

Maximum depth from cover level to soffit of pipe 2 m, non entry

Manhole cover - see drainage schedule

Mortar bedding and haunching to cover and frame

Road construction

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

Class B engineering brickwork or precast concrete cover frame sealing rings

Precast concrete slab or in-situ concrete slab to support cover and frame

DOT Type 1 sub base (thickness varies)

Flexible seal

DOT Type 1 sub base (thickness varies) or concrete surround

Temporarily cap shaft during construction

Minimum internal dimensions: 450mm diameter or 450 mm x 450 mm

DOT Type 1 sub base or concrete surround min thickness 150mm

Sump depth (min 400mm)

Joints to be as close as possible to face of chamber to permit satisfactory joint and subsequent movement

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

Technical cross-section diagram of a manhole assembly. The diagram illustrates the vertical structure from the top access opening down to the invert. Key components and their specifications are labeled as follows:

- Access opening:** restricted to 350mm diameter or 300 mm x 300 mm if depth of chamber to invert is > 1 m.
- Class B engineering brickwork or precast concrete cover frame:** sealing rings.
- DOT Type 1 sub base:** (thickness varies).
- Minimum internal dimensions:** 450mm diameter or 450 mm x 450 mm.
- Base unit:** to have all connections with soffit levels set no lower than that of the main pipe.
- Invert of connecting pipe:** at least 50mm above that of the main pipe.
- Granular bedding material:** surrounding the base unit.
- Joints between base and shaft:** and between shaft components to be fitted with watertight seals.
- Joints to be as close as possible:** to face of chamber to permit satisfactory joint and subsequent movement.
- Temporarily cap shaft during construction.**
- Flexible seal.**
- Precast concrete slab or in-situ concrete slab:** to support cover and frame.
- Road construction.**
- Mortar bedding and haunching:** to cover and frame to clause E6.7.

Sited in domestic driveways or footways

Technical drawing of a manhole construction showing internal and external views with labels for materials and dimensions.

Labels:

- Mortar bedding and haunching to cover and frame to Clause E6.7
- 150mm deep concrete collar
- Flexible seal
- Temporarily cap shaft during construction
- BS EN 124 and BS 7903 Driveways, footways and landscaped areas - Class B125 See Clause E2.32
- Access opening restricted to 350mm diameter or 300 mm x300 mm if depth of chamber to invert ≥ 1 m
- Minimum internal dimensions 450mm diameter or 450 mm x 450 mm

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

Topsoil

Cover complying with BS EN 124 and BS 7903 Gullers - Class A/5
See Clause E2.32

Flexible seal

Temporarily cap shaft during construction

Access opening restricted to 350mm diameter or 300 mm x200 mm if depth of chamber to invert >1 m

Minimum internal dimensions
450mm diameter or
450 mm x 450 mm

Maximum depth from cover level to soffit of pipe 2 m, non entry

Sited in domestic driveways/paved areas

Mortar bedding and haunching to cover and frame to Clause E6.7		Cover complying with BS EN 124 and BS 7903 Driveways, footways and landscaped areas - Class B125 See Clause E2.32
--	--	--

150 mm deep concrete collar

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

Joints between base and shaft and shaft components to be filled with watertight seals

Granular bedding material

Minimum internal dimension 250 mm diameter

DOT Type 1 sub base (thickness varies) or concrete surround

Base unit to have all connections with a diameter of greater than 150 mm set at soffits level

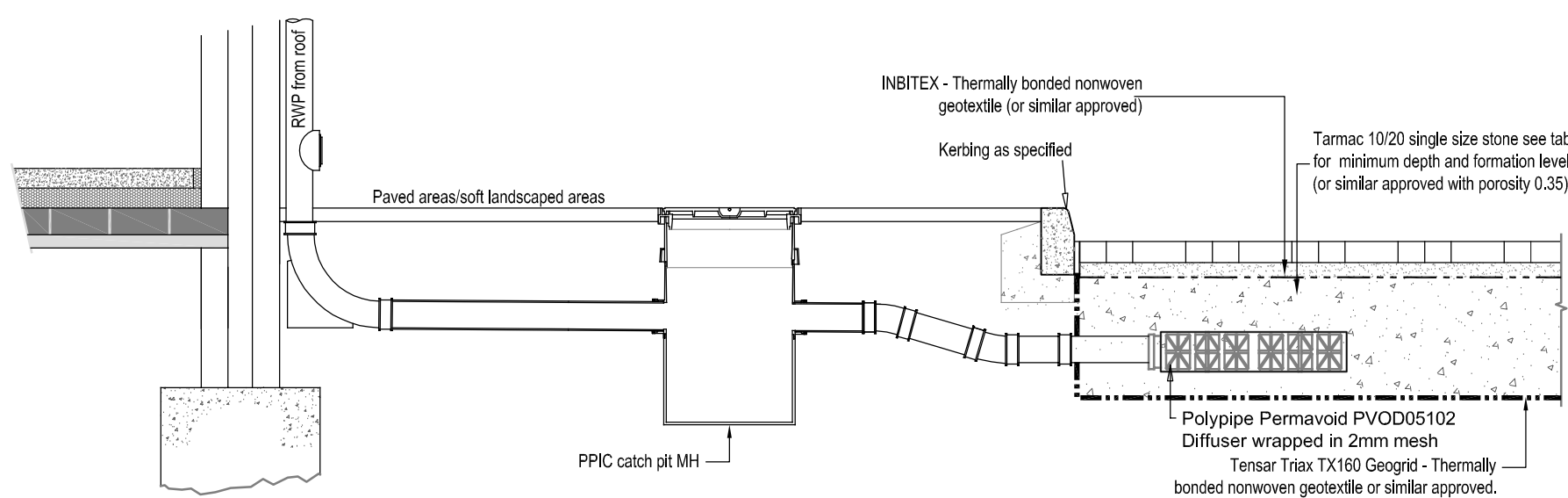
[illegible]

Diagram illustrating the construction of Bed B, showing the following layers and dimensions:

- Backfill** (see note 5)
- Selected granular backfill** (see note 6)
- O.D. 1/4 Under barrels & sockets or 100mm min. (200mm min. for rock)**
- Granular pipe bedding** (see note 7)
- Bed B**
- Dimensions:** 300mm (for bedding), 200mm min. (for rock)
- Labels:** EARTHWORKS OUTLINE

Backfill (see note 5)

Selected granular backfill (see note 6)

O.D./4 Under barrels & sockets or 100mm min. (200mm min. for rock)

O.D./4 or 100mm min.

Granular pipe bedding

EARTHWORKS OUTLINE

Bed S
Bedding Factor 2.2

Backfill
(see note 5)

EARTHWORKS
OUTLINE

Class GEN3
Concrete
Surround

151

O.D. 4 Under
barrels & sockets
or 150mm min.
(200mm min. for
rock)

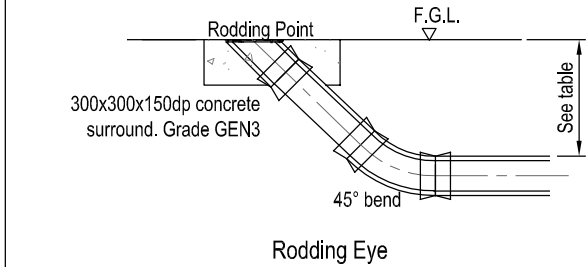
Bed Z (Concrete Surround)
Bedding Factor 2.9

All bedding classes requiring concrete shall have a 12mm expansion joint constructed for the full width and depth of the concrete and shall be placed at pipe joints not more than 5.0 metres apart

BEDDING NOTES:

1. All pipes shall be laid in trenches in accordance with Part B of the building regulations.
2. All trenches shall have vertical sides for full depth. Exceptionally, with prior approval of the Engineer, trenches may be battered above the point not less than 300mm above the top of the pipe
3. All bedding classes requiring concrete shall have 12mm expansion joint constructed for the full width and depth of the concrete and shall be placed at pipe joints not more than 5.0 metres apart
4. Reinstatement of trenches in existing carriageways shall conform to the same material and thicknesses to underside of wearing course to be in new carriageway construction unless otherwise specified in the Contract
5. Selected 10 or 15mm grit free stones larger than 40mm.
6. Selected 10: 1mm free stones larger than 40mm, lumps of clay free 100mm, frozen, frozen material & vegetable matter.
7. Granular Material: For rigid pipes the granular material shall conform to BS EN 1016 Annex B. For flexible pipes it should be single size material or graded material from 5mm up to a maximum size of 10mm for 100mm pipes, 14mm for 150mm pipes, 20mm for pipes from 150mm up to 600mm and 25mm for pipes from 600mm to 1500mm. Compaction maximum 0.5 for class N B and 0.15 for class F.
8. All works and materials to be in accordance with Water Authorities specifications
9. Bedding:
 - a) Non trafficked areas:
 - Bed B: To be used in areas not subjected to vehicular loads where cover is greater than 0.6m
 - Bed D: To be used where depth of cover is less than 0.6m
 - b) Trafficked areas:
 - Bed S: To be used in areas subject to traffic loading where depth of cover $\geq 1.2m$.
 - Bed T: To be used in areas subject to traffic loading where depth of cover $\leq 1.2m$.

Where required to protect drainage from root ingress, Bed Z is to be installed, wrapped in Inbitex non-woven geo-textile, at locations indicated on drg. 502-01



Screw down access cover

150mm Ø perforated inspection well

150mm Ø perforated pipe

Granular fill with voids ratio not less than 40%

Effective Length (refer to layout)

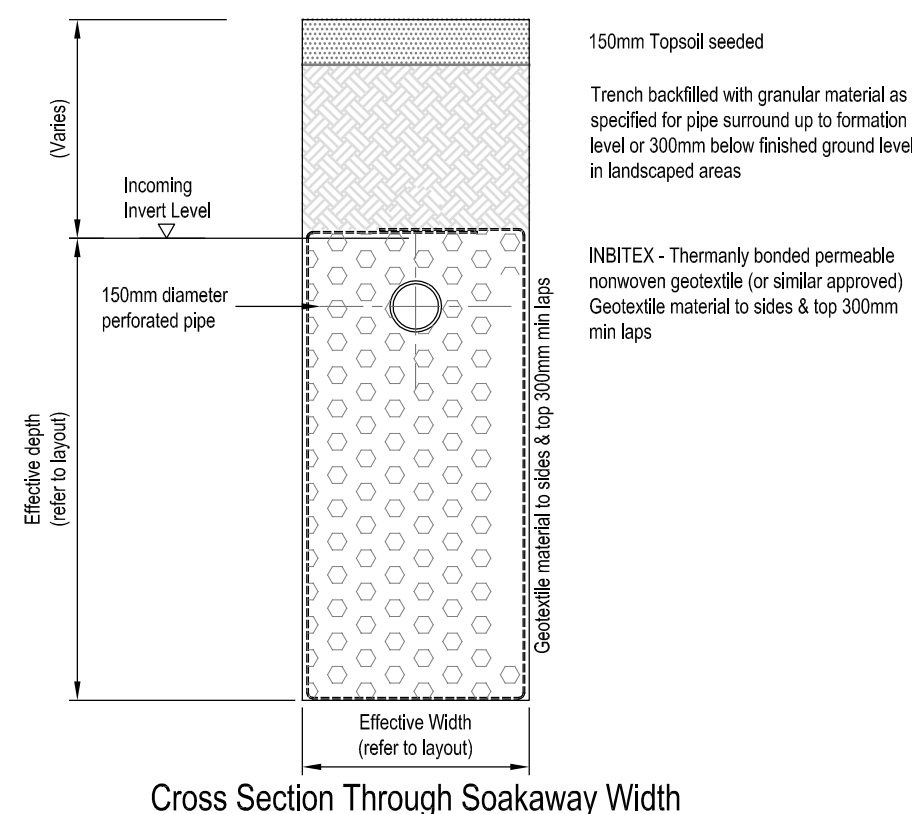
150mm Ø perforated inspection well

150mm Ø perforated pipe

Granular material to sides & top 300mm min. deep

Stop Interface

SEE DRAINAGE LAYOUT FOR
SOAKAWAY SIZE AND DEPTH



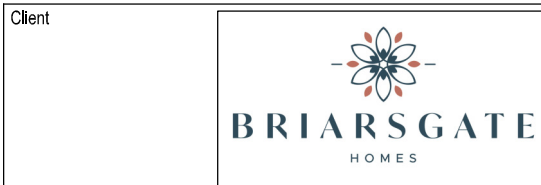
Cross Section Through Soakaway Width

A	21.04.26	First Issue	KN
Rev.	Date	Details	Initials

Drawing Status
PRELIMINARY

Project
OLD CLAYTON KENNELS
STORRINGTON

Client



Drawing Title

Engineering Details
Standard Construction Details

Drawn KN	Checked	Scales 1:25	Paper Size A1	Date 04.26
Job No. KNC2602		Drawing No. 501-02		Revision A