

Greater Parramatta Area Plan

Review of the long term electricity infrastructure
requirements in Sydney's Greater Parramatta Area

Asset Planning & Performance

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1.0 Executive summary

This report outlines the status of the current network configuration and proposed a strategy to continue servicing the Greater Parramatta Growth Area.

The Greater Parramatta Area is located within the Parramatta local government area and is part of the Greater Parramatta to Olympic Peninsula (GPOP) corridor. This corridor is approximately 6,000 hectares and is comprised of 26 precincts and is estimated to deliver up to 90,000 new dwellings and 120,000 new jobs by 2036. This report aims to review the current strategy for supplying key development areas within the Greater Parramatta Area, with particular focus on the supplying 132kV network.

This area is currently serviced by five existing zone substations: Westmead ZS, West Parramatta ZS, North Parramatta ZS, Lennox ZS and Rosehill ZS. These are primarily supplied by two transmission substations: Camellia TS and Guildford TS which both receive supply from Holroyd BSP. Currently, there are projects in progress to establish an additional transformer at Westmead ZS and Camellia TS.

As the current network cannot supply the continued growth in this area, further sub-transmission infrastructure investments will be required within the next 10 years. This report proposes a strategy for this network which includes three main projects in the next FY25 to FY29 Regulatory Period.

The first project investigates network options to service the developments in the Parramatta CBD. Options include converting the current East Parramatta Switching Station into a firm 45MVA zone substation or a staged approach of the above.

The second and third projects will address the conditional and network capacity needs on the sub-transmission network between Guildford TS and Camellia TS due to age and increasing demand across the Greater Parramatta Area. These projects will investigate the replacement of cables in two separate trenches and potential solutions to defer replacement.

In the long-term, the Greater Parramatta Supply Strategy outlines the expansion of the sub-transmission network to service the continual development across the Greater Parramatta Area. This includes the conversion of Lennox ZS into a 132kV/11kV zone substation and the extension of the 132kV network into Westmead.

The projects outlined in this plan will be economically assessed to determine which option is most prudent in addressing risks and has the greatest benefit resulting in the highest NPV. Funding will be sought for each of these projects at the appropriate. Furthermore, for projects above \$6 Million, the RIT-D will be carried out to investigate non network solutions in comparison to network solutions.

Following analysis of future network needs of the Greater Parramatta Area outlined in this document, it is recommended that the Recommended Supply Strategy outlined within this report is carried forward as the basis for further planning within the Greater Parramatta Area.

2.0 Relationship with Asset Management System

A critical input to the Regulated Asset Base (RAB) Strategies is a series of detailed area plans developed for areas that are expected to require significant investment in the future. The purpose of these area plans is to outline an overarching view of the network infrastructure that will be required to service the identified growth area.

The Area Plans aim to assess the state of the network, identify the critical external influences to determine the likely future network requirements, and identify the high-level needs and opportunities to be refined and options (external to the Area Plan process) through the investment governance process.

The relationship between the Area Plans and the other artefacts within Endeavour Energy's asset management system is illustrated in Figure 1.

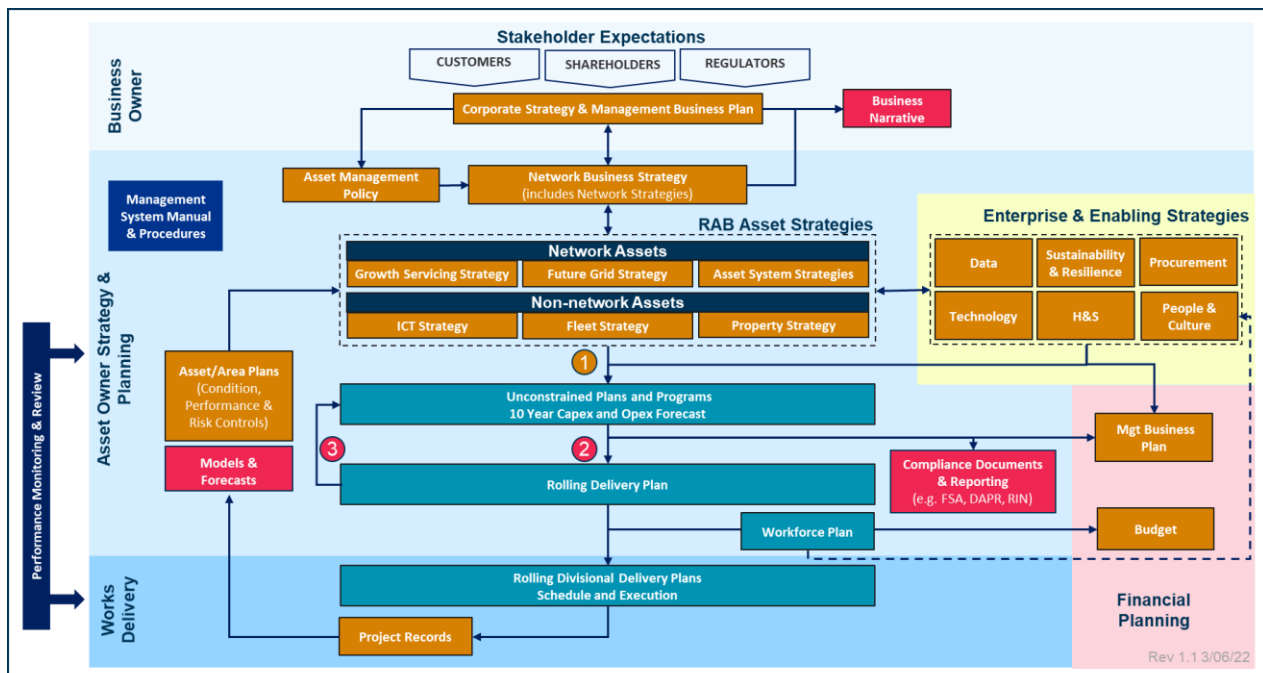


Figure 1 – Endeavour Energy Asset Management System artefact hierarchy

A detailed description of Endeavour Energy's asset management system and its constituent parts is available in the Asset Management System Manual and the Asset Management System Guidelines.

3.0 Introduction

The aim of this report is to review the current strategy for supplying key development areas within the Greater Parramatta Area. This area includes the developments at Westmead, Parramatta North, Parramatta CBD, Auto Alley and Camellia as shown in Figure 2 below. These developments are part of the Greater Parramatta to Olympic Peninsula (GPOP) Strategic Plan [1] which holds a vision of transforming this area into Sydney's 2nd CBD, the 'Central River City' as outlined in the Greater Sydney Region Plan [2].



Figure 2 – Greater Parramatta Development Areas

4.0 Greater Parramatta Development Areas

4.1 Westmead

Most of the development at Westmead is centred around the Westmead Health Precinct being one of the largest health complexes in the Southern Hemisphere. This precinct is currently undergoing a \$1 billion expansion which will result in a large increase in demand. The precinct includes Westmead Hospital, Westmead Children's Hospital and supporting departments, research facilities and accommodation. The precinct is supplied by Westmead ZS and accounts for approximately two thirds of the substation's load. The substation also supplies residential and commercial loads in the surrounding area. Other contributors to load growth in this area include the adjacent Western Sydney University campus, the Parramatta Light Rail (PLR) traction power station (TPS) and Sydney Metro West (SMW). The GPOP interim Land Use and Infrastructure Strategy [3] estimated a growth of 30,000 jobs by 2036 in the Westmead precinct.

4.2 Parramatta North

The Parramatta North Urban Transformation (PNUT) Precinct was outlined in the Parramatta DCP [4] with the aim of revitalising the area into a residential and commercial precinct. Rezoning of land in the precinct allows for a village centre of 4,000 sqm of floor space, 20,000 sqm of commercial floor space and 3,000 new homes [5]. The indicative layout plan for PNUT has been included in Appendix 10.1.1. Other contributors to load growth in this area include the PLR TPS.

4.3 Parramatta CBD

Parramatta CBD is a priority development area of the Greater Parramatta to Olympic Peninsula (GPOP) and is expected to see significant growth as Sydney's second CBD. It is already undergoing major developments including the \$2.8 billion transformation of Parramatta Square, the relocated Powerhouse Museum and the SMW and PLR stations. This area also includes other major developments including new commercial buildings, residential towers and schools. Overall, the CBD is expected to provide 46,120 jobs & 13,430 homes by 2036 [6] and Appendix 10.1.2 and 10.1.3 show the Height of Buildings and Land Rezoning maps planned for the CBD.

4.4 Auto Alley

The Auto Alley precinct refers to a corridor on Church St around 500 metres long, beginning from the Great Western Highway intersection with Church St to the Boundary St intersection. Lying directly adjacent to the Parramatta CBD, it is planned to become a commercial extension of the CBD in the longer-term [6]. Land has been rezoned to Commercial Core and Mixed Use zones as per Appendix 10.1.3, providing an expanded area for higher-order commercial and retail activities as well as high-density apartment dwellings. Already, the South Quarter development in the north of the Auto Alley precinct has proposed to develop 5 towers with 750 apartments and 40,000 sqm of commercial and retail floor space [7]. This will result in significant load growth within this precinct.

4.5 Camellia-Rosehill

The Camellia-Rosehill precinct is currently a significant industrial hub with major High Voltage Customers. The Camellia-Rosehill Place Strategy [8] outlines a 20-year vision to transform this precinct into a new residential and employment hub. The vision includes a new town centre with an 18-hour entertainment precinct, high-density residential housing and a new urban services precinct while also retaining some industrial zoning to ensure this area continues to be an industrial powerhouse for Sydney. This is expected to create up to 10,000 new homes and 14,500 jobs by 2041.

The redevelopment plans for this area are still under investigation and as such no timing has been proposed for the redevelopment of this area. Other contributors to load growth include the establishment of the PLR TPS and stabling yard and the SMW stabling and maintenance yards within this precinct.

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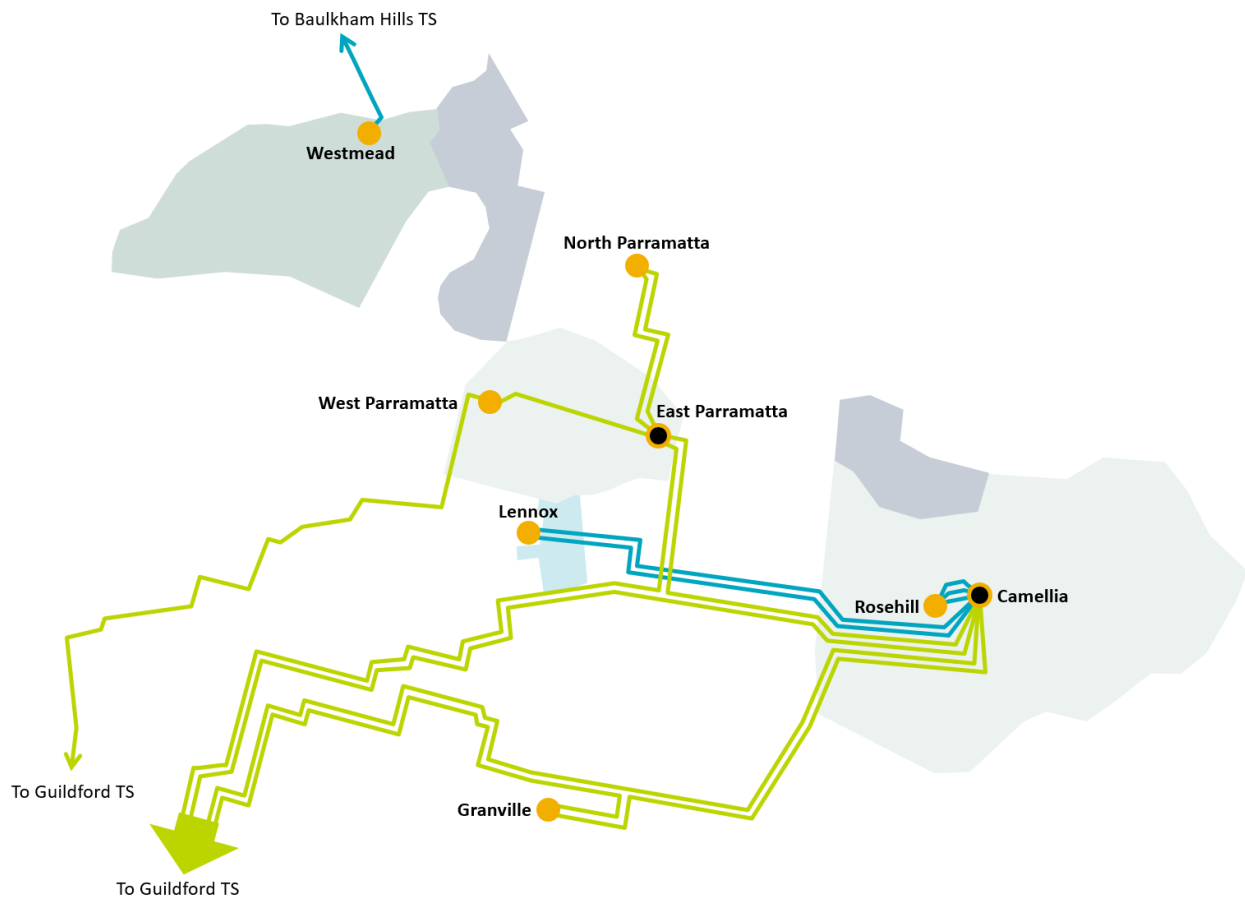


Figure 3 – Sub-Transmission Network within Greater Parramatta area

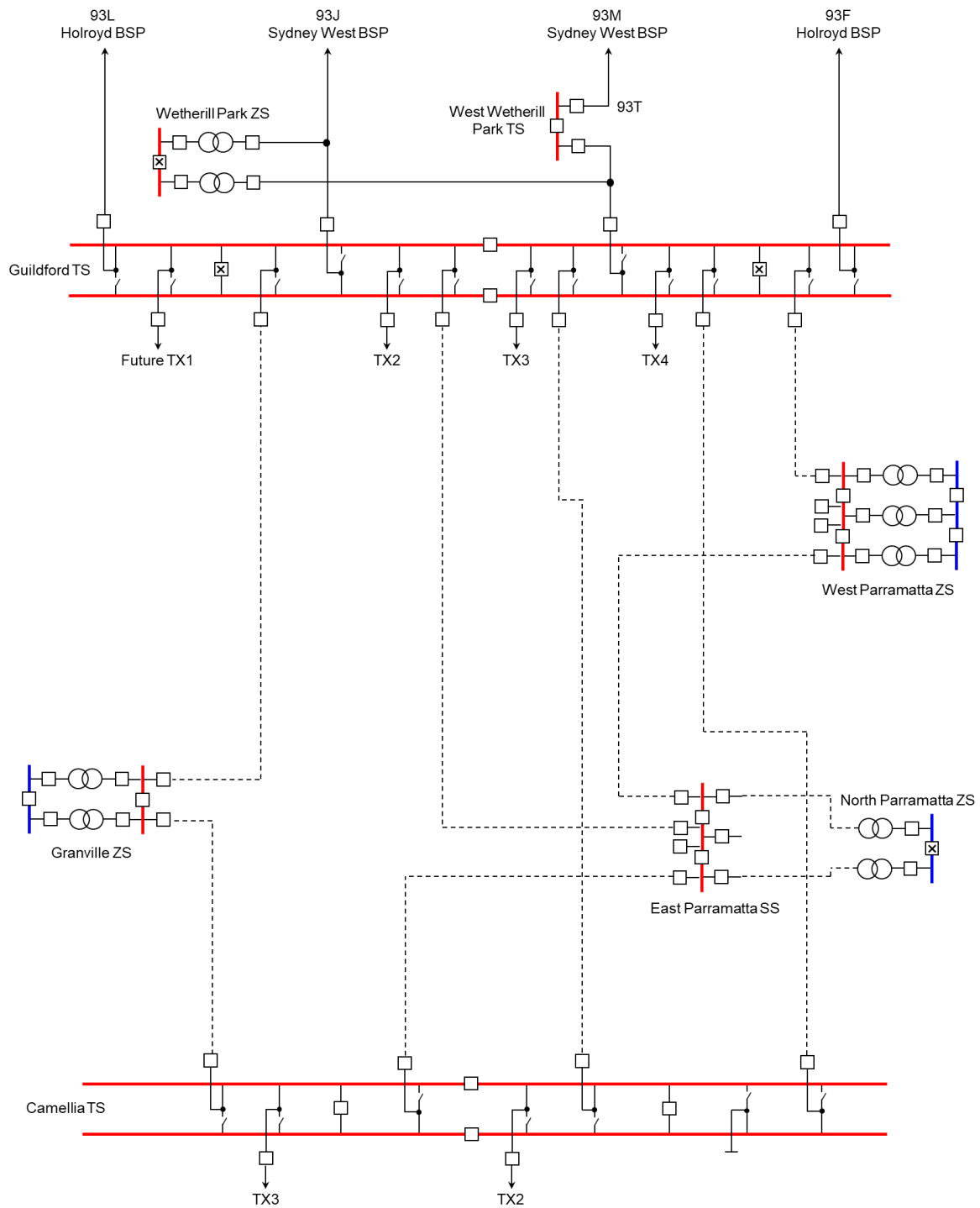


Figure 4 - Current 132kV Network

6.0 Network Need

The figures provided by the Department of Planning and Environment NSW for anticipated residential and industrial lot yields have been used as inputs into load forecasts. An After Diversity Maximum Demand (ADMD) of 5.4kVA per dwelling and 3.3kVA per apartment have been used to calculate residential demand. Note these residential ADMD values typically have an 80% diversity factor applied to them when included in demand forecasts at zone substation levels. For the purposes of sub-transmission network load flow modelling, further diversity factors are taken into consideration to reduce coincident peak load.

6.1 Major Substations

The demand for each precinct has been attributed to the appropriate zone substation in order to present a “do nothing” result of the anticipated load demand on the existing. The table below shows the 10 year load forecasted for each zone substation and their capacities.

Zone Substation	Supplying Precinct	ZS Firm Capacity (MVA)	ZS Total Capacity (MVA)	Year 10 Load (MVA)
West Parramatta ZS	Parramatta CBD	90	135	114.1
North Parramatta ZS	North Parramatta	55	110	35.6
	Parramatta CBD			
Lennox ZS	Auto Alley	50	75	40.4
Rosehill ZS	Camellia-Rosehill	50	75	20.0 ¹
Westmead ZS	Westmead	35	70	65.2

Table 1 – Zone substations, precincts and loads

There is only one transmission substation within the Greater Parramatta Area and the table below shows its 10-year load forecast and capacity.

Transmission Substation	Supplying zone substations	ZS Firm Capacity (MVA)	ZS Total Capacity (MVA)	Year 10 Load (MVA)
Camellia TS	Rosehill ZS and Lennox ZS	120	240	138.4
	Major Camellia-Rosehill customers (SMW, Ausgrid, etc.)			

Table 2 – Transmission substations and loads

It can be seen from Table 1 and Table 2 there are major substations which exceed firm capacity in the next 10 years. As a result, projects are being investigated and assessed to address the risks associated with exceeding capacity.

¹ The Camellia-Rosehill Place Strategy is still a draft proposal on exhibition and so has not been included in the forecast.

6.2 Transmission Feeders

Table 3 shows each sub-transmission line in the area along with the contingency demand and the associated rating for the next 10 years.

Feeder Designation and Destination	Voltage (kV)	Contingency Demand (MVA)	Rating (MVA)
Holroyd BSP			
22G Guildford to West Parramatta	132	176	251
225 West Parramatta to East Parramatta	132	176	172
228 Guildford to East Parramatta	132	139	111
22W Guildford to Camellia	132	115	111
233 Camellia to East Parramatta	132	73	111
226 Camellia to Granville	132	76	117
22U Guildford to Granville	132	114	117
9J8 Guildford to Camellia	132	119	117
224 East Parramatta to North Parramatta	132	38	65
235 East Parramatta to North Parramatta	132	38	65
Camellia TS			
411 Camellia to Rosehill	33	20	47
412 Camellia to Rosehill	33	15	47
413 Camellia to Rosehill	33	20	47
417 Camellia to Lennox	33	37	50
418 Camellia to Lennox	33	37	43

Table 3 – Sub-transmission feeder loadings and ratings

7.0 Recommended Supply Strategy

7.1 Greater Parramatta Supply Strategy

To service the continual development of the Greater Parramatta Area, a long-term supply strategy has been developed as shown in Figure 5. The 132kV network for the proposed Greater Parramatta Supply Strategy is shown in Figure 6.

The following sections discuss the supply strategies and projects for each major development area.

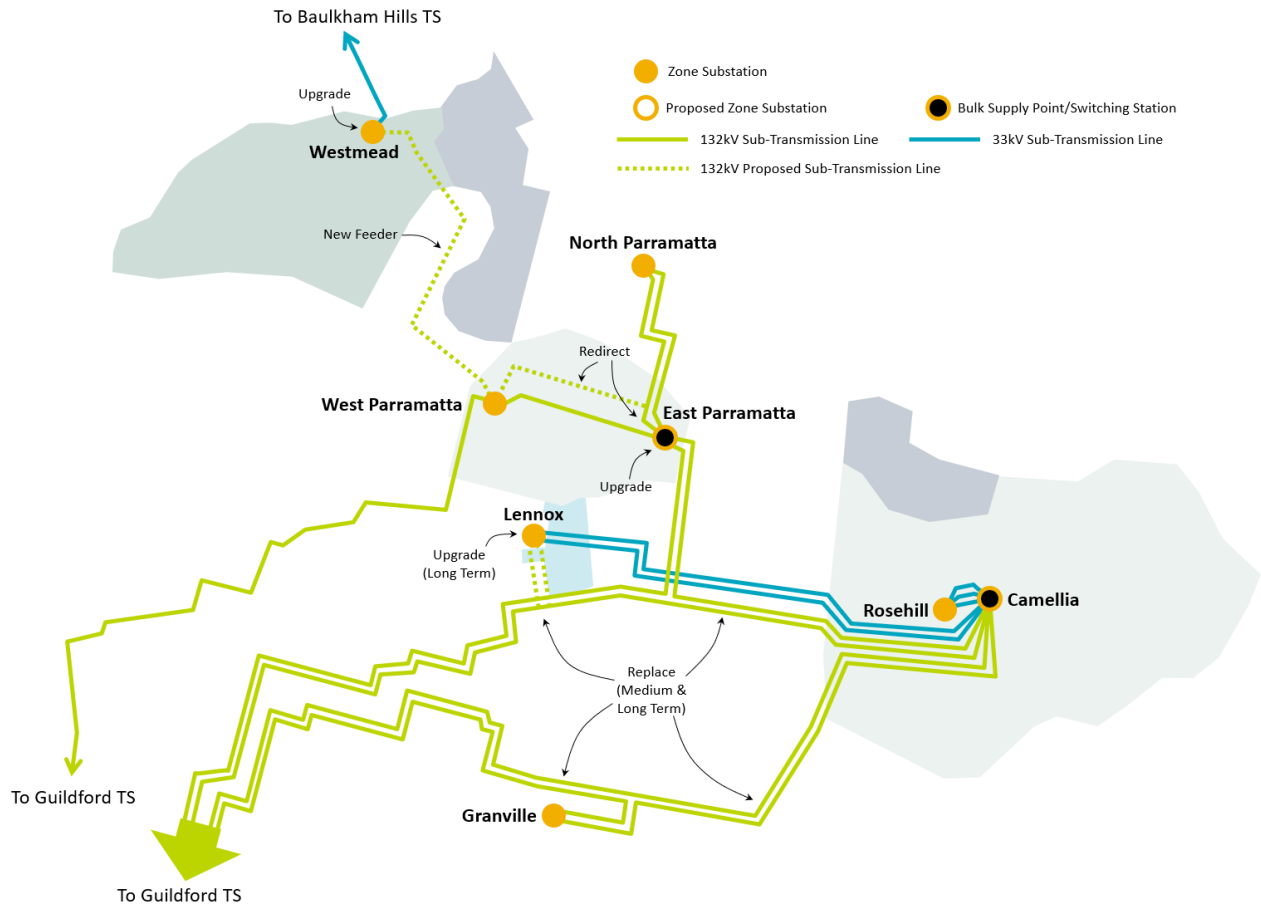


Figure 5 – Proposed Greater Parramatta network

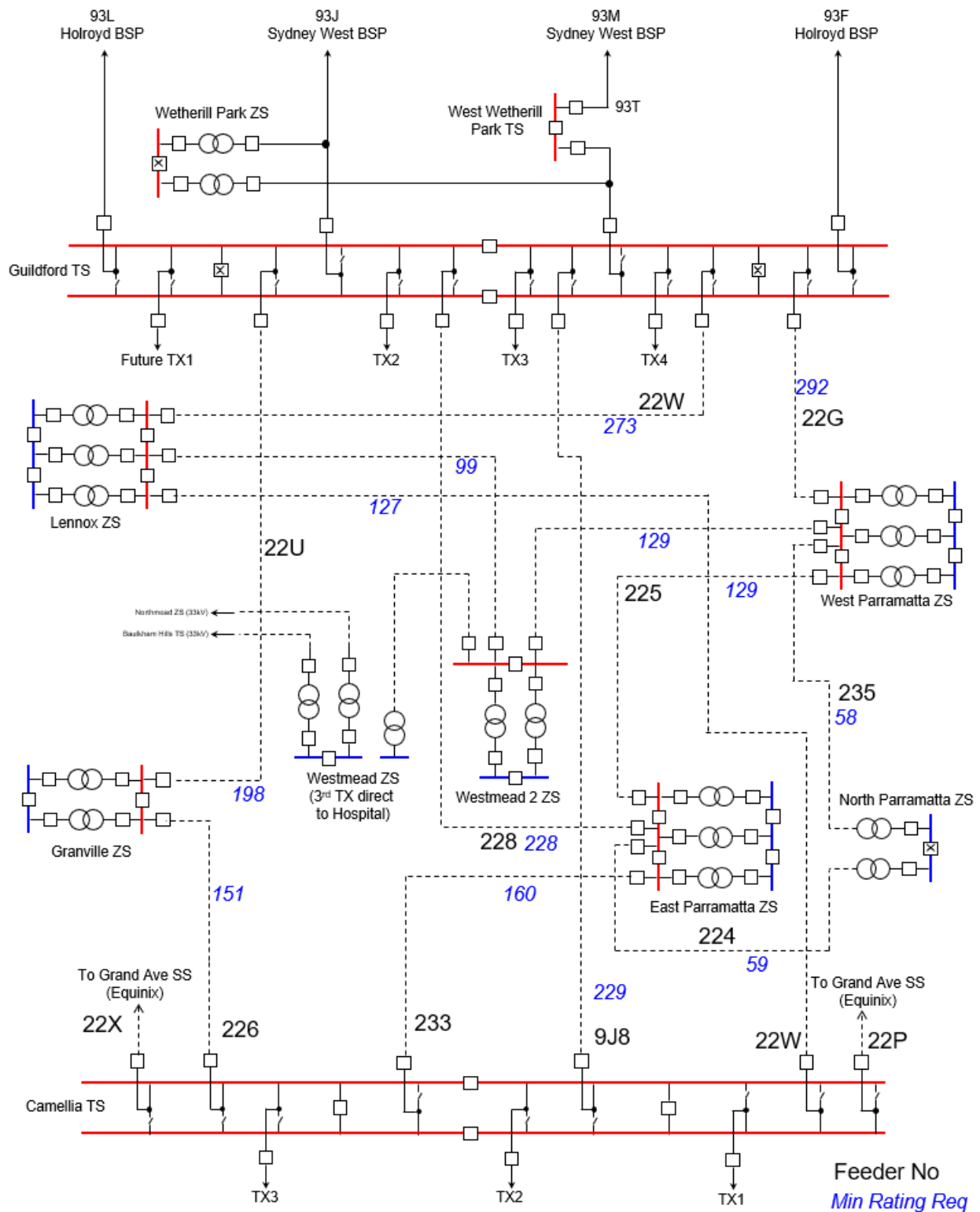


Figure 6 - Proposed 132kV Strategy

7.2 Projects in Progress

Projects are currently in progress to address some of the network needs in the Greater Parramatta area.

Westmead ZS will have a 3rd 132kV/11kV 45MVA transformer installed by FY2024 with the 11kV end directly connected to Westmead Hospital's 11kV switchboard. It will be supplied by Holroyd BSP via a new 132kV feeder West Parramatta ZS. Noting that the existing transformers at Westmead ZS are supplied by Sydney West BSP via 33kV feeders from Baulkham Hills TS, this will provide the hospital with primary and backup supplies from two separate bulk supply points (Holroyd BSP and Sydney West BSP). This project will relieve load from Westmead ZS (33kV) which is currently supplying the entire Westmead Health Precinct and other residential and commercial loads in the surrounding area.

Camellia TS will have a 3rd 132kV/33kV 120MVA transformer installed by FY2025 which will improve backup capacity for the zone substations it is currently supplying as well as many upcoming major customer connections (including Sydney Metro West and Ausgrid zone substations). This project will also help to address the load growth expected under the Camellia-Rosehill Place Strategy.

7.3 Westmead

With the continual growth of the Westmead Health Precinct, a second 132kV/11kV zone substation within Westmead may eventually be required. This would be supplied by the 132kV mesh network across the Greater Parramatta Area, supplied by Holroyd BSP. However as outlined in Section 0, Westmead ZS is being augmented with a 45MVA transformer which has pushed back the need date for the 2nd ZS beyond the 10-year timeframe.

Although the need for the zone substation is more than 10 years away, difficulties in securing a suitable site have been anticipated particularly in the future as the Health Precinct expands and densifies. This has triggered early discussions with Westmead Health to potentially receive a site from them and investigations into identifying suitable sites with our property team.

Load growth within this precinct will continue to be monitored to confirm the need and timing of the 2nd zone substation.

7.4 Parramatta CBD

The Parramatta CBD is currently almost entirely supplied by West Parramatta ZS with a small portion to the north supplied by North Parramatta ZS. Based on current forecasts, the Parramatta CBD is expected to reach 126MVA by 2041 and exceed West Parramatta ZS's firm capacity by 2028.

To service the continual growth of the Parramatta CBD, a new project has been proposed to convert the existing East Parramatta Switching Station into the East Parramatta ZS. This would avoid the need to acquire additional land within the CBD for a new ZS and also reduce equipment costs as much of the 132kV switchgear is already in place. Options to establish a 45MVA firm ZS or a staged approach is still being explored.

The current 132kV feeder configuration of East Parramatta ZS will stay largely the same except that a feeder to North Parramatta ZS will be redirected to come from West Parramatta ZS, ringing North Parramatta ZS between West and East Parramatta ZS. This will free up an additional circuit breaker to enable connection of three transformers at East Parramatta ZS.

Once East Parramatta ZS is established, nearby West Parramatta feeders will be extended to the new ZS to transfer feeders to East Parramatta ZS. In addition, feeders in the Parramatta CBD are currently backed up by a 'hub' system where hub feeders run directly to a switching station (the 'hub') to provide backup to other feeders connected to the hub. With the establishment of the new ZS, new hubs will need to be set up for East Parramatta feeders. Existing hubs may need to switch hub feeders to East Parramatta feeders to provide backup to West Parramatta feeders from a different ZS. A number of distribution works will be required to realise the above.

7.5 Auto Alley

It is planned to supply the Auto Alley precinct from Lennox ZS due to its proximity. As the proposed rezoning of Auto Alley has only been recently approved in 2021, development has not yet begun. Based on high-level load estimates, firm is not expected to be exceeded within a 10-year timeframe.

In the long-term, the ultimate load of Auto Alley has been estimated to reach 38MVA. Lennox ZS has 50MVA of firm capacity and is currently supplying 21MVA of load which will increase by 10MVA within 3 years due to load transfers and received load applications. To supply this increase in load, it has been proposed to convert Lennox ZS from a 33kV/11kV ZS to a 132kV/11kV ZS which would enable larger 45MVA transformers to be installed. This is because Lennox ZS already has 3x transformers and thus cannot be augmented with an additional transformer and establishing a new zone substation is likely more expensive than the 132kV conversion.

Options are still being considered and load growth within this precinct will continue to be monitored to confirm the need and timing of the Lennox ZS 132kV conversion.

7.6 Camellia-Rosehill

The Camellia-Rosehill precinct is entirely supplied by Rosehill ZS with 50MVA of firm capacity. Based on the Camellia-Rosehill Place Strategy, high-level load estimates have been made to estimate an ultimate load of 68MVA by 2041. However, as this strategy is still a draft in the exhibition stage, it has not been included in the demand forecast and firm is not expected to be exceeded within a 10-year timeframe.

Options to address this load growth are still being considered. The lowest cost option involves extending feeders from the proposed East Parramatta ZS to the Camellia-Rosehill precinct and would avoid significant zone substation investment. However, if East Parramatta ZS does not have enough capacity, a second zone substation within the precinct may be required to supply the proposed town centre. As Rosehill ZS already has 3 transformers, it can't be augmented with an additional transformer and there are difficulties converting it to a 132kV/11kV ZS due to space constraints.

Options are still being considered and load growth within this precinct will continue to be monitored to confirm the need and timing of augmentation.

7.7 Oil Filled Cables

Forming part of the 132kV sub-transmission network supplying the Greater Parramatta area are six 132kV oil-filled cables with a total length of 40.7km. As per Figure 7, these cables lie in two separate trenches:

- Northern trench: feeders 228, 22W and 233, manufactured by BICC with a rating of 111MVA installed in the mid-1960's.
- Southern trench: feeders 226, 22U and 9J8, manufactured by Furukawa with a rating of 117MVA installed in the late-1970's.

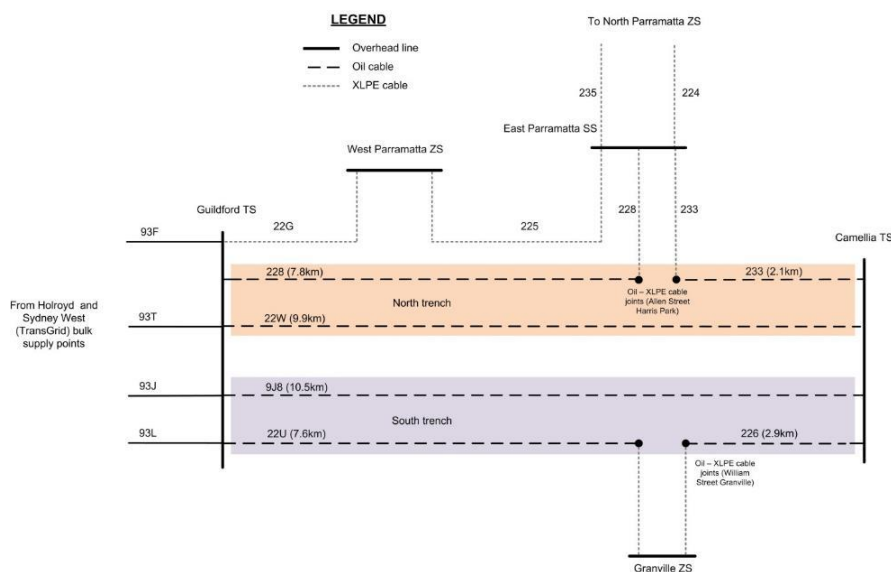


Figure 7 - 132kV oil-filled cable network

- The cables in the northern trench were found to be in poor condition, triggering an investigation into the replacement need of both trenches. The cables were assessed on both their conditional and network capacity needs.

- Conditionally, breakdown of the sheath and/or cable joints of an oil-filled cable will result in oil leaks. This will lead to reducing insulation between cable phases which could cause an arc flash and damaging electrical fault requiring lengthy repairs. If it develops into a major oil leak, the cable will require de-energisation and costly repair procedures. Additionally, a major oil leak will have high environmental impact, particularly if the nearby Duck Creek, which flows into the Parramatta River, is polluted. The Northern trench was found to have degrading sheaths and joints at multiple points with 12 out of 19 cable sections with oil leaks. The Southern trench has been assessed to be in a manageable state within the 10-year timeframe.

The cable's network capacity is assessed based on forecast load and when the cable's rated capacity will be exceeded in normal and contingency situations. As discussed in Section 0, there is significant growth across the Greater Parramatta Area. On top of this, applications from major customers such as data centres have been received which contributes further to the requirement for increased capacity in the supplying 132kV network.

Based on both its poor condition and capacity constraints, the Northern trench is currently estimated to require replacement by the end of 2029. In comparison, the Southern trench was found to be in much better condition but its rated capacity is expected to be exceeded by 2031. This is summarised in Table 4.

Due to the different network needs and timing of the two trenches, two separate projects have been raised to investigate the replacement of each trench. The Northern trench CFI has been written and submitted for approval. Investigation on the timing of the Southern trench replacement found that the Northern trench replacement shifted more load onto the Southern trench due to the higher reactance of the new larger capacity cables compared to the oil-filled cables. This would bring forward the Southern trench need date to the replacement date of the Northern trench.

Thus, an alternative solution is being investigated that will shift load towards the new larger capacity Northern trench, thus deferring the need date of the Southern trench replacement. Currently the SmartWires product 'SmartValve' is being investigated as a potential solution to dynamically shift load between the trenches by acting as a dynamic series reactance.

Cable location	Feeder	Summary of need	Expected year of network need (FY)	Driver
Northern trench	228	Approaching end of life due to condition and rated capacity due to forecast load growth	2030	Repex & augex
	22W			
	233			
Southern trench	22U	Approaching rated capacity due to forecast load growth	2030	Augex
	9J8			
	226			

Table 4 - Oil-filled cable needs summary

7.8 Proposed Projects

A summary of projects for the next 10 years to service the Greater Parramatta Area are shown in Table 5. It is noted that the Need Year identified for these projects are indicative only and will be further refined as they are assessed.

Project Number	Project	Description	Need Year (FY)	Status	Cost (\$M)
NLP-000039	Westmead ZS Expansion Land Acquisition	Acquisition of land adjacent to the existing Westmead ZS to enable augmentation.	2022	Executing	0.3
NPR-000026	Westmead ZS Augmentation	Augmentation of Westmead ZS with a 3 rd 132kV/11kV transformer to supply the growing Health Precinct.	2024	Executing	12.5
NPR-000020	Connection of Ausgrid's Auburn and Lidcombe ZS	Augmentation of Camellia TS to facilitate connection of Ausgrid's feeders.	2024	Executing	0.05
NPR-000035	Camellia TS Data Centre 132kV Enabling Works	Enabling works required to connect Equinix data centre to 132kV supply from Camellia TS.	2024	Executing	2.0
NPR-000079	Camellia TS Load Constraint	Augmentation of Camellia TS and establishment of a 132kV switching station to supply load growth and major customers.	2024 ² 2025 ³	Executing	13.9
NLP-000058	Westmead No2 ZS Site Purchase	Acquisition of a site for the 2 nd Westmead ZS	2027	Investigating	10.3
NPR-000451	Parramatta CBD Load Constraint	Conversion of East Parramatta SS to East Parramatta ZS to supply the growing Parramatta CBD.	2029	Investigating	10.8
NTM-000535	132kV oil-filled cable failure risk mitigation (north trench)	Replacement of oil-filled cables 228, 22W & 233 due to poor condition and load growth	2030	Investigating	46.2
NPR-000533	132kV oil-filled cable augmentation (south trench)	Installation of 1 SmartValve at Guildford TS to shift load to the Northern trench to defer replacement of the Southern trench.	2030	Investigating	5.6

Table 5 – Proposed cost of network strategy

The proposed projects will relieve the capacity constraints identified in Table 1, Table 2 and Table 3. The expected outcome of these projects is as summarised in Table 6.

² Need date of switching station

³ Need date of Camellia TS augmentation

Asset	Status	Firm Capacity (MVA)		Year 10 Load (MVA)	
		Before	After	Before	After
West Parramatta ZS	Existing	90		114.1	86.5
East Parramatta ZS	Proposed	-	45	-	27.6
Westmead ZS (33kV) ⁴	Existing	35		65.2	14.6 ⁵
Westmead ZS (132kV) ⁶	In progress	-	45	-	50.6 ⁵
Camellia TS	In progress	120	240	138.4	
132kV feeder 226 132kV feeder 22U 132kV feeder 9J8	Existing	117		76 114 119	TBD ⁷
132kV feeder 228 132kV feeder 233 132kV feeder 22W	Proposed	111	228 ⁸ 160 ⁸ 273 ⁸	139 73 115	TBD ⁷

Table 6 – Proposed projects to address capacity constraints

⁴ Westmead ZS (33kV) is the existing 33kV/11kV zone substation supplied from Sydney West BSP via Baulkham Hills TS.

⁵ To investigate load balancing between the Westmead ZS transformers.

⁶ Westmead ZS (132kV) is the future 132kV/11kV zone substation supplied from Holroyd BSP via Guildford TS.

⁷ Load shifting potential of Smartvalve solution TBD.

⁸ Rating required for ultimate load within Greater Parramatta Area, actual cable ratings TBD.

8.0 Electrification and our customers changing energy needs

Customer energy needs continue to evolve within the wider context of the energy transition. There is a growing bias from both customer groups and developers to transition or move away from gas, increase energy efficiency (e.g., building standards and heat pump heating systems), adopt low emission transportation options, and increase the penetration and capability of distributed energy resources (DERs) such as solar generation and storage.

Endeavour Energy continues to adapt to changing needs. The extended roll out of distributed automation, latest technology substation control systems, the provision for grid scale storage on many zone substation sites, amongst other initiatives provides enabling options in this transition. The deployment of the Advanced Distribution Management System (ADMS), continued developments in Distributed Energy Resource Management System (DERMS), TimeScale Databases, and Next Generation Planning Systems (NGPS) will provide data platforms to underpin an ability to inspect, understand and forecast changing customer behaviours and continue to adapt.

Continuously investigating alternative, smart options and integrating these into the network planning process represent important enablers of energy transition. Endeavour Energy is currently investigating SmartValve technology to increase reactance of feeders supplying the Parramatta CBD and surrounding area. Increased reactance of these feeders will shift load towards the new larger capacity, thus deferring the need to replace feeders with limitations. SmartValve is quick to install, easy to relocate or scale, and fully controllable, providing the adaptability Endeavour Energy need given the challenges we face today.

SmartValve is a single-phase, modular-SSSC (static synchronous series compensator) that injects a leading or lagging voltage in quadrature with the line current. These devices are installed in series with a feeder which requires an adjustment to its reactance. The result is an increase or decrease in reactance that is in series with the feeder. This provides the ability to adjust the load sharing across parallel feeders.

Endeavour Energy's network has 40.5 kilometres of 132kV oil-filled cables installed across six feeders. These cables form part of the 132kV sub-transmission network which supplies the Parramatta CBD and surrounding area. The six oil-filled cables are installed in two separate trenches, with two cables running side by side in different segments. These two trenches are referred to as the Northern trench and the Southern trench.

The Northern trench has been identified to be replaced under asset renewal needs. The Southern trench has been identified through load flow modelling to have arising capacity constraints. Endeavour Energy investigates installing either one or two sets of SmartValves on feeders 22U and 9J8 in to increase their reactance and thus "pushing" load onto the replaced higher rated XLPE feeders in the Northern trench. The installation of these devices would be located at Guildford TS from the Greater Parramatta Area between the 132kV CB and the feeder.

9.0 Recommendation

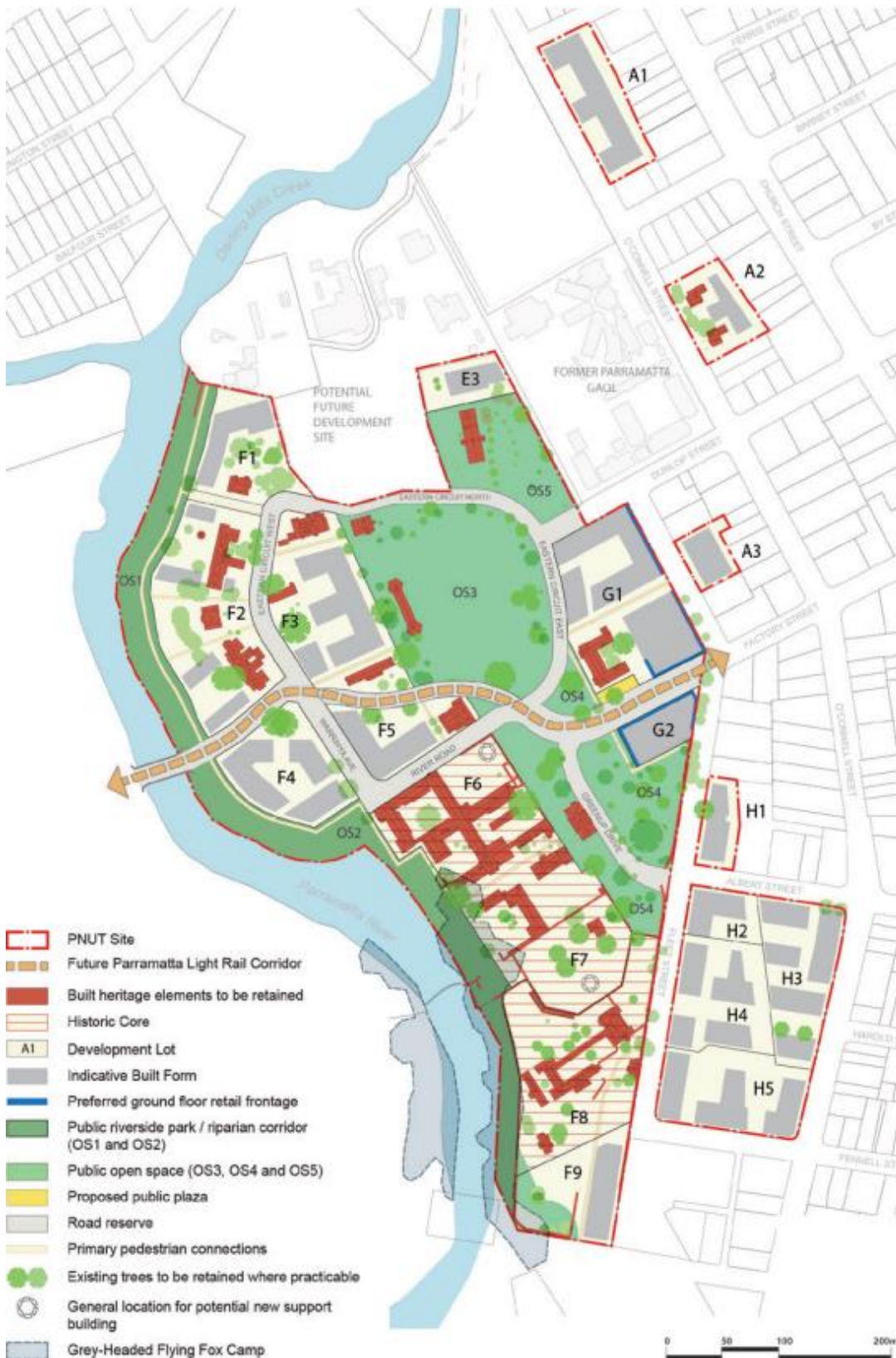
Following analysis of future network needs of the Greater Parramatta area, it is recommended that the Recommended Supply Strategy outlined within this report in Section 7.0 is carried forward as the basis for further planning within the Greater Parramatta supply area.

Furthermore, individual Network Investment Options (NIO) are to be carried out for the projects in Section 7.8 based on the principles outlined in this report will be developed separately. Options will be economically assessed to determine which option is most prudent in addressing risks and has the greatest benefit resulting in the highest NPV. Funding will be sought for each of these projects at the appropriate time.

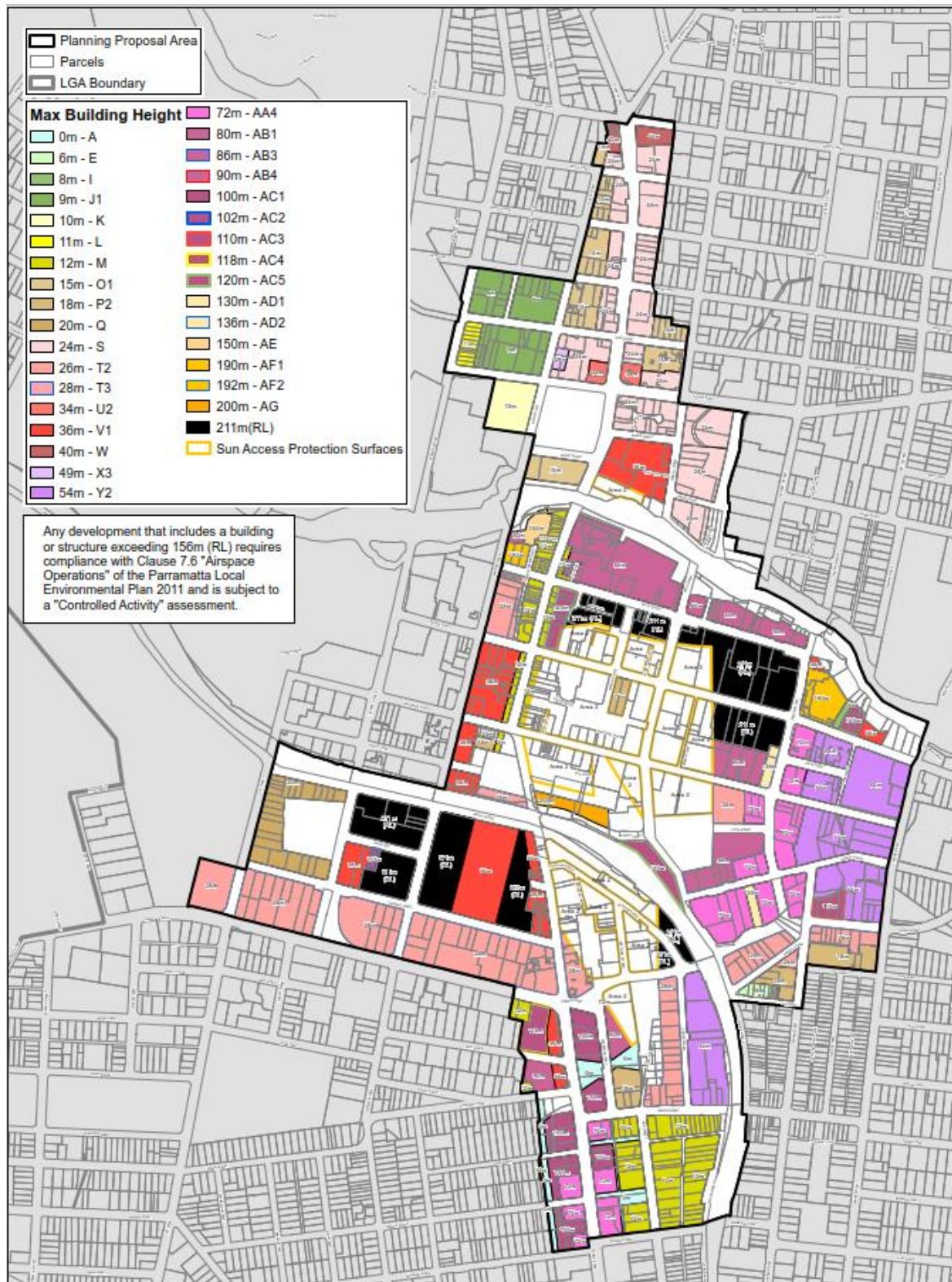
10.0 Appendices

10.1 Development Area Plans

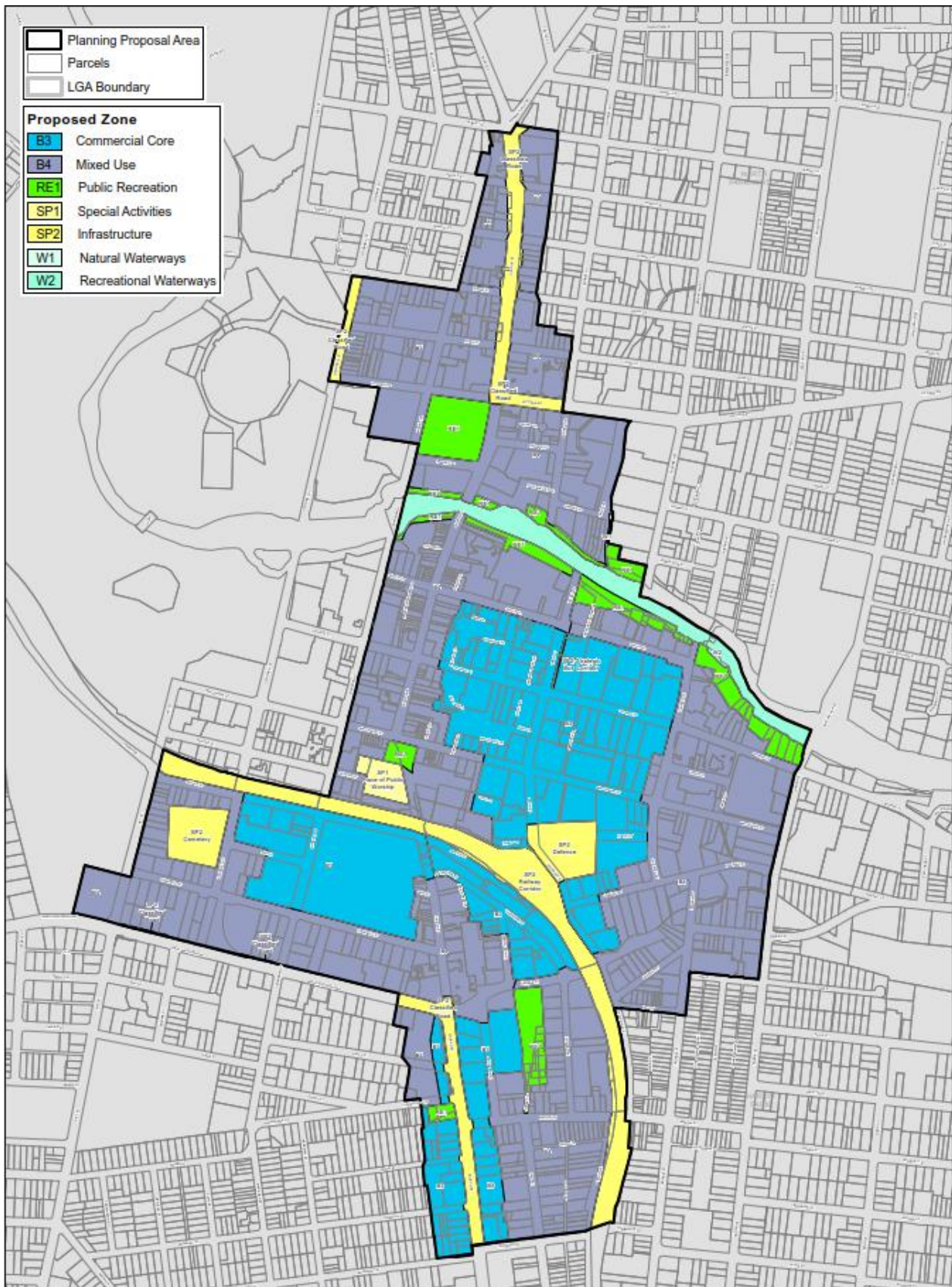
10.1.1 Parramatta North Urban Transformation Indicative Layout Plan



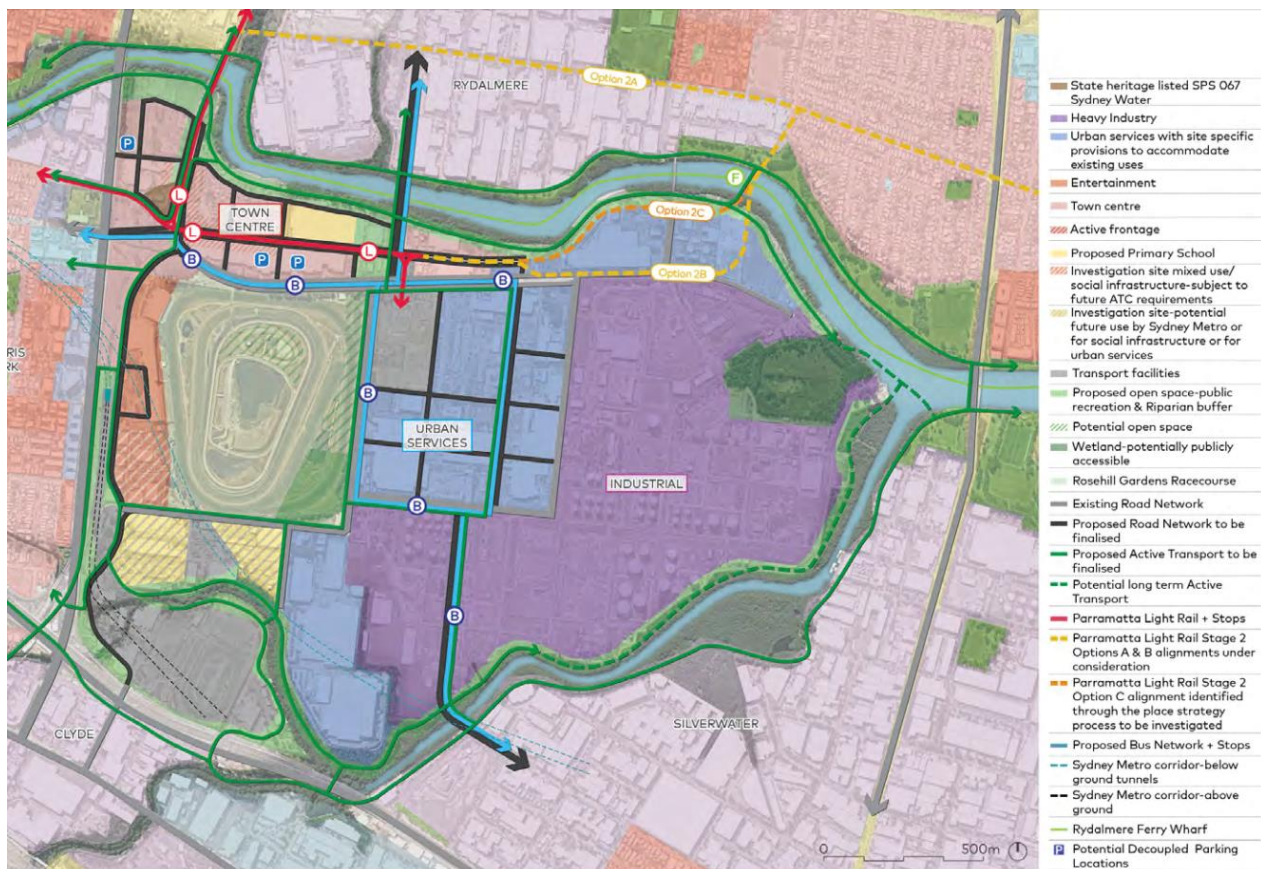
10.1.2 Parramatta CBD Height of Buildings Map



10.1.3 Parramatta CBD Land Rezoning Map



10.1.4 Camellia-Rosehill Master Plan Overview



10.2 References

- [1] Greater Sydney Commission, “A City Supported by Infrastructure,” 2019.
- [2] Greater Sydney Commission, “A Metropolis of Three Cities,” 2018.
- [3] NSW Department of Planning, Industry and Environment, “Greater Parramatta Interim Land Use and Implementation Plan,” 2017.
- [4] City of Parramatta Council, “Parramatta Development Control Plan,” in *Section 4.3 Strategic Precincts*, 2021.
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