

Mortar Haunching to Manhole Cover & Frame

Cover & Frame to be Grade A or B Class 1 Having 600mm Clear opening

Reinforced Concrete Cover Slab Bedded with Mortar. Proprietary Bitumen or Resin Mastic Sealant

ST12 Concrete Surround 150mm Thick (Sulphate resisting where necessary)

Galvanised Mild Steel Step Irons at 250mm or 300mm Ctrs Throughout

Benching Slope to be not flatter than 1 in 30

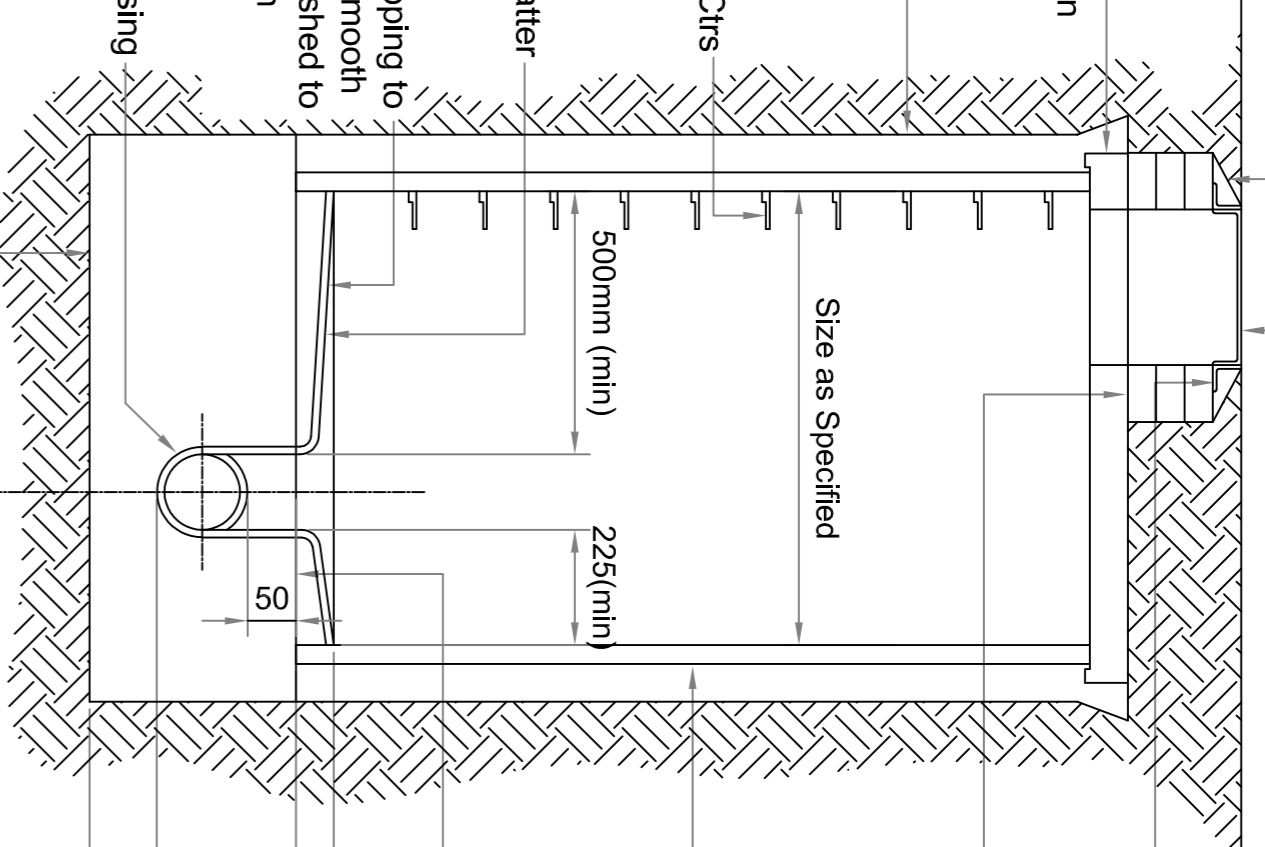
High Strength Concrete Topping to be brought up to a Dense Smooth Face, Neatly Shaped & Finished to all Branch Connections (Min Thickness 20mm)

Inverts Formed Generally using Channel pipes

ST12 Concrete (Sulphate resisting where necessary)

Joint to be as close as practicable to Face of Manhole to Permit Satisfactory Joint & Subsequent Movement

Pipe Joint with Channel to be Located (min) 100mm Inside Face of Chamber



Cover Frame to be Bedded on Mortar

Engineering or Special Purpose Concrete Brickwork, 4 courses (max) 2 courses (min) and/or Precast Concrete Cover Frame Sealing Rings

Precast Concrete Shaft Chamber Sections & Cover Slab Bedded with Mortar. Proprietary Bitumen or Resin Mastic Sealant

The Bottom Chamber Section to be Built into Base Concrete 75mm (min)

Construction joint

225mm to Invert of Pipe

Pipe Diameter	Rocker Pipe Length
150 - 450	500 - 750
450 - 750	750 - 1000
> 750	Seek Guidance

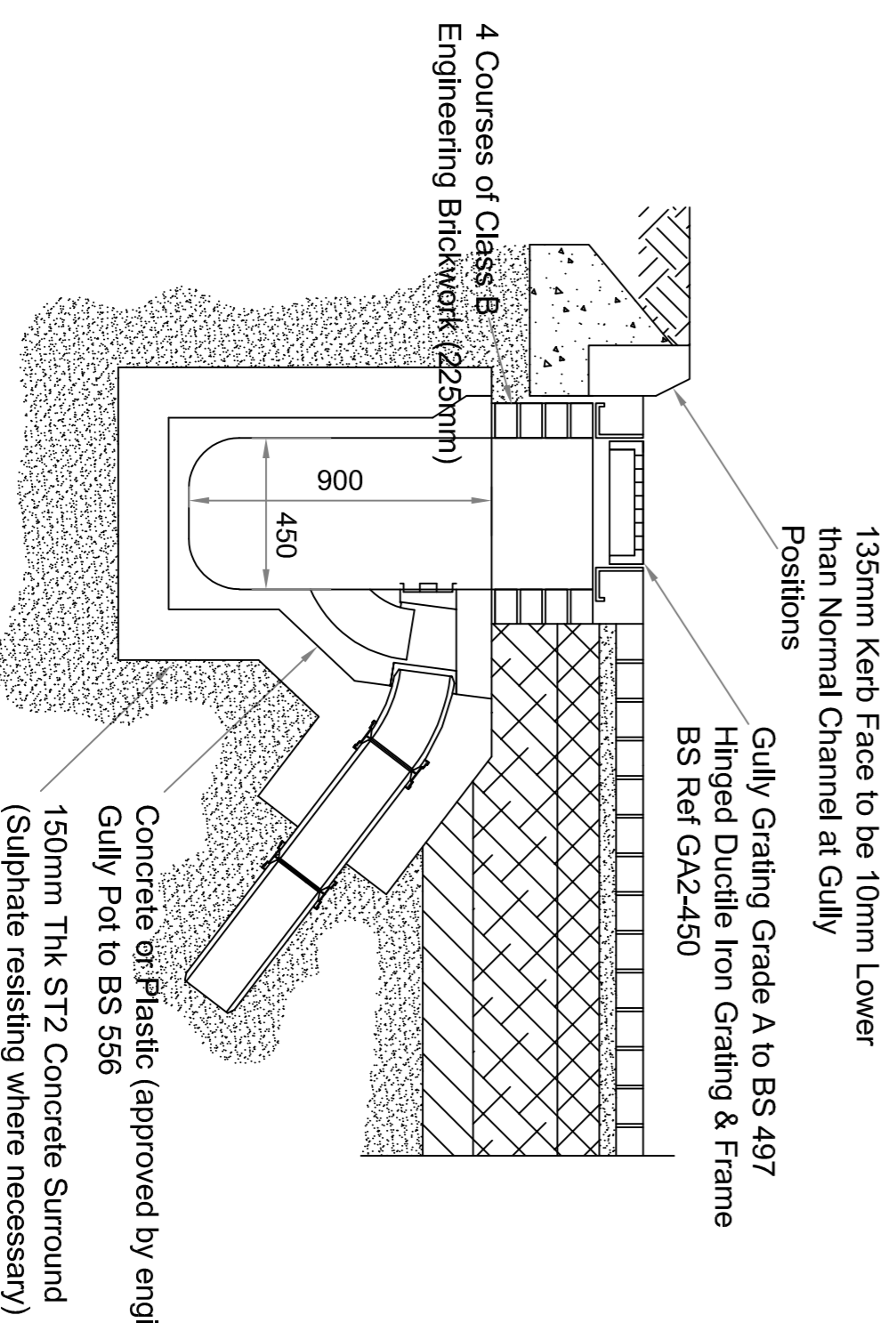
NB: Toe Holes to be Provided in Benching of Sewers Greater than 450mm $\varnothing$  for Access to Invert

Short Length Pipe to be Similar Length to Rocker Pipe

## TYPICAL MANHOLE DETAILS

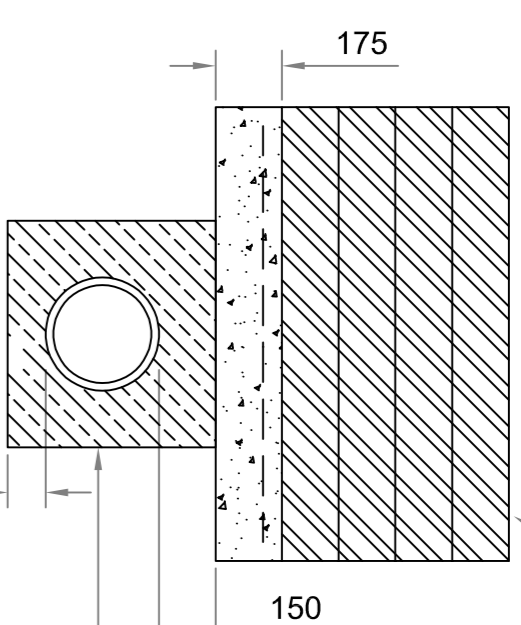
Depth to suit Soffit 1.35 - 3.0m

Scale 1:20



## TYPICAL GULLY DETAILS

Scale 1:20

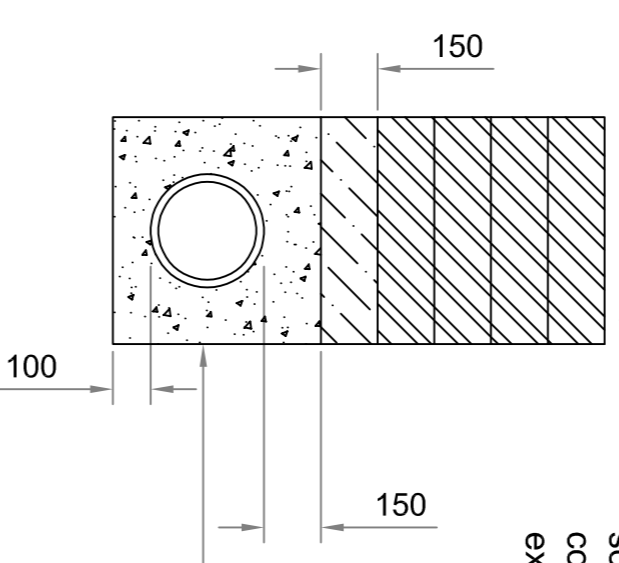


Type B Class CL 505 Free Draining uniformly readily compactible material free from rubbish & organic matter, frozen soil, clay lumps & large stones, compacted in layers not exceeding 150mm

Class S Fill & Surround in accordance with SFA edition 5 & the WAA Information & Guidance Note No.4-08-01 March 98 - Graded Material only

## CONCRETE PROTECTION DETAIL

Scale 1:20

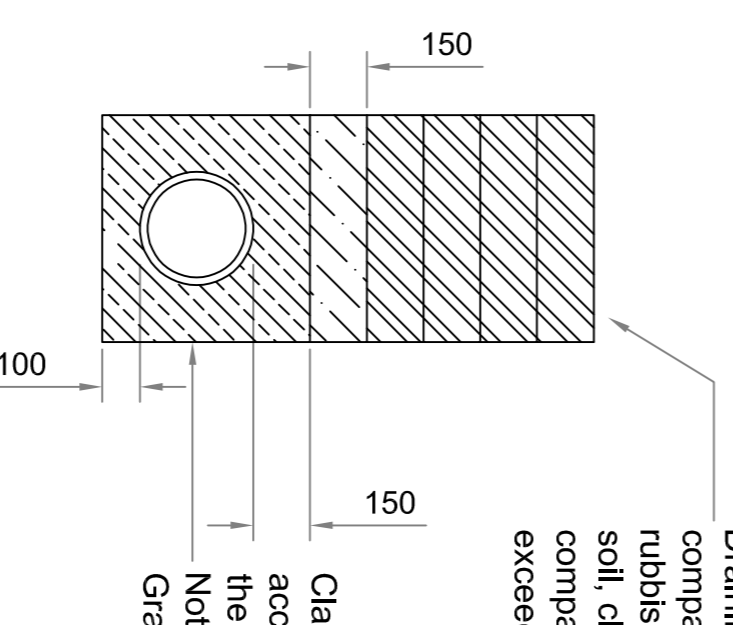


Type B Class CL 505 Free Draining uniformly readily compactible material free from rubbish & organic matter, frozen soil, clay lumps & large stones, compacted in layers not exceeding 150mm

Class Z Fill & Surround in accordance with SFA edition 5 & the WAA Information & Guidance Note No.4-08-01 March 98 - Graded Material only

## CONCRETE ENCASEMENT DETAIL

Scale 1:20

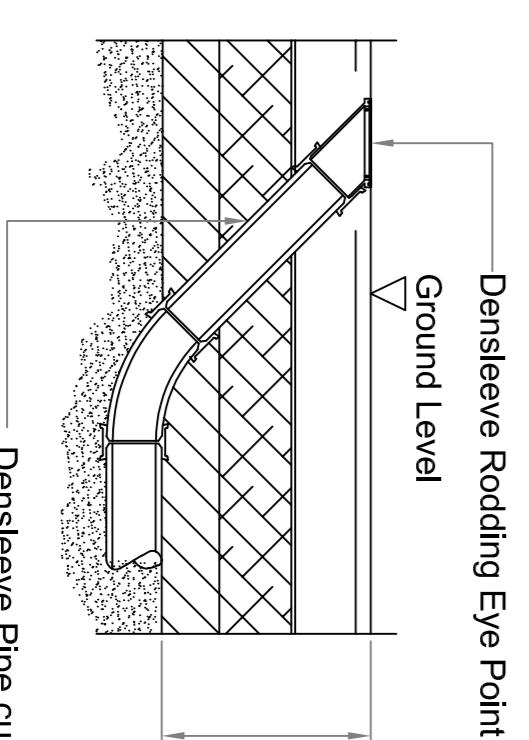


Type B Class CL 505 Free Draining uniformly readily compactible material free from rubbish & organic matter, frozen soil, clay lumps & large stones, compacted in layers not exceeding 150mm

Class S Fill & Surround in accordance with SFA edition 5 & the WAA Information & Guidance Note No.4-08-01 March 98 - Graded Material only

## STANDARD BEDDING DETAIL

Scale 1:20



Densisleeve Pipe cut to Required Length

## RODDING POINT DETAIL

Scale 1:20

## Hardstanding notes:

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND BAILEY JOHNSON HAYES DRAWINGS AND SPECIFICATIONS
- ALL TOPSOILS, SUBSOILS AND DELETERIOUS MATERIAL IS TO BE STRIPPED FROM BENEATH THE BUILDING ZONE FOR FORMATION LEVELS. THE EXPOSED FORMATION TO BE PROOF ROLLED WITH A TWIN WHEELED VIBRATORY ROLLER WITH A STATIC LOAD OF NOT LESS THAN 35KG/25MM WIDTH. ROLLING IS TO CONTINUE UNTIL THERE IS NO NOTICABLE DEFORMATION UNDER THE ACTION OF THE ROLLER. (MINIMUM OF 8 NO. PASSES)
- ANY SOFT SPOTS ARE TO BE EXCAVATED OUT AS INSTRUCTED BY BJH AND FILLED/ROLLED WITH ACCEPTABLE SAND/GRAVEL FROM SITE EXCAVATIONS IN LAYERS NOT EXCEEDING 150MM THICK
- SLABS TO BEAR UPON 1200 GAUGE VISQUEEN WHICH IS TO BE FULLY LAPPED/SEALED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS
- ALL CONCRETE IS TO BE GRADE C35 TO BS8110, MIN CEMENT CONTENT 330KG/M3 OPC MAXIMUM FREE WATER CEMENT RATIO 0.6 MAXIMUM AGGREGATE SIZE 20MM + 5% AIR ENTRAINED.
- THE SLAB IS TO BE LAID IN LONG BAY FASHION IN ASSOCIATION WITH THE CONCRETE SOCIETY RECOMMENDATIONS TO RECEIVE A LIGHT BRUSH FINISH
- MINIMUM MESH LAPS 300MM SIDE AND ENDS. MINIMUM VISQUEEN LAP 300MM
- IT IS ESSENTIAL THAT ALL TRANSVERSE JOINTS ARE CUT WITHIN 24 HOURS OF CASTING
- ALL JOINTS ARE TO BE SEALED USING THIOFLEX 600 OR SIMILAR APPROVED
- SLAB POURING PROGRAMME SHOULD ALLOW 72 HOURS CLEAR BETWEEN CASTING ADJACENT BAYS

## Drainage notes:

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ARCHITECTS & ENGINEERS DRAWINGS & SPECIFICATIONS.
- DRAINS TO BE PLASTIC HEPWORTH SUPERSLEEVE OR MAYLOR DENISLEEVE. LAID ON CLASS N GRANULAR BEDDING TO BS 882: TABLE 4 OR TO BS 8301: 1985 APPENDIX D. CONCRETE ENCASED PIPES IDENTIFIED ON BJH DRAWINGS.
- ALL TRENCHES WITHIN TRAFFICKED AREAS TO BE BACKFILLED WITH 75MM DOWNGRADED STONE FILL, PLACED & COMPACTED IN LAYERS OF 150MM. ALL PIPES IN ROADWAYS / PARKING, LESS THAN 900MM DEEP TO BE ENCASED IN CONCRETE. PROVIDE FLEXIBLE JOINTS AT 3000MM CENTRES.
- MANHOLES TO BE CONSTRUCTED OF PRECAST CONCRETE RINGS TO BS 5911-PART 1. RINGS TO BE BEDDED IN SEALANT STRIPS.
- MANHOLES BENEATH ROADS & PARKING AREAS TO BE CASED IN 150MM CONCRETE SURROUND.
- ALL CONNECTIONS TO RAIN WATER PIPES TO BE PROVIDED WITH RODDING ACCESS.
- ROAD GULLIES TO BE HEPWORTH ROAD GULLIES REF: 213 WITH 150MM DIAMETER OUTLET OR SIMILAR APPROVED. GULLIES TO BE ENCASED IN 150MM MINIMUM CONCRETE. PLASTIC GULLIES CAN BE USED IN YARDS AND CAR PARKS IN CONSULTATION WITH ENGINEER
- DRAWINGS TO BE ISSUED TO HE & LOCAL AUTHORITY WELL IN ADVANCE OF COMMENCEMENT OF DRAINAGE CONSTRUCTION.
- EXISTING MANHOLES IN ROADS TO HAVE INVERT LEVELS CONFIRMED PRIOR TO DRAINAGE CONSTRUCTION.
- ROADS TO BE REINSTATED TO STANDARD REQUESTED BY LOCAL AUTHORITY WHERE DRAINAGE CROSSES CARRIDGEWAY.

- Allow for all Soft Spots.

- Allow for all Removal if existing Hedges / Trees & Additional Construction Depth as necessary.

- All Earth Batters Remaining to be not steeper than 1 in 2.5.

- Allow for use of Terram as Necessary in softer areas.

## TOWN PLANNING

Rev	Date	Revision Description
A	22.04.22	Updated to LLFA planning comments

### Revision Schedule

Project Title  
Axis J9 - Bicester

Client



PHASE 3

Typical Drainage Details

BAILEY JOHNSON HAYES

Consulting Engineers

ST ALBANS, Suite 4, Phoenix House, 63 Cornfield Rd, ST ALBANS, Herts, AL1 5PL

MANCHESTER, George House, 200 Dalton Street, MANCHESTER, M2 6PU

Scale: 1:20 @A1 Drawing Number: S1209-PH3-05 A

Date: 23.08.21 Drawn: JNG