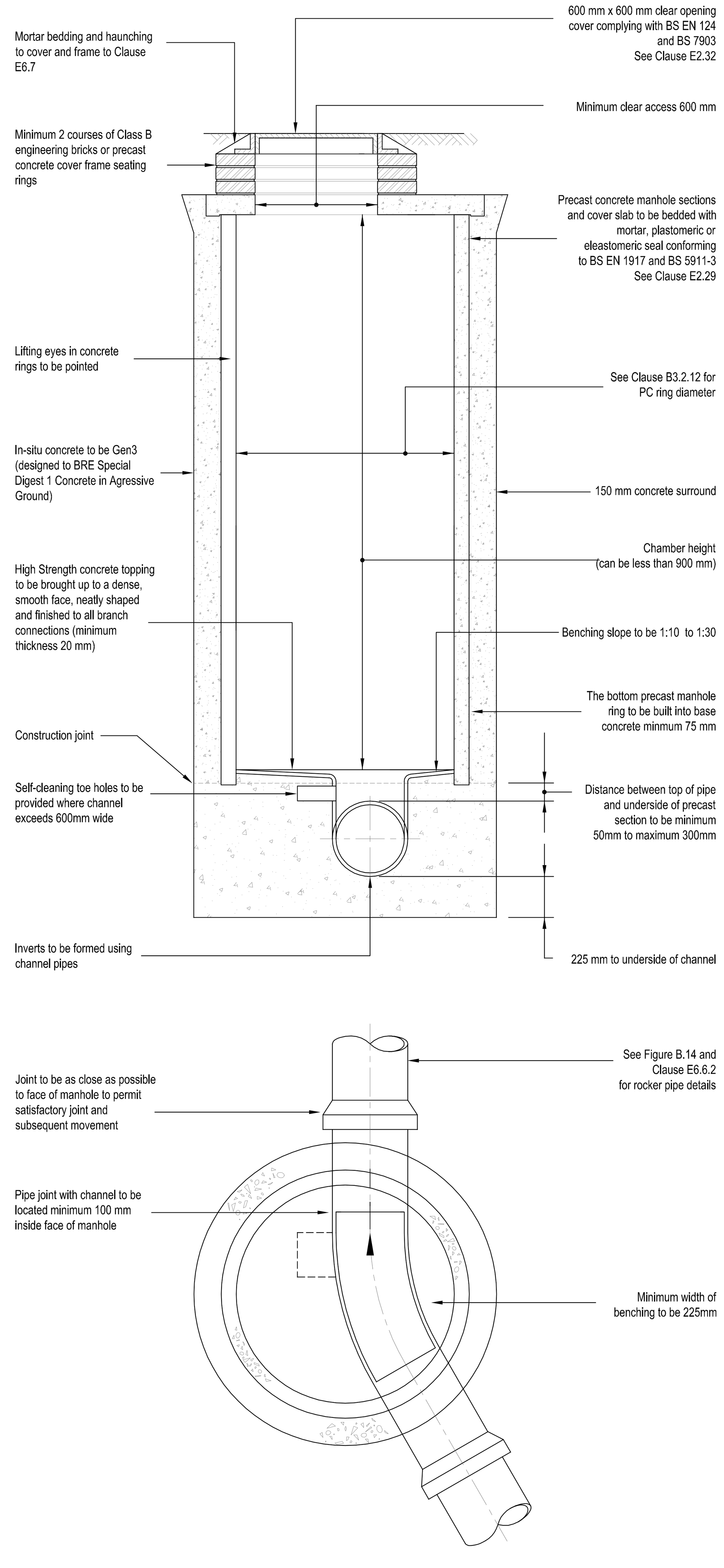
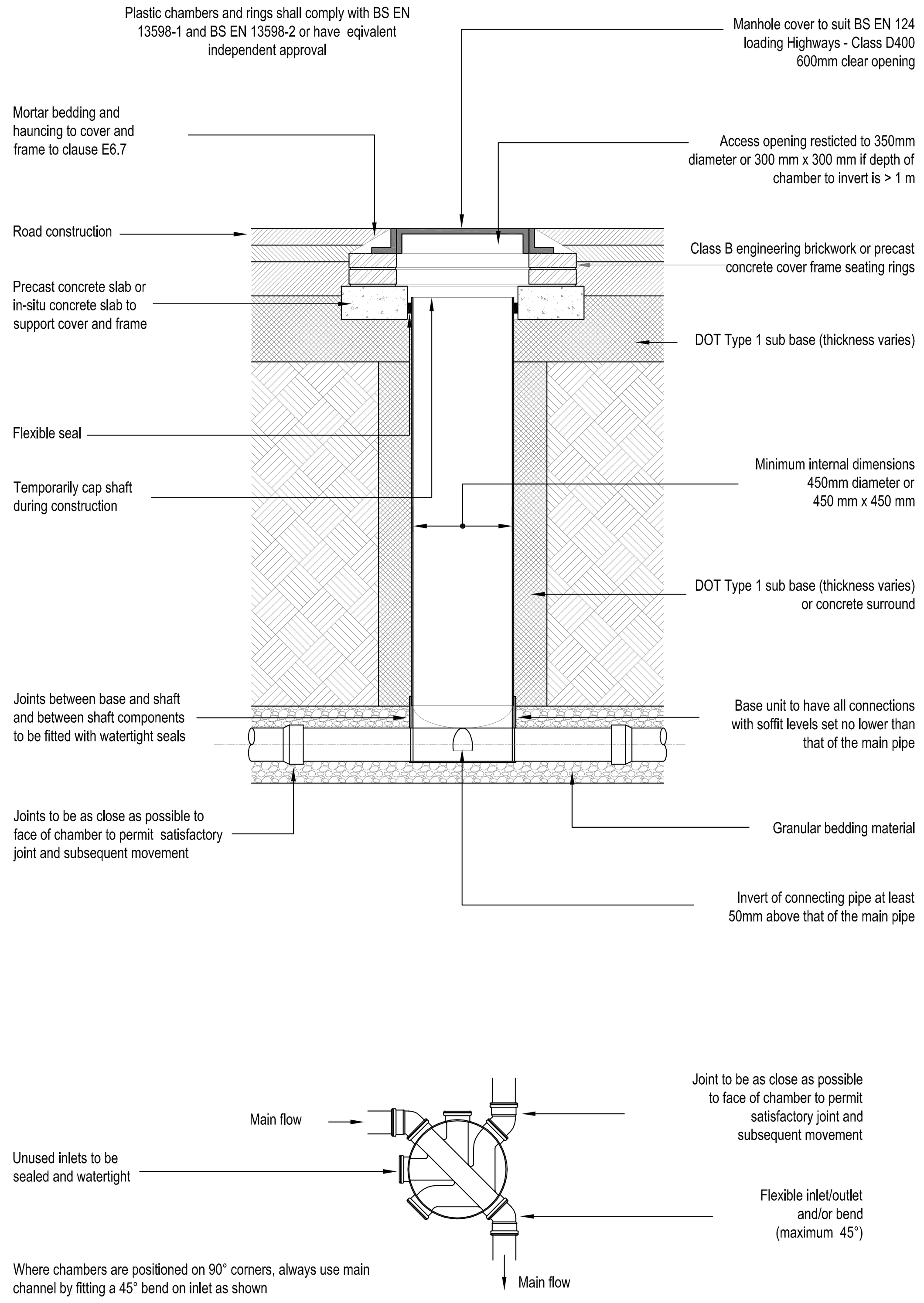


TYPICAL MANHOLE DETAIL - TYPE 2

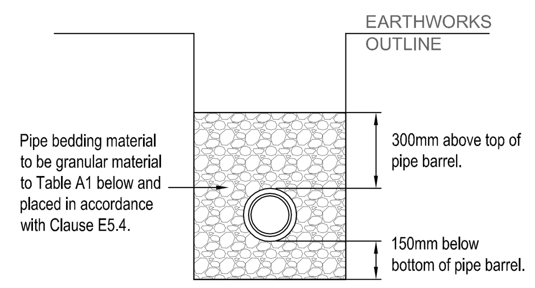
Maximum depth from cover level soffit of pipe 3.0 m



TYPICAL INSPECTION CHAMBER DETAIL- TYPE 3

(Flexible material detail)

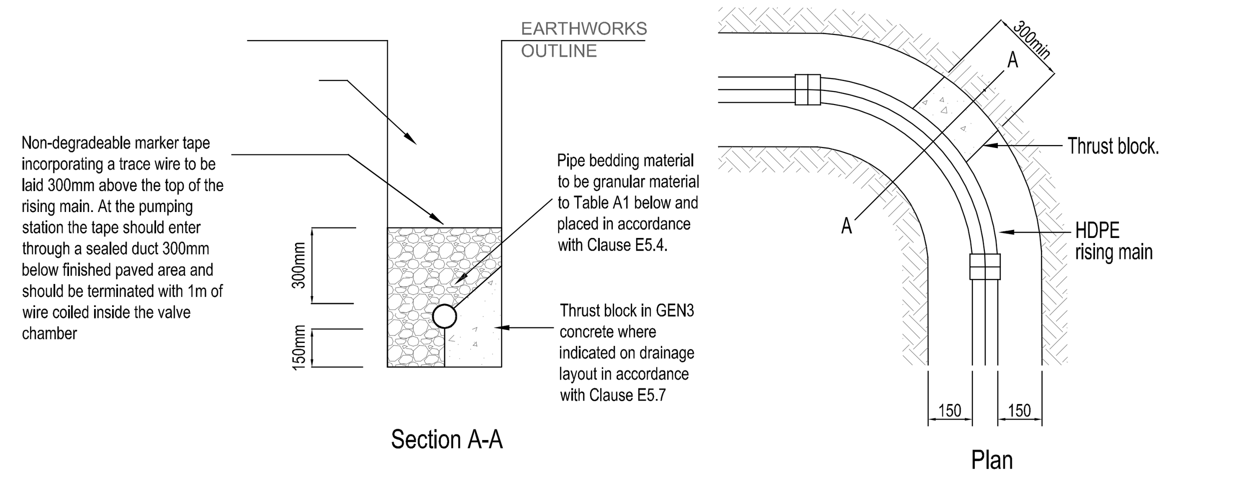
Maximum depth from cover to soffit level of pipe in areas subject to vehicle loading 3 m, non-entry



TYPE S

GRANULAR BED AND SURROUND

(See table below for pipe bedding specification)



THRUST BLOCK DETAIL

(see table below for pipe bedding specification)

Water Industry Information and Guidance Note IGN 4-08-01 (including Amendment dated November 2008)
Bedding and Sidefill Matrerials for Buried Pipelines

Table A.1 - Processed and as-dug granular bedding materials for rigid pipes

Pipe nominal size (DN)	Nominal maximum particle size (mm) See note (c)	Class of bedding See note (d)	Suitable Materials — Either: Maximum CF value for acceptibility See note (b)	Or: Materials specified in British Standards See note (a)
100	10	S B F	0.15 0.30 0.15	10mm nominal single-size
		N	0.30	Fine aggregate
Over 100 to 150	16	S B F	0.15 0.30 0.15	10 or 14 mm nominal single-size or 14mm to 5mm graded
		N	0.30	Fine aggregate
Over 150 to 300	20	S B F	0.15 0.30 0.15	10, 14 or 20mm nominal single-size or 14mm to 5mm graded or 20mm to 5mm graded
		N	0.30	All-in aggregate or fine aggregate
Over 300 to 550	20	S B F	0.15 0.30 0.15	14 or 20mm nominal single-size or 14mm to 5mm graded or 20mm to 5mm graded
		N	0.30	All-in aggregate or fine aggregate
Over 550	40	S B F	0.15 0.30 0.15	14, 20 or 40mm nominal single-size crushed rock or or 14mm to 5mm graded or 20mm to 5mm graded or 400mm to 5mm graded
		N	0.30	All-in aggregate or fine aggregate

Notes:
(a) Processed granular materials to include aggregates to BS EN 13242..
(b) Compaction Fraction value (CF), see WIS No. 4-05-02 Issue 4 and No. 4-08-02 Amendment (Nov 2008).
(c) The nominal maximum particle sizes apply both to processed and as-dug materials (see Section 4). Materials specified to British Standards listed in note(a) allow an acceptable percentage of larger particles to be present provided that 100% passes the next larger sieve size in the range of sieves used in these standards.
(d) Bedding classes are defined in:
BS EN 1295-1:1998 Structural design of buried pipelines under various conditions of loading
TRRL - Simplified Tables of External Loads on Buried Pipelines.
(e) The sulphate content of bedding and sidefill materials for use with cementitious pipe should not be greater than 0.3% as sulphur trioxide.

NOTES:

1. All works to be carried out in accordance with WRC SFA 7th Edition and to Southern Water requirementds. Clause numbers quoted refer to SFA 7th Edition Part E Civil Engineering Specification.

2. Vitrified Clay pipes and fittings to be in accordance with Clause E2.18

3. Excavation of trenches shall be carried out in accordance with Clause E3.1

4. Pipe bedding works shall be carried out in accordance with Clause E5.2

5. Pipe jointing shall be carried out in accordance with Clause E5.5

6. Pipes shall be cut in accordance with Clause E5.6

7. Cleansing and testing of sewers shall be carried out in accordance with Clause E7

Water Industry Information and Guidance Note IGN 4-08-01 (including Amendment dated November 2008)
Bedding and Sidefill Materials for Buried Pipelines

Table A.2 - Processed granular bedding materials for flexible pipes

Pipe nominal bore (mm) See note (d)	Nominal maximum particle size (mm)	Suitable Materials — Either: Maximum CF value for acceptibility See note (b) — Non-pressure pipe	Pressure pipe	Or: Materials specified in British Standards See note (a)
100	10	0.15	0.30	10mm nominal single-size
Over 100 to 150	16	0.15	0.30	10 or 14 mm nominal single-size or 14mm to 5mm graded
Over 150 to 300	20	0.15	0.30	10, 14 or 20mm nominal single-size or 14mm to 5mm graded or 20mm to 5mm graded
Over 300 to 550	20	0.15	0.30	14 or 20mm nominal single-size or 14mm to 5mm graded or 20mm to 5mm graded
Over 550	40	0.15	0.30	14, 20 or 40mm nominal single-size or 14mm to 5mm graded or 20mm to 5mm graded or 400mm to 5mm graded

Notes:
(a) Processed granular materials to include aggregates to BS EN 13242.
(b) Compaction Fraction value (CF), see WIS No. 4-05-02 Issue 4 and No. 4-08-02 Amendment (Nov 2008).
(c) For the purpose of this table, PE pipes of 630mm OD can be regarded as having nominal bores of over 550mm, irrespective of thickness.
(d) Nominal bore is used in preference to DN becasue of the different nominal size classifications for flexible pipes.
(e) For PE80 and PE100 polyethylene pipe complying with current relevant Water Industry Specifications, the maximum sidefill particle size may be increased to 120% of the pipe nominal size.
(f) For E; values for processed granualr materials reference should be made to Table A.3 where specific site tests have not been performed.
(g) For ferrous and cementitious pipeline materials, the sulphate content of bedding and sidefill materials should not be greater than 0.3% as sulphur trioxide.

NOTES:

1. All works to be carried out in accordance with WRC SFA 7th Edition and to Southern Water requirementds. Clause numbers quoted refer to SFA 7th Edition Part E Civil Engineering Specification.

2. Excavation of trenches shall be carried out in accordance with Clause E3.1

3. Pipe bedding works shall be carried out in accordance with Clause E5.2

4. Pipe jointing shall be carried out in accordance with Clause E5.5

5. Polyethlene pressure pipes and fittings shall be in accordance with Clause E2.24

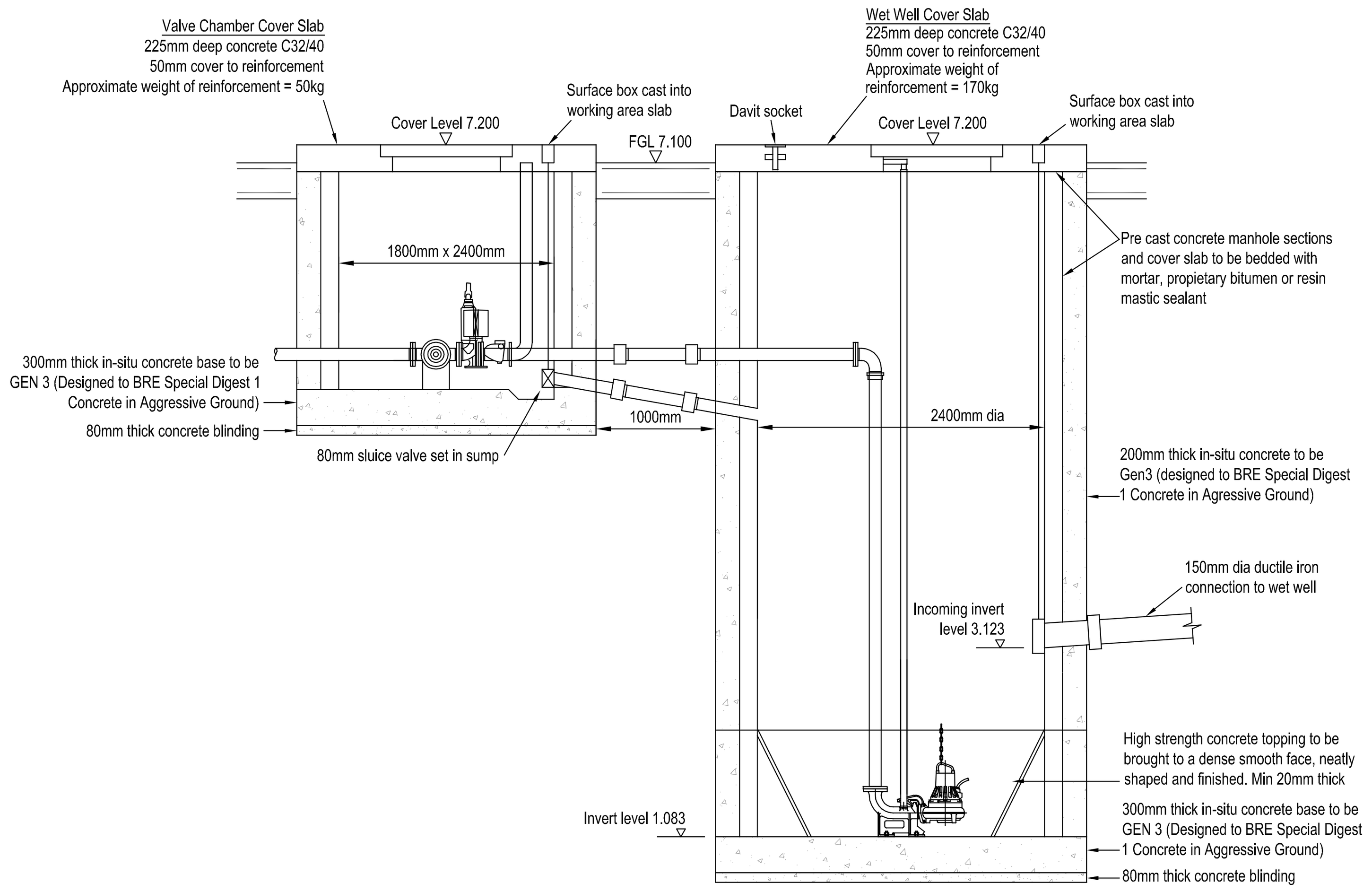
6. Cleansing and testing of rising main shall be carried out in accordance with Clause E7

SAFETY, HEALTH & ENVIRONMENTAL INFORMATION
CDM Regulations 2015

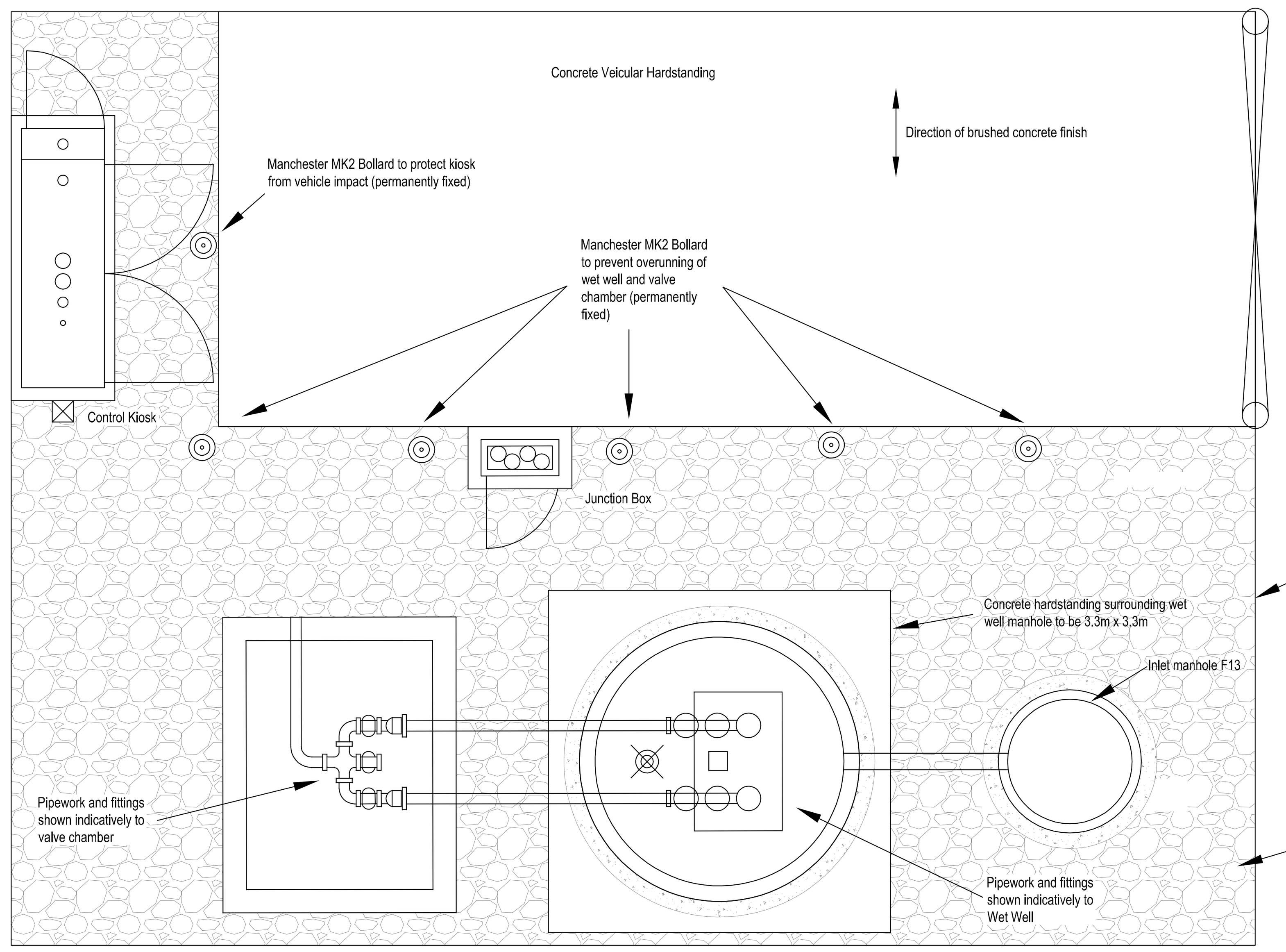
In addition to the hazards/risks normally associated with the type of work detailed on this drawing note should be made of the following:

- Working in vicinity of deep excavations
- Working in live Highway
- Exisitng Services across site and in Highway

It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement.
Contractor is not relieved of any of his obligations under all applicable health and safety regulations.

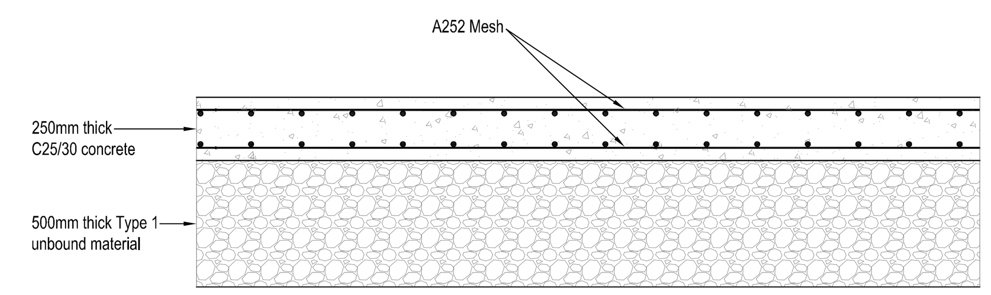


Typical Section Through Valve Chamber and Wet Well

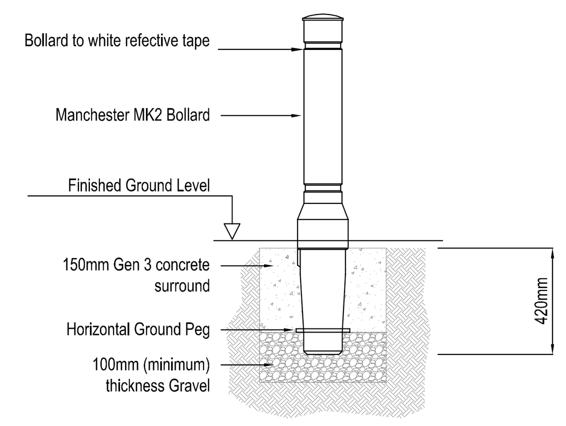


Compound Layout Plan

PUMP STATION



Vehicular Access Detail
(Brushed Concrete Finish)
Scale 1:25



Manchester MK2 Bollard (Permanently fixed)
Scale 1:25

Rev.	Date	Details	Initials
A	19.09.18	Initial Issue	MA

Drawing Status: TENDER

Project: Burndell Road, Yapton

Client: Crayfern HOMES

ESCHER · SILVERMAN
Civil & Structural Consulting Engineers
Roughton, A2 Omega Park, Electron Way, Chandlers Ford, Hampshire SO53 4SE
Tel: 023 8027 8659 Email: reception@eschers.co.uk
www.eschersilverman.com

Drawing Title: Engineering Details Adoptable Drainage Details

Drawn	Checked	Scales	Paper Size	Date
MA	KAM	Not To Scale	A1	09.18

Job No.	Drawing No.	Revision
ES1838	501–01	A

This drawing is the copyright of Escher Silverman and may not be copied, altered or reproduced in any form or passed to a third party without the consent of Escher Silverman. Do not scale from this drawing, use figured dimensions only.
Dimensions should be checked and verified on site and any discrepancies should be reported to Escher Silverman as soon as possible.

ARUN DISTRICT COUNCIL F/29/18/DOC