rating system utilising structured qualitative criteria to assist in determining the retention value for a tree. To assist this process all definitions for terms used in the *Tree Significance - Assessment Criteria* and *Tree Retention Value - Priority Matrix*, are taken from the IACA Dictionary for Managing Trees in Urban Environments 2009.

This rating system will assist in the planning processes for proposed works, above and below ground where trees are to be retained on or adjacent a development site. The system uses a scale of *High*, *Medium* and *Low* significance in the landscape. Once the landscape significance of an individual tree has been defined, the retention value can be determined. An example of its use in an Arboricultural report is shown as Appendix A.

Tree Significance - Assessment Criteria

1. High Significance in landscape

- The tree is in good condition and good vigour;
- The tree has a form typical for the species;
- The tree is a remnant or is a planted locally indigenous specimen and/or is rare or uncommon in the local area or of botanical interest or of substantial age;
- The tree is listed as a Heritage Item, Threatened Species or part of an Endangered ecological community or listed on Councils significant Tree Register;
- The tree is visually prominent and visible from a considerable distance when viewed from most directions within the landscape due to its size and scale and makes a positive contribution to the local amenity;
- The tree supports social and cultural sentiments or spiritual associations, reflected by the broader population or community group or has commemorative values;
- The tree's growth is unrestricted by above and below ground influences, supporting its ability to reach dimensions typical for the taxa *in situ* - tree is appropriate to the site conditions.

2. Medium Significance in landscape

- The tree is in fair-good condition and good or low vigour;
- The tree has form typical or atypical of the species;
- The tree is a planted locally indigenous or a common species with its taxa commonly planted in the local area
- The tree is visible from surrounding properties, although not visually prominent as partially obstructed by other vegetation or buildings when viewed from the street,
- The tree provides a fair contribution to the visual character and amenity of the local area,
- The tree's growth is moderately restricted by above or below ground influences, reducing its ability to reach dimensions typical for the taxa *in situ*.

3. Low Significance in landscape

- The tree is in fair-poor condition and good or low vigour;
- The tree has form atypical of the species;
- The tree is not visible or is partly visible from surrounding properties as obstructed by other vegetation or buildings,
- The tree provides a minor contribution or has a negative impact on the visual character and amenity of the local area,
- The tree is a young specimen which may or may not have reached dimension to be protected by local Tree Preservation orders or similar protection mechanisms and can easily be replaced with a suitable specimen,
- The tree's growth is severely restricted by above or below ground influences, unlikely to reach dimensions typical for the taxa *in situ* - tree is inappropriate to the site conditions,
- The tree is listed as exempt under the provisions of the local Council Tree Preservation Order or similar protection mechanisms,
- The tree has a wound or defect that has potential to become structurally unsound.

Environmental Pest / Noxious Weed Species

- The tree is an Environmental Pest Species due to its invasiveness or poisonous/ allergenic properties,
- The tree is a declared noxious weed by legislation.

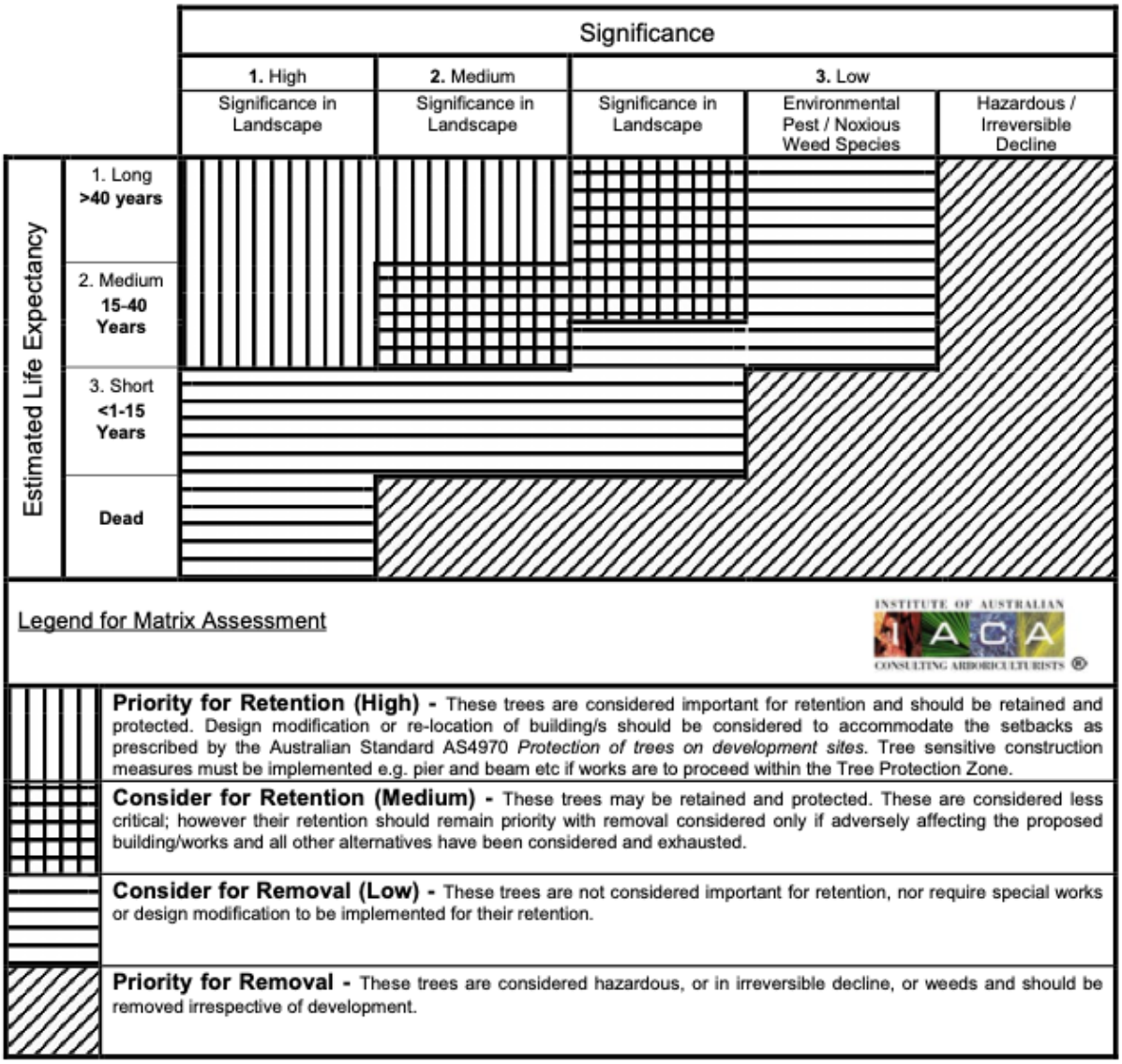
Hazardous/Irreversible Decline

- The tree is structurally unsound and/or unstable and is considered potentially dangerous,
- The tree is dead, or is in irreversible decline, or has the potential to fail or collapse in full or part in the immediate to short term.

The tree is to have a minimum of three (3) criteria in a category to be classified in that group.

Note: The assessment criteria are for individual trees only, however, can be applied to a monocultural stand in its entirety e.g. hedge.

Table 1.0 Tree Retention Value - Priority Matrix.



USE OF THIS DOCUMENT AND REFERENCING

The IACA Significance of a Tree, Assessment Rating System (STARS) is free to use, but only in its entirety and must be cited as follows:

IACA, 2010, *IACA Significance of a Tree, Assessment Rating System (STARS)*, Institute of Australian Consulting Arboriculturists, Australia, www.iaca.org.au

REFERENCES

Australia ICOMOS Inc. 1999, *The Burra Charter – The Australian ICOMOS Charter for Places of Cultural Significance*, International Council of Monuments and Sites, www.icomos.org/australia

Draper BD and Richards PA 2009, *Dictionary for Managing Trees in Urban Environments*, Institute of Australian Consulting Arboriculturists (IACA), CSIRO Publishing, Collingwood, Victoria, Australia.

Footprint Green Pty Ltd 2001, *Footprint Green Tree Significance & Retention Value Matrix*, Avalon, NSW Australia, www.footprintgreen.com.au

IACA 2010, *IACA Significance of a Tree, Assessment Rating System (STARS)*, Institute of Australian Consulting Arboriculturists, www.iaca.org.au

APPENDIX 3 – TREE LOCATION PLAN

ver.	date	comment	surveyed	drawn	checked	pm
A	18.06.2023	INITIAL ISSUE	K.K.	M.B.	D.K.	M.L.O

co-ordinate information
CO-ORDINATE SYSTEM: MGA2020 55
ORIGIN OF CO-ORDINATES: P.M.27126
DATE OF SURVEY: 21/04/2023

level information
DATUM: AHD
ORIGIN OF LEVELS: P.M.27126
CONTOUR INTERVAL: 0.2m

scale (A1 original size)

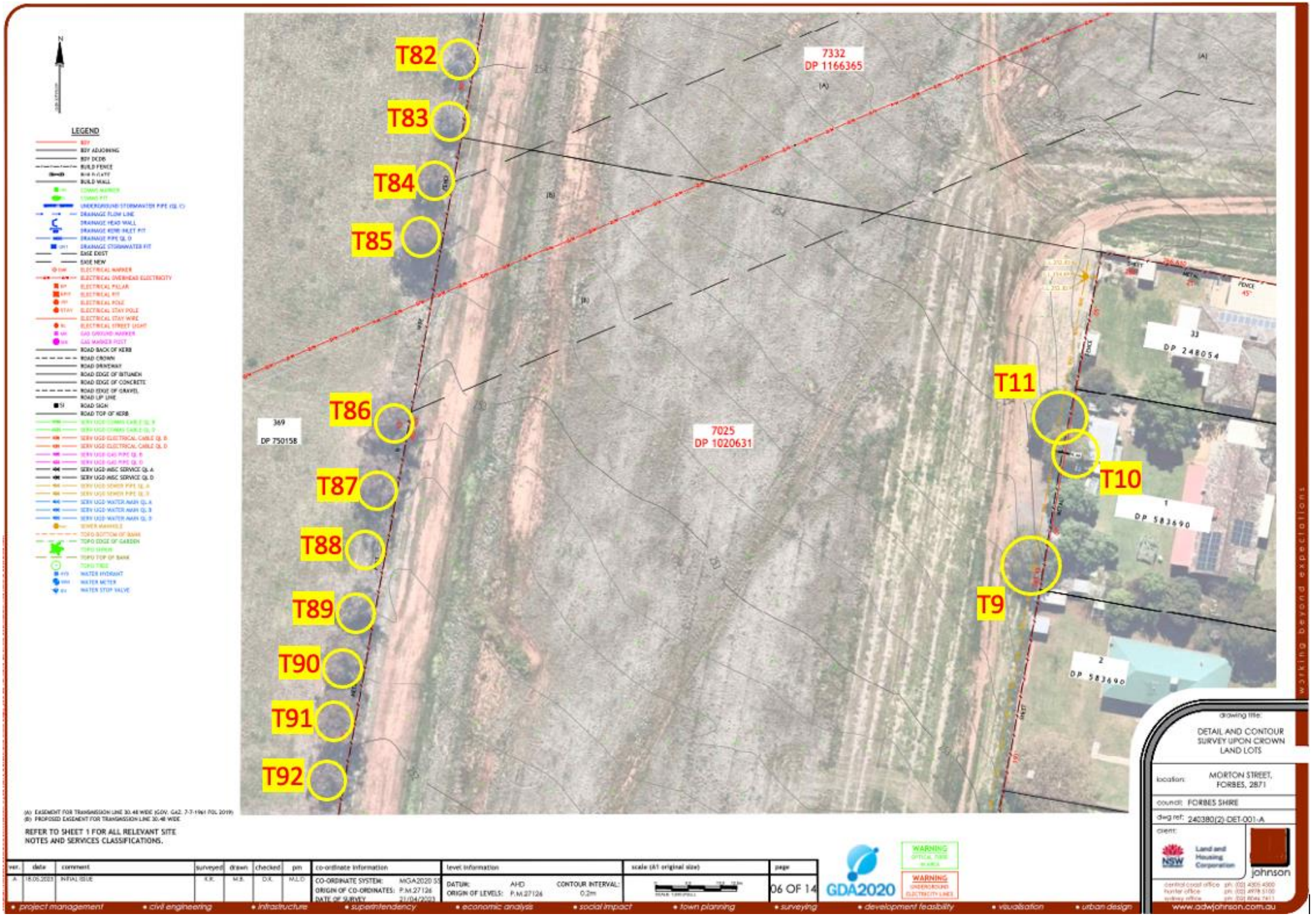
page

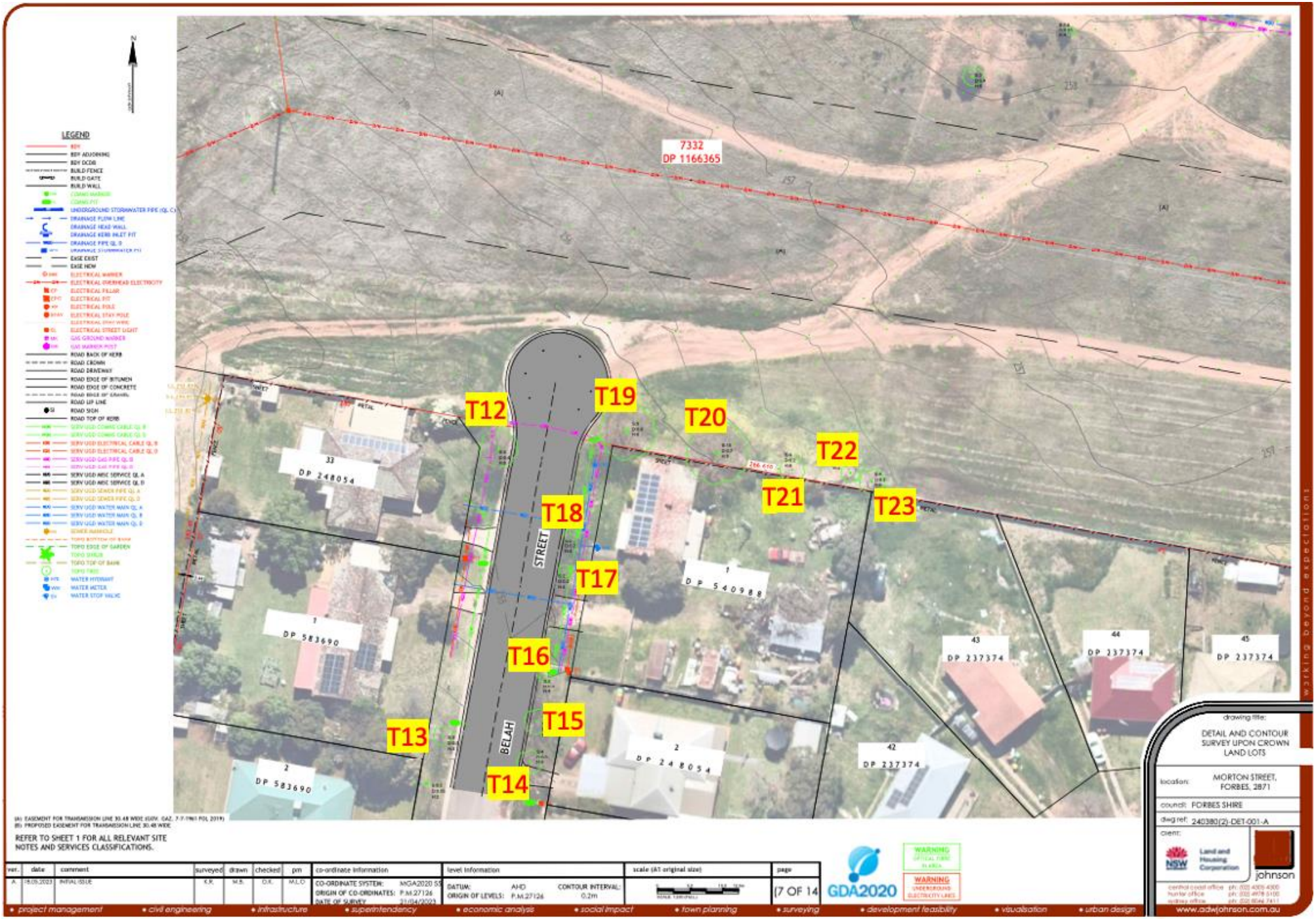
project management · civil engineering · infrastructure · superintendency · economic analysis · social impact · town planning · surveying · development feasibility · valuation · urban design

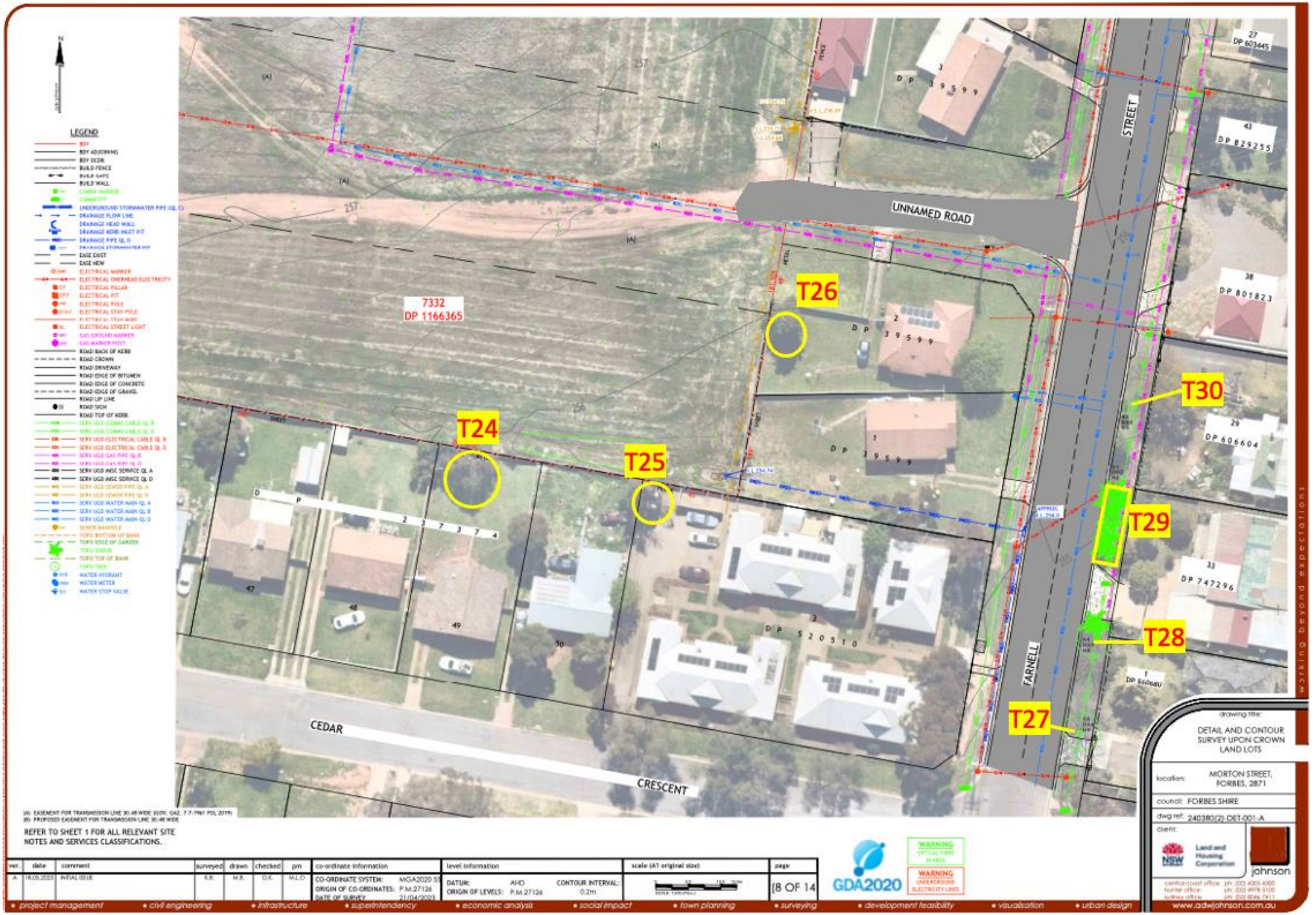
working beyond expectations


T103
T104
T105
T106
T107
T108
T109
T110
369
DP 750158
7025
DP 1020631
1
DP 1077961
LEGEND
REFER TO SHEET 1 FOR ALL RELEVANT SITE NOTES AND SERVICES CLASSIFICATIONS.
DETAIL AND CONTOUR SURVEY UPON CROWN LAND LOTS
MORTON STREET, FORBES, 2871
FORBES SHIRE
240380(2)-DET-001-A
GDA2020
(4 OF 14
project management
civil engineering
infrastructure
superintendency
economic analysis
social impact
town planning
surveying
development feasibility
visualisation
urban design
www.adwjohnson.com.au

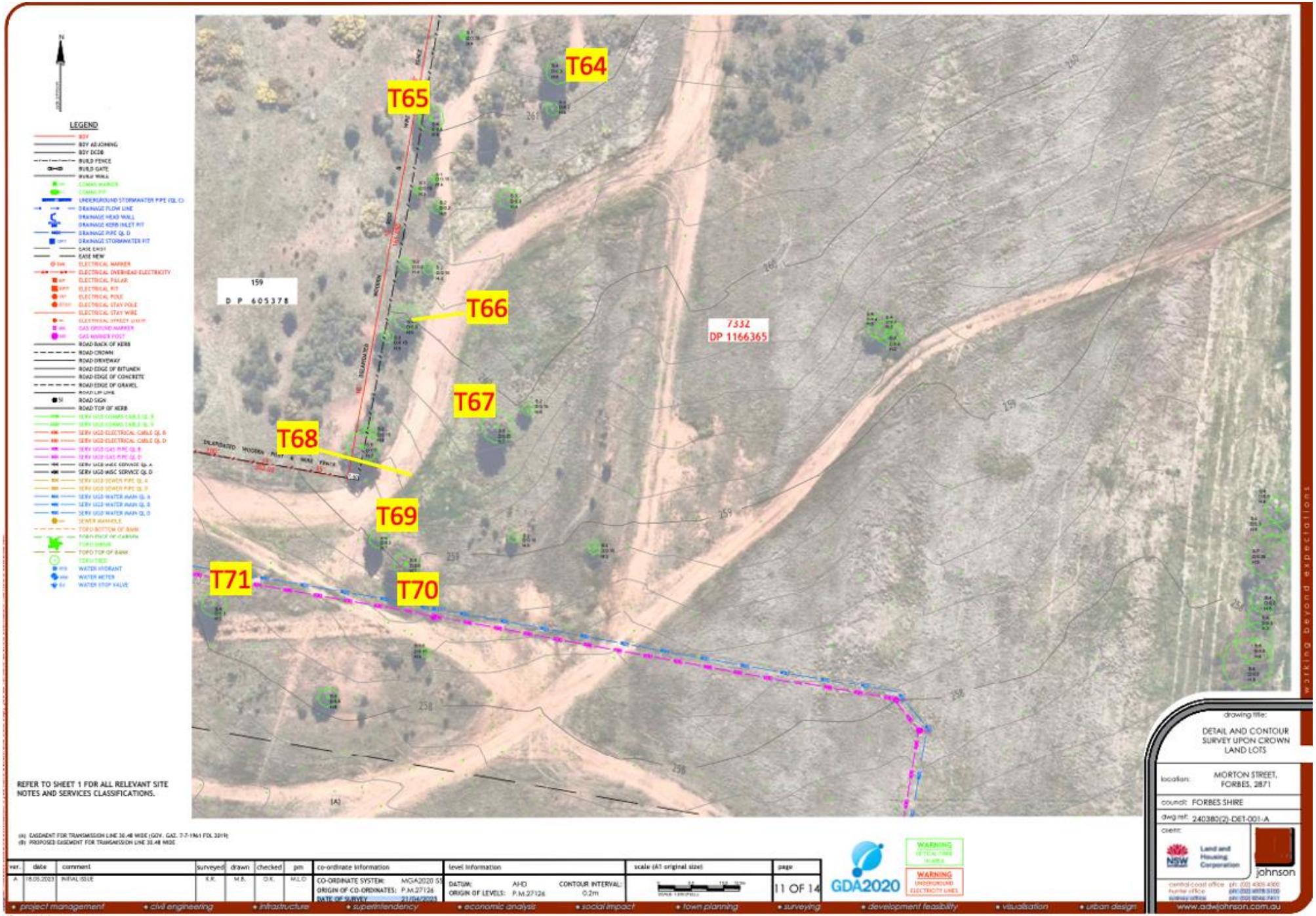

T92
T93
T94
T95
T96
T97
T98
T99
T100
T101
T102
T8
7025
DP 1020631
369
DP 750158
2
DP 583690
LEGEND
REFER TO SHEET 1 FOR ALL RELEVANT SITE NOTES AND SERVICES CLASSIFICATIONS.
drawing title:
DETAIL AND CONTOUR SURVEY UPON CROWN LAND LOTS
location: MORTON STREET, FORBES, 2871
council: FORBES SHIRE
dwg ref: 240380(2)-DET-001-A
client:
Land and Housing Corporation
johnson
GDA2020
WARNING
WARNING
working beyond expectations
project management • civil engineering • infrastructure • superintendency • economic analysis • social impact • town planning • surveying • development feasibility • visualisation • urban design
www.adwjohnson.com.au

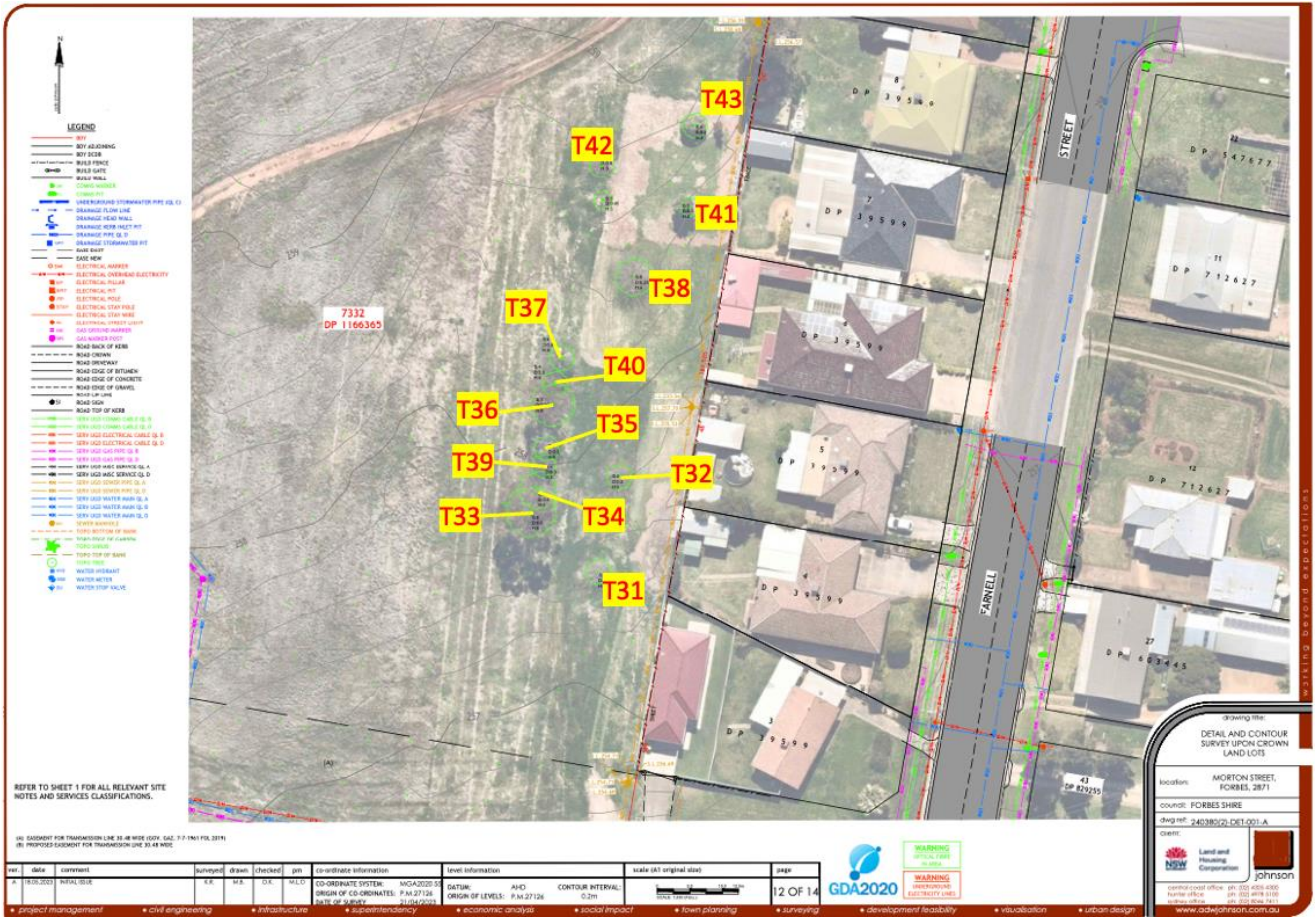

T82
T83
T84
T85
T86
T87
T88
T89
T90
T91
T92
T11
T10
T9
7332
DP 1166365
7025
DP 1020631
369
DP 750158
33
DP 248054
1
DP 583690
2
DP 583690
LEGEND
(A) EASEMENT FOR TRANSMISSION LINE 30.48 WIDE (GOV. GAZ. 7-7-1961 FOL 2019)
(B) PROPOSED EASEMENT FOR TRANSMISSION LINE 30.48 WIDE.
REFER TO SHEET 1 FOR ALL RELEVANT SITE NOTES AND SERVICES CLASSIFICATIONS.
drawing title:
DETAIL AND CONTOUR SURVEY UPON CROWN LAND LOTS
location: MORTON STREET, FORBES, 2871
council: FORBES SHIRE
dwg ref: 240380(2)-DET-001-A
client:
Land and Housing Corporation
johnson
GDA2020
WARNING
WARNING
06 OF 14
working beyond expectations
www.adwjohnson.com.au

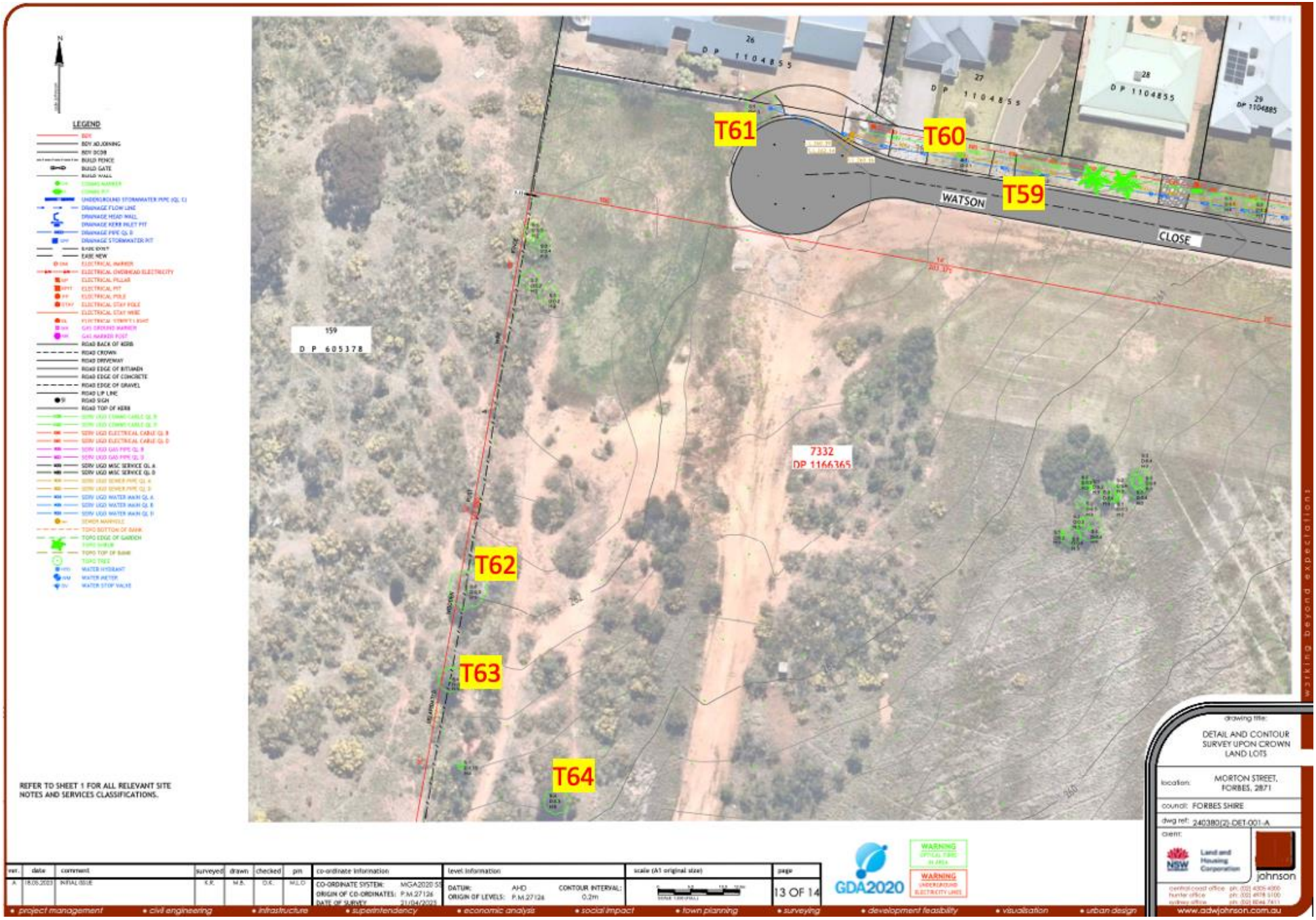

LEGEND
7332
DP 1166365
T12
T19
T20
T22
T21
T23
T18
T17
T16
T15
T14
T13
STREET
BELAH
DP 248054
DP 583690
DP 540988
DP 237374
REFER TO SHEET 1 FOR ALL RELEVANT SITE NOTES AND SERVICES CLASSIFICATIONS.
drawing title:
DETAIL AND CONTOUR SURVEY UPON CROWN LAND LOTS
location:
MORTON STREET, FORBES, 2871
council: FORBES SHIRE
dwg ref: 240380(2)-DET-001-A
client:
GDA2020
(7 OF 14
www.adwjohnson.com.au


LEGEND
UNNAMED ROAD
STREET
FARNELL
CEDAR
CRESCENT
7332
DP 1166365
T24
T25
T26
T27
T28
T29
T30
REFER TO SHEET 1 FOR ALL RELEVANT SITE NOTES AND SERVICES CLASSIFICATIONS.
DETAIL AND CONTOUR SURVEY UPON CROWN LAND LOTS
MORTON STREET, FORBES, 2871
FORBES SHIRE
240380(2)-DET-001-A
GDA2020
johnson
www.adwjohnson.com.au


LEGEND
159
DP 605378
MORTON
STREET
T72
T74
T73
T75
T76
T77
T78
T79
T80
T81
T82
369
DP 750158
7332
DP 1166365
REFER TO SHEET 1 FOR ALL RELEVANT SITE
NOTES AND SERVICES CLASSIFICATIONS.
drawing title:
DETAIL AND CONTOUR
SURVEY UPON CROWN
LAND LOTS
location:
MORTON STREET,
FORBES, 2871
council:
FORBES SHIRE
dwg ref:
240380(2)-DET-001-A
client:
Land and
Housing
Corporation
johnson
GDA2020
WARNING
WARNING
UNDERGROUND
ELECTRICITY LINES
working beyond expectations
www.adwjohnson.com.au
project management
civil engineering
infrastructure
superintendency
economic analysis
social impact
town planning
surveying
development feasibility
visualisation
urban design


T64
T65
T66
T67
T68
T69
T70
T71
159
D P 605378
7332
DP 1166365
LEGEND
REFER TO SHEET 1 FOR ALL RELEVANT SITE NOTES AND SERVICES CLASSIFICATIONS.
drawing title:
DETAIL AND CONTOUR SURVEY UPON CROWN LAND LOTS
location: MORTON STREET, FORBES, 2871
council: FORBES SHIRE
dwg ref: 240380(2)-DET-001-A
client:
Land and Housing Corporation
GDA2020
WARNING
UNDERGROUND ELECTRICITY LINES
11 OF 14
www.adwjohnson.com.au


T43
T42
T41
T38
T37
T40
T36
T35
T39
T32
T33
T34
T31
7332
DP 1166365
STREET
FARNELL
LEGEND
REFER TO SHEET 1 FOR ALL RELEVANT SITE NOTES AND SERVICES CLASSIFICATIONS.
drawing title:
DETAIL AND CONTOUR SURVEY UPON CROWN LAND LOTS
location: MORTON STREET, FORBES, 2871
council: FORBES SHIRE
dwg ref: 240380(2)-DET-001-A
client:
johnson
12 OF 14
GDA2020
CO-ORDINATE SYSTEM: MGA2020
ORIGIN OF CO-ORDINATES: P.M.27126
DATUM: AHD
ORIGIN OF LEVELS: P.M.27126
CONTOUR INTERVAL: 0.2m
project management
civil engineering
infrastructure
superintendency
economic analysis
social impact
town planning
surveying
development feasibility
visualisation
urban design
www.adwjohnson.com.au
working beyond expectations


T61
T60
T59
T62
T63
T64
WATSON
CLOSE
26
DP 1104855
27
DP 1104855
28
DP 1104855
29
DP 1104885
159
D P 605378
7332
DP 1166365
LEGEND
REFER TO SHEET 1 FOR ALL RELEVANT SITE NOTES AND SERVICES CLASSIFICATIONS.
drawing title:
DETAIL AND CONTOUR SURVEY UPON CROWN LAND LOTS
location: MORTON STREET, FORBES, 2871
council: FORBES SHIRE
dwg ref: 240380(2)-DET-001-A
client:
Land and Housing Corporation
johnson
www.adwjohnson.com.au
working beyond expectations
GDA2020
WARNING OPTICAL FIBRE IN AREA
WARNING UNDERGROUND ELECTRICITY LINES
page
13 OF 14
project management
civil engineering
infrastructure
superintendency
economic analysis
social impact
town planning
surveying
development feasibility
visualisation
urban design


T58
T56
T57
T55
T54
T53
T51
T49
T52
T50
T48
T47
T46
WATSON
STREET
FARNELL
WYNDHAM AVENUE
7332
DP 1166365
LEGEND
REFER TO SHEET 1 FOR ALL RELEVANT SITE NOTES AND SERVICES CLASSIFICATIONS.
drawing title: DETAIL AND CONTOUR SURVEY UPON CROWN LAND LOTS
location: MORTON STREET, FORBES, 2871
council: FORBES SHIRE
dwg ref: 240380(2)-DET-001-A
client:
johnson
14 OF 14
GDA2020
WARNING
co-ordinate information
CO-ORDINATE SYSTEM: MGA2020
ORIGIN OF CO-ORDINATES: P.M.27126
level information
DATUM: AHD
ORIGIN OF LEVELS: P.M.27126
CONTOUR INTERVAL: 0.2m
scale (A1 original size)
page
www.adwjohnson.com.au
• project management • civil engineering • infrastructure • superintendency • economic analysis • social impact • town planning • surveying • development feasibility • visualisation • urban design