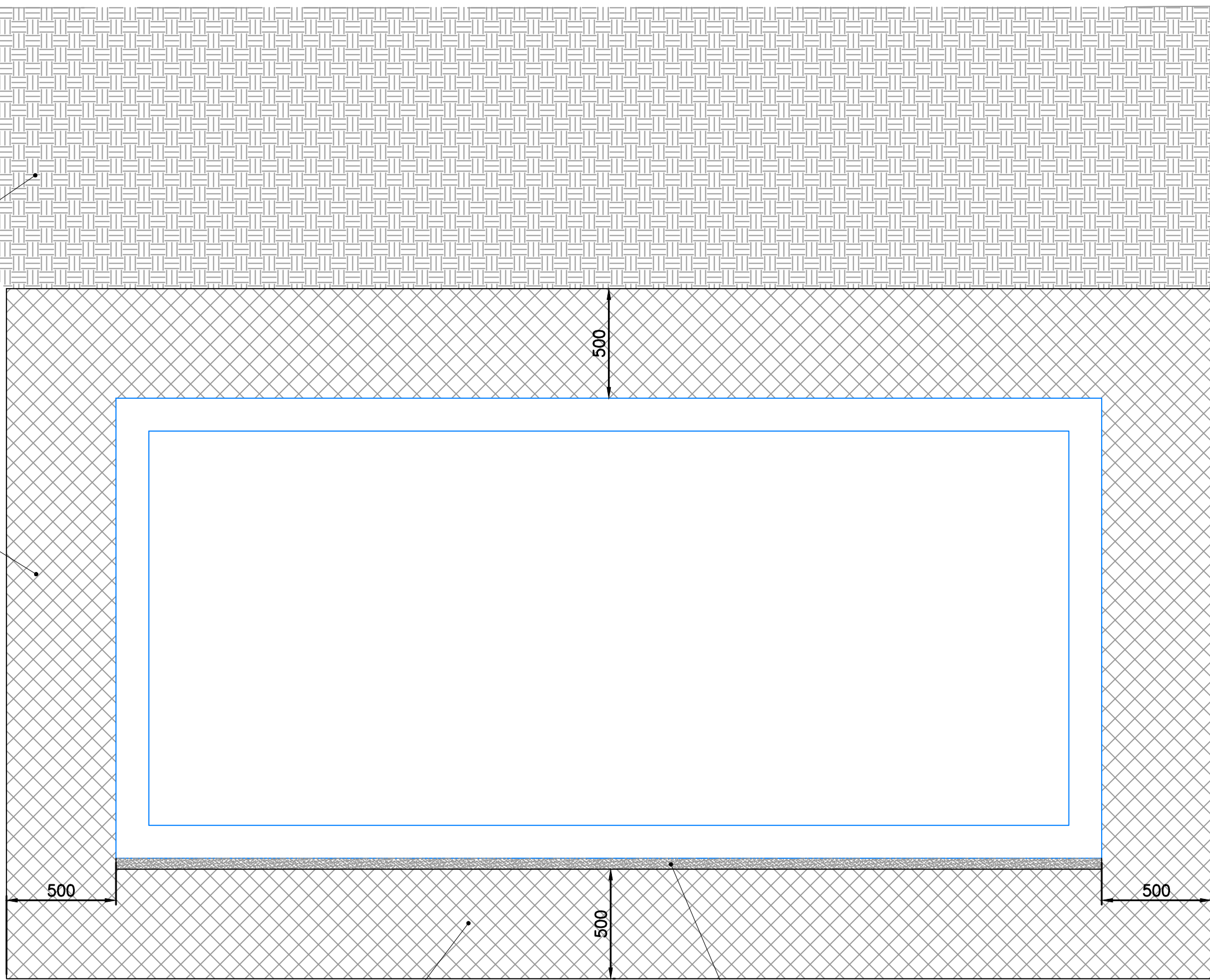


KEY CDM RESIDUAL DESIGN AND ENVIRONMENTAL RISKS			
Buried services (1.01)	Deep excavation (3.02, 3.03)		
Overhead services (1.03)	Manual handling (3.04)		
Buried structures (1.04)	High ground water levels (3.09)		
Existing rail (1.05)			
Unexploded ordnance (2.01)			
Contaminated soil (2.02)			
Confined space (3.01)			

- IN ACCORDANCE WITH THE CONSTRUCTION DESIGN MANAGEMENT REGULATIONS 2015, THE DOCUMENT ORIGINATOR HAS UNDERTAKEN A DESIGN RISK ASSESSMENT FOR THE ELEMENTS SHOWN ON THIS DOCUMENT. THE ABOVE ARE ONLY THE KEY RISKS THAT WERE IDENTIFIED DURING THE RISK ASSESSMENT. FOR A COMPREHENSIVE LIST REFER TO THE DESIGN RISK ASSESSMENT.
- GENERAL NOTES:
- DO NOT SCALE FROM THIS DRAWING
 - SITE VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION
 - REPORT ALL DISCREPANCIES TO THE DRAWING ORIGINATOR IMMEDIATELY
 - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT AS BUILT DRAWINGS AND OTHER DOCUMENTS

Backfill material compacted in layers no greater than 250mm. Heavy machinery must not be used in the first 250mm layer.

Well-compacted type 1 granular backfill. To be compacted in layers no greater than 200mm. Heaving vibratory equipment is not to be used. Refer to the FP McCann box culvert installation guide for further details.



500mm well-compacted type 1 granular bed. To be compacted in layers no greater than 250mm. Heaving vibratory equipment is not to be used. Refer to the FP McCann box culvert installation guide for further details.

50mm sharp sand blinding layer

TYPICAL BOX CULVERT
BEDDING DETAIL
Scale 1: 20 @ A1

Opening in back wall cast to suit the outside diameter of the pipe at invert height required.

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

Notes:

- All dimensions in mm
- 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 installed on minimum 150mm thick well compacted Class 6H 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 (Rev 05).

Handling

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

Storage

- Mix ref: Self-compacting C40/50A Mix
- Lifting strength based on 2 cubes = 200N/mm²
- Characteristic 28 day cube strength = 50N/mm²
- Concrete provides Design Chemical Class 4 (DCA) to special Digest 1, Table F2.

Reinforcement

- Reinforcement to BS EN 13369
- Scheduling, dimensioning, bending & cutting to BS9666
- Cage to be machine tied with steel wire

Manufacture

- Manufacture to BS EN 12056-2008 precast concrete products - Retaining wall elements, Factory Production Control certificate number: 0006-CPR460461 & BS EN 13369
- Tolerances to BS EN 13369 clause 4.3.1.1
- Finishing

Top	Bottom	Side	Head of wall
Class 1	Class 1	Class 1	Class 1

Marking: Units shall be visibly marked to show:

- Model reference code
- Demolish code
- Job reference number & unique product number
- Unit weight (kg)

Design

- Concrete design to EC2
- Allison 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

Mix Class	Concrete	Reinforcement	Steel	Steel	Steel
Class 1	BS	BS	BS	BS	BS

Report: Production Control Certificate number: 0006-CPR460461 & BS EN 13369

By Contractor: [Signature] By Client: [Signature] Date: [Date]

By Contractor: [Signature] By Client: [Signature] Date: [Date]

Fabrication Specification

- Manufacture BW/EN 1090-2 EXC CLASS 1
- Material grade is to be BS EN 10025 S275
- Welding carried out in accordance with BS 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 ribs and fully welded both sides where possible.
- All sharp edges and turns 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

- Handrail to be Galvanised Steel 8 Fittings
- Size 1.48mm OD 3.2mm Wall Thickness Galvanised Medium Duty Tube to BS EN 10255
- 300mm Design Load as stated in BS 6119, BS 6180, BS 6399 & BS 7916, Civil Engineering Specification for the Water Industry (CEWI) 7th Edition Clause 2.6.0 Handrails & Balustrades & The Engineering Equipment and Materials Users Association (EEMUA) Publication 105 7th Edition Factory Storeways, Ladders and Handrails
- Other design loads available on request
- GRIPTRIP Handrails also available

UK CA

B	25/02/25	FBS number updated to 200100	AJC	AJC
A	21/02/25	Tender issue	AJC	SG - KB
Rev	Date	Description	Dim	CHK'd App'd
Revisions				

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Drawing Status

TENDER

Project Name

INVICTUS

Drawn by	Drawn Date	Checked by	Checked Date
A COLLINS	21/02/2025	S GOODALL	21/02/2025
Approved by	Approved Date	Scale	Shown
K BALDWIN	21/02/2025	As Shown	

Title

Original drawing sheet is A1

DITCH DIVERSION
DRAINAGE DETAILS
SHEET 1

Document Reference							
PROJECT NUMBER	ORIGINATOR	FACILITY DESCRIPTION	DISCIPLINE GROUP	REFERENCE TYPE CODE	DOCUMENT TYPE CODE	SEQUENCE NUMBER	REVISION
3701.00025 - SKA - 200100 - CI - DRG - DG - 00520	B						