Application for Planning Approval

Land Use Planning and Approvals Act 1993

APPLICATION NO.

DA2023/017

LOCATION OF AFFECTED AREA

8 WOODRIEVE ROAD, BRIDGEWATER

DESCRIPTION OF DEVELOPMENT PROPOSAL

MANUFACTURING AND PROCESSING, STORAGE & TRANSPORT DEPOT AND DISTRIBUTION. CONSTRUCTION OF TWO SHEDS.

A COPY OF THE DEVELOPMENT APPLICATION MAY BE VIEWED AT www.brighton.tas.gov.au AND AT THE COUNCIL OFFICES, 1 TIVOLI ROAD, OLD BEACH, BETWEEN 8:15 A.M. AND 4:45 P.M., MONDAY TO FRIDAY OR VIA THE QR CODE BELOW. ANY PERSON MAY MAKE WRITTEN REPRESENTATIONS CONCERNING AN APPLICATION UNTIL 4:45 P.M. ON **27/11/2023**. ADDRESSED TO THE GENERAL MANAGER AT 1 TIVOLI ROAD, OLD BEACH, 7017 OR BY EMAIL AT development@brighton.tas.gov.au.

REPRESENTATIONS SHOULD INCLUDE A DAYTIME TELEPHONE NUMBER TO ALLOW COUNCIL OFFICERS TO DISCUSS, IF NECESSARY, ANY MATTERS RAISED.

JAMES DRYBURGH
General Manager

SCAN ME

Brighton going places

RAINBOW building solutions

CHECK CAREFULLY ALL ASPECTS OF THESE DOCUMENTS BEFORE COMMENCING ASSESSMENT.

ANY ERRORS OR ANOMALIES TO BE REPORTED TO THE DRAWER BEFORE ASSESSMENT IS CONTINUED

CONFIRM ALL SIZES AND HEIGHTS ON SITE

DO NOT SCALE OFF PLAN

THESE DOCUMENTS ARE INTENDED FOR COUNCIL PLANNING APPLICATION ONLY, THEY ARE NOT TO BE USED FOR ANY OTHER PURPOSES.

LEGEND:
COVER PAGE
PAGE 1# SITE PLAN
PAGE 2# SURFACES PLAN
PAGE 3# PLANNING OVERLAYS
PAGE 4# SWMP
PAGE 5# SHED 1 FLOOR PLAN/ELEVATION
PAGE 6# SHED 1 ELEVATIONS
PAGE 7# SHED 2 FLOOR PLAN/ELEVATIONS

PROPOSED SHEDS FOR WOODRIEVE HOLDINGS PTY LTD AT 8 WOODRIEVE RD BRIDGEWATER TAS 7030

	Shed 1	Shed 2
Number of employees	14	7
Main business operations	Manufacturing (located inside), storage, transportation depot & distribution	Manufacturing (located inside), storage, transportation depot & distribution
Truck deliveries per week	5	5
Sub-class use	Metal fabrication (no welding), warehousing of steel products for future use, park and garage vehicles associated with those activities mentioned above and to assist with road freight	Metal fabrication (no welding), warehousing of steel products for future use, park and garage vehicles associated with those activities mentioned above and to assist with road freight
Brief	Delivery of inward/outward steel, storage of steel, light fabrication of pre-fabed house and shed framing (no welding) including trusses	Delivery of inward/outward steel, storage of steel, light fabrication of pre-fabed house and shed framing (no welding) including trusses

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LAUNCESTON
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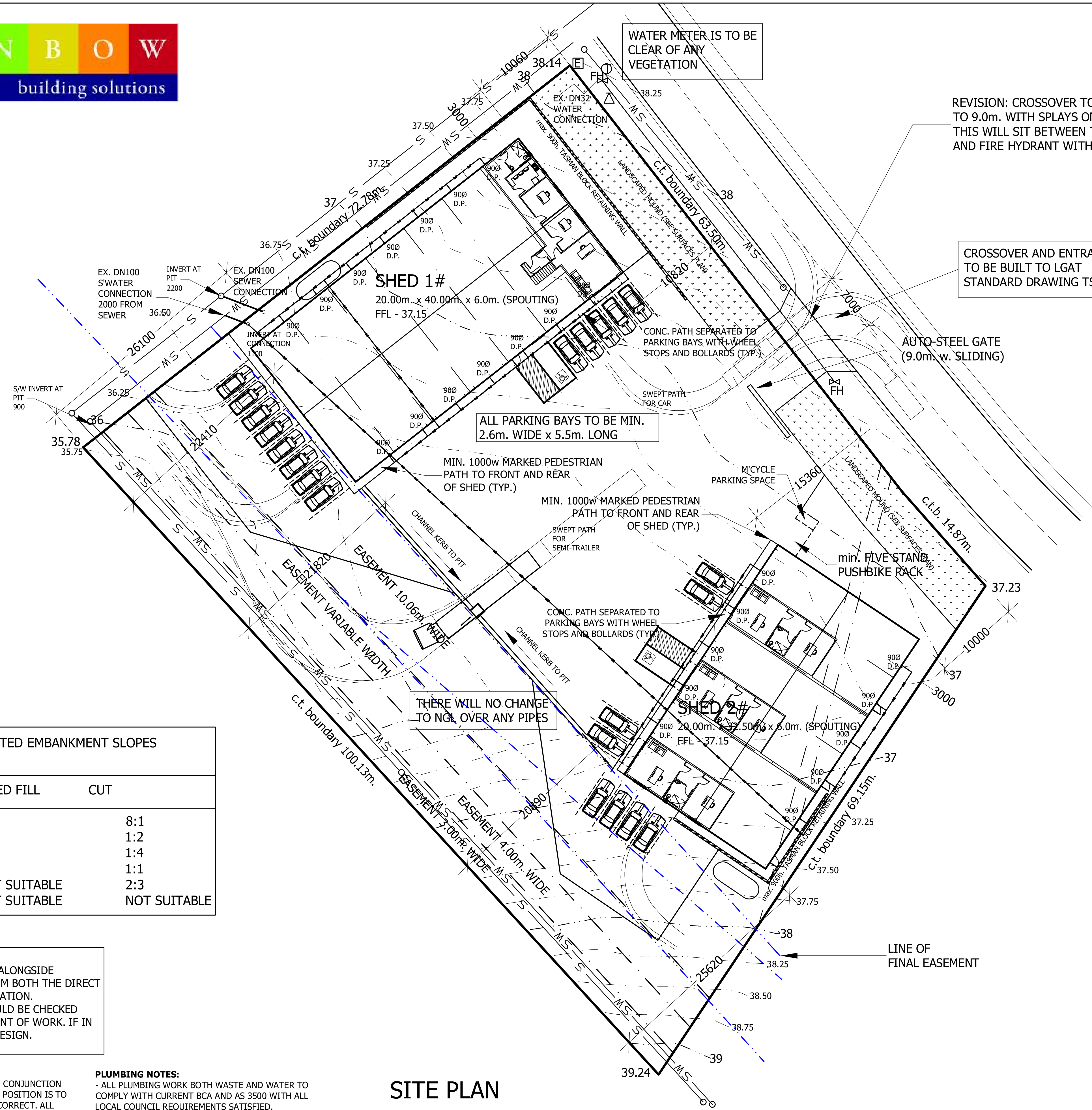

SITE PLAN
1:500

NOTE: ALL DIMENSIONS TO BE CONFIRMED ON SITE.

8 WOODRIEVE RD
BRIDGEWATER TAS 7030

TITLE REF: 182281/13
PROPERTY ID: 9639794
TITLE AREA = 6186.00m²

NOTE: TABLE FOR UNPROTECTED EMBANKMENT SLOPES
SLOPE = H:L

SOIL TYPE		COMPACTED FILL	CUT
STABLE ROCK		2:3	8:1
SAND		1:2	1:2
SILT		1:4	1:4
CLAY	(FIRM)	1:2	1:1
	(SOFT)	NOT SUITABLE	2:3
SOFT SOILS		NOT SUITABLE	NOT SUITABLE

NOTE:
THESE PLANS HAVE BEEN PREPARED ALONGSIDE INFORMATION AND DIMENSIONS FROM BOTH THE DIRECT CLIENT, TheList AND ONLINE INFORMATION.
ALL ASPECTS OF THE DRAWING SHOULD BE CHECKED THOROUGHLY BEFORE COMMENCEMENT OF WORK. IF IN DOUBT SEEK ADVICE FROM WILKIN DESIGN.

SET OUT NOTES:
- THE BUILDER IS TO SET OUT THE WORKS IN CONJUNCTION WITH THE ACCOMPANYING PLANS. THE FINAL POSITION IS TO BE CONFIRMED BY THE CLIENT AS TO BEING CORRECT. ALL DIMENSIONS HEIGHTS AND LEVELS ARE TO BE CONFIRMED ON SITE BY ALL PARTIES INCLUDING LOCAL COUNCIL, OWNER AND ENGINEER BEFORE ANY EXCAVATION IS TO BE CARRIED OUT.

PLUMBING NOTES:
- ALL PLUMBING WORK BOTH WASTE AND WATER TO COMPLY WITH CURRENT BCA AND AS 3500 WITH ALL LOCAL COUNCIL REQUIREMENTS SATISFIED.
- ALL DRAINS ARE TO BE 100mm PVC SEWER PIPE SET IN 12mm BLUEMETAL WITH A MINIMUM DEPTH OF 500mm ALL AS PER AS 3500 "PLUMBING AND DRAINAGE".
- STORMWATER DRAIN INSTALLATION SHALL COMPLY WITH AS 3500.

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NOTES: ----------.

PROJECT TITLE: WOODRIEVE HOLDINGS SHEDS
WOODRIEVE RD BRIDGEWATER

REVISION: 03/05/2023

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SCALE: AS SHOWN

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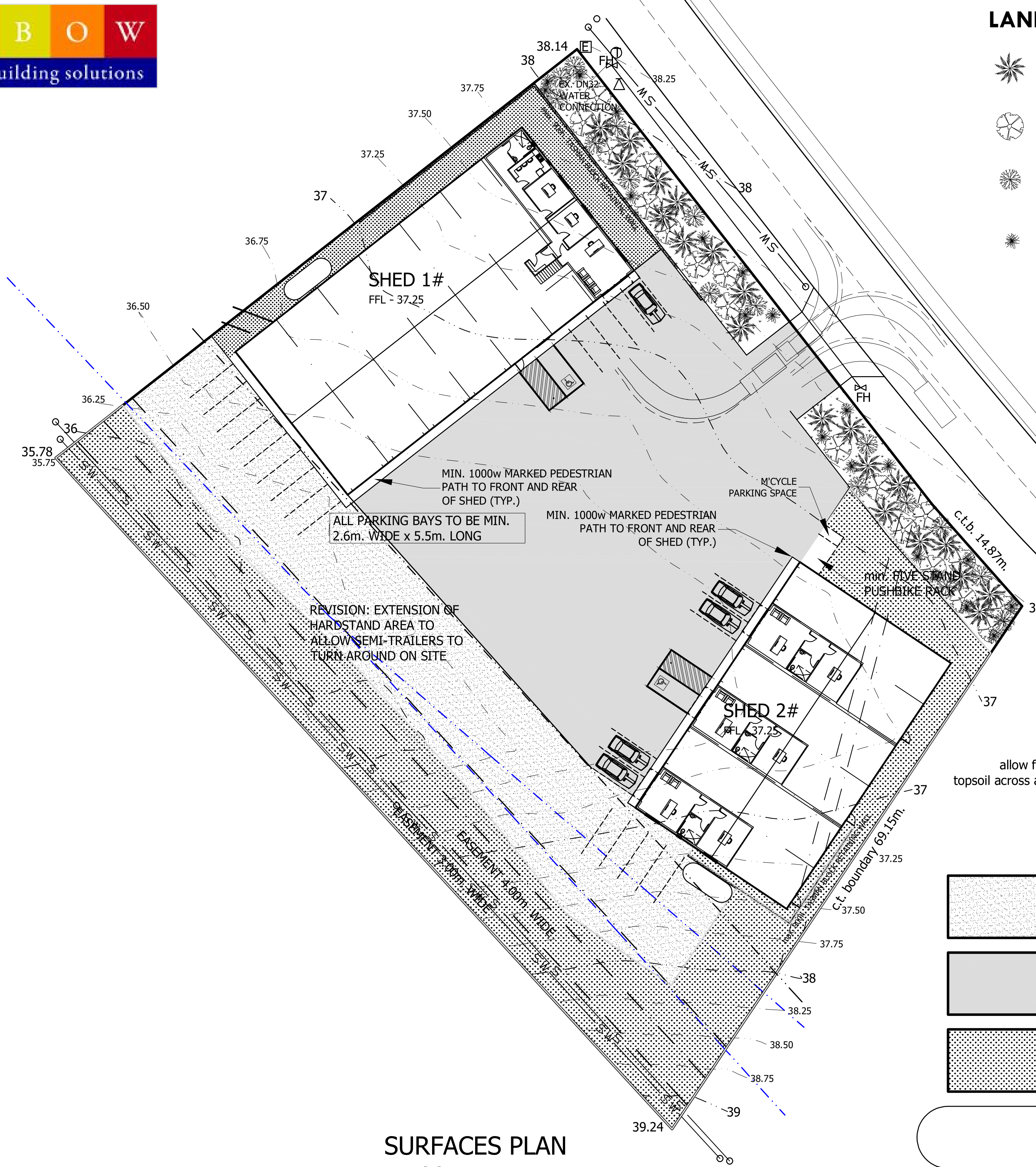

SURFACES PLAN
1:500

NOTE: ALL DIMENSIONS TO BE CONFIRMED ON SITE.

LANDSCAPING SCHEDULE

DIDONAEA VISCOSA
(MR. GREEN SHEEN)
1 - 2m. 1 per m²

RAPHIOLEPSIS UMBELLATA
(YEDDO HAWTHORNE)
1.5m. 1 per m²

LOMANDRA TANIKA
(TANIKA)
0.60m. 3 per m²

MYOPORUM PARVIFOLIUM
(CREEPING BOOBIALLA)
(GROUNDCOVER) 1 per m²

NOTE: IF SPECIFIED PLANTS ARE NOT AVAILABLE AT TIME OF PLANTING SIMILAR SIZE AND TYPE OF PLANTS SHOULD BE INSTALLED IN LOCATIONS SHOWN.

GARDEN BEDS TO HAVE AN IRRIGATION SYSTEM. IN-LINE DRIPPER TUBE @ 300crs. TO BE PROVIDED

8 WOODRIEVE RD
BRIDGEWATER TAS 7030

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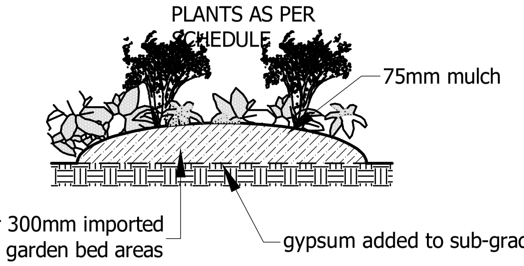

CROSS SECTION OF 6.0m. WIDE GARDEN BED

HARDSTAND GRAVEL WITH FALLS TO SPOON DRAIN

CONCRETE HARDSTAND WITH FALLS TO SUMPS

SIMPLE GRASSED AREA

min. 5000l. WATER TANK
ALL S/WATER TO TANK FIRST AND THEN TO S/W CONNECTION
TANK WATER TO BE RE-USED FOR TOILET CISTERNS

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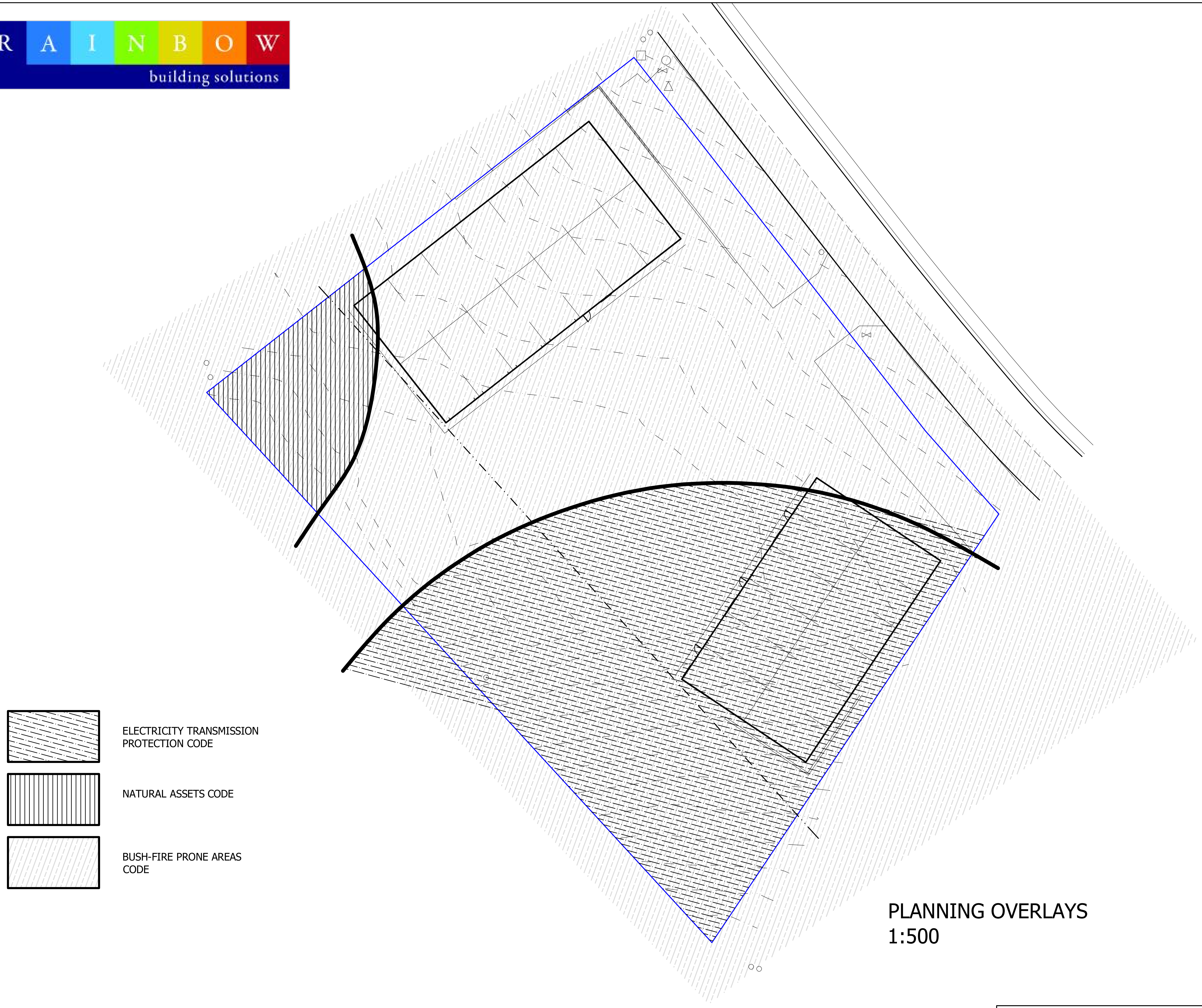

PLANNING OVERLAYS
1:500

8 WOODRIEVE RD
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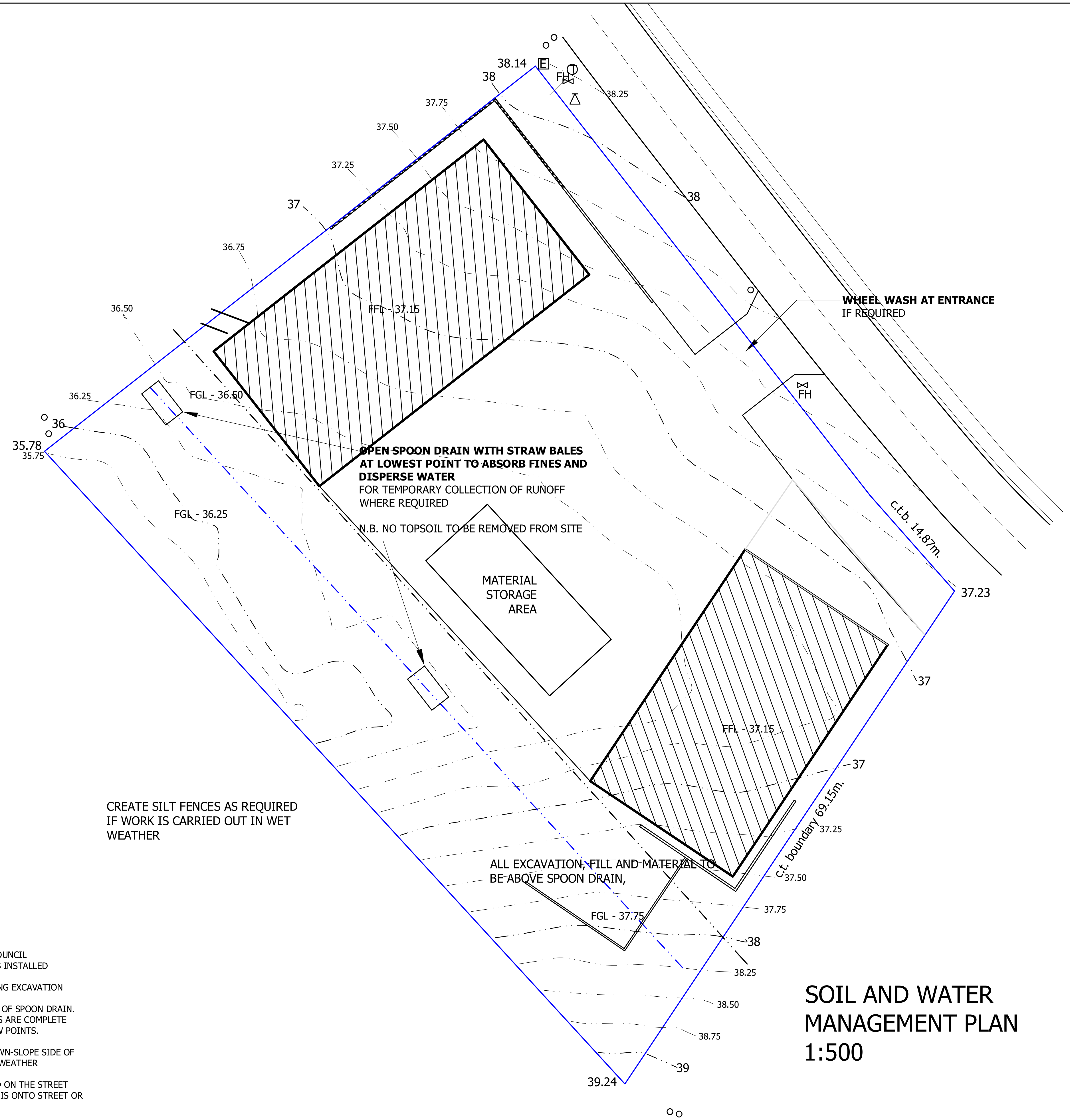

CREATE SILT FENCES AS REQUIRED
IF WORK IS CARRIED OUT IN WET
WEATHER

SOIL AND WATER MANAGEMENT:

DOWN-PIPES TO BE CONNECTED INTO COUNCIL STORM-WATER AS SOON AS THE ROOF IS INSTALLED

INSTALL SPOON DRAIN PRIOR TO FOOTING EXCAVATION

EXCAVATED MATERIAL PLACED UP SLOPE OF SPOON DRAIN. TO BE REMOVED WHEN BUILDING WORKS ARE COMPLETE AND USED AS FILL ON SITE FOR ANY LOW POINTS.

INSTALL A SEDIMENT FENCE ON THE DOWN-SLOPE SIDE OF MATERIAL IF CONSTRUCTION IS IN WET WEATHER

CONSTRUCTION VEHICLES TO BE PARKED ON THE STREET ONLY, TO PREVENT TRANSFERRING DEBRIS ONTO STREET OR TO USE WHEEL WASH

8 WOODRIEVE RD
BRIDGEWATER TAS 7030

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SOIL AND WATER MANAGEMENT PLAN
1:500

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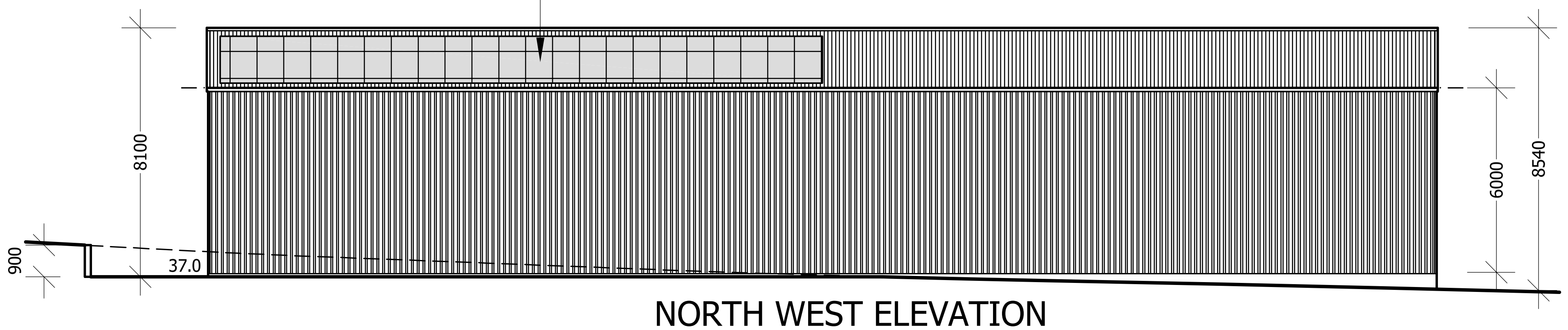
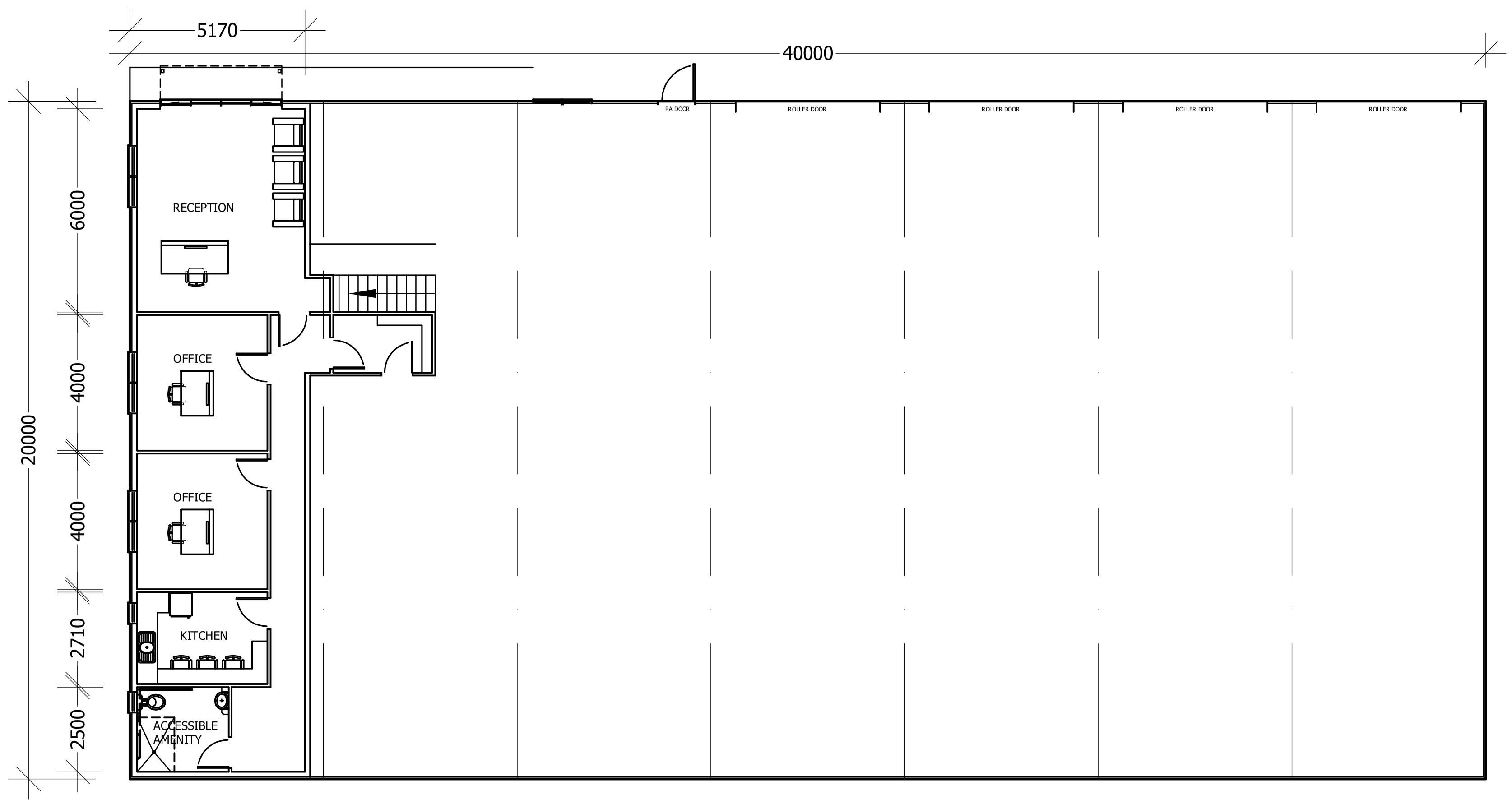


NORTH WEST ELEVATION
1:200



SHED 1#

FLOOR PLAN
1:200

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SHED 1#

SOUTH EAST ELEVATION
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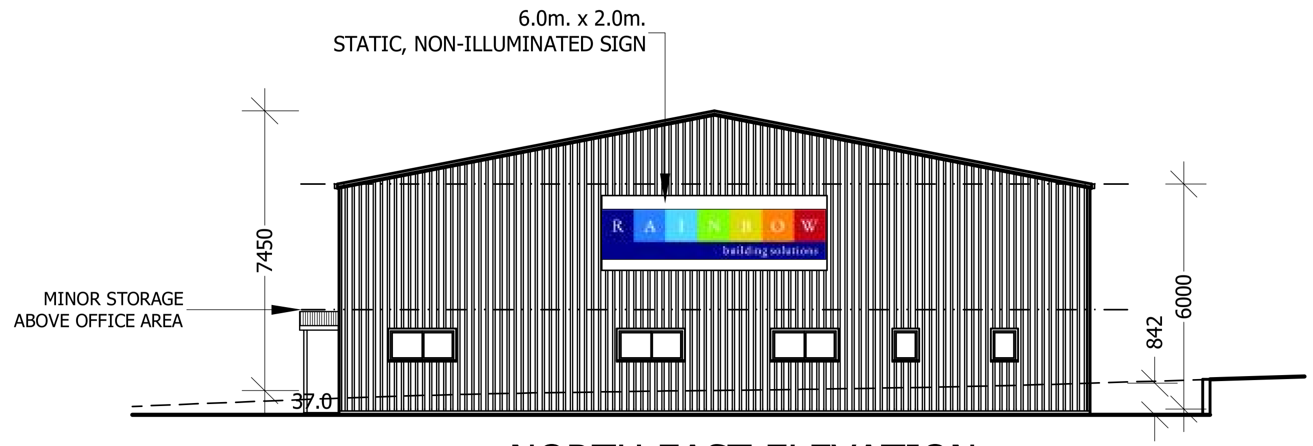
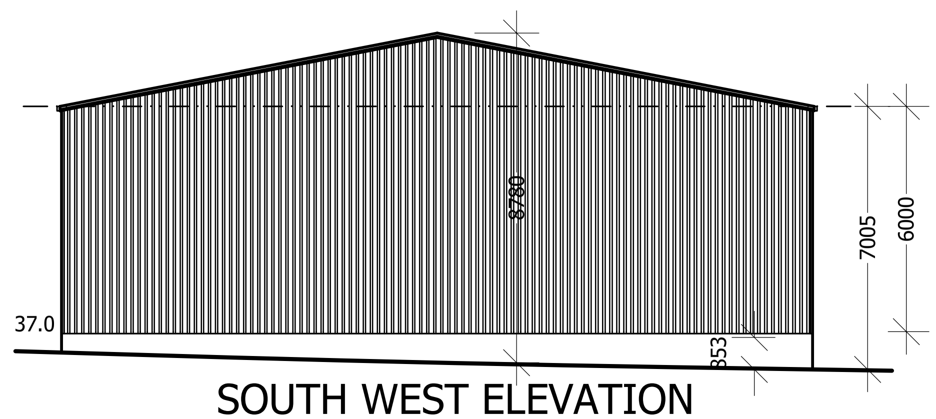


NORTH EAST ELEVATION
1:200



SOUTH WEST ELEVATION
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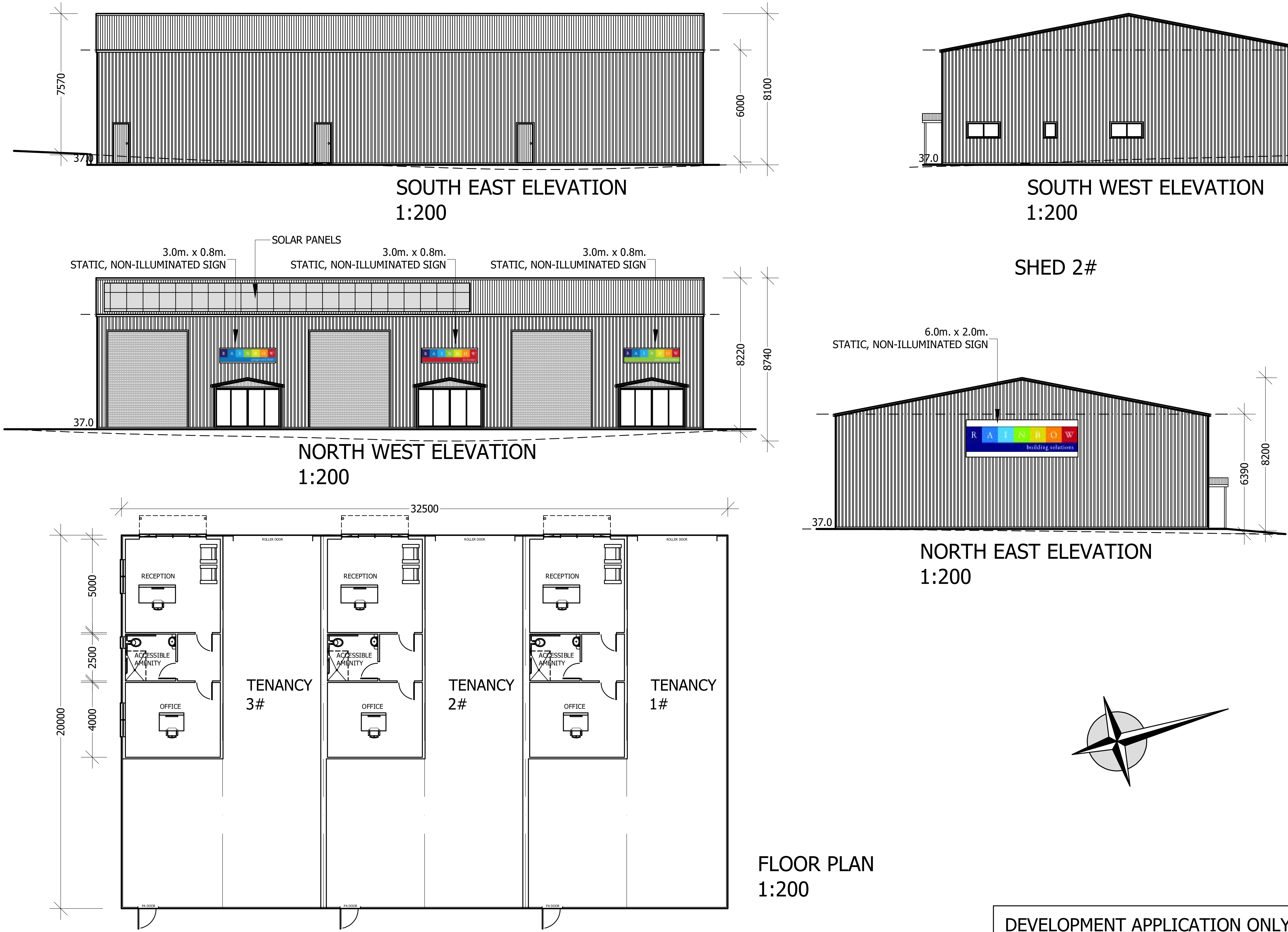

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TRAFFIC IMPACT ASSESSMENT

Hubble Traffic

May 2023

MANUFACTURING SHEDS, 8 WOODRIEVE ROAD, BRIDGEWATER

Version	Date	Reason for Issue
Draft	May 2023	Draft issued for client feedback
Final	3 May 2023	Final issued

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1. Introduction

Nick Smith of Rainbow Building Solutions has engaged Hubble Traffic to prepare an independent Traffic Impact Assessment, to consider the traffic impacts from the provision of two manufacturing and processing sheds at 8 Woodrieve Road, Bridgewater.

A planning application (DA2023/017) was submitted to the Brighton Council (council), and in considering the application council has requested more information, in particular vehicle swept paths, pedestrian access, and ensuring the site provides safe and efficient access.

This assessment has considered the functional requirements of the proposed business; the size and position of the lot; the current local road network; the need to cater for medium rigid vehicles, and provision of adequate on-site staff parking, while providing safe and efficient access.

This report has been prepared to satisfy the requirements of Austroads, Guide to Traffic Management Part 12: Traffic Impacts of Developments, 2019, and referred to the following information and resources:

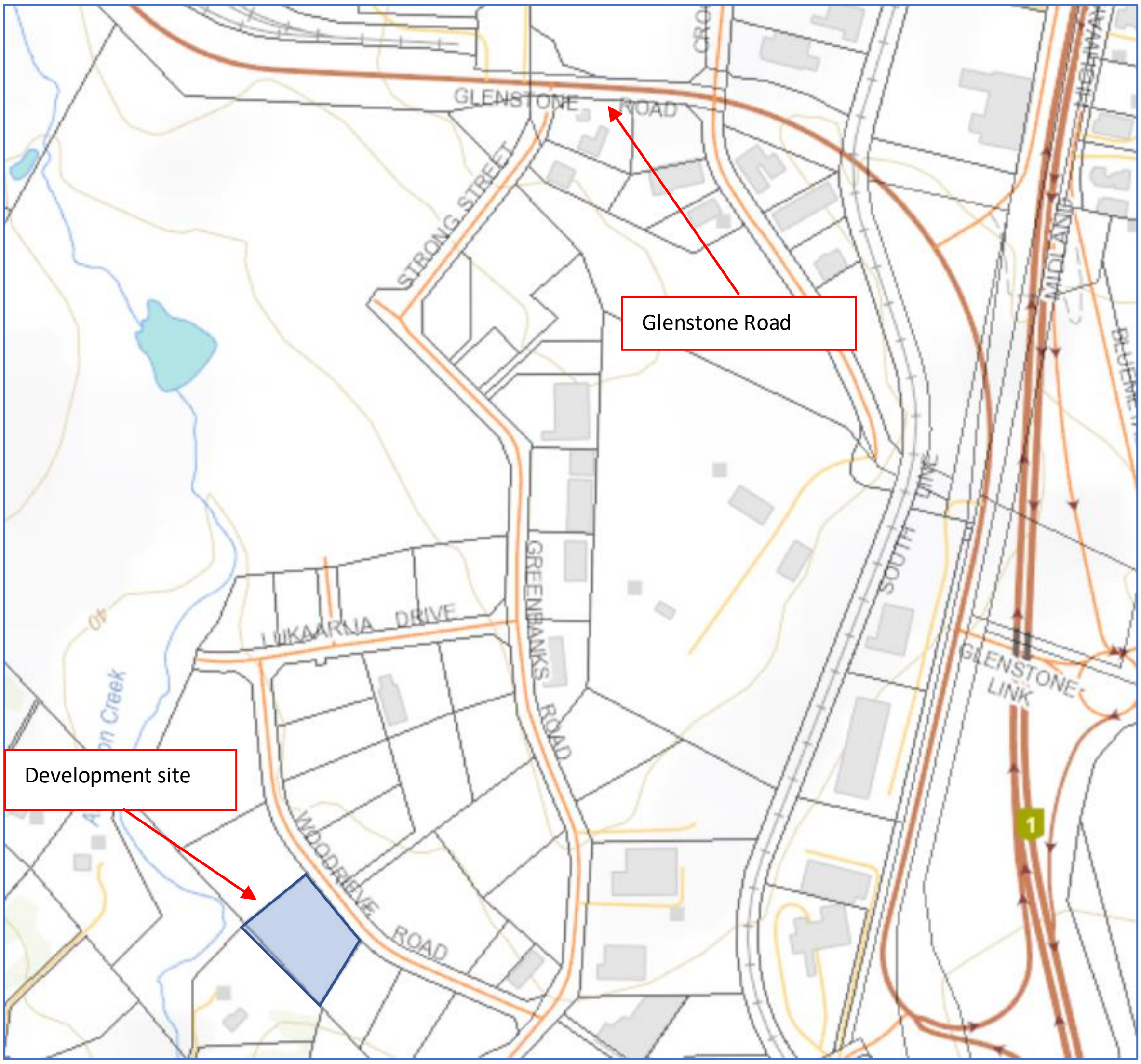
- Tasmanian Planning Scheme, (Brighton Council)
- Road Traffic Authority NSW (RTA) Guide to Traffic Generating Developments
- Australian Standards AS2890 parts 1, 2 and 6
- Austroads series of Traffic Management and Road Design
    - Part 4: Intersection and crossings, General
    - Part 4a: Unsignalised and Signalised Intersections
    - Part 12: Traffic Impacts of Development
- Department of State Growth crash database
- Autoturn Online vehicle turning software
- LIST Land Information Database

2. Site Description

The development site is located at 8 Woodrieve Road, Bridgewater and is currently an undeveloped parcel of land. According to the LIST Land Information Database, the site is located within an established light industrial zone.

The entire industrial zone is serviced by Glenstone Road, which connects back onto the Midland Highway, with this highway purposely built to carry industrial traffic. All traffic generated by this development must use the junction of Glenstone Road and Strong Street.

Diagram 2.0 – Extract from the LIST Land Information Database



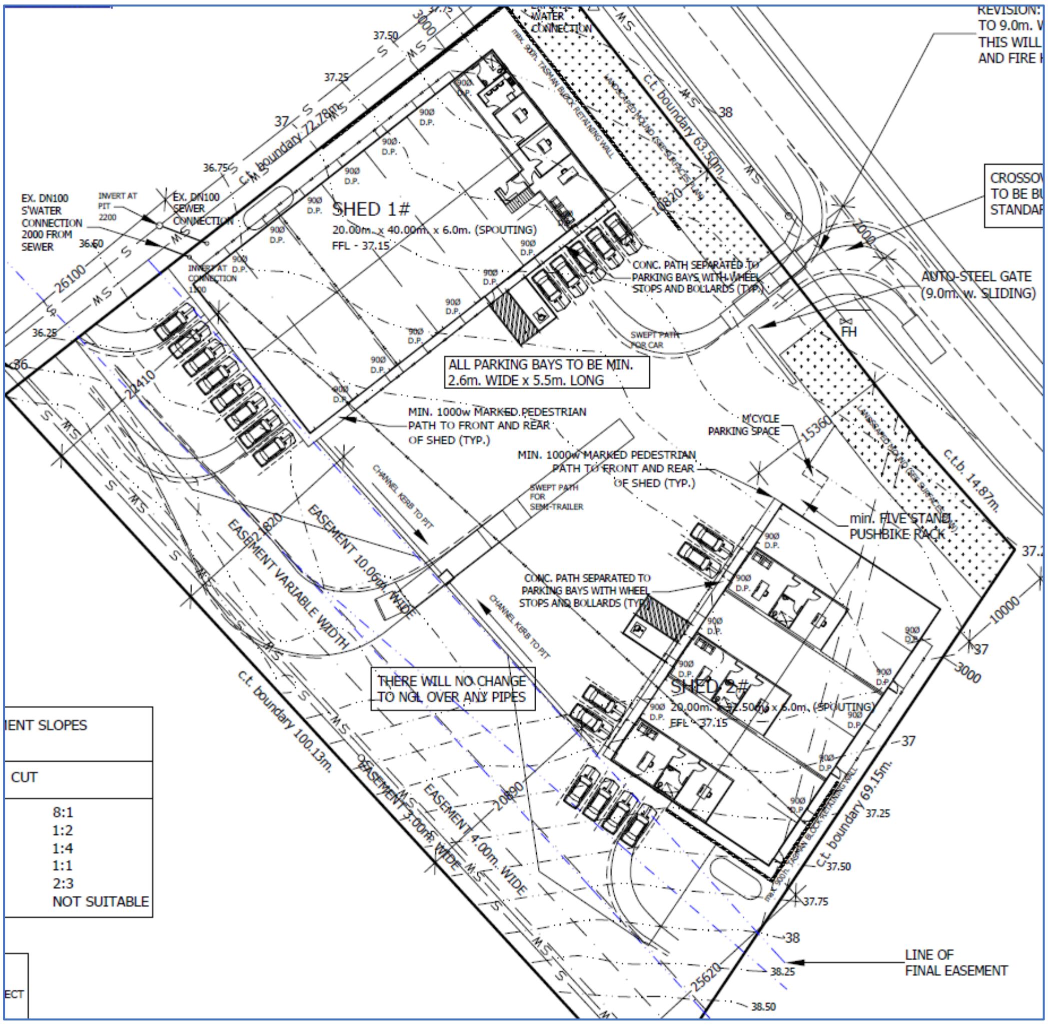
3. Development proposal

As advised by the developer the development is for the construction of two large sheds, which will be suitable for manufacturing and processing, car parking spaces for employees, and sufficient manoeuvring area for delivery vehicles to enter, turnaround, and leave the site in a forward-driving direction

The two sheds will be built for fabricating steel products, as well as storing the products before delivery. Shed one will be a single tenancy , while shed two will be split into three tenancies, with each tenancy to have a ground floor area, reception, office space, and amenity facilities (kitchen and toilet). Each tenancy will have a large roller door to allow for loading and unloading to occur internally.

Deliveries of raw materials for metal fabrication will be by semi-trailer once a month, which will be unloaded within the large forecourt area. The finished product will be distributed by medium rigid vehicles, estimated at ten deliveries per week. It is expected there will be a maximum of 21 employees across the two buildings, with visitors or customers not expected.

Diagram 3.0 – Proposed development layout



4. Trip generation by this development

A trip in this report is defined as a one way vehicular movement from one point to another excluding the return journey. Therefore, a return trip to and from a land use is counted as two trips.

To determine the number of trips likely to be generated by this development, reference has been taken from the RTA Guide to Traffic Generating Developments, (RTA Guide) section 3.10 Industry.

The RTA Guide indicates peak traffic generation for industrial land use is generally determined by three key factors; employee density, travel mode, and peak period travel distribution. For the purpose of this assessment, it is assumed that:

- the businesses are likely to employ 21 staff across the two building, and with the location being remote from public transport all employees are expected to travel by private vehicle, which is expected to generate up to 21 trips in the morning and evening peak periods.
- Delivery of raw materials is expected to occur once a month and will not be included in the daily trips.
- Transporting of the finished product will occur 10 times a week, and it is assumed that two daily deliveries will occur, with a worst-case scenario of these deliveries occurring once during the morning and evening peak periods.
- Visitors or customers are not expected to arrive on site.

The above assumptions are considered to represent a worst case trip generation rate in the peak periods. The development has the potential to generate up to 56 daily vehicle trips, with 23 of these expected to occur within each of the two peak periods.

Table 4.0 – Trip generation

Trip generator	Number per weekday	Number of trips during the morning peak	Number of trips during the evening peak	Number of trips between peaks	Total weekday trips
Staff	21	21	21	10	52
Transport finished product	2	2	2	0	4
Total		**23**	**23**	**10**	**56**

5. Existing industrial road network

Woodrieve Drive is a newly constructed road within an expanding industrial subdivision, which has been constructed to carry both light and heavy vehicles. The nearest arterial road is Glenstone Road, which is part of the State Road network connecting motorists with the Midland Highway. The only route connecting the development site to the arterial road is along Greenbanks Road, turning at the Strong Street junction with Glenstone Road.

5.1 Woodrieve Road characteristics

Woodrieve Road has been constructed to operate as a local industrial road, to support traffic movements to and from the adjacent industrial properties.

The road is situated on flat terrain and extends between Lukaarlia Drive and Greenbanks Road. Road construction is to a typical urban standard, with 8.1 metre wide bitumen seal, driveable concrete kerb, and channel, and 1.5 metre wide footpath on the opposite side to the development site, accompanied with street lighting.

Road alignment adjacent to the development site is straight, either side of the development there are sweeping horizontal bends. There are no speed limit signs posted on the road, and the urban default 50 km/h speed limit would apply by regulation due to the urban nature of the road characteristics and density of the land-use.

Photograph 5.1A – View of Woodrieve Road towards Greenbanks Road

Photograph 5.1B – View of Woodrieve Road towards Lukaarlia Drive

5.2 Traffic flow on the surrounding industrial road network

To evaluate the traffic impact from the development, it is important to understand the current traffic flow on Glenstone Road and Strong Street, as all traffic must use these roads. A recent manual traffic survey was undertaken at the junction of these roads, during the morning and afternoon peak periods. The following two tables provide the recorded traffic flows for the 90 minute periods.

Table 5.2A – Manual traffic flow for the morning period

Time AM	Glenstone Road				Strong Street	
	Straight towards Midlands	Straight towards Brighton	Right into Strong Street	Left into Strong Street	Left onto Glenstone Road	Right onto Glenstone Road
7:00 – 7:15	16	10	6	15	1	5
7:15 – 7:30	13	16	8	17	4	14
7:30 – 7:45	14	12	6	12	2	16
7:45 – 8:00	15	17	4	13	0	6
8:00 – 8:15	8	14	8	11	1	10
8:15 – 8:30	14	9	4	13	4	8
Total	**80**	**78**	**36**	**81**	**12**	**59**

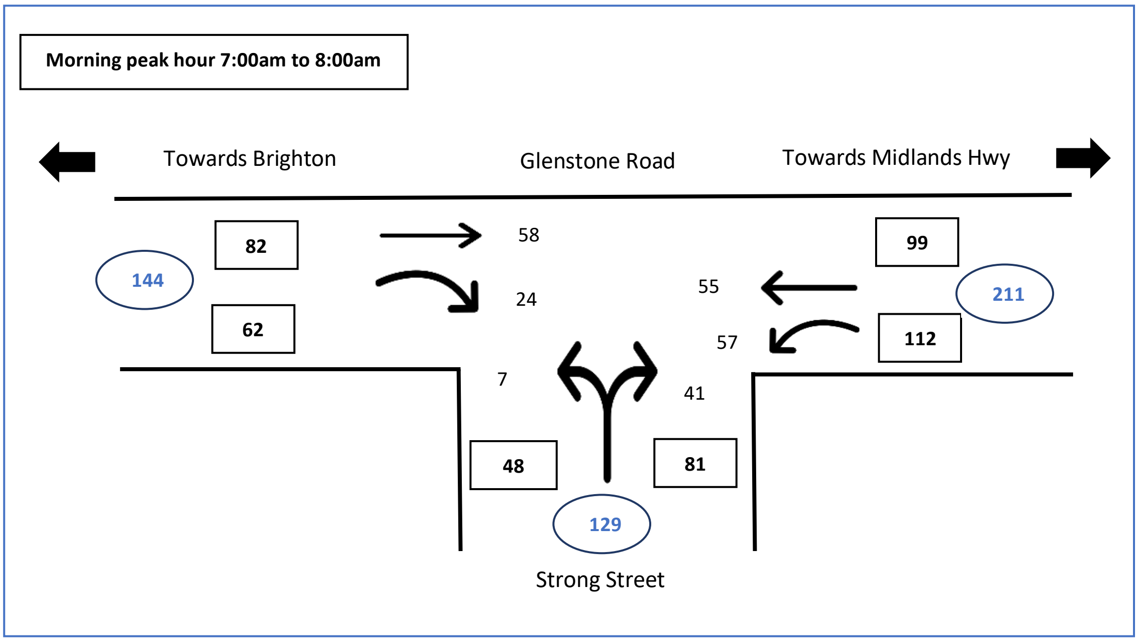
Table 5.2B– Manual traffic flow for the evening period

Time PM	Glenstone Road				Strong Street	
	Straight towards Midlands	Straight towards Brighton	Right into Strong Street	Left into Strong Steet	Left onto Glenstone Road	Right onto Glenstone Road
4:00 – 4:15	18	17	6	13	7	31
4:15 – 4:30	13	12	0	8	10	12
4:30 – 4:45	11	16	4	6	6	17
4:45 – 5:00	8	13	5	6	10	14
5:00 – 5:15	11	10	3	2	8	22
5:15 – 5:30	4	12	3	6	10	18
Total	**65**	**80**	**21**	**41**	**51**	**114**

5.3 Peak hour turning movements at the junction of Strong St and Glenstone Rd

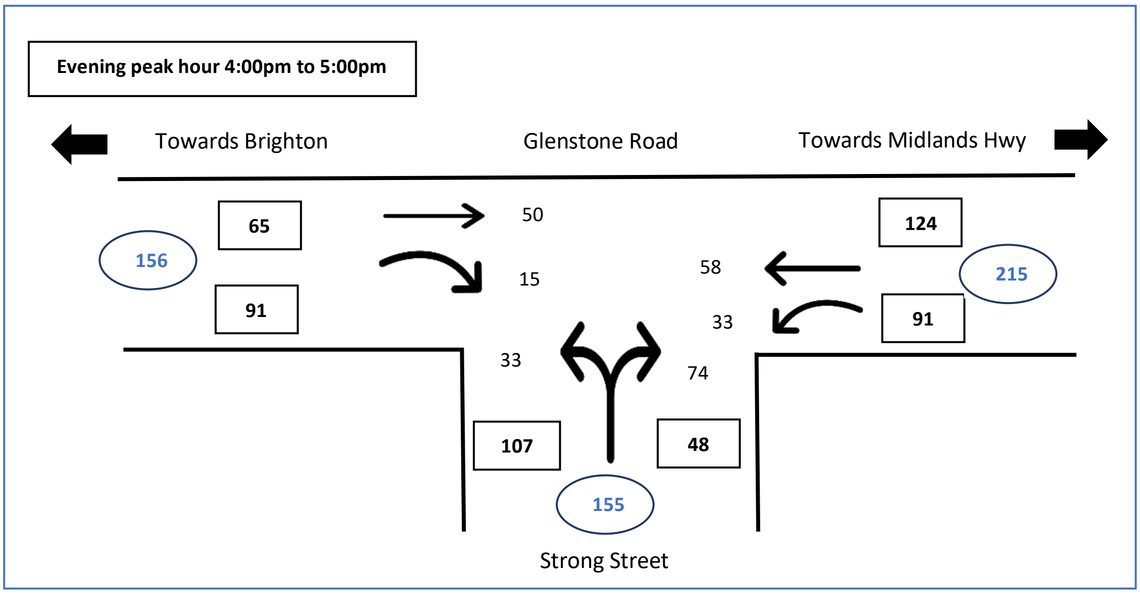
From the recent traffic surveys, the peak hour in each of the periods has been extracted for traffic modelling purposes. During the morning peak (7:00am to 8:00am) a total of 255 vehicles used the junction, with Strong Street generating half of the vehicle movements. It was observed that there was a significant proportion of the vehicle movements leaving Strong Street (48), with 81 vehicles entering.

Diagram 5.3A – Morning peak hour traffic movements



During the evening peak (4:00pm to 5:00pm) a similar volume of vehicles used the junction, with Strong Street generating 155 vehicle movements, which includes 48 vehicles arriving and 107 leaving.

Diagram 5.3B – Evening peak hour traffic movements



5.4 Road safety of the surrounding road network

The Department of State Growth maintains a database of reported road crashes, a check of this database found that within the last five years no crashes reported on Woodrieve Road.

6. Impact from traffic generated by this development

As indicated in section 4 of this report, the development is estimated to generate 56 daily vehicle trips, with 23 of these trips likely to occur during both the morning and evening peak period.

6.1 Lane capacity and level of service for Glenstone Road and Strong Street

In evaluating the impact of additional vehicle movements on Glenstone Road and Strong Street, it is important to understand the Level of Service (LOS) motorists are currently receiving. The RTA Guide provides guidance on level of service for urban roads, based on peak hour directional traffic flows.

Diagram 6.1 – Extract from the RTA Guide for level of service for urban roads

Table 4.4
Urban road peak hour flows per direction

Level of Service	One Lane (veh/hr)	Two Lanes (veh/hr)
A	200	900
B	380	1400
C	600	1800
D	900	2200
E	1400	2800

Based on the directional traffic flows obtained from the manual surveys, both Glenstone Road and Strong Street are operating at the highest level of service possible of LOS A, during the morning and evening peak periods. This means that the traffic flow is stable, motorists have freedom to select their own operating speed, and there should be sufficient gaps in the traffic stream to enable vehicles to enter and leave for adjacent properties, without causing any adverse impacts.

Traffic generated by the development has been assigned to the surrounding road network during the peak periods, and the table below demonstrates that the additional vehicle movements will not cause a reduction in the level of service, with both Glenstone Road and Strong Street to continue to operate at the highest level of service LOS A. The table below compares the directional traffic flows and level of service when the development is operating, in the columns highlighted in green.

Table 6.1 – Traffic flow and level of service comparison

Glenstone Road	Existing traffic flow				With development traffic			
	Morning		Evening		Morning		Evening	
	EB	WB	EB	WB	EB	WB	EB	WB
Directional flows	99	62	124	91	106	78	140	98
Level of Service	A	A	A	A	**A**	**A**	**A**	**A**
Strong Street	**Existing traffic flow**				**With development traffic**			
	Morning		**Evening**		**Morning**		**Evening**	
	NB	**SB**	**NB**	**SB**	**NB**	**SB**	**NB**	**SB**
Directional flows	48	81	107	48	48	104	130	48
Level of Service	A	A	A	A	**A**	**A**	**A**	**A**

6.2 Traffic efficiency at the junction of Glenstone Road and Strong Street

The simplest method to determine the traffic performance at a junction is to use SIDRA Intersection traffic modelling software, which uses gap acceptance theory to determine the average delay, queue lengths and degree of saturation, which are all measures of traffic congestion and level of service.

Level of Service (LOS) is a quantifiable assessment of the factors that contribute to the traffic performance, which includes traffic density, gaps in traffic streams, expected delays, and queues. For junctions, there are five levels from A to E, with A providing the highest level for give-way controlled junctions, meaning motorists are not incurring delays, with ample gaps in the traffic stream for vehicles to turn freely and safely without disrupting other users.

The following table provides level of service for the various traffic controls and is based on the RTA Guide.

Diagram 6.2 - Level of service for intersections

Table 4.2
Level of service criteria for intersections

Level of Service	Average Delay per Vehicle (secs/veh)	Traffic Signals, Roundabout	Give Way & Stop Signs
A	< 14	Good operation	Good operation
B	15 to 28	Good with acceptable delays & spare capacity	Acceptable delays & spare capacity
C	29 to 42	Satisfactory	Satisfactory, but accident study required
D	43 to 56	Operating near capacity	Near capacity & accident study required
E	57 to 70	At capacity; at signals, incidents will cause excessive delays Roundabouts require other control mode	At capacity, requires other control mode

A traffic model was developed in the SIDRA software to replicate the junction of Glenstone Road and Strong Street, using the recent peak hour traffic flows. The modelling predicts the junction will operate in the morning and evening periods at LOS A, which is the highest level of service, where motorists are not likely to incur any delay or traffic queues.

The additional traffic generated from the development site has been assigned to the junction of Glenstone Road, based on all trips entering Strong Street in the morning and leaving in the evening. The trips assignment at the junction is based on the current traffic movements, where in the morning peak 70 percent of the vehicles arrive by turning left onto Strong Street, while in the evening peak 69 percent of vehicles leave by turning right from Strong Street.

Modelling of the junction with the additional vehicle movements generated by the development, predicts there will be no deterioration in traffic performance, with all motorists expected to continue to receive LOS A. The table below provides the comparison in traffic conditions between the existing and when the development is operating. This demonstrates traffic generated by the development will not cause any adverse impact to the traffic performance at the junction.

Table 6.2 – Comparison of traffic modelling between existing and with development operating

Period	Scenario	Total vehicles	DOS	Worst average delay	LOS	Max queue
Morning peak hour	Existing	255	0.072	7.0 sec	A	1.8m
	Development	279	0.083	7.1 sec	A	1.8m
Evening peak hour	Existing	277	0.112	6.9 sec	A	3.8m
	Development	301	0.137	6.9 sec	A	4.7m

Printout of the modelling results is available in appendix A.

7. Access arrangement to and from the development site

The manufacturing process will involve the delivery of raw materials, manufacturing of products within the sheds, with the finished products being transported from the site when necessary. The developer estimates once a month the raw materials will be delivered by a semi-trailer, which will be required to enter the property, unload within the forecourt, turnaround and leave in a forward-driving direction.

The finished product will be transported and distributed from the site, with the developer estimating this delivery task will be undertaken by a medium rigid vehicle, occurring ten times per week. The sheds have been designed with large roller doors to allow for the loading to occur within the sheds.

7.1 Design vehicle

The design vehicle is not necessarily the largest vehicle accessing the development site, but is the most common heavy vehicle, which will be a medium rigid for this development. Larger vehicles arriving on an infrequent basis should be able to turn into and out of the development site using all the roadway of Woodrieve Road.

7.2 Vehicular access to the development site

The development site requires the creation of a new vehicular access onto Woodrieve Road, with the new access to allow for two-way traffic, accommodating both light and heavy vehicles. The new access has been designed to accommodate the swept path of a medium rigid vehicle, measuring 8.8 metres in length, to turn into and out of the development, without encroaching the centre of Woodrieve Road.

There will be sufficient access width to accommodate a semi-trailer vehicle required to turn into and out of the development, using all the width of the adjacent roadway.

The concrete crossover will be design and built to comply with LGAT standard drawing TSD-R09.

7.3 Sight distance at the proposed vehicular access

It is important that drivers leaving the development site have suitable sight distance to undertake turning manoeuvres in a safe manner, without impacting motorists travelling along Woodrieve Road.

Safe Intersection Sight Distance (SISD) is the optimum distance to enable a vehicle leaving the development site, to see approaching vehicles, and then have sufficient time to enter Woodrieve Road without impacting the approaching vehicles, meaning that vehicles do not need to slow. SISD is based on the operating speed of approaching vehicles and the gradient of the approaching road.

Austroads Guide to Road Design table 3.2 provides guidance on sight distance. Based on the urban default 50 km/h speed limit operating, approaching roads having no significant vertical grade, the specified SISD of 90 metres is required, based on a driver reaction time of 1.5 seconds, which is suitable for an urban environment.

Available sight distance was measured on-site and based on a driver positioned 1.05 metres above the road surface, with an approaching vehicle being 1.2 metres high, a driver leaving the property will have available sight distance exceeding 120 metres in both directions.

With the available sight distance exceeding the required SISD, vehicles will be able to leave the development site in a safe and efficient manner, without impacting other road users. The available sight distance is shown in the following two photographs.

Photograph 7.3A – Available sight distance to the left

Photograph 7.3B – Available sight distance to the right

8. On-site parking and internal road layout

8.1 Number of car parking spaces

The planning scheme table C2.1 prescribes the number of on-site parking spaces required, based on the type of land use. For manufacturing and processing, the requirement is one space per 200 square metres of floor area, or two spaces per three employees, whichever is greater. While office space requires one space per 40 square metres of floor area.

The developer has advised the total development is likely to employ 21 staff, which would require 14 on-site parking spaces, based on two spaces per three employees. Alternatively, based on the floor areas, the development would require 20 on-site car parking spaces, as calculated in the table below.

Table 8.1 – Car parking spaces required

Activity	Use	Planning scheme requirements	Employees	Floor area	Number of parking spaces
Shed 1	Manufacturing and processing	1 space per 200m^2 of floor area or 2 spaces per three employees, whichever is greater	14	696m^2	10
Shed 2	Manufacturing and processing	1 space per 200m^2 of floor area or 2 spaces per three employees, whichever is greater	7	471m^2	4
Office	Office	1 space per 40m^2		223m^2	6
Total					**20**

There is adequate area within the site to provide 23 car parking spaces, located in front and at the rear of the sheds. The development will provide 23 on-site car parking spaces to meet the reasonable demand, eliminating parking overflow, complying with the acceptable solution under the planning scheme.

8.2 Layout of on-site car parking spaces

The design will incorporate four parking modules within the development site. Each shed will have two parking modules, with one module being at the front of the shed and the other module being at the rear.

- Shed one will have six parking spaces at the front, including one accessible space with a shared zone, located within close proximity to the entrance, and eight parking spaces located at the rear.
- Shed two will have five parking spaces at the front, including an accessible space with a shared zone, located in-between the large roller doors, and four parking spaces located at the rear.

All car parking spaces have been designed to be situated on gradient less than five percent, in both longitudinal and transverse directions. The parking spaces will be supplemented with wheel stops and delineated by pavement markings, where possible. Any parking deck that is higher than 600 metres above the natural ground surface will be supplemented by an approved safety barrier.

8.3 Dimensions of parking spaces

The car parking spaces have been designed to comply with the planning scheme parking dimensions in table C2.3, where ninety-degree parking spaces will be 2.6 metres wide, 5.4 metres long, and supported with a minimum 6.4 metre manoeuvring area or access aisle. With these parking spaces complying with the planning scheme specified parking dimensions, it will ensure vehicles can enter and leave the parking spaces in a single turn efficiently.

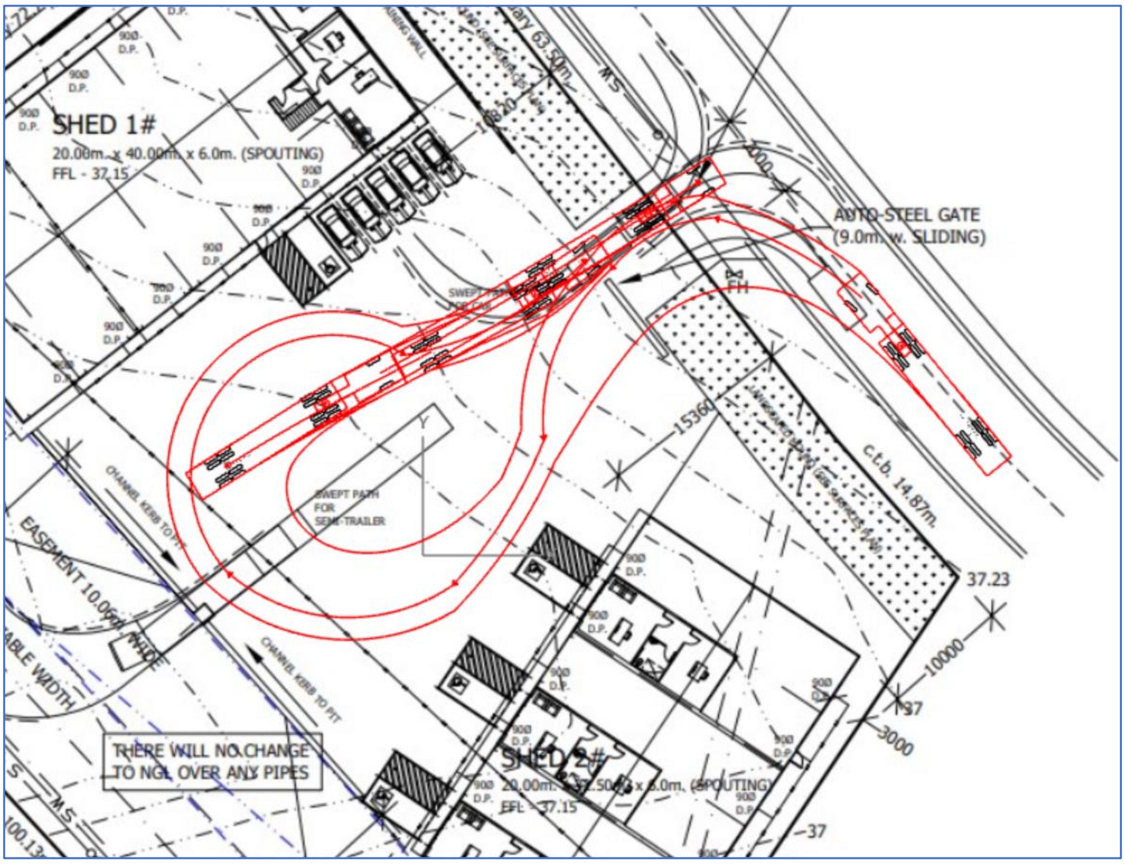
Vehicle swept paths for parking spaces located at the rear of each shed, can be found in appendix B.

8.4 Commercial deliveries

Although the design vehicle is for a medium rigid vehicle, a semi-trailer delivering raw materials is expected on-site once per month. Vehicle swept path software has been used to demonstrate that a semi-trailer (19 metres in length) will be able to enter, turnaround in the forecourt, unload on the forecourt, and leave the site in a forward-driving direction, as shown in the diagram 8.4. Unloading on the forecourt is expected to occur once a month and this low frequency is not expected to cause adverse impact to other users, noting the parking spaces are for employees, with visitors and customers not expected.

Collection of finished products is expected to occur with a medium rigid or a smaller delivery vehicle, occurring on average twice per day. The sheds will be equipped with large roller doors, allowing unloading, or loading to occur internally.

Diagram 8.4 – Swept path of a semi-trailer



8.5 Internal layout

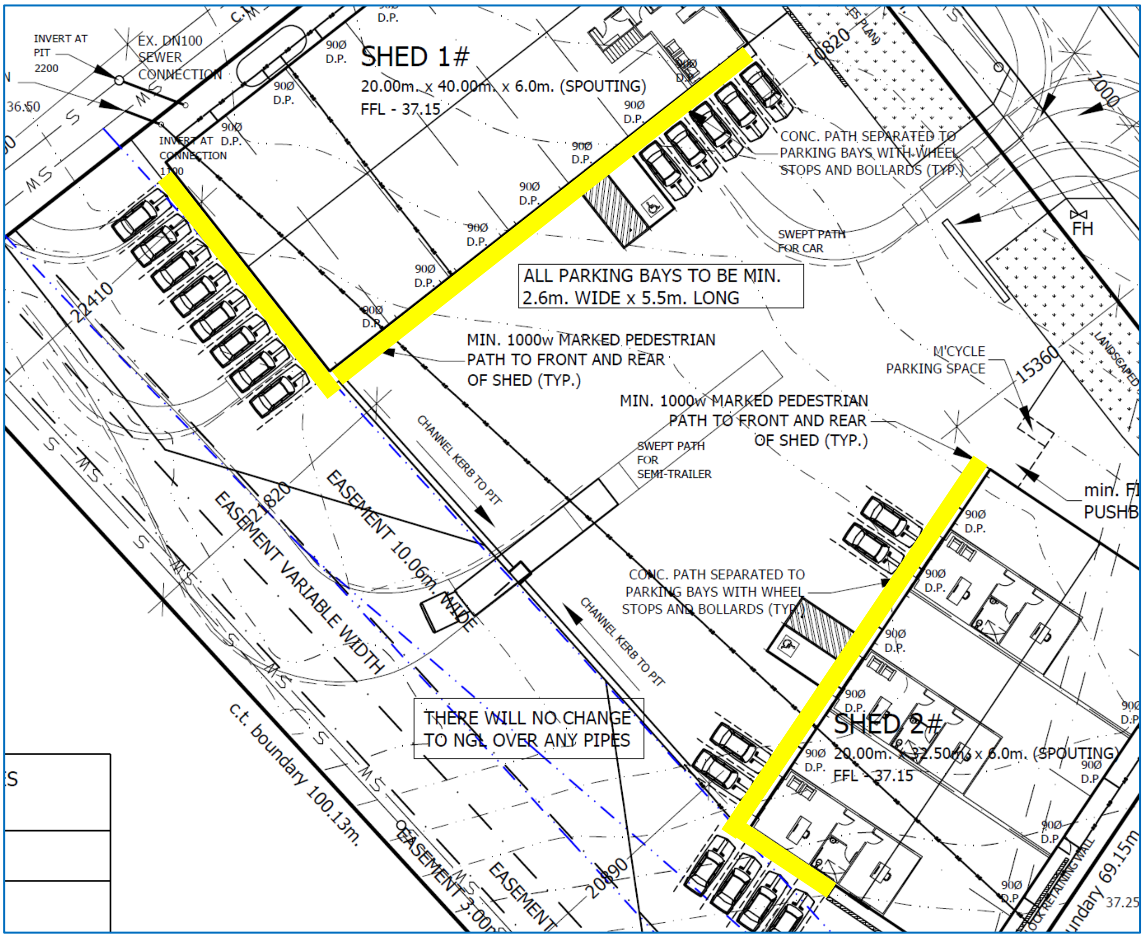
The design incorporates a single vehicular access, with the sheds located in close proximity to the property boundaries, creating a large forecourt area.

Within the rear of the property there are significant easements, with the surface above these easements to be an all-weather hard wearing surface, while the remaining area of the forecourt will be a concrete surface. The concrete forecourt will be graded to direct surface water to the centre, where appropriate pits will be positioned to collect the surface water.

8.6 Internal pedestrian pathways

A minimum one metre wide marked pedestrian pathway will be provided along the front and the rear of the sheds, connecting the parking spaces to the entrances. The pathways will be separated from the parking spaces with wheel stops and bollards.

Diagram 8.6 – Internal pedestrian pathways



8.7 Other parking requirements

Under the planning scheme table C2.1 Parking Space Requirements, bicycle parking facilities are required to be provided based on land use. For manufacturing and processing, one space is required per five employees, and for offices one space per 500 square metres of floor area. Based on the floor area of the offices and a maximum of 21 employees on site at any one time, five bicycle facilities will be required for employees.

The development will provide five bicycle parking spaces in the form of wheel frames, to allow for bicycles to be secured, these will be located within 50 metres of the building entrance and be visible to the offices.

The planning scheme table C2.4, prescribes the number of motorcycle parking spaces required, based on the number of car parking spaces being provided. One motorcycle space is required for every 20 car parking spaces, and one additional space per 20 spaces. As the development is providing 23 car parking spaces, there is a need to provide for one dedicated motorcycle parking space. The development will provide one dedicated motorcycle space complying the dimensions specified in the Australian Standard of 1.2 metre wide and 2.4 metres long.

Two accessible spaces will be provided by the development, one accessible space in front of each shed, located as near as practicable to the building entrance.

9. Planning scheme

9.1 C2.0 Parking and Transport Code

C2.5.1 Car parking numbers

The development is providing a total of 23 on-site car parking spaces, exceeding the number of car parking spaces required under the planning scheme. This number of parking spaces is expected to meet the reasonable demand generated by the development, eliminating overflow parking.

The number of on-site car parking spaces complies with the acceptable solution under the planning scheme.

C2.5.2 Bicycle parking numbers

The development will provide wheel frames to accommodate parking of five bicycles, complying with the planning scheme table C2.1, and satisfying the acceptable solution requirement.

C2.5.3 Motorcycle parking numbers

The development will provide one dedicated motorcycle parking space complying with the planning scheme table C2.4 and satisfying the acceptable solution requirement.

C2.5.4 Loading bays

Each of the tenancies will have large roller doors to enable delivery vehicles to load and unload within the sheds, and this complies with the acceptable solution. There is sufficient area within the forecourt for a semi-trailer to enter and turnaround, to provide infrequent delivery and unloading of raw materials within the forecourt. This is considered acceptable, as deliveries are not expected to cause any adverse impact, as visitors and customers are not expected on-site, only employees. The developer can implement a management plan to ensure the unloading of the semi-trailer can occur safely and efficiently.

C2.6. Development standards

C2.6.1 Construction of parking areas.	The car parking spaces in front of the sheds, internal access driveway and forecourt, will be constructed with a hard-wearing concrete surface extending to the end of the manufacturing sheds. Beyond this point the remaining surface area will be an all-weather hard wearing gravel surface due to significant underground services, with the area defined as an easement. The concrete forecourt area will have an appropriate camber, directing the surface water into central pits, connecting with an approved stormwater drainage system. This complies with the acceptable solution A1.
C2.6.2 Design and layout of parking areas.	All car parking spaces on-site will be for employees only, which have been designed to comply with the planning scheme table C2.3. Each space will be 2.6 metres wide, 5.4 metres long and have a minimum manoeuvring area of 6.4 metres. The parking spaces shall have a gradient of less than five percent, which will be delineated with line markings where possible and supported with wheel stops. The width of the driveway access will exceed the minimum of 5.5 metres, as prescribed in table C2.2 of the planning scheme. Overall, the car parking layout complies with the acceptable solution and ensures safe and efficient access.
C2.6.3 Number of accesses for vehicles.	The development will require the creation of a new access with Woodrieve Road, which will be designed to cater for a medium rigid vehicle turning. A single vehicular access complies with the acceptable solution.
C2.6.4 Lighting of parking areas within the general business zone and central business zone	The development site will be provided with suitable lighting to ensure vehicles can enter, park, manoeuvre and leave in a safe manner.
C2.6.5 Pedestrian access.	A minimum one metre wide pedestrian walkway will be provided in the front and the rear of both buildings. The pathways will connect the parking spaces to the entrances to the sheds.
C2.6.6 Loading bays.	Each tenancy will have a large roller door, allowing for delivery vehicles to be loaded and unloaded within the sheds.
C2.6.7 Bicycle parking and storage facilities	Bicycle parking spaces will be designed to comply with the planning scheme and Australian Standard 1158.3.1:2005 and be located close to the entrance and visible to the offices.
C2.6.8 Siting of parking and turning areas.	Not applicable for a light industrial zone.

9.2 C3.5.1 Traffic generation at a vehicle crossing, level crossing or new junction

The development will require the creation of a new access with Woodrieve Road and will need to be assessed against the performance criteria P1, ensuring the access can operate safely and efficiently.

Performance criteria	Assessment
Vehicular traffic to and from the site must minimise any adverse effects on the safety of a junction, vehicle crossing or level crossing or safety or efficiency of the road or rail network, having regard to:	
a) Any increase in traffic caused by the use;	The development is estimated to generate 56 daily trips, with 23 of these trips likely to occur during both morning and evening peak periods, with 10 trips likely to occur between the peak periods. This number of vehicle trips is considered low, and not expected to cause adverse impact.
b) The nature of the traffic generated by the use;	The facility is being developed within an established industrial area and will generate both light vehicle (less than 5.5 metres) and heavy vehicle movements. Light vehicles will be generated by employees, with most of the heavy vehicles being generated by medium rigid vehicles, with one semi-trailer vehicle likely per month. These vehicle types are compatible with the existing traffic on the surrounding road network.
c) The nature of the road;	Woodrieve Road is a newly constructed industrial road designed to cater for industrial traffic and is considered appropriate for the use.
d) The speed limit and traffic flow of the road;	The default urban 50 km/h speed limit would apply along Woodrieve Road. A recent manual survey found the surrounding roads are lightly trafficked, with motorists receiving the highest level of service possible. Traffic generated by the development will need to turn at the junction of Strong Street and Glenstone Road, and this assessment determined motorists using this junction are receiving the highest level of traffic performance for a give-way controlled junction, with no notable traffic delay or queues. This assessment has demonstrated there is spare traffic capacity on the surrounding road to absorb the additional traffic generated by the development, without causing a reduction in the level of performance or causing adverse impact to other users. Traffic modelling at the junction predicts the increase in traffic will not cause any deterioration in the level of performance, and the junction has spare traffic capacity to accommodate future growth in the area.
e) Any alternative access to a road;	None.
f) The need for the use;	The new manufacturing sheds will create new employment within the Brighton municipality and this business cannot proceed without the creation of a new access.

g)	Any traffic impact assessment	A traffic impact assessment has found no reason for this development not to proceed.
h)	Any advice received from the rail or road authority	A letter from the council dated 14/02/2023, requesting more information and the need for a Traffic Impact Statement.

10. Conclusions

The provision of two new sheds, suitable for manufacturing and processing at 8 Woodrieve Road, Bridgewater is a suitable use of the new industrial subdivision land.

From a traffic engineering and road safety perspective, additional traffic generated from this development is not expected to create any adverse safety, amenity, or traffic efficiency problems, as:

- the amount of traffic generated is considered to be low and there if sufficient capacity within the current road network to absorb the extra traffic movements,
- a new vehicular access can be created without causing any safety or traffic efficiency issues to the local road network,
- the development will have sufficient parking spaces to meet the expected demand, eliminating the risk of parking overflow, and
- commercial vehicles will be able to load and unload within the development site, causing no adverse impact to the operational performance of the public road network.

This Traffic Impact Assessment found no reason for this development not to proceed.

11. Appendix A – Glenstone Road and Strong Street traffic modelling

Existing morning peak traffic modelling

MOVEMENT SUMMARY

Site: 101 [Glenstone and Strong existing AM]

New Site
Site Category: (None)
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	Demand Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m
South: Strong Street								
1	L2	7	20.0	0.056	6.0	LOS A	0.2	1.8
3	R2	43	20.0	0.056	7.0	LOS A	0.2	1.8
Approach		51	20.0	0.056	6.9	LOS A	0.2	1.8
East: Glenstone Road (Midland Hwy)								
4	L2	60	20.0	0.072	5.8	LOS A	0.0	0.0
5	T1	58	30.0	0.072	0.0	LOS A	0.0	0.0
Approach		118	24.9	0.072	2.9	NA	0.0	0.0
West: Glenstone Rd (Brighton)								
11	T1	61	30.0	0.038	0.0	LOS A	0.0	0.0
12	R2	25	20.0	0.018	6.1	LOS A	0.1	0.6
Approach		86	27.1	0.038	1.8	NA	0.1	0.6
All Vehicles		255	24.7	0.072	3.3	NA	0.2	1.8

Existing evening peak traffic modelling

MOVEMENT SUMMARY

Site: 101 [Glenstone and Strong existing PM]

New Site
Site Category: (None)
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	Demand Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m
South: Strong Street								
1	L2	35	20.0	0.112	6.0	LOS A	0.5	3.8
3	R2	78	20.0	0.112	6.9	LOS A	0.5	3.8
Approach		113	20.0	0.112	6.6	LOS A	0.5	3.8
East: Glenstone Road (Midland Hwy)								
4	L2	35	20.0	0.059	5.8	LOS A	0.0	0.0
5	T1	61	30.0	0.059	0.0	LOS A	0.0	0.0
Approach		96	26.4	0.059	2.1	NA	0.0	0.0
West: Glenstone Rd (Brighton)								
11	T1	53	30.0	0.032	0.0	LOS A	0.0	0.0
12	R2	16	20.0	0.011	6.0	LOS A	0.0	0.4
Approach		68	27.7	0.032	1.4	NA	0.0	0.4
All Vehicles		277	24.1	0.112	3.8	NA	0.5	3.8

Morning peak traffic modelling with development traffic

MOVEMENT SUMMARY

▽ Site: 101 [Glenstone and Strong existing AM - with development traffic]

New Site
Site Category: (None)
Giveway / Yield (Two-Way)

Movement Performance - Vehicles								
Mov ID	Turn	Demand Flows Total veh/h	Demand Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m
South: Strong Street								
1	L2	7	20.0	0.057	6.0	LOS A	0.2	1.8
3	R2	43	20.0	0.057	7.1	LOS A	0.2	1.8
Approach		51	20.0	0.057	7.0	LOS A	0.2	1.8
East: Glenstone Road (Midland Hwy)								
4	L2	77	20.0	0.083	5.8	LOS A	0.0	0.0
5	T1	58	30.0	0.083	0.0	LOS A	0.0	0.0
Approach		135	24.3	0.083	3.3	NA	0.0	0.0
West: Glenstone Rd (Brighton)								
11	T1	61	30.0	0.038	0.0	LOS A	0.0	0.0
12	R2	33	20.0	0.023	6.2	LOS A	0.1	0.8
Approach		94	26.5	0.038	2.2	NA	0.1	0.8
All Vehicles		279	24.3	0.083	3.6	NA	0.2	1.8

Evening peak traffic modelling with development traffic

MOVEMENT SUMMARY

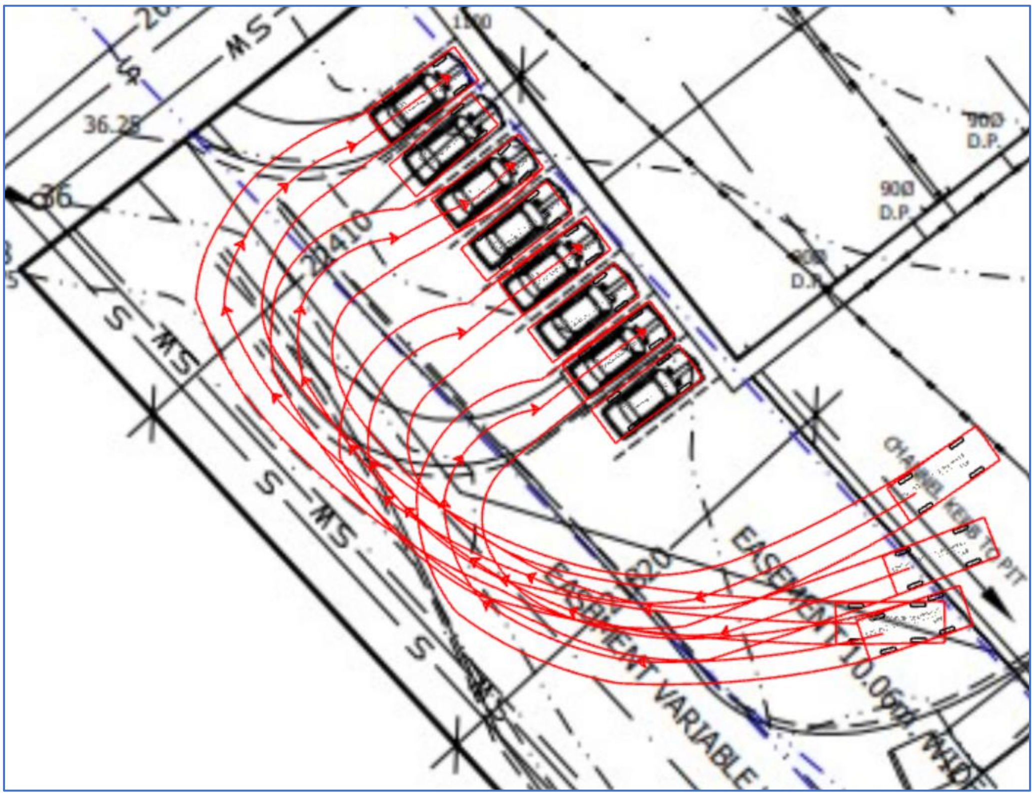
▽ Site: 101 [Glenstone and Strong existing PM - with developmnet traffic]

New Site
Site Category: (None)
Giveway / Yield (Two-Way)

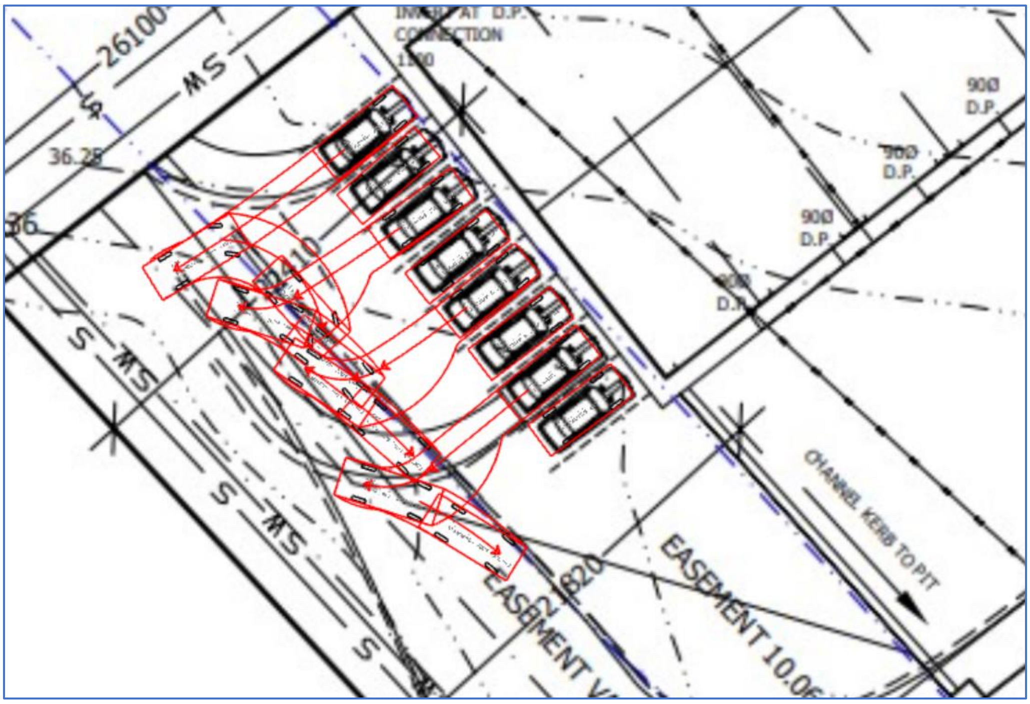
Movement Performance - Vehicles								
Mov ID	Turn	Demand Flows Total veh/h	Demand Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m
South: Strong Street								
1	L2	42	20.0	0.137	6.0	LOS A	0.6	4.7
3	R2	95	20.0	0.137	6.9	LOS A	0.6	4.7
Approach		137	20.0	0.137	6.6	LOS A	0.6	4.7
East: Glenstone Road (Midland Hwy)								
4	L2	35	20.0	0.059	5.8	LOS A	0.0	0.0
5	T1	61	30.0	0.059	0.0	LOS A	0.0	0.0
Approach		96	26.4	0.059	2.1	NA	0.0	0.0
West: Glenstone Rd (Brighton)								
11	T1	53	30.0	0.032	0.0	LOS A	0.0	0.0
12	R2	16	20.0	0.011	6.0	LOS A	0.0	0.4
Approach		68	27.7	0.032	1.4	NA	0.0	0.4
All Vehicles		301	23.8	0.137	4.0	NA	0.6	4.7

12. Appendix B – Vehicle swept paths

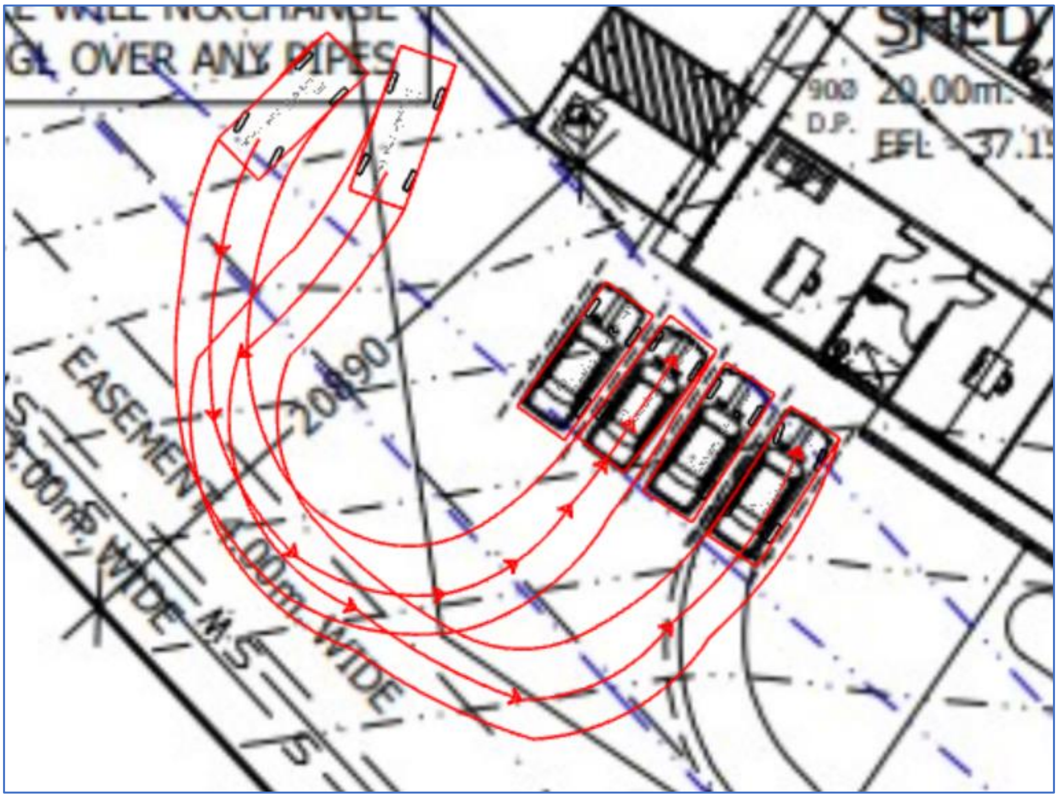
Swept paths of vehicles entering parking spaces behind shed 1



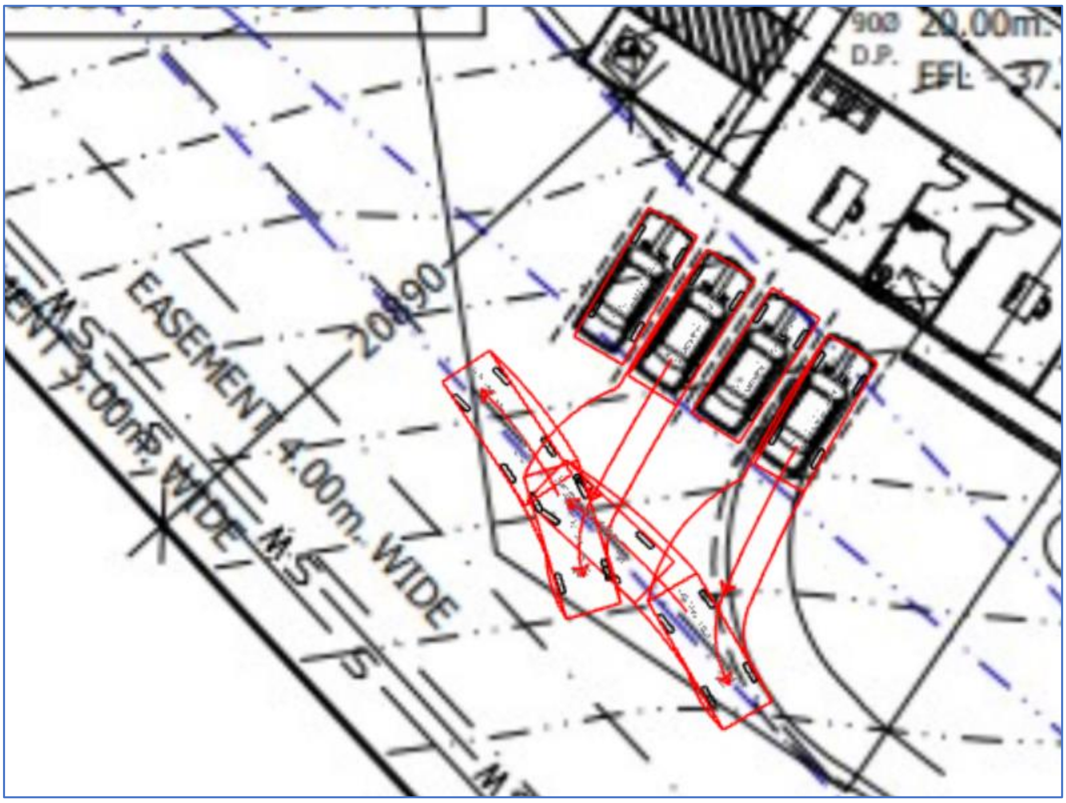
Swept paths of vehicles leaving parking spaces behind shed 1



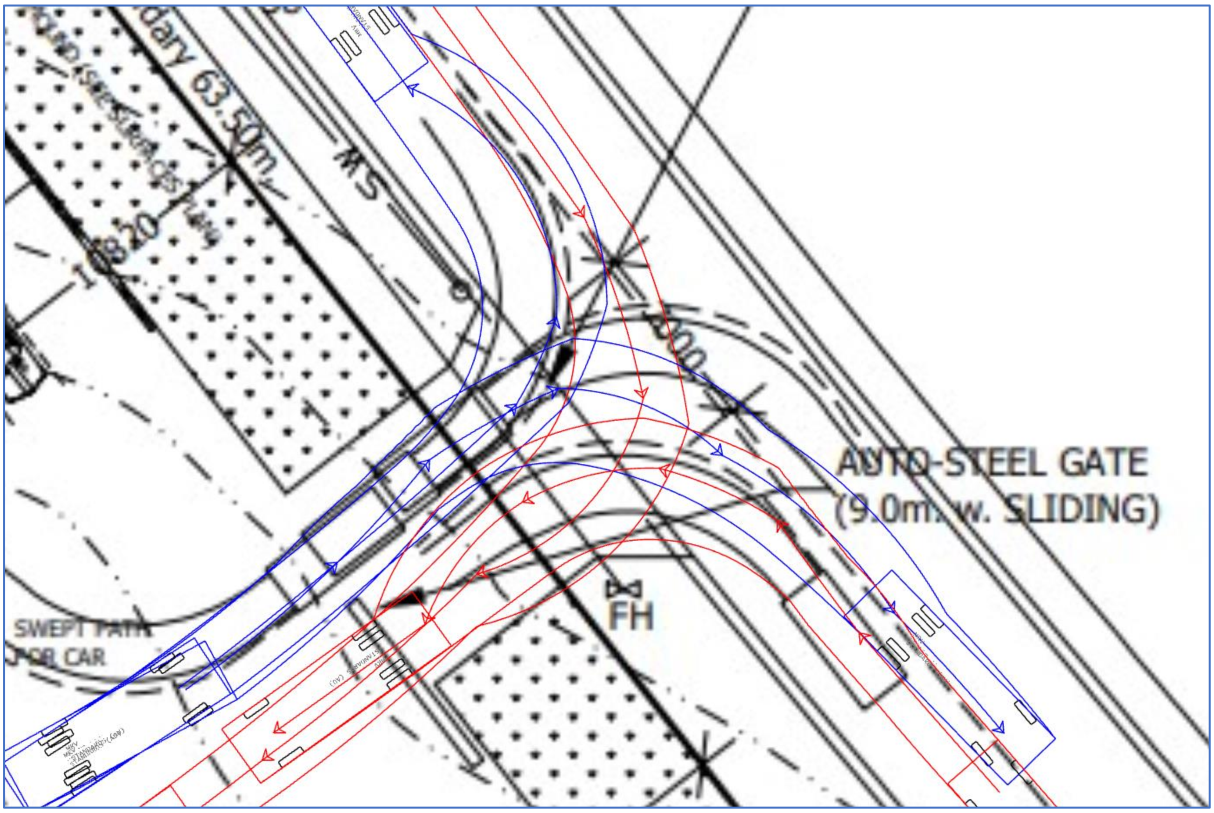
Swept path of vehicles entering parking spaces behind shed 2



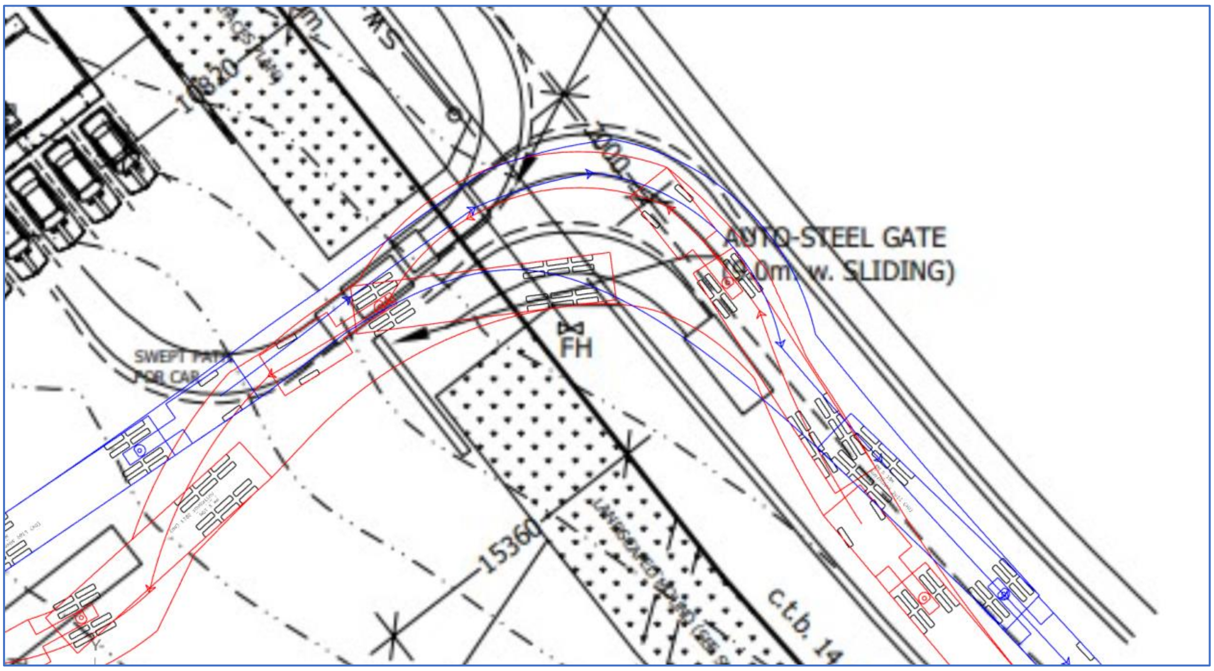
Swept paths of vehicles leaving parking spaces behind shed 2



Swept path of medium rigid vehicle entering (red) and leaving (blue) the development site



Swept path of semi-trailer entering (red) and leaving(blue)



Proposed STORMWATER DRAINAGE at No. 8 Woodrieve Road, BRIDGEWATER, TAS, 7030

A3 Size Sheets

2023/167/1 - General Construction Notes
2023/167/2 - Stormwater Drainage Layout
2023/167/3 - Site Plan
2023/167/4 - General Construction Details
OCEAN PROTECT Pit Detail - Bypass
OCEAN PROTECT Pit Detail
OCEAN PROTECT Typical Pit Detail
Site Catchment Layout
Drainage Calculations

Issue	Date	Amendment	Checked
-	2/1/2023	Issued for construction	

AMENDMENTS

PRINTED Friday, 13 October 2023 3:45:58 PM

Project No. 2023/167

WILLIAMS CONSULTING ENGINEERS AUSTRALIA
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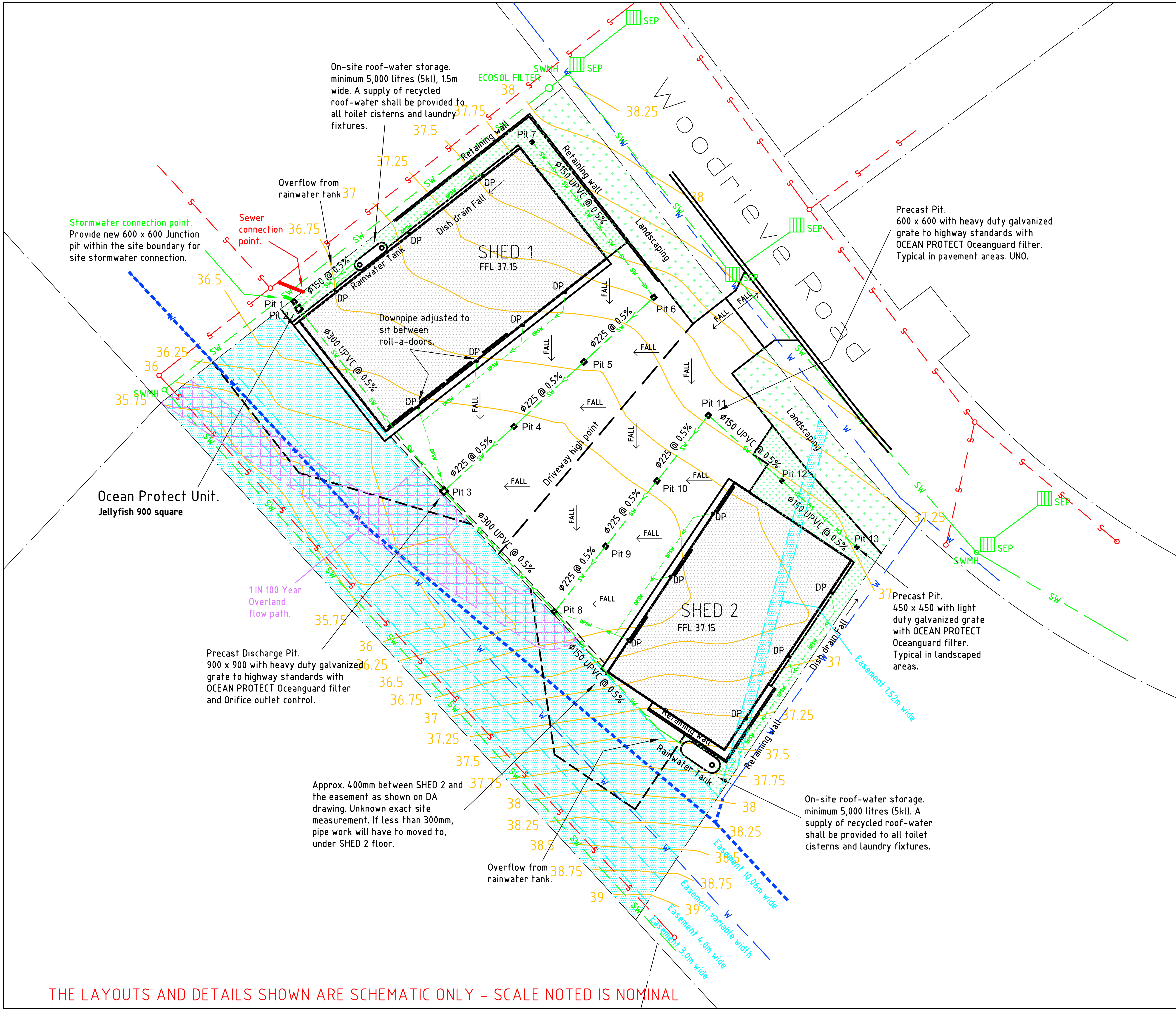


Note: Refer to Drawing No. 2022/167/1 for general and other notes.

Pits:

1. 600x600 - Boundary connection, sealed cover
2. 900x900 - OCEAN Protect Unit, sealed cover
3. 900x900 - Driveway - Discharge Control galv. grate
4. 600x600 - Driveway, galv. grate
5. 600x600 - Driveway, galv. grate
6. 600x600 - Driveway, galv. grate
7. 450x450 - Landscape, galv. grate
8. 600x600 - Driveway, galv. grate
9. 600x600 - Driveway, galv. grate
10. 600x600 - Driveway, galv. grate
11. 600x600 - Driveway, galv. grate
12. 450x450 - Landscape, galv. grate
13. 450x450 - Landscape, galv. grate

Issue	Date	Amendment	Checked

AMENDMENTS

PRINTED Friday, 13 October 2023 1:07:02 PM

The Contractor to verify all dimensions on site before commencing work.

All figured dimensions given are to be taken in preference to scaling.

This drawing shall be read in conjunction with any Architectural Drawings and Specifications and any other relevant documents. Any discrepancy shall be referred to the Engineer for written confirmation of any variation prior to construction of that particular element. NOTE :- The long term satisfactory performance of the works as designed depends on full adherence to these engineering details and notes.

THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION PURPOSES UNLESS SIGNED BY THE ENGINEER.

DATE

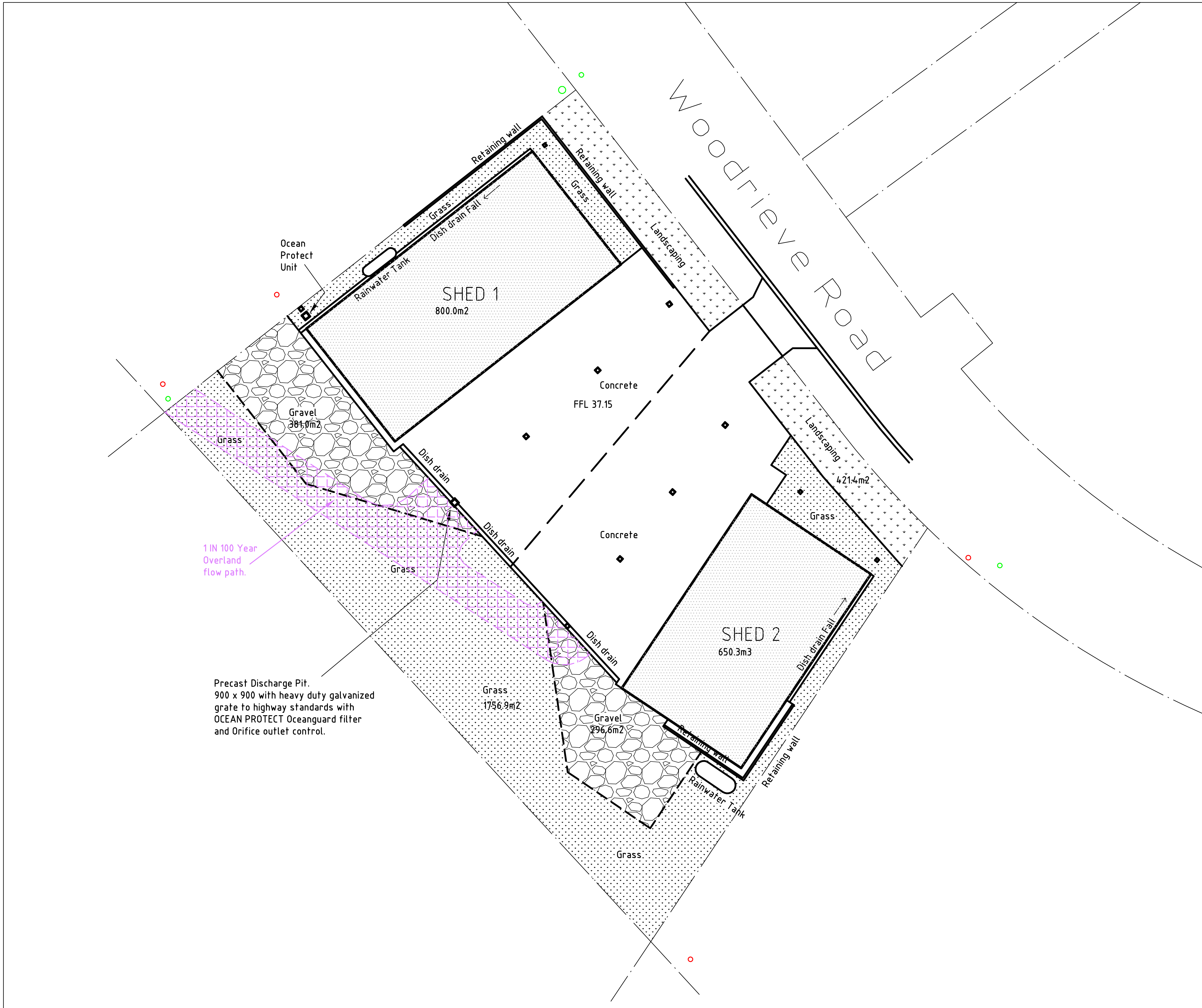
DESIGN INFORMATION

Layout: Stormwater Drainage

Proposed STORMWATER DRAINAGE at No. 8 Woodrieve Road, BRIDGEWATER, TAS, 7030

DESIGN BY	R.D.W.	PAPER SIZE	A3 (PRINT SCALE A3x500)
DETAILS BY	Franz		
CHECKED		DRAWING No.	2023/167/2
SCALES	1:500	DATE	August 2023

WILLIAMS CONSULTING ENGINEERS AUSTRALIA P/L.
CONSULTING, CIVIL AND STRUCTURAL ENGINEERS.
Unit 3/31 Attunga Road, BLAXLAND Post Office Box 79, Blaxland, NSW. 2774
5000 Channel Highway, Gordon, TAS. 7150 Post Office Box 79, Middleton, TAS. 7163
Email : ralph@wcea.com.au Mobile Phone : 0425307531



THE LAYOUTS AND DETAILS SHOWN ARE SCHEMATIC ONLY - SCALE NOTED IS NOMINAL

Note: Refer to Drawing No. 2022/167/1 for general and other notes.

Issue	Date	Amendment	Checked

AMENDMENTS

PRINTED Friday, 13 October 2023 1:43:55 PM

The Contractor to verify all dimensions on site before commencing work.

All figured dimensions given are to be taken in preference to scaling.

This drawing shall be read in conjunction with any Architectura Drawings and Specifications and any other relevant documents. Any discrepancy shall be referred to the Engineer for written confirmation of any variation prior to construction of that particular element. NOTE :- The long term satisfactory performance of the works as designed depends on full adherence to these engineering details and notes.

N

THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION PURPOSES UNLESS SIGNED BY THE ENGINEER.

DATE

DESIGN INFORMATION

Layout: Site Pervious & Impervious Areas

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DETAILS BY	Franz	PRINT SCALE A3x500	
CHECKED		DRAWING No.	2023/167/3
SCALES	1:500	DATE	August 2023

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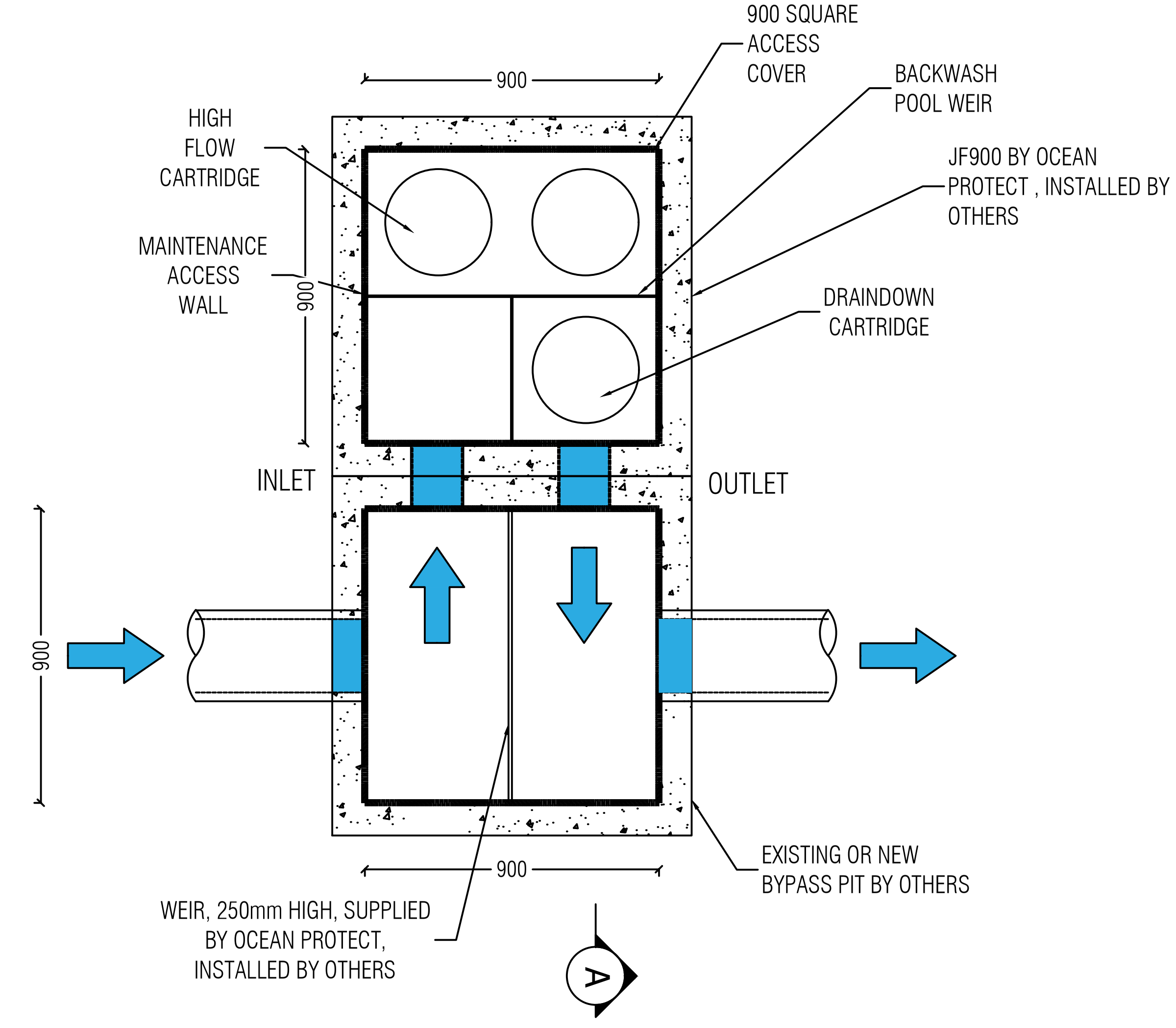
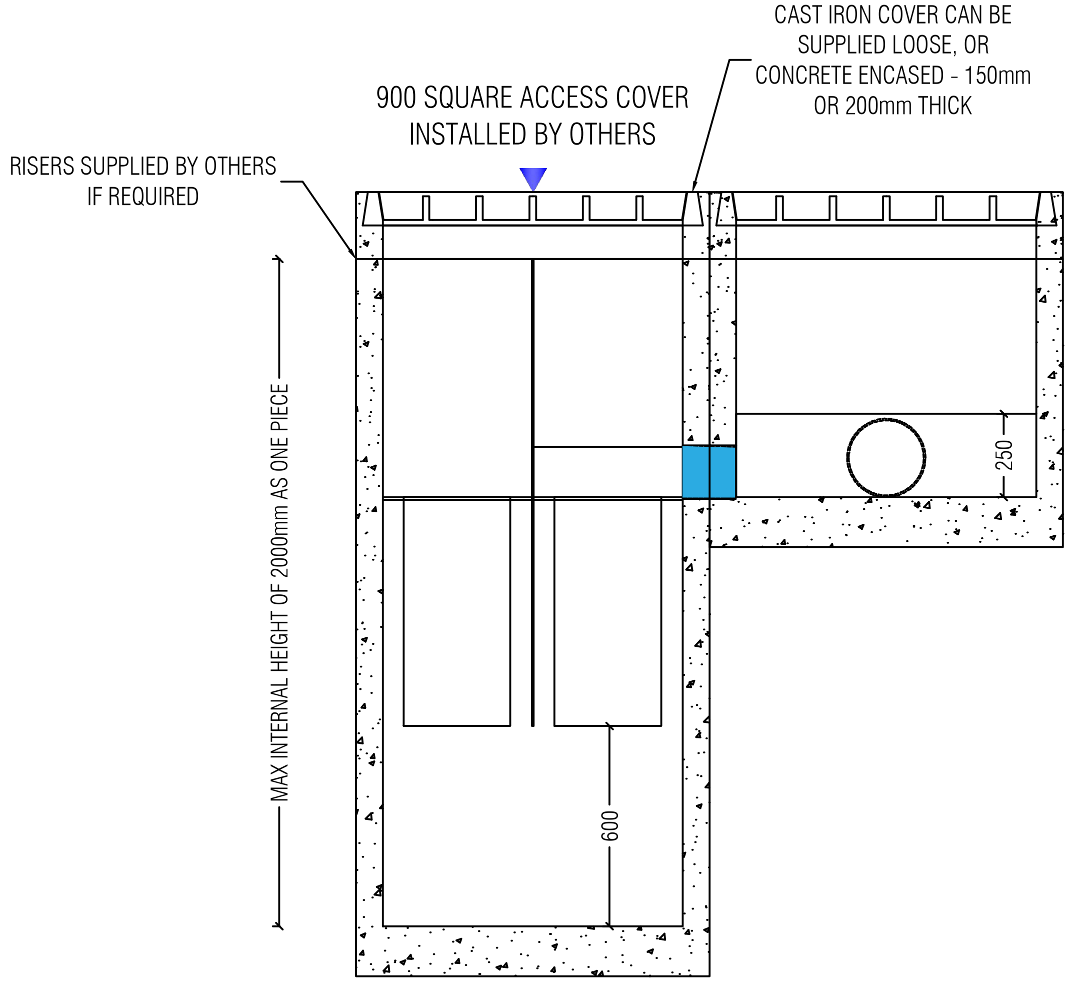
Email : ralph@wcea.com.au
Mobile Phone : 0425307531

NOT FOR CONSTRUCTION



PLAN LAYOUT



SECTION A-A

LAST MODIFIED: 25-02-19

JELLYFISH DESIGN TABLE

JELLYFISH TREATMENT FLOW IS A FUNCTION OF THE NUMBER OF CARTRIDGES AND THE DEVICE TOTAL HEAD DIFFERENTIAL. IF THE PIPE FLOW EXCEEDS THE TREATMENT FLOW THEN AN UPSTREAM BYPASS STRUCTURE IS REQUIRED.

REQUIRED DEVICE TOTAL HEAD DIFFERENTIAL [mm]	460	230
CARTRIDGE FLOW RATE FOR HIGH-FLOW / DRAINDOWN [L/s]	2.5 / 1.3	1.27 / 0.79
CARTRIDGE LENGTH [mm]	690	690
OUTLET INVERT TO STRUCTURE INVERT [mm])	1985	1985

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID	[ ]
WATER QUALITY FLOW RATE (L/S)	[ ]
# OF CARTRIDGES REQUIRED (HF - DD)	[-]
CARTRIDGE SIZE	690

PIPE DATA:	I.L.	MATERIAL	DIAMETER
INLET PIPE	[ ]	[ ]	[ ]
OUTLET PIPE	[ ]	[ ]	[ ]

LID WEIGHT	TBC
PART A & B WEIGHT (SEPARATE)	TBC

NOTE: TANK SUPPLIED IN TWO PARTS; PARTS A & B TO BE JOINED ON SITE

GENERAL NOTES

1. JELLYFISH WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF THE PROJECT.
2. PRECAST STRUCTURE SUPPLIED WITH CORE HOLES TO SUIT OUTER DIAMETER OF NOMINATED PIPE SIZE / MATERIAL.
5. STRUCTURE AND ACCESS COVERS TO BE DESIGNED TO MEET AUSTROADS T44 LOAD RATING WITH 0.0m TO 2.0m FILL MAXIMUM (CLASS D) UNLESS OTHERWISE NOTED. THE OUTLET PIPE INVERT ELEVATION. CERTIFYING ENGINEER TO CONFIRM ACTUAL GROUNDWATER ELEVATION.PRECAST STRUCTURE SHALL BE IN ACCORDANCE WITH AS3600.
6. IF THE PEAK FLOW RATE, AS DETERMINED BY THE CERTIFYING ENGINEER, EXCEEDS THE TREATMENT FLOW RATE OF THE SYSTEM, AN UPSTREAM BYPASS STRUCTURE IS REQUIRE.
7. ALL WATER QUALITY TREATMENT DEVICES REQUIRE PERIODIC MAINTENANCE. REFER TO OPERATION AND MAINTENANCE MANUAL FOR GUIDELINES AND ACCESS REQUIREMENTS.
8. SITE SPECIFIC PRODUCTION DRAWING WILL BE PROVIDED ON PLACEMENT OF ORDER.
9. DRAWING NOT TO SCALE.

INSTALLATION NOTES

A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE SPECIFIC DESIGN CONSIDERATION AND SHALL BE SPECIFIED BY THE CERTIFYING ENGINEER.
B. CONTRACTOR TO PROVIDE ALL EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STRUCTURE (LIFTING DETAIL PROVIDED SEPARATELY).
C. CONTRACTOR TO INSTALL AND LEVEL THE STRUCTURE, APPLY SEALANT TO ALL JOINTS AND TO PROVIDE, INSTALL AND GROUT INLET AND OUTLET PIPES.
D. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.
E. CARTRIDGE INSTALLATION, BY OCEANPROTECT, SHALL OCCUR ONLY AFTER SITE HAS BEEN STABILIZED AND THE JELLYFISH UNIT IS CLEAN AND FREE OF DEBRIS. CONTACT OCEAN PROTECT TO COORDINATE CARTRIDGE INSTALLATION WITH SITE COMPLETION.

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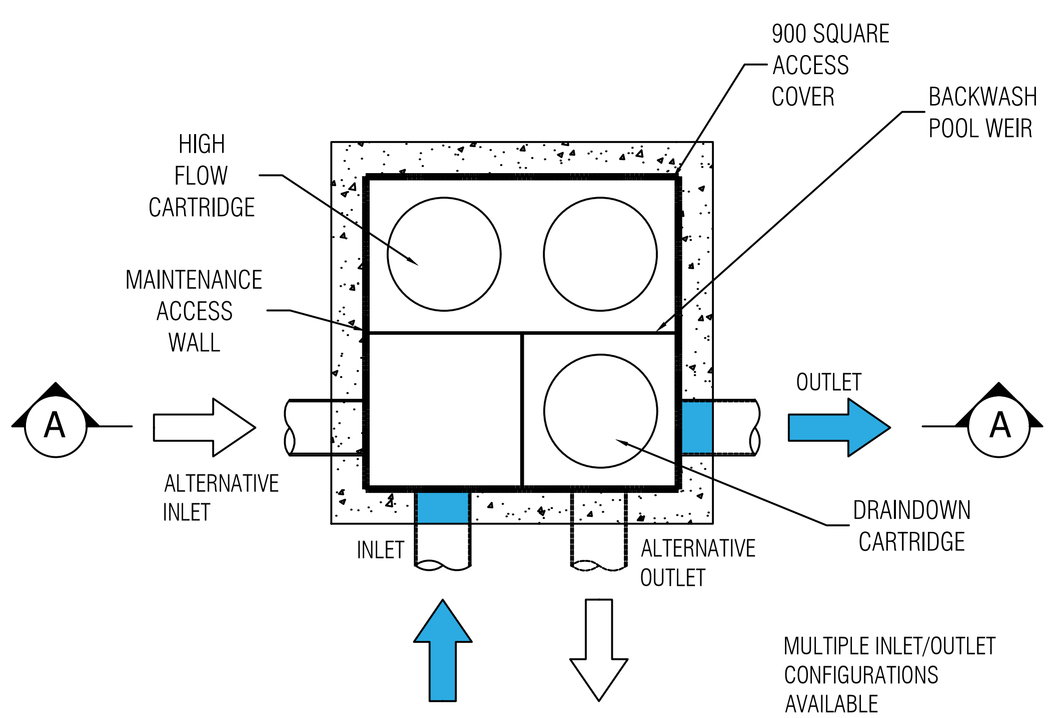
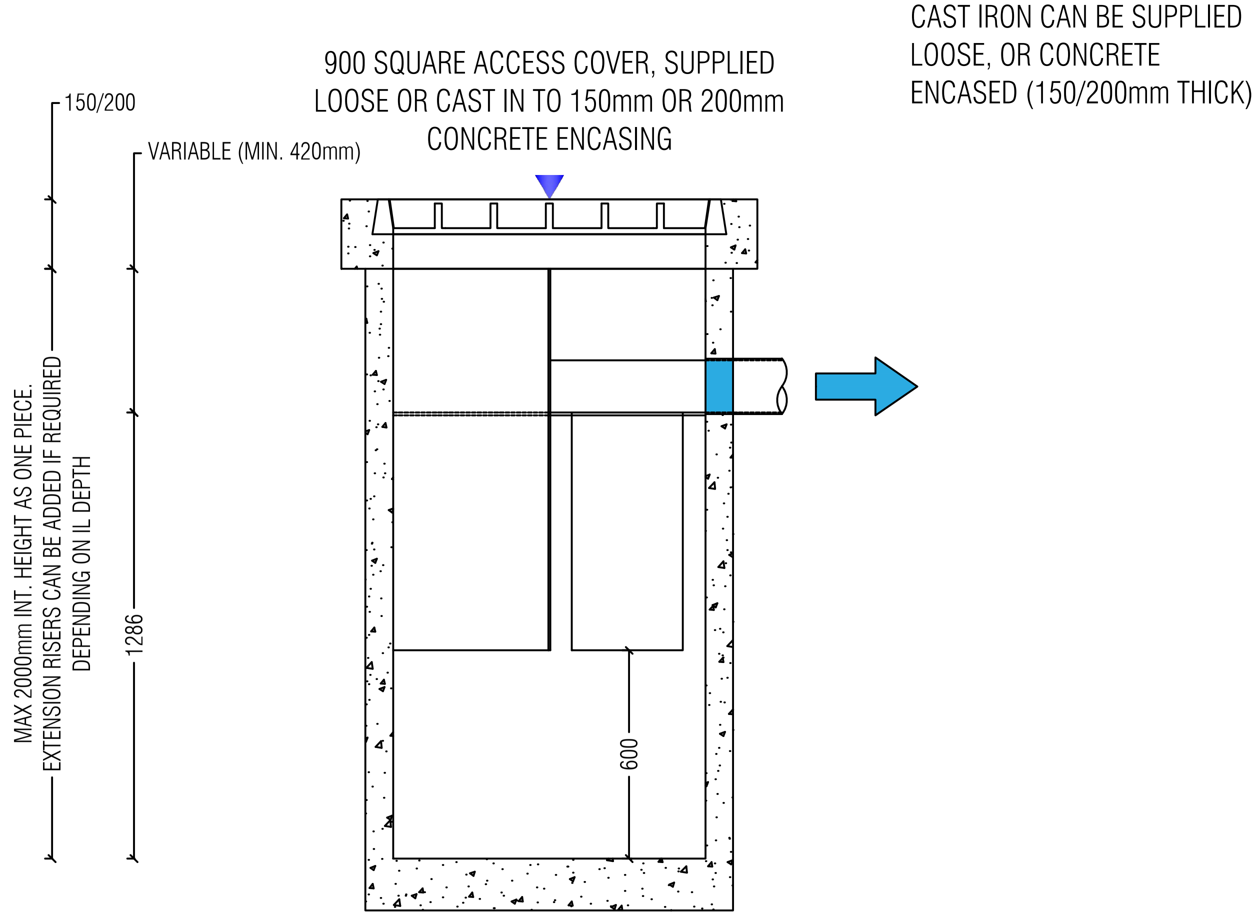
JELLYFISH 900 SQUARE
ADJACENT BYPASS PIT LAYOUT

NOT FOR CONSTRUCTION



PLAN LAYOUT



SECTION A-A

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REQUIRED DEVICE TOTAL HEAD DIFFERENTIAL [mm]	460	305	230
CARTRIDGE FLOW RATE HIGH-FLOW / DRAINDOWN [L/s]	2.5 / 1.3	1.68 / 0.98	1.27 / 0.79
CARTRIDGE LENGTH [mm]	686	690	690
OUTLET INVERT TO STRUCTURE INVERT [mm])	1286	1286	1286

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID	[ ]
WATER QUALITY FLOW RATE (L/S)	[ ]
# OF CARTRIDGES REQUIRED (HF - DD)	[-]
CARTRIDGE SIZE	690

PIPE DATA:	I.L.	MATERIAL	DIAMETER
INLET PIPE	[ ]	[ ]	[ ]
OUTLET PIPE	[ ]	[ ]	[ ]

LID WEIGHT	TBC
PART A & B WEIGHT (SEPARATE)	TBC

NOTE: TANK SUPPLIED IN TWO PARTS; PARTS A & B TO BE JOINED ON SITE

GENERAL NOTES

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9. DRAWING NOT TO SCALE.

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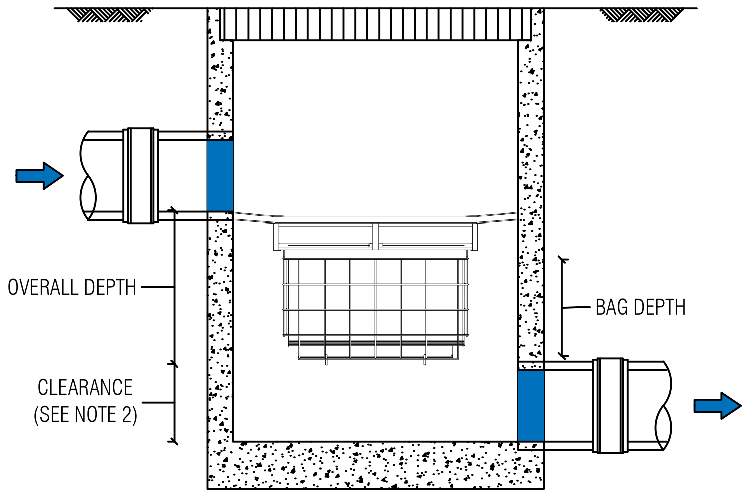
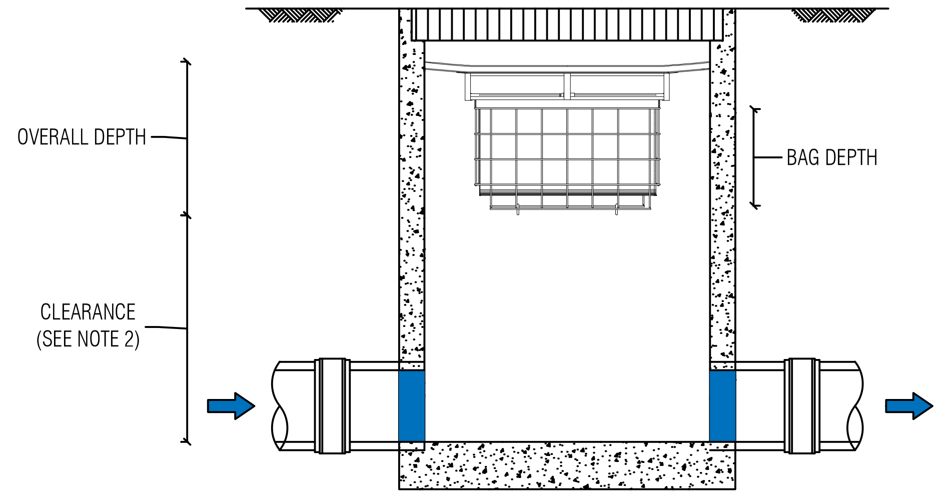
OCEAN PROTECT
JELLYFISH 900 SQUARE
STANDARD PRODUCT DRAWING

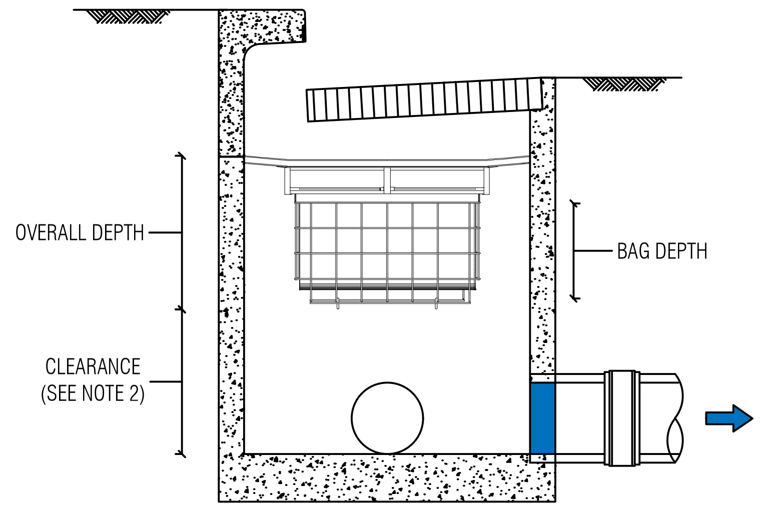
LAST MODIFIED: 25-02-19



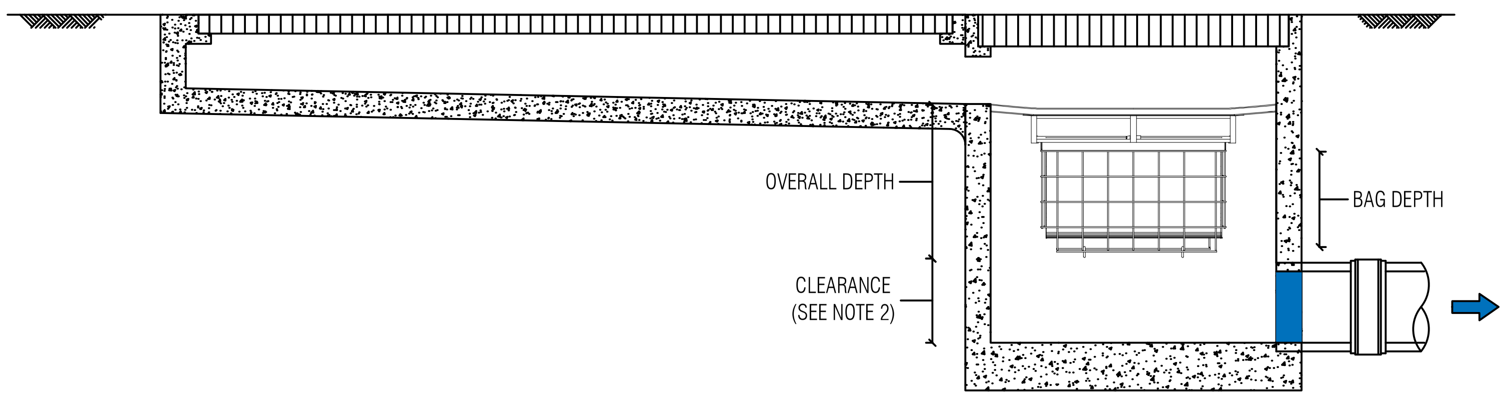
PIPE FLOW CONFIGURATION



SURFACE FLOW CONFIGURATION



SURFACE FLOW CONFIGURATION



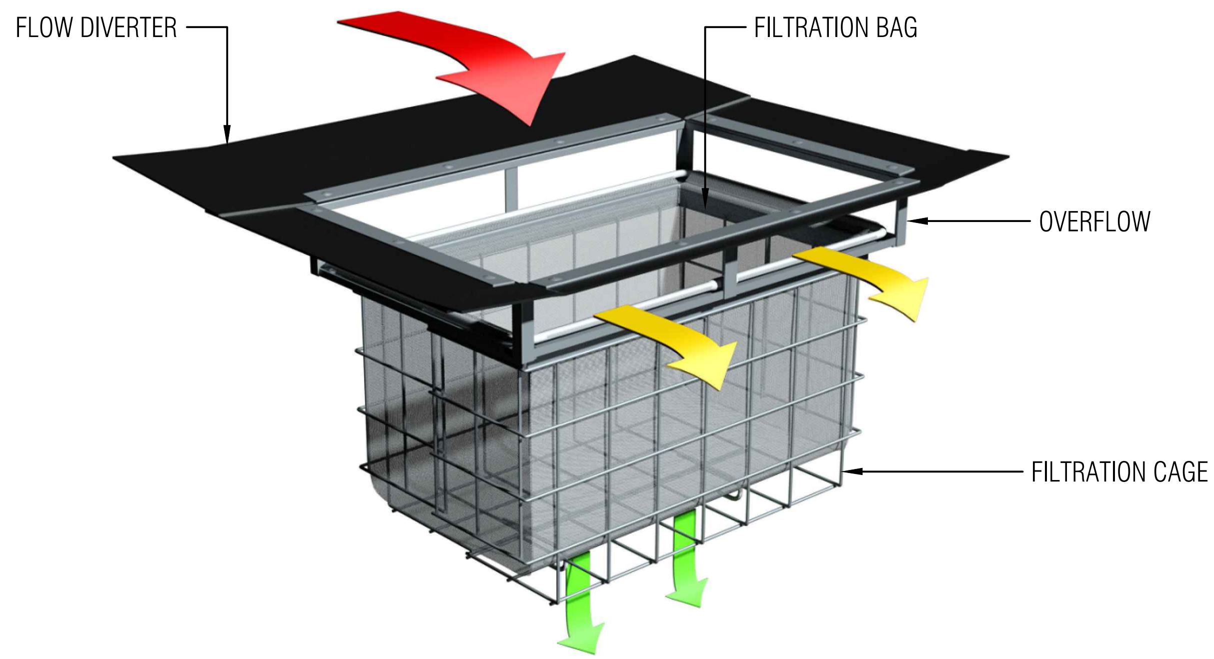
GRATED STRIP DRAIN CONFIGURATION

LAST MODIFIED: 15-10-19

PLAN ID	MAXIMUM PIT PLAN DIMENSIONS
S	450mm x 450mm
M	600mm x 600mm
L	900mm x 900mm
XL	1200mm x 1200mm

DEPTH ID	BAG DEPTH	OVERALL DEPTH
1	170	270
2	300	450
3	600	700

		DEPTH ID		
		1	2	3
PLAN ID	S	■		
	M	■	■	
	L	■	■	■
	XL	■	■	■



GENERAL NOTES

1. THE MINIMUM CLEARANCE DEPENDS ON THE CONFIGURATION (SEE NOTE 2) AND THE LOCAL COUNCIL REQUIREMENTS.
2. CLEARANCE FOR ANY PIT WITHOUT AN INLET PIPE (ONLY USED FOR SURFACE FLOW) CAN BE AS LOW AS 50mm. FOR OTHER PITS, THE RECOMMENDED CLEARANCE SHOULD BE GREATER OR EQUAL TO THE PIPE OBVERT SO AS NOT TO INHIBIT HYDRAULIC CAPACITY.
3. OCEAN PROTECT PROVIDES TWO FILTRATION BAG TYPES:- 200 MICRON BAGS FOR HIGHER WATER QUALITY FILTERING AND A COARSE BAG FOR TARGETING GROSS POLLUTANTS.
4. DRAWINGS NOT TO SCALE.

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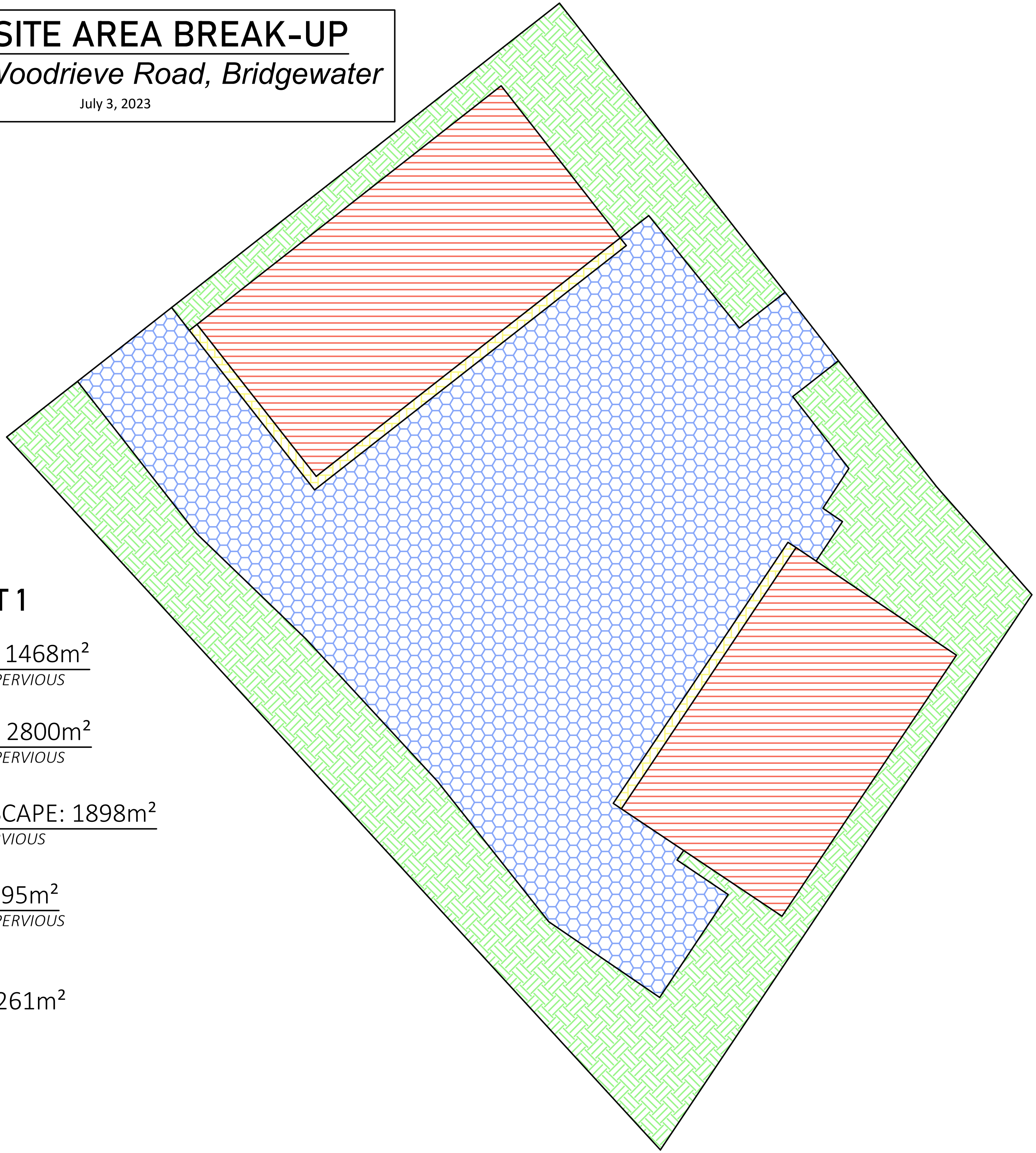
TYPCIAL ARRANGEMENTS
SPECIFICATION DRAWING

WSUD SITE AREA BREAK-UP

20820 - 8 Woodrieve Road, Bridgewater

July 3, 2023



CATCHMENT 1

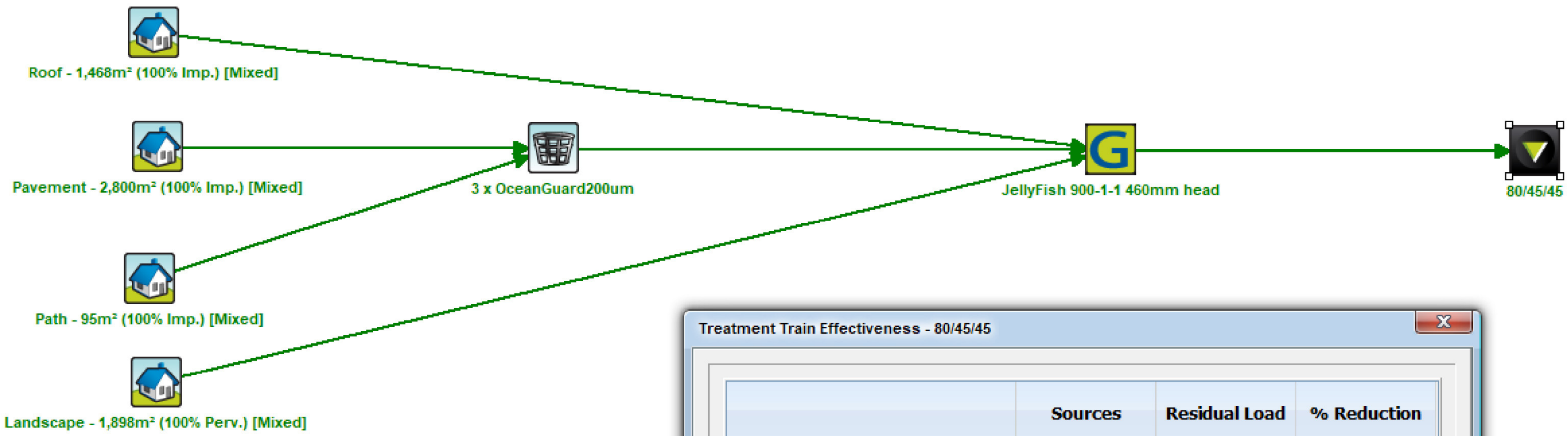
ROOF: $1468m^2$
100% IMPERVIOUS

ROAD: $2800m^2$
100% IMPERVIOUS

LANDSCAPE: $1898m^2$
100% PERVIOUS

PATH: $95m^2$
100% IMPERVIOUS

TOTAL AREA: $6261m^2$



Treatment Train Effectiveness - 80/45/45

	Sources	Residual Load	% Reduction
Flow (ML/yr)	1.9	1.9	0
Total Suspended Solids (kg/yr)	445	25.7	94.2
Total Phosphorus (kg/yr)	0.816	0.333	59.2
Total Nitrogen (kg/yr)	4.68	2.44	48
Gross Pollutants (kg/yr)	69.1	2.68	96.1

From: Nick Smith <Nick@rainbowbuilding.com.au>
Sent: Wednesday, February 15, 2023 11:39 AM
To: Brian White <brian.white@brighton.tas.gov.au>
Cc: Josh Smith <Josh@rainbowbuilding.com.au>
Subject: RE: DA 2023 / 00017 (8 Woodrieve Road, Bridgewater)

Ok, thanks Brian, sorry, I was looking at Table 19.2 only which doesn't list sub-classes.

Therefore, please find updated table and information below:

Question 1 of RFI	**Shed 1**	**Shed 2**
Number of employees:	14	7
Main business operations	Manufacturing (located inside), storage, transportation depot & distribution	Manufacturing (located inside), storage, transportation depot & distribution
Truck deliveries per week	5	5
Sub-class use	Metal fabrication (no welding), warehousing of steel products for future use, park and garage vehicles associated with those activities mentioned above and to assist with road freight	Metal fabrication (no welding), warehousing of steel products for future use, park and garage vehicles associated with those activities mentioned above and to assist with road freight
Brief	Delivery of inward/outward steel, storage of steel, light fabrication of pre-fabed house and shed framing (no welding) including trusses	Delivery of inward/outward steel, storage of steel, light fabrication of pre-fabed house and shed framing (no welding) including trusses

Sorry again, I trust the above is more useful this time?

Nick Smith
Sales
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