

Engineering Report

Encompassing Civil Infrastructure and Servicing

Link Road Holding

Planning Proposal for Amendment of
Newcastle LEP 2012 & Lake
Macquarie LEP 2014

Prepared on behalf of Eden Estates (Newcastle)
Pty Ltd

Document Control Sheet					
Issue ID.	Amendment	Date of Issue	Prepared By	Reviewed By	Project Ref
A	Draft	04.11.2020	AL	RK	239936
B	Updated Issue	10.12.2020	AL	RK	239936
C	Updated Issue	18.12.2020	AL	RK	239936
D	Updates Structure Plan	29.08.2025	BMV	JY	239936

Ref: 239936-Engineering Report

Limitations Statement

This report has been prepared in accordance with and for the purposes outlined in the scope of services agreed between ADW Johnson Pty Ltd and the Client. It has been prepared based on the information supplied by the Client, as well as investigation undertaken by ADW Johnson and the sub-consultants engaged by the Client for the project.

Unless otherwise specified in this report, information and advice received from external parties during the course of this project was not independently verified. However, any such information was, in our opinion, deemed to be current and relevant prior to its use. Whilst all reasonable skill, diligence and care have been taken to provide accurate information and appropriate recommendations, it is not warranted or guaranteed and no responsibility or liability for any information, opinion or commentary contained herein or for any consequences of its use will be accepted by ADW Johnson or by any person involved in the preparation of this assessment and report.

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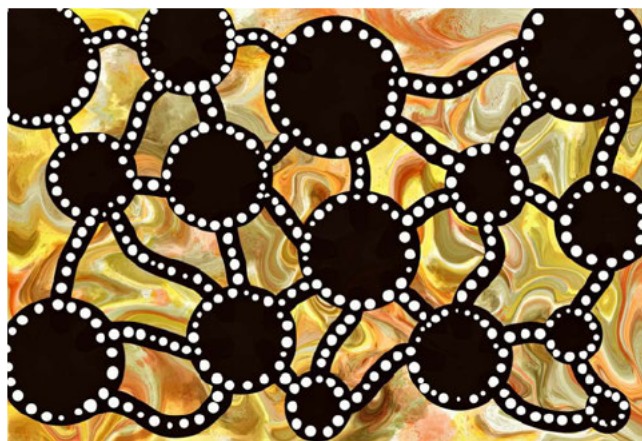
The Client should be aware that this report does not guarantee the approval of any application by any Council, Government agency or any other regulatory authority.

Acknowledgement of Country

We, ADW Johnson, acknowledge the Traditional Custodians of the land where we live and work, the country of Awabakal, Darkinjung and the Eora Nation.

We recognise their continuous connection to the land and waters of our beautiful regions. We pay our respects to Aboriginal and Torres Strait Islanders Elders past, present and emerging.

Artwork created by Joe Griffin, a proud Aboriginal man, descendant of the Awabakal people.



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1.0 Introduction

ADW Johnson (ADWJ) has been engaged by Eden Estates to prepare this servicing report to support the Planning Proposal for an amendment to the Lake Macquarie Local Environmental Plan (LMLEP) 2014 and the Newcastle Local Environmental Plan 2012 in relation to a 574ha parcel of land within the suburbs of Glendale, Edgeworth, Cameron Park, Wallsend and Elmore Vale (hereafter referred to as 'the site'). The site is owned by Eden Estates (Newcastle) Pty Ltd.

This report provides commentary on the servicing and engineering principles which underpin the developability of the site.

Figure 1 shows the site location and **Figure 2** shows the site context with respect to land ownership.

The site is one of the most strategically well-located housing release areas within the Greater Newcastle Metropolitan Plan Area. It is the closest housing release area to the metropolitan core. It sits within a regionally significant catchment and growth area. The site is well connected to the City and inter-regional road and rail connections providing an opportunity to enhance local multi-modal transport options. The site sits within the catchment of regional and local open space, recreation and sporting areas that continue to be enhanced and expanded.

The planning proposal is supported by a preliminary structure plan (drawing 055.WS.070-01 prepared by Urbanco), which is shown in **Figure 4**.

In addition to the site, there is adjacent land that, with the consent of the owners and planning authorities can logically be planned in conjunction with the site. This land includes;

- Road Reserves within the site (20ha);
- The area between the site and Maryland Creek in the vicinity of Boundary Road and Downie Lane (9ha). This area is currently rural acreage with a number of private owners;
- The area between the site and an unnamed tributary of Ironbark Creek (10ha). The land is in one ownership and is currently zoned R2;
- A parcel of land within the site owned by Hunter Water (2ha).



Figure 1: Site Location

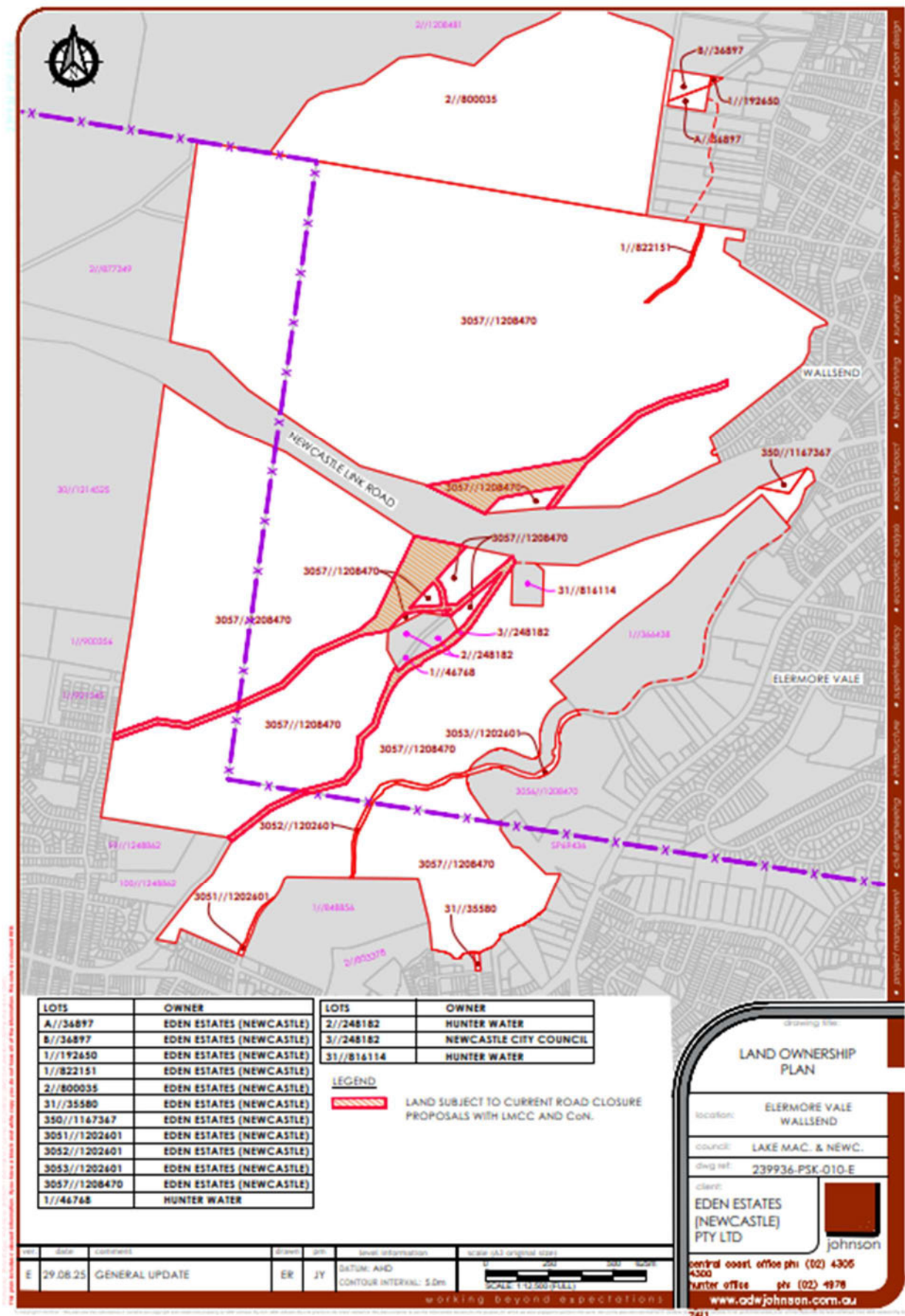


Figure 2: Land Ownership

1.1 Location/Existing Land Use

The site is approximately 574ha comprised of 11 separate properties as identified in **Figure 2**. The site is located within the suburbs of Glendale, Edgeworth, Cameron Park, Wallsend and Elmore Vale. The north-eastern portion of the site is in the City of Newcastle (CoN) Local Government Area (LGA) and the south-western portion of the site is in the Lake Macquarie City Council (LMCC) LGA.

The site is former mining land with a history of underground and concentrated areas of surface mining. The site has been remediated under a mine closure plan.

We note the following site attributes:

- The site is bound by the Summerhill Waste Management Centre to the north;
- The site is bound by existing residential and commercial land to the east;
- The site is bound by future residential development (Winten's Minmi development) to the west;
- The site is bound by residential land and the Glendale TAFE campus to the south;
- The site is bisected by the Newcastle Link Road;
- The site surrounds the Elmore Vale Water Reservoirs;
- Maryland Creek and tributaries run through the site towards the north-eastern edge of the site;
- A tributary of Ironbark Creek runs west to east through the site in the south-eastern corner of the site; and
- Brush Creek and tributaries, and a tributary of Winding Creek run north to south through the site in the southern-western corner of the site.

The site is currently vacant.

1.2 Topography

The site comprises a generally undulating landscape, with local high points, ridges and gullies traversing the site.

Ground-truthed LIDAR survey indicates that surface levels within the site range from its lowest point, being approximately RL 7m AHD around the watercourse in the south-western corner of the site, to approximately RL 95m AHD on a ridge in the northern portion of the site.

The majority of the site is of moderate slope (5-15% in grade) although some sections of the site have steep slopes (exceeding 20%). The steeper slopes are primarily associated with the ridgeline that runs north-south through the site.

The site is largely vegetated noting cleared areas, the result of former surface mine workings and infrastructure.

The existing topography is illustrated by the topographic plan in **Figure 3**.

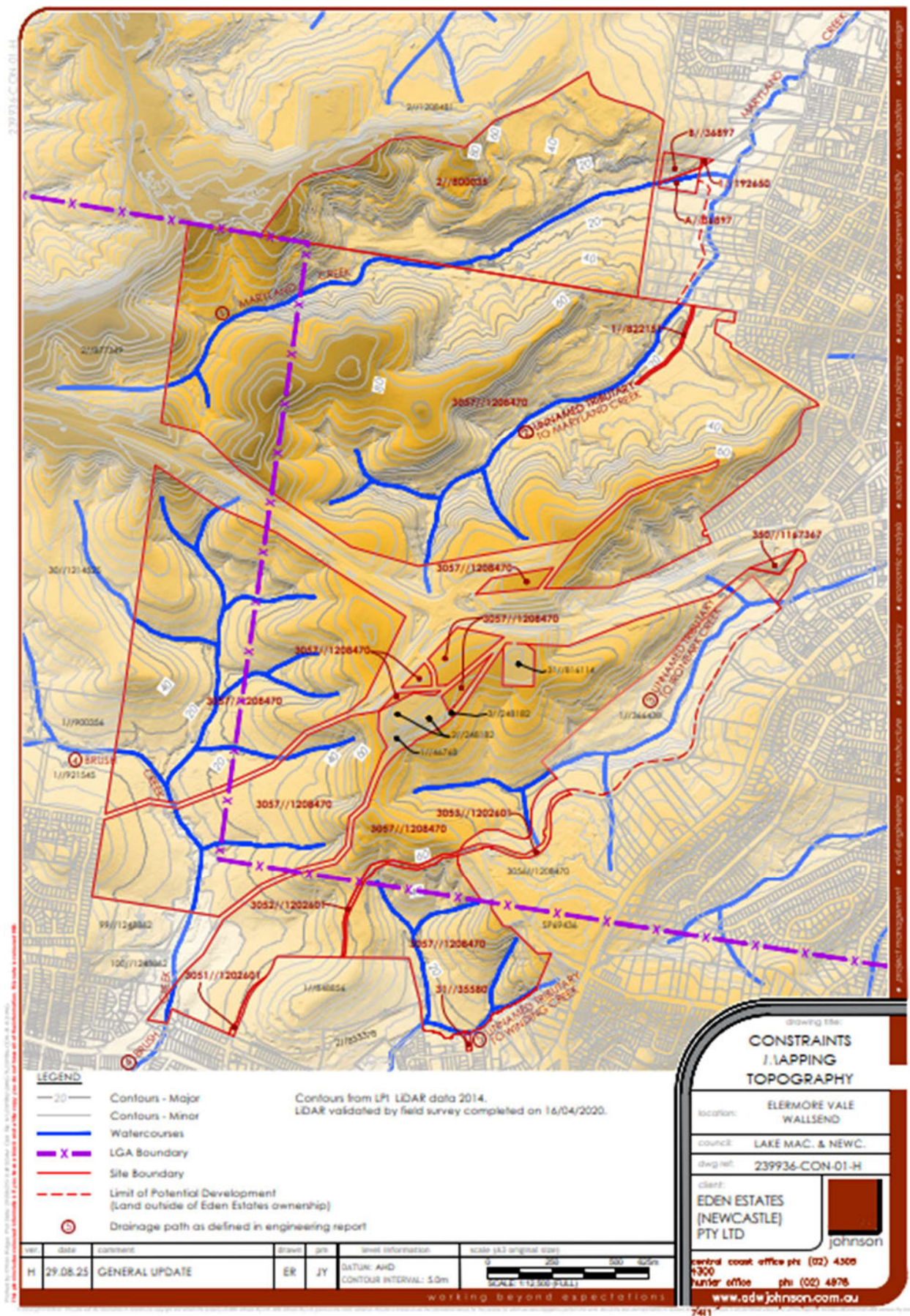


Figure 3: Topographic Plan

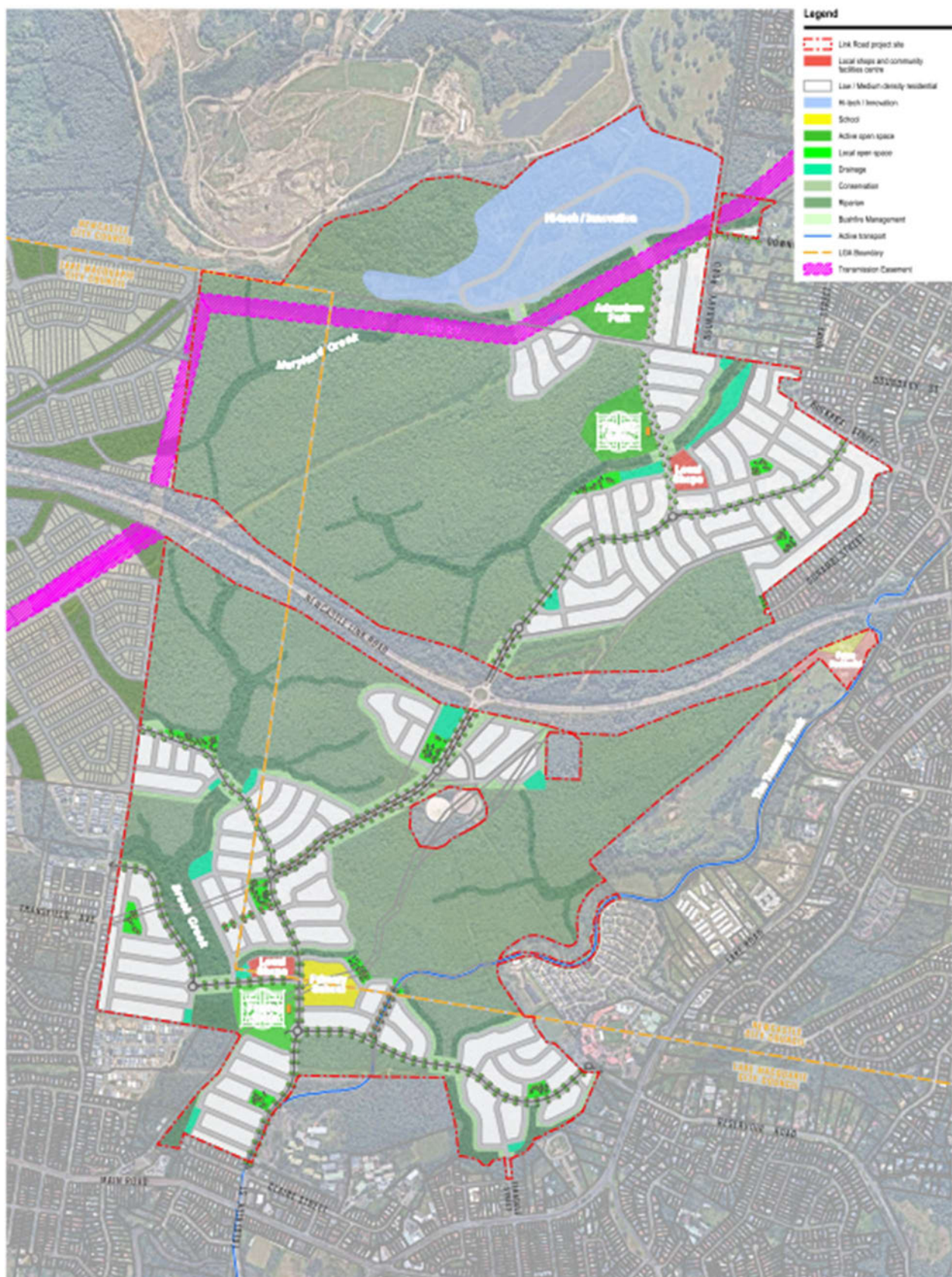
2.0 Intended Land Use

2.1 Intended Land Use

Urbanco have prepared a Preliminary Structure Plan for the site describing potential development areas. The Structure Plan indicates the following intended land uses;

- Conservation Land;
- Residential;
- Commercial;
- Employment;
- Open Space / Recreation;
- Education.

The Structure Plan is shown in **Figure 4**.



Development Concept Plan
Link Road, Wallsend

Project: Urban Extension 055.110

DRAFT FOR DISCUSSION

Scale: 1:2500
Date: 27/06/2023
Author: [illegible]
Check: [illegible]
Drawn: [illegible]

urbanco
URBAN DESIGN & PLANNING
2023/06/27 14:00:00

Figure 4: Preliminary Structure Plan (Urbanco Dwg 055.WS.010-04)

3.0 Engineering Principles

3.1 Bulk Earthworks

The topography of the site is a generally undulating landscape, with local ridges and gullies traversing the site. The majority of the site is of moderate slope (5-15% in grade) although some sections of the site have steep slopes (exceeding 20%).

A slope analysis of the site has been undertaken. **Figure 5** highlights the areas within the site with slopes of 20-25%, 25-30% and >30%.

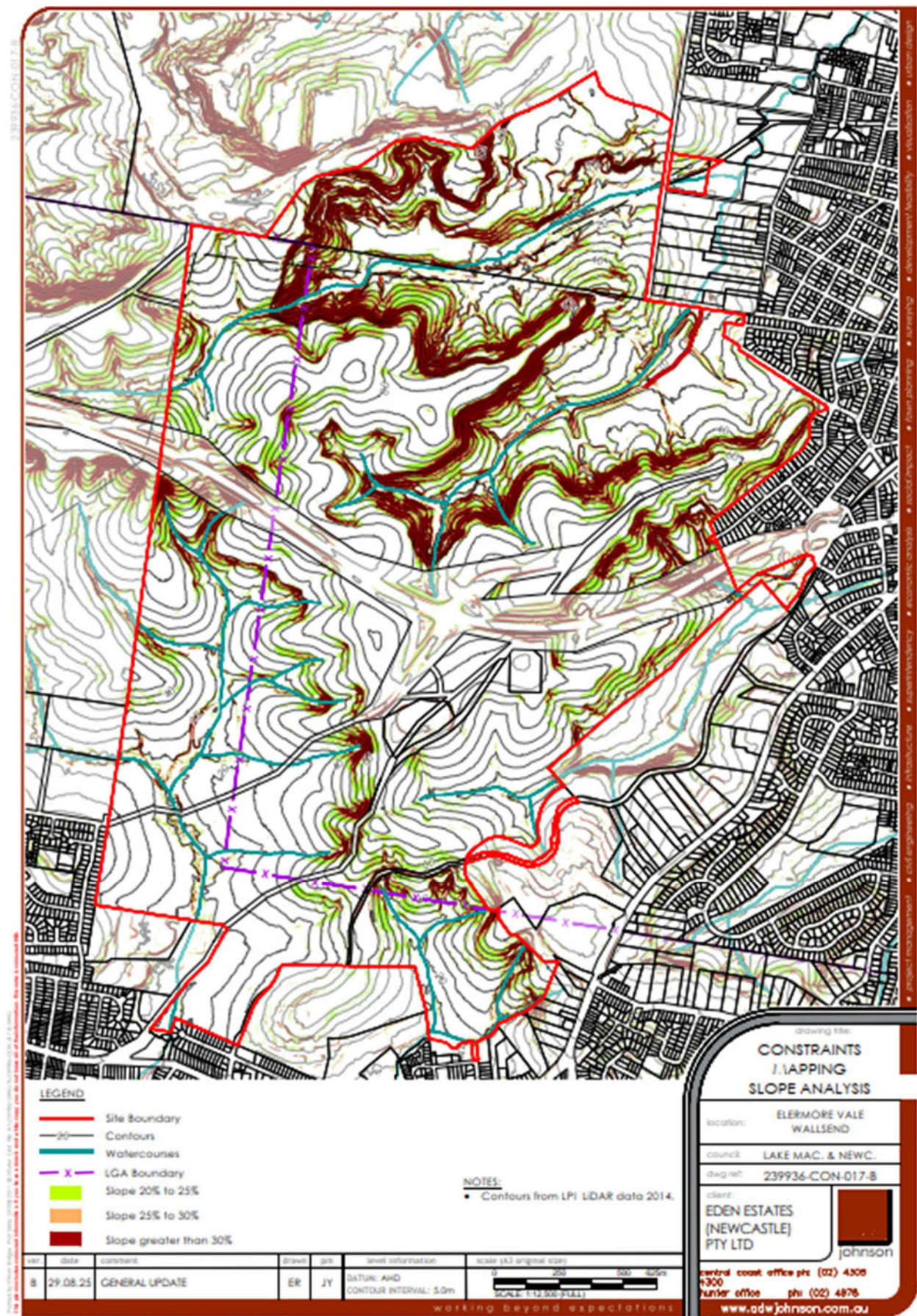


Figure 5: Slope Analysis Plan

Areas of slope >20% have generally been excluded from the proposed development footprint noting discrete areas which will allow reshaping using normal engineering practices to create road connections and some smaller pockets and edges within footprint areas.

It is proposed to bench areas with a grade of 5-10% with retaining walls between residential lots. Site grading of this nature is also ideal in providing adequate drainage for a subdivision development.

Bulk earthworks are proposed in areas of grades between 10-20% to generate a landform more suitable for urban development and realise the development potential of the site. The resultant landform will also be benched and retained.

It is intended that material excavated from cut areas will be reused in fill areas as engineering fill compacted under geotechnical supervision to achieve appropriate lot classifications supporting residential foundations (typically raft slab). It is anticipated that bulk earthworks operations will be undertaken in a number of stages.

The site's landform is appropriate for development. The majority of the site (grading at less than 20%) can be developed utilising standard engineering and construction practices. The site is also surrounded by completed and approved development, emphasising the developability of the area's topography.

3.1.1 Areas of Fill Relating to Previous Surface Mining

Areas of the northern portion of the site were subject to surface mining operations. Douglas Partners have carried out site investigations, including underground investigation to identify the extent, composition and depth of the areas of fill. The outcomes of the Douglas Partners investigations are detailed in their report 91610.05 dated December 2020.

These areas of fill are shown in **Figure 6** and are located in the north-eastern portion of the site, around the former Wallsend No. 2 Colliery pit top areas. The surface mining operations resulted in deep excavations that have been filled with material won as a result of mining operations.

Within report 91610.05, Douglas Partners discuss the ability to achieve the following hierarchy of land uses with consideration for combustibility, acid generation potential and geotechnical condition of the existing fill:

- No development (allow the area to regenerate bushland / Biodiversity Stewardship);
- Open Space (such as sporting fields);
- Commercial development; or
- Residential development, including roads, services and buildings.

Report 91610.05 outlines possible avenues to achieve each land use. In most cases, the pathway to each land use involves earthworks such as removal, replacement and compaction of material and/or blending or capping of material. Based on our experience on similar and adjacent sites, these outcomes are achievable with industry-standard earthworks techniques.

Areas of former surface mining operations and resulting deep fill do not inhibit the developability and potential rezoning of the land. These areas can be remediated to achieve a number of land uses through earthworks techniques which have been considered in the selection of the development footprint.

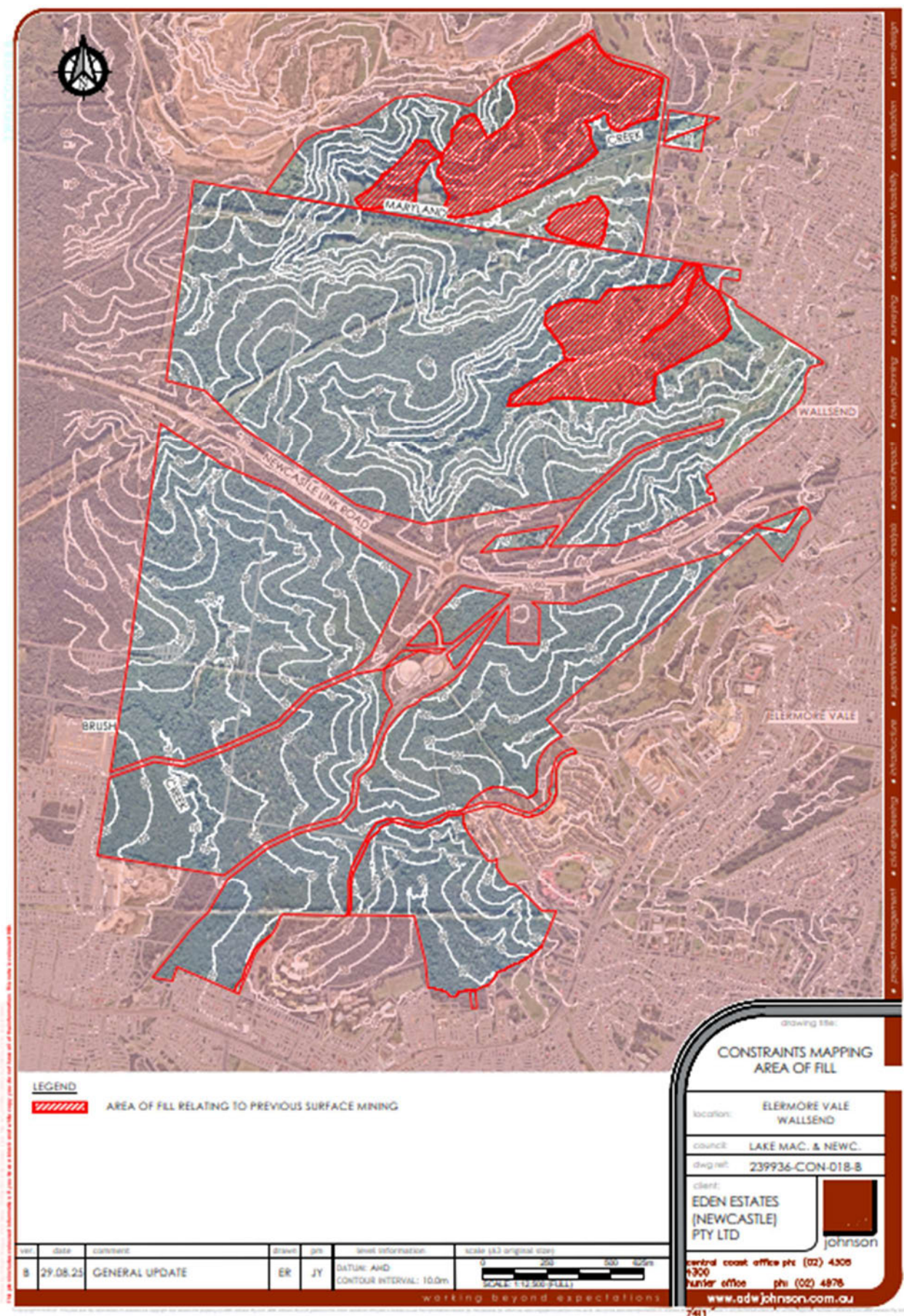


Figure 6: Areas of Fill Relating to Previous Surface Mining

3.2 Services

We have carried out a review of servicing requirements for the development of the site including:

- Water;
- Wastewater;
- Electrical;
- Communication; and
- Gas.

Water – Hunter Water Corporation

We have held consultation with Hunter Water Corporation (HWC) with regard to development of the site based on the preliminary structure plan by way of two meetings and additional telephone discussions. We have received Preliminary Servicing Advice from HWC and it is attached at **Appendix A**. The Preliminary Servicing Advice acknowledges that the structure plan can be serviced and that details of water infrastructure and connection requirements are to be confirmed by a developer-funded water strategy as is normal development practice.

The site is supplied by the Elmore Vale Reservoirs located within the site. Large diameter water trunk mains, supplied by the reservoirs, run through the site and connection to these existing trunk mains is possible. The location of existing water infrastructure is shown in **Figure 7**.

The Elmore Vale Reservoirs are located with a top water level of RL88m. Development land within the site above RL66m will require a booster pumping station. Development land below RL28m may require pressure reduction measures such as a pressure reducing valve.

The Preliminary Servicing Advice acknowledges the large scale and preliminary nature of the development proposal and provides only broad connection information that will form the base information for development of the water strategy

The full site is able to be serviced by water infrastructure. Due to the proximity to, and capacity within the existing water network, water infrastructure works to service the site are considered minimal with regard to normal development practices.

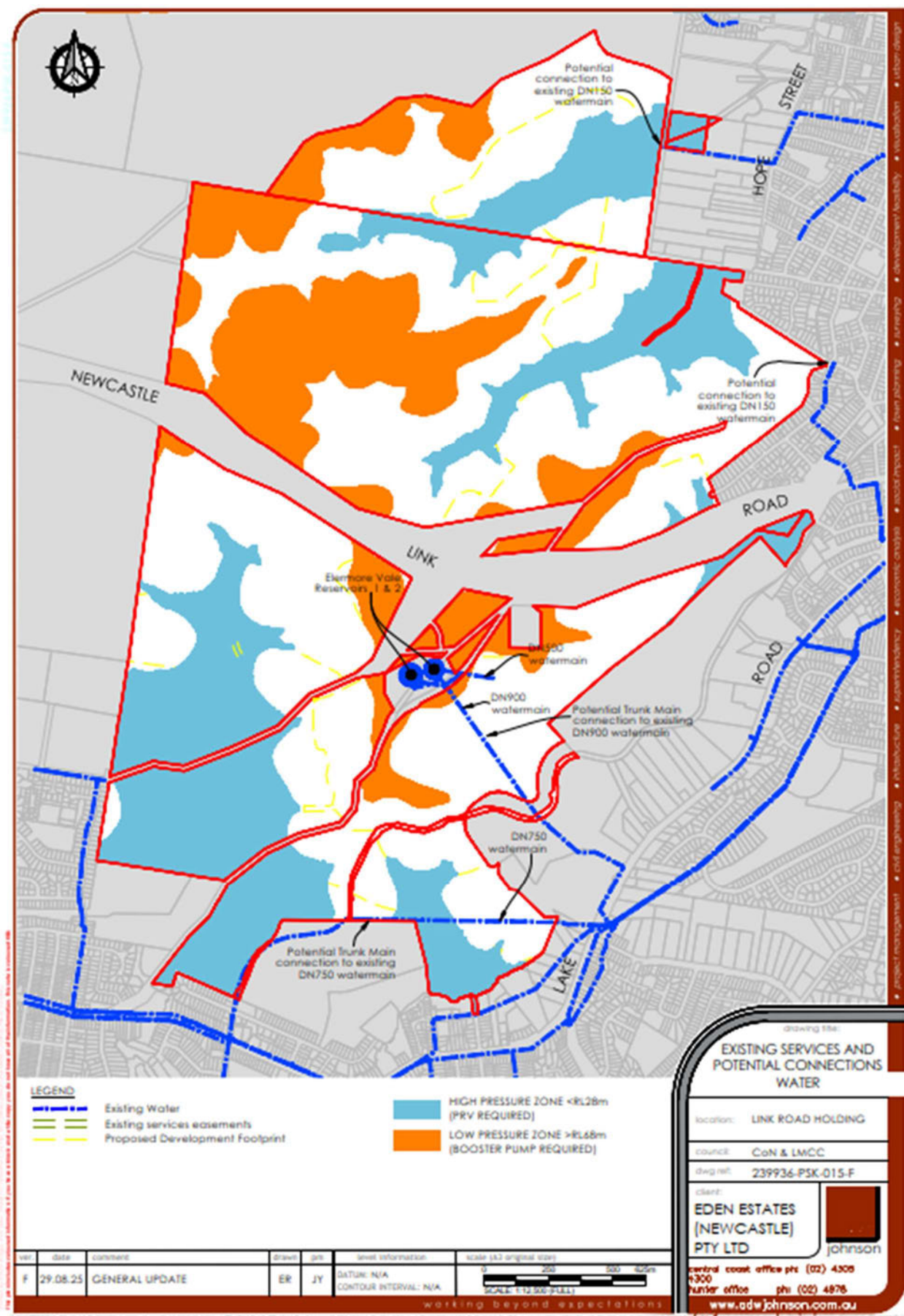


Figure 7: Existing Water Infrastructure and Potential Connections

Wastewater – Hunter Water Corporation

We have held consultation with Hunter Water Corporation (HWC) with regard to development of the site based on the preliminary structure plan by way of two meetings and additional telephone discussions. We have received Preliminary Servicing Advice from HWC and it is attached at **Appendix A**. The Preliminary Servicing Advice acknowledges that the structure plan can be serviced and that details of wastewater infrastructure and connection requirements are to be confirmed by a developer-funded sewer strategy as is normal development practice.

The topography of the land divides the site into four sewer catchments. Catchments 1 and 3 will ultimately drain to Edgeworth Wastewater Treatment Works and Catchments 2 and 4 will drain to Shortland Wastewater Treatment Works. The sewer catchments are shown in **Figure 8**.

A potential wastewater servicing strategy for each catchment is as follows:

- Catchment 1 – South West;

Catchment 1 is likely to be serviced by making connection to the existing DN225 gravity main draining to the Cardiff No. 1 Waste Water Pump Station (WWPS) catchment. The main was recently constructed by adjacent development and allows spare capacity for development of a portion of the site.

- Catchment 2 – East;

Catchment 2 is likely to require a new gravity main to drain the catchment to the Wallsend SF WWPS catchment with likely connection near Wallsend Oval.

- Catchment 3 – South East;

Catchment 3 is likely to require a new gravity main to drain the catchment to the Cardiff No.1 WWPS catchment, likely via Ferndale Street and Stephens Street with connection into an existing DN225 main in Lake Road.

- Catchment 4 – North of the Link Road;

Catchment 4 is likely to require a new Wastewater Pump Station (WWPS) along with a rising main to discharge into the Wallsend SF WWPS catchment area.

The potential upgrade of the sewer network aligns with HWC growth policies and recent NSW Government Investment in the surrounding network (Minmi 3 Wastewater Pump – Housing Acceleration Funding).

HWC have been supportive of this approach in our consultation with them and the above will be one option included in the wastewater strategy.

The sewer catchments, existing trunk infrastructure and potential servicing connections are shown in **Figure 8**. It is noted that the catchment areas are based upon the entirety of the existing site and the developable area is less than this.

The full site is able to be serviced by sewer infrastructure. Due to its proximity to, and capacity within the existing network, sewer infrastructure works to service the site are considered to be low with regard to normal development practices.

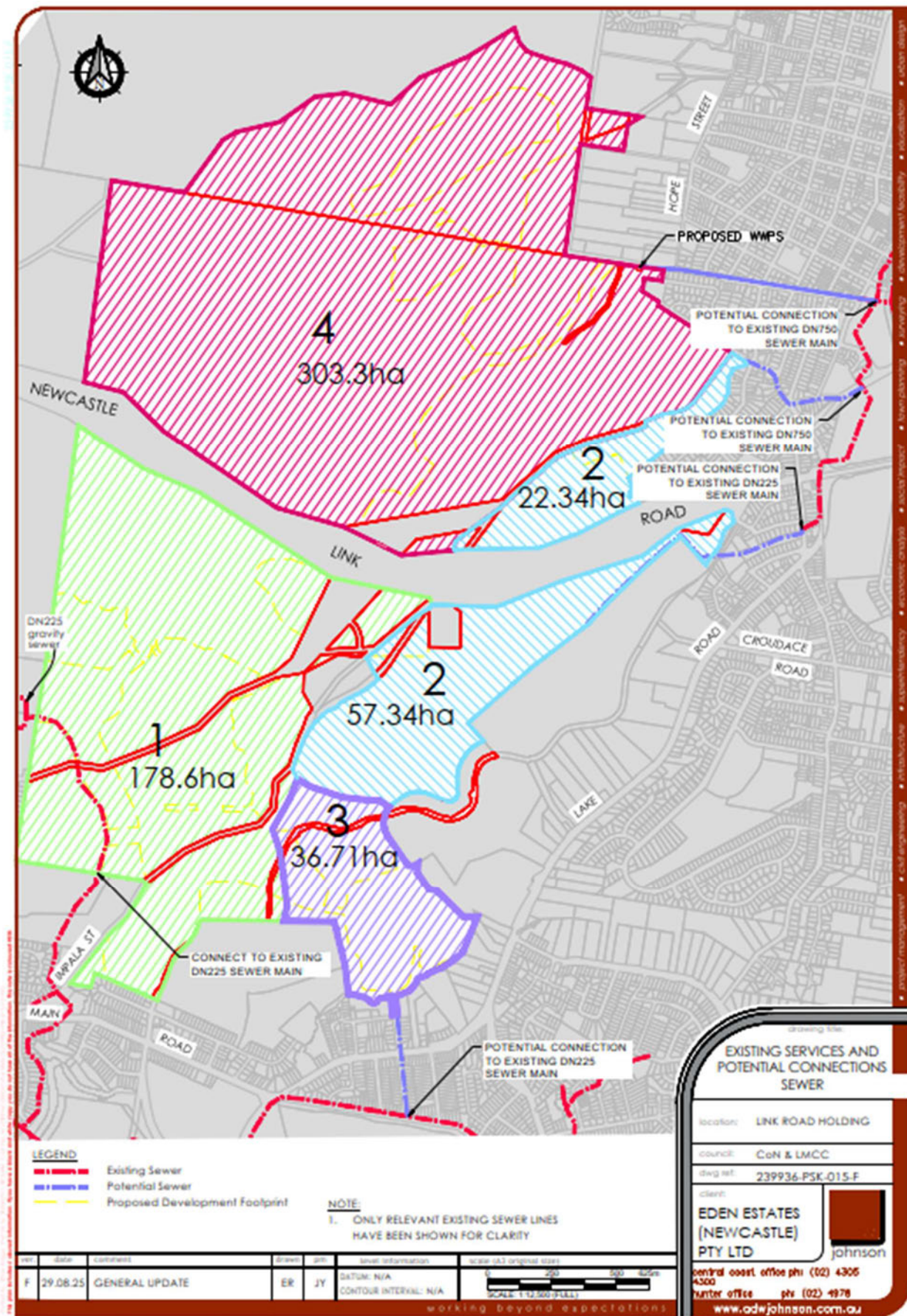


Figure 8: Existing Wastewater Infrastructure and Potential Connections

Electricity – Ausgrid

An electrical infrastructure overview has been undertaken by Power Solutions Pty Ltd for the site (**Appendix B**). Existing electrical infrastructure is shown in **Figure 9**.

Power Solutions have confirmed that the site is likely capable of being serviced by the two existing Ausgrid 11kV feeders within the site. It is also noted that the Maryland Zone Substation has two spare 11kV feeders, to which connection can be made if required.

Two Ausgrid 132kV transmission lines traverse the site and are unsuitable for connection to the site. It is noted that these lines may be relocated (underground or overhead) in accordance with Ausgrid's network standards in order to complement the final development footprint.

It is proposed that the 330kV TransGrid line that traverses the site is left undisturbed.

The proposed development has access to two existing Ausgrid 11kV feeder with additional redundancy available via Maryland Zone Substation. The development can be serviced via the standard Ausgrid Contestable process.

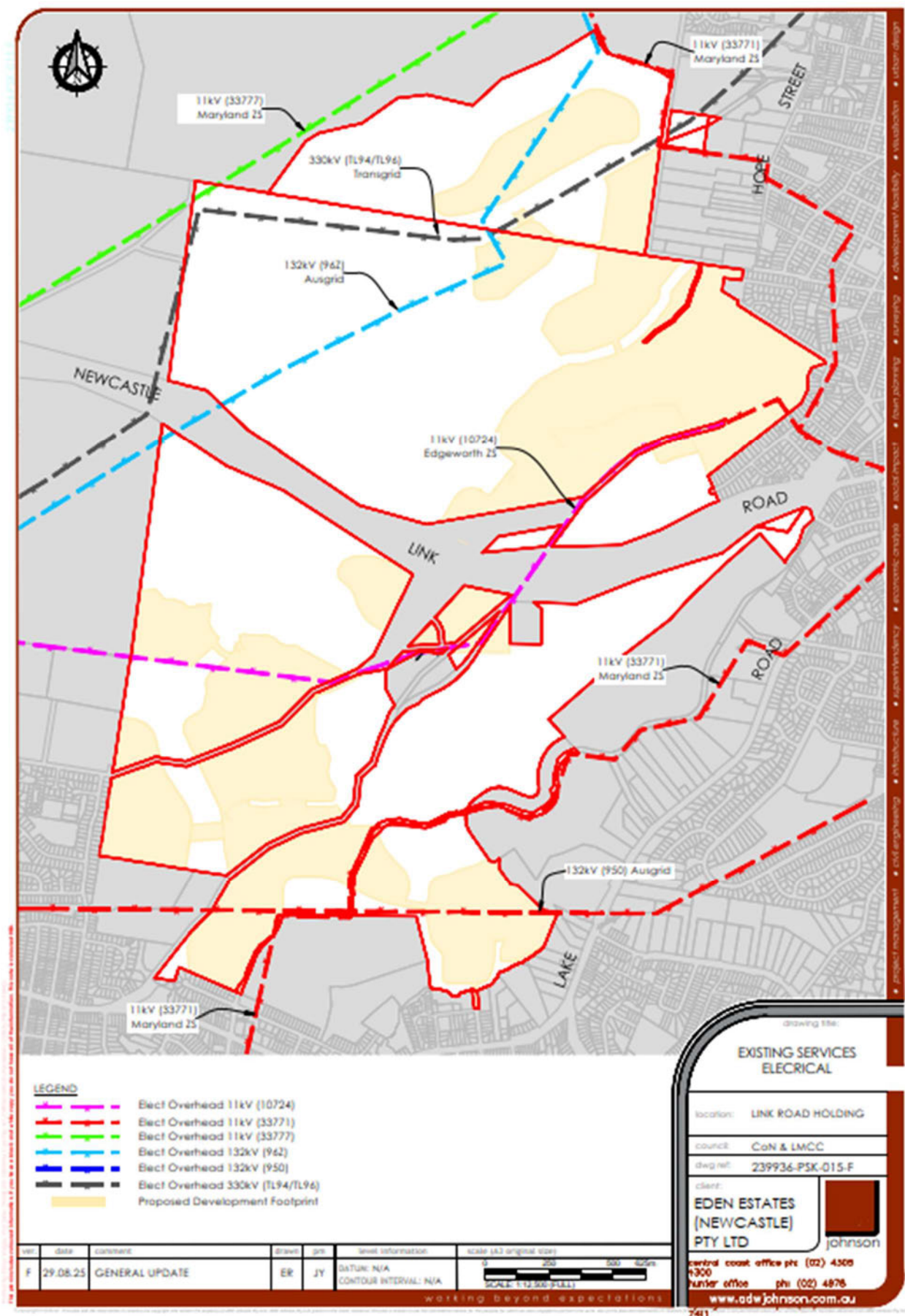


Figure 9: Existing Electrical Infrastructure

Communications – NBN Co.

NBN Co are obligated to provide NBN telecommunications connection to all new developments. It is noted that there is existing NBN infrastructure in both the Newcastle Link Road, which bisects the site, and on Lake Road, immediately adjacent to the site to the east. It is likely that some infrastructure backhaul will be required; the extent of works will be determined by NBN Co once an application for connection is made. It is noted that this is routine development practice.

Communications infrastructure will be available as development proceeds and as such, communications servicing does not inhibit the developability and potential rezoning of the site.

Communications – Mobile Coverage.

As required under the Telecommunication in New Development Policy (TIND), mobile coverage is to be considered for new developments. As per **Figure 10**, majority of the site is covered by the Telstra 5G network. Areas unable to access the 5G network have full coverage by the 4G network as shown in **Figure 11**.

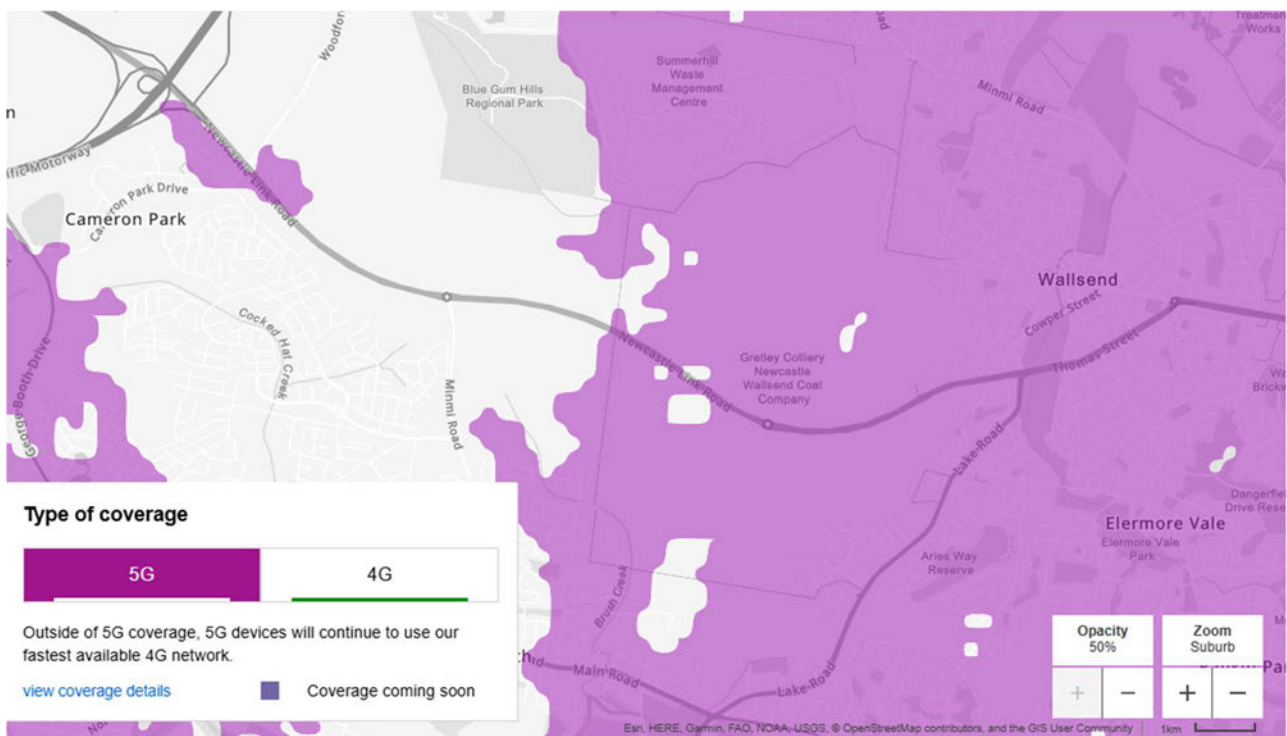


Figure 10: Telstra 5G Coverage



Figure 11: Telstra 5G Coverage

Adequate mobile coverage is available and therefore does not inhibit the developability and potential rezoning of the site.

Gas – Jemena

There is an existing high-pressure gas main that runs along Rundle Avenue and Lake Road to the east of the site and Main Road to the south of the site. Jemena will not provide conclusive servicing advice until a connection application is made. It is noted that where supply is available that Jemena will typically provide mains and reticulation at no cost where a common services trench is provided to them. Although it is not essential to the development, it appears that gas connection is available, however this cannot be confirmed until a connection application is made.

Gas is not a necessity for the development process however, it appears that connection can be made. Gas servicing does not inhibit the developability of the site.

4.0 Conclusion

We have carried out a review of engineering principles related to planning of the site in accordance with the structure plan.

Our review included investigation of the following principles to ascertain the developability of the site in support of the rezoning:

- Bulk Earthworks;
- Areas of Fill Related to Previous Surface Mining;
- Services Infrastructure:
 - Water – Hunter Water Corporation;
 - Wastewater – Hunter Water Corporation;
 - Electricity – Ausgrid;
 - Communications – NBN Co.;
 - Communications – Mobile Coverage;
 - Gas – Jemena.

Our review and investigation found the following;

Bulk Earthworks

The site's landform is appropriate for development. The majority of the site (grading at less than 20%) can be developed utilising standard engineering and construction practices. The site is also surrounded by completed and approved development, emphasising the developability of the area's topography.

Areas of Fill Relating to Previous Surface Mining

Areas of former surface mining operations and resulting deep fill do not inhibit the developability and potential rezoning of the land. These areas can be remediated to achieve a number of land uses through earthworks techniques which have been considered in the selection of the development footprint.

Services

Water – Hunter Water Corporation

The full site is able to be serviced by water infrastructure. Due to the proximity to, and capacity within the existing water network, water infrastructure works to service the site are considered minimal with regard to normal development practices.

Wastewater – Hunter Water Corporation

The full site is able to be serviced by sewer infrastructure. Due to its proximity to, and capacity within the existing network, sewer infrastructure works to service the site are considered to be low with regard to normal development practices.

Electricity - Ausgrid

The proposed development has access to two existing Ausgrid 11kV feeder with additional redundancy available via Maryland Zone Substation. The development can be serviced via the standard Ausgrid Contestable process.

Communications – NBN Co.

Communications infrastructure will be available as development proceeds and as such, communications servicing does not inhibit the developability and potential rezoning of the site.

Communications – Mobile Coverage.

Adequate mobile coverage is available and therefore does not inhibit the developability and potential rezoning of the site.

Gas – Jemena

Gas is not a necessity for the development process however, it appears that connection can be made. Gas servicing does not inhibit the developability or potential rezoning of the site.

Our review of engineering principles including civil construction, flooding and infrastructure servicing supports development of the site on the basis that the development outcomes are achievable utilising standard engineering and construction practices. In the case of stormwater, water, wastewater and electrical servicing the site can be developed with greater efficiency than many other release areas in the Hunter owing to existing infrastructure on site and the site's proximity to, and capacity within the existing services networks.

Appendix A

Hunter Water Corporation
Preliminary Servicing Advice





Hunter Water Corporation
ABN 46 228 513 446

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HRMC NSW 2310
36 Honeysuckle Drive
NEWCASTLE NSW 2300
1300 657 657 (T)
(02) 4979 9625 (F)
hunterwater.com.au

15 December 2020

Ref: 2020-1334

The Newcastle Wallsend Coal Co Pty Ltd
C/- ADW Johnson Pty Ltd
7/335 Hillsborough Road
Warners Bay NSW 2282

Attention: Adam Gaul

Dear Adam,

PRELIMINARY SERVICING ADVICE

Hunter Water offers the following preliminary servicing advice for the provision of water and sewerage facilities to the preliminary application for the proposed Residential Subdivision at Lot 3057 DP 1208470 & various lots, 39 Bulkara Street, Wallsend NSW 2287.

General information on water and sewer issues relevant to the proposal is included in this correspondence. This information is based on Hunter Water's knowledge of its system performance and other potential development in the area at the present time.

As the development may be subject to rezoning and approval by Council(s) any information offered by Hunter Water is only preliminary and may be subject to significant change prior to proceeding.

The preliminary servicing advice offered is not binding on Hunter Water. Once Development Consent has been granted and you wish to proceed with your development you will be required to lodge an application for Notice of Requirements from Hunter Water and comply with these requirements prior to the issue of a Section 50 Compliance Certificate.

Hunter Water's preliminary servicing advice provides general information on water and sewer issues relevant to the proposed development. The information provided is based on Hunter Water's knowledge of current system performance and other potential development in the area. There could be significant change prior to lodging a Development Application and therefore these preliminary requirements may be different to the Notice of Requirements provided in the future.

Network Infrastructure and Delivery

1 Water Supply

The site of the proposed development is located in the West Lakes Water Supply System, and is supplied from the Elmore Vale Reservoir 1 and 2. Unfortunately, due to the large scale and preliminary nature of this development, only broad details of the likely connection points and associated boundary conditions can be provided at this time.

The maximum serviceable level from the two existing Elmore Vale Reservoirs, located within the development site, is approximately 60 m. Lots above this level will require the construction of a booster water pump station to meet minimum pressure requirements.

A water servicing strategy and modelling report will be required to confirm the interim and ultimate trunk servicing arrangement, water pump station(s) and future reservoir location. Strategy development is explained further in Item 4 below.

Potential initial development areas on the periphery of existing residential areas have been explored in more detail;

Southern – Frederick Street

There are trunk water mains along Main Rd that would be able to provide capacity for initial lots. There is no spare capacity in the 100mm reticulation main in Frederick St.

South West – Transfield Avenue

A 200mm watermain is available at the eastern extent of Transfield Avenue to provide some capacity for initial stages in this area.

South East – Ferndale Street

There is minimal capacity within the existing reticulation mains along Ferndale Street and Lakes Road for development within this catchment. Connection from the trunk mains in the vicinity of the Lake/Reservoir Rd intersection may be required.

Eastern– Turrama Street

There are no significant mains to service beyond a small number of initial lots in the far eastern end of the development. Upgrades would be required from the trunk network on Rundle Avenue.

North East – Bulkara Street

There is limited capacity within the existing watermain on Bulkara Street for lots at lower elevations. The reticulation network would need to be modelled in further detail to determine upgrades required as there is no trunk system in this area.

North West – proposed mixed use zone

There are no existing mains in this area.

Central

Servicing of the central portions of land to the north and south of Newcastle Link Road would likely involve a new trunk network from the Elmore Vale Reservoirs. A new Water Pump Station will be required for elevations above approximately 60m.

2 Wastewater Transportation

The available capacity over the sewer network is as follow:

North East Boundary

Maryland 4 WWPS has 190 ET spare capacity - DN150 upgrade for 150m and extend 380m of DN150 PVC of sewer to be able to service through Downie Lane.

East Boundary

Wallsend 1 WWPS has 10 ET spare capacity and could not carry significant loads of the development. Therefore, alternative options such as a gravity connection to Maryland 4 WWPS may be explored.

South Boundary

Argenton 1 WWPS has been upgraded to 2021 flow of 2125 L/s. With 2019 ET and pump flows, it has about 200 L/s spare capacity. It is a large catchment with multiple hotspots throughout the network. However with recent WWPS upgrade has improved performance in vicinity.

3 Wastewater Treatment Network

Northern Boundary could drain to the Shortland WWTW through Maryland WWPS. While southern boundary is pumped to Edgeworth WWTW. Both WWTW have capacities at the current connected capacity to cater for extra loads. The available capacity depends on the time frame of the connected development accordingly.

The proposed development will drain toward the Shortland and Edgeworth WWTW. Both WWTW have sufficient capacity for the proposed development.

4 Strategy Development

The above connection points should be confirmed via completion of a detailed developer – funded water and sewer servicing strategy. The strategy will be required to investigate the infrastructure necessary to service the proposed development and any augmentation to Hunter Water's existing water and sewerage systems.

The water and sewer strategies should address, but not be limited to, the following matters:

- Adjacent development areas;
- Development layout, staging and timing;
- Infrastructure required to service the proposed development;
- Existing asset constraints;
- Alternative connection points;
- Preliminary sizing and layout of the water and wastewater transport system.
- Any necessary augmentations to Hunter Water's existing water and wastewater supply system;
- Security of supply;
- Boosting for high level areas;
- Pressure Reducing Valves;
- Options to provide trunk main capacity to the development and to any other developments in the area and the likely timing of these developments;
- Identify and assess all possible wastewater servicing options mentioned above and any other feasible options available; and
- Estimated capital and operational costs of the proposed water and wastewater transport infrastructure.

Hunter Water recommends that you liaise further with our Development Planning and Relations team before commencing the strategy so that the following matters can be addressed:

- Presentation of an overview of development, including location, expected water supply and wastewater demand parameters, major construction challenges, staging options and any other relevant known aspects that may impact Hunter Water's network;
- Discussion of any known system constraints that may affect the proposed development;
- Presentation and discussion of possible connection points to existing Hunter Water assets; and
- Agreement of the study area to be presented in strategy.

These preliminary requirements are not commitments by Hunter Water and maybe subject to significant change prior to this development proceeding.

Yours Sincerely



Wesley Jones

R/ Account Manager Major Development

Enquiries:



Tel:



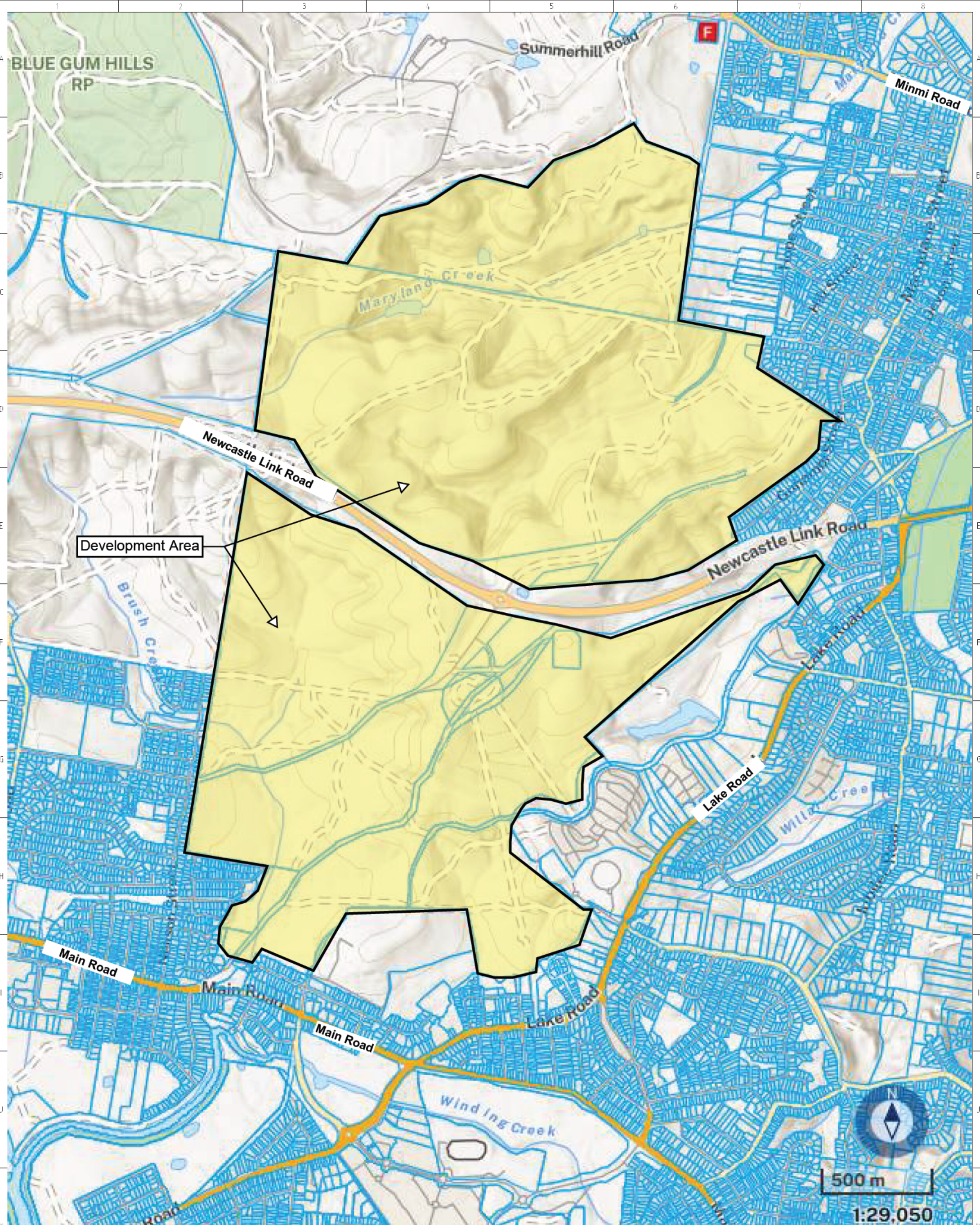
Email:





Appendix B

Power Solutions Electrical
Servicing Report



Locality Sketch

N.T.S

CONCEPT ONLY

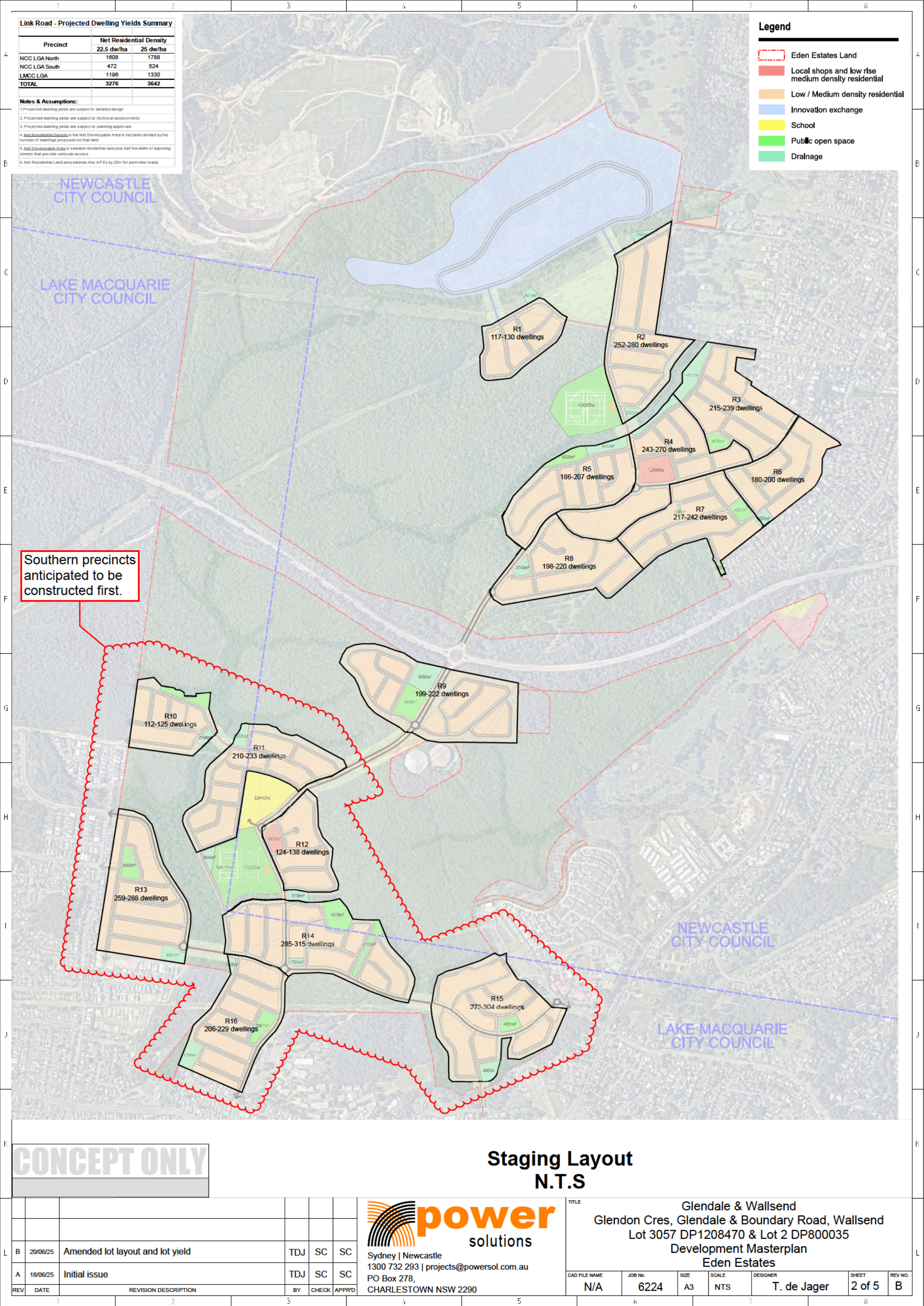
						 power solutions Sydney Newcastle 1300 732 293 projects@powersol.com.au PO Box 278, CHARLESTOWN NSW 2290	TITLE Glendale & Wallsend Glendon Cres, Glendale & Boundary Road, Wallsend Lot 3057 DP1208470 & Lot 2 DP800035 Development Masterplan Eden Estates								
B	20/06/25	Amended lot layout and lot yield			TDJ		SC	SC	CAD FILE NAME	JOB No.	SIZE	SCALE	DESIGNER	SHEET	REV NO.
A	18/06/25	Initial issue			TDJ		SC	SC	N/A	6224	A3	NTS	T. de Jager	1 of 5	B
REV	DATE	REVISION DESCRIPTION			BY		CHECK	APPRD							



Sydney | Newcastle
1300 732 293 | projects@powersol.com.au
PO Box 278,
CHARLESTOWN NSW 2290

TITLE	Glendale & Wallsend Glendon Cres, Glendale & Boundary Road, Wallsend Lot 3057 DP1208470 & Lot 2 DP800035 Development Masterplan Eden Estates
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CAD FILE NAME	JOB No.	SIZE	SCALE	DESIGNER	SHEET	REV NO.
N/A	6224	A3	NTS	T. de Jager	1 of 5	B



Link Road - Projected Dwelling Yields Summary

Precinct	Net Residential Density	
	22.5 dw/ha	25 dw/ha
NCC LGA North	1608	1788
NCC LGA South	472	524
LMCC LGA	1196	1330
TOTAL	3276	3642

Notes & Assumptions:

1. Projected dwelling yields are subject to detailed design
2. Projected dwelling yields are subject to technical assessments
3. Projected dwelling yields are subject to planning approvals
4. Net Residential Density is the Net Developable Area in hectares divided by the number of dwellings proposed on that land
5. Net Developable Area is saleable residential land plus half the width of adjoining streets that provide vehicular access
6. Net Residential Land area extends into APZs by 20m for perimeter roads

Legend

- Eden Estates Land
- Local shops and low rise medium density residential
- Low / Medium density residential
- Innovation exchange
- School
- Public open space
- Drainage

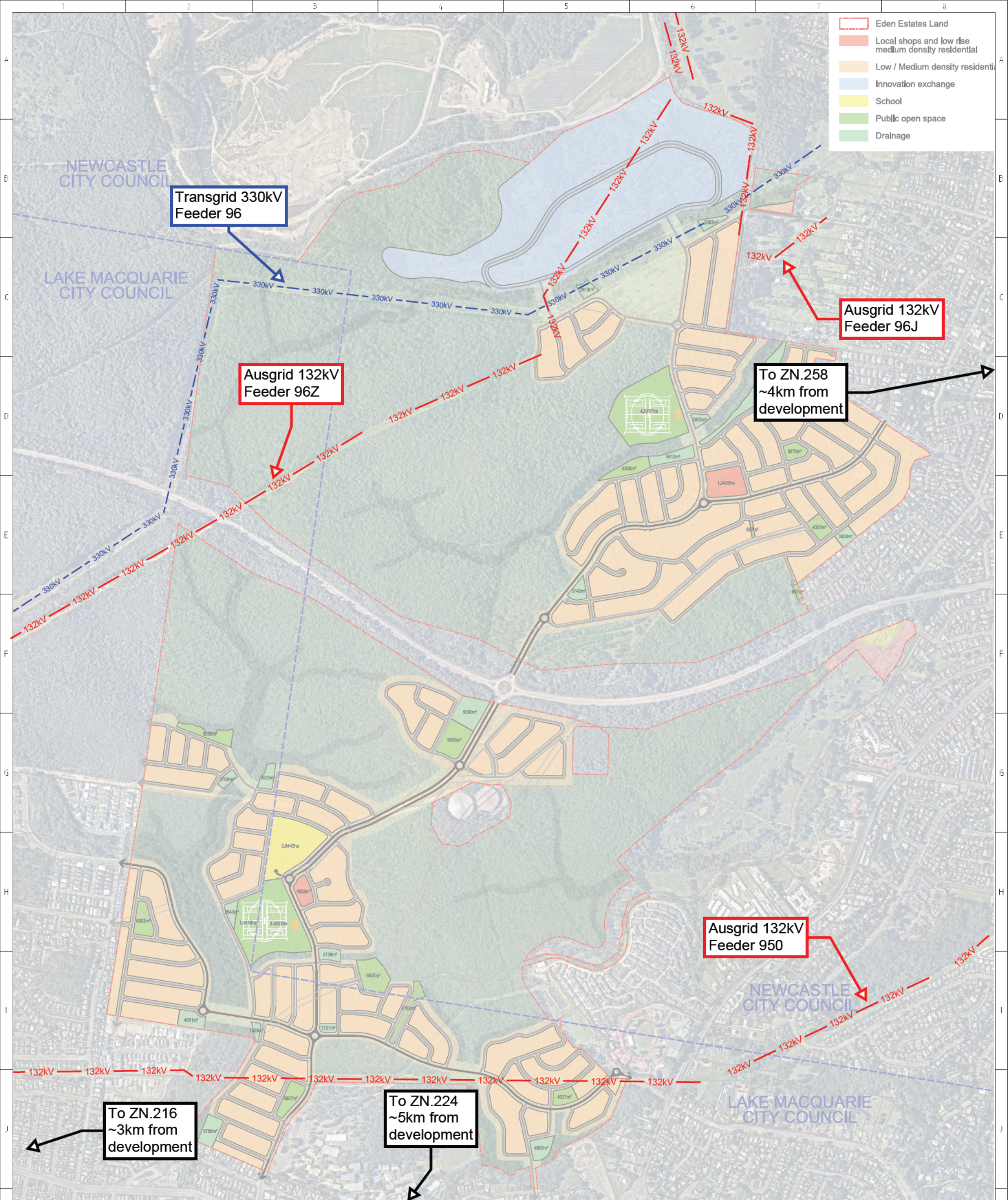
Southern precincts anticipated to be constructed first.

CONCEPT ONLY

Staging Layout
N.T.S

power solutions
Sydney | Newcastle
1300 732 293 | projects@powersol.com.au
PO Box 278,
CHARLESTOWN NSW 2290

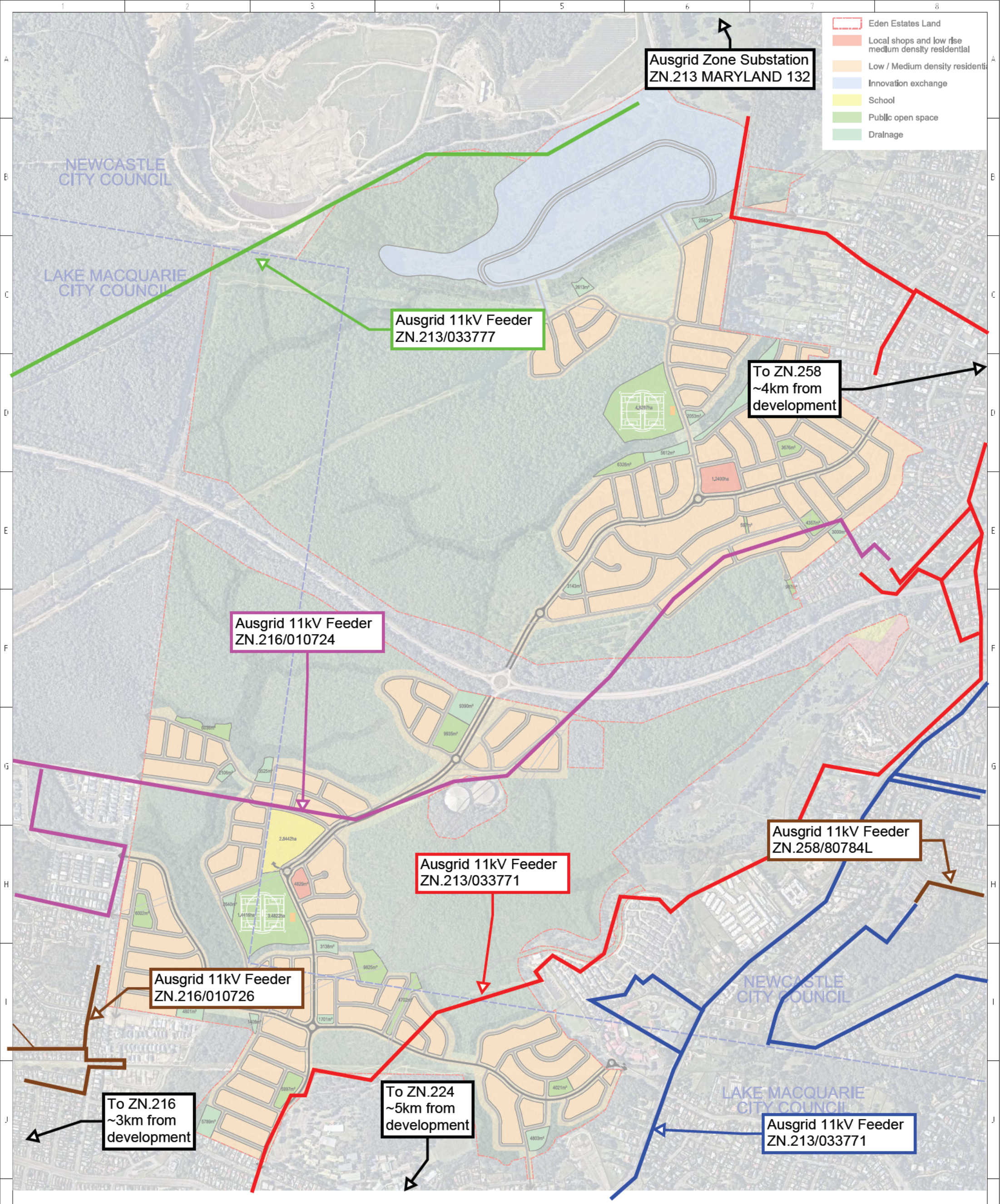
TITLE Glendale & Wallsend Glendon Cres, Glendale & Boundary Road, Wallsend Lot 3057 DP1208470 & Lot 2 DP800035 Development Masterplan Eden Estates					
CAD FILE NAME N/A	JOB NO. 6224	SIZE A3	SCALE NTS	DESIGNER T. de Jager	SHEET 2 of 5
				REV NO. B	



CONCEPT ONLY

Ausgrid Sub-Transmission & Transgrid Transmission Asset Locality
N.T.S

						 Sydney Newcastle 1300 732 293 projects@powersol.com.au PO Box 278, CHARLESTOWN NSW 2290	TITLE Glendale & Wallsend Glendon Cres, Glendale & Boundary Road, Wallsend Lot 3057 DP1208470 & Lot 2 DP800035 Development Masterplan Eden Estates						
B	20/06/25	Amended lot layout and lot yield	TDJ	SC	SC		CAD FILE NAME	JOB No.	SIZE	SCALE	DESIGNER	SHEET	REV NO.
A	18/06/25	Initial issue	TDJ	SC	SC		N/A	6224	A3	NTS	T. de Jager	3 of 5	B
REV	DATE	REVISION DESCRIPTION	BY	CHECK	APPRD								



CONCEPT ONLY

Ausgrid Distribution (11kV) Asset Locality
N.T.S

						 Sydney Newcastle 1300 732 293 projects@powersol.com.au PO Box 278, CHARLESTOWN NSW 2290	TITLE Glendale & Wallsend Glendon Cres, Glendale & Boundary Road, Wallsend Lot 3057 DP1208470 & Lot 2 DP800035 Development Masterplan Eden Estates								
B	20/06/25	Amended lot layout and lot yield			TDJ		SC	SC	CAD FILE NAME	JOB No.	SIZE	SCALE	DESIGNER	SHEET	REV NO.
A	18/06/25	Initial issue			TDJ		SC	SC	N/A	6224	A3	NTS	T. de Jager	4 of 5	B
REV	DATE	REVISION DESCRIPTION			BY		CHECK	APPR'D							
1		2		3		4		5		6		7		8	

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