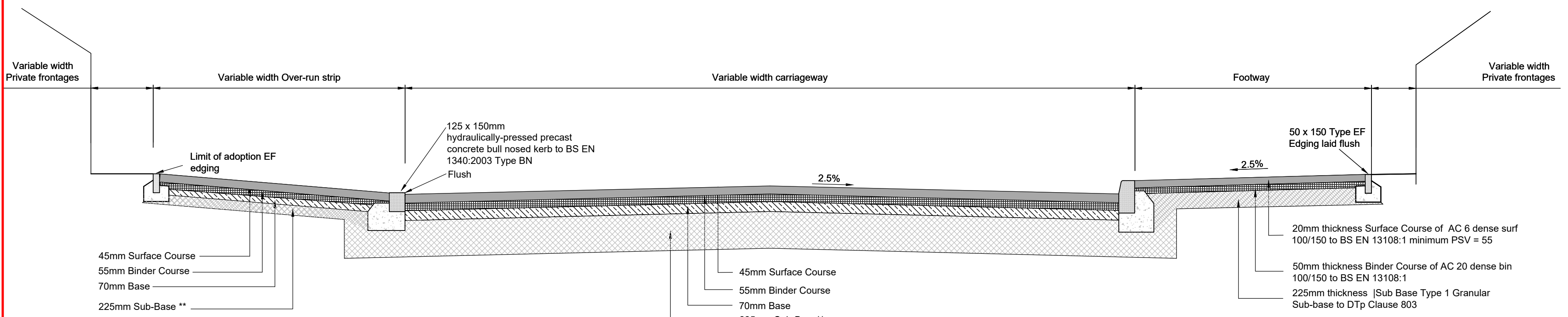
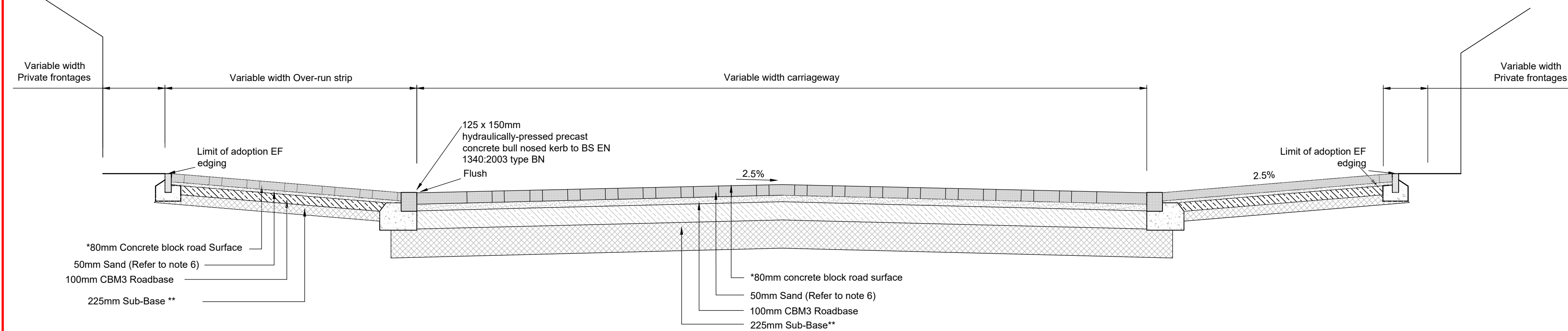


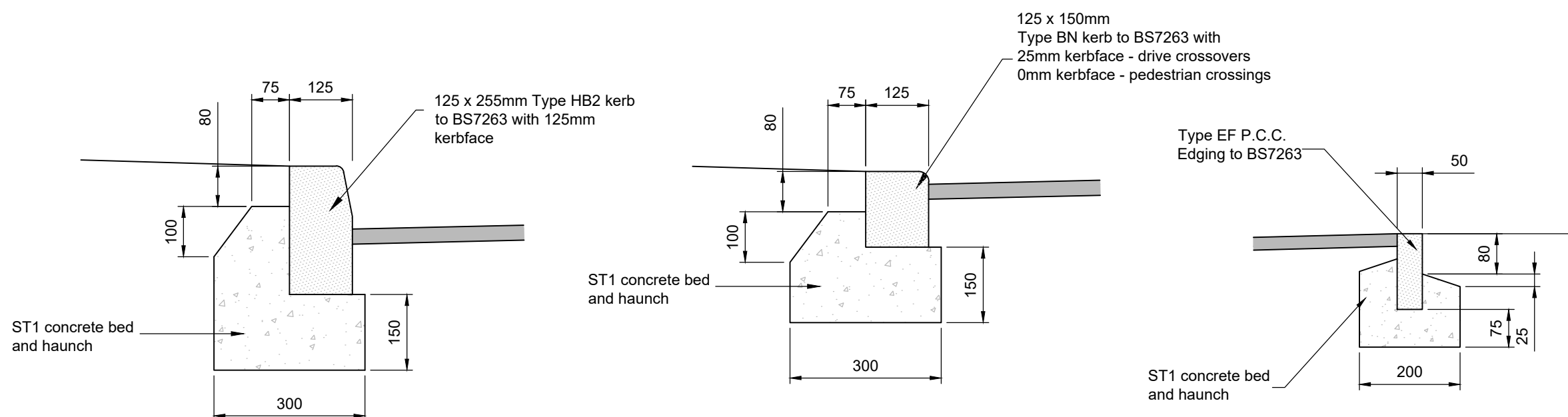
Superseded



TYPICAL SECTION THROUGH ROAD - FLEXIBLE CARRIAGEWAY



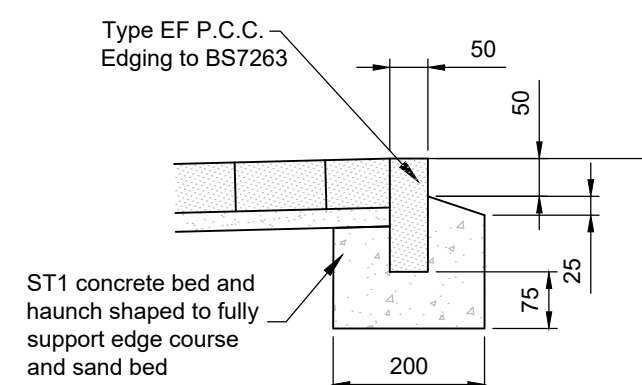
TYPICAL SECTION THROUGH - BLOCK PAVING



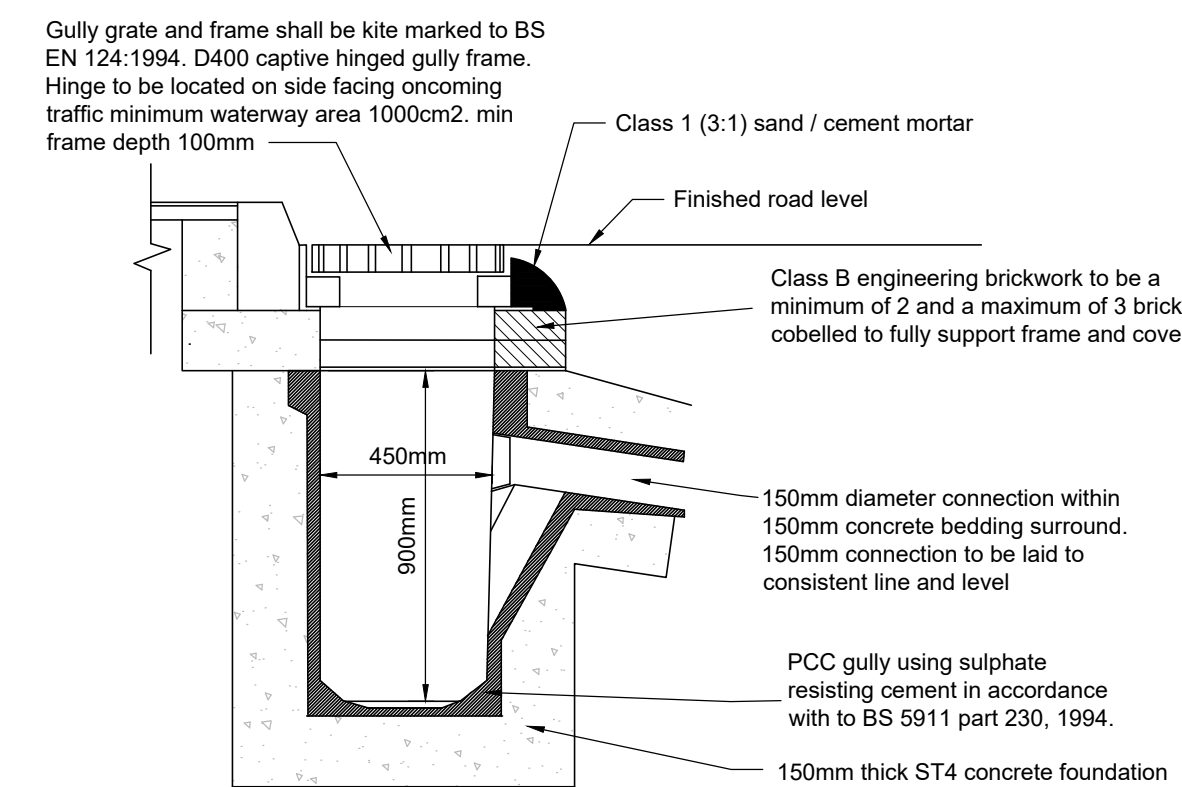
TYPE HB2 KERB DETAIL

TYPE BN KERB DETAIL

TYPE EF EDGING DETAIL



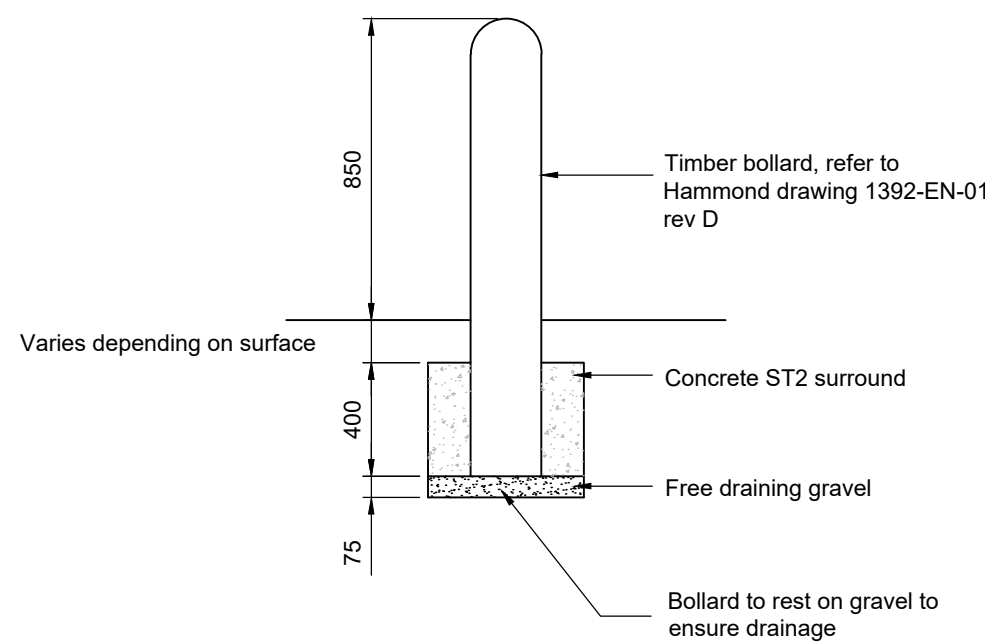
TYPE EF EDGING DETAIL
(Block Paving)



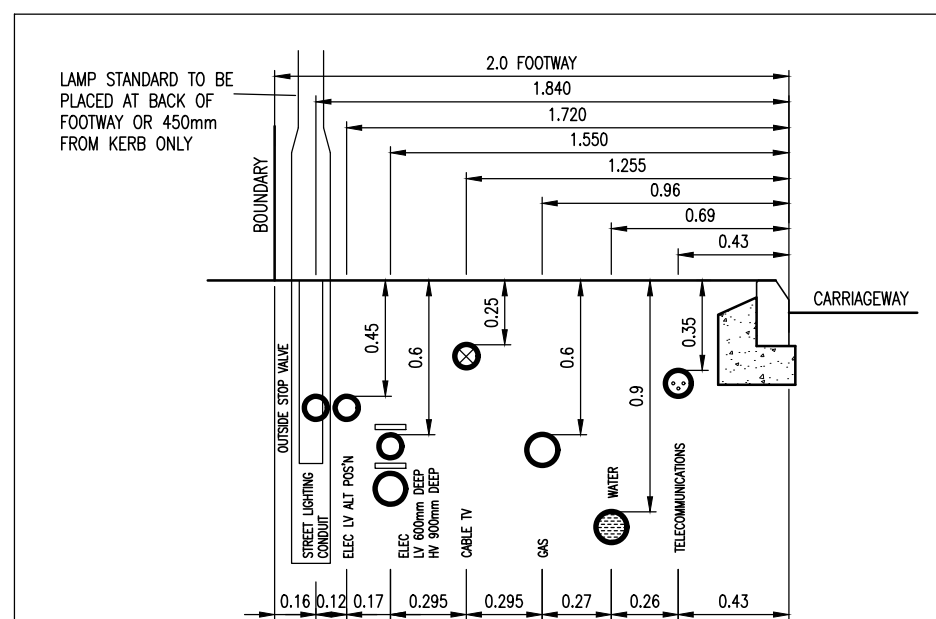
ROAD GULLY RETAIL

NOTES:

1. All references to 'SHW' to mean 'The Specification for Highway Works' published as Volume 1 of The Manual of Contract Documents for Highway Works March 1998 and as amended May 2001.
2. Gullies in carriageways shall have gratings and frames with captive hinges and be of Group 4 Class D400 to BS EN 124.
3. The minimum depth from the top of the grating to the top of the gully outlet is to be 750mm when the connecting pipe is under the carriageway and 600mm elsewhere.
4. Precast concrete gullies and cover slabs shall be to BS5911: Part 2.



TIMBER BOLLARD DETAIL



RECOMMENDED ARRANGEMENT OF SERVICES IN A 2.0m FOOTWAY

NOTE: NOT ALL SERVICES ARE EXPECTED TO BE WITHIN, OR ON THE SAME, FOOTWAY SIDE. WHERE THE FOOTWAY WIDTH IS LESS THAN 2.0m THE CONTRACTOR SHALL SEEK GUIDANCE FROM THE ENGINEER.

TABLE A

CBR Reading %	Subbase Thickness mm	Capping Layer Thickness mm
> 5	225	0
2 - 5	150	350
1 - 2	150	450
< 1	150	600

Notes:

1. CBR values shown are those of the subgrade.
2. Bituminous Sprays (bitumen Emulsion Spray Tack Coat (Clause 920)) - All surfaces to be overlaid with bituminous materials shall be bond coated or tack coated (as appropriate), and all joints treated, in accordance with CL 903 and 920. See appendix 7/4.
3. ** If subgrade is frost susceptible sub-base depth to be increased to give minimum pavement construction depth of 450mm.

TABLE B - Flexible Pavement Construction

Description	Design Information	Additional Information
Carriageway Specification		
45mm thick Surface Course to Clause 912	Close graded macadam surface course to BS4987 :part 1 Clause 7.3 for 14mm nominal size close graded surface course. (AC 14 close surf)	Required declared PSV category; min 55 Required maximum AAIV category in hot asphalt systems; 12;
50mm thick Asphalt Concrete Binder Course to Clause 906	AC 20 Dense bin 40/60 rec. BS EN 13108 Part 1, PD 6691; Annex B	The Course aggregate shall be crushed rock, blast furnace slag and steel slag in accordance with Clause 801. Void content to be measured in accordance with CI 929.3
70mm thick Asphalt Concrete Base Course to Clause 906	AC 32 Dense base 40/60 BS EN 13106 Part 1, PD 6691; Annex B	The Course aggregate shall be crushed rock, blast furnace slag and steel slag in accordance with clause 801
225mm thick** Granular Sub-Base to Clause 803.	Granular Sub-base Material Type 1. Min. CBR = 30%	A Capping layer will be required for subgrade's with a CBR of less than 5% (See Table A)
Over-run Strip Specification		
45mm thick Surface Course to Clause 912	Close graded macadam surface course to BS4987 :part 1 Clause 7.3 for 14mm nominal size close graded surface course. (AC 14 close surf)	Required declared PSV category; min 55 Required maximum AAIV category in hot asphalt systems; 12;
50mm thick Asphalt Concrete Binder Course to Clause 906	AC 20 Dense bin 40/60 rec. BS EN 13108 Part 1, PD 6691; Annex B	The Course aggregate shall be crushed rock, blast furnace slag and steel slag in accordance with Clause 801. Void content to be measured in accordance with CI 929.3
70mm thick Asphalt Concrete Base Course to Clause 906	AC 32 Dense base 40/60 BS EN 13106 Part 1, PD 6691; Annex B	The Course aggregate shall be crushed rock, blast furnace slag and steel slag in accordance with clause 801
225mm thick** Granular Sub-Base to Clause 803.	Granular Sub-base Material Type 1. Min. CBR = 30%	A Capping layer will be required for subgrade's with a CBR of less than 5% (See Table A)

TABLE C - Flexible Footway Construction

Description	Layer	Material	Thickness	DTP SHW Specification	British standard specification
Flexible footway	Surface Course	6mm size Dense Bitumen Macadam Surface Course	20mm	Clause 909	BS 4987 : PART 1 : 7.5
	Binder Course	20mm size Dense Bitumen Macadam Surface Course	50mm	Clause 906	BS 4987 : PART 1 : 6.5
	Sub-Base	Granular Sub-Base Material Type 1	100mm / 200mm	Clause 803	

If the sub grade is frost susceptible the pavement shall comprise of a minimum 450mm thickness of material not susceptible to frost action.

Sub grade Equilibrium CBR	<1%	1-2%	2-5%	>5%
Sub-Base thickness	150mm	150mm	150mm	225mm
Capping Layer	600mm	450mm	350mm	-

TABLE D - Block Pavement Construction

Description	Design Information	Additional Information
Carriageway & Overrun Strip Specification		
80mm PCC block paviour	800mm thick concrete block paving to BS 6717:2001	Laid in 45° herringbone or stretcher pattern in accordance with the manufacturers instructions. Joints to be filled with kiln dried sand and vibrated after final compaction.
50mm sharp and bedding	50mm cat. II laying course sand	Refer to Note 6
100mm thick CBM3 Roadbase	Cement bound material Category 3 (CBM3). In accordance with CI 1035 and CI1038.	
225mm thick** Granular Sub-Base to Clause 803.	Granular Sub-base Material Type 1. Min. CBR = 30%	A Capping layer will be required for subgrade's with a CBR of less than 5% (See Table A)

Gradient	Min PSV
<1:14 to 1:10	55
>1:10	60

Notes:

1. Formation to be sprayed with the specified weed-killer in compliance with manufacture instructions.
2. Minimum PSV required for the flexible footway surface course to be as follows:

NOTES

1. All highway works are to be carried out in accordance with Neath Port Talbot County Borough Council's specification for Highway Works.
2. Refer to the Engineering Drawings for road types, and carriageway, footway and service margin widths.
3. All kerbs shall be laid upright on Grade ST1 concrete as dimensioned. Immediately after laying, kerbs and edgings shall be backed and hunched with ST1 concrete in accordance with the detail.
4. All precast concrete kerbs etc. shall comply with BS 7263 : Part 1 : 1994.
5. All precast concrete block paving, shall comply with BS 6717.
6. Proprietary dropper kerbs, radius kerbs, transition kerbs, angle kerbs, quadrant kerbs, etc. are to be used as appropriate.
7. All ironware in the carriageway is to comply with BS EN1241. Certification mark of BSI, LRQA or SGS only are acceptable.
8. The sub base and capping layer thickness is dependent on proposed Equilibrium CBR values. CBR tests to be carried out by a NPTCBB approved laboratory and the specification then agreed by NPTCBB and the Developer.
9. Footway/path surfacing to be laid 5mm higher than adjacent kerb.
10. Gully gratings to be laid 5mm below adjacent road surface
11. Do not scale from this drawing.
12. All dimensions are in millimetres unless otherwise specified
13. Sub base shall be either crushed concrete with a minimum 150 MPa stiffness or Type 1 in accordance with Specification for Highways Work Clause 803. Sub grade material shall be tested to ensure that a consistent 5% minimum CBR is achieved. Should a consistent 30% CBR or above be achieved for sub grade material, the Contractor shall consult the Designer with respect to reviewing the pavement design construction layers.
14. Refer to External Works for details of surfacing type in each area, including block paving colour and size.
15. All works to be in accordance with NPTCBB Specification for the construction of Roads for Adoption and the Approval of NPTCBB Engineer.
16. Block paving sharp sand laid to a depth of 50mm but compressed to a maximum of 30mm.
17. All Materials and specifications to be in accordance with the Coed Darcy Town Code.