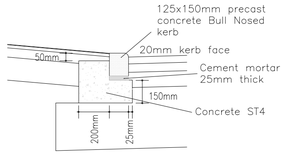
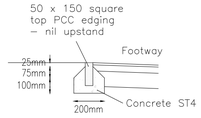


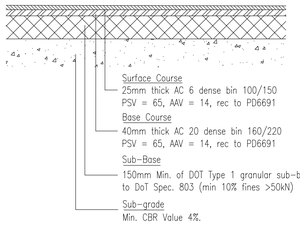
HALF BATTERED KERB



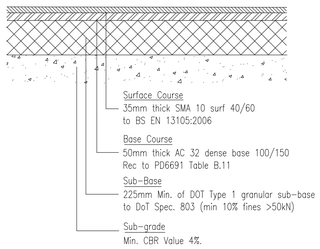
BULL NOSED KERB



FOOTWAY EDGING DETAIL



TYPICAL FOOTPATH SECTION



TYPICAL CAR PARK SECTION

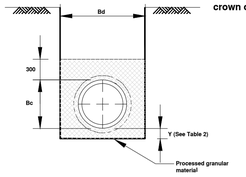
PLEASE NOTE THAT THIS DRAWING IS ISSUED FOR INFORMATION/TENDER PURPOSES ONLY UNTIL TECHNICAL APPROVAL HAS BEEN GRANTED.
ANY WORK UNDERTAKEN PRIOR TO TECHNICAL APPROVAL BEING GRANTED IS AT THE CLIENTS RISK.

TABLE 2
Embedment Dimensions for Rigid Pipes

NOMINAL INT PIPE DIA	DIMENSION Y1 EVEN TRENCH BOTTOM (MIN)	DIMENSION Y2 ROCK OR UNEVEN TRENCH BOTTOM (MIN)	PROCESSED GRANULAR MATERIAL	DIMENSION Z (MIN)	MAX PERMITTED TRENCH WIDTH
150	100	200	100mm single sized or 14mm to 5mm graded	100	750
225	100	200		100	825
300	100	200		100	925
375	100	200	100mm single sized or 14mm to 5mm graded	100	1050
450	150	200		150	1150
525	150	250		150	1200
600	150	250	20mm single sized or 20mm to 5mm graded	150	1350
675	150	250		225	1450
750	225	300		225	1500
825	225	300		225	1600
900	225	300		225	1900
975	225	300		300	2000
1050	225	300		300	2100
1125	225	300		300	2200
1200	250	350		300	2300
1350	375	450		375	2500
1500	375	450		375	2700
1650	375	450		450	2800
1800	375	500	40mm single sized or 40mm to 5mm graded	450	3100
1950	400	500		525	3200
2100	425	650		525	3400
2400	450	675		600	3700

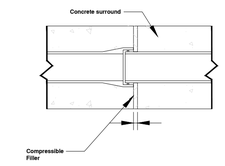
Note:
Bc = Effective trench width measured 300mm above crown of pipe

PIPE BEDDING DETAILS



TYPE 7
EMBEDMENT CLASS S

BEDDING FACTOR (See note 5)	
2.2	Narrow Trench
2.2 or 2.5	Wide Trench
2.2	Embankment



FLEXIBLE JOINT DETAIL FOR CONCRETE BED AND CONCRETE SURROUND SPIGOT AND SOCKET PIPES

GENERAL NOTES

1. All dimensions in millimetres

2. The pipe embedments indicate the minimum trench dimensions which should be assumed for initial design purposes; the minimum trench widths shown will usually be sufficient to allow adequate compaction of the embedment material
All pipework should be designed in accordance with BS EN 1295-1

3. For narrow trenching techniques the minimum trench width may be reduced, providing that the design indicates that the reduced embedment width is sufficient to support the pipework

4. Where selected excavated material may migrate into the native soil or vice versa, geotextile membrane shall be provided around the embedment material

5. Bedding factors are derived from "A guide to design loadings for buried rigid pipes" and IGN 4-11-02 "Revised bedding factor for Vitrified Clay drains and sewers"

6. Embedment dimensions shall be in accordance with Table 2

PROCESSED GRANULAR MATERIAL:

7. Processed granular material shall comply with WIS 4-08-02. The grading of processed granular material shall be as specified

8. Limestone material shall not be used where the native ground or ground water is acidic, ie pH of 6 or less

CONCRETE EMBEDMENTS & SURROUND:

9. Gen 3 concrete shall be used in non aggressive ground. Elsewhere the cement type and mix design should be selected to suit the sulphate content and pH of the ground and groundwater

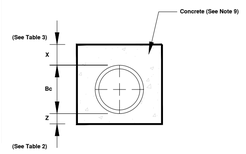
10. Concrete surround details shall be adopted where cover to pipework is less than 1.2M and where it is necessary to protect the pipework from traffic loading

11. Pipes to be bedded/surrounded with concrete shall be supported on precast concrete setting blocks, the top face of of each block being covered with two layers of compressible packing

12. PVC and PE pipes shall be wrapped with a layer of plastic sheeting complying with UU CESWI 6 class 2.95

13. GRP pipes shall be wrapped with compressible filler material 100mm wide at the end of the end of the concrete surround

14. Compressible filler shall comply with UU CESWI 6 class 2.19



CONCRETE SURROUND (CLASS Z)

TABLE 3
Thickness of Compressible Fill (L)

Nominal Internal Pipe Dia	Dim. X mm	Compressible Filler L mm
<400	160	18
400-700	200	36
725-1200	300	36
>1200	300	54

GENERAL

1. All adoptable sewers and associated works are to comply fully with "Sewers for Adoption" 7th.Edition dated August 2012.
2. All highway works to be to adoptable standards and to to comply fully with the Local Authority specification.
3. All private drainage works are to comply fully with part H of the Building Regulations
4. All existing invert levels to be checked by the Contractor at the start of works and any discrepancies notified to REFA.
   All levels are based on topographical survey information provided by others.
5. All materials to bear the relevant B.S.Kitemark and comply fully with the specifications.
   All concrete & concrete products must use Sulphate resistant cement (unless the site investigation report proves that sulphate attack from soils and groundwater will not occur)
6. All opening notices etc. as required under highways acts etc. are to be obtained prior to commencement of works.
   All works are to be inspected by L.A., NHBC or Relevant Water Authority as applicable.

C.D.M. REGULATIONS 2015

In line with the above regulations we are obliged to inform the Client of their responsibilities under section CDM 15/1, and residual risks that may be encountered in the construction of these works.
All design work has been carried out with Health and Safety aspects given full consideration.
Wherever possible risks have been eliminated from the design, however due to the very nature of this type of work it is not possible to remove all the risks from the design.
We would also respectfully remind the Client of his obligations to take all reasonable steps in ensuring that only competent Contractors who have a valid safety policy are employed.
They should also provide satisfactory responses at tender stage as to the manner in which they will deal with the elements of risk involved in this type of work and in particular those highlighted by REFA below:-

1. Support / treatment for ALL excavation work.
2. Guarding to edges of excavations to prevent people,materials and vehicles falling into excavation.
3. Guarding of excavations outside working hours to prevent unauthorised access.
4. Undermining to adjacent roads or structures.
5. Confined space operations.
6. Dealing with existing services.
7. Traffic management on existing highways.
8. Procedure to be followed in event of accident or emergency.
9. Method of working where contaminated ground is present on site.
10. Confirmation will be required that all operatives are adequately trained, copies of relevant training certificates to be supplied.

The above list is by no means exhaustive but it does highlight operations that present a risk to contractors and the general public.
For clarification on any item please contact REFA.

rev	Revision details	RevBy	Date

smas worksafe consultant www.smasltd.com as recognised by SSIP SAFETY SCHEMES IN PROCUREMENT

Drawing Stage		Drawing Status			
	Draft		Comments	●	Tender
●	Issued		Information		Construction
		●	Approval		As Built

Client
SG ESTATES LIMITED

Job title
WATTS DYKE LLAY PHASE 2

Drawing title
TYPICAL CAR PARK CONSTRUCTION DETAILS

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GEOTECHNICAL • ENVIRONMENTAL

Date	Scale	Drawn
18.04.24	N.T.S.	AS

DRAWING No 24053/105/1 Rev

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A3 SHEET