AQUACELL INSTALLATION NOTES
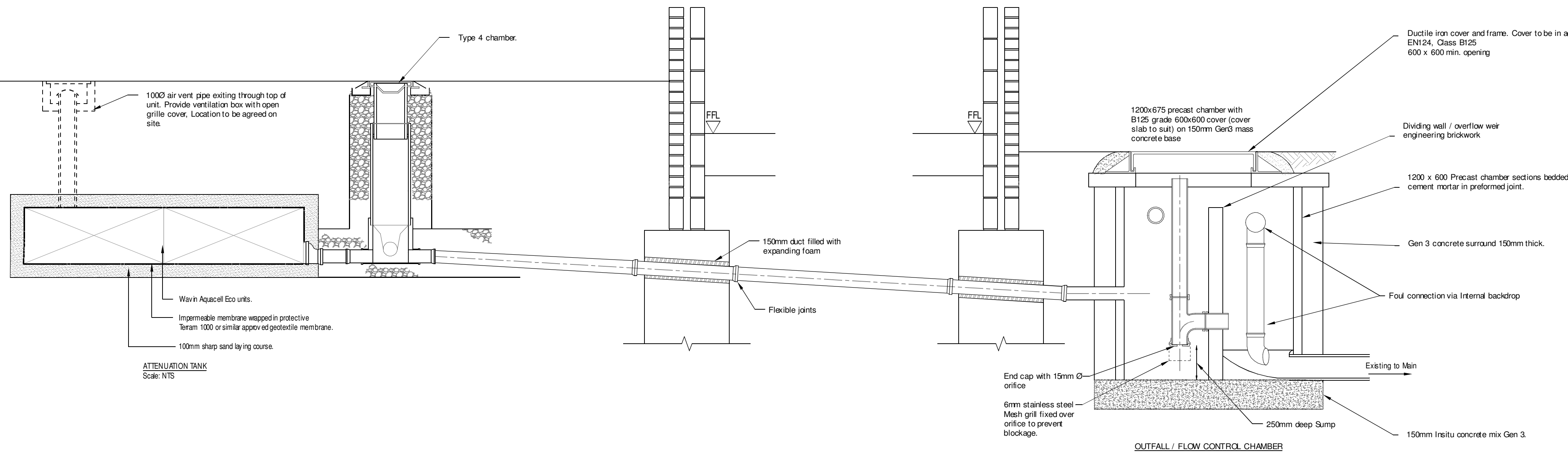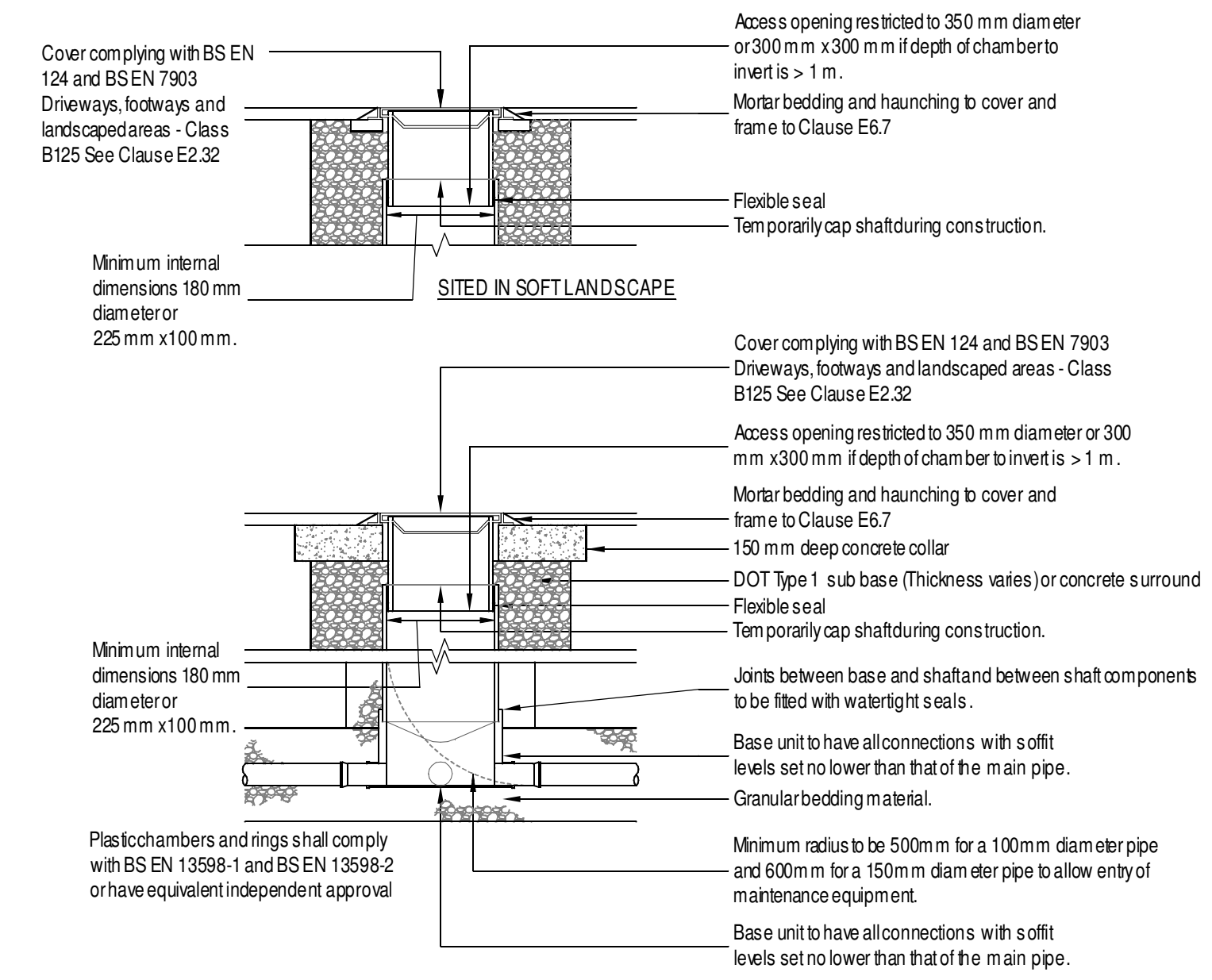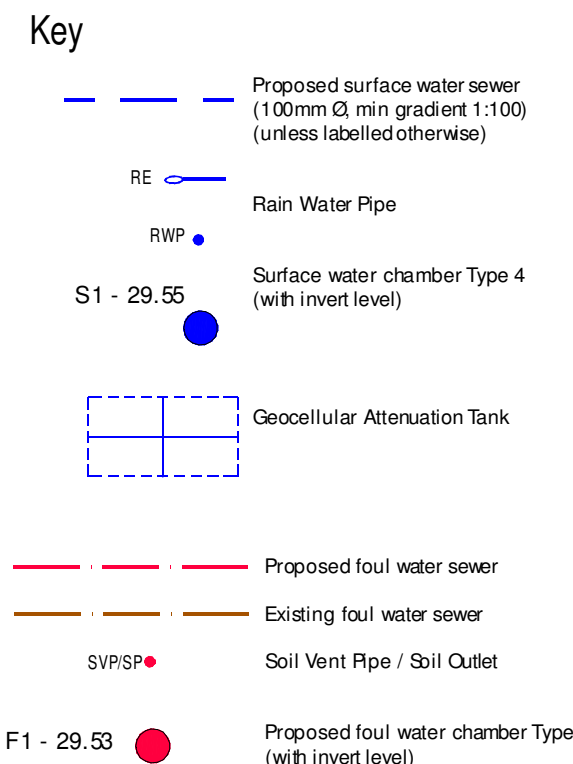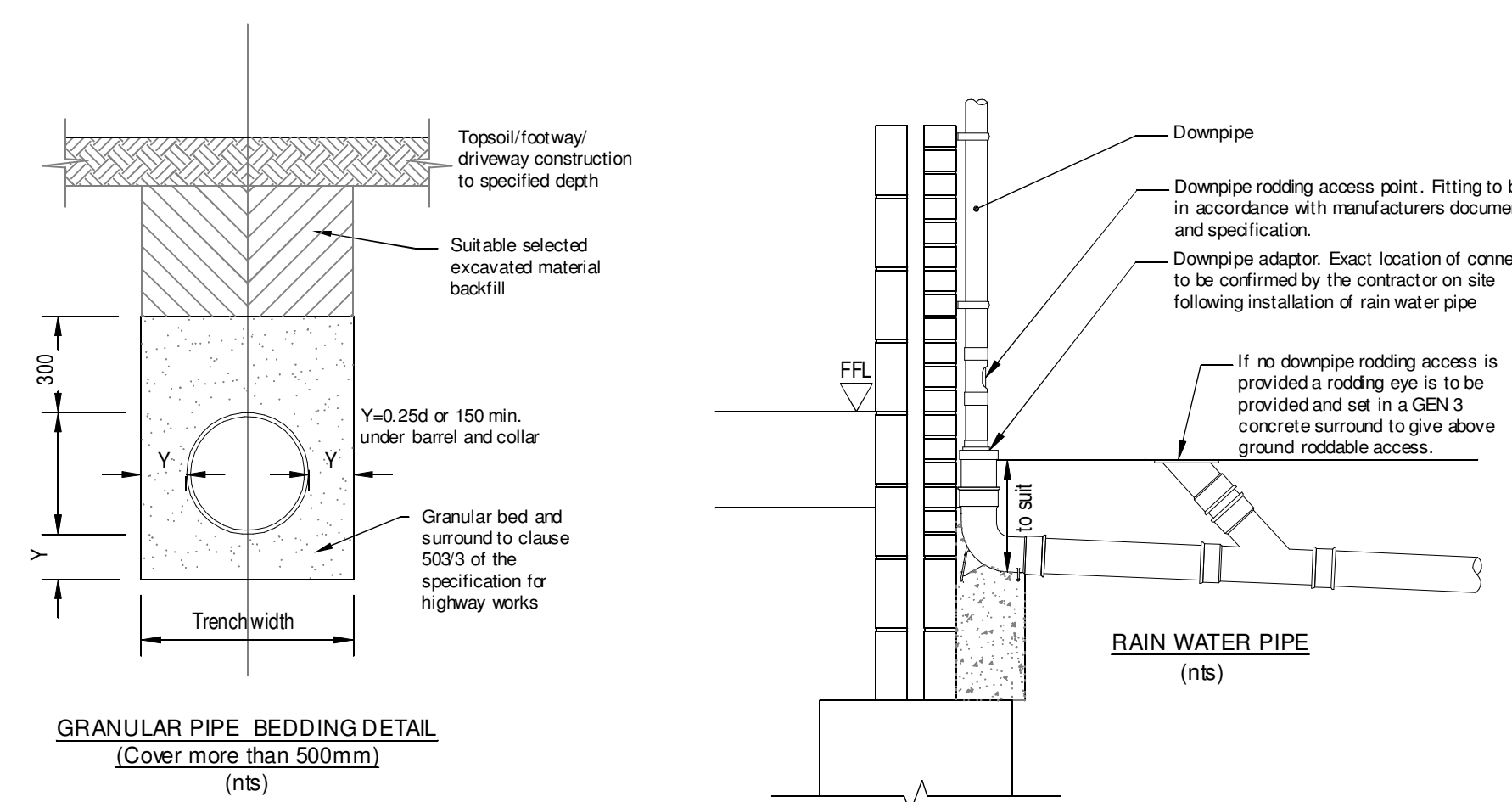
1. Excavate the trench to the required depth ensuring that the plan area is slightly greater than that of the AquaCell Units.
2. Lay 100mm bed of coarse sand or non angular granular material, level and compact.
3. Lay the geotextile* over the base and up the sides of the trench.
4. Lay the AquaCell Units parallel with each other. In multiple layer applications, wherever possible, continuous vertical joints should be avoided. AquaCell units can be laid in a 'brick bonded' formation (i.e. to overlap the joints below). For single layer applications use the Wavin Clips and for multi layers use the Wavin Clips and the Wavin Shear Connectors.
5. Fix the Wavin Adaptors to the AquaCell Units as required and connect pipework.
6. In order to prevent silt from entering the tank, clogging inlet pipework and reducing storage capacity, it is recommended that the Wavin Silt Trap (6LB600) is installed prior to the inlet pipework.
7. Wrap and overlap the geotextile covering the entire AquaCell structure.
8. Lay 100mm of coarse sand or non angular granular material between the trench walls and the AquaCell structure and compact.
9. Lay 100mm of coarse sand or non angular granular material over the geotextile and compact. Backfill with stone free as dug material.
10. Rainwater from roof areas may discharge directly into the soakaway but rainwater from carparks must discharge through a catchpit manhole or a petrol interceptor.

ATTENUATION TANK
Scale: NTS

Wavin Aquacell Eco units.

Impermeable membrane wrapped in protective Terram 1000 or similar approved geotextile membrane.

100mm sharp sand laying course.

1000Ø air vent pipe exiting through top of unit. Provide ventilation box with open grille cover. Location to be agreed on site.

Type 4 chamber.

FFL

FFL

150mm duct filled with expanding foam

Flexible joints

Ductile iron cover and frame. Cover to be in accordance with BS EN124, Class B125 600 x 600 min. opening

1200x675 precast chamber with B125 grade 600x600 cover (cover slab to suit) on 150mm Gen3 mass concrete base

Dividing wall / overflow weir engineering brickwork

1200 x 600 Precast chamber sections bedded on cement mortar in preformed joint.

Gen 3 concrete surround 150mm thick.

Foul connection via internal backdrop

Existing to Main

End cap with 15mm Ø orifice

6mm stainless steel Mesh grill fixed over orifice to prevent blockage.

250mm deep Sump

150mm Insitu concrete mix Gen 3.

OUTFALL / FLOW CONTROL CHAMBER

Tumble bay

Removable end cap

Pipe support

INTERNAL BACKDROP DETAIL

Key

Proposed surface water sewer (100mm Ø min gradient 1:100) (unless labelled otherwise)

RE — Rain Water Pipe
RWP •

S1 - 29.55 ● — Surface water chamber Type 4 (with invert level)

— Geocellular Attenuation Tank

Proposed foul water sewer

Existing foul water sewer

SVP/SP● — Soil Vent Pipe / Soil Outlet

F1 - 29.53 ● — Proposed foul water chamber Type 4 (with invert level)

NOTES: DRAINAGE

1. This drawing to be read in conjunction with all relevant documents and specifications.
2. Dimensions not to be scaled.
3. The Contractor shall carry out a level check of the existing drainage and confirm the results to the Engineer for confirmation of the design, prior to the laying of any new drainage.
4. Covers & frames to existing chambers to be adjusted to suit new levels.
5. All manhole chamber covers to be installed parallel to final kerbs, edgings, paving joints or building lines.
6. This drawing details all below ground drainage up to finished floor level. For details of drainage above finished floor level, refer to Architect's drawings.
7. External private pipework may be either VC, thermoplastic structured wall sewer pipe, or PCV-u to BSEN13476 160, and shall comply with WIS 4-35-01. Pipes shall be BSI Kitemarked, or have equivalent third party certification.
8. All open drainage connections, svp's, gullies, manholes, etc. shall be protected throughout the construction period to prevent the ingress of debris to the systems.
9. All drainage to be laid within ±10mm of the design invert levels and shall have a positive fall towards the outfall, no backfalls are permitted.
10. Pipe bedding and surround to be granular (type S).

Type 4 Flexible Material Inspection Chamber
Scale 1:25

Cover complying with BS EN 124 and BS EN 7903 Driveways, footways and landscaped areas - Class B125 See Clause E2.32

Access opening restricted to 350 mm diameter or 300 mm x 300 mm if depth of chamber to invert is > 1 m.

Mortar bedding and haunching to cover and frame to Clause E6.7

Flexible seal

Temporarily cap shaft during construction.

Minimum internal dimensions 180mm diameter or 225mm x100mm.

SITED IN SOFT LANDSCAPE

150 mm deep concrete collar

DOT Type1 sub base (Thickness varies) or concrete surround

Joints between base and shaft and between shaft components to be fitted with watertight seals.

Base unit to have all connections with soffit levels set no lower than that of the main pipe.

Granular bedding material.

Minimum radius to be 500mm for a 100mm diameter pipe and 600mm for a 150mm diameter pipe to allow entry of maintenance equipment.

Plastic chambers and rings shall comply with BS EN 13598-1 and BS EN 13598-2 or have equivalent independent approval

SITED IN DOMESTIC DRIVEWAYS OR FOOTWAYS

Drainage Layout
Scale 1:100 @ A1

FFL - 30.00m

Geocellular Attenuation Tank
Aquacell Eco units or equivalent
1 layers of 16 crates arranged as shown
Invert -29.60 m
Top of tank - 30.00 m
Min ground level 30.50m

S1 - 29.55

Flow control
15mm diameter orifice
Peak flow = 0.5l/s

Internal backdrop

Outfall to existing 900x790 public combined sewer

Outfall / Flow Control chamber, built on existing pipe at boundary.
Invert Levels:
a -29.50
b -29.00
c -28.60
d -29.30
e -28.18

F1 - 29.53

Rodable shower trap

GRANULAR PIPE BEDDING DETAIL
(Cover more than 500mm)
(nts)

Topsoil/footway/driveway construction to specified depth

Suitable selected excavated material backfill

Y=0.25d or 150 min. under barrel and collar

Granular bed and surround to clause 503/3 of the specification for highway works

Trench width

RAIN WATER PIPE
(nts)

Downpipe

Downpipe rodding access point. Fitting to be in accordance with manufacturers documents and specification.

Downpipe adaptor. Exact location of connection to be confirmed by the contractor on site following installation of rain water pipe

If no downpipe rodding access is provided a rodding eye is to be provided and set in a GEN 3 concrete surround to give above ground roddable access.

P2	Flow control chamber rotated	06/02/24 MT	
P1	Preliminary Issue	23/01/24 MT	
Rev	Description	Date	Chkd

flow
DRAINAGE DESIGN

t: 07837 685280
e: info@flowdrainagedesign.co.uk
w: www.flowdrainagedesign.co.uk

Client:
Felix Hansen

Project:
1 Eastfield Road

Title:
Surface & Foul Water Drainage Layout & Details

Project Engineer:	M. Taylor	Scale : As Shown @A1
Project Director :		Date : Jan 2024
Status :	PRELIMINARY	

| Drawing No. | 2407/01 | Rev P2 |