

The Contractor is to check and verify in conjunction with the Architects details all setting out points, building and site dimensions, levels and sewer invert levels at connection points and ensure that they are fully conversant with the contents and requirements of the site investigation report before work starts. The Contractor is to comply in all respects with current building legislation, British Standard Specifications, Building Regulations etc. whether or not specifically stated on this drawing.

This drawing is not intended to show details of ground conditions or ground contaminants. Each area of ground relied upon to support any structure depicted (including drainage) must be investigated by the Contractor any areas of formation for said structures which do not accord with the anticipated conditions as described in the site investigation report are to be immediately notified to the Engineer, where applicable. Any suspected fluid ground or ground contaminants on or within the ground should be further investigated by a suitable expert. Any earthworks shown indicate typical slopes for guidance only and should be investigated further by a suitable geotechnical expert.

Where existing trees are shown to be retained they should be subject to a full Arboricultural Inspection for safety. All trees are to be planted so as to ensure they are a minimum of 5 metres from buildings and 3 metres from drainage and services, where applicable. A foundation is to be provided to accommodate the proposed tree planting, where applicable.

© This drawing and the building works depicted are the copyright of Banners Gate Ltd and may not be reproduced or amended except by written permission. No liability will be accepted for amendments made by other persons.

GENERAL NOTES

- This drawing is to be read in conjunction with relevant architectural and engineering drawings.
- Levels indicated in blocks are Finished floor levels and are 150mm above adjacent finished ground levels unless otherwise shown.
- Levels of the existing road at the point of tie-in with proposed site road must be checked prior to commencement of works.
- Any discrepancies between the details shown and actual on site conditions to be reported immediately to the engineer prior to commencement of works.
- CALA project number BA00013

BUILDING DRAINAGE

- Building drainage shall comply with BS EN 752 1996 and the Building Regulations 2002 part H.
- All building drainage shall be 100mm diameter unless shown otherwise.
- All connections to adaptable sewers shall be 150mm diameter.
- All building drainage shall be clayware to BS EN 295 or uPVC to BS 4660 with Class B or Class S bedding unless shown otherwise.
- All pipes under buildings without suspended floors shall have Class S bedding.
- Concrete protection shall be provided to all pipes with less than 300 cover in pedestrian areas, to all pipes with less than 600mm cover private driveways not used by commercial vehicles, and to all pipes with less than 1200mm cover in roads or private driveways used by commercial vehicles. Where concrete surround is specified flexibility of joints is to be maintained by using compressible bitumen impregnated fibreboard at each joint.
- Where a pipe passes through a wall an opening is to be formed through the wall to give at least 50mm clearance around the pipe. Brickwork over shall be supported by a lintel. The opening is to be masked each side of the opening with rigid sheet material. Pipes embedded in walls shall have a joint formed within 150mm of each wall face. A rocker pipe of maximum 600mm length shall be used to continue the pipework.
- Where a pipe trench is within 1m of a building, the pipe is to be provided with concrete protection and the trench filled with concrete up to a level below the building equal to the distance from the building less 150mm.
- Where the formation of a pipe trench is above original ground level levels are to be made up with well compacted DTP Type 2 material or better.
- Inspection chambers located within garages are to have double seal bolt down covers.
- All private drives which fall towards a public highway and exceed two parking bays in area are to be provided with a suitable gully or drainage channel to prevent water discharging onto the highway.
- Where a driveway falls towards a dwelling it shall be provided with a suitable gully or drainage channel to prevent water damaging the building.
- The invert level of an access chamber on a foul drain from a building is to be set 600mm below finished ground level unless otherwise shown.
- The invert level of a rodding eye at the head of a surface water drain is to be set 450mm below finished ground level unless shown otherwise.

FOR CONSTRUCTION

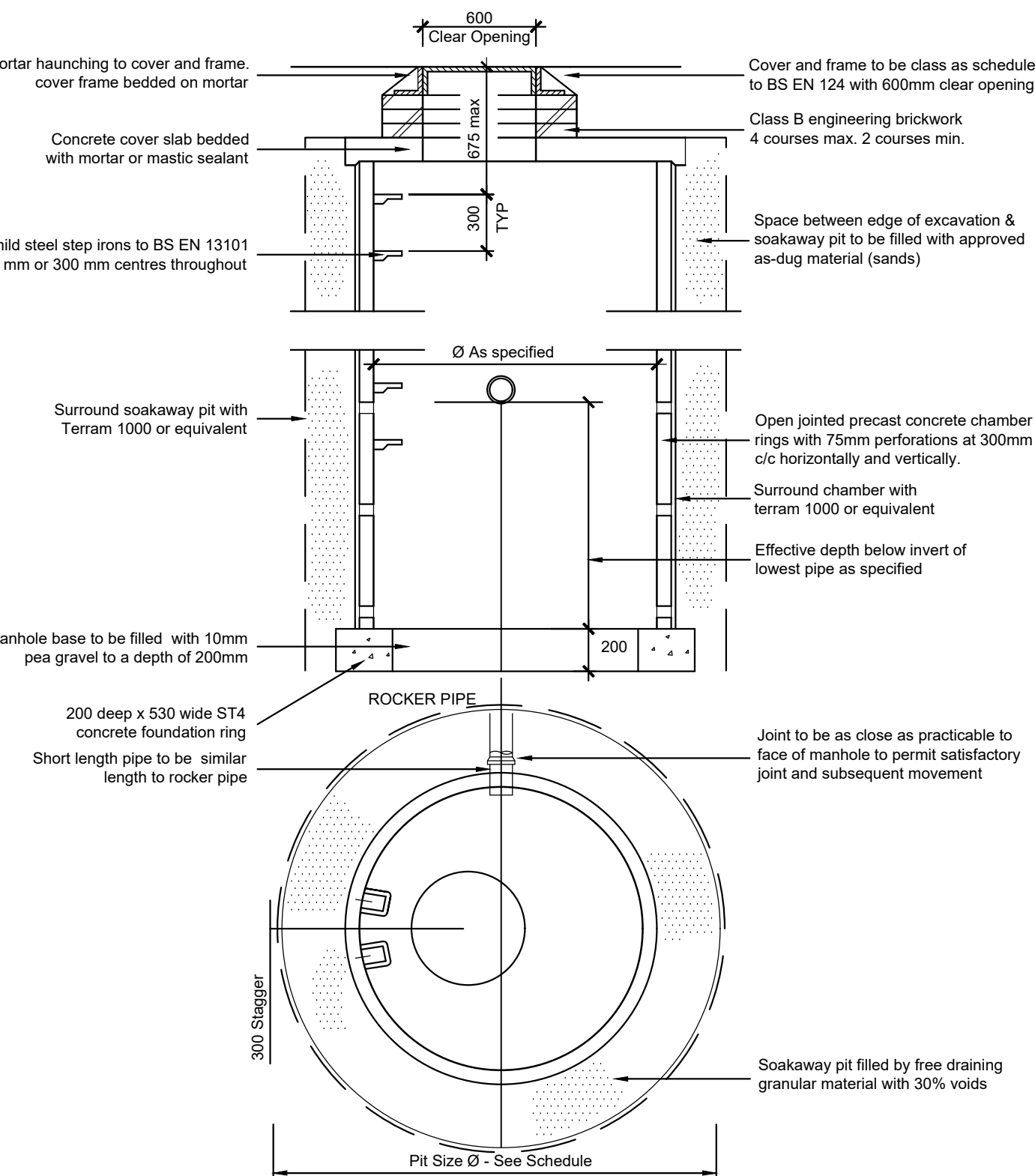
Subject to Section 38 & 104 approval

Rev.	Description	Date	By
C	Soakaway dimensions amended to suit additional soakaway testing	27/07/16	JB
B	Soakaway dimensions amended to suit clients queries.	21/10/15	LJ
A	Drawing status changed to 'For Construction'	26/08/15	CB
-	First issue	15/07/15	JB
Client			
Project			
Title			
Scale			
Date			
File			
15031/dwgs/civils/current		15031 / 311 C	

Soakaway Levels & Sizes

N.B.-SOAKAWAY SIZES HAVE BEEN DERIVED FROM SUPPLEMENTARY PERCOLATION TESTING UNDERTAKEN BY BROWNFIELD CONSULTANCY ON JULY 2016 & PERCOLATION RATES TO BE CONFIRMED AT BASE LEVEL OF SOAKAWAY AT ACTUAL LOCATION PRIOR TO THE COMMENCEMENT OF CONSTRUCTION OF SOAKAWAY STRUCTURE.

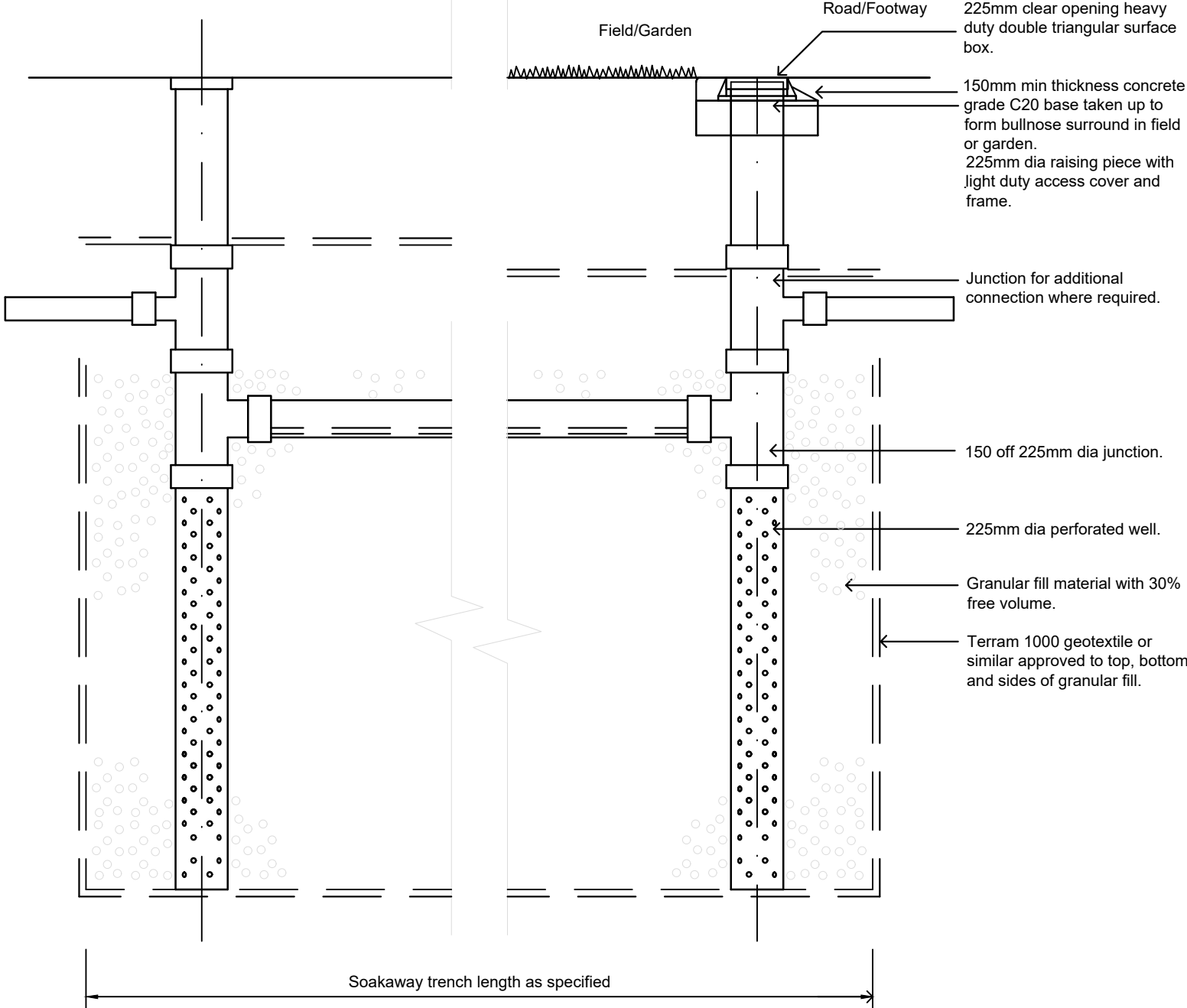
Soakaway Ref	Approximate Cover Level	Incoming Invert Level	Effective Depth	Base Level of Soakaway	Type of Soakaway	Size of Soakaway (h)	Area	Percolation Value	Pit Diameters (m)	100year+30% level
ST1	115.70	114.70	1m	113.70	Trench	2mx 14m	0.026	1.1x10-4	-	114.80
ST2	116.20	115.05	0.75m	114.30	Trench	1m x 10m	0.014	1.4x10-4	-	115.21
ST3	115.30	114.10	0.7m	113.40	Trench	1m x 20m	0.027	1.1x10-4	-	114.37
ST4	114.30	113.40	0.7m	112.70	Trench	1m x 20m	0.023	1.1x10-4	-	114.527
ST5	114.40	112.80	0.8m	112.00	Trench	1m x 10m	0.008	9x10-6	-	113.138
ST6	114.40	113.85	1.15m	112.70	Trench	1.5m x 9m	0.012	9x10-6	-	114.061
ST7	113.60	112.30	0.7m	111.60	Trench	1.4m x 24m	0.028	9x10-6	-	112.884
ST8	114.28	113.35	1.15m	112.20	Trench	1.2m x 24m	0.022	9x10-6	-	113.55
ST9	115.20	113.90	0.6m	113.30	Trench	0.6m x 21m	0.024	3.9x10-4	-	113.915
ST10	115.20	114.40	0.6m	113.80	Trench	0.6m x 34m	0.026	2.4x10-4	-	114.55
ST11	114.49	112.65	0.7m	111.95	Trench	1.5m x 11m	0.032	2.4x10-4	-	113.128
ST12	144.49	112.20	0.6m	111.60	Trench	1m x 10m	0.016	2.4x10-4	-	112.77
ST13	114.88	114.00	0.7m	113.30	Trench	0.6m x 28m	0.022	9.4x10-5	-	114.138
ST14	115.15	114.20	0.6m	113.60	Trench	0.6m x 12m	0.011	3.9x10-4	-	114.30
ST15	116.40	115.10	0.6m	114.50	Trench	1m x 24m	0.029	1.4x10-4	-	115.302
ST16	116.16	114.40	0.6m	113.80	Trench	1m x 20m	0.022	1.4x10-4	-	114.528
ST17	114.83	114.05	0.6m	113.45	Trench	0.6m x 18m	0.014	1.4x10-4	-	114.142
ST18	114.20	114.20	1.3m	112.90	Trench	0.6m x 18m	0.007	4.2x10-3	-	112.954
-	-	-	-	-	-	-	-	-	-	-
SK1	115.45	114.50	1.5m	113.00	Ring	1.05m Ø	0.013	3.9x10-4	1.575	-
SK2	114.60	114.00	1.15m	112.85	Ring	1.2m Ø	0.018	9x10-6	2.88	-
SK3	114.50	114.00	1.85m	112.15	Ring	1.2m Ø	0.012	9x10-6	2.88	-
SK4	115.30	113.40	1.25m	112.15	Ring	1.2m Ø	0.009	9x10-6	2.88	-
SK5	115.30	113.60	1.4m	112.20	Ring	1.2m Ø	0.009	3.9x10-4	2.88	-
SK6	114.05	112.90	0.5m	112.40	Ring	1.2m Ø	0.040	4.2x10-3	2.88	-
SK7	114.00	111.40	0.8m	110.60	Cellular Storage	4m x 15m x 0.8m	0.170	6.9x10-4	N/A	-



Soakaway Chamber and Pit Detail (Attenuation Infiltration System)

The Soakaway must be sited at a minimum distance of 5m away from buildings

Note: Where a soakaway trench is below a road, car park or footway the trench is to be overlaid at formation level with one layer Tensar SS30 geogrid or similar approved. The geogrid is to extend over undisturbed for at least two metres at both sides of trench.



Typical Soakaway Trench

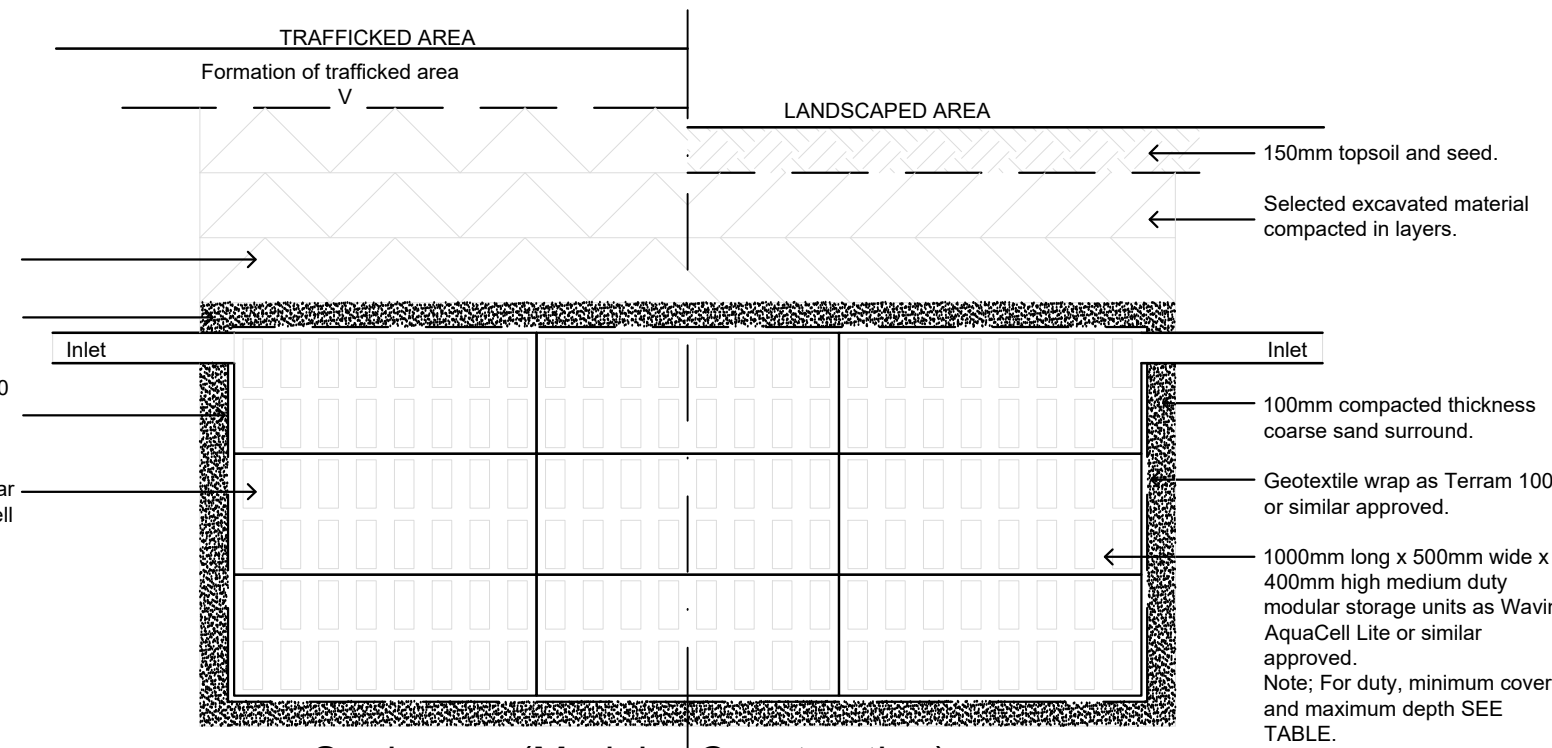
Soakaway is to be minimum 5m from any building. An inspection well is to be constructed at both ends of each soakaway trench

DTP type 1 material compacted in layers.

100mm compacted thickness coarse sand surround.

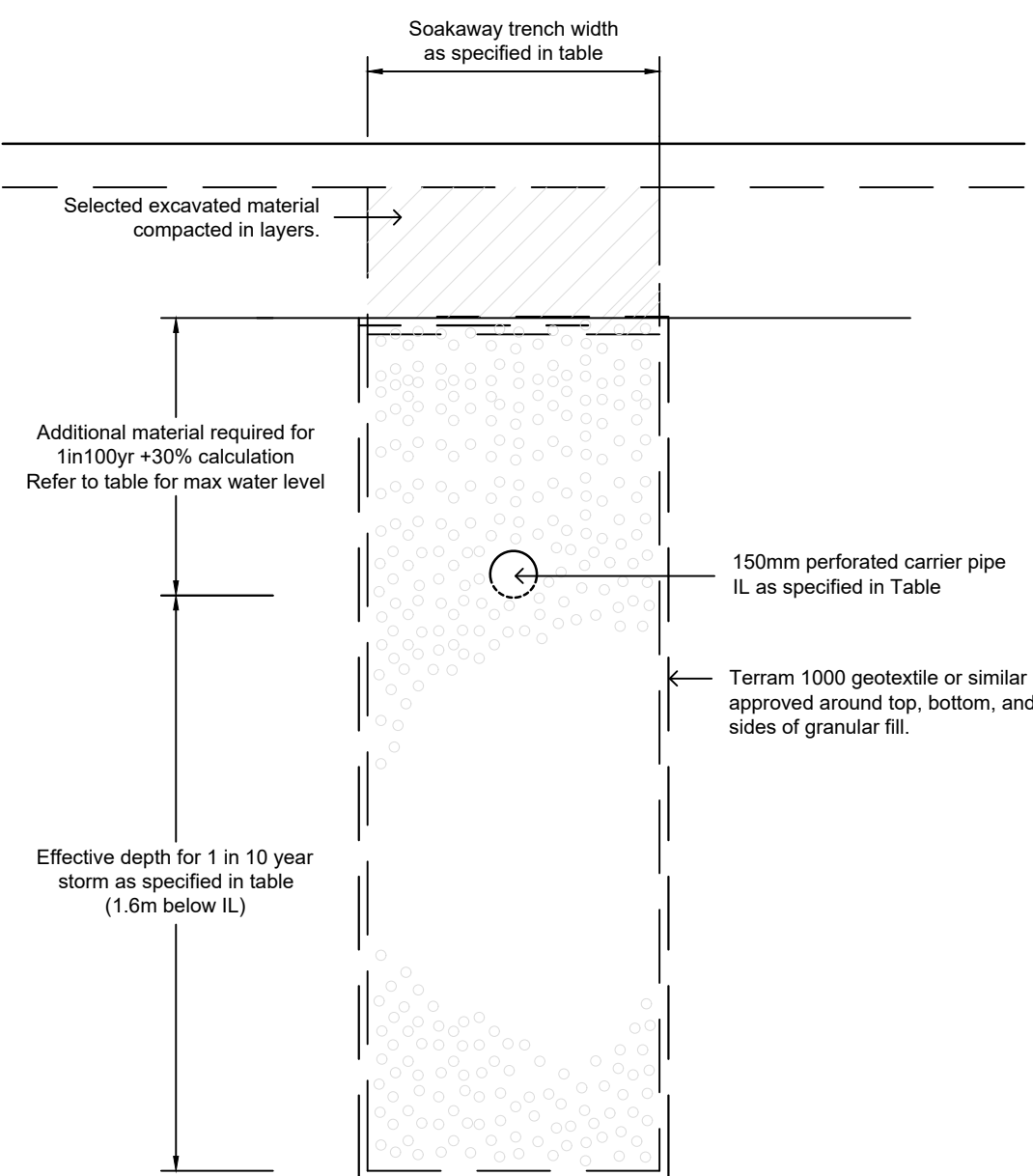
Geotextile wrap as Terram 1000 or similar approved.

1000mm long x 500mm wide x 400mm high heavy duty modular storage units as Wavin AquaCell Core or similar approved. Note: For duty, minimum cover and maximum depth SEE TABLE.

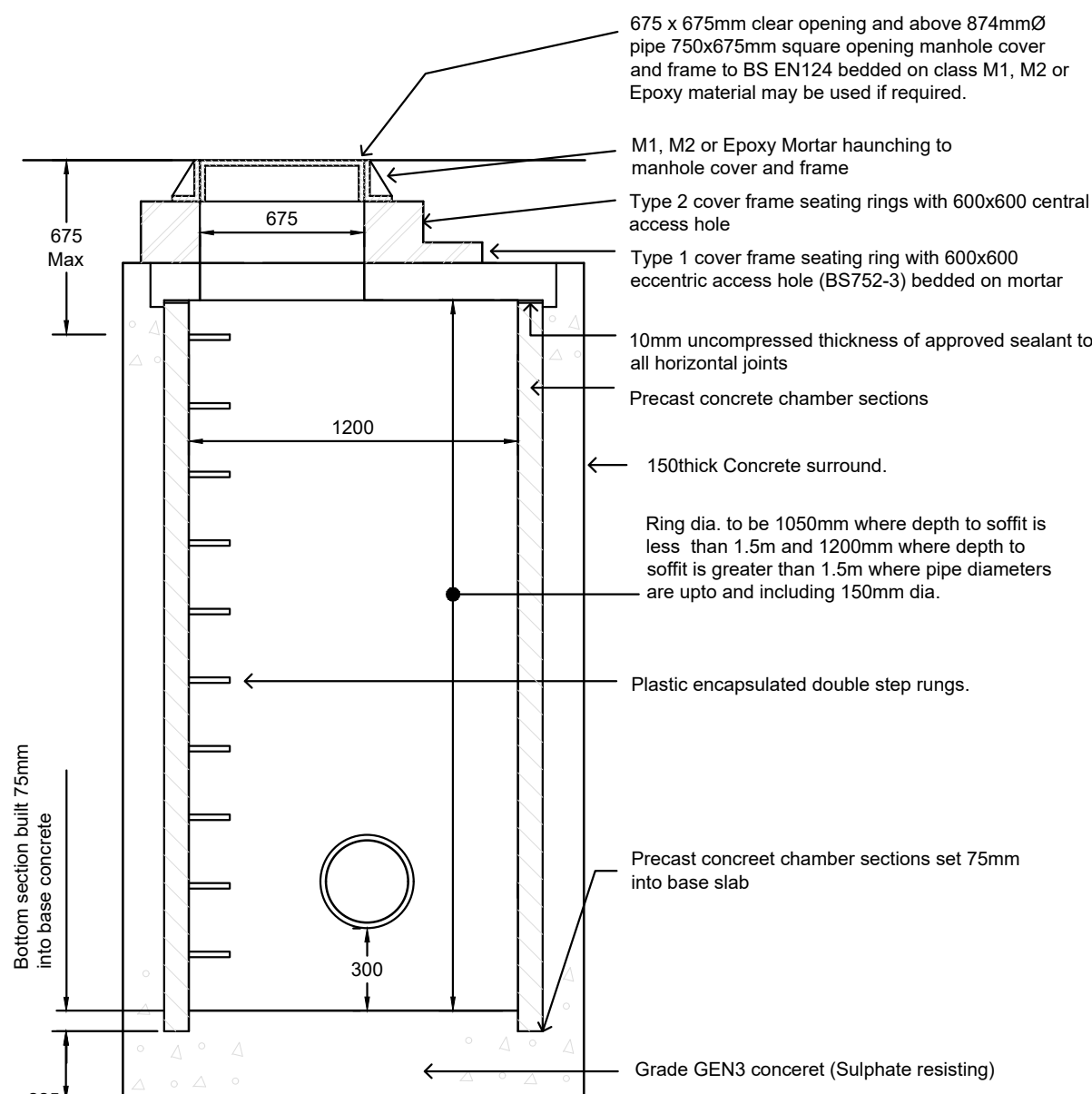


Soakaway (Modular Construction)

The soakaway is to be constructed and backfilled in accordance with the specification of the manufacturer of the modular storage units.



Typical Section through Trench Soakaway



Typical Silt Trap Chamber

For depths greater than 1.2m.

All chambers before entering into a Soakaway are to be silt traps to prevent ingress of detritus.