

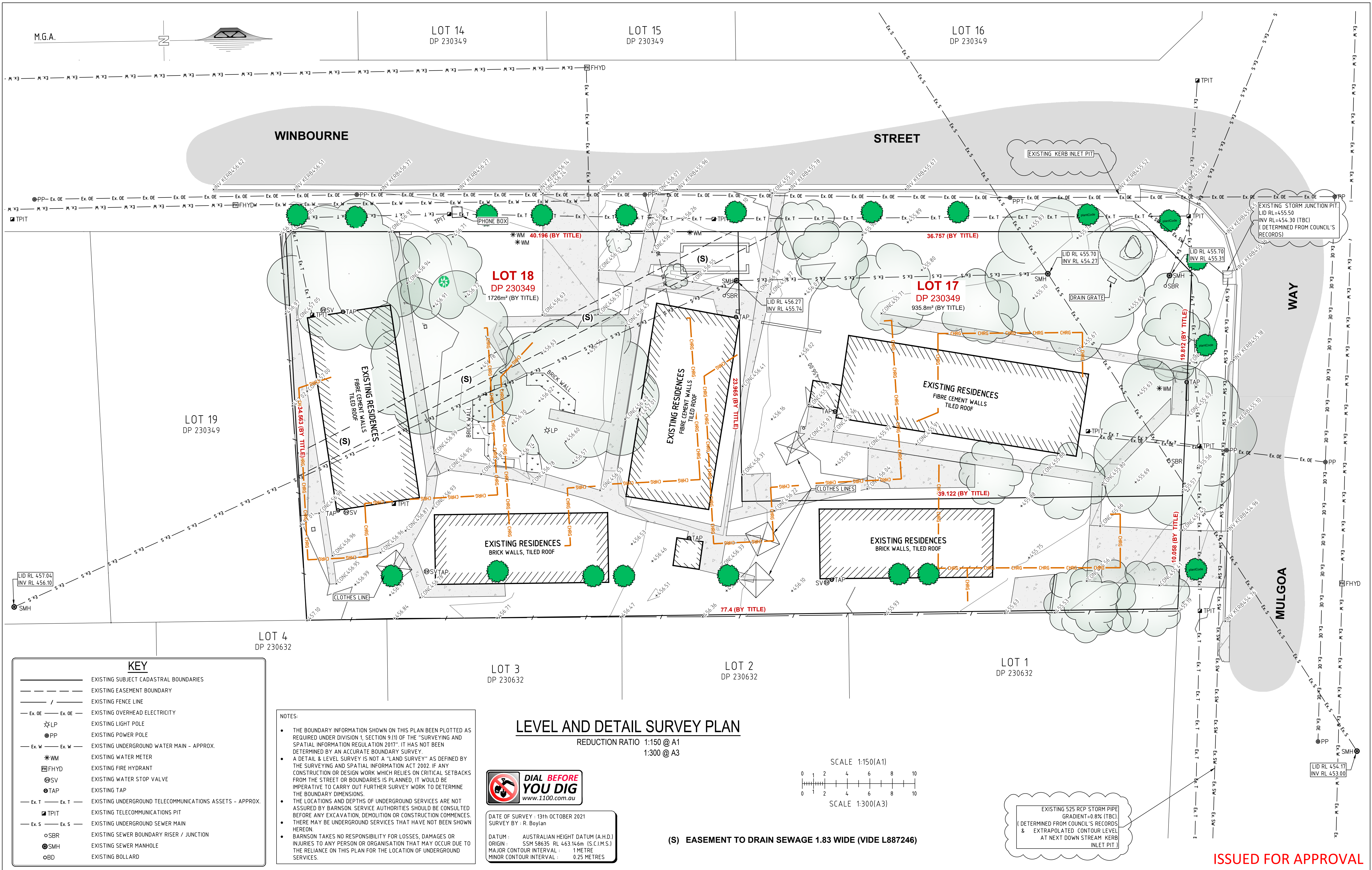
Civil Engineering Works, Development Application Documentation

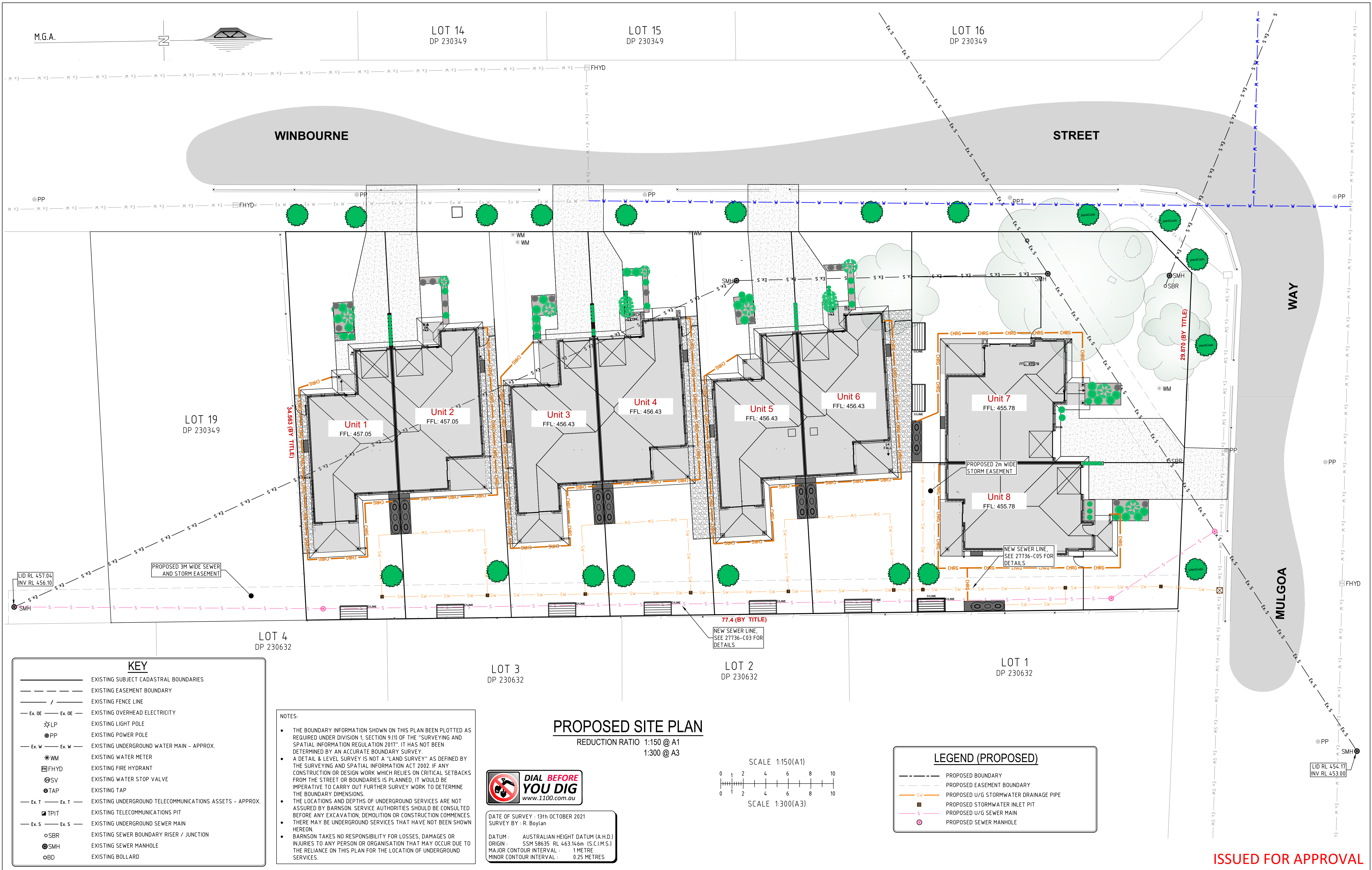
Proposed Development, LOT 17 & 18, DP 230349, WINBOURNE STREET, Mudgee NSW 2850

SCHEDULE OF DRAWINGS

SHEET No.	DESCRIPTION
27736-C00	COVER SHEET
27736-C01	LEVEL AND DETAIL SURVEY PLAN
27736-C02	PROPOSED SITE PLAN
27736-C03	PROPOSED SEWER PLAN
27736-C04	PROPOSED SEWER DETAILS AND LONGSECTION
27736-C05	PROPOSED STORMWATER MANAGEMENT PLAN
27736-C06	PROPOSED STORMWATER DETAILS
27736-C07	PROPOSED WATER PLAN
27736-C08	PROPOSED SEDIMENT & EROSION CONTROL PLAN
27736-C09	PROPOSED SEDIMENT & EROSION CONTROL DETAILS

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Client: HOUSING PLUS
Project: PROPOSED DEVELOPMENT AT LOT 17 & 18, DP 230349, WINBOURNE STREET MUDGEE
Drawing Title: PROPOSED SITE PLAN

Rev	Date	Amendment
A	23-05-2022	ISSUED FOR APPROVAL
B	26-05-2022	RETAINING WALL ADDED
C	13-07-2022	RETAINING WALL REMOVED
D	14-11-2022	SITE PLAN UPDATED
E	16-11-2022	LANDSCAPING ADDED
F	17-02-2023	GENERAL UPDATES
G	27-03-2023	STORMWATER DESIGN REVISED

Design LM Certification

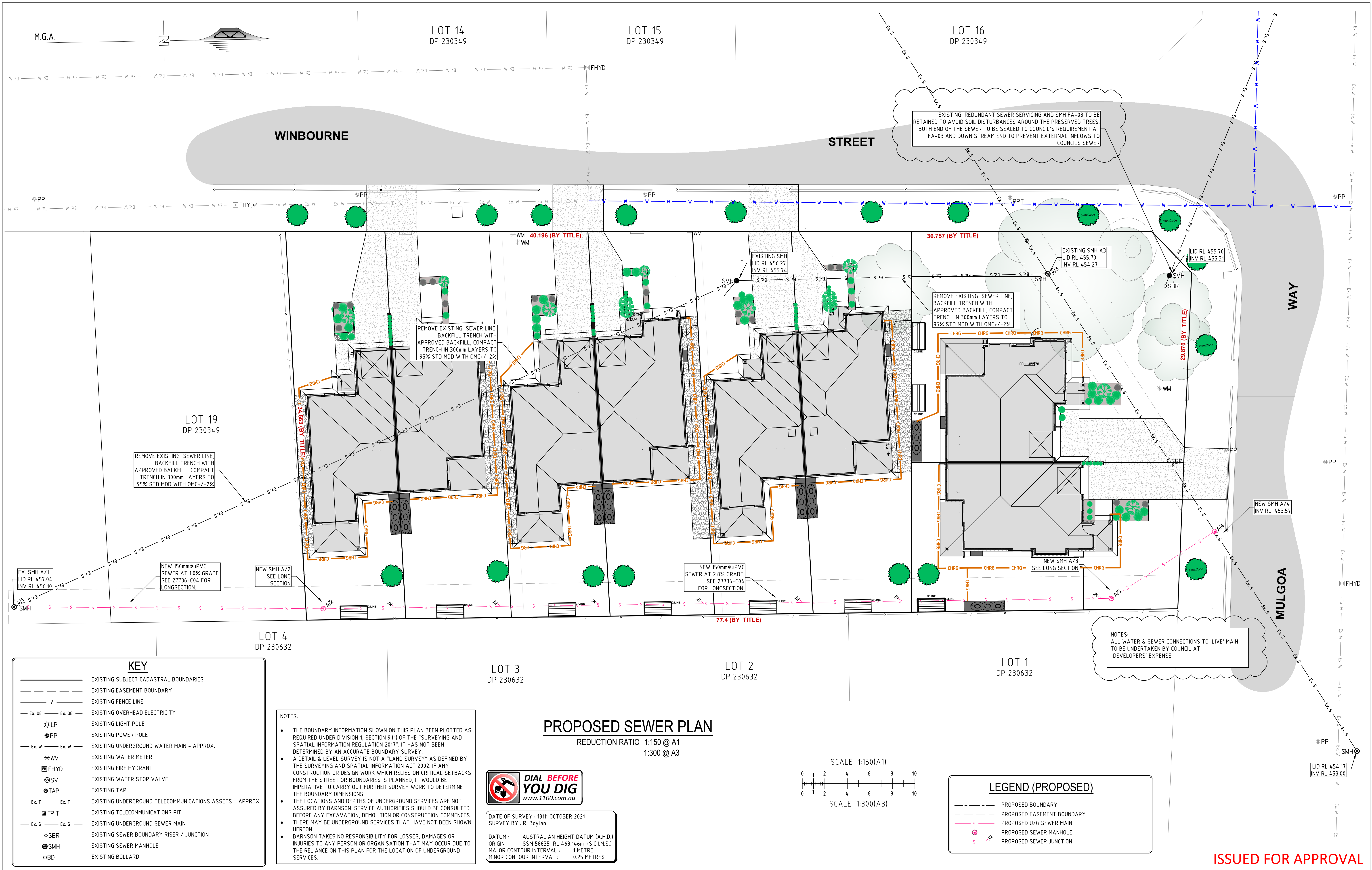
Drawn MK

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Original Sheet Size = A1
27736 - C02

Revision

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Client: HOUSING PLUS
Project: PROPOSED DEVELOPMENT AT LOT 17 & 18, DP 230349, WINBOURNE STREET MUDGE
Drawing Title: PROPOSED SEWER PLAN

Rev	Date	Amendment
A	23-05-2022	ISSUED FOR APPROVAL
B	26-05-2022	RETAINING WALL ADDED
C	13-07-2022	RETAINING WALL REMOVED
D	7-09-2022	SEWER AMENDMENT
E	20-10-2022	NEW SEWER LOCATION
F	25-10-2022	NEW SITE PLAN ADDED
G	14-11-2022	SITE PLAN UPDATED
H	16-11-2022	LANDSCAPING ADDED
I	27-02-2023	SEWER RE-ROUTED

Design LM Certification

Drawn MK

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Original Sheet Size = A1

27736 - C03

Revision

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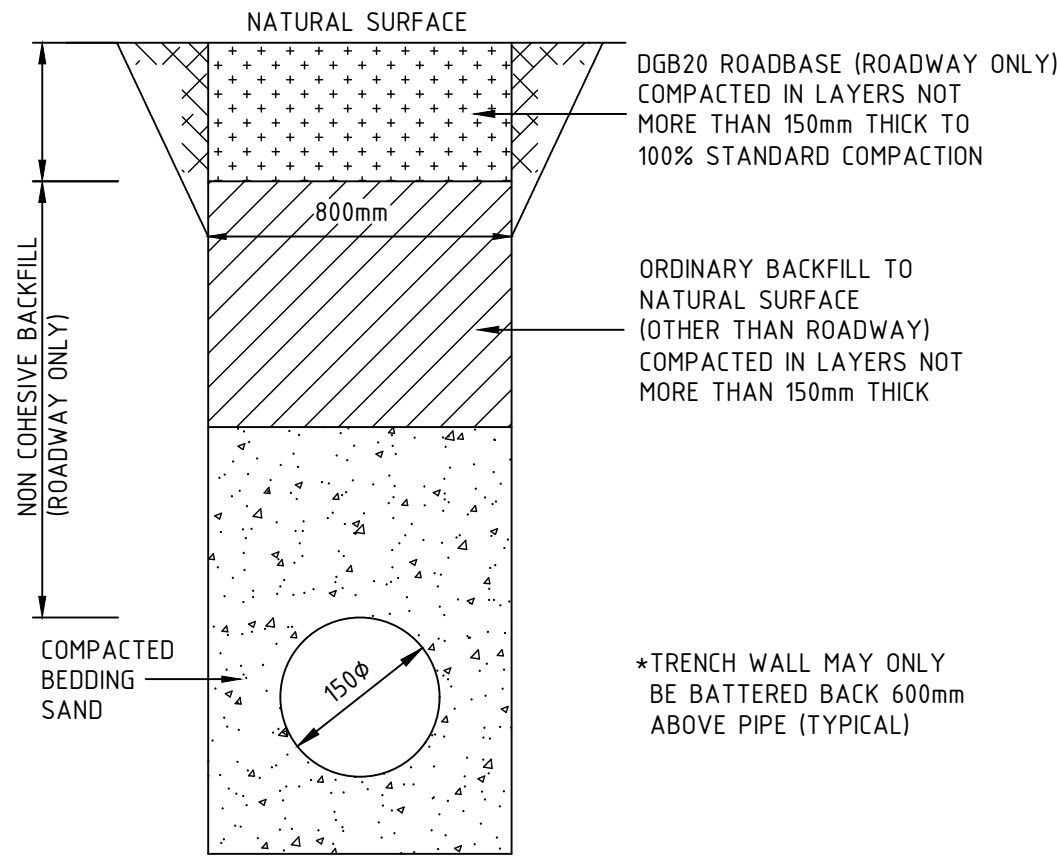
NOTES

1. ALL SEWER MAINS SHALL BE 150Ø/225Ø CLASS SN8 RRJ UPVC PIPE. ALL GRAVITY LINES TO USE SEWER GRADE FITTINGS WHERE REQUIRED.
2. CONSTRUCTION OF SEWER MAINS AND MANHOLES SHALL BE CARRIED OUT IN ACCORDANCE WITH THE WSA SEWERAGE CODE, WSA-02, 2002.
3. ANY OTHER SERVICES INCLUDING TELSTRA, GAS, POWER, WATER AND STORMWATER MUST BE LOCATED BEFORE WORK COMMENCES.
4. MANHOLES SHALL BE PRECAST CONCRETE FROM A SUPPLIER APPROVED BY COUNCIL AND HAVE A ROUND REMOVABLE LIGHT DUTY GATIC COVER (UNO) AND A MINIMUM INTERNAL DIAMTER OF 1020mm.
5. 150mmØ BOUNDARY RISERS SHALL BE PROVIDED TO EACH LOT TO MID-WESTERN REGIONAL COUNCIL'S GUIDELINES FOR ENGINEERING WORKS.
6. RISERS AND SIDELINES TO BE CONSTRUCTED TO WSA-02 2002.
7. FLOW LINE CHANNELS AND INTERSECTIONS SHALL BE CONSTRUCTED THROUGH MANHOLES AS PER WSA-02 2002.
8. ALL SEWER MAINS TO BE PRESSURE TESTED AS PER WSA-02 2002 AND MID-WESTERN REGIONAL COUNCIL'S GUIDELINES FOR ENGINEERING WORKS.

BEDDING NOTES

1. THE MINIMUM DEPTH TO TOP OF PIPE SHALL BE 1000mm, EXCEPT UNDER ROAD PAVEMENT WHERE MINIMUM COVER TO TOP OF PIPE SHALL BE 1200mm MINIMUM UNLESS SHOWN OTHERWISE. PIPES WITH LESS COVER THAN THESE LIMITS TO BE CONCRETE ENCASED, AND DICL UNDER ROADS.
2. GRADES OF GRAVITY SEWER NOT TO BE FLATTER THAN 1:179 (0.55%) FOR 150mm DIAMETER PIPES AS PER WSA-2014.
3. MANHOLES SHALL BE PLACED AT EACH CHANGE IN DIRECTION OR GRADE OF THE PIPE LINE AT INTERVALS ALONG THE LINE NOT EXCEEDING 80m.

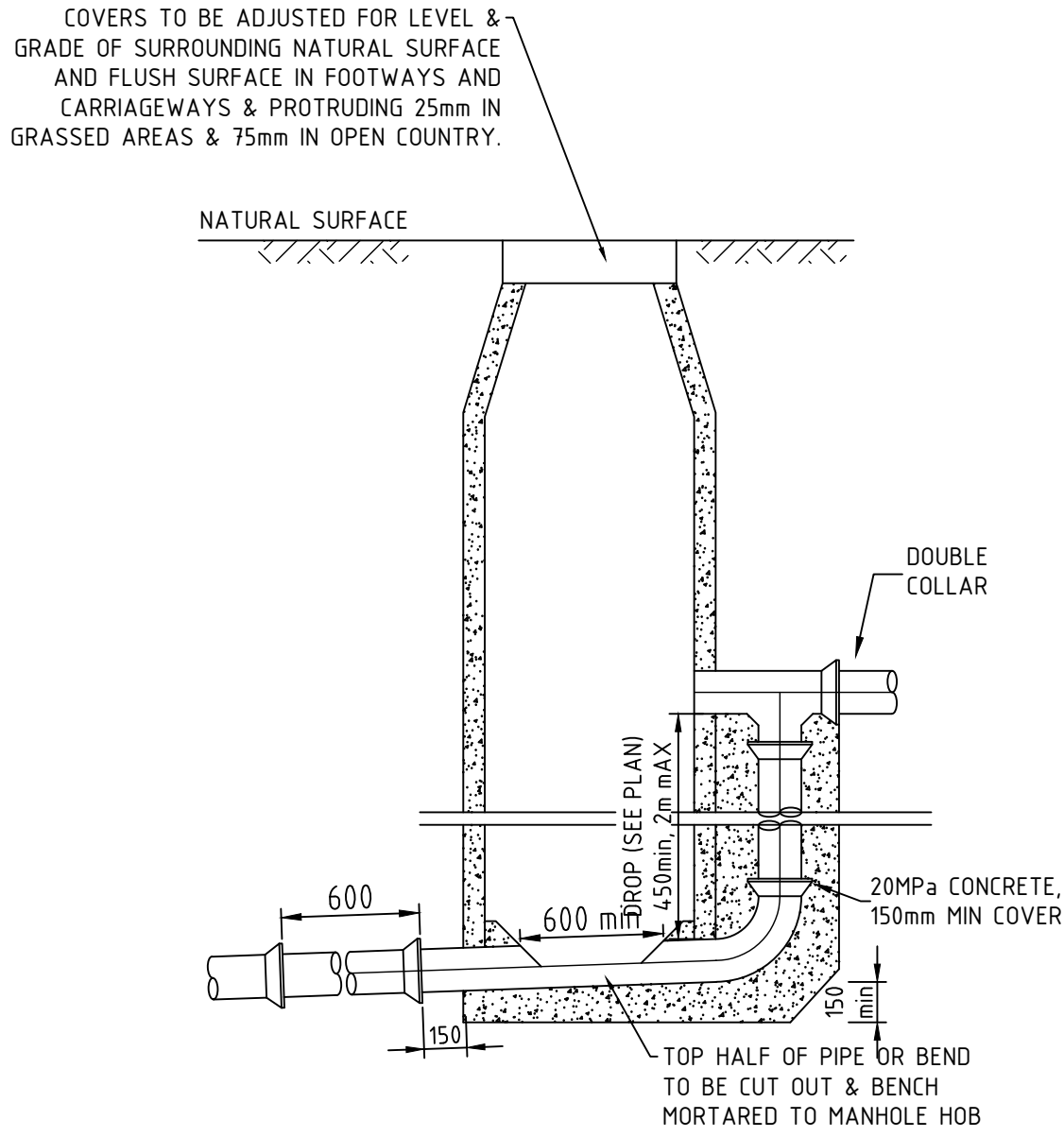
INSPECTION HOLD POINTS
1. INSTALLATION OF SEDIMENT & EROSION CONTROL MEASURES.
2. SEWER LINE INSTALLATION PRIOR TO BACKFILL.
3. PRACTICAL COMPLETION.



TYPICAL TRENCH SECTION

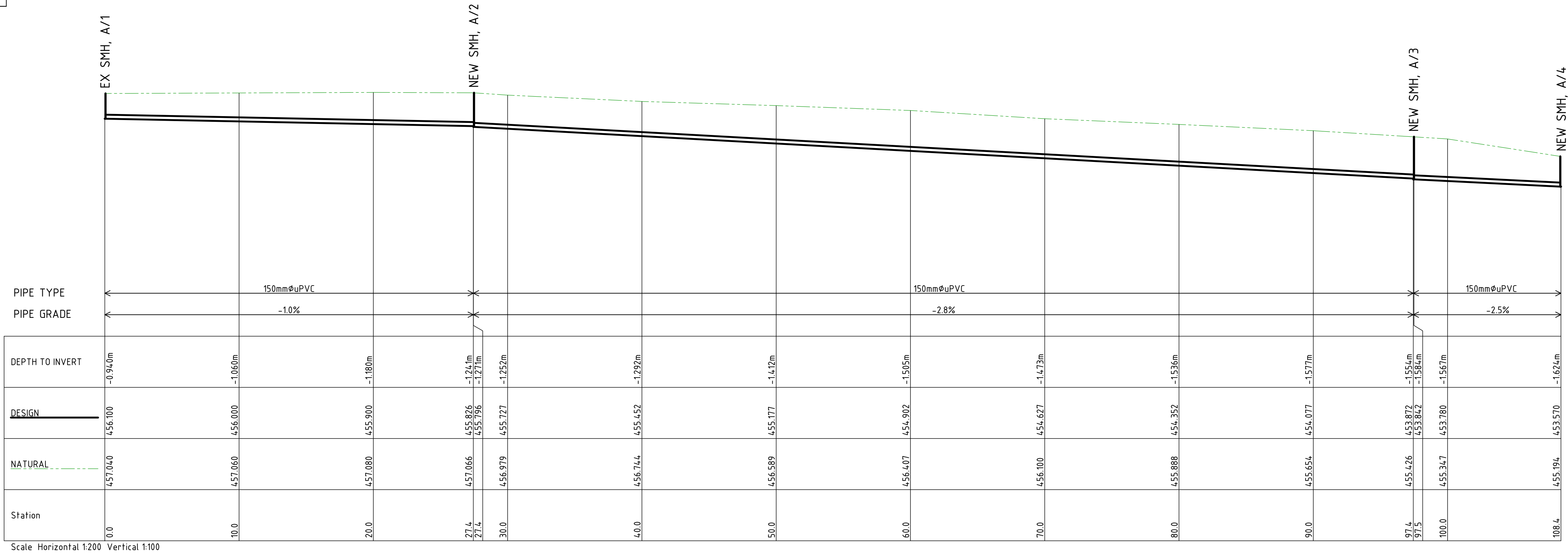
N.T.S.

* INSTALLATION OF UPVC PIPES SHALL TO CONFORM TO AS2032-1977 "INSTALLATION OF UPVC PIPE SYSTEMS", AS2566-1998 "BURIED FLEXIBLE PIPELINES", WSA-02 2002 AND MANUFACTURERS INSTRUCTIONS.



TYPICAL EXTERNAL DROP (150mmØ)

N.T.S.



LONGITUDINAL SECTION - SEWER LINE

REDUCTION RATIO H 1:250
V 1:100

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Client: HOUSING PLUS
Project: PROPOSED DEVELOPMENT AT LOT 17 & 18, DP 230349, WINBOURNE STREET MUDGE
Drawing Title: PROPOSED SEWER DETAILS AND LONGSECTION

Rev	Date	Amendment
A	23-05-2022	ISSUED FOR APPROVAL
B	14-11-2022	SITE PLAN UPDATED
C	27-02-2023	SEWER LONGSECTION UPDATED

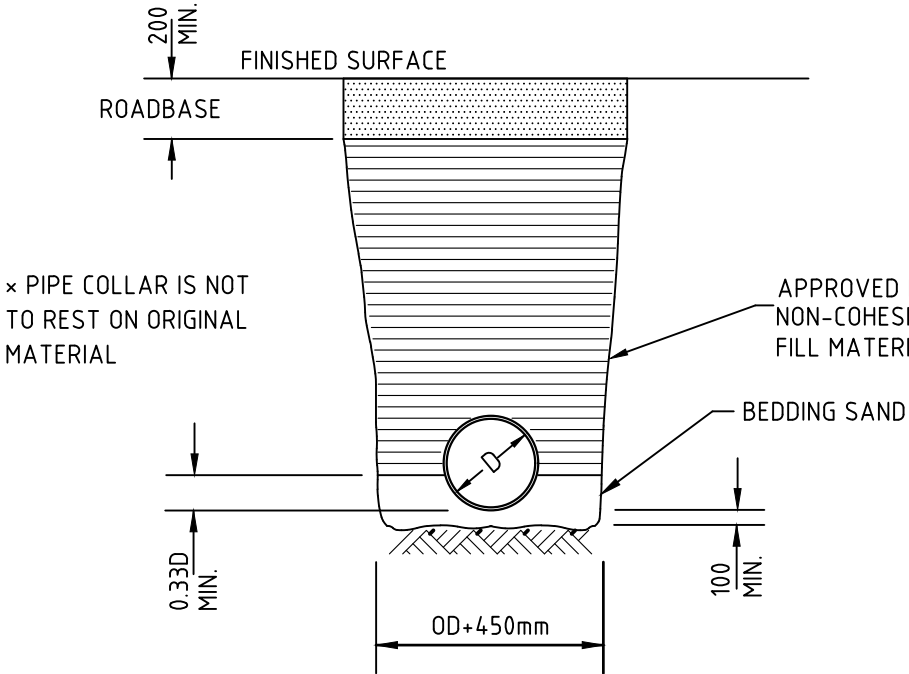
Design	LM	Certification	
Drawn	MK		
Check	LM	Drawing Number	27736 - C04
Original Sheet Size = A1			Revision C

STORMWATER NOTES

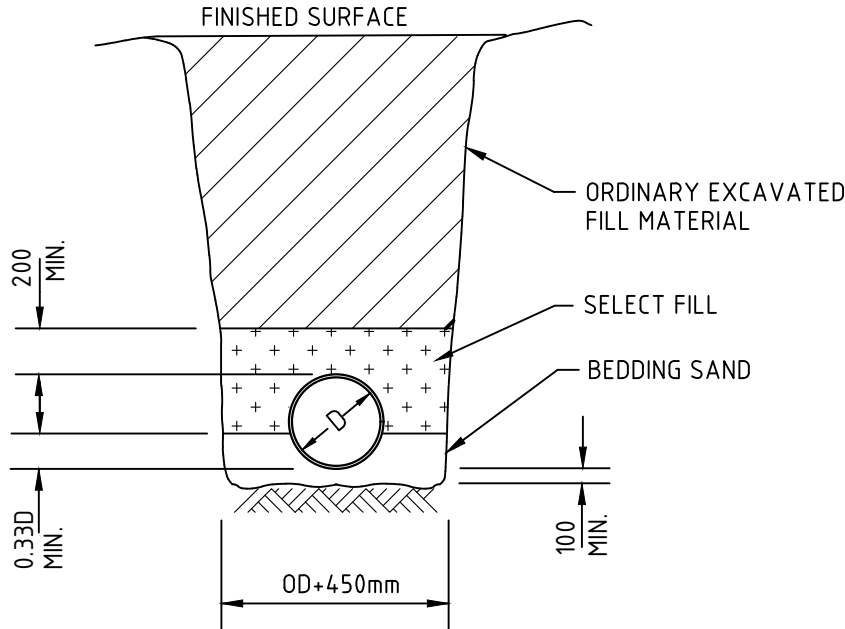
1. CONTRACTOR IS TO ADEQUATELY INFORM HIMSELF AS TO THE DEPTH AND LOCATION OF ALL EXISTING SERVICES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. PIPE IS TO BE LAID AT UNIFORM GRADE BETWEEN INVERT LEVELS SHOWN WITH MINIMUM COVER MAINTAINED UNLESS OTHERWISE APPROVED BY THE SUPERINTENDENT.
3. MINIMUM COVER OVER ALL PIPES IN NON- TRAFFICABLE AREAS TO BE 450mm UNO. MINIMUM COVER OVER ALL PIPES IN TRAFFICABLE AREAS TO BE 600mm UNO. WHEN THIS CRITERIA CANNOT BE ACHIEVED, PIPES TO BE ENCASED IN 150 CONCRETE.
- 5.ALL CONNECTIONS TO EXISTING DRAINAGE PITS SHALL BE MADE IN A TRADESMAN-LIKE MANNER AND THE INTERNAL WALL OF THE PIT AT THE POINT OF ENTRY SHALL BE CEMENT RENDERED TO ENSURE A SMOOTH FINISH.
- 6.PRECAST PITS MAY BE USED AS APPROVED BY THE SUPERINTENDENT.
- 7.ALL PIPES SHALL BE RUBBER RING JOINTED CLASS '2' UNLESS NOTED OTHERWISE.

COMPACTION OF BACKFILL

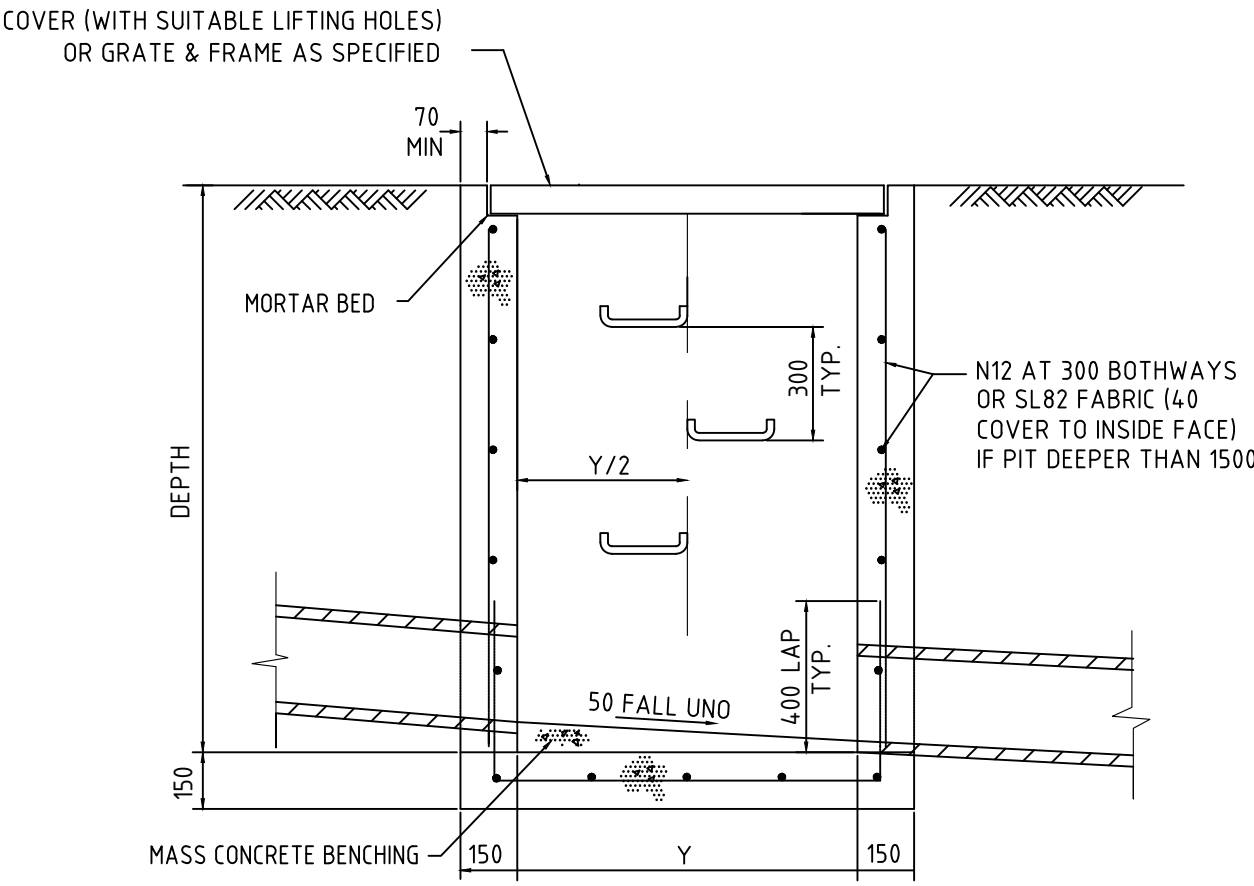
1. BEDDING SAND
- BEDDING SAND SHALL BE GRANULAR MATERIAL HAVING A LOW PERMEABILITY AND HIGH STABILITY WHEN SATURATED, CONFORMING TO THE GRADING LIMITS FOR BEDDING SAND AS INDICATED IN THE CONTRACT DOCUMENTS. BEDDING SAND SHALL BE COMPACTED TO A DENSITY INDEX OF 70% AS DETERMINED IN ACCORDANCE WITH AS1289.
2. APPROVED IMPORTED GRANULAR FILL
- ONLY IMPORTED GRANULAR FILL MATERIAL APPROVED BY THE SUPERINTENDENT SHALL BE USED. THIS FILL MATERIAL SHALL BE COMPACTED IN LAYERS NOT EXCEEDING 150mm THICK TO A DRY DENSITY OF 95% OF THE STANDARD MAXIMUM DRY DENSITY OF THE MATERIAL AND WITH A MOISTURE CONTENT NO MORE THAN 1% ABOVE OPTIMUM MOISTURE CONTENT AS DETERMINED IN ACCORDANCE WITH AS1289.
3. ORDINARY EXCAVATED FILL MATERIAL
- ORDINARY EXCAVATED FILL MATERIAL IS EXCAVATED TRENCH MATERIAL THAT IS FREE OF VEGETABLE MATTER, HUMUS, LARGE CLAY LUMPS AND ROCK BOULDERS. THIS FILL MATERIAL SHALL BE COMPACTED IN LAYERS NOT EXCEEDING 300mm THICK, TO A DENSITY OF 90% OF THE STANDRAD MAXIMUM DRY DENSITY OF THE MATERIAL WITH A MOISTURE CONTENT OF NOT MORE THAN 1% ABOVE THE OPTIMUM MOISTURE CONTENT AS DETERMINED IN ACCORDANCE WITH AS1289.



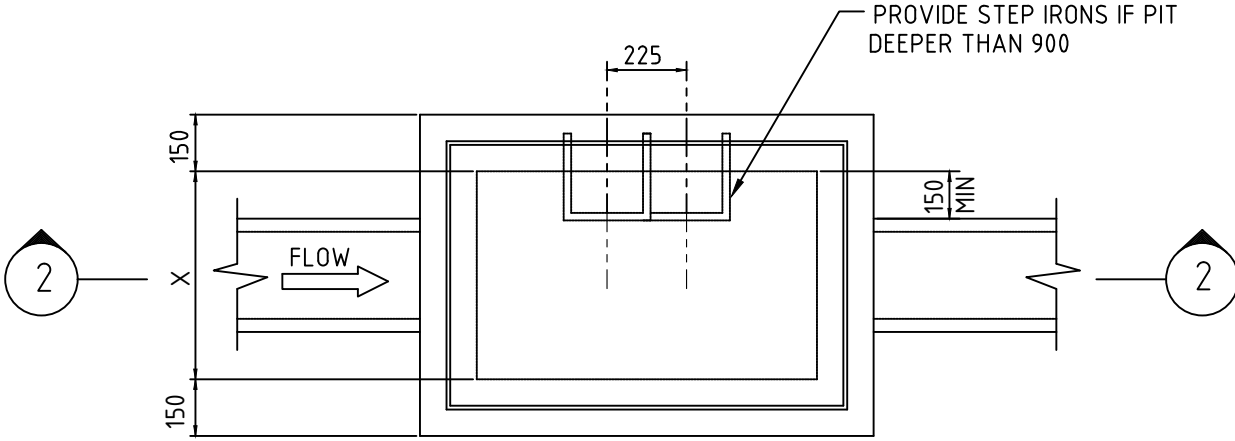
TYPICAL SECTION – TRENCH IN ROADWAY
N.T.S.



TYPICAL SECTION – EARTH FOUNDATION TRENCH
N.T.S.



SECTION 2

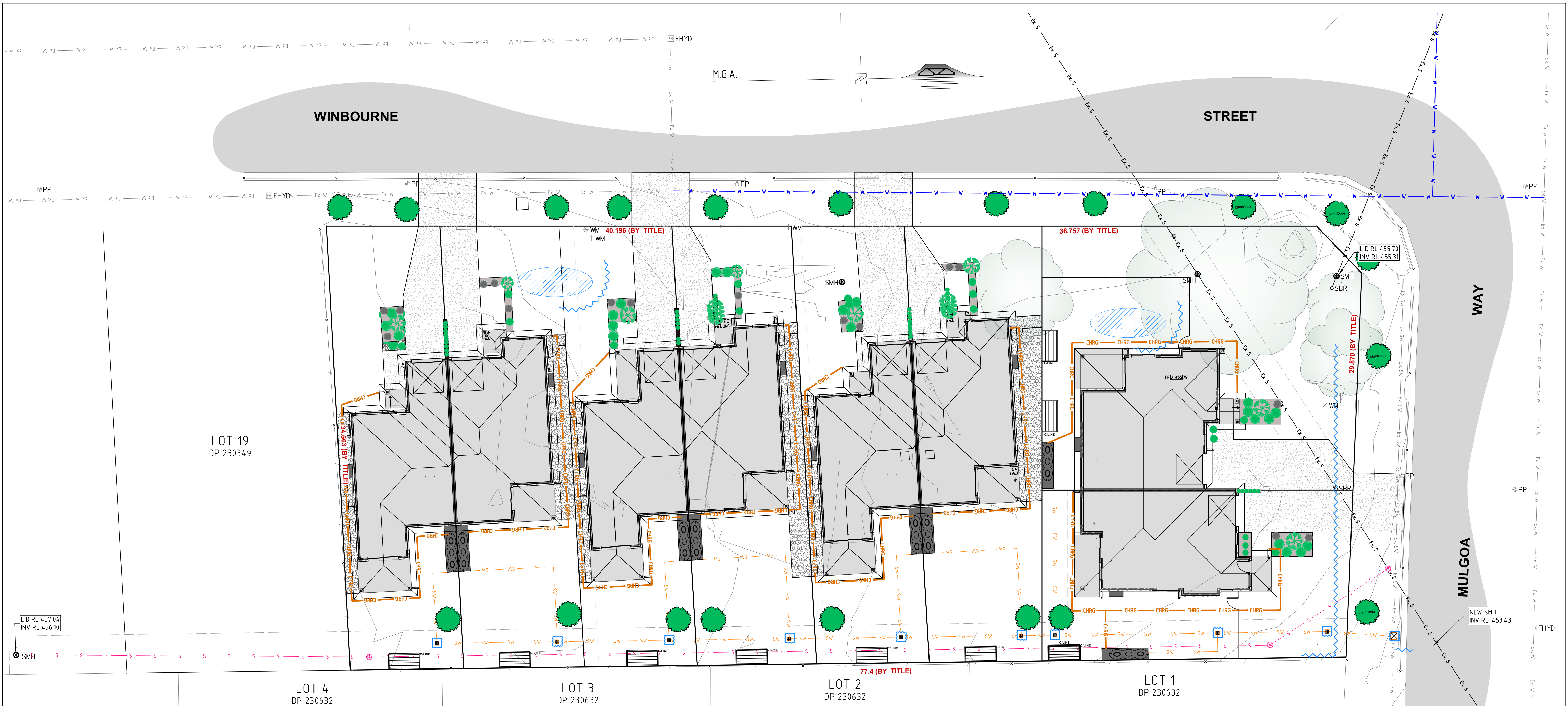


PLAN

GRADED INLET PIT
N.T.S.

PIT DIMENSIONS		
DEPTH	X	Y
D=600	450	450
D=1000	600	600
D=1500	600	900
1500+D+2400	900	900
D=2400	750	1200

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KEY	
	EXISTING SUBJECT CADASTRAL BOUNDARIES
	EXISTING EASEMENT BOUNDARY
	EXISTING FENCE LINE
	EXISTING OVERHEAD ELECTRICITY
	EXISTING LIGHT POLE
	EXISTING POWER POLE
	EXISTING UNDERGROUND WATER MAIN - APPROX.
	EXISTING WATER METER
	EXISTING FIRE HYDRANT
	EXISTING WATER STOP VALVE
	EXISTING TAP
	EXISTING UNDERGROUND TELECOMMUNICATIONS ASSETS - APPROX.
	EXISTING TELECOMMUNICATIONS PIT
	EXISTING UNDERGROUND SEWER MAIN
	EXISTING SEWER BOUNDARY RISER / JUNCTION
	EXISTING SEWER MANHOLE
	EXISTING BOLLARD

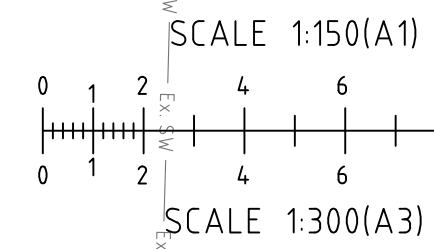
PROPOSED SEDIMENT & EROSION CONROL PLAN

REDUCTION RATIO 1:150 @ A1
1:300 @ A3

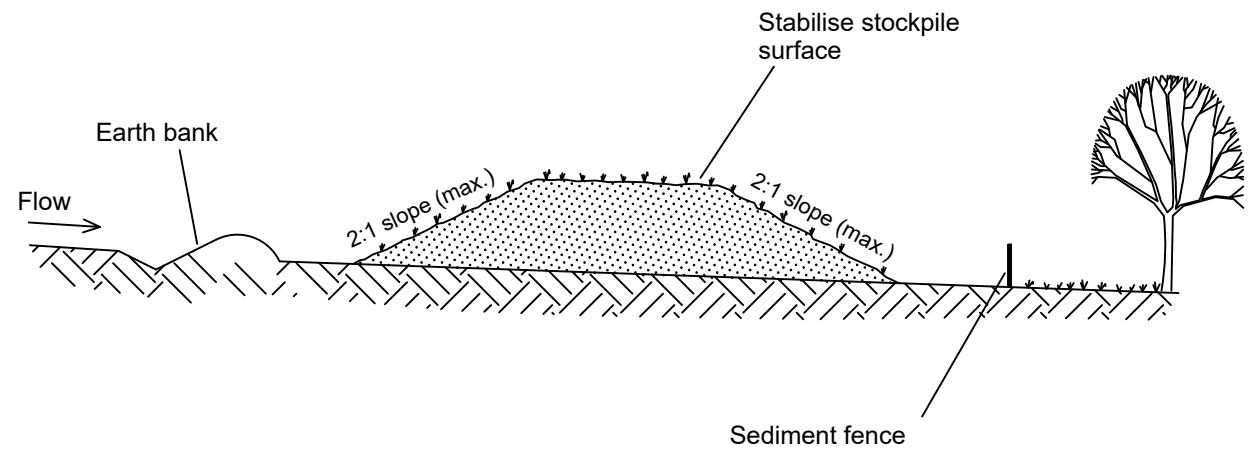
LEGEND (PROPOSED)	
	PROPOSED BOUNDARY
	PROPOSED EASEMENT BOUNDARY
	PROPOSED U/G STORMWATER DRAINAGE PIPE
	PROPOSED STORMWATER INLET PIT
	PROPOSED U/G SEWER MAIN
	PROPOSED SEWER MANHOLE
	PROPOSED SEDIMENT FENCE, SEE 27736-C08
	GEOTEXTILE INLET FILTER, SEE 27736-C08
	PROPOSED SOIL STOCKPILE LOCATION, SEE 27736-C08

GENERAL NOTES

1. ALL SEDIMENT AND EROSION CONTROL STRUCTURES TO BE INSTALLED PRIOR TO SITE DISTURBANCE, UNLESS STATED OTHERWISE ON THIS PLAN.
2. SEDIMENT AND EROSION CONTROL STRUCTURES TO BE BUILT AS PER DIAGRAMS PROVIDED.
3. ALL SEDIMENT CONTROL STRUCTURES TO BE INSPECTED AND MAINTAINED BY PROJECT MANAGER AT LEAST WEEKLY AND FOLLOWING EACH RAINFALL EVENT. IF STRUCTURES ARE TO BE REMOVED, THEY ARE TO BE REINSTALLED AND INSPECTED BY PROJECT MANAGER.
4. ALL SEDIMENT RETAINING STRUCTURES TO BE CLEARED ON REACHING 50% STORAGE CAPACITY AND SPREAD ON DISTURBED AREAS.
5. TOPSOIL FROM ALL AREAS THAT WILL BE DISTURBED TO BE STRIPPED AND STOCKPILED WITHIN A NOMINATED AREA ONSITE. STOCKPILES TO BE NO HIGHER THAN 600MM. THIS IS TO BE ACCOMPANIED BY APPROPRIATE SEDIMENT AND EROSION CONTROLS (STRAW BALE SEDIMENT FILTER OR SEDIMENT FENCE OR OTHER DEVICE AS SPECIFIED ON THIS PLAN) LOCATED DOWNSLOPE OF STOCKPILES. IF STOCKPILES ARE TO REMAIN FOR LONGER THAN ONE MONTH, THEY ARE TO BE STABILISED WITHIN 14 DAYS. STOCKPILED TOPSOIL IS TO BE RESPREAD ON DISTURBED AREAS, SEEDED AND FERTILISED IN ACCORDANCE WITH THE REHABILITATION SPECIFICATION SHOWN ON THIS PLAN AS PART OF REHABILITATION WORKS.
6. STOCKPILES OF ERODABLE BUILDING MATERIALS INCLUDING SAND AND SOIL TO BE LOCATED WITHIN DESIGNATED MATERIAL STORAGE AREAS (MSA) AND PROTECTED WITH SEDIMENT FENCE OR STRAW BALE SEDIMENT FILTERS OR OTHER DEVICE AS SPECIFIED ON THIS PLAN. THE PROJECT MANAGER TO NOMINATE SPECIFIED STORAGE AREAS WITHIN THE BOUNDARIES OF THE DISTURBED AREA.
7. ALL VEGETATION OUTSIDE THE DISTURBED AREA BOUNDARY TO REMAIN UNDISTURBED. EXISTING VEGETATION ONSITE TO BE RETAINED AS PER RESTRICTION ON USE OF THE LAND. DISTURBANCE TO VEGETATIVE GROUND COVER TO BE MINIMISED AS FAR AS PRACTICABLE.
8. ALL EROSION AND SEDIMENT CONTROL STRUCTURES SHALL REMAIN IN PLACE UNTIL THE SITE IS FULLY STABILISED AND/OR REVEGETATED (UNLESS OTHERWISE STATED ON THIS PLAN).
9. NO STORAGE OF VEHICLES OR VEHICLE MOVEMENTS ARE TO OCCUR OUTSIDE THE DISTURBED AREA BOUNDARY.
10. ACCESS TO THE SITE TO BE THROUGH VIA CONSTRUCTION ENTRANCE AS DEPICTED ON THIS PLAN.
11. THE PROJECT MANAGER IS TO INFORM ALL CONTRACTORS OF THEIR OBLIGATIONS UNDER THIS PLAN.
12. ALL SEWER, WATER AND DRAINAGE LINES ARE TO BE BACKFILLED WITHIN 24 HOURS OF INSPECTION AND APPROVAL.
13. TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES ARE SHOWN ON THIS PLAN.
14. OPEN CHANNELS, RETENTION BASINS AND TABLE DRAINS ASSOCIATED WITH INTERNAL ROADS TO BE STABILISED AND REHABILITATED IN ACCORDANCE WITH THE REHABILITATION SPECIFICATION DEPICTED ON THIS PLAN WITHIN 14 DAYS OF THE COMPLETION OF EARTHWORKS.
15. ALL CUT AND FILL BATTERS SHALL BE EFFECTIVELY STABILISED WITHIN 14 DAYS OF COMPLETION OF EARTHWORKS.
16. ALL AREAS DISTURBED AS A RESULT OF EARTHWORKS SHALL BE PROGRESSIVELY STABILISED AND/OR REVEGETATED SO THAT NO AREAS REMAIN EXPOSED TO EROSION DAMAGE FOR MORE THAN 14 DAYS UPON COMPLETION OF EARTHWORKS. LIKEWISE ALL HARDSTAND AREAS SHALL BE STABILISED WITH COMPACTED SUB-GRADE AS SOON AS POSSIBLE AFTER THEIR FORMATION. THE RESPONSIBILITY FOR PROGRESSIVE REVEGETATION AND STABILISATION LIES WITH THE PROJECT MANAGER.
17. THIS PLAN IS TO BE READ IN CONJUNCTION WITH STORMWATER MANAGEMENT PLANS AND OTHER APPLICABLE PLANS INCLUDING PLANS.
18. SEDIMENT FENCES ASSOCIATED WITH TABLE DRAINS ALONG INTERNAL AND EXTERNAL ROADS TO BE AT A MAXIMUM OF 60 METRE SPACINGS.



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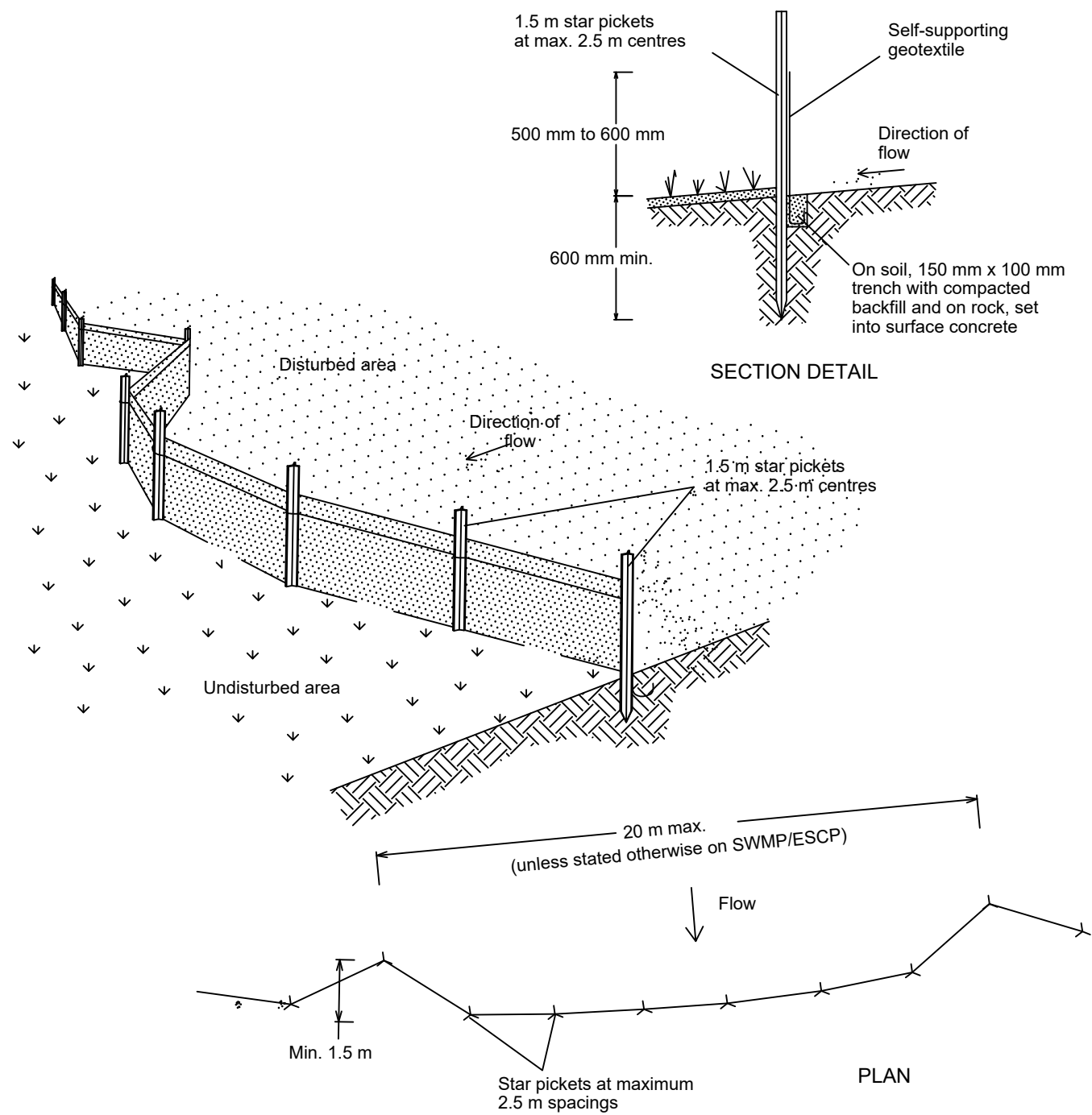


Construction Notes

1. Place stockpiles more than 2 (preferably 5) metres from existing vegetation, concentrated water flow, roads and hazard areas.
2. Construct on the contour as low, flat, elongated mounds.
3. Where there is sufficient area, topsoil stockpiles shall be less than 2 metres in height.
4. Where they are to be in place for more than 10 days, stabilise following the approved ESCP or SWMP to reduce the C-factor to less than 0.10.
5. Construct earth banks (Standard Drawing 5-5) on the upslope side to divert water around stockpiles and sediment fences (Standard Drawing 6-8) 1 to 2 metres downslope.

STOCKPILES

SD 4-1

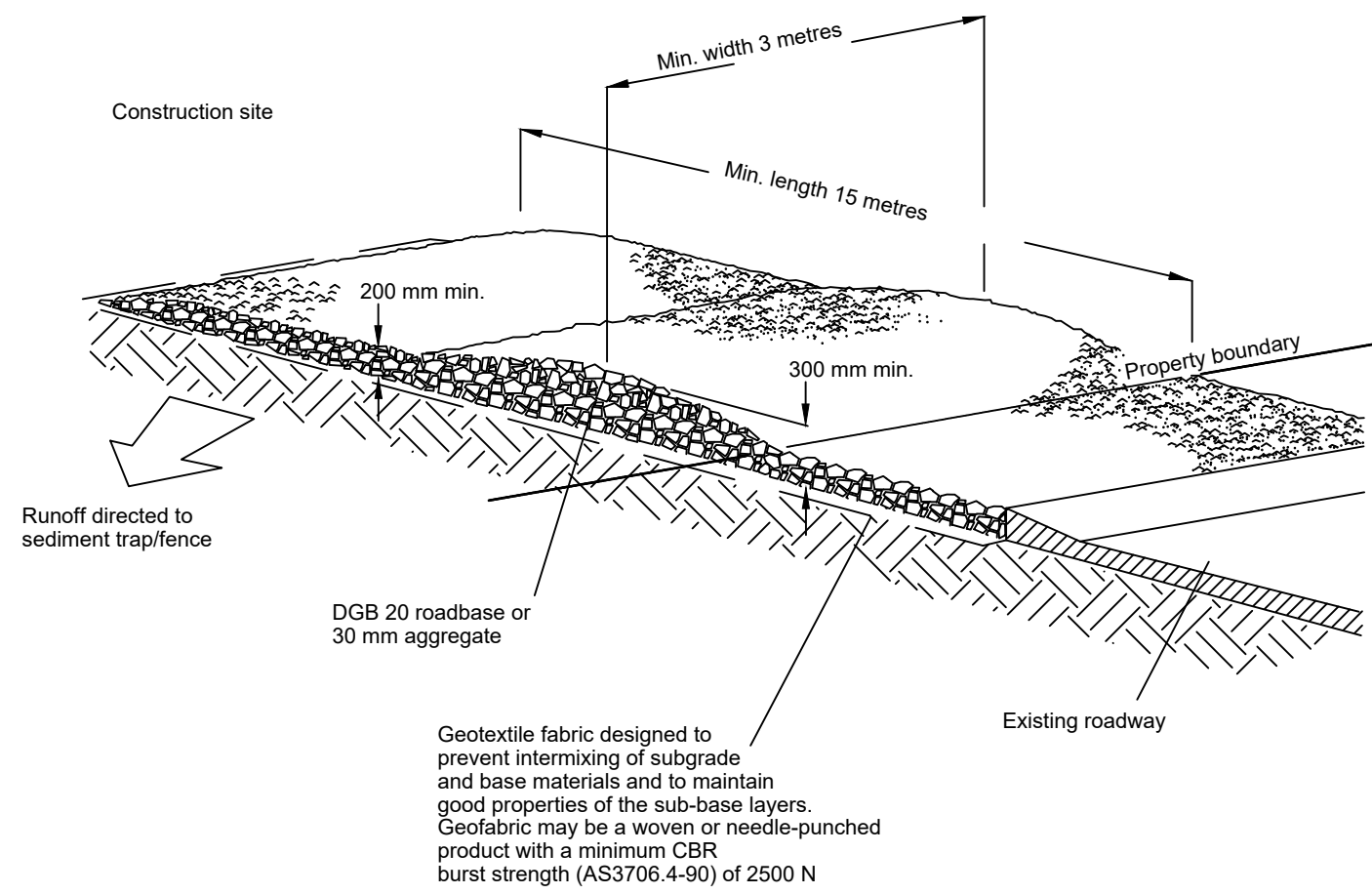


Construction Notes

1. Construct sediment fences as close as possible to being parallel to the contours 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.
2. Cut a 150-mm deep trench along the upslope line of the fence for the bottom of the fabric to be entrenched.
3. Drive 1.5 metre long star pickets into ground at 2.5 metre intervals (max) at the downslope edge of the trench. Ensure any star pickets are fitted with safety caps.
4. 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 of shade cloth for this purpose is not satisfactory.
5. Join sections of fabric at a support post with a 150-mm overlap.
6. Backfill the trench over the base of the fabric and compact it thoroughly over the geotextile.

SEDIMENT FENCE

SD 6-8

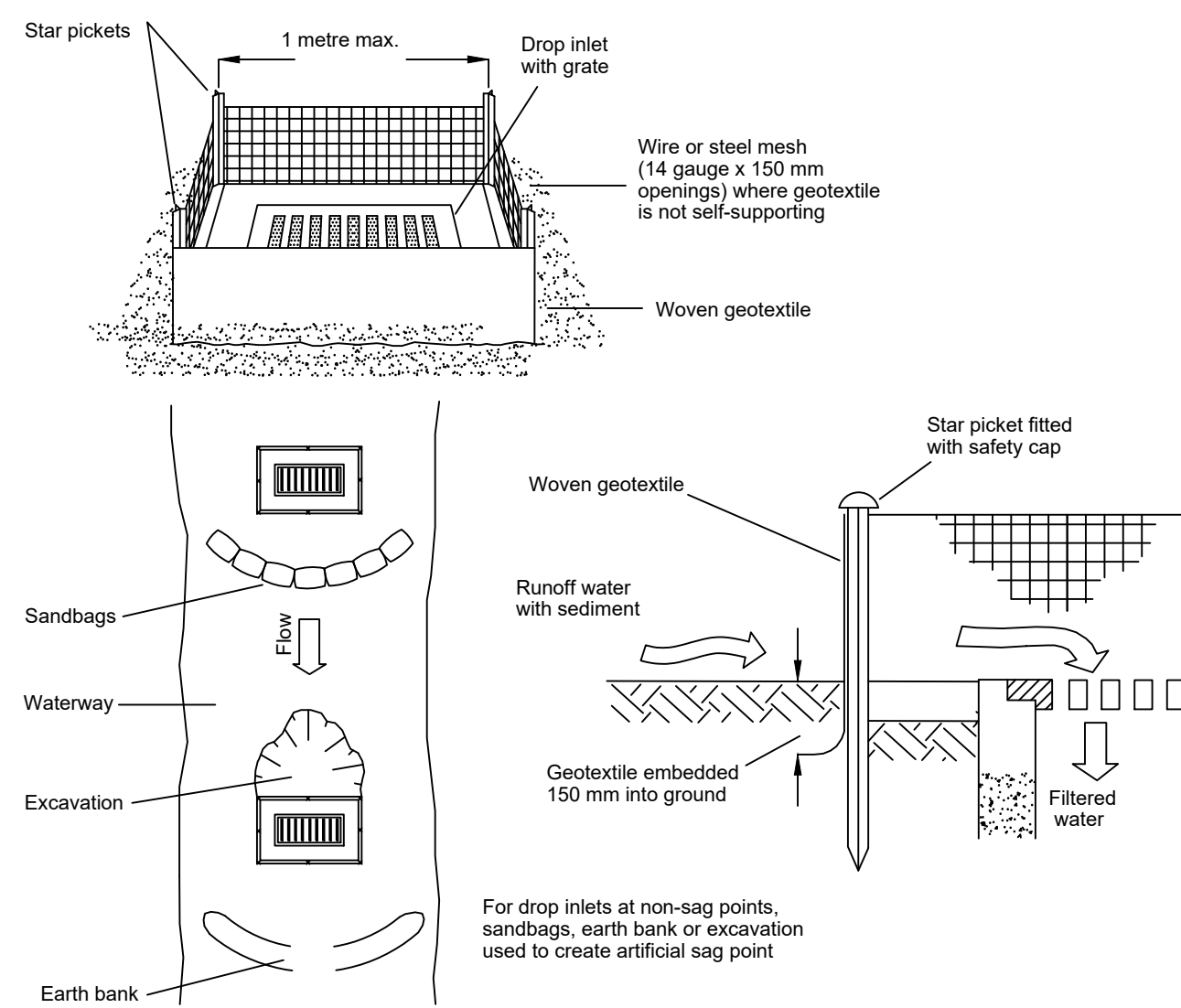


Construction Notes

1. Strip the topsoil, level the site and compact the subgrade.
2. Cover the area with needle-punched geotextile.
3. Construct a 200 mm thick pad over the geotextile using road base or 30 mm aggregate.
4. Ensure the structure is at least 15 metres long or to building alignment and at least 3 metres wide.
5. Where a sediment fence joins onto the stabilised access, construct a hump in the stabilised access to divert water to the sediment fence

STABILISED SITE ACCESS

SD 6-14



Construction Notes

1. Fabricate a sediment barrier made from geotextile or straw bales.
2. Follow Standard Drawing 6-7 and Standard Drawing 6-8 for installation procedures for the straw bales or geofabric. Reduce the picket spacing to 1 metre centres.
3. In waterways, artificial sag points can be created with sandbags or earth banks as shown in the drawing.
4. 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