

Appendix D

Developer Strategies included in 2019 Northern Region DSP

MEMO - Summary of developer servicing strategy documents for water and sewer in Northern Region Development Servicing Plan Area

Background

To support the development of the 2019 Development Servicing Plans (DSP, this summary document is provided to give an overview of proposed major development activities as described in recent developer initiated water and wastewater servicing strategies and associated DSP funded capital works required to service these developments.

Development Summary

1. Wadalba East Land Owners Group (WELOG) Development

Proposed WELOG development south of Johns Rd, Wadalba consists of 67ha of developable land with multiple owner interest. A developer servicing strategy (ADW Johnson, June 2017) proposed the following lot yield and staging plan as shown in Table 1 and Figure 1, respectively. Proposal was to progress with a development front moving east to west to work within the constraints of existing water and sewer services. Proposed water and sewer assets to service the development are shown in Figures 2 and 3, respectively. This consists of approximately 2km each of water and sewer main and three additional sewer pumping stations.

Table 1: WELOG Lot Yield

Stage	Contributing ET
1A	165
1B	161
2A	165
2B	117
3A	226
3B	168
TOTAL	1002

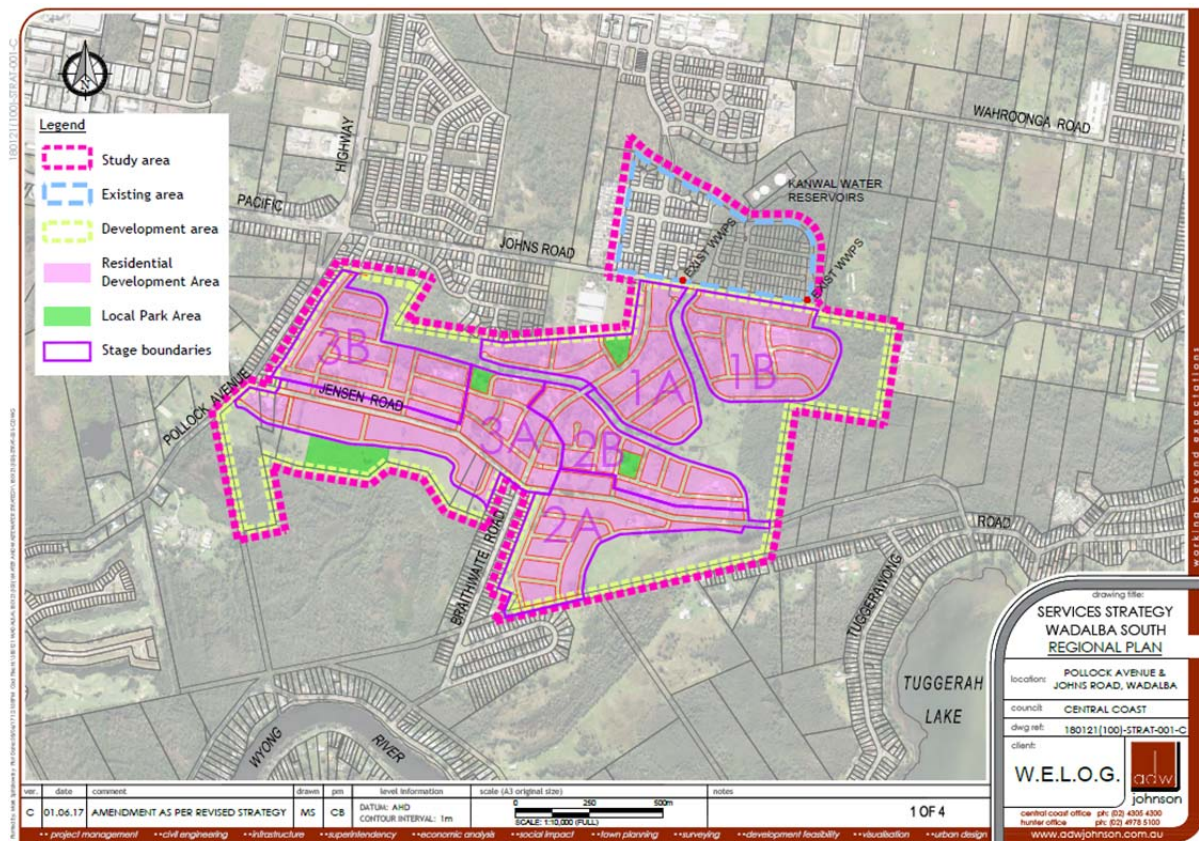
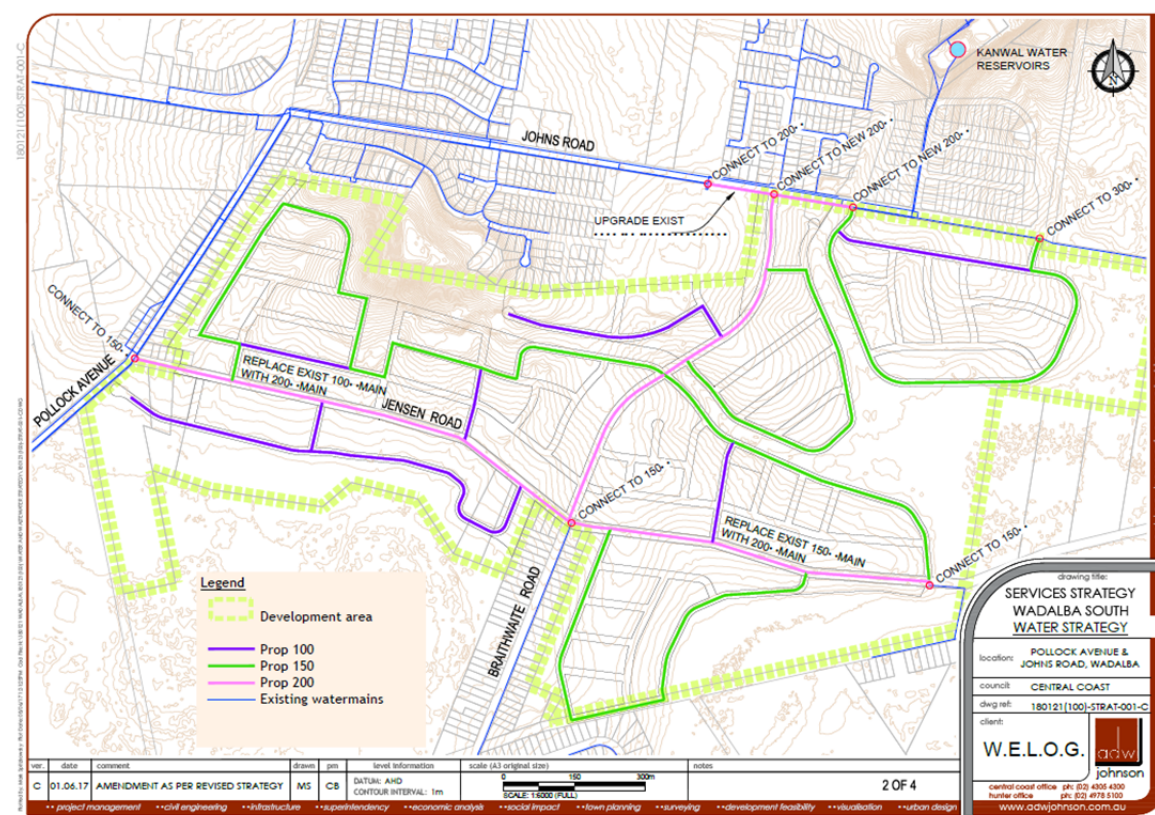
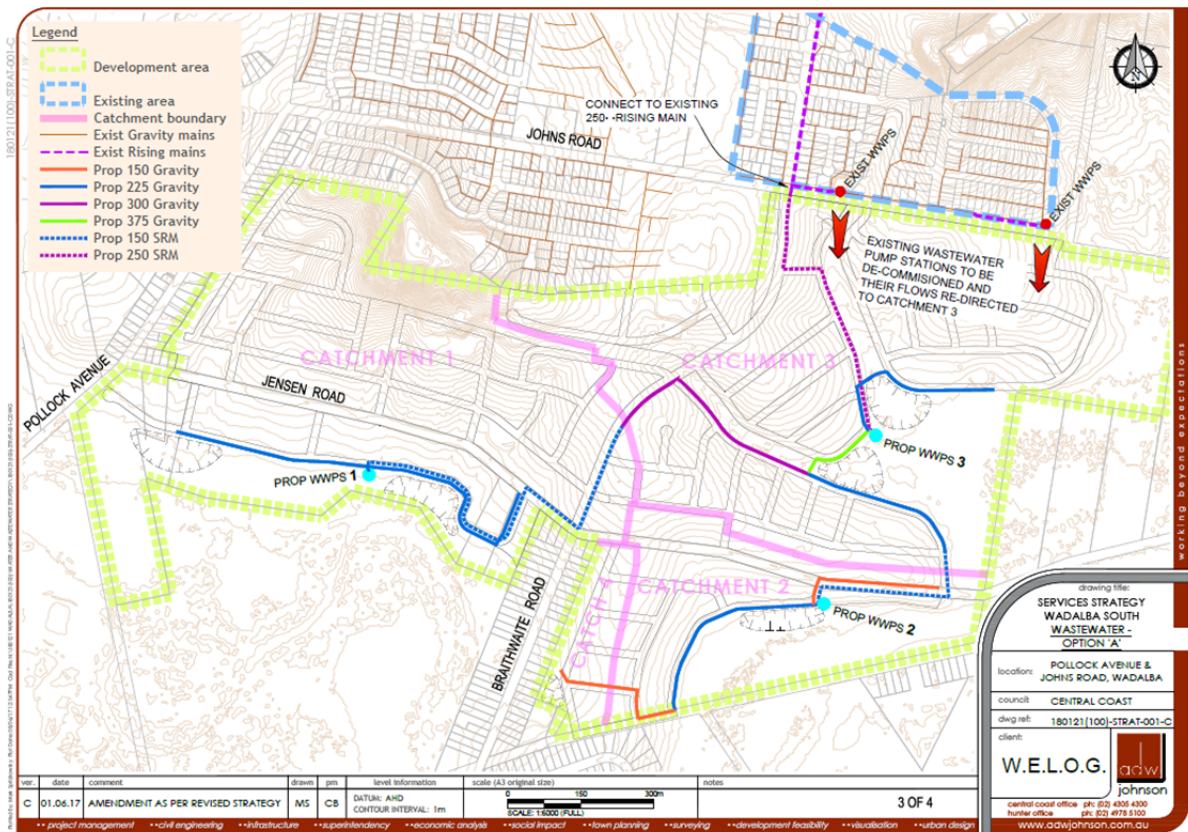


Figure 1 – WELOG Development Staging Plan



WELOG Development New Water Assets

Figure 2 –



– WELOG Development New Sewer Assets (Preferred Option A)

Figure 3

2. Darkinjung Aboriginal Land Council (DALC) Development Lake Munmorah

Proposed DALC Lake Munmorah development is for a 62Ha development north of the Pacific Highway and intersection of Chain Valley Bay Rd with total lot yield of 544 ET (ADW Johnson, April 2018). While no staging plan has been proposed it was deemed not to be a high priority due to the simplicity of servicing. Detail on preferred water and sewer servicing options is presented in Figures 4 and 5 respectively. Proposal for water is for a secondary spline of the main trunk line to provide some added security of supply. Preferred sewer servicing (Option 2D) is for one regional sewer pumping station discharging directly to Mannering Park STP.

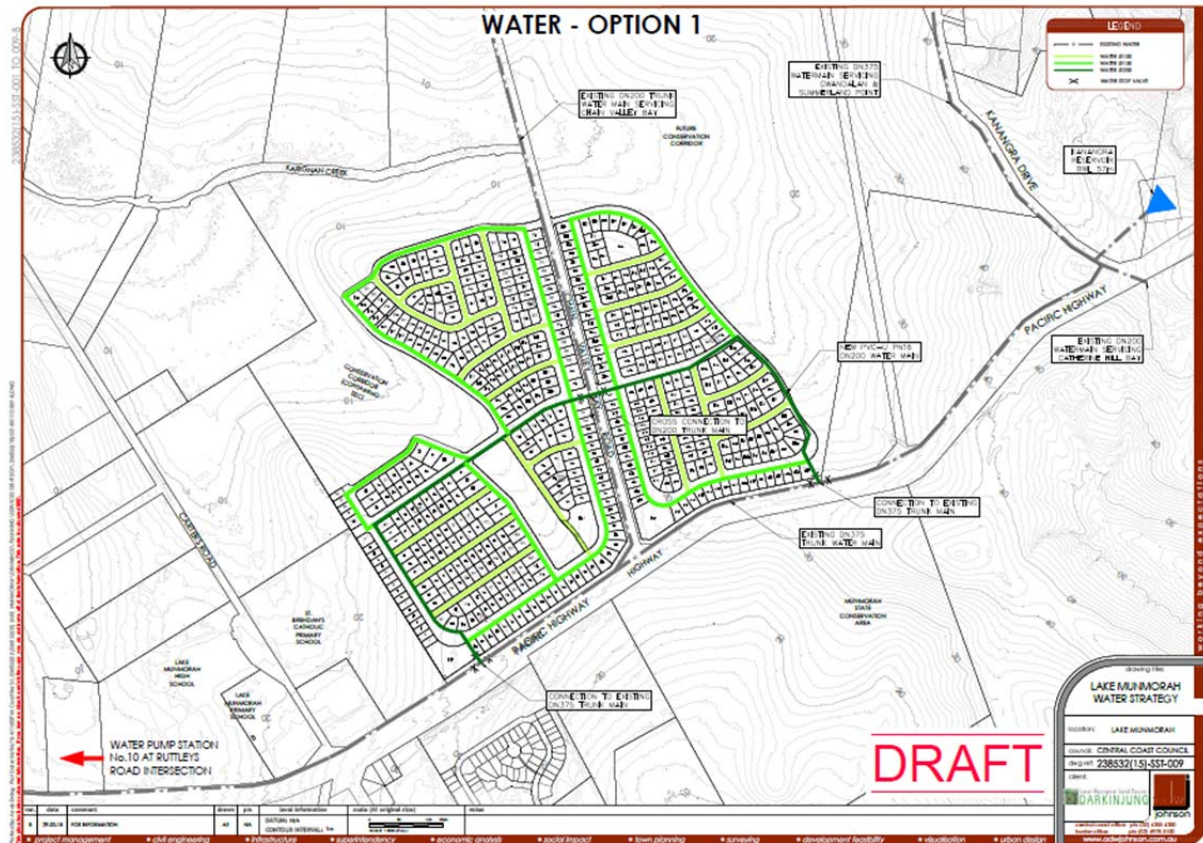


Figure 4 – DALC Lake Munmorah Development New Water Assets (Option 1)

3. DALC Development Bushells Ridge

Proposed DALC Bushells Ridge development is for a mixed land use development over 3 stages with Stages 1 and 3 comprising industrial and Stage 2 as residential (ADW Johnson, Dec 2017). A summary of lot yield and Staging plan are shown in Table 2 and Figure 6 respectively. Detail on preferred water and sewer servicing options is presented in Figures 7 and 8 respectively. Proposal for water is for a new 3 to 8ML reservoir at Bushells Ridge and ring of trunk water main assets connecting up the three stages including an additional development on Hunter Lands and option to connect four Council owned sites. Preferred sewer servicing (Option 2D) is for two regional pumping stations discharging directly to Charmhaven STP to service Stage 1 and 3. The Stage 2 residential development will be serviced by a gravity network and small pumping station.

Table 2: DALC Bushells Ridge Development Lot Yield

Stage	Contributing ET
1 (Industrial Waste Hub)	1160
2A (Residential)	345
2B	174
2C	375
3 (Wallarah Industrial)	1260
TOTAL	3314

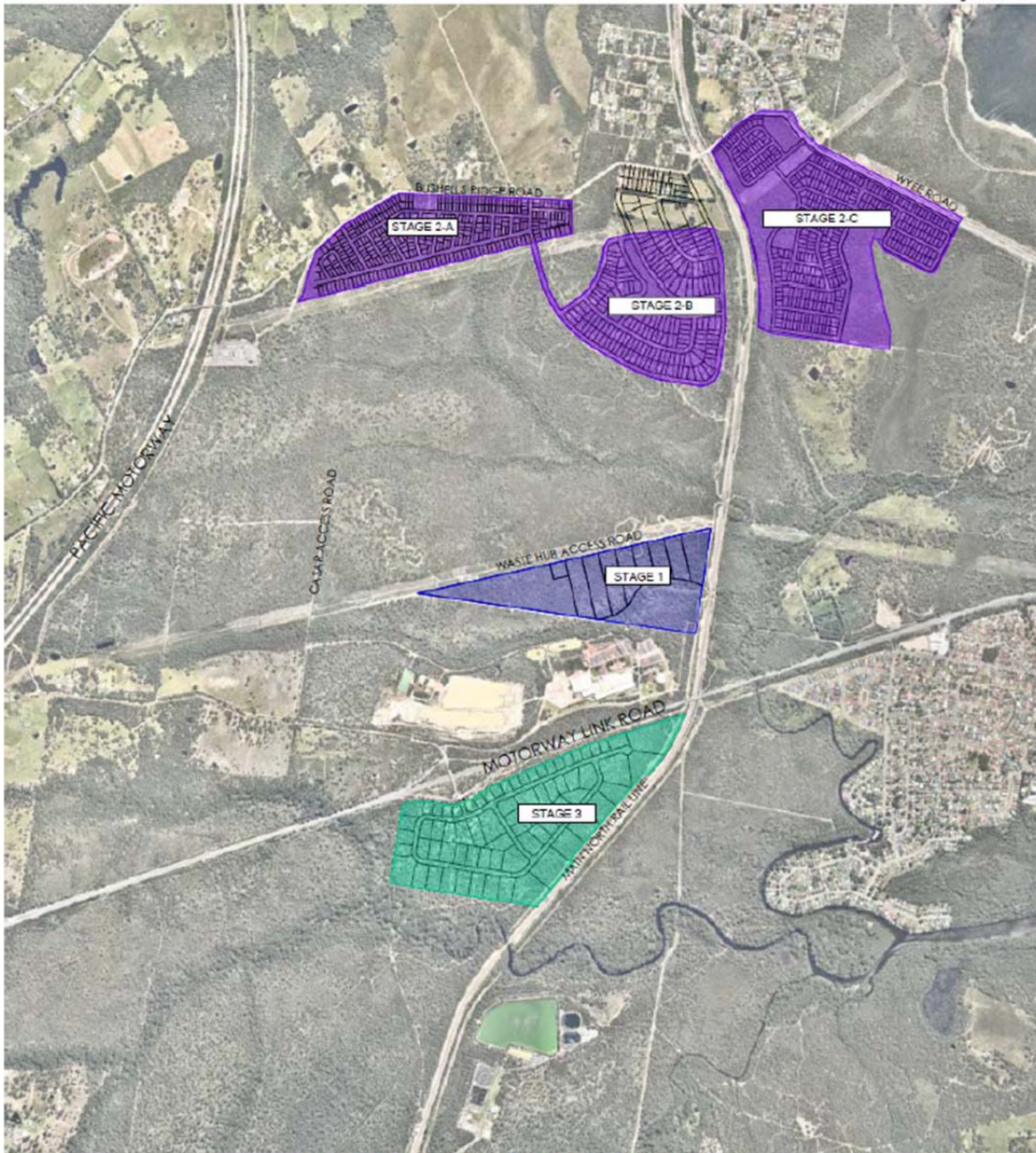


Figure 1.1 – Proposed Development Site

Figure 6

– DALC Bushells Ridge Development Staging Plan

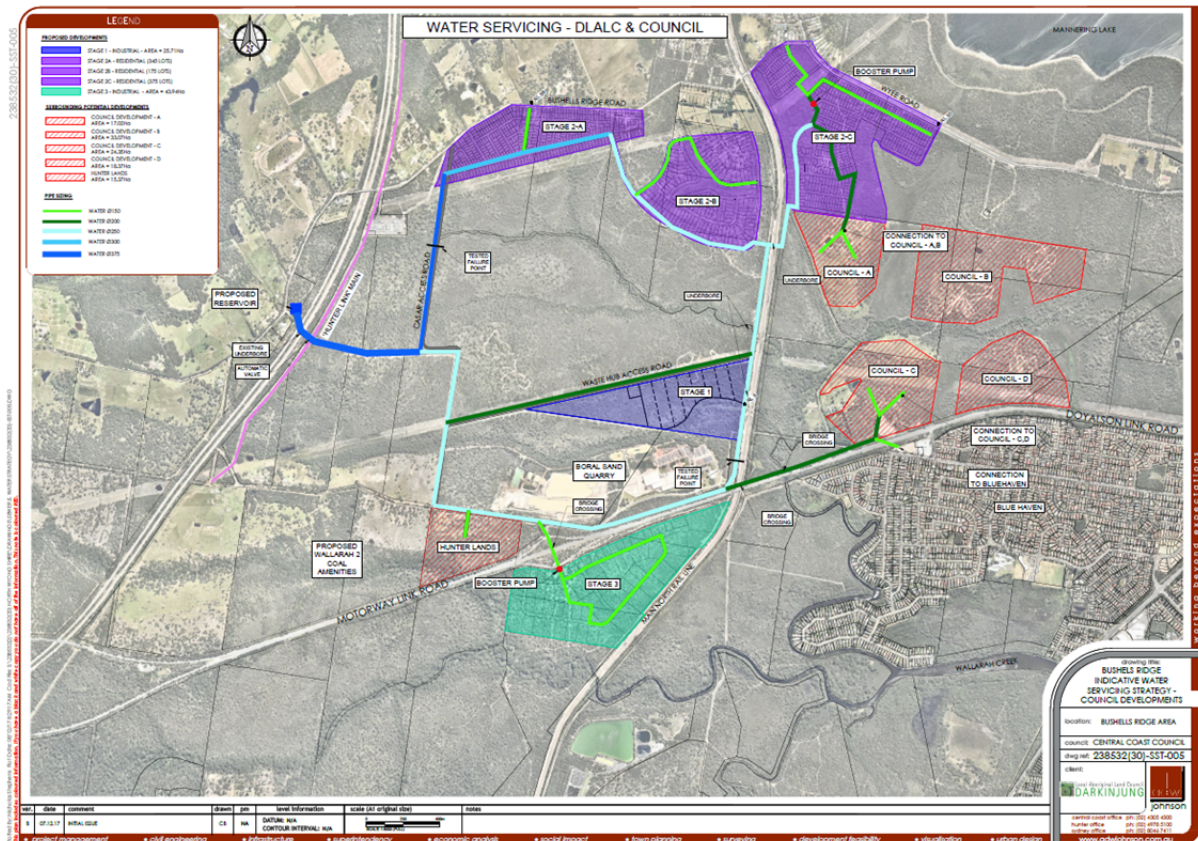
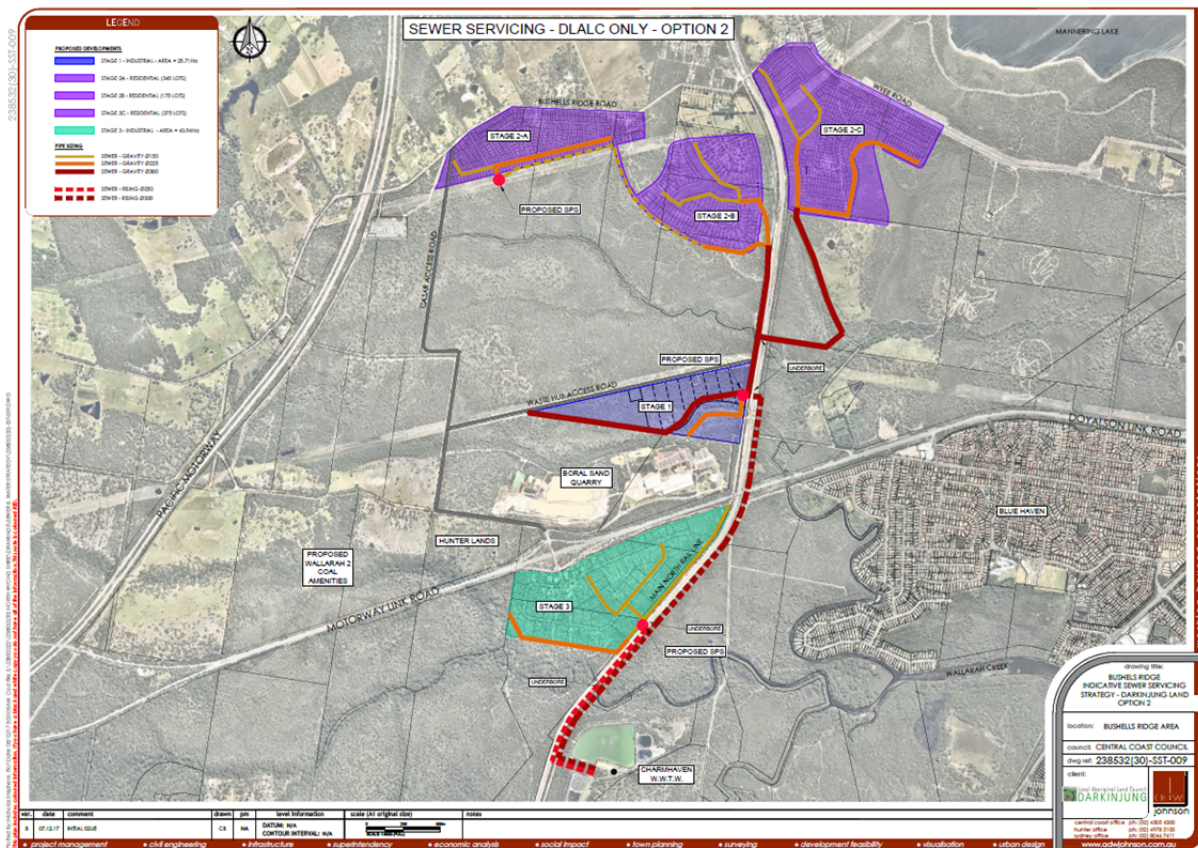


Figure 7 – DALC Bushells Ridge Development New Water Assets



Figure

8 – DALC Bushells Ridge Development New Sewer Assets (Preferred Option 2)

4. Glenning Valley Sewer Pumping Station Concept Design (SPSWS47)

Proposed development at 79 Berkeley Rd, Berkeley Vale comprising of residential land use is estimated to produce an ultimate lot yield of 398 ET subject to further Council approval with current approval for up to 126 ET(ADW Johnson, May 2018). Assumed lot development is shown in Table 3 and corresponding staging plan in Figure 9. Due to the simplicity of servicing for water through developer funded internal reticulation, no DSP funded works for water distribution have been identified. Preferred servicing for sewer is for a new pumping station (SPS WS47) with nominal 30L/s capacity.

Table 3: Berkeley Rd, Berkeley Vale Development Lot Yield

Table 1.7.1 – Assumed lot development over time

Development	Lots	Year
DA 1438/2015 – Stage 1	49	1
DA 1438/2015 - Stage 4	25	2
DA 1438/2015 - Stage 5	52	3
Eastern Residential	23	3
Western Residential	78	4
WBSE Buffer Zone	133	5
Southern Residential	9	6
MB & EEC Area	29	6

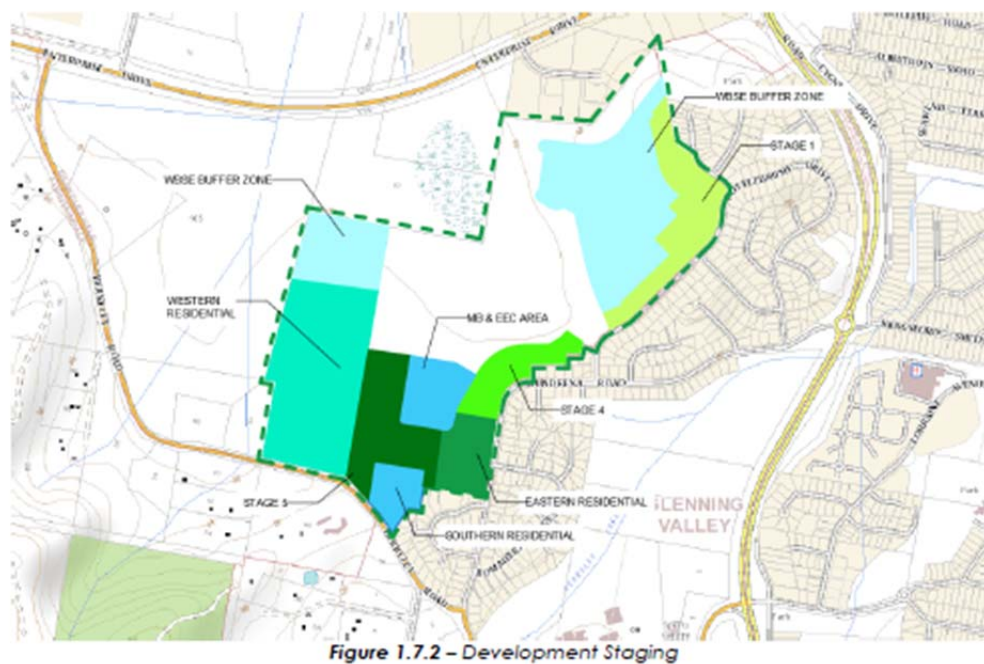


Figure 9 – Berkeley Rd, Berkeley Vale Development Staging Plan (Glenning Valley)

5. Greater Warnervale Structural Plan

The Warnervale Town Centre (WTC) is a 119ha development with estimated yield of 6000 ET as residential. In addition to the residential yield it is estimated that an additional 40,000 residents will be serviced through diverse community facilities, retail, and commercial and a public transport hub and adjacent Wyong Employment Zone (WEZ). A locality plan of the WTC and WEZ is shown in Figure 10. Detail on preferred water and sewer servicing options is presented in Figures 11 and 12 respectively. Proposal for water is for a new 9km long Mardi to Warnervale Pipeline. Preferred sewer servicing is for three pumping stations (SPS CH35, CH36, CH37) and network of trunk and gravity sewer mains.



Source: Warnervale Town Centre Development Control Plan 2012, NSW Department of Infrastructure and Planning

Figure 10 – Warnervale Town Centre (WTC) and Wyong Employment Zone (WEZ) Locality

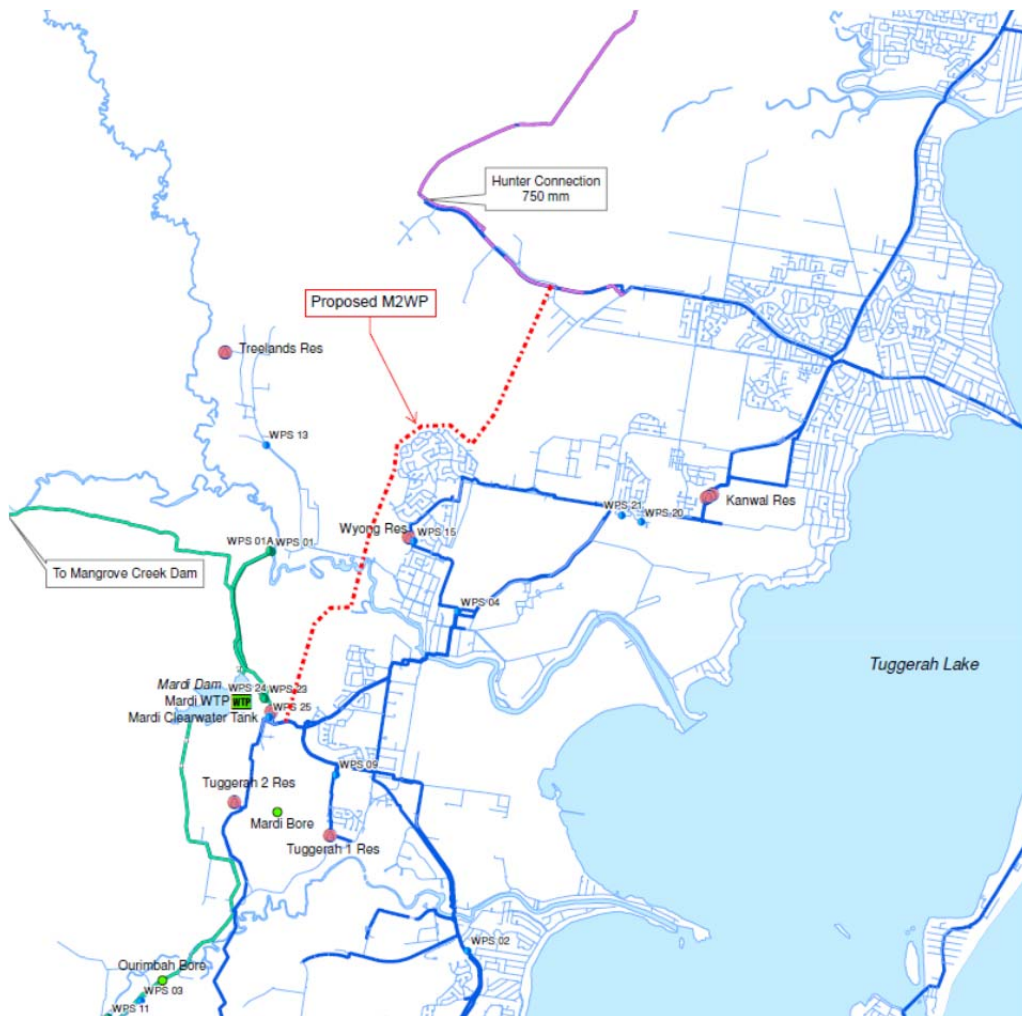


Figure 11 – WTC and WEZ Water Servicing through Mardi to Warnervale Pipeline

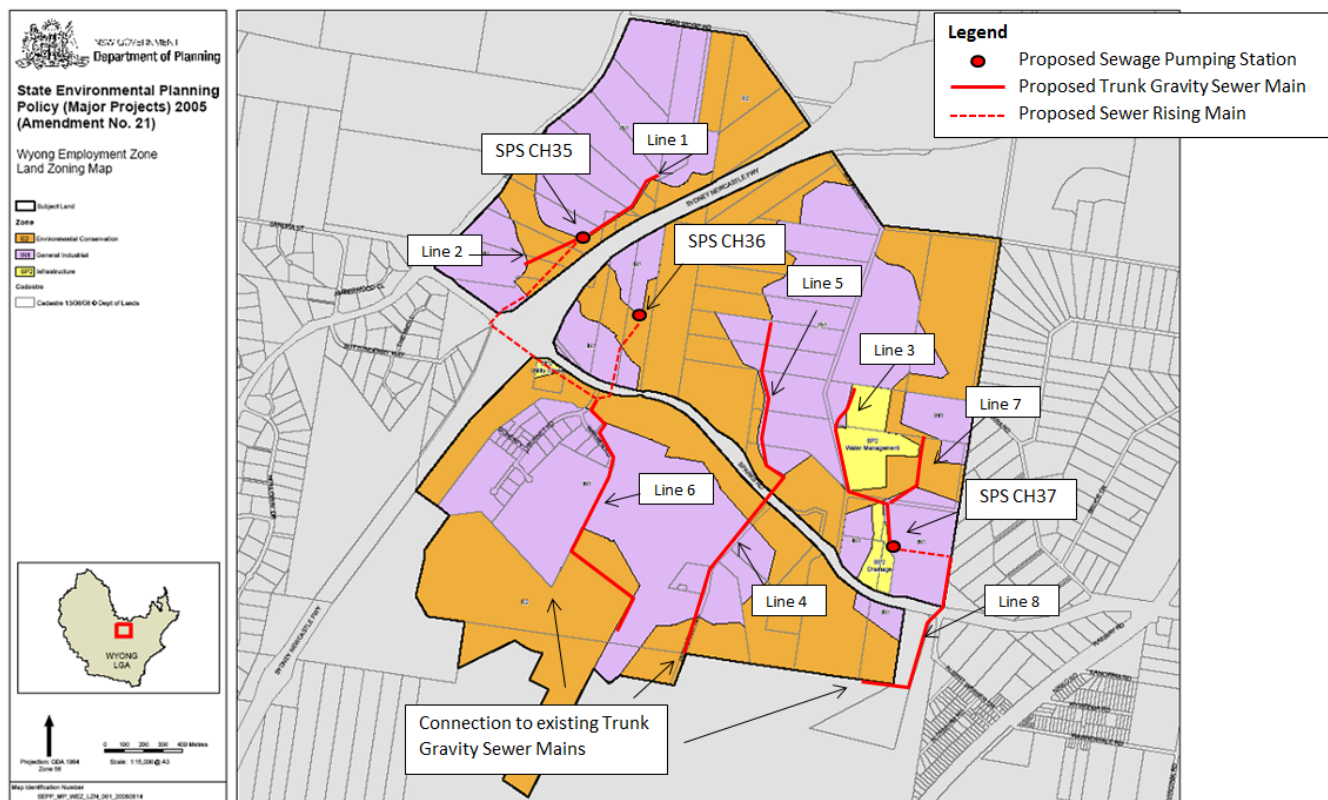


Figure 12 – WTC and WEZ Water Sewer Servicing Strategy

6. Gwandalan Sewer Pumping Station Detailed Design (SPSGW09)

A proposed 54.6ha residential development south of the Gwandalan township is estimated to yield an 600ET (ADW Johnson, October 2018). Staging of the development is according to two sewer pumping station catchment required to service the development with estimated lot yield as shown in Table 4. The site plan and lot layout plan are shown in Figures 13 and 14, respectively. Due to the simplicity of servicing for water through developer funded internal reticulation, no DSP funded works for water distribution have been identified. Preferred servicing for sewer is for a new regional pumping station (SPS GW09) with nominal 46L/s capacity to pump directly to Gwandalan STP and smaller sewer pumping station (SPS GW10) of nominal 21L/s capacity to pick up adjacent catchment.

Table 4: Gwandalan Residential Development Lot Yield

SPS Catchment	Contributing ET	SPS Capacity (L/s)
SPSGW09 (gravity only)	329	(25.0)gravity only
SPSGW10	271	20.7
TOTAL (SPSGW09 total)	600	45.8



Figure 1.1 – Proposed Gwandalan Development Site, as indicated by red boundary

Figure 13 – Gwandalan Development Locality Plan

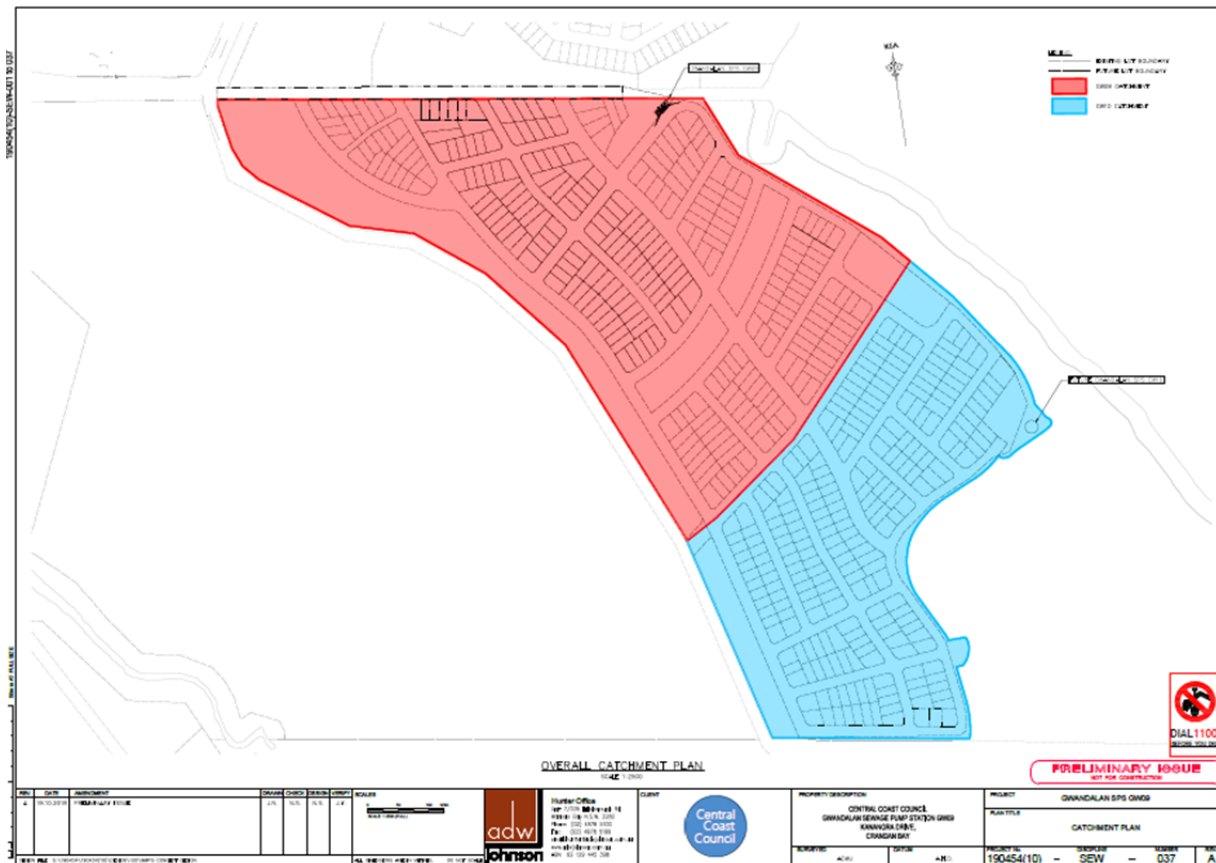


Figure 14: Gwandalan Development Lot Layout Plan (GW09 Catchment = Red; GW10 =Blue)

References:

1. Water and Wastewater Servicing Strategy, Wadalba South Development Area, Wadalba East Land Owners Group (WELOG), ADW Johnson, June 2017, Revision C (TRIM: D12836485)
2. Water and Wastewater Servicing Strategy, Pacific Highway Lake Munmorah, Darkinjung Local Aboriginal Land Council, ADW Johnson, April 2018 (TRIM: D13200523)
3. Water and Wastewater Servicing Strategy, Bushells Ridge, Darkinjung Local Aboriginal Land Council, ADW Johnson, December 2017 (TRIM: D13201953)
4. Sewer Pumping Station Concept Design Package, Glenning Valley WWPS, ADW Johnson, May 2018, Revision A (TRIM: D13267064)
5. Greater Warnervale Structural Plan, Central Coast Council Internal Memo, November 2018, (TRIM: D13593828)
6. Wastewater Pumping Station Detailed Design Package, Gwandalan – GW09, ADW Johnson, October 2018, Revision A (TRIM: D13593851)