

infrastructure & development consulting

Pondicherry
Utilities Implementation Plan

March 2021

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1 Preface

In 2016, Greenfields Development Company No. 2 Pty Ltd (GDC2, the developer of Oran Park) initiated discussions with the (now) Department of Planning, Industry and Environment (DPIE) about commencing land use planning for Pondicherry using the Precinct Acceleration Protocol. Those discussions culminated with GDC2 (the future developer of Pondicherry) and Leppington Pastoral Co Pty Limited (LPC, the landowner of Pondicherry) entering a Planning Agreement with the Minister for Planning for Pondicherry's accelerated planning. The Planning Agreement was signed in April 2018.

Under the Planning Agreement, the precinct planning was to be led by DPIE. A series of committees involving other authorities, the Council and GDC2 were established under the Planning Agreement to assist in the administration of the planning process. The Planning Agreement required GDC2 to pay for precinct planning costs, including all technical studies required to determine land use capability and proposed zoning. GDC2 also had responsibility for preparing a Services Infrastructure Strategy and Implementation Plan for Pondicherry and obtaining approval for that Strategy and Plan.

Separately, in 2020 GDC2 lodged a planning proposal with Camden Council to "fast-track" rezone a portion of the larger Pondicherry precinct to ensure continued land supply. This area is known as Tranche 41 and in February 2021 the Tranche 41 planning proposal received conditional Gateway approval to proceed to exhibition.

The conditional Gateway Determination issued for Tranche 41 required that the Council provide *"relevant service providers with an infrastructure strategy that demonstrates how the subject land [Tranche 41] is to be serviced, including proposed arrangements for the wider Pondicherry Precinct"* (Condition 5). The draft Services Infrastructure Strategy and Implementation Plan prepared for the wider Pondicherry precinct contains information which meets this Gateway condition.

Consequently, it has been agreed to provide this draft report to the service authorities for their review as part of the Tranche 41 planning proposal, rather than as part of the Pondicherry rezoning as originally planned when this report was commissioned. The report is being provided to demonstrate to the servicing authorities the serviceability of Tranche 41, in the context of the wider Pondicherry precinct.

Indicative road patterns and land uses are shown for both Tranche 41 and Pondicherry on the maps and diagrams contained in this report. Some of these details may change as a result of the exhibition of either (or both) of the Tranche 41 and Pondicherry planning proposals. However, at this stage they represent the most likely land uses and indicative subdivision layout, based on the best available information at this time. Because ultimate land uses and road patterns may change in later stages of the planning process, service authorities should not share this report, in part or in whole, outside their organisations.

2 Introduction

Infrastructure & Development Consulting (IDC) have been engaged by Greenfields Development Company to prepare a utilities servicing strategy and Implementation Plan to support the Pondicherry Release Lands rezoning. This report summarises the investigations relating to the staged implementation of the utilities infrastructure strategies for the development of the site. The site is expected to be developed into primarily low-density residential lots, with potential for mixed use and/or higher density development around local and town centres.

The site is located within the South West Growth Area and is subject to the Western Sydney Growth Area Special Infrastructure Contribution (SIC) framework.

This report outlines a potential strategy for the provision of utility services for the site. Specifically, this report will outline:

- Existing utility services within the vicinity of the site
- Current and planned utility projects
- Implications of the above and potential servicing strategies for the proposed development of the site

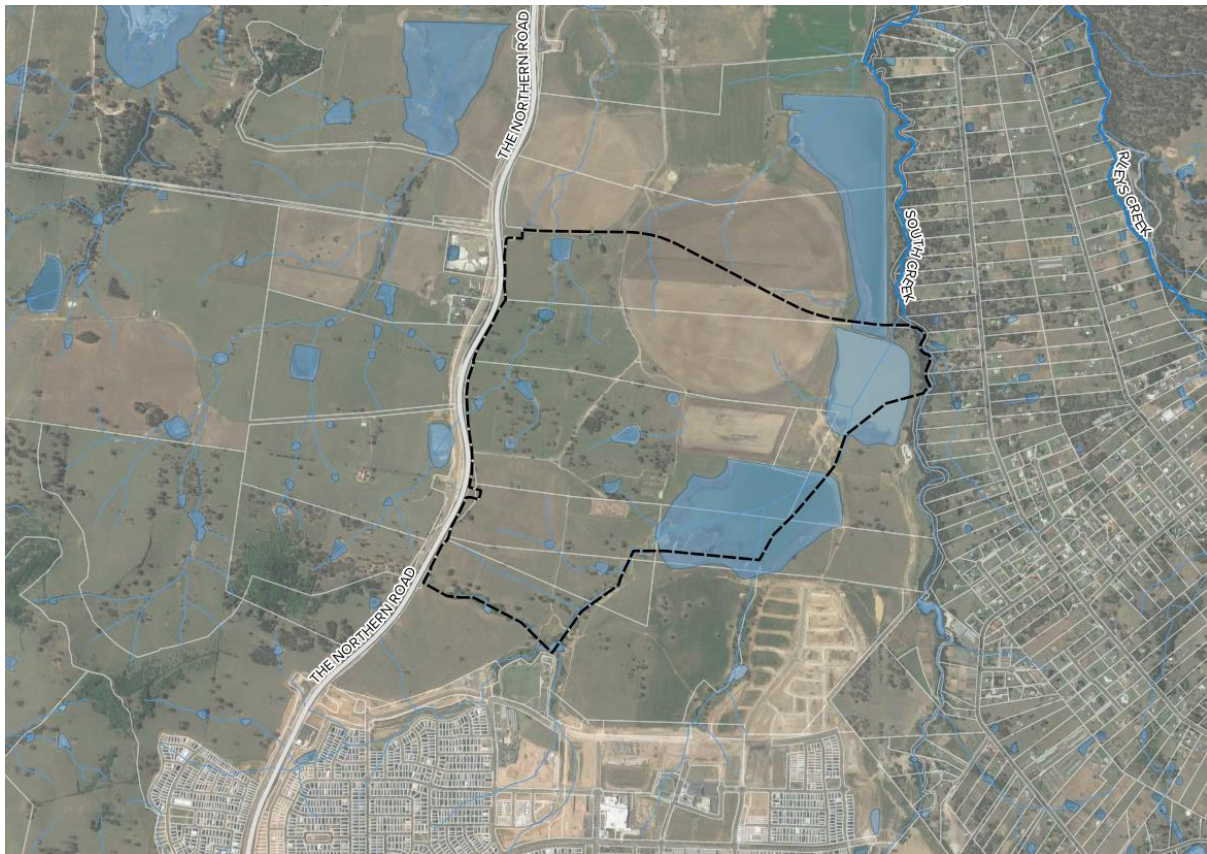
The following analyses have been undertaken to provide an overall strategy for servicing the site and to guide future detailed design through the implementation of appropriate authority controls and best management practices.

We note that the proposed servicing measures are strategic in nature and further refinement may be required during subsequent design phases of the project. However, the underlying principles and objectives of this report should be maintained.

3 The Site

The Pondicherry Release Lands site is located within the Camden City Council Local Government Area (LGA) and covers an area of approximately 210ha. The site is bound by South Creek to the east, the Oran Park Precinct to the south and the Northern Road to the west. The area to the north of the site is currently agricultural land owned by Leppington Pastoral Company (LPC) which is anticipated to be developed after completion of the Pondicherry Site.

Figure 1 - The Site

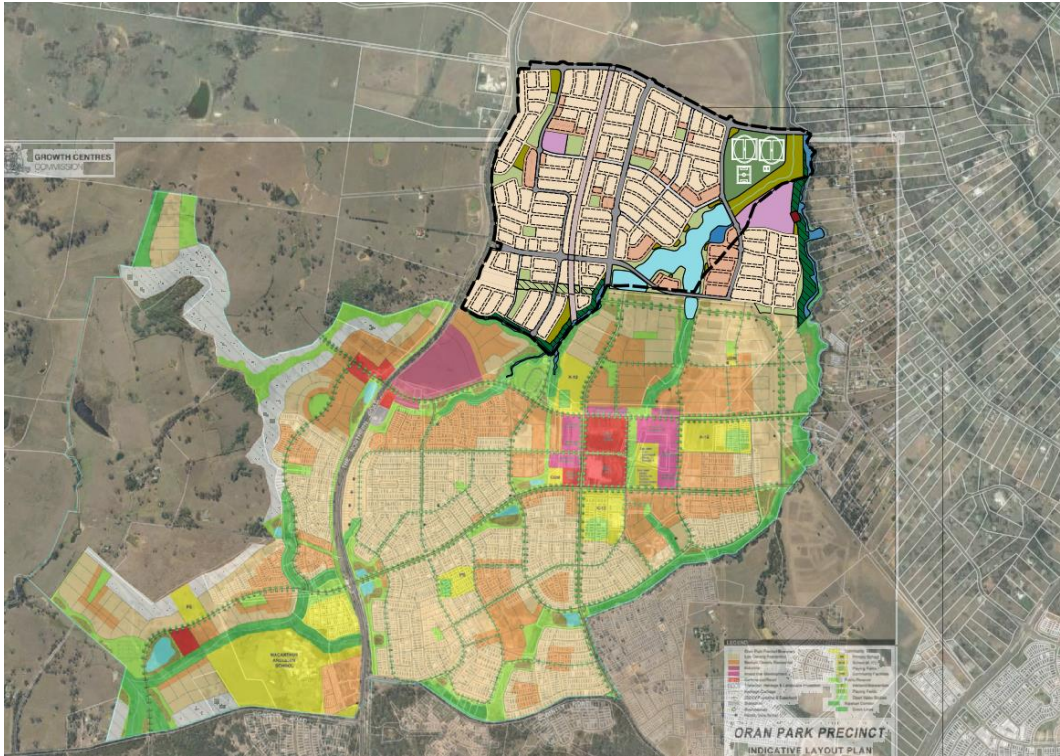


3.1 Oran Park

The Pondicherry site is located adjacent the Oran Park Precinct. The Oran Park development will provide up to 7,500 new dwellings as well as new schools, open space and employment land.

Where possible, existing utilities infrastructure will be extended from Oran Park to supply initial development across Pondicherry before new services are constructed.

Figure 2 - Oran Park Interface



3.2 Tranche 41

The first stage of the Pondicherry development is subject to a separate rezoning application. This area is referred to as Tranche 41 and is shown in red on the figure below. The Tranche 41 area is being rezoned via an application to Camden City Council. The balance of the Pondicherry site will be rezoning by the NSW Department of Planning, Industry and Environment.

Although Tranche 41 is subject to a separate rezoning process, this study will include both Tranche 41 and the balance of the Pondicherry site to provide a holistic approach to utilities servicing.

Figure 3 – Tranche 41



3.3 Proposed Development

The Pondicherry Release Lands will be rezoned to provide a mix of development typologies. We have considered low, medium and high growth scenarios with yields ranging between 2,528 dwellings for the low scenario and 2,848 dwellings for the high scenario.

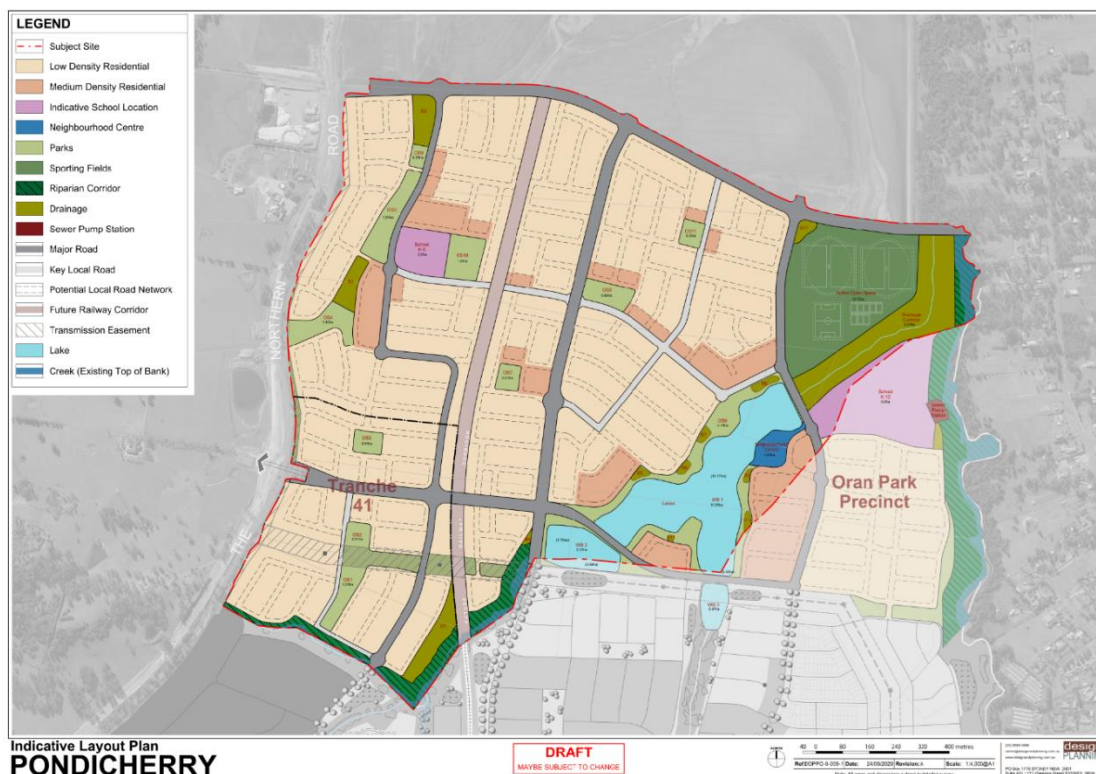
This report is based on the mid growth scenario with a total yield of 2,714 dwellings (including Tranche 41). However, we have tested the infrastructure requirements outlined in this report against the high growth scenario and concluded that the recommendations remain robust for this option. The infrastructure recommendations made in this report are therefore suitable to meet the greater demand generated in Pondicherry should the higher growth scenario be adopted. A breakdown of the staging for the Pondicherry Release Lands is provided in Table 1 below.

Table 1 - Development Breakdown

Stage	Standard Residential	Medium Density	High Density	Total
1 (2022)	477	-	-	477
2 (2023)	400	32	-	432
3 (2024)	331	152	-	483
4 (2025)	364	83	-	447
5 (2026)	618	132	-	750
6 (t.b.d.)	-	-	125	125
Total	2,190	399	125	2,714

The proposed indicative layout plan is shown in Figure 4 below.

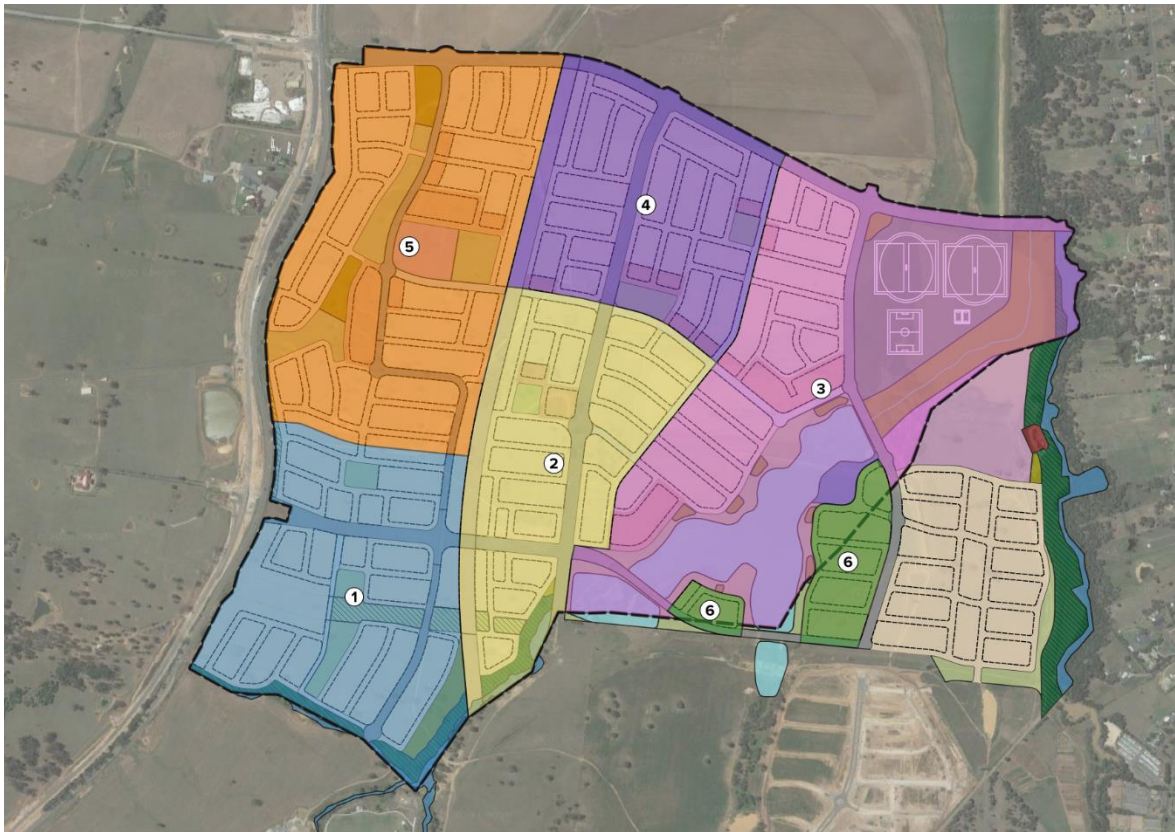
Figure 4 - Pondicherry Indicative Layout Plan



4 Stages

The development site has been separated into a number of Stages which broadly align with servicing catchment boundaries. The proposed Stages are shown in Figure 5 below. Each Stage includes between 125 – 750 dwellings.

Figure 5 - Pondicherry Stages



5 Stage 1

Stage 1 corresponds with the Tranche 41 boundary. As discussed in Section 3.2, Tranche 41 is subject to a separate rezoning application to Camden City Council. It has therefore been assumed that Tranche 41 will be developed first. Tranche 41 covers an area of approximately 41 hectares and generally falls from west to east, with elevations ranging between RL. 84 and RL.116m AHD.

Tranche 41 will largely be serviced by extending existing infrastructure from Oran Park, located to the south, to the development site. A summary of the servicing strategy for Tranche 41 is provided below.

5.1 Water

Sydney Water have stated that initial stages of the Pondicherry development can be serviced using existing infrastructure in Oran Park. Potable water infrastructure will be extended from an existing 100mm diameter main located in South Circuit. The new main will cover a length of approximately 350m to reach the site boundary.

5.2 Sewer

Sewer servicing will require the construction of a new 225mm gravity main. The main will be constructed adjacent the future rail corridor boundary and connect to the existing Oran Park Carrier. It is expected that all development within Tranche 41 can be serviced by this sewer main.

5.3 Electricity

Endeavour Energy have also indicated that there is available capacity in the existing electrical network to service initial stages of development at Pondicherry. Electrical infrastructure will be extended from existing 11kV high voltage feeders located in South Circuit.

It should be noted that the proposed employment precinct located between the existing Oran Park development and the Pondicherry site will be completed ahead of Tranche 41. It is therefore reasonable to assume the extension of both potable water and electrical infrastructure could occur from new infrastructure within the employment precinct.

5.4 Stormwater

Stormwater runoff within Tranche 41 will drain to detention basin B1, located in the south eastern corner of the Stage. Basin B1 covers a catchment area of approximately 1.4 hectares and will discharge to the adjacent creek to the north.

The area located north of Marylands Link Road 1 drains northwards to Basin B2, located in Stage 5. A temporary tail out and basin will need to be provided adjacent the low point at the site boundary to capture stormwater flows until Basin B2 is constructed. This is shown in Figure 6.

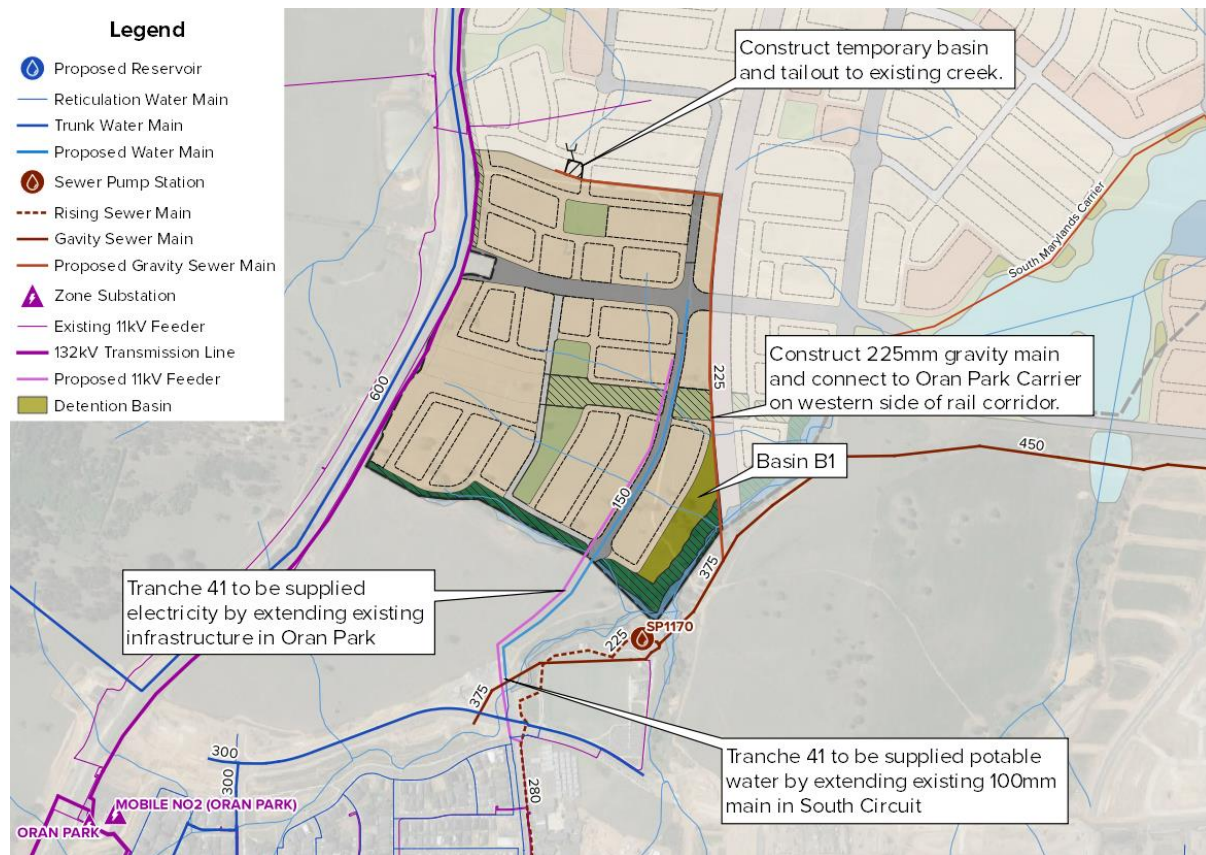
5.5 Summary of Infrastructure Requirements

A summary of the infrastructure requirements associated with Stage 1 is provided in Table 2. Trunk utilities infrastructure upgrades are not expected to be required to support the development of Tranche 41. The site can largely be serviced by utilities infrastructure independently of other Stages.

Table 2 – Stage 1 Infrastructure Requirements

	Load	Required Trunk Infrastructure
Number of Dwellings	477	
Potable Water	43.1L/s	Extension of 150mm main in South Circuit
Sewer	1,670 EP	225mm main connecting to Oran Park Carrier
Electrical	2.1 MVA	Extension of existing 11kV Feeders in South Circuit
Stormwater	-	Detention Basin B1

Figure 6 – Stage 1 (Tranche 41) Servicing Strategy



6 Stage 2

Stage 2 covers the area bound by the rail corridor to the west, Stage 4 to the north, Stage 3 to the east and the site boundary to the south. Stage 2 lies within a single drainage catchment and generally falls from north-west to south-east with elevations ranging from RL.84 to RL.100m AHD.

6.1 Water

Sydney Water have indicated that the Pondicherry site will be serviced by the new reservoirs at Oran Park currently being delivered. To support Stage 2, a 450mm diameter offtake will be constructed from the 600mm diameter main located in the Northern Road. This offtake will be constructed along Marylands Link Road 1, within Tranche 41, and extended across the future rail corridor to Stage 2. A pressure reduction valve will be required at the offtake.

6.2 Sewer

Stage 2 falls into the eastern sewer catchment and will therefore drain to the South Marylands Carrier, located on the southern side of the proposed lake. Sydney Water have indicated that they expect this infrastructure to be developer delivered.

Stages 2, 3, 4 and 6 all fall within the eastern sewer catchment. It can therefore be expected that the South Marylands Carrier would be delivered with the development of the first Stage in the eastern catchment.

Assuming that Stage 2 is the second stage to be delivered, the entire length of the South Marylands Carrier would need to be constructed. This would complete the sewer enabling works for all Stages within the eastern catchment.

6.3 Electricity

As discussed in Section 5.3, Endeavour Energy have indicated that initial stages of development can be serviced by extending existing electrical infrastructure from Oran Park to the site. It is expected that part of Stage 2 can be serviced in this way, however a new 11kV feeder will be required to support Stage 2 in its entirety.

Electrical supply for Pondicherry will ultimately come from the future Maryland ZS, located adjacent the Northern Road, approximately 600m north of the site. This infrastructure is currently flagged for delivery in 2024/25. Endeavour Energy have indicated that in the interim, high voltage feeders can be constructed from the Oran Park ZS, located 1km south of the site.

Each Stage within the Pondicherry site is expected to require about half of the capacity of an 11kV feeder. For simplicity, it has been assumed that a new feeder will be provided for every second stage. Assuming Stage 2 is delivered after Stage 1/Tranche 41, a new 11kV feeder would be constructed from the Oran Park ZS to the site. The feeder would be constructed along Marylands Link Road 1.

6.4 Stormwater

Stormwater runoff within Stage 2 will drain to detention basin B4, located in the south eastern corner of the Stage. Basin B4 covers an area of approximately 0.06 hectares and will discharge to the adjacent creek. The area located north of Marylands Link Road 1 drains eastwards to Basins B5, B6, B7 and B8 located in Stage 3. Temporary basins and tail outs to the existing creek will need to be provided until the permanent stormwater infrastructure is constructed. These basins

will be provided as part of the Stage 3 works. An indicative temporary stormwater arrangement is shown in Figure 7.

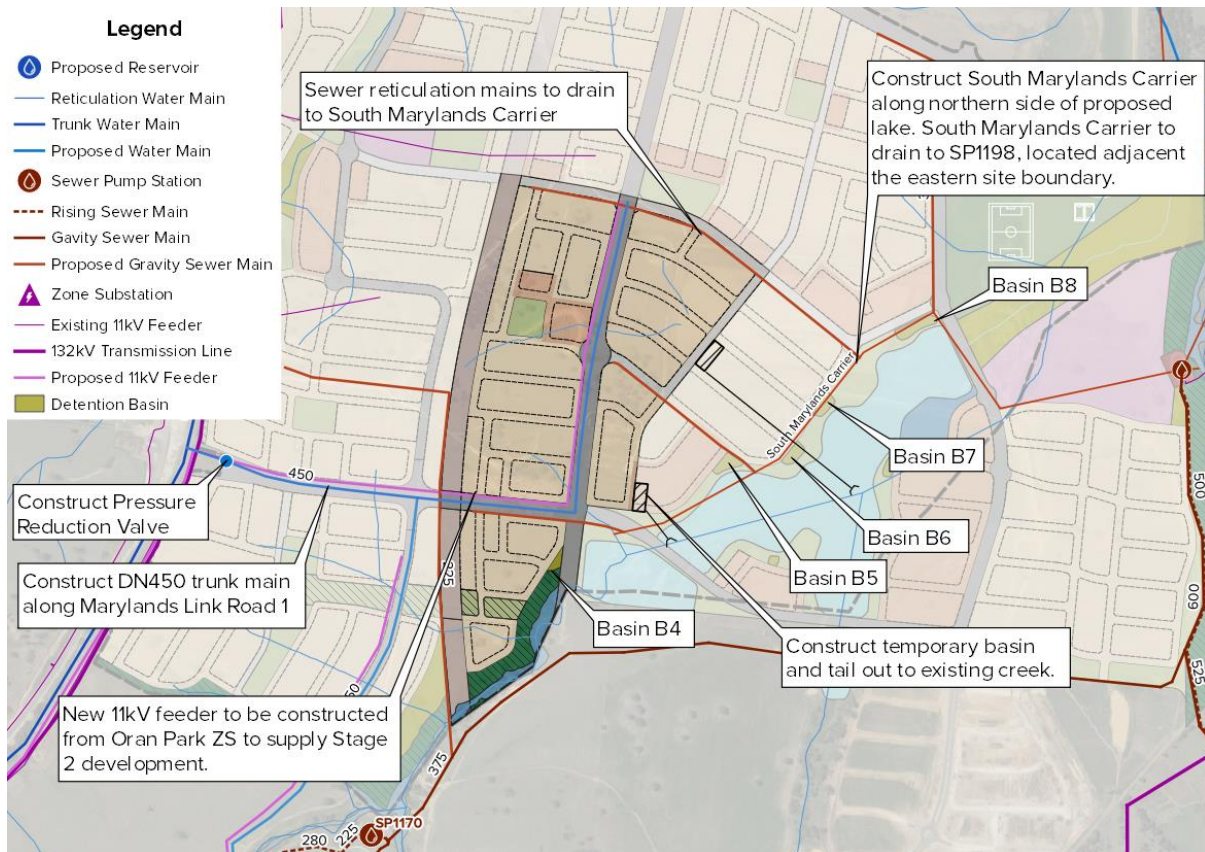
6.5 Summary of Infrastructure Requirements

A summary of the infrastructure requirements associated with Stage 2 are provided in Table 3.

Table 3 - Stage 2 Infrastructure Requirements

	Load	Required Trunk Infrastructure
Number of Dwellings	432	
Potable Water Load	38.9L/s	450mm offtake main to be constructed along Marylands Link Road 1.
Sewer Load	1,512 EP	South Marylands Carrier (minimum 300mm diameter to service all eastern catchment)
Electrical Load	1.9 MVA	1x 11kV feeders from Oran Park ZS
Stormwater	-	Detention Basin B4

Figure 7 – Stage 2 Servicing Strategy



7 Stage 3

Stage 3 covers the area bound by the Pondicherry site boundary to the north, east and south, and Stages 2 and 4 to the west. Stage 3 lies in a single drainage catchment and generally falls from west to east with elevations ranging from RL.72 to RL.84m AHD.

7.1 Water

Potable water will be supplied to Stage 3 via the 450mm diameter offtake constructed along Marylands Link Road 1 as part of the Stage 2 works. This main will be extended across the future rail corridor to supply development within Stage 2 and 3.

7.2 Sewer

The site falls into the eastern sewer catchment which drains to the South Marylands Carrier. This infrastructure will be constructed with the development of Stage 2, completing the enabling works for all Stages in the eastern sewer catchment. Should Stage 3 be developed ahead of Stage 2, this main would need to be constructed with the Stage 3 works.

A series of smaller, lead-in mains will be constructed from the development to the South Marylands Carrier. Indicative locations are shown in Figure 8.

7.3 Electricity

As discussed above in Section 6.3, it has been assumed that a new feeder will be provided for every second stage. Stage 3 will therefore utilise the 11kV feeder provided as part of Stage 2 works. The feeder will be further extended from Stage 2 to the development site.

7.4 Stormwater

Stormwater runoff within Stage 3 will drain to a number of detention basins located within active open space and the lakes area. Areas in the north of the catchment will drain to Basin B12 located in the north west corner of the active open space area. Areas in the south of the catchment will drain to Basins B5, B6, B7 and B8 located adjacent the proposed lake.

Basin B12 will discharge to South Creek while Basins B5, B6, B7 and B8 will discharge to the proposed lake.

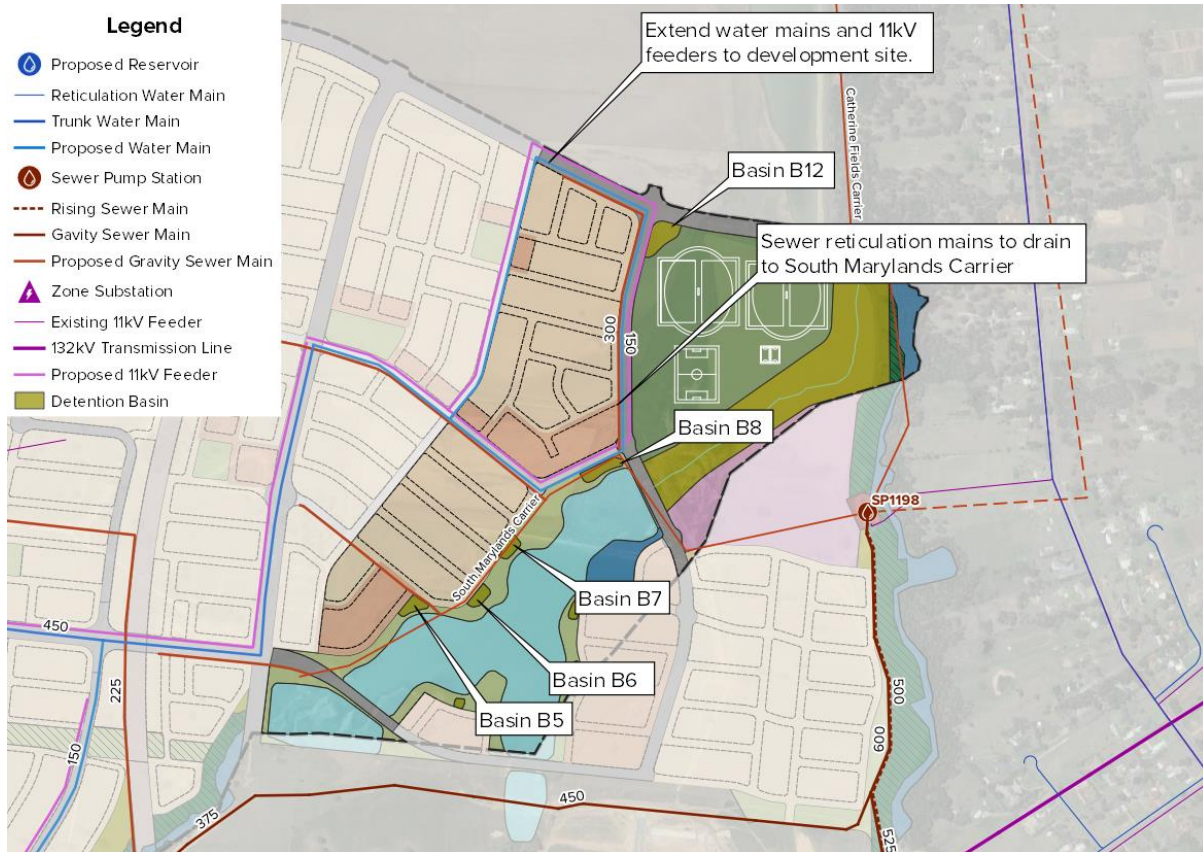
7.5 Summary of Infrastructure Requirements

A summary of the infrastructure requirements associated with Stage 3 are provided in Table 4.

Table 4 - Stage 3 Infrastructure Requirements

	Load	Required Trunk Infrastructure
Number of Dwellings	483	
Potable Water Load	74.6L/s	450mm offtake main along Marylands Link Road 1 (Constructed in Stage 2)
Sewer Load	1,691 EP	South Marylands Carrier (minimum 300mm diameter to service all eastern catchment) (Constructed in Stage 2)
Electrical Load	2.1MVA	1x 11kV feeder from Oran Park ZS (Shared with Stage 2 – assumed constructed in Stage 2)
Stormwater	-	Detention Basins B5, B6, B7, B8 and B12

Figure 8 - Stage 3 Servicing Strategy



8 Stage 4

Stage 4 covers the area bound by the rail corridor to the west, the Pondicherry site boundary to the north, Stage 3 to the east and Stage 2 to the south.

Stage 4 is characterised by a crest located through the centre running in a north-south direction which separates the Stage into two sub-catchments. The sub-catchment located to the east of the key north-south link road drains eastward, while the sub-catchment located to the west of the north-south link road drains northwards. Elevations range from RL.82 to RL.98m AHD.

8.1 Water

Sydney Water have indicated that the Pondicherry site will be serviced by the new reservoirs at Oran Park. As discussed above, a 450mm diameter offtake will be constructed along Marylands Link Road 1 and will extend across the rail corridor to supply development in Stages 1, 2 and 3.

To service Stage 4, a second, 400mm diameter offtake will be constructed along Marylands Link Road 2 on the northern site boundary. An additional pressure reduction valve will also be required at this offtake. Should the construction of Marylands Link Road 2 be deferred to Stage 5, infrastructure servicing Stage 3 could be extended to the development site as shown in Figure 9.

8.2 Sewer

Stage 4 falls is located in the eastern sewer catchment and will therefore drain to the South Marylands Carrier, located on the southern side of the proposed lake. This infrastructure will be delivered when Stage 2 is constructed.

Localised earthworks could be constructed to drain lots located in the western sub-catchment back to the South Marylands Carrier. An indicative area of works is shown in Figure 9.

Alternatively, earthworks levels may be able to be retained with a deep sewer draining to the South Marylands Carrier. This would be part of a future feasibility review once more detailed concept designs are undertaken. Should Stage 5 be constructed ahead of Stage 4, this portion of the site could drain west to the future main servicing Stage 5 and the Greenway development located to the north of the Pondicherry site.

8.3 Electricity

As discussed above, a new 11kV feeder is to be constructed with the development of Stage 4 and would supply development in Stages 4 and 5. It has been assumed for the purpose of this assessment that all new 11kV feeders will originate from the Oran Park ZS, however should the Marylands ZS be constructed ahead of Stage 4, new feeders would be constructed from the Marylands ZS.

Feeders will be constructed within the utilities allocation in The Northern Road and enter the site via Marylands Link Road 2. If the Marylands Link Road 2 is constructed with Stage 5, the feeders will enter the site via Marylands Link Road 1.

8.4 Stormwater

Stormwater runoff from lots within the northern half of Stage 4 will drain to detention basin B12, while lots within the southern half will drain to basin B8. Basin B8 is located adjacent the northern boundary of the proposed lakes, basin B12 is located in the north western corner of the active open space. Both basins are expected to be delivered as part of the Stage 3 works.

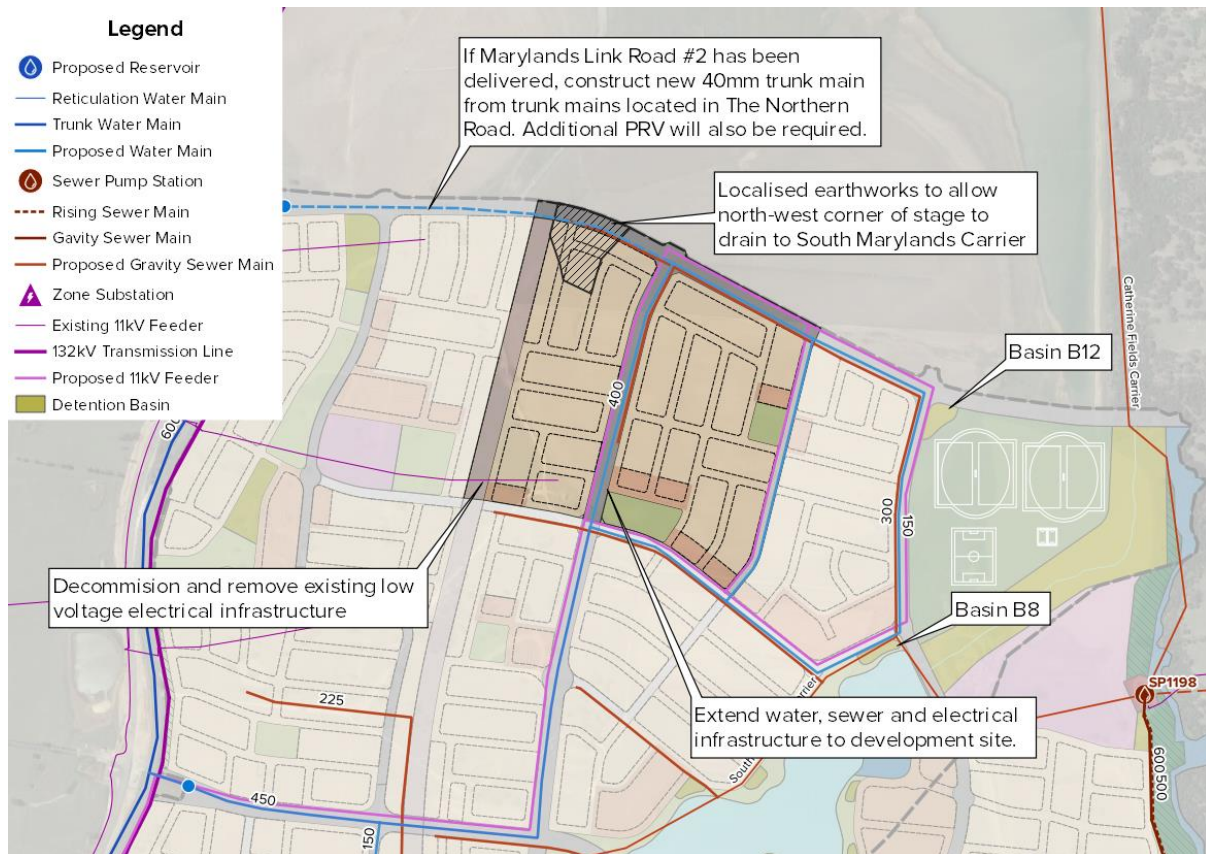
8.5 Summary of Infrastructure Requirements

A summary of the infrastructure requirements associated with Stage 4 are provided in Table 5.

Table 5 - Stage 4 Infrastructure Requirements

	Load	Required Trunk Infrastructure
Number of Dwellings	447	
Potable Water Load	35.1 L/s	400mm offtake main along Marylands Link Road 2. Alternative servicing achieved by extending infrastructure from Stages 2 and 3.
Sewer Load	1,565 EP	South Marylands Carrier (minimum 300mm diameter to service all eastern catchment) (Constructed in Stage 2)
Electrical Load	2.0 MVA	1x 11kV feeder from Maryland ZS
Stormwater	-	Detention Basins B8 & B12 (constructed in Stage 3)

Figure 9 – Stage 4 Servicing Strategy



9 Stage 5

Stage 5 covers the area bound by the northern and western site boundaries, the rail corridor and Tranche 41/Stage 1. Stage 5 lies within a single drainage catchment and generally falls from south to north with elevations ranging from RL.84 to RL.100m AHD.

9.1 Potable Water

Potable water supply for Stage 5 will come from the 400mm diameter offtake main constructed along Marylands Link Road 2 on the northern site boundary. If this road and main were not constructed as part of the Stage 4 works, this infrastructure will be constructed as part of Stage 5 and will complete the trunk potable water network for the site.

9.2 Sewer

Stage 5 will drain to the future Lowes Creek Carrier, located approximately 2.1km north of the site boundary. This Carrier main, along with SP1209, are expected to be delivered to align with development in the Lowes Creek Precinct. This has been flagged for delivery in early 2023.

A significant lead-in main will be required from the Pondicherry site to the Lowes Creek Carrier. This lead-in would also service dwellings in the future Greenway development site, directly north of Pondicherry. This main will be sized 225mm diameter within the Pondicherry site and increase to 375mm diameter at the connection to the Lowes Creek Carrier.

Sewer servicing for Stage 5 is entirely reliant on the construction of the Lowes Creek Carrier and SP1209. This infrastructure is understood to be delivered by Sydney Water.

9.3 Electricity

Stage 5 will be supplied via the 11kV feeder constructed as part of the Stage 4 works. This feeder will originate from the Marylands ZS and enter the site via Marylands Link Road 2.

9.4 Stormwater

Stormwater runoff from lots within the northern half of Stage 5 will drain to detention basin B3, while lots within the southern half will drain to basin B2. Basin B3 is located adjacent the northern site boundary and covers an area of approximately 0.9 hectares. Basin B2 is located north of open space OS4, adjacent the medium density residential zone. Basin B2 covers an area of approximately 0.8 hectares. Both basins will discharge to the existing creek at the northern site boundary.

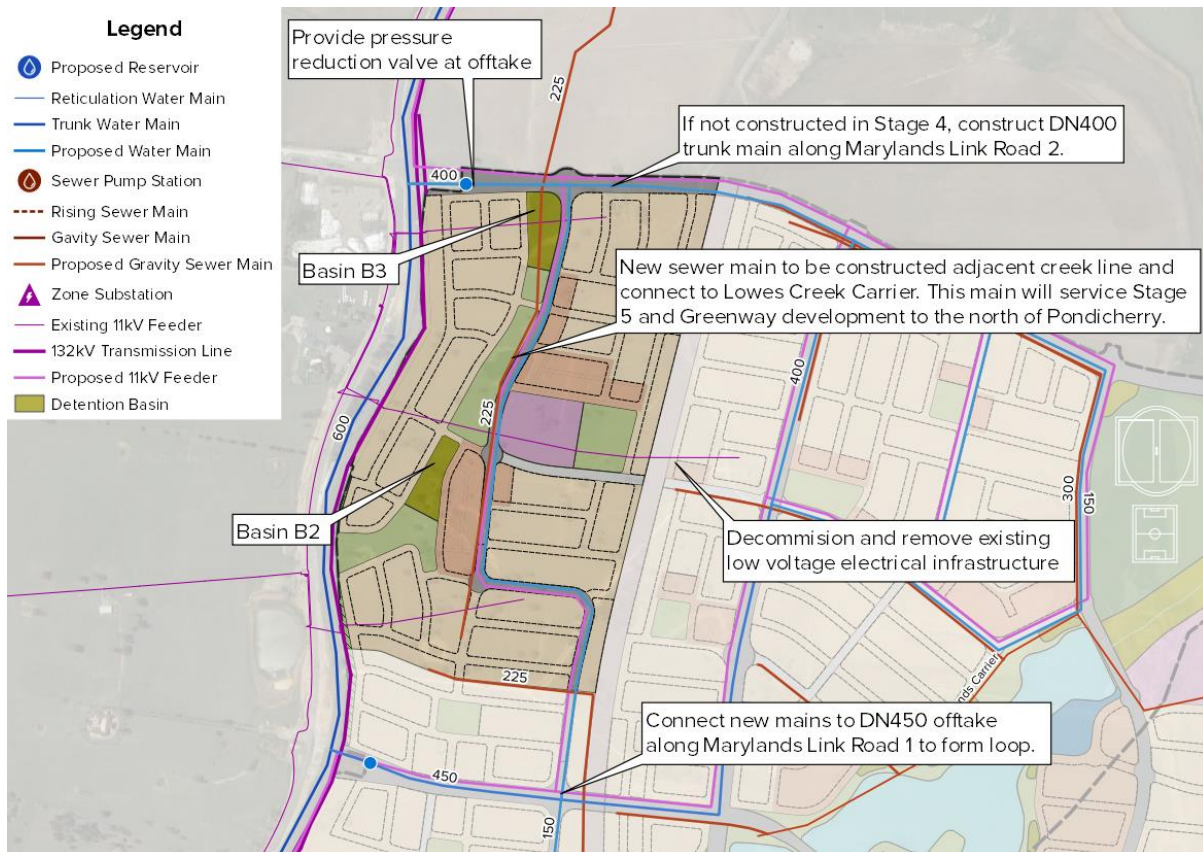
9.5 Summary of Infrastructure Requirements

A summary of the infrastructure requirements associated with Stage 5 are provided in Table 6.

Table 6 – Stage 5 Infrastructure Requirements

	Load	Required Trunk Infrastructure
Number of Dwellings	750	
Potable Water Load	56.8 L/s	400mm offtake main along Marylands Link Road 2.
Sewer Load	2,625 EP	225mm lead-in main to Lowes Creek Carrier. Lead-in main to progressively increase in size to 375mm at downstream connection.
Electrical Load	3.3 MVA	1x 11kV feeder from Maryland ZS (Shared with Stage 4 – assumed constructed in Stage 4)
Stormwater	-	Detention Basins B2 & B3

Figure 10 - Stage 5 Infrastructure Requirements



11 Stage 6

Stage 6 includes the two pockets of medium density residential land on the eastern side of the proposed lake. Stage 5 lies within a single drainage catchment, both development areas drain northwards towards the proposed lakes.

11.1 Potable Water

Potable water infrastructure from Stage 3 will be extended to service development in Stage 6. Supply of potable water is not expected to pose a constraint to development. Alternative supply could be achieved by extending mains from the Oran Park development, located to the south of Stage 6. This option is dependent on construction in Oran Park occurring ahead of construction of Stage 6.

11.2 Sewer

Stage 6 will be serviced by the South Marylands Carrier. A sewer main will be constructed from the development site and connect to the Carrier main near the north eastern stage boundary.

11.3 Electricity

It is likely that Stage 6 can be supplied electricity using residual available capacity in 11kV high voltage feeders constructed in Stages 2 and 4. Should there be insufficient capacity to supply development, alternative supply could originate from the Oran Park development located to the south of Stage 6. As mentioned above, this is reliant on this area being constructed ahead of Stage 6.

Should there be insufficient capacity in the feeders supplying Oran Park, a new feeder would be constructed from the Maryland ZS.

11.4 Stormwater

Stormwater runoff from lots within the western development block will drain to detention basin B11, while lots within the eastern development block will drain to basins B9 and B10. All basins are located on the southern boundary of the proposed lake.

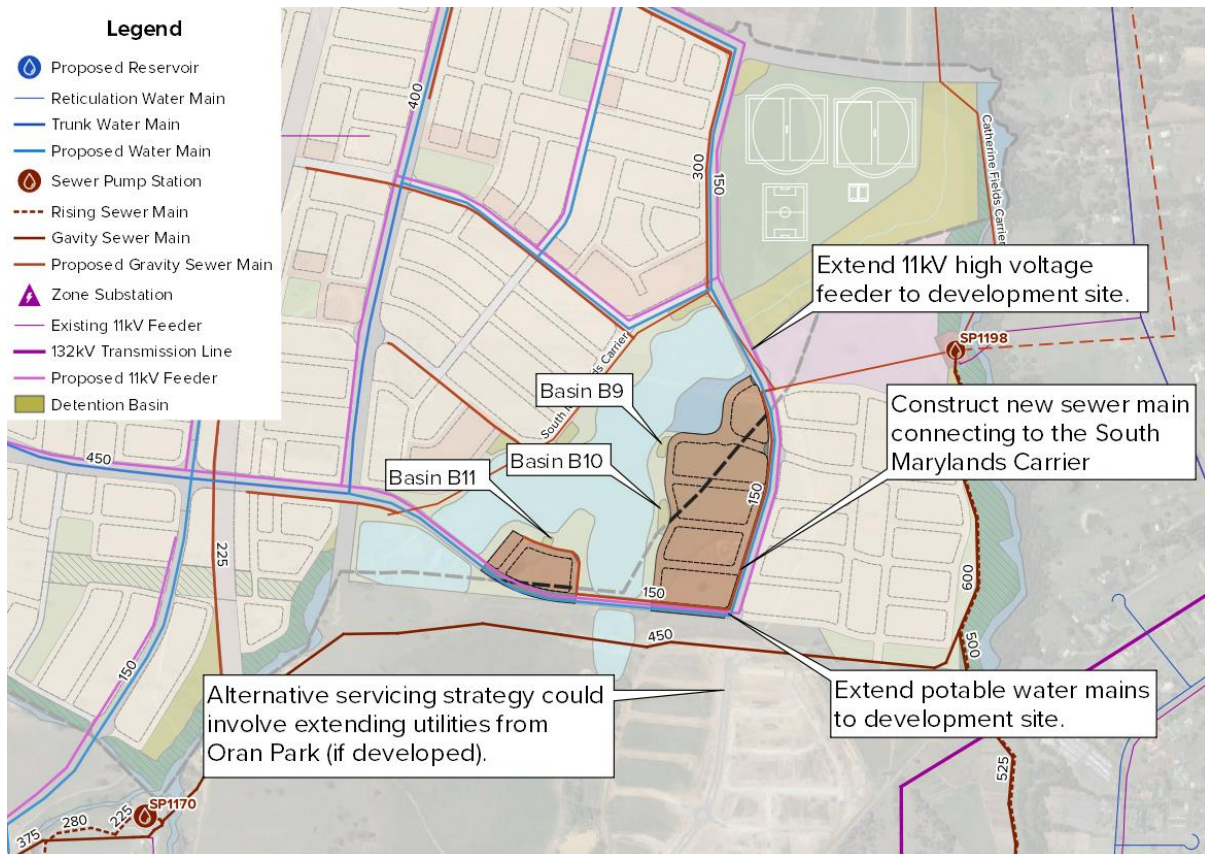
11.5 Summary of Infrastructure Requirements

A summary of the infrastructure requirements associated with Stage 4 are provided in Table 7.

Table 7 - Stage 6 Infrastructure Requirements

	Load	Required Trunk Infrastructure
Number of Dwellings	125	
Potable Water Load	9.3 L/s	Extension of existing potable water infrastructure to development site
Sewer Load	438 EP	150mm sewer main connecting to South Marylands Carrier
Electrical Load	0.6 MVA	Extension of existing electrical infrastructure to development site
Stormwater	-	Detention Basins B9, B10 & B11

Figure 11 - Stage 6 Infrastructure Requirements



12 Summary of Infrastructure Requirements

The servicing requirements for each Stage are summarised in Table 8.

Table 8 – Proposed Infrastructure Rollout

Stage	Dwellings	Water	Sewer	Electricity	Stormwater
1	477	Extension of existing 100mm diameter water main in South Circuit	New 225mm diameter gravity main connection to Oran Park Carrier	Extension of existing electrical feeders in South Circuit	Detention Basin B1
2	432	450mm offtake main to be constructed along Marylands Link Road 1.	South Marylands Carrier (minimum 300mm diameter to service all eastern catchment)	1x 11kV feeders from Oran Park ZS	Detention Basin B4
3	483	450mm offtake main along Marylands Link Road 1 (Constructed in Stage 2)	South Marylands Carrier (minimum 300mm diameter to service all eastern catchment) (Constructed in Stage 2)	1x 11kV feeder from Oran Park ZS (Shared with Stage 2 – assumed constructed in Stage 2)	Detention Basins B5, B6, B7, B8 and B12
4	447	400mm offtake main along Marylands Link Road 2. Alternative servicing achieved by extending infrastructure from Stages 2 and 3.	South Marylands Carrier (minimum 300mm diameter to service all eastern catchment) (Constructed in Stage 2)	1x 11kV feeder from Maryland ZS	Detention Basins B8 & B12 (constructed in Stage 3)
5	750	400mm offtake main along Marylands Link Road 2.	225mm lead-in main to Lowes Creek Carrier. Lead-in main to progressively increase in size to 375mm at downstream connection.	1x 11kV feeder from Maryland ZS (Shared with Stage 4 – assumed constructed in Stage 4)	Detention Basins B2 & B3
6	125	Extension of existing potable water infrastructure to development site	150mm sewer main connecting to South Marylands Carrier	Extension of existing electrical infrastructure to development site	Detention Basins B9, B10 & B11

12.1 Cost Estimates

Based on the infrastructure rollout outlined in Table 8, an approximate cost of enabling trunk infrastructure for each stage has been calculated. The results are tabulated below.

Table 9 - Trunk Infrastructure Cost by Stage

Year	Trunk Infrastructure Delivered	Estimated Cost	Total Cost
2022	225mm sewer main to Oran Park	\$370,000	\$9,161,000
	Detention Basin B1	\$8,791,000	
2023	450mm offtake main on Marylands Link Road 1	\$842,000	\$4,462,000
	South Marylands Carrier (assumed 300mm diameter)	\$713,000	
	11kV feeder from Oran Park ZS	\$2,482,000	
	Detention Basin B4	\$425,000	
2024	Bioretention Basins B5, B6, B7 & B8 and Detention Basin B12	\$4,398,000	\$4,398,000
2025	400mm offtake main along Marylands Link Road 2	\$881,000	\$2,862,000
	11kV feeder from Maryland ZS	\$1,981,000	
2026	Sewer lead-in to Lowes Creek Carrier (225mm – 375mm diameter main)	\$1,103,000	\$12,082,000
	Detention Basins B2 & B3	\$10,979,000	
2026 +	Bioretention Basins B9, B10 & B11	\$1,102,000	\$1,102,000