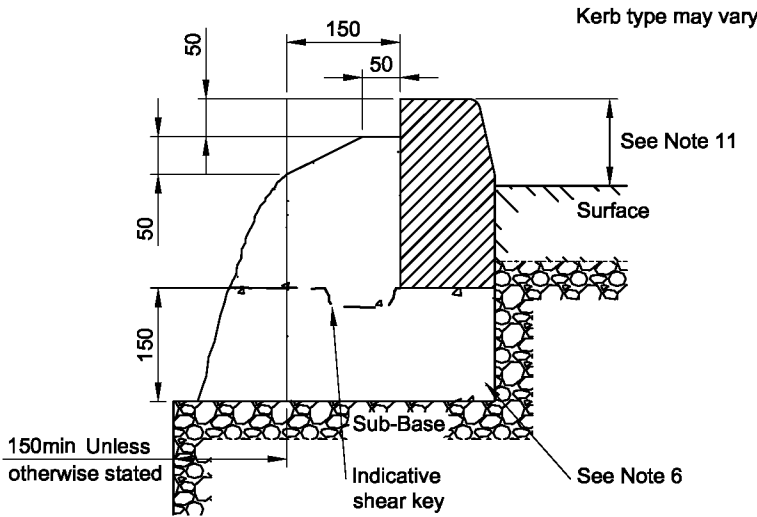
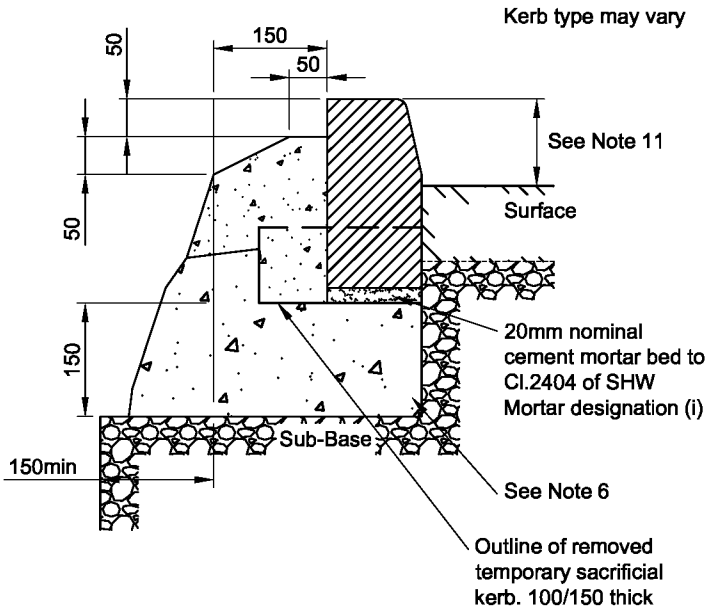


C B A	All changes dated 2014	DJL	DJL	25.11.14	West Sussex County Council Infrastructure Group County Hall, West Street Chichester West Sussex PO19 1RH (01243) 642105  west sussex county council	Project Name Section 278/38 Highway Agreement Standard Details	APPROVED NOVEMBER 2012 CONTRACTOR TO ENSURE LATEST DETAILS ARE USED
	All changes dated Sept 2013 Revised in line with drawings	DJL DLS	GM MJA	09.09.13 28.02.13			
Rev	Revision details	Chkd	Appd	Date		Drawing Title Drawing Index Sheet	Original Drawing Size : A3 Scale : N/A Drawing No. S278/38/00 Rev C
Drawn: MJA			For comment				
Chkd:			For tender				
Appd:			For construction				
Date: 28.02.2013			As constructed				
File ref: IWP Ref:							

- NOTES
1. Do not scale from this drawing.
 2. Kerbs to be butt jointed. Where kerb alignments incur 'minor open joint tapers' in excess of 5mm between formed surfaces mortar jointing shall be used as directed by Highway Inspector.
 3. All full length PCC kerbs are to be mechanically handled.
 4. All precast concrete Kerbs & Edgings shall be to BS EN 1340 & laid to BS 7533-6.
 5. All setts of natural stone shall be to BS EN 1342 & laid to BS 7533-7.
 6. All Kerbs & Edgings bed & backing to be Concrete Class ST1 (C6/8), well compacted. Unless otherwise stated this shall be a minimum bed thickness of 150mm.
 7. The minimum length of any cut kerb shall be 450mm (Half kerb).
 8. The correct radius kerbs shall be used for all radii of 12m or less. For radii between 12m and 20m 600mm long straight units shall be used. Radius kerbs shall be used to form corners of laybys.
 9. The correct transition kerbs shall be used for all drop kerb and upstand variation locations.
 10. The correct quadrant kerbs shall be used to form corners of square areas and refuge islands. Cut quadrants are permissible.
 11. Full height kerb upstand shall be 125mm unless otherwise agreed by WSCC under a formal request.
 12. Drop kerb upstand shall be 0-6mm for pedestrian crossings, 25mm for vehicular crossings.



GREEN BED METHOD
(1:10)



FORMED BASE METHOD
(1:10)

B	100mm Temp Kerb shown	DJL	GM	09/09/13
A	Formed Base Temp Kerb added	DJL	GM	30/11/12
Rev	Revision details	Chkd	Appd	Date
Drawn:	MJA			For comment
Chkd:	DJL			For tender
Appd:	APH			For construction
Date:				As constructed
File ref:				
IWP Ref:				

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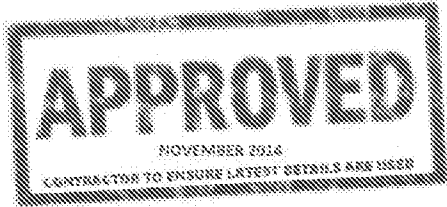


Project Name

Section 278/38 Highway Agreement
Standard Details

Drawing Title

Alternative Methods of
Laying Kerbs



Original Drawing Size : A3

Scale : As Shown

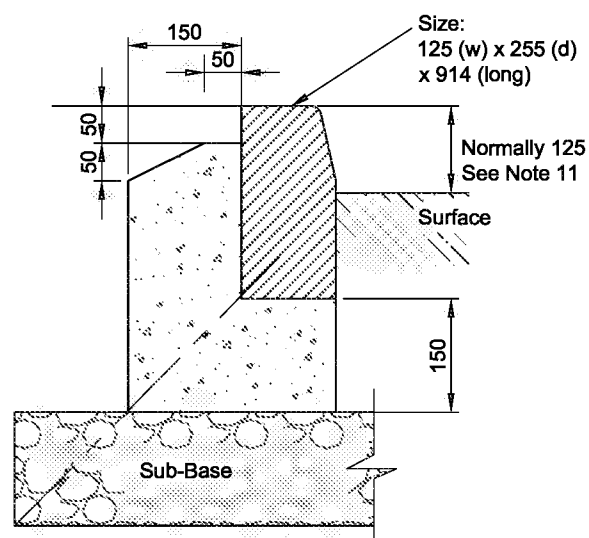
Dimensions :

Drawing No.

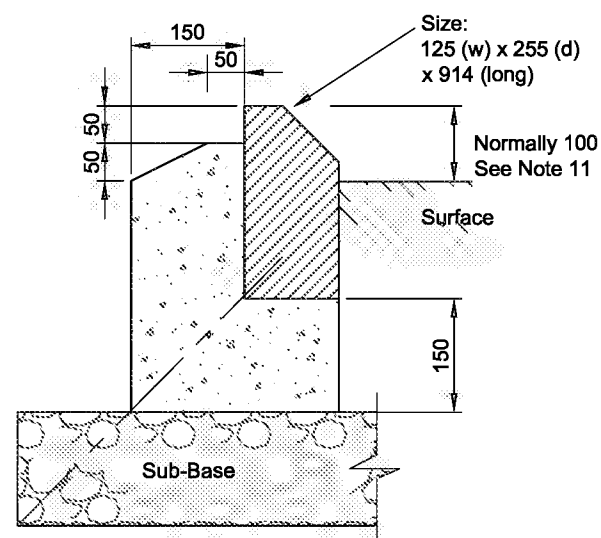
S278/38/01

Rev

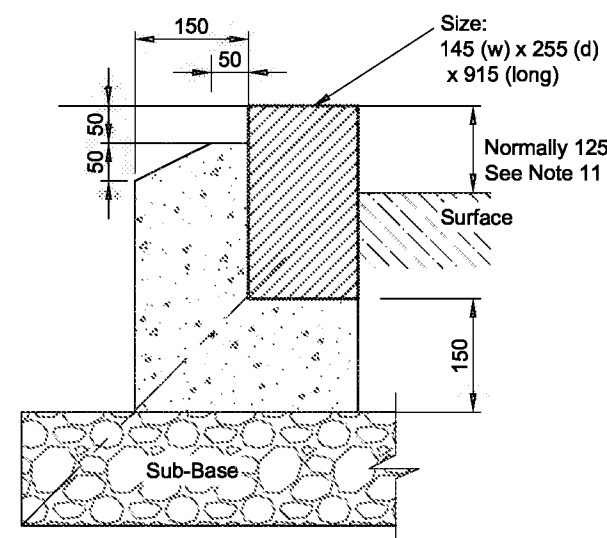
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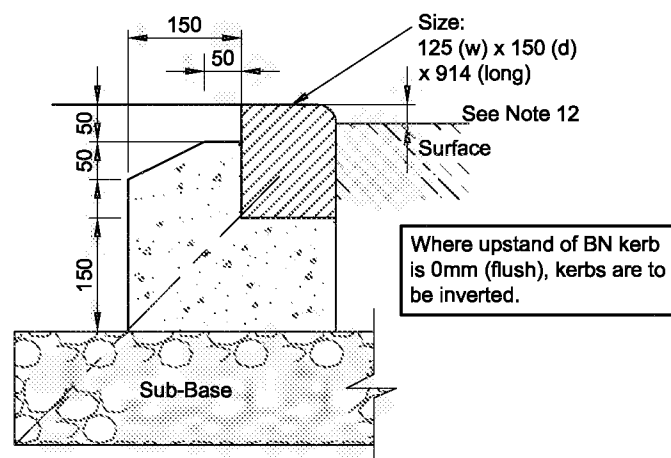
**FULL HEIGHT KERB
TYPE HB2**
(1:10)



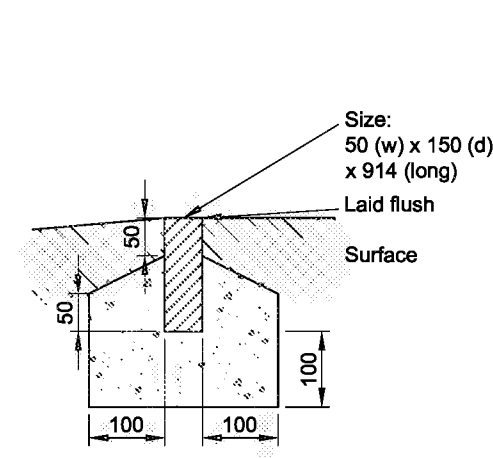
**SPLAY KERB
TYPE SP**
(1:10)



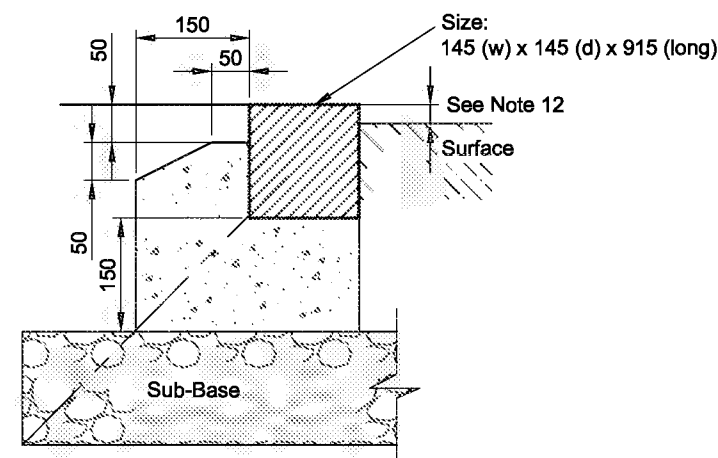
**FULL HEIGHT KERB
TYPE CONSERVATION**
(1:10)



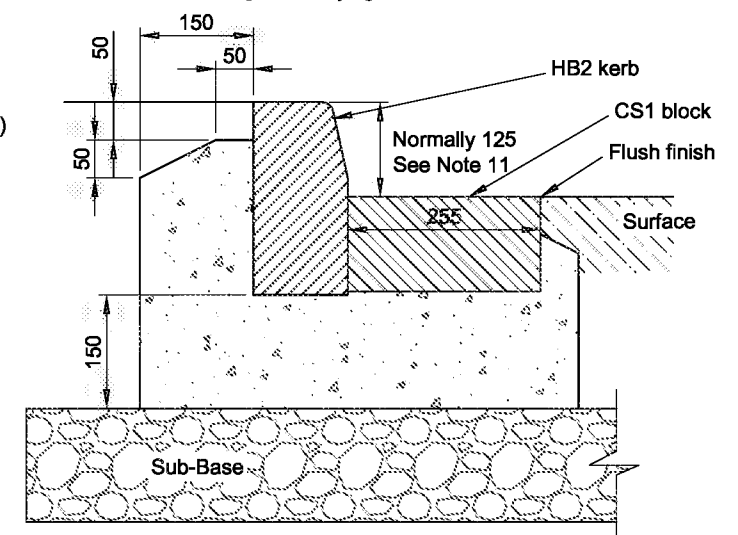
**DROP KERB
TYPE BN**
(1:10)



**EDGING
TYPE EF FLAT TOP**
(1:10)



**DROP KERB
TYPE: CONSERVATION**
(1:10)



**COMBINATION KERB
TYPE HB2+CS1**
(1:10)

NOTES

- Do not scale from this drawing.
- Kerbs to be butt jointed. Where kerb alignments incur 'minor open joint tapers' between formed surfaces mortar jointing shall be used as directed by Highway Inspector.
- All full length PCC kerbs are to be mechanically handled.
- All precast concrete Kerbs & Edgings shall be to BS EN 1340 & laid to BS 7533-6.
- All setts of natural stone shall be to BS EN 1342 & laid to BS 7533-7.
- All Kerbs & Edgings bed & backing to be Concrete Class ST1 (C6/8), well compacted. Unless otherwise stated this shall be a minimum bed thickness of 150mm.
- The minimum length of any cut kerb shall be 450mm (Half kerb).
- The correct radius kerbs shall be used for all radii of 12m or less. For radii between 12m and 20m 600mm long straight units shall be used. Radius kerbs shall be used to form corners of laybys and tapers.
- Suitable transition kerbs shall be used for all drop kerb and upstand variation locations.
- Suitable quadrant kerbs shall be used to form corners of square areas and refuge islands.
- Full height kerb upstand shall be as shown unless otherwise agreed by WSCC under a formal request.
- Drop kerb upstand shall be 0-6mm for pedestrian crossings, 25mm for vehicular crossings.
- Refer to drawing 01 for laying methods.

A	Splay kerb re-named	DJL	GM	30/11/12
Rev	Revision details	Chkd	Appd	Date
Drawn:	MJA		For comment	
Chkd:			For tender	
Appd:			For construction	
Date:			As constructed	
File ref:				
IWP Ref:				

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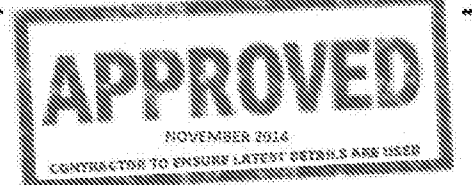


Project Name

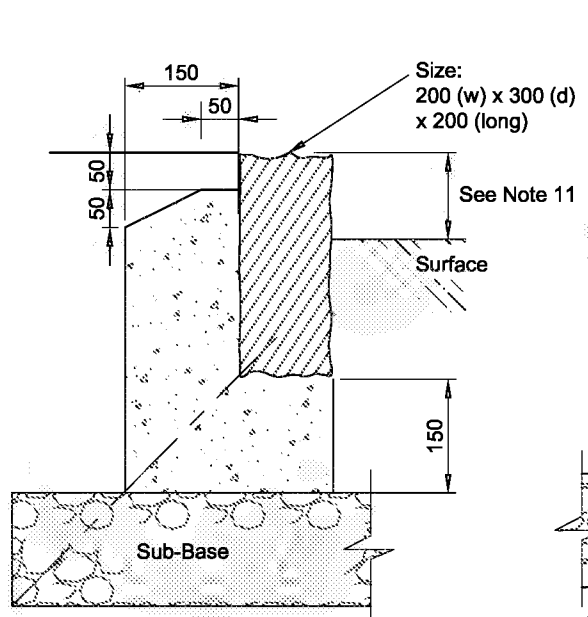
Section 278/38 Highway Agreement
Standard Details

Drawing Title

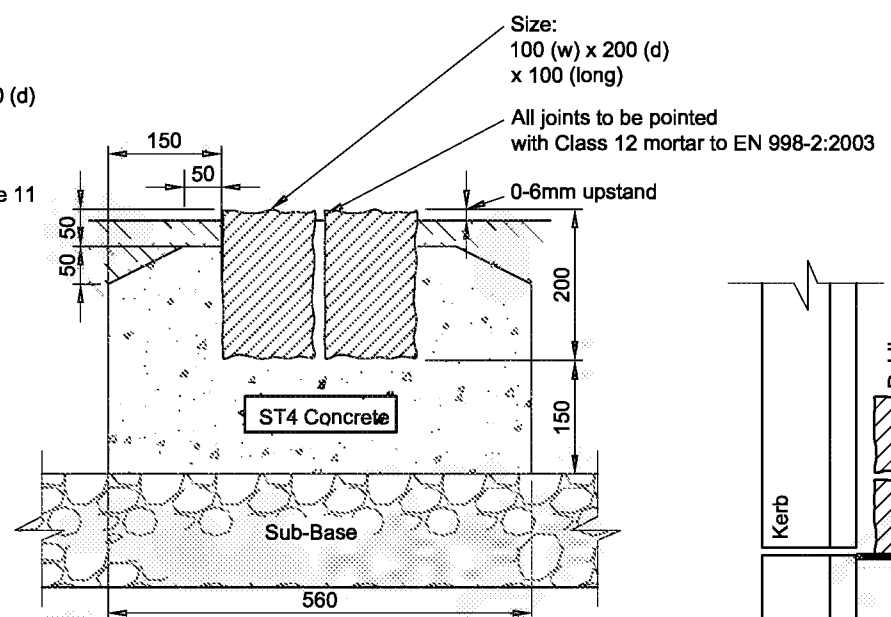
Approved Kerb Type Selection
Sheet 1



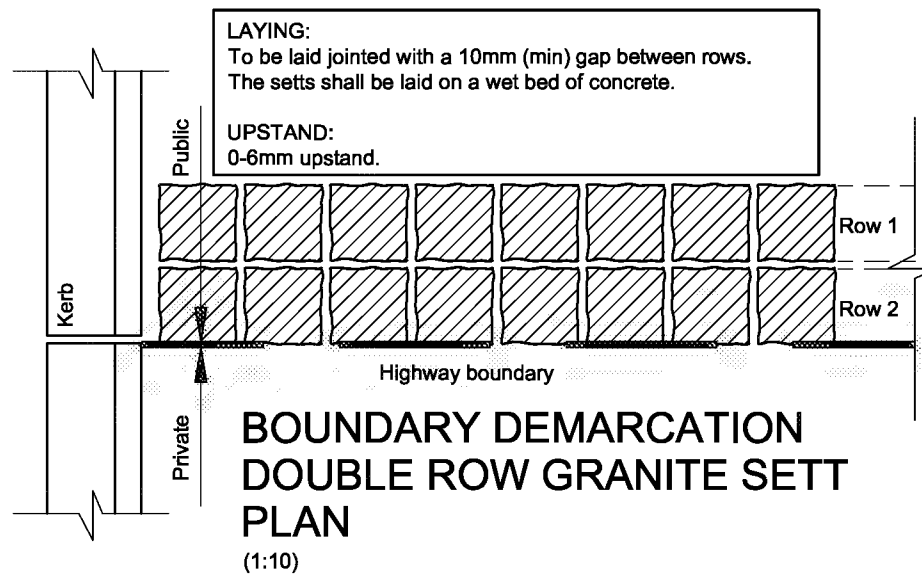
Original Drawing Size :	A3
Scale :	As Shown
Dimensions :	
Drawing No.	S278/38/02
Rev	A



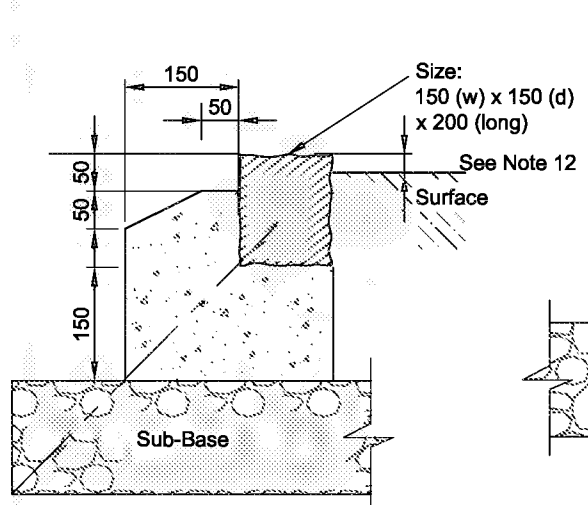
FULL HEIGHT KERB
TYPE GRANITE SETT
(1:10)



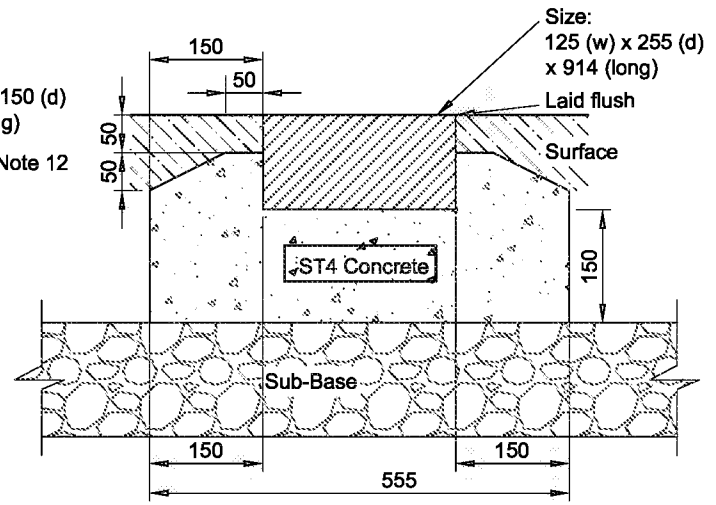
BOUNDARY DEMARCATION
DOUBLE ROW GRANITE SETT
SECTION
(1:10)



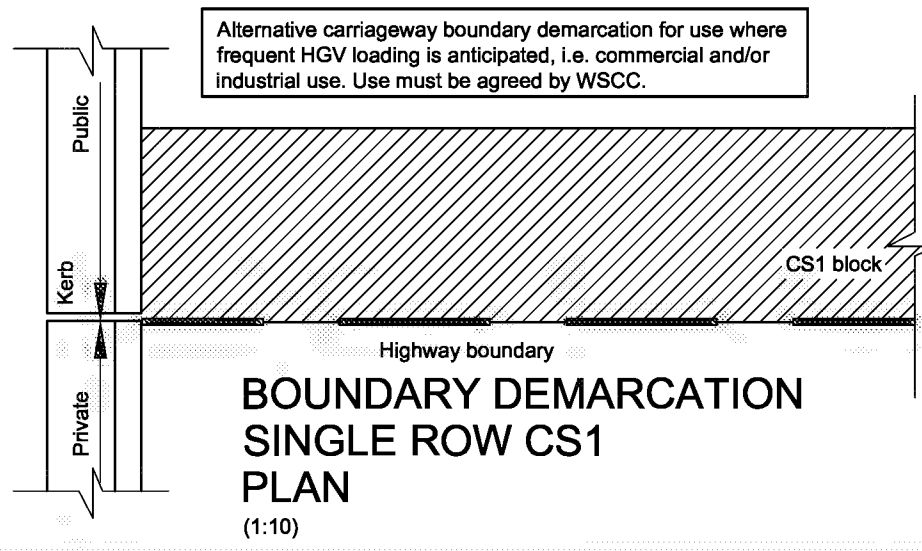
- NOTES
1. Do not scale from this drawing.
 2. Kerbs to be butt jointed. Where kerb alignments incur 'minor open joint tapers' between formed surfaces mortar jointing shall be used as directed by Highway Inspector.
 3. All full length PCC kerbs are to be mechanically handled.
 4. All precast concrete Kerbs & Edgings shall be to BS EN 1340 & laid to BS 7533-6.
 5. All setts of natural stone shall be to BS EN 1342 & laid to BS 7533-7.
 6. All Kerbs & Edgings bed & backing to be Concrete Class ST1 (C6/8), well compacted. Unless otherwise stated this shall be a minimum bed thickness of 150mm. Carriageway demarcation CS1/Granite setts to be ST4 (C16/20).
 7. The minimum length of any cut kerb shall be 450mm (Half kerb).
 8. The correct radius kerbs shall be used for all radii of 12m or less. For radii between 12m and 20m 600mm long straight units shall be used. Radius kerbs shall be used to form corners of laybys and tapers.
 9. The correct transition kerbs shall be used for all drop kerb and upstand variation locations.
 10. The correct quadrant kerbs shall be used to form corners of square areas and refuge islands.
 11. Full height kerb upstand shall be 125mm unless otherwise agreed by WSCC under a formal request.
 12. Drop kerb upstand shall be 0-6mm for pedestrian crossings, 25mm for vehicular crossings.
 13. Refer to drawing 01 for laying methods.



DROP KERB
TYPE GRANITE SETT
(1:10)



BOUNDARY DEMARCATION
TYPE CS1
SECTION
(1:10)



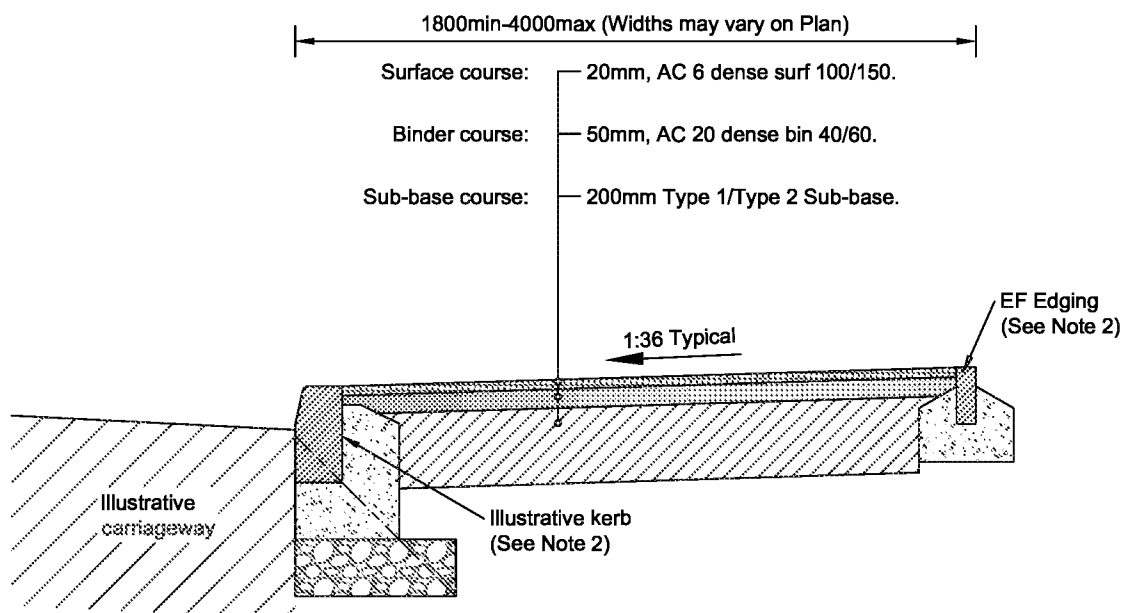
A	Corrected ref to CS1	DJL	GM	30/11/12
Rev	Revision details	Chkd	Appd	Date
Drawn:	MJA		For comment	
Chkd:			For tender	
Appd:			For construction	
Date:			As constructed	
File ref:				
IWP Ref:				

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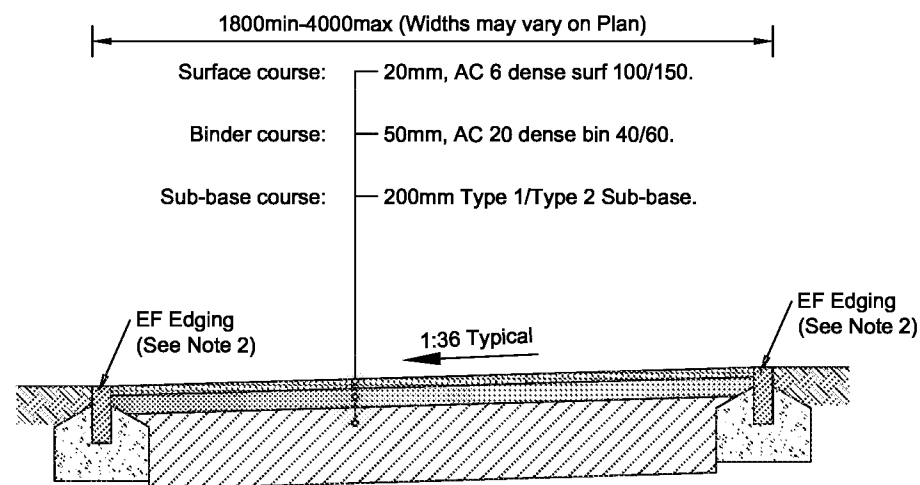
Project Name	Section 278/30 Highway Agreement Standard Details
Drawing Title	Approved Kerb Type Selection Sheet 2

APPROVED
NOVEMBER 2014
CONTRACTOR TO ENSURE LATEST DETAILS HAS BEEN USED

Original Drawing Size :	A3	
Scale :	As Shown	Dimensions :
Drawing No.	S278/38/03	Rev A



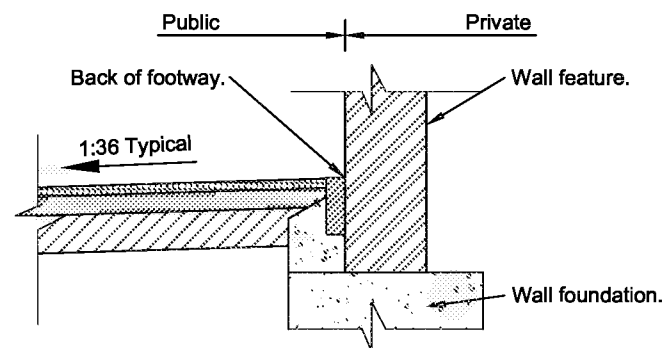
TYPE 1
FLEXIBLE FOOTWAY CONSTRUCTION
(Adjacent Carriageway)
(Scale 1:20)



TYPE 2
FLEXIBLE FOOTPATH CONSTRUCTION
(Separate from Carriageway)
(Scale 1:20)

NOTES

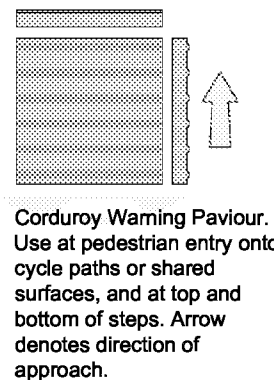
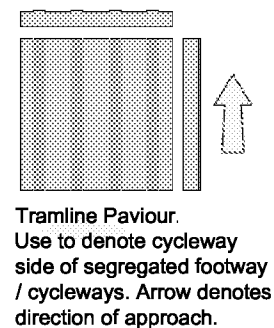
1. Do not scale from this drawing.
2. Refer to drawings 02 & 03 for Approved Kerb Type Selection.
3. Refer to drawing 01 for laying methods.
4. Prior to the commencement of laying the formation shall be treated with an approved residual weedkiller.
5. The Highway Inspector may request inclusion of a non-woven separation membrane to mitigate weed/root intrusion.
6. The Highway Inspector may increase the Sub-base depth or include a geotextile or geogrid on formation where site ground conditions are considered to be sub-standard.
7. Where there are footways without vehicle crossovers sub-base may be reduced to 100mm.
8. None of the details on this drawing are suitable where 'no-dig' construction is required.
9. Where a footpath is proposed between walls, private land or other features then positive drainage will be necessary in order to prevent run off of highway surface water.
10. Tactile paving to be specified and installed in accordance with DETR guidance on the Installation of Tactile Paving 1998



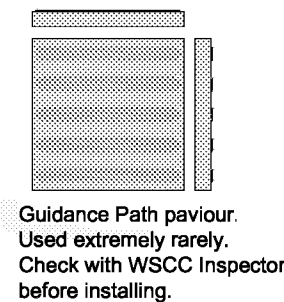
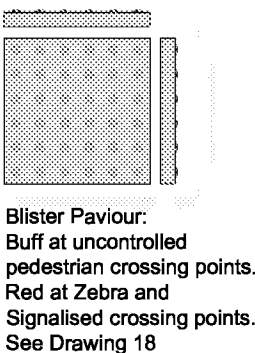
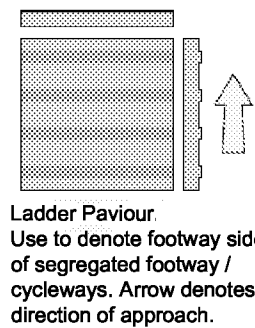
FLEXIBLE CONSTRUCTION ADJACENT WALL
(Scale 1:20)

PROPOSED WALL SCENARIO
The back of footway shall be formed with an EF Edging.

HISTORIC WALL SCENARIO
Where works are proposed directly adjacent an existing wall feature the Highway Inspector shall review the edging requirement on a case by case basis.



TACTILE PAVING
(Scale 1:20) - See note 10



Small element tactile paviments to be used where vehicular overrun is likely to break slabs

FOOTWAY - FLEXIBLE CONSTRUCTION TABLE SELECTOR			
	FOOTWAY	CROSSOVER TYPE 1 (STANDARD)	CROSSOVER TYPE 2 (INDUSTRIAL)
SUB-BASE			
Type 1 / Type 2 (Clause 803)	200 (See Note 7)	200	270
BASE			
32mm Dense Asphalt Concrete Base 40/60 PEN	-	-	100
BINDER COURSE			
20mm Dense Asphalt Concrete Binder 40/60 PEN (Not required with block paviers)	50	50	50
SURFACE COURSE			
Heavy Traffic Option: HRA 30/10 F Surf 40/60	25	25	25
HRA 45/6 Surf 160/220			
6mm Dense Graded Asphalt Concrete Surface Course 100/150	20	20	-
10mm Close Graded Asphalt Concrete Surface Course 100/150	-	-	30
Blocks on 30mm sand Bed	60	60	60

B	Tactile Paving added	DJL	GM	09.09.13
A	Notes amended	DLS	MJA	28.02.13
Rev	Revision details	Chkd	Appd	Date
Drawn:	MJA		For comment	
Chkd:			For tender	
Appd:			For construction	
Date:			As constructed	
File ref:				
IWP Ref:				

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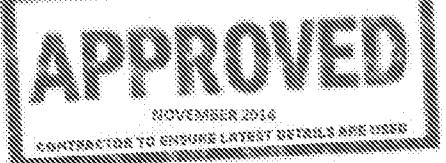


Project Name

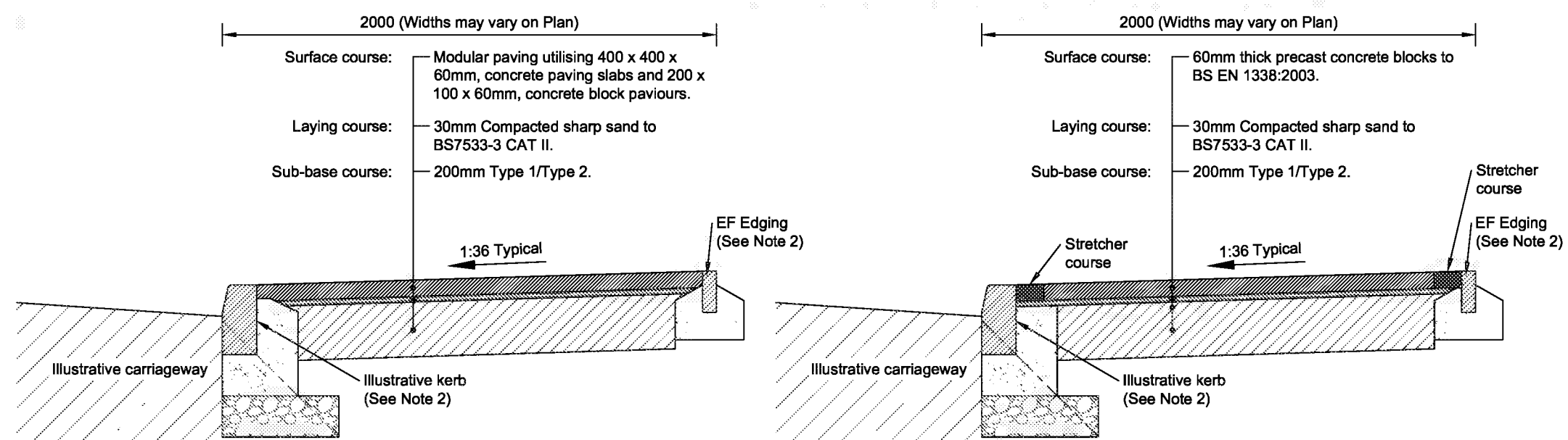
Section 278/38 Highway Agreement
Standard Details

Drawing Title

Footway/Cycleway
Type 1 & 2

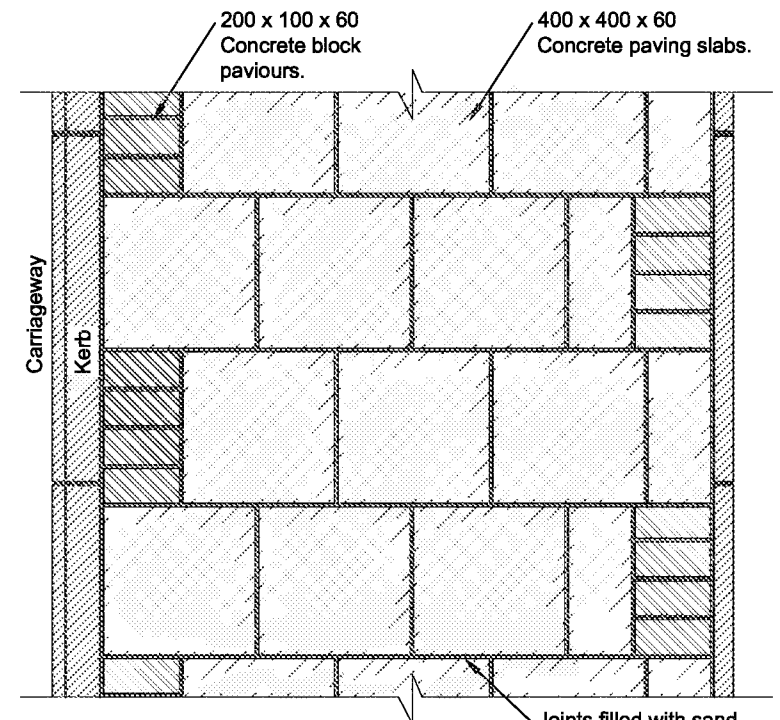


Original Drawing Size :	A3
Scale :	As Shown
Dimensions :	
Drawing No.	Rev
S278/38/04	B

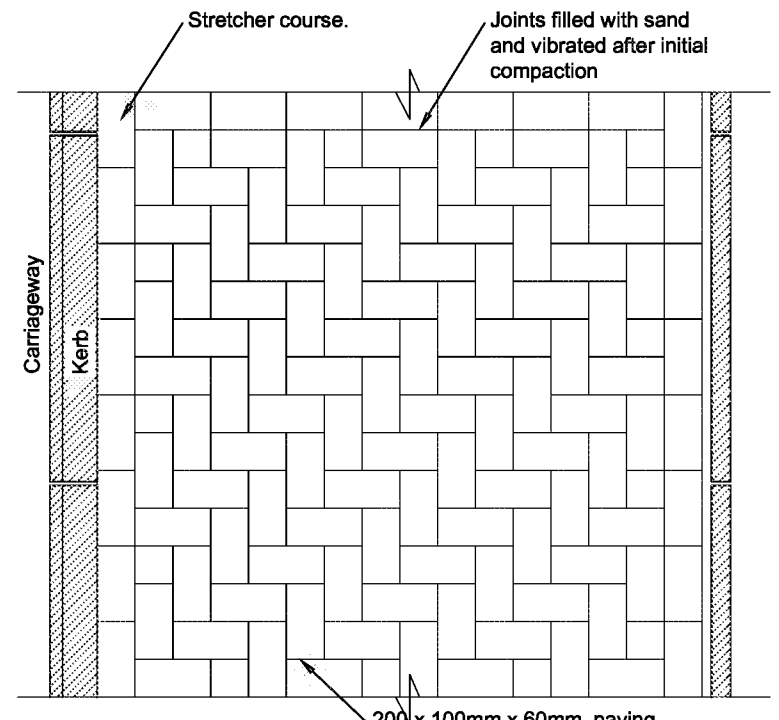


**TYPE 3
MODULAR PAVING
SECTION**
(Scale 1:20)

**TYPE 4
BLOCK PAVING
SECTION**
(Scale 1:20)



**TYPE 3
MODULAR PAVING
PLAN**
(Scale 1:20)



**TYPE 4
BLOCK PAVING
PLAN**
(Scale 1:20)

- NOTES**
- Do not scale from this drawing.
 - Refer to drawings 02 & 03 for Approved Kerb Type Selection.
 - Refer to drawing 01 for laying methods.
 - Prior to the commencement of laying the formation shall be treated with an approved residual weedkiller.
 - The Highway Inspector may request inclusion of a non-woven separation membrane to mitigate weed/root intrusion.
 - The Highway Inspector may increase the Sub-base depth or include a geotextile or geogrid on formation where site ground conditions are considered to be sub-standard.
 - Where there are footways without vehicle crossovers, sub-base may be reduced to 100mm.
 - The minimum length of any cut kerb shall be 450mm (Half kerb)
 - None of the details on this drawing are suitable where 'no-dig' construction is required.
 - Where a footpath is proposed between walls, private land or other features then positive drainage infrastructure must be provided in order to prevent run off of highway surface water.
 - Refer to drawings 04 & 06 for Footway Surfacing Options.

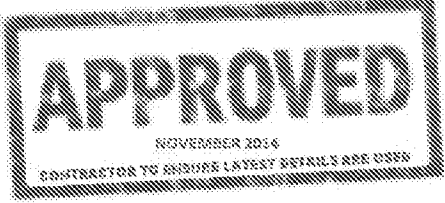
- PAVING NOTES:**
- A. All thicknesses in mm.
 - B. A single row stretcher course shall be applied around all ironwork service covers.
 - C. Where recessed covers are installed the laying pattern must match.
 - D. Gaps/joints must be sealed with a proprietary sealing system.
 - E. Type 1/2 Sub-base to be in accordance with Specification for Highway Works Clause 803 (See drg. 04).
 - F. All paving shall be sealed on completion of the works with a proprietary sand stabilisation material.

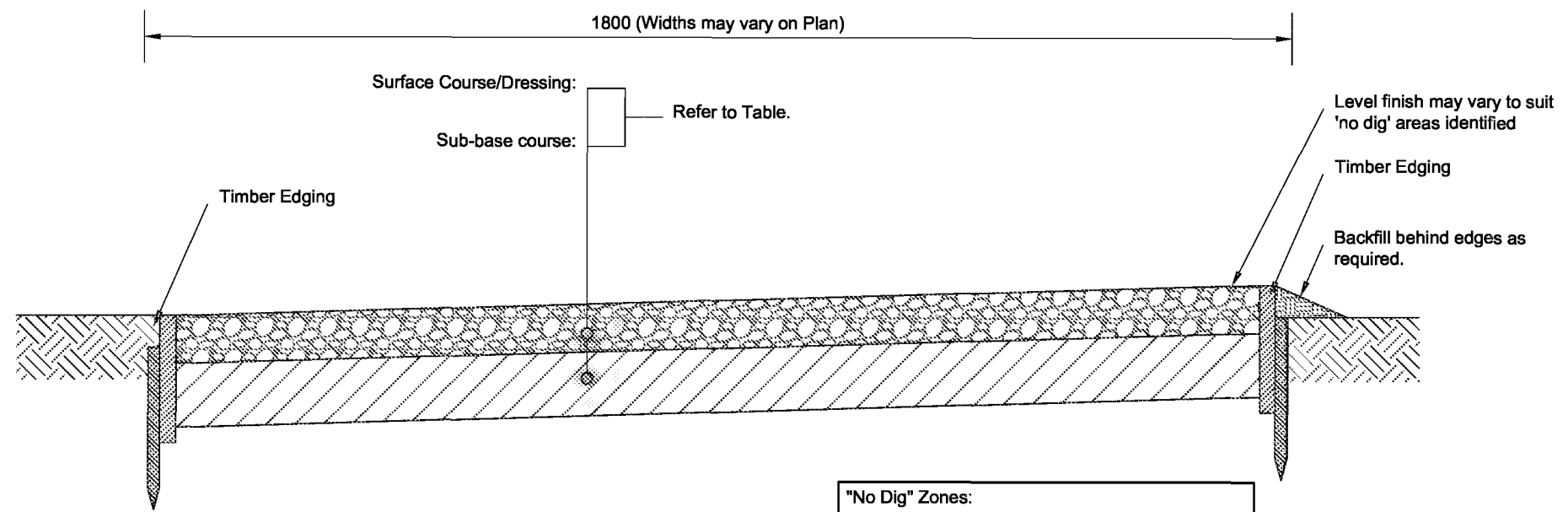
C	Footway width now 2m	DJL	DJL	13.05.14
B	Binder course omitted	DJL	GM	09.09.13
A	Notes amended	DLS	MJA	28.02.13
Rev	Revision details	Chkd	Appd	Date
Drawn: MJA			For comment	
Chkd:			For tender	
Appd:			For construction	
Date:			As constructed	
File ref:				
IWP Ref:				

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Project Name	Section 278/38 Highway Agreement Standard Details
Drawing Title	Footway/Cycleway Type 3 & 4

	
Original Drawing Size :	A3
Scale : As Shown	Dimensions :
Drawing No.	Rev
S278/38/05	C



ELEVATION DETAIL
(Scale 1:10)

"No Dig" Zones:

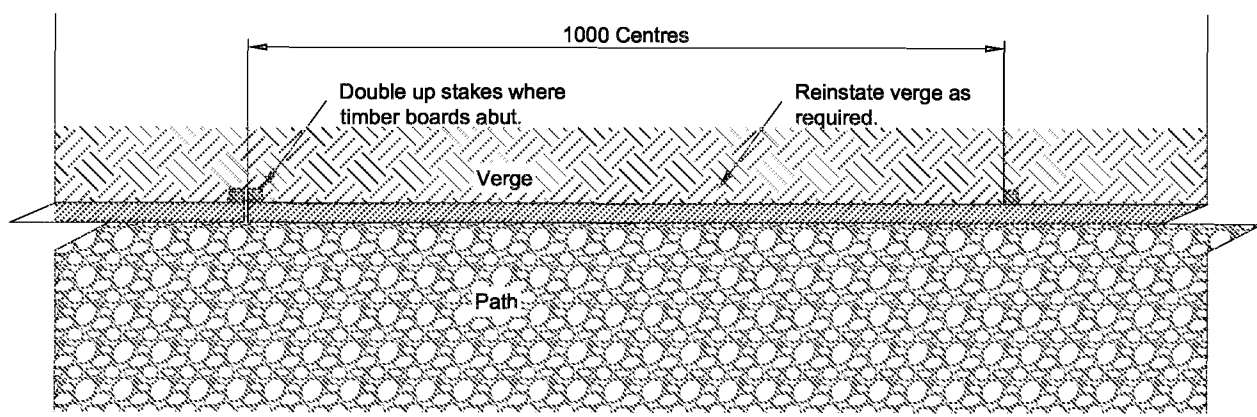
Where it is necessary to provide footways or footpaths within a tree-root protection zone (TPZ), the designer must use this detail or otherwise comply with the following requirements:

- i). No tree roots are to be severed
- ii). Existing soil must not be compacted
- iii). The construction must allow aeration and run-off

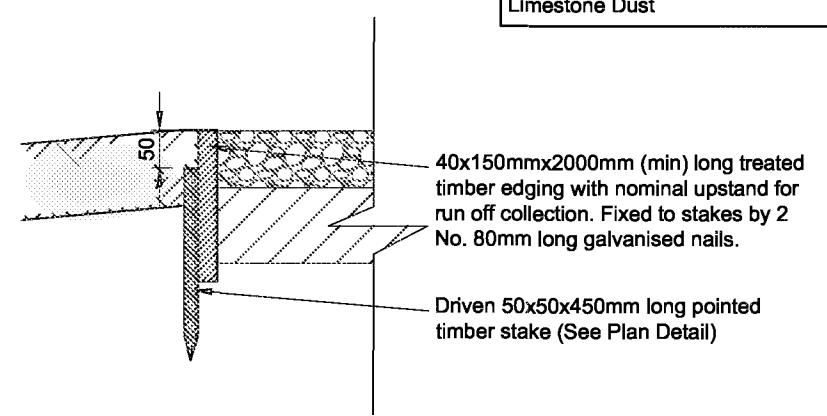
Specialist advice is to be sought in conjunction with approval from WSCC Tree Officer.

Cellweb (or similar approved) may be used, in accordance with manufacturer's specifications.

FOOTPATH - ALTERNATIVE CONSTRUCTION SELECTOR			
	RURAL TYPE A	RURAL TYPE B	RURAL TYPE C
SUB-BASE			
Type 1 (Clause 803) rolled in 2 No. layers	175	175	175
SURFACE/DRESSING COURSE			
Fittleworth Stone Screened Rubble	75	-	-
Eco-Mix supplied by Dudmans or equivalent approved by WSCC	-	75	-
Limestone Dust	-	-	25



PLAN DETAIL
(Scale 1:10)

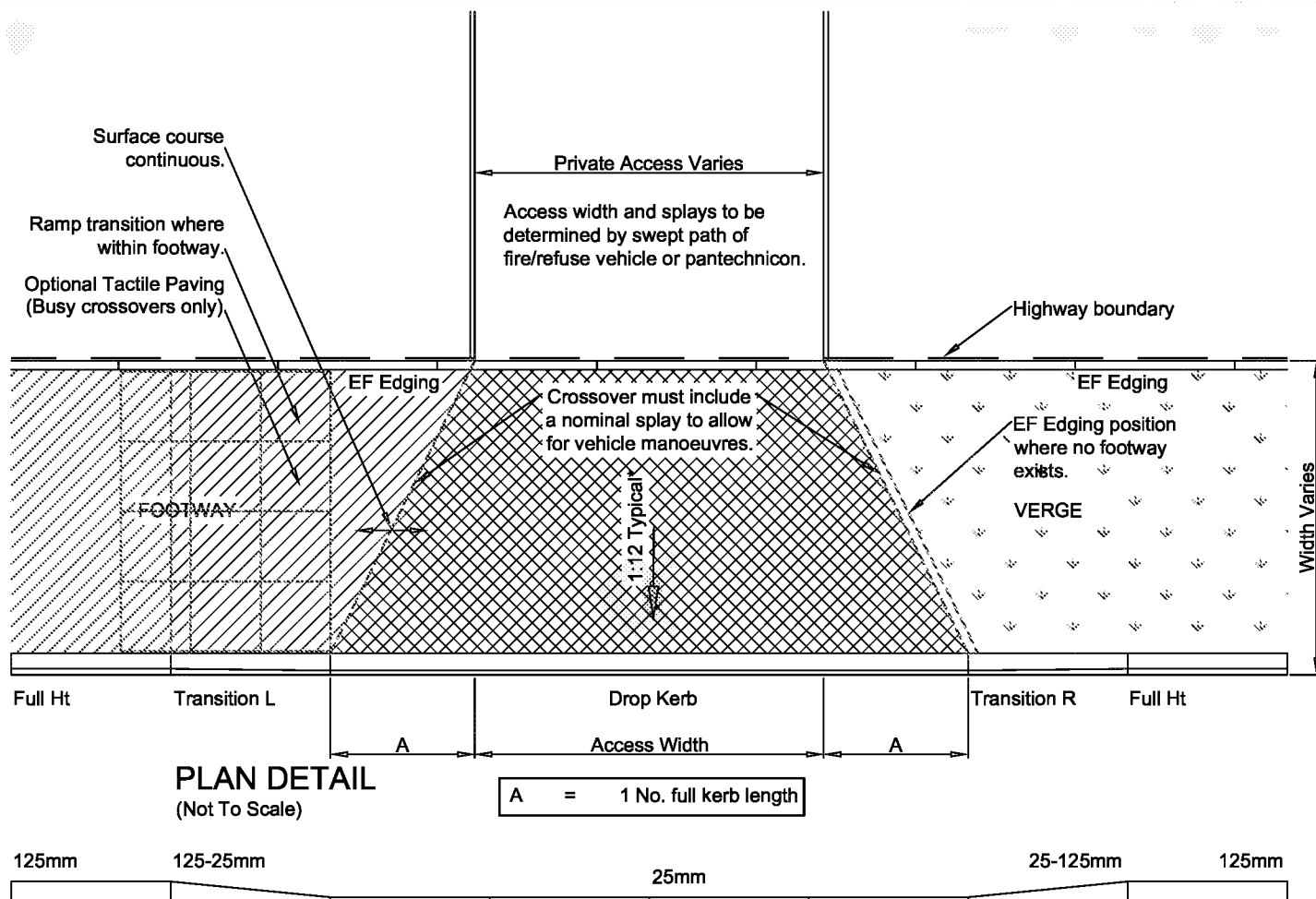


EDGING DETAIL
(Scale 1:10)

- NOTES**
- Do not scale from this drawing.
 - All timber shall comply with SHW Clause 304 unless otherwise stated.
 - Actual position of footpath/cycleway/bridleway shall be determined on site with The Highway Inspector.
 - Where footpath routing is in vicinity of trees appropriate measures shall be undertaken in accordance with BS5837 and in consultation with the WSCC tree officer.
 - The Highway Inspector may increase the Sub-base depth or include a geotextile or geogrid on formation where site ground conditions are considered to be sub-standard.
 - None of the details on this drawing are suitable where 'no-dig' construction is required.

A	Notes amended	DLS	MJA	28.02.13	West Sussex County Council Infrastructure Group County Hall, West Street Chichester West Sussex PO19 1RH (01243) 642105		Project Name	Section 278/38 Highway Agreement	APPROVED NOVEMBER 2014 CONTRACTOR TO ENSURE LATEST DETAILS ARE USED
Rev	Revision details	Chkd	Appd	Date			Drawing Title	Footway/Footpath (Rural)	
Drawn:	MJA							Type 5	
Chkd:									
Appd:									
Date:									
File ref:									
IWP Ref:									

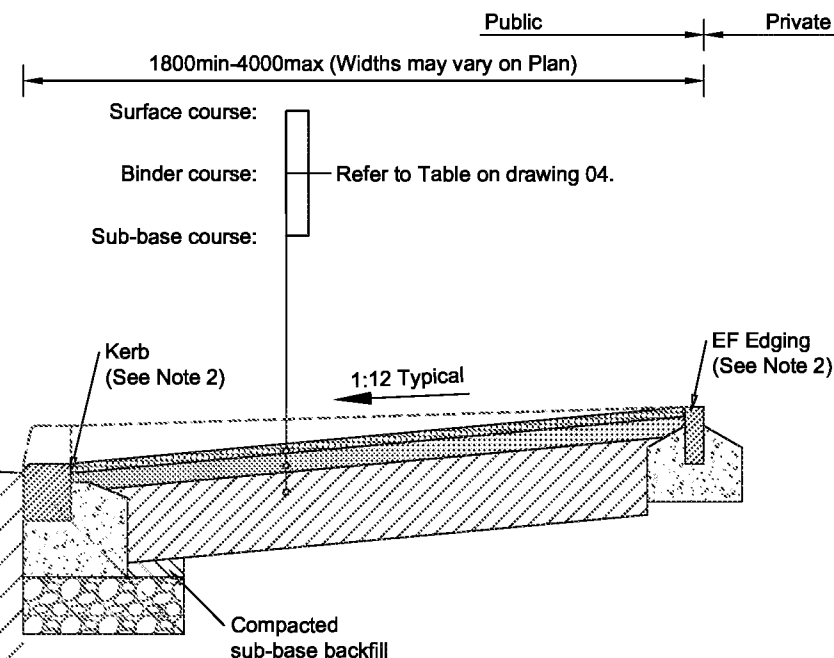
Size : A3	
Scale : As Shown	Dimensions :
Drawing No. S278/38/06	Rev A



PLAN DETAIL
(Not To Scale)

ELEVATION DETAIL
(Not To Scale)

*Where crossover widths are >9m, or where multiple crossovers are close together footway crossfall shall be reduced to 1 in 40



SECTION DETAIL
(Scale 1:20)

NOTES

1. Do not scale from this drawing.
2. Refer to drawings 02 & 03 for Approved Kerb Type Selection.
3. Refer to drawing 01 for laying methods.
4. Prior to the commencement of laying the formation shall be treated with an approved residual weedkiller.
5. The Highway Inspector may request inclusion of a non-woven separation membrane to mitigate weed/root intrusion.
6. The Highway Inspector may increase the Sub-base depth or include a geotextile or geogrid on formation where site ground conditions are considered to be sub-standard.
7. None of the details on this drawing are suitable where 'no-dig' construction is required.
8. The access width shall be constructed using a whole number of uncut dropper & transition kerbs.
9. Where the gradient of the access centreline exceeds a 1:12 WSCC shall review the suitability.
10. Where the vertical alignment of a private access falls towards the highway boundary, positive drainage infrastructure must be provided in order to prevent run off of on to the Public Highway.
11. Refer to drawing 04 for Footway Surfacing Options.

C	Limit to crossfall at * added	DJL	DJL	13.05.14
B	Tactile and width note added	DJL	GM	09.09.13
A	Notes amended	DLS	MJA	28.02.13
Rev	Revision details	Chkd	Appd	Date
Drawn: MJA			For comment	
Chkd:			For tender	
Appd:			For construction	
Date:			As constructed	
File ref:				
IWP Ref:				

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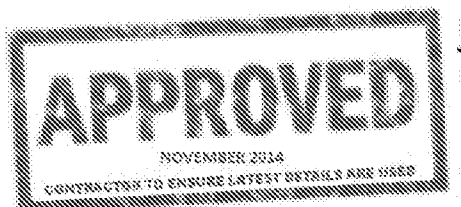


Project Name

Section 278/38 Highway Agreement
Standard Details

Drawing Title

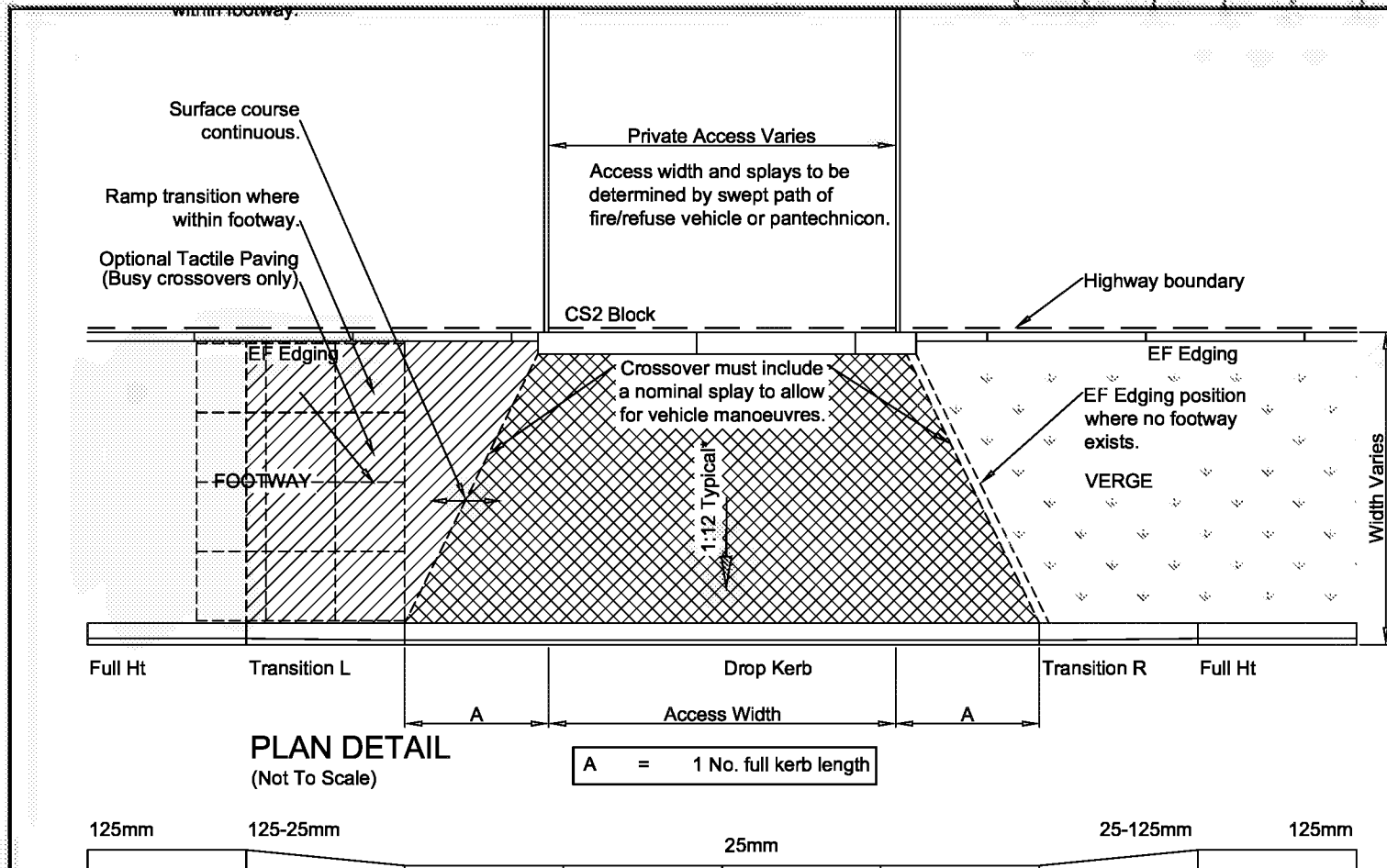
Footway Crossover
Type 1 - Residential



Size : A3
Scale : As Shown Dimensions :

Drawing No.
S278/38/07

Rev
C

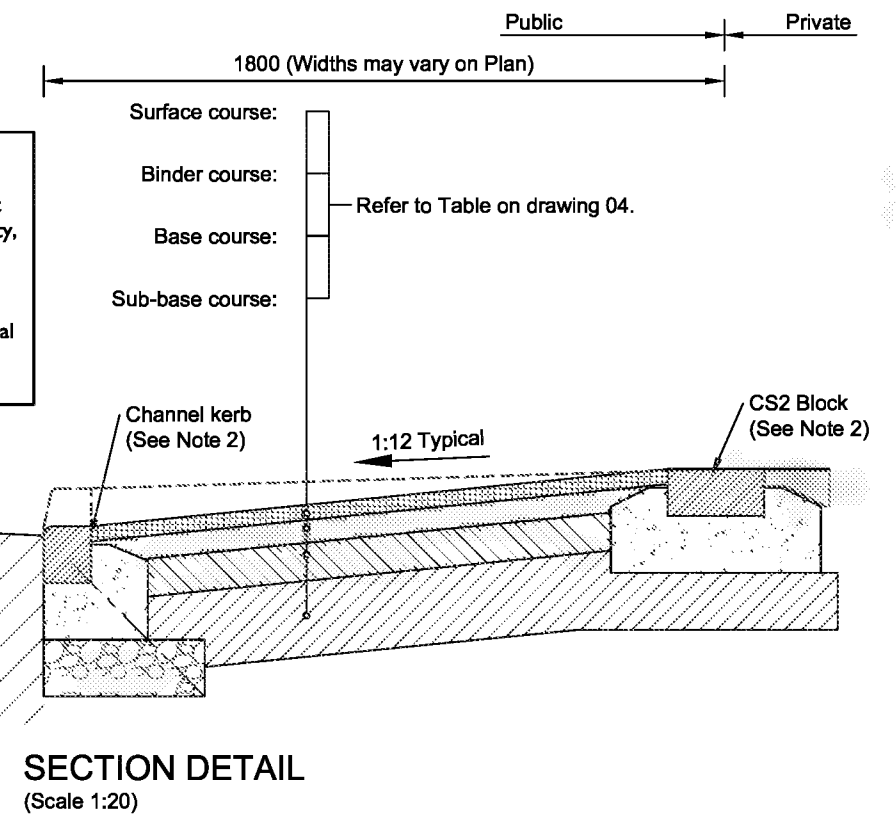


ELEVATION DETAIL
(Not To Scale)

*Where crossover widths are >9m, or where multiple crossovers are close together footway crossfall shall be reduced to 1 in 40

SURFACING NOTES:

- 450mm minimum overall construction must be met in compliance with frost susceptibility, irrespective of subgrading cbr value.
- All areas regarded as 'soft spots' are to be excavated and replaced with suitable material within the extents of new public highway to the satisfaction of the highway inspector.



NOTES

- Do not scale from this drawing.
- Refer to drawings 02 & 03 for Approved Kerb Type Selection.
- Refer to drawing 01 for laying methods.
- Prior to the commencement of laying the formation shall be treated with an approved residual weed killer.
- The Highway Inspector may request inclusion of a non-woven separation membrane to mitigate weed/root intrusion.
- The Highway Inspector may increase the Sub-base depth, or include a geotextile or geogrid on formation where site ground conditions are considered to be sub-standard.
- None of the details on this drawing are suitable where 'no-dig' construction is required.
- The access width shall be constructed using a whole number of uncut dropper & transition kerbs.
- Where the longitudinal vertical alignment of the access centreline exceeds a gradient of 1:12, WSCC shall review the suitability.
- Where the vertical alignment of a private access falls towards the highway boundary, positive drainage infrastructure must be provided in order to prevent run off of on to the Public Highway.
- Refer to drawing 04 for Footway Surfacing Options.

C	Crossfall note at * added	DJL	DJL	13.05.14
B	Tactile and width note added	DJL	GM	09.09.13
A	Notes amended	DLS	MJA	28.02.13
Rev	Revision details	Chkd	Appd	Date
Drawn: MJA			For comment	
Chkd:			For tender	
Appd:			For construction	
Date:			As constructed	
File ref:				
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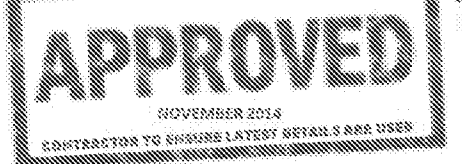


Project Name

Section 278/38 Highway Agreement
Standard Details

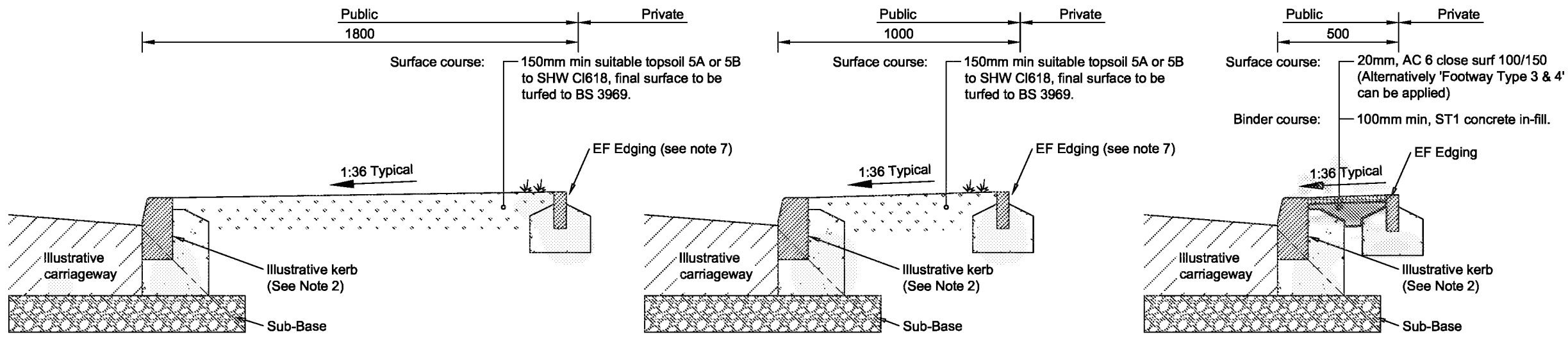
Drawing Title

Footway Crossover
Type 2 - Industrial



Original Drawing Size :	A3
Scale :	As Shown
Dimensions :	
Drawing No.	Rev
S278/38/08	C

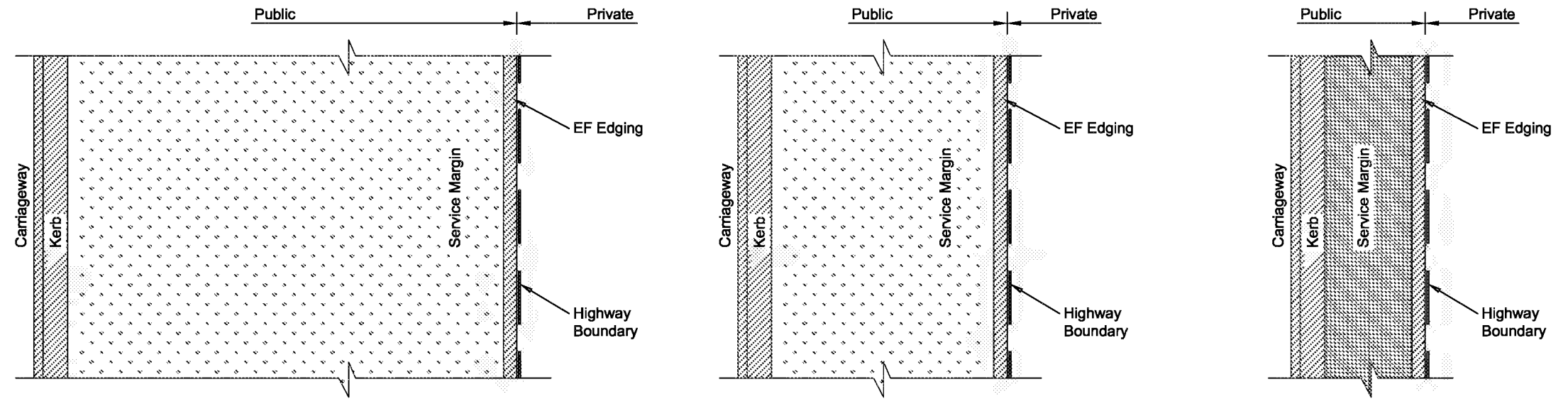
- NOTES
1. Do not scale from this drawing.
 2. Refer to drawings 02 & 03 for Approved Kerb Type Selection.
 3. Refer to drawing 01 for laying methods.
 4. Refer to drawing 10 for service corridor arrangements.
 5. Prior to the commencement of laying the formation shall be treated with an approved residual weedkiller.
 6. Should alternative aesthetic arrangements for highway boundary demarcation be proposed these must be agreed on a site by site basis by WSCC.
 7. EF edge to be omitted where margin is grassed/planted and bounded by a wall.



1.8m WIDTH
(Scale 1:20)

1.0m WIDTH
(Scale 1:20)

0.5m WIDTH
(Scale 1:20)



1.8m WIDTH
DEMARICATION PLAN
(Scale 1:20)

1.0m WIDTH
DEMARICATION PLAN
(Scale 1:20)

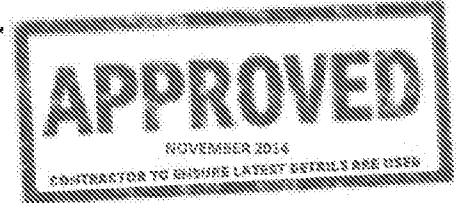
0.5m WIDTH
DEMARICATION PLAN
(Scale 1:20)

B	Note 7 added	DJL	GM	09.09.13
A	Notes amended	DLS	MJA	28.02.13
Rev	Revision details	Chkd	Appd	Date
Drawn:	MJA		For comment	
Chkd:			For tender	
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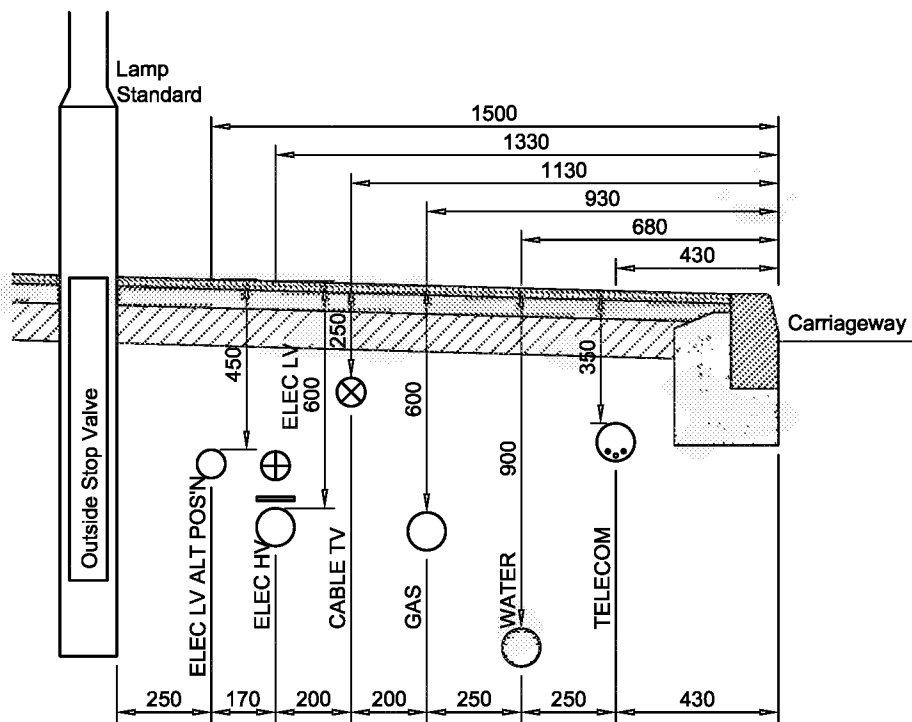


Project Name	Section 278/38 Highway Agreement
Drawing Title	Service Margins

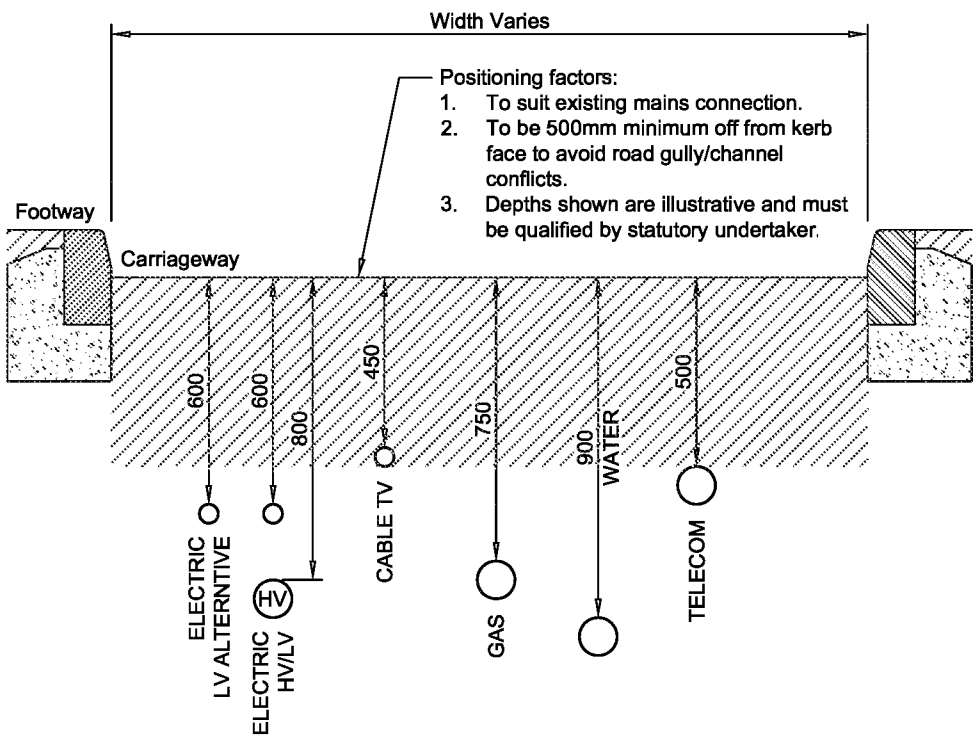


Original Drawing Size :	A3
Scale :	As Shown
Dimensions :	
Drawing No.	S278/38/09
Rev	B

- NOTES
1. Do not scale from this drawing.
 2. Refer to drawings 02 & 03 for Approved Kerb Type Selection.
 3. Refer to drawing 01 for laying methods.
 4. Refer to drawing 09 for service margin arrangements.
 5. All consultant and/or contractor planning and installation of underground utilities apparatus to be in accordance with NJUG (The National Joint Utilities Group) Guidelines, Volumes 1-5.
 6. Any variations to the typical depths shown must be qualified by correspondence evidence obtained from the relevant statutory authority.
 7. Shallow apparatus proposals must be qualified by correspondence evidence obtained from the relevant statutory authority as to the acceptable 'protective measures'. For technical approval a supporting drawing and loading calculations may be required.
 8. With the exception of existing and/or proposed sewers, no services shall be permitted to be routed within or below (includes crossings) a SUDS permeable pavement. Where this is deemed unavoidable WSCC shall review each location on a case by case basis.



RECOMMENDED ARRANGEMENT OF SERVICE MAINS WITHIN FOOTWAY
(Scale 1:20)



ALTERNATIVE ARRANGEMENT OF SERVICE MAINS WITHIN CARRIAGEWAY
(Scale 1:20)

SERVICE NOTES:

If services cannot be accommodated within the footway and/or service margin areas then WSCC will consider an alternative arrangement within the carriageway on a case by case basis subject to the following criteria:

- A. Statutory Undertaker Consent. (Streetworks Team)
- B. Maintenance Access.
- C. Likely Road Closures.
- D. Damage due to poor reinstatement works.

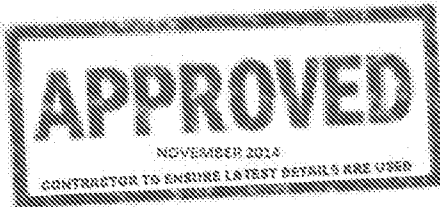
A	Notes amended	DLS	MJA	28.02.13
Rev	Revision details	Chkd	Appd	Date
Drawn:	MJA		For comment	
Chkd:			For tender	
Appd:			For construction	
Date:			As constructed	
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Project Name
Section 278/38 Highway Agreement
Standard Details

Drawing Title
Preferred Arrangement of
Services within Public Highway



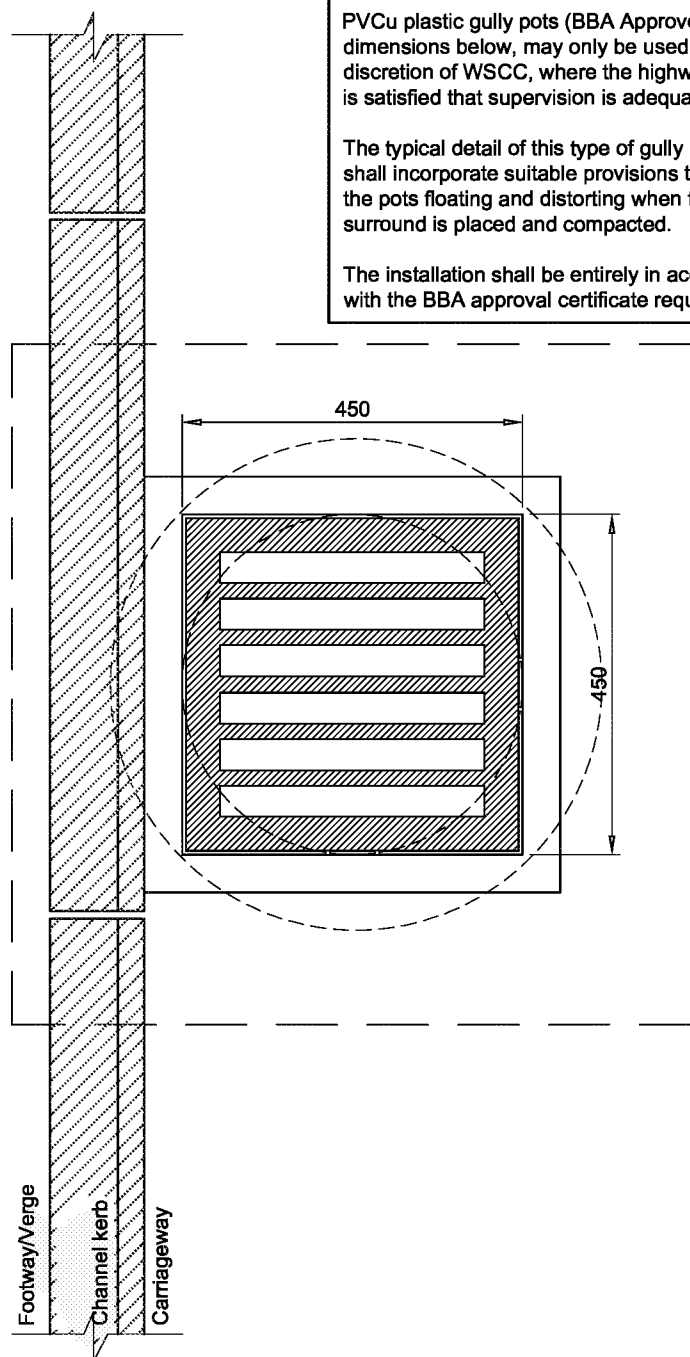
Original Drawing Size :	A3
Scale :	As Shown
Dimensions :	
Drawing No.	Rev
S278/38/10	A

ALTERNATIVE GULLY POT.

PVCu plastic gully pots (BBA Approved) of the dimensions below, may only be used at the discretion of WSCC, where the highway inspector is satisfied that supervision is adequate.

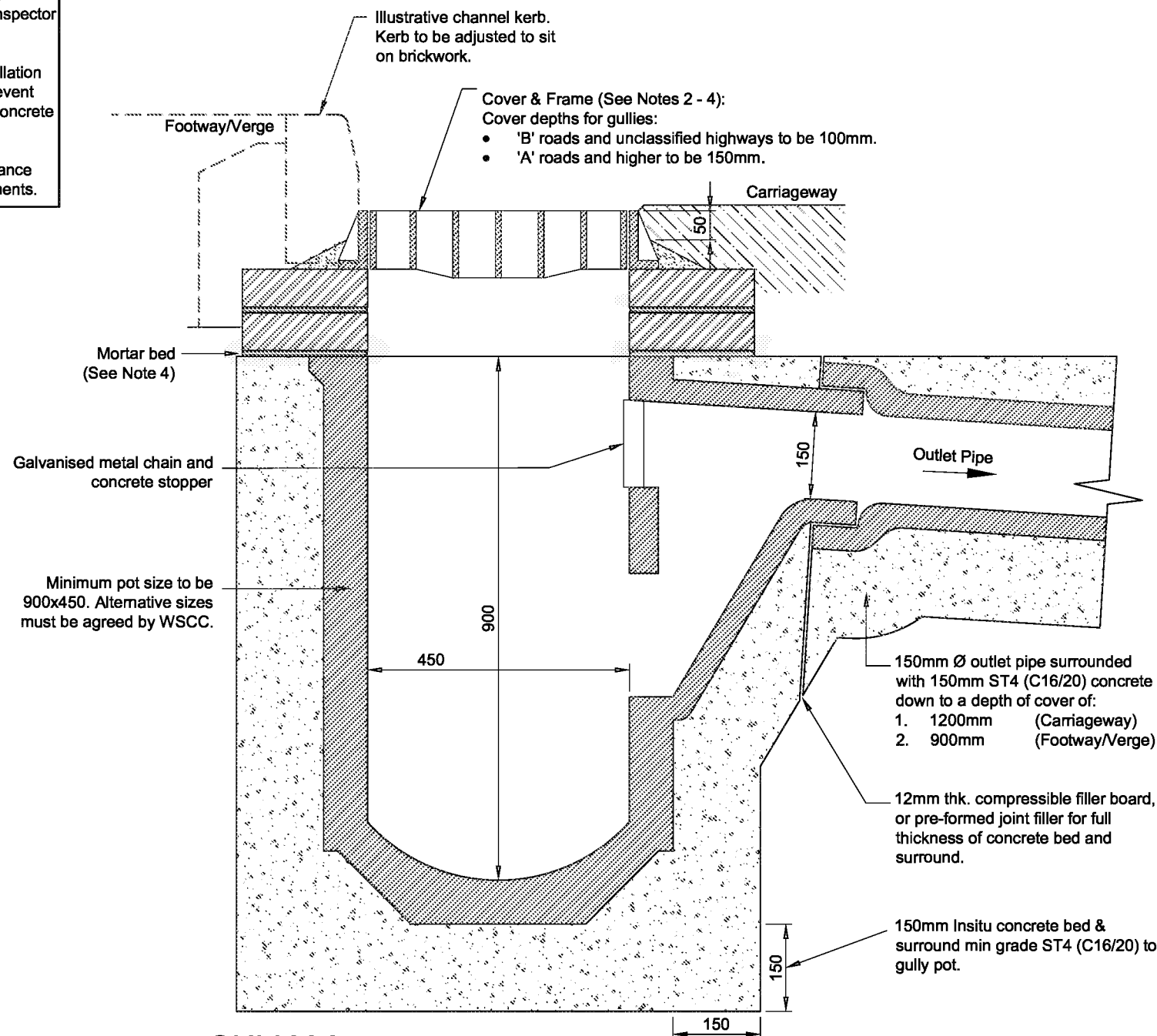
The typical detail of this type of gully installation shall incorporate suitable provisions to prevent the pots floating and distorting when the concrete surround is placed and compacted.

The installation shall be entirely in accordance with the BBA approval certificate requirements.



GULLY A
TYPE: PRECAST CONCRETE
PLAN

(1:10)



GULLY A
TYPE: PRECAST CONCRETE
SECTION

(1:10)

NOTES

- Do not scale from this drawing.
- All gully grating and frames to be 'hinged' heavy duty ductile iron minimum grade D400 in accordance with BS EN124:1994 & Section 508 of the Specification of Highway Works.
- All ironwork shall carry a BSI kite mark.
- Frames shall be bedded on a gauged Class 1 (3:1) sand/cement mortar to CI.2402 of SHW Mortar Designation (i), and either 2 or 3 courses of Engineering Brickwork Class 'B' to BS EN 771-1:2011.
- Gully spacing is to be determined from the requirements of HA 102/00, Design Manual for Roads and Bridges, however, maximum area to be drained by one gully: 180 m²
- Gully pots used for carriageway gullies shall be of precast concrete using Sulphate Resisting Cement (SRC) in accordance with BS 5911, part 230, 2004.
- All gullies to be trapped. Any variations to this i.e. 'non-trapped', 'gully chute' or 'grip' must be qualified and WSCC shall review each location on an individual basis.
- Selection of gully grating type shall be to suit the application area i.e. carriageway, footway/cycleway and to the satisfaction of the highway inspector.
- Pipe bedding to highway drainage to be Type Z when located under carriageway, and Type T at all other times, as detailed on Specification of Highway Works HCD no. F1.

SURFACE WATER PIPES

Permitted Types as follows:

CLAY: (100Ø-1200Ø)
All pipe shall be Vitriified Clayware to BS EN 295-1:1991.

UPVC: (100Ø-1100Ø)
All pipes shall be to BS EN 1401-1:1998.
All pipes shall be ribbed 'twin wall' to provide a suitable network (pipes & couplings).

CONCRETE: (300Ømin)
All pipes shall be made with Sulphate resistant Cement to BS 5911-1:2002

- ALL jointing and installation shall be undertaken to manufacturers specification.
- ALL materials shall be BBA certified.
- ALL materials shall comply with the Specification for Highway Works.

A	Notes & drg layout amended	DLS	MJA	28.02.13
Rev	Revision details	Chkd	Appd	Date
Drawn:	MJA		For comment	
Chkd:			For tender	
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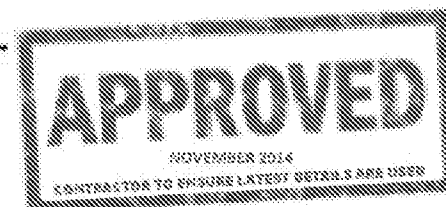


Project Name

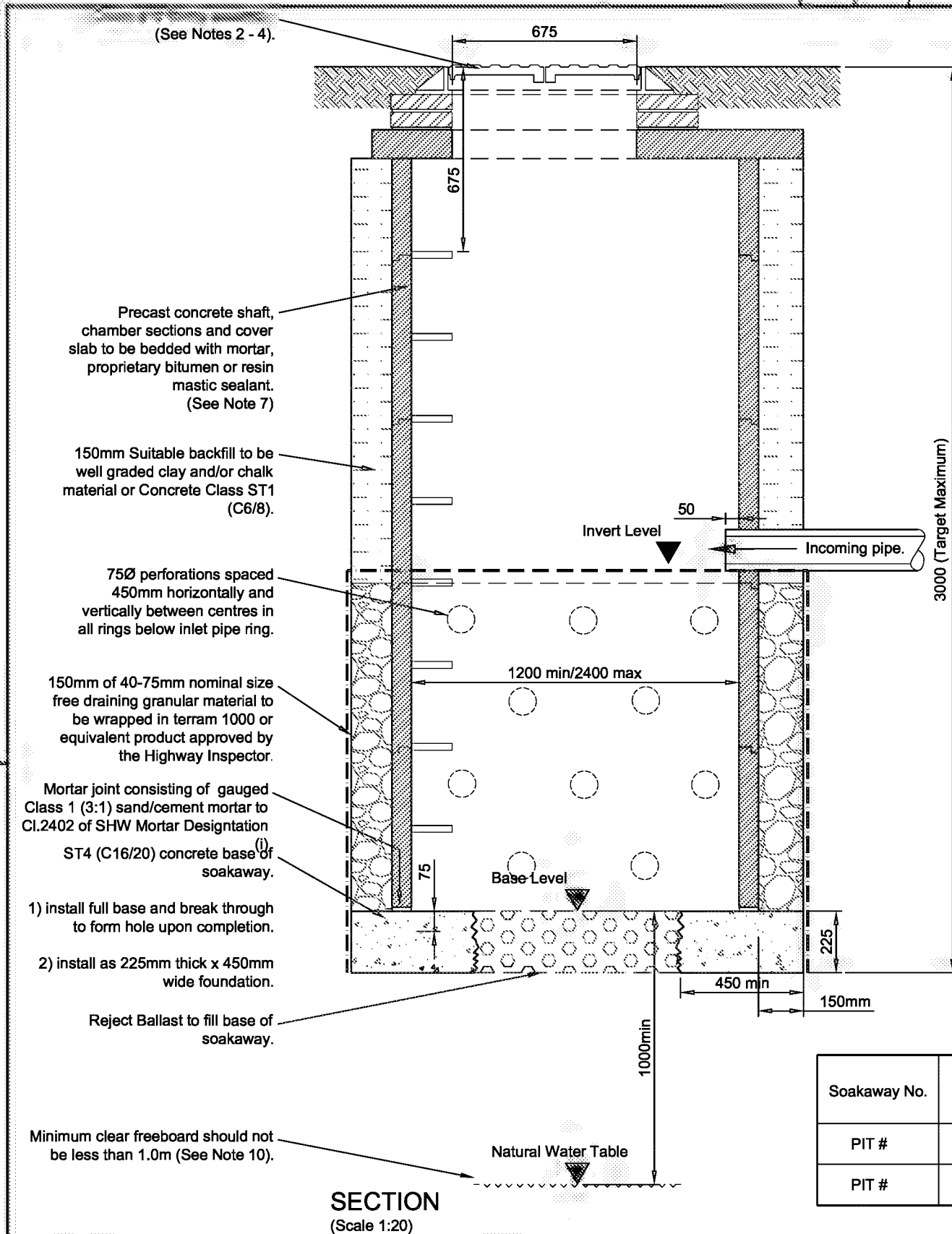
Section 278/38 Highway Agreement
Standard Details

Drawing Title

Drainage
Gully A - Pre-Cast Concrete

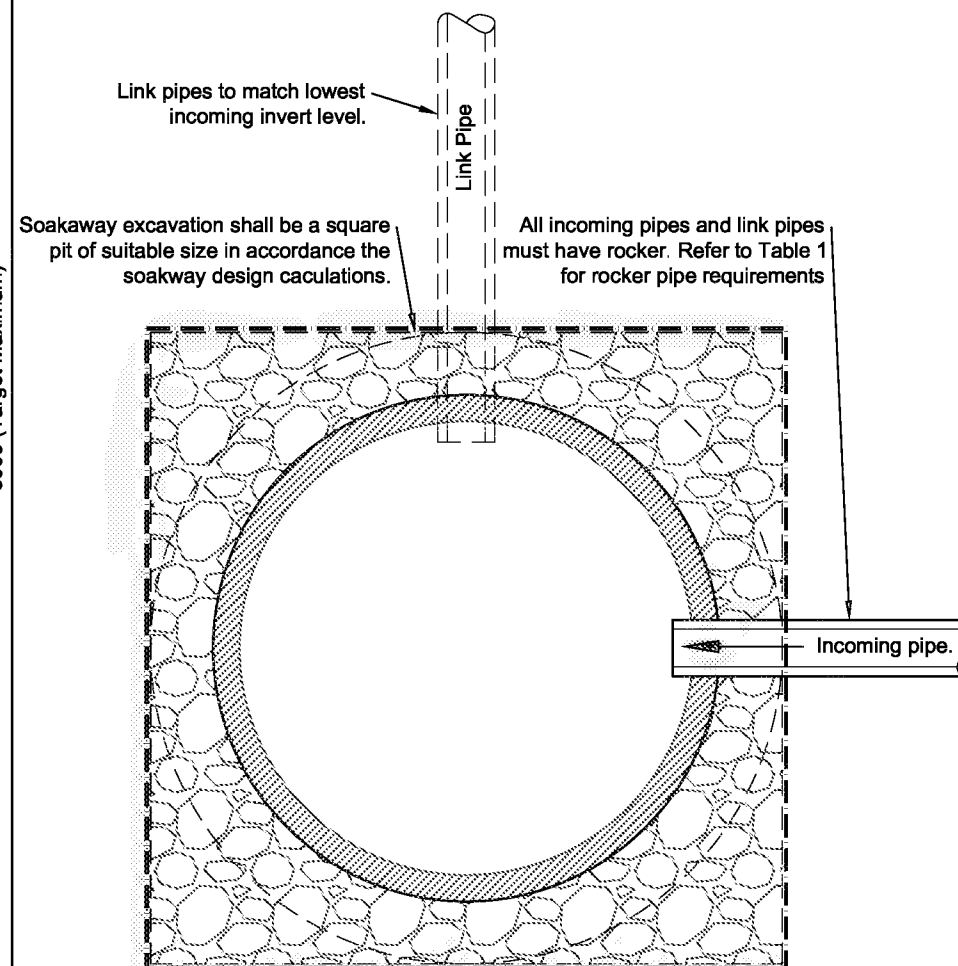


Size :	A3
Scale :	As Shown
Dimensions :	
Drawing No.	Rev
S278/38/11	A



NOMINAL DIAMETER	ROCKER PIPE LENGTH
150 - 600mm	0.6m
>600 - 750mm	1.0m
>750mm	1.25m

TABLE 1



Example Soakaway Schedule

Soakaway No.	Catchment Area (m ²)	Soakaway Cover Level (m)	Soakaway Base Level (m)	Soakaway Ring Dia (m)	Pit Size (m)	Incoming Invert (m)	Effective Depth (m)	Total Depth (m)
PIT #	###	###	###	Type # ###Ø	###	###	###	###
PIT #	###	###	###	Type # ###Ø	###	###	###	###

ALL LEVELS SHOULD BE RELATED TO ORDNANCE SURVEY DATUM.

NOTES

- Do not scale from this drawing.
- Cover Grade shall be minimum D400 unless otherwise agreed with the Highway Inspector. 675mm clear opening.
- Manhole cover and frames shall comply with the relevant provisions of BS EN 124, BS 7903 and Highway Agency Guidance Document HA 104/02. They shall be of a non-rocking design which does not rely on the use of cushion inserts. All manhole covers shall be the non-ventilating type and shall have closed keyways.
- Frames shall be bedded on a gauged Class 1 (3:1) sand/cement mortar to CI.2402 of SHW Mortar Designation (i), and between 2 and 4 courses of Engineering Brickwork Class 'B' to BS EN 771-1:2011.
- Steps for manholes and other chambers shall be Type D Class 1, complying with the requirements of BS EN 13101: 2002.
- Precast concrete manhole pattern step irons at 300mm centres vertically and staggered 300mm horizontally between centres.
- On manholes less than 1.5mØ reducing slab not to be used and PC rings to continue up to cover slab.
- Pre-cast concrete products shall comply with the relevant provisions of BS 5911: Part 2, 200 & 230.
- The design criteria shall be agreed with WSCC. Drainage strategy and flood risk reports shall be provided. In the absence of this information the designer shall ensure compliance as follows:
 - Site Investigation Report.
 - Infiltration Test Results.
 - Design Calculations in accordance with BRE365 or CIRIA 156.
 - Design for 1:100yr Return Period and include an allowance for climate change.
 - Environment Agency consent.
- Where multiple soakaways are to be linked via pits at the same location, the minimum spacing must be equal to the excavated pit size.
- Soakaways to be sited clear of the footways and service margins in order to avoid obstructing the route of public utilities.
- Locations within verges and other adoptable areas should be chosen, in preference to the carriageway.
- Ground water monitoring may be necessary to establish highest seasonal variation. Where 1m of unsaturated ground below soakaway cannot be achieved, seek advice from WSCC.

C	Text removed from sample table	DJL	DJL	25.11.14
B	Table 1 and mortar base joint	DJL	DJL	13.05.14
A	Notes amended	DLS	MJA	28.02.13
Rev	Revision details	Chkd	Appd	Date
Drawn:	MJA		For comment	
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Project Name

Section 278/38 Highway Agreement
Standard Details

Drawing Title

Drainage
Precast Concrete Ring Soakaway

APPROVED
NOVEMBER 2014
CONTRACTOR TO ENSURE LATEST DETAILS ARE USED

Original Drawing Size: A3

Scale: As Shown Dimensions:

Drawing No.
S278/38/12

Rev
C

DIAMETER OF LARGEST PIPE	INTERNAL DIA. OF MANHOLE
<375mm	1200mm
375 - 700mm	1500mm
750 - 900mm	1800mm

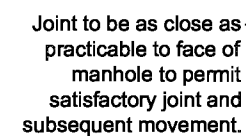
TABLE 1.

NOMINAL DIAMETER	ROCKER PIPE LENGTH
150 - 600mm	0.6m
>600 - 750mm	1.0m
>750mm	1.25m

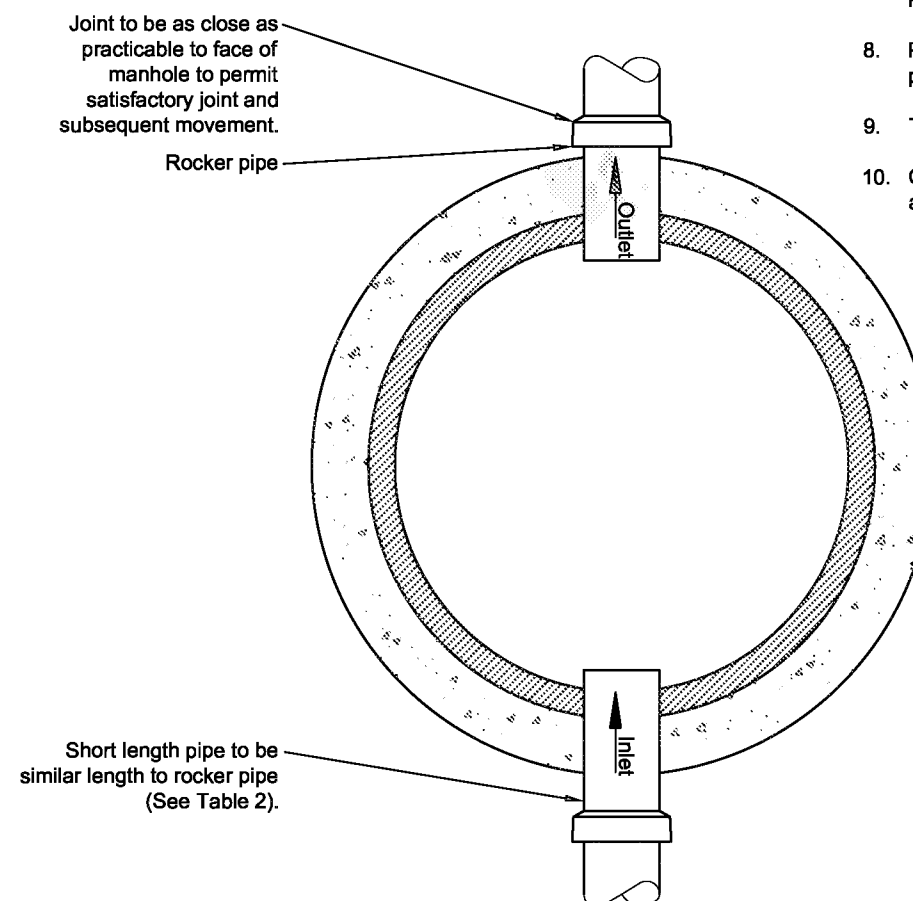
TABLE 2

Note: Opening to be offset from centre by approximately 200mm for 1200mm diameter shaft with rungs/ladder.

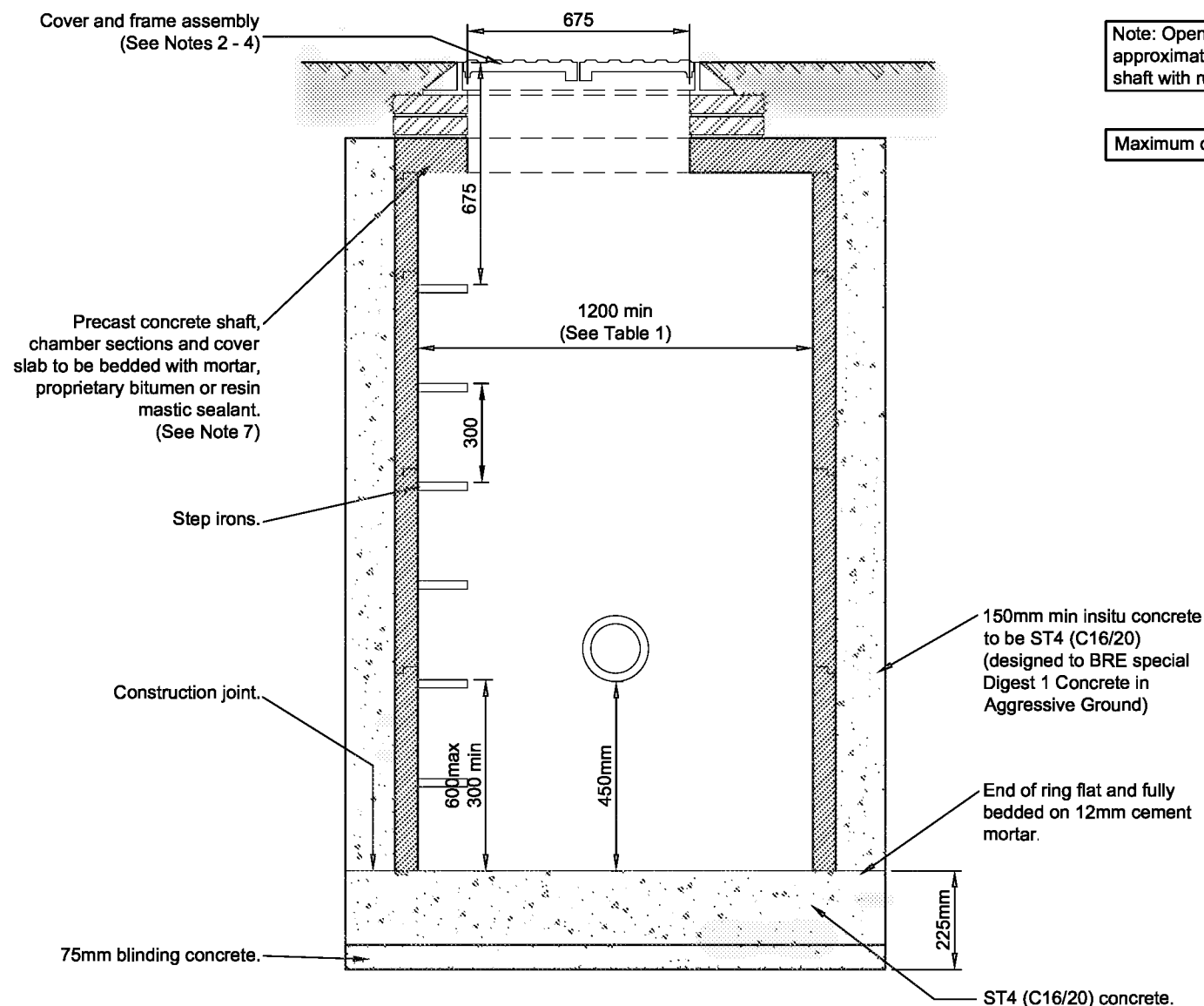
Maximum depth from cover level to soffit of pipe 3.0m.



Rocker pipe



Short length pipe to be similar length to rocker pipe (See Table 2).



SECTION
(Scale 1:20)

PLAN
(Scale 1:20)

B	Notes amended	DJL	DJL	13.05.15
A	Notes amended	DLS	MJA	28.02.13
Rev	Revision details	Chkd	Appd	Date
Drawn: MJA			For comment	
Chkd:			For tender	
Appd:			For construction	
Date:			As constructed	
File ref:				
IWP Ref:				

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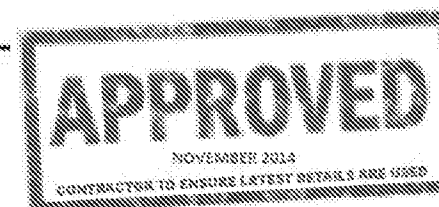


Project Name

Section 278/38 Highway Agreement Standard Details

Drawing Title

Drainage Type B Catchpit



Original Drawing Size : A3

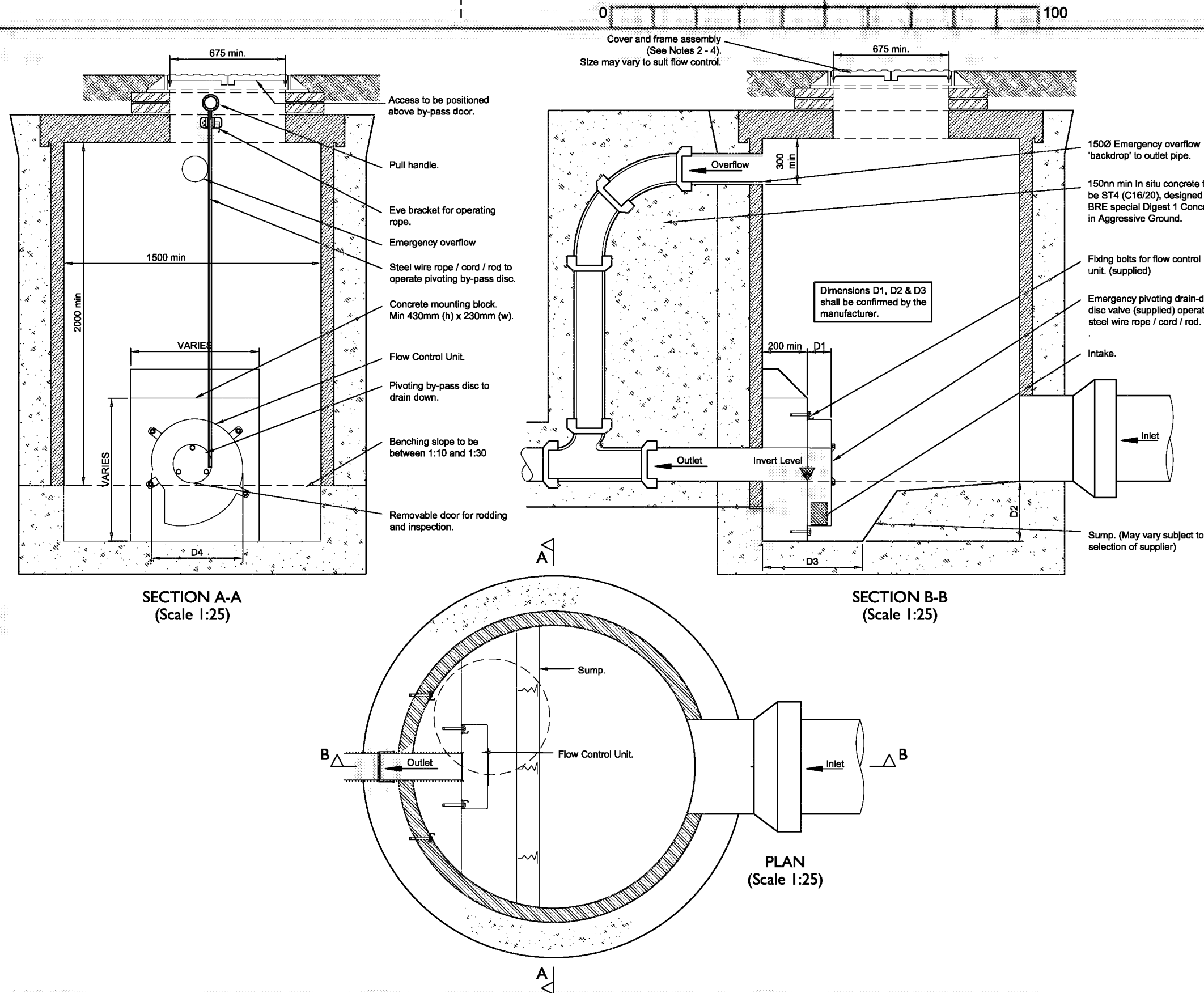
Scale : As Shown

Dimensions :

Drawing No.

S278/38/13

Rev



NOTES

- Do not scale from this drawing.
- Cover Grade shall be minimum D400 unless otherwise agreed with the Highway Inspector. 675mm clear opening.
- Manhole cover and frames shall comply with the relevant provisions of BS EN 124, BS 7903 and Highway Agency Guidance Document HA 104/02. They shall be of a non-rocking design which does not rely on the use of cushion inserts. All manhole covers shall be the non-ventilating type and shall have closed keyways.
- Frames shall be bedded on a gauged Class 1 (3:1) sand/cement mortar to CI.2402 of SHW Mortar Designation (i), and between 2 and 4 courses of Engineering Brickwork Class 'B' to BS EN 771-1:2011.
- Steps for manholes and other chambers shall be Type D Class 1, complying with the requirements of BS EN 13101: 2002.
- Precast concrete manhole pattern step irons at 300mm centres vertically and staggered 300mm horizontally between centres.
- On manholes less than 1.5mØ reducing slab not to be used and PC rings to continue up to cover slab.
- Pre-cast concrete products shall comply with the relevant provisions of BS 5911: Part 2, 200 & 230.
- The applicant must obtain an approval in principle with WSCC for use of such flow control. The design 'performance' shall be agreed with WSCC (head/flow). Drainage strategy and flood risk reports shall be provided. In the absence of this information evidence shall be provided to demonstrate historic and/or Greenfield flows.
- The flow control quotation and specification, and chamber details shall be supplied to WSCC in order that the 'commuted sum' can be calculated.
- The chamber shall be of suitable size, type and construction relative to the flow control unit dimensions. The chamber must be installed in strict accordance with the supplier recommendations. Any variations shall be reported to WSCC.
- All flow control manholes shall include an emergency overflow located just under the biscuit. This shall be a minimum 150Ø. The overflow is only permitted to operate during exceedance events in excess of 1:30yr+30% climate change.

A	Notes amended	DLS	MJA	28.02.13
Rev	Revision details	Chkd	Appd	Date
Drawn:	MJA		For comment	
Chkd:			For tender	
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Date:			As constructed	
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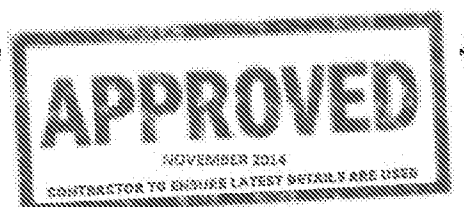


Project Name

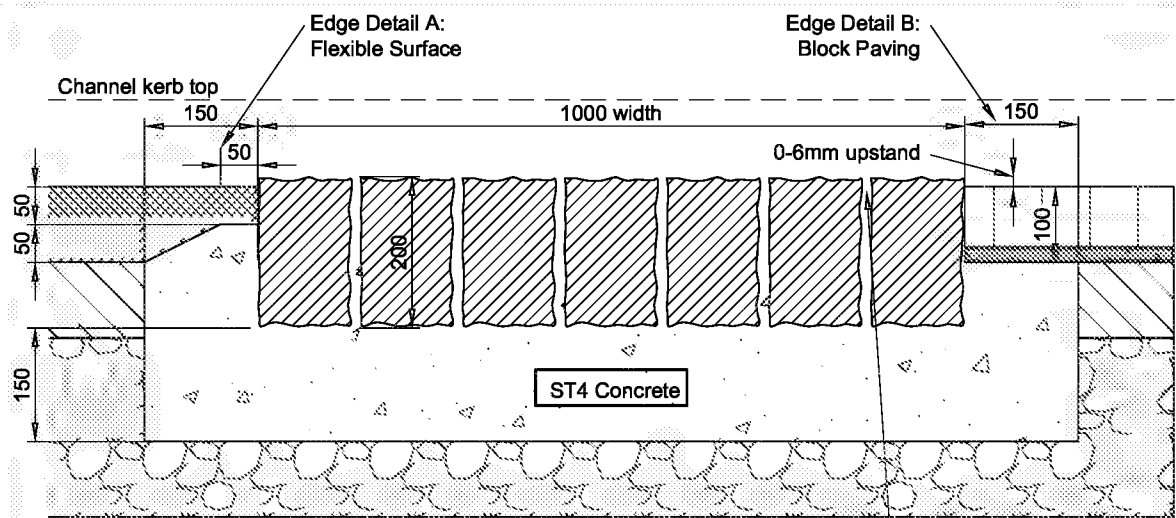
Section 278/38 Highway Agreement
Standard Details

Drawing Title

Vortex Flow Control
Type B Manhole

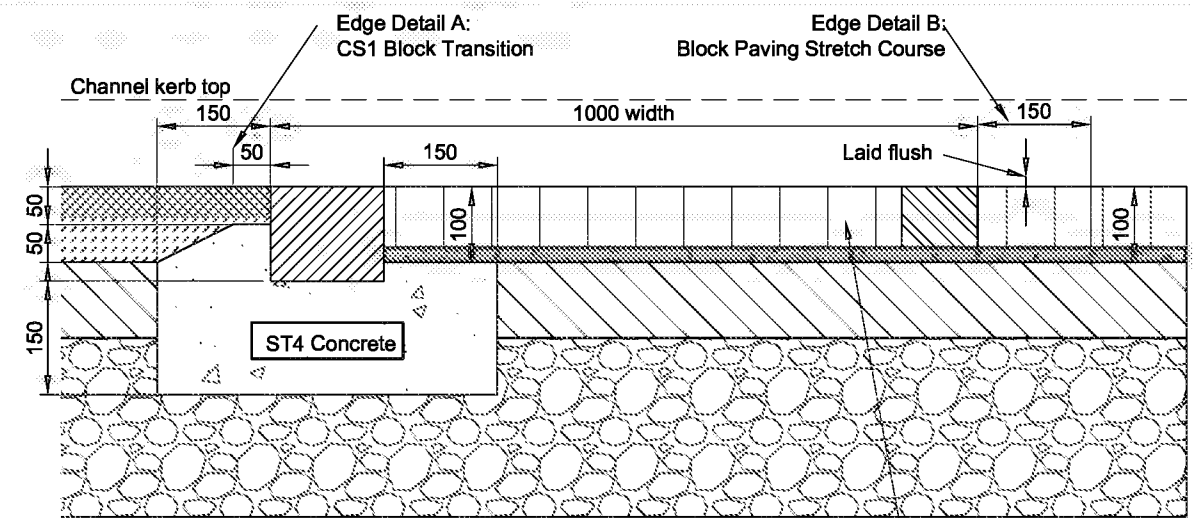


Original Drawing Size :	A3
Scale :	As Shown
Dimensions :	
Drawing No.	Rev
S278/38/14	A



GRANITE SETT RUMBLE STRIP
SECTION
(1:10)

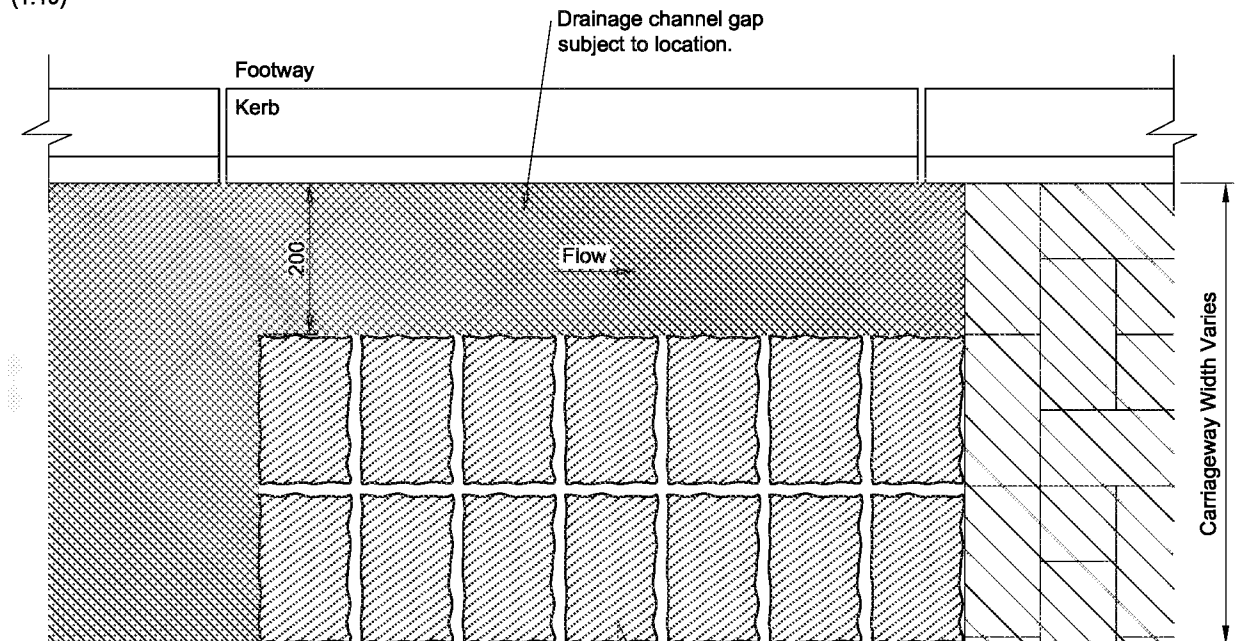
All joints to be pointed
with Class 12 mortar to EN
998-2:2003



BLOCK PAVED RUMBLE STRIP
SECTION
(1:10)

80mm Block Paving as per
manufacturer specification

- NOTES
1. Do not scale from this drawing.
 2. Kerbs to be butt jointed. Where kerb alignments incur 'minor open joint tapers' between formed surfaces mortar jointing shall be used as directed by Highway Inspector.
 3. All full length PCC kerbs are to be mechanically handled.
 4. All precast concrete Kerbs & Edgings shall be to BS EN 1340 & laid to BS 7533-6.
 5. All setts of natural stone shall be to BS EN 1342 & laid to BS 7533-7.
 6. All Kerbs & Edgings bed & backing forming rumble strip to be Concrete Class ST4 (C16/20), well compacted. Unless otherwise stated this shall be a minimum bed thickness of 150mm.
 7. The minimum length of any cut kerb shall be 450mm (Half kerb).
 8. The correct radius kerbs shall be used for all radii of 12m or less. For radii between 12m and 20m 600mm long straight units shall be used. Radius kerbs shall be used to form corners of laybys and tapers.
 9. The correct transition kerbs shall be used for all drop kerb and upstand variation locations.
 10. The correct quadrant kerbs shall be used to form corners of square areas and refuge islands. Cut quadrants are permissible.
 11. Full height kerb upstand shall be 125mm unless otherwise agreed by WSCC under a formal request.
 12. Drop kerb upstand shall be 0-6mm for pedestrian crossings, 25mm for vehicular crossings.

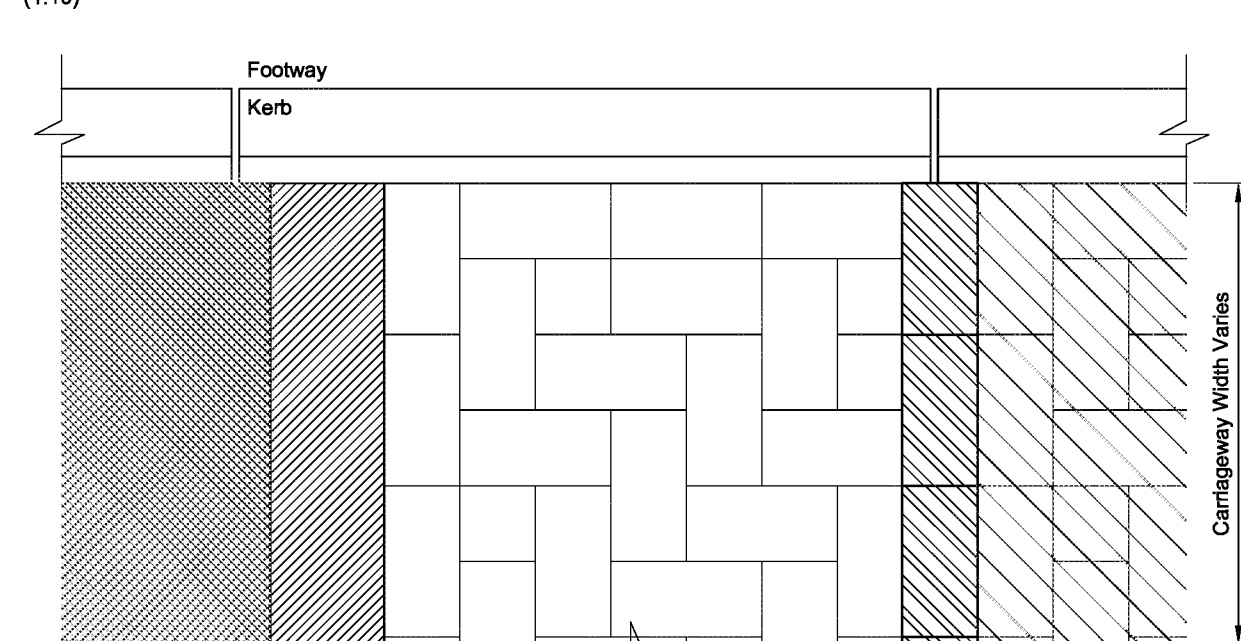


GRANITE SETT RUMBLE STRIP
PLAN
(1:10)

LAYING:
To be laid jointed with a 10mm (min) gap between rows.
The setts shall be laid on a wet bed of concrete.

UPSTAND:
0-6mm upstand.

DRAINAGE:
Setts shall be laid leaving a 200mm gap from the kerb face
where necessary to maintain surface water conveyance.



BLOCK PAVED RUMBLE STRIP
PLAN
(1:10)

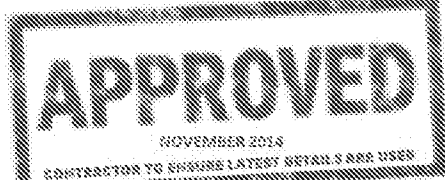
LAYING:
To be laid jointed with a 10mm (min) gap between rows.
The setts shall be laid on a wet bed of concrete.

A	Notes amended	DLS	MJA	28.02.13
Rev	Revision details	Chkd	Appd	Date
Drawn:	MJA		For comment	
Chkd:			For tender	
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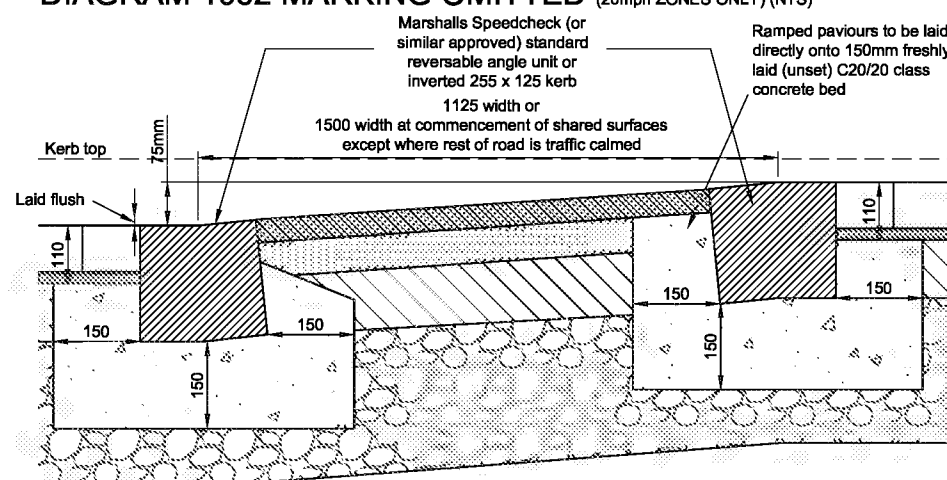
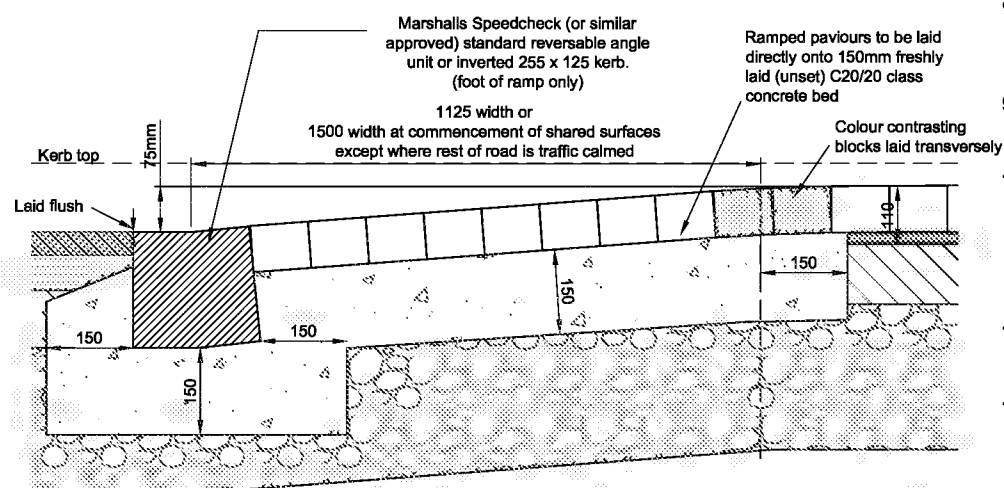
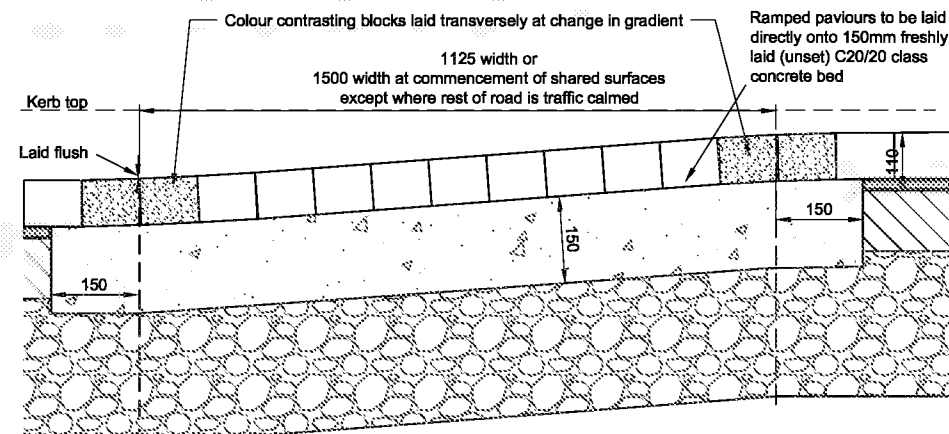
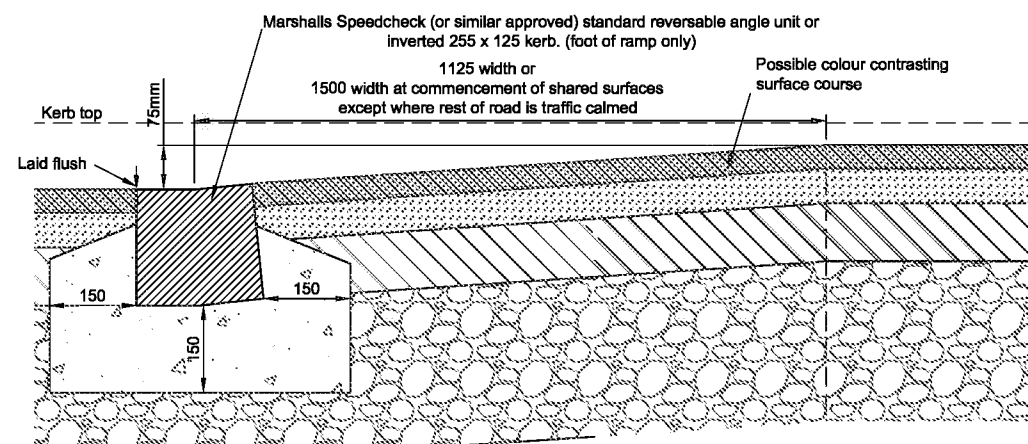
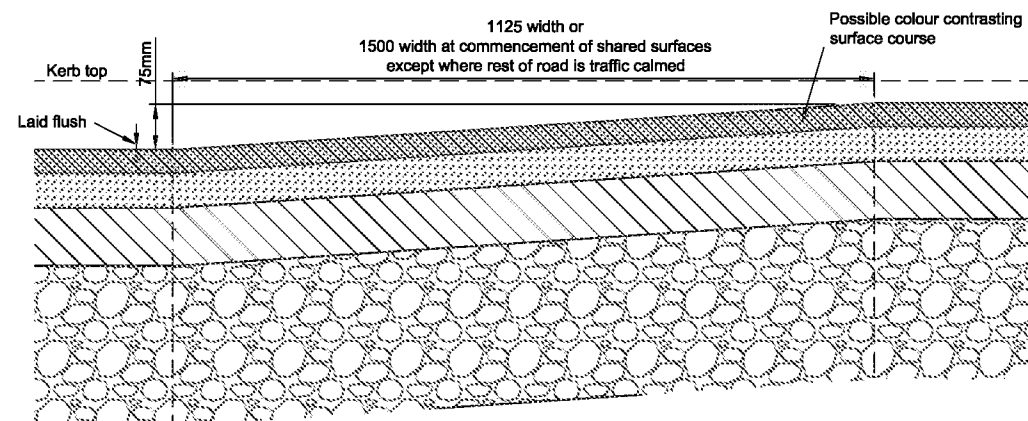
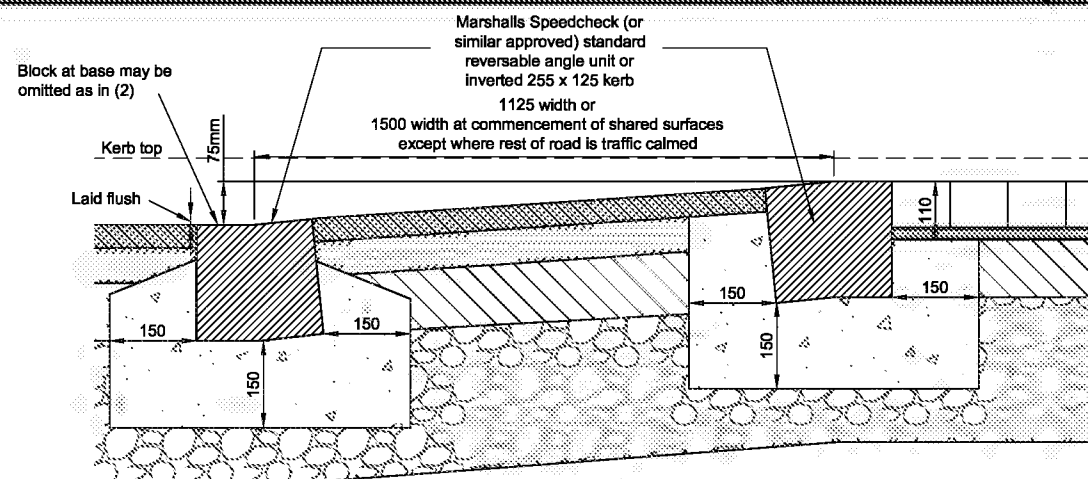


Project Name	Section 278/38 Highway Agreement Standard Details
Drawing Title	Street Furniture Rumble Strips



NOVEMBER 2013
CONTRACTOR TO ENSURE LATEST DETAILS ARE USED

Original Drawing Size :	A3
Scale :	As Shown
Dimensions :	
Drawing No.	S278/38/15
Rev	A



- ## NOTES

1. Do not scale from this drawing.
2. Kerbs to be butt jointed. Where kerb alignments incur 'minor open joint tapers' between formed surfaces mortar jointing shall be used as directed by Highway Inspector.
3. All full length PCC kerbs are to be mechanically handled.
4. All precast concrete Kerbs & Edgings shall be to BS EN 1340 & laid to BS 7533-6.
5. All setts of natural stone shall be to BS EN 1342 & laid to BS 7533-7.
6. All Kerbs & Edgings bed & backing forming rumble strip to be Concrete Class ST4 (C16/20), well compacted. Unless otherwise stated this shall be a minimum bed thickness of 150mm.
7. The minimum length of any cut kerb shall be 450mm (Half kerb).
8. The correct radius kerbs shall be used for all radii of 12m or less. For radii between 12m and 20m 600mm long straight units shall be used. Radius kerbs shall be used to form corners of laybys and tapers.
9. The correct transition kerbs shall be used for all drop kerb and upstand variation locations.
10. Markings to diagram 1062 may be omitted within 20mph Zones subject to Safety Audit. Ramps shall be designed to be conspicuous to approaching drivers, particularly where markings to diag 1062 are omitted. - This may be achieved through the use of colour contrasting materials
11. Block paved ramped sections are only permissible in 20mph Zones where markings to diag 1062 are omitted.
12. Plateau sections of speed tables shall be a minimum of 4m in length, and on through routes, bus routes and spine roads they shall be at least 6m in length.
13. Speedcheck (or similar) block may be replaced by an inverted 255 x 125 kerb (laid flush) except at tops of ramps where both ramp face and plateau are block paved.
14. Road centre-line markings to diagram 1004 shall be provided over the ramp wherever triangle hump markings to diag 1062 are installed except where there is a controlled pedestrian crossing on the ramp, or when the width of the hump is less than 5m.
15. Edge of road markings to diagram 1012.1 shall be placed alongside the ramp wherever triangle hump markings to diag 1062 are installed to indicate the edge of a road hump which does not extend across the full width of the carriageway but ends within 300mm of the kerb-line, except where single or double yellow line markings to diag 1017 or 1018.1 are installed.

C	Notes 14 and 15	DL	DL	13/05/2014
B	Extensive reworking	DL	GM	09/09/2013
A	Various	DL	GM	07/03/2013
Rev	Revision details	Chkd	Appd	Date
Drawn: MJA			For comment	
Chkd:			For tender	
Appd:			For construction	
Date:			As constructed	
File ref:				
IWP Ref:				

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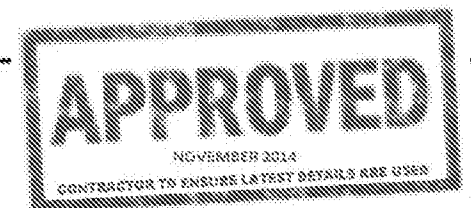


Project Name

Section 278/38 Highway Agreement Standard Details

Drawing Title

Street Furniture Ramp Feature



Original Drawing Size : A3

Scale : NTS

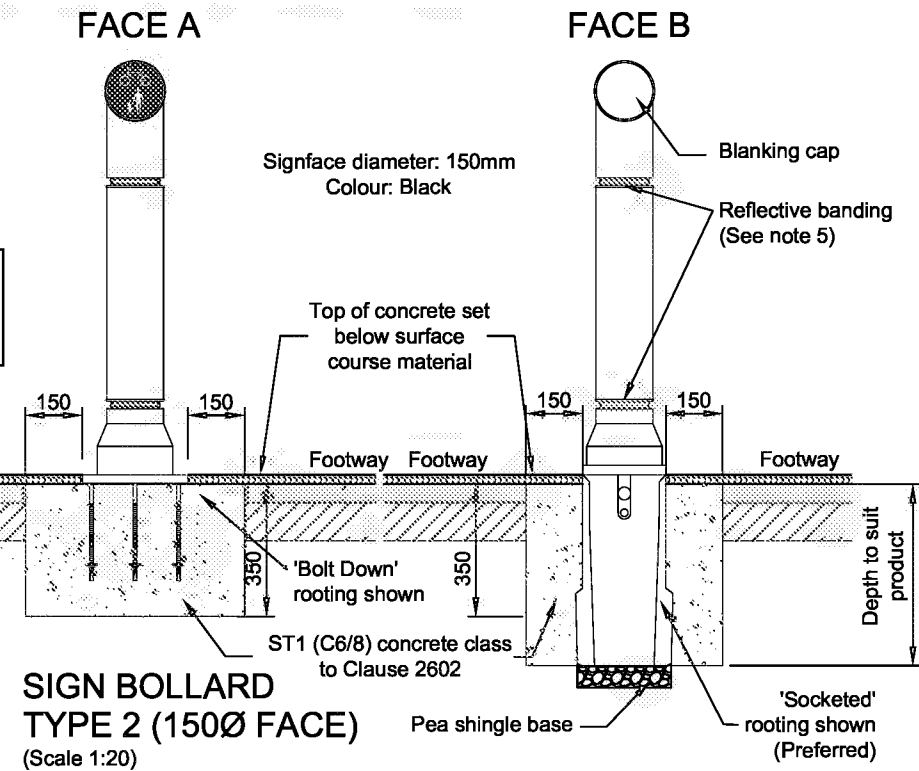
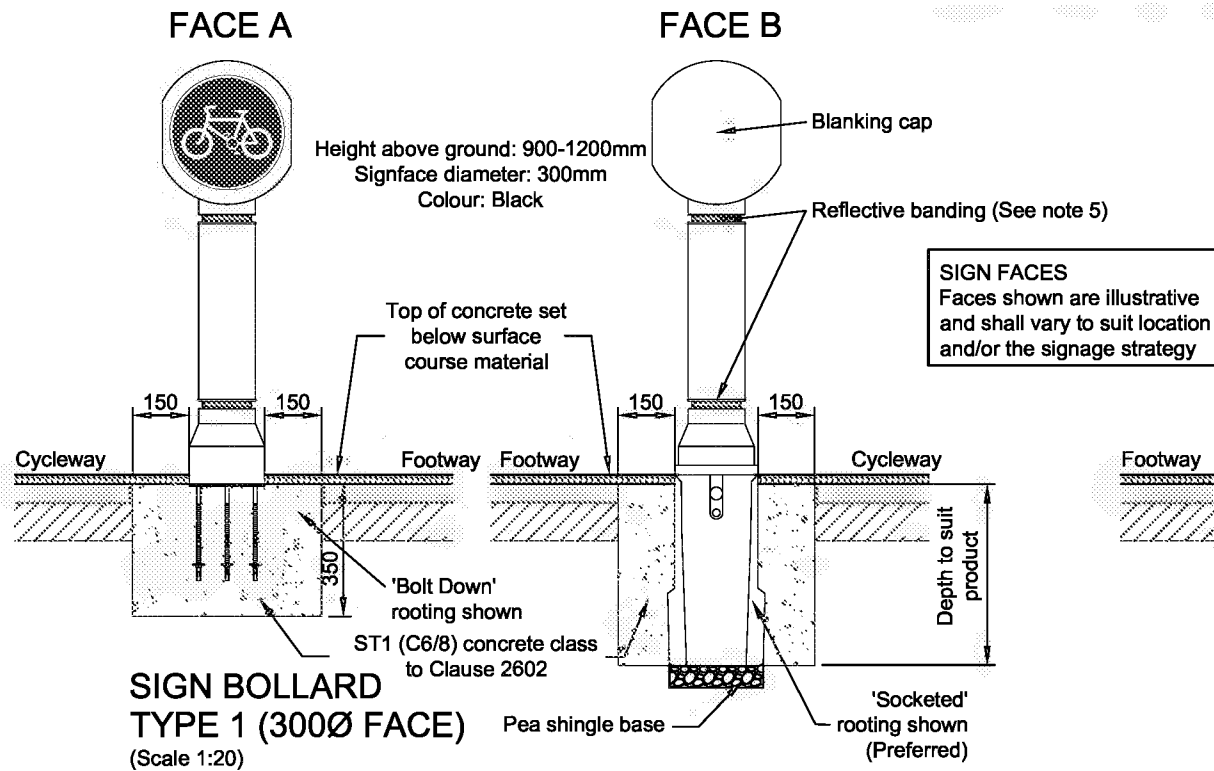
Dimensions : mm

Drawing No.

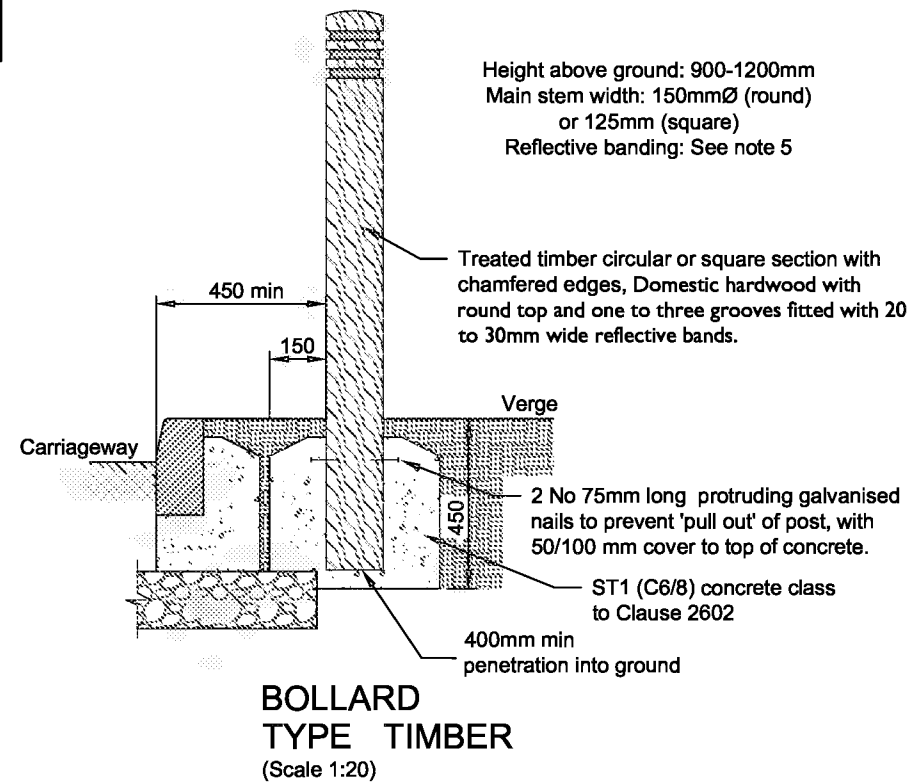
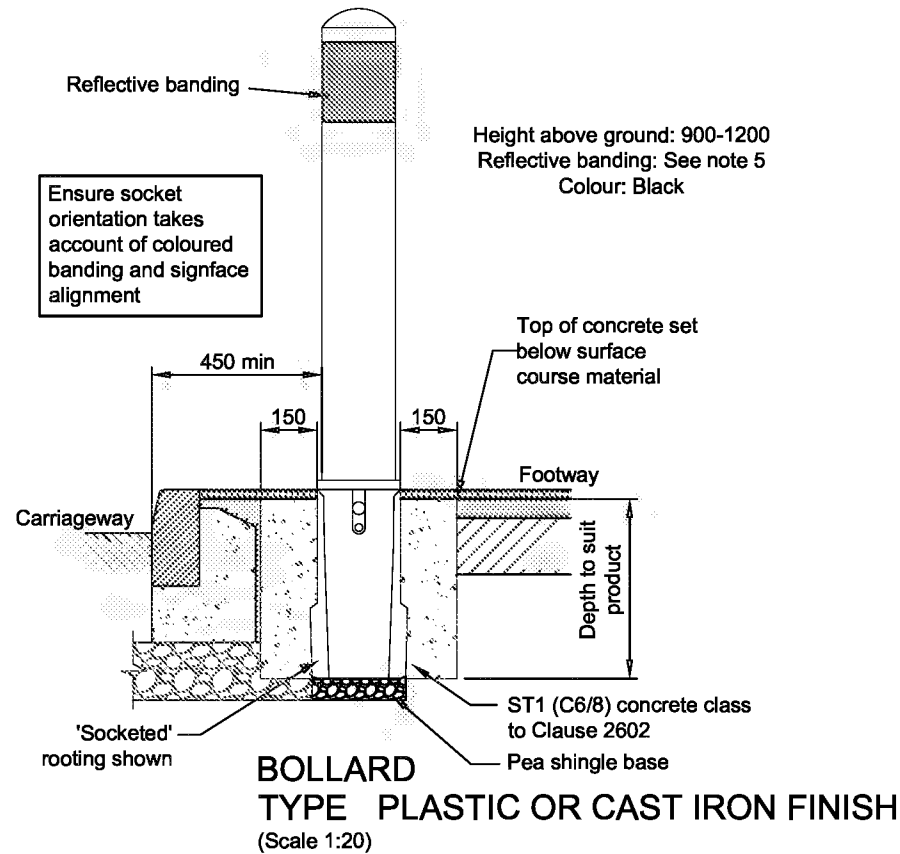
S278/38/16

Rev

C



- NOTES**
- Do not scale from this drawing.
 - This drawing must be used in conjunction with engineers sign/bollard location plan and sign face schedule.
 - All bollards must be installed with reflective banding.
 - All unused faces must be installed with a blanking cap.
 - Reflective banding shall be reflective to class ref 2 requirements and be coloured red on the left hand edge of the carriageway as viewed by the drivers of approaching vehicles, and coloured white on the right hand edge of the carriageway when so viewed, except where the edge is the edge of a dual carriageway or one way road whereupon the colour shall be amber.



- BOLLARD REQUIREMENTS:**
- Bollards are to be installed in strict accordance with manufacturers specification.
 - Sign face bollards shall be in accordance with The Traffic Signs Regulations and General Directions document.
 - Bollards may be installed as either 'socketed' (preferred) or 'bolt down'.
 - Selection of bollard type may be dependant on planning requirements and location and shall be agreed by WSCC.
 - For plastic or cast iron bollards the standard colour shall be black, unless otherwise agreed by WSCC.
 - Fixed and/or removable bollard types must be clearly annotated on the plan drawings.

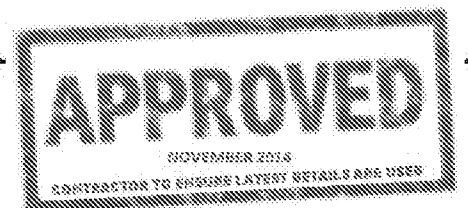
B	Note 5 & Timber foundation	DLS	MJA	28.02.13
A	Notes amended	DLS	MJA	28.02.13
Rev	Revision details	Chkd	Appd	Date
Drawn: MJA			For comment	
Chkd:			For tender	
Appd:			For construction	
Date:			As constructed	
File ref:				
IWP Ref:				

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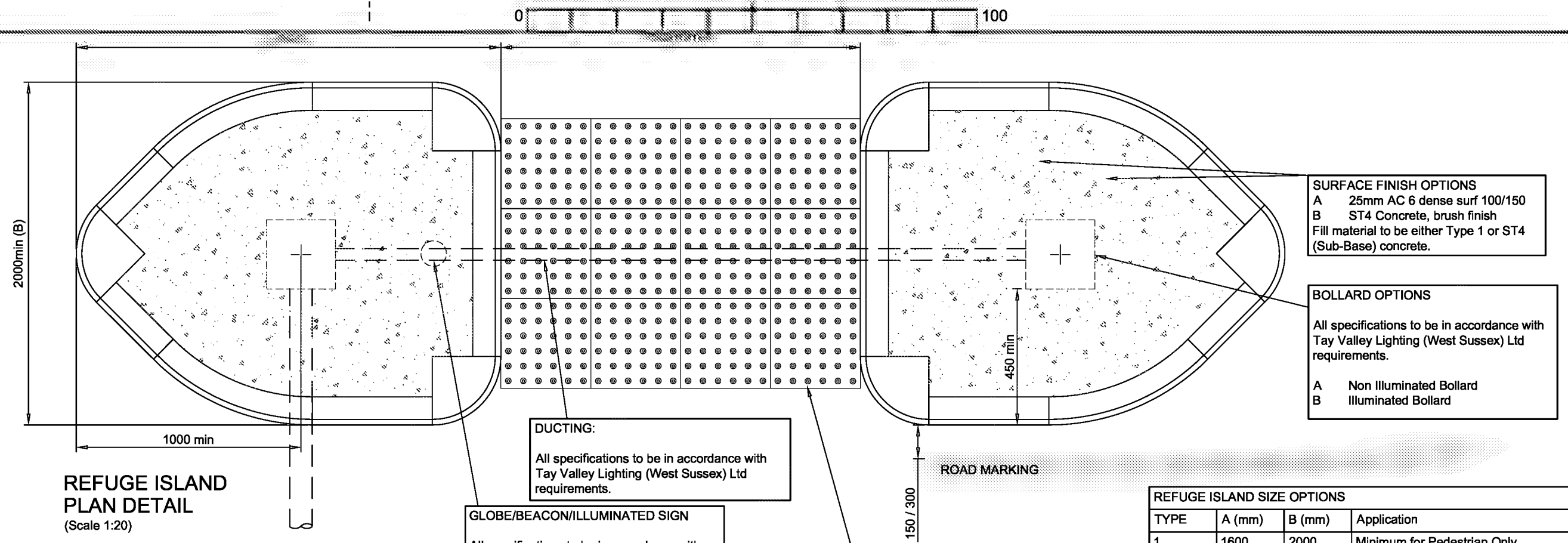


Project Name
Section 278/38 Highway Agreement
Standard Details

Drawing Title
Street Furniture
Bollards



Original Drawing Size :	A3
Scale : As Shown	Dimensions :
Drawing No.	Rev
S278/38/17	B



REFUGE ISLAND
PLAN DETAIL
(Scale 1:20)

SURFACE FINISH OPTIONS
A 25mm AC 6 dense surf 100/150
B ST4 Concrete, brush finish
Fill material to be either Type 1 or ST4
(Sub-Base) concrete.

BOLLARD OPTIONS
All specifications to be in accordance with
Tay Valley Lighting (West Sussex) Ltd
requirements.
A Non Illuminated Bollard
B Illuminated Bollard

DUCTING:
All specifications to be in accordance with
Tay Valley Lighting (West Sussex) Ltd
requirements.

GLOBE/BEACON/ILLUMINATED SIGN
All specifications to be in accordance with
Tay Valley Lighting (West Sussex) Ltd
requirements.
Demountable equipment may be required
on wide load routes

TACTILE PAVING ARRANGEMENT
1. Tactile shall not protrude beyond the
'back of kerb' to the island.
2. Refuge Island dimension (A) shall be
sized to suit the required number of
tactile paviors for the crossing.

Design shall take into account the need
for access by snow ploughs on all WSCC
gritting routes. These include A and B
roads, bus routes, and roads serving
Schools, Hospitals, Emergency Services,
Public Transport Hubs and WSCC
Highways Depots.

REFUGE ISLAND SIZE OPTIONS			
TYPE	A (mm)	B (mm)	Application
1	1600	2000	Minimum for Pedestrian Only
2	2400	2500	Minimum for Pedestrian & Cyclist

- DESIGN CONSIDERATIONS**
- The minimum lane width shall be 3.2m.
 - Absolute minimum lane width 3.0m (less than 5% HGV) lightly trafficked. Minimum kerb to kerb width for snow plough 3.5m
 - Avoid lane widths between 3.2m - 4.0m.
 - Road markings warning line offset to be 300mm. This may be reduced to a minimum of 150mm where speed limit is 40mph or less
 - Future maintenance requirements.
 - Kerb heights should not normally exceed 75mm.
 - Departures from Standard approval will be required for speed limits in excess of 40mph.
 - Swept path analysis shall be provided.
 - Consultation with local residents i.e. impacts to private accesses.
 - Islands should be surfaced in a material that contrasts with the existing road surface.

Islands not conforming with WSCC refuge island size options will only be accepted with supporting designers risk assessment and may require an independent Road Safety Audit.

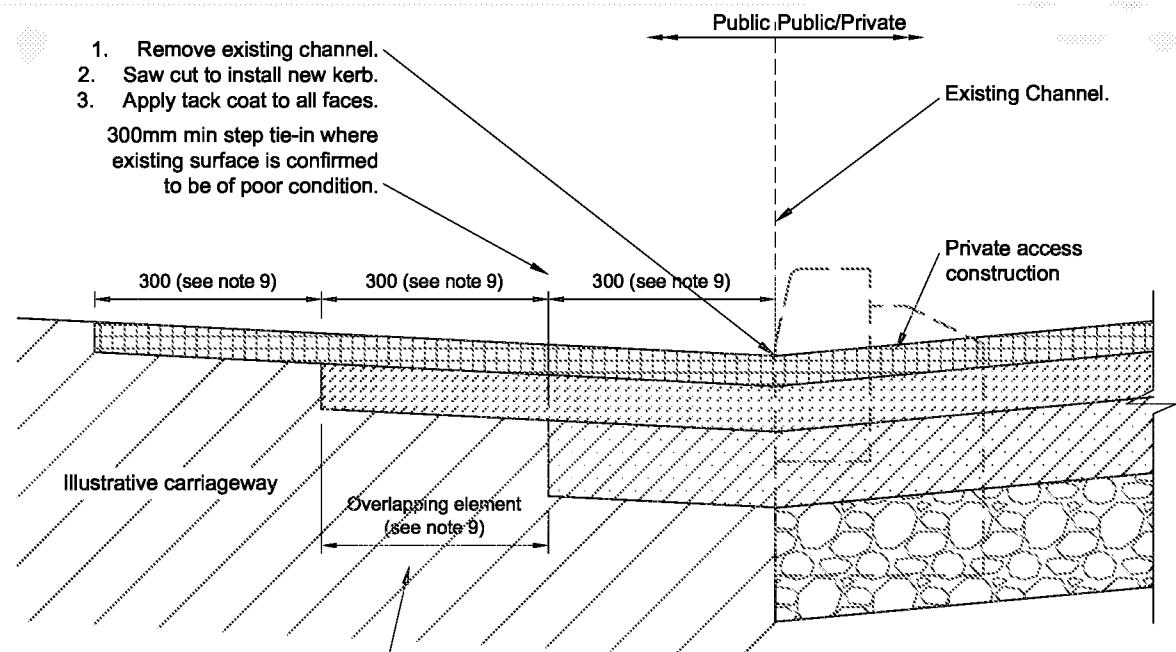
- NOTES**
- Do not scale from this drawing.
 - Refer to drawing 18 for Tactile Paving specification.
 - WSCC illuminated equipment is subject to PFI requirements.

C	'SSE' replaced by 'TVL'	CD	DJL	10.10.14
B	Snow plough + wide load notes	DJL	GM	09.09.13
A	Notes amended. Ducts added.	DLS	MJA	28.02.13
Rev	Revision details	Chkd	Appd	Date
Drawn:	MJA		For comment	
Chkd:			For tender	
Appd:			For construction	
Date:			As constructed	
File ref:				
IWP Ref:				

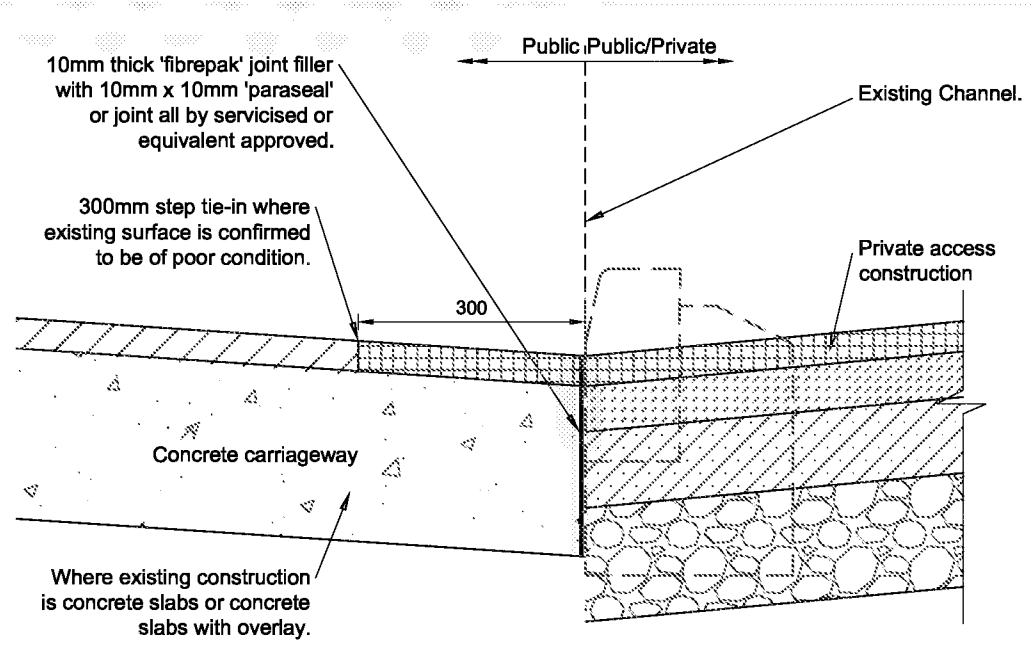
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Project Name	Section 278/38 Highway Agreement Standard Details
Drawing Title	Street Furniture Refuge Islands

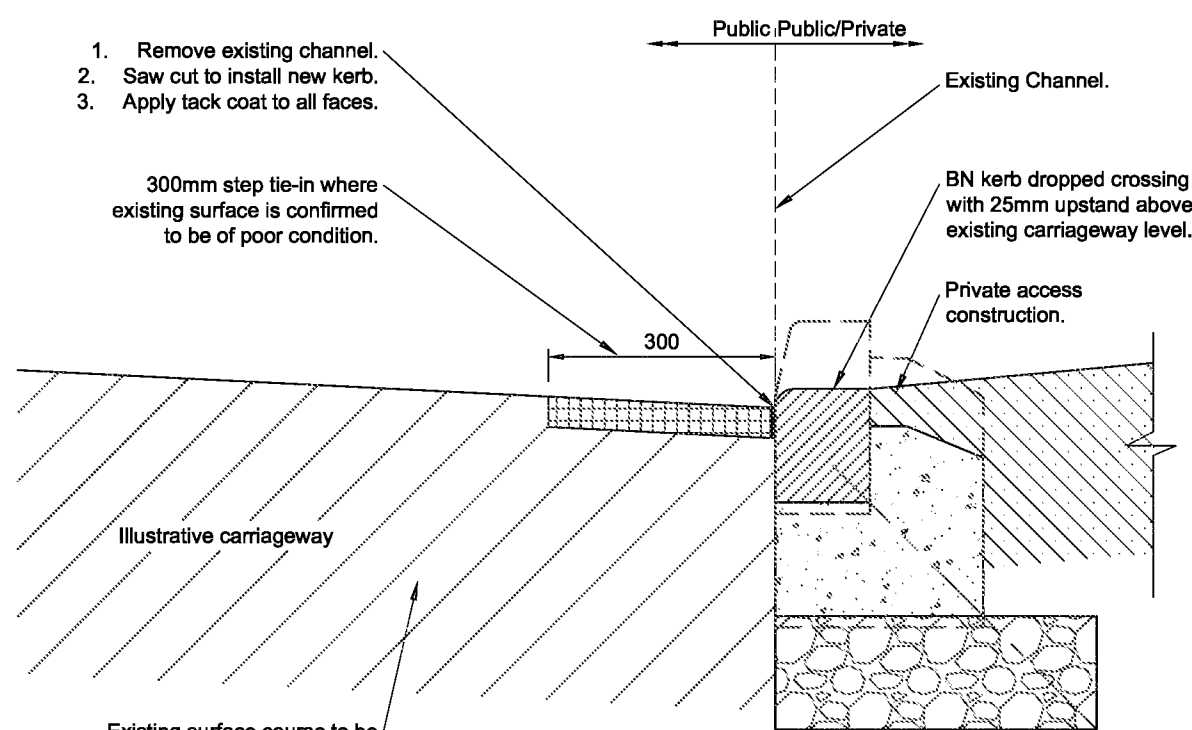
Drawing Size :	A3
Scale :	As Shown
Dimensions :	
Drawing No.	S278/38/19
Rev	C



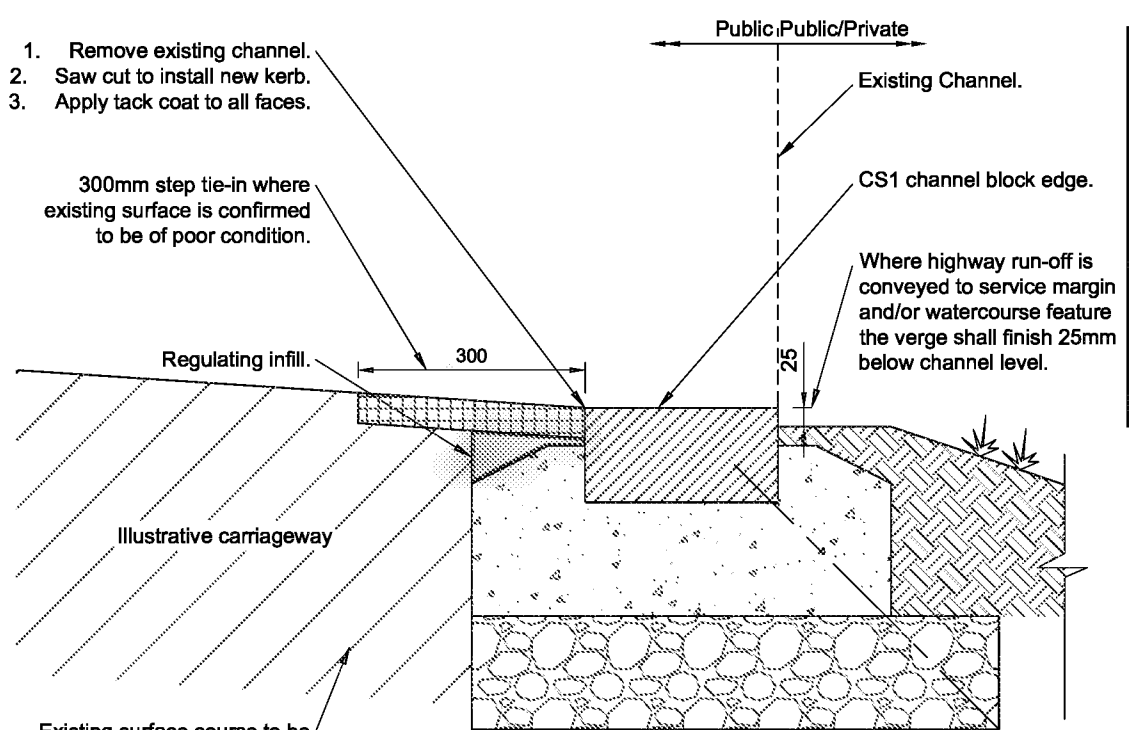
**CARRIAGEWAY TIE-IN
OPTION 1**
(1:10)



**CARRIAGEWAY TIE-IN
OPTION 2**
(1:10)



**CARRIAGEWAY TIE-IN
OPTION 3**
(1:10)



**CARRIAGEWAY TIE-IN
OPTION 4**
(1:10)

- NOTES**
1. Do not scale from this drawing.
 2. Refer to drawings 02 & 03 for Approved Kerb Type Selection.
 3. Refer to drawing 01 for laying methods.
 4. Prior to the commencement of laying the formation shall be treated with an approved residual weedkiller.
 5. The Highway Inspector may request inclusion of a non-woven separation membrane to mitigate weed/root intrusion.
 6. The Highway Inspector may increase the Sub-base depth or include a geotextile or geogrid on formation where site ground conditions are considered to be sub-standard.
 7. Not suitable where 'no-dig' construction is required.
 8. Refer to drawing 21 for Carriageway Surfacing Options.
 9. Overlapping elements of stepped joints shall normally be 300mm except where this places the joint in the wheel track, whereupon on C class and unclassified roads the overlap may be reduced to 150mm, and on A and B class roads the overlapping elements shall be extended in accordance with IAN 154/12. Any overlapping elements less than 300mm shall be agreed with the WSCC Engineer and/or WSCC Inspector.

EXTRACT FROM IAN 154/12:
For new pavement construction, all longitudinal joints in all layers shall be situated outside wheel-track zones. Where an existing road pavement is resurfaced, joints in the surface course shall coincide with either the lane edge, the lane marking, or the middle of a traffic lane, whichever is appropriate. Joints shall not coincide with the wheel path. **The wheel-track zones shall be taken to be between 500mm and 1100mm and between 2550mm and 3150mm from the centre of the nearside lane markings for each traffic lane (or, in the absence of lane markings, lane edges).** All joints shall be offset at least 300mm from parallel joints in the layer beneath.

B A	IAN 154/12 extract corrected Notes amended	CD DLS	DJL MJA	05.09.13 28.02.13
Rev	Revision details	Chkd	Appd	Date
Drawn:	MJA		For comment	
Chkd:			For tender	
Appd:			For construction	
Date:			As constructed	
File ref:				
IWP Ref:				

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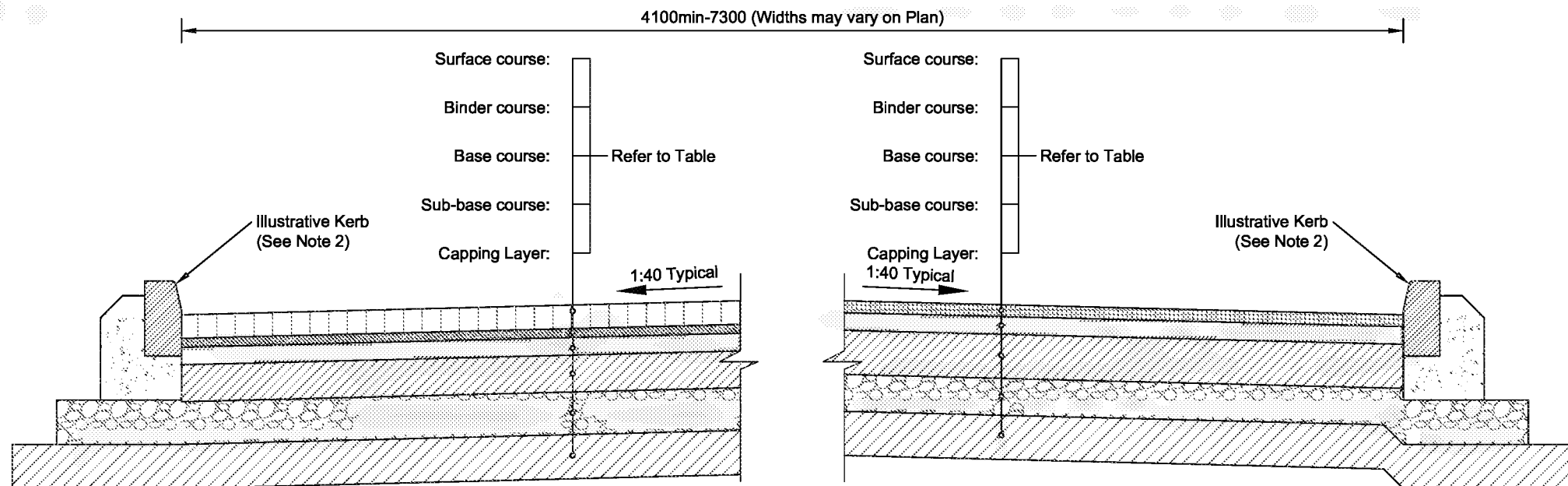


Project Name	Section 278/38 Highway Agreement Standard Details
Drawing Title	Carriageway Tie-In Options

APPROVED

NOVEMBER 2014
CONTRACTOR TO ENSURE LATEST DETAILS ARE USED

Size :	A3	
Scale :	As Shown	Dimensions :
Drawing No.	S278/38/20	Rev
		B



TYPE 1 FLEXIBLE CONSTRUCTION

(Scale 1:20)

ALTERNATIVE DESIGN:
WSCC will accept permanent foundation designs in accordance with the latest revision of Interim Advice Note 73/06 or HD25/94.

CARRIAGEWAY - FLEXIBLE CONSTRUCTION TABLE SELECTOR					
	LOCAL DISTRIBUTOR	COLLECTOR	ACCESS ROAD	ACCESS WAY	
CAPPING LAYER					
Type 6F1 / 6F2 CBR <2%	Bespoke design required in accordance with HD 25/94 or IAN 73/06				
Type 6F1 / 6F2 CBR 2-2.5%	600	600	600	600	
Type 6F1 / 6F2 CBR 2.5-5%	350	350	350	350	
Type 1 CBR >5%	100	100	100	100	
SUB-BASE					
Type 1 (Clause 803)	150	150	150	150	
BASE					
Either: 32mm Dense Asphalt Concrete Base 40/60 PEN	150	125	100	100	
Or: Lean Mix Concrete	-	150	150	150	
BINDER					
20mm Dense Asphalt Concrete Binder 40/60 PEN (Not required with block pavours)	60	60	50	50	
SURFACE COURSE					
HRA 30/14 F Surf 40/60 with: 14/20mm pre-coated chippings - PSV as table 3.1 (HD36/06)	40	-	-	-	
10mm Close Graded Asphalt Concrete Surface Course 100/150	-	30	30	30	
Blocks on 30mm sand Bed	-	80	80	80	

NOTES

- Do not scale from this drawing.
- Refer to drawings 02 & 03 for Approved Kerb Type Selection.
- Refer to drawing 01 for laying methods.
- Prior to the commencement of laying the formation shall be treated with an approved residual weedkiller.
- The Highway Inspector may request inclusion of a non-woven separation membrane to mitigate weed/root intrusion.
- The Highway Inspector may increase the Sub-base depth or include a geotextile or geogrid on formation where site ground conditions are considered to be sub-standard.
- Not suitable where 'no-dig' construction is required.
- Asphalt Concrete to be in accordance with BS EN 13108-01 and BS 594987.
- Type 1 Sub-base to be in accordance with Specification for Highway Works clause 803.
- Hot Rolled Asphalt to be in accordance with BS EN 13108-04 and BS 594987.
- Block Paviers to be in accordance with BS EN 1338.
- Total Carriageway construction depth must be greater than 450mm to negate susceptibility to frost penetration, irrespective of CBR value.
- Where block paved construction is proposed the binder course may be omitted.
- More major roads shall have a bespoke pavement design in accordance with DMRB standards.
- Carriageway widening to widths of less than 1m; Base and sub-base to be replaced with ST1 concrete with the same overall construction depth as the standard construction.
- Under some circumstances, WSCC may accept 40mm of Bardon Superflex 50 with 10mm Aggregate (65 PSV) as a surface course, provided there is a 10 year guarantee on the skid resistance value (SRV).
- On approaches to traffic signals WSCC may accept 40mm of Bardon Superflex 72 with 10mm Aggregate (72 PSV) as a surface course, provided there is a 10 year guarantee on the skid resistance value (SRV).
- PSV requirements shall be declared in accordance with HD 36/06 table 3.1.
- CBR values to be obtained from site investigation report and laboratory testing. The WSCC Inspector may request additional tests.

B A	Note 13 + Base detail amended Notes amended	DJL DLS	GM MJA	09.09.13 28.02.13
Rev	Revision details	Chkd	Appd	Date
Drawn: MJA		For comment		
Chkd:		For tender		
Appd:		For construction		
Date:		As constructed		
File ref:				
IWP Ref:				

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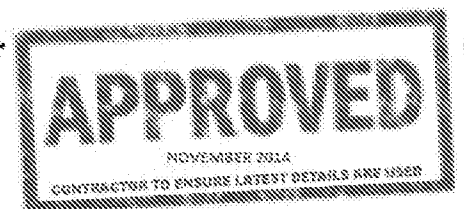


Project Name

Section 278/38 Highway Agreement
Standard Details

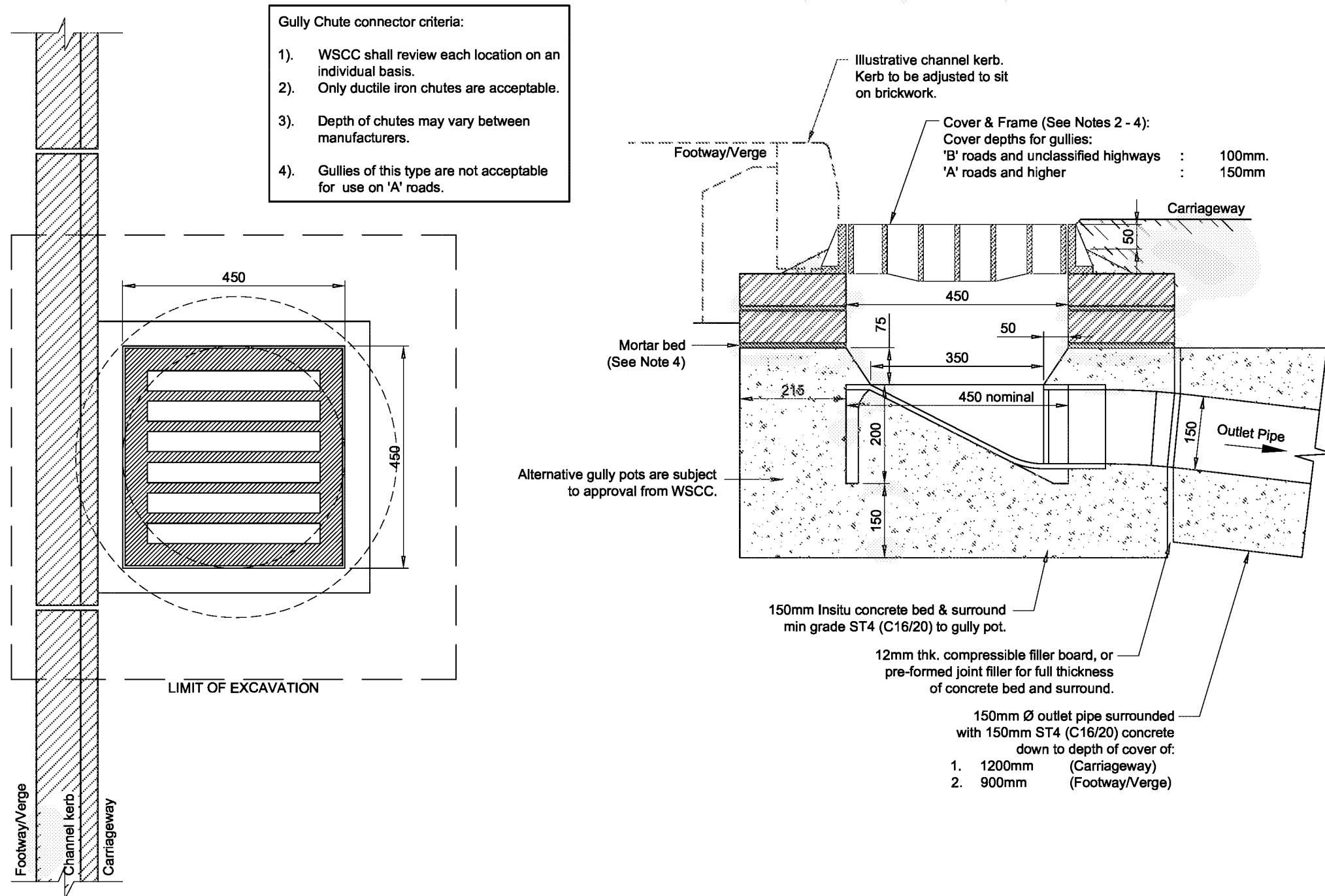
Drawing Title

Carriageway
Flexible Specification



Original Drawing Size : A3	
Scale : As Shown	Dimensions :
Drawing No. S278/38/21	Rev B

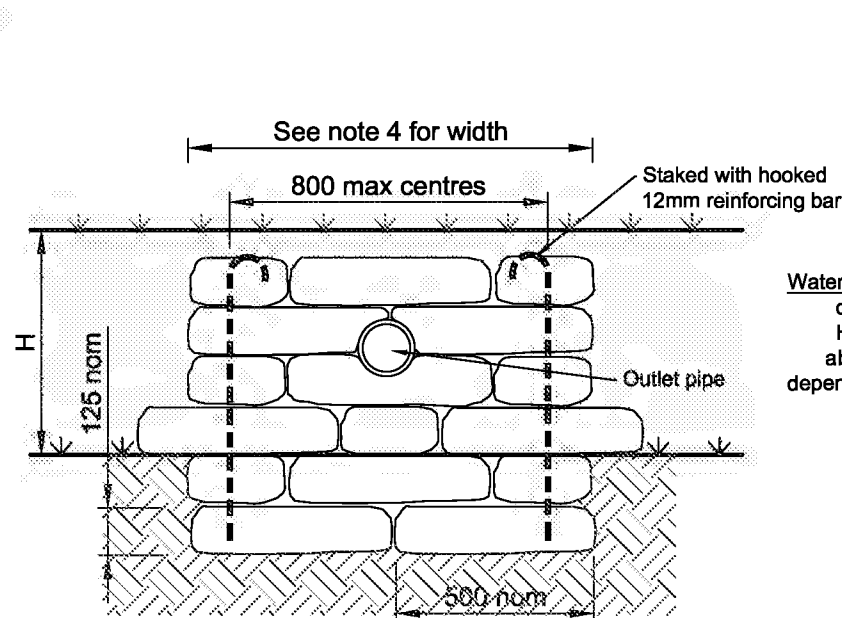
- NOTES
1. Do not scale from this drawing.
 2. All gully grating and frames to be 'hinged' heavy duty ductile iron minimum grade D400 in accordance with BS EN124:1994 & Section 508 of the Specification of Highway Works.
 3. All ironwork shall carry a BSI kite mark.
 4. Frames shall be bedded on a gauged Class 1 (3:1) sand/cement mortar to Cl.2402 of SHW Mortar Designation (i), and either 2 or 3 courses of Engineering Brickwork Class 'B' to BS EN 771-1:2011.
 5. Gully spacing is to be determined from the requirements of HA 102/00, Design Manual for Roads and Bridges, however, maximum area to be drained by one gully: 180 m²
 6. Gully pots used for carriageway gullies shall be of precast concrete using Sulphate Resisting Cement (SRC) in accordance with BS 5911, part 230, 2004.
 7. Selection of gully grating type shall be to suit the application area i.e carriageway, footway/cycleway and to the satisfaction of the highway inspector.
 8. Pipe bedding to highway drainage to be Type Z when located under carriageway, and Type T at all other times, as detailed on Specification of Highway Works HCD no. F1.
 9. For surface water pipe specifications, refer to Drg. No. S278/38/11.



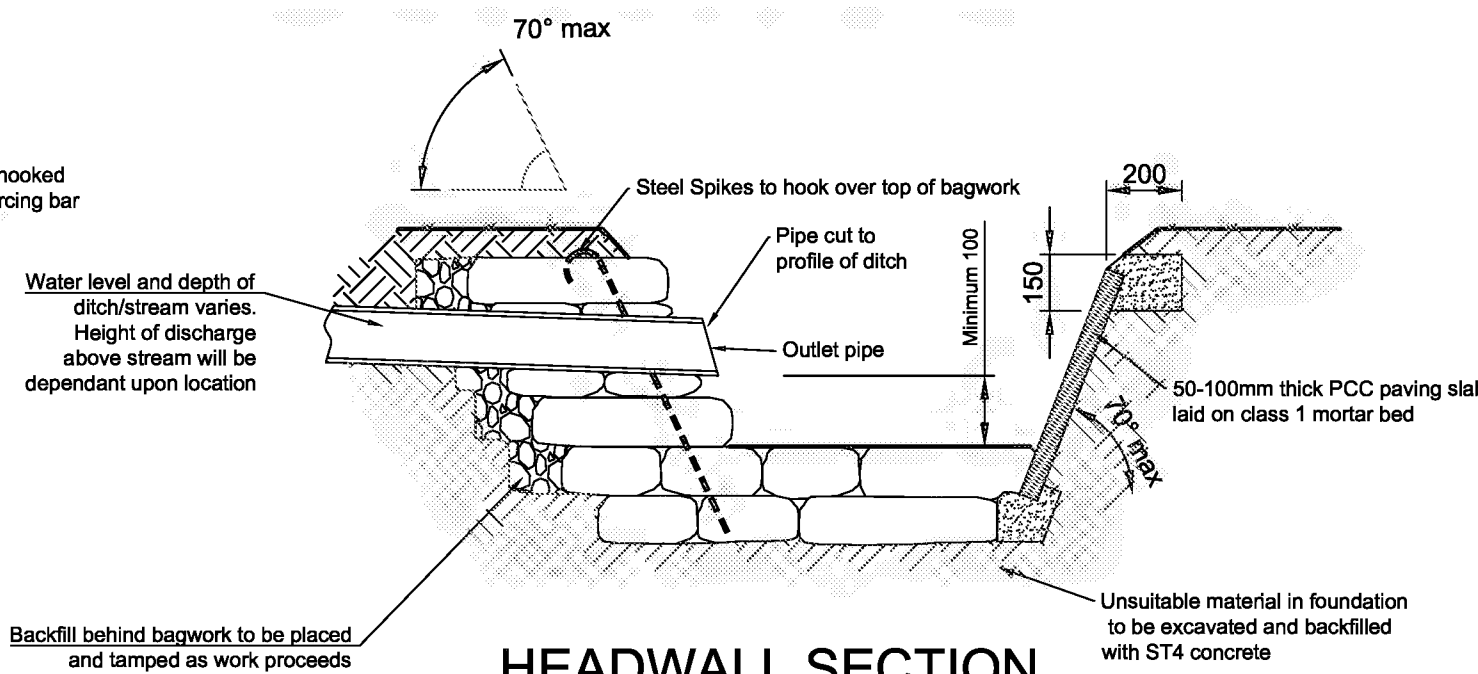
GULLY C
TYPE: CHUTE (SUMPLESS)
PLAN
(1:10)

GULLY C
TYPE: CHUTE (SUMPLESS)
SECTION
(1:10)

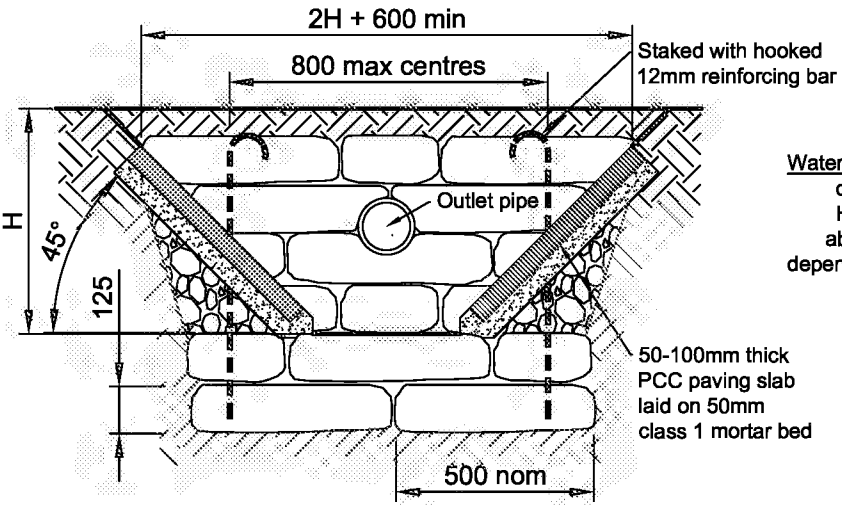
					West Sussex County Council Infrastructure Group County Hall, West Street Chichester West Sussex PO19 1RH (01243) 642105  west sussex county council	Project Name Section 278/38 Highway Agreement Standard Details		APPROVED NOVEMBER 2014 CONTRACTOR TO ENSURE LATEST DETAILS ARE USED		
Rev	Revision details		Chkd	Appd		Date				
Drawn: DLS						For comment				
Chkd:						For tender				
Appd:						For construction				
Date:						As constructed				
File ref: IWP Ref:										
						Drawing Title Drainage Gully C - Chute Gully (SumpleSS)		Original Drawing Size : A3 Scale : As Shown Drawing No. S278/38/22		
								Dimensions : Rev -		



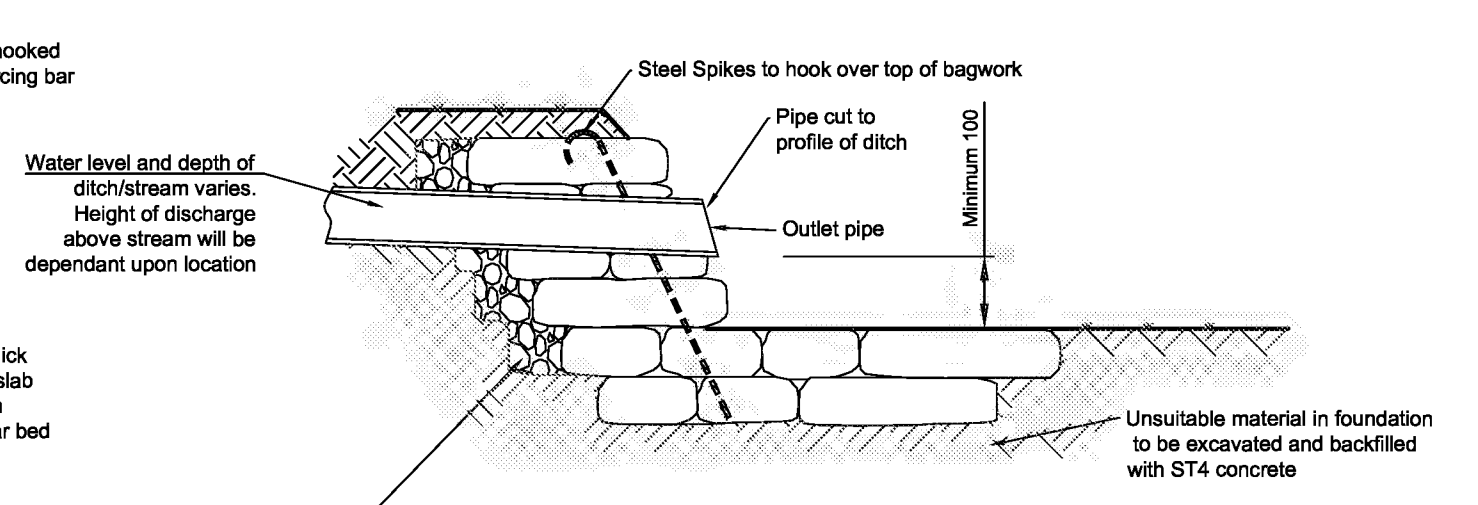
ELEVATION OF HEADWALL
OUTFALL TO POND / SIDE OF DITCH



HEADWALL SECTION
OUTFALL TO SIDE OF DITCH

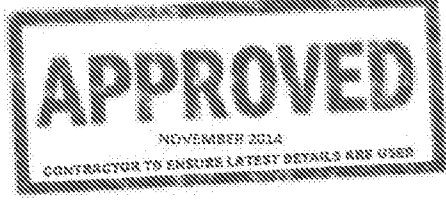


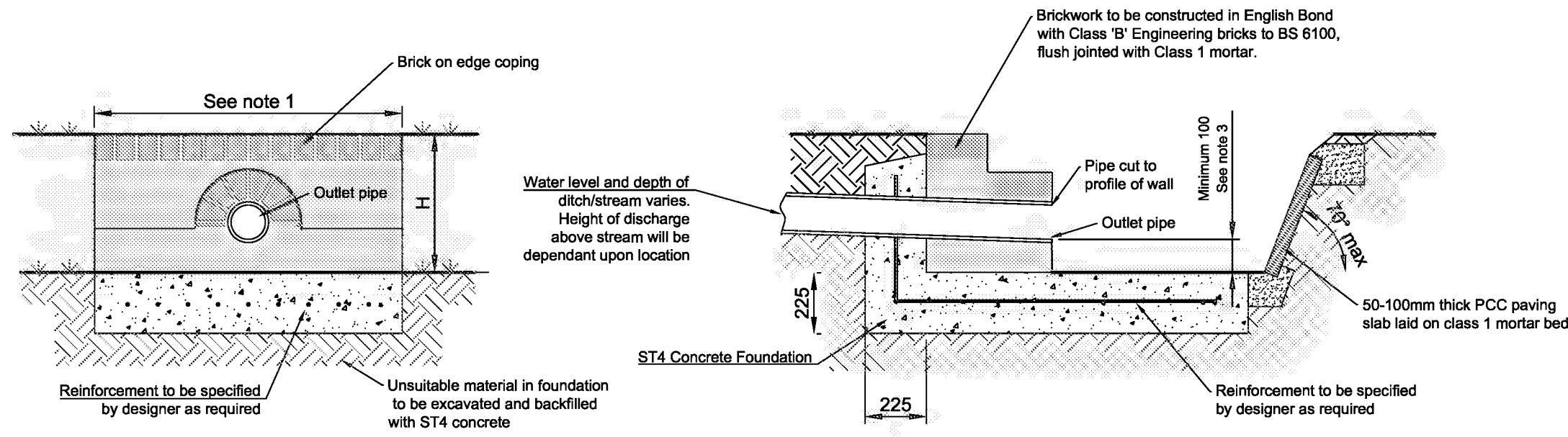
ELEVATION OF HEADWALL
OUTFALL TO END OF DITCH



HEADWALL SECTION
OUTFALL TO POND / END OF DITCH

- NOTES
1. Bags shall be of Hessian or Canvas and shall be of a size to provide a wall thickness of 500mm
 2. Concrete bagwork shall be to Clause 519 and be three quarter filled with 25mm slump ST4 concrete immediately prior to placing with the ends sewn.
 3. The bags shall be placed in a modified Flemish bond so as to 'break joint' with the mouths away from the surface and be tamped into position to form a rectangular block
 4. Extent of outlet protection to be the greater of 1500mm or pipe diameter + 1200mm spanning the outlet pipe.
 5. Headwall design may need to be adjusted to on site conditions following approval from WSCC Inspector
 6. For vehicular crossings of ditches pipes shall be min 450mm diam and be set to invert of ditch. Ditch to be regraded to achieve satisfactory falls.
 7. For H>600 appropriate vehicular or pedestrian containment shall be installed.
 8. The nearest edge of any carriageway shall be set back at least H from the base of the ditch

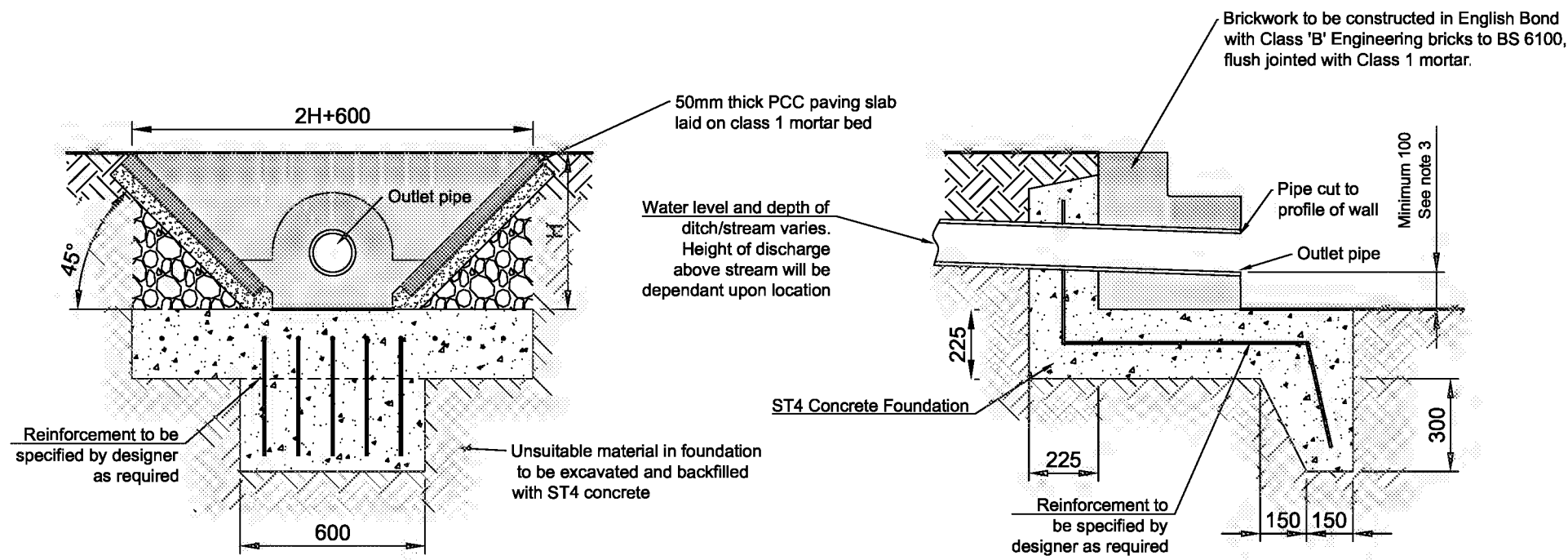
					West Sussex County Council Infrastructure Group County Hall, West Street Chichester West Sussex PO19 1RH (01243) 642105		Project Name Section 278/38 Highway Agreement Standard Details		Drawing Title Headwall Detail for pipe sizes up to 600 diam Concrete Bagwork		Original Drawing Size : A3 Scale : 1:20 Dimensions : mm		Drawing No. S278/38/23		Rev	
Rev	Revision details	Chkd	Appd	Date												
Drawn:	DJL															
Chkd:	GM															
Appd:	AH	X														
Date:	SEPT 2013															
File ref:																
IWP Ref:																



- NOTES**
1. Extent of outlet protection to be the greater of 1500mm or pipe diameter + 1200mm spanning the outlet pipe.
 2. Headwall design may need to be adjusted to on site conditions following approval from WSCC Inspector.
 3. For vehicular crossings of ditches pipes shall be min 450mm diam and be set to invert of ditch. Ditch to be regraded to achieve satisfactory falls.
 4. For H>600 appropriate vehicular or pedestrian containment shall be installed.
 5. The nearest edge of any carriageway shall be set back at least H from the base of the ditch

**ELEVATION OF HEADWALL
OUTFALL TO POND / SIDE OF DITCH**

**HEADWALL SECTION
OUTFALL TO SIDE OF DITCH**



**ELEVATION OF HEADWALL
OUTFALL TO END OF DITCH**

**HEADWALL SECTION
OUTFALL TO POND / END OF DITCH**

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Rev	Revision details		Chkd	Appd		Date	Drawing Title Headwall Detail for pipe sizes up to 600 diam Engineering Brickwork		Original Drawing Size : A3			
Drawn: DJL				For comment		Scale : 1:20			Dimensions : mm			
Chkd: GM				For tender		Drawing No. S278/38/24			Rev			
Appd: AH			X	For construction								
Date: SEPT 2013				As constructed								
File ref:												
IWP Ref:												