APPENDIX 6

ENGINEERING SERVICES REPORT

(WOOD & GRIEVE)

WOOD & GRIEVE ENGINEERS

Lot 594 Wanneroo Road, Hocking

Civil Engineering Services Report

Revision 1

Prepared for:

Nicole Barnao
David Barnao & Co

Prepared by:

Paul Onesti/Jayden Catto
Project No. 42071
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Date:
9 May 2019

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Revision

REVISION	DATE	COMMENT	APPROVED BY
0	14 March 2019	Draft Issue	**P. ONESTI**
1	9 May 2019	Update with City of Wanneroo advice	**P. ONESTI**

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1. Introduction

Wood & Grieve Engineers have been commissioned to provide an Engineering Servicing Report to assist with a feasibility assessment and development potential of Part Lot 594, Hocking (30 Ranworth Road).

The contents of this report are based on meetings held with Roberts Day and David Barnao & Co, as well as the resulting concept development plan (refer to Appendix A).

Servicing investigations have been undertaken to establish the availability of the existing services infrastructure in the area and their capacity to service the proposed development. Where the existing infrastructure has proved insufficient to meet development demands, infrastructure extensions and upgrades have been identified.

Image 1 – Locality Plan (City of Wanneroo Intramaps)

2. Subject Area

The site is approximately 6.7 hectares and is bound by Wanneroo Road to the west, existing residential subdivision to the North, St Elizabeth's Primary School site to the east and Kirkstall Drive to the south. The western half of the site is generally clear with small pockets of trees and areas of low-lying vegetation, and the eastern half of the site appears to be thickly vegetated with Marri/Jarrah Woodland, Banksia Woodland and several significant trees that have potential for breeding for Black Cockatoos as noted within the Environmental Investigation and reporting undertaken by PGV Environmental (2011, 2019).

Historic land use is currently unknown, however based on a review of available satellite imagery we understand the site and local area to be free from recent agriculture, commercial or industrial use.

We note the whole of Lot 594 still appears to exist on the parent title post the opening of the St Elizabeth's Primary School

Image 2 – Aerial Photography of the Site December 2019 (Nearmap, 2019)

3. Geotechnical Investigation

A Geotechnical Investigation has yet to be completed for the site, and will be required to inform earthworks, drainage and other design strategies and responses.

Based on our understanding of nearby sites and experience on similarly scoped development projects within the City of Wanneroo, we would understand the site to consist of deep, free draining and highly permeable sands overlain with a relatively thick layer of topsoil.

We recommend a qualified specialist be consulted.

4. Acid Sulphate Soils

An Acid Sulphate Soils (ASS) Investigation has yet to be completed for the site, however a desktop review of the Perth Groundwater Map (Department of Water) and Department of Parks and Wildlife's ASS risk mapping indicates the site has no known risk of ASS.

Based on this mapping, we do not anticipate that an ASS Management Plan would be necessary for subdivisional development, however we would recommend the risk of ASS be confirmed through ASS investigation undertaken as part of the geotechnical investigation.

We recommend a qualified specialist be consulted.

5. Contamination

The Department of Environment Regulation's Contaminated Sites Register does not list the site on their Contaminated Sites Database as at 5 February 2019. As such, the site is expected to be clear of contamination from previous land use, however we recommend specific advice from an Environmental Consultant is obtained in this regard.

We recommend a qualified specialist be consulted.

6. Aboriginal Heritage

The Department of Indigenous Affair's Aboriginal Heritage Inquiry System indicated that there are no Aboriginal Heritage sites present, as at 5 February 2019.

We recommend a qualified specialist be consulted.

7. Groundwater

A water management strategy at local, district and urban water management levels has yet to be completed for the site, however a desktop review of the Perth Groundwater Map (Department of Water) has been undertaken with the findings and considerations summarised below.

The groundwater mapping indicates groundwater contours from the regional water table and aquifer are an average depth of 17.8m and 56.0m respectively from natural surface levels. We anticipate there will be no soil saturation or requirement for subsoil drainage to control groundwater levels.

We are unable to comment on the presence of perched or 'trapped' groundwater levels due to unconfirmed geotechnical site conditions, however based on our understanding of nearby sites and experience on similarly scoped development projects within the City of Wanneroo we would not expect the presence of perched or trapped groundwater levels due to the anticipated sandy and free draining nature of the site.

Image 3 – Groundwater Contours (Perth Groundwater Map, 2019)

We recommend a qualified specialist be consulted.

8. Noise

Based on the proximity of the site to Wanneroo Road and proposed interaction of Commercial and Residential lots we would recommend consideration of the potential noise and acoustic impacts on the development and whether specific acoustic treatments would be warranted (e.g. noise wall, building requirements notice on title). We note that large masonry walls are present on the Wanneroo Road boundary of residential areas to the south of the Lot 594 development, however the nature of these walls is currently unknown.

We recommend a qualified specialist be consulted.

9. Environmental

Based on the Environmental Investigation and reporting undertaken by PGV Environmental (2011, 2019) and subsequent advice provided on 18 February 2019 (refer Appendix B) there exists numerous vegetation features on the site which would dictate the development response and required environmental approvals process. These items can be summarised from PGV Environmental (PGV) reporting as below:

- Foraging habitat for Black Cockatoos – approximately 2.6ha on the site;
- Potential breeding habitat for Black Cockatoos – 8 large trees on the site; and
- Banksia Woodland TEC – approximately 1ha on site.

PGV advise the Banksia Woodland is classified as Swan Coastal Plan Threatened Ecological Community which is protected under the Commonwealth EPBC Act as a Threatened Ecological Community (TEC). Based on the Concept Layout Plan prepared by Roberts Day, referral under the EPBC Act has been recommended by PGV due to proposed clearing of more than 1ha of foraging habitat and more than one potential breeding habitat tree.

PGV Environmental also provide the following advice:

> *Having been referred, the Commonwealth Department of the Environment and Energy (DoEE) have to make a determination as to whether to assess the proposal (Controlled Action) or not assess the proposal (Not a Controlled Action (NCA)). An NCA decision would mean the EPBC Act has been fully satisfied with. On the basis of the amount of foraging and potential breeding habitat to be cleared, and the small amount of Banksia Woodland TEC I would expect the DoEE to make an NCA decision. As DoEE say, however, every proposal is assessed on a case by case basis. From our tracking of referrals under the EPBC Act in the last 7 years no proposal has been fully assessed when the amount of foraging habitat has been less than 2ha or the number of trees has been a small amount or the amount of Banksia Woodland TEC has been less than a few hectares.*

Based on our experience on development projects with similar constraints (clearing of TEC, native vegetation, potential breeding trees) and referral under the EPBC Act, we recommend the proposed clearing be referred at the earliest possible timeframe to allow adequate time for review, response and resolution.

Due to the interaction of lots with retained vegetation within the south-east corner of the site we anticipate specific Bushfire Management Planning and Bushmead Attack Level (BAL) mapping and compliance may need to be demonstrated at time of subdivision lodgment to the WAPC. We recommend continuing discussions with PGV (or another qualified specialist) for environmental advice.

10. Earthworks

Based on the existing site contours (refer Image 4) two distinct formations can be identified across the site. The western section generally falls from a north-south aligned high point (54.4mAHD) towards the site low point (52mAHD) in the north-western corner and adjacent to Wanneroo Road. The eastern section generally falls from the north-eastern corner (57mAHD) and both the east and south property boundaries (55mAHD) towards a central low point (53mAHD). There is an existing limestone retaining wall (approximately 1.5m in height) along the northern property boundary providing retaining to the residential lots fronting Wayford Circle.

Earthworks design would need to consider the above highlighted site features and existing surface levels, including the existing levels surrounding the site and present on Wanneroo Road, Kirkstall Drive and along the eastern boundary adjacent to St Elizabeth's Primary School site. The gradients and levels available provide the subject land with the flexibility to obtain some cut material, together with imported fill material to achieve required lot levels to suit storm event flood routing, desired lot mix and product and interfacing with existing site boundaries. Market forces presently dictate the provision of flat building sites with retaining walls to accommodate level differences. Current City of Wanneroo engineering policies limit the height of retaining structures to 3.0m, however we would not anticipate the site to require such a retaining response.

Final earthwork levels should be designed to accommodate market requirements as well as to ensure adequate clearance to the 100-year ARI (1% AEP) flood level for the local and district drainage network, or as required to ensure roadway geometrical design incorporates major flood routing constraints. Sufficient site levels will also be required for the operation of gravity sewer connections. Based on the concept layout plan we would expect the north-western low point and central POS low points of the site to be maintained, providing overall flood routing (major event) via road networks.

Image 4 – Existing Contours (Esinet, 2019)

A Geotechnical investigation has not been undertaken at this time, however as discussed in sections 3 and 7 of this report we would not expect underlying reactive or low permeability materials, or the presence of groundwater to dictate lot levels and/or the filling of lots in order to achieve Class A lot classifications in accordance with AS2870: 1996, Residential Slabs and Footing Construction. It is recommended that Geotechnical Investigations consider potential suitability for the blending and re-use of topsoil stripped from the site as fill within lots to limit the disposal of materials offsite, if topsoil is expected to be in-excess at project close.

11. Wastewater

Disposal of residential wastewater within the subject land will be achieved via a network of gravity sewer reticulation (anticipated DN150) gravitating to the existing sewer reticulation network present within Kirkstall Drive to the south of the site. We note the existing sewer within Kirkstall Drive is located within the southern verge and would require road crossing works for interconnection with the existing service.

Water Corporation have confirmed DN150 property connections to the existing DN225 present within the eastern verge of Wanneroo Road would be required to service the western commercial lots. We note the proximity of the DN225 sewer main to existing distribution mains (DN1000 steel water main, DN150 high-pressure gas main) would require all due diligence be undertaken at time of detailed design and construction to ensure adequate clearances and/or approvals for supervision and modified works practices in the vicinity of the existing mains.

Existing sewer reticulation network is also present and at the boundaries of Ranworth Road/St Elizabeth's Primary School site (DN150). We note the shallow level of the existing DN150 precludes interconnection to the proposed development.

Water Corporation have confirmed the area has been accounted for within wastewater planning and that the existing identified mains would provide adequate serviceability to the proposed development with no network upgrades or reinforcement being required at this time.

The existing sewer reticulation services are shown in red in the image below.

Refer to Appendix C for further information provided by Water Corporation.

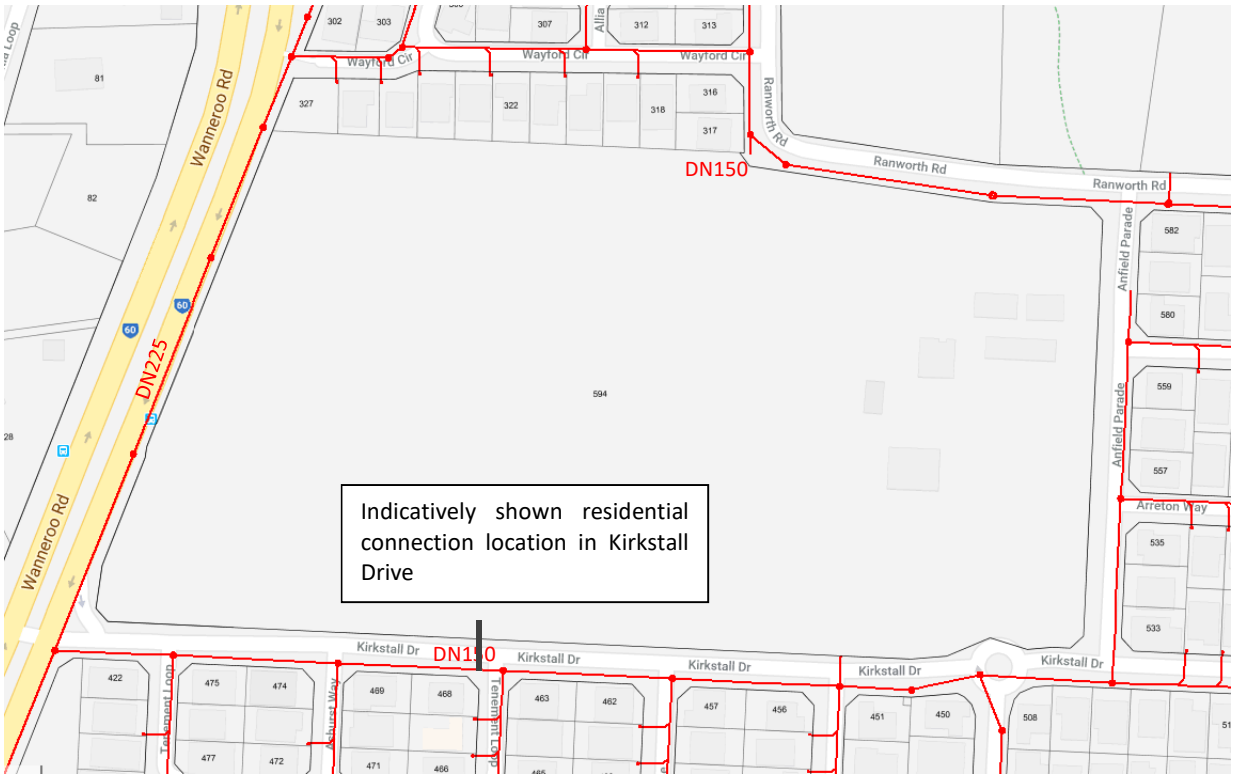


Figure 5 – Existing Sewer Reticulation (Water Corporation Esinet, 2019)

12. Stormwater Drainage

The Better Urban Water Management requirements for Western Australia prescribes that storm water drainage design ensures that the post development flows are maintained to the predevelopment levels specified, as well as incorporating best practice water sensitive urban design.

City of Wanneroo have advised that a Local Water Management Strategy (LWMS) and/or Urban Water Management Plan (UWMP) will be required at time of subdivisional development in order to outline stormwater and groundwater management strategies. It is anticipated that minor drainage events (typically less than 5-year ARI / 20% AEP) will be discharged via a piped drainage network to drainage treatment and infiltration systems with water quality structural controls. Drainage catchments are anticipated to be split with major storm events (those in excess of the 5-year ARI / 20% AEP) conveyed northwest by roadways to a sump area, as well as conveyed southeast by roadways to a detention basin incorporated into the POS design. The City have rejected the proposal to co-location drainage basins within any retained Banksia Woodland area. We note the scope of earthworks excavations and tree removal for formation of drainage basin area may be disruptive to retained vegetation (pending detailed drainage and basin sizing). The City advised that outfall to the existing Gungurru Park located north-east of the site is unlikely, however this can be explored during LWMS/UWMP investigations.

We recommend a qualified specialist (Hydrologist) be consulted.

13. Water Reticulation

Provision of water reticulation to the site is proposed via extensions of the existing DN150 main within Ranworth Road. The Water Corporation may also require interconnection with the existing DN100 main within the southern verge of Kirkstall Drive. Water Corporation have confirmed the existing identified mains would provide adequate serviceability to the proposed development and that no known network upgrades or reinforcement is required at this time. Provision of a water supply to each lot within the residential subdivision would be achieved via the construction of a network of DN100 and DN150 mains throughout the internal road network of the site, with DN150 reticulation required in order to service the commercial lots.

We note the presence of distribution mains within the eastern verge of Wanneroo Road (including DN1000 steel water distribution) which should be considered during the detailed civil subdivision design and construction phases to ensure adequate clearances and/or approvals for supervision and modified works practices in the vicinity of the main.

The existing water services are shown in blue in the image below.

Refer to Appendix C for further information provided by Water Corporation.

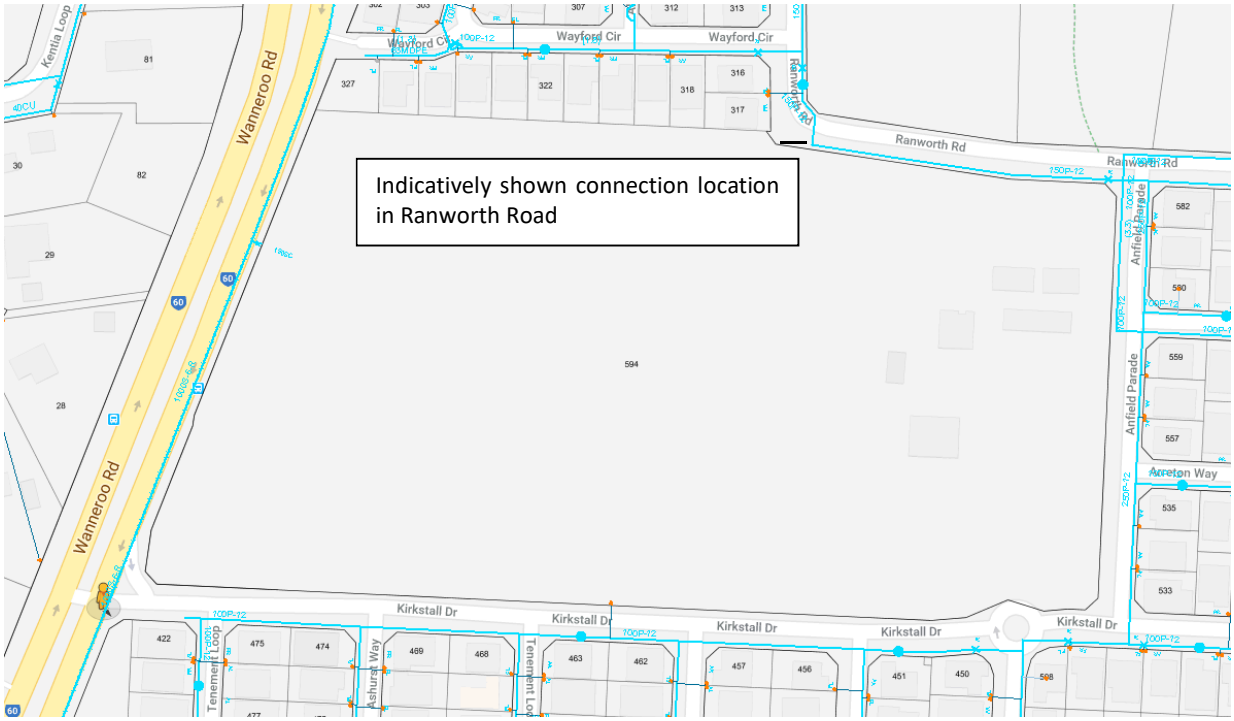


Image 6 – Existing Water Reticulation (Water Corporation Esinet, 2019)

14. Roadworks

The residential area of the development will connect to Kirkstall Drive as the primary access with secondary access proposed via a laneway connection to Kirkstall Drive. If road connectivity to Ranworth Road is preferred the City advised a roundabout may be required. This connectivity has recently been changed to a Public Access Way by the planners.

The Commercial sites fronting Wanneroo Road will feature left-in, left-out access to Wanneroo Road with a continuous internal road circulation and secondary access to the southern commercial lot to Kirkstall Drive. The City have advised the major road connection to Kirkstall Drive will require a roundabout or other local area traffic management. The City of Wanneroo do not support access via Wanneroo Road at this time and require submission of a Traffic Impact Assessment (TIA) outlining vehicle movements, volumes, access strategies and treatments in accordance with relevant design and authority standards for consideration.

Road pavement configuration within the proposed development would be designed in accordance with specific geotechnical investigation and advice, with construction in accordance with the City of Wanneroo requirements. Current City of Wanneroo construction requirements specifies the use of 'thick-lift' type asphalt pavements. All proposed footpaths surrouding the existing St Elizabeth's school site are required to be concrete Dual Use Paths.

We note City of Wanneroo have requested road reserve widths be in accordance with *Liveable Neighborhoods* and queried the validity of 9m and 12.5m road reserve widths.

We recommend a qualified specialist (Traffic Engineer) be consulted.

15. Underground Power

Existing Infrastructure

An analysis of Western Powers DFIS system has been conducted in order to determine the existing power supply configuration surrounding the development (refer DFIS_Map, Appendix D). The existing Western Power network surrounding the site consists of 22kV overhead HV and LV distribution feeders along the east side of Wanneroo Road. This HV feeder (Mul 509.0) originates from the Mullaloo Zone Substation on Joondalup Drive (nearest intersection Ocean Reef Road). Existing LV and HV underground services also exist along the south side of Kirkstall Road. DBYD information indicates there is also existing HV cable along the north side of Kirkstall Road (refer HVLV_Map, Appendix D). Western Power no longer force the removal of existing overheads fronting a development unless these lines traverse property, and in this instance the existing lines on Wanneroo Road are outside the lot boundary and therefore assumed that there is no requirement to remove / underground these lines fronting the development.

It should also be noted that streetlights exist along the north side of Kirkstall Drive on the proposed subdivision side. We cannot confirm as yet whether these existing streetlights will require relocation to be in line with the proposed adjacent lot boundaries.

Infrastructure Capacity/Proposed Upgrades

On the basis that the proposed development will consist of 92 standard residential dwellings, and 3 commercial dwellings, we have estimated the maximum demand load to be in the order of 630.4kVA which is based on the standard Western power load allocation of 4.7kVA per lot for residential lots and 200kVA per hectare for commercial lots.

New ring main cable will be cut in and out of one of the existing feeders surrounding the site and terminate into a new switchgear within the development. A new transformer will also be required to service the proposed load. It is anticipated that the development can be accommodated from the existing HV feeder in the vicinity, however we cannot confirm network capacity without a DIP application or feasibility study.

The cost of a feasibility study undertaken by Western Power is now dependant on the complexity of work. Base investigation fixed price fee from WP is $1,500, however it should be noted that if a more in-depth investigation is required WP charge at an hourly rate. Western Power will determine the scope and pricing before proceeding, noting that recent quotes for feasibility studies for these types of developments have been in the range of $3 - $8k and Western Power take approximately 8 weeks to produce the report. If a WPC feasibility study is required, we would require a signed letter of authorisation and a staging uptake over the period of development. Please contact us for further information in this regard.

It should be noted that due to the dynamic nature of Western Power's network, infrastructure requirements and connection points referred above may differ when applications are placed in the future. It is encouraged to undertake a planning study closer to the date of proposed load uptake to determine if the existing network has the capacity to take on the development load.

Western Power Network Capacity Mapping Tool has indicated that the forecasted remaining capacity in 2019 within the area is 15-20MVA (refer Network_Capacity_Mapping_Tool_2019, Appendix D). This begins to reduce in 2031.

16. Telecommunications

An analysis of NBN's DBYD has been conducted in order to determine the location of the existing NBN network to service this development. After reviewing NBN's rollout map (refer NBN_rollout_map, Appendix E), it is noted that service is already available in the area.

The nearest existing NBN network is located along Kirkstall Drive and Wanneroo Road.

Based on the current yield of 92 residential and 3 commercial lots, we assume that the connection to this development will initially originate from an existing pit along Kirkstall Parade to service the residential lots and from existing pits along Wanneroo Road to service the commercial lots.

Relocation of the existing pits may be required depending on the main entry to the residential lots, as well as driveway locations for the commercial lots.

Developers are required to install and fund a pit and pipe system to NBN requirements, and then transfer ownership of the infrastructure to NBN via the execution of a Master Developer Agreement in exchange for the provision of data infrastructure within that pit and pipe. A pit and pipe system is extended within the communications corridor inside the development area with communication pits strategically located to enable the connection of two lots from one pit. This pit and pipe system can be designed and installed at the same time as the other services to NBN specifications and handed over to NBN to reticulate their cabling as required.

NBN do not allow pits to be installed within driveways, and as such all pits are to be located within the verge inside the communications corridor away from driveway locations.

It should be noted that due to the dynamic nature of NBN's network, infrastructure requirements and connection points referred above may differ when applications are placed in the future.

17. Gas

It is anticipated that ATCO Gas will fund and service the residential portion of the development by internal reticulation of natural gas about the subdivision, utilising a common trench with water reticulation being provided by the Developer and connecting to the existing gas mains adjacent to the site. The internal ATCO Gas infrastructure to service the commercial portion of the development will be funded by the developer.

Based on our analysis of DBYD information (refer to Appendix F) we note there is existing gas infrastructure located within Ranworth Road, Wanneroo Road and Kirkstall Drive with connections to the proposed site possible via the existing gas network. ATCO Gas have also confirmed adequate gas supply within the existing network, and that no network upgrades or reinforcement would be required at this time.

We note the presence of distribution mains within the eastern verge of Wanneroo Road (including DN150 steel high pressure gas main) would require supervision or modified works practices where construction is proposed within the vicinity of the main, limiting connection opportunities in this location.

18. Developer Contribution Schemes

Noting the location of the proposed development within East Wanneroo Cell 4 (Pearsall/Hocking) the current Developer Contribution Scheme (DCS) rates would be **$23,327.55** per lot in accordance with the below schedule.

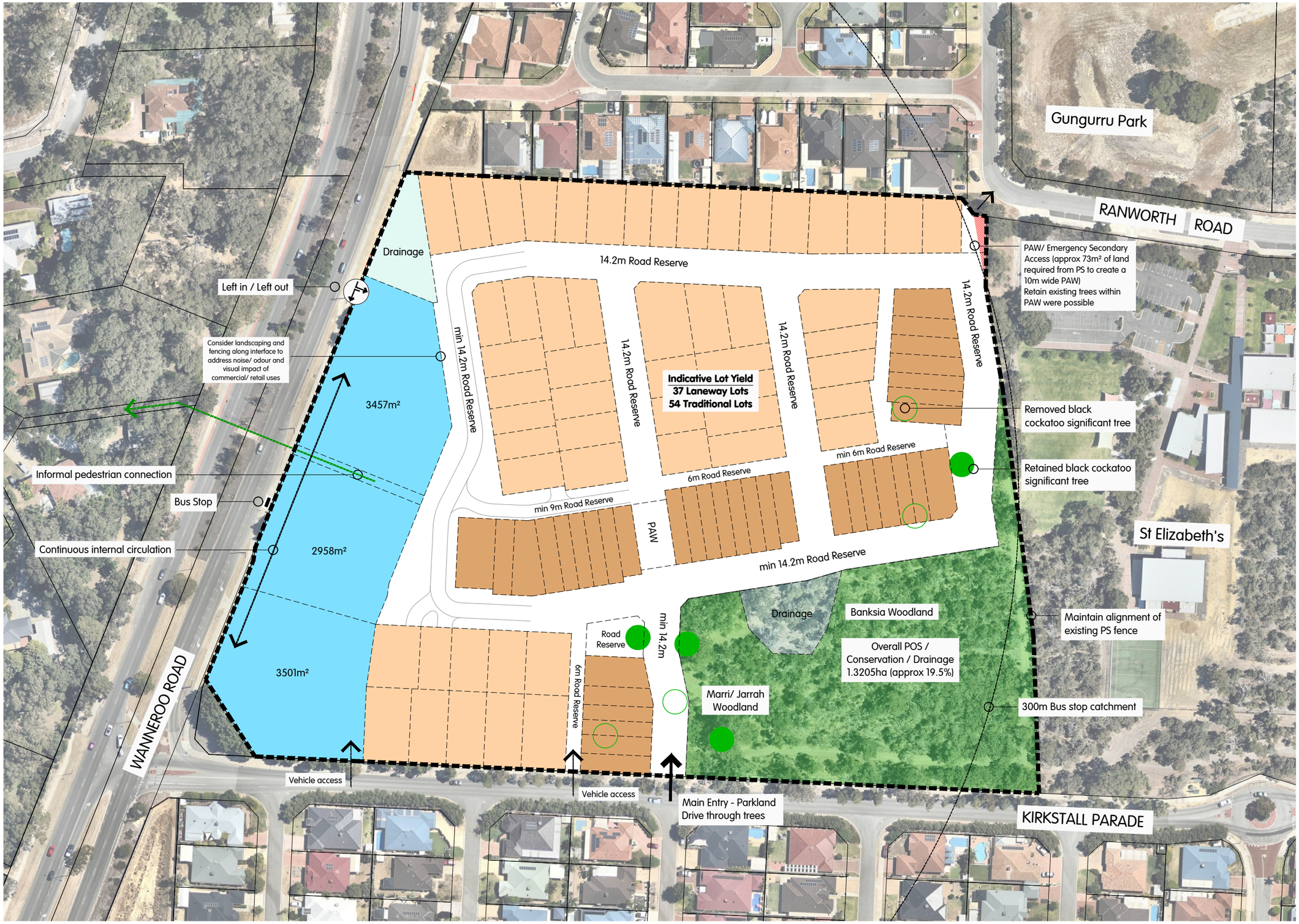
DEVELOPER CONTRIBUTION SCHEME RATES						
CELL NUMBER or DCP AREA	**NETT CELL ESTIMATE**	**DATE ADOPTED BY COUNCIL ICPL ASSESSED VALUE**	**CURENT COST PER LOT (ICPL)**	**AVERAGE PER Ha LAND VALUE *INCLUDING SOLATIUM***	**HISTORIC POS PER Ha CREDIT VALUE**	**GENERAL LEDGER INCOME**
1	$ 16,741,433	ICPL - 29.08.06 VALUE - 10.11.2015	$ 25,835.54	$ 2,062,500	$ 1,875,000	617871-1344-513
2	$ 30,917,353	ICPL - 29.08.06 VALUE - 10.11.2015	$ 24,361.96	$ 2,062,500	NIL	617872-1344-513
3	$ 645,689	ICPL - 29.08.06 VALUE - 10.11.2015	$ 14,036.00	$ 1,980,000	$ 1,800,000	617873-1344-154
4	$ 35,831,121	ICPL - 29.08.06 VALUE - 10.11.2015	$ 23,327.55	$ 2,145,000	NIL	617874-1344-513

Figure 7 - DCS Schedule (City of Wanneroo, 2019)

Noting the significant DCS cost per lot, we would assume the DCS amount includes road reserves directly adjacent to the subject lot which would preclude any claim from other developers under Section 159 of the Planning and Development Act of 2005.

We recommend these rates be confirmed with City of Wanneroo (contact: Mike Hudson).

APPENDIX A - Roberts Day Concept Plan



LEGEND

- Structure Plan Boundary
- Laneway Lots
- Traditional Lots
- Business/ Commercial
- POS/ Conservation
- Drainage

CADASTRAL INFORMATION
SOURCE: LANDGATE
YYMMDD: 190206
DWG REF: 190206_LANDGATE_
PROJECTION: PCG94

AERIAL PHOTOGRAPHY
SOURCE: NEARMAPS
YYMMDD: 181222

great places

INDICATIVE ONLY

SIZE A3 1:1500

0 metres 15 30 45 60 75

PRELIMINARY CONCEPT OPTION 1.d
Lot 594 Wanneroo Road, Hocking
City of Wanneroo

JOBE CODE	SERVICE	DOC.TYPE	DRAW NO.	REV.
BARHOC	**DES**	**DWG**	**001**	**D**

APPENDIX B – PGV ENVIRONMENTAL

Jayden Catto

From: Paul van der Moezel <paul@pgv.net.au>
Sent: Monday, 18 February 2019 2:33 PM
To: Lucian Iacob; 'nicole@waproperty.com.au'
Cc: Dan Pearce; Emma van der Linden; Paul Onesti
Subject: RE: Lot 594 Wanneroo Road, Hocking

Categories: Filed by Newforma

Luc

Following is our summary of Preliminary Concept Option 1b in terms of what it may mean for the environmental approvals processes.

Commonwealth EPBC Act

- The features of the bush on the site that are relevant to the Commonwealth EPBC Act are:

  (1) foraging habitat for Black Cockatoos – approximately 2.6ha on the site,
  (2) potential breeding habitat for Black Cockatoos – 8 large trees on the site, and
  (3) Banksia Woodland TEC – approximately 1ha on site.

- Preliminary Concept Option 1b will result in the following:
  (1) retention of around 0.8ha of foraging habitat and clearing of 1.8ha
  (2) retention of four potential breeding habitat trees and removal of four; and
  (3) retention of around 0.6ha of Banksia Woodland TEC and removal of 0.2ha (?)

With respect to Black Cockatoos - according to the EPBC Referral guidelines for Black Cockatoos the clearing of more than 1ha of foraging habitat and more than one potential breeding habitat tree is likely to lead to a significant impact and therefore should be referred. The Concept Option 1b (and incidentally all other options sent previously) proposes to clear more than 1ha of foraging habitat and more than one potential breeding tree. Therefore, referral is recommended. I don't see anything but a substantial increase in POS to reduce the amount of clearing to less than 1ha and keeping all 8 trees to avoid this recommendation. That is not going to happen unless the client wants to avoid the EPBC Act process. My comments on the likely outcome of a referral below should allay any fear of the EPBC Act process for this development.

With respect to the Banksia Woodland TEC there are no specific guidelines for the amount of clearing that trigger a referral, just the generic Significant Impact Guidelines. According to the Significant Impact Guidelines, the clearing of any amount of TEC is likely to lead to a significant impact and referral is recommended. That is a bit bizarre as surely clearing only a few square metres wouldn't lead to a significant impact but until specific guidelines for this TEC are drawn up (and I'm told they will be) we have to go by these guidelines. Option 1b will lead to the removal of a small amount of the Banksia Woodland TEC (0.2ha or thereabouts) and referral is recommended.

Having been referred, the Commonwealth Department of the Environment and Energy (DoEE) have to make a determination as to whether to assess the proposal (Controlled Action) or not assess the proposal (Not a Controlled Action (NCA)). An NCA decision would mean the EPBC Act has been fully satisfied with. On the basis of the amount of foraging and potential breeding habitat to be cleared, and the small amount of Banksia Woodland TEC I would expect the DoEE to make an NCA decision. As DoEE say, however, every proposal is assessed on a case by case basis. From our tracking of referrals under the EPBC Act in the last 7 years no proposal has been fully assessed when the amount of foraging habitat has been less than 2ha or the number of trees has been a small amount or the amount of Banksia Woodland TEC has been less than a few hectares.

The proposed clearing can be referred anytime, either as shown in a Structure Plan or in a subdivision. What you are actually referring is the amount of clearing, not the plan itself. An EPBC Act decision is not an approval of a Structure Plan or subdivision, just approval of the clearing. So, the best time to refer the proposal to clear is after the LSP has been approved. It can be referred earlier if you know that the area to be cleared is not going to change in any amendments to the LSP.

State Approvals

If development of the site needs an MRS or TPS Amendment the Amendment will need to be referred to the EPA. The EPA will decide whether to fully assess the Amendment or not. I would expect no assessment in which case the next stages of planning can go ahead (structure planning and subdivision).

The Structure Plan will be referred out to DBCA who will no doubt comment on the environmental features of the site. Hopefully they say we have done a good job in keeping a representative portion of the best condition vegetation on the site including Banksia woodland TEC and Black Cockatoo habitat. If not, their comments will be taken on board by DPLH and the proponent has a right of response on any LSP submissions.

Subdivision approval will give an exemption from the requirement for a clearing permit unless you want to clear ahead of subbie approval in which case a clearing permit would be required. Avoid the clearing permit process if you can.

Let me know if you have any comments on the above.

Regards

Paul van der Moezel

Managing Director
PGV Environmental

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File Note 1 February 2019

Lot 594 Wanneroo Road, Hocking – Environmental Features Balance Lot

The attached plan shows the following environmental features of the portion of Lot 594 Wanneroo Road west of the fenced school site.

1. Approximately 2.6ha of native vegetation on the site comprising
   - Marri/Jarrah Woodland with occasional Tuart trees (1.6ha)
   - Banksia woodland with Jarrah and Sheoak trees (1.0ha)

2. Marri/Jarrah woodland in Good condition with some areas on the western edge containing more grassy weeds than the more central part.

   Banksia woodland mostly in Very Good condition.

3. Banksia woodland just meets the definition of the Banksia Woodland of the Swan Coastal Plain Threatened Ecological Community (TEC). The TEC is protected under the Commonwealth EPBC Act. No thresholds for the amount of clearing that requires referral under the Act.

4. Priority plant species *Jacksonia sericea* (P4) located in south-eastern part of the site and continues into school bushland. Priority species not protected by State or Commonwealth legislation but should be considered for retention where possible.

5. All the native vegetation is considered to be foraging habitat for Black Cockatoos. In addition, there are 9 significant trees that have potential for breeding for Black Cockatoos. Clearing more than 1ha of foraging habitat and one potential breeding tree could require referral under the EPBC Act.

6. The proposed clearing, or past clearing for the school site, has not been referred under the EPBC Act therefore the Banksia Woodland TEC and Black Cockatoo habitat are relevant considerations.

7. Clearing for the school site was approved under a Clearing Permit in 2013. A condition of the clearing permit required an area of bush south of the school to be fenced (and presumably protected long-term although there is no specific condition requiring this). The western boundary fence for the school site does not follow the boundary of the area of bush required to be fenced in the clearing permit. Some of the clearing permit area requiring fencing is west of the fence.

N

0 10 20 30 40 50m

SCALE 1 : 1 500 at A3 (MGA)

Legend

- Site Boundary
- Cadastral Boundary
- Clearing Permit Protection Area
- Fenceline
- Vegetation Type Boundary
- **Marri** Vegetation Type
- *Jacksonia sericea* (P4)
- Black Cockatoo Significant Tree

WAYFORD CIRCLE

RANWORTH ROAD

ROAD

WANNEROO

PARADE

ANFIELD

KIRKSTALL DRIVE

Lot 594

Marri/Jarrah Woodland

Banksia Woodland

14459 R 45914

13414 R 45914

13625 R 45970

387 600mE

387 400mE

387 800mE

6 484 400mN

6 484 200mN

CADASTRAL SOURCE: Landgate, February 2014.
AERIAL PHOTOGRAPH SOURCE: NearMap, flown December 2018.

10027-wkpln02.dgn

PINPOINT CARTOGRAPHICS (08) 9562 7136

pgv ENVIRONMENTAL

Catholic Archdiocese of Perth
LOT 594 WANNEROO ROAD
HOCKING

Drawn: P. van der Moezel | Date: 4 Feb 2019

Job: 10027 Rpt: -- | Revision: A

OPPORTUNITIES AND CONSTRAINTS MAP

Workplan 2

pgv ENVIRONMENT

Phone + 61 8 9202 8780
Fax + 61 8 9202 8789
Moh +61 0 427 095 226
Email paul@pgv.net.au

Unit 210/396 Scarborough Beach Road
Osborne Park WA 6017

ABN 44 981 725 395
Knightsdale Nominees Pty Ltd

28 June 2011

David Barnao

Needs to be updated:
- due to time that has passed (7 years); and
- Banksias on site

David Barnao & Co
PO Box 750
Wembley WA 6913

Dear David

RE: Lot 594 Wanneroo Road, Hocking

Following are the results of the significant tree survey undertaken on Lot 594 Wanneroo Road, Hocking.

The survey follows on from the work done by Coffey Environments on the site in 2007 in which a recommendation was made to retain mature trees where possible. The recommendation was made on the basis that the mature Eucalypt trees may be roosting and potential breeding habitat for the endangered Carnaby's Black Cockatoo. The location of the mature trees was not identified in the Coffey Environments report.

According to the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), any clearing of Carnaby's Cockatoo habitat that is deemed likely to have a significant impact needs to be referred to the Department of Sustainability, Environment, Water, Populations and Communities (DSEWPC) for assessment. According to unpublished criteria being used by officers of the Department of Sustainability, Environment, Water, Populations and Communities, the clearing of more than three eucalypt trees greater than 500mm diameter within a 0.5ha woodland would be considered significant as these trees could contain hollows now or in the future in which Carnaby's Cockatoos could breed.

The identification of significant trees in this survey used the 500mm diameter at breast height criterion being used by DSEWPC in their definition of potential breeding habitat.

The tree survey was undertaken on 18 May 2011 by myself. Trees greater than 500mm were identified by species, and had estimates of diameter and height taken, a comment on the health of the tree and whether or not there were hollows in the trees. The results of the survey are shown in Table 1.

Table 1 Significant Tree Information

Tree #	Species	Ht (m)	Diameter (m)	Health	Hollows	Easting	Northing
1	Tuart	16	1	healthy	None	387547.01	6484139.1
2	Marri	15	0.8	healthy	None	387559.21	6484178.03
3	Tuart	11	0.6	healthy with some dead young branches	None	387578.17	6484176.39
4	Tuart	13	0.6	healthy with multiple stems, only one >0.5m	None	387573.7	6484152.32
5	Tuart	12	0.5, 0.7	Healthy, two stems >0.5m	Small hollow with bees	387592.8	6484137.75
6	Tuart	13	0.5	healthy	None	387747.59	6484128.35
7	Marri	14	0.6	healthy	None	387687.89	6484247.8
8	Marri	15	0.8	healthy with some dead young branches	None	387669.17	6484227.27
9	Marri	14	0.7	healthy	None	387665.52	6484271.58
10	Dead	8	0.5	Dead	One on side half way up	387737.74	6484307.47
11	Tuart	14	0.5	healthy	None	387840.47	6484295.65

In total there were 11 trees with a diameter of 500mm or greater. The largest was a Tuart tree with a diameter of 1.0m and a height of approximately 16m. The location of the 11 trees is shown on the attached Figure 1. Photographs of the 11 trees are also attached.

Of the 11 trees there were six Tuarts, 4 Marris and one dead tree. All of the live trees were healthy although two trees had some dead young branches.

One of the live trees had a small hollow that contained an active bee hive. The dead tree also contained a hollow on the side about half way up the tree. Neither of the hollows appeared to be suitable for Carnaby's Black Cockatoo breeding. No evidence of breeding cockatoos was observed on the day.

no longer relevant: in school site

Tree numbers 1-5 are located close to each other and in a location where they might be able to be retained in a school or residential subdivision design. Trees 6 and 11 are on the perimeter of the site and could also be retained potentially in a widened road reserve. Trees 7-9 appear to be more problematic in terms of their location and ability to be retained in a school or residential subdivision design, however it is recommended that retention of these trees should still be considered.

The retention of as many of the 11 trees as possible would reduce the need to refer a future proposal under the EPBC Act. The Banksia trees on the site provide foraging habitat and the significance of any clearing of Banksias will need to be assessed to determine whether a referral

under the EPBC Act is required. I have provided some advice on this matter in a letter to you on 6 January 2011.

Please contact me if you require any further advice on this matter.

Yours sincerely

Dr Paul van der Moezel
Managing Director

Attachments: Figure 1 Significant Tree Locations
Tree Photographs


N
0 10 20 30 40 50m
SCALE 1 : 1 500 at A3 (MGA)
WAYFORD CIRCLE
RANWORTH ROAD
PARADE
ANFIELD
WANNEROO
KIRKSTALL DRIVE
1
2
3
4
5
6
7
8
9
10
11
Legend
Site Boundary
Cadastral Boundary
Significant Tree Location
CADASTRAL SOURCE: Landgate June 2011
AERIAL PHOTOGRAPH SOURCE: NearMap, flown April 2011
pgv
Drawn: P. van der Moezel
Date: 8 Jun 2011
Job: 10027
Revision: A
Catholic Education Office
SIGNIFICANT TREE ASSESSMENT
LOT 594 WANNEROO ROAD, HOCKING
SIGNIFICANT TREE LOCATIONS
Figure 1

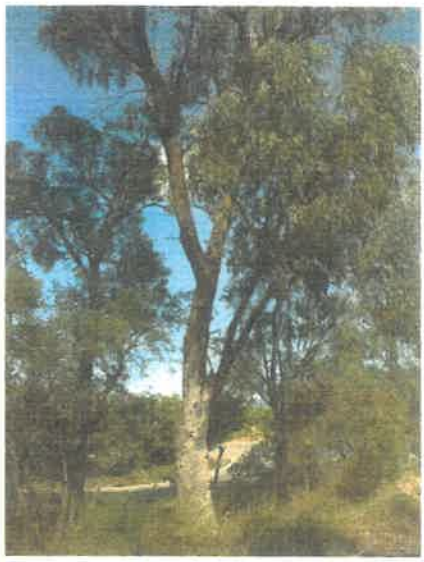
Tree 1 Tuart

Tree 2 Marri

Tree 3 Tuart

Tree 4 Tuart

Tree 5 Tuart



Tree 6 Tuart

Tree 7 Marri

Tree 8 Marri

Tree 9 Marri

Tree 10 Dead

Tree 11 Tuart


N
0 10 20 30 40 50m
SCALE 1 : 1 500 at A3 (MGA)
WAYFORD
CIRCLE
RANWORTH
ROAD
PARADE
ANFIELD
WANNEROO
KIRKSTALL
Legend
Site Boundary
Cadastral Boundary
Significant Tree Location
CADASTRAL SOURCE: Landgate, June 2011.
AERIAL PHOTOGRAPH SOURCE: NearMap, flown April 2011.
pgv
Drawn: P. van der Moezel
Date: 8 Jun 2011
Job: 10027
Revision: A
Catholic Education Office
SIGNIFICANT TREE ASSESSMENT
LOT 594 WANNEROO ROAD, HOCKING
SIGNIFICANT TREE LOCATIONS
Figure 1

APPENDIX C – WATER CORPORATION PLANNING INFORMATION

Jayden Catto

From: Simon Ridgewell <Simon.Ridgewell@watercorporation.com.au>
Sent: Thursday, 28 February 2019 1:18 PM
To: Jayden Catto
Subject: Service Feasibility - Wanneroo Rd Hocking
Attachments: SF0008479 WW Planning.pdf; SF0008479 WW Existing.pdf; SF0008479 W Existing.pdf; SF0008479 WZ Existing.pdf; SF0008479 C Existing.pdf

Categories: Filed by Newforma

Good Afternoon Jayden,

Thank you for your enquiry regarding any known limitation of water corporation infrastructure.

With regards to water, no issues are currently know with regards to capacity or pressure, however, extension of at least a DN 150 would be needed into the proposal in order to service the commercial developments.

With regards to the wastewater, the area in question has been accounted for with our planning, and therefore should have no issues with capacity from the proposal.

Attached for you convenience, is our latest planning and current infrastructure from the area.

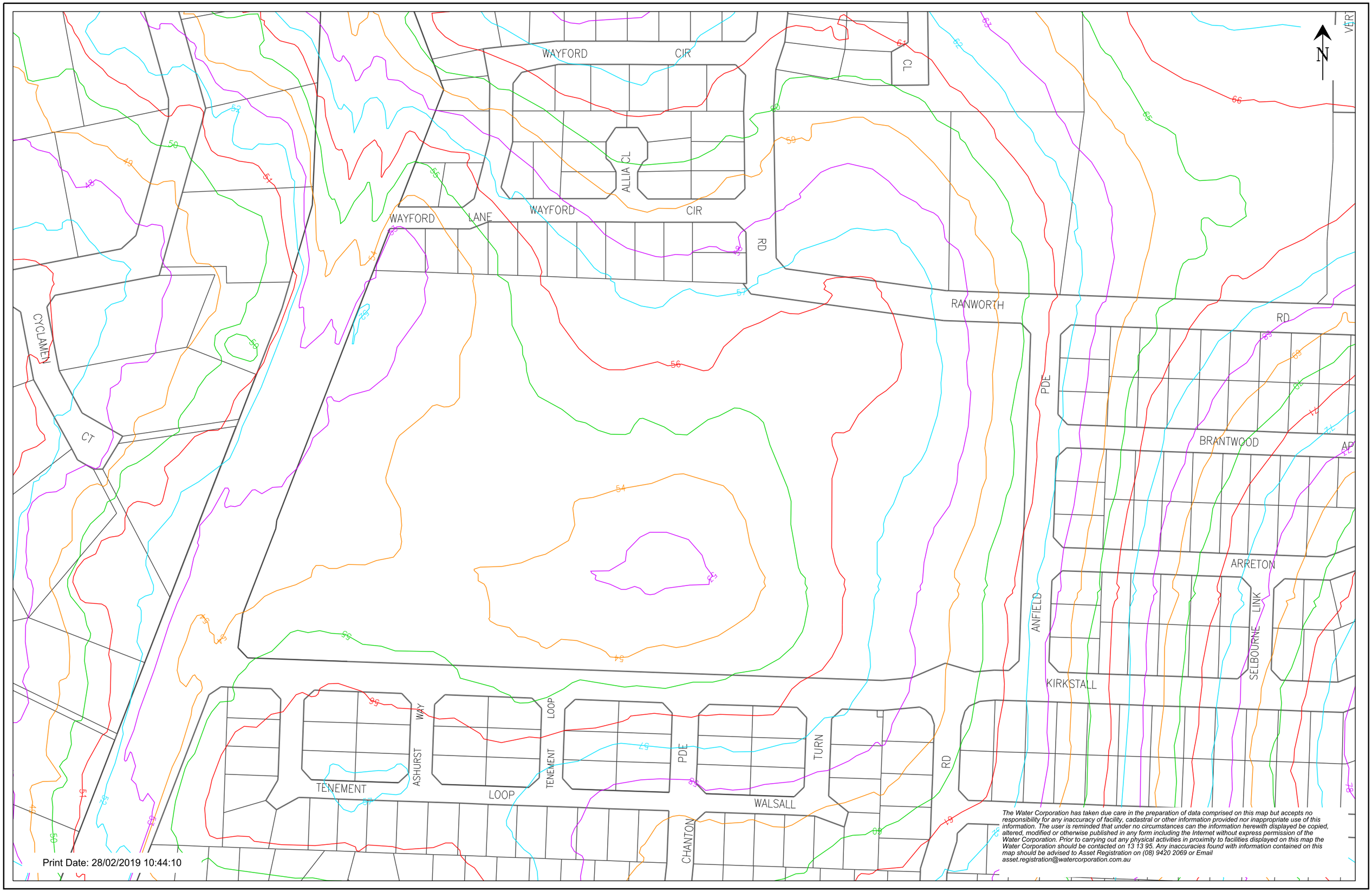
Should you need any further information, please don't hesitate to contact me.

Best Regards

Simon Ridgewell
Snr Adv - Land Servicing
Development Services

E Simon.Ridgewell@watercorporation.com.au
T (08) 9420 2775

watercorporation.com.au



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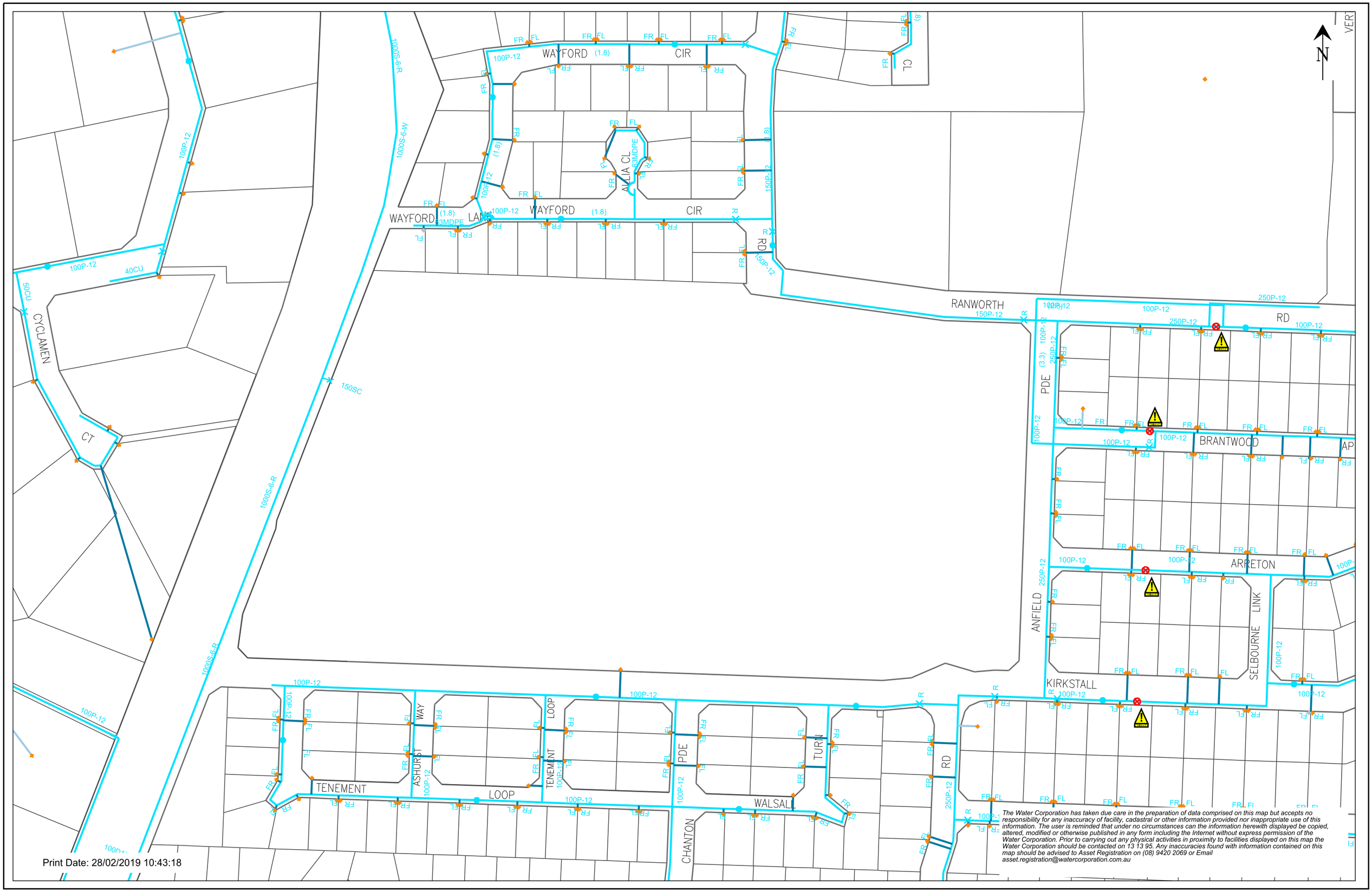
Projection: MGA Zone 50 (m)



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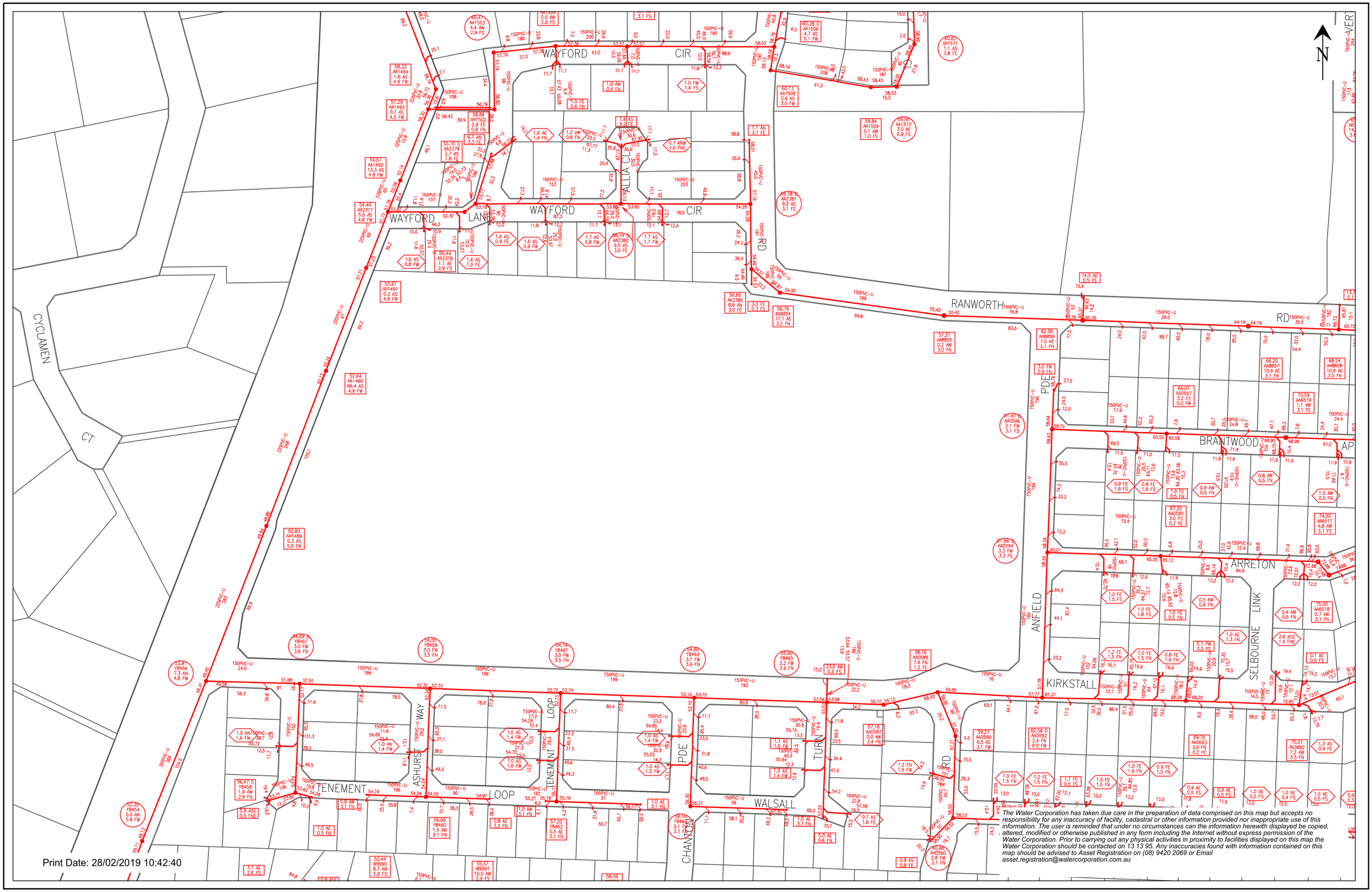

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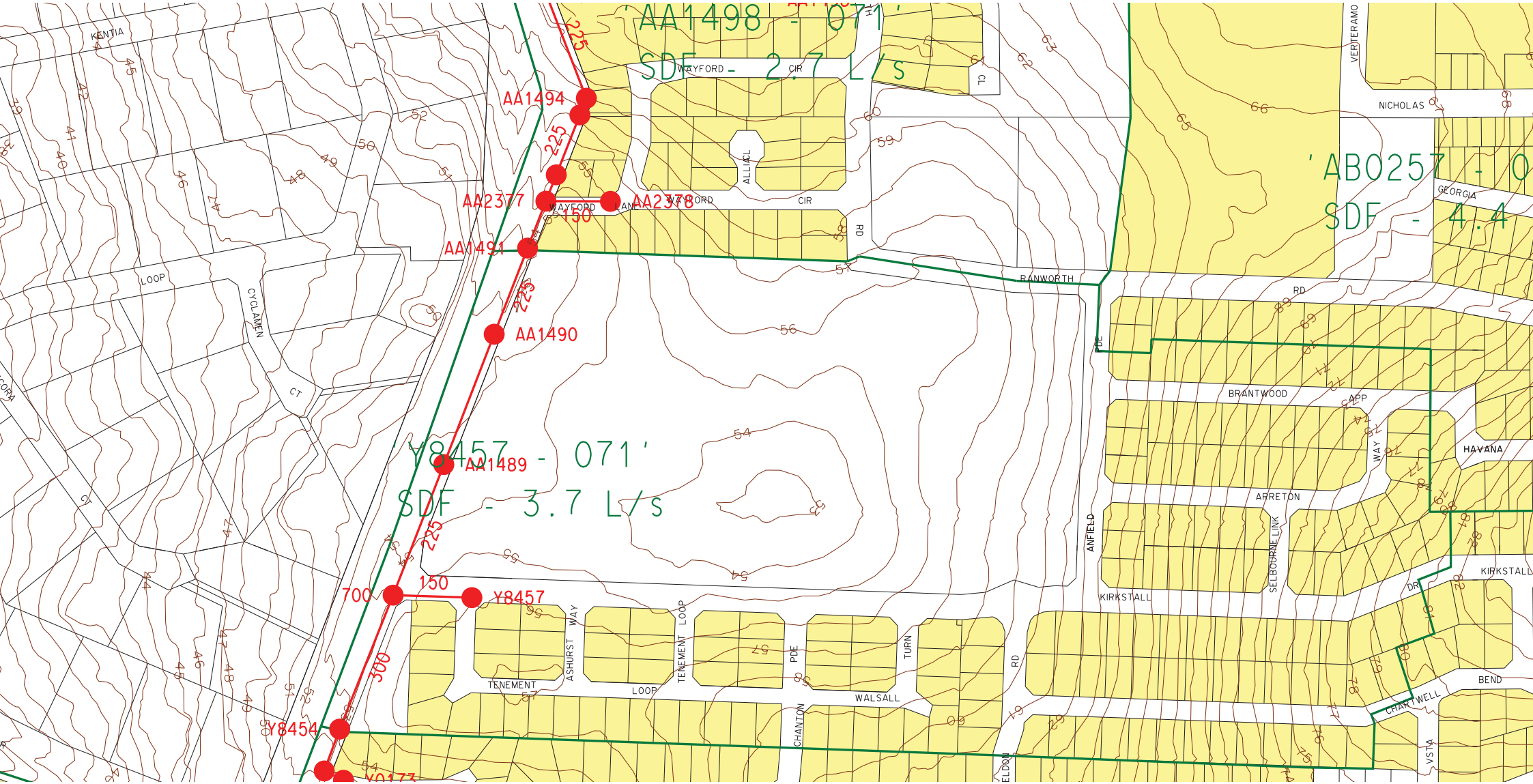
Projection: MGA Zone 50 (m)


'AA1498 - 071'
SDF - 2.7 L/s
AA1494
225
AA2377
150
AA2378
AA1491
225
AA1490
'Y8457 - 071'
SDF - 3.7 L/s
AA1489
225
700
150
Y8457
300
Y8454
'AB0257 - 0
SDF - 4.4
WAYFORD CIR
WAYFORD LANE
ALLIAL CIR
RD
RANWORTH
KENTIA
LOOP
CYCLAMEN
CT
VERITERAMO
NICHOLAS
GEORGIA
BRANTWOOD
APP
WAY
HAVANA
ARRETON
ANFIELD
SELBOURNE LINK
KIRKSTALL
DR
BEND
CHARTWELL
VISTA
TENEMENT
ASHURST WAY
TENEMENT LOOP
LOOP
PDE
TURN
WALSALL
CHANTON

Print Date: 28/02/2019 10:43:48

The Water Corporation has taken due care in the preparation of data comprised on this map but accepts no responsibility for any inaccuracy of facility, cadastral or other information provided nor inappropriate use of this information. The user is reminded that under no circumstances can the information herewith displayed be copied, altered, modified or otherwise published in any form including the Internet without express permission of the Water Corporation. Prior to carrying out any physical activities in proximity to facilities displayed on this map the Water Corporation should be contacted on 13 13 95. Any inaccuracies found with information contained on this map should be advised to Asset Registration on (08) 9420 2069 or Email asset.registration@watercorporation.com.au

Scale 1:2000

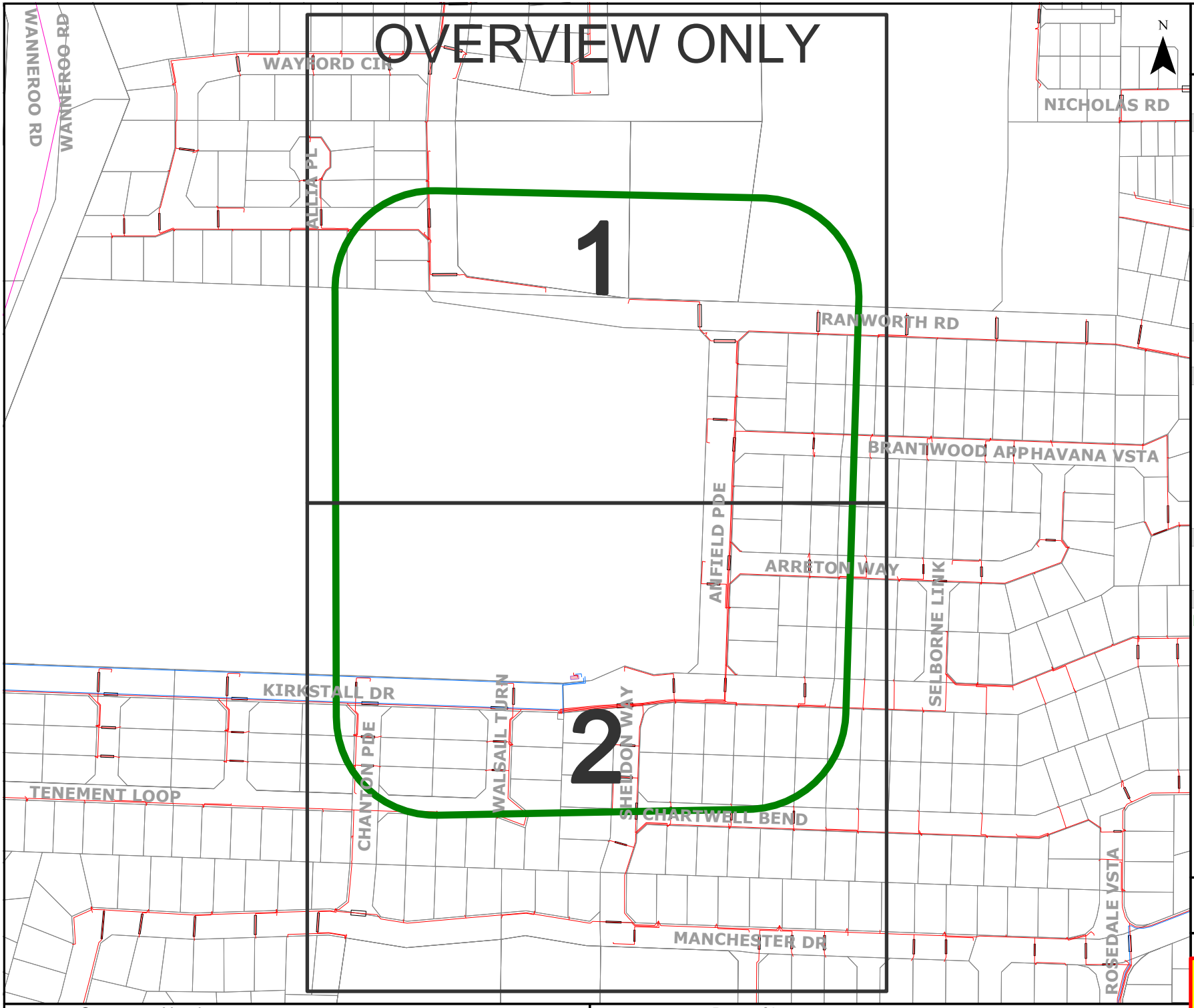
0m 20m 40m 60m 80m 100m

Projection: MGA Zone 50 (m)

APPENDIX D – WESTERN POWER INFORMATION

WANNEROO RD 13.5 MILE
ON
8945
ON
2797588
ON
L451 KIRKSTALL
N
WAYFORD CIR
WAYFORD CT
MALLIA PL
WANNEROO RD
CYCLEWAY
TENEMENT LP
ASHURST WY
KIRKSTALL DR
CHANTON PDE
WALSALL IRR
SHELDON RD
ANFIELD PDE
ARRETON W
CHARTWELL BEND
BRANTWOOD
MS10039
MTS876
MTS965
594
720
328
23
183
46

- Turquoise Precalc Road Front
- Turquoise Precalc Int Lot Boun
- Turquoise Precalc Centroids
- Planned Subdivisions
- Tower
- Transmission Pole
- Pole
- Kiosk
- L. V. Distribution Frame
- Pillar
- Ring Main Unit
- Substation
- Underground Crossing
- Overhead Stay
- 330kv Busbar
- 330kv Overhead
- 220 Kv Busbar
- 220kv Overhead
- 132kv Busbar
- 132kv Overhead
- Carrier Approximation
- 132kv Underground
- 66kv Busbar
- 66kv Overhead
- 66kv Underground
- Data Overhead
- Data Underground
- Perth Fibre Conduit Ug Carrier
- Earth Overhead
- Earth Underground
- H. V. Overhead
- High Volt Single Phase
- High Voltage Busbar
- H. V. Underground
- Single Phase Underground
- L. V. Overhead
- Low Voltage Busbar
- L. V. Underground
- St. Lt. Circuit, Overhead
- St. Lt. Circuit, Underground
- St. Lt. Pilot, Overhead
- St. Lt. Pilot, Underground
- Circuit Breaker
- Disconnector
- Join
- Tee Junction
- Reactor
- 132kv Termination
- Cable Joint
- Drop Out Fuse
- 66kv Termination
- Join Underground
- Auto Transformer
- Distribution Transformer
- Isolating Transformer
- Regulating Transformer
- Capacitor Bank
- Metering Unit
- Pole Top Switch Disconnector
- Recloser
- Surge Divertor
- Sectionaliser
- Fuse Switch
- Hv Cable Pole Termination
- Non Load Break Connector
- Switch Disconnector
- Fuse Disconnector, Overhead
- Lamp
- Circuit Breaker Disconnector
- Disconnector, Underground
- Fuse Disconnector, Underground
- Lv Cable Pole Termination
- Street Light Control Box
- Generator
- Power Transformer
- Green Legal Centroids
- Building Lines To 10000
- Building Lines To 5000
- District Boundary
- Water Feature
- Oil Pipe
- Region And Metro Area Boundary
- Ord Boundary
- Local Government Boundary
- Suburb Boundary
- Ucs Boundary
- Urd Boundary
- Voltage Boundary
- W.A.N.G Natural Gas Pipeline
- High Load Route, 5.5 Metre
- High Load Route, 5 Metre
- High Load Route, 6 Metre
- High Load Route, 7 Metre
- Electrical Miscellaneous
- Design Boundary
- GLS Gas Off Line Service
- Otc Underground Cable
- Customer Connection Point
- Electric Meter
- Fault Indicator
- Private Parallel Generator
- Lodged Centroids
- Environmentally Sensitive Area
- High Wide Load Corridor
- High Wide Load Warning
- Communication Pit
- Distribution Pipe
- Link Pipe
- Trunk Pipe
- Bright Conduit Ug Carrier
- Bright Conduit Oh Carrier
- Coastal Zones
- Communication Notes
- Communication Tower
- Defined Area For Retic Elec
- District Boundary 96



westernpower

UNDERGROUND LEGEND

Structures

- Pillar
- Metal Pole
- Transformer Site
- UG Crossing *
- Ring Main Unit
- LV Distribution Frame

Distribution Cables

- High Voltage Cable (1kV - 33kV)
- Low Voltage Cable (< 1kV)
- Street Light Circuit (< 1kV)
- Street Light Pilot (< 1kV)
- Earth Wire

Cable Pole Terminations

- HV Termination
- LV Termination

Proposed Construction Assets

- Design Area *
- High Voltage Underground Cable
- Low Voltage Underground Cable
- Metal Pole
- Pillar
- Transformer site
- HV Termination
- LV Termination

State Underground Power Project

- CURRENT Work Area *
- COMPLETED Area *

Feature

- Area of Interest

*** Please refer to coversheet**

Privately owned cables NOT SHOWN (including house services)

This map is INDICATIVE ONLY. Hand exposure via pothole method is MANDATORY.

Telephone Support: 1300 769 345
Mon to Fri - 08:00 to 16:30

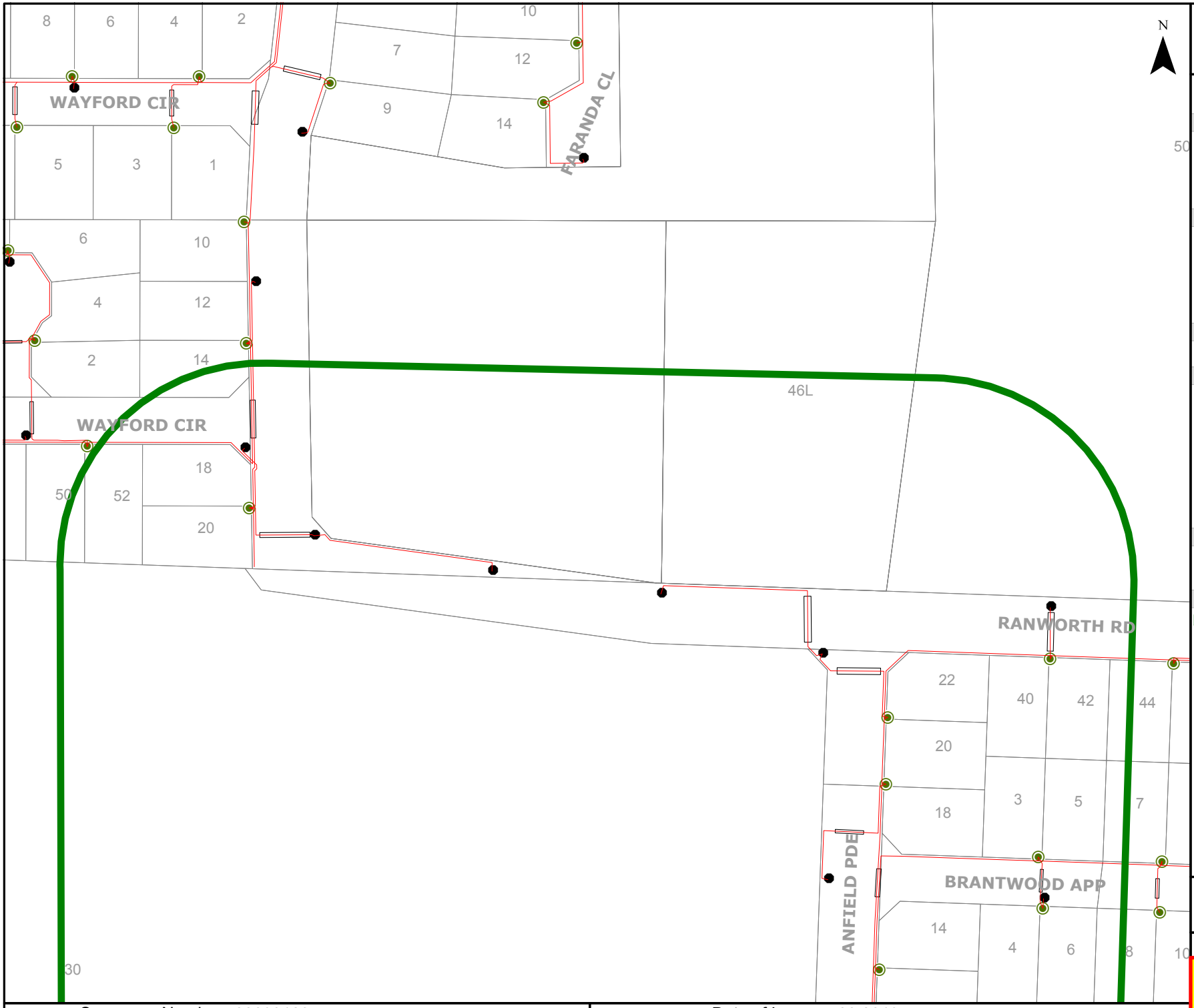
Information valid for 30 days from date of issue

A4 | Scale : 1 3075

WARNING! Look out for overhead power lines

Sequence Number: 80893123

Date of Issue: 5 03 2019



westernpower

UNDERGROUND LEGEND

Structures

- Pillar
- Metal Pole
- Transformer Site
- UG Crossing *
- Ring Main Unit
- LV Distribution Frame

Distribution Cables

- High Voltage Cable (1kV - 33kV)
- Low Voltage Cable (< 1kV)
- Street Light Circuit (< 1kV)
- Street Light Pilot (< 1kV)
- Earth Wire

Cable Pole Terminations

- HV Termination
- LV Termination

Proposed Construction Assets

- Design Area *
- High Voltage Underground Cable
- Low Voltage Underground Cable
- Metal Pole
- Pillar
- Transformer site
- HV Termination
- LV Termination

State Underground Power Project

- CURRENT Work Area *
- COMPLETED Area *

Feature

- Area of Interest

*** Please refer to coversheet**

Privately owned cables NOT SHOWN (including house services)

This map is INDICATIVE ONLY. Hand exposure via pothole method is MANDATORY.

Telephone Support: 1300 769 345
Mon to Fri - 08:00 to 16:30

Information valid for 30 days from date of issue

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WARNING! Look out for overhead power lines

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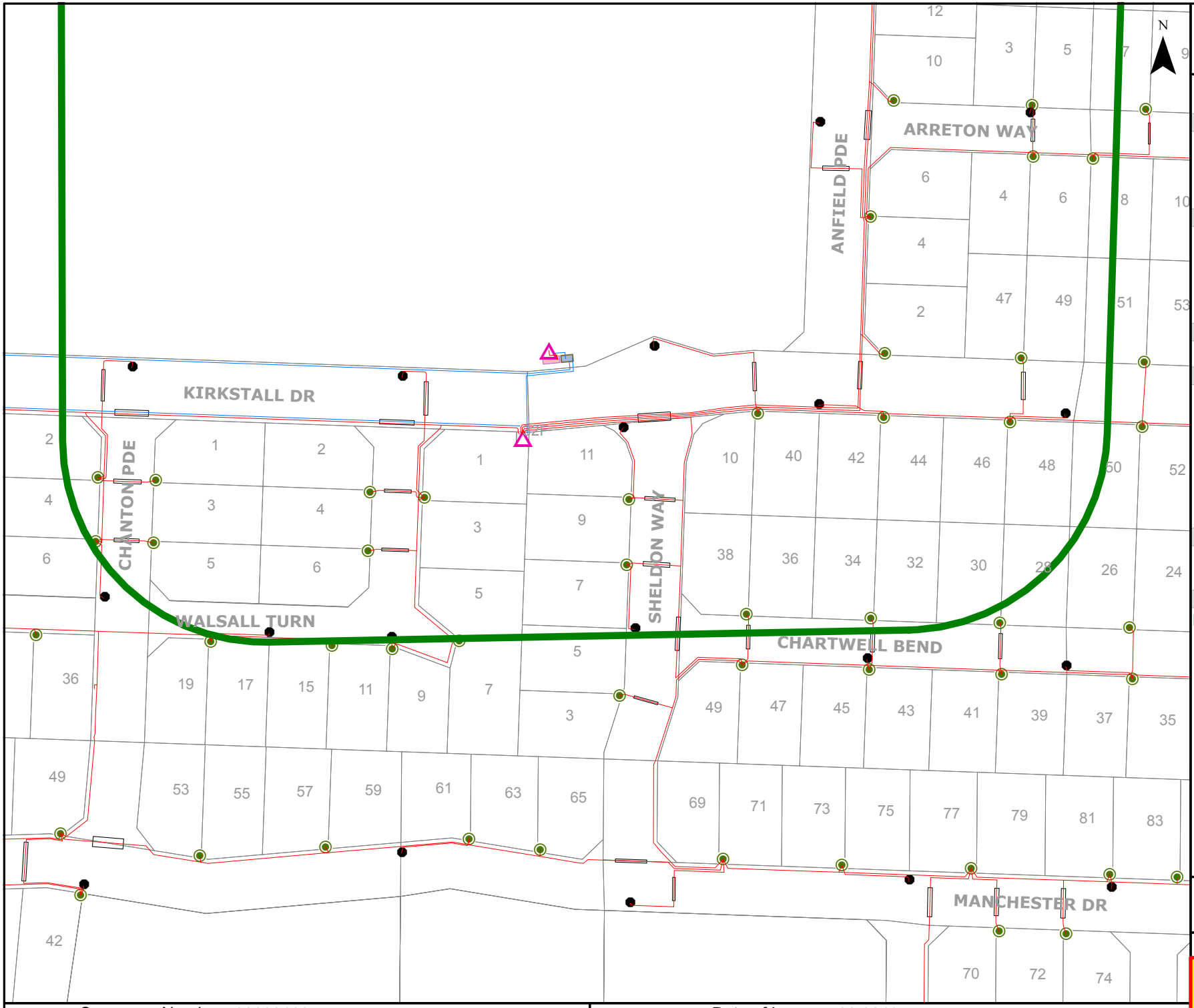


westernpower

UNDERGROUND LEGEND

Structures

- Pillar
- Metal Pole
- Transformer Site
- UG Crossing *
- Ring Main Unit
- LV Distribution Frame

Distribution Cables

- High Voltage Cable (1kV - 33kV)
- Low Voltage Cable (< 1kV)
- Street Light Circuit (< 1kV)
- Street Light Pilot (< 1kV)
- Earth Wire

Cable Pole Terminations

- HV Termination
- LV Termination

Proposed Construction Assets

- Design Area *
- High Voltage Underground Cable
- Low Voltage Underground Cable
- Metal Pole
- Pillar
- Transformer site
- HV Termination
- LV Termination

State Underground Power Project

- CURRENT Work Area *
- COMPLETED Area *

Feature

- Area of Interest

*** Please refer to coversheet**

Privately owned cables NOT SHOWN (including house services)

This map is INDICATIVE ONLY. Hand exposure via pothole method is MANDATORY.

Telephone Support: 1300 769 345
Mon to Fri - 08:00 to 16:30

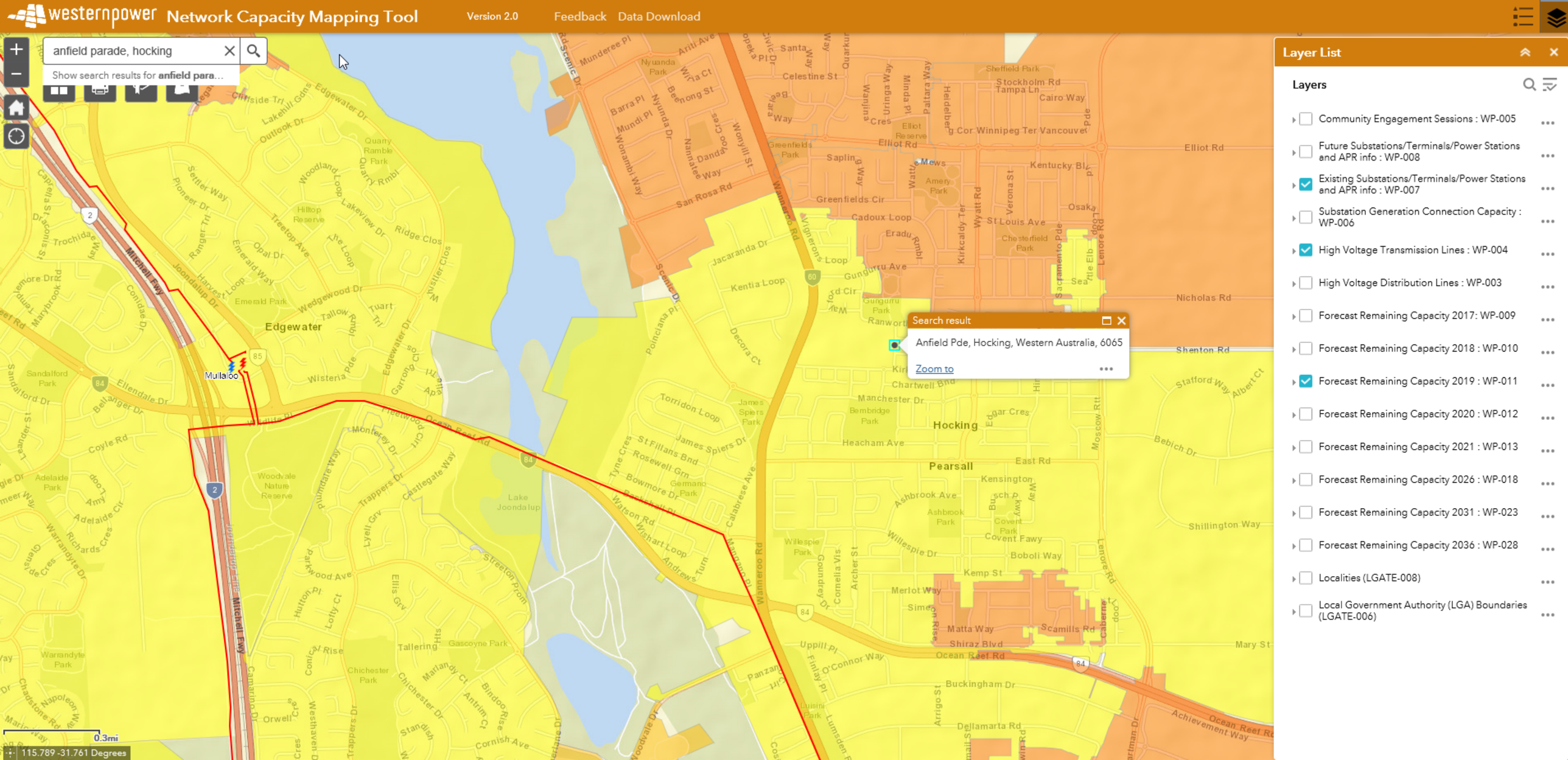
Information valid for 30 days from date of issue

A4	Scale : 1 1500

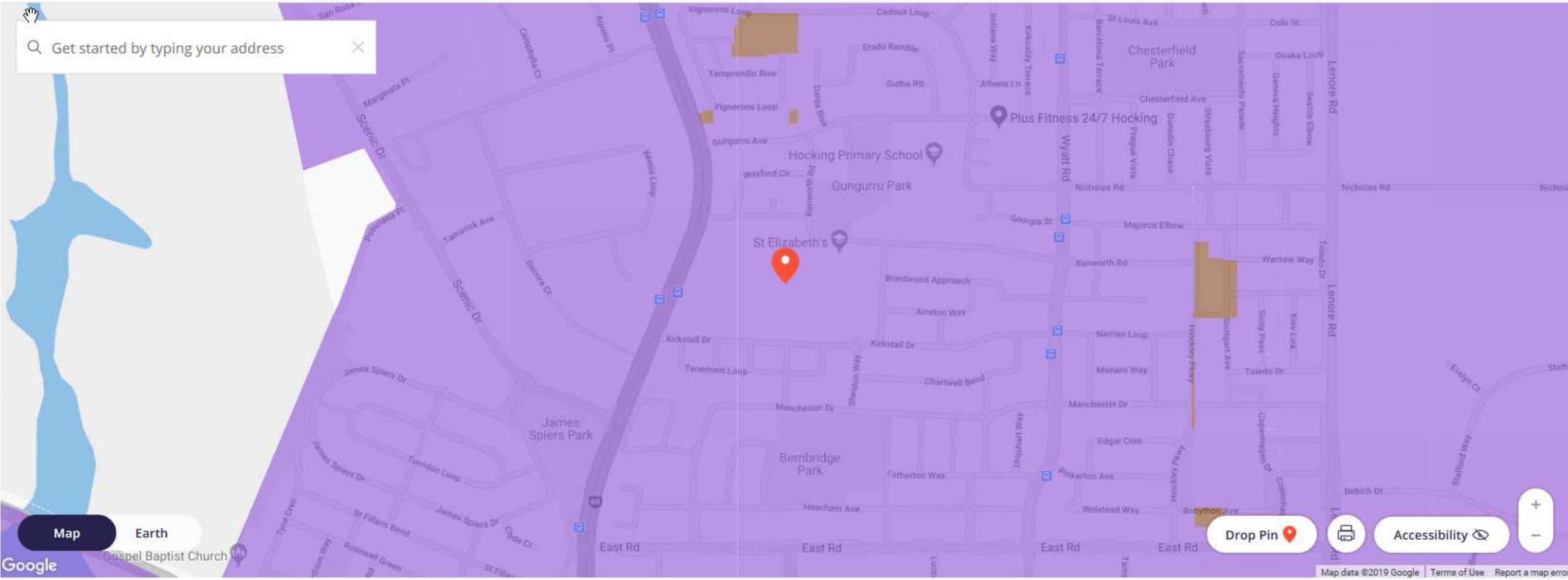
WARNING! Look out for overhead power lines

Sequence Number: 80893123

Date of Issue: 5 03 2019


westernpower Network Capacity Mapping Tool
Version 2.0
Feedback
Data Download
anfield parade, hocking
Show search results for anfield para...
Layer List
Layers
Community Engagement Sessions : WP-005
Future Substations/Terminals/Power Stations and APR info : WP-008
Existing Substations/Terminals/Power Stations and APR info : WP-007
Substation Generation Connection Capacity : WP-006
High Voltage Transmission Lines : WP-004
High Voltage Distribution Lines : WP-003
Forecast Remaining Capacity 2017: WP-009
Forecast Remaining Capacity 2018 : WP-010
Forecast Remaining Capacity 2019 : WP-011
Forecast Remaining Capacity 2020 : WP-012
Forecast Remaining Capacity 2021 : WP-013
Forecast Remaining Capacity 2026 : WP-018
Forecast Remaining Capacity 2031 : WP-023
Forecast Remaining Capacity 2036 : WP-028
Localities (LGATE-008)
Local Government Authority (LGA) Boundaries (LGATE-006)
Search result
Anfield Pde, Hocking, Western Australia, 6065
Zoom to
Edgewater
Mullaloo
Hocking
Pearsall
Mitchell Fwy
Ocean Reef Rd
Wanneroo Rd
Nicholas Rd
Elliot Rd
Shenton Rd
East Rd
Lake Joondalup
0.3mi
115.789 -31.761 Degrees

APPENDIX E – NBN INFORMATION



Service available ⓘ

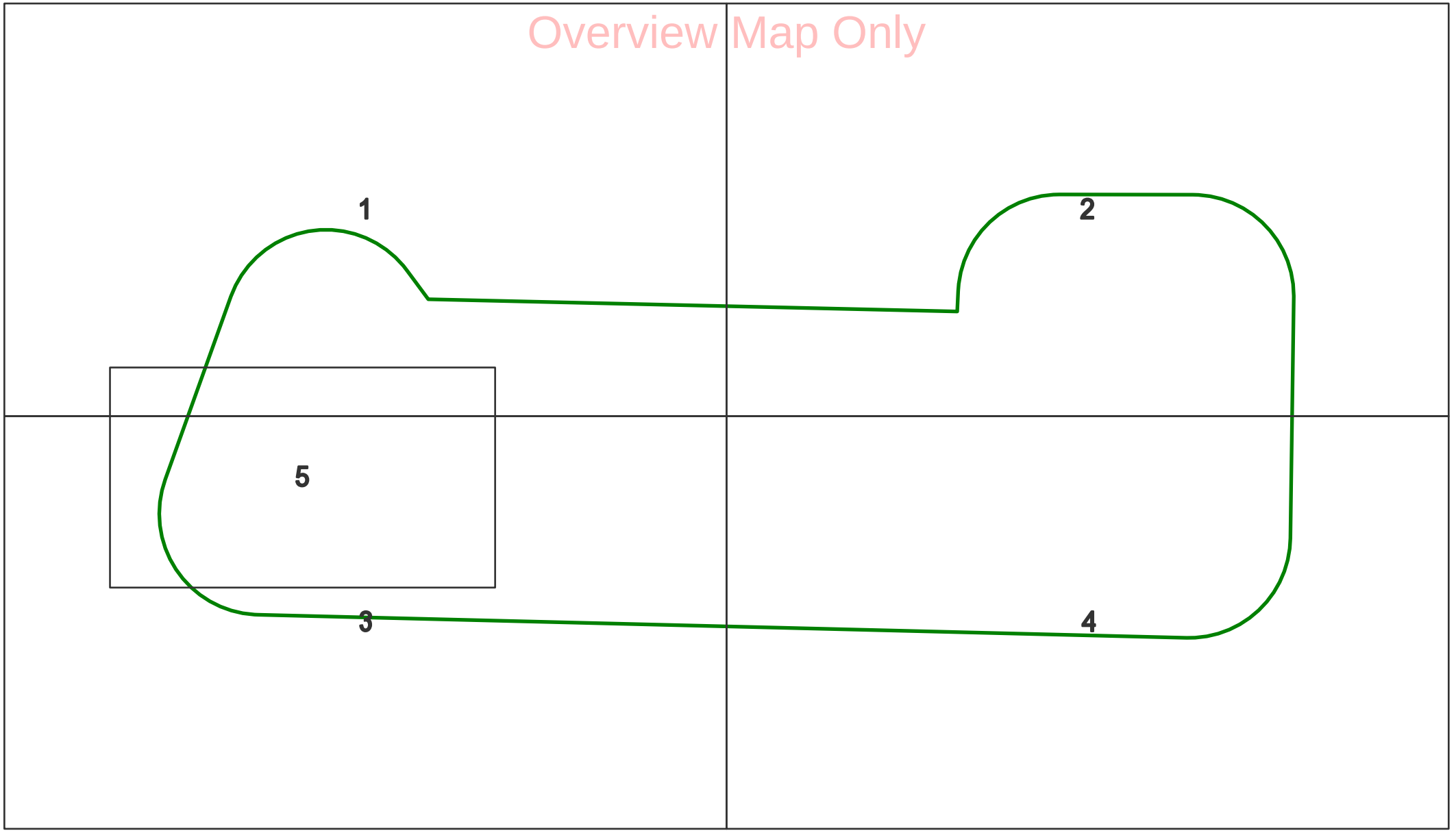
Build commenced ⓘ

Other fibre provider ⓘ

APPENDIX F – ATCO GAS INFORMATION

WARNING - HIGH PRESSURE PIPELINE IN THE VICINITY.

No works within 15 metres of this asset are permitted without prior approval from ATCO Gas Australia PH 1300 926 755



Sequence No: 79644960 | Map Tile: | Scale: 1:3075

Job No: 15656609 | Date:29/01/2019 | Location: Kirkstall Drive, Hocking 6065

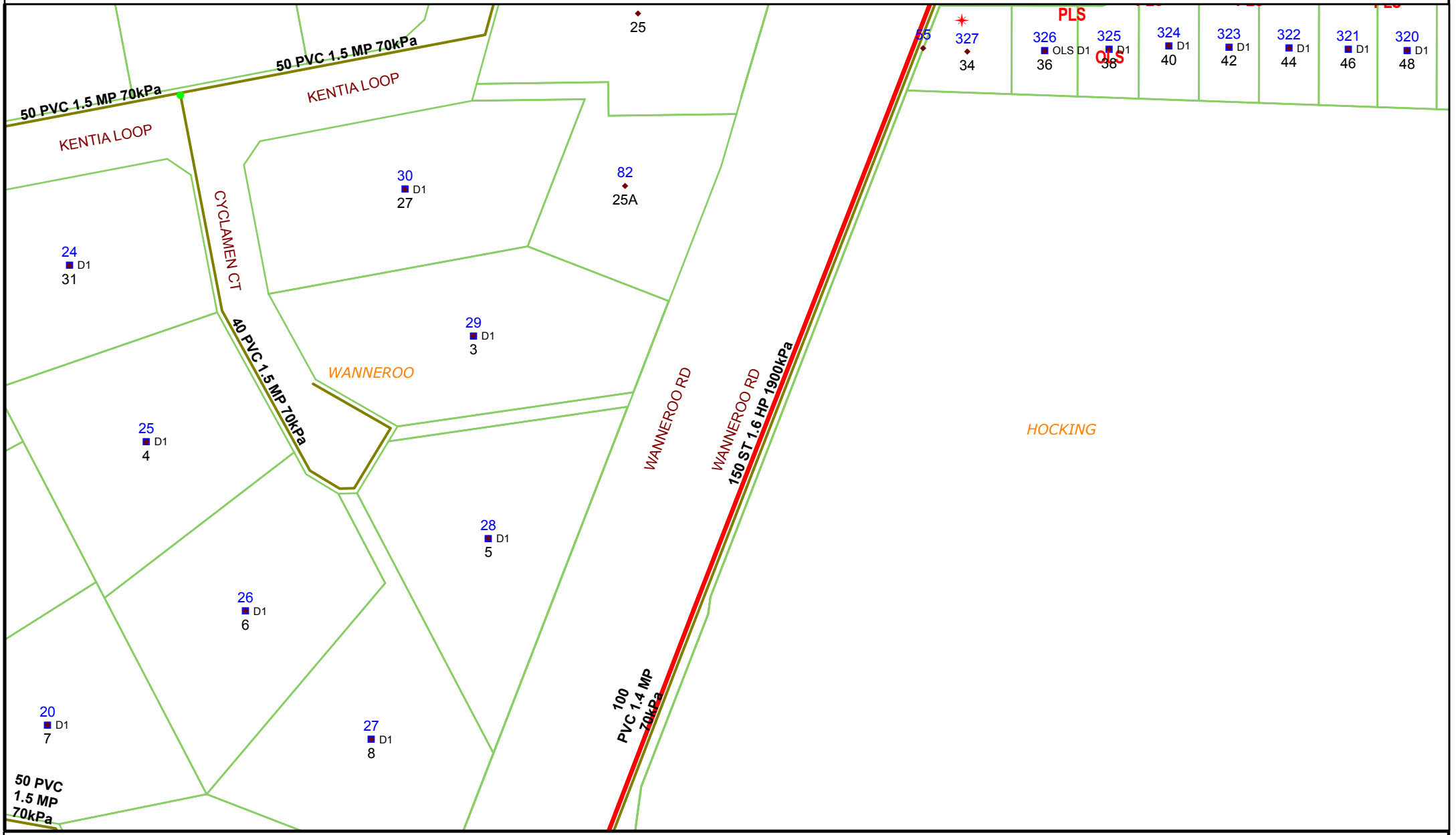
N W E S

ATCO Gas AUSTRALIA

Please read all **warnings**, conditions and information on the attached "Underground Asset Details" information sheet. This plan is issued subject to that information and those conditions and **warnings** (including, but not limited to, the "NO HOT WORKS" warning). Plans are current for only **30 days** from date of request, indicative only and not warranted to be accurate. It is your responsibility to carefully locate underground assets and follow safe work practises and procedures (eg pot-holing). ATCO Gas Australia will seek compensation for damage caused to assets.

WARNING - HIGH PRESSURE PIPELINE IN THE VICINITY.

No works within 15 metres of this asset are permitted without prior approval from ATCO Gas Australia PH 1300 926 755



Sequence No: 79644960 Map Tile: 1 Scale: 1:1500

Job No: 15656609 Date:29/01/2019 Location: Kirkstall Drive, Hocking 6065

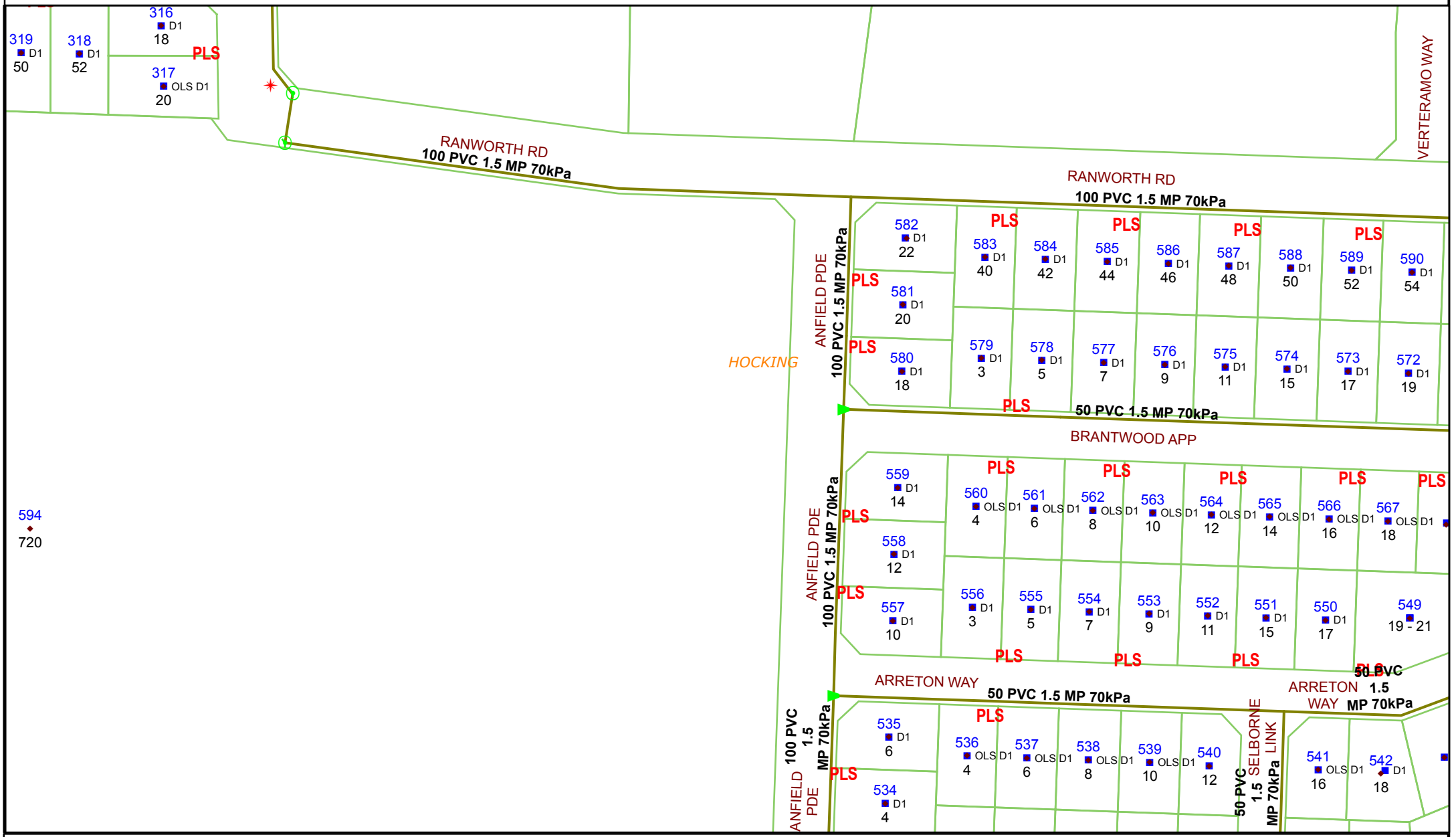
N W E S

ATCO Gas AUSTRALIA

Please read all **warnings**, conditions and information on the attached "Underground Asset Details" information sheet. This plan is issued subject to that information and those conditions and **warnings** (including, but not limited to, the "NO HOT WORKS" warning). Plans are current for only **30 days** from date of request, indicative only and not warranted to be accurate. It is your responsibility to carefully locate underground assets and follow safe work practises and procedures (eg pot-holing). ATCO Gas Australia will seek compensation for damage caused to assets.

WARNING - HIGH PRESSURE PIPELINE IN THE VICINITY.

No works within 15 metres of this asset are permitted without prior approval from ATCO Gas Australia PH 1300 926 755



Sequence No: 79644960 | Map Tile: 2 | Scale: 1:1500

Job No: 15656609 | Date:29/01/2019 | Location: Kirkstall Drive, Hocking 6065

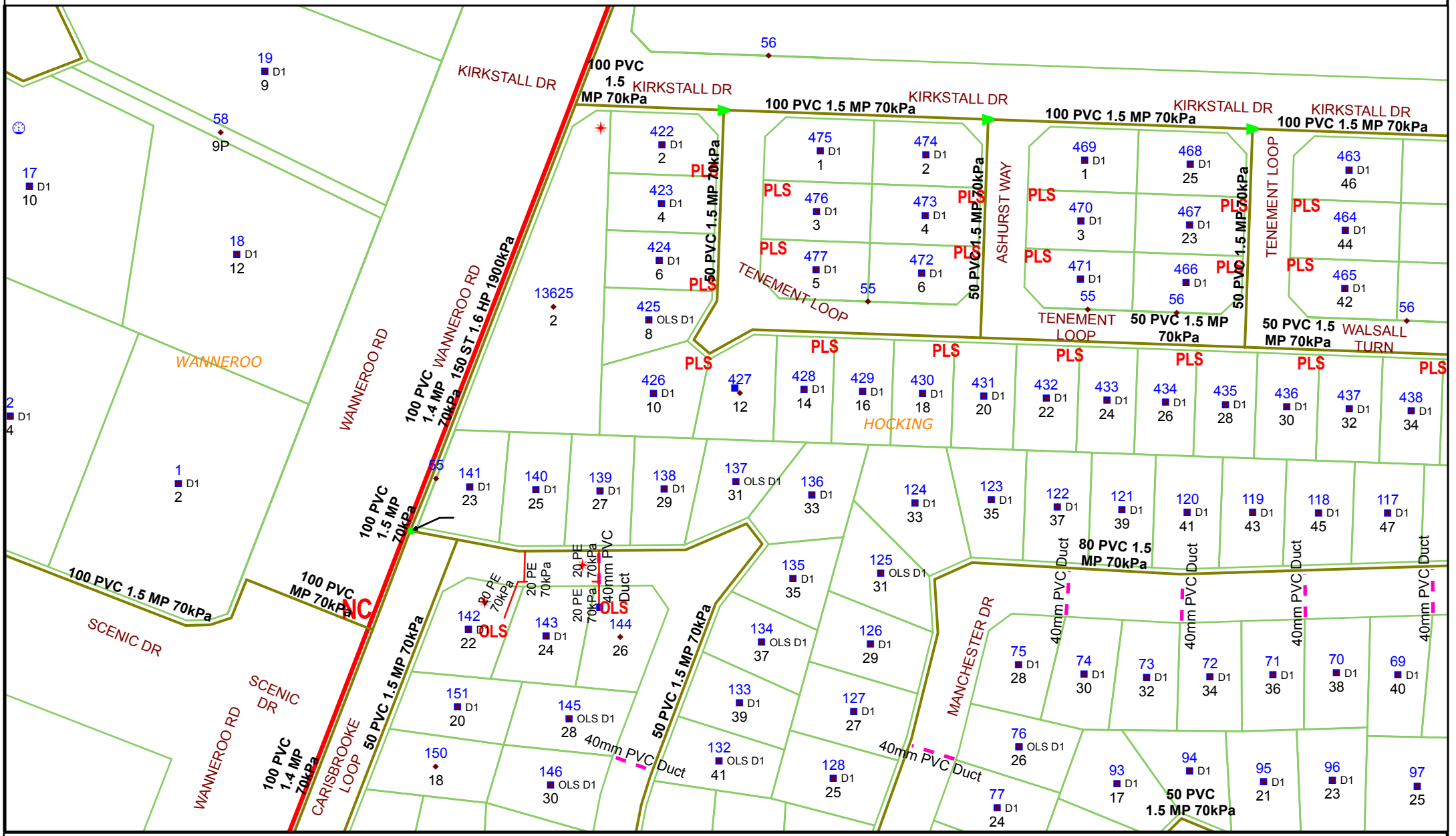
N W E S

ATCO Gas AUSTRALIA

Please read all **warnings**, conditions and information on the attached "Underground Asset Details" information sheet. This plan is issued subject to that information and those conditions and **warnings** (including, but not limited to, the "NO HOT WORKS" warning). Plans are current for only **30 days** from date of request, indicative only and not warranted to be accurate. It is your responsibility to carefully locate underground assets and follow safe work practises and procedures (eg pot-holing). ATCO Gas Australia will seek compensation for damage caused to assets.

WARNING - HIGH PRESSURE PIPELINE IN THE VICINITY.

No works within 15 metres of this asset are permitted without prior approval from ATCO Gas Australia PH 1300 926 755



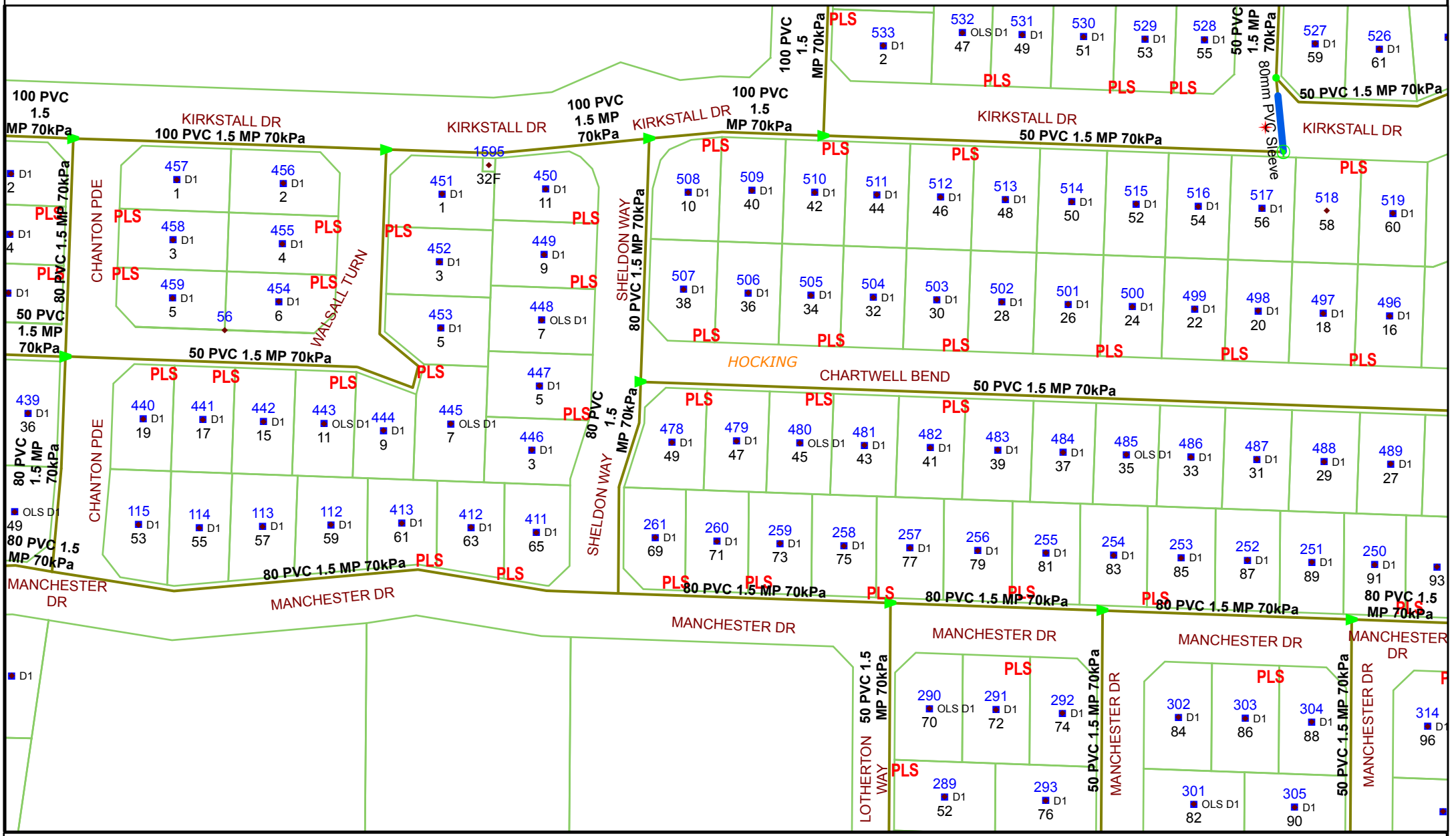
Sequence No: 79644960 | Map Tile: 3 | Scale: 1:1500

Job No: 15656609 | Date:29/01/2019 | Location: Kirkstall Drive, Hocking 6065

Please read all **warnings**, conditions and information on the attached "Underground Asset Details" information sheet. This plan is issued subject to that information and those conditions and **warnings** (including, but not limited to, the "NO HOT WORKS" warning). Plans are current for only **30 days** from date of request, indicative only and not warranted to be accurate. It is your responsibility to carefully locate underground assets and follow safe work practises and procedures (eg pot-holing). ATCO Gas Australia will seek compensation for damage caused to assets.

WARNING - HIGH PRESSURE PIPELINE IN THE VICINITY.

No works within 15 metres of this asset are permitted without prior approval from ATCO Gas Australia PH 1300 926 755



Sequence No: 79644960 | Map Tile: 4 | Scale: 1:1500

Job No: 15656609 | Date:29/01/2019 | Location: Kirkstall Drive, Hocking 6065

N W E S

ATCO Gas AUSTRALIA

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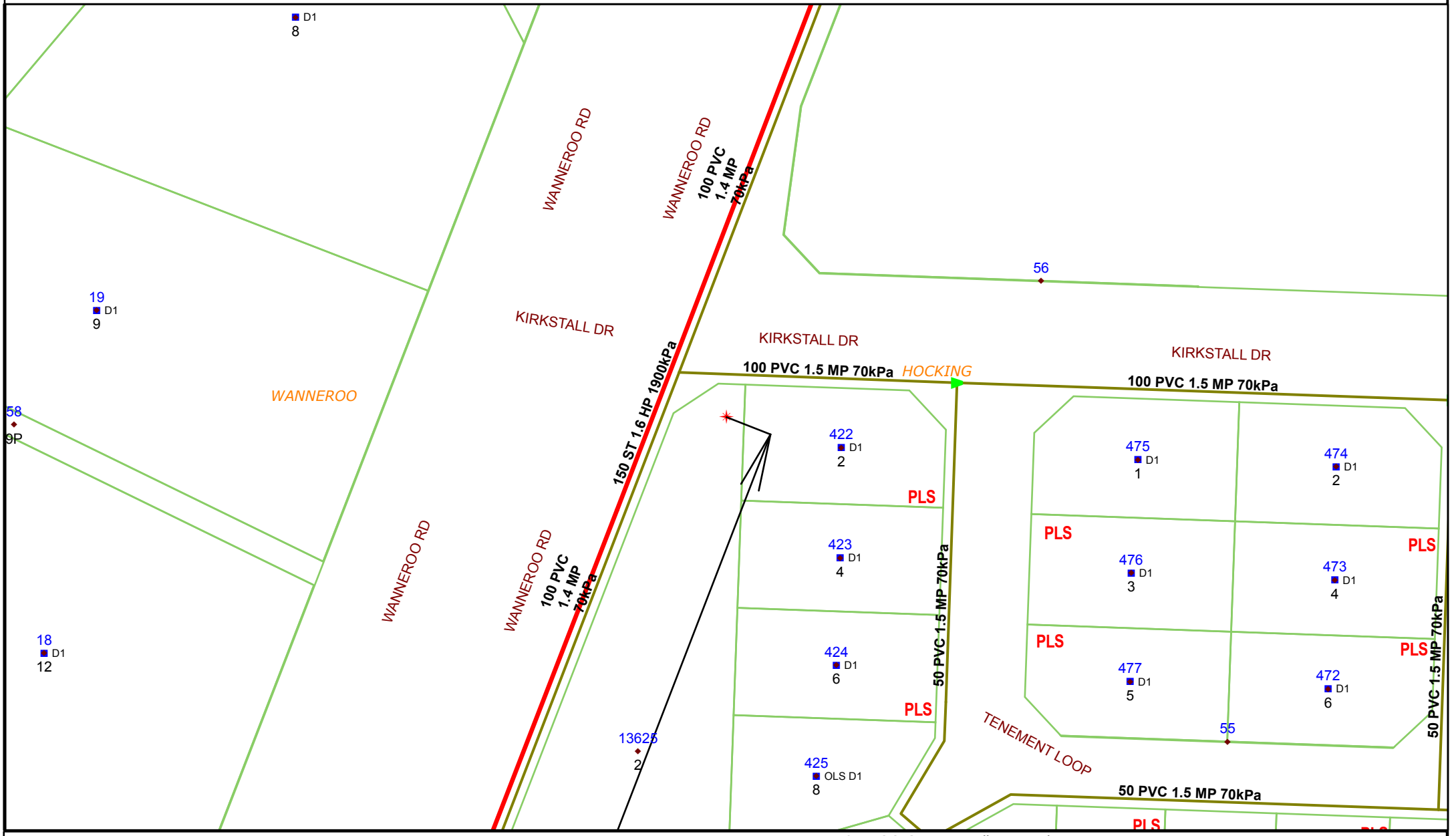

Sequence No: 79644960 Map Tile: 5 Scale: 1:800

Job No: 15656609 Date:29/01/2019 Location: Kirkstall Drive, Hocking 6065

N W E S

ATCO Gas AUSTRALIA

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