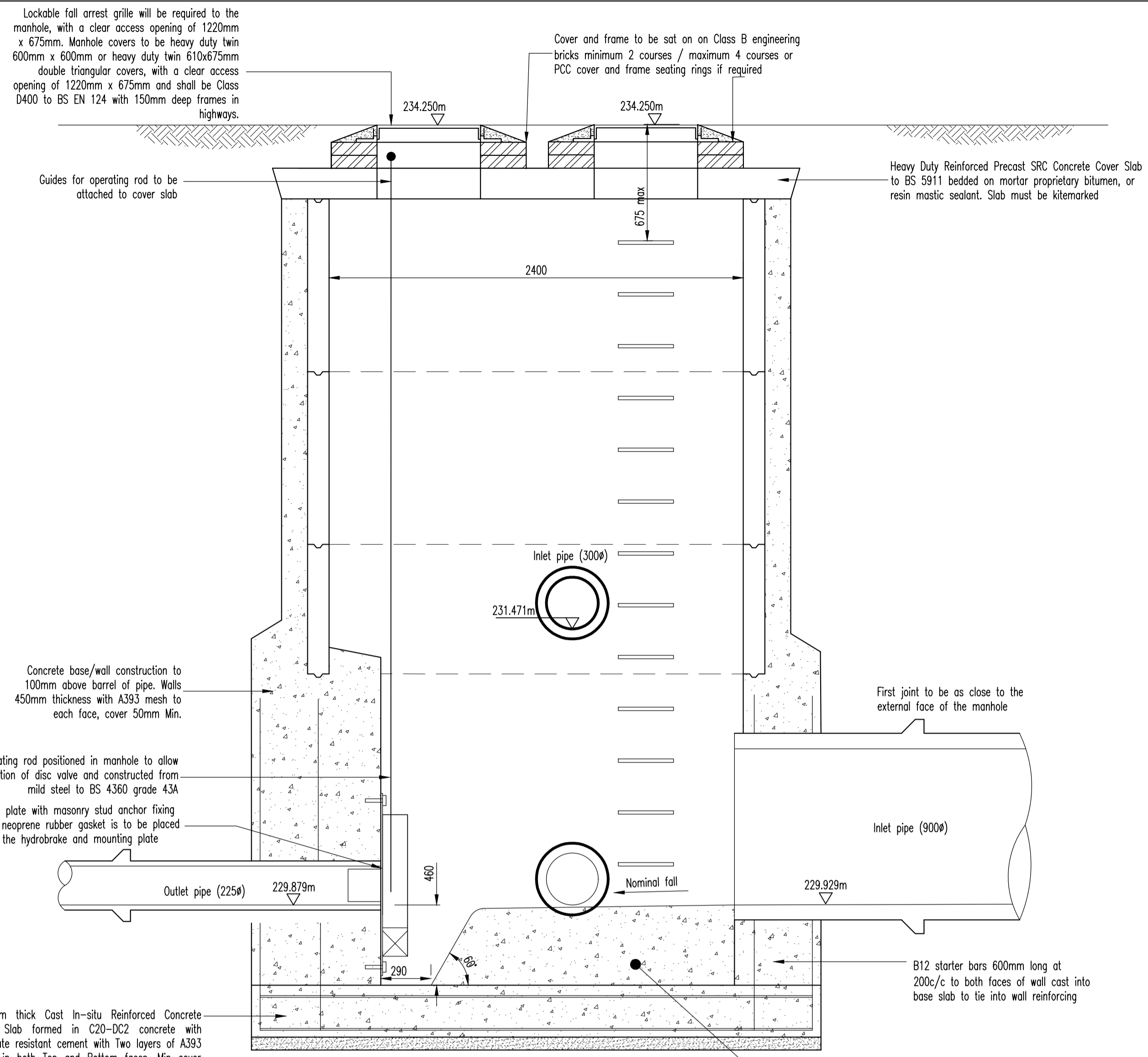
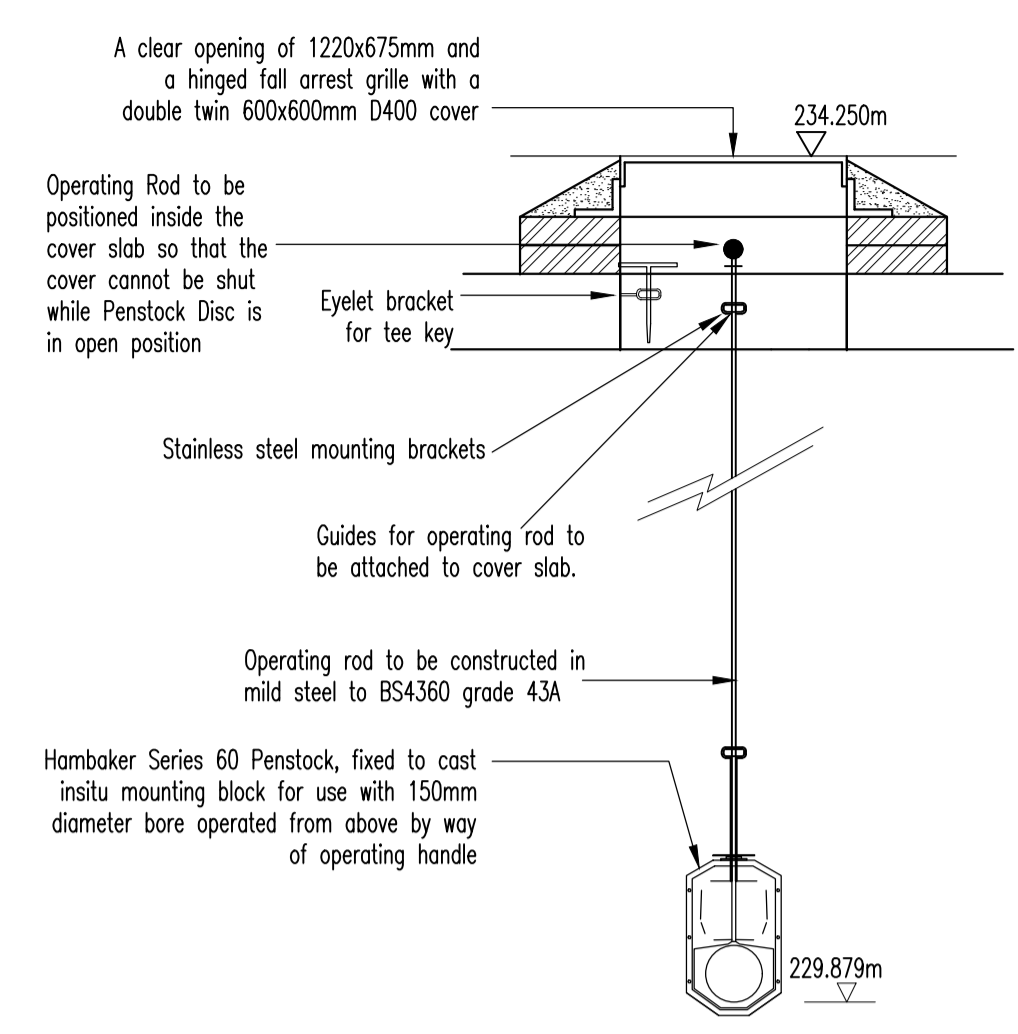


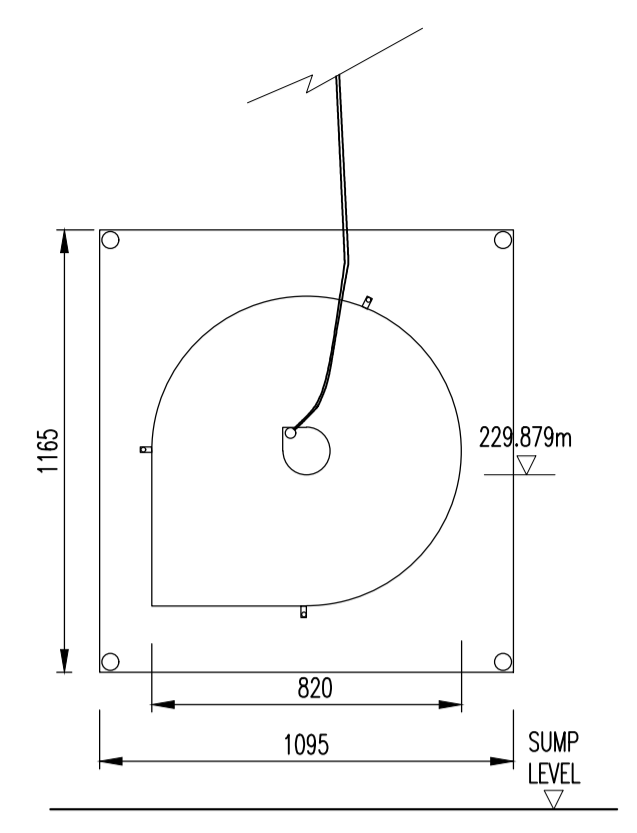
- Adoption General Notes**
- All adoptable sewer works and materials to be in accordance with Sewerage Sector Guidance (SSG), the relevant British/European and the adopting Water Authority standards/Requirements/Addendum to the Mechanical and Electrical Specification and Kitemarked.
 - Manhole covers shall/must have a clear opening of 600mm and shall be Class D400 to BS EN 124 with 150mm deep frames in highways.
 - Filled ground must be filled and consolidated under the supervision, and to the satisfaction, of LEEP before any sewer works are carried out.
 - Cover slabs must carry the BS Kitemark or may be rejected by LEEP inspector. Where the clear opening of the Kitemarked product is different to that of the cover and frame, a loading bearing slab should be fitted above the cover slab to bring the size down to 600x600mm for LEEP specified cover size. Please refer to the Concrete Pipe Systems Association (CPSA), 'Technical Bulletin' issued autumn 2004 for Kitemarked cover slab opening sizes.
 - The adoptable sewers should be a minimum of 1m and manholes 0.5m from kerb faces and service margins.
 - Sewers must have 5 metres clearance from trees and hedges, (please also refer to Figure 2.3 on page 33 in 'Sewers for Adoption' 6th Edition for restrictions on tree planting adjacent to sewers).
 - Sewers to be laid in Class "S" bedding (150mm granular bed and surround). Where depth of cover to top of the sewer is less than 1.2m in highways and verges (or less than 900mm in non vehicular access areas) then a concrete slab should be provided above the granular bed and surround.
 - Bedding and backfill material to conform to the requirement of Water Industry Specification 4-08-02 (Table A2)
 - Adoptable plastic sewer pipes to be BS Kitemark (Certified to WS 4-35-01 and BS EN13476). Adoptable sewer pipes to be laid in maximum 3 metre lengths unless there is a specific operational need to lay longer.
 - Plastic channel sections in manholes are not acceptable and clayware is preferable. Plastic channels are difficult to set in concrete and a satisfactory finish cannot be obtained on the bedding.
 - The chamber size of manholes with more than one connection in them may need to be increased an increment to accommodate the connections and bends.
 - LEEP's policy is not generally to accept Type "C" brick manhole and 1050mm dia manhole rings. Instead it is preferred that you use a type "B" manhole with 1200mm dia or 1500mm dia rings, with the opening sized over the chamber where depth of cover to pipe affix is 1-1.5m.
 - If plastic pipes are to be used then the following should apply:-
 - All adoptable sewers to be BS Kitemark (certified to WS 4-35-01).
 - Bedding and backfill material to conform to the requirements of Water Industry Specification 4-08-02 (Table A2)
 - Where plastic pipes are proposed for adoptable sewers, structural calculations for the plastic pipes and a site investigation report to prove that the ground condition is suitable for the plastic pipes are to be produced.
 - Where plastic pipes are installed into the ground prior to getting full technical approval, the developer must provide a CCTV survey of the prospectively adoptable sewers and a deformation test (Light-Line test) of the plastic pipes.
 - Demarcation chambers to be a min. 450mm chamber for 100mm foul & 150mm surface water pipes up to 1.2m deep. For depths greater than 1.2m, restricted access opening to 350mm is required for safety reasons.
 - Maximum depth of demarcation chamber to be 3m, where depth exceeds 3m, manhole to be constructed as type B manhole.
 - Where a B125 cover and frame has been approved, this must not be coated in plastic and must have lifting eyes suitably sized to accommodate standard lifting keys. Screw down covers are not acceptable.
 - LEEP is not obliged to accept filter drain/land drainage runoff into the public sewer network or adoptable drainage system (directly or in-directly). An alternative method of disposal of the land drainage runoff will therefore be required and you will have to liaise with the Land Drainage Authority/Land Drainage Section with regard to the disposal of the filter drain/land drainage runoff is required.
 - Sulphate resisting cement (C20-DC2) and precast concrete products must be used or a laboratory report provided proving that such precautions are not necessary.
 - Strength of vitrified clay pipes (if used) to be 40KN/m for 1000, 40KN/m for 1500, 45KN/m for 2250 and 72KN/m for 3000. All concrete pipes to be Class 120 concrete to EN 1916/BS 5911-1:2002.
 - All levels of existing drainage to be confirmed prior to work commencing on site.
 - The contractor must allow for any feet's required for road and sewer opening permits, sewer connections and make the appropriate applications.
 - There should be enough clearance to accommodate the bedding for both pipes, approx 300mm: If crossover is near rocker then the clearance needed may be increased.



SECTION A-A THROUGH MANHOLE NW1-S25FC (1:20)



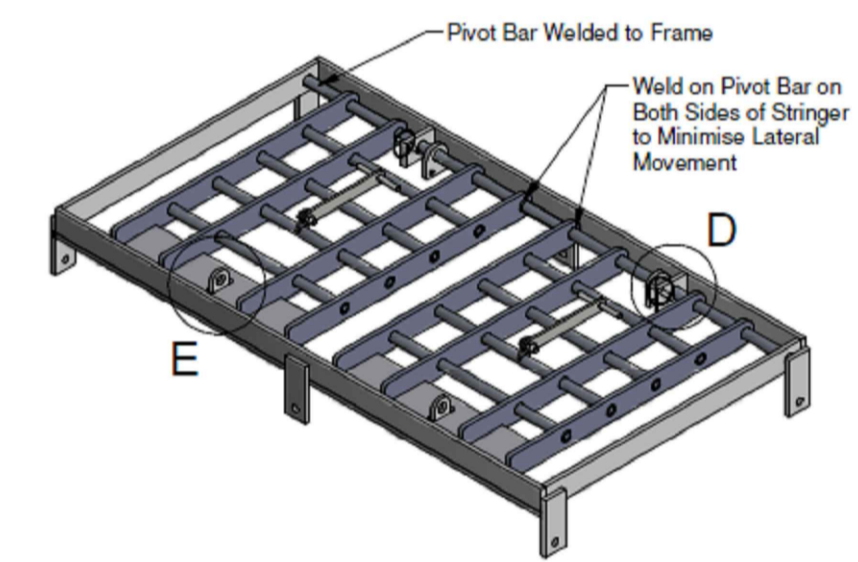
ELEVATION ON PENSTOCK (1:20)



FLOW CONTROL FACE-ON VIEW (NTS)

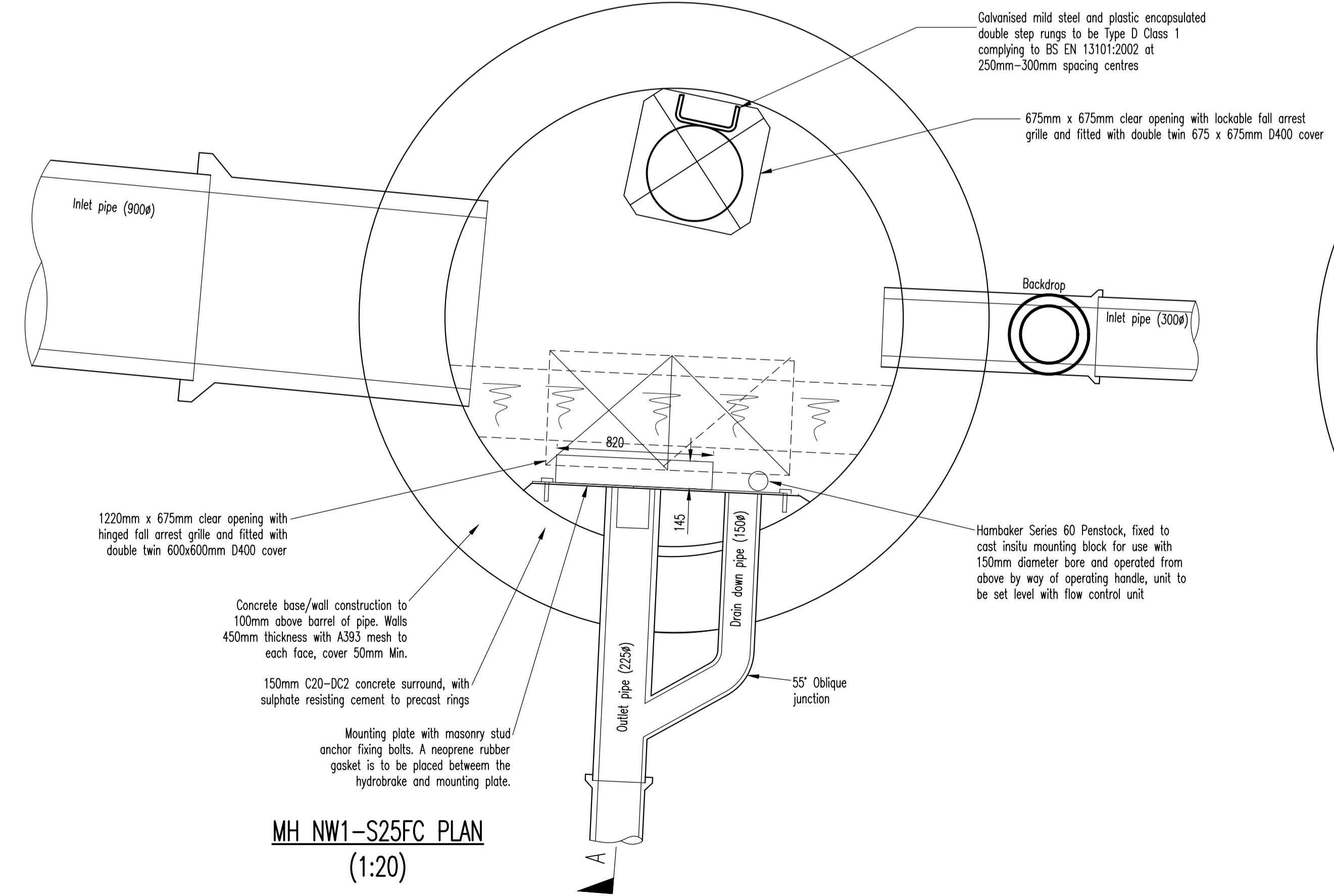
All custom built ironwork to be hot-dipped galvanised prior to final fixing

Section A-A is an idealised section and is shown for clarity.

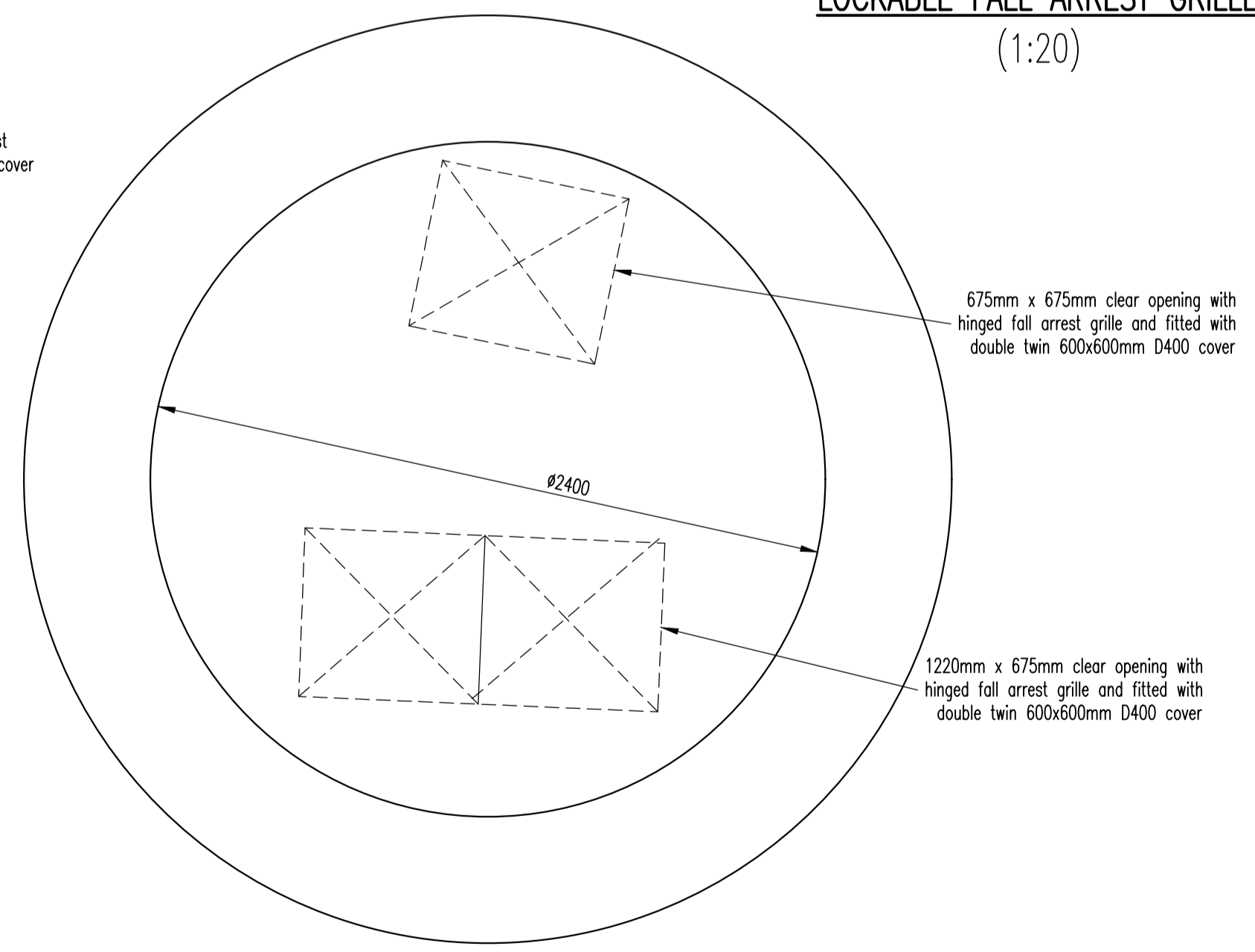


LOCKABLE FALL ARREST GRILLE (1:20)

Peter Savage Ltd KD19 RETRO FIT - PRISON GRILLE 1220x675mm clear opening with hinged fall arrest by Yorkshire Water Material: Mill Steel to BSEN ISO 1461:1999



MH NW1-S25FC PLAN (1:20)



COVER SLAB PLAN (1:20)

FLOW CONTROL DATA

MANUFACTURER	HYDRO INTERNATIONAL
TELEPHONE	01275 878371
TYPE	HYDROBRAKE OPTIMUM
FLOW/HEAD	13.2 l/s @ 3.150m
HYDRO REF	SHE-0135-1320-3150-1320

To be installed in accordance with manufacturers specifications and recommendations before the manhole cover slab is installed

C	MI	29.08.25	Minor change to head from 3.100 to 3.150	MI
B	MI	29.08.25	Access and step irons added	MI
A	MI	29.08.25	Flow control head and diameter amended	MI
/	JC	28.02.25	Issued for approval	MI
Rev	By	Date	Revision	Apvd

ARP ARP ASSOCIATES
Chartered Consulting Engineers

Northwest House • 5 & 6 Northwest Business Park • Servia Hill, Leeds • LS6 2QH
0113 245 6498 • 0113 244 3864 • leeds@arpassociates.co.uk • www.arpassociates.co.uk

ARP Associates is a trading division of ARP Geotechnical Ltd, a company registered in England and Wales with company number 377383, whose registered office is at 5/6 Northwest Business Park, Servia Hill, Leeds LS6 2QH

TITLE
FLOW CONTROL MANHOLE & DETAILS FOR NW1-S25FC

PROJECT
BLACKMOORFOOT ROAD, HUDDERSFIELD

CLIENT
MILLER HOMES YORKSHIRE

DRAWING STATUS
PRELIMINARY

Scale	Date	Drawn	JC
As shown @ A1	FEB 25	Chk.	MI
Org. No.	0425/92/12.01	Rev	C

SUBJECT TO THE APPROVAL OF ALL RELEVANT AUTHORITIES