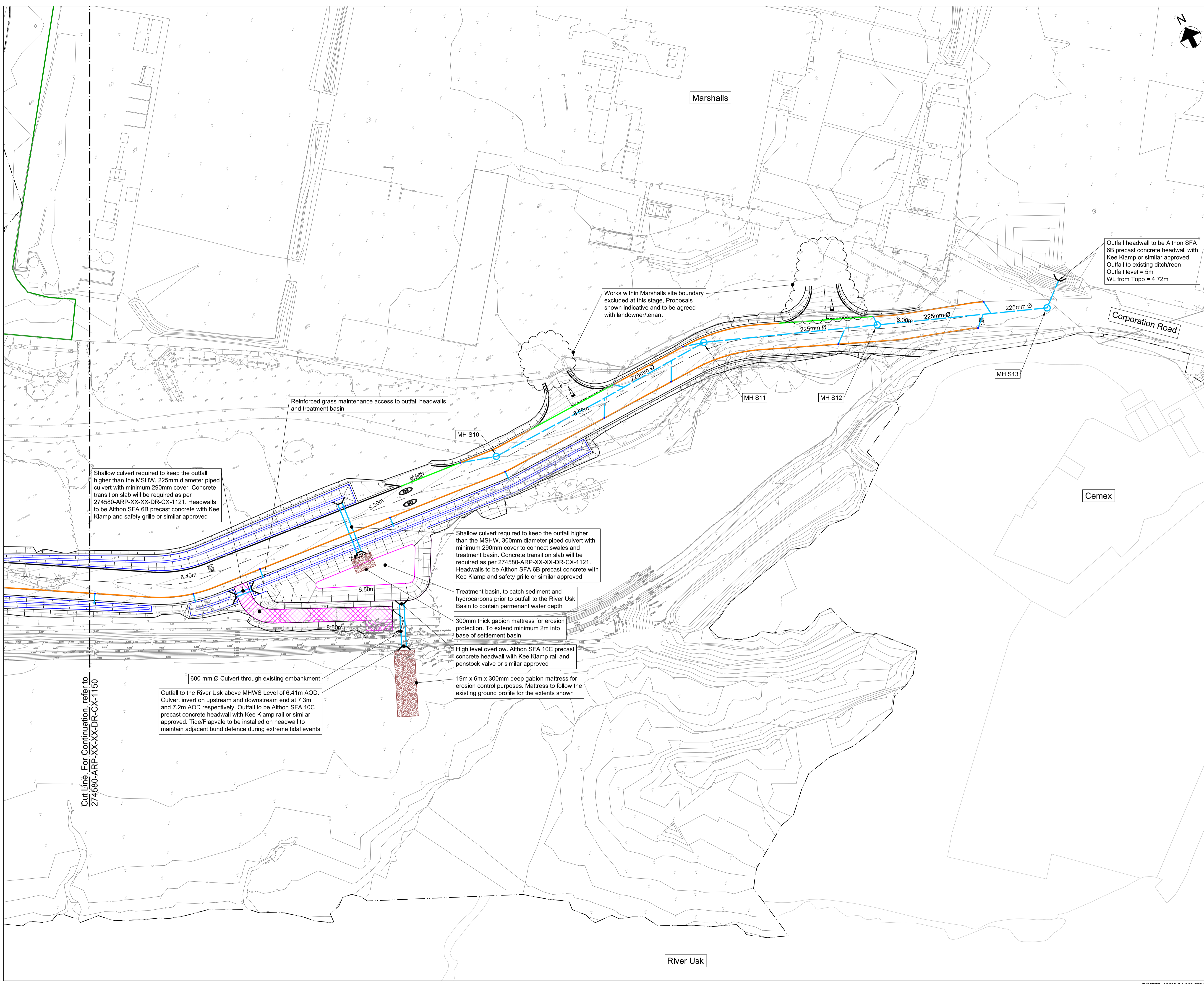


Legend

- Topographical Survey Boundary
- Flood Defence Structure
- 7.00m Contours
- Existing Utilities
- Proposed Storm Drainage
- Proposed Storm Manhole
- Proposed Storm Gully
- Proposed Storm Culvert
- Proposed Attenuation Pond
- Proposed Storm Headwall
- Proposed Swale
- Proposed Kerb Drainage ACO 305 or equivalent
- Proposed Kerb Drainage Outlet
- Proposed Catchpit
- Proposed Filter Drain to MCHW HCD F2 Type I
- Reinforced grass, Geosynthetic Turfmesh 4 or equivalent
- Linear Drainage Channel with load rating F900, ACO RoadDrain or equivalent

- Notes**
1. Do not scale from this drawing
 2. All dimensions are in metres unless noted otherwise.
 3. The details shown on this drawing are based on a RIBA Stage 4 design for approval produced for a detailed planning application. The highway design shown is for adoption by Newport City Council and subject to design approval. The details will need to be reviewed and revised during subsequent design stages.
 4. The topographical survey details shown within the topographical survey boundary has been provided by Natural Resources Wales (NRW) on 05/08/2020 from a survey completed by John Vincent Surveys LTD in July 2020. The survey information outside the boundary is a combination of surveys received from NRW as part of the original tender. No responsibility can be given for the accuracy of these surveys.
 5. Refer to all other Engineering and Architects Drawings and notify the Civil Engineer of any discrepancies.
 6. This drawing is to be read with all other Engineers drawings and specifications.
 7. All manholes to be SFA Type 2, 1200mm diameter unless otherwise stated. Nominal 1.2m depth to pipe soffit unless stated otherwise.
 8. All grating and covers to be D400 unless otherwise stated.
 9. Concrete surround to be provided to all pipes where depth to soffit is less than 1.2m in trafficked areas.
 10. All storm pipes to be 150mm diameter respectively or unless otherwise stated.
 11. Proposals shown subject to SAB Approval therefore subject to change.
 12. All manhole pipe connections to be soffit to soffit.
 13. Refer to drawings 274580-ARP-XX-XX-DR-CX-1153 to 1154 for details and 274580-ARP-XX-XX-DR-CX-1152 for catchment extents.
 14. Details shown for the proposed highway and accompanying drainage infrastructure. No allowance shown for the proposed flood defence works.
 15. Narrow filter drainage for pavement layers required, however not shown. Narrow filter drains to be in accordance with SHW Highway Construction Details F20.
 16. All proprietary products to be installed to manufacturers requirements.



Shallow culvert required to keep the outfall higher than the MSHW. 225mm diameter piped culvert with minimum 290mm cover. Concrete transition slab will be required as per 274580-ARP-XX-XX-DR-CX-1121. Headwalls to be Althon SFA 6B precast concrete with Kee Klamp and safety grille or similar approved

Reinforced grass maintenance access to outfall headwalls and treatment basin

Shallow culvert required to keep the outfall higher than the MSHW. 300mm diameter piped culvert with minimum 290mm cover to connect swales and treatment basin. Concrete transition slab will be required as per 274580-ARP-XX-XX-DR-CX-1121. Headwalls to be Althon SFA 6B precast concrete with Kee Klamp and safety grille or similar approved

Treatment basin, to catch sediment and hydrocarbons prior to outfall to the River Usk Basin to contain permanent water depth

300mm thick gabion mattress for erosion protection. To extend minimum 2m into base of settlement basin

High level overflow. Althon SFA 10C precast concrete headwall with Kee Klamp rail and penstock valve or similar approved

19m x 6m x 300mm deep gabion mattress for erosion control purposes. Mattress to follow the existing ground profile for the extents shown

600 mm Ø Culvert through existing embankment
 Outfall to the River Usk above MHSW Level of 6.41m AOD. Culvert invert on upstream and downstream end at 7.3m and 7.2m AOD respectively. Outfall to be Althon SFA 10C precast concrete headwall with Kee Klamp rail or similar approved. Tide/Flapvale to be installed on headwall to maintain adjacent bund defence during extreme tidal events

Works within Marshalls site boundary excluded at this stage. Proposals shown indicative and to be agreed with landowner/tenant

Outfall headwall to be Althon SFA 6B precast concrete headwall with Kee Klamp or similar approved. Outfall to existing ditch/reen. Outfall level = 5m. WL from Topo = 4.72m

Cut Line. For Continuation, refer to 274580-ARP-XX-XX-DR-CX-1150

P03	REVISED FOR PLANNING RESUBMISSION	CB	CL	DL	25/06/21
P02	ISSUED FOR TENDER	CB	CL	DL	11/05/21
P01	ISSUED FOR PLANNING	CB	SW	SW	24/02/21
Rev.	Description	Drawn	Chkd.	Appd.	Issue Date

Cyfoeth Naturiol Cymru
Natural Resources Wales

ARUP

Project Name:
 STEPHENSON STREET FLOOD DEFENCE SCHEME

Drawing Title:
 EAST BANK ROAD
 PROPOSED HIGHWAY DRAINAGE
 SHEET 2 OF 2

Subsidiary:
 D2 - FOR TENDER

Internal Project Number:
 274580

Scale:
 1:500

Rev.
 P03

Drawing Number:
 274580-ARP-XX-XX-DR-CX-1151