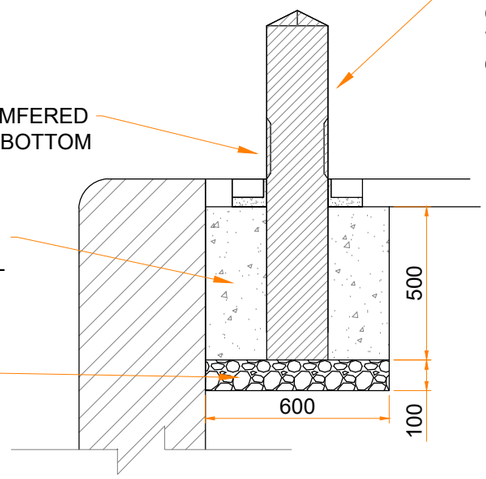
MAIN HAZARDS	
Hazard No	Hazard Description
1	Unidentified utility services in the working area
2	Stability of existing bank and other structures may be unknown

200x200mm OAK TIMBER POST. HEIGHT ABOVE GROUND LEVEL SEE WP. TYPICAL RANGE OF HEIGHTS 400-600mm.

25mm CHAMFERED CORNERS BOTTOM 200mm.

C25 CONCRETE FOUNDATION FOR ALL POSTS MINIMUM SIZE 600x600x500.

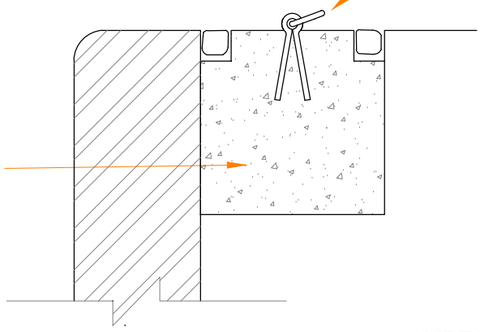
MOT TYPE 1 WELL COMPACTED



TIMBER BOLLARD

BANK PROTECTION TYPE VARIES. SEE WORKS PACKAGE (WP).

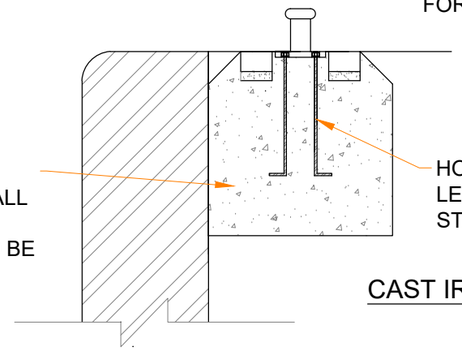
MOORING RING SEE STANDARD DETAIL STD-CRT-ZZ-ZZ-04-DR-C-04



C25 CONCRETE FOUNDATION FOR ALL RINGS SHOULD BE MINIMUM SIZE 600x600x600.

MOORING RING

WIDE VARIETY OF CAST IRON/STEEL BOLLARD STYLES USED ACROSS THE NETWORK. BOLLARD STYLE SHOULD MATCH STYLE HISTORICALLY USED ON THE PARTICULAR CANAL (SEE WP FOR BOLLARD TYPE TO BE USED).

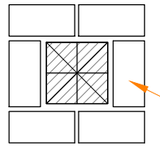


C25 CONCRETE FOUNDATION FOR ALL CAST IRON/STEEL BOLLARDS SHOULD BE MINIMUM SIZE 600x600x600.

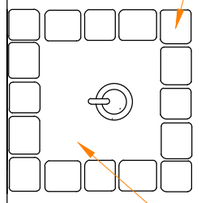
HOOK BOLTS MIN. LENGTH 400mm. STAINLESS STEEL M16.

CAST IRON/STEEL BOLLARD

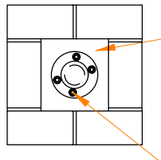
SECTION



ENGINEERING BRICK OR STONE TRIM. TYPE OF TRIM SHOULD MATCH THAT HISTORICALLY USED ON THE PARTICULAR CANAL. SEE WP FOR SURROUND TYPE AND PATTERN. CONCRETE VISIBLE AT THE SURFACE SHOULD BE MINIMISED. BRICKS/STONE SETTS LAID ON 30mm MORTAR BEDS.



SURFACE SHOULD BE FLUSH TO AVOID WATER AND SILT COLLECTION.



CONCRETE MORTAR INFILL AROUND BOLLARD BASE FINISHED FLUSH WITH BASE AND SURROUNDINGS

BOLT HOLES TO BE FILLED WITH EXTERIOR GRADE PAINTABLE MASTIC FINISHED FLUSH WITH SURFACE PRIOR TO PAINTING

PLAN

Notes:

1. Do not scale from this drawing.
2. All dimensions are in millimetres unless otherwise shown.
3. Drawing should be read in conjunction with all other drawings and the Works Package (WP).
4. During the planning of work the assessment of risks from overhead and underground services must be undertaken.
5. All works are to be carried out in accordance with the Canal & River Trust Civil Engineering Specification.
6. All timber to be FSC and pressure treated.
7. For location and spacing's between bollards/rings refer to CRT's Safety Customer Service Standards and Lock Bollards - Guidance Note. Location and spacing between bollards should be included in the WP.
8. Care should be taken when specifying the location of bollards/rings. Ensure that they do not encroach upon the towpath where the towpath is narrow potentially creating trip hazards.
9. Bollard Installation may require LBC. Refer to the CRT Heritage Advisor.
10. Cast iron/steel bollards may have a painted finish. See WP for paint specification.
11. Timber bollards should not be painted.

Rev	Date	Description	Sig	Check
C01	10.2023	Review of Standard Details inc. new drawing template	AH	SH
-	05.2021	Initial issue	AMB	SH

Revisions:

Canal & River Trust

Design & Development

Project: TRUST STANDARD DETAILS

Drawing Title: BOLLARD/MOORING RING DETAIL FOUNDATION & SURROUND SPECIFICATION

Original Size:	Project Number:
A3	
Drawn By: AMB	Checked By: SH
Drg Scale (A3) 1:20	Date: OCT 2023
Status: A1	Rev. C01

Drg. No. STD-CRT-ZZ-ZZ-04-DR-C-01

File Location: C:\Users\ahigginson\Canal & River Trust\Design & Development Team - West Midlands\New Standard details 2023\DWG Drafts\STD-CRT-ZZ-ZZ-04-DR-C-01 Bollards and Mooring Rings Concrete Foundation Detail.dwg

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