

HYDRAULIC SERVICES TRADE WASTE DUE DILIGENCE REVIEW

15 & 20 Gow Street, Padstow NSW 2211

Date: 4 November 2024
Revision: 2
Issue: 2
Ref. No.: Job No – 24192

Prepared for: **Will Gourlay**
Vaughan Constructions Pty Ltd (Australia)
Will.Gourlay@vaughans.com.au
0400 190 555

Disclaimer

This specification (including any enclosures and attachments) has been prepared for the exclusive use and benefit of the addressee(s) and solely for the purpose for which it is provided. Unless we provide express prior written consent, no part of this report should be reproduced, distributed or communicated to any third party. We do not accept any liability if this report is used for an alternative purpose from which it is intended, nor to any third party in respect of this report.

Document Control

Revision	Date	Description	Prepared	Reviewed	Approved
1	28/10 /2024	TRADE WASTE	II	JF	JF
2	04/11/2024	TRADE WASTE	II	JF	JF

Prepared by	Ibrahim Ibrahim	Revision	2
Approved by	Joshua Frew	Revision	2

TABLE OF CONTENTS

1.	INTRODUCTION	1
	1.1 LIMITATIONS AND EXCLUSIONS	1
2.	EXISTING SITES	2
3.	PROPOSED DEVELOPMENT	4
4.	EXISTING TRADE WASTE	6
5.	PROPOSED NEW CHEMICAL MANUFACTURING TRADE WASTE DISCHARGE-BOWERBIRD ...	8
6.	PROPOSED NEW & EXISTING TRADE WASTE DISCHARGE	10
7.	DOMESTIC SEWAGE	11
8.	SEWER TOTAL	11
9.	SCHEMATIC	12
10.	SUMMARY	14

1. INTRODUCTION

Sparks and Partners Consulting Engineers have been engaged by Vaughan Constructions Pty Ltd to provide a high-level due diligence report for the hydraulic and engineering infrastructure for a proposed redevelopment at 15 and 20 Gow St, Padstow. The purpose of this report is to:

- Review existing and available hydraulic and fire services engineering infrastructure and liaise with service authorities where possible.
- Review statement of available pressure and flow from Sydney Water for the above mentioned property.
- Assist the client in determining the available hydraulic and trade waste services engineering infrastructure to support the proposed future development of the land;
- Provide advice as to any major hydraulic and/or fire services engineering items that may affect the future development of the land.

1.1 LIMITATIONS AND EXCLUSIONS

- The services review and assessment is based on a desktop review of available information from sources such as Dial Before You Dig (DBYD), Council planning portal, adjacent development sites and supply authorities that is available at the time of writing. This information may change overtime. At the detailed design stage further enquiries should be made to ensure the most current information is relied upon.
- Sparks and Partners have not completed a section 73 application or the associated building plan approval process.
- Sparks and partner have placed a pressure flow enquiry with Sydney Water to assess available water services.
- Existing services have been located using sources such as DBYD information and visual site inspections. No service search or services locating has been undertaken to confirm the accuracy of this information.

2. EXISTING SITES

The existing and proposed development applies to land identified as 15 and 20 Gow Street, Padstow, being Lot 100 DP1011185 and Lot 53 DP1064349. (State Significant Development Application, SSSDA-71052213)

- No Building Works Proposed for 20 Gow Street, Padstow



Figure 1. Cadastral Map (Source: SIX Maps, 2024)

The Subject Site is currently occupied by Dulux Group and Selleys and constitutes an area of approximately 6ha. The Subject Site is within the IN1 General Industrial zone pursuant to the *Canterbury-Bankstown Local Environmental Plan 2023* (CBLEP2023). The Subject Site is located within the Canterbury-Bankstown Local Government Area (LGA). At present, 15 Gow Street is occupied by a number of industrial warehouse facilities and administration buildings operated by Dulux Group and Selleys with car parking provided opposite at 20 Gow Street, Padstow, which is owned by Dulux Group.

15 Gow Street is located on the southern side of Gow Street, between Fairford Road and Salt Pan Creek, Padstow. The Subject Site is located approximately 3.5km from Bankstown, 12km from Liverpool and 20km from Sydney CBD. Access to the road network is from the north of the Subject Site which is within close proximity to the South Western Motorway 1.

Surrounding land uses in the vicinity of the Subject Site include:

- North – a range of industrial developments zoned IN1 General Industrial and Bankstown STS Substation zoned SP2 Infrastructure;
- East – Salt Pan Creek zoned RE1 Public Recreation and W1 Natural Waterways;
- South – a range of industrial developments zoned IN2 Light Industrial; and
- West - a range of industrial developments zoned IN1 General Industrial.

TABLE 1. DEVELOPMENT STATISTICS	
Component	Proposed Outcome
15 Gow St, Padstow	53,830 m ²
20 Gow St, Padstow	6,341 m ² (NO BUILDING WORKS)
Site Area	60,171m ²

Table 1. COURTESY OF WILLOW TREE PLANNING & VAUGHAN CONSTRUCTIONS

3. PROPOSED DEVELOPMENT

15 Gow Street Padstow.

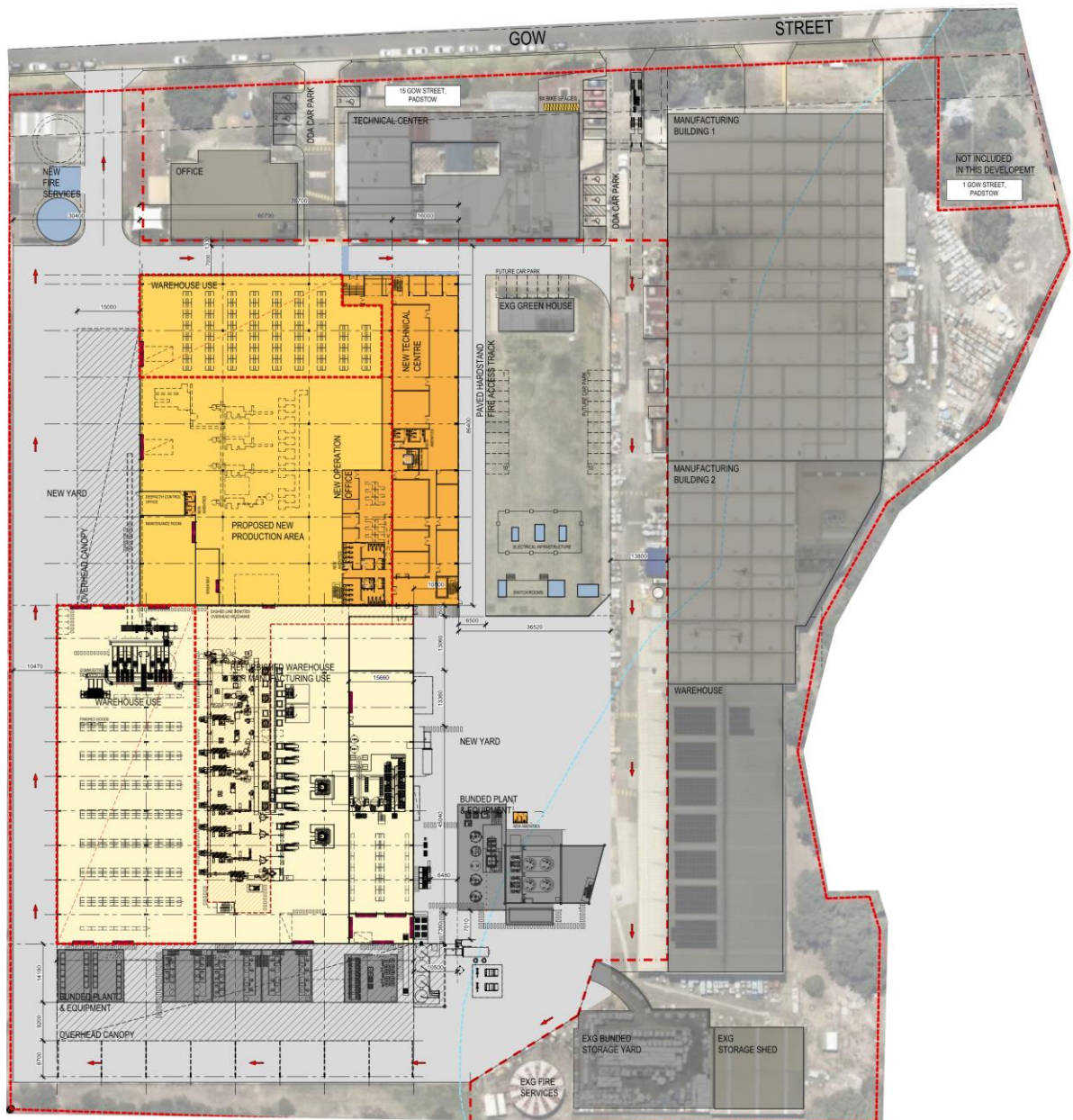
The proposed development seeks consent for the following works:

- Demolition of existing warehouse and maintenance building;
- Strip out and refurbishment of existing warehousing space to create a state-of-the-art manufacturing facility with ancillary raw materials storage which will continue to be operated by the Dulux Group and Selleys;
- Construction of external tank storage and tanker unloading area; and
- Remodeling of the existing vehicle access to allow uni-directional truck flow.



Figure 2. 15 Gow St, Padstow scope of building works

Figure 3. PROPOSED BOWERBIRD PROJECT NEW & REFURBISHED FACTORY



4. EXISTING TRADE WASTE

The current Selleys Trade Waste Agreement with Sydney Water specifies the following maximum discharge rates to sewer: Consent Number 36900

- Instantaneous maximum rate of pumped discharge: 1.110 L/s
- Maximum daily discharge: 40 kL
- Average daily discharge 15 kL

It is anticipated that a second (parallel) Trade Waste system will be necessary due to location of existing Trade Waste outlet.

It is also anticipated that a new Trade Waste Agreement will be necessary based on increased volumes.

The estimated maximum quantity of effluent to Trade Waste is shown below. CET GROUP have provided a predicted usage of the existing plant by 2031.

Existing Predicted Padstow Trade Waste Treatment in 2031			
Source	16/5 based consumption / day	24/7 based consumption / day	Peak flow from site rates
Totals	4,285 #5L/day	4,285 #5L/day	0.5 #6L/s

Table 2. Document N^o: BB-1000-REP-0001(Water & Waste Water)-Rev 0.1(Courtesy of CETGROUP)

#5. 70 % (estimated reduction of current with Bowerbird) of last year Trade Waste site trend of 1,800 kL, 49 weeks, 6 days per week 6.120 kL/day.

#6. Not measured estimated.

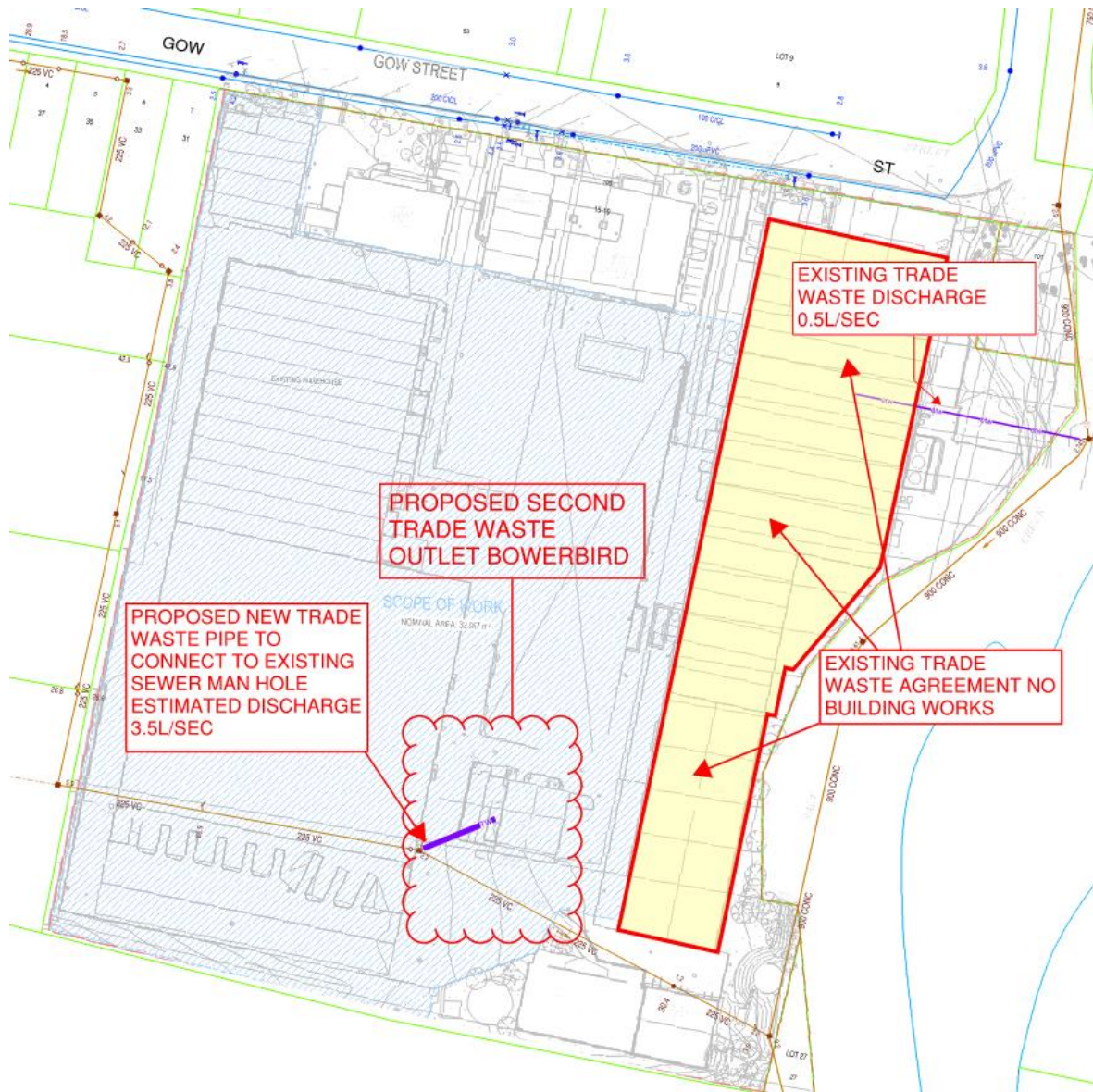


Figure 4. Proposed second parallel trade waste outlet

5. PROPOSED NEW CHEMICAL MANUFACTURING TRADE WASTE DISCHARGE-BOWERBIRD

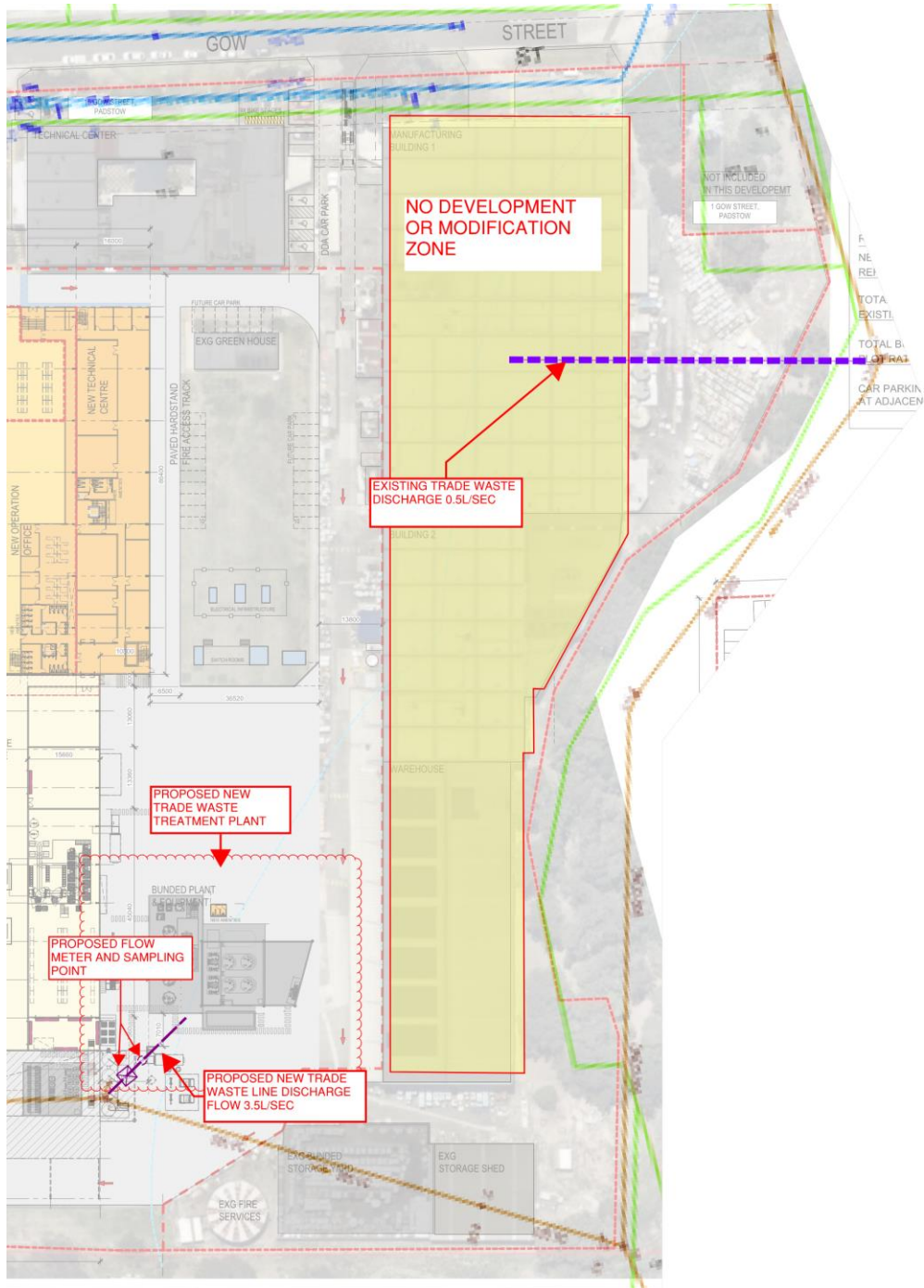
The estimated maximum quantity of effluent to Trade Waste is shown below.

Bowerbird Trade Waste Treatment			
Source	16/5 based consumption / day	24/7 based consumption / day	Peak flow from site rates
Water treatment systems	35,000 #L/day	52,500 L/day	3.0 L/s
Air Compressor			0.2 L/s
Miscellaneous Services	5,000 L/day	7,500 L/day	0.3 L/s
Totals	40,000 L/day	60,000 L/day	3.5 L/s

Table 3. Based on cetgroup Document N°: BB-1000-REP-0001(Water & Waste Water)-Rev 0.1

Refer to figure 5 for proposed connection to Sydney water asset with proposed flow and sampling point.

Figure 5. PROPOSED NEW CONNECTION WITH TRADE WASTE SAMPLING AND FLOW METER



6. PROPOSED NEW & EXISTING TRADE WASTE DISCHARGE

Total Predicted Padstow Trade Waste Treatment in 2031			
User	16/5 based consumption / day	24/7 based consumption / day	Peak flow rates into the site
Total	44,285 L/day	64,285	4.0 L/s
Buffer Allowance	10 %	10%	10 %
Totals	48,714 L/day	70,714 L/day	4.4 L/s

Table 4. Based on cetgroup Document N^o: BB-1000-REP-0001(Water & Waste Water)-Rev 0.1

	EXISTING TRADE WASTE DISCHARGE	PROPOSED NEW TRADE WASTE DISCHARGE (BOWERBIRD)	SUB TOTAL	10% BUFFER	TOTAL DISCHARGE
L/Day	4,285	40,000	44,285	4,428.5	48,714
L/Sec	0.5	3.5	4	.4	4.4
Fu's	6	85	91	9.1	101
DN	100	100	100	X	X

Table 5. Proposed L/Day & L/Sec Discharge

The following tables from AS/NZS 3500.2:2021 were used to determine fixture unit rating and pipe sizes

Table 6.3(B) — Fixture unit ratings for continuous flows

Flow, L/s	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0
Fixture unit equivalent rating	6	8	15	25	40	60	85	115

Table 3.3.1 — Maximum fixture unit loading for vented drains

Grade %	Nominal size of drain, DN						
	65 ^a	80	100	125	150	225	300
5.00	60	215	515	1 450	2 920	11 900	26 900
3.35	36	140	345	1 040	2 200	9 490	21 800
2.50	25	100	255	815	1 790	8 060	18 700
2.00	x	76	205	665	1 510	7 090	16 600
1.65	x	61	165	560	1 310	6 370	15 000
1.45	x	(50)	(140)	485	1 160	5 810	13 900
1.25	x	(42)	(120)	425	1 040	5 360	12 900
1.10	x	x	x	(380)	935	4 970	12 100
1.00	x	x	x	(340)	855	4 500	11 400
0.85	x	x	x	x	(725)	3 850	10 300
0.65	x	x	x	x	(595)	3 250	9 090
0.50	x	x	x	x	x	x	7 720
0.40	x	x	x	x	x	x	6 780

7. DOMESTIC SEWAGE

The estimated total flowrate of domestic sewage from the site in 2031 on a 16/5 basis is 1.5 L/s, 10,000 L/day.

8. SEWER TOTAL

Litres per second discharge flow rates

Trade waste discharge flow	4.4 L/sec
Estimated domestic discharge flow	1.5 L/sec
Total with 10% buffer	6.5 L/sec

Litres per day discharge flow rates

Trade waste discharge flow	48,714
Estimated domestic discharge flow	10,000
Total with 10% buffer	64,586

The estimated total quantity of effluent flowing to sewer is the sum of Trade Waste and domestic effluent flows, including a 10 % safety factor is 64.6 KL/day.

Pipe sizing for effluent from the site should be based on the peak flow rates plus a 10 % i.e. 6.5 L/s.

Our option that the existing 225mm Sydney water sewer asset running along the Southern end of the subject site is deemed acceptable size for proposed operations but needs to be assessed and confirmed by Sydney Water.

9. SCHEMATIC

Proposed treatment in bunded plant and equipment area see below figure 5.

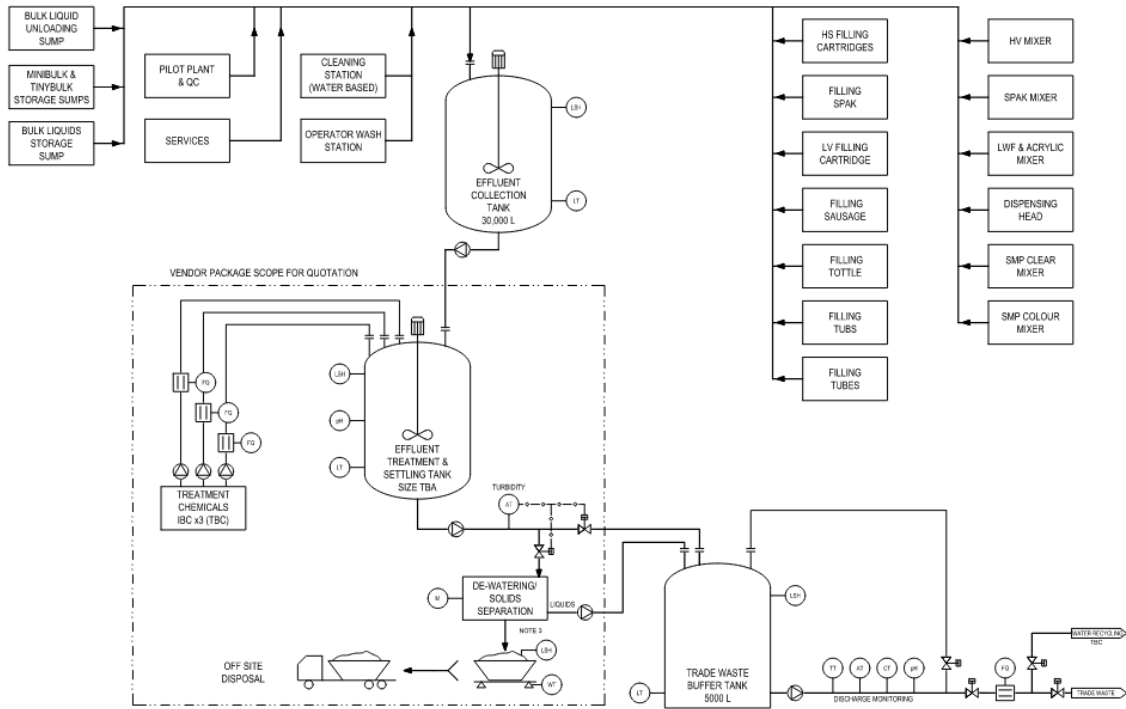
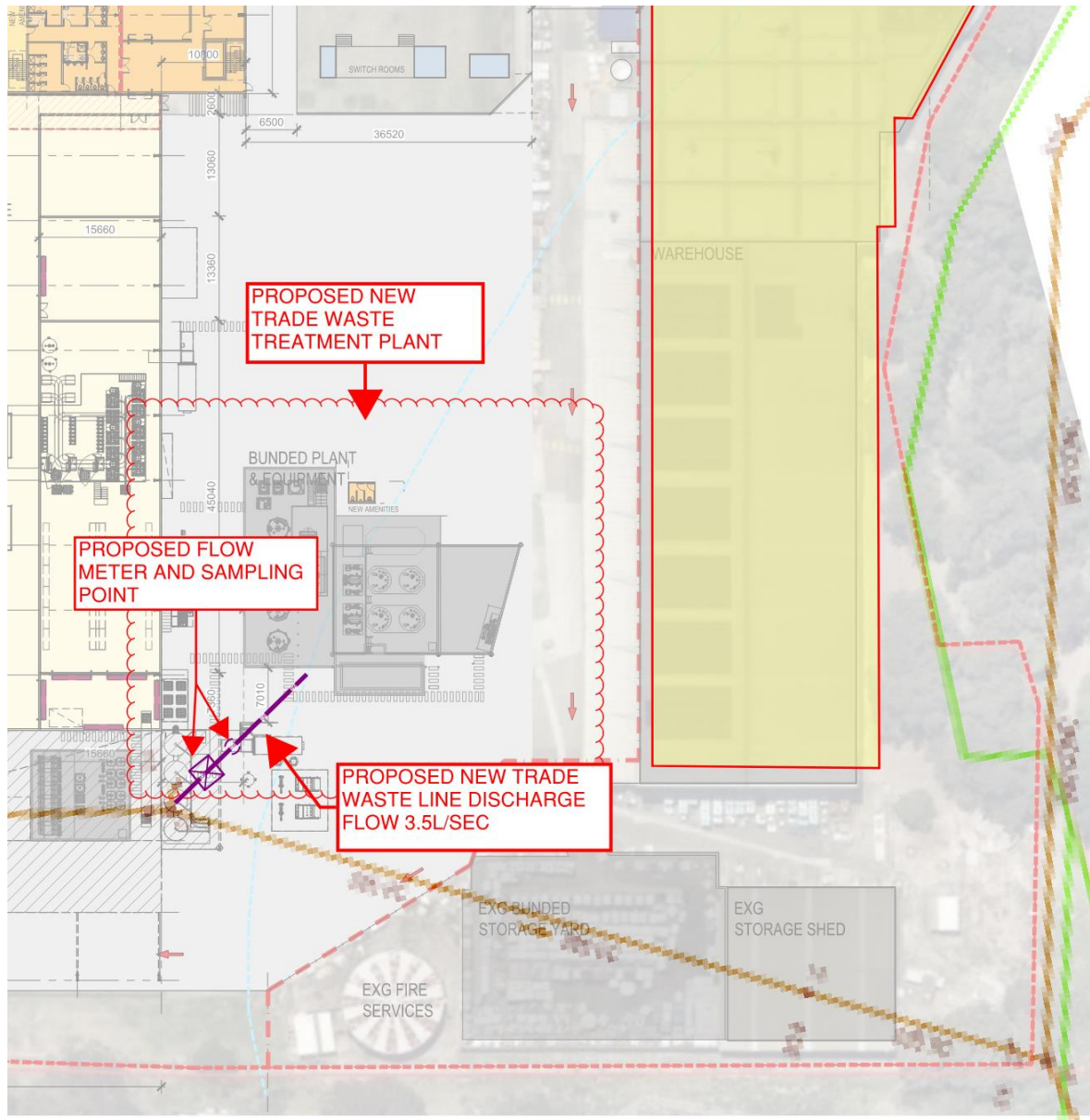


Figure 6. Schematic of trade waste treatment plant

Figure 7. Proposed trade waste treatment location



Refer to figure 6 for schematic in banded plant area.

10. SUMMARY

BOWERBIRD- PROPOSED NEW TRADE WASTE DISCHARGE

- Proposed new trade waste discharge 40 KL/day. Refer to section 5 table 4
- Proposed new trade waste discharge peak flow rate 3.5 L/s. Refer to section 5 table 4
- We propose a Dn 100mm pipe into sydney waters existing manhole on the South Eastern side of the property please refer to figure 6 for illustration and section 6 for pipe sizing)

Existing trade waste agreement – consent number 369000

- Instantaneous maximum rate of pumped discharge: 1.110 L/s
- Maximum daily discharge: 40 kL
- Average daily discharge 15 kL

Proposed total combined discharge in 2031 – Based on 16/5 consumption/day

- Trade waste - 4.4L/sec, 48.714 KL/Day. Refer to section 6 table 5 for figures
- Domestic – 1.5 L/sec, 10,000 KL/Day. Refer to section 7 for figures courtesy of CET group
- Total combined discharge with 10% buffer 6.5 L/sec. Refer to section 8 litres per second table
- Total combined daily discharge with 10% buffer 64.586 KL/Day. Refer to section 8 litres per day table