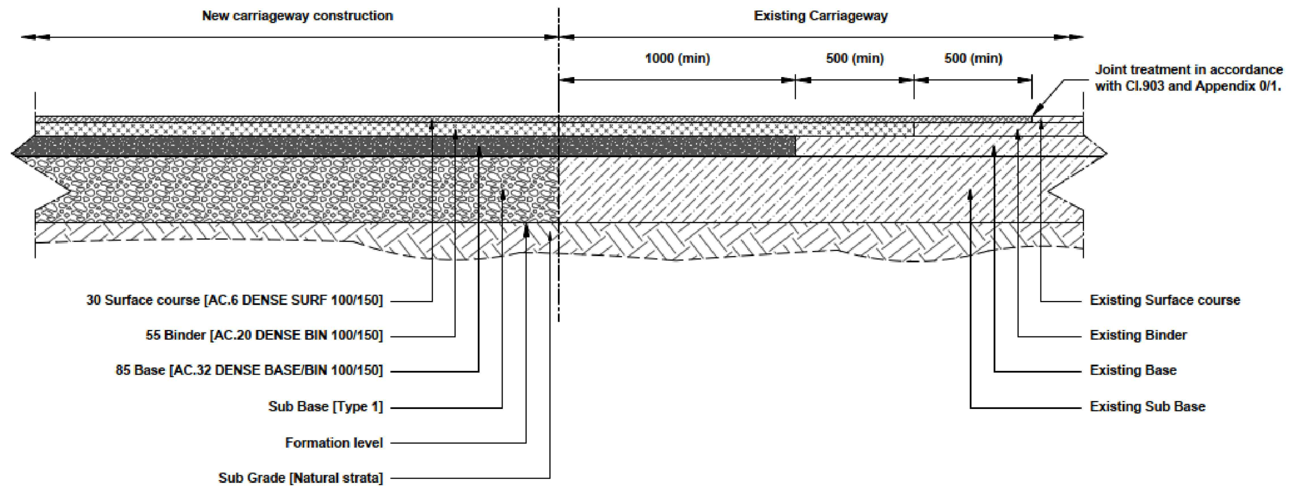
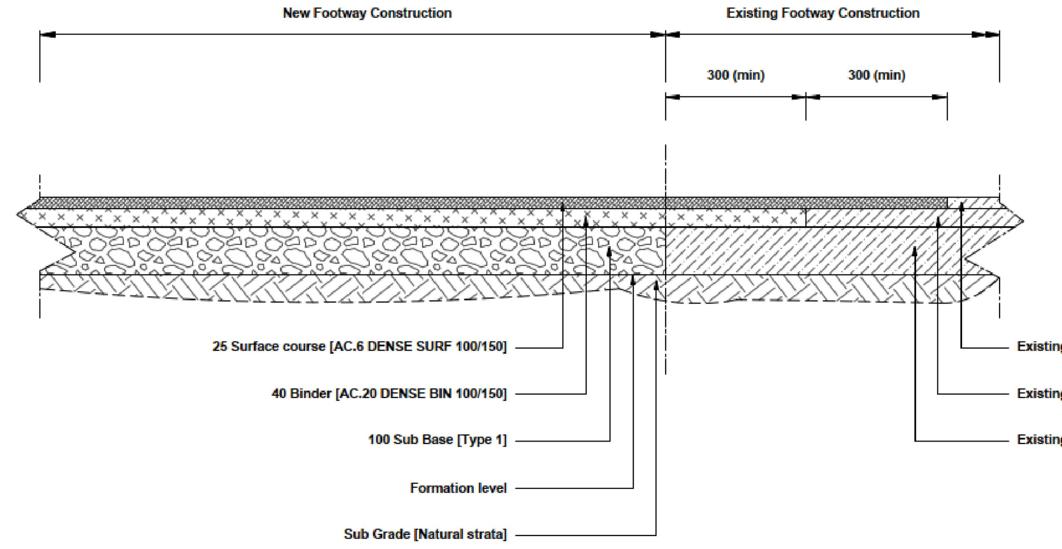
1. Unless stated otherwise all dimensions are in millimetres.



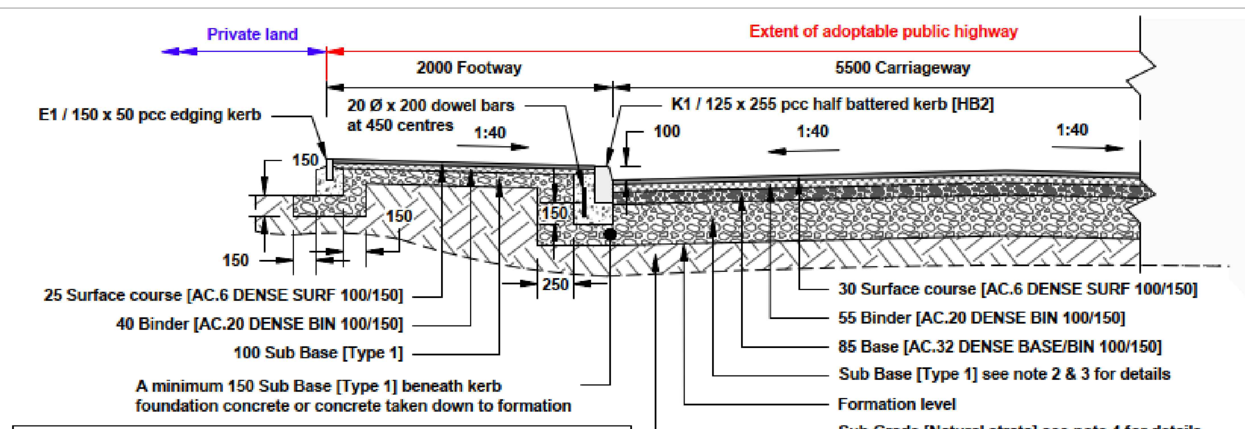
THIS DETAIL SHOWS NEW TO NEW & NEW TO EXISTING, TRADITIONAL ESTATE ROAD TO AN EXISTING TRADITIONAL ESTATE ROAD TIE-IN DETAILS

FOR ANY OTHER CATEGORY OF ROAD, A BESPOKE TIE-IN DETAIL IS REQUIRED

NEW TO EXISTING CARRIAGEWAY DETAIL



NEW TO EXISTING FOOTWAY DETAIL



At vehicular crossings, increase Binder to 60 and increase Sub Base [Type 1] to 150 with kerb K15 / 125 x 150 pcc bullnosed kerb [BN3] with 30 upstand

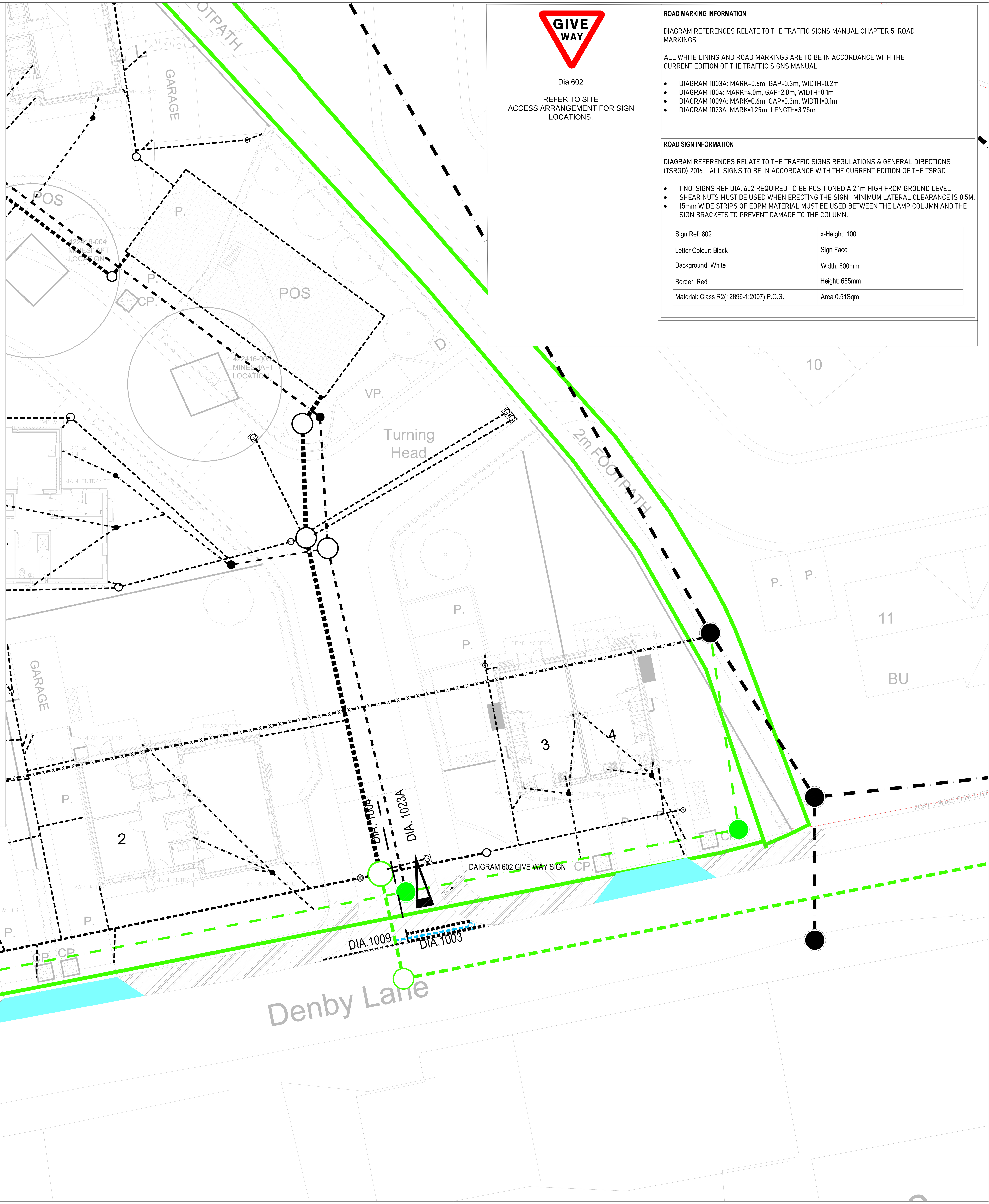
PAVEMENT FOUNDATION DESIGN LOCAL RESIDENTIAL STREET / TRADITIONAL ESTATE ROAD [TYPE B]

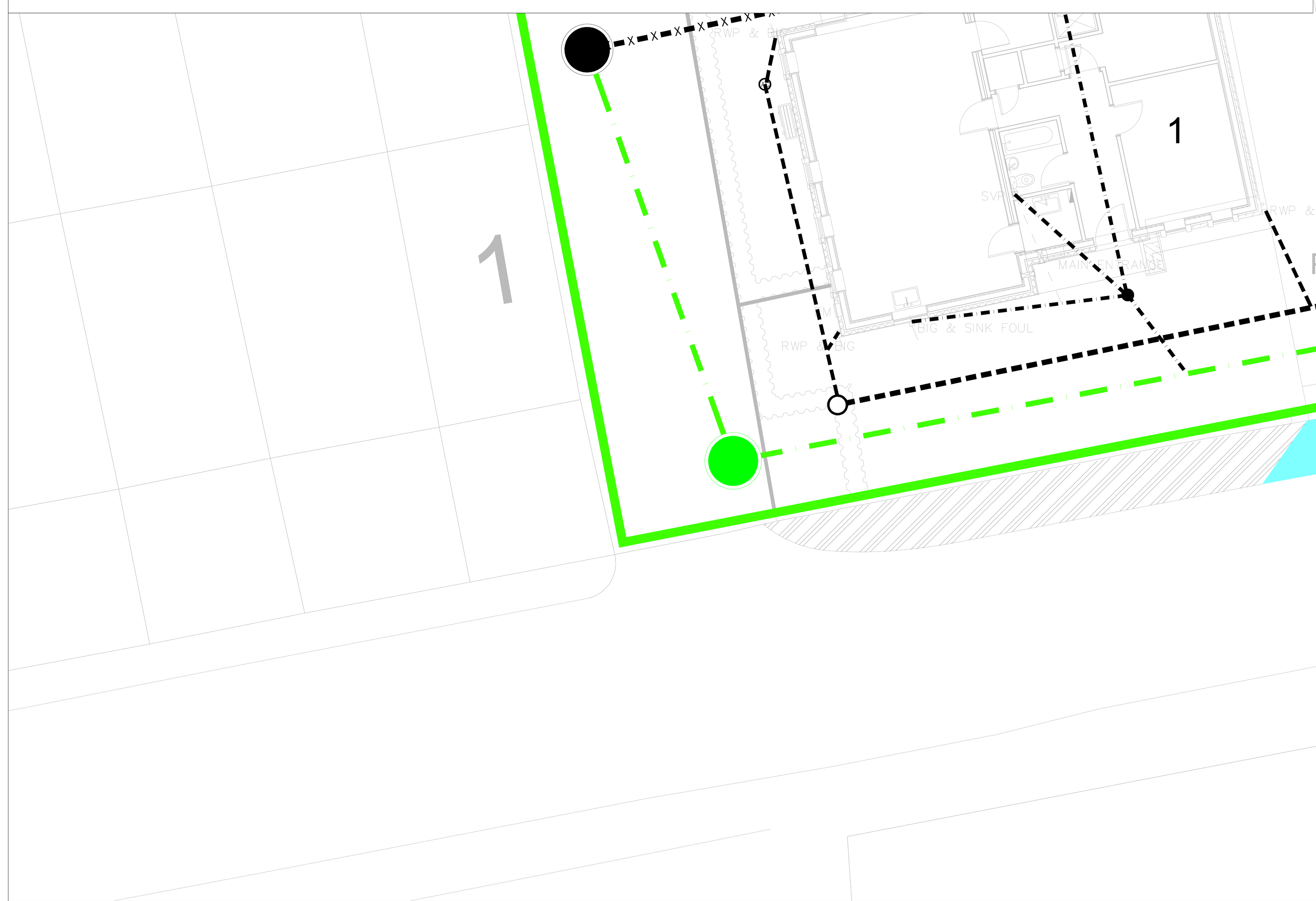
CBR %		< 2.5	2.5 to 3.0	3.0 to 4.0	4.0 to 5.0	5.0 to 15.0	>15.0
SUB BASE ONLY	SUB BASE [TYPE 1] DEPTH	Ground remediation required to improve sub grade CBR	450	420	370	330	280*
OR			OR				
SUB BASE ON CAPPING	SUB BASE [TYPE 1] DEPTH		350	320	280*	280*	280*
	CAPPING DEPTH		250	240	230	210	150

* Minimum required type 1 sub base depth to achieve 450mm of non-frost susceptible material.

1. Unless stated otherwise all dimensions are in millimetres.
2. For pavement foundation design, there are two options:
(i) Sub Base only
(ii) Sub Base and Capping
(iii) See adjacent pavement design table for layer thickness.
3. For pavement foundation design the total pavement construction buildup from final design surface to the foundation, is to be 450mm in depth, such that the materials shall not be frost susceptible in accordance with [MCHW Vol 1 Series 801 Clause 7].
4. All made ground to be removed to a depth of 3m.
5. All kerbs to be laid upon 10mm mortar bed.
6. All K1 kerbs require dowel bars.
7. For kerb details refer to Kirklees Standard Details Drawing No. HD / SD / 11 /01A,02A,03A,04A,05A.

KIRKLEES COUNCIL ADOPTABLE HIGHWAY AND FOOTWAY DETAIL





Dia 602

REFER TO SITE ACCESS ARRANGEMENT FOR SIGN LOCATIONS.

ROAD MARKING INFORMATION

DIAGRAM REFERENCES RELATE TO THE TRAFFIC SIGNS MANUAL CHAPTER 5: ROAD MARKINGS

ALL WHITE LINING AND ROAD MARKINGS ARE TO BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE TRAFFIC SIGNS MANUAL.

- DIAGRAM 1003A: MARK=0.6m, GAP=0.3m, WIDTH=0.2m
- DIAGRAM 1004: MARK=4.0m, GAP=2.0m, WIDTH=0.1m
- DIAGRAM 1009A: MARK=0.6m, GAP=0.3m, WIDTH=0.1m
- DIAGRAM 1023A: MARK=1.25m, LENGTH=3.75m

ROAD SIGN INFORMATION

DIAGRAM REFERENCES RELATE TO THE TRAFFIC SIGNS REGULATIONS & GENERAL DIRECTIONS (TSRGD) 2016. ALL SIGNS TO BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE TSRGD.

- 1 NO. SIGNS REF DIA. 602 REQUIRED TO BE POSITIONED A 2.1m HIGH FROM GROUND LEVEL
- SHEAR NUTS MUST BE USED WHEN ERECTING THE SIGN. MINIMUM LATERAL CLEARANCE IS 0.5M.
- 15mm WIDE STRIPS OF EDPM MATERIAL MUST BE USED BETWEEN THE LAMP COLUMN AND THE SIGN BRACKETS TO PREVENT DAMAGE TO THE COLUMN.

Sign Ref: 602	x-Height: 100
Letter Colour: Black	Sign Face
Background: White	Width: 600mm
Border: Red	Height: 655mm
Material: Class R2(12899-1:2007) P.C.S.	Area 0.51Sqm

DESIGN RISK NOTES:
1. IN ACCORDANCE WITH THE CONSTRUCTION (DESIGN & MANAGEMENT) REGULATIONS 2015, IT IS THE POLICY OF THIS PRACTICE TO 'DESIGN OUT' AS MANY IDENTIFIABLE RISKS AS POSSIBLE FOR THE CONSTRUCTION, OPERATION AND MAINTENANCE OF THE PROJECT.
2. ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE PRE CONSTRUCTION INFORMATION WHICH IS DEFINED IN THE CONSTRUCTION (DESIGN & MANAGEMENT) REGULATIONS 2015.
3. A COMPETENT CONTRACTOR SHOULD BE AWARE OF 'NORMAL' RISKS INVOLVED WITH THE CONSTRUCTION PROCESS. HOWEVER ADDITIONAL PRECAUTIONS WILL NEED TO BE CONSIDERED FOR THE FOLLOWING ITEMS:
A) NONE IDENTIFIED.
4. SAFE METHODS AND SYSTEMS OF WORK REMAIN THE RESPONSIBILITY OF THE CONTRACTOR AND MUST BE IDENTIFIED IN THE CONSTRUCTION PHASE PLAN. THE CONSTRUCTION PHASE PLAN MUST BE IN PLACE PRIOR TO THE START OF ANY MOBILIZATION OR SITE WORKS.
5. RESIDUAL RISKS THAT HAVE BEEN IDENTIFIED AND CANNOT BE 'DESIGNED OUT' ARE AS FOLLOWS:
A) NONE IDENTIFIED.
6. IF ANY PARTY USING THIS DRAWING CONSIDERS THAT THERE ARE 'ABNORMAL' RISKS THAT HAVE NOT BEEN IDENTIFIED ABOVE, THEN THE ENGINEER SHOULD BE NOTIFIED.

ADDITIONAL HEALTH & SAFETY NOTES:
1. CONTRACTOR SHOULD BE AWARE OF GENERAL CONSTRUCTION RISKS TO PREVENT SLIPS, TRIPS AND FALLS AND TAKE NECESSARY PRECAUTIONS WITHOUT SPECIAL INSTRUCTION.

ROADS & DRAINAGE
2. CONTRACTOR TO PROVIDE TRENCH SUPPORTS AS APPROPRIATE AND ENSURE THAT PLANT REMAINS A SAFE DISTANCE FROM TRENCHES PRIOR TO INSTALLING DRAINAGE
3. THE TIME THAT EXCAVATIONS ARE OPEN ON SITE SHOULD BE KEPT TO A MINIMUM AND ALL TRENCHES SHOULD BE SURROUNDED BY A BARRIER.
4. CONNECTIONS TO EXISTING SEWERS TO BE MADE BY APPROVED CONTRACTOR ONLY.
5. CONTRACTOR TO MAKE OPERATIVES AWARE OF ASSOCIATED DANGERS TO HEALTH SUCH AS LEPTOSPIROSIS (WEILS DISEASE) AND RECOMMENDED PRECAUTIONS. ADEQUATE WELFARE FACILITIES AND PROTECTIVE CLOTHING TO BE PROVIDED AS REQUIRED.
6. UNFINISHED MANHOLES MUST BE COVERED WITH LOAD BEARING MATERIALS AND SURROUNDED WITH BARRIER.

PIPES & CABLES
7. CONTRACTOR TO OBTAIN ALL SERVICE RECORDS PRIOR TO WORKS COMMENCING.
8. SERVICE RECORDS TO BE REFERRED TO PRIOR TO WORK COMMENCING. CONTRACTOR TO PROCEED WITH CAUTION AND SERVICES TO BE LOCATED BY HAND DIG AND PROTECTED ACCORDINGLY.

EXCAVATION/FILL
9. CONTRACTOR TO ENSURE RELEVANT MEASURES ARE TAKEN TO KEEP PLANT AND PEOPLE A SAFE DISTANCE FROM STEEP SLOPES DURING THE WORKS.
10. CONTRACTOR TO ENSURE THAT PROCEDURES ARE IN PLACE TO KEEP PEOPLE A SAFE DISTANCE FROM WORKING PLANT WHERE NECESSARY.
11. CONTRACTOR TO REFER TO GROUND INVESTIGATION REPORT FOR CONTAMINATION TESTS AND TO PROVIDE ADEQUATE WELFARE FACILITIES AND PROTECTIVE CLOTHING AS REQUIRED.
12.

DRAINAGE NOTES

1. ALL ADOPTABLE DRAINAGE WORKS AND MATERIALS TO BE IN ACCORDANCE WITH "CODE FOR ADOPTION", THE RELEVANT BRITISH/EUROPEAN AND NORTHUMBRIAN WATER'S STANDARDS/REQUIREMENTS/ADDENDUM TO THE MECHANICAL AND ELECTRICAL SPECIFICATION AND KITEMARKED.
2. MANHOLE COVERS SHALL/MUST HAVE A CLEAR OPENING OF 600MM AND SHALL BE CLASS D400 TO BS EN 124 WITH 150MM DEEP FRAMES IN HIGHWAYS.
3. FILLED GROUND MUST BE FILLED AND CONSOLIDATED UNDER THE SUPERVISION AND TO THE SATISFACTION OF NORTHUMBRIAN WATER BEFORE ANY SEWER WORKS ARE CARRIED OUT.
4. ALL ADOPTABLE SEWERS TO BE KITEMARKED (CERTIFIED TO WIS 4-35-01 AND BS/EN13476).
5. PLASTIC CHANNEL SECTIONS IN MANHOLES ARE NOT ACCEPTABLE AND THE WATER AUTHORITY PREFER CLAYWARE CHANNEL IN MANHOLES. PLASTIC CHANNELS ARE DIFFICULT TO SET IN CONCRETE BECAUSE THEY FLOAT AND A SATISFACTORY FINISH CANNOT BE OBTAINED ON THE BENCHING.
6. SULPHATE RESISTANT CEMENT (C20-DC2) AND PRECAST CONCRETE PRODUCTS MUST BE USED OR A LABORATORY REPORT PROVIDED PROVING THAT SUCH PRECAUTIONS ARE NOT NECESSARY.
7. THE ADOPTABLE SEWERS SHOULD BE A MINIMUM OF 1M AND MANHOLES 0.5M FROM KERB FACES AND SERVICE MARGINS.
8. SEWERS MUST HAVE 5 METRES CLEARANCE FROM TREES AND HEDGES.
9. SEWERS TO BE LAID IN CLASS "S" BEDDING (150MM GRANULAR BED AND SURROUND). WHERE DEPTH OF COVER TO TOP OF THE SEWER IS LESS THAN 1.2M IN HIGHWAYS AND VERGES (OR LESS THAN 900MM IN NONE VEHICULAR ACCESS AREAS) THEN A CLASS 'Z' BEDDING(CONCRETE SURROUND) SHOULD BE PROVIDED.
10. BEDDING AND BACKFILL MATERIAL TO CONFORM TO THE REQUIREMENT OF WATER INDUSTRY SPECIFICATION 4-08-02 (TABLE A2).
11. THE CHAMBER SIZE OF MANHOLES WITH MORE THAN ONE CONNECTION IN THEM MAY NEED TO BE INCREASED AN INCREMENT TO ACCOMMODATE THE CONNECTIONS AND BENDS.
12. ALL PRIVATE DRAINAGE WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH BUILDING REGULATIONS 2010 EDITION.
13. CONTRACTOR TO ESTABLISH POSITION SIZE AND DEPTH OF ALL EXISTING SEWERS AND SERVICES PRIOR TO COMMENCEMENT ON SITE.
14. THE CONTRACTOR SHALL ALLOW FOR THE PROTECTION, TEMPORARY AND PERMANENT SUPPORT, AND TEMPORARY AND PERMANENT DIVERSION WORKS, AS NECESSARY TO ALL EXISTING SERVICES.
15. THE CONTRACTOR SHALL ALLOW FOR ALL TRAFFIC MANAGEMENT IN CONNECTION WITH ROAD AND SEWER WORKS.
16. THE CONTRACTOR SHALL ALLOW FOR KEEPING SEWER TRENCHES AND EXCAVATIONS AS DRY AS PRACTICABLE BY PUMPING FROM TEMPORARY SUMPS AND DEWATERING AS APPROPRIATE. THE POINT AND METHOD OF DISCHARGE TO BE AGREED WITH THE DRAINAGE AUTHORITY.
17. FOR PIPE SPECIFICATION PLEASE REFER TO ADDITIONAL NOTES.
18. VITRIFIED CLAY PIPES AND FITTINGS SHALL COMPLY WITH THE RELEVANT PROVISIONS OF BS EN295 AND BS 65 RESPECTIVELY AND BE KITEMARKED. ALL PIPES SHALL BE EXTRA STRENGTH TO BS 65 OR EQUIVALENT BS EN295 PIPE CRUSHING STRENGTH.
19. STRUCTURED WALL PLASTIC PIPES TO WIS 4-35-01 MAY BE USED FOR FOUL & SURFACE WATER DRAINAGE, SUBJECT TO ADOPTING AUTHORITY APPROVAL.
20. PRECAST CONCRETE PRODUCTS SHALL COMPLY WITH THE RELEVANT PROVISIONS OF BS 5911 AND BE KITEMARKED. CONCRETE PIPES TO BE CLASS 120 UNLESS NOTED OTHERWISE.
21. GULLY GRATES AND FRAMES SHALL COMPLY WITH THE RELEVANT PROVISIONS OF BS EN124 AND BE OF A NON-ROCKING DESIGN WITH CAPTIVE HINGE ACCESS AND BE KITEMARKED. LOAD CLASS D400 FOR ROADS AND SERVICE YARD AREAS. CLASS C250 TO BE USED IN CAR PARKING AREAS.
22. BACKFILLING AND REINSTATEMENT TO TRENCHES IN PUBLIC HIGHWAYS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS AND SPECIFICATIONS OF THE ADOPTING AUTHORITY, OR, IN THE ABSENCE OF SUCH, IN ACCORDANCE WITH THE REQUIREMENTS OF "THE STREET WORKS REGULATIONS 1992" AND RELEVANT PROVISIONS OF H.A.U.C. "SPECIFICATION FOR THE REINSTATEMENT OF OPENINGS IN HIGHWAYS" JUNE 1992, BOTH UNDER SECTION 71 OF THE NEW ROADS AND STREET WORKS ACT 1991.
23. ALL TRADITIONAL RAINWATER PIPE DOWN COMERS TO DISCHARGE TO TRAPPED GULLIES.
24. ALL ROAD GULLIES ARE TO BE TRAPPED GULLIES.
25. ALL GULLY LEADS TO BE 150mm DIAMETER.
26. ALL REDUNDANT EXISTING DRAINAGE TO BE GRUBBED UP OR GROUTED, ANY EXISTING LIVE DRAINAGE SHOULD BE REPORTED TO THE ENGINEER AND RECONNECTED.
27. ALL ROAD GULLIES & LEADS TO BE CLEARED OF DEBRIS UPON COMPLETION OF WORKS.
28. THE CONTRACTOR MUST ENSURE THAT ANY OF THE EXISTING DRAINAGE WHICH IS LIVE IS KEPT CLEAR OF DEBRIS AND SHOULD ALLOW FOR JETTING THROUGH THE NEW & EXISTING DRAINAGE UPON COMPLETION.
29. CONTRACTOR TO TAKE MEASURES TO PROTECT HIS OPERATIVES WITH RESPECT TO THE PRESENCE OF GAS IN SEWER TRENCHES AND MANHOLES THROUGH THE USE OF GAS MONITORING EQUIPMENT AND BREATHING APPARATUS AS REQUIRED.
30. CONTRACTOR TO APPLY FOR SEWER PERMITS AND ROAD OPENING PERMITS AS NECESSARY FROM THE APPROPRIATE AUTHORITIES, PRIOR TO COMMENCING WORKS.
31. ADOPTABLE PLASTIC SEWER PIPES TO BE LAID IN MAXIMUM 3m LENGTHS UNLESS THERE IS A SPECIFIC OPERATIONAL NEED TO LAY LONGER LENGTHS.
32. WHERE PLASTIC PIPES ARE INSTALLED PRIOR TO GETTING APPROVAL THEN A LIGHT LINE CCTV SURVEY AND REPORT ARE REQUIRED PRIOR TO APPROVAL.
33. WHERE A B125 COVER AND FRAME HAS BEEN APPROVED, THIS MUST NOT BE COATED IN PLASTIC AND MUST HAVE LIFTING EYES SUITABLY SIZED TO ACCOMMODATE STANDARD LIFTING KEYS. SCREW DOWN COVERS ARE NOT ACCEPTABLE.
34. THERE SHOULD BE ENOUGH CLEARANCE TO ACCOMMODATE THE BEDDING FOR BOTH PIPES, APPROX 300MM : IF CROSSOVER IS NEAR THE ROCKER THEN THE CLEARANCE NEEDED MAY BE INCREASED
35. THE MINIMUM CRUSHING STRENGTH FOR CLAY PIPES SHOULD BE AS FOLLOWS : 100MM DIA. 40KN/M, 150MM DIA. 40KN/M, 225MM DIA. 45KN/M AND 300MM DIA. 72KN/M. THE MINIMUM CRUSHING STRENGTH FOR CONCRETE PIPES SHOULD BE - (CLASS 120 TO EN 1916/BS5911-1 2002). PLASTIC PIPES SHOULD CONFORM TO WIS 4-35-01 AND BS EN13476.

KEY

- SITE BOUNDARY
- ADOPTABLE CARRIAGEWAY TO SUIT KIRKLEES COUNCIL SPECIFICATION
- ADOPTABLE FOOTWAYS TO SUIT KIRKLEES COUNCIL SPECIFICATION
- VEHICULAR CROSSING TO KIRKLEES COUNCIL SPECIFICATION
- S104 DRAINAGE
- ADOPTED GULLY

SEE DRAWING D500 FOR KERBING DETAILS

Date	Revisions	Drawn	Checked	Rev
18.11.2025	DENBY LANE FOOTWAY ADDED	NA	AE	3
17.11.2025	CHANGED TO S278	NA	AE	2
13/11/2025	FIRST ISSUE	SR	AE	1

Dwg Status: TENDER

NORTH EAST 0191 2585632

YORKSHIRE 0113 535 3500

RWO CONSULTING ENGINEERS

WWW.RWO.GROUP
INFO@RWO.GROUP

Client: YORKSHIRE COUNTY PROPERTIES

Project: DENBY LANE GRANGE MOOR

Title: S38 LAYOUT

DO NOT SCALE	Scale @ A0: 1:200	Drawn SR	Checked AE	Date 11.11.2025
Job No Y22054		Dwg No D802		Rev 3