

CLIENT INFO

NAME: MITCHELL ROBINSON

COMPANY: STEEL SUPPLIES

0448-273-324
mitch@steelsupplies.com.au

DOCUMENT INFO

TYPE: CIVIL ENGINEERING DESIGN

PROJECT INFO

NAME: CIVIL WORKS FOR PROPOSED NEW SHED

ADDRESS: 8-12 SAY STREET ST & 4 HARTOG PLACE EAST WAGGA, NSW, 2650
LOT: 3 DP 858049
LGA: WAGGA WAGGA CITY COUNCIL

STRUCTURAL
ENGINEERING

MECHANICAL
ENGINEERING

CIVIL
ENGINEERING

PROJECT
MANAGEMENT

ARCHITECTURE
& PLANNING

FABRICATION
DRAWINGS

POINT CLOUD
SURVEY

FIELD
SURVEY

CRESCO AUSTRALIA

WHERE EXPERTISE MEETS INNOVATION ▶▶

PROJECT NUMBER
23054

1800 CRESCO
(1800 273 726)

www.cresco-group.com.au

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Principal: Shane Lutze / B.Eng (Mech) - M.Eng. Sci (Struct)
MIEAust - NER (Mech & Struct): 7120849
RPE QLD (Mech & Struct): 28594
RPE VIC (Mech & Struct): PE0010096
RPE TAS (Mech & Struct): 708732979
RPE NSW (Mech & Struct): PRE0002298

REV	DESCRIPTION	DATE	DRAFT BY	ENG BY	VER BY
0	ISSUED FOR CONSTRUCTION	17/01/25	GDT	NJM	SJL
A	ISSUED FOR CLIENT REVIEW	15/11/24	GDT	NJM	SJL

IMPORTANT NOTES:

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SHEET NAME

COVER SHEET

SHEET NUMBER

C00
PROJECT NUMBER
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REVISION

0
FORMAT
A3

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DRAWING LIST		
SHEET NUMBER	SHEET TITLE	REV
C00	COVER PAGE	A
C01	DRAWING LIST AND LOCATION MAP	A
C02	OVERVIEW PLAN	A
C03	BULK EARTHWORKS PLAN	A
C04	EROSION SEDIMENT CONTROL NOTES	A
C05	STORMWATER MANAGEMENT PLAN	A
C06	STORMWATER CALCULATION TABLE	A
C07	TYPICAL DRAINAGE DETAILS	A
C08	TRAFFIC MOVEMENT PLAN & SWEEP PATH	A
C09	GENERAL ENGINEERING NOTES	A



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SHEET NAME

DRAWING LIST AND LOCATION MAP

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C01
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SHEET NAME
 OVERVIEW PLAN

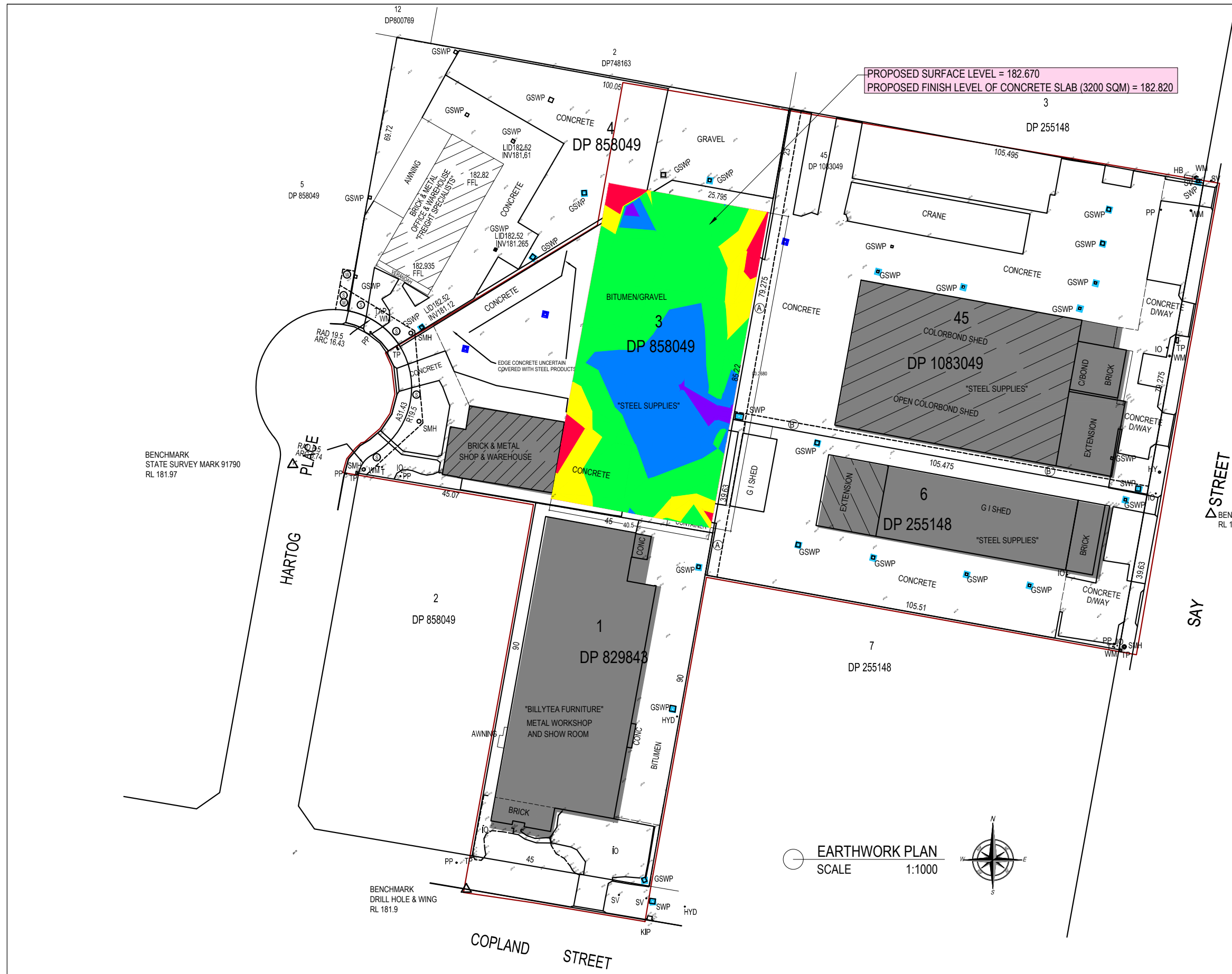
SHEET NUMBER
C02

REVISION
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SCALE

FORMAT
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LEGEND

- PROPOSED PIT
- EXISTING PIT TO BE MAINTAINED
- EXISTING STEEL ROOF STRUCTURES

Surface Analysis: Elevation Ranges			
Number	Color	Minimum Elevation (m)	Maximum Elevation (m)
1		-0.236	-0.100
2		-0.100	0.000
3		0.000	0.100
4		0.100	0.200
5		0.200	0.300

BULK EARTHWORKS SUMMARY	
SURFACE AREA	3253.625 sq.m
CUT	34.192 cu.m
FILL	220.374 cu.m
BALANCE	-186.183 cu.m (EXCESS CUT)

NOTES:

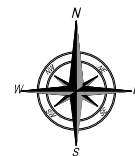
- THE QUANTITIES PROVIDED ARE DIFFERENCE IN LEVEL BETWEEN DESIGN AND NATURAL SURFACE ONLY.
- BULK EARTHWORKS DESIGN DOES NOT ALLOW FOR TOPSOIL STRIPPING, PAVEMENT BOXING OR BULKING FACTORS.

BENCHMARK
STATE SURVEY MARK 91790
RL 181.97

BENCHMARK ON CONC KERB
RL 181.98

BENCHMARK
DRILL HOLE & WING
RL 181.9

EARTHWORK PLAN
SCALE 1:1000



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SHEET NAME

BULK EARTHWORKS PLAN

SHEET NUMBER

C03

PROJECT NUMBER
23054

REVISION

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FORMAT
A3

EROSION AND SEDIMENT CONTROL NOTES:

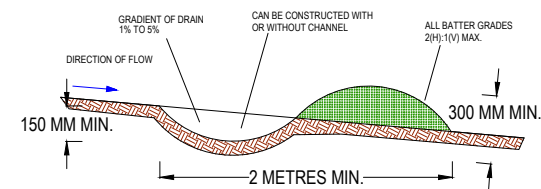
- The Contractor is to take all necessary precautions to control and minimise erosion and downstream sedimentation during all stages of construction including the maintenance period.
- Notwithstanding the design shown on the drawings, the Contractor is responsible to implement sediment control devices using best practices as necessary to minimise the quantity of sediment leaving the site.
- Some variations to the specified construction sequence may be necessary in certain areas to facilitate construction. Where this is the case, any variation must be approved by the superintendent prior to implementation.
- At all times the Contractor shall monitor the prevailing weather conditions and protect any downstream construction gully inlets.
- Clearing of site and stockpile site to be determined on site by Superintendent and is to be clear of any water course.
- Where possible provide cut-off drains to divert clean water from undisturbed catchment.
- All perimeter banks/swales shall have uninterrupted positive grade to an outlet.
- Construct wash down bay or shake down at entry/exit to council standards and to IECA guidelines. Inlets to have silt protection in accordance with kerb inlet protection detail at locations shown or as directed by the superintendent.
- The extent of grassing or hydromulching be determined by the engineer and shall be seeded, as specified, within seven days of final trimming.
- The Contractor shall be responsible for complying with council's requirements in relation to grass strike and grass coverage rates at the on and off maintenance inspections.
- Provide turf strips over sewer/roofwater lines where adjacent to existing properties.
- All sediment fences to be installed to IECA guidelines.
- All sediment fences to be separate from other barriers on site.
- All open ended pipework located in open trenches and incomplete pits are to be capped with suitable filter cloth at the end of each day's work and immediately prior to storms.
- All materials tracked or sediment washed onto council's road from the development are to be broomed up and collected and not washed into stormwater system.
- All materials tracked or sediment washed onto council's road from the development are to be broomed up and collected and not washed into stormwater system.
- All sediment control devices shall be monitored, cleaned and/or repaired whenever the capacity of the erosion and sediment control measure falls below 75%.
- All erosion and sediment control measures shall be inspected at least daily (when work is occurring on site) or weekly (when work is not occurring on site). Within 24 hours of expected rain and within 18 hours of a rainfall event as required to maintain control devices.
- All temporary Erosion and Sediment Control (ESC) measures are to be maintained and fully operational during the maintenance period, and are to be removed after the satisfactory completion of an 'Off Maintenance' inspection and prior to formal acceptance by council.
- No obstructions shall be placed on council's public roads or gully pits for safety reasons.

SEDIMENT MANAGEMENT PROGRAM:

- Clearing
 - Install appropriate safety fencing and signage.
 - Sediment fence, sediment basins and diversion drains to be constructed as required.
 - Existing grassed areas to remain where possible.
 - Shake down/wash down bay at entry/exit point as required.
- Construct upstream clean water diversion drains
- Superintendent to confirm extent of clearing to Contractor prior to commencement of works.
- Refer also to Vegetation Management Plan.
- Earthworks
 - Sediment fences and diversion drains to be constructed as required
 - Temporary lateral contour drains to be instated as specified.
- Sewer/Roofwater/Stormwater/Services
 - Excavated material to be placed on high side of trench and to protect pipe work and direct surface runoff away from excavations.
 - Topsoil and hydromulch areas in allotments immediately after completing the sewer and roofwater drainage construction and turf over trenches where adjacent to existing properties.
 - Depress ground around temporary field inlets to create sediment pond.
 - Turf open drains where shown
- Stockpile
 - Sediment fence to be erected 5m from toe of batter on low side of stockpile.
 - Cut off drain on high side to direct surface runoff around stockpile.
- Roadworks
 - Sediment fences to allotments to be erected.
 - Kerb inlet protection to be provided to all gullies unless noted otherwise.
 - Place turf filter strips behind kerb and channel.
- Allotments
 - Mulch, topsoil and hydromulch allotments as directed.
 - Sediment fences to allotments to be erected.
 - Covers to gully grates to be removed if the superintendent indicates the grass strike is sufficient.
- Maintenance period
 - All erosion and sediment control measures shall be inspected:
 - At least daily (when work is occurring on site) or weekly (when work is not occurring on site)
 - Within 24 hours of expected rain; and
 - Within 18 hours of a rainfall event
 - All erosion and sediment control measures shall be maintained the same day when the capacity of the erosion and sediment control measure falls below 75%.
 - Any repairs to erosion and sediment control devices are to be effected immediately. Sediment after rain is to be cleaned from streets and allotments immediately and corrective action taken to avoid a re-occurrence of the failure.

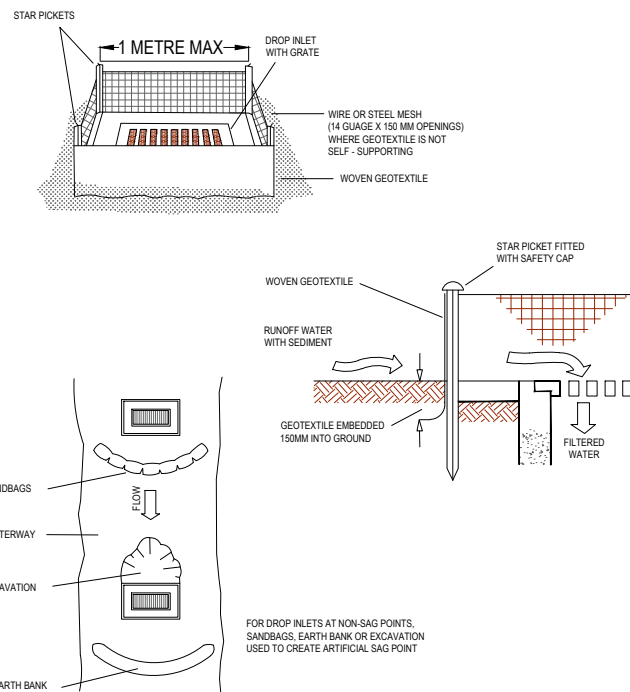
CONSTRUCTION SEQUENCE:

- Construct entry and exit point together with shake down device.
- Erect sediment fences along downstream adjacent property boundaries. Place barrier fences around lots or areas that do not require disturbance to ensure areas remain undisturbed.
- Install protection measures as directed to any existing gullies and field inlets affected by the new works.
- Construct clean water diversion swales along to ensure upstream runoff is diverted around the site. All diversion swales are to be constructed prior to any earthworks operations.
- Undertake earthworks operations ..
- Construct all underground hydraulic services ensuring stormwater drains remain capped during construction. Install field inlet and gully pit protection measures as directed.
- Place sediment fences at boundaries adjacent to roadways where lot slopes towards road.
- Turf verges progressively following completion of utility services.
- On completion of works as stated above, establishment of 70% grass cover and approval by council, remove sediment basin, sediment traps and rehabilitate areas. Hyrdomulch immediately. Place sediment fences to downstream sides of disturbed areas.



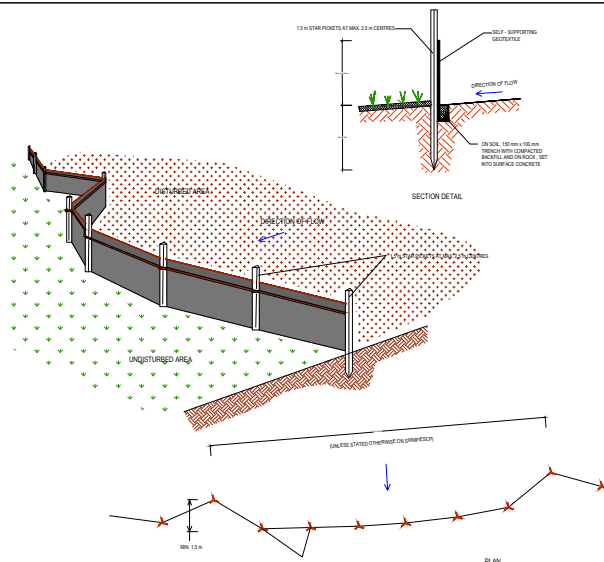
- NOTE: ONLY TO BE USED AS TEMPORARY BANK WHERE MAXIMUM UPSLOPE LENGTH IS 80 METRES
- CONSTRUCTION NOTES**
- BUILD WITH GRADIENTS BETWEEN 1 PERCENT AND 5 PERCENT
 - AVOID REMOVING TREES AND SHRUBS IF POSSIBLE - WORK AROUND THEM
 - ENSURE THE STRUCTURES ARE FREE OF PROJECTIONS OR OTHER IRREGULARITIES THAT COULD IMPEDE WATER FLOW
 - BUILD THE DRAINS WITH CIRCULAR, PARABOLIC OR TRAPEZOIDAL CROSS SECTIONS, NOT V SHAPED
 - ENSURE THE BANKS ARE PROPERLY COMPACTED TO PREVENT FAILURE
 - COMPLETE PERMANENT OR TEMPORARY STABILISATION WITHIN 10 DAYS OF CONSTRUCTION.

EARTH BANK (LOW FLOW) SD 5-5



- CONSTRUCTION NOTES**
- FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE OR BALES
 - FOLLOW STANDARD DRAWING 6-7 AND STANDARD DRAWING 6-8 FOR INSTALLATION PROCEDURE FOR THE STRAW BALES OR GEOFABRIC. REDUCE THE PICKET SPACING TO 1 METRE CENTRES.
 - IN WATERWAYS, ARTIFICIAL SAG POINTS CAN BE CREATED WITH SANDBAGS OR EARTH BANKS AS SHOWN IN THE DRAWING.
 - DO NOT COVER THE INLET WITH GEOTEXTILE UNLESS THE DESIGN IS ADEQUATE TO ALLOW FOR ALL WATERS TO BYPASS IT.

GEOTEXTILE INLET FILTER SD 6-12



- CONSTRUCTION NOTES**
- CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOUR OF THE SITE BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION. THE CATCHMENT AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT TO 50 LITRES PER SECOND IN THE DESIGN STORM EVENT, USUALLY THE 10-YEAR EVENT.
 - CUT A 150 MM DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
 - DRIVE 1.5 METRE LONG STAR PICKETS INTO GROUND AT 2.5 METRE INTERVALS (MAX) AT THE DOWNSLOPE EDGE OF THE TRENCH. ENSURE ABY STAR PICKETS ARE FITTED WITH SAFETY CAPS
 - FIX SELF-SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS ENSURING IT GOES TO THE BASE OF THE TRENCH. FIX THE GEOTEXTILE WITH WIRE TIES OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE SHADE CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY.
 - JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150 MM OVERLAP
 - BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE

SEDIMENT FENCE SD 6-8



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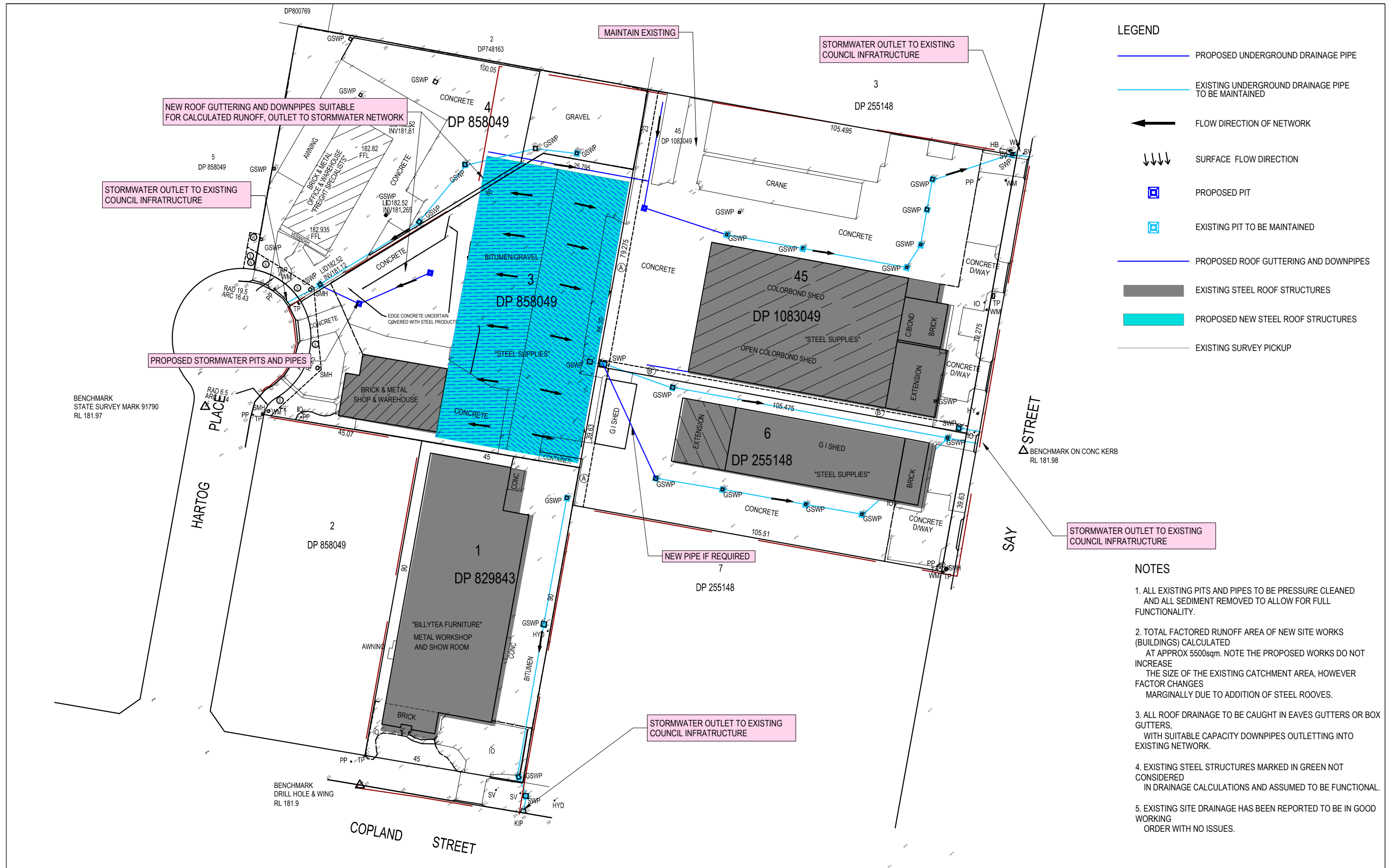
SHEET NAME
 EROSION AND SEDIMENT CONTROL NOTES

SHEET NUMBER
C04

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FORMAT
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- LEGEND**
- PROPOSED UNDERGROUND DRAINAGE PIPE
 - EXISTING UNDERGROUND DRAINAGE PIPE TO BE MAINTAINED
 - ← FLOW DIRECTION OF NETWORK
 - ↓ ↓ ↓ ↓ SURFACE FLOW DIRECTION
 - PROPOSED PIT
 - EXISTING PIT TO BE MAINTAINED
 - PROPOSED ROOF GUTTERING AND DOWNPIPES
 - EXISTING STEEL ROOF STRUCTURES
 - PROPOSED NEW STEEL ROOF STRUCTURES
 - EXISTING SURVEY PICKUP

- NOTES**
1. ALL EXISTING PITS AND PIPES TO BE PRESSURE CLEANED AND ALL SEDIMENT REMOVED TO ALLOW FOR FULL FUNCTIONALITY.
 2. TOTAL FACTORED RUNOFF AREA OF NEW SITE WORKS (BUILDINGS) CALCULATED AT APPROX 5500sqm. NOTE THE PROPOSED WORKS DO NOT INCREASE THE SIZE OF THE EXISTING CATCHMENT AREA, HOWEVER FACTOR CHANGES MARGINALLY DUE TO ADDITION OF STEEL ROOVES.
 3. ALL ROOF DRAINAGE TO BE CAUGHT IN EAVES GUTTERS OR BOX GUTTERS, WITH SUITABLE CAPACITY DOWNPIPES OUTLETING INTO EXISTING NETWORK.
 4. EXISTING STEEL STRUCTURES MARKED IN GREEN NOT CONSIDERED IN DRAINAGE CALCULATIONS AND ASSUMED TO BE FUNCTIONAL.
 5. EXISTING SITE DRAINAGE HAS BEEN REPORTED TO BE IN GOOD WORKING ORDER WITH NO ISSUES.



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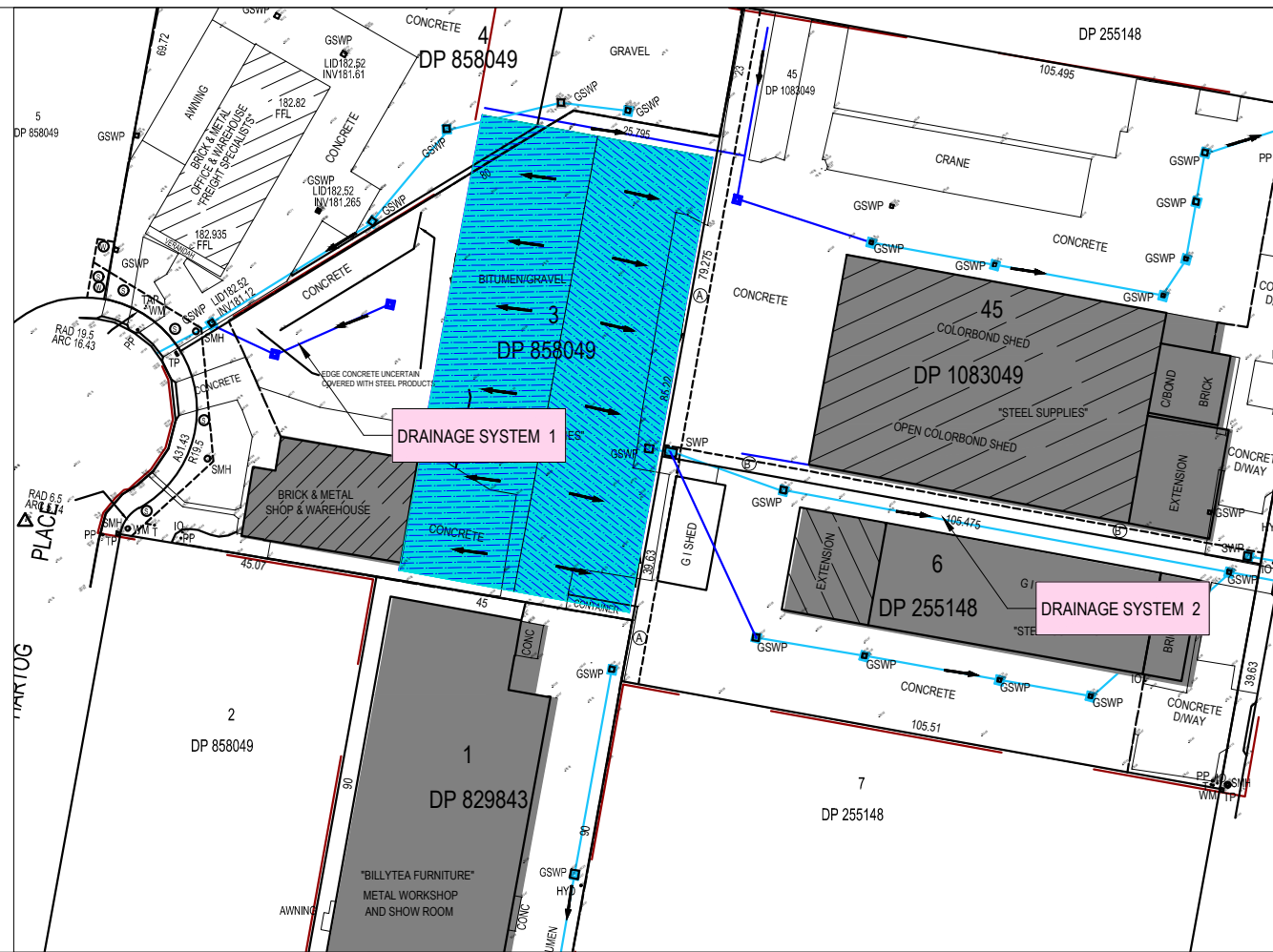
SHEET NAME
 STORMWATER MANAGEMENT PLAN

SHEET NUMBER
C05

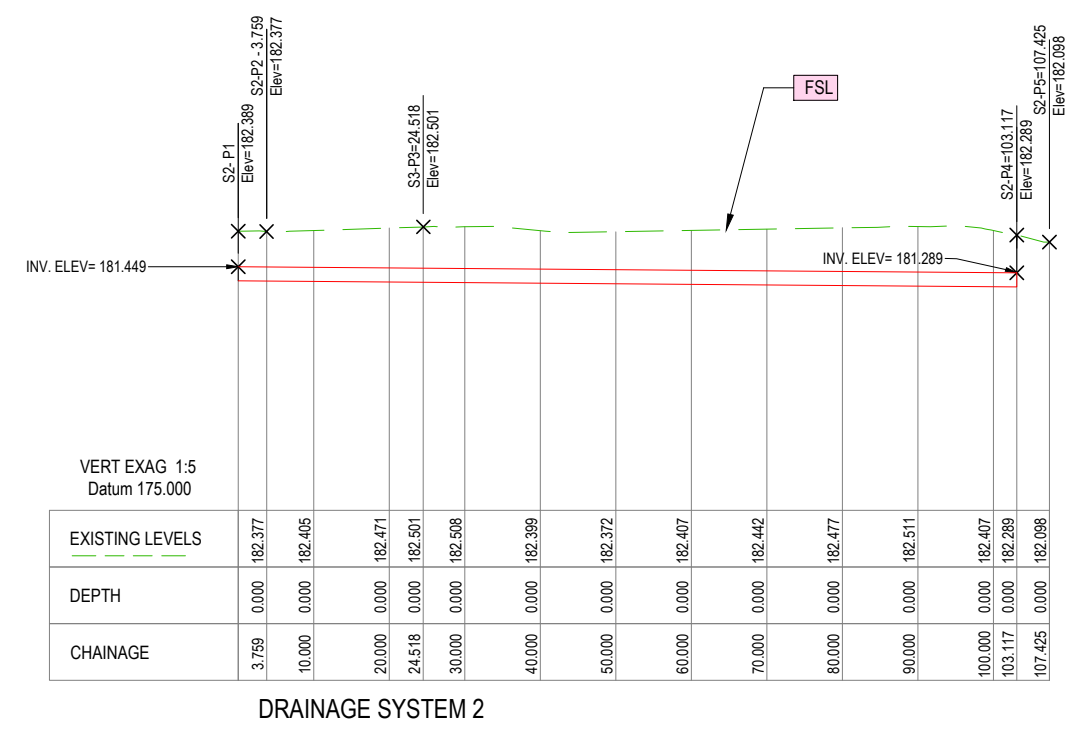
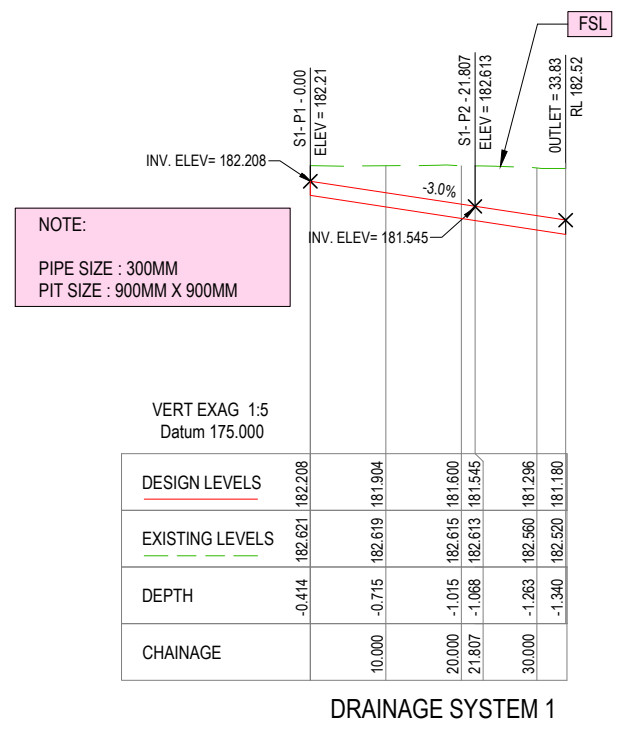
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NOTE:
 ALL ROOF RUNOFF CAN BE DIRECTED TO THE PROPOSED INFRASTRUCTURE TO OUTLET TO HARTOG STREET. ALTERNATIVELY, RUNOFF CAN BE SPLIT IN HALF DOWN THE ROOF LINE WITH HALF TO HARTOG ST, AND HALF TIED TO SAY ST EXISTING INFRASTRUCTURE (SHOWN)



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CLIENT INFO
NAME: MITCHELL ROBINSON
COMPANY: STEEL SUPPLIES

DOCUMENT INFO
TYPE: CIVIL ENGINEERING DESIGN

PROJECT INFO
NAME: CIVIL WORKS FOR STEEL SUPPLIES SAY STREET
ADDRESS: 8-12 SAY STREET ST & 4 HARTOG PLACE EAST WAGGA, NSW, 2650
LOT: 3 DP 858049
LGA: WAGGA WAGGA CITY COUNCIL

SHEET NAME
 STORMWATER MANAGEMENT PLAN

SHEET NUMBER
C05A

PROJECT NUMBER
 23054

REVISION
0

FORMAT
 A3

Say Street - Proposed Shed - DRAINS Results

PIT / NODE DETAILS

Name	Max HGL	Max Pond HGL	Max Surface Flow Arriving (cu.m/s)	Max Pond Volume (cu.m)	Min Freeboard (m)	Overflow Constraint (cu.m/s)
Pit 2	182.17		0.12			0.65 None
Pit 4	181.86		0.004			0.76 None
Pit 5	181.73		0.015			0.77 None
Outlet	181.01		0			

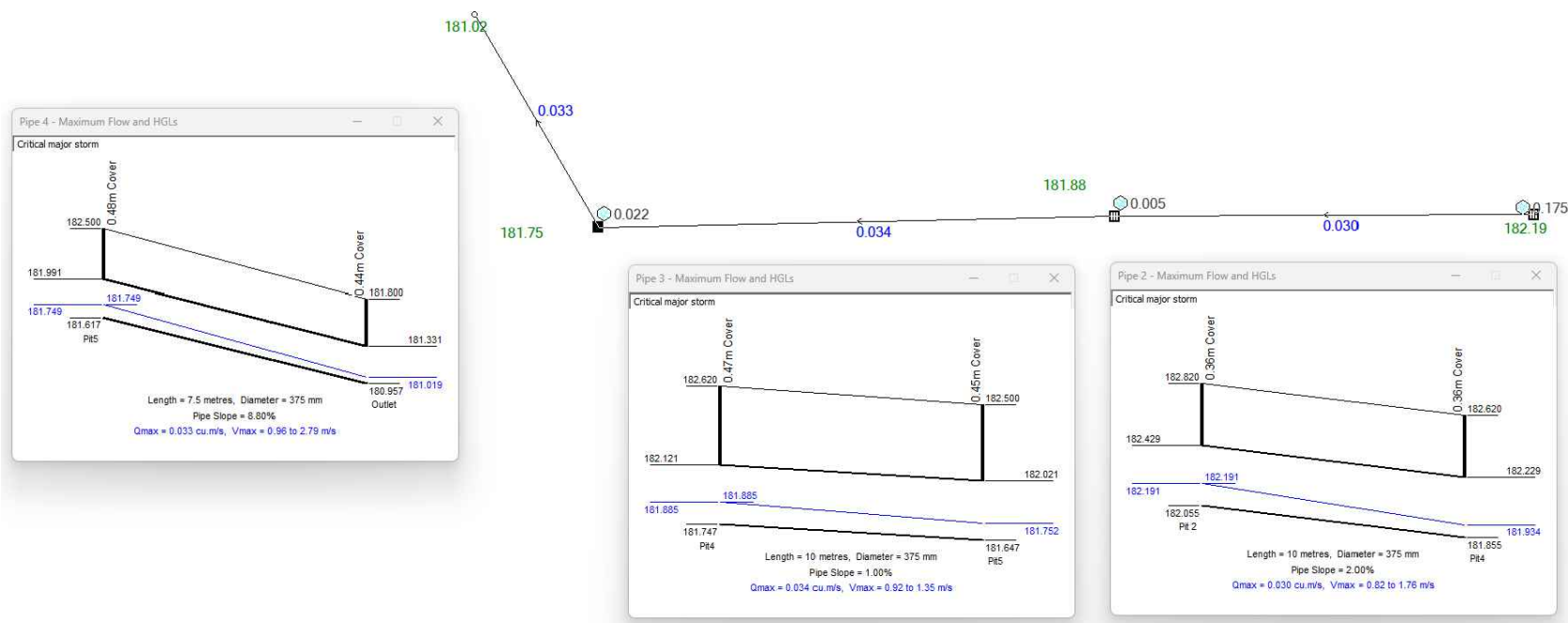
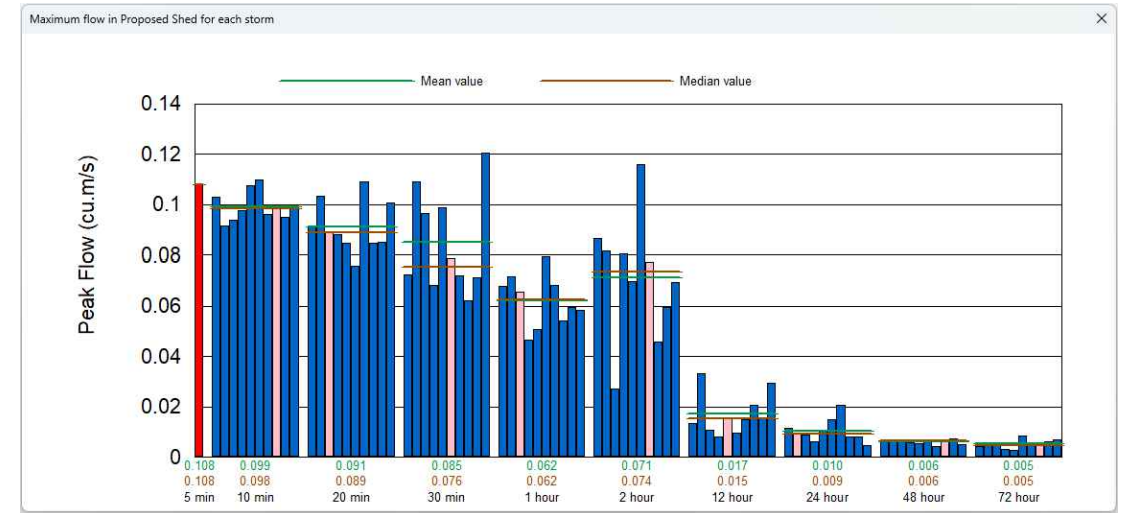
SUB-CATCHMENT DETAILS

Name	Max Flow Q (cu.m/s)	Paved Max Q (cu.m/s)	Grassed Max Q (cu.m/s)	Paved Tc (min)	Grassed Tc (min)	Supp. Tc (min)	Due to Storm
Proposed Shed	0.108	0.108		0	5	0	2 10% AEP, 5 min burst, Storm 1
Catchment 3	0.003	0.003		0	5	0	2 10% AEP, 5 min burst, Storm 1
Catchment 4	0.013	0.013		0	5	0	2 10% AEP, 5 min burst, Storm 1

PIPE DETAILS

Name	Max Q (cu.m/s)	Max V (m/s)	Max U/S HGL (m)	Max D/S HGL (m)	Due to Storm
Pipe 2	0.023	1.66	182.173	181.923	10% AEP, 5 min burst, Storm 1
Pipe 3	0.026	1.29	181.864	181.735	10% AEP, 5 min burst, Storm 1
Pipe 4	0.025	2.58	181.731	181.011	10% AEP, 5 min burst, Storm 1

No water upwelling from any pit.
Freeboard was adequate at all pits.



Get in touch with our team of design specialists.
CRESCO-GROUP.COM.AU
Principal: Shane Lutz / B.Eng (Mech) - M.Eng. Sci (Struct)
MIEAust - NER (Mech & Struct): 7120849
RPE QLD (Mech & Struct): 28594
RPE VIC (Mech & Struct): PE0010096
RPE TAS (Mech & Struct): 708732979
RPE NSW (Mech & Struct): PRE0002298

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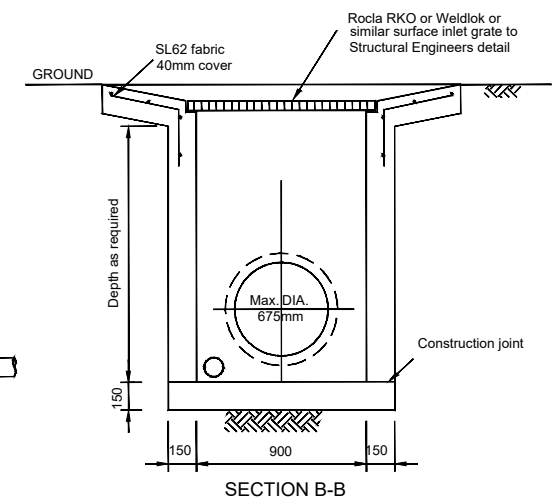
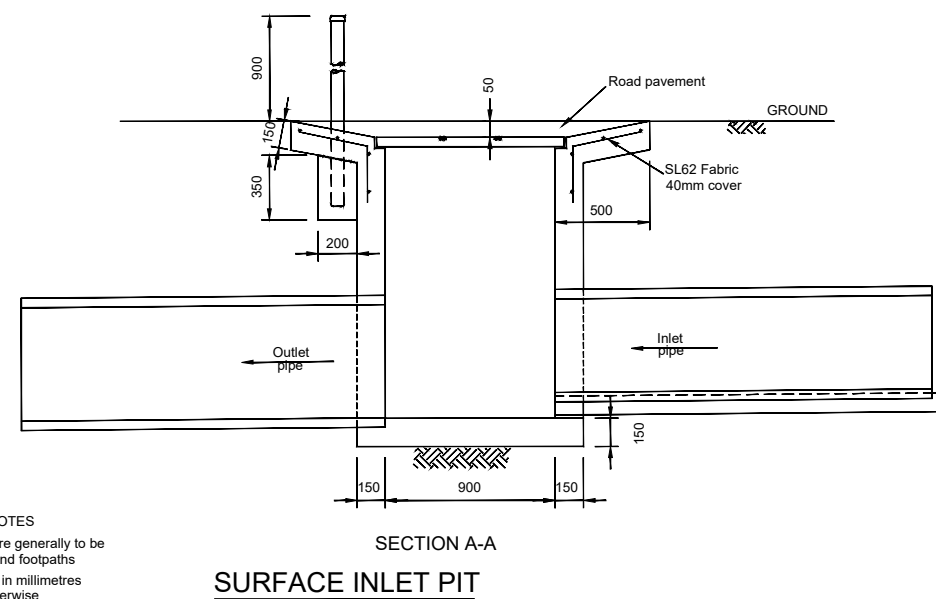
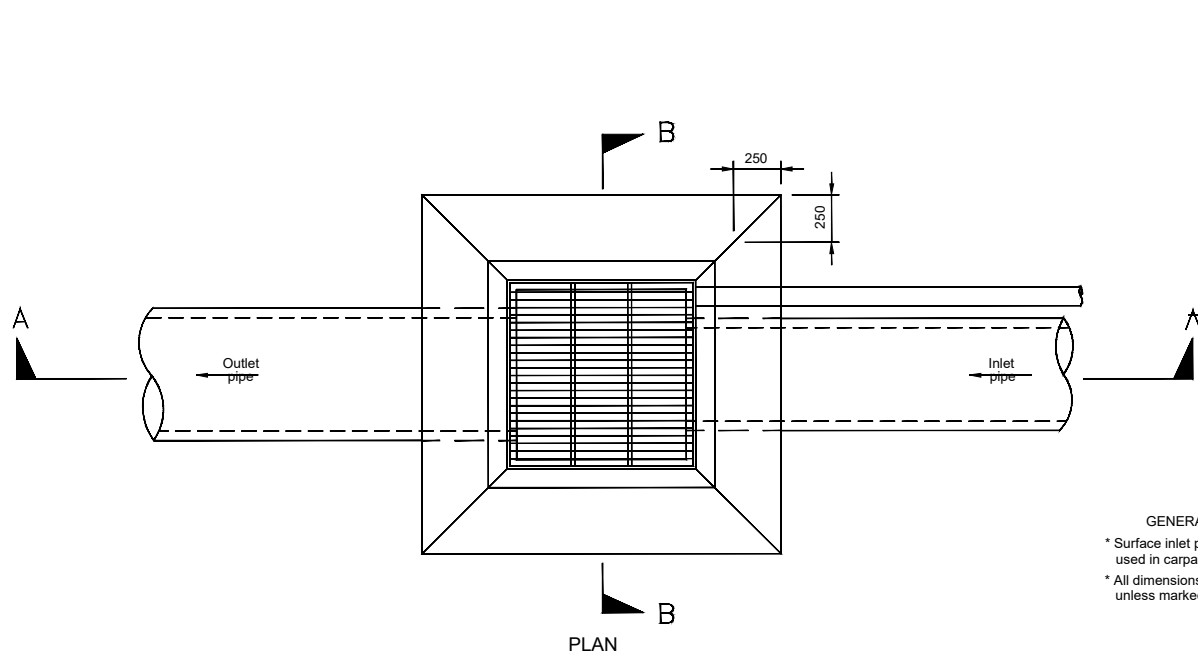
SHEET NAME
STORMWATER CALCULATION TABLE

SHEET NUMBER
C06

PROJECT NUMBER
23054

REVISION
0

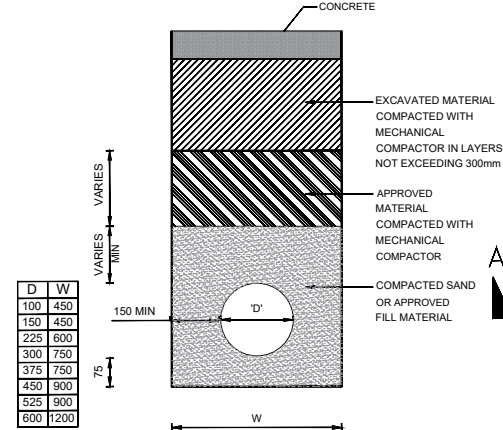
FORMAT
A3



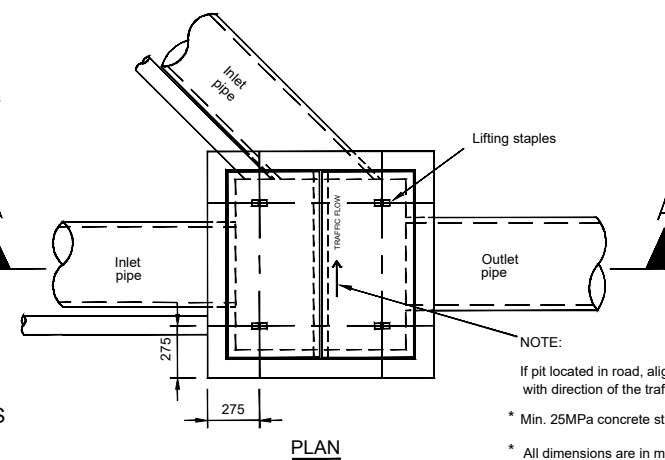
GENERAL NOTES
 * Surface inlet pits are generally to be used in carparks and footpaths
 * All dimensions are in millimetres unless marked otherwise

SURFACE INLET PIT

NOTE: BACKFILL COMPACTION TO BE IN ACCORDANCE WITH AS 3725 LOADS ON BURIED CONCRETE PIPES

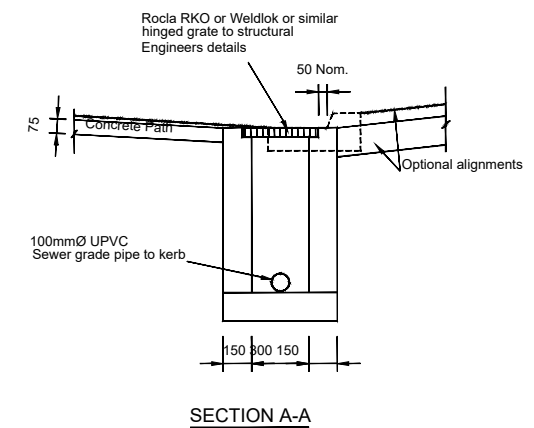


TYPICAL BACKFILLING DETAIL - OTHER AREAS

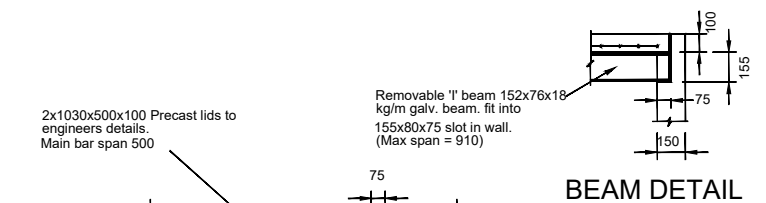


JUNCTION PIT

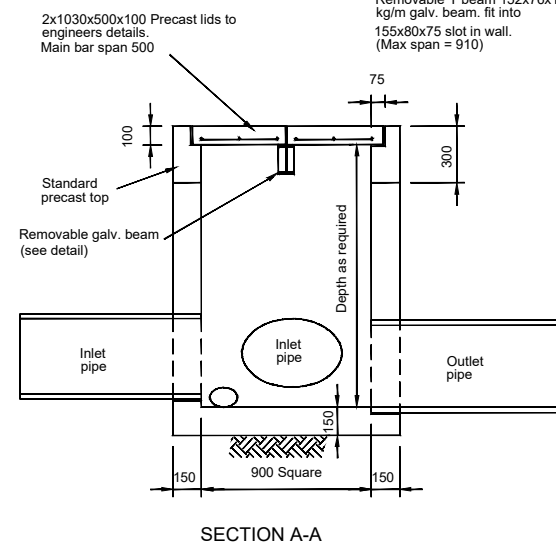
NOTE:
 If pit located in road, align lids with direction of the traffic flow.
 * Min. 25MPa concrete strength
 * All dimensions are in millimetres



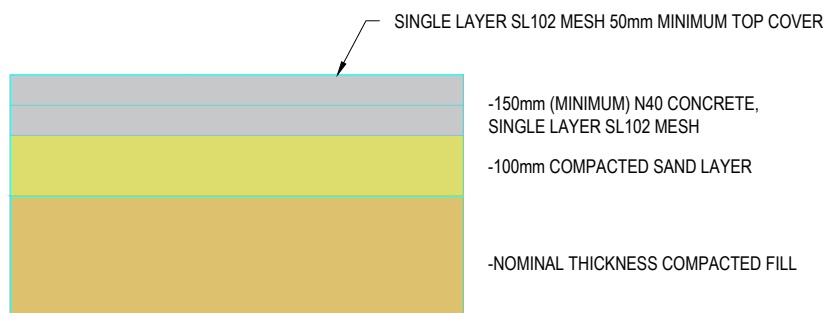
SECTION A-A



BEAM DETAIL



SECTION A-A



CONCRETE PAVEMENT DETAILS
 N.T.S.

REFER TO SHEET S12 IN STRUCTURAL DRAWING SET 23054_STRUCTURAL_A FOR DETAILED CONCRETE CONSTRUCTION NOTES

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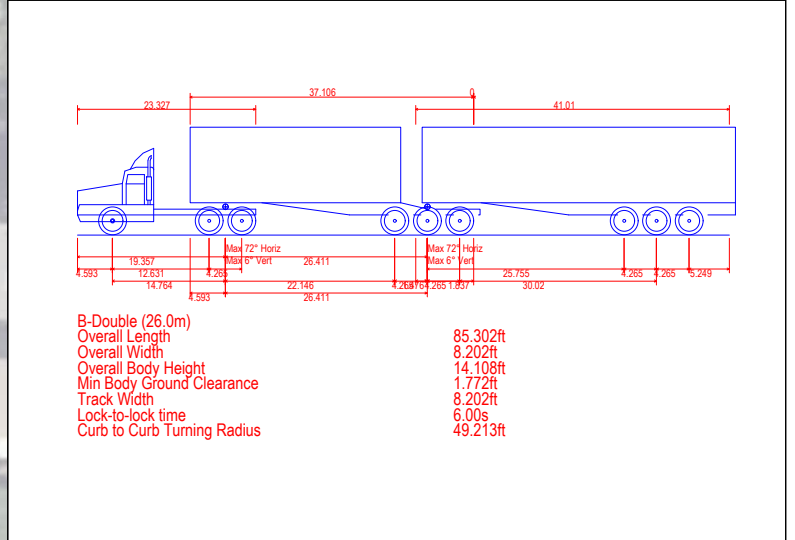
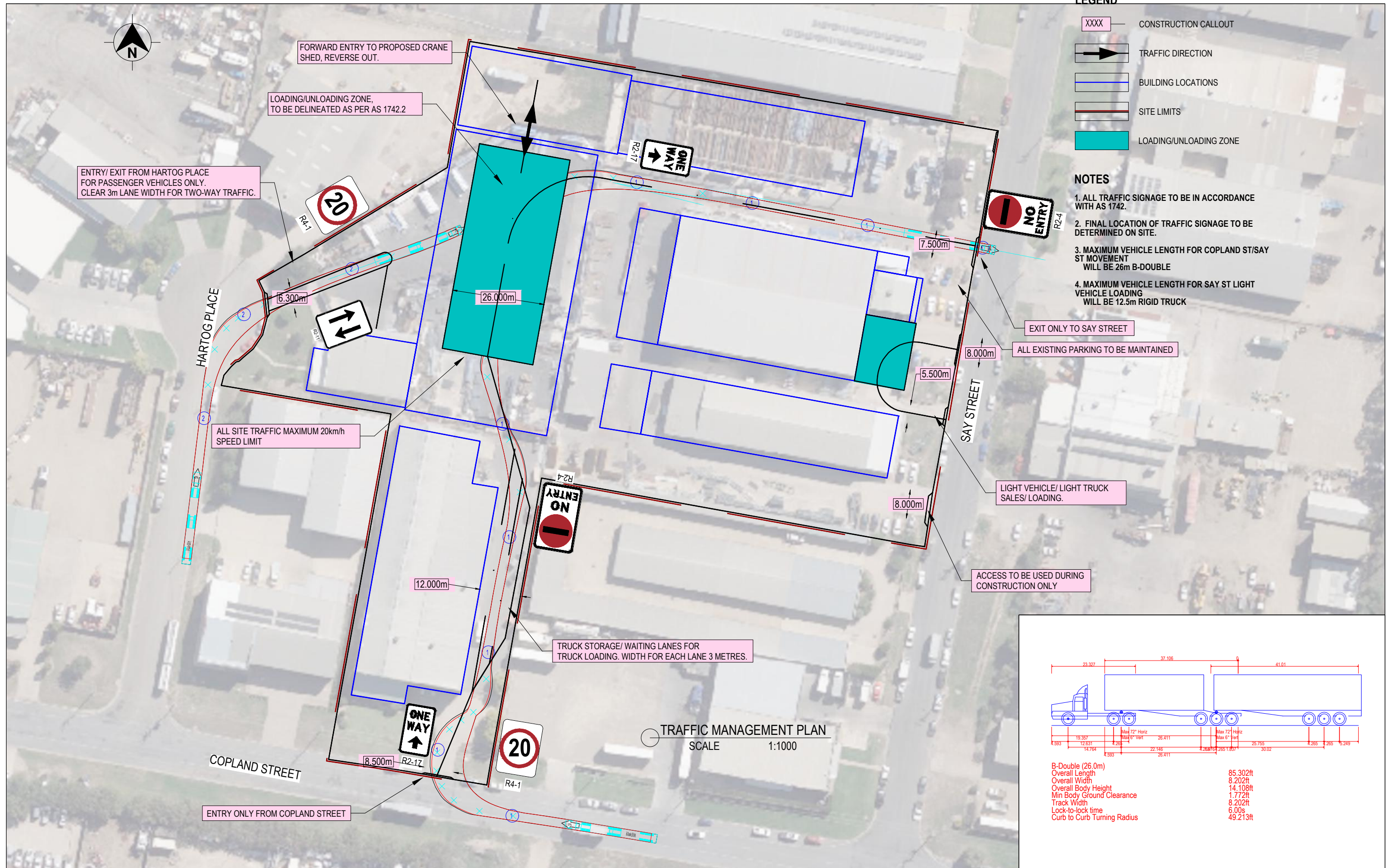
DOCUMENT INFO
TYPE: CIVIL ENGINEERING DESIGN

PROJECT INFO
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ADDRESS: 8-12 SAY STREET ST & 4 HARTOG PLACE EAST WAGGA, NSW, 2650
LOT: 3 DP 858049
LGA: WAGGA WAGGA CITY COUNCIL

SHEET NAME
 TYPICAL DRAINAGE DETAIL

SHEET NUMBER
C07
PROJECT NUMBER
 23054

REVISION
0
FORMAT
 A3



CRESCO AUSTRALIA

Get in touch with our team of design specialists.
CRESCO-GROUP.COM.AU

PH: 1800 CRESCO (1800 273 726)
 Email: info@creSCO-group.com.au

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LGA: WAGGA WAGGA CITY COUNCIL

SHEET NAME
 TRAFFIC MANAGEMENT PLAN & SWEEP PATH

SHEET NUMBER
C08

PROJECT NUMBER
 23054

REVISION
0

FORMAT
 A3

GENERAL NOTES

1. ALL WORKMANSHIP AND MATERIALS SHALL COMPLY WITH RELEVANT PRESCRIPTIVE DOCUMENTS AND THE RELEVANT CURRENT AUSTRALIAN STANDARDS/ AUSTRROADS.
2. ANY DISCREPANCIES, ERRORS, OR QUERIES SHOULD BE DISCUSSED WITH THE ENGINEER FOR CLARITY PRIOR TO ANY WORKS COMMENCING.
3. PERMANENT SURVEY MARKS MUST BE PRESERVED DURING CONSTRUCTION. PERSONAL FINES APPLY FOR THE DAMAGE OR DESTRUCTION OF PERMANENT SURVEY INFRASTRUCTURE.

EARTHWORKS

1. ALL EARTHWORKS TO BE CARRIED OUT IN ACCORDANCE WITH ACCOMPANYING GEOTECHNICAL ADVICE. IF GEOTECHNICAL ADVICE IS NOT SOUGHT, THE ENGINEER ASSUMES CONDITIONS BASED ON OBSERVATION ONLY, AND WILL NOT BE HELD LIABLE FOR ANY PREVIOUSLY UNKNOWN POOR GROUND.
2. THE CONTRACTOR IS NOT TO ENTER INTO, UPON, OR DO ANY WORK WITHIN ADJACENT LANDS WITHOUT THE WRITTEN PERMISSION OF THE AUTHORISED PERSON.
3. THE CONTRACTOR IS TO MAINTAIN ALL WEATHER ACCESS TO SITE AT ALL TIMES.
4. SUBGRADE - SUBGRADE SHOULD BE RIPPED TO A NOMINAL DEPTH AND WORKED WITH A ROLLER TO ACHIEVE 98% STD COMPACTION AS PER AS.1289.

THE SUBGRADE SHOULD BE PROOF ROLLED, WITH ANY UNSUITABLE AREAS REMOVED AND REPLACED.

5. SUBBASE - A LAYER OF GRAVEL IS TO BE PLACE TO THE REQUIRED THICKNESS AND COMPACTED TO 100% STD COMPACTION AS PER AS.1289.

THE THICKNESS OF A PLACED INDIVIDUAL LAYER OF GRAVEL SHOULD NOT EXCEED 150mm, BUT BE GRATHER THAN 75mm.

ALL SOURCED MATERIAL WILL COMPLY WITH TNSW DGS20 SPECIFICATION UNLESS NOTED OTHERWISE

6. BASE - A LAYER OF GRAVEL IS TO BE PLACE TO THE REQUIRED THICKNESS AND COMPACTED TO 102% STD COMPACTION AS PER AS.1289.

THE THICKNESS OF A PLACED INDIVIDUAL LAYER OF GRAVEL SHOULD NOT EXCEED 150mm, BUT BE GRATHER THAN 75mm.

ALL SOURCED MATERIAL WILL COMPLY WITH TNSW DGB20 SPECIFICATION UNLESS NOTED OTHERWISE.

7. SEAL - THE PRIMER SEAL APPLIED TO FINISH THE ROAD SHOULD COMPLY WITH RELEVANT COUNCIL STANDARDS.

STORMWATER

1. ALL DRAINAGE PIPES IN COUNCIL ROAD RESERVES SHALL BE CLASS 2 APPROVED SPIGOT AND SOCKET REINFORCED CONCRETE PIPES WITH RUBBER RING JOINTS (RCP RRJ).
2. ALL PIPE JUNCTIONS UP TO AND INCLUDING 450mm DIAMETER, SHALL BE VIA PURPOSE MADE FITTINGS.
3. CONTRACTOR TO SUPPLY AND INSTALL ALL FITTINGS AND SPECIALS INCLUDING PIPE ADAPTERS TO ENSURE PROPER CONNECTION BETWEEN DISSIMILAR PIPEWORK.
4. ALL CONNECTIONS TO DRAINAGE PITS SHALL BE INSTATED IN A PROFESSIONAL MANNER AND THE INTERNAL WALL OF THE PIT AT POINT OF ENTRY SHALL BE CEMENT RENDERED TO ENSURE A SMOOTH FINISH.
5. PRECAST CONCRETE PITS MAY BE INSTALLED IN LIEU OF CAST IN-SITU PITS.
6. PITS DEEPER THAN 1000mm SHALL HAVE STEP IRONS INSTALLED IN ACCORDANCE WITH COUNCIL OR GOVT REQUIREMENTS.
7. BEDDING SHALL BE TYPE H2 FOR PIPES NOT UNDER PAVEMENTS, AND TYPE HS2 FOR PIPES UNDER PAVEMENTS AND BUILDINGS IN ACCORADANCE WITH AS.3725.
8. BACKFILL TRENCHES WITH SAND OR APPROVED GRANULAR BACKFILL TO A MINIMUM OF 300mm ABOVE PIPE. WHERE THE PIPE IS UNDER PAVEMENT OR BUILDINGS, BACKFILL REMAINDER OF TRENCH WITH SAND OR APPROVED GRAVEL SUBBASE COMPACTED IN 150mm LAYERS. THE CONTRACTOR IS TO ENSURE THE COMPACTION IS ADEQUATE FOR THE PIPE CLASS USED.

EXISTING SERVICES

1. EXISTING SERVICES HAVE BEEN PLOTTED FROM SUPPLIED DATA AND AS SUCH THEIR ACCURACY CANNOT BE GUARANTEED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH THE LOCATION AND LEVEL OF ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY WORK. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER.
2. THE CONTRACTOR SHALL ALLOW FOR THE CAPPING OFF, EXCAVATION AND REMOVAL IF REQUIRED, OF ALL REDUNDANT EXISTING SERVICES IN AREAS AFFECTED BY WORKS WITHIN THE CONTRACT AREA, AS SHOWN ON THE DRAWINGS.
3. THE CONTRACTOR SHALL ENSURE THAT AT ALL TIMES SERVICES TO ALL OTHER BUILDINGS ARE NOT HINDERED BY THE CONSTRUCTION WORKS.
4. IF REQUIRED, THE CONTRACTOR SHALL CONSTRUCT TEMPORARY SERVICES TO MAINTAIN EXISTING SUPPLY TO BUILDINGS REMAINING IN OPERATION DURING WORKS. ONCE WORKS ARE COMPLETE, THE CONTRACTOR SHALL DECOMMISSION AND MAKE GOOD OF EXISTING.
5. INTERRUPTION TO THE SUPPLY OF EXISTING SERVICES SHALL BE DONE SO AS NOT TO CAUSE ANY INCONVENIENCE TO THE PRINCIPAL. THE CONTRACTOR IS RESPONSIBLE FOR ALL LIASON.
6. ALL BRANCH GAS AND WATER SERVICES UNDER DRIVEWAYS AND BRICK PAVING SHALL BE LOCATED IN 80mm PVC SEWER GRADE CONDUITS EXTENDING A MINIMUM OF 500mm BEYOND EACH PAVEMENT EDGE.
7. CLEARANCE AND COVER REQUIREMENTS SHALL BE OBTAINED FROM THE RELEVANT SERVICE AUTHORITY BEFORE COMMENCEMENT OF WORKS AND SHALL BE ADHERED TO AT ALL TIMES.
8. CARE IS TO BE TAKEN WHEN EXCAVATING NEAR EXISTING SERVICES. NO MECHANICAL EXCAVATIONS ARE OT BE UNDERTAKEN OVER TELECOM OR ELECTRICAL SERVICES. HAND EXCAVATE THESE AREAS ONLY.
9. THE CONTRACTOR SHALL INDEPENDANTLY CHECK THE UPSTREAM AND DOWNSTREAM SEWER LEVELS TO CHECK CONTINUITY WITH PLANS PRIOR TO COMMENCEMENT OF CONSTRUCTION.



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SHEET NAME
 GENERAL ENGINEERING NOTES

SHEET NUMBER
C09

PROJECT NUMBER
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REVISION
0

FORMAT
 A3