

DRAWING NOTES

- All dimensions in mm U.O.S.
- All measurements ±1mm.
- DO NOT SCALE DRAWING.

SPECIFICATION INFORMATION

- Opening in back wall cast to suit outer dimension of pipe.
- Invert level of pipe can be set to your specification.

HEADWALL INSTALLATION

Units should be bedded on minimum 150mm thick well compacted Class 6N or 6K* well graded granular material with 50mm topping of fine material (Class 6L*) to ensure units are level and stable. *Manual of contract documents for Highway Works: Volume (MCHW1) specification for Highway Works, Series 600 (Nov 09).

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, dimensions, bends & 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 0086-CPR-650448 & BS EN 13369.
- Tolerances to BS EN 13369 clause 4.3.1.1.
- Finishing:

| Class | Top | Sides | Rear | Rear of Backwall |
|-------|-----|-------|------|------------------|
| | 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 structure designed to Eurocode 2.
- JKH have designed 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 as table below * (all cover sizes in mm).

| Design Life | >50 years, 100mm Wall Thickness | | >100 years, 150mm Wall Thickness | |
|-------------|---------------------------------|----------------|----------------------------------|----------------|
| | Min Size Cover for All Faces | Max Size Cover | Min Size Cover | Max Size Cover |
| | 33 | 28 | 38 | 55 |
| | | | 50 | 63 |

| Exposure Classification | 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 to IAW EN 1090-2 PARA 7.5.4 - 7.5.18
- All fillet & butt welds to have minimum throat thickness of 6mm and joints fully welded where possible.
- Ensure vertical flats 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 process after fabrication to BS EN ISO1461.

HANDRAIL SPECIFICATION

- Keel 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 as 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.

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DRAWING TITLE:

**SERIES 2800 HEADWALL (1250 HIGH)
STANDARD & OPTIONAL FEATURES**

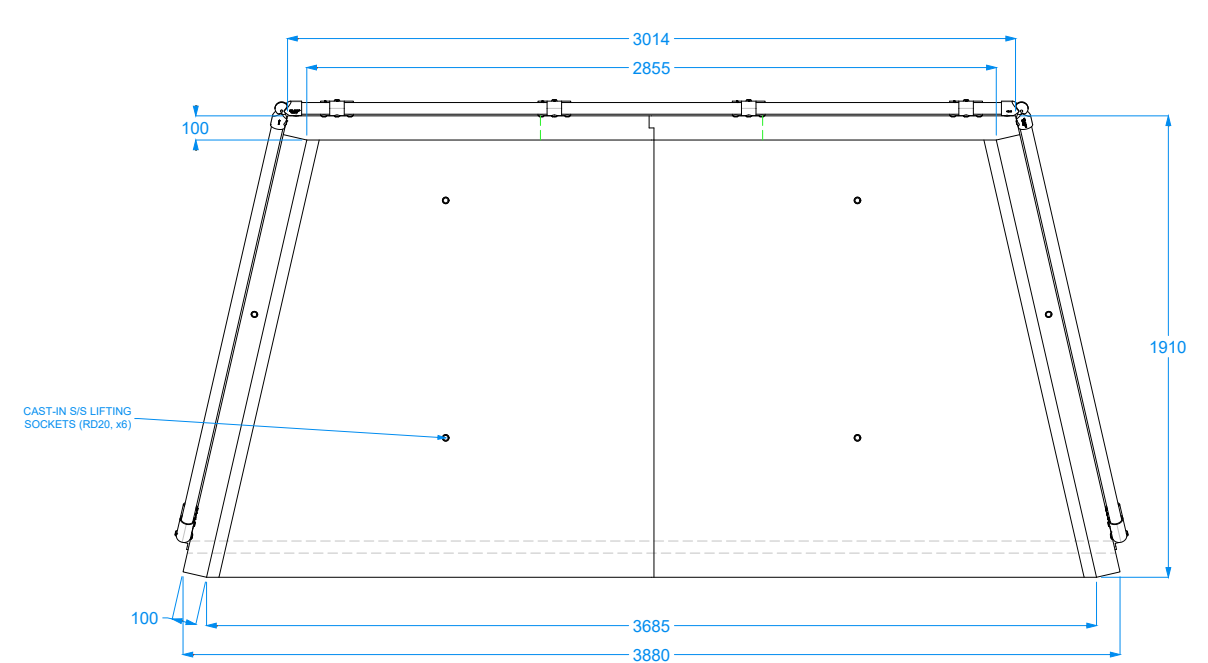
TOTAL WEIGHT (CASTINGS ONLY): **3300 kg**

CONCRETE MIX DESIGN:

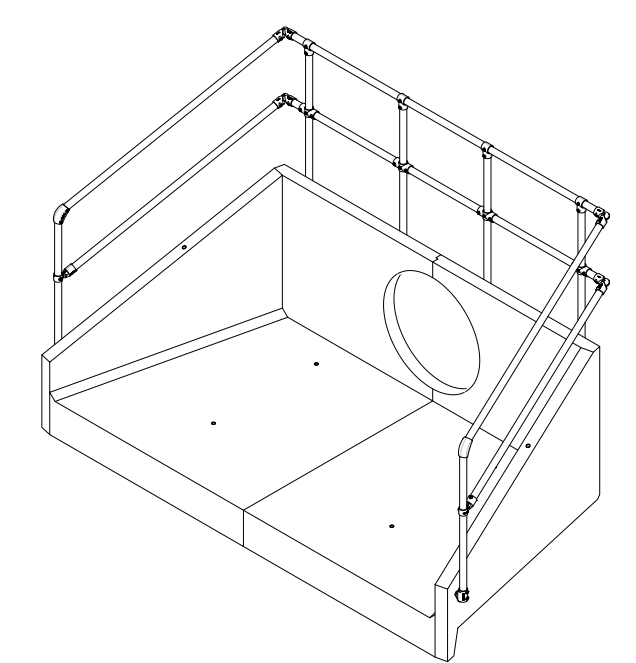
**CO² EMISSION
REDUCTION ↓ -50%**

DRAWN: PN | ISSUE #: 01 | SHEET #: 1 | DATE: 12/2/24

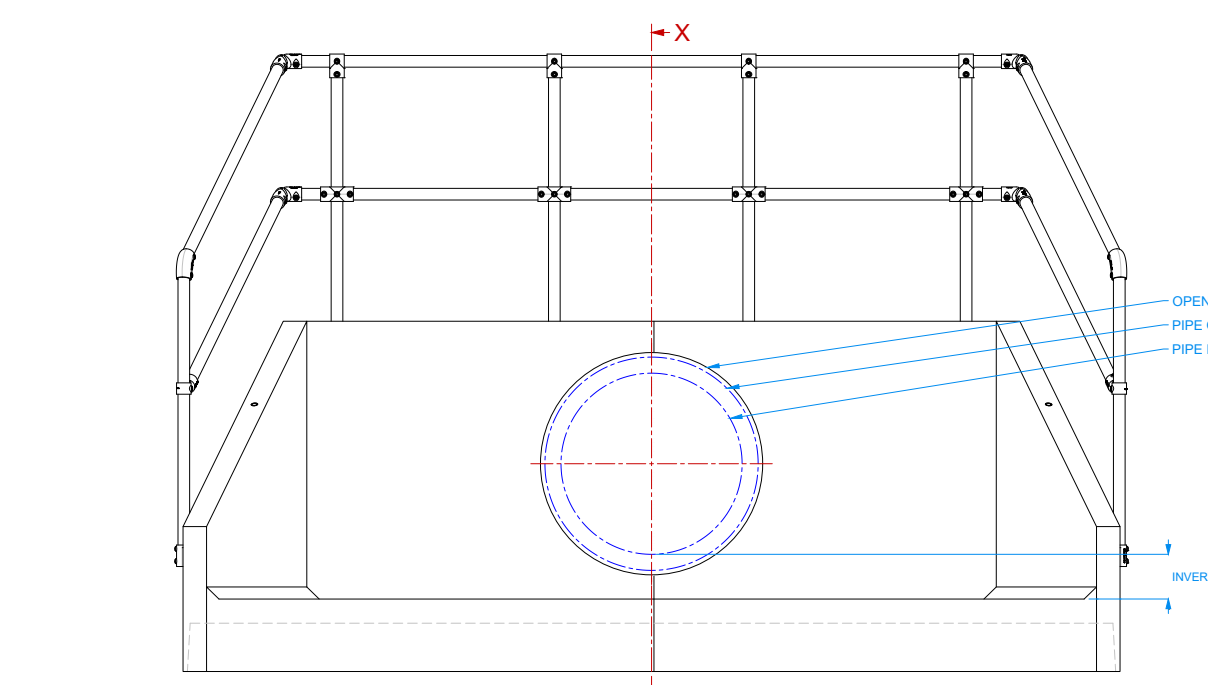
DRAWING #: **2800-1250**



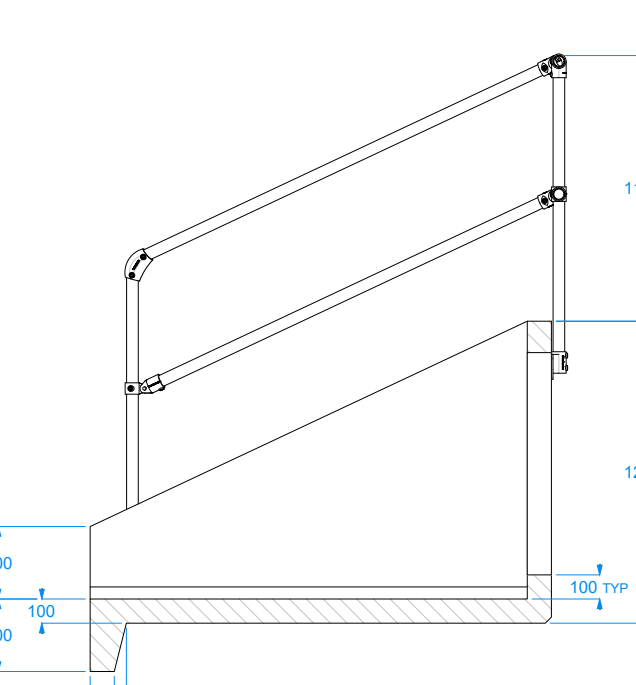
VIEW: TOP



VIEW: ISOMETRIC



VIEW: FRONT



VIEW: SECTION X-X

STANDARD FEATURES

OPENING SIZE GUIDE

Ø 1020 mm
← MAXIMUM OPENING

TYPICAL MAXIMUM PIPE SIZES*
PLASTIC TWINWALL ID: Ø 750 mm
CONCRETE ID: Ø 750 mm

CUSTOM DESIGN
BESPOKE SOLUTIONS...

- CONCRETE
- STEELWORK
- HANDRAILS
- FLOW CONTROL

INTEGRAL TOE

CAST-IN S/S SOCKETS
ACCURATE ALIGNMENT TO JOINT FITTINGS & OPTIONAL FEATURES

OPTIONAL FEATURES

TOE BEAM RANGE

- VARIOUS SIZE OPTIONS ARE AVAILABLE
- DOWEL PINS SUPPLIED TO SECURE TOE TO HEADWALL

CONCRETE COLOURS

- 24 COLOURS AVAILABLE IN RANGE FOR BLENDING ITEM WITH LOCAL ENVIRONMENT

GRATINGS & TRASH SCREENS

FACTORY FITTED AS STANDARD *WHERE PRACTICAL / SAFE FOR TRANSPORT

- FULLY WELDED, HOT DIP GALVANISED STEEL & S/S FIXINGS AS STANDARD

KEE KLAMP HANDRAILS

FACTORY FITTED AS STANDARD *WHERE PRACTICAL / SAFE FOR TRANSPORT

FLOW CONTROL DEVICES

FACTORY FITTED (WHERE PRACTICAL / SAFE FOR TRANSPORT) AS STANDARD

- S/S FIXINGS & RUBBER SEALS / SEALANTS AS STANDARD

ALUMINIUM STOPLOG SYSTEM

CHANNELS FACTORY FITTED AS STANDARD * WHERE PRACTICAL / SAFE FOR TRANSPORT

- VARIOUS BOARD HEIGHT / TYPES AVAILABLE
- LOCKING BRACKETS & T-KEY KITS SUPPLIED.
- S/S FIXINGS & RUBBER SEALS AS STANDARD