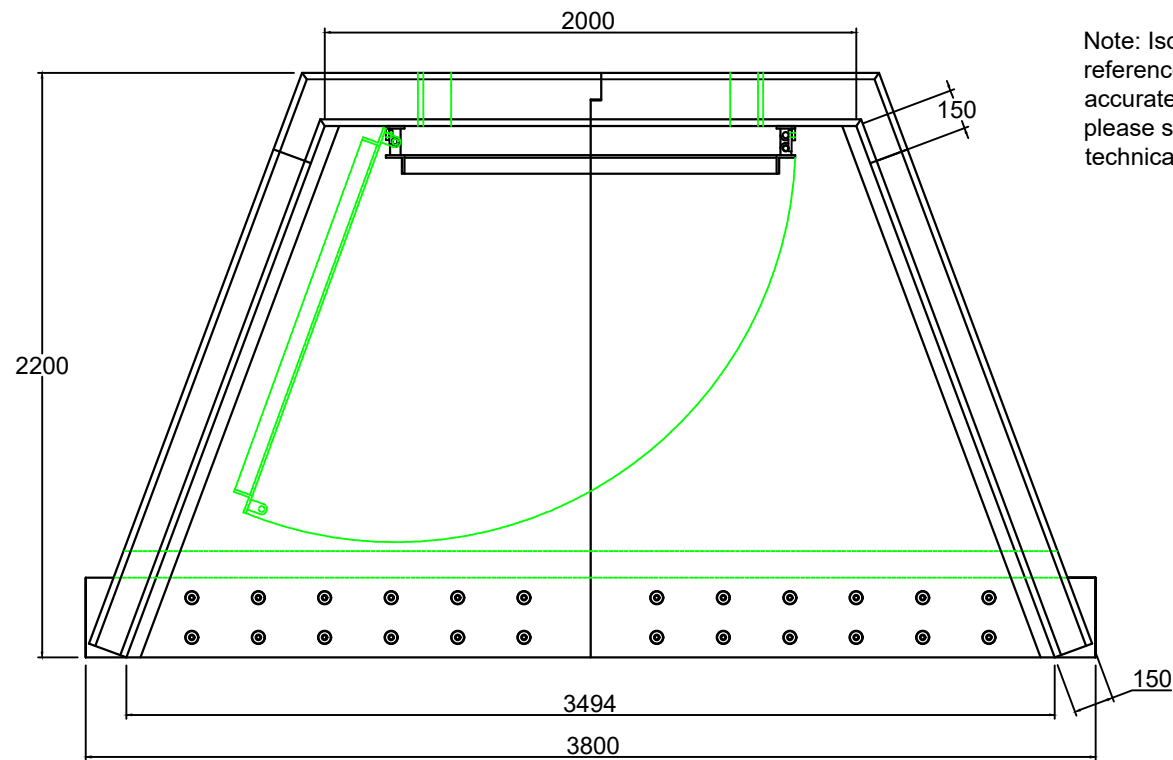
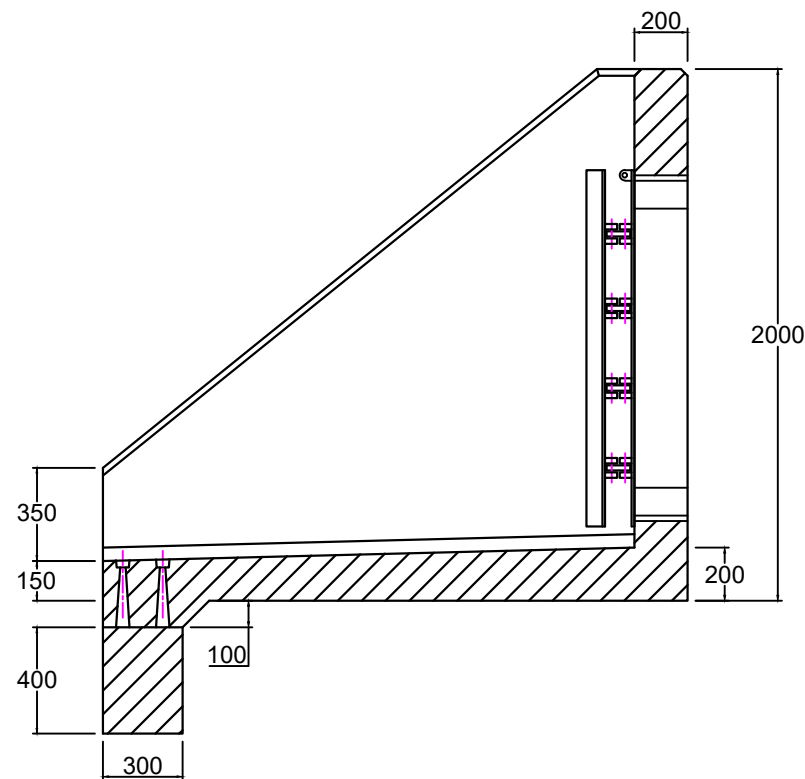
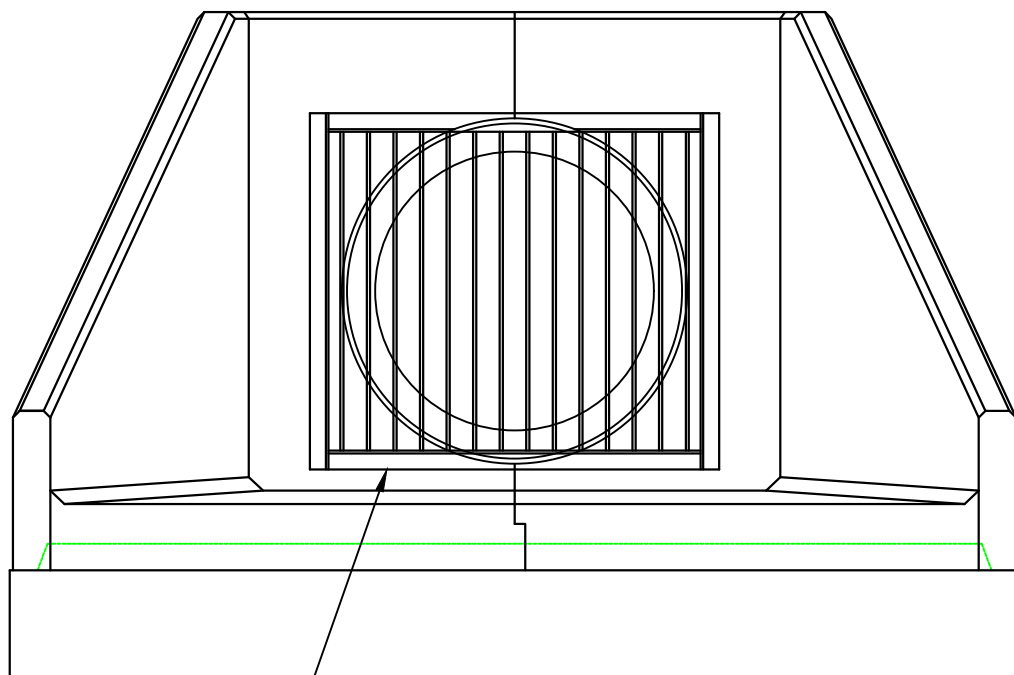
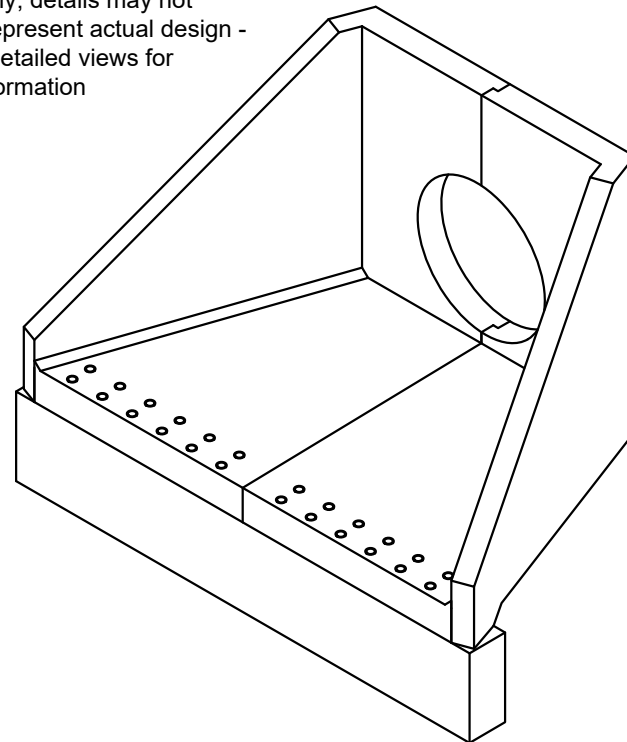




Note: Isometric drawing is for reference only, details may not accurately represent actual design - please see detailed views for technical information



- Sewers for Adoption / Sewers for Scotland Outfall Safety Grille - SFA1 1050
1. In accordance with Figure C.6 Typical Outfall Safety Grille - for outfalls of 350mm diameter or greater - Sewers for Adoption 7th Edition
 2. Material Grade is to be: BS EN 10025 S275
 3. All mild steel to be hot dipped galvanized after fabrication
 4. Galvanizing to BS EN: 1461
 5. Welding to BS EN 1011-2:2001
 6. Hinged on one side with padlock facility
 7. Weight Approx: 156kg

DO NOT SCALE DRAWING

NOTES:

- All dimensions in mm
- All measurements ± 1 mm

Specification Information

- Opening in back wall cast to suit outside diameter of the pipework
- Invert level of pipe can be set to your specification

Headwall Installation

Units should be bedded on minimum 200mm thick well compacted Class 6A* selected well graded granular material.

*Manual of contract documents for Highway Works: Volume (MCHW1) specification for Highway Works, Series 600 (Nov.09).

Sit the headwall level or with a slight fall 1:50 from pipe to spill mouth.

Handling

- A. Weight of concrete is based on 2.4 tonne/m³+5% is recommended for sizing lifting equipment.
- B. All lifting points shall be used as specified below
- C. Unit to be lifted as per lifting diagram

Concrete

- A. Mix ref: Self-compacting DC4/DS4 Mix
- B. Lifting strength based on 2 cubes = 20N/mm²
- C. Characteristic 28 day cube strength = 50N/mm²
- D. Concrete provides Design Chemical Class 4 (DC4) to special Digest 1, Table F2.

Reinforcement

- A. Reinforcement to BS EN 13369
- B. Scheduling, dimensioning, bending & cutting to BS8666
- C. Cage to be machine tied with steel wire

Manufacture

- A. Manufacture to BS EN 15258:2008 precast concrete products - Retaining wall elements, Factory Production Control certificate number: 0086-CPR-650448 & BS EN 13369

- B. Tolerances to BS EN 13369 clause 4.3.1.1

Finishing:

Class	Top	Sides	Base	Rear of back wall
	A	A	A	Self - Levelled

- D. Marking: Units shall be indelibly marked to show:

- Mould reference code
- De-mould date
- Job reference number & unique product number
- Unit weight (kg)

Design

- A. Concrete design to EC2
- B. Althon have designed the concrete units only, the site conditions should be assessed for suitability by the scheme designer
- C. Units are designed to withstand a vertical live load surcharge of 10kN/m²
- D. Weight of soil = 18kN/m³
- E. Angle of internal friction = 30 Deg.
- F. Design Life: >100 years

Min Cover	Cover Block Size (mm)	Min Cover	Max Cover
All Faces	55	50	60

Exposure Classification	Exposure induced by Carbonation	Corrosion induced by Chloride	Freeze/thaw attack	Chemical attack
All Faces	XC3/4	XD3	XF4	XA3

Fabrication Specification

- A. Manufacture IAW EN 1090-2 EXC CLASS 1
- B. Material grade is to be: BS EN 10025 S275
- C. Welding carried out IAW EN 1090-2 PARA 7.5.4 - 7.5.18
- D. All fillet and butt welds to have a minimum throat thickness of 6mm & joints to be fully welded where possible.
- E. Ensure vertical flats are fully welded both sides where possible.
- F. All sharp edges and burrs are to be removed.
- G. Remove all weld splatter.
- H. Holes by punching are permitted with reaming.
- I. Galvanising is carried out after fabrication to BS EN:ISO 1461

Handrail Specification

- A. Kee Klamp® Galvanised Size 8 Fittings
- B. Size 8 48.3mm OD 3.2mm Wall Thickness Galvanised Medium Duty Tube to BS EN 10255
- C. 360N/m Design Load at stated in BS 8118, BS 6180, BS 6399 & BS 7818, Civil Engineering Specification for the Water Industry (CESWI) 7th Edition Clause 2.60 Handrails & Balusters & The Engineering Equipment and Materials Users' Association (EEMUA) Publication 105 7th Edition Factory Stairways, Ladders and Handrails
- D. Other design loads available on request
- E. GRP/FRP Handrails also available

REV NO	DATE	DESCRIPTION
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DRAWING TITLE / PROJECT:

SFA20C Headwall
400 x 300mm Toe
SFA1 1050 Outfall Safety Grille

CLIENT:

SCALE:	PAPER:	SHEET NO:	DATE:
NTS	A3	01 OF 01	04 - 10 - 18

HEADWALL WEIGHT:	TOE WEIGHT:
6730kg	1095kg

PRODUCT NAME:
SFA20C

DRAWING No:

