

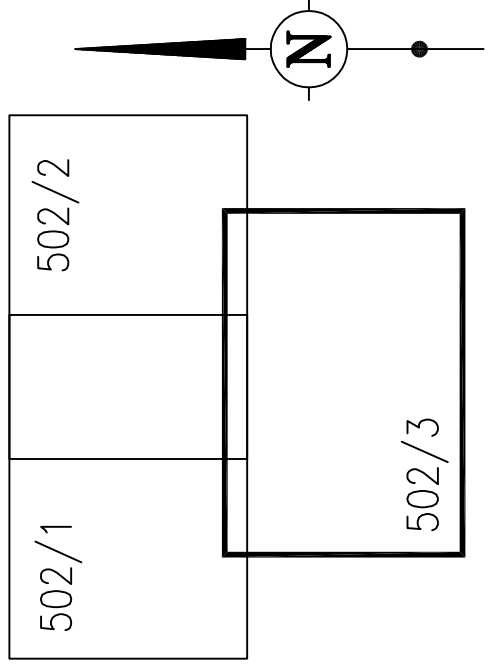


- | DRAWING LIST | |
|--------------|---------------------------------------|
| 04 | — Hard landscaping Layout |
| 502/1 | — Engineering layout sheet 1 |
| 502/2 | — Engineering layout sheet 2 |
| 502/3 | — Engineering layout sheet 3 |
| 503/1 | — Road & Sewer section sheet 1 |
| 503/2 | — Road & Sewer section sheet 2 |
| 503/3 | — Road & Sewer section sheet 3 |
| 504/1 | — Typical Road details sheet 1 |
| 504/2 | — Typical Road details sheet 2 |
| 505 | — Typical sewer details |
| 506 | — Private drive details |
| 507 | — Private parking court details |
| 508 | — Private parking court details |
| 509 | — Typical UPVC house drainage details |
| 510 | — Private regrotte details |
| 511 | — Typical services details |
| 512/1 | — Services Layout Sheet 1 |
| 512/2 | — Services Layout Sheet 2 |
| 513 | — Trench soakaway details |
| 514 | — Kerb details |
| 515/1 | — Contouring Layout Sheet 1 |
| 515/2 | — Contouring Layout Sheet 2 |

Where gravel boards have been utilised post length to be increased accordingly to ensure minimum 600mm embedment in the natural ground on the low side.

ENGINEERING LAYOUTS SHOULD BE USED FOR:	ENGINEERING LAYOUTS SHOULD NOT BE USED FOR:
- All adoptable sewer & highway works – position & level - All private building drainage – position & level - All road & retaining works – position & height - Roof names & postal numbers - Street lighting & other street furniture / signage	- Fencing & drive positions or materials - Private house paths or patios - House types & positions

Bollard Specification	FFP
b. 0.15m square Epping Timber bollard ESG 150/1500 set 1m above ground level supplied by Furnitures or similar approved.	☒ Feeder pillars to service private street lighting column PL1. Feeder pillars to be waterproof lockable kiosk of adequate space for 500x300mm meter board (EDF) such that the bottom edge of the board will not be less than 450mm or more than

[illegible]

Bovis Homes Limited
Cantham, Devon

HAMPTON PARK
LITTLEHAMPTON, WEST SUSSEX

ENGINEERING LAYOUT
SHEET 3

DRAWN BY	SY	DATE	NOV 2015	DRAWING NO.	REV
SCALE:	1/250 at A1	CHECKED/DATE		LITL-502/3	H

SOUTHERN WATER NOTES

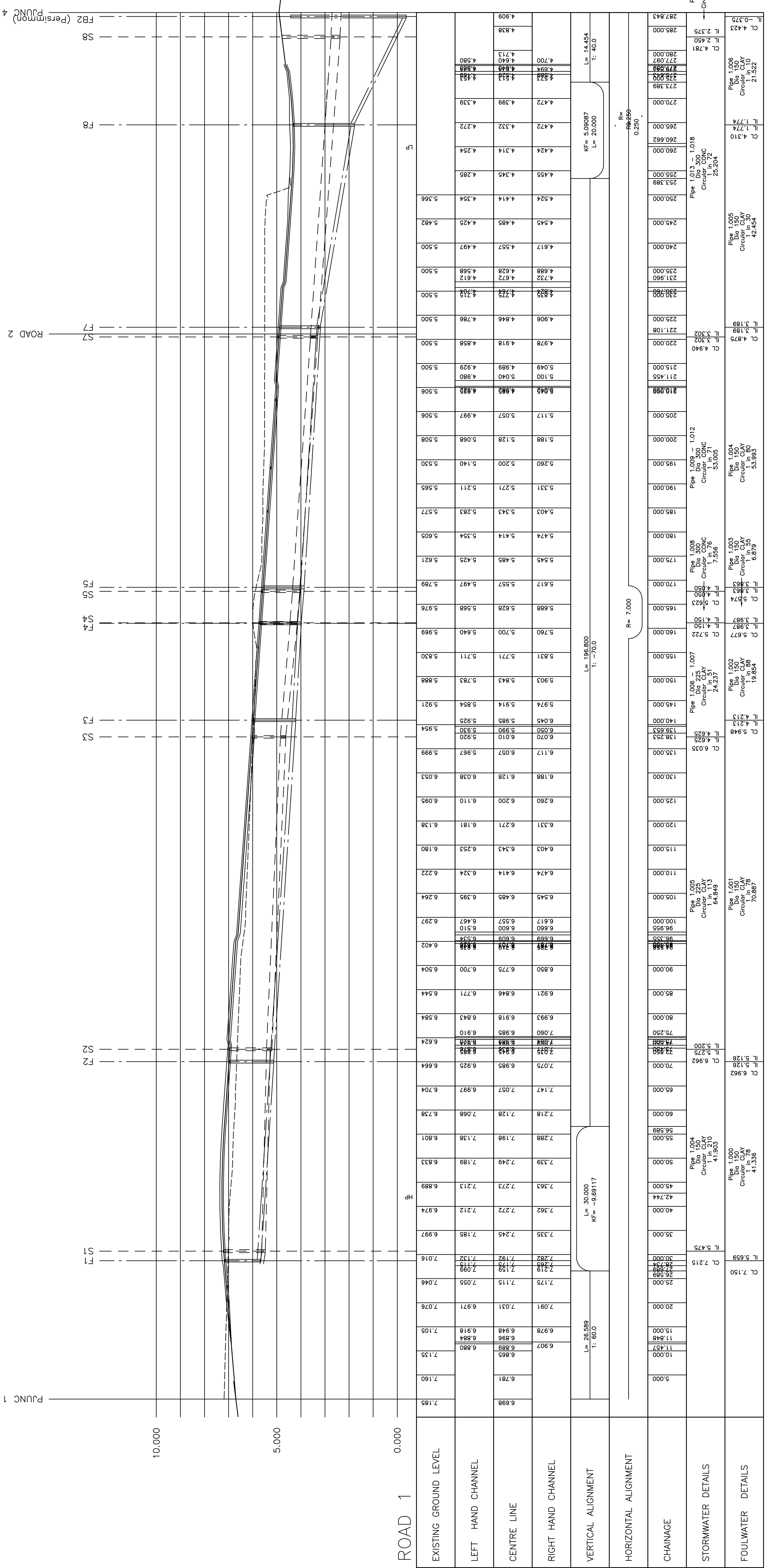
1. ALL LEVELS RELATE TO OS DATUM
2. CLASS S GRANULAR BED AND SURROUND TO ALL SEWER PIPES WHERE COVER IS GREATER THAN 1.2m BELOW FINISHED LEVELS.
3. CLASS A CONCRETE BED AND SURROUND TO ALL SEWER PIPES WHERE COVER IS LESS THAN 1.2m BELOW FINISHED LEVELS.
4. REFER TO 'TYPICAL SEWER DETAILS' DRAWING FOR MATERIAL SPECIFICATION.
5. PIPES WITH A NOMINAL PIPE RANGE OF 150MM-300MM MAY BE CONSTRUCTED IN EITHER:

o) CLAY

OR

b) UPVC (ULTRA FORTIS) WHICH IS RESISTANT TO A JETTING PRESSURE OF 4000PSI. MINIMISE THE NUMBER OF JOINTS IN THE SYSTEM BY USING 3M PIPE LENGTH & DO NOT HAVE UP SEAL JOINTS HENCE PREVENTING ROOT INGRESS.
6. ALL PIPES GREATER THAN 300MM DIAMETER TO BE CONCRETE CLASS 120 TO BS EN 1916 & BS5911-1.
7. STRENGTH OF PIPE TO BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS FOR THE DEPTH OF WHICH THE PIPES ARE TO BE LAD & THE INTENDED IMPOSED LOAD.
8. ALL ADAPTABLE DRAINAGE WORKS TO BE CONSTRUCTED AS DETAILED IN THE WATER AUTHORITIES ASSOCIATION PUBLICATION 'SEWERS FOR ADOPTION 6TH EDITION'.

----- Existing Ground Line
----- Proposed Finished Level



Do not scale from this drawing. Use written dimensions only. When shown relationship between dimensions, the dimension with the greatest number of significant figures shall govern. All dimensions are to be rounded to the nearest millimetre. This drawing is the copyright of Bovis Homes Ltd.



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SITE

HAMPTON PARK
LITTLEHAMPTON, WEST SUSSEX

DRAWING TITLE

ROAD & SEWER SECTIONS

SHEET 1

DRAWN BY

SY

DATE

NOV 2015

CHECKED/DATE

REVISION NO.

LITL-503/1

REV

C

SOUTHERN WATER NOTES

1. ALL LEVELS RELATE TO OS DATUM
2. CLASS 5 GRANULAR BED AND SURROUND TO ALL SEWER PIPES WHERE COVER IS GREATER THAN 1.2m BELOW FINISHED LEVELS.
3. CLASS 4 CONCRETE BED AND SURROUND TO ALL SEWER PIPES WHERE COVER IS LESS THAN 1.2m BELOW FINISHED LEVELS.
4. REFER TO 'TYPICAL SEWER DETAILS' DRAWING FOR MATERIAL SPECIFICATION.
5. PIPES WITH A NOMINAL PIPE RANGE OF 150MM-300MM MAY BE CONSTRUCTED IN EITHER:
 - a) CLAY
 - OR
 - b) UPVC (ULTRA FORTIS) WHICH IS RESISTANT TO A JOINTING PRESSURE OF 400KPSI, MINIMISE THE NUMBER OF JENTS IN THE SYSTEM BY USING 3M PIPE LENGTH & DO NOT HAVE LIP SEAL JOINTS HENCE PREVENTING ROOT INGRESS.
6. ALL PIPES GREATER THAN 300MM DIAMETER TO BE CONCRETE CLASS 120 TO BS EN 1916 & BS5911-1.
7. STRENGTH OF PIPE TO BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS FOR THE DEPTH OF WHICH THE PIPES ARE TO BE LAID & THE INTENDED IMPOSED LOAD.
8. ALL ADAPTABLE DRAINAGE WORKS TO BE CONSTRUCTED AS DETAILED IN THE WATER AUTHORITIES ASSOCIATION PUBLICATION 'SEWERS FOR ADOPTION 6TH EDITION'.

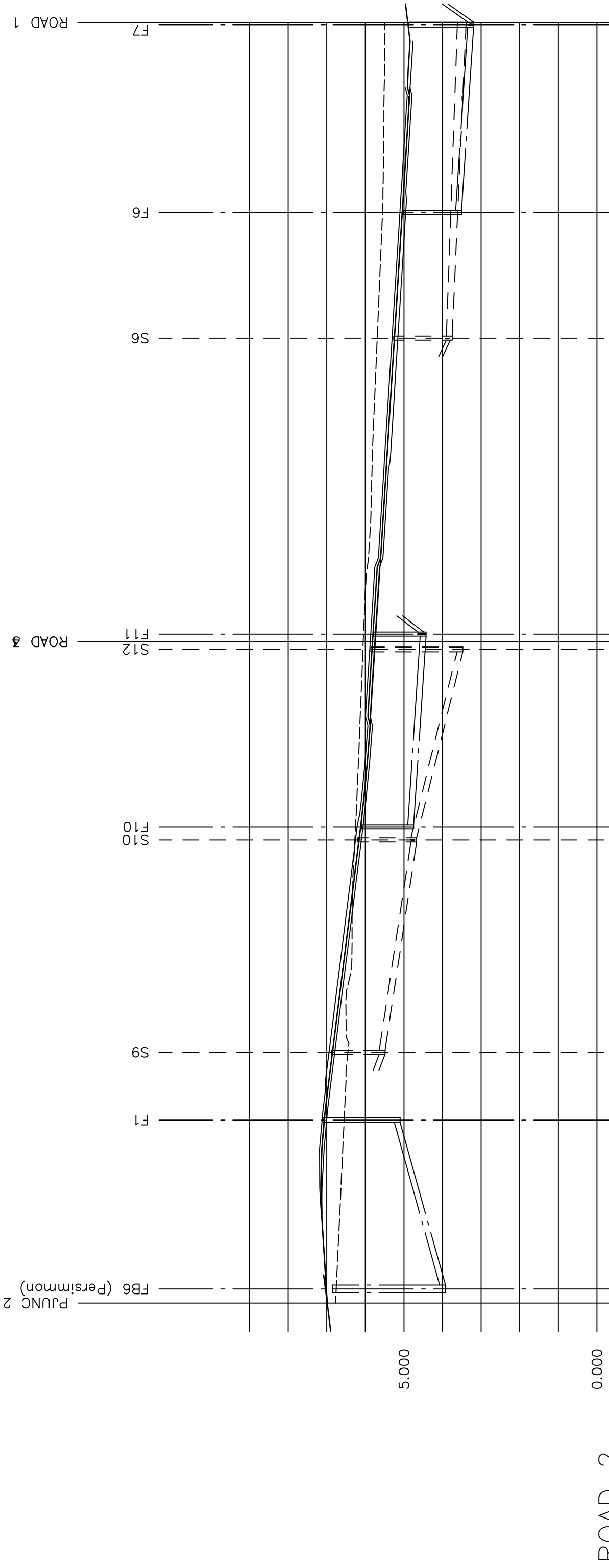
OR

b) UPVC (ULTRA FORTIS) WHICH IS RESISTANT TO A JETTING PRESSURE OF 4000PSI, MINIMISE THE NUMBER OF JOINTS IN THE SYSTEM BY USING 3M PIPE LENGTH & DO NOT HAVE LIP SEAL JOINTS HENCE PREVENTING ROOT INGRESS.

6. ALL PIPES GREATER THAN 300MM DIAMETER TO BE CONCRETE CLASS 120 TO BS EN 1916 & BS5911-1.
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Existing Ground Line

Proposed Finished Level _____

[illegible]

HORIZONTAL ALIGNMENT[illegible]

C	08.11.16	S12-Outfall – Pipe up sized to a 375.	NM
B	28.09.16	Drainage amended to suit engineering layout.	SY
A	18.01.16	Drainage amended to suit engineering layout.	SY

Drainage Authority Approval Date

Highway	Authority	Approval Date
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Do not scale from this drawing. Use written dimensions only. When shown relationships between slab levels and ground levels are to be checked on site. Any discrepancy or suggested modification to be reported to Design and Engineering Director.

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SITE

HAMPTON PARK
LITTLEHAMPTON, WEST SUSSEX

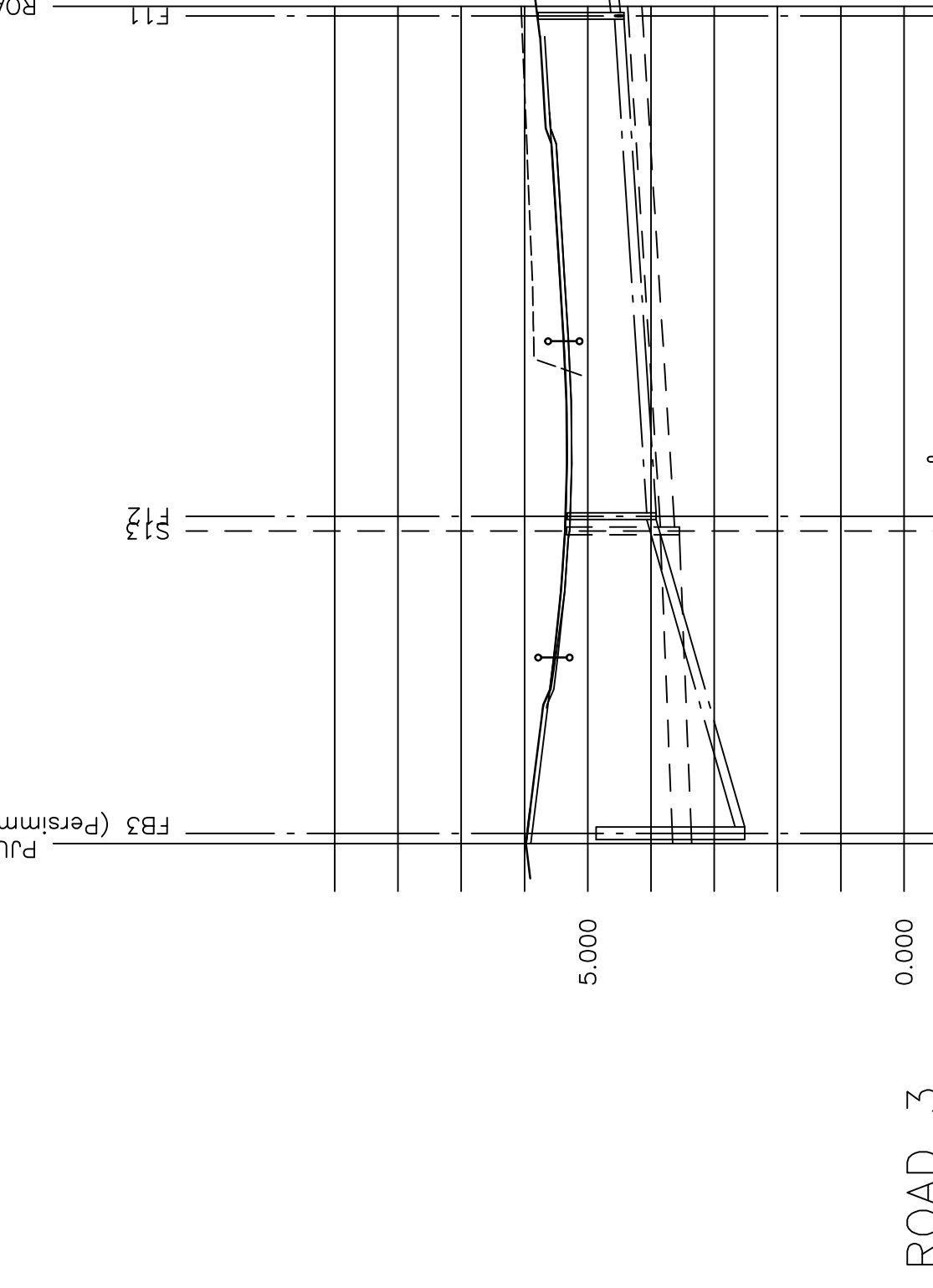
DRAWING TITLE

ROAD & SEWER SECTIONS

SHEET 2

DRAWN BY SY	DATE NOV 2015	DRAWING NO. LITL-503/2	REV C
SCALE: V-1:100, H-1:500	CHECKED/DATE		

AD 2

[illegible]

Drainage Authority Approval Date	Highway Authority Approval Date
----------------------------------	---------------------------------

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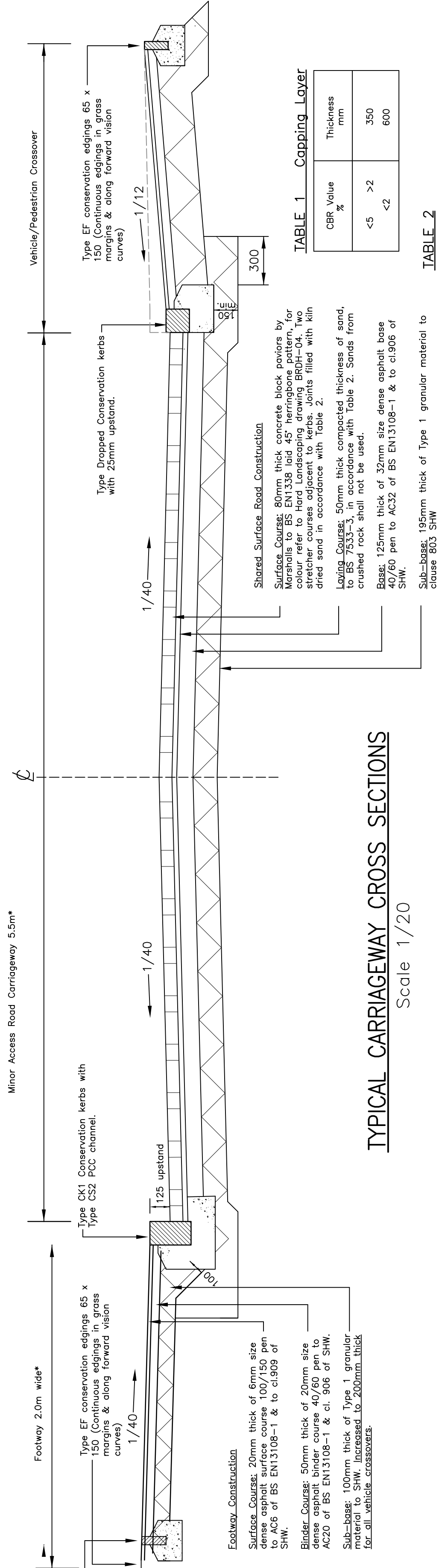
SITE

HAMPTON PARK
LITTLEHAMPTON, WEST SUSSEX

ROAD & SEWER SECTIONS
SHEET 3

DRAWN BY	SY	DATE	NOV 2015	DRAWING NO.	LITL-503/3	REV	C
SCALE:		V=1:100, H=1:500					

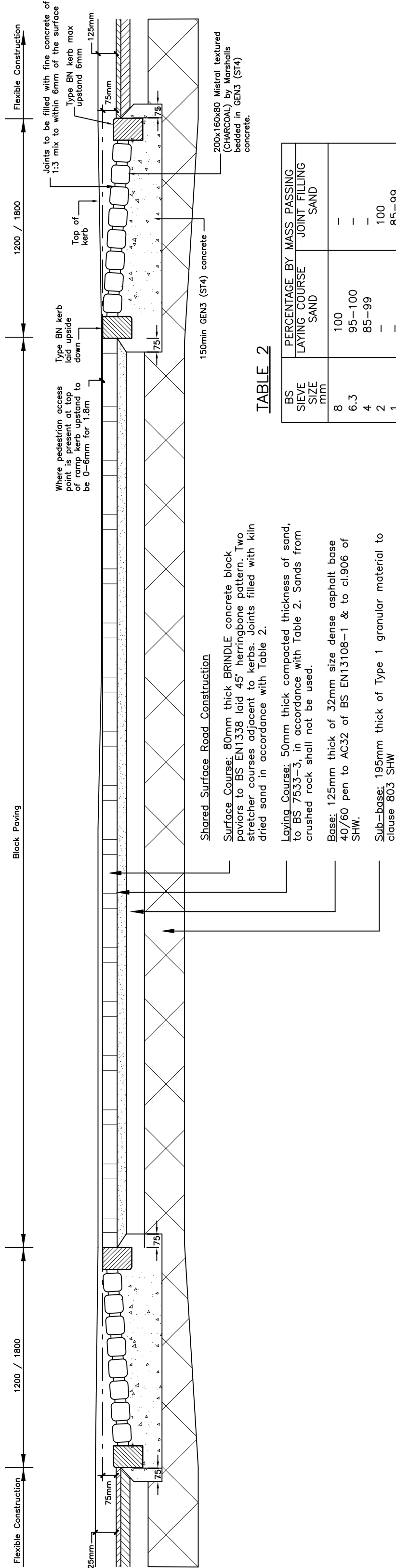
*Refer to Engineering Layout



TYPICAL CARRIAGEWAY CROSS SECTIONS

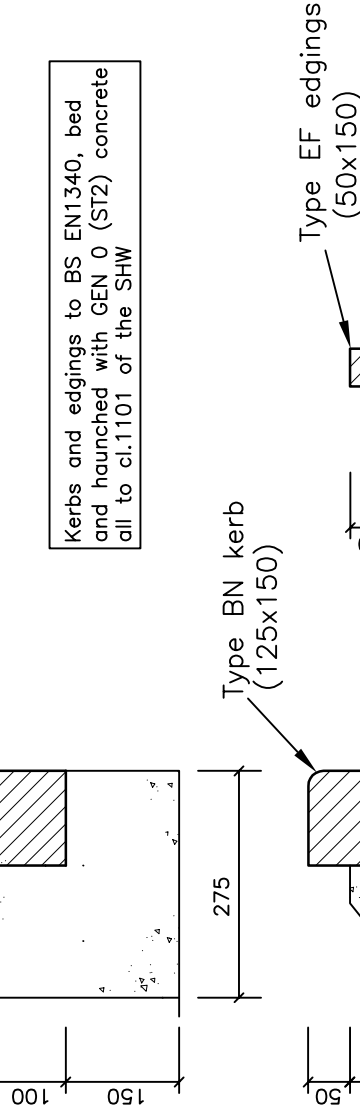
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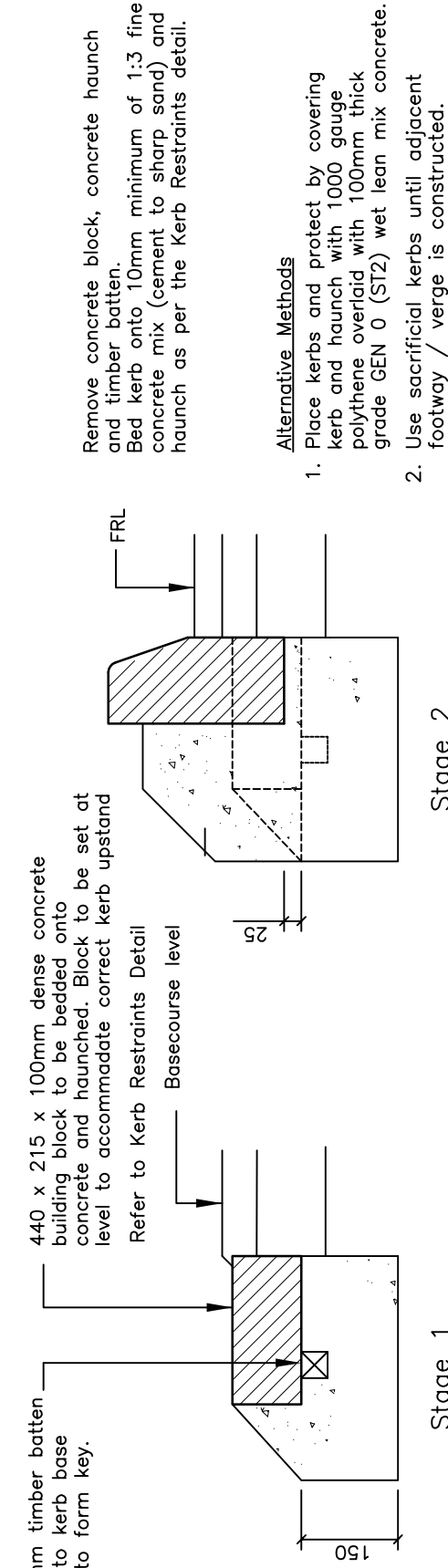
RAISED TABLE DETAIL

Scale 1/20



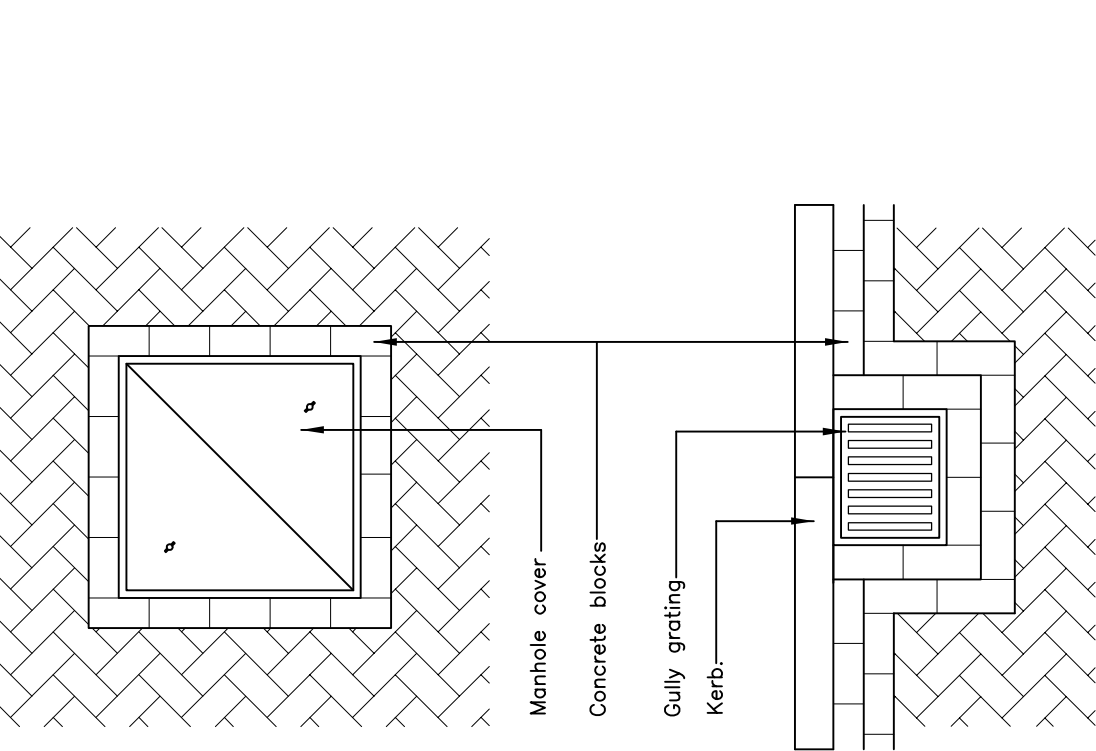
EDGE RESTRAINTS

Scale 1/10



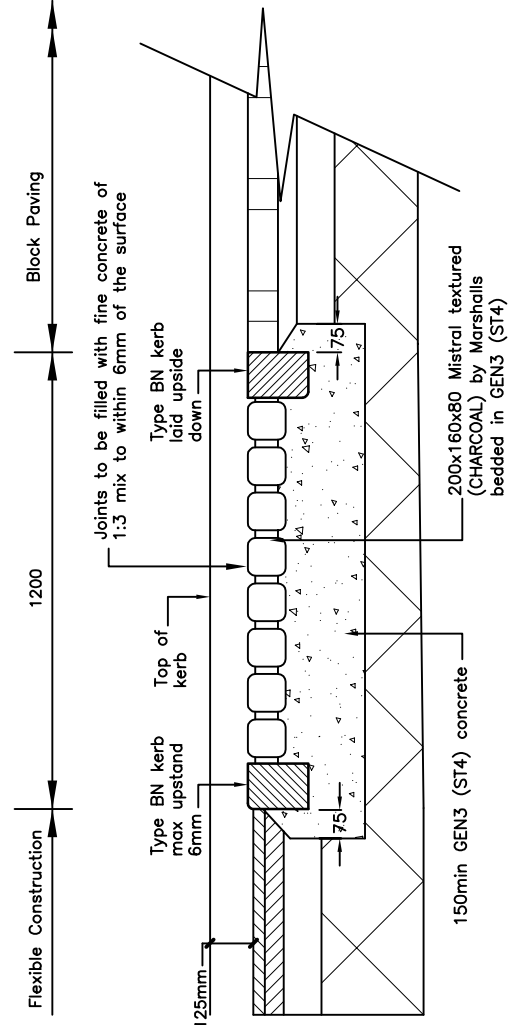
TEMPORARY KERB RACE DETAIL

Scale 1/10



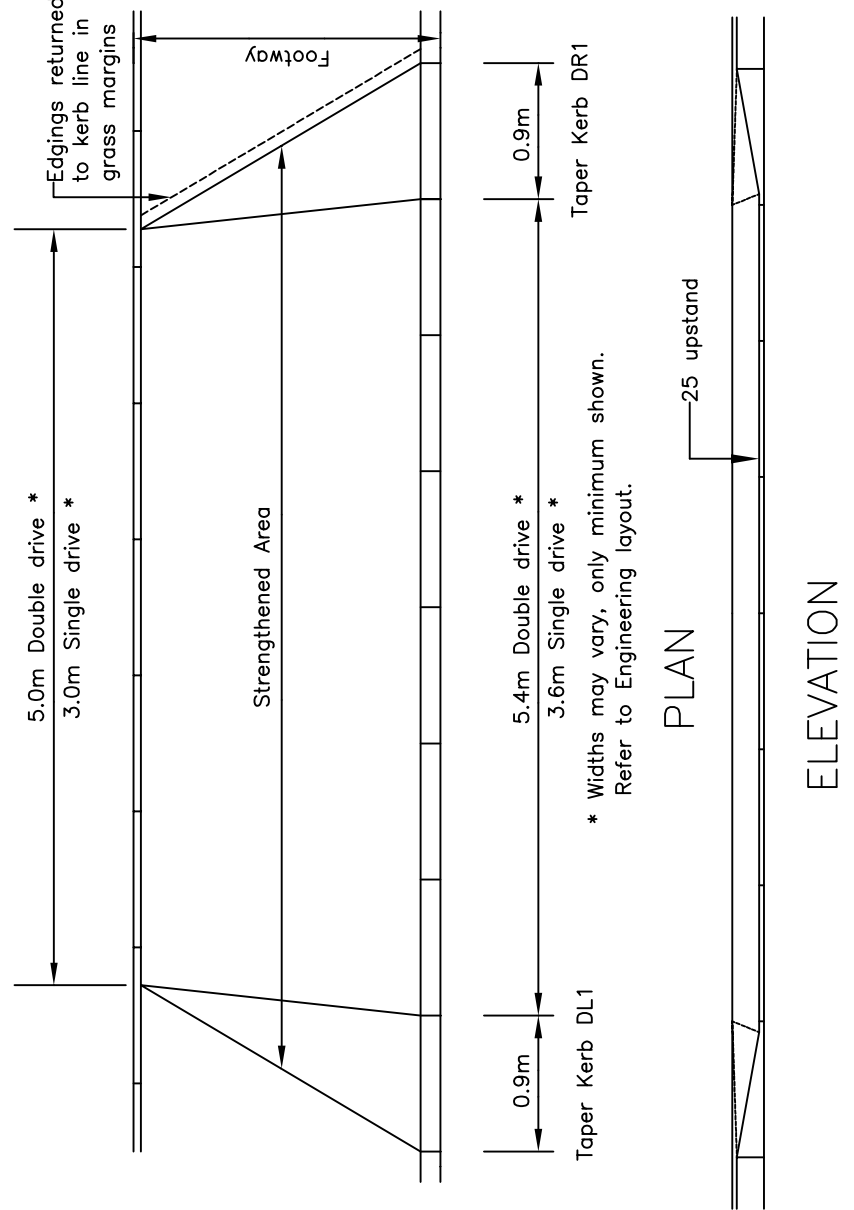
BLOCK PAVING
AROUND IRONWORK

Scale 1/25



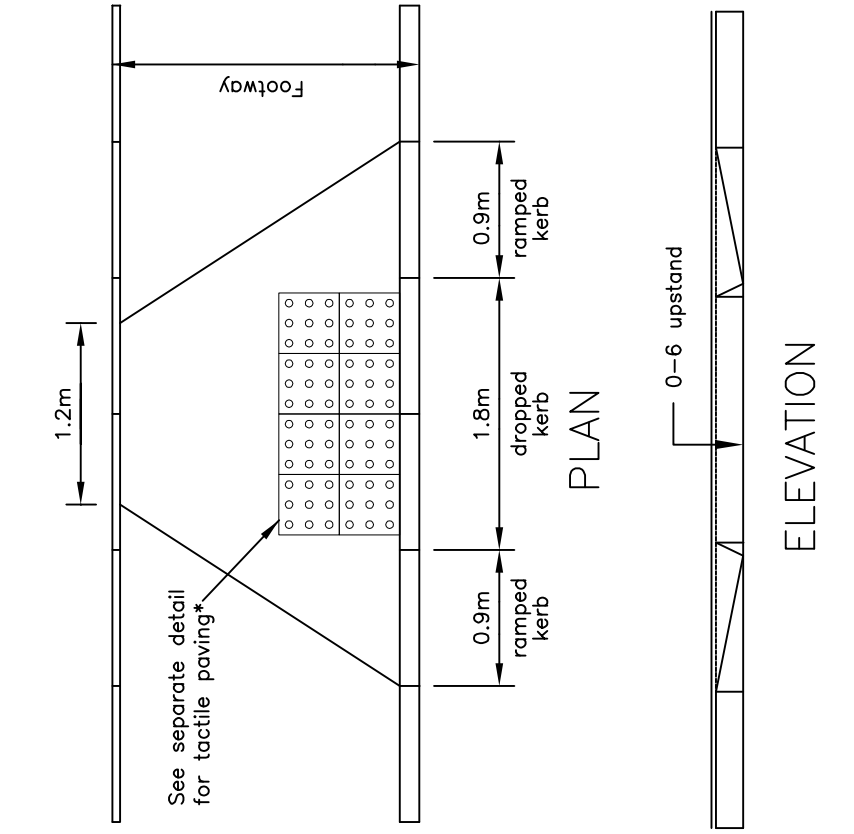
FLAT PANEL DETAIL

Scale 1/20



VEHICLE CROSSOVER PLAN

Scale 1/50



PRAM CROSSING DETAIL

Scale 1/50

NOTES

- All carriageway materials to be laid and compacted in accordance with their respective British Standard and DTP Specification for Highway Works. (SHW) Including West Sussex County Council amendments Asphalt (HMA & WMA) – BS 94987 Tack Coat – BS 94987 Capping – Series 600 of SHW Concrete Paving Blocks – BS 7533-3 Kers – BS 7533-4
- Additional material required to make up levels in fill areas shall be a well compacted material with a CBR of 15% or greater and shall be compacted to a minimum depth of 300mm beyond the kerb haunching will be required to facilitate adequate compaction at the edges.
- If the basecourse is to be left as a running surface then it shall be sealed with coated grit immediately on completion of the bindercourse.
- A tack coat of K1-40 or A1-40 to BS434Pt1; and PL2 shall be applied prior to the next course being laid on all courses that are not covered immediately by the next layer. The rate of application shall be 0.4 L/S.
- All road construction to be strictly in accordance with the West Sussex County Council Specification and the SHW.
- Any discrepancy in soil condition to be reported to the resident site management and the Highway Inspector.
- Formation level to be treated with a granular weed killer or pre-emergent type.
- Gully pots and ironwork shall comply with the BS1 Interlocking Gully Pot Specification and shall be marked with the BSI trademark, the 'Kitemark'.
- No surfacing areas are to be completed until all street lighting columns, traffic signs, and other street furniture are completed and the only with the approval of the Highway Authority.
- Footways and footpaths basecourse to be sealed with coated grit if not topped with wearing course within 48 hours.
- All gullies to be adopted by the Highway Authority are to have a Grade 0400 cover & frame with a 900x900 min. area of waterway and a min. combined cover & frame weight of 50kg. Gully grates located within Homezones and shared surface area shall be suitable for pedestrian use.
- All gullies within the carriageway are initially to be set at 150mm above basecourse level and reset prior to the final wearing course.
- Particular attention must be given to exposing the formation level (FRL) to the elements of the FL haunch of the kerb being laid if the FL haunch is left open to the elements for longer than necessary & has subsequently weakened the sub-soil then the FL shall be reduced further to a level agreed with the Engineer and replaced with a suitable material as per Note 2.
- The contractor is to provide prior to construction a detailed method statement for the proposed construction methods and recycled materials to Highway Authority and Bovis Homes for approval.
- In-situ CBR tests shall be taken to confirm the coping layer/fall-base requirements & to finalise the overall construction thickness prior to the commencement of construction. The BH Engineer will agree with the highway authority the above requirement.

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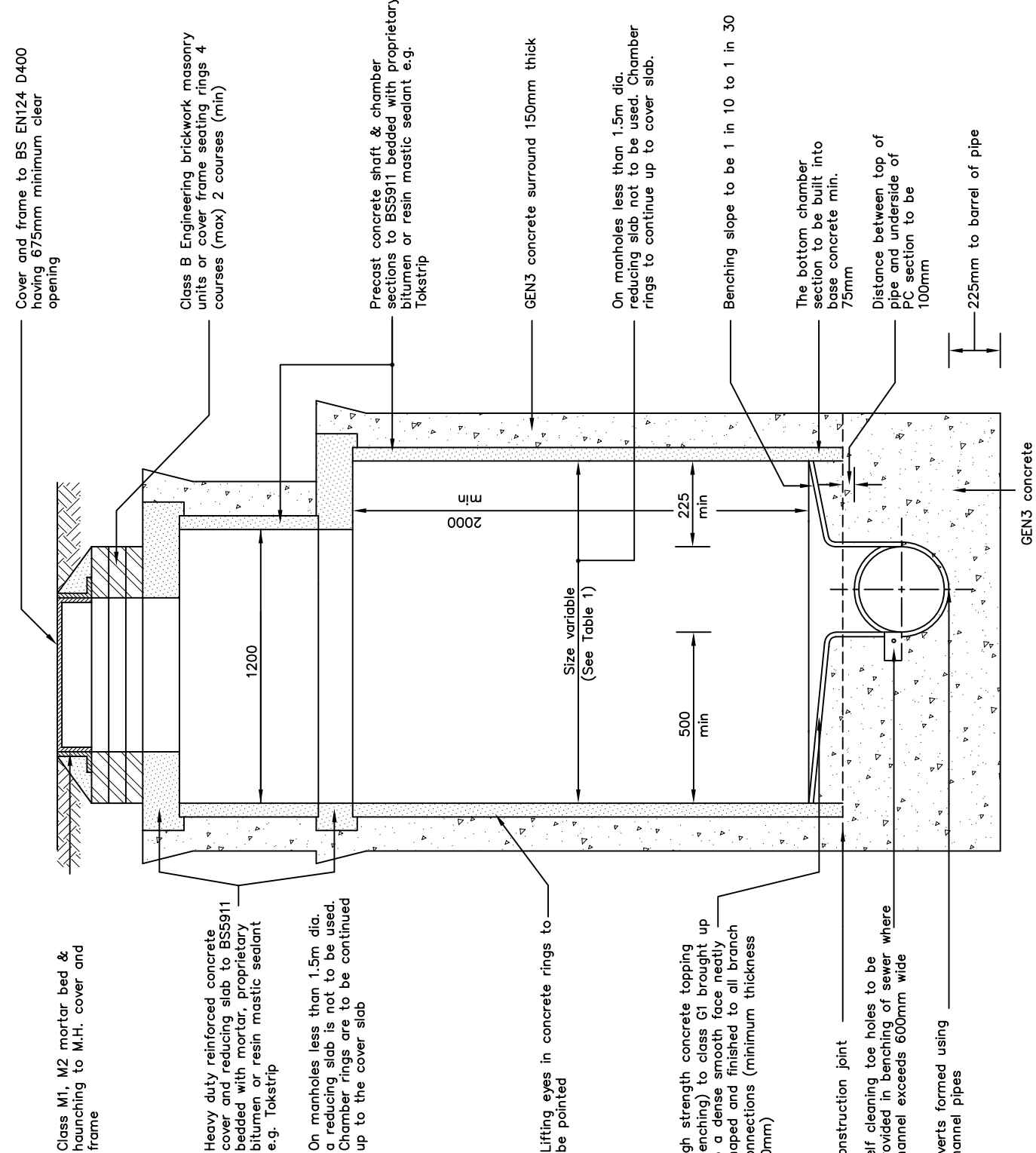
SITE
HAMPTON PARK
LITTLEHAMPTON, WEST SUSSEX

DRAWING TITLE
TYPICAL ROAD DETAILS
WEST SUSSEX COUNTY COUNCIL

DRAWN BY: RE
DATE: OCTOBER 2011
SCALE: As Shown
CHECKED/DIE: LITL-504
REV

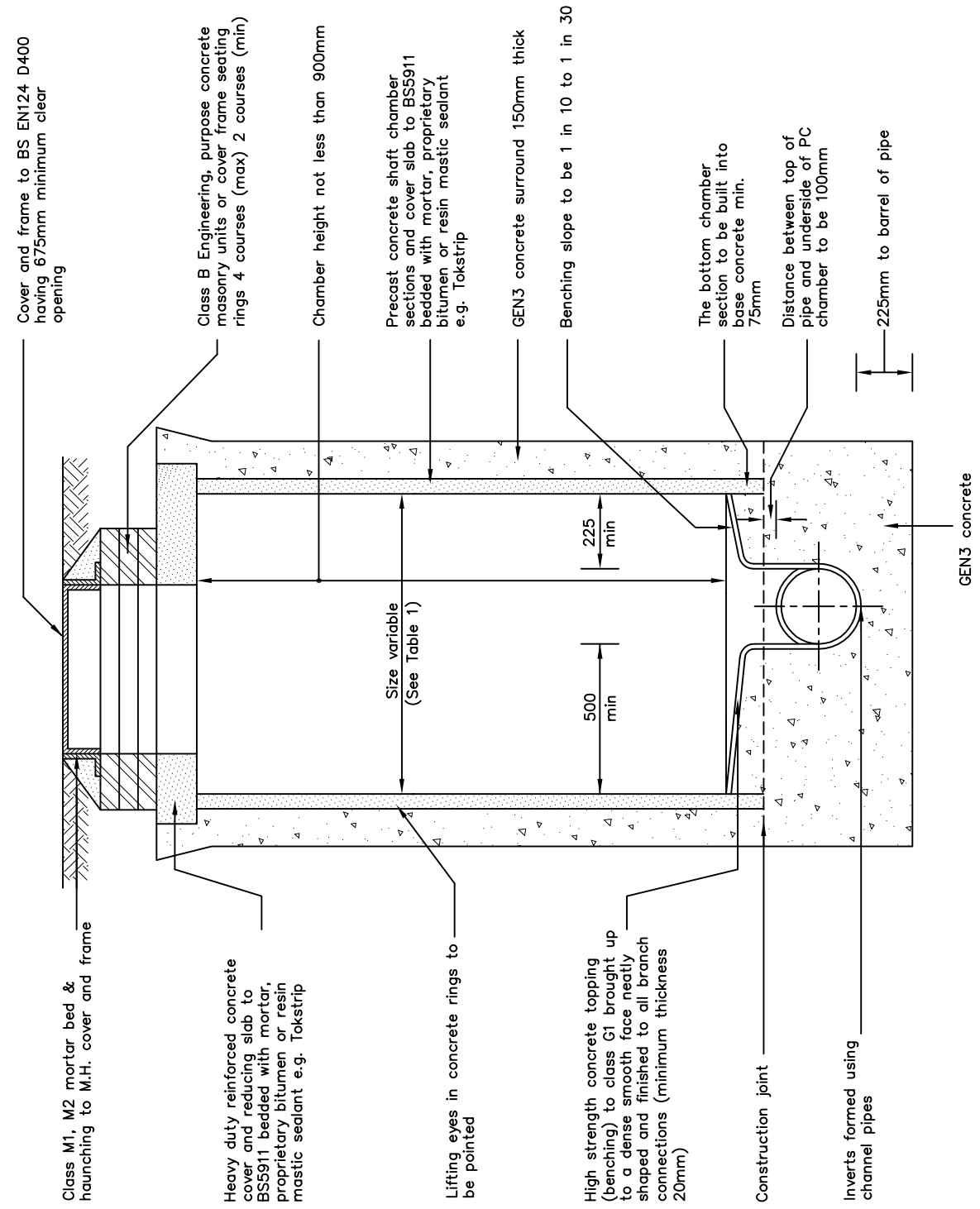
TYPICAL MANHOLE DETAIL– TYPE A

Depth to soffit 3 to 6m Scale: 1/25



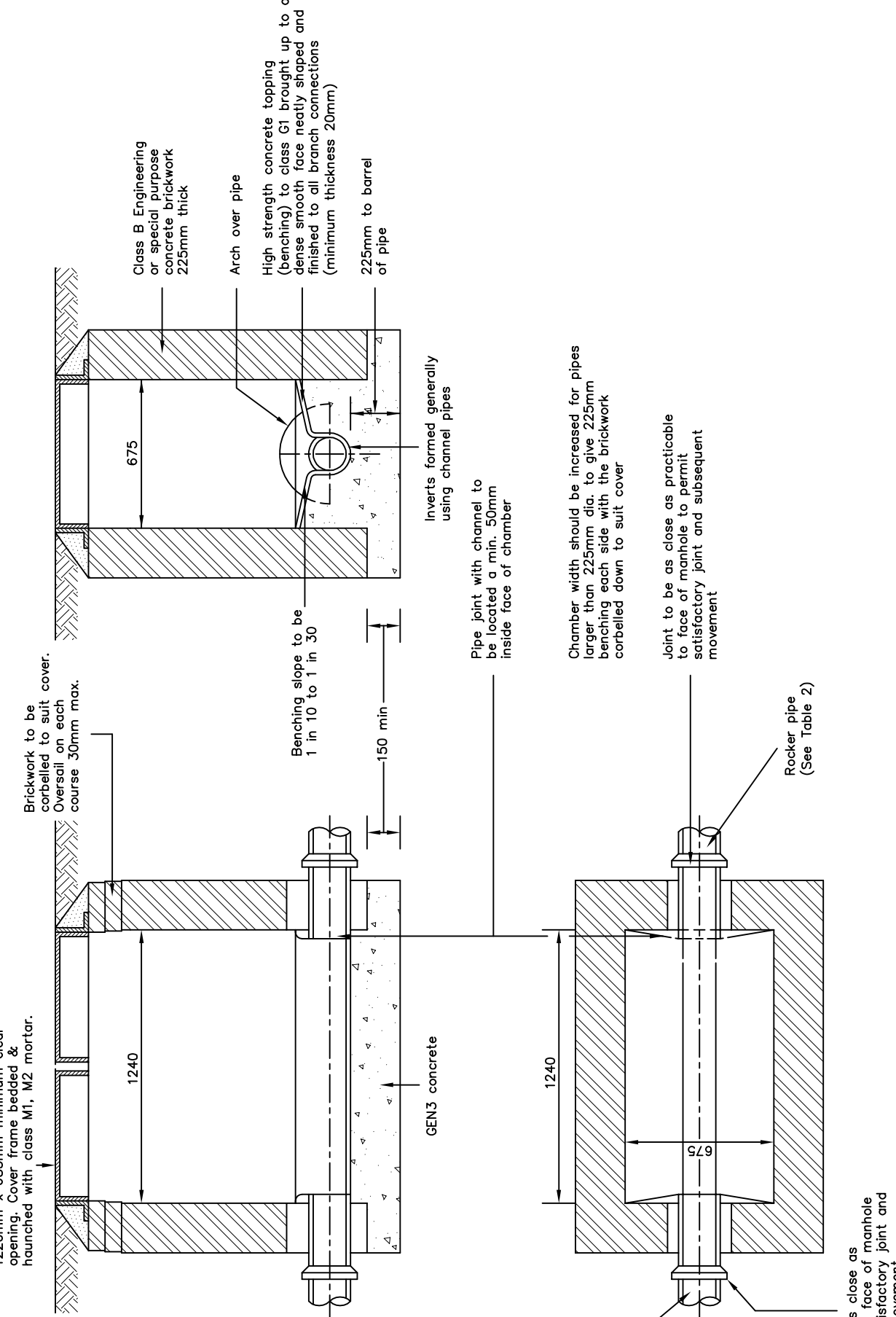
TYPICAL MANHOLE DETAIL– TYPE B

Max. depth to soffit 3m Scale: 1/25



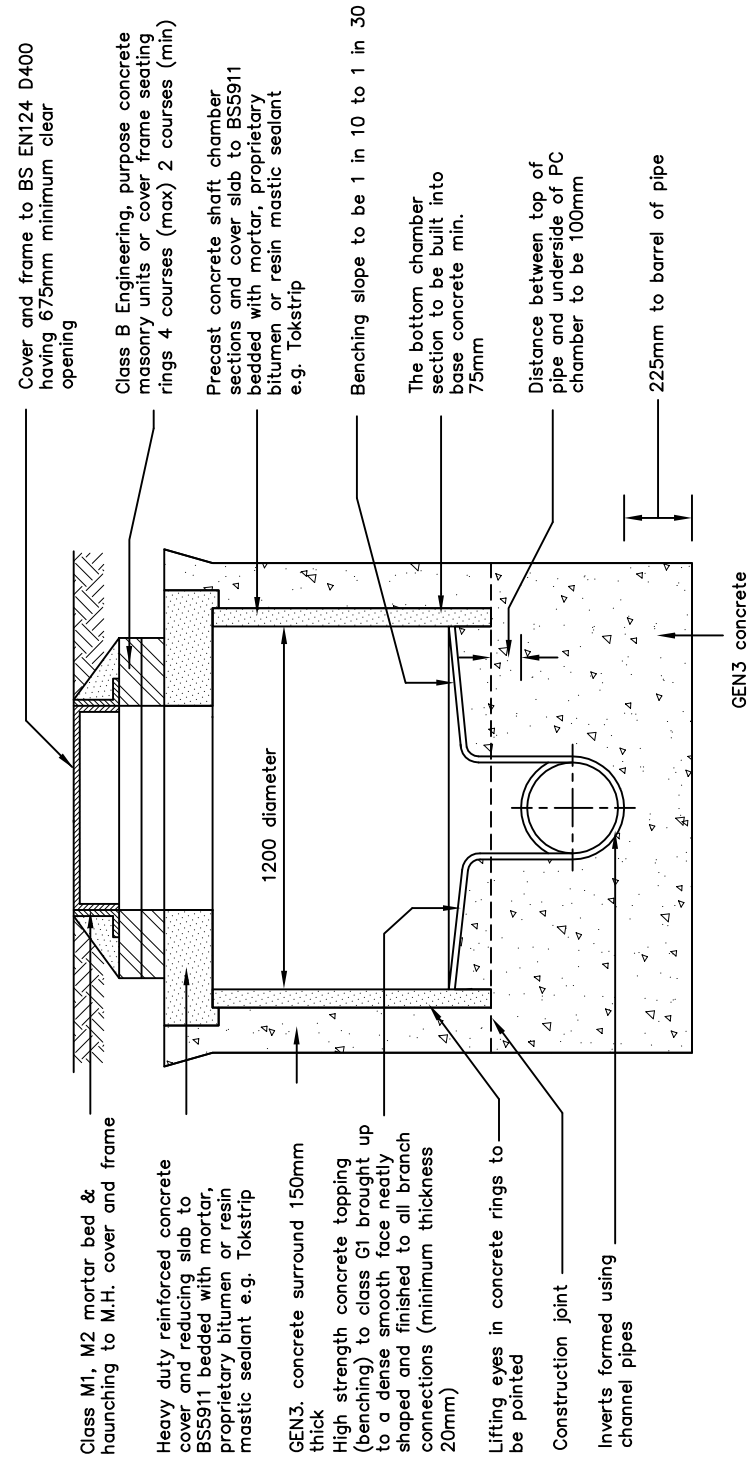
TYPICAL MANHOLE DETAIL– TYPE C

Depth to soffit 1.00 to 1.45m Scale: 1/25



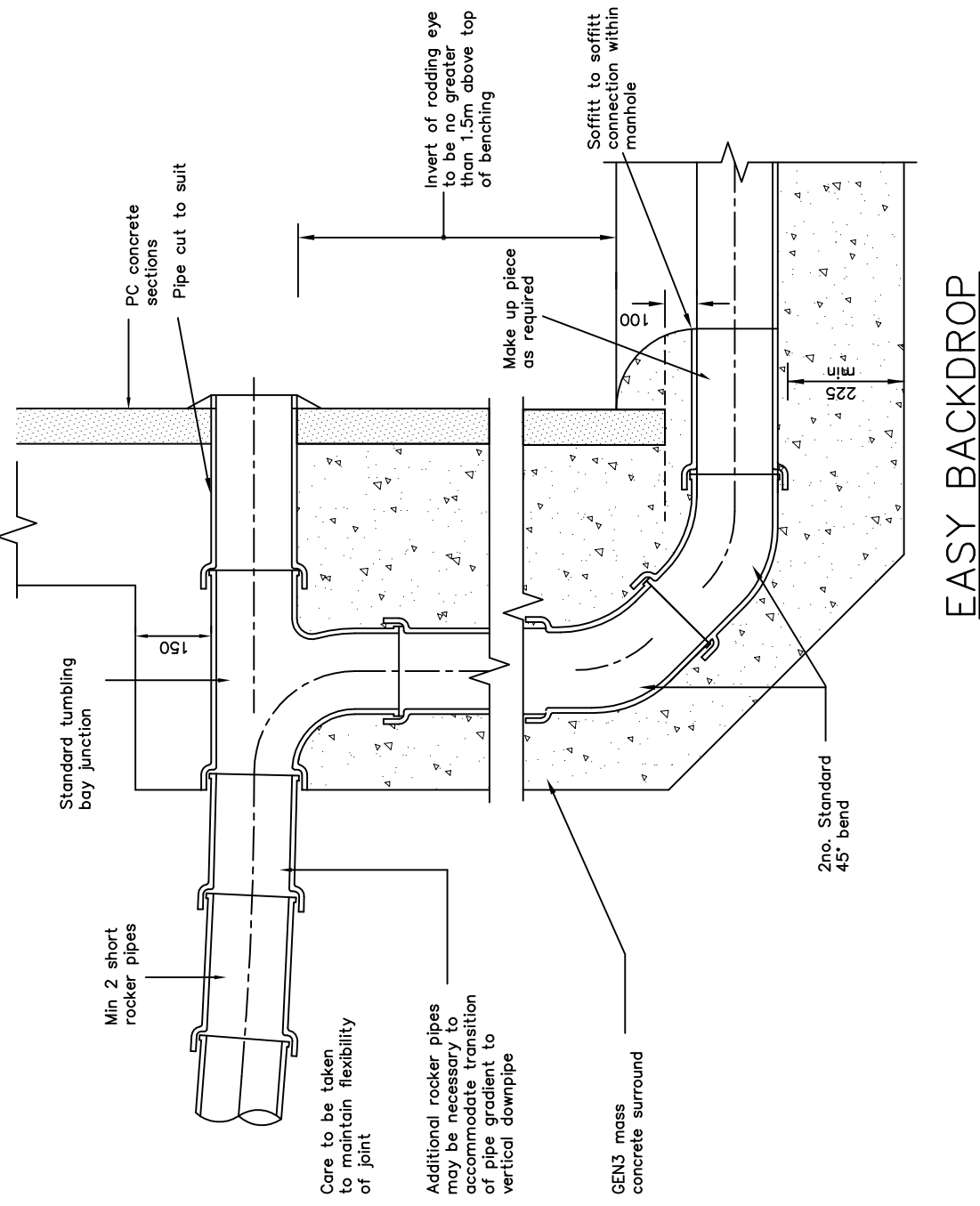
TYPICAL MANHOLE DETAIL– TYPE E

Depth from cover level to soffit pipe 1.0m to 1.5m Scale: 1/25
Maximum sewer diameter 375mm

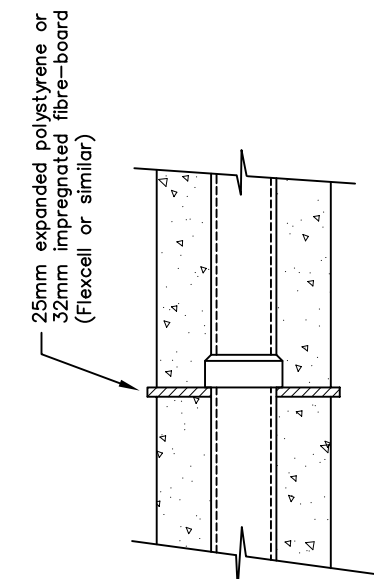


TYPICAL BACKDROP DETAIL

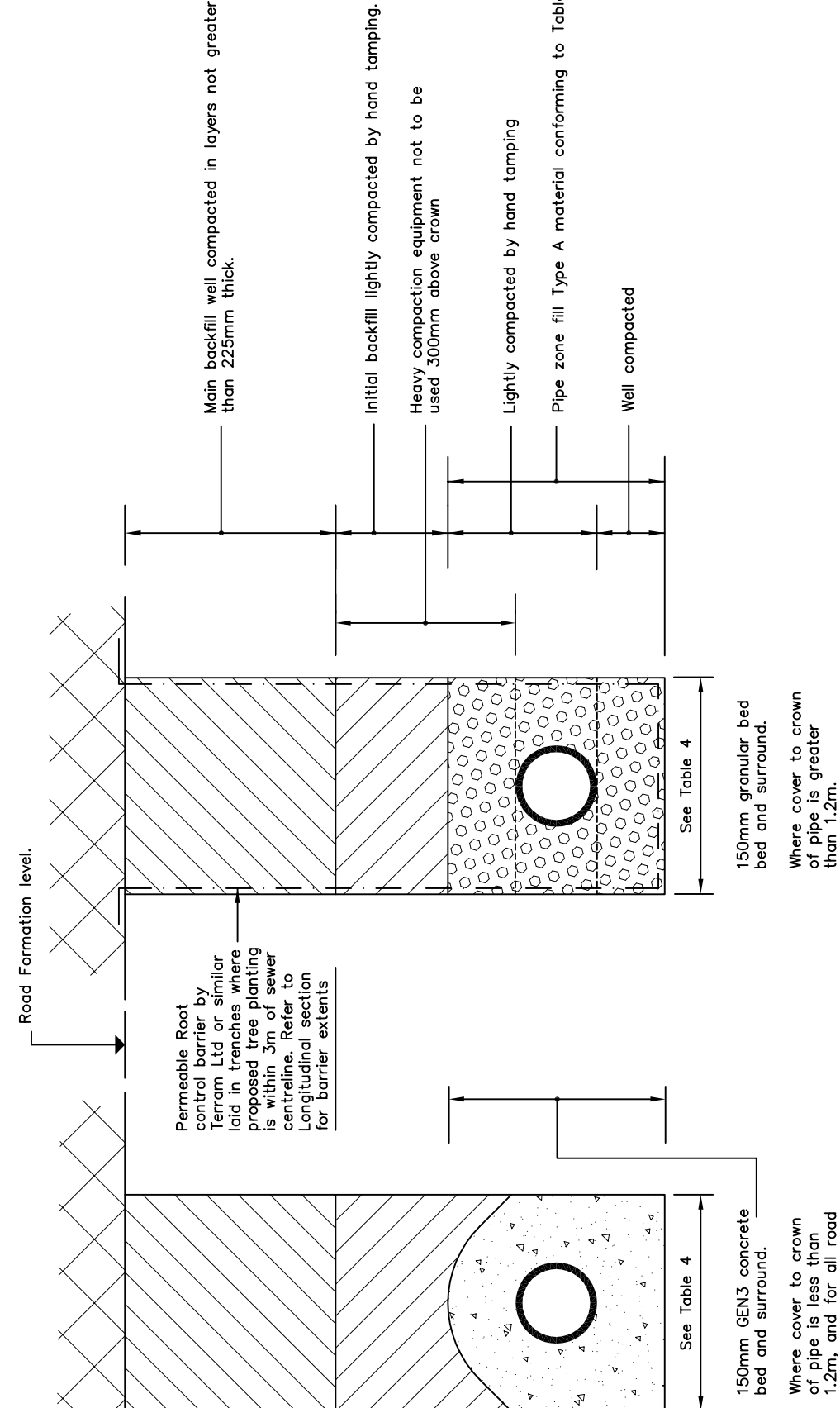
NOTE: Steeper gradients are preferred to the use of backdrops



FLEXIBLE JOINT IN CONCRETE BED AND SURROUND.



PIPE BEDDING & BACKFILL IN HIGHWAYS DETAIL



CLASS A

concrete bed & surround

CLASS S

granular bed & surround

Table 1

Dia. of largest pipe in manhole.	Chamber section diameter.
Less than 375mm	1200 (1050 where depth to soffit is 1.35m – 1.5m)
375–700	1500
750 – 900	1800

NOTE: The above sizes are minimums. If two pipes enter the manhole, the chamber size must be sufficient to allow them to open up and benching. All pipes built into the manhole invert should be installed with soffits level.

NOTE:

All exposed internal surfaces of FOUL manholes are to be built using sulphate resisting cement to prevent damage due to septicity to comply with BRE Digest 363, Class 4.

Table 2

Pipe Dia. (mm)	Rocker Pipe Length
150–600	0.60m
675–750	1.00m
825 and over	1.25m

Table 3

Type A material	
Granular bedding and sidefill materials for flexible pipes	
Pipe Dia. (mm)	Grading
150	10 or 14 single size or 14 to 5mm graded
225 300	10, 14 or 20mm single size or 14 to 5mm graded or 20 to 5mm graded
375 450 525 600	14 or 20mm single size or 14 to 5mm graded or 20 to 5mm graded
Greater than 600	14, 20 or 40mm single size or 14 to 5mm graded or 20 to 5mm graded or 40 to 5mm graded

Table 4

TRENCH WIDTHS	
Pipe Dia. (mm)	Trench Width max. (mm)
150–300	600
375–450	750
525–675	975

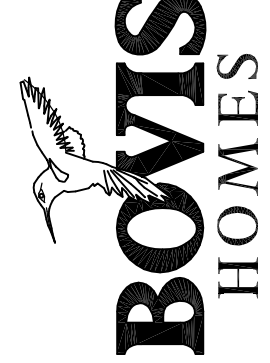
GENERAL NOTES

- Manholes with an incoming sewer of 900mm dia. and greater shall be approved by the appropriate Council/Undertaker.
- All materials shall comply to the BS Kitemark Certification Scheme and shall be marked with the ESI Trade mark (the Kitemark), and/or the containers of such materials are to be marked.
- All manhole covers are to exclude FW and SW Badge references.
- All manhole cover keyholes are to be filled with a graded e.g.
- The manhole chamber sizes quoted are the minimum. If the cover opening is proposed to be smaller than the chamber, the invert must be sufficient to accommodate adequate benching. All pipes built into the manhole invert should be installed with soffits level.
- All details on this drawing are to comply with the National Water Authorities Association publication: SEWERS FOR ADOPTION– A Design and Construction Guide for Developers, 6th Edition.
- Type B material shall be selected excavated or imported material and shall consist of uniform, readily compacted material of excessively high moisture content and frozen material. Clay having a liquid limit greater than 80 and/or plastic limit greater than 55 shall not be acceptable. Clay having a liquid limit greater than 55 and plastic limit greater than 25 shall be excluded from the fill material.
- Branch connections to be curved in the direction of flow, e.g. for 90° connections use 45° slippers.
- The design of manholes shall comply with the Undertaker's Safety Policy.
- Where two manholes are sited adjacent to each other care and consideration should be taken to ensure adequate compaction is achieved around and between the manholes.
- Where a cover is located in an area of block paving the frame shall be 150mm deep. Infill type covers are not acceptable.

Trench Backfill

Highway Areas – Imported clean well graded granular material as type 1 of capping material 6P1.

Landscape Areas – As dug material (See Note 6 above)



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HAMPTON PARK
LITTLEHAMPTON, WEST SUSSEX

TYPICAL SEWER DETAILS
SOUTHERN WATER AREAS

DRAWN BY	DATE	DRAWING NO.	REV
CAD	OCTOBER 2011	LITL-505	A
SCALE:	CHECKED/DATE		
As Shown			

