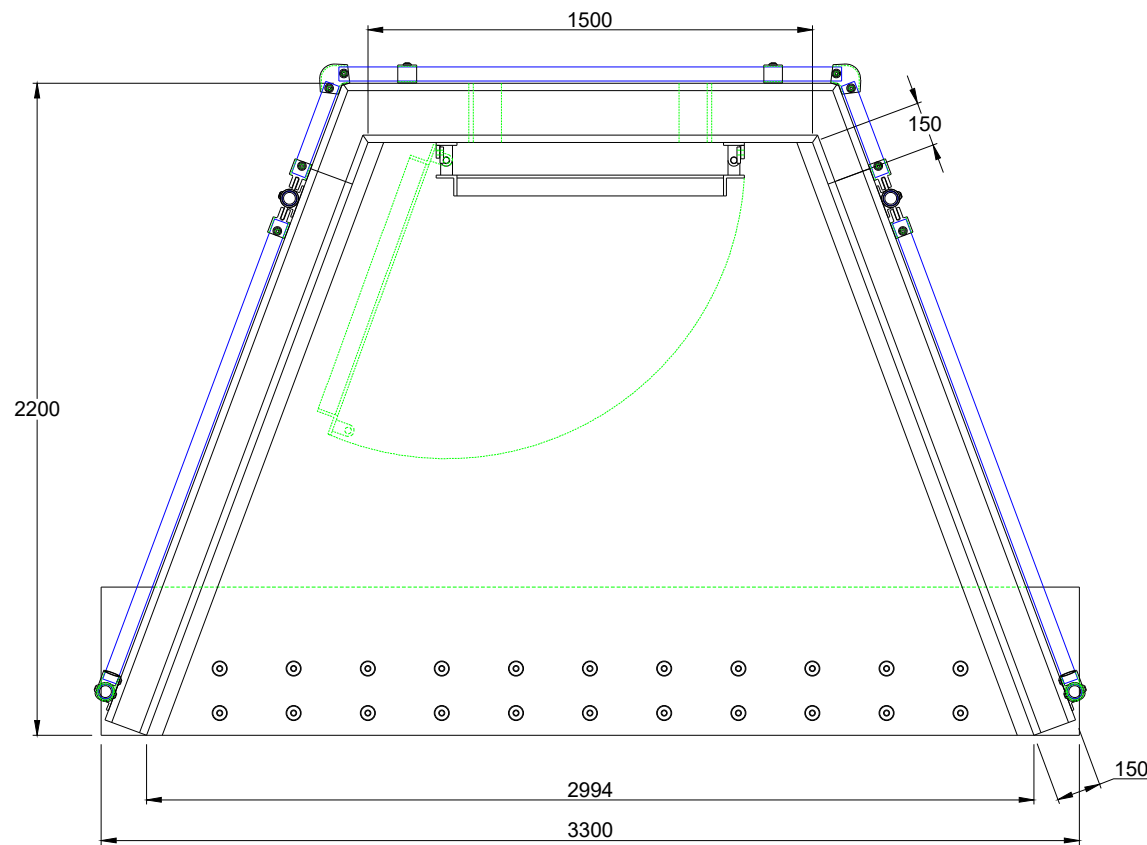
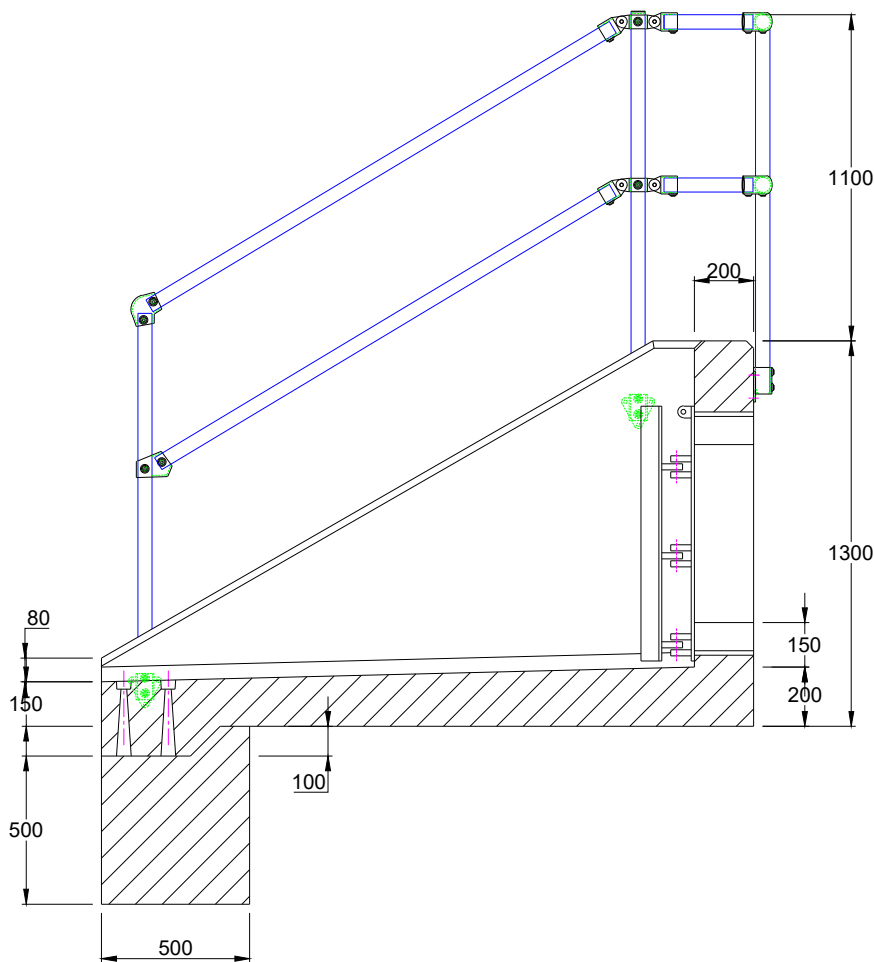
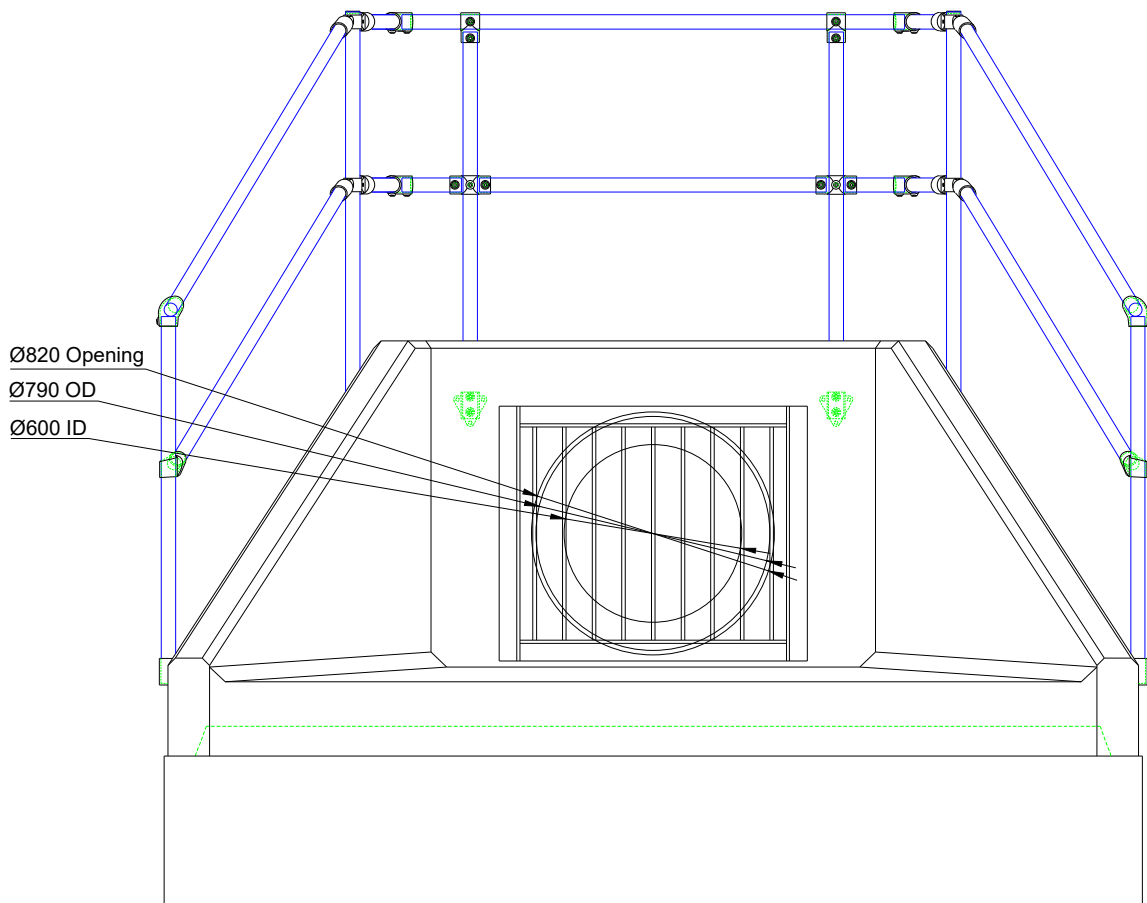
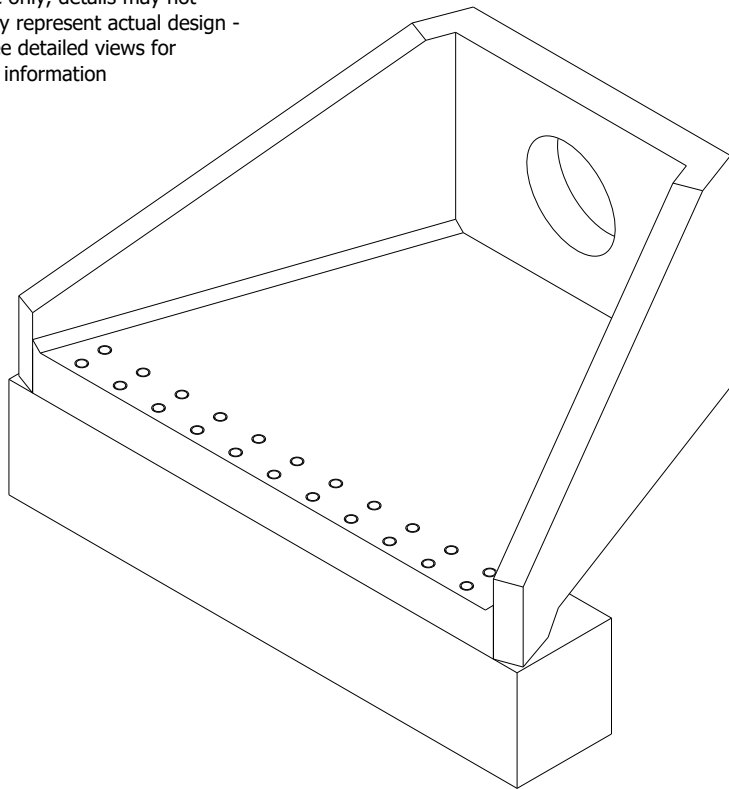




Note: Isometric drawing is for reference only, details may not accurately represent actual design - please see detailed views for technical information



- Sewers for Adoption / Sewers for Scotland Outfall Safety Grille - SFA1 600
- 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: 80kg

DO NOT SCALE DRAWING

NOTES:

- All dimensions in mm
- All measurements  $\pm 1$ 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/m<sup>3</sup>+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/mm<sup>2</sup>
- Characteristic 28 day cube strength = 50N/mm<sup>2</sup>
- 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/M<sup>2</sup>
- Weight of soil = 18kN/M<sup>2</sup>
- Angle of internal friction = 30 Deg.
- Design Life: >120 years

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

| Exposure       | Exposure induced | Corrosion induced | Freeze/thaw | Chemical |
|----------------|------------------|-------------------|-------------|----------|
| Classification | by Carbonation   | by Chloride       | attack      | 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

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



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DRAWING TITLE / PROJECT:

|                  |        |                        |              |
|------------------|--------|------------------------|--------------|
| CLIENT:          |        | Anglian Water          |              |
| SCALE:           | PAPER: | SHEET NO:              | DATE:        |
| NTS              | A3     | 01 OF 01               | 19 - 09 - 19 |
| HEADWALL WEIGHT: |        | TOE WEIGHT:            |              |
| 4435kg           |        | 1584kg                 |              |
| PRODUCT NAME:    |        | SFA15W                 |              |
| DRAWING No:      |        | ALT-AW-115W-600-500-01 |              |

