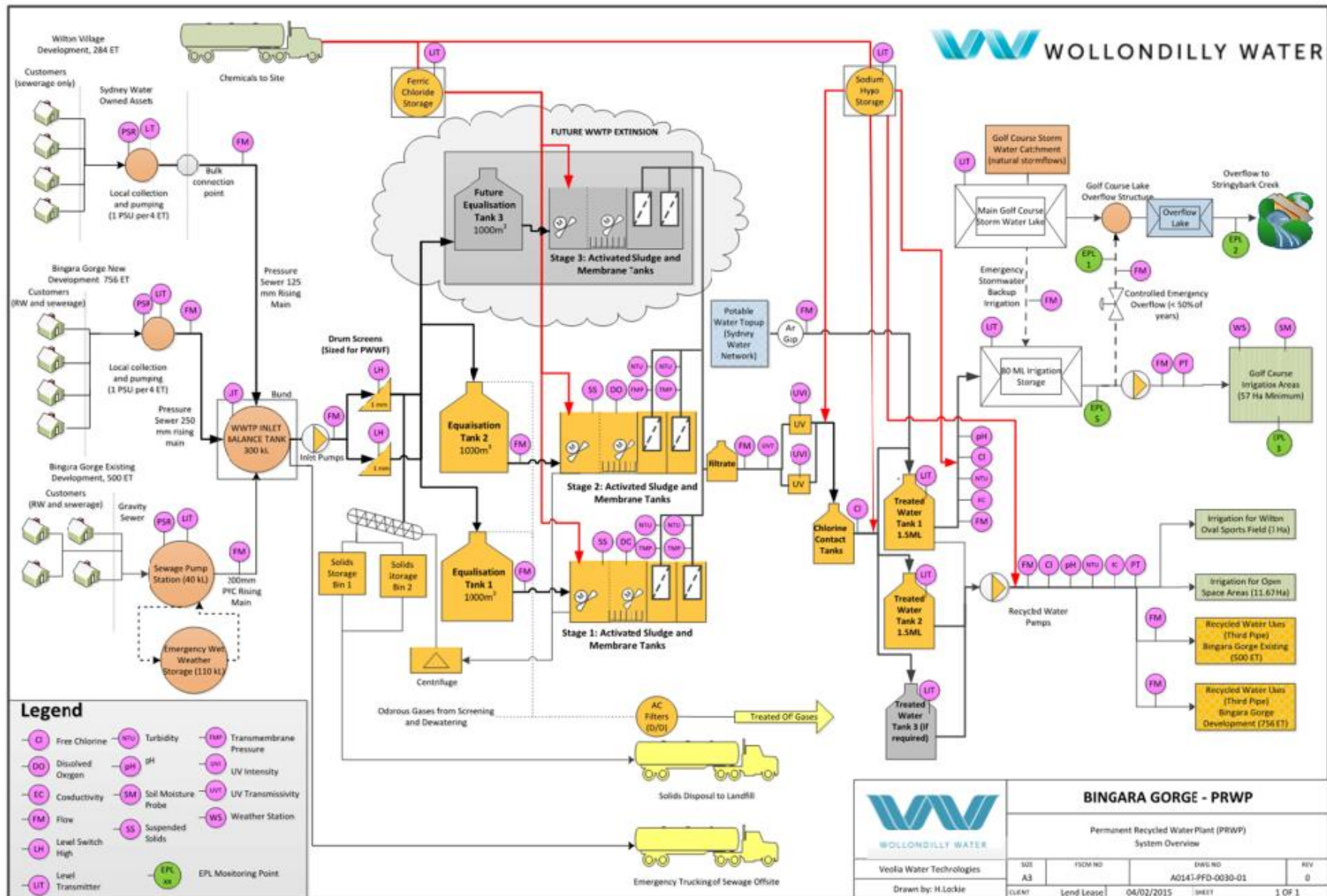


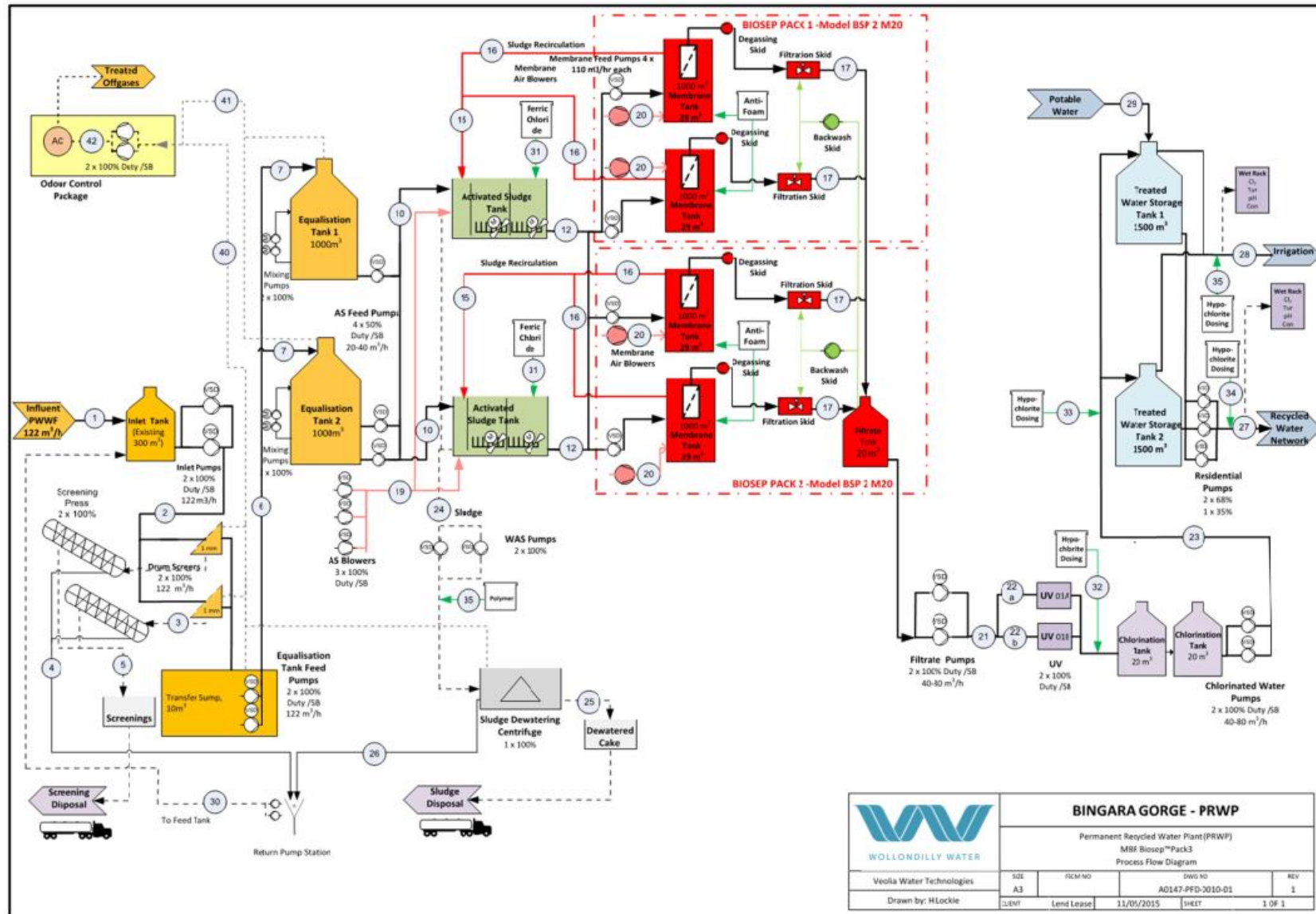
Appendix 4.2.1 (pages 7 to 8)

Scheme Overview and Recycled Water PFD

Wollondilly Water – Recycled Water Scheme Overview



Wollondilly Water – Recycled Water Plant Process Flow Diagram



Appendix 4.2.2(a) (pages 10 to 11)

Figure 1 – Completed Recycled Water Network

Figure 2 – Existing and Future Recycled Water Network

Figure 1 - Wollondilly Water – Recycled Water Network

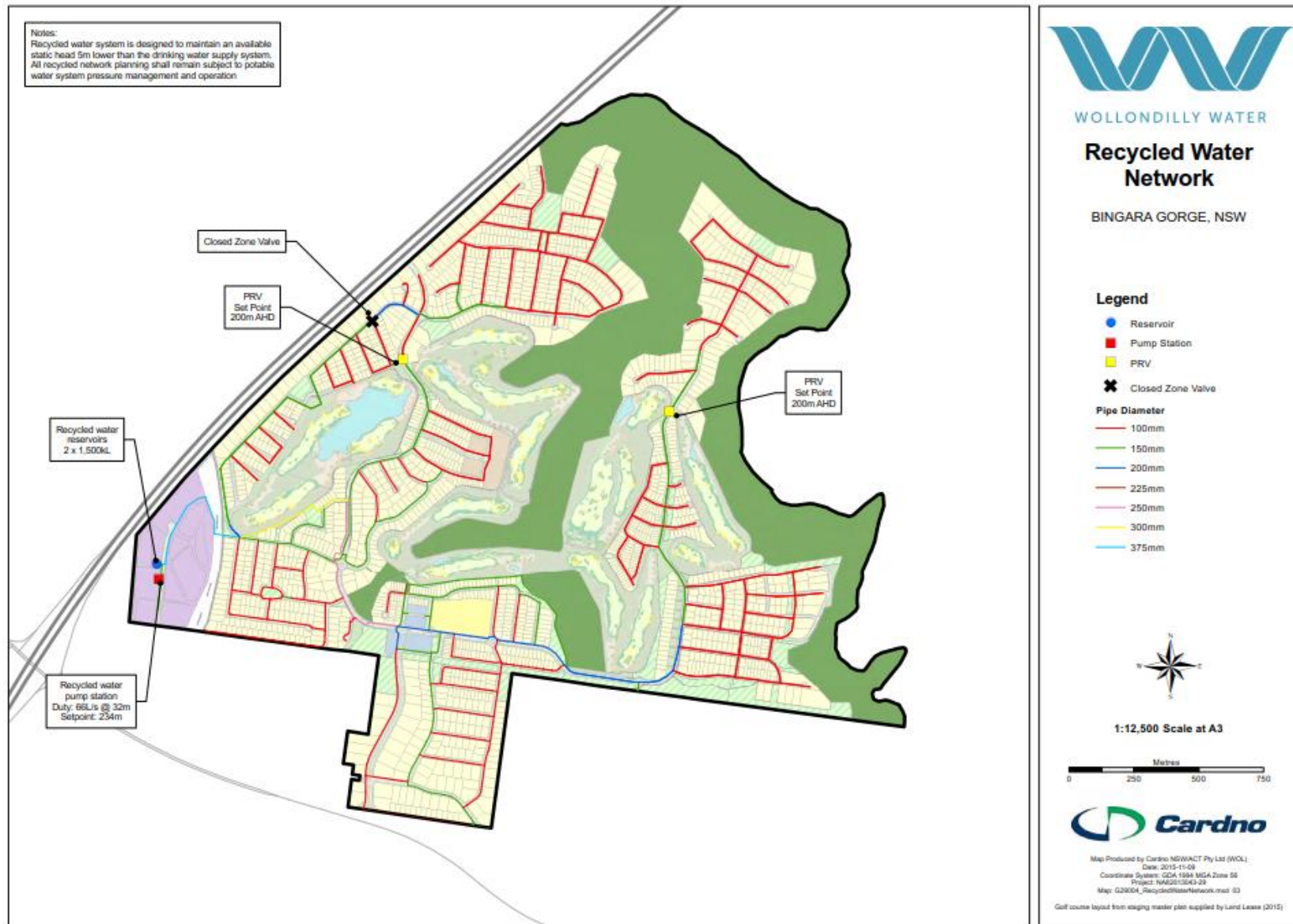
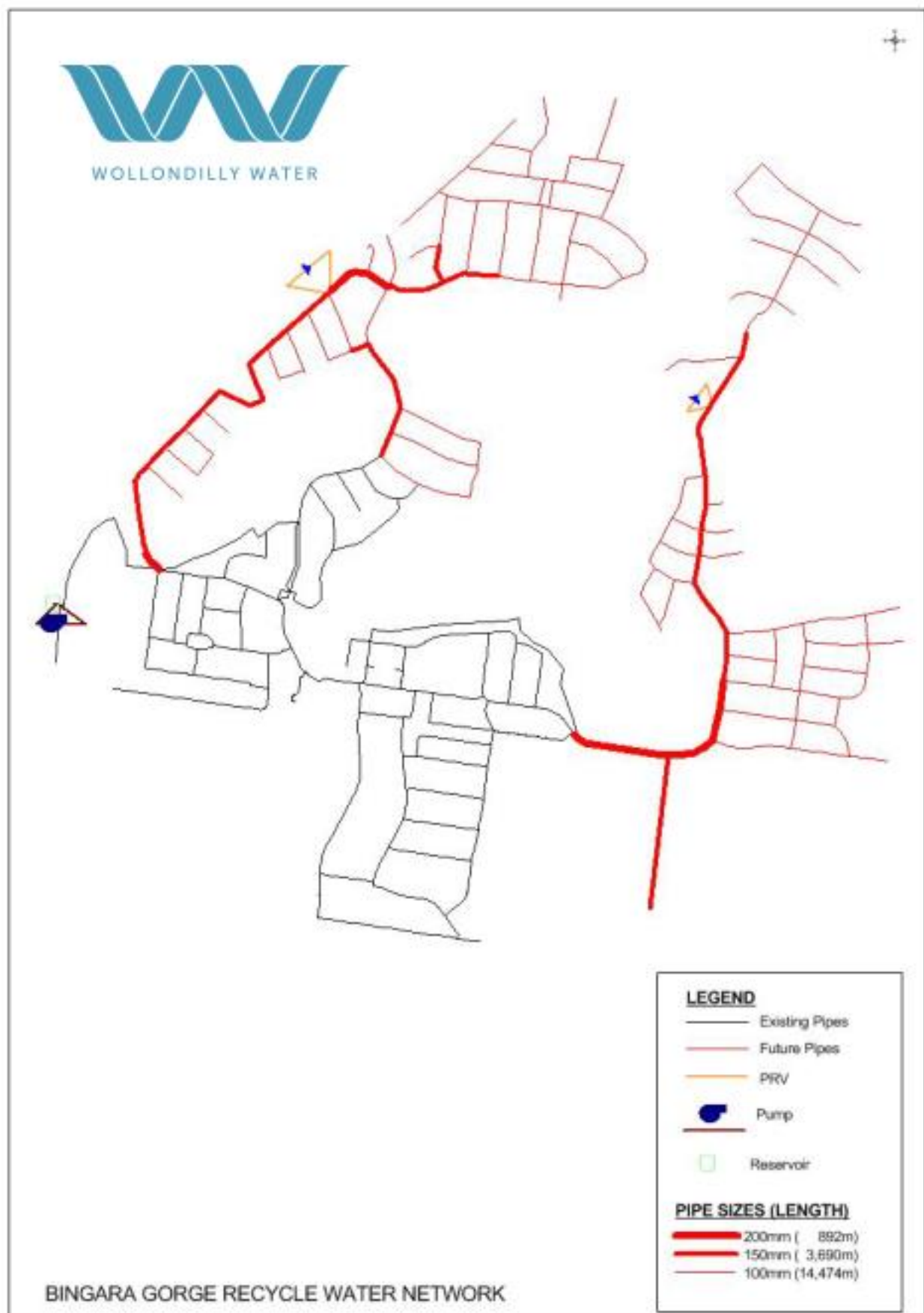


Figure 2 - Wollondilly Water – Current and Future Network Expansion (as of January 2019)



Appendix 4.2.2(b) (pages 13 to 15)

Integrated Asset Management Plan

WOLLONDILLY WATER

WW-PL-6000
INTEGRATED ASSET MANAGEMENT PLAN



Contents

1.	INTRODUCTION	6
1.1.	BACKGROUND	6
1.2.	GOALS AND OBJECTIVES OF ASSET MANAGEMENT	7
1.3.	ROLE OF AN ASSET MANAGEMENT PLAN	7
1.4.	ASSETS COVERED BY THIS PLAN	8
1.5.	PLAN FRAMEWORK	9
2.	STRATEGIC ASSET MANAGEMENT (CORPORATE PLANNING)	11
2.1.	MISSION STATEMENT (CONFIRM STRATEGIC OBJECTIVE)	11
2.2.	STRATEGIC ASSET MANAGEMENT OBJECTIVES (CONFIRM STRATEGIC OBJECTIVE CONT.)	11
2.3.	ORGANISATIONAL STRUCTURE (DEFINE RESPONSIBILITIES)	13
2.4.	OPERATING ENVIRONMENT AND CONTEXT	13
2.5.	CORE AND ADVANCED ASSET MANAGEMENT	13
2.6.	COMMUNITY CONSULTATION	14
2.7.	MANAGEMENT COMMITMENT (GAIN ORGANISATION COMMITMENT)	14
2.8.	REVIEW AND UPDATE	14
3.	IDENTIFY AND DESCRIBE ASSETS	15
3.1.	DEFINITION OF SITE	15
3.2.	BINGARA TRWP AND PRWP SITE	16
3.2.1.	ASSET RECORDS TO DEFINE TRWP & PRWP CAPABILITY (EXISTING INFORMATION SOURCES)	17
3.3.	SEWER PUMP STATION 2 (SPS2)	17
3.3.1.	ASSET RECORDS TO DEFINE SPS2 CAPABILITY (EXISTING INFORMATION SOURCES)	18
3.4.	SEWER COLLECTION NETWORK	19
3.4.1.	ASSET RECORDS TO DEFINE SEWER NETWORK CAPABILITY (EXISTING INFORMATION SOURCES)	19
3.5.	RECYCLED WATER DISTRIBUTION NETWORK	20
3.5.1.	ASSET RECORDS TO DEFINE RW NETWORK CAPABILITY (EXISTING INFORMATION SOURCES)	20
3.6.	GOLF IRRIGATION PONDS, TRANSFER MAIN AND ENVIRONMENTAL DISCHARGE NETWORK	21
3.6.1.	ASSET RECORDS TO DEFINE PONDS, TM AND DISCHARGE NETWORK CAPABILITY	21
3.7.	WILTON VILLAGE RISING MAIN	22
3.7.1.	ASSET RECORDS TO DEFINE WILTON VILLAGE RM CAPABILITY (EXISTING INFORMATION SOURCES)	22
3.8.	ASSET LISTS, PLANS, RECORDS	23
3.9.	AGE OF INFRASTRUCTURE	23
3.10.	ASSET RISK ASSESSMENT	23
3.10.1.	ASSET CONDITION	24
3.10.2.	SCHEDULING	24
3.11.	ASSET CAPABILITY AND PERFORMANCE (PERFORMANCE MONITORING)	25
4.	LEVELS OF SERVICE	26
4.1.	WHAT ARE LEVELS OF SERVICE?	26
4.2.	CUSTOMER RESEARCH AND EXPECTATIONS	26
4.3.	LEGISLATIVE REQUIREMENTS	26
4.4.	CURRENT LEVELS OF SERVICE	27
5.	FUTURE DEMAND	30
5.1.	CUSTOMER TYPES	30
5.2.	DEMAND FORECAST	30
5.3.	POPULATION AND URBAN GROWTH	30
5.4.	WATER DEMANDS	32
5.5.	WASTEWATER SOURCES & INFILTRATION	35
6.	LIFECYCLE MANAGEMENT PLAN	37
6.1.	ASSET LIFE CYCLE	37
6.2.	LIFECYCLE STAGE 1 - ASSET PLANNING	38
6.3.	LIFECYCLE STAGE 2 - ASSET CREATION AND ACQUISITION	39
6.4.	LIFECYCLE STAGE 3 - ASSET OPERATION AND MAINTENANCE	39
6.4.1.	OPERATIONS MANAGEMENT	40
6.4.2.	MAINTENANCE MANAGEMENT	40

6.4.3.	OPERATIONAL ASSET BASE	41
6.5.	LIFECYCLE STAGE 2 - ASSET CONDITION, PERFORMANCE MONITORING AND RISK ASSESSMENT	44
6.5.1.	ASSET CONDITION RATING.....	44
6.5.2.	ASSET CRITICALITY	47
6.5.3.	ASSET PERFORMANCE MONITORING	48
6.5.4.	ASSET RISK ASSESSMENT	50
6.5.5.	ASSET VALUATION	50
6.6.	LIFECYCLE STAGE 3 - ASSET REHABILITATION AND RENEWAL	51
6.7.	LIFECYCLE STAGE 4 - ASSET DISPOSAL AND RATIONALISATION	52
7.	FINANCIAL SUMMARY	53
7.1.	FINANCIAL STATEMENTS AND PROJECTIONS	53
7.2.	SUSTAINABILITY OF SERVICE DELIVERY	54
7.2.1.	LONG TERM - LIFE CYCLE COST	54
7.2.2.	MEDIUM TERM – 10 YEAR FINANCIAL PLANNING PERIOD	55
7.3.	FUNDING STRATEGY	55
7.4.	VALUATION FORECASTS	56
7.5.	KEY ASSUMPTIONS MADE IN FINANCIAL FORECASTS.....	56
8.	PLAN IMPROVEMENT AND MONITORING	58
8.1.	IMPROVEMENT PLAN	58
8.2.	MONITORING AND REVIEW PROCEDURES	59

Appendix 4.2.3 (pages 17 to 18)

Figure 1 – Completed Recycled Water Network

Figure 2 – Bingara Community Registered Lots Plan

Figure 1 - Wollondilly Water – Recycled Water Network

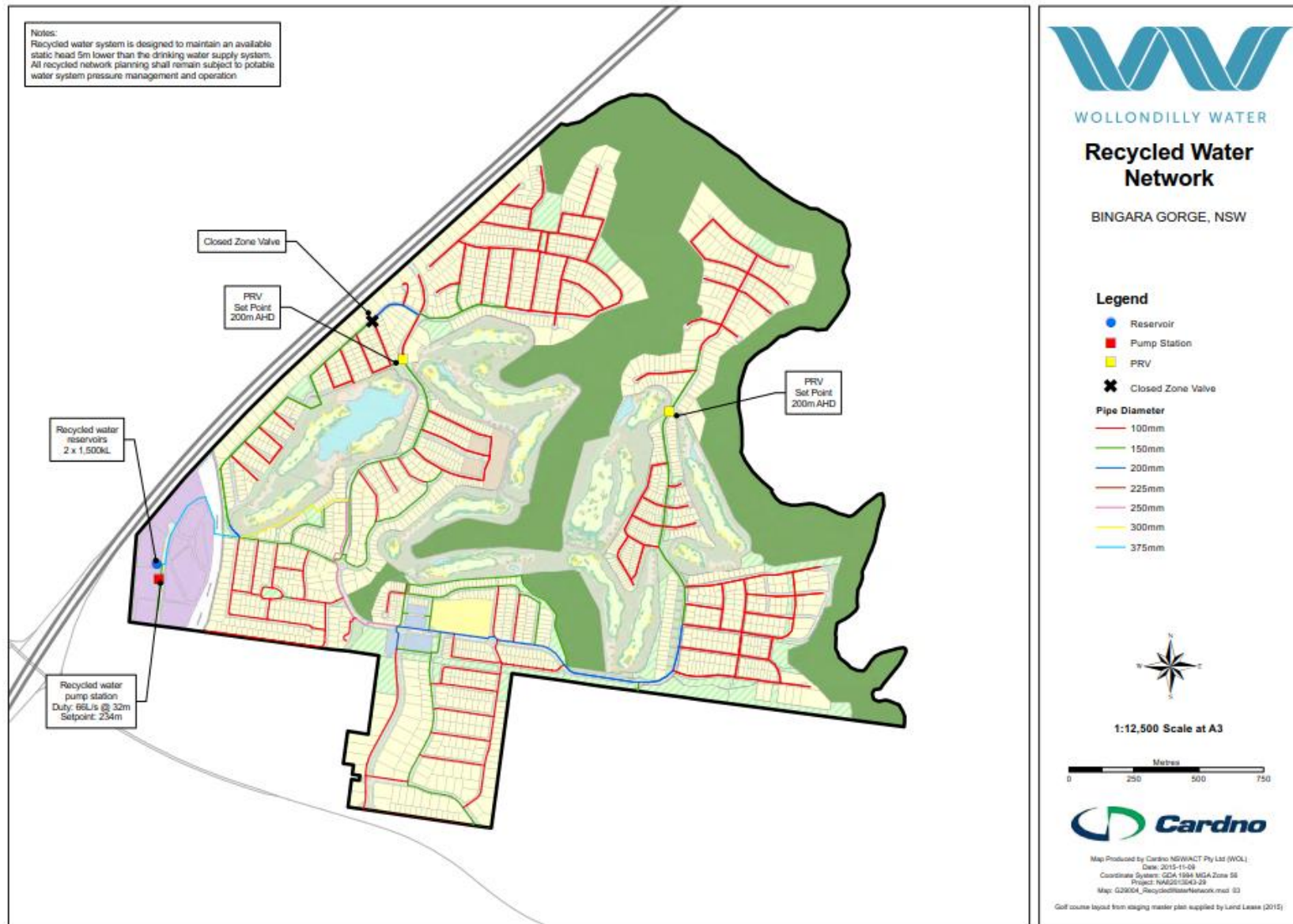


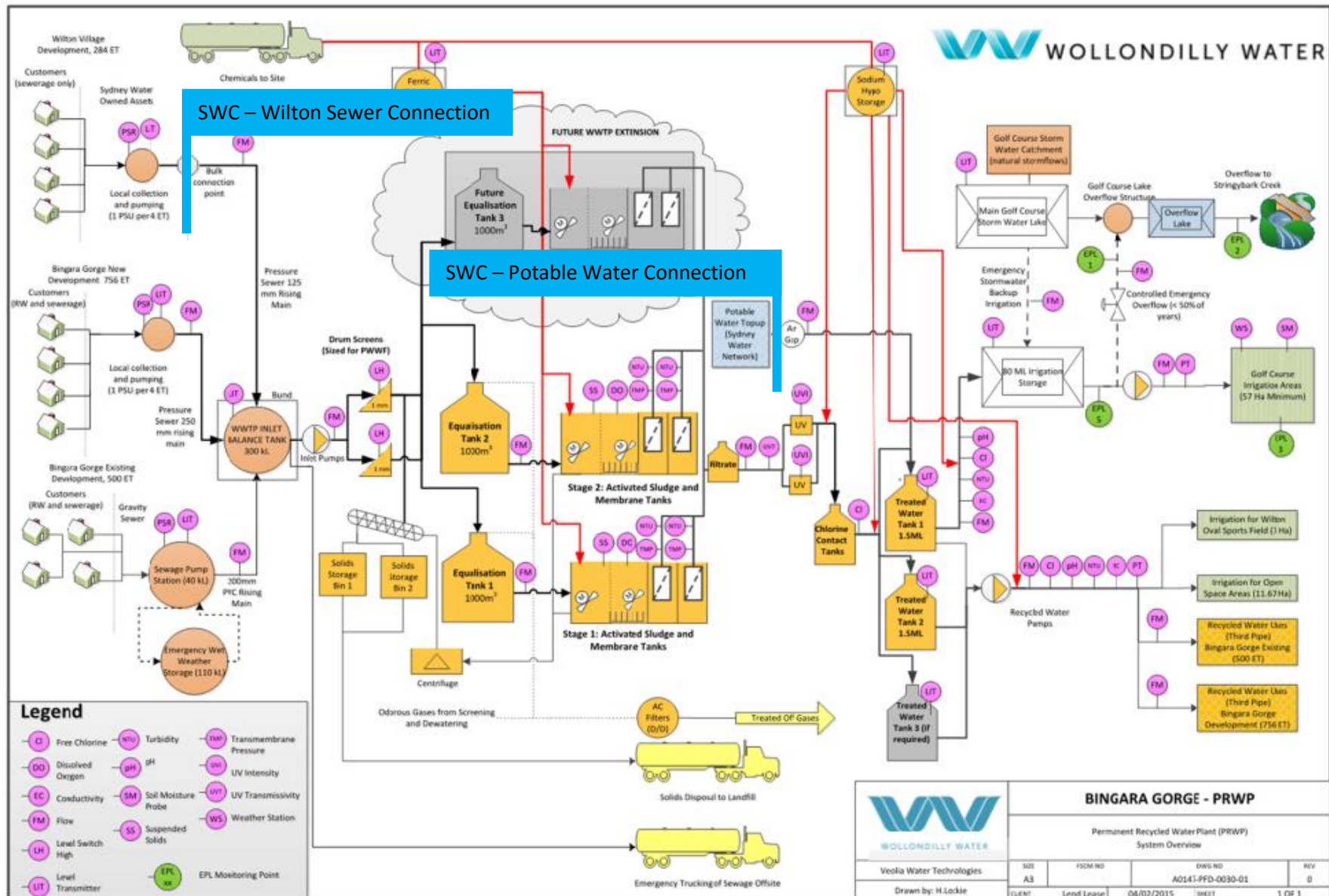
Figure 2 - Wollondilly Water – Bingara Community Registered Lots Plan



Appendix 4.2.4 (page 20)

Wollondilly Water – SWC Connection Points

Wollondilly Water – SWC Connection Points

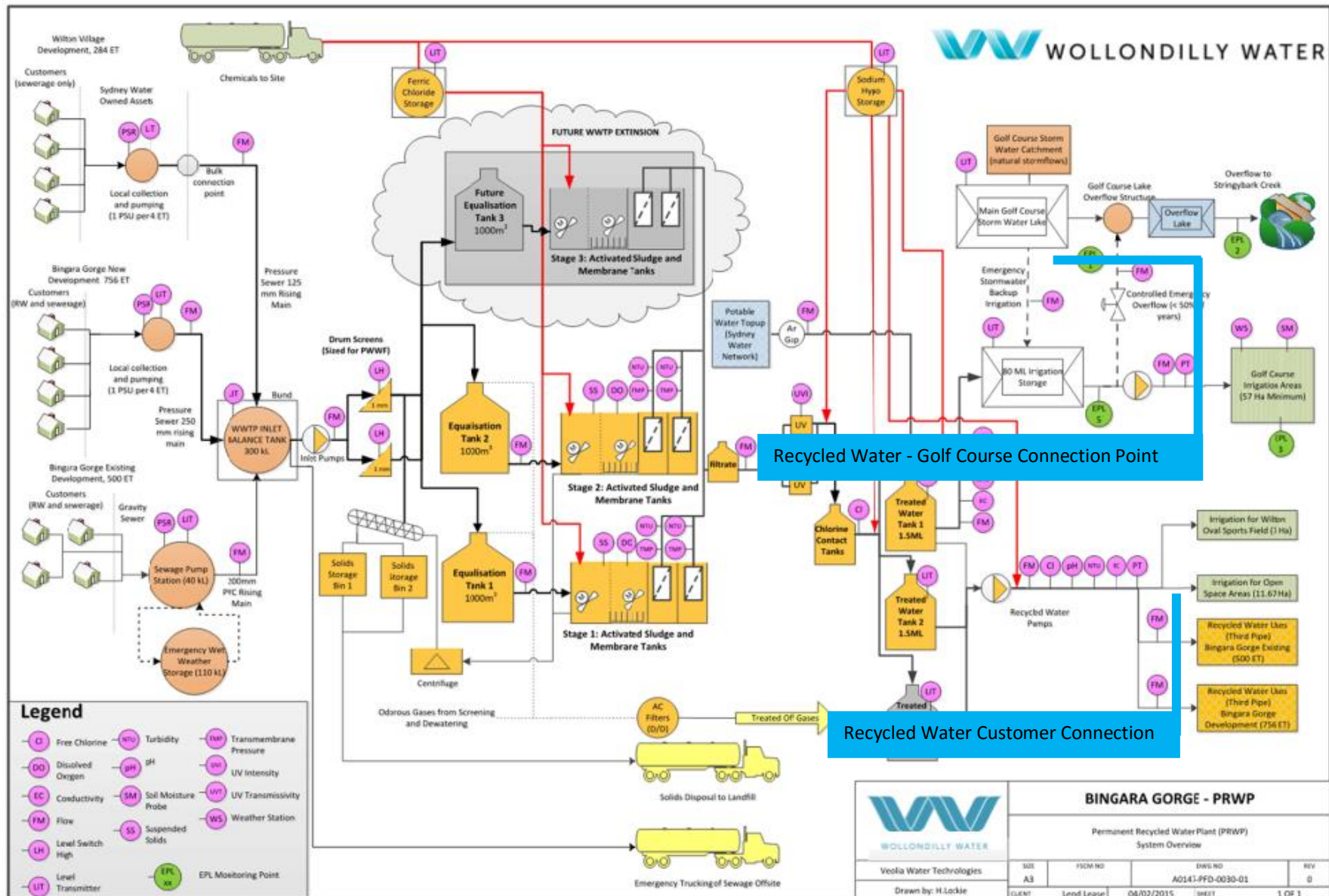


Appendix 4.2.5 (pages 22 to 23)

Wollondilly Water – Recycled Water Customer Connection Points

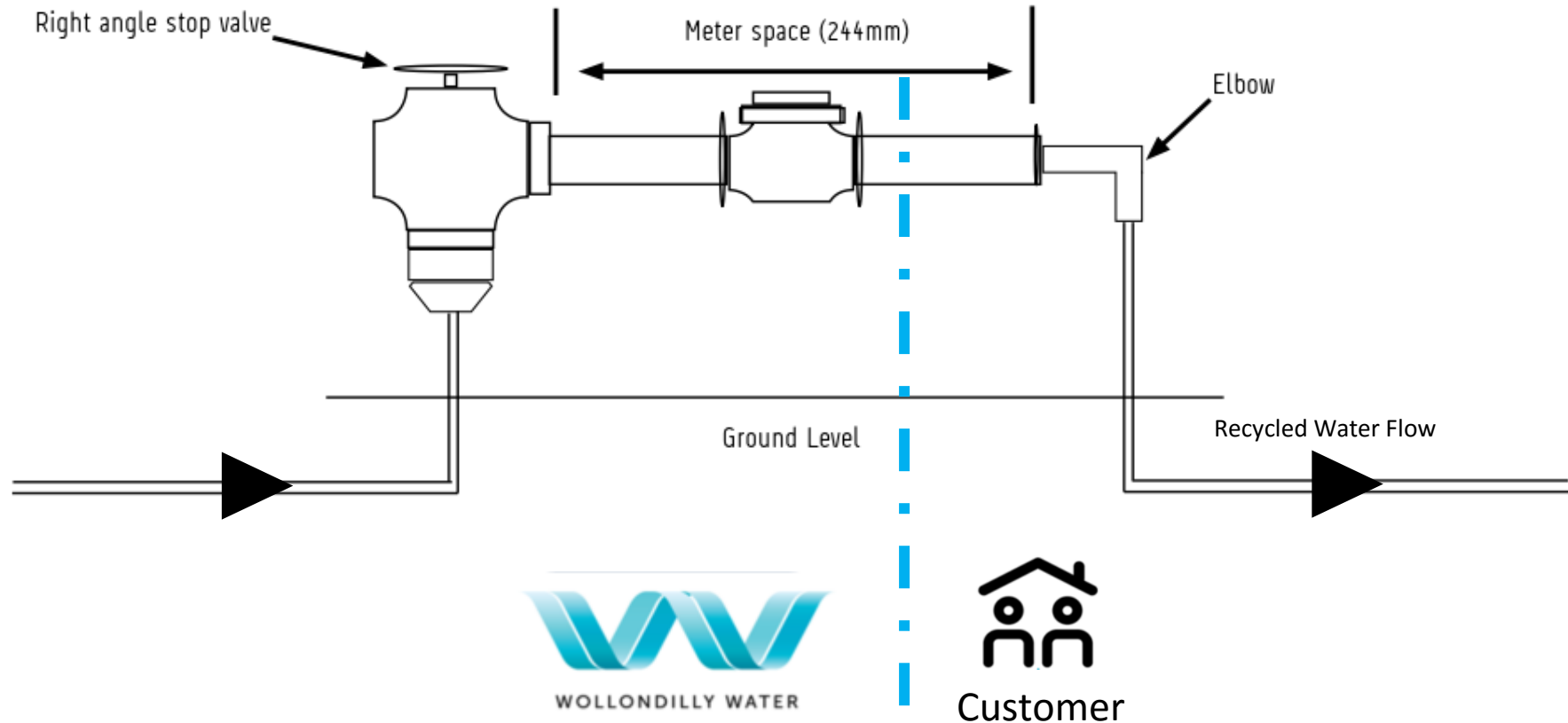
Wollondilly Water – Detailed Customer Connection Point (Recycled Water)

Wollondilly Water – Recycled Water Customer Connection Points



Home Recycled Water Meter Set Up Requirements

What spacing do you need to allow?



Appendix 4.2.6 (pages 25 to 31)

Wilton Village Wastewater Services Agreement



HENRY DAVIS YORK
LAWYERS

Wilton Village Wastewater Services Agreement – Contract No 26765

Sydney Water Corporation
ABN 49 776 225 038

Lend Lease Communities (Wilton) Pty Limited
ABN 31 110 022 976

CONTENTS

KEY DETAILS	1
BACKGROUND	3
TERMS	4
1 Interpretation	4
1.1 Definitions	4
1.2 Interpretation	16
1.3 Contra proferentem	17
1.4 Ambiguities and inconsistencies	17
1.5 Effect of this Agreement	17
1.6 Audit and inspection	17
2 Service Provider's D&C Activities	18
2.1 General obligations	18
2.2 Delivery Point requirements	18
2.3 WVPSS design integration	19
2.4 Progress reporting	20
2.5 Service Provider D&C Completion	20
2.6 Land rights	21
2.7 As-built drawings and surveys	21
2.8 Service Provider assumes all risk	21
3 Sydney Water's D&C Activities	21
3.1 D&C obligations	21
3.2 Defects	22
3.3 Sydney Water to own WVPSS	22
3.4 Land rights	22
3.5 Easement for WVPSS	22
3.6 Sydney Water assumes all risk	23
4 Security	23
4.1 Provision of Parent Company Guarantee	23
4.2 Security upon novation or Change of Control	23
5 Services Commencement and Term	23
5.1 Conditions Precedent	23
5.2 Notification	23
5.3 Effect of failure to achieve Conditions Precedent	24
5.4 Term	24
5.5 Options to extend term	24
6 The Services	24
6.1 Service Provider's general obligations	24
6.2 All work included	26
6.3 Ownership of wastewater	26
6.4 Access to WVPSS	26
6.5 Service Provider accepts all risks	26
6.6 Reservation of rights	27

6.7	Remediation	27
7	Availability Incidents	27
7.1	Notification	27
7.2	Abatements for Availability Incidents	28
8	Contract Documents	28
8.1	Development of Contract Documents	28
8.2	Review by Sydney Water	28
8.3	Periodic review	29
9	Legislative requirements	29
9.1	WICA Licence	29
9.2	Evidence of compliance	29
9.3	IPART audit	30
9.4	Sydney Water's obligations	30
9.5	WH&S compliance	30
10	Customer Contract	32
10.1	Compliance with Customer Contract	32
10.2	Procedure upon breach	32
10.3	Wastewater Quality Exceedence Events	33
10.4	No end-user charges	34
11	Payment	34
11.1	General	34
11.2	Submission of Payment Claim	34
11.3	Incorrect Payment Claim	35
11.4	Conditions precedent to payment	35
11.5	Payment	35
11.6	Set-off and deductions	36
11.7	Effect of payment	36
11.8	Abatements	36
11.9	GST	37
12	Variations to the Services	38
12.1	Proposed variations	38
12.2	Directing Variations and pricing	38
12.3	The Independent Expert	39
12.4	Variations in writing	40
12.5	Additional Lots	40
13	Contract management	40
13.1	Sydney Water Representative	40
13.2	Service Provider Representative	41
13.3	Directions	41
13.4	Meetings	41
13.5	Reporting	41
13.6	Amendments to Contract Management Schedule	41
13.7	Sydney Water may audit	41
13.8	Service Provider must assist	42

14	Subcontracting	43
14.1	Subcontracting to the PUO	43
14.2	Subcontracts	43
14.3	Compliance	43
14.4	Anti-corruption provisions	44
15	Intellectual property	44
15.1	Service Provider to retain IP	44
15.2	Sydney Water Licence to use	44
15.3	Service Provider's warranties	44
15.4	WVPSS Design Documentation	45
15.5	Survival	45
16	Assignment and novation	46
16.1	Sale of assets	46
16.2	Acknowledgement	46
16.3	Novation or assignment by the Service Provider	46
16.4	Novation or assignment by Sydney Water	47
16.5	Change of Control	47
16.6	Bond	48
16.7	Release of the Bond	49
16.8	Requirements for the Bond	49
16.9	Replacement of Bond	50
16.10	Adjustment of the Bond amount	50
16.11	Use of Bond	50
16.12	No interest	51
16.13	No trust	51
17	Confidentiality	51
17.1	Confidential Information	51
17.2	Confidentiality	52
17.3	Permitted disclosure	52
17.4	Required disclosure	52
17.5	Obligations on termination or expiry	52
17.6	Government contracts	53
17.7	GIPA	53
18	Insurance	53
18.1	Insurance against public and products liability	53
18.2	Professional indemnity insurance	53
18.3	Industrial special risks insurance	54
18.4	Motor vehicle insurance	54
18.5	Workers' compensation insurance	54
18.6	Periods of insurance	54
18.7	Adjustments to levels of cover	54
18.8	Evidence of policies	55
18.9	Premiums	55
18.10	Undertaking to inform	55
18.11	Insurance requirements generally	55
18.12	Uninsurable risks	56
19	Suspension	57

19.1	Sydney Water suspension	57
19.2	Recommencement	58
19.3	Service Provider suspension	58
19.4	Cost of suspension	58
19.5	Sydney Water may carry out replacement services	58
20	Force Majeure Events	59
20.1	Notification	59
20.2	Obligations	59
20.3	Relief	60
20.4	Payments during Force Majeure Events	60
21	Expiry of the Term	60
21.1	Handover Plan	60
21.2	Transition of Handover	60
21.3	Handover	61
21.4	Condition of Facilities at Handover	61
21.5	Condition Audit Prior to Handover	61
22	Notification of Claims	62
22.1	Application	62
22.2	Late notification	62
22.3	Additional Definitions	62
23	Default	62
23.1	Default Events	62
23.2	Default Notice	63
23.3	Cure Plan	63
23.4	Applicable Cure Period	64
23.5	No prejudice to other remedies	65
23.6	Sydney Water breaches	65
24	Termination	66
24.1	Termination Events	66
24.2	Termination for default by the Service Provider	66
24.3	Termination for default by Sydney Water	66
24.4	Termination notice	66
24.5	Termination for convenience	66
24.6	Consequences of termination	66
24.7	Payments on termination for convenience	67
24.8	Termination deemed void	67
25	Expiry or termination	68
25.1	Third party warranties	68
25.2	Duties of the Service Provider on expiry or termination	68
25.3	Rights of Sydney Water on termination	68
26	Indemnities	68
26.1	Intellectual Property indemnity	68
26.2	WH&S indemnity	68
26.3	General indemnity – Service Provider	69
26.4	Limitation of liability	69

26.5	Proportionate Liability	70
26.6	Obligations not affected	71
26.7	Operation of indemnities	71
27	Dispute Resolution	71
27.1	Notice of Dispute	71
27.2	Dispute resolution meetings	71
27.3	Expert determination	71
27.4	Binding	72
27.5	Further proceedings	72
27.6	Summary relief	72
27.7	Survive termination	72
28	Notices	72
28.1	How to give a notice	72
28.2	When a notice is given	73
28.3	Address for notices	73
29	General	74
29.1	Entire Agreement	74
29.2	Variation	74
29.3	Information Security	74
29.4	Media and publication	74
29.5	Governing Law	75
29.6	Counterparts	75
29.7	Exercise of rights and remedies	75
29.8	Further assurance	75
29.9	Legal costs	75
29.10	No merger and survival	75
29.11	Waiver	76
29.12	Severability	76
29.13	Survival of representations and warranties	76
	Schedule 1: BGRWN & Delivery Point	77
	Schedule 2: WVPSS	78
	Schedule 3: Treatment Services	79
	Schedule 4: WVPSS Services	85
	Schedule 5: Payment Schedule	87
	Schedule 6: Deed of Novation	94
	Schedule 7: Contract Documents Schedule	105
	Schedule 8: Contract Management Schedule	110
	Schedule 9: Handover Requirements	111
	Schedule 10: Parent Company Guarantee	112

Schedule 11: Statutory Declaration	129
EXECUTION	132
Exhibit 1: Customer Contract	133
Exhibit 2: PSS Home Owner's Manual	134
Exhibit 3: Sydney Water Business Ethics Guide	135
Exhibit 4: Concept layout plan for the BGRWN and Delivery Point	136

Appendix 4.2.11 (pages 33 to 36)

Sewerage and Recycled Water Quality Management Plan



Solutions & Technologies

**Bingara Gorge Development
Sewage and Recycled Water Quality Management Plan
April 2018**



Document Title
Combined Sewerage and Water Quality Management Plan

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Document Owner: General Manager - Services

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A	31/10/2010	Original	Internal	I Fernandez-Rousselot	R. Harkness	K. Shaw
B-D	11/2010 – 01/2011	Review	Internal	C. Mangion	I Fernandez-Rousselot	K. Shaw
E	22/02/2011	Review	Internal	R. Harkness	K. Shaw	K. Shaw
F	01/04/2011	Review	Combined with SMP by RH & updated by IFR	R. Harkness	I Fernandez-Rousselot	K. Shaw
0	06/04/2011	IPART Audit	External	R. Harkness	I Fernandez-Rousselot	K. Shaw
1	20/05/2011	IPART Audit	Validation Augmentation	K. Shaw	R. Harkness	R. Harkness
2		Release				
3		Annual Review				
4	23/11/2011	IPART & Council	Testing Clarified	I Fernandez-Rousselot	J-C Schrotter	K. Shaw
5	08/03/2012	IPART & Auditor	Clarification Water Quality	I Fernandez-Rousselot	K. Shaw	K. Shaw
6	03/2015	Review	Various	M. Sintrat/ J. Lindley	S. Kar	G. McNay
7	18/07/2016	Update with PRWP	Integration of TRWP and PRWP plans	S.Kar / J. Huxtable	H.Lockie	G. McNay
8	20/04/2018	Review	Revision for Operations	Patrick Coulton / Craig Hancock	S. Kar	G. McNay

Contents

1	Abbreviations	5
2	Purpose	5
3	Background	5
4	Delineation of Responsibilities	6
4.1	Design and Construction	6
4.1.1	By Lend Lease Communities (Wilton); the Developer	6
4.1.2	By VWS; the Licensee	6
4.2	Operation and Maintenance Only	6
4.3	Specific Condition of the License	6
5	Plan Overview	7
5.1	Combined sewage and Water Quality Management Plan (this Plan)	7
5.2	Scope Not Included	7
6	Relationship with Other Plans under Regulation	7
7	Stakeholders	7
8	Methodology – Recycled Water Management	7
8.1	Element 1: Commitment to responsible use and management of recycled water quality	8
8.1.1	Responsible Use of Recycled Water	8
8.1.2	Partnerships and Involvement	8
8.1.3	Regulatory and Formal Requirements	9
8.1.4	Recycled Water Policy	10
8.2	Element 2: Assessment of the recycled water system	11
8.2.1	Source of Recycled Water, Intended Uses, Receiving Environments & Routes of Exposure	11
8.2.2	Recycled Water System Analysis	14
8.2.3	Assessment of water and sewage quality data	16
8.2.4	Hazard identification and risk assessment	16
8.3	Element 3: Preventive Measures for Recycled Water Management	18
8.3.1	Preventive Measures and Multiple Barriers	18
8.3.2	Critical Control Points	20
8.4	Element 4: Operational procedures and process control	26
8.4.1	Identification and Documentation of Procedures	26
8.4.2	Operation and Maintenance Manuals	26
8.4.3	Operational Monitoring	26
8.4.4	Operational Corrections	28
8.4.5	Equipment Capability and Maintenance	29
8.4.6	Materials and Chemicals	30
8.5	Element 5: Verification of Recycled Water Quality and Environmental Performance	30
8.5.1	Recycled water quality monitoring	30
8.5.2	Application Site and Receiving Environment Monitoring	33
8.5.3	Documentation and Reliability	34
8.5.4	Satisfaction of Users of Recycled Water	34
8.5.5	Short-Term Evaluation of Results	35
8.5.6	Corrective responses	35
8.6	Element 6: Management of incidents and emergencies	36
8.6.1	Communication	36
8.6.2	Incident and emergency response protocols	36
8.7	Element 7: Operator, contractor and end user awareness and training	38
8.7.1	Operator, contractor and end user awareness and involvement	38
8.7.2	Operator, Contractor and End User Training	39
8.8	Element 8: Community Involvement and Awareness	40
8.8.1	Consultation with users and community	40
8.8.2	Communication and education	40
8.9	Element 9: Validation, Research and Development	41

8.9.1	Validation of processes.....	41
8.9.2	Design of Equipment.....	41
8.9.3	Investigation of studies and research monitoring.....	42
8.10	Element 10: Documentation and reporting.....	42
8.10.1	Management of documentation and records.....	42
8.10.2	Reporting.....	43
8.11	Element 11: Evaluation and Audit.....	43
8.11.1	Long Term Evaluation of Results.....	44
8.11.2	Audit of recycled water quality management.....	44
8.11.3	Internal and external audits.....	44
8.11.4	Audit results.....	44
8.12	Element 12: Review and Continuous Improvement –.....	45
8.12.1	Review by Senior Management.....	45
9	Sewage Management – Specific Aspects.....	46
9.1	Disposal of Waste – Sewage.....	46
9.1.1	Overview.....	46
9.1.2	Sewage Generation.....	46
9.1.3	Assumed Raw Wastewater Characteristics.....	46
9.1.4	Transfer Rising Mains.....	47
9.1.5	Sewer Network Control System.....	47
9.1.6	Catchment Storage.....	47
9.1.7	Treatment Plant Equalization.....	48
9.1.8	Summary of Storage – Bingara PRWP.....	48
9.1.9	Pressure Sewerage Control System.....	50
9.2	Disposal of Waste – Screenings and Sludge.....	50
9.2.1	Overview.....	50
9.2.2	Screenings.....	50
9.2.3	UF and Disc Filter Backwash Waste – Bingara TRWP.....	50
9.2.4	Waste Activated Sludge – Bingara PRWP.....	50
9.3	Chemicals Management.....	51
9.4	Noise.....	51
9.5	Odour.....	51
9.5.1	Bingara Scheme.....	51
9.5.2	Bingara PRWP.....	52
10	Implementation and Compliance.....	52
10.1	Implementation.....	52
10.2	Amendments.....	52
11	Compliance.....	52
11.1	IPART audit.....	52
11.2	Other audits.....	52
11.3	Audit outcomes.....	52
12	Appendices.....	53
12.1	Appendix A: Overall System PFD and EPL Monitoring Points.....	53
12.2	Appendix B: PFD Bingara TRWP (Temporary Plant, Mothballed).....	54
12.3	Appendix C: PFD Bingara PRWP (Permanent Plant).....	55
12.4	Appendix D: VWS Water Policy.....	57
12.5	Appendix E: Hazard Analysis and Critical Control Point (HACCP) for Bingara PRWP.....	57
12.6	Appendix F: BR18-GU20 Biological Hazards Guideline.....	57
12.7	Appendix G: Odour Assessment – Bingara PRWP.....	57

Appendix 4.2.13 (pages 38 to 41)

Combined Sewerage and Water Infrastructure Operating Plan

Bingara Gorge Development

Combined Sewerage & Water Infrastructure Operating Plan Rev 7

September 2018



Combined Sewerage Services and Water Supply Infrastructure Operating Plan
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1		IPART Approval	Post Audit			
2		Release				
3		Annual Review				
4	February 2015		Review + Update	M. Sintrat / J Lindley	S Kar	Grant McNay
5	July 2016	IPART Audit	Review / Update	S Kar	H Lockie	Grant McNay
6	April 2018	IPART Audit	Review / Update	C.Hancock	S.Kar	Grant McNay
7	Sept 2018	IPART Edit	IPART Update Request	C.Hancock	S.Kar	Grant McNay

Contents

1.	Purpose	5
2.	Regulations and Standards.....	6
3.	Background	7
4	Plan Overview	8
4.1	Infrastructure Operating Plan (this Plan)	8
4.1.1	Planning: Water Infrastructure	8
4.1.2	Implementation: Water and Sewerage Infrastructure	8
4.1.3	Compliance: Water and Sewerage Infrastructure	9
4.2	Scope Not Included	9
4.3	Other Conditions under Licence	9
4.4	Specific Condition of the Licence Variation	10
4.5	Other Conditions under Regulation	13
4.6	Codes of Conduct	14
4.7	Relationship with Other Plans under Regulation	14
5	Relationship between Parties	15
5.1	Stakeholders	15
5.2	Contractual and Licence Requirements	17
5.3	Delineation of Responsibilities	19
5.4	Design and Construction.....	20
5.4.1	By Lend Lease Communities (Wilton); the Developer	20
5.4.2	By Sydney Water	20
5.4.3	By VWS; the Licensee	21
6	Treatment Infrastructure (Design and Construction)	22
6.1	Overview	22
6.2	Design Overview	22
6.3	Raw Sewage Feed Sources and Quality	23
6.4	Bingara TRWP (for Information)	24
6.5	Bingara PRWP	25
6.5.1	Process description	25
6.5.2	Redundancy	27
6.5.3	Occupational Health, Safety and Environment	29
6.5.4	Design Life of Assets	29
6.5.5	Construction, Commissioning and Performance Testing.....	30
6.6	Operation and maintenance manuals	31
7	Sewerage Transfer Infrastructure (Design and Construction)	33
7.1	Scope.....	33
7.2	Sewerage Collection System	33
7.2.1	Overview	33
7.2.2	Existing Gravity Sewerage Network	34
7.2.3	Pressure Sewer Networks.....	35
8	Recycled Water Infrastructure (Design and Construction)	37
8.1	Lilac Recycled Water System	37
8.1.1	Redundancy Built into System	38

8.1.2	Design Life of Recycled Water Network Infrastructure	38
8.2	Recycled water storage lagoon	38
9	Strategic Service Planning	39
9.1	Overview	39
9.2	Bingara PRWP	39
9.3	Gravity Sewer Network	39
9.4	Pressure Sewer Network	39
9.5	Recycled Water (Lilac) Network	40
9.6	Whole of Life Cost Evaluation	40
10	Level of Service	40
10.1	General	40
10.2	Treatment Capacity and Performance Criteria	40
10.3	Availability	40
10.3.1	Bingara TRWP and PRWP	40
10.3.2	Scheduled Outages	41
10.4	Site Attendance and Response	41
10.4.1	Site Operations	41
10.4.2	Call Centre	41
10.4.3	Service support	41
10.4.4	Response Times	42
10.4.5	Management Meetings	42
10.5	Complaint Handling	42
10.6	Spare Parts, Consumables and Chemicals	42
10.7	Standard of Service (KPI)	43
10.8	Continuity of Service	44
10.8.1	Continuity of Sewerage Services	44
10.8.2	Continuity of Recycled Water Supply	44
10.9	Emergency Response Plan	45
11	Asset Management	45
11.1	Asset Register	45
11.2	Asset Management Plan	45
11.3	Asset Evaluation and Service	46
12	Reporting	46
12.1	Reporting Requirements	46
12.2	Process for Keeping Records	46
13	Sampling and Testing	47
14	Training	48
14.1	Site Induction	48
14.2	Staff Training	48
15	Assignment of Responsibilities	49
16	Appendices	50
16.1	Appendix A: Overall System PFD and EPL Monitoring Points	50
16.2	Appendix B: PFD Bingara TRWP (Temporary Plant)	51
16.3	Appendix C: PFD Bingara PRWP / Mass Balance (Permanent Plant)	52

Appendix 4.3.2 (pages 43 to 44)

Sewer Network – Built and Future

Wollondilly Water – Current Sewer Network (Operational as of 2019)



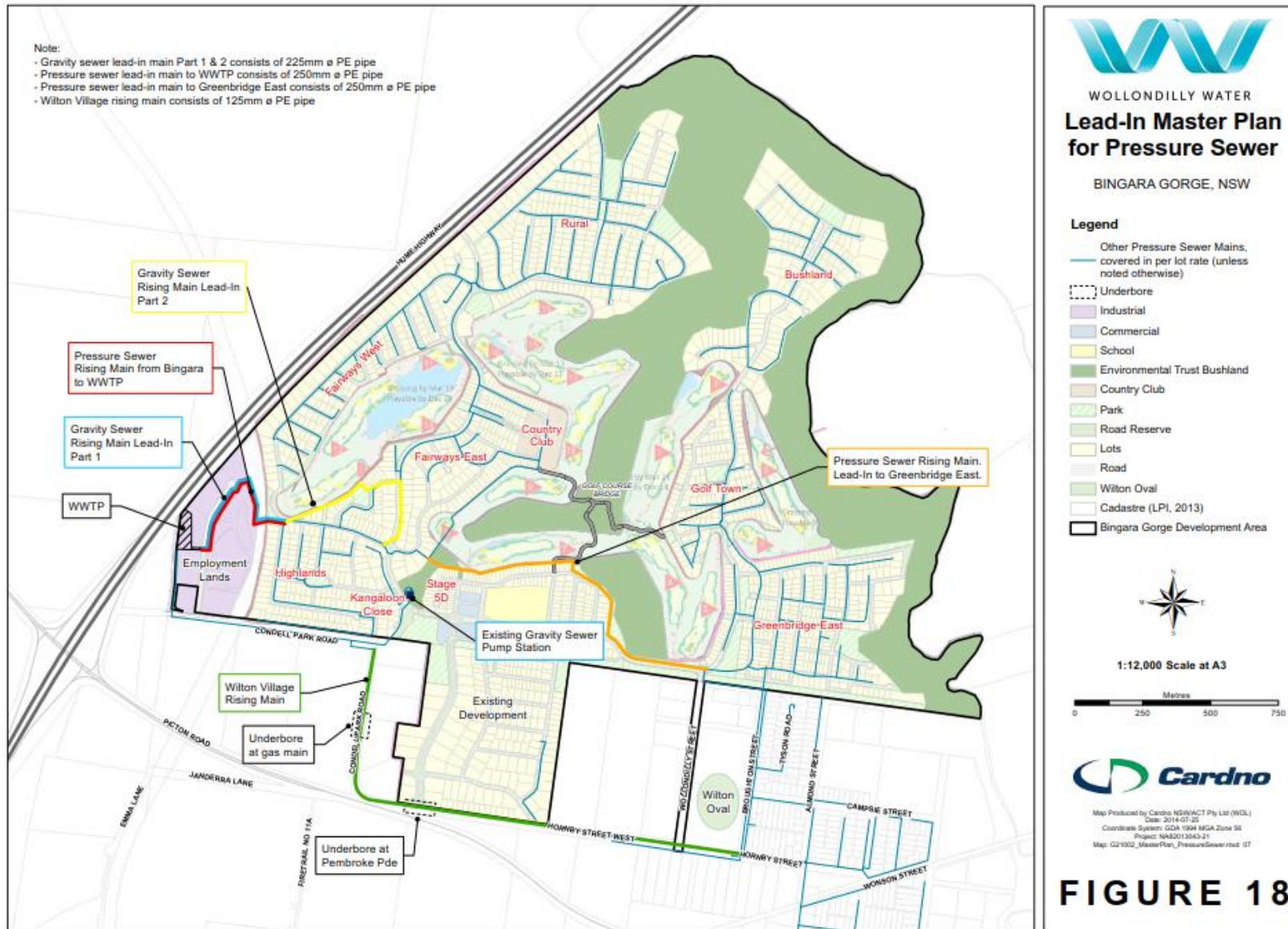
Wollondilly Water – Sewer Network Scheme Overview (Completed Scheme)



Appendix 4.3.3 (pages 46 to 48)

Wollondilly Water Sewer Network

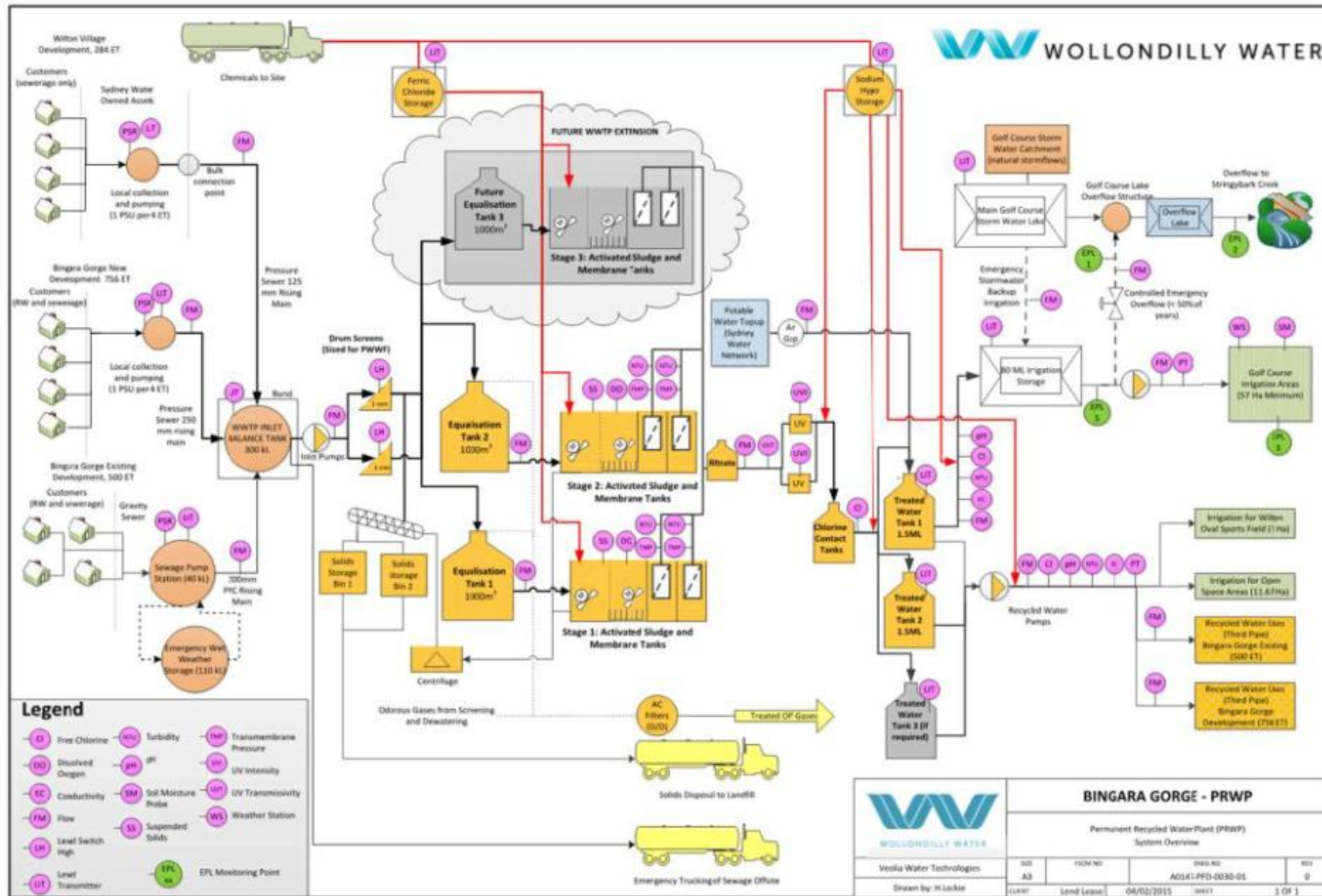
Wollondilly Water – Sewer Network Scheme Overview



Bingara Lot Plan – Wollondilly Water Sewer Network



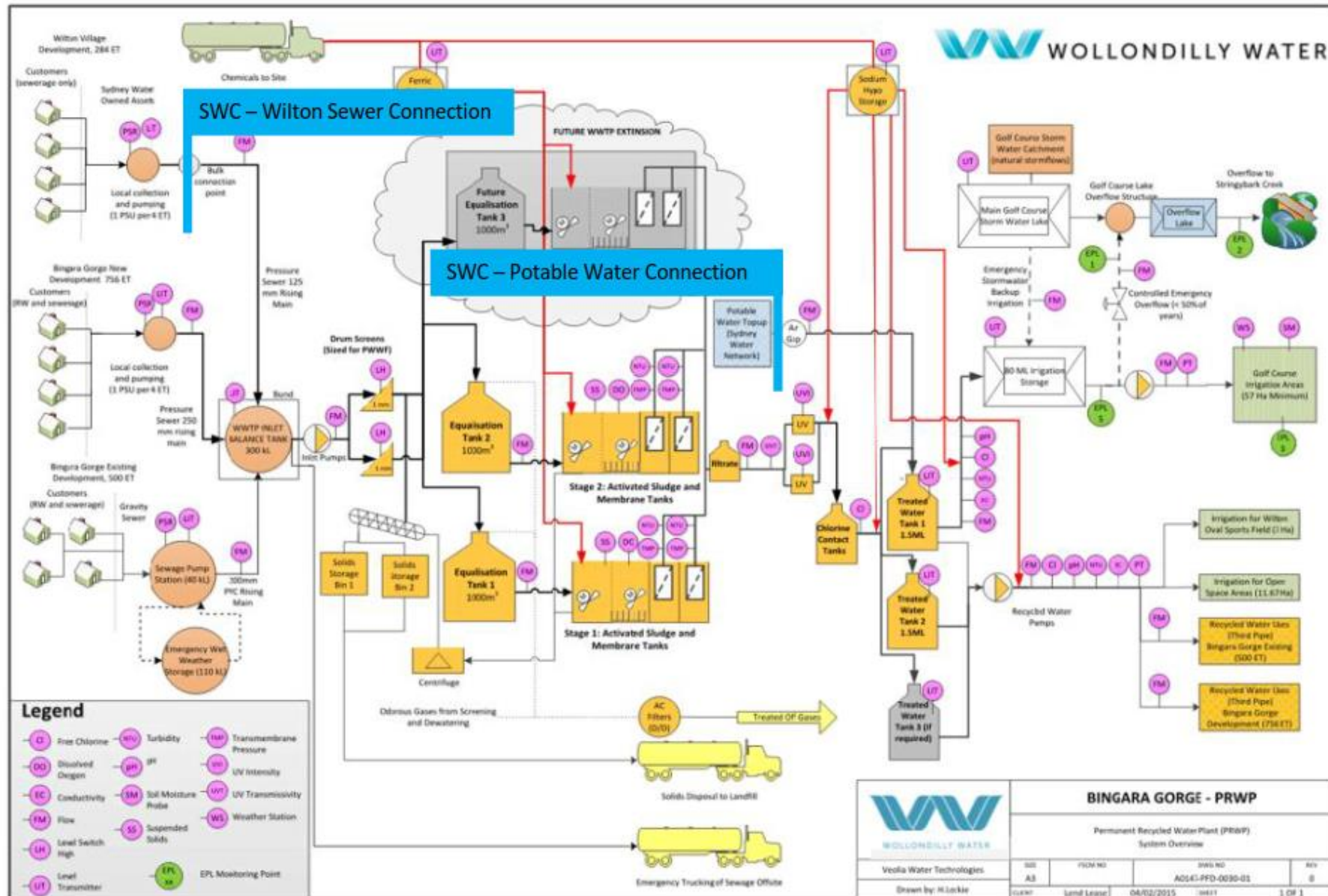
Wollondilly Water Scheme PFD



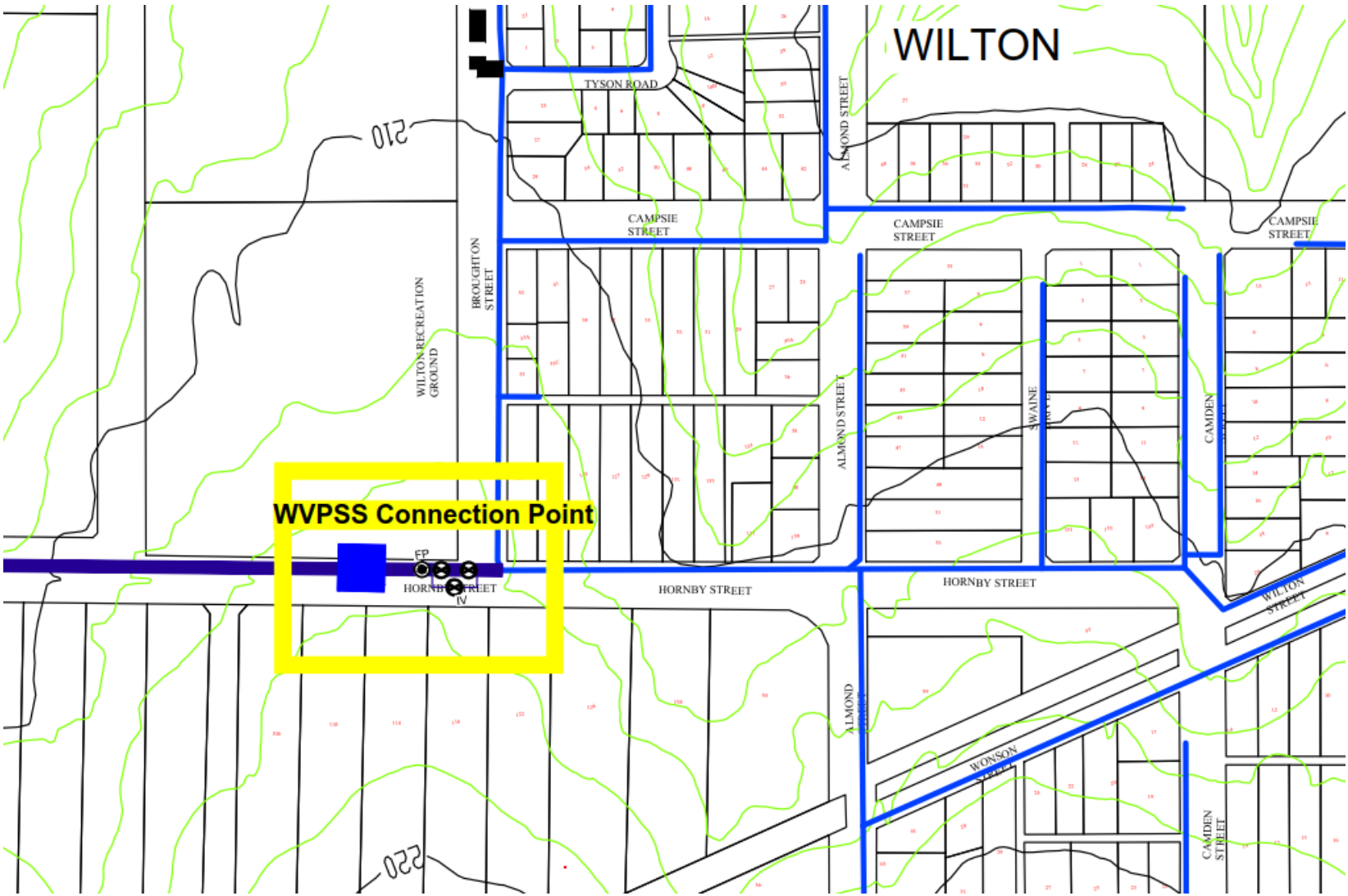
Appendix 4.3.4 (page 50 to 52)

Sewer Network – Connection Points with SWC

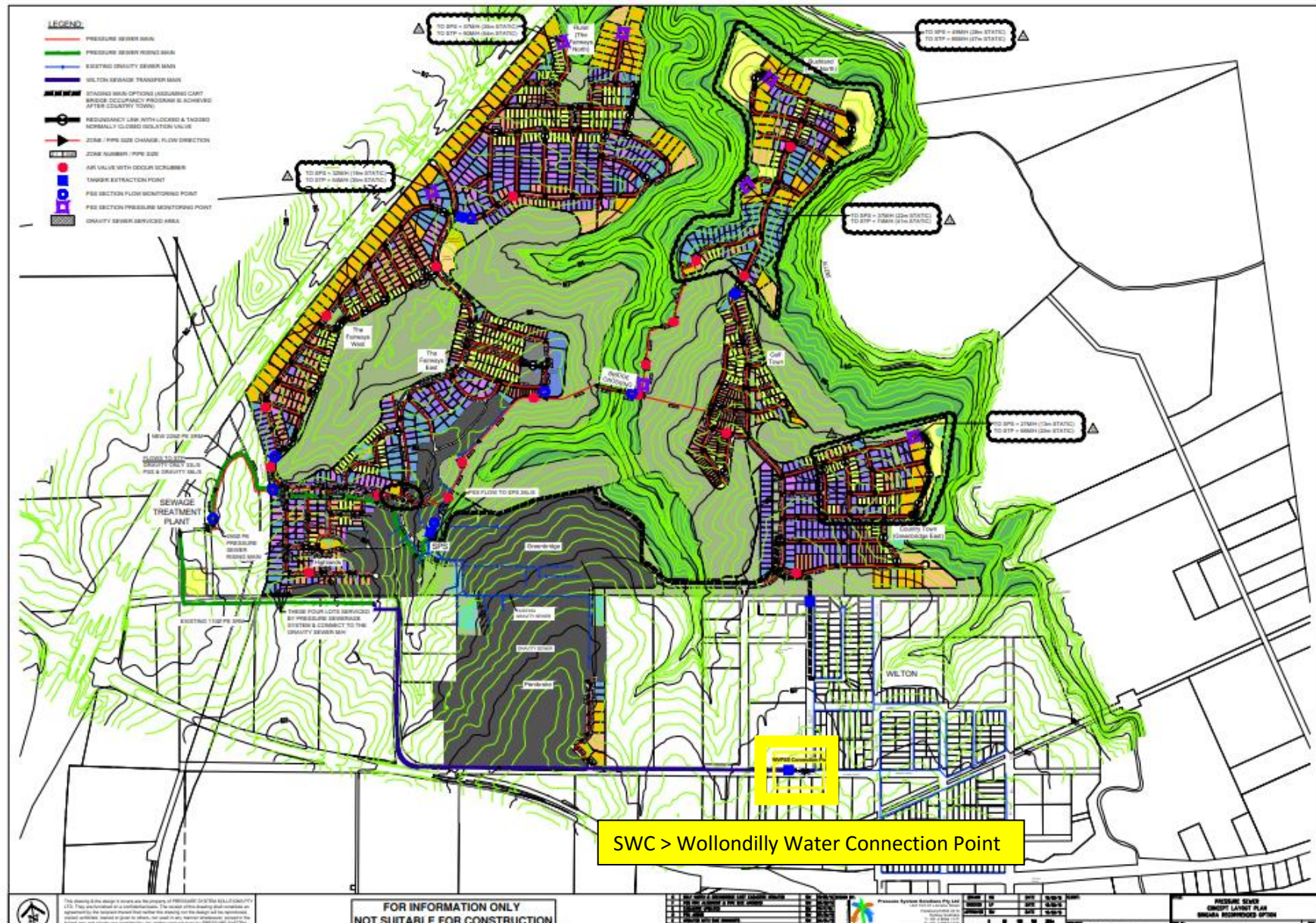
Wollondilly Water – SWC Connection Points



Wollondilly Water – Sewer Rising main Connection point SWC



Wollondilly Water – Sewer Network Scheme Overview (Completed Scheme)



Appendix 4.3.8

(pages 54 to 58) - Briefing Note 2 Capacity Assessment

(pages 59 to 63) - Briefing Note 3 Chemical Dosing

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Bingara Gorge PRWP

Briefing Note 2 Capacity Assessment

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List of Abbreviations

ADF	Average Daily Flow
ADWF	Average Dry Weather Flow
Alk	Alkalinity
AOUR	Actual Oxygen Uptake Rate
AS	Activated Sludge
BCOD	Biodegradable Chemical Oxygen Demand
CCT	Chlorine Contact Tank
CT	Concentration times Time
COD	Chemical Oxygen Demand
DO	Dissolved Oxygen
DST	Dry Solids Tonne
EP	Equivalent Persons
ET	Equivalent Tenements
FCR	Free Chlorine Residual
HRT	Hydraulic Retention Time
LRV	Log Removal Value
MDF	Maximum Daily Flow
MLSS	Mixed Liquor Suspended Solids
MLVSS	Mixed Liquor Volatile Suspended Solids
MMF	Maximum Monthly Flow
NBVSS	Non-Biodegradable Volatile Suspended Solids
NH _x -N	Ammonia Nitrogen
NO _x -N	Total Oxidised Nitrogen
NVSS	Non-Volatile Suspended Solids
OM	Operating Manual
P&ID	Process and Instrumentation Diagram
PBCOD	Particulate Biodegradable Chemical Oxygen Demand
PCOD	Particulate Chemical Oxygen Demand
PFD	Process Flow Diagram
PNCOD	Particulate Non-Biodegradable Chemical Oxygen Demand
PO _x -P	Orthophosphate Phosphorus
PP	Particulate Phosphorus
PIP	Particulate Inert Phosphorus
PPR	Principal's Project Requirements
PRWP	Permanent Recycled Water Plant
PTKN	Particulate Total Kjeldahl Nitrogen
PWWF	Peak Wet Weather Flow
RFI	Request for Information
SA	Surface Area
SBCOD	Soluble Biodegradable Chemical Oxygen Demand
SCOD	Soluble Chemical Oxygen Demand
SE	Secondary Effluent
SNCOD	Soluble Non-Biodegradable Chemical Oxygen Demand
SNTKN	Soluble Non-Biodegradable Total Kjeldahl Nitrogen
SOTR	Standard Oxygen Transfer Rate
SS	Suspended Solids
TKN	Total Kjeldahl Nitrogen
TN	Total Nitrogen
TP	Total Phosphorus
TRWP	Temporary Recycled Water Plant
UV	Ultraviolet
VSS	Volatile Suspended Solids
WAS	Waste Activated Sludge

Contents

1	Executive Summary.....	6
2	Introduction	7
2.1	Background.....	7
2.2	Scope of Work	7
3	Model Development.....	9
3.1	Process Model	9
3.2	Operating Model	9
3.3	Scenarios.....	9
3.4	Design Criteria and Sizing.....	10
4	Model Calibration	11
4.1	Performance Testing Data Analysis.....	11
4.2	Current Sewage Characteristics.....	11
4.2.1	Sewage Flow Correction.....	11
4.2.2	Sewage Concentration Correction.....	12
4.2.3	Measured and Corrected Sewage Characteristics.....	12
4.3	Model Calibration.....	13
5	Loading Scenarios	15
5.1	Sewage Characteristics.....	15
5.2	Sewage Ratios and Fractions.....	15
5.3	Data Cube	17
6	Capacity Estimates.....	18
6.1	Exclusions	18
6.2	Feed Tank	18
6.3	Screening System	19
6.4	Transfer Sump.....	20
6.5	Equalisation Tanks.....	21
6.6	Carbon Dosing.....	23
6.7	Activated Sludge Reactors	26
6.8	Membranes.....	29
6.9	Aeration and Mixing System.....	30
6.10	Ferric Chloride Dosing	33
6.11	Alkalinity Dosing	34
6.12	UV System.....	36
6.13	Chlorination System.....	36
6.14	Treated Water System	38
6.15	Waste Activated Sludge Pumping	39
6.16	Sludge Dewatering System	40
6.17	Foul Water Return System.....	42
6.18	Capacity Summary.....	44
7	Specific Questions	46
7.1	Does the Amended Design Meet Capacity?	46
7.1.1	Specific Question (f)	46
7.1.2	Answer to Specific Question (f).....	46
7.2	What is the Capacity of the Amended Design?	47
7.2.1	Specific Question (g)	47
7.2.2	Answer to Specific Question (g)	47
7.3	Is Further Monitoring Required?	47
7.3.1	Specific Question (h)	47
7.3.2	Answer to Specific Question (h)	47
8	Attachments.....	48

List of Tables

Table 4-1 – Measured and Corrected Sewage Characteristics	12
Table 4-2 – Measured and Modelled Parameters after Calibration	13
Table 5-1 – Sewage Characteristics for Each Scenario	15
Table 5-2 – Sewage Fractions and Ratios Adopted by ASpect	16
Table 6-1 – Feed Tank Capacity Assessment	18
Table 6-2 – Screening System Capacity Assessment	20
Table 6-3 – Transfer Sump Capacity Assessment	21
Table 6-4 – Equalisation System Capacity Assessment	23
Table 6-5 – Denitrification and Carbon Dosing System Capacity Assessment	25
Table 6-6 – AS Reactor Tankage Capacity Assessment	28
Table 6-7 – Membrane Capacity Assessment	29
Table 6-8 – AS Reactor Aeration and Mixing Capacity Assessment	31
Table 6-9 – Ferric Chloride Dosing System Capacity	33
Table 6-10 – Alkalinity Dosing System Capacity	35
Table 6-11 – UV System Capacity	36
Table 6-12 – Chlorination System Capacity	37
Table 6-13 – Treated Water System Capacity	39
Table 6-14 – WAS Pumping Capacity	40
Table 6-15 – Dewatering Capacity	41
Table 6-16 – Foul Water Return Capacity	43
Table 6-17 – Process Unit and Equipment Capacity Summary	44

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Briefing Note 3 Chemical Dosing

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Contents

1	Executive Summary.....	6
2	Introduction	7
2.1	Background.....	7
2.2	Scope of Work	7
3	Veolia Claims	8
3.1	Summary of Claims Letter.....	8
3.2	Claim 1 – Decisions Made.....	8
3.3	Claim 2 - Alkalinity Assumptions and Trigger	9
3.4	Claim 3 - Total Nitrogen Assumptions and Trigger.....	9
3.5	Claim 4 – Actual Sewage TN and Alkalinity	10
3.6	Claim 5 – TN Removal	10
3.7	Claim 6 – COD:TN Ratio.....	11
4	Loading Scenarios	12
5	Alkalinity Dosing Assessment	13
5.1	Theory	13
5.2	Assumptions	13
5.3	Alkalinity Consumption Calculations	14
5.4	Alkalinity Dosing Conclusions.....	15
6	Carbon Dosing Assessment.....	16
6.1	Theory	16
6.2	Assumptions	17
6.3	Denitrification Calculations	17
6.4	Carbon Dosing Conclusions	18
7	Specific Questions	19
7.1	Would Dosing be Required Under PPR Loadings?	19
7.1.1	Specific Question (a)	19
7.1.2	Answer to Specific Question (a)	19
7.2	Would Dosing be Required Under Pre-Design Measured Loadings?	19
7.2.1	Specific Question (b)	19
7.2.2	Answer to Specific Question (b)	19
7.3	Is Dosing Required Under Current Conditions?	20
7.3.1	Specific Question (c).....	20
7.3.2	Answer to Specific Question (c)	20
7.4	What is the Time to Design and Cost Permanent Dosing?.....	20
7.4.1	Specific Question 4.2.....	20
7.4.2	Answer to Specific Question (4.2)	20

List of Tables

Table 4-1 – Sewage Characteristics for Each Scenario	12
Table 5-1 – Calculation of Alkalinity Consumption for Each Scenario	14
Table 6-1 – Calculation of Denitrification Performance for Each Scenario.....	17