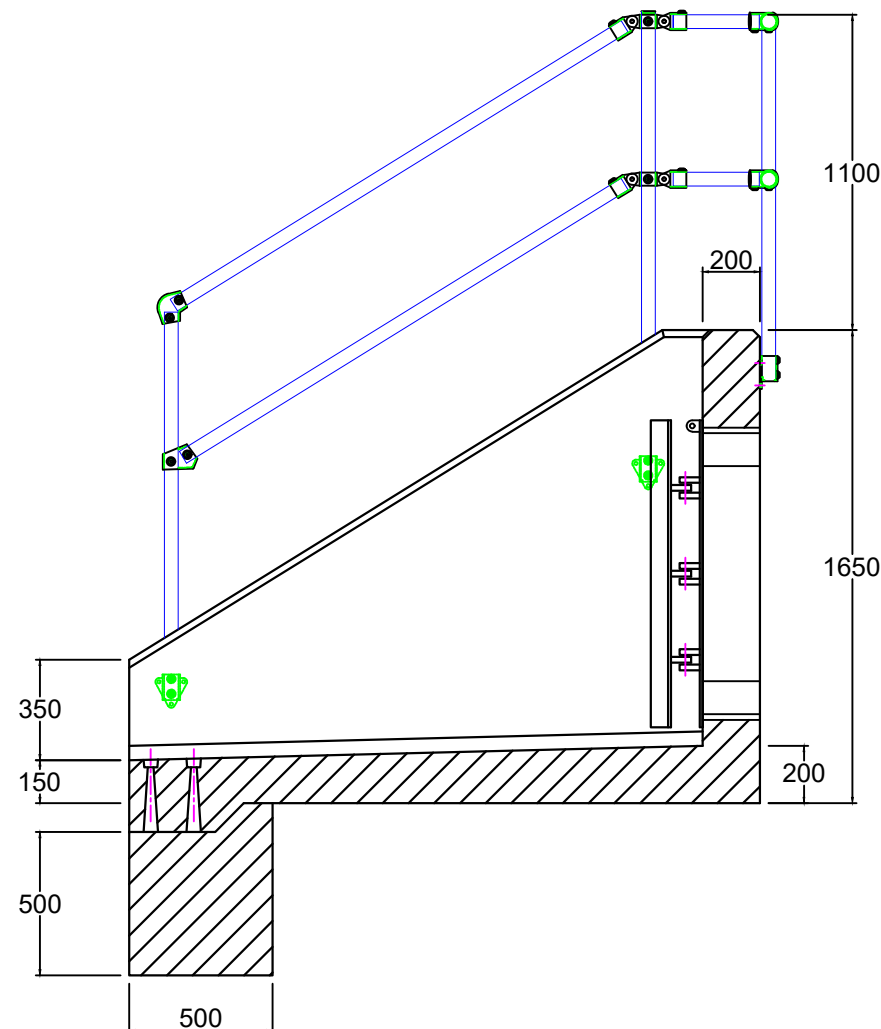
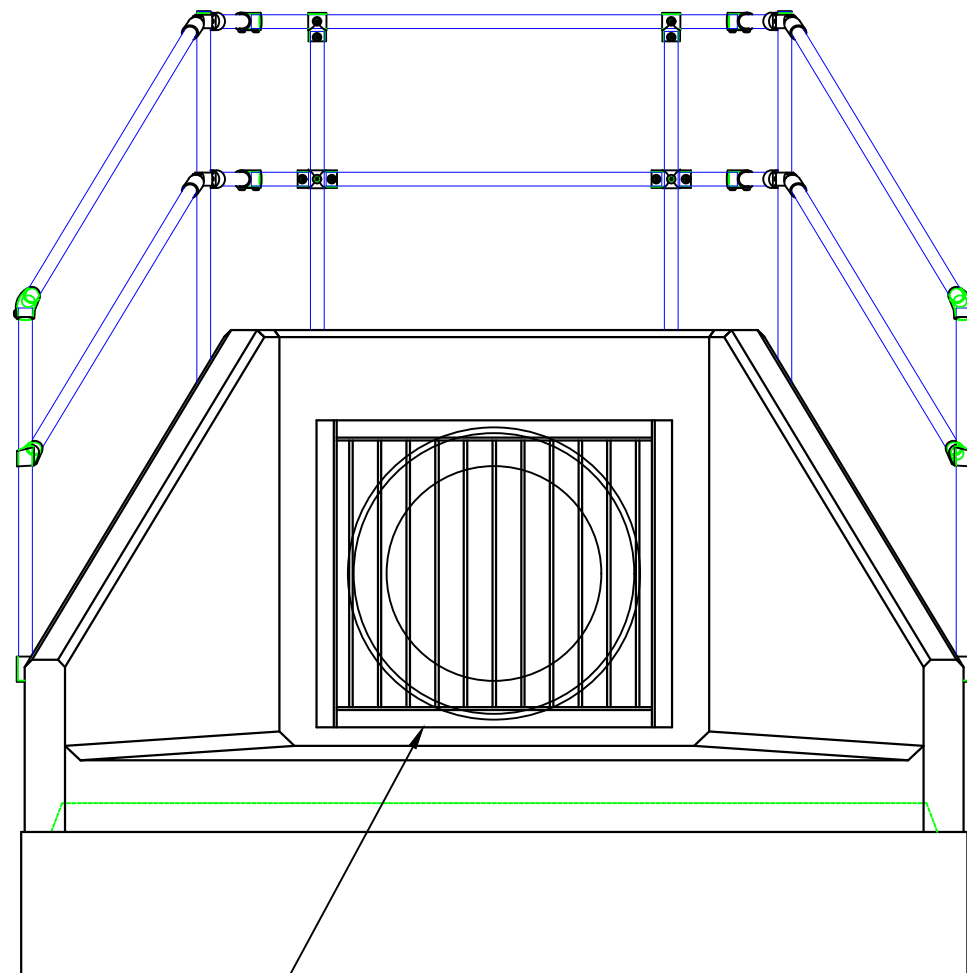
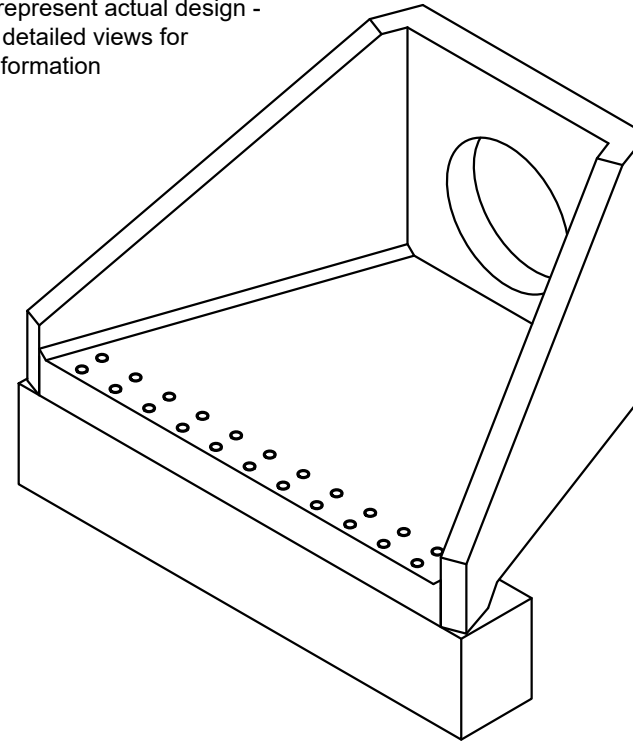


Note: Isometric drawing is for reference only, details may not accurately represent actual design - please see detailed views for technical information



- Sewers for Adoption / Sewers for Scotland Outfall Safety Grille - SFA1 750
- In accordance with Figure C.6 Typical Outfall Safety Grille - for outfalls of 350mm diameter or greater - Sewers for Adoption 7th Edition
 - Material Grade is to be: BS EN 10025 S275
 - All mild steel to be hot dipped galvanized after fabrication
 - Galvanizing to BS EN: 1461
 - Welding to BS EN 1011-2:2001
 - Hinged on one side with padlock facility
 - Weight Approx: 110kg

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

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

Concrete

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

Reinforcement

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

Manufacture

- Manufacture to BS EN 15258:2008 precast concrete products - Retaining wall elements, Factory Production Control certificate number: 0086-CPR-650448 & BS EN 13369
- Tolerances to BS EN 13369 clause 4.3.1.1
- Finishing:

| Class | Top | Sides | Base | Rear of back wall |
|-------|-----|-------|------|-------------------|
| | A | A | A | Self - Levelled |
- Marking: Units shall be indelibly marked to show:
 - Mould reference code
 - De-mould date
 - Job reference number & unique product number
 - Unit weight (kg)

Design

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

| Min Cover | Cover Block Size (mm) | Min Cover Size (mm) | Max Cover Size (mm) |
|-----------|-----------------------|---------------------|---------------------|
| 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

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

Handrail Specification

- Kee Klamp® Galvanised Size 8 Fittings
- Size 8 48.3mm OD 3.2mm Wall Thickness Galvanised Medium Duty Tube to BS EN 10255
- 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
- Other design loads available on request
- GRP/FRP Handrails also available

| REV NO | DATE | DESCRIPTION |
|--------|------|-------------|
| | | |



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DRAWING TITLE / PROJECT: **SFA15B Headwall**
500 x 500mm Toe
3 Sided Kee Klamp
SFA1 750 Outfall Safety Grille

CLIENT:

| SCALE: | PAPER: | SHEET NO: | DATE: |
|--------|--------|-----------|--------------|
| NTS | A3 | 01 OF 01 | 25 - 09 - 18 |

| HEADWALL WEIGHT: | TOE WEIGHT: |
|------------------|-------------|
| 5210kg | 1584kg |

PRODUCT NAME: **SFA15B**

DRAWING No:

