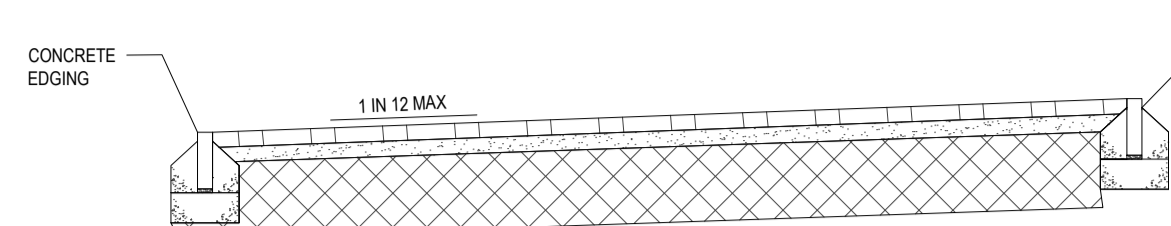


SURFACE COURSE: PAVER SLABS TO DEVELOPERS SPECIFICATION TO BS 1338  
 BEDDING COURSE: 25mm SHARP SAND TO BS7533:3 CATEGORY 2 OF ANNEX D  
 SUB-BASE: 100mm GRANULAR SUB-BASE MATERIAL TYPE 1 TO CLAUSE 803 TABLE B2  
 MCHW1 SERIES 800 (SEE NOTE 2) (SUBJECT TO SITE CBR SEE TABLE BELOW)



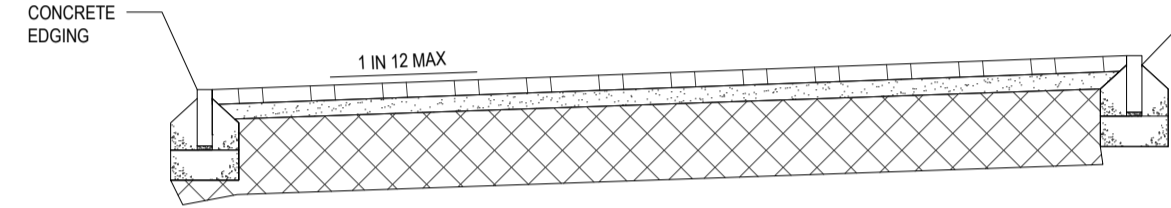
HOUSE PATHS AND PATIOS  
 (TAKEN FROM NHBC STANDARDS 10.2)

SCALE 1:25

NHBC NOTES

6 WHEN LAID TO EITHER 90 OR 45 DEGREES HERRINGBONE PATTERN THEN THE EDGE PERIMETER TO BE LAID WITH ONE SINGLE ROW OF STRETCHER BOND SET PARALLEL TO THE EDGE RESTRAINT. WHERE BLOCK PAVERS ARE LAID ADJUTING DRAINAGE CHANNELS, GULLY GRATES AND THE LIKE, THE UPPER SURFACE OF THE BLOCK PAVERS SHALL BE SET BETWEEN 3 AND 6mm ABOVE THE GRATING. MANUFACTURERS DECLARED VALUE MARKINGS V0 AND S4 ARE ACCEPTABLE IF V0 IS 1.0KG/M<sup>2</sup> OR LESS AND S4 IS 45 OR MORE BASED ON C SCALE UNIT (WITH REGARD TO ABRASION, CLASS A2, NO TEST RESULT IS GREATER THAN 23mm; AND CLASS A1 = NO PERFORMANCE DETERMINED).

PAVERS: BLOCK PAVERS TO DEVELOPERS SPECIFICATION TO BS 1338 OF CLASS MARKINGS W2, A2 AND S3 (WEATHERING, ABRASION AND SLIP/IKD CLASSES) (SEE NOTE 6) MINIMUM THICKNESS TO BE 50mm  
 BEDDING COURSE: 50mm SHARP SAND TO BS7533:3 CATEGORY 2 OF ANNEX D  
 SUB-BASE: GRANULAR SUB-BASE MATERIAL TYPE 1 TO CLAUSE 803 TABLE B2  
 MCHW1 SERIES 800 (SEE NOTE 2) (SUBJECT TO SITE CBR SEE TABLE BELOW)



BLOCK PAVED PRIVATE DRIVES & PARKING AREAS HAVING USE BY CARS & LIGHT VEHICLES DETAIL  
 (TAKEN FROM NHBC GUIDANCE 10.2 TABLE 2D)

SCALE 1:25

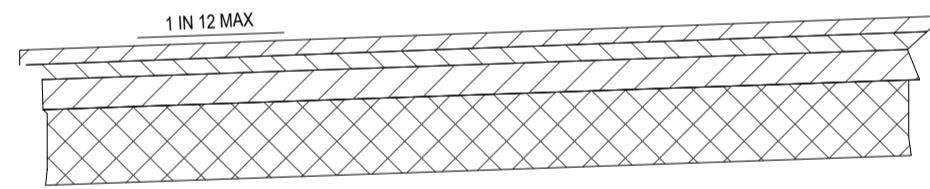
NHBC NOTES

2 IF A CAPPING LAYER IS SPECIFIED THEN SUB-BASE THICKNESS CAN BE REDUCED. DMRB VOLUME 7 SECTION 2 PART 2 HD 2595 FOUNDATIONS CHAPTER 3 CAPPING AND SUB-BASE GIVES GUIDANCE ON CAPPING AND SUB-BASE THICKNESS DESIGN BASED ON CBR VALUES AND WITH AND WITHOUT A CAPPING LAYER.

5 ASPHALT BASED MATERIALS CAN BE USED AS A PARTIAL REPLACEMENT FOR FULL THICKNESS OF GRANULAR SUB-BASE TYPE 1 MATERIAL.

6 WHEN LAID TO EITHER 90 OR 45 DEGREES HERRINGBONE PATTERN THEN THE EDGE PERIMETER TO BE LAID WITH ONE SINGLE ROW OF STRETCHER BOND SET PARALLEL TO THE EDGE RESTRAINT. WHERE BLOCK PAVERS ARE LAID ADJUTING DRAINAGE CHANNELS, GULLY GRATES AND THE LIKE, THE UPPER SURFACE OF THE BLOCK PAVERS SHALL BE SET BETWEEN 3 AND 6mm ABOVE THE GRATING. MANUFACTURERS DECLARED VALUE MARKINGS V0 AND S4 ARE ACCEPTABLE IF V0 IS 1.0KG/M<sup>2</sup> OR LESS AND S4 IS 45 OR MORE BASED ON C SCALE UNIT (WITH REGARD TO ABRASION, CLASS A2, NO TEST RESULT IS GREATER THAN 23mm; AND CLASS A1 = NO PERFORMANCE DETERMINED).

SURFACE COURSE: 30mm STONE MASTIC ASPHALT TO BS EN 13108-5 AND PD6691 WITH AGGREGATES TO BS EN 13043 AND PD6682-2, SMA 10 SURF 4000  
 BINDER COURSE: 50mm ASPHALT CONCRETE TO BS EN 13108-1 AND PD6691 UTILISING AGGREGATES TO BS EN 13043 AND PD6682-2, AC20 DENSE BIN 100/150  
 BASE COURSE: 100mm ASPHALT CONCRETE TO BS EN 13108-1 AND PD6691 UTILISING AGGREGATES TO BS EN 13043 AND PD6682-2, AC20 DENSE BIN 100/150  
 SUB-BASE: GRANULAR SUB-BASE MATERIAL TYPE 1 TO CLAUSE 803 TABLE B2  
 MCHW1 SERIES 800



PRIVATE DRIVES & PARKING AREAS HAVING USE BY CARS & LIGHT VEHICLES DETAIL  
 (TAKEN FROM NHBC GUIDANCE 9.2 TABLE 2A)

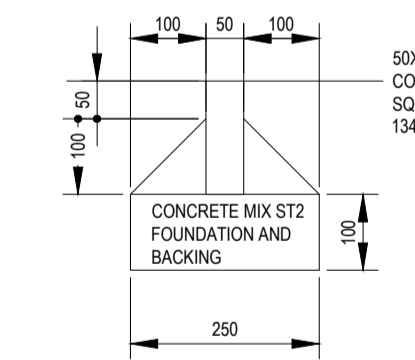
SCALE 1:25

NHBC NOTES

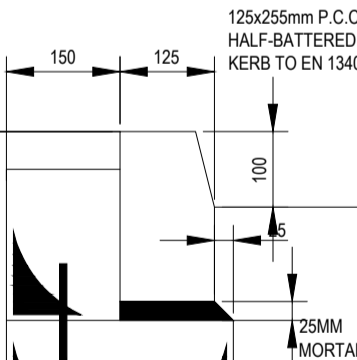
2 IF A CAPPING LAYER IS SPECIFIED THEN SUB-BASE THICKNESS CAN BE REDUCED. DMRB VOLUME 7 SECTION 2 PART 2 HD 2595 FOUNDATIONS CHAPTER 3 CAPPING AND SUB-BASE GIVES GUIDANCE ON CAPPING AND SUB-BASE THICKNESS DESIGN BASED ON CBR VALUES AND WITH AND WITHOUT A CAPPING LAYER.

5 ASPHALT BASED MATERIALS CAN BE USED AS A PARTIAL REPLACEMENT FOR FULL THICKNESS OF GRANULAR SUB-BASE TYPE 1 MATERIAL.

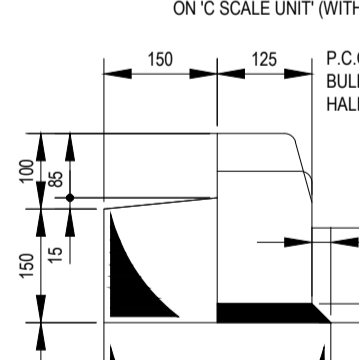
6 WHEN LAID TO EITHER 90 OR 45 DEGREES HERRINGBONE PATTERN THEN THE EDGE PERIMETER TO BE LAID WITH ONE SINGLE ROW OF STRETCHER BOND SET PARALLEL TO THE EDGE RESTRAINT. WHERE BLOCK PAVERS ARE LAID ADJUTING DRAINAGE CHANNELS, GULLY GRATES AND THE LIKE, THE UPPER SURFACE OF THE BLOCK PAVERS SHALL BE SET BETWEEN 3 AND 6mm ABOVE THE GRATING. MANUFACTURERS DECLARED VALUE MARKINGS V0 AND S4 ARE ACCEPTABLE IF V0 IS 1.0KG/M<sup>2</sup> OR LESS AND S4 IS 45 OR MORE BASED ON C SCALE UNIT (WITH REGARD TO ABRASION, CLASS A2, NO TEST RESULT IS GREATER THAN 23mm; AND CLASS A1 = NO PERFORMANCE DETERMINED).



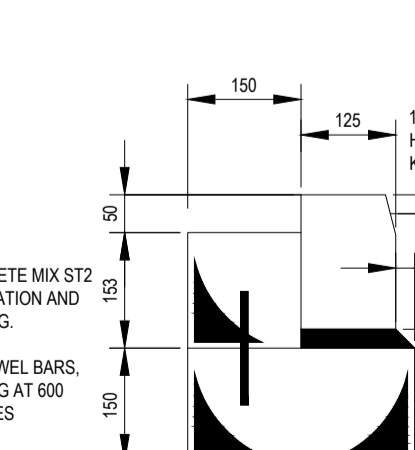
CONCRETE EDGING KERB  
 50 X 150  
 SCALE 1:10



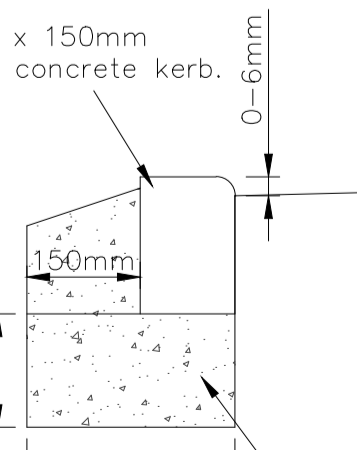
HALF BATTER  
 125 x 255  
 SCALE 1:10



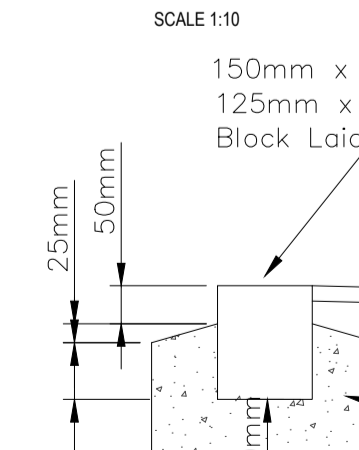
HALF BATTER DROPPER  
 125 x 150  
 SCALE 1:10



DRIVEWAY CROSSING KERB  
 DETAIL  
 SCALE 1:10



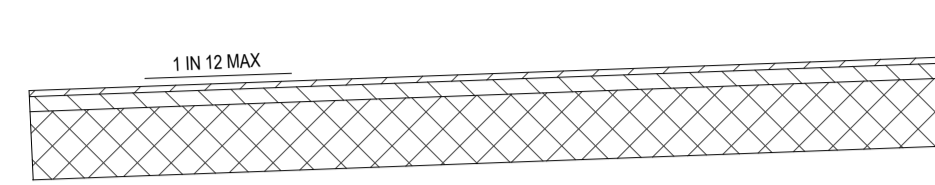
BULLNOSED KERB DETAIL  
 (6mm KARB FACE)  
 Scale 1:10



CHANNEL BLOCK DETAIL  
 Scale 1:10

ALL KERB FOUNDATION DIMENSIONS ARE A MINIMUM

SURFACE COURSE: 20mm STONE MASTIC ASPHALT TO BS EN 13108-5 AND PD6691 WITH AGGREGATES TO BS EN 13043 AND PD6682-2, AC 6 DENSE SURF 100/150  
 BINDER COURSE: 50mm ASPHALT CONCRETE TO BS EN 13108-1 AND PD6691 UTILISING AGGREGATES TO BS EN 13043 AND PD6682-2, AC 20 DENSE BIN 40/50  
 SUB-BASE: 225mm GRANULAR SUB-BASE MATERIAL TYPE 1 TO CLAUSE 803 TABLE B2  
 MCHW1 SERIES 800 (SEE NOTE 2) (SUBJECT TO SITE CBR SEE TABLE BELOW)



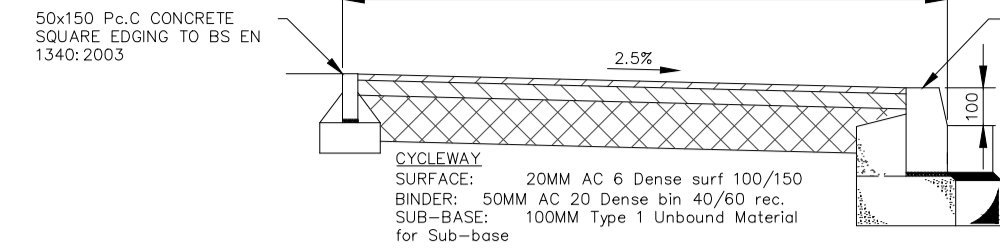
VEHICULAR CROSSINGS  
 (TAKEN FROM CD239 TABLE 3.18B)

SCALE 1:25

MINIMUM SUB-BASE THICKNESS FOR LIGHT VEHICLE FOOTWAYS	
CALIFORNIA BEARING RATIO (CBR) VALUES	MINIMUM THICKNESS (mm) OF SUB-BASE (CONSOLIDATED IN ACCORDANCE WITH MCHW VOLUME 1 CLAUSE 801, TABLE 8/1) WITHOUT GEOTEXTILE UNDERNEATH
2.5% - 5%	200
GREATER THAN 5%	150

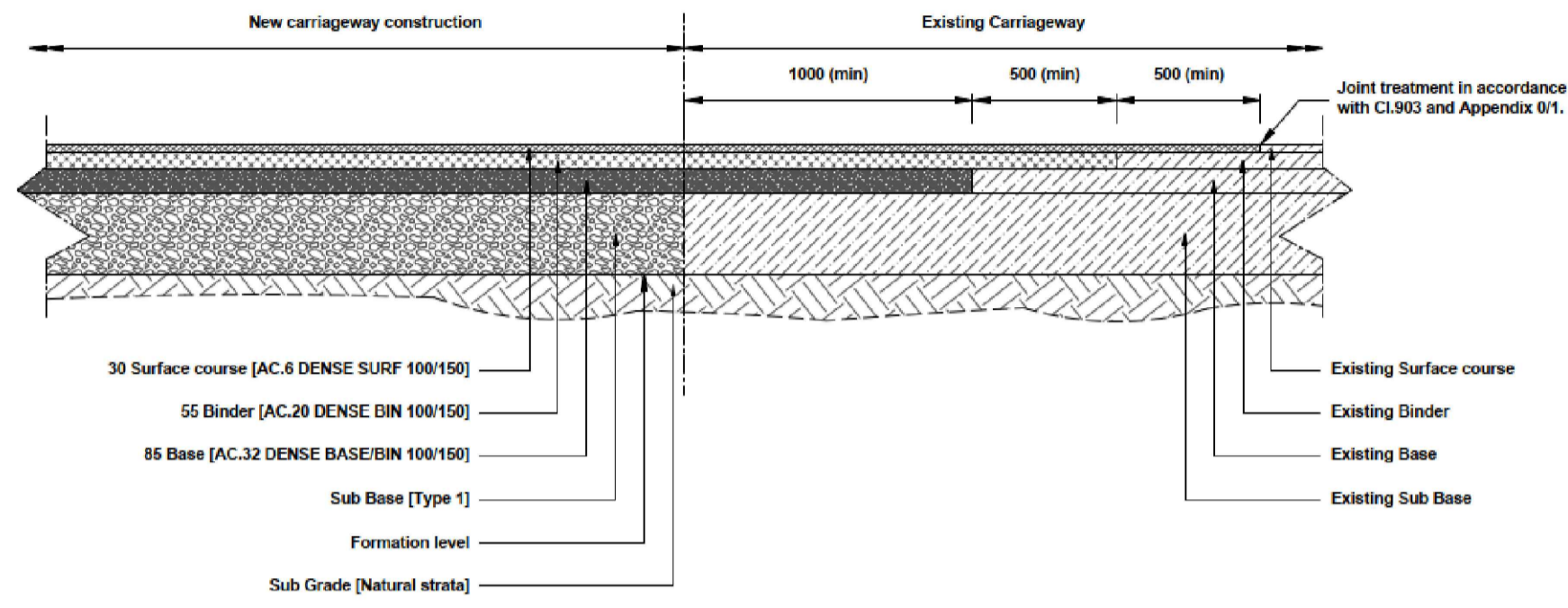
MINIMUM SUB-BASE THICKNESS FOR PRIVATE DRIVE AREAS		
CALIFORNIA BEARING RATIO (CBR) VALUES	MINIMUM THICKNESS (mm) OF SUB-BASE (CONSOLIDATED IN ACCORDANCE WITH MCHW VOLUME 1 CLAUSE 801, TABLE 8/1)	
	WITHOUT GEOTEXTILE UNDERNEATH	WITH GEOTEXTILE UNDERNEATH
LESS THAN 2%	N/A	300
2% - 3%	325	225
3% - 5%	250	150
5% - 7%	150	
7% - 20%	100	

MINIMUM SUB-BASE THICKNESS FOR PRIVATE DRIVE AREAS		
CALIFORNIA BEARING RATIO (CBR) VALUES	MINIMUM THICKNESS (mm) OF SUB-BASE (CONSOLIDATED IN ACCORDANCE WITH MCHW VOLUME 1 CLAUSE 801, TABLE 8/1)	
	WITHOUT GEOTEXTILE UNDERNEATH	WITH GEOTEXTILE UNDERNEATH
LESS THAN 2%	N/A	300
2% - 3%	325	225
3% - 5%	250	150
5% - 7%	150	
7% - 20%	100	



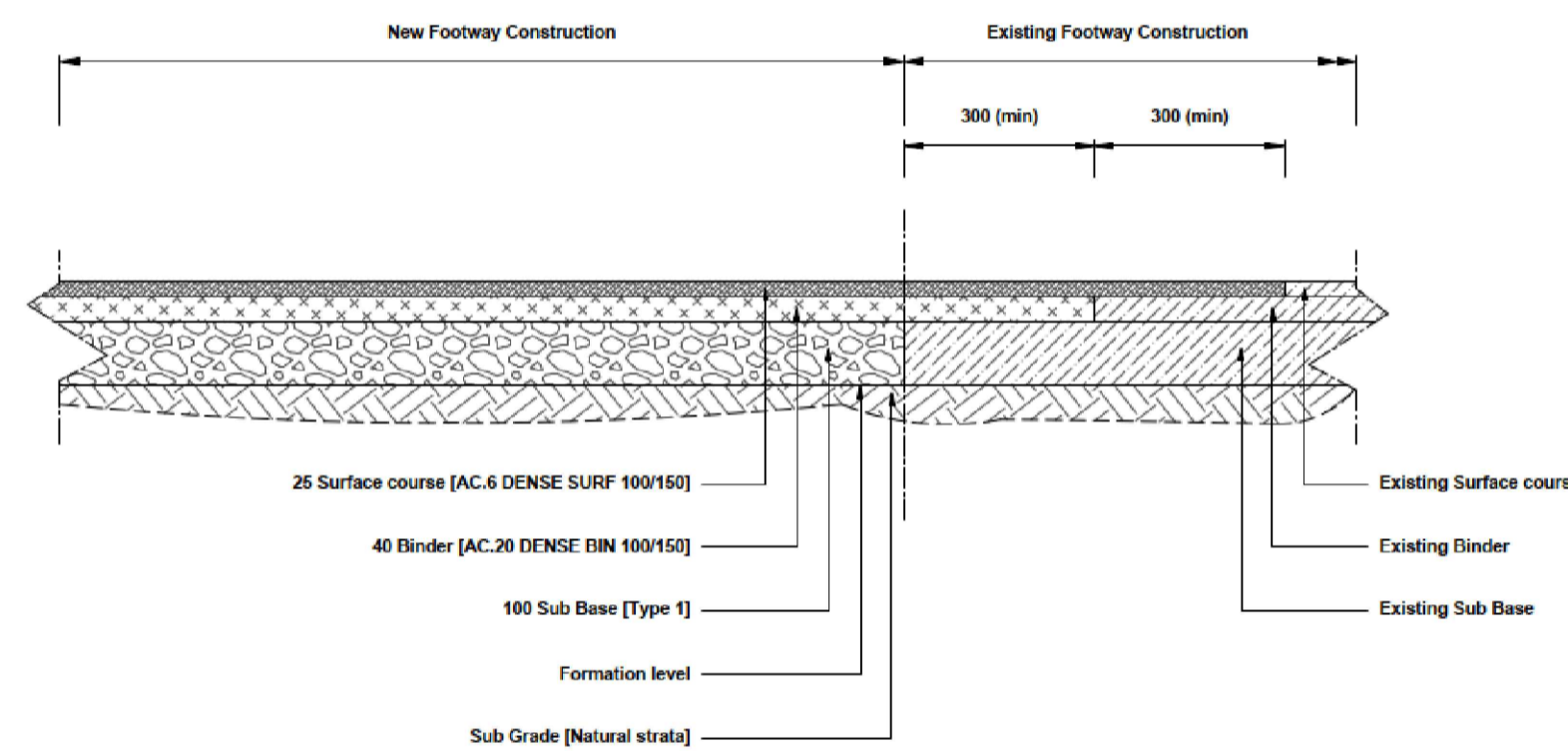
FOOTWAYS (PEDESTRIAN ONLY)  
 (TAKEN FROM CD239 TABLE 3.18A)

SCALE 1:25

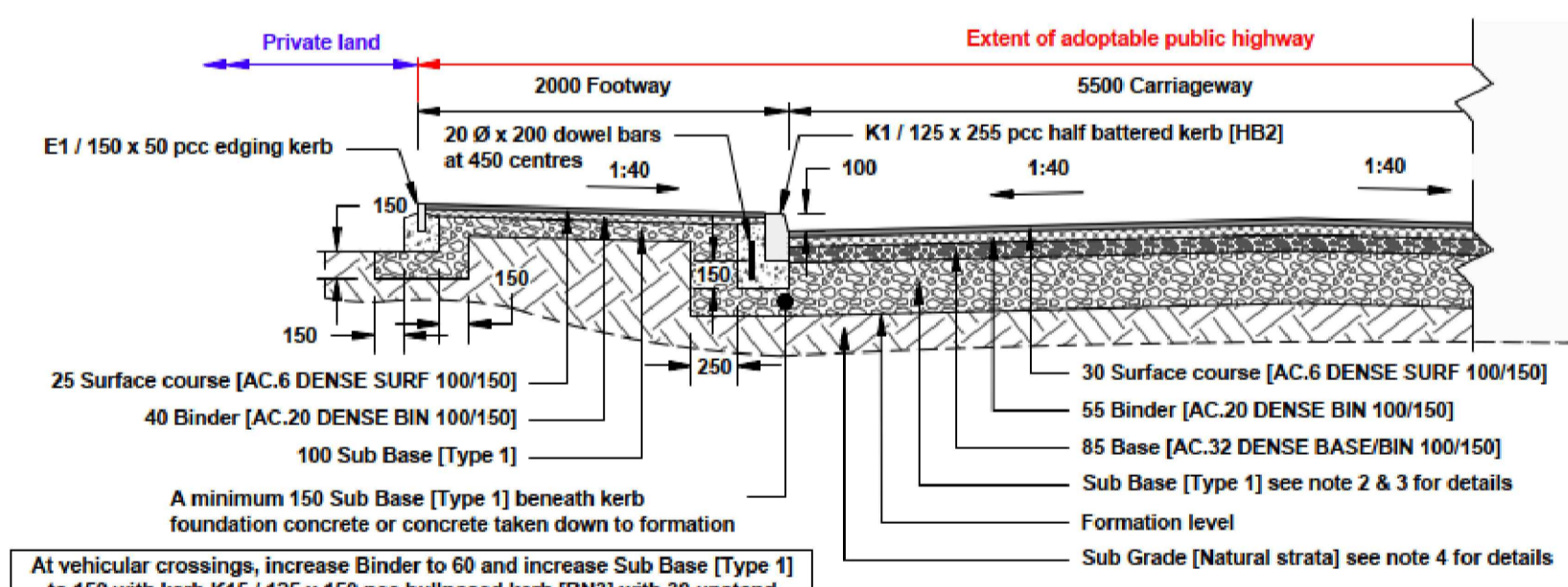


THIS DETAIL SHOWS NEW TO NEW & NEW TO EXISTING. TRADITIONAL ESTATE ROAD TO AN EXISTING TRADITIONAL ESTATE ROAD TIE-IN DETAIL IS REQUIRED FOR ANY OTHER CATEGORY OF ROAD, A BESPOKE TIE-IN DETAIL IS REQUIRED

NEW TO EXISTING CARRIAGEWAY DETAIL



NEW TO EXISTING FOOTWAY DETAIL

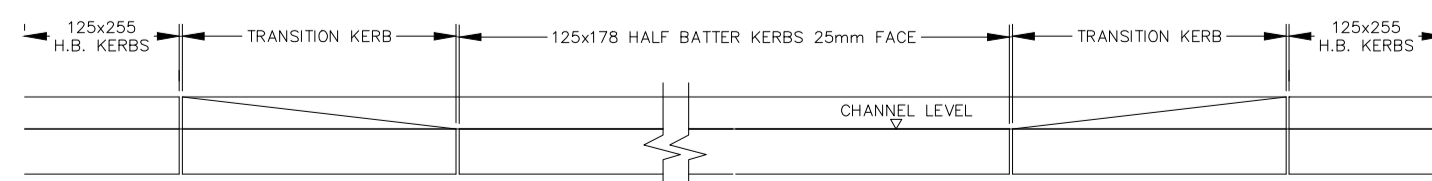


At vehicular crossings, increase Binder to 60 and increase Sub Base [Type 1] to 150 with kerb K15 / 125 x 150 pcc bullnose kerb [BN3] with 30 upstand

PAVEMENT FOUNDATION DESIGN LOCAL RESIDENTIAL STREET / TRADITIONAL ESTATE ROAD [TYPE B]		CBR %				
SUB BASE ONLY	SUB BASE [TYPE 1] DEPTH	< 2.5	2.5 to 3.0	3.0 to 4.0	4.0 to 5.0	> 15.0
		450	420	370	330	280
OR		Ground remediation required to improve sub grade CBR				
SUB BASE ON CAPPING	SUB BASE [TYPE 1] DEPTH	350	320	280	280	280
		CAPPING DEPTH	250	240	230	210

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

KIRKLEES COUNCIL ADOPTABLE HIGHWAY AND FOOTWAY DETAIL



ELEVATION ON VEHICLE DROPPED CROSSING  
 SCALE 1:20

DRAINAGE NOTES

1. ALL ADAPTABLE DRAINAGE WORKS AND MATERIALS TO BE IN ACCORDANCE WITH 'CODE FOR ADOPTION', THE RELEVANT BRITISH/EUROPEAN AND YORKSHIRE WATER'S STANDARDS/REQUIREMENTS/ADDENDUM TO THE MECHANICAL AND ELECTRICAL SPECIFICATION AND KITEMARKED.
2. MANHOLE COVERS SHALL 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 YORKSHIRE WATER BEFORE ANY SEWER WORKS ARE CARRIED OUT.
4. ALL ADAPTABLE SEWERS TO BE KITEMARKED (CERTIFIED TO WIS 4-35-01 AND BS EN13478).
5. ASBESTOS RESISTANT CHANNEL SECTIONS IN MANHOLES ARE NOT ACCEPTABLE AND THE WATER AUTHORITY PREFER GLASSWARE 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 (SR5) AND PRECAST CONCRETE PRODUCTS MUST BE USED OR A LABORATORY REPORT PROVIDED PROVING THAT SUCH PRECAUTIONS ARE NOT NECESSARY.
7. THE ADAPTABLE 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 'B' BEDDING (150MM GRANULAR BED AND SURROUND), WHERE DEPTH OF COVER TO TOP OF THE SEWER IS LESS THAN 1.2M IN HIGHWAYS AND ERGERS (OR LESS THAN 800MM 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 SLUICING 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. FITTED CLAY PIPES AND FITTINGS SHALL COMPLY WITH THE RELEVANT PROVISIONS OF BS EN286 AND BS 65 RESPECTIVELY AND BE KITEMARKED. ALL PIPES SHALL BE EXTRA STRENGTH TO BS 65 OR EQUIVALENT BS EN286 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-RUCKING DESIGN WITH CAPTIVE HINGE ACCESS AND BE KITEMARKED. LOAD CLASS D400 FOR ROADS AND SERVICE YARD AREAS, CLASS C20 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 SANITARY 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 GROUDED, 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 SCHEM PERMITS AND ROAD OPENING PERMITS AS NECESSARY FROM THE APPROPRIATE AUTHORITIES, PRIOR TO COMMENCING WORKS.
31. ADAPTABLE 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 BIDS 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 'F' 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. 40KNM, 150MM DIA. 40KNM, 225MM DIA. 45KNM AND 300MM DIA. 70KNM. THE MINIMUM CRUSHING STRENGTH FOR CONCRETE PIPES SHOULD BE: CLASS 120 TO EN 1916888-11:2002. PLASTIC PIPES SHOULD CONFORM TO WIS 4-35-01 AND BS EN13478.

SUBJECT TO LOCAL AUTHORITY & WATER AUTHORITY APPROVAL

DATE	DESCRIPTION	DR	AE	CHK	REV
12/11/2025	KIRKLEES COUNCIL ROAD AND FOOTWAY SPEC ADDED	NA	AE		03
05/08/2025	UPDATED TO SUIT COMMENTS	SR	AE		02
21/07/2025	FIRST ISSUE	NA	AE		01

TENDER



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NEWCASTLE | LEEDS | LONDON | STOKESLEY

YORKSHIRE COUNTY PROPERTIES

PROJECT:

DENBY LANE GRANGE MOOR

TITLE:

ROAD CONSTRUCTION DETAILS

PROJECT No: 22054 | DISCIPLINE: CIVIL | SCALE: 1:AS SHOWN @:A1

DRAWING No: D702 | REV: 3

D702

3