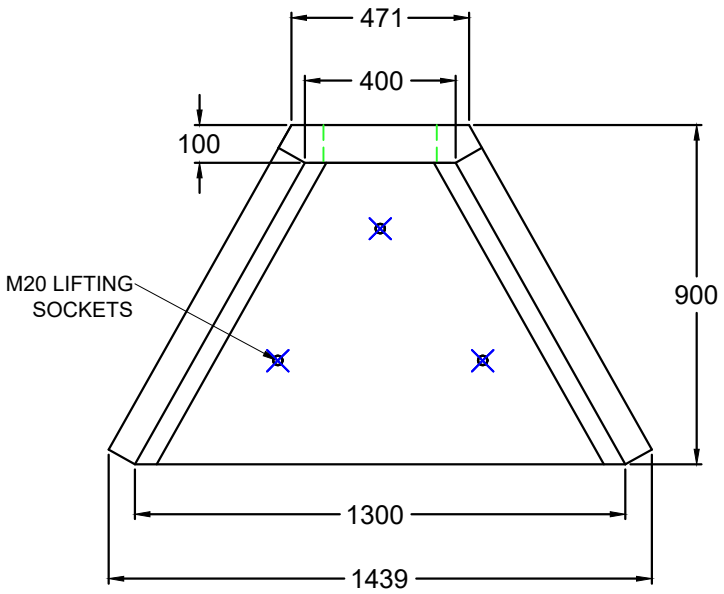

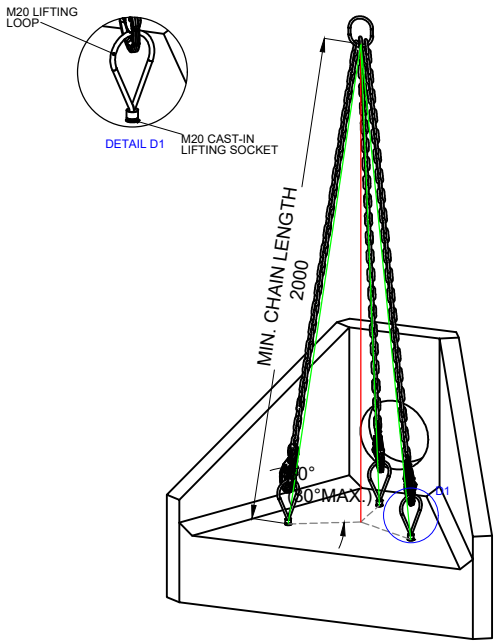

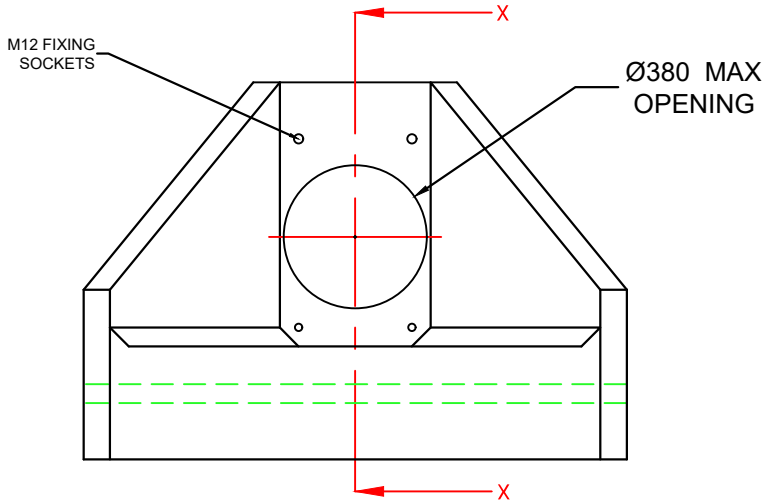

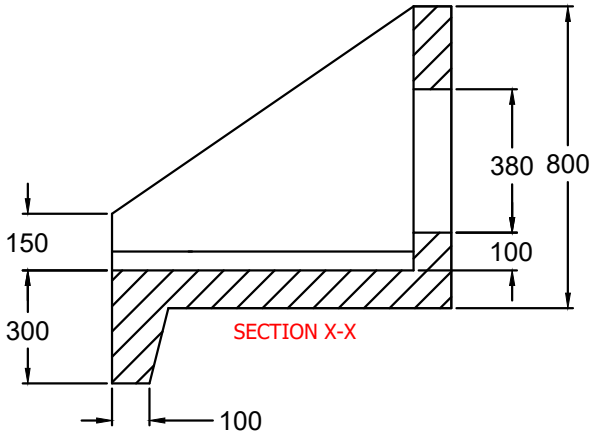

DO NOT SCALE DRAWING

NOTES:
- All dimensions in mm U.O.S
- All measurements ±1mm

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 150mm thick well compacted Class 6N or 6K* well graded granular material with a 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
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, dimensions, bends & 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 0086-CPR-650448 & BS EN 13369
B. Tolerances to BS EN 13369 clause 4.3.1.1
C. Finishing:

	Top	Sides	Rear	Rear of back wall
Class	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. JKH 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/M²
E. Angle of internal friction = 30 Deg.
F. Design Life: >50 years

Min Cover	Cover Block Size (mm)	Min Cover Size (mm)	Max Cover Size (mm)
All Faces	33	28	38

Exposure Classification	Exposure induced by Carbonation	Corrosion induced by Chlorids	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 to IAW EN 1090-2 PARA 7.5.4 - 7.5.18
D. All fillet & butt welds to have a minimum throat thickness of 6mm and joints 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 process after fabrication to BS EN ISO1461.

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

DRAWING TITLE / PROJECT:

300 SERIES HEADWALL

CLIENT:	N/A
REV NUMBER: 0	DRAWN DATE: 20/03/2023
REV DESCRIPTION: ORIGINAL ISSUE	DRAWN BY: DH CHECK BY: DH / JP
WEIGHT (total kg): 530	TOE BEAM (kg):
HEADWALL (kg): 530	GRATING (kg): HANDRAIL (kg): MISC. (kg):

DRAWING NUMBER:

300 SERIES HEADWALL