

FINAL

CHAPEL REEN

Water Framework Directive Compliance
Screening Assessment

Project no. 4021359

Prepared for:

Natural Resources Wales

March 2024



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Project no. 4021359

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Executive Summary

The proposed works at Chappel Reen outfall are screened into the next stage for WFD Compliance assessment. The next stage of assessment is scoping. The items of the scheme screened in for WFD compliance scoping assessment on the waterbodies Monks Ditch - source to Wainbridge and Severn Lower are:

Monks Ditch – source to Wainbridge

- (a) **Maintenance of existing structures** - Upgrading the existing tidal flap valves and installation of new mechanical lifting equipment.

Monks Ditch – source to Wainbridge and Severn Lower

- (a) **Temporary flow diversion (fish/eel passage impeded)** – The implementation of dam and over-pumping pipe to facilitate bed reinforcement.
- (b) **Sheet piling** - Replacement of a 12.6 m plan length of existing and failed retaining walls on both sides of the outfall with steel sheet piled retaining walls of up to -6 m relative to Ordnance Datum (OD) (Newlyn) (an approximate pile length of 12 m). The sheet pile walls will be behind the existing retaining walls, within the area of profiled ground between the headwall and the Reen channel. The temporary works currently located within the channel will be removed, along with the remnants of the failed existing walls and slumped soils. Ground level will be reinstated around the downstream end of the new structure to tie-in with existing levels.

Due to the nature of piling works there is some uncertainty on the embedment depth that can be reached during the works. The drawings submitted with this application show the assumed worst case scenario on site – this comprises a retained height of approximately 3.5m - 4m and the installation of four 7.5m long structural steel universal columns between 6.5 and 7.5mAOD to prop the sheet piles. If possible during the works, the number of steel universal columns and the retained height will be reduced and the surrounding ground reprofiled and reinstated accordingly. The ground profile behind the piles will not exceed a 1 in 2 slope.

- (c) **Bed reinforcement** - Replacement of a 12.6 m plan length of existing masonry channel (invert) bed with a reinforced concrete bed.
- (d) **Outfall** – Reinstatement of the effluent pipe from the Farmers Arms pub to its original position, which was relocated as part of the emergency works.

Severn Lower

- (a) **Outfall** – Repairs to the upstream face of the outfall structure consisting of revegetation of the wall and masonry works.

2. Introduction

2.1 Background

Binnies UK Limited (BUKL) has been appointed by Natural Resources Wales (NRW) to undertake the Water Framework Directive (WFD) compliance screening assessment for remediation works for Chapel Reen outfall. Chapel Reen is within the Newport Wetlands National Nature Reserve (NNR) site in the Caldicot Levels, located between the city of Newport and the Severn estuary, in the village of Goldcliff. The site is located in a rural area, at central Ordnance Survey (OS) grid reference ST 36678 83023. Chapel Reen will hereafter be referred to as the 'Scheme'.

The purpose of the Scheme is to restore the sea defence known as 'Fisher's Gout Sea Door' which reduces flood risk to Goldcliff by restricting the movement of estuarine water from Severn Estuary into the Reen system and preserves important inland freshwater habitats from seawater ingress. The Chapel Reen structure's primary function is flood defence. The sea door structure consists of two masonry culverts and a headwall which spans the width of the Reen, the headwall is shaped to channel flows down the culverts through the manually operated, cable-controlled flap valves. The outfall is operated and maintained by Natural Resources Wales (NRW), the Client. A retaining wall collapsed during the winter of 2020. Emergency temporary works were installed between July 2021 and March 2022 consisting of:

- (a) Installing two number 0.9m diameter 6.8m long culverts within the original masonry arch.
- (b) In-filling the gap between the culverts and the arch intrados with mass concrete.
- (c) Constructing a new downstream headwall.
- (d) Installing trench boxes downstream of the headwall and dumpy gravel bags at the downstream ends of the trench boxes.
- (e) Providing a ladder access on the right bank and temporarily diverting the effluent discharge from the Farmer's Arms public house on the right bank to the downstream end of the trench boxes.

The Scheme covers an area of approximately 0.163 ha. The activities that will need to be carried out to deliver the Scheme will hereafter be referred to as the 'Proposed Works'. The spatial extent within which the Proposed Works will be carried out, i.e. the Boundaries of the Site, is hereafter referred to as the 'Scheme Area'. This is shown on Figure 1 in Appendix A.

2.2 Scope of the report

The report follows the NRW guidance OGN 72, including the associated annexes. The scope of the report is to screen the Proposed Works of the Scheme for WFD compliance. Scoping assessment and further assessment are not included within the scope of this report.

3. Stage 1: Screening

3.1 Stage 1, Step 1: proposal details.

Project details where NRW is the project proponent/instigator	
NRW Project reference	CE0626
Type of scheme	The purpose of the project is to repair the Chapel Reen Outfall.
What ongoing maintenance work will be required? All structures will require maintenance	The project is expected to be managed, operated and maintained for a service life of 50 years. Maintenance of the outfall will be required, and is anticipated to comprise: (a) Clearance of debris from around the flap valves, effluent pipe outfall, ladder and concrete base slab. (b) Flailing of embankments each side of the Reen. (c) Replacement of the mastic sealants in the concrete base slab. (d) Repointing of the mortar joints in the masonry outfall structure. (e) Replace scour protection at the downstream end of the sheet piles. (f) Clearing of the sheet pile back of wall drainage. (g) Maintain the effluent pipe outfall.
Breakdown of physical works involved (e.g. new weir, bank reinforcement, riparian vegetation management)	The scheme comprises: (a) Upgrading the existing tidal flap valves and installation of new mechanical lifting equipment. (b) Repairs to the upstream face of the outfall structure consisting of de-vegetation of the wall and masonry works. (c) Reinstatement of the effluent pipe from the Farmers Arms pub to its original position, which was relocated as part of the emergency works.

	(d) Replacement of a 12.6m plan length of existing and failed retaining walls on both sides of the outfall with steel sheet piled retaining walls of depths up to approximately -6m relative to Ordnance Datum (OD) (Newlyn) (an approximate pile length of 12m). The sheet pile walls will be behind the existing retaining walls, within the area of profiled ground between the head wall and the channel. The temporary works currently located within the channel will be removed, along with the remnants of the failed existing walls and slumped soils. Ground level will be reinstated around the downstream end of the new structure to tie-in with existing levels. (e) Installation of steel/reinforced concrete capping beam to the piles. (f) Installation of 7.5m long structural steel universal columns to prop the sheet piles. Replacement of a 12.6m plan length of existing masonry channel (invert) bed with a reinforced concrete bed. Due to the nature of piling works, there is some uncertainty on the embedment depth that can be reached. The drawings submitted as part of the marine licence application show the assumed worst case scenario on site (Drawing References 4021359-BUK-ZZ-00-DR-C-00002, 4021359-BUK-ZZ-00-DR-C-00001, 4021359-BUK-ZZ-00-DR-C-00010 and 4021359-BUK-ZZ-00-DR-C-00009). This comprises a retained height of approximately 3.5m - 4m and the installation of four 7.5m long structural steel universal columns between 6.5 and 7.5mAOD to prop the sheet piles. If possible, during the works, the number of steel universal columns and the retained height will be reduced and the surrounding ground reprofiled and reinstated accordingly. The ground profile behind the piles will not exceed a 1 in 2 slope. The construction compound, storage and parking area are to be located to the northwest of the outfall. Temporary water management will be used including the removal of flap valves from existing headwalls/pipes, installation of adapters and pipes to pump, then route these pipes downstream and install dam downstream and temporary flap valve.
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	Piling activities will then commence, using geobags and stockpiled materials inside trench boxes to create a level piling pad. Piling on the eastern row of sheet piling will then take place, then moving to the western side. Post piling, geobags and trench boxes will be removed, old walls will be cleared, and backfill/imported material will be removed. In addition, a full over-pumping setup downstream of the temporary dam will be in place to facilitate the pouring of a concrete slab. The existing flap valve to the existing headwall will then be reinstalled and the temporary dam and over-pumping setup will be removed.
Location of activity	The site is located in a rural area, at central Ordnance Survey (OS) grid reference ST 36678 83023. Start (upstream limit) - ST 36707 83029 End (downstream limit) - ST 36714 83009
Length / size of works (m)	The total estimated length of the project is approximately 60m (measured from north to south) and the footprint of the works is approximately 2500 m² which encompasses all construction activities and site compound.
Estimated extent of footprint/impact of the works	The length of the in-channel works area is estimated at 25.2 m in length, with an approximate area of 150 m². Upstream of the reach, there will be no impact as a result of construction activities. However, it is anticipated that there may be temporary changes to the outfall and works channel which may impact the Chapel Reen waterbody downstream of the Outfall.
Timing of works	The works will be completed outside the main elver run period on the Severn Estuary (March to April) and outside of the wintering bird period (November to March).
Map of site included and scaled plan	Yes
Project documents	Site boundary: Appendix A: Figure 1 Drawings: - Site plan: 4021359-BUK-ZZ-00-DR-C-00002 - General arrangement: 4021359-BUK-ZZ-00-DR-C-00001 - Typical cross sections: 4021359-BUK-ZZ-00-DR-C-00010 - Long section: 4021359-BUK-ZZ-00-DR-C-00009

	- Pipe easement plan (Farmer's Arm effluent pipe): 4021359-BUK-ZZ-00-DR-C-00006
NRW team	The document has been drafted by Josh Francis (Binnies UK Ltd Water Environmental Scientist) on behalf of NRW.
Lead officer	David Jenkins
Date of assessment	March 2024

3.2 Stage 1, Step 2: Collate baseline information on all water bodies at risk from the proposal.

Data of classification information: Cycle 3 2021

Water body ID	Water body name	Water body type	HMWB	Overall water body status	Morphology status*	Relevance to the proposal
GB109056026850	Monks Ditch - source to Wainbridge	River	Artificial	Moderate	No status	The proposal is along Chapel Reen which is not a designated WFD waterbody, however, the works lie within the Monks Ditch- Source to Wainbridge river catchment. Therefore, there is potential risk from the proposed activities.
GB40902G201700	Usk Devonian Old Red Sandstone	Groundwater	No	Good	N/A	The proposal is within this waterbody. There is potential risk from the proposed activities.
GB530905415401	Severn Lower	Transitional	Heavily Modified	Moderate	No Status	The proposal is within this waterbody. There is potential risk from the proposed activities.

*where there is no information, or a null value then assume it is at good status for morphology (or hydromorphology for TraC water bodies) or, if the water body is designated HMWB the morphological status is **not applicable (please be aware that these water bodies are still sensitive to physical modifications)**.

There are no further waterbodies that are at potential risk from the proposed activities.

3.3 Stage 1, Step 3: Risk Screening - complete for each water body listed above that is either in the water body or hydrologically linked with potential risk

Water body name: Monks Ditch - source to Wainbridge Water body ID: GB109056026850			
Question number	Risk screening questions	Name of activity	Screening decision – delete as appropriate
Q1.1	Is the proposal in a water body at high status or high status for morphology or hydromorphology?	N/A	No – go to Q1.2
Q1.2	Is the activity listed in Annex D as a green activity? Complete new row for each activity	Maintenance of existing structures - <i>Upgrading the existing tidal flap valves and installation of new mechanical lifting equipment.</i>	No – Complete scoping assessment for this water body. Replacement of tidal flaps and mechanical lifting equipment is not detailed as a green activity in table D2 or D3 of 'OGN 72 Annex D'.
		Temporary flow diversion (fish/eel passage impeded) – <i>The implementation of dam and over-pumping pipe to facilitate bed reinforcement.</i>	No – Complete scoping assessment for this water body. Temporary flow diversion will impede fish and eel passage is not detailed as green activity in table D3 of 'OGN 72 Annex D'.
		Sheet Piling – <i>Replacement of a 12.6 m plan length of existing and failed retaining walls on both sides of the outfall with steel sheet piled to full depth (an approximate pile length of 12 m). The sheet pile walls will be behind the existing retaining walls, within the area of profiled ground between the head wall and the channel. The temporary works currently located within the channel will be removed,</i>	No – Complete scoping assessment for this water body. Bank reinforcement. Noted red in table D3 of 'OGN 72 Annex D'.

Water body name: Monks Ditch - source to Wainbridge

Water body ID: GB109056026850

Question number	Risk screening questions	Name of activity	Screening decision – delete as appropriate
		<i>along with the remnants of the failed existing walls and slumped soils.</i>	
		Bed reinforcement – Replacement of a 12.6 m plan length of existing masonry channel (invert) bed with a reinforced concrete bed.	No – Complete scoping assessment for this water body. Bed reinforcement noted red in table D3 of 'OGN 72 Annex D'.
		Outfall – Repairs to the upstream face of the outfall structure consisting of revegetation of the wall and masonry works, temporary scaffolding will be required for <6 months	Yes – Screened out for scoping assessment for this water body. 'Removal of localised vegetation e.g. young trees, shrubs and grass that may affect structural stability/integrity of the structure' and 'Like for like maintenance and repair e.g. repointing' are green activities in table D3 of 'OGN 72 Annex D').
		Outfall – Reinstatement of the effluent pipe from the Farmers Arms pub to its original position, which was relocated as part of the emergency works.	No – Does not meet criteria for a Green activity in table D2 and D3 of 'OGN 72 Annex D'. Complete scoping assessment for this water body, it is noted for this scoping assessment that this is an existing effluent pipe
Q1.3	Are there any potential cumulative/in combination impacts? Or is there Local Expert Override*?	No	No – go to Q1.4

Water body name: Monks Ditch - source to Wainbridge

Water body ID: GB109056026850

Question number	Risk screening questions	Name of activity	Screening decision – delete as appropriate
Q1.4	Is the water body at Good overall status?	No	No - Go to Q1.5
Q1.5	Record best practice measures that the works include to help achieve the objectives of the water body.	The following best practice measures will be adhered to during the work: • The works will be undertaken by an NRW framework contractor who will implement best practice techniques to control pollution, siltation, and the spread of INNS (Invasive and Non-Native Species) at the source and to ensure measures to prevent it from spreading are in place. Method statements will be agreed upon before the works by NRW. • The works will be completed outside the main elver run period on the Severn Estuary (March to April) and outside of the wintering bird period (November to February). • Best-practice guidelines (GPP5: Works and maintenance in or near water, Version 1.2, 2018) will be followed as a minimum to prevent potential adverse effects from pollution and the spread of invasive non-native species. • Method statements will be approved by NRW before works start and will include mitigation for accidental fuel spills and implementation of pollution controls including: ○ The use of readily biodegradable oils and lubricants within all hydraulic equipment and machinery ○ Siting of refuelling areas and storage of machinery and equipment outside of the designated sites (Wildlife sites and Scheduled Monuments) and away from water courses ○ All plant will be equipped with plant nappies and spill kits ○ Refuelling of plant and machinery will be carried out at least 15m away from watercourses in bunded area ○ Silt control measures, including the use of a waterproof material surrounded by sandbags to be used to store excavated material to prevent silt runoff, to be deployed in working areas close to the watercourses and drainage systems.	

Water body name: Usk Devonian Old Red Sandstone Water body ID: GB40902G201700			
Question number	Risk screening questions	Name of activity	Screening decision – delete as appropriate
Q1.1	Is the proposal in a water body at high status or high status for morphology or hydromorphology?	No	No – go to Q1.2
Q1.2	Is the activity listed in Annex D as a green activity? Complete new row for each activity	Maintenance of existing structures - Upgrading the existing tidal flap valves and installation of new mechanical lifting equipment.	No – Does not meet criteria for a Green activity in table D2 and D3 of 'OGN 72 Annex D', however, there will be no risk to this groundwater body from this activity, therefore, this activity can be screened out from further assessment .
		Temporary flow diversion (fish/eel passage impeded) – The implementation of dam and over-pumping pipe to facilitate bed reinforcement.	No – Does not meet criteria for a Green activity in table D2 and D3 of 'OGN 72 Annex D', however, there will be no risk to this groundwater body from this activity, therefore, this activity can be screened out from further assessment .
		Sheet Piling – Replacement of a 12.6 m plan length of existing and failed retaining walls on both sides of the outfall with steel sheet piled to full depth (an approximate pile length of 12 m). The sheet pile walls will be behind the existing retaining walls, within the area of profiled ground between the head wall and the channel. The temporary works currently located within the channel will be removed, along with the remnants of the failed existing walls and slumped soils.	No – Does not meet criteria for a Green activity in table D2 and D3 of 'OGN 72 Annex D', there will be no risk to this groundwater body from this activity due to the scale of the works in relation to the size of the groundwater body. Therefore, this activity can be screened out from further assessment .

Water body name: Usk Devonian Old Red Sandstone Water body ID: GB40902G201700			
Question number	Risk screening questions	Name of activity	Screening decision – delete as appropriate
		Bed reinforcement – Replacement of a 12.6m plan length of existing masonry channel (invert) bed with a reinforced concrete bed.	No – Does not meet criteria for a Green activity in table D2 and D3 of 'OGN 72 Annex D', however, there will be no risk to this groundwater body from this activity due to the scale of the works in relation to the size of the groundwater body. Therefore, this activity can be screened out from further assessment .
		Outfall – Repairs to the upstream face of the outfall structure consisting of revegetation of the wall and masonry works	Yes – Screened out for scoping assessment for this water body. 'Removal of localised vegetation e.g. young trees, shrubs and grass that may affect structural stability/integrity of the structure' and 'Like for like maintenance and repair e.g. repointing' are green activities in table D3 of 'OGN 72 Annex D'.
		Outfall – Reinstatement of the effluent pipe from the Farmers Arms pub to its original position, which was relocated as part of the emergency works.	No – Does not meet criteria for a Green activity in table D2 and D3 of 'OGN 72 Annex D', however, there will be no risk to this groundwater body from this activity, therefore, this activity can be screened out from further assessment .
Q1.3	Are there any potential cumulative/in combination impacts? Or is there Local Expert Override*?	NA	NA
Q1.4	Is the water body at Good overall status?	Yes	NA
Q1.5	Record best practice measures that the works include to help	The following best practice measures will be adhered to during the work: The works will be undertaken by an NRW framework contractor who will implement best practice techniques to control pollution, siltation, and the spread of INNS at the source and	

Water body name: Usk Devonian Old Red Sandstone

Water body ID: GB40902G201700

Question number	Risk screening questions	Name of activity	Screening decision – delete as appropriate
	achieve the objectives of the water body.	to ensure measures to prevent it from spreading are in place. Method statements will be agreed upon before the works by NRW. • Best-practice guidelines (GPP5: Works and maintenance in or near water, Version 1.2, 2018, 'Protect groundwater and prevent groundwater pollution' guidance) will be followed as a minimum to prevent potential adverse effects from pollution to groundwater. • Method statements will be approved by NRW before works start and will include mitigation for accidental fuel spills and implementation of pollution controls including: ○ The use of readily biodegradable oils and lubricants within all hydraulic equipment and machinery ○ Siting of refuelling areas and storage of machinery and equipment outside of the designated sites (Wildlife sites and Scheduled Monuments) and away from water courses ○ All plant will be equipped with plant nappies and spill kits. ○ Refuelling of plant and machinery will be carried out at least 15m away from watercourses in bunded area. ○ Silt control measures, including the use of a waterproof material surrounded by sandbags to be used to store excavated material to prevent silt runoff, to be deployed in working areas close to the watercourses and drainage systems.	

*Expert judgement may be required i.e. for complex or cumulative interactions; or a particularly sensitive site/activity (including target water bodies).

Water body name: Severn Lower Water body ID: GB530905415401			
Question number	Risk screening questions	Name of activity	Screening decision – delete as appropriate
Q1.1	Is the proposal in a water body at high status or high status for morphology or hydromorphology?	N/A	No – go to Q1.2
Q1.2	Is the activity listed in Annex D as a green activity? Complete new row for each activity	Maintenance of existing structures - Upgrading the existing tidal flap valves and installation of new mechanical lifting equipment.	Yes – Go to Q1.3. Replacement of flaps is a band 1 marine licensing activity.
		Temporary flow diversion (fish/eel passage impeded) – The implementation of dam and over-pumping pipe to facilitate bed reinforcement.	No – Complete scoping assessment for this water body. Temporary flow diversion will impede fish and eel passage is not detailed as green activity in table D3 of 'OGN 72 Annex D'.
		Sheet Piling – Replacement of a 12.6 m plan length of existing and failed retaining walls on both sides of the outfall with steel sheet piled to full depth (an approximate pile length of 12 m). The sheet pile walls will be behind the existing retaining walls, within the area of profiled ground between the head wall and the channel. The temporary works currently located within the channel will be removed, along with the remnants of the failed existing walls and slumped soils.	No – Complete scoping assessment for this water body. Bank reinforcement. Noted red in table D3 of 'OGN 72 Annex D'.
		Bed reinforcement – Replacement of a 12.6 m plan length of existing masonry	No – Complete scoping assessment for this water body. Bed reinforcement. Noted red in table D3 of 'OGN 72 Annex D'.

Water body name: Severn Lower Water body ID: GB530905415401			
Question number	Risk screening questions	Name of activity	Screening decision – delete as appropriate
		<i>channel (invert) bed with a reinforced concrete bed.</i>	
		Outfall – Repairs to the upstream face of the outfall structure consisting of devegetation of the wall and masonry works.	No – Complete scoping assessment for this water body. Does not meet criteria for table D1 of 'OGN 72 Annex D'.
		Outfall – Reinstatement of the effluent pipe from the Farmers Arms pub to its original position, which was relocated as part of the emergency works.	No – Complete scoping assessment for this water body. Does not meet criteria for table D1 of 'OGN 72 Annex D'. It is noted for this scoping assessment that this is an existing effluent pipe
Q1.3	Are there any potential cumulative/in combination impacts? Or is there Local Expert Override*?	No	No – go to Q1.4
Q1.4	Is the water body at Good overall status?	No	No - Go to Q1.5
Q1.5	Record best practice measures that the works include to help achieve the objectives of the water body.	The following best practice measures will be adhered to during the work: - The works will be undertaken by an NRW framework contractor who will implement best practice techniques to control pollution, siltation, and the spread of INNS (Invasive and Non-Native Species) at the source and to ensure measures to prevent it from spreading are in place. Method statements will be agreed upon before the works by NRW. - The works will be carried out outside of the main elver run period on the Severn Estuary, so between May – March 2024.	

Water body name: Severn Lower Water body ID: GB530905415401			
Question number	Risk screening questions	Name of activity	Screening decision – delete as appropriate
		• Best-practice guidelines (GPP5: Works and maintenance in or near water, Version 1.2, 2018) will be followed as a minimum to prevent potential adverse effects from pollution and the spread of invasive non-native species. • Method statements will be approved by NRW before works start and will include mitigation for accidental fuel spills and implementation of pollution controls including: ○ The use of readily biodegradable oils and lubricants within all hydraulic equipment and machinery ○ Siting of refuelling areas and storage of machinery and equipment outside of the designated sites (Wildlife sites and Scheduled Monuments) and away from water courses ○ All plant will be equipped with plant nappies and spill kits ○ Refuelling of plant and machinery will be carried out at least 15m away from watercourses in bunded area ○ Silt control measures, including the use of a waterproof material surrounded by sandbags to be used to store excavated material to prevent silt runoff, to be deployed in working areas close to the watercourses and drainage systems.	

*Expert judgement may be required i.e. for complex or cumulative interactions; or a particularly sensitive site/activity (including target water bodies).

APPENDICES

Appendix A: Drawings

Figure 1: Site Location

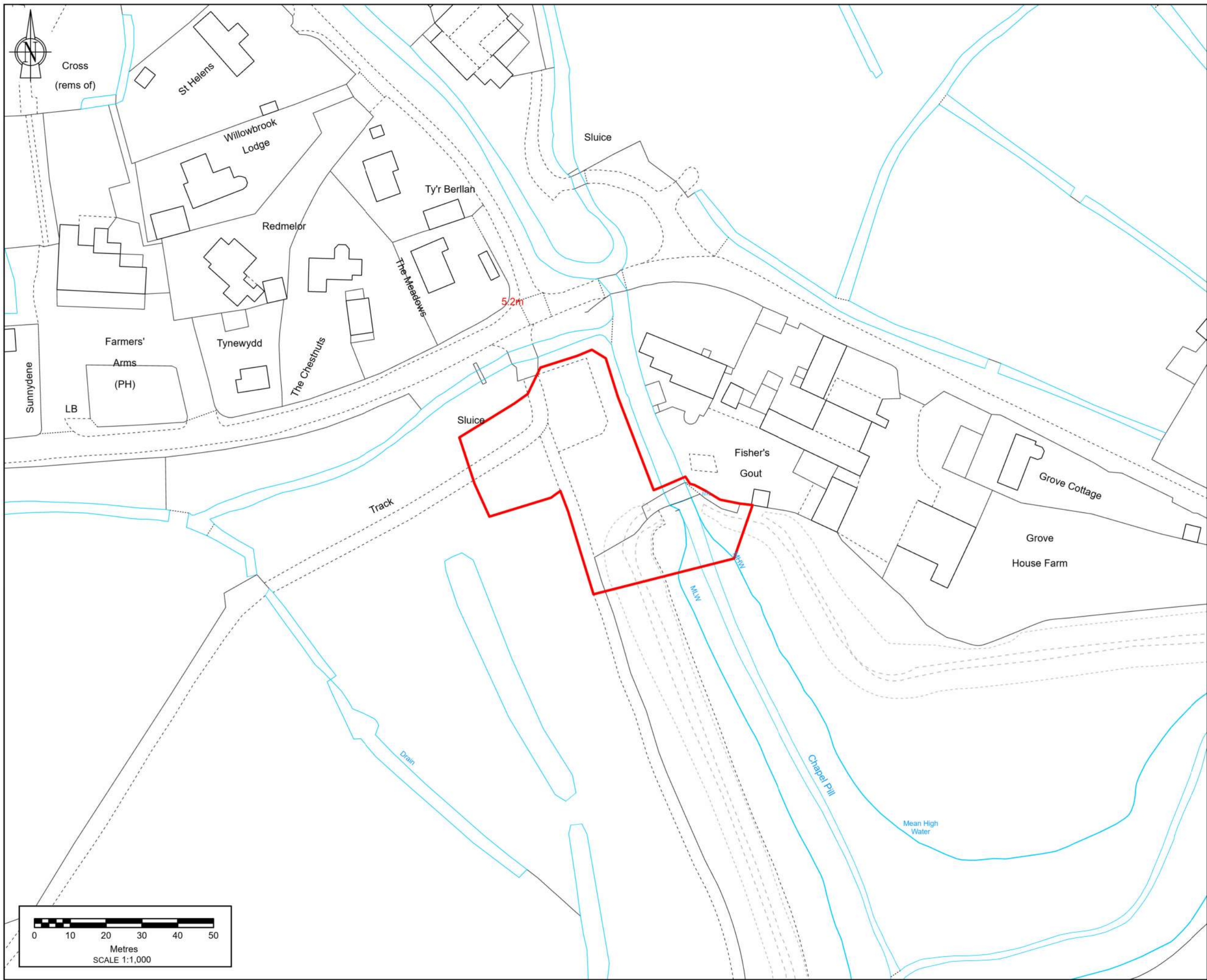
See drawing reference '4021359-BUK-ZZ-00-DR-EN-00002'

Figure 2: WFD Surface Water Body

See drawing reference '4021359-BUK-ZZ-00-DR-EN-00003'.

Figure 3: WFD Groundwater Body

See drawing reference '4021359-BUK-ZZ-00-DR-EN-00004'.



Note: The limits, including the height and depths of the Works, shown in this drawing are not to be taken as limiting the obligations of the contractor under Contract.

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LEGEND

— BOUNDARIES OF THE SITE



SAFETY HEALTH AND ENVIRONMENT INFORMATION

IN ADDITION TO THE HAZARDS OR RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, THE FOLLOWING SIGNIFICANT RESIDUAL RISKS SHOULD BE NOTED. FURTHER DETAILS ARE INCLUDED IN THE CDM DESIGN RISK MANAGEMENT REGISTER.

CONSTRUCTION
NOT APPLICABLE
MAINTENANCE / CLEARING / OPERATION
NOT APPLICABLE
DECOMMISSIONING / DEMOLITION
NOT APPLICABLE

Rev	Drawn	Chkd	Rev'd	Approved	Date	Description
P02	TW	JH	EN	ET	07/02/2024	FOR INFORMATION
P01	AP	JH	EN	ET	20/12/2023	FOR INFORMATION

Designed by: AP Date: DEC 2023

Client:



Client Drawing No. CE0626 Revision



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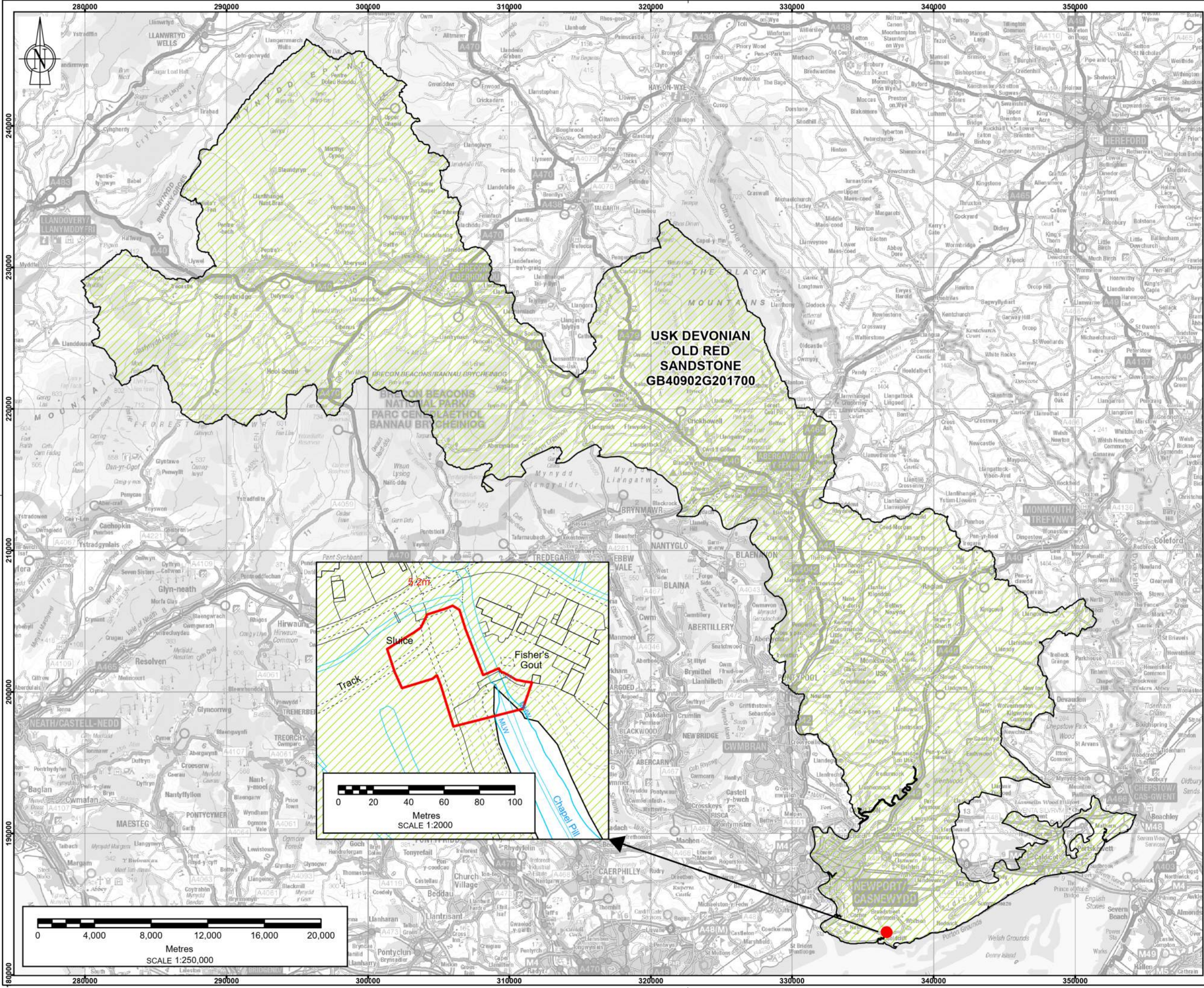
Project: CHAPEL REEN

Drawing title:

WFD ASSESSMENT -
SITE LOCATION MAP

Drawing scale: 1:1,000 Sheet size: A3

Drawing no. 4021359-BUK-ZZ-00-DR-EN-00002 Revision P02



Note: The limits, including the height and depths of the Works, shown in this drawing are not to be taken as limiting the obligations of the contractor under Contract.

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LEGEND

- BOUNDARIES OF THE SITE
- WFD GROUNDWATER BODY

Wales
Cardiff

SAFETY HEALTH AND ENVIRONMENT INFORMATION

IN ADDITION TO THE HAZARDS OR RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, THE FOLLOWING SIGNIFICANT RESIDUAL RISKS SHOULD BE NOTED. FURTHER DETAILS ARE INCLUDED IN THE CDM DESIGN RISK MANAGEMENT REGISTER

CONSTRUCTION						
NOT APPLICABLE						
MAINTENANCE / CLEARING / OPERATION						
NOT APPLICABLE						
DECOMMISSIONING / DEMOLITION						
NOT APPLICABLE						

P02	AP	JH	EN	ET	07/02/2024	FOR INFORMATION
P01	AP	JH	EN	ET	20/12/2023	FOR INFORMATION

Rev	Drawn	Chkd	Rev'd	App'd	Date	Description

Designed by: AP
Client: _____
Date: DECEMBER 2023

Cyfoeth Naturiol Cymru
Natural Resources Wales

Client Drawing No: CE0626
Revision: P02

Binnies UK Limited
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Project: CHAPEL REEN

Drawing title: WFD ASSESSMENT - WFD GROUNDWATER BODIES

Drawing scale: 1:250,000
Sheet size: A3
Drawing no: 4021359-BUK-ZZ-00-DR-EN-00004
Revision: P01