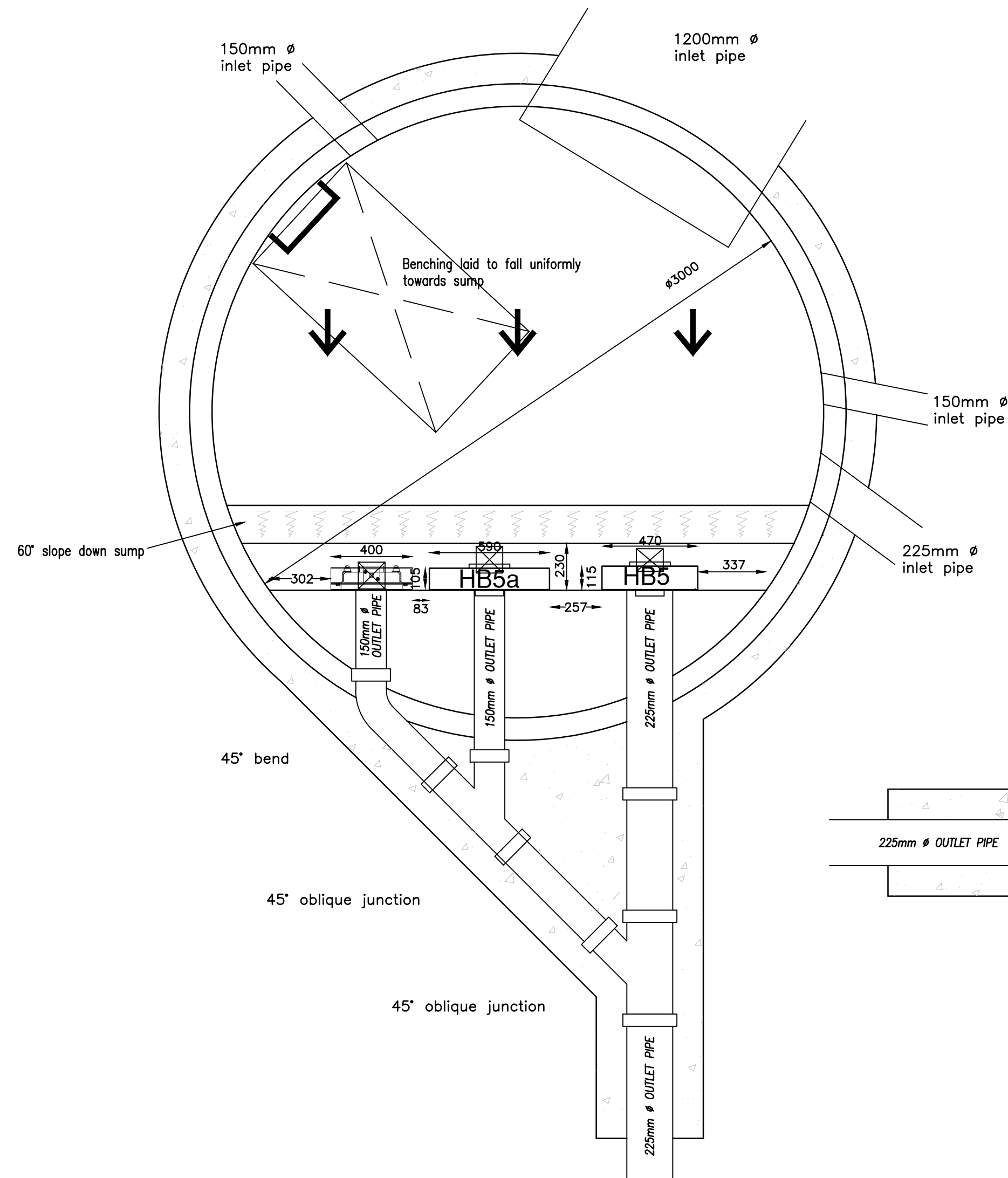


SHB5 - HYDROBRAKE MH



SW - NETWORK 5

Manhole Number	Cover Level	Connections	Pipe			Manhole Size	Types		Other Detail					
Coordinates	Depth To Soffit		Code	Inverts	Diams		Manhole	Cover	Depth & Size (mm)	Means of Access	Safety Chains	Handrails	Invert Access Steps	
SHB5	46.077		1	1.003	43.036	1200	3000	HB	D400	150 1220 x 685 1220 x 685 COVER SLAB OPENING	Ladder	No	No	No
E= 386142.717	2.816													
N= 397058.264			0	1.004	43.036	225								

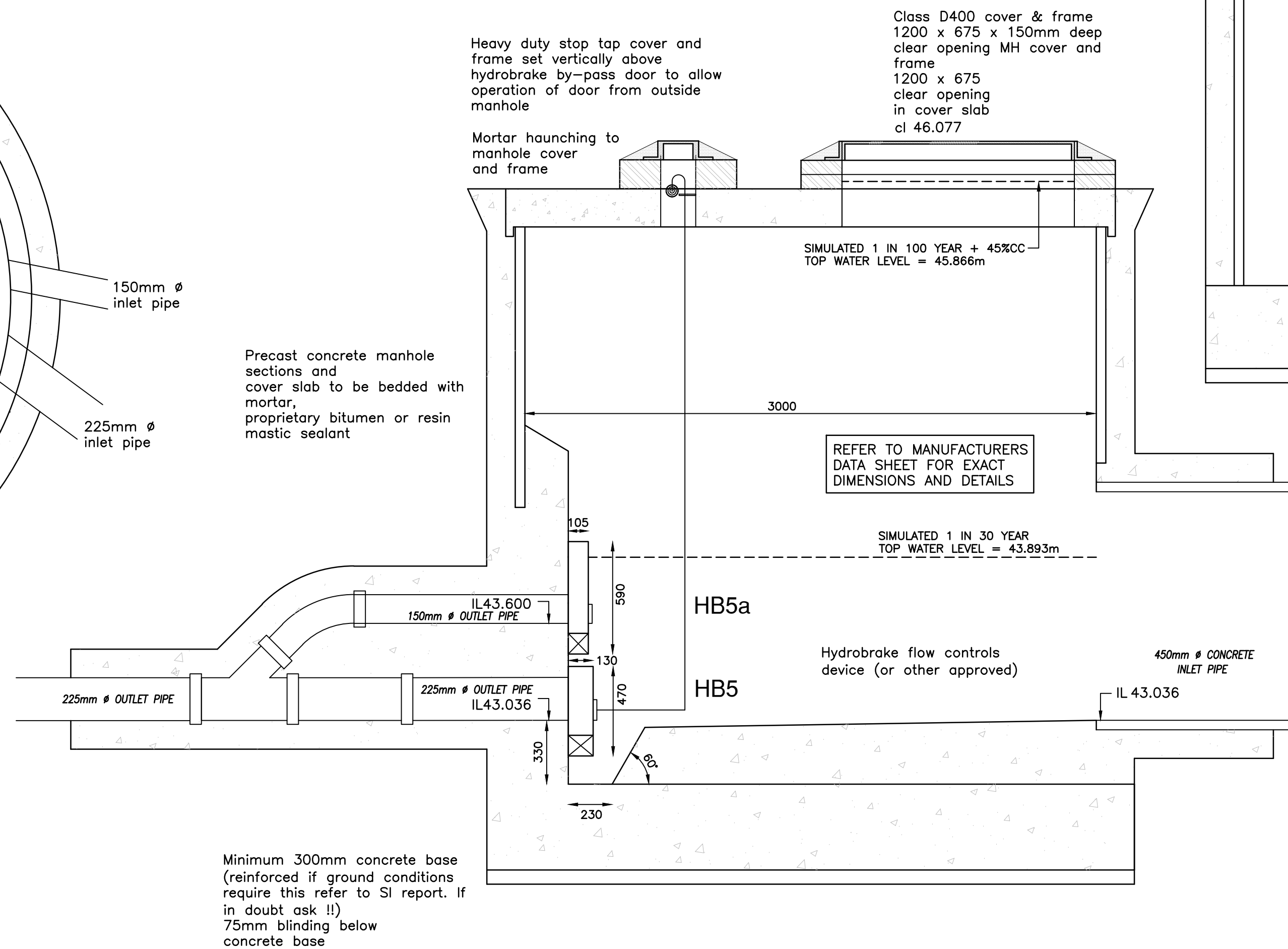
STUB PIPES AND ROCKER PIPES ARE REQUIRED
ON ALL MANHOLE INLET AND OUTLET PIPES
WHERE BACKDROPS ARE USED A ROCKER PIPE
MUST BE PROVIDED AT THE TOP OF THE
VERTICAL PIPE AND BEYOND THE CONCRETE
ENCASEMENT

MANHOLE LADDER TO BE CONSTRUCTED IN LINE WITH DESIGN
AND CONSTRUCTION GUIDE CLAUSE DCG CLAUSE E2.37

ROCKER PIPES WILL BE USED IN LINE WITH DESIGN AND CONSTRUCTION GUIDANCE

NOTE ALL CONNECTIONS TO BE MADE SOFFIT LEVEL UNLESS INDICATED OTHERWISE

MANHOLES TO BE CONSTRUCTED IN ACCORDANCE
WITH THE DESIGN AND CONSTRUCTION GUIDANCE
- MAY 2021



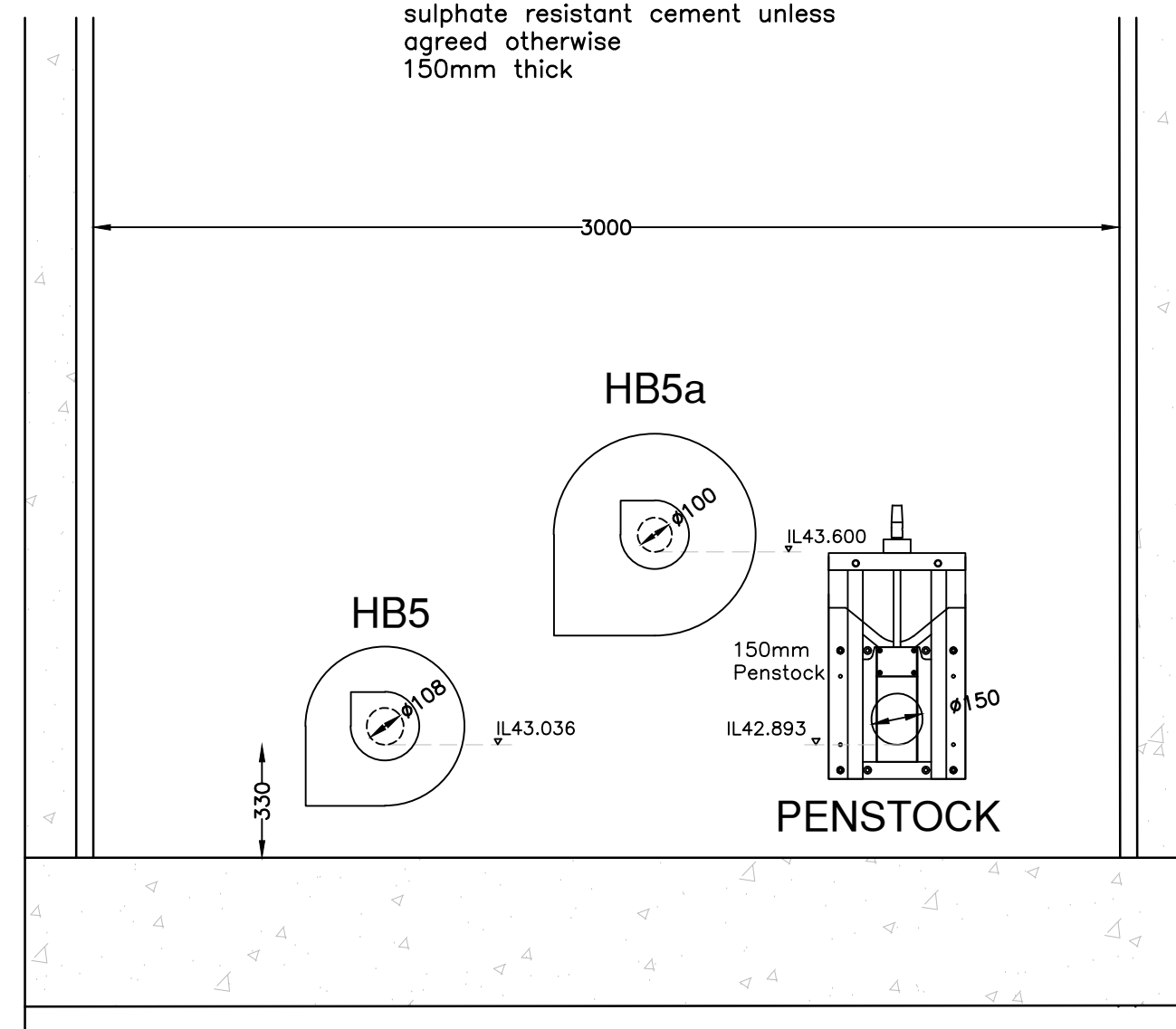
HYDROBRAKE DETAILS

MH. No.	SHB5
TYPE	SHE-0108-5000-0850-5000
DESIGN HEAD (m)	0.85
MAX. FLOW (litres/sec)	5.0 IL 43.036
ORIFICE DIA. (mm)	108
SURCHARGED OUTFALL PIPE	YES

HYDROBRAKE DETAILS

MH. No.	SHB5	
TYPE	SHE-0100-5000-1400-5000	
DESIGN HEAD (m)	1.4	
MAX. FLOW (litres/sec)	5.0	IL 43.600
ORIFICE DIA. (mm)	100	
SURCHARGED OUTFALL PIPE	YES	

All in situ concrete to be c20 with sulphate resistant cement unless agreed otherwise
150mm thick



GENERAL

1. All adoptable sewers and associated works are to comply fully with "Design and Construction Guidance" by the Local Authority.
2. All highway works to be to adoptable standards and to comply fully with the Local Authority specification.
3. All private drainage works are to comply fully with part 4 of the Building Regulations.
4. All existing invert levels to be checked by the Contractor at the start of works and any discrepancies notified to REFA.
All levels are based on topographical survey information provided by others.
5. All materials to bear the relevant BS/Kitemark and comply fully with the specifications.
6. All concrete & concrete products must use Sulphate resistant cement and a site investigation report proves that sulphate attack from soils and groundwater will not occur)
7. All opening notices etc. as required under highways acts etc. are to be obtained prior to commencement of works.
8. All works are to be inspected by LA, NHBC or Relevant Water Authority as applicable.

C.D.M. REGULATIONS 2015

In line with the above regulations we are obliged to inform the Client of their responsibilities under section CDM 15/1, and residual risks that may be encountered in the construction of these works. All design work has been carried out with Health and Safety aspects given full consideration.

Wherever possible risks have been eliminated from the design, however due to the very nature of this type of work it is not possible to remove all the risks from the design.

We would also respectfully remind the Client of his obligations to take all reasonable steps in ensuring that only competent Contractors who have a valid safety policy are employed.

They should also provide satisfactory responses at tender stage as to the manner in which they will deal with the elements of risk involved in this type of work and in particular those highlighted by REFA below:-

1. Support / treatment for ALL excavation work.
2. Guarding to edges of excavations to prevent people, materials and vehicles falling into excavation.
3. Guarding of excavations outside working hours to prevent unauthorised access.
4. Undermining to adjacent roads or structures.
5. Confined space operations.
6. Dealing with existing services.
7. Traffic management on existing highways.
8. Procedure to be followed in event of accident or emergency.
9. Method of working where contaminated ground is present on site.
10. Confirmation will be required that all operatives are adequately trained, copies of relevant training certificates to be supplied.

The above list is by no means exhaustive but it does highlight operations that present a risk to contractors and the general public.
For clarification on any item please contact REFA.

[illegible]

D	REVISED FOLLOWING SW RECALCULATIONS	RW	20.07.23
C	COVER SIZES REVISED AS S104 COMMENTS	RF	25.05.23
B	SEWER DESIGN REVISED FOLLOWING UPDATED EXISTING SEWER INFORMATION	RF	06.04.23
A	MINOR CHANGES TO COVER LEVEL. TWL REVISED	RF	20.01.23



Drawing Stage		Drawing Status	
	Draft	Comments	● Tender
●	Issued	Information	Construction
		● Approval	As Built

Client

**KELLEN HOMES
LIMITED**

Job title

**BENNETT STREET
MANCHESTER**

Drawing title

MANHOLE SCHEMATICS

DRG 15 - HB5

CONSULTING ENGINEERS
CIVIL STRUCTURAL

GEOTECHNICAL ENVIRONMENTAL

Date 29.11.22	Scale 1:20	Drawn RF
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DRAWING No	22122/109/15	Rev D
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ANY WORK UNDERTAKEN PRIOR TO TECHNICAL APPROVAL BEING GRANTED IS AT THE CLIENTS RISK.