Herefordshire Council

WORKS INFORMATION & SPECIFICATION

BB0148 Kinnersley Bridge

70085416-WSP-SBR-WI-RP-CB-00401
APRIL2022

CONFIDENTIAL

Herefordshire Council

WORKS INFORMATION & SPECIFICATION

BB0148 Kinnersley Bridge

TYPE OF DOCUMENT (VERSION) CONFIDENTIAL

PROJECT NO. 70085416

OUR REF. NO. 70085416-WSP-SBR-WI-RP-CB-00401

DATE: APRIL2022

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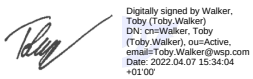
QUALITY CONTROL

Issue/revision	First issue	Revision 1	Revision 2	Revision 3
Remarks	Client Review	Minor Amendments		
Date	Mar 22	April 22		
Prepared by	Vineeth Mylavarapu	Vineeth Mylavarapu		
Signature				
Checked by	Jade Mills	Jade Mills		
Signature				
Authorised by	Toby Walker	Toby Walker		
Signature		 Digitally signed by Walker, Toby (Toby.Walker) DN: cn=Walker, Toby (Toby.Walker), ou=Active, email=Toby.Walker@wsp.com Date: 2022.04.07 15:34:04 +01'00'		
Project number	70085416	70085416		
Report number	70085416-WSP-SBR-WI-RP-CB-00401	70085416-WSP-SBR-WI-RP-CB-00401		
File reference				

CONTENTS

APPENDICES

1 WORKS INFORMATION

1.1 WORKS DESCRIPTION

For details set out within the works description please refer to drawing number 70085416-WSP-SBR-SWI-DE-CB-00402 Proposed General Arrangement.

TEMPORARY / PRELIMINARY WORKS

Road Closure / Welfare Facilities:

The works will involve the establishment of a road closure with accompanying traffic management signs, in accordance with Chapter 8. Once the traffic management is in place, the welfare facilities and site cabins will be erected for the duration of the works.

Footbridge / Working Platform:

Preliminary works will be carried out prior to the saddle strengthening, which include installing a temporary pedestrian footbridge (if required). The temporary footbridge is to be confirmed by the Principal Contractor prior to commencing work. Any platforms erected are to be above the existing barrel intrados, to ensure the hydraulic capacity is maintained.

Arch Supports:

Temporary supporting (centering) of the barrel intrados, using vertical and horizontal props, will be required to provide stability to the arch and abutments. All props are to be hand tightened and not over loaded (extended) causing displacement and additional forces on the arch.

All temporary supports to be designed by the Contractor.

Ecology / Ordinary Watercourse Consent:

A sheet system is to be installed beneath the arch barrel, prior to concrete works, to catch debris or wet concrete. A temporary environmental pollution boom will be installed downstream of the structure and monitored during high flows.

Letton Lake is connected to the River Wye 4km downstream from the Survey Area. The River Wye is an SAC. Due to the connectivity of the Survey Area to an SAC, a Habitats Regulations Screening Assessment (HRSA) will need to be undertaken in order to confirm whether the works would result in a Likely Significant Effect (LSE) on the functionality / integrity of the internationally designated site.

The bridge structure is considered to have a moderate suitability to support roosting bats. It is recommended that an additional survey of the bridge is carried out by a Natural England licensed bat worker in order to further determine the suitability of the features present to be used by bats. This could include intrusive checks using an endoscope. Depending on the results and whether access can be safely arranged, there may be a requirement to undertake bat emergence and/or re-entry surveys in the summer months.

The Survey Area was considered to have potential to support badger, bats, dormouse, reptiles, otter, nesting birds (including kingfisher), GCN, white-clawed crayfish and fish species.

It is recommended that the vegetation clearance is overseen by a suitably qualified ecologist, to allow for a pre-works badger, nesting bird and otter check, recommendations on sensitive clearance measures for reptiles and for GCN, and to implement associated avoidance measures should these

be encountered. These recommendations should be updated on confirmation on the exact clearance levels required.

Services:

All services are to be positively identified, located, and marked out. Known services include underground Welsh Water (WW) and Gigaclear Ltd (GCL) services and an overhead British Telecommunication (BT) service. All services must be positively identified prior to undertaking excavation works.

MAIN WORKS (SADDLE STRENGTHENING)

Once the surfacing material has been removed, the fill material is to be excavated in a controlled, balanced sequence, either side of the arch barrel down to the top of the abutments, with a 250mm maximum level difference either side, at any time **(Significant Risk Identified).**

All excavations are to be benched or battered back at a safe angle, to provide a safe working zone. Once complete, the exposed abutments, arch barrel are to be inspected by the supervising engineer for suitability. Excavation may be required behind the existing abutments, further than the proposed excavation shown on the sequence of excavation drawing, to provide better founding for the proposed concrete saddle. This will need to be carried out in 'hit and miss' bays, maximum 1m wide and backfilled with ST2 concrete, to ensure no movement of the abutments and therefore, prevent arch collapse **(Significant Risk Identified).**

Once the excavation works over the arch barrel are complete, the extrados of the arch barrel is to be reviewed, and mortar pointing undertaken where gaps are found. Large gaps will require stone and mortar. Ancon Staifix starter wall ties (or equally approved) are to be installed in to the inside face of the exposed spandrel wall, at 250mm by 250mm horizontal/vertical spacing, using Fosroc E35 anchor grout (or equally approved).

The A393 mesh will then be installed along the arch extrados and top of proposed saddle, with minimum cover (Cmin) 40mm, and nominal cover (Cnom) 50mm (Cnom = Cmin + $\triangle$c (10mm)). The cover may be increased due to the irregularities of the stone extrados. The in-situ concrete saddle will then be cast, using grade C32/40. This will follow a controlled balanced sequence of works, with maximum lifts of 250mm and a maximum difference in level either side of the arch of 250mm **(Significant Risk Identified).** 250mm level lines will be marked out on the inside face of the spandrel wall for concrete pour level guide. 25mm chamfers will be formed on all the horizontal edges, with a top U4 surface finish.

Once the concrete has cured, the exposed concrete of the saddle will be prepped, and waterproofed with a spray applied BBA approved waterproofing system over the top of the saddle and intrados, by a BBA approved contractor.

20mm thick bridge protection course is to be laid over the waterproofing and then a fluorescent orange indicator mesh (or equally approved) will be laid over the top.

The addition of 2No. new steel ducts (NAL or equally approved), to accommodate future services, will be installed within the verge. HB3 kerbs, with an ST2 concrete backing, will then be installed at the edge of the existing carriageway, with new ST2 concrete cast in the verge, with a U2 concrete finish.

The environmental spill boom and sheet system will then be removed. The carriageway will then be resurfaced to the existing levels.

The road will then be reopened.

The possible suggested sequence of construction is: -

Temporary / Preliminary Works:

- Set up advanced notice signing (2 weeks prior to works);
- Set up of traffic management, road closure and accompanying signs;
- Ecological walkover prior to works;
- Set up site compound and offices;
- Erect temporary footbridge (if required);
- Erect temporary working platforms;
- Install temporary propping system – Spandrel Walls;
- Install temporary propping system – Arch Barrel;
- Install temporary propping system – Abutments;
- Install sheeting system beneath the Arch Barrel;
- Review and abide by Ordinary Watercourse Consent and RAMS within the Ecological Report;
- Install temporary environmental pollution boom;
- Positively identify, and mark out all services (hand dig);
- Temporary support / divert services (if required);
- Rake out and repoint loose areas of mortar; and,
- Point areas of missing mortar.

Main Works (Saddle Strengthening):

- Excavate arch to expose arch barrel, excavation undertaken following a controlled balanced sequence of works;
- Point gaps within arch barrel;
- Drill and fix Ancon Staifix Starter Ties (or equally approved);
- Excavate behind abutment (if required) in 1m wide 'Hit and Miss' bays – depth 250mm;
- Install bent A393 mesh reinforcement;
- Cast C32/40 concrete in controlled sequence. Installed in lifts, max 250mm difference either side;
- Apply waterproofing by BBA approved contractor;
- Apply fluorescent orange indicator mesh or equally approved over 20mm thick SMA;
- Install 2No. steel ducting pipes (for future services);
- Install new HB3 kerbs with ST2 concrete backing;
- Cast new ST2 concrete verge;
- Re-lay carriageway surfacing;
- Paint white centreline;
- Remove temporary works;
- Remove environmental spill boom;
- Remove traffic management and site welfare; and,
- Open road to public.

The above possible suggested sequence of works is a potential sequence, and the overall final sequence of works is down to the Contractor and identified within their Construction Phase Plan.

The watercourse is classed as an ordinary watercourse; therefore, consultation and liaison has been carried out with Herefordshire Council for works consent.

Refer to Ordinary Watercourse Consent in Appendix B.

2 SPECIFICATION

2.1 CONCRETE

Appendix 17/1: Concrete

Reference	
Location	Saddle
Nominal Cover to reinforcement	40+ ∆c (10mm)
Minimum Cement Content (kg/m^3)	300
Maximum Cement Content (kg/m^3)	550
Compressive Strength Class of Concrete	C32/40
Max. Agg. Size	20
Exposure Class	XC3/4
Chloride Content Class	Cl 0,40
Structural Performance	High
DC Class	DC-1
Maximum Water / Cement Ratio	0.55
Consistency class	S3
Required Group or Type and Class of Cement	All in table A.6 except IVB-V
Required Source/Special Type of Aggregate	All aggregates shall be non-reactive A, B or C
Required Admixture	No
Air Entrainment Required	No
Sampling and Testing	See Appendix 17/1 – 1.
Other Requirements –	

Appendix 17/1 - 1: Concrete – Sampling and Testing

1. All batches are to be slump tested by Contractor. The contractor is also required to take 8 cubes in total for testing. Two cubes to be tested at 3 days, 7 days and 4No. at 28 days or at other dates as approved by the Overseeing Organisation.
2. The concrete shall conform to BS8500-1-2015.

Appendix 17/03: Concrete – Surface Finishes

1. Surface finishes for concrete formed surfaces to be: Class F2 finish to sides of saddle. See drawing series 00402 for details. A dense finish with no grout or mortar loss with the specified cover to embedded metal. The irregularities in the finish shall be no greater than those obtained from the use of wrought thickness square edge boards arranged in a uniform pattern. The finish is intended to be left as struck but imperfections such as fins and surface discolouration shall be made good.

2. Class U4 finish to top of saddle and U2 finish to top of verge.
    - Class U2 finish - The concrete shall be levelled and screeded to produce a uniform surface to the profile shown on the drawings. No further work shall be applied to the surface unless it is used as a first stage for another class of finish. After the concrete has hardened sufficiently, the Class U1 finish shall be floated by hand or machine sufficiently only to produce a uniform surface free from screed marks.

    - Class U4 finish - The concrete shall be levelled and screeded to produce a uniform surface. When the concrete has sufficiently hardened, and the bleed water evaporated the surface shall be trowelled to produce a hard-dense surface free from screed marks and exposed aggregate. Finally, the surface shall be lightly textured with a wooden float or equivalent. Alternatively, the concrete shall be levelled, screeded and floated to produce a uniform surface and immediately before the waterproofing operation this surface shall receive surface preparation by water jetting or grit blasting to provide a lightly textured finish. The finished surface shall not deviate from the required profile by more than 10 mm over a 3 m gauge length or have any abrupt irregularities more than 3 mm.

Concrete Finishes:

- Concrete edges to have horizontal 25mm chamfer.

Ancillary Concrete:

- Kerb backing – ST2 mix concrete with a consistency class of S1
- Concrete Verge – ST2 mix concrete with a consistency class of S3

2.2 REINFORCEMENT AND MASONRY TIES

Reinforcement:

- Reinforcement to conform to BS EN 10080:2005 and BS 4449: 2005 (Grade B500A, B500B or B500C) with characteristic yield strength of 500N/mm^2 – A393 mesh.

Masonry ties:

- Ancon Staifix Starter Tie (or equally approved) applied at 250x250 centres.
- Fixing with Fosroc E35 polyester resin anchor grout or equally approved.

2.3 STONEWORK, PARAPETS, MORTAR

Stonework shall be 'like for like' and sourced locally.

Mortar:

- Lime mortar shall consist of one part by volume of hydrated lime conforming to BS EN 459-1 to 2.5 parts by volume of sand, NHL5: Aggregate;
- Aggregate to match existing;
- Colour to match existing; and,
- Sample to be provided and final mix to be agreed prior to commencing masonry works.

2.4 WATERPROOFING

Waterproofing:

- BBA approved waterproofing system applied by BBA approved contractor, (GCP Eliminator system or equally approved) applied to saddle exposed vertical and horizontal sides, 500mm down back of the saddle and lapped with brush applied bitumen emulsion, FOSROC Mulseal DP (or equally approved).

Indicator layer:

- 20mm thick SMA 6 reg bridge protection layer, with fluorescent orange indicator mesh, or equally approved.

2.5 SURFACING, KERBING AND SERVICE DUCTS

Surfacing material:

- Work to be in accordance with BS EN 594987.
- Granular sub base type 1. – (if enough depth exists)
- 90mm thick AC32 dense base 40/60 (off saddle deck only). – (if enough depth exists)
- 60mm thick AC20 dense base 40/60.
- 40mm thick HRA 30/14 F surf 40/60, PSV 65, AAV 14.

Kerbs:

- HB3 (H 150mm, W 125mm, L 914mm). 38kg approx.

Service Ducts:

- Steel ducting within verge (NAL Ltd or equally approved), with a minimum bore capacity to that of 110mm traditional duct O/D.

Miscellaneous:

- White centreline paint –thermoplastic type material in accordance with BS EN 1436 to be used (to match existing hazard warning line). All markings shall be reflectorized with solid glass beads complying with BS EN 1423 and BS EN 1424. The lines shall achieve a minimum coefficient of retro-reflected luminance of >100mcd.m-2.lx-1 in dry conditions (R3) and >50mcd.m-2.lx-1 in wet conditions (RW3) in accordance with BS EN 1436 (table 2, Class B5 and Table 3, Class RW3 respectively) for no less than 36 months from the date of issue of the completion certificate. (if required)

3 QUANTITY ESTIMATE

The following quantity estimate is based on figures obtained from the drawings and the design and figures will vary on site, due to site constraints and construction techniques. Therefore, quantities shall be measured on site prior to ordering materials.

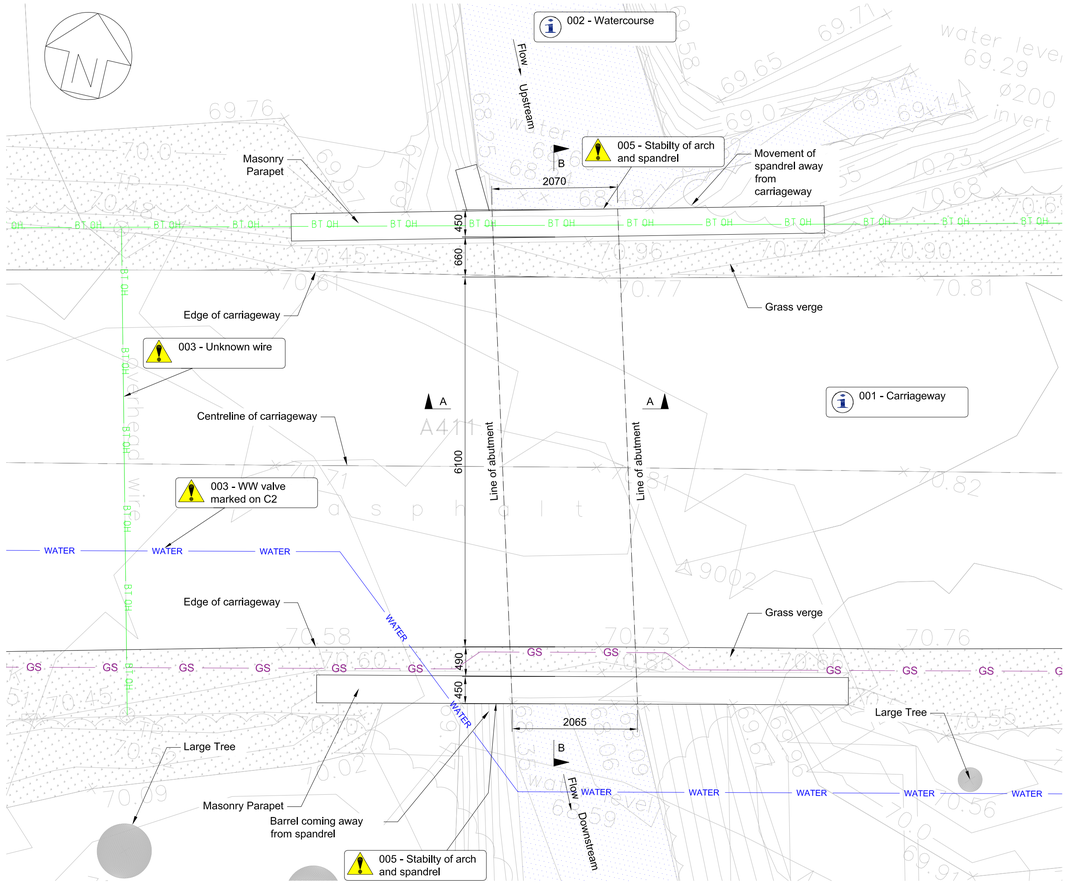
Based on 8 total weeks work duration

Please Note: This Quantitiy Estimate is based on estimates from the design and are not to be relied upon. Please review drawings and obtain own on site measurements prior to ordering materials.

Operation	Description	Quantity	Unit
	SERIES 100 - PRELIMINARIES		
	Temporary Accommodation		
	Erection of the offices and messes	1	Occ
	Servicing of offices and messes	40	op.day
	Dismantling of offices and messes	1	Occ
	Information Board Type 3A	2	no.
	Additional diversion advisory sign	10	no.
	Temporary closure, description, of road with provision of up to 8 no. diversion signs in accordance with Appendix 1/18	1	Occ
	Maintenance of temporary closure of road	40	op.day
	SERIES 500 - DRAINAGE AND SERVICE DUCTS		
	110mmØ Steel duct (NAL ltd or equally approved)	18	m
	SERIES 600 - EARTHWORKS		
	Excavation of acceptable material topsoil (class 5A) - grass verge	2	m^3
	Excavation of acceptable material excluding class 5A in any other excavation	42	m^3
	Extra over for excavation in hard material in structural foundations of any other exc.	4	m^3
	Breaking up of redundant flexible pavement or paved area up to 200mm deep	124	m^2
	Disposal of material acceptable/unacceptable material	60	m^3
	SERIES 700 - PAVEMENTS		
	AC 32 dense base 100/150 in all carriageway areas	4	m^3
	AC 20 dense bin 100/150 in all carriageway areas, 50-200m2 thickness - 60mm	124	m^2
	HRA 30/14 F surf 40/60, PSV 65, AAV 14	124	m^2
	Granular type 1 sub-base, area 50-200m2 in all carriageway areas	3.7	m^3
	Waterproof protection 20mm thick. SMA	40	m^2
	SERIES 1100 - KERBS, FOOTWAYS AND PAVED AREAS		
	HB3 Kerbs	20	No.
	HB3 drop kerbs	4	No.
	SERIES 1700 - STRUCTURAL CONCRETE		
	ST2 kerb backing	1.0	m^3
	ST2 Concrete Verge	1.34	m^3
	In situ concrete mix C32/40	35	m^3
	Tensile steel type 2 bar reinforcement 16mm and under (A393 mesh)	0.41	t
	SERIES 2000 - WATERPROOFING FOR STRUCTURES		
	BBA/HE Bridge deck waterproofing system (top)	40	m^2
	SERIES 2400 - BRICKWORK, BLOCKWORK AND STONEWORK		
	Rake out mortar joints size 0-100mm (weak mortar in spandrel)	5	m^2
	Pointing of joints with lime mortar	5	m^2
	MISC		
	Masonry ties - Ancon starter cavity ties - staifix	150	No.
	Orange indicator mesh	40	m^2
	Heras Fencing (site security)	60	m
	Temporary pedestrian footbridge	9	m
	Environment pollution boom	1	No.
	Grout - Fosroc E35	0.1	m^3
	Temporary propping supports where required	27	m^2
	Split ducting to suite Cadent service	9	m
	Unscheduled		
	Contingencies	10%	
	Plant	sum	

Appendix A

DRAWINGS



Plan
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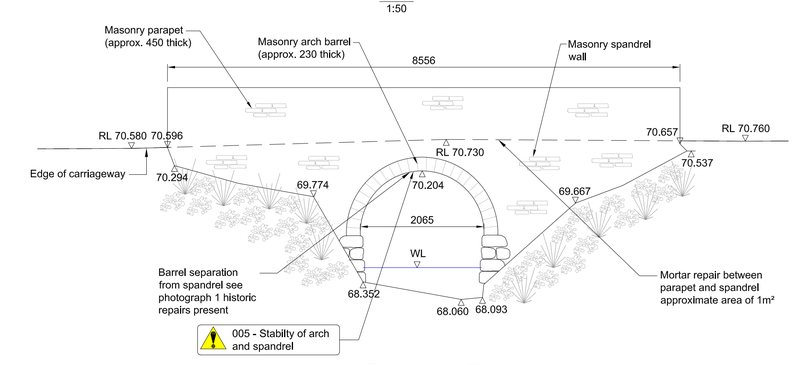
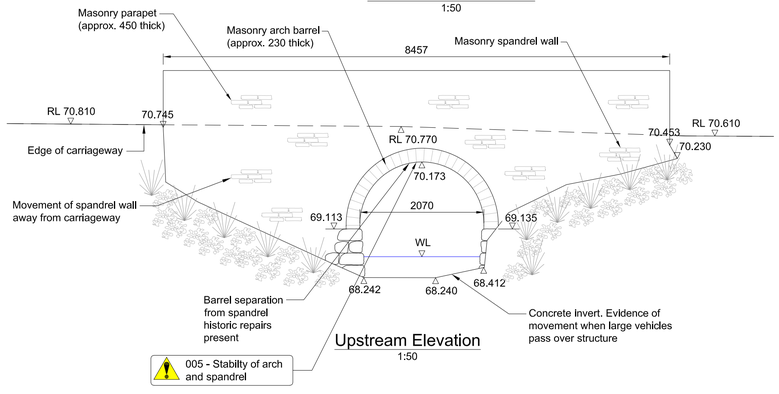


Downstream Elevation
1:50

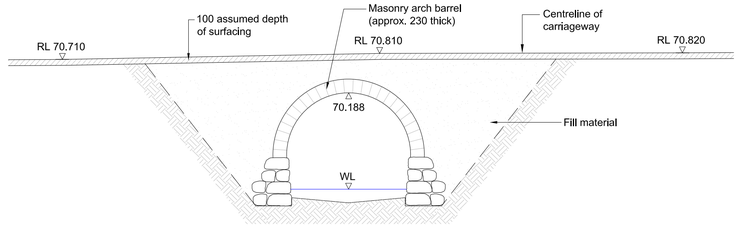


Upstream Elevation
1:50

KEY

Water Level	WL
Road Level	RL
Welsh Water Underground Service	WATER
Gigaclear Service	GS
BT Overhead service	BT OH

Photograph-1-Cracking within barrel with evidence of longitudinal stitching



Section A - A
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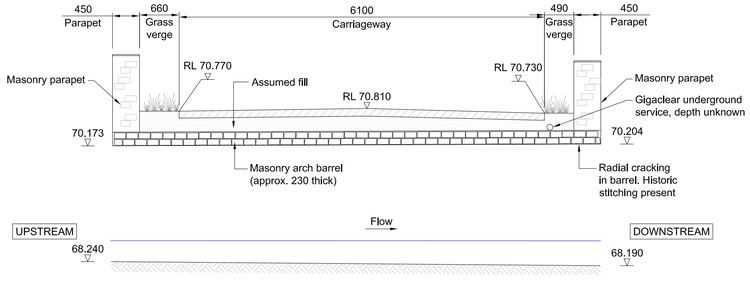

Section B-B
1:50

DO NOT SCALE

1. All dimensions are in millimeters unless otherwise stated.
2. Do not scale off this drawing.
3. Dimensions are based on reference Kinnersley topo 'BB4084-07 2D & BB4084-07-3D'.
4. Service locations based on C2 information.Exact location of services unknown. Approximate locations shown for informations only.
5. Bridge is located at approximate Grid Reference SO 3497 4993.
6. Please refer to the design risk management schedule for details of the risks associated with the construction, maintenance, operation, decommissioning and demolition phases.

⚠	**Indicates a residual risk as a warning** Select this symbol when the risk being identified is unusual and cannot be designed out
🔵	**Indicates a residual risk requiring a compulsory action** Select this symbol when the risk being identified requires operatives to take a specific action or actions
🚫	**Indicates a residual risk requiring a prohibitive action** Select this symbol when the risk being identified requires operatives to avoid a specific action or actions
ℹ	**Indicates a residual risk for information** Select this symbol when specific information needs to be conveyed

REV	DATE	BY	DESCRIPTION	CHK	APP
P02	07/04/2022	MV	MINOR AMENDMENTS	JM	TW
P01	10/03/2022	MV	FIRST ISSUE	JM	TW

DRAWING STATUS: S4 - FOR CONSTRUCTION APPROVAL

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wsp.com

CLIENT: Balfour Beatty Living Places

ARCHITECT:

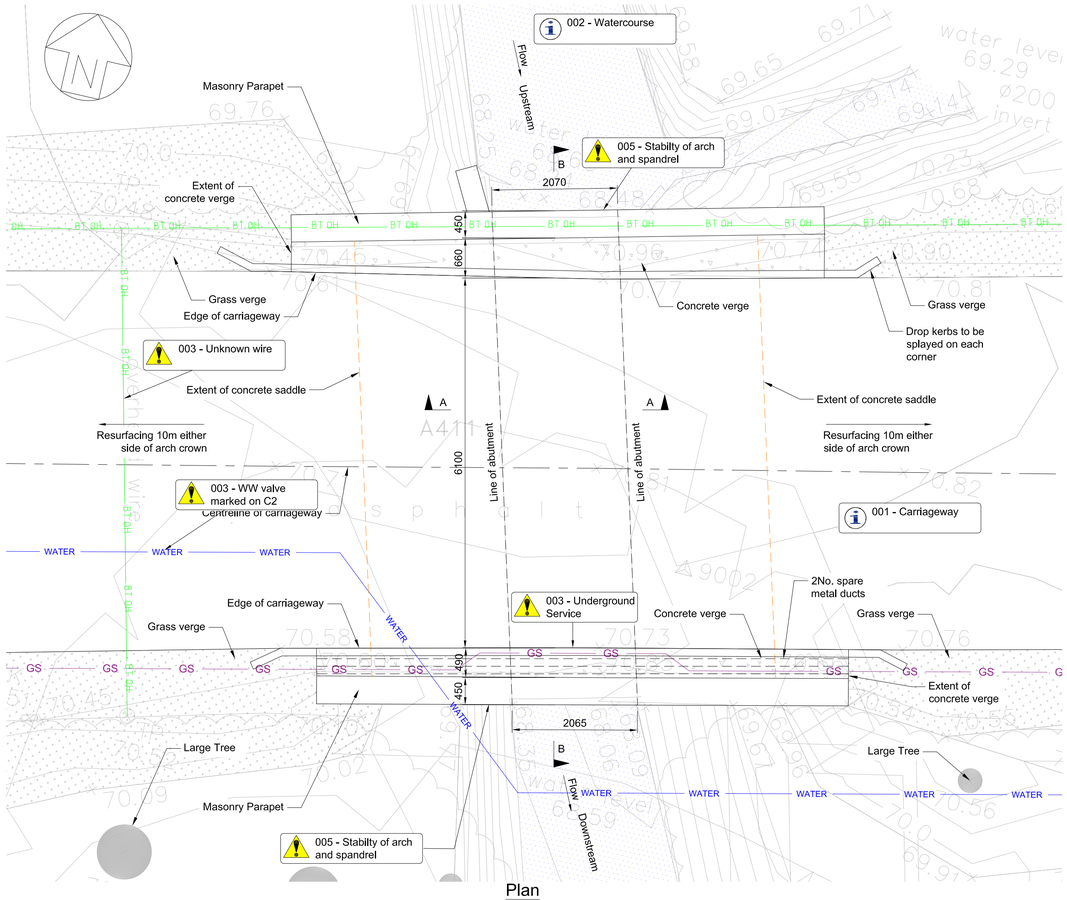
SITE/PROJECT: Kinnersley Bridge

TITLE: Existing General Arrangement

SCALE @ A1:	CHECKED:	APPROVED:
AS SHOWN	J. Mills	T. Walker

PROJECT NO:	DESIGNED:	DRAWN:	DATE:
70085416	T. Walker	Manikandan.V	Apr 2022

DRAWING No: 70085416-WSP-SBR-SWI-DE-CB-00401 REV: P02



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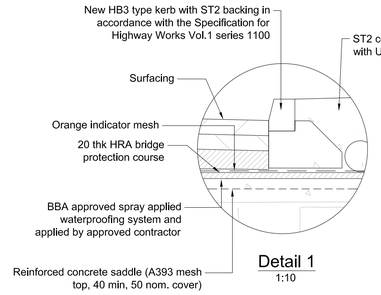
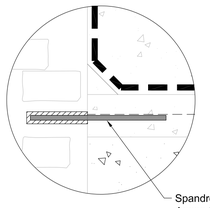


Detail 1
1:10

KEY	
Water Level	WL
Road Level	RL
Welsh Water Underground Service	WATER
Gigaclear Service	GS
BT Overhead service	BT OH
Top of Concrete	TOC



Detail 2
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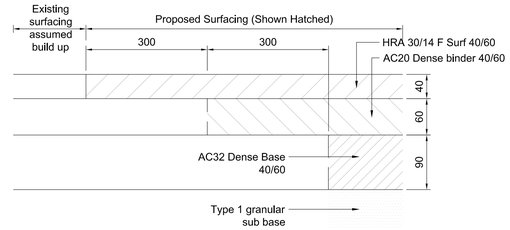
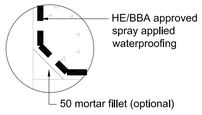
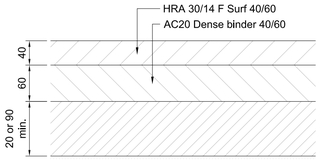


Surfacing Detail (interface with existing)
1:5

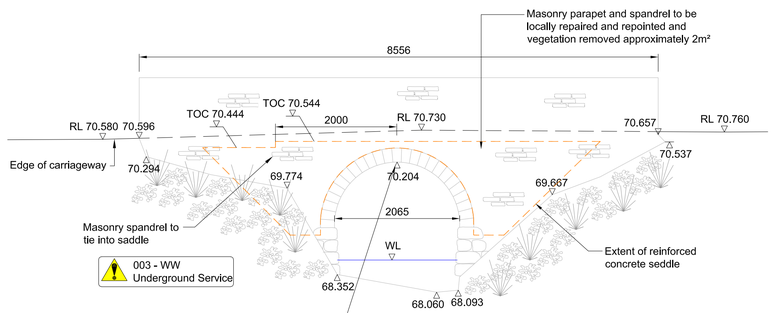


Detail 3
1:5

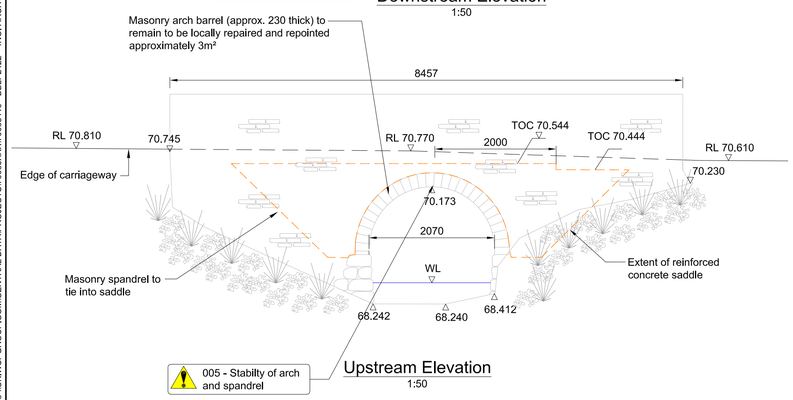
At concrete saddle: Surfacing laid directly over 20 thick HRA bridge protection course/indicator mesh.
Off concrete saddle: AC32 Dense Base 40/60 over concrete backfill and/or type 1 sub base.



Surfacing Detail (over length of worksite)
1:5



Downstream Elevation
1:50



Upstream Elevation
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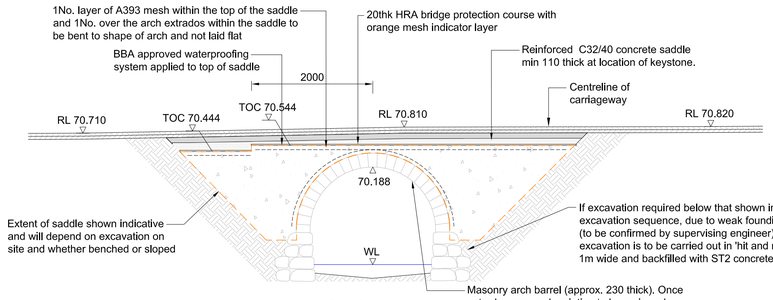

Section A - A
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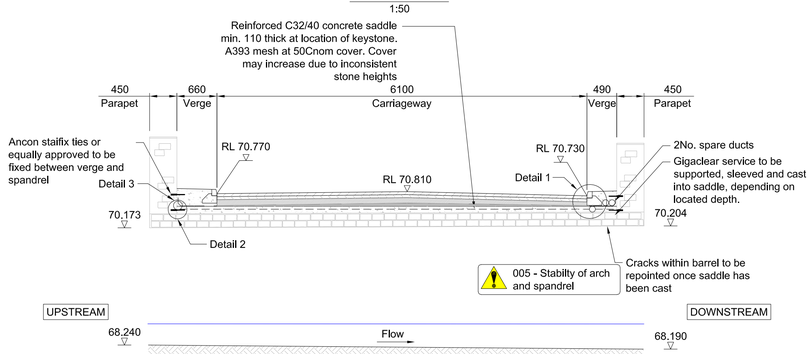

Section B-B
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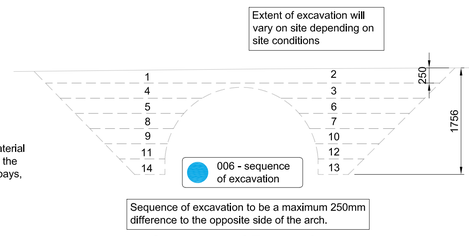
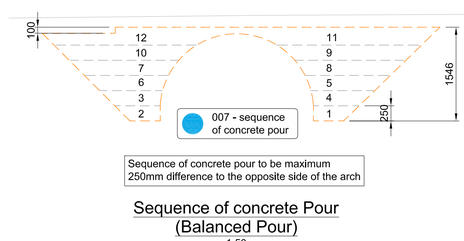


Sequence of excavation to be a maximum 250mm difference to the opposite side of the arch.

Sequence of Excavation (Balanced Excavation)
1:50



Sequence of concrete pour to be maximum 250mm difference to the opposite side of the arch

Sequence of concrete Pour (Balanced Pour)
1:50

NOTES:

DO NOT SCALE

1. All dimensions are shown in millimetres unless otherwise stated.
2. Do not scale off this drawing.
3. Dimensions are based on reference Kinnersley topo 'BB4084-07 3D'
4. Service locations based on C2 information. Exact location of services unknown. Approximate locations shown for information only.
5. Additional consultation is required with Gigaclear Ltd, Welsh Water and BT to ascertain the exact location of the services and the requirements for diverting/marking out the affected services. No construction work is to be undertaken until the necessary works have been completed.
6. Excavation and concrete pour is to be undertaken in a balanced sequence and have a max level difference either side of 250mm.
7. Concrete and reinforcement specified in accordance with Eurocode execution.
8. All horizontal exposed arris have 25 x 25 chamfer, unless stated otherwise.
9. All reinforcement is grade B500B or B500C steel conforming to BS4449, bent and cut to BS8666.
10. All tie wire is 1.2mmØ stainless steel in accordance with Specification for Highway Works clause 1714.
11. Concrete Specification
    Exposure Class = XC3/4
    Cement/Combination = All in table A6 of BS8500-1 except IVB-V

    Concrete Haunch
    Strength Class = C32/40
    Max. w/c = 0.55
    Min. Cement = 300kg/m^3
    Cover, Cnom = 50mm for fixing tolerances (Δc=10mm)
    Cover, Cmin = 40mm
    Finishes = U4 to top of haunch, F2 to sides.

    Concrete Verge
    ST2 concrete
    Finishes U2
12. Please refer to the Design Risk Management Schedule for details of the risks associated with the construction, maintenance, operation, decommissioning and demolition phases.

⚠	**Indicates a residual risk as a warning** Select this symbol when the risk being identified is unusual and cannot be designed out
🔵	**Indicates a residual risk requiring a compulsory action** Select this symbol when the risk being identified requires operatives to take a specific action or actions
🚫	**Indicates a residual risk requiring a prohibitive action** Select this symbol when the risk being identified requires operatives to avoid a specific action or actions
ⓘ	**Indicates a residual risk for information** Select this symbol when specific information needs to be conveyed

REV	DATE	BY	DESCRIPTION	CHK	APP
P02	07/04/2022	MV	MINOR AMENDMENTS	JM	TW
P01	10/03/2022	MV	FIRST ISSUE	JM	TW

DRAWING STATUS: S4 - FOR CONSTRUCTION APPROVAL

wsp
11 High Cross, Truro, TR1 2AJ, UK
T+ 44 (0) 187 224 5860
wsp.com

CLIENT: Balfour Beatty Living Places

ARCHITECT:

SITE/PROJECT: Kinnersley Bridge

TITLE: Proposed General Arrangement

SCALE @ A1:	CHECKED:		APPROVED:
AS SHOWN	J. Mills		T. Walker
PROJECT NO:	DESIGNED:	DRAWN:	DATE:
70085416	T. Walker	Manikandan.V	April 2022

DRAWING No: 70085416-WSP-SBR-SWI-DE-CB-00402 REV: P02

File name \\UK.WSPGROUP.COM\CENTRAL DATA\PROJECTS\70085XX\70085416 - BBLP2122 - 4NO. ARCH SADDLING DESIGNS (BATCH 2)\03 WIP\BR BRIDGE ENGINEER\03 DRAWINGS\KINNERSLEY22-04-07 P02\70085417-WSP-SBR-SWI-DE-CB-00402 - STANDARD\70085417-WSP-SBR-SWI-DE-CB-00402.DWG, printed on 07 April 2022 15:27:41, by Walker, Toby

Appendix B

ORDINARY WATERCOURSE CONSENT

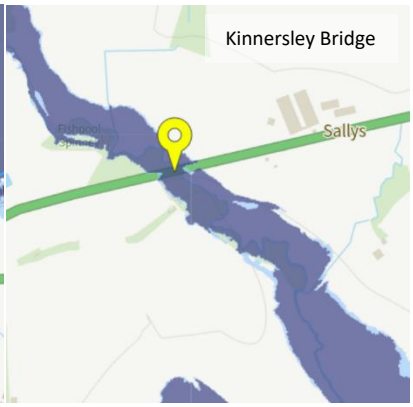
Ordinary Watercourse Flood Defence Consent

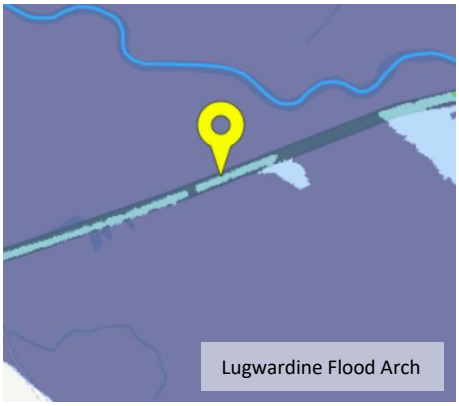
Balfour Beatty Living Places, on behalf of Herefordshire Council

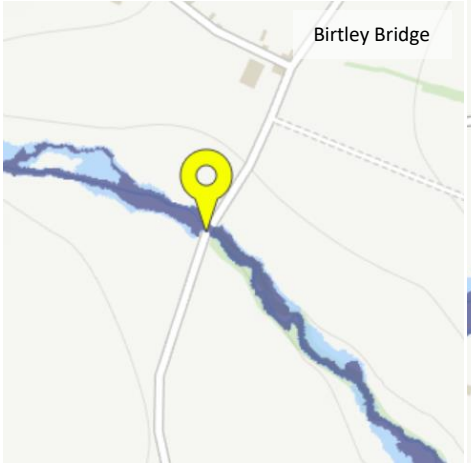
Consent Reference: 21-18

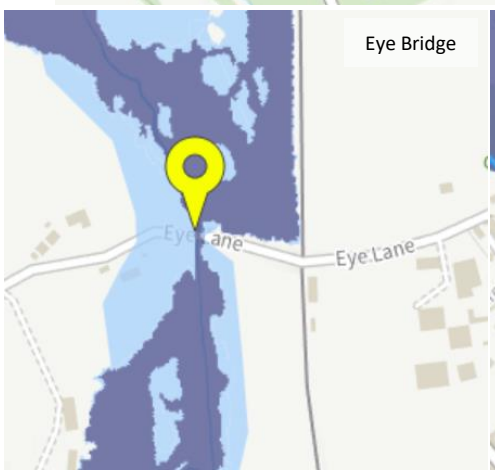
Applicant name and address: Chris Wright, Balfour Beatty Living Places C/O Herefordshire Council

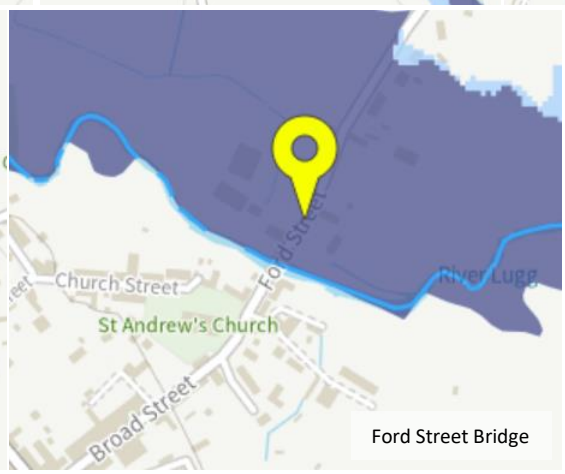
Site Location: Various: Bartestree Culvert (SO 5725 4052), Kinnersley Bridge (SO 3497 4993), Lugwardine Flood Arch (SO 5409 4046), Bacton Manor Bridge (SO 3774 3226), Birtley Bridge (SO 3664 6868), Comberton Bridge (SO 4970 6760), Eye Bridge (SO 4926 6393), Ford Street Bridge (SO 3168 6466), Leinthall Moor Bridge (SO 4344 7030), Sutton Marsh Bridge (SO 5529 4434).

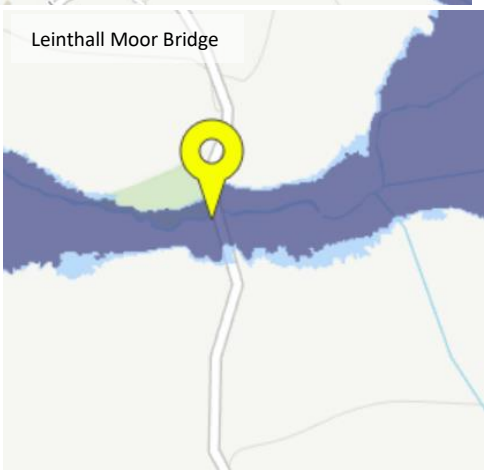


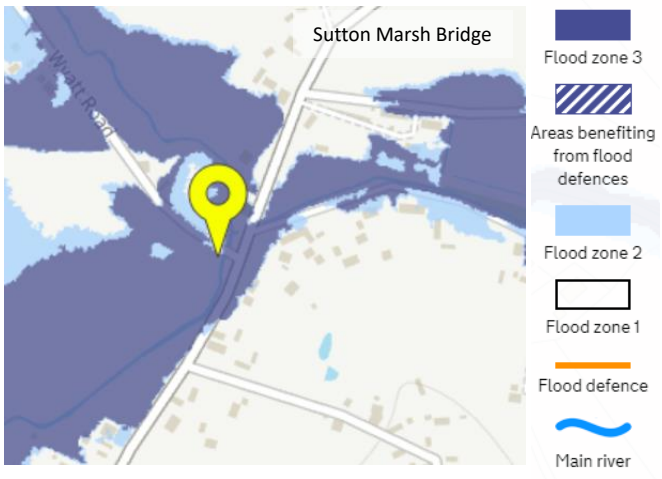












Description of activity(s) and structure(s): The arch bridges are to have their carriageway and fill excavated and then saddled with reinforced concrete. The original mortared masonry soffit of the bridge will remain the same. The proposed works will require temporary sheeting system to catch any debris that could enter the stream during the concrete pour and excavation works. A pollution boom will be installed downstream of the works to prevent pollution to the watercourse throughout the works. A temporary footbridge may be required for pedestrian access, and placed on the river side of the parapet, spanning the watercourse, and leaving the arch opening clear. Every effort will be made to install the temporary footbridge within the footprint of the structure, above the arch barrel.

as detailed within the following submitted documents:

- Application Form (via email);
- Method Statement (Aug 2021)

Date application received: August 2021

Subject to conditions (please see overleaf), Balfour Beatty, on behalf of Herefordshire Council hereby consents, under Section 23 of the Land Drainage Act 1991 (as amended by the Flood and Water Management Act 2010), the following activities:

Mortared masonry arch bridge strengthening works.

Works are proposed at various locations as detailed above and in the Method Statement.

Liabilities and Contraventions

In relation to constrictions or blockages on Ordinary Watercourses, Herefordshire Council can under Section 24 of the Land Drainage Act 1991 serve a legal notice requiring the person to abate any nuisance within a specified time. Failure to abide by such a notice can result in The Council carrying out the necessary remedial work and seeking to recover costs.

Herefordshire Council does not accept any responsibility for the design and construction of the works referred hereto and any liability for any loss or damage which may arise out of their design, construction, maintenance or use.

You are reminded that it is an offence under Regulation 38 of The Environmental Permitting (England and Wales) Regulation 2010 to cause or knowingly permit pollution of a watercourse or pollution of ground water. Care must be taken to ensure that neither the watercourse nor groundwater becomes polluted, particularly by, for example diesel fuel, petrol or oil from machinery.

Any waste generated in the course of the works must be disposed of in accordance with the provision of the Environmental Protection Act 1990.

This Consent does not remove from the applicant the necessity to obtain other licences, consents, approvals or permissions (including planning permission) which may be required in law or in order to comply with any duties or responsibilities for conservation or protection of the environment.

Important Information

Notifications

Herefordshire Council should be notified before the commencement and upon completion of the activity.

Flood Risk Management

The Landowner must ensure that any structure is clear and free of rubbish, silt and debris at all times. Regular inspections of the structure should also be carried out and the appropriate maintenance work undertaken.

Ecological Issues

The free passage of fish and eels must be maintained at all times, including when Temporary Works are in place. A safe passage for Otters shall be provided through the site, unless further defined in an approved method statement.

If White Clawed Crayfish are identified at the site, a Crayfish licence will be required.

The Applicant should assess the impact of the works on fish spawning and then schedule the works in accordance with the Salmon and Freshwater Fisheries Act 1975 as appropriate.

The free passage of fish must be maintained at all times in addition, temporary works should include means for the safe passage of Otters through the site, unless defined in an approved method statement.

Should there be any pointing works/repairs to the arch be proposed the potential presence of bat species should be considered.

Conditions

1. Timing of works

A The activity should be completed within 3 years of the date of the date of issue of this consent. Works not completed within this time and/or any additional works will require consent.

B Works which could impact on fish spawning and migration/obstruction to flood flows should not be carried out in the watercourse during the high risk season. Ecological advice should be sought regarding suitable time frame for working in the watercourse. If any further work is to be carried out in the river at this time, you are made aware that you may be in breach of the Salmon and Freshwater Fisheries Act 1975 by disturbing any spawn or spawning fish, or any bed, bank, or shallow on which any spawn or spawning fish may be.

2. General

A The completed works must not impede the flow of water in the watercourse.

B A full method statement which includes details of the proposed construction methodology and how it is intended to prevent pollution or contamination of the Brook, has been submitted.

The method statement has covered:-

- Construction methods
- The control of concrete
- Temporary Works
- Management of flood risk during construction
- Pollution protection arising from the construction of the works
- How issues associated with flora and fauna will be managed

C The construction of works described in this consent must be in accord with the method statement, the detailed descriptions and attached drawings in the application form. Any alterations must be agreed with the Land Drainage Authority before construction.

D Works should be undertaken in accordance with the Pollution Prevention Guidelines (particularly PPG5). Although these guidelines are now superseded a copy can be downloaded from the Environment Agency website.

E Wet concrete must not be released into the watercourse due to the potential for pH alteration and subsequent fish kill.

F All reasonable care should be taken to ensure that the watercourse is kept free of foreign matter and floating debris during the construction period and on completion.

G Upon completion of works:

- All debris and surplus materials must be removed from the site of the works and the banks left in a stable condition.
- The banks and / or the bed of the watercourse where disturbed shall be restored to the reasonable satisfaction of the Land Drainage Authority.

3. Temporary Works

A Care must be taken to ensure that if a flood event occurs that no materials stored on the flood plain are mobilised by flood waters.

B Minimal obstructions to flows are permitted during construction but these temporary restrictions must not increase flood risk to others and they must be capable of being overtopped in higher flows.

C If over pumping is used a suitable screen or strainer no larger than 10mm diameter should be used to prevent fish and other material being drawn in.

Date consent shall come into effect: 13/01/2022

Signed:  (Jennifer Allen)

Assistant Drainage Engineer

Appendix C

DIVERSION ROUTE - TO BE INSERTED BY BBLP

11 High Cross
Truro
Cornwall
TR1 2AJ

wsp.com