

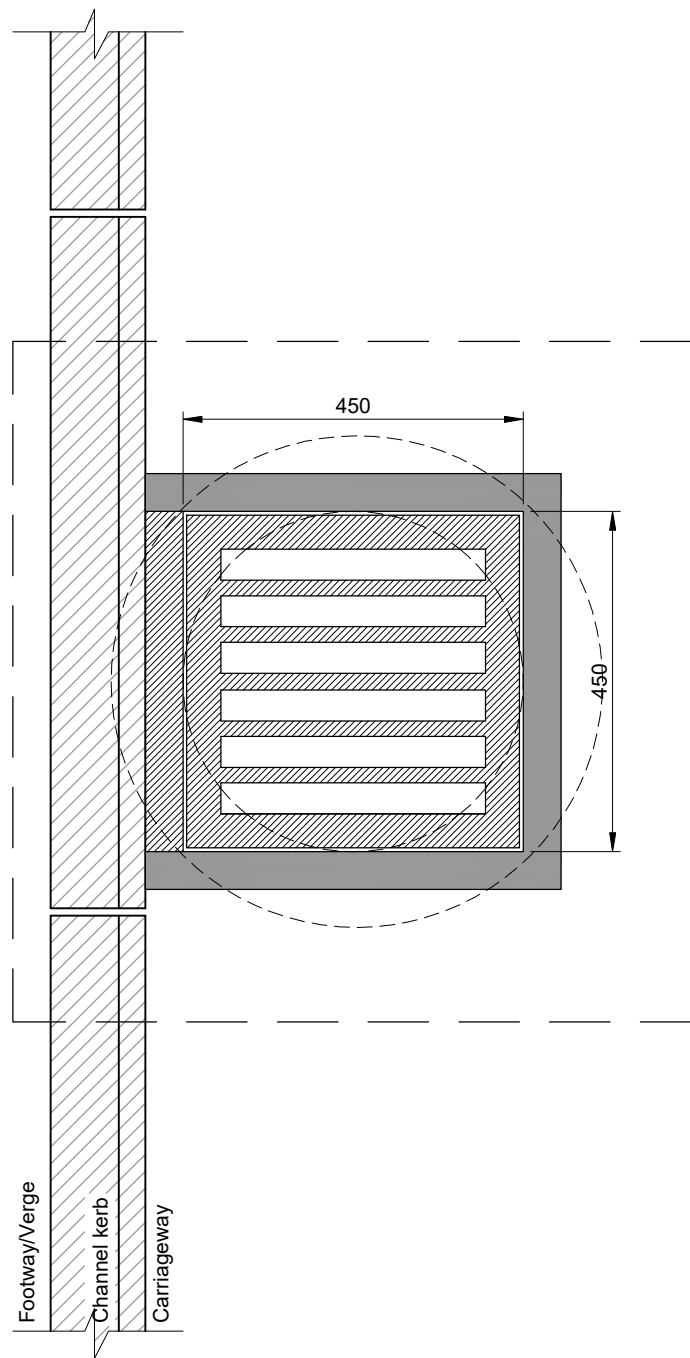
CDM HAZARD ASSESSMENT				
No:	Title	Rev:	Comment Date:	Potential Hazards:
S278/38/01	Alternative Methods of Laying Kerbs	C	15.11.2017	Strain injury due to repetitive lifting. Kerbs to be lifted mechanically.
S278/38/02	Approved Kerb Type Selection Sheet 1	B	15.11.2017	Strain injury due to repetitive lifting. Kerbs to be lifted mechanically.
S278/38/03	Approved Kerb Type Selection Sheet 2	A	15.11.2017	Strain injury due to repetitive lifting. Kerbs to be lifted mechanically.
S278/38/04	Footway/Cycleway Type 1 & 2	B	15.11.2017	-
S278/38/05	Footway/Cycleway Type 3 & 4	C	15.11.2017	-
S278/38/06	Public Footpath (Rural) Type 5	A	15.11.2017	Deterioration of surface uniformity over time. Surface to be monitored and repaired as required.
S278/38/07	Footway Crossover Type 1 - Residential	C	15.11.2017	-
S278/38/08	Footway Crossover Type 2 - Industrial	C	15.11.2017	-
S278/38/09	Service Margins	B	15.11.2017	-
S278/38/10	Preferred Arrangement of Services with Public Highway	A	15.11.2017	-
S278/38/11	Drainage - Gully A Pre-cast Concrete	D	15.03.2019	-
S278/38/12	Drainage - Pre-cast Concrete Ring Soakaway	E	15.03.2019	Unknown depth of chamber when full. Consider installing signage and omitting step rungs.
S278/38/13	Drainage - Type B Catchpit	E	15.03.2019	Unknown depth of sump when full. Consider installing signage and omitting step rungs.
S278/38/14	Drainage - Type B Vortex Flow Control	C	15.03.2019	Unknown depth of chamber if full due to blockage. Consider installing signage.
S278/38/15	Street Furniture - Rumble Strips	C	15.11.2017	-
S278/38/16	Street Furniture - Ramp Feature	D	15.11.2017	-
S278/38/17	Street Furniture - Bollards	B	15.11.2017	-
S278/38/18	Street Furniture - Tactile Crossings	A	15.11.2017	-
S278/38/19	Street Furniture - Refuge Islands	D	15.11.2017	-
S278/38/20	Carriageway - Tie-in Options	B	15.11.2017	-
S278/38/21	Carriageway - Flexible Specification	E	15.11.2017	Strain injury due to repetitive lifting of blocks. Consider laying Blocks mechanically.
S278/38/22	Chute Gully	-	15.11.2017	-
S278/38/23	Headwall Detail - Concrete Bagwork up to 600 diam	A	15.11.2017	Falling from height. Consider installation of edge protection.
S278/38/24	Headwall Detail - Engineering Brickwork up to 600 diam	A	15.11.2017	Falling from height. Consider installation of edge protection.
S278/38/25	Highway Ditch detail	A	15.11.2017	Falling from height. Consider installation of edge protection.
S278/38/26	Highway Swale Detail	A	15.11.2017	Falling from height. Consider installation of edge protection.
S278/38/27	Highway Swale - Check dam detail	-	15.11.2017	-
S278/38/28	Trench Soakaway	A	15.03.2019	-
S278/38/29	Filter Drain Collector	A	15.03.2019	Silt removal maintenance to be undertaken using vacuum apparatus from ground level.
S278/38/30	Permeable Carriageway (Sheet 1)	A	15.03.2019	-
S278/38/31	Permeable Carriageway (Sheet 2)	A	15.03.2019	-
S278/38/32	Headwall Detail - Pipes 150Ø - 450Ø	A	15.03.2019	Falling from height. Consider installation of edge protection.

CDM Regulations 2015:

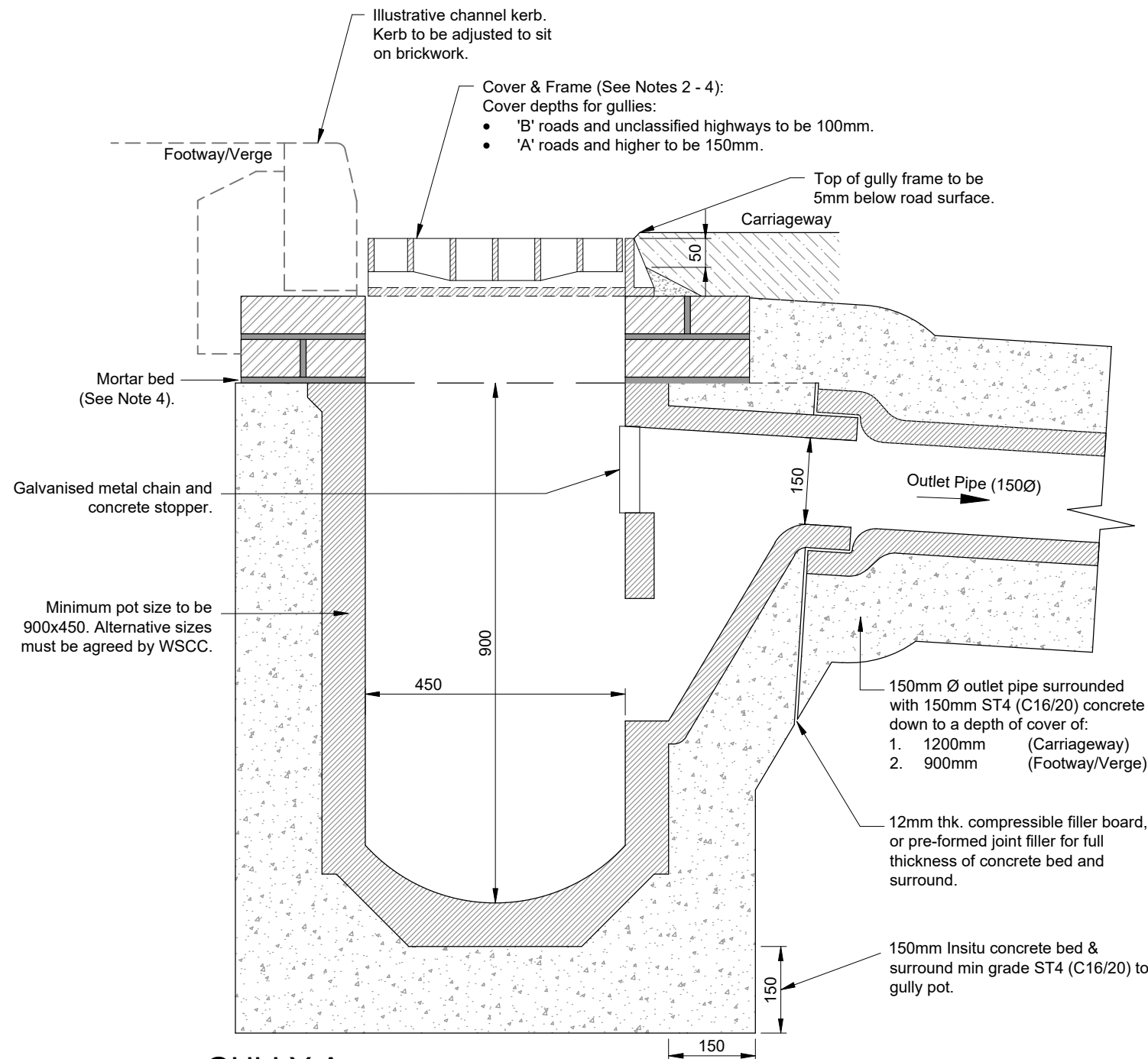
1. In preparing the following drawings West Sussex County Council would fall under the scope of a Designer as defined by the CDM regulation 2015. However, as these drawings are not project specific it is not possible for West Sussex County Council to list all hazards that may occur because of the implementation of the details.
2. The Project team must determine any hazards associated with their project due to the implementation of these details.
3. The comments against each detail may or may not apply to a project but are given to assist the project team and to meet West Sussex County Councils obligations under the Regulations. The comments are made on the basis that work will be undertaken by a competent company/person.
4. West Sussex County Council must be informed of the Dutyholders and be provided with the project teams hazard assessment.
5. The client and project team must ensure that all drawings, specifications and the West Sussex County Council Section 278/38 Highway Agreement Standard Details are supplied to the contractor responsible for implementing the Highway Works.

CDM HAZARD ASSESSMENT				
No:	Title	Rev:	Comment Date:	Potential Hazards:
S278/38/33	Pipe Bedding	A	15.03.2019	-
S278/38/34	Cellular Storage (sheet 1)	A	15.03.2019	Strain injury due to repetitive lifting. Kerbs to be lifted mechanically.
S278/38/35	Cellular Storage (sheet 2)	A	15.03.2019	-
S278/38/36	Lateral Connections	A	15.03.2019	-

A -	General update Initial Issue	MJA -	MJA -	15.03.19 -	West Sussex County Council Infrastructure Group County Hall, West Street Chichester West Sussex PO19 1RH (01243) 642105  west sussex county council	Project Name				
Rev	Revision details	Chkd	Appd	Date		Section 278/38 Highway Agreement Standard Details				
Drawn: MJA			For comment			Drawing Title				
Chkd:			For tender			CDM			Original Drawing Size : A3	
Appd:			For construction						Scale : N/A	Dimensions :
Date: 07.11.2017			As constructed						Drawing No.	Rev
File ref: IWP Ref:						S278/38/CDM			A	



GULLY A
TYPE: PRECAST CONCRETE
PLAN
(1:10)



GULLY A
TYPE: PRECAST CONCRETE
SECTION
(1:10)

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 102/17, 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. 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.
8. 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.
9. Refer to drawing 33 for pipe bedding selection.

SURFACE WATER PIPES

Permitted Types as follows:

CLAY: (150Ømin-300Ømax)
All pipe shall be Vitrified Clayware to BS EN 295-1:1991.

UPVC: (150Ømin-900Ømax) (*)
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-900Ømax) (*)
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.

STRUCTURES (*)

Pipes with a diameter of 0.9m or greater are classified as a structure and will be subject to review by the WSCC structures team.

D	General update	MJA	MJA	15.03.19
C	General update	-	-	07.11.17
B	Plastic gully pots removed	DJL	HM	25.04.17
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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West Sussex
PO19 1RH
(01243) 642105



Project Name

Section 278/38 Highway Agreement
Standard Details

Drawing Title

Drainage
Gully A - Pre-Cast Concrete



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

CLEAR OPENING	
Chamber Depth <900mm	600mm x 1200mm
Chamber Depth >900mm	600mm x 600mm

TABLE 3.

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

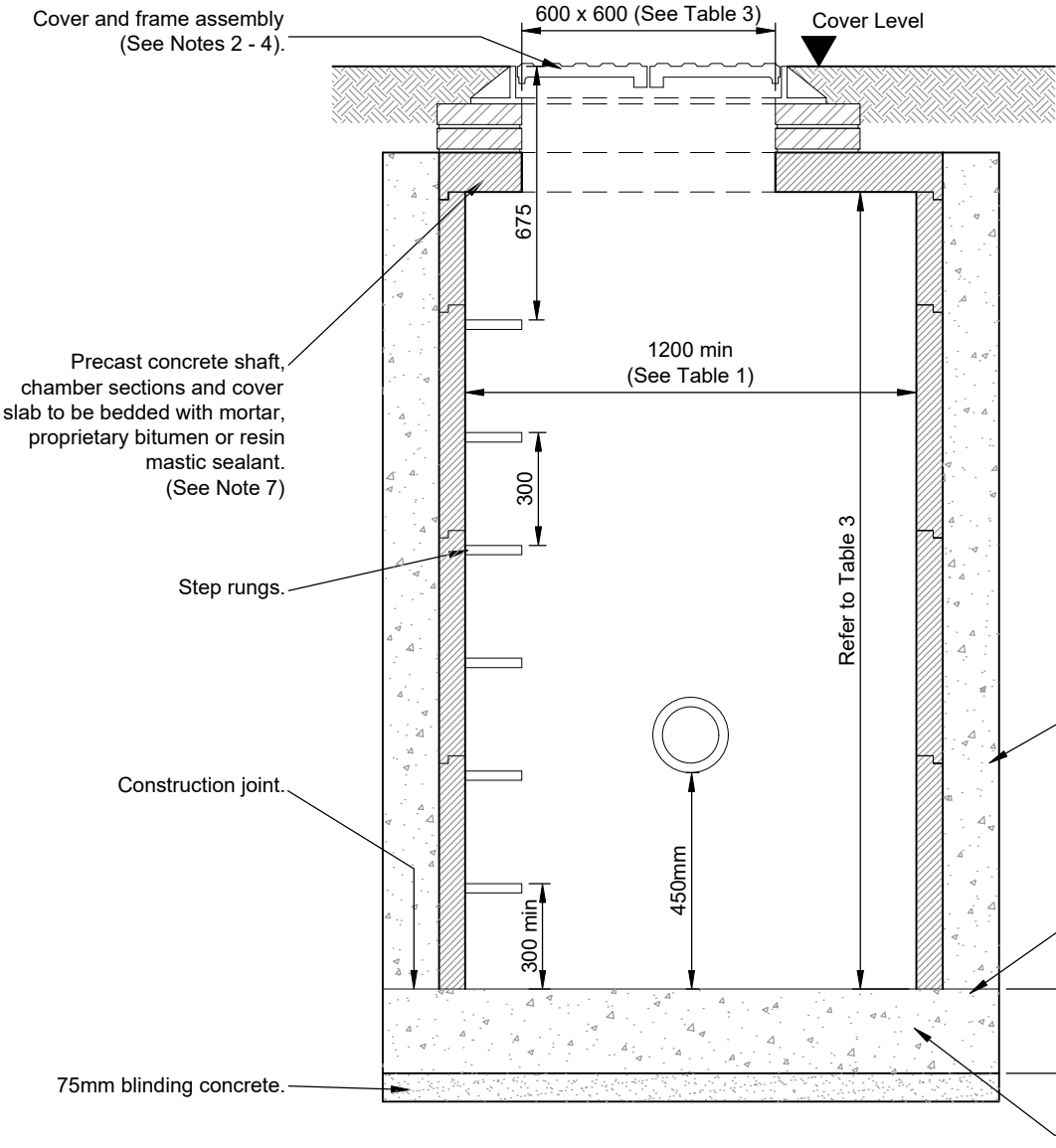
TABLE 1.

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

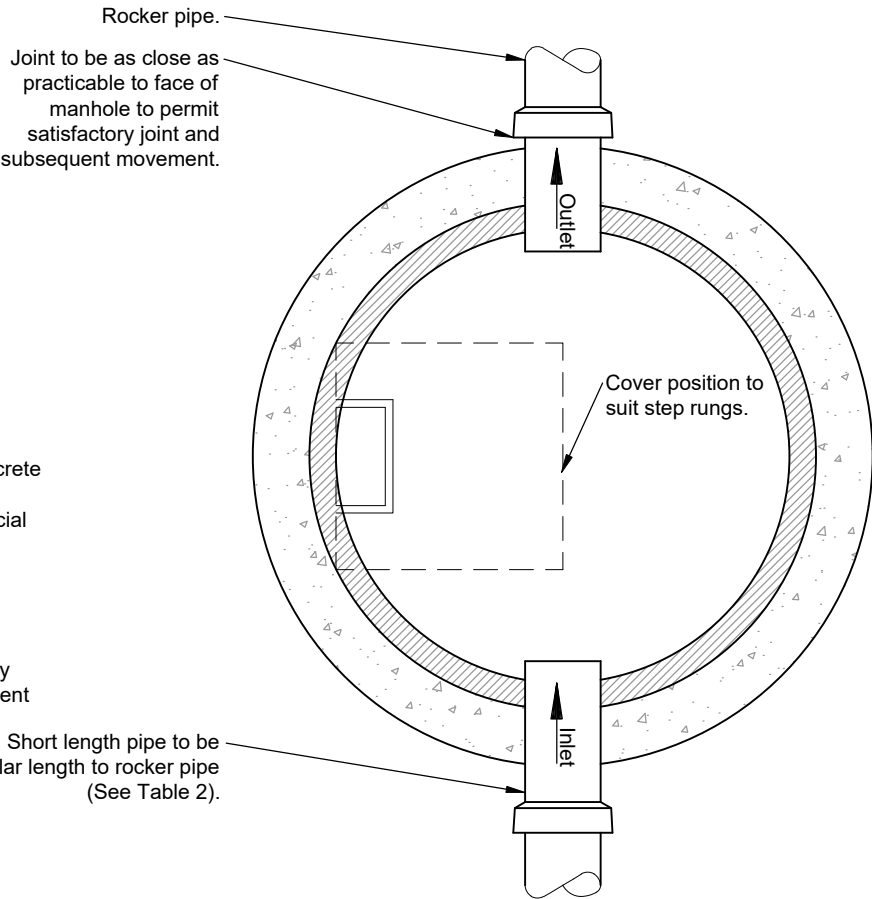
TABLE 2

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

Minimum depth from cover level to base 1.3m.
Maximum depth from cover level to soffit of pipe 3.0m.



SECTION
(Scale 1:20)



PLAN
(Scale 1:20)

NOTES

- Do not scale from this drawing.
- Cover Grade shall be minimum D400 unless otherwise agreed with the Highway Inspector. 600mm x 600mm clear opening (Refer to Table 3).
- 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. All covers formed of double triangular units shall be loosely bolted together.
- Frames shall be bedded on a gauged Class 1 (3:1) sand/cement mortar to Cl.2402 of SHW Mortar Designation (i), and between 2 and 4 courses of Engineering Brickwork Class 'B' to BS EN 771-1:2011.
- Rungs 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 number of incoming branches and invert levels may vary.
- Cover and frame may be installed as a 'gully top' where appropriate.
- Min pipe diameter for carrier pipes to be 225mm.
- Min pipe diameter for gully laterals to be 150mm.

E	General update	MJA	MJA	15.03.19
D	General update	MJA	HM	07.11.17
C	Min pipe diameters added	DJL	HM	25.04.17
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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West Sussex
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sussex
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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

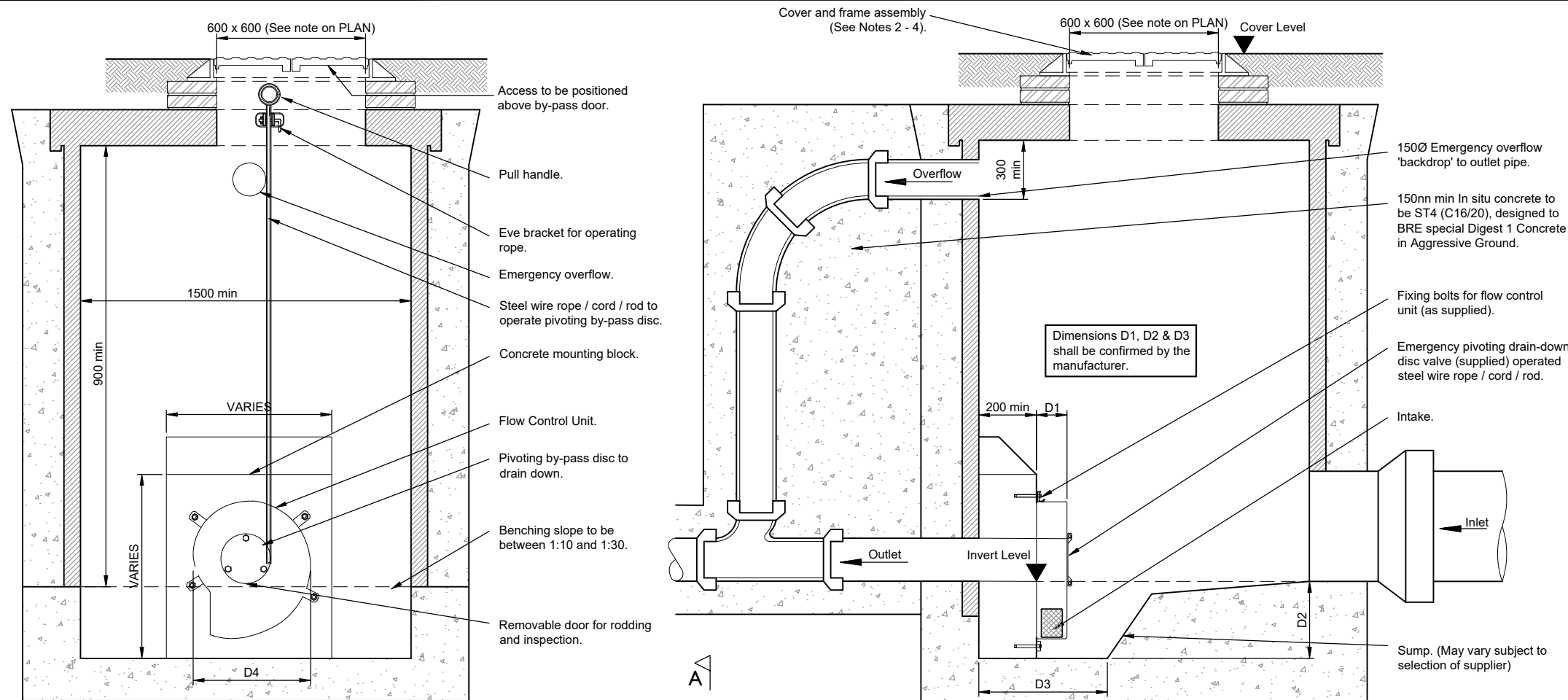
Dimensions :

Drawing No.

S278/38/13

Rev

E



- NOTES
1. Do not scale from this drawing.
 2. Cover Grade shall be minimum D400 unless otherwise agreed with the Highway Inspector. 600mm x 600mm clear opening (See note on PLAN).
 3. 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. All covers formed of double triangular units shall be loosely bolted together.
 4. 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.
 5. Precast concrete manhole pattern step irons at 300mm centres vertically and staggered 300mm horizontally between centres.
 6. On manholes less than 1.5mØ reducing slab not to be used and PC rings to continue up to cover slab.
 7. Pre-cast concrete products shall comply with the relevant provisions of BS 5911: Part 2, 200 & 230.
 8. The flow control quotation and specification, and chamber details shall be supplied to WSCC in order that the 'commuted sum' can be calculated.
 9. 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.

- CONDITIONS OF USE:
- 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.
 - 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.
 - Flow control to have a minimum of 75mm solid handling.
 - Opening size minimum shall be 600mm x 600mm. Size must be designed to suit the selected flow control apparatus and future maintenance requirements for removal/replacement.

C	General update	MJA	MJA	15.03.19
B	Notes amended	MJA	MJA	07.11.17
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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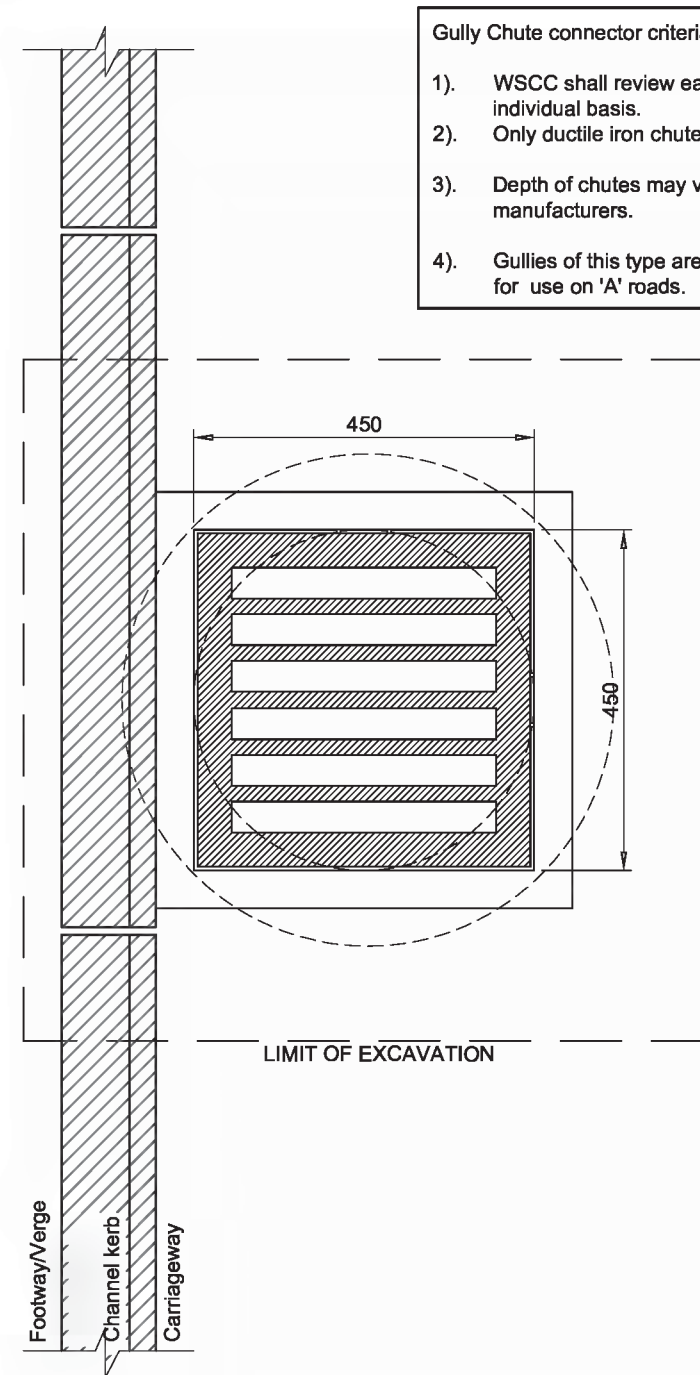


Project Name
Section 278/38 Highway Agreement
Standard Details

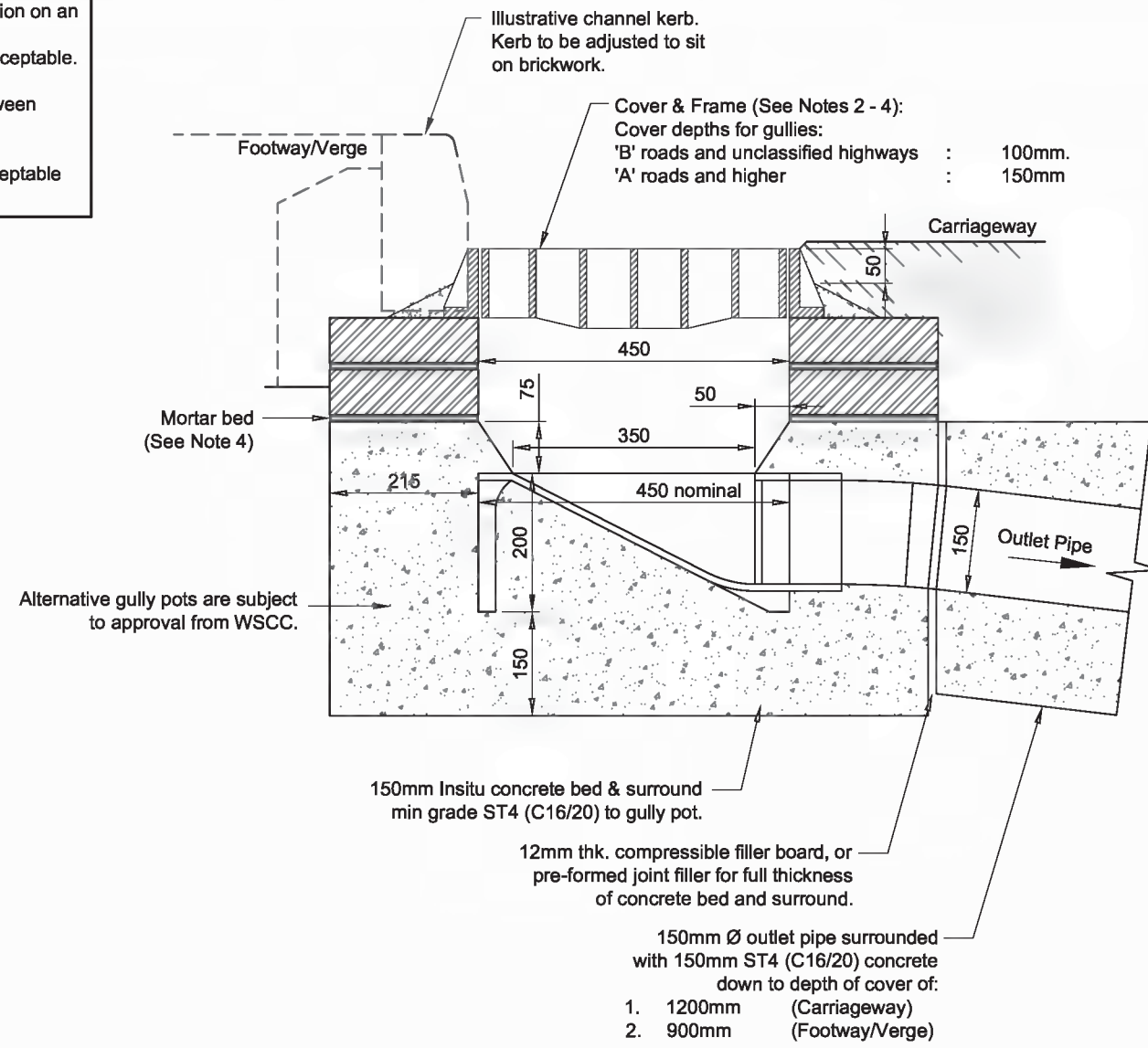
Drawing Title
Vortex Flow Control
Type B Manhole



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



- Gully Chute connector criteria:
- 1). WSCC shall review each location on an individual basis.
 - 2). Only ductile iron chutes are acceptable.
 - 3). Depth of chutes may vary between manufacturers.
 - 4). Gullies of this type are not acceptable for use on 'A' roads.



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

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

- 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.

Rev	Revision details	Chkd	Appd	Date
Drawn:	DLS		For comment	
Chkd:			For tender	
Appd:			For construction	
Date:			As constructed	
File ref:				
IWP Ref:				

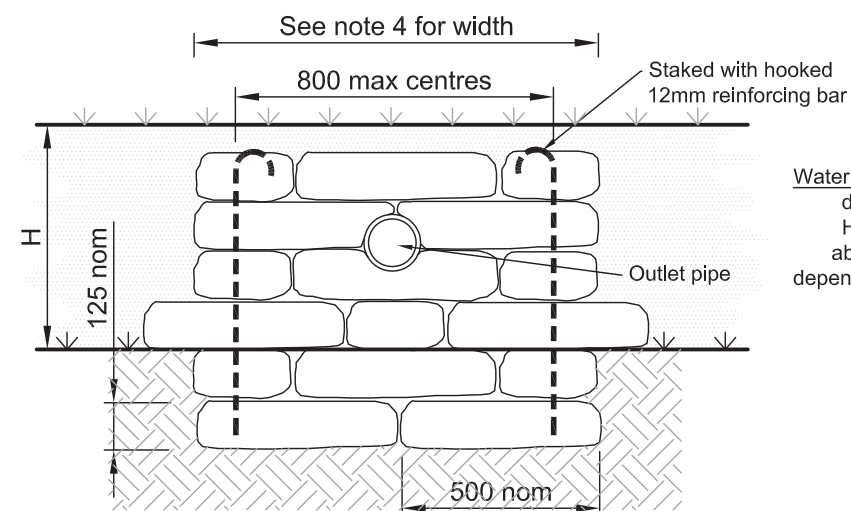
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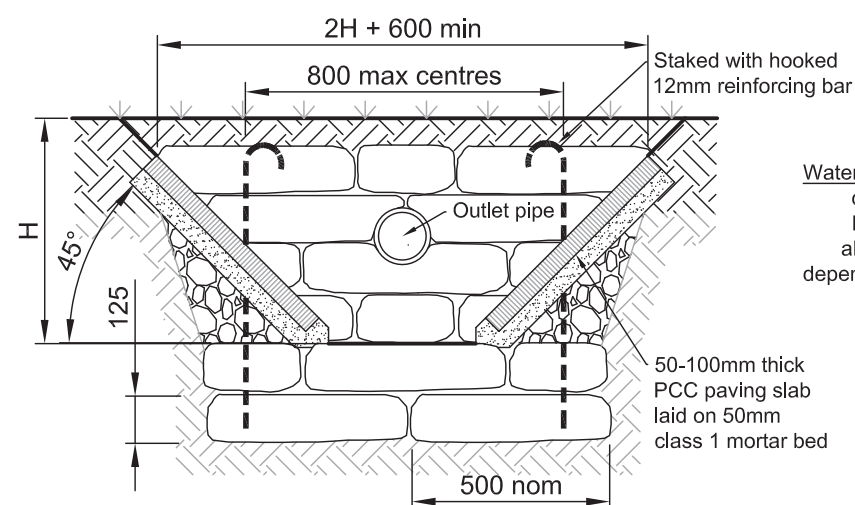
Project Name	Section 278/38 Highway Agreement Standard Details
Drawing Title	Drainage Gully C - Chute Gully (SumpleSS)

APPROVED
APRIL 2017
CONTRACTOR TO ENSURE LATEST DETAILS ARE USED

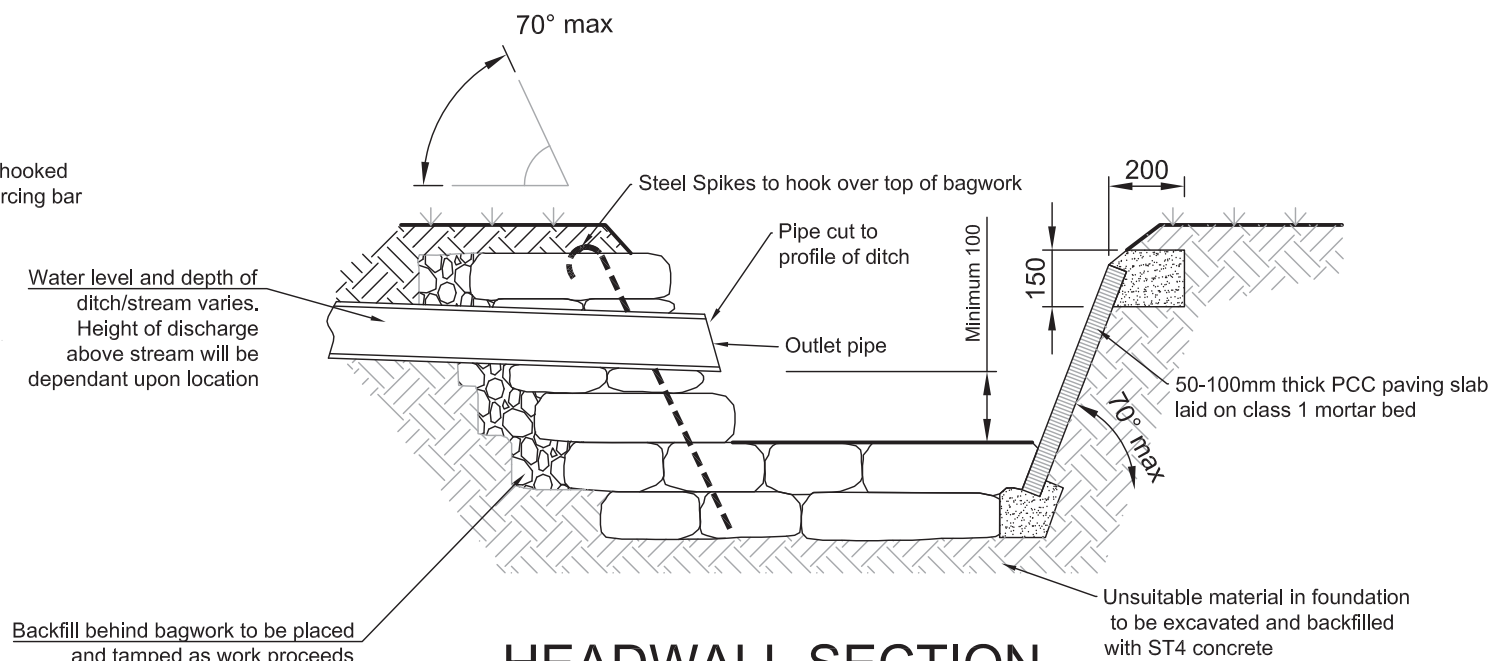
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Scale : As Shown Dimensions :
Drawing No. S278/38/22
Rev -



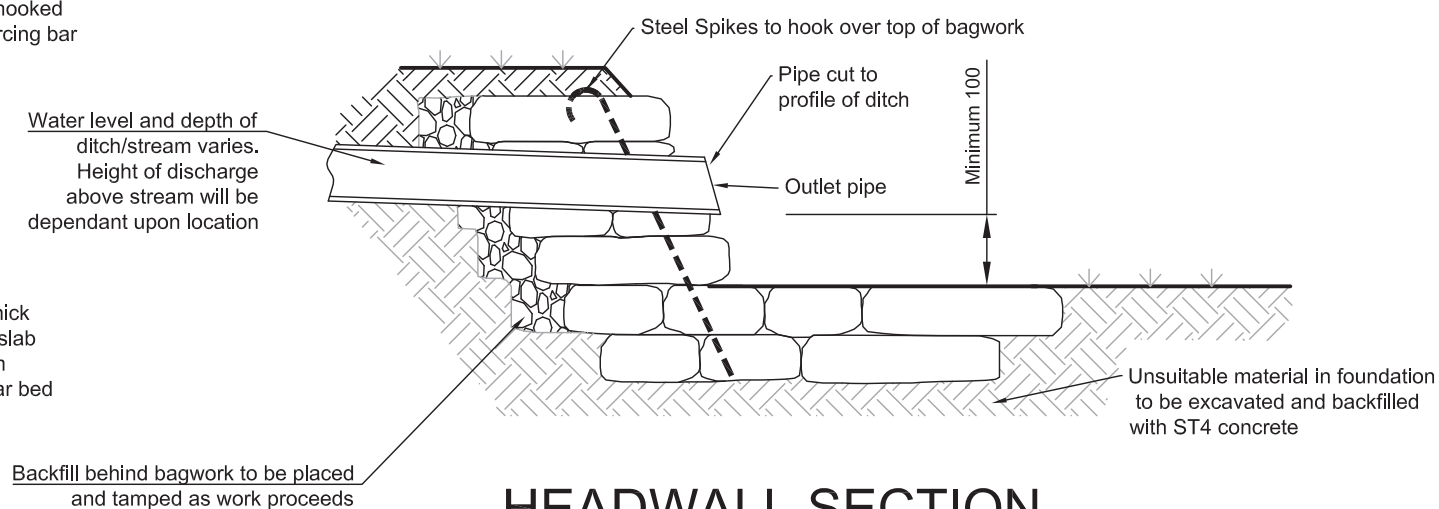
ELEVATION OF HEADWALL OUTFALL TO POND / SIDE OF DITCH



ELEVATION OF HEADWALL OUTFALL TO END OF DITCH



HEADWALL SECTION OUTFALL TO SIDE 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
9. All exposed pipework to be certified UV stable.

A	Note 9 added	DL	HM	25.04.17
Rev	Revision details	Chkd	Appd	Date
Drawn:	DJL		For comment	
Chkd:	GM		For tender	
Appd:	AH	X	For construction	
Date:	SEPT 2013		As constructed	
File ref:				
IWP Ref:				

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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
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Scale : 1:20

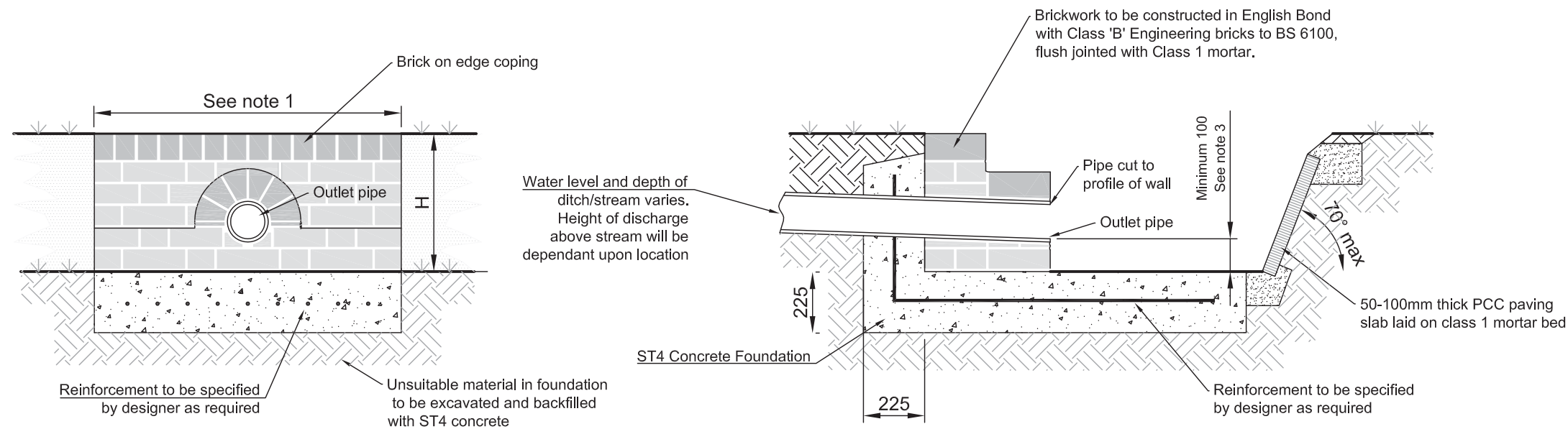
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Drawing No.

S278/38/23

Rev

A

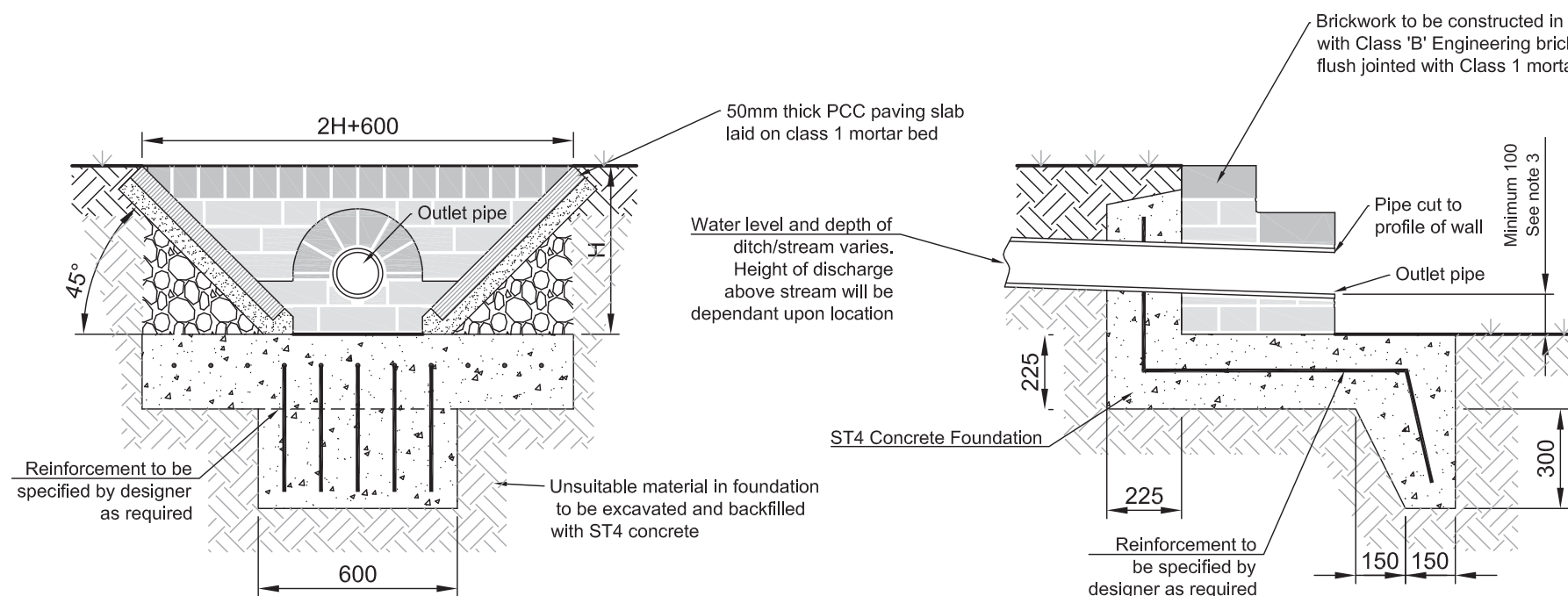


ELEVATION OF HEADWALL
OUTFALL TO POND / SIDE OF DITCH

HEADWALL SECTION
OUTFALL TO SIDE OF DITCH

NOTES

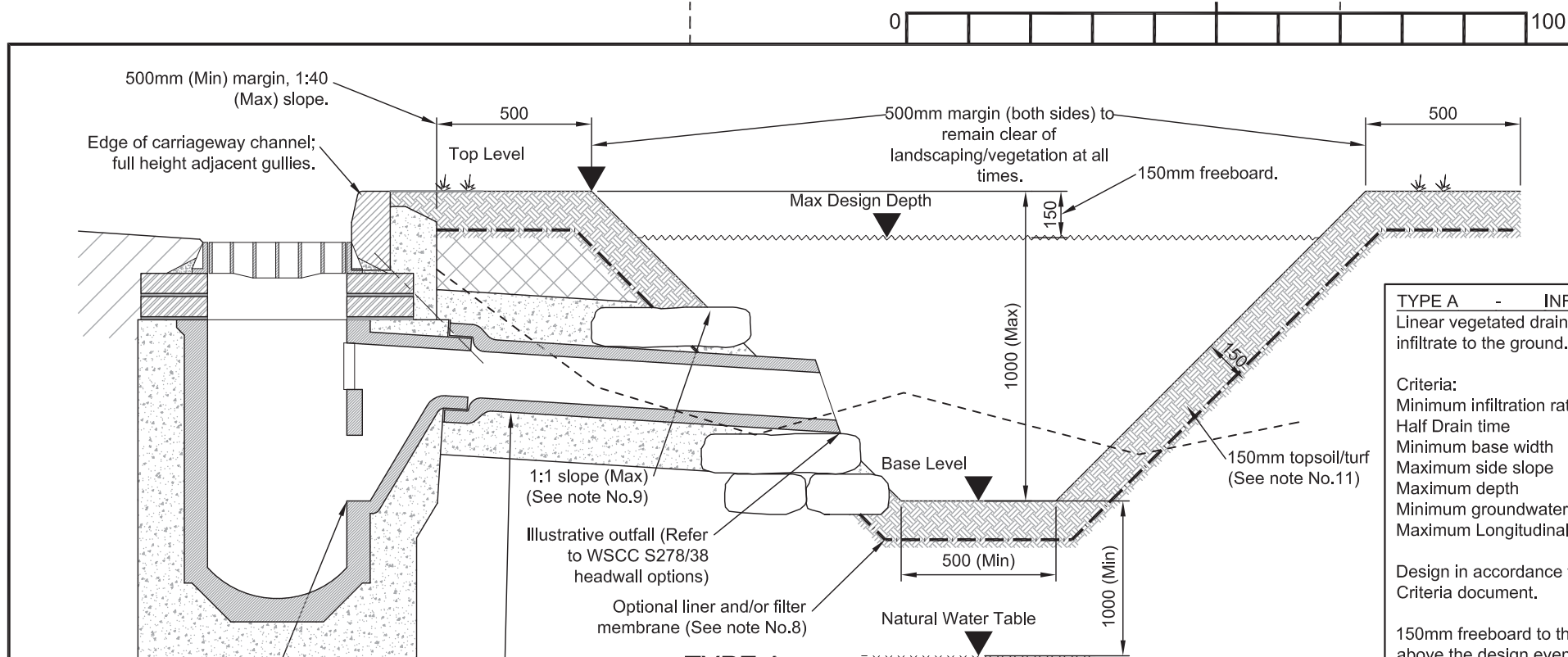
1. Extent of outlet protection to be the greater of 1500mm or pipe diameter + 1200mm spanning the outlet pipe.
2. Headwall design may need to be adjusted to on site conditions following approval from WSCC Inspector.
3. For vehicular crossings of ditches pipes shall be min 450mm diam and be set to invert 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
6. All exposed pipework to be UV stable



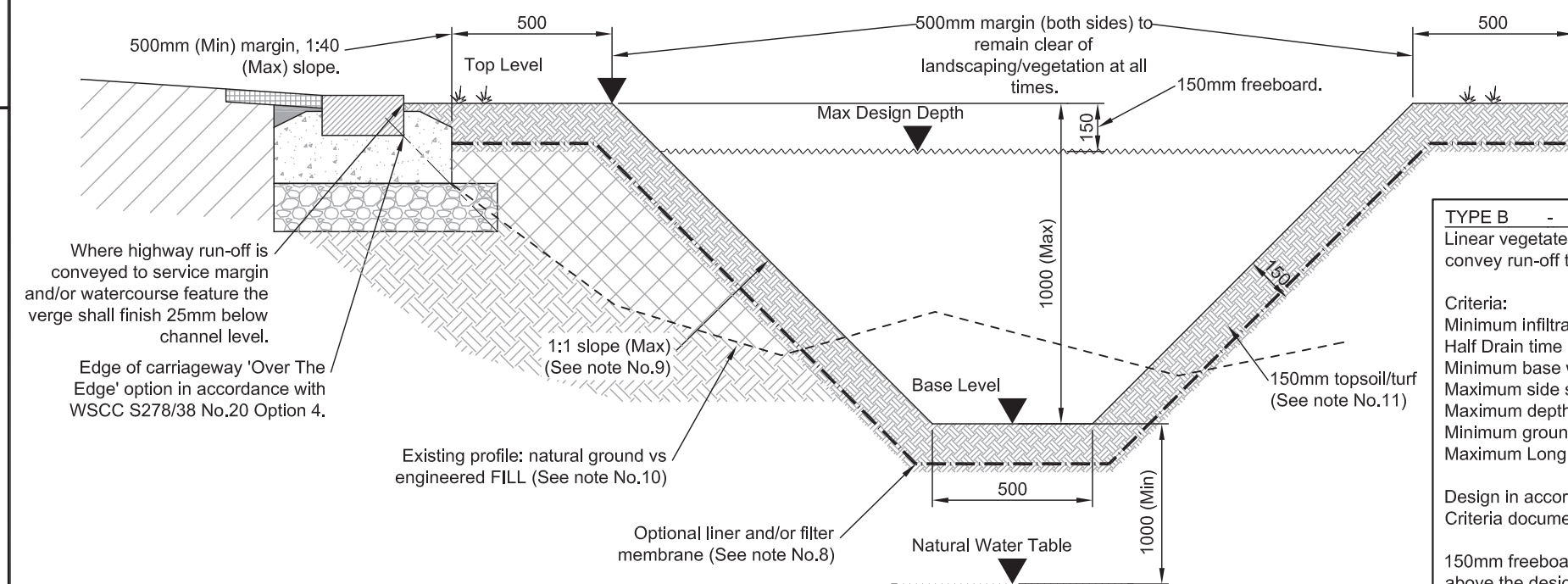
ELEVATION OF HEADWALL
OUTFALL TO END OF DITCH

HEADWALL SECTION
OUTFALL TO POND / END OF DITCH

A	Note 6	DJL	HM	25.04.17	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			
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	
Chkd:	GM		For tender					Dimensions : mm	
Appd:	AH	X	For construction					Drawing No.	
Date:	SEPT 2013		As constructed					S278/38/24	
File ref: IWP Ref:								Rev A	



TYPE A
SECTION
(Scale 1:20)



TYPE B
SECTION
(Scale 1:20)

TYPE A - INFILTRATION

Linear vegetated drainage feature designed to store and infiltrate to the ground.

Criteria:

Minimum infiltration rate	-	1x10(-5)m/sec
Half Drain time	-	24hrs
Minimum base width	-	500mm
Maximum side slope	-	1:1
Maximum depth	-	1m
Minimum groundwater freeboard	-	1m (Note 7)
Maximum Longitudinal grade	-	2% (1:50)

Design in accordance with WSCC Highway Drainage Criteria document.

150mm freeboard to the top of the ditch shall be included above the design event depth.

TYPE B - FLOW CONVEYANCE

Linear vegetated drainage feature designed to store and convey run-off to an ultimate outfall.

Criteria:

Minimum infiltration rate	-	N/A
Half Drain time	-	N/A
Minimum base width	-	500mm
Maximum side slope	-	1:1
Maximum depth	-	1m
Minimum groundwater freeboard	-	1m (Note 7)
Maximum Longitudinal grade	-	2% (1:50)

Design in accordance with WSCC Highway Drainage Criteria document.

150mm freeboard to the top of the ditch shall be included above the design event depth.

Type B ditches must be linked to an ultimate outfall feature and cannot be used in isolation.

A	Pipes to be UV stable	DJL	HM	25.04.17
Rev	Revision details	Chkd	Appd	Date
Drawn: MJA			For comment	
Chkd: DJL			For tender	
Appd: DJL			For construction	
Date: 14/12/2015			As constructed	
File ref:				
IWP Ref:				

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Project Name

Section 278/38 Highway Agreement Standard Details

Drawing Title

Drainage
Highway Ditch



Original Drawing Size :	A3
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A3

Scale : As Shown

Dimensions :

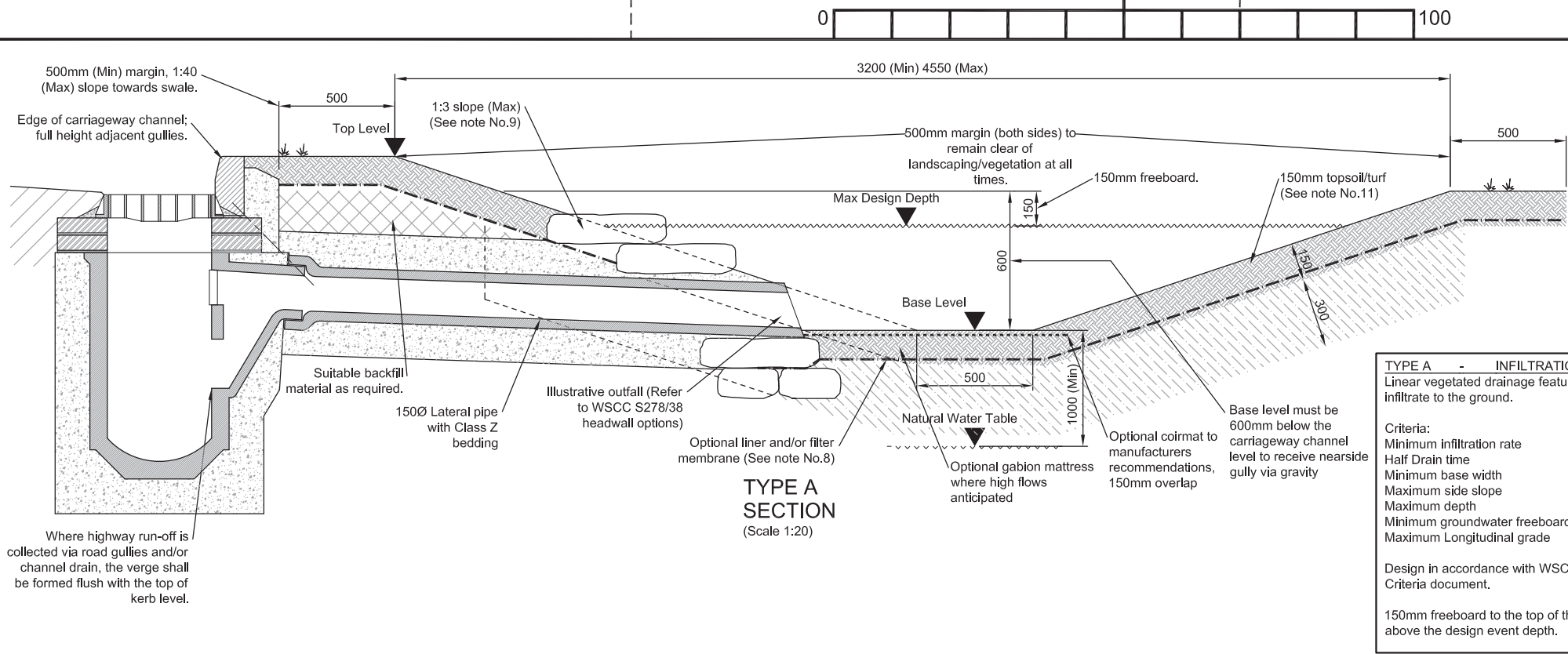
Drawing No.

S278/38/25

Rev

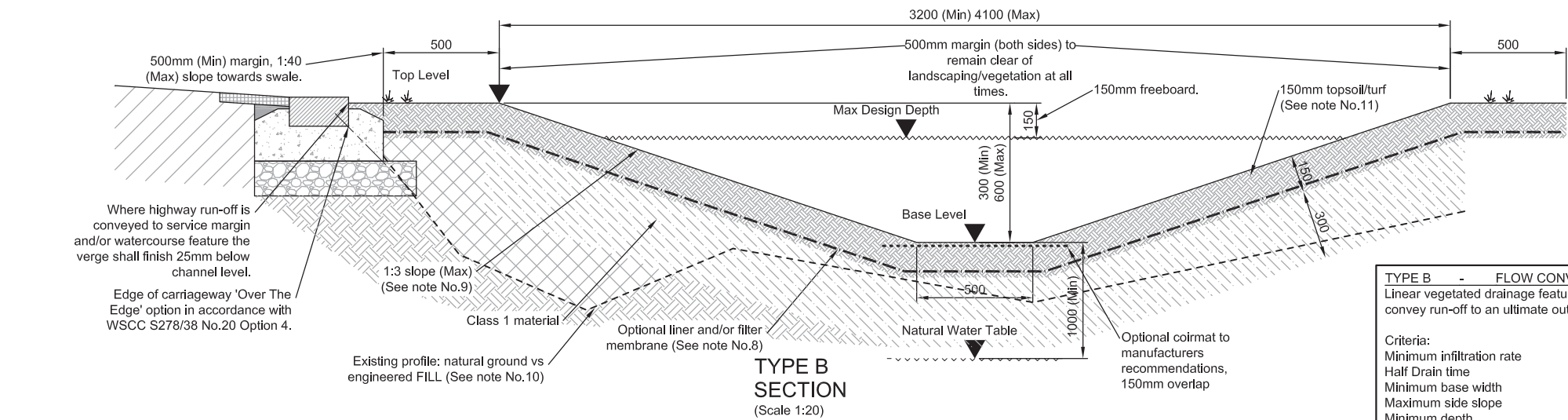
A





TYPE A SECTION
(Scale 1:20)

TYPE A - INFILTRATION	
Linear vegetated drainage feature designed to store and infiltrate to the ground.	
Criteria:	
Minimum infiltration rate	- 1x10(-5)m/sec
Half Drain time	- 24hrs
Minimum base width	- 500mm
Maximum side slope	- 1:3
Maximum depth	- 1m
Minimum groundwater freeboard	- 1m (Note 7)
Maximum Longitudinal grade	- 2% (1:50)
Design in accordance with WSCC Highway Drainage Criteria document.	
150mm freeboard to the top of the swale shall be included above the design event depth.	



TYPE B SECTION
(Scale 1:20)

TYPE B - FLOW CONVEYANCE	
Linear vegetated drainage feature designed to store and convey run-off to an ultimate outfall.	
Criteria:	
Minimum infiltration rate	- N/A
Half Drain time	- N/A
Minimum base width	- 500mm
Maximum side slope	- 1:3
Minimum depth	- 300mm
Maximum depth	- 600mm
Minimum groundwater freeboard	- 1m (Note 7)
Maximum Longitudinal grade	- 2% (1:50)
Design in accordance with WSCC Highway Drainage Criteria document.	
150mm freeboard to the top of the swale shall be included above the design event depth.	
Type B swales must be linked to an ultimate outfall feature and cannot be used in isolation.	

- NOTES**
- Do not scale from this drawing.
 - The design criteria shall be in accordance with CIRIA C697 and agreed in principle with WSCC as per the box note options.
 - Drainage strategy and flood risk reports shall be provided where applicable. In addition of this information the designer shall ensure compliance as follows:
 - Site topographical survey - (Outfall & Flow Conveyance)
 - Site Investigation Report - (Soil Type, Infiltration Test Results, Groundwater Levels, Contamination)
 - Design - (Area of Catchment, Design calculations in accordance with BRE365 or CIRIA 156, Design for 1:100yr Return Period and include an allowance for climate change)
 - Any design proposals impacting on or in close vicinity to an 'Ordinary Watercourse' shall be subject to the approval of West Sussex County Council Land Drainage Consent.
 - Any design proposals impacting on or in close vicinity to a 'Main River' shall be subject to the approval of The Environment Agency Land Drainage Consent.
 - Highway ditches to be sited at least 500mm clear of service margins in order to avoid obstructing the route of public utilities.
 - Ground water monitoring may be necessary to establish highest seasonal variation. Where 1m of unsaturated ground below ditch cannot be achieved, seek advice from WSCC.
 - Lining/membranes will be required if location in area of high pollution or risk of contamination.
 - Slope grade shall be a maximum 1:1 but may need to be slacker depending on the geology of the natural soil or the nature of the engineered FILL, and will be subject to determination of maintenance access and locality i.e. some area may need to be laid flatter to allow safe egress.
 - All design proposals must identify the extents of ditch to be formed in 'natural ground' or 'engineered FILL'. Where applicable geotechnical evidence may need to demonstrate method of construction, vehicular loads, angle of repose and long-term settlement.
 - Slope finish to be dense turf with a water tolerant grass specification to minimise erosion. Turf to be pinned if necessary to prevent slumping off the slope. Topsoil and seeding may be an acceptable alternative and will be dependant on slope grade, seasonal laying and when the feature will become operational post construction i.e. risk of wash out.
 - Erosion/scour protection may be necessary if the ditch intersects existing land drains or other incoming drains subject to determination of anticipated flow rates.
 - Exposed pipes to be UV stable.

A	Note 13	DJL	HM	25.04.17
Rev	Revision details	Chkd	Appd	Date
Drawn: MJA			For comment	
Chkd: DJL			For tender	
Appd: DJL			For construction	
Date: 14/12/2015			As constructed	
File ref:				
IWP Ref:				

West Sussex County Council
Infrastructure Group
County Hall,
West Street
Chichester
West Sussex
PO19 1RH
(01243) 642105

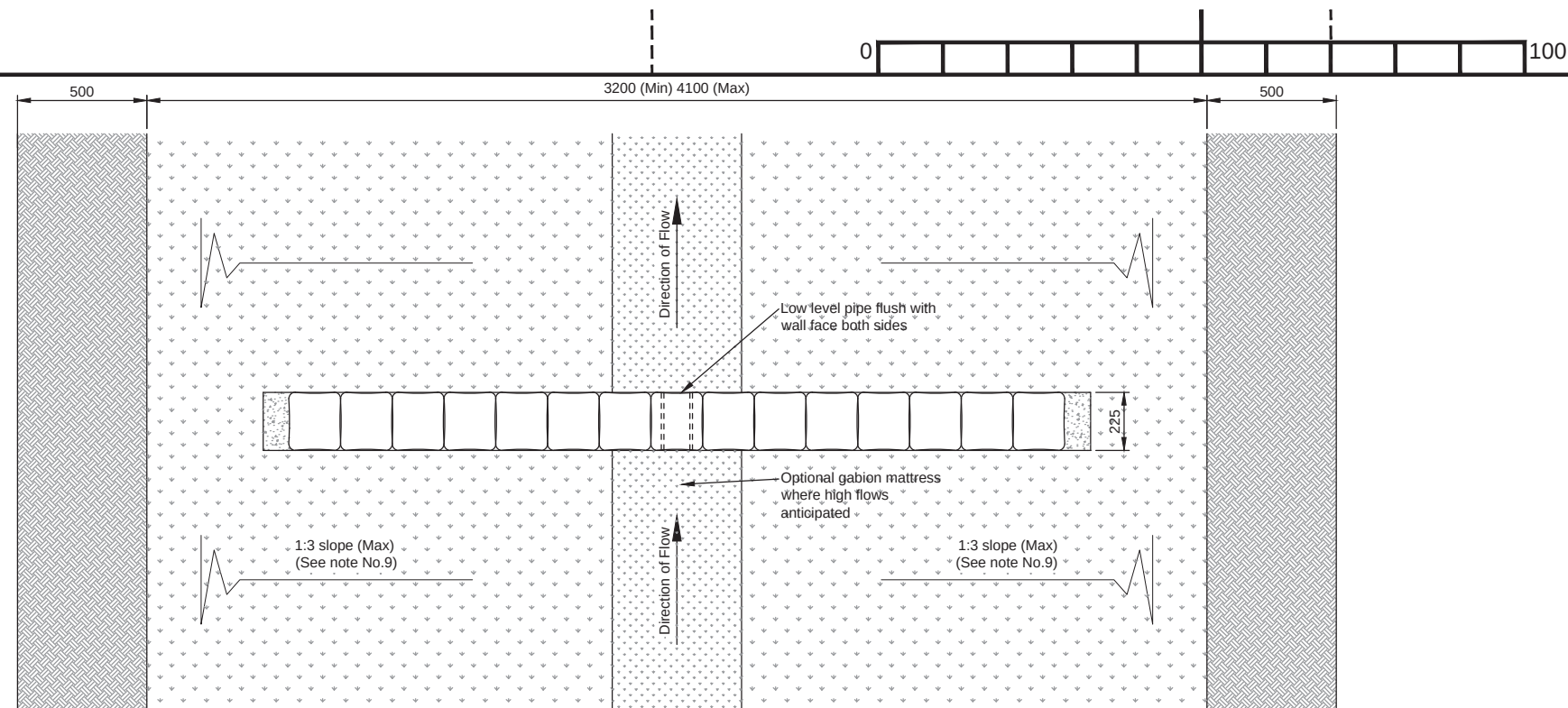


Project Name
Section 278/38 Highway Agreement
Standard Details

Drawing Title
Drainage
Highway Swale

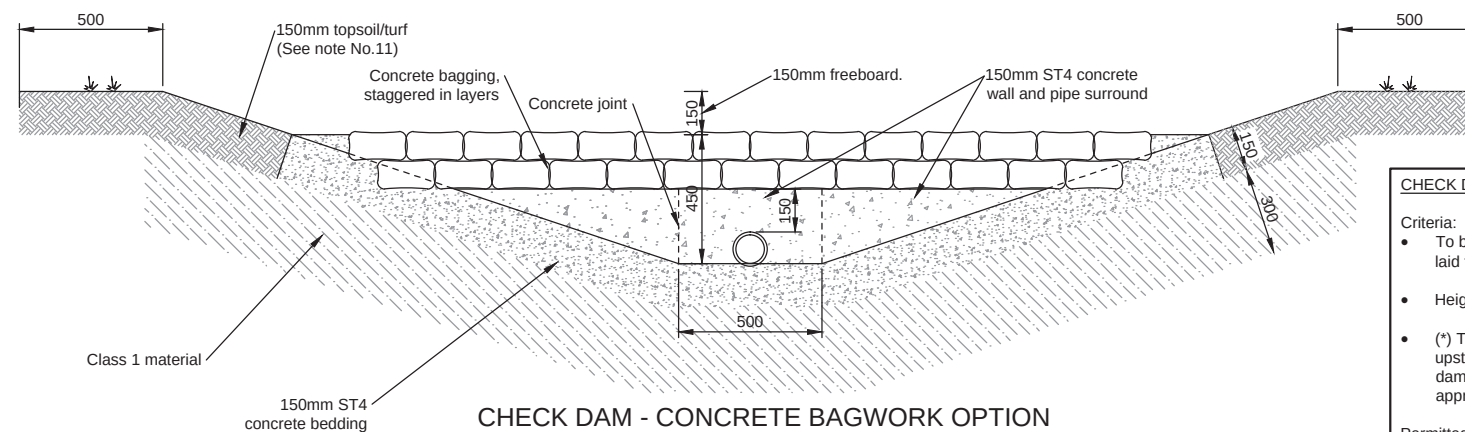


Original Drawing Size : A3	
Scale : As Shown	Dimensions :
Drawing No. S278/38/26	Rev A



- NOTES
1. Do not scale from this drawing.
 2. Refer to drawing 26 for swale Type Selection and specifications.

CHECK DAM - CONCRETE BAGWORK OPTION
PLAN
(Scale 1:25)



CHECK DAM - CONCRETE BAGWORK OPTION
SECTION
(Scale 1:25)

CHECK DAMS

Criteria:

- To be provided where longitudinal grades cannot be laid flatter than 2%.
- Heights shall be 150mm below the top of swale (*).
- (*) To be provided at intervals of 10-20m to ensure the upstream toe water level matches the downstream dam. WSCC may require a long section to demonstrate appropriate spacing.

Permitted Types:

- Gabion Wall
- Concrete Bagwork
- Earth berm (CLAY Core)

Loose aggregate and/or wooden boards are not accepted.

All check dams shall include a low level pipe (weep hole) to maintain baseline flows. Only 100Ø, 150Ø or 225Ø pipe sizes are permitted and will be subject to hydraulic assessment of flow rates.

Rev Revision details Chkd Appd Date Drawn: MJA Chkd: DJL Appd: DJL Date: 14/12/2015 File ref: IWP Ref: For comment For tender For construction As constructed					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 Drainage Highway Swale Check Dam	APPROVED APRIL 2017 CONTRACTOR TO ENSURE LATEST DETAILS ARE USED Original Drawing Size : A3 Scale : As Shown Dimensions : Drawing No. S278/38/27 Rev -
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