

# SITE LAYOUT PLAN

# PASSLANDS (PASS) BRIDGE







DOWNSTREAM ELEVATION **UPSTREAM ELEVATION LOCATION MAP** 

**NOTES** 

This drawing is the property of CCC. This drawing should not be relied on or used in circumstances other than those for which it was originally prepared and for which CCC was commissioned.

## **GENERAL NOTES**

- All dimensions are in millimeters unless noted otherwise.
  All levels are in meters related to the ordnance datum.
  Drawings are not to be scaled.
  Drawings are not to be scaled.
  Drawings to be read in conjunction with the specification
  KCCBFW-CCC-ST-XX-SP-S-0001
  Drawings to be read in conjunction with:
  KCCBFW-CCC-ST-XX-DR-S-0001 Design Notes
  KCCBFW-CCC-ST-XX-DR-S-0002 Standard Details, Sheet 1 of 2
  KCCBFW-CCC-ST-XX-DR-S-0003 Standard Details, Sheet 2 of 2
  KCCBFW-CCC-ST-XS-DR-S-0003 Existing Defects, Plan and Elevations
  KCCBFW-CCC-ST-S06-DR-S-0003 Existing Defects, Sections
  KCCBFW-CCC-ST-S06-DR-S-0003 Existing Defects, Sections
  KCCBFW-CCC-ST-S06-DR-S-0003 Exhabilitation Works, Sheet 1 of 2
  KCCBFW-CCC-ST-S06-DR-S-0006 Rehabilitation Works, Sheet 2 of 2
  KCCBFW-CCC-ST-S06-DR-S-0006 Rehabilitation Works, Sheet 2 of 2
  KCCBFW-CCC-ST-S06-DR-S-0007 Site Location Map

## LEGEND

78/78	MASONRY
	CONCRETE





## **LEGEND - EXISTING SERVICES**

	UNIDENTIFIED GPR
— TRF —	TRAFFIC CONTROL
	WATERMAIN (GPR)
— PL —	PUBLIC LIGHTING
—— САВ ——	CABLING
<b>◄</b>	TRAFFIC LIGHT (TL)

REV	DATE	DESCRIPTION	BY	СНК	APD	
D00	13/06/2024	DETAILED DESIGN	JM	PT	SC	
D01	22/11/2024	SECTION 177 ISSUE	PT	PT	SC	





BRIDGE REHABILITATION WORKS IN CO. KILDARE

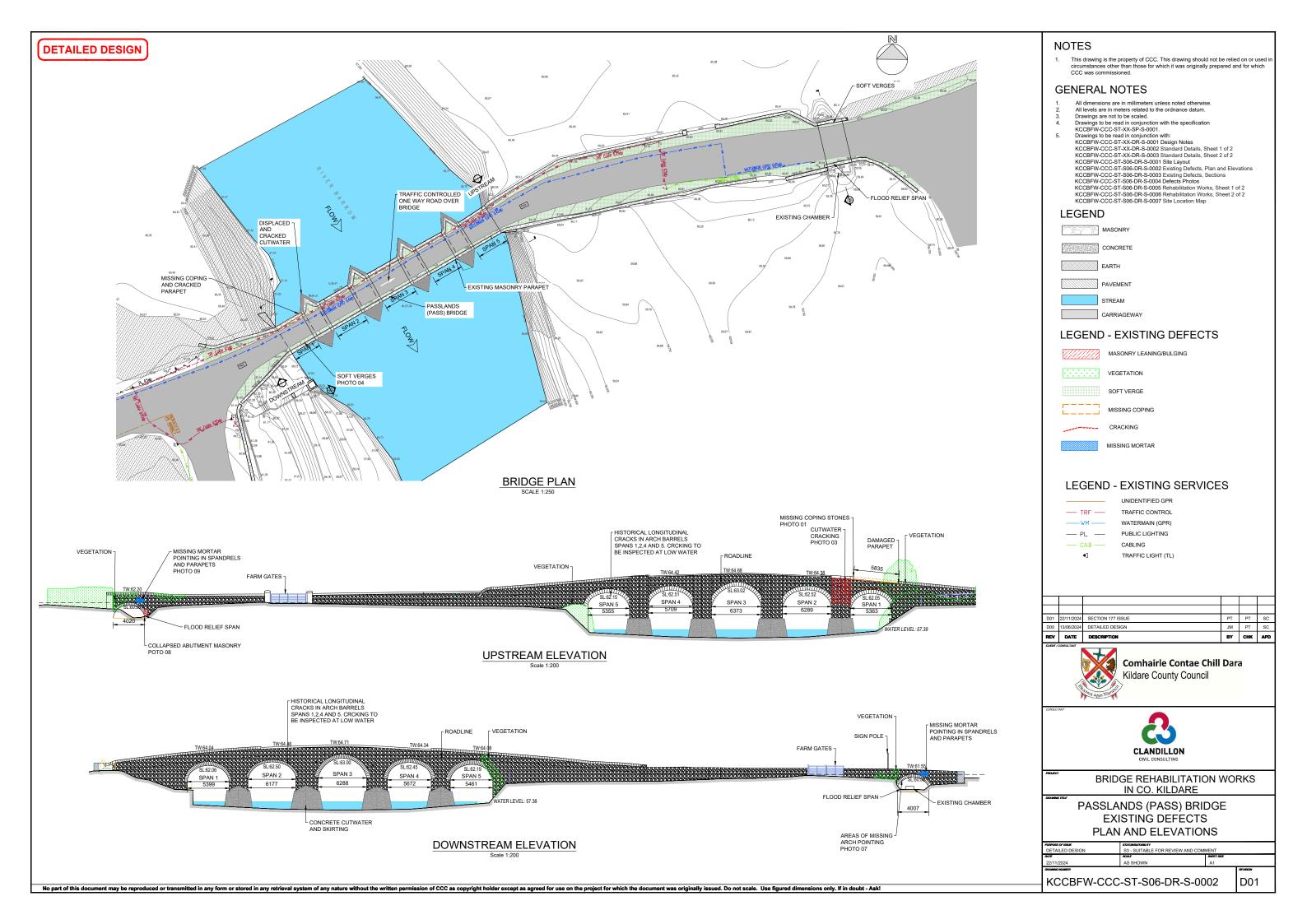
D01

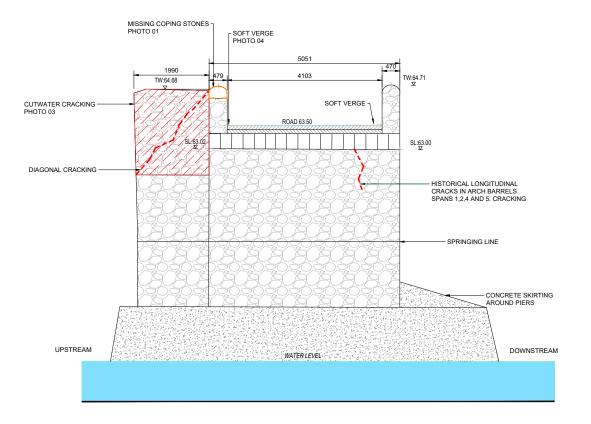
PASSLANDS (PASS) BRIDGE SITE LOCATION & LAYOUT

PURPOSE OF ISSUE	STATUS/SUITABILITY		
DETAILED DESIGN	S3 - SUITABLE FOR REVIEW AND COM	MENT	
DATE	SCALE	SHEET SIZE	
22/11/2024	AS SHOWN	A1	
DRAWING NUMBER			REVISION

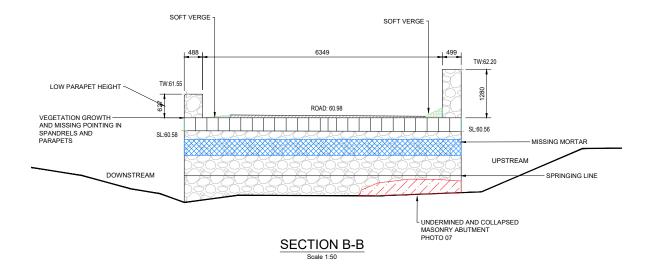
KCCBFW-CCC-ST-S06-DR-S-0001

No part of this document may be reproduced or transmitted in any form or stored in any retrieval system of any nature without the written permission of CCC as copyright holder except as agreed for use on the project for which the document was originally issued. Do not scale. Use figured dimensions only. If in doubt - Askl









## **NOTES**

This drawing is the property of CCC. This drawing should not be relied on or used in circumstances other than those for which it was originally prepared and for which CCC was commissioned.

## **GENERAL NOTES**

- All dimensions are in millimeters unless noted otherwise.
  All levels are in meters related to the ordnance datum.
  Drawings are not to be scaled.
  Drawings to be read in conjunction with the specification
  KCCBFW-CCC-ST-XX-SP-S-0001.
  Drawings to be read in conjunction with:
  KCCBFW-CCC-ST-XX-DR-S-0002 Standard Details, Sheet 1 of 2
  KCCBFW-CCC-ST-XX-DR-S-0003 Standard Details, Sheet 2 of 2
  KCCBFW-CCC-ST-XX-DR-S-0003 Standard Details, Sheet 2 of 2
  KCCBFW-CCC-ST-XX-DR-S-0003 Standard Details, Sheet 2 of 2

  - KCCBFW-CCC-ST-XX-DR-S-0003 Standard Details, Sheet 2 of 2 KCCBFW-CCC-ST-S06-DR-S-0001 Site Layout KCCBFW-CCC-ST-S06-DR-S-0002 Existing Defects, Plan and Elevations KCCBFW-CCC-ST-S06-DR-S-0002 Existing Defects, Sections KCCBFW-CCC-ST-S06-DR-S-0004 Defects Photos KCCBFW-CCC-ST-S06-DR-S-0005 Rehabilitation Works, Sheet 1 of 2 KCCBFW-CCC-ST-S06-DR-S-0006 Rehabilitation Works, Sheet 2 of 2 KCCBFW-CCC-ST-S06-DR-S-0006 Rehabilitation Works, Sheet 2 of 2 KCCBFW-CCC-ST-S06-DR-S-0006 Rehabilitation Map

## LEGEND



PAVEMENT



## CARRIAGEWAY

**LEGEND - EXISTING DEFECTS** 

MASONRY LEANING/BULGING

VEGETATION

SOFT VERGE

CRACKING

MISSING COPING

MISSING MORTAR

## **LEGEND - EXISTING SERVICES**

UNIDENTIFIED GPR — TRF — TRAFFIC CONTROL WATERMAIN (GPR) PUBLIC LIGHTING

CABLING — CAB — •1 TRAFFIC LIGHT (TL)

D01	22/11/2024	SECTION 177 ISSUE	PT	PT	SC
D00	13/06/2024	DETAILED DESIGN	JM	PT	SC
REV	DATE	DESCRIPTION	BY	СНК	APD



Comhairle Contae Chill Dara Kildare County Council



**BRIDGE REHABILITATION WORKS** IN CO. KILDARE

PASSLANDS (PASS) BRIDGE **EXISTING DEFECTS** SECTIONS

KCCBFW-CCC-ST-S06-DR-S-0003

No part of this document may be reproduced or transmitted in any form or stored in any retrieval system of any nature without the written permission of CCC as copyright holder except as agreed for use on the project for which the document was originally issued. Do not scale. Use figured dimensions only. If in doubt - Ask!

D01



PHOTO 01 UPSTREAM SPAN 1 MISSING COPING



PHOTO 02 UPSTREAM SPAN 1 DAMAGED PARAPET



PHOTO 03 UPSTREAM SPAN 1 DAMAGED CUTWATER/CRACKING



PHOTO 04 SOFT VERGES



PHOTO 05 ARCH WATER STAINS



PHOTO 06 PARAPET



PHOTO 04 RELIEF ARCH UNDERMINING / COLLAPSED ABUTMENT



PHOTO 08 RELIEF ARCH UPSTREAM



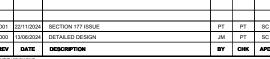
PHOTO 09 RELIEF ARCH DOWNSTREAM

## **NOTES**

This drawing is the property of CCC. This drawing should not be relied on or used in circumstances other than those for which it was originally prepared and for which CCC was commissioned.

## **GENERAL NOTES**

- All dimensions are in millimeters unless noted otherwise.
  All levels are in meters related to the ordnance datum.
  Drawings are not to be scaled.
  Drawings are not to be scaled.
  Drawings to be read in conjunction with the specification
  KCCBFW-CCC-ST-XX-SP-S-0001
  Drawings to be read in conjunction with:
  KCCBFW-CCC-ST-XX-DR-S-0001 Design Notes
  KCCBFW-CCC-ST-XX-DR-S-0001 Site Notes
  KCCBFW-CCC-ST-XX-DR-S-0003 Standard Details, Sheet 1 of 2
  KCCBFW-CCC-ST-XX-DR-S-0003 Iste Layout
  KCCBFW-CCC-ST-S06-DR-S-0003 Existing Defects, Plan and Elevations
  KCCBFW-CCC-ST-S06-DR-S-0005 Resisting Defects, Sections
  KCCBFW-CCC-ST-S06-DR-S-0005 Rehabilitation Works, Sheet 1 of 2
  KCCBFW-CCC-ST-S06-DR-S-0006 Rehabilitation Works, Sheet 2 of 2
  KCCBFW-CCC-ST-S06-DR-S-0006 Rehabilitation Works, Sheet 2 of 2
  KCCBFW-CCC-ST-S06-DR-S-0007 Site Location Map







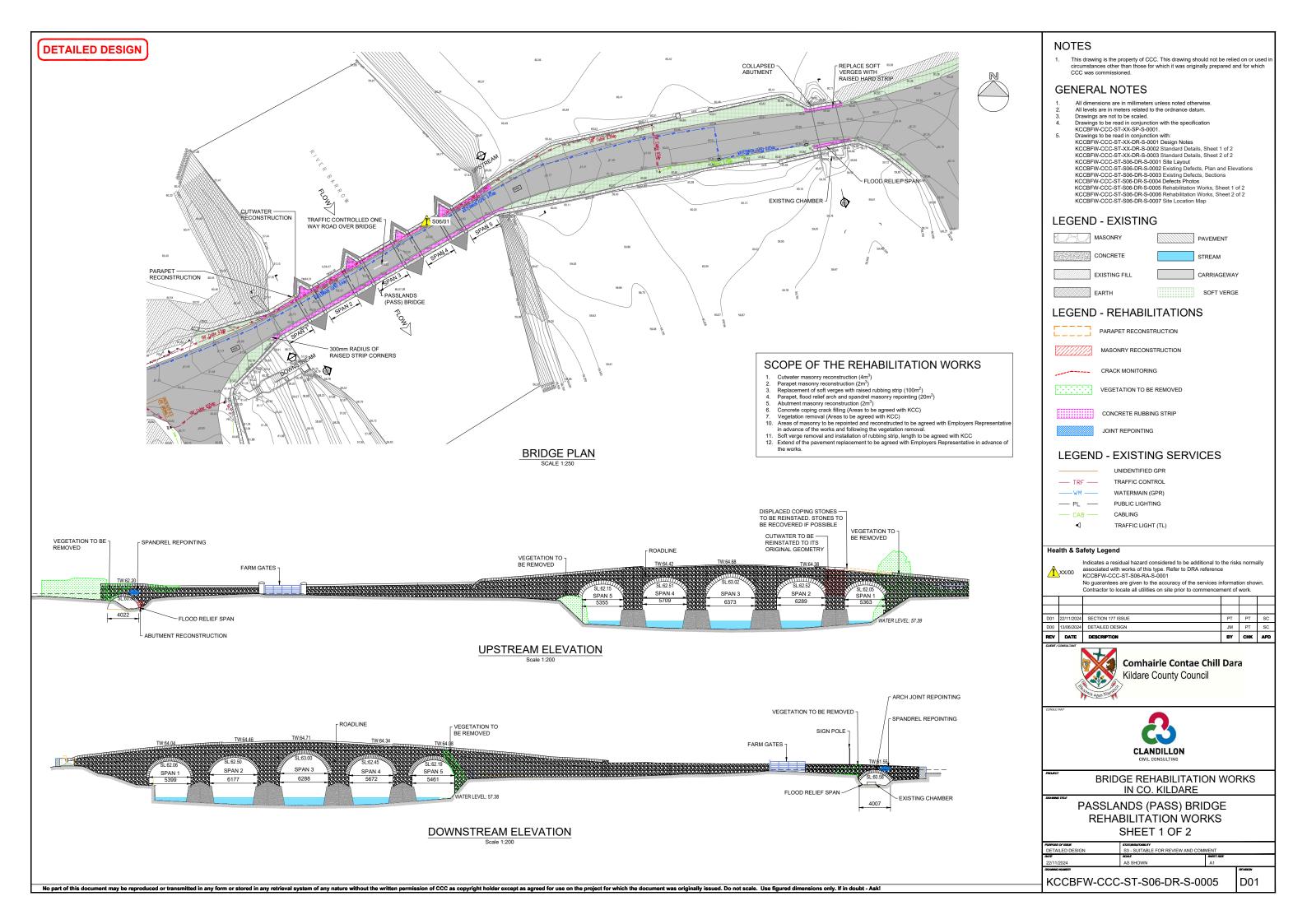
BRIDGE REHABILITATION WORKS IN CO. KILDARE

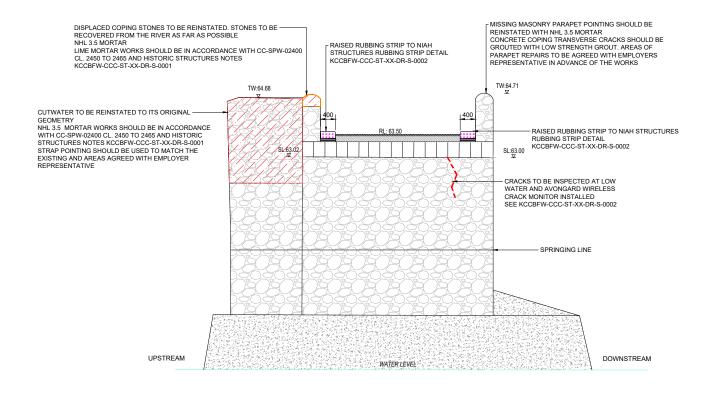
D01

PASSLANDS (PASS) BRIDGE DEFECTS PHOTOS

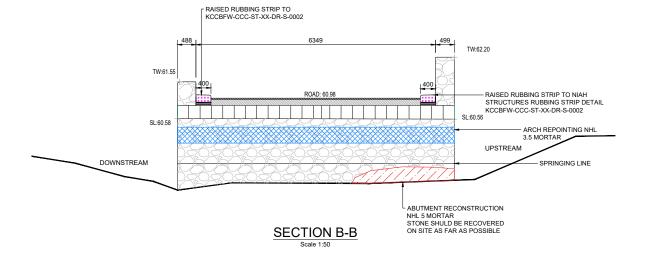
PURPOSE OF ISSUE	STATUS/SUITABILITY			
DETAILED DESIGN	S3 - SUITABLE FOR REVIEW AND COMMENT			
DATE	SCALE	SHEET SIZE		
22/11/2024	AS SHOWN	A1		
DRAWING NUMBER			REVISION	

KCCBFW-CCC-ST-S06-DR-S-0004





**SECTION A-A** 



## **NOTES**

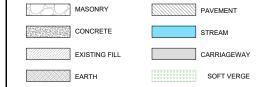
This drawing is the property of CCC. This drawing should not be relied on or used in circumstances other than those for which it was originally prepared and for which CCC was commissioned.

## **GENERAL NOTES**

All dimensions are in millimeters unless noted otherwise.
All levels are in meters related to the ordnance datum.
Drawings are not to be scaled.
Drawings to be read in conjunction with the specification
KCCBFW-CCC-ST-XX-SP-S-0001.
Drawings to be read in conjunction with:
KCCBFW-CCC-ST-XX-DR-S-0002 Standard Details, Sheet 1 of 2
KCCBFW-CCC-ST-XX-DR-S-0003 Standard Details, Sheet 2 of 2
KCCBFW-CCC-ST-XX-DR-S-0003 Standard Details, Sheet 2 of 2
KCCBFW-CCC-ST-XX-DR-S-0003 Standard Details, Sheet 2 of 2

KCCBFW-CCC-ST-XX-DR-S-0003 Standard Details, Sheet 2 of 2 KCCBFW-CCC-ST-S06-DR-S-0000 Tike Layout KCCBFW-CCC-ST-S06-DR-S-00002 Existing Defects, Plan and Elevations KCCBFW-CCC-ST-S06-DR-S-0003 Existing Defects, Sections KCCBFW-CCC-ST-S06-DR-S-0004 Defects Photos KCCBFW-CCC-ST-S06-DR-S-0005 Rehabilitation Works, Sheet 1 of 2 KCCBFW-CCC-ST-S06-DR-S-0006 Rehabilitation Works, Sheet 2 of 2 KCCBFW-CCC-ST-S06-DR-S-0007 Site Location Map

## LEGEND - EXISTING



## LEGEND - REHABILITATIONS

LEGEND	- KEHABILITATIONS
	PARAPET RECONSTRUCTION
	MASONRY RECONSTRUCTION
	CRACK MONITORING
	CONCRETE RUBBING STRIP
	JOINT REPOINTING

D01	22/11/2024	SECTION 177 ISSUE	PT	PT	SC
D00	13/06/2024	DETAILED DESIGN	JM	PT	SC
REV	DATE	DESCRIPTION	BY	СНК	APD





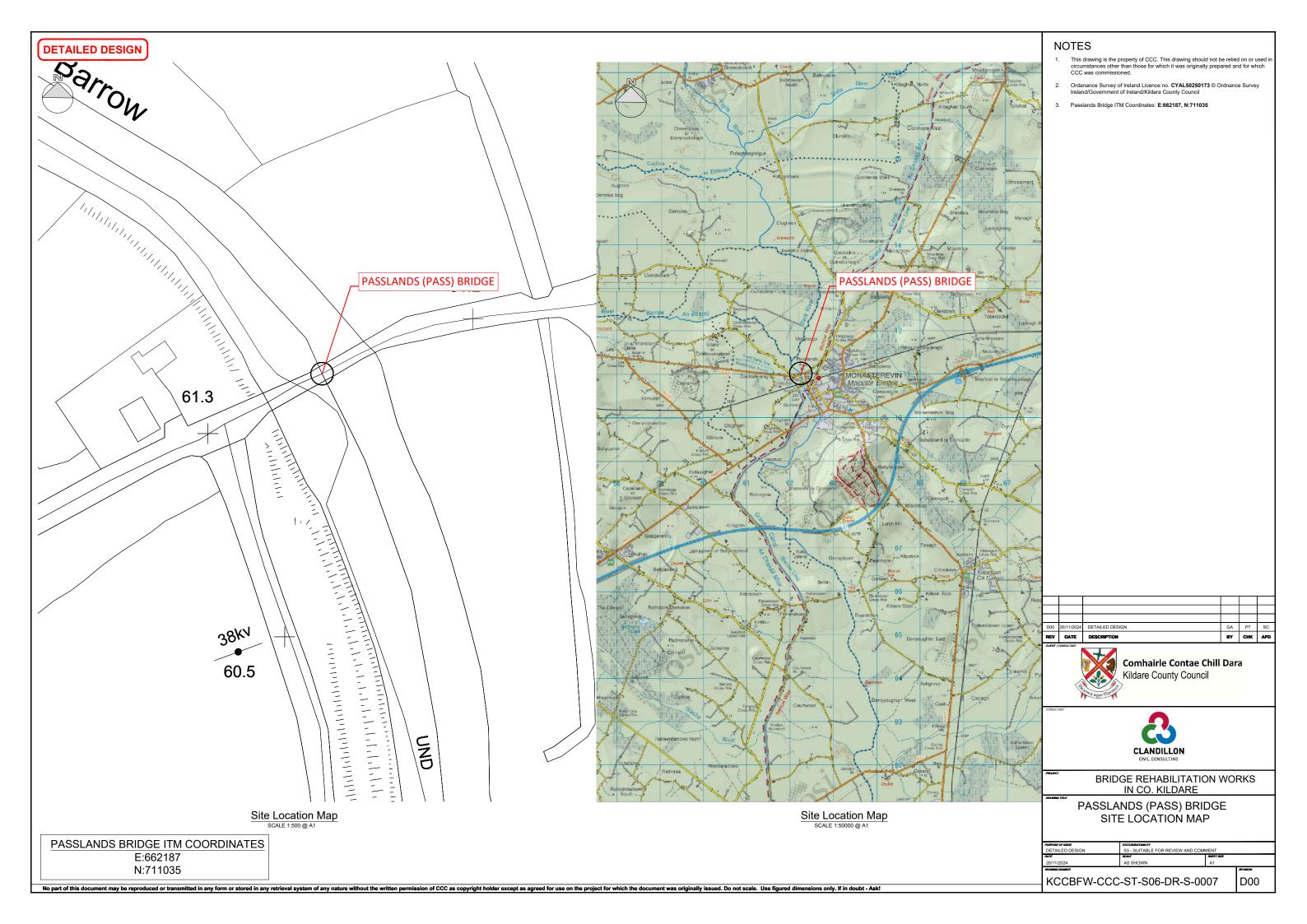
**BRIDGE REHABILITATION WORKS** IN CO. KILDARE

PASSLANDS (PASS) BRIDGE REHABILITATION WORKS SHEET 2 OF 2

PURPOSE OF ISSUE	STATUS/SUITABILITY			
DETAILED DESIGN	S3 - SUITABLE FOR REVIEW AND COMP			
DATE	SCALE SHEET SIZE			
22/11/2024	AS SHOWN	A1		
DRAWING MUMBER			REVISION	
KCCBFW-CCC	KCCBFW-CCC-ST-S06-DR-S-0006			

No part of this document may be reproduced or transmitted in any form or stored in any retrieval system of any nature without the written permission of CCC as copyright holder except as agreed for use on the project for which the document was originally issued. Do not scale. Use figured dimensions only. If in doubt - Askl

D01





#### 1 Vegetation Removal

- 1.1 All areas to be re-pointed shall be cleared of all vegetation and algae. Invasive roots shall be removed in so far as is possible. Those not able to be fully removed shall be cut back as far as possible and treated with a suitable systemic herbicide, as approved by the Employers representative.
- 1.2 The vegetation removed should be collected and disposed of offsite. Care should be taken to prevent debris from entering the water course.
- 1.3 A controlled localized application herbicide shall be used, spraying shall not be permitted.
- 1.4 Threes should be cut down as close to the ground as possible. The three stump should not be removed and the remaining stump treated with a Glyphosate-based herbicide. This should be applied directly to the vascular bundle in dry conditions. The stump should not be rooted out as this may cause instability to both bank and bridge
- 1.4 Threes marked for full removal should be fully removed with the root system.

#### 2 Masonry Joint Pointing - Lime Mortar

- 2.1 Contractor should prepare the Traffic Management Plan for the proposed works for approval with KCC.
- 2.3 Scaffolding should be lined with an impermeable membrane, polythene or similar, to prevent falling mortar from entering the watercourse below
- 2.4 Re-pointing should be carried out as per CC-SPW-02400 Specification for Road Works Series 2400- Brickwork. Blockworks and Stonework.
- 2.5 The areas to be pointed with lime-based mortars are identified in the design drawings.
- 2.6 Lime mortar to comply with SRW series 2400 CL, 2450 TO 2465.
- 2.7 The following Mortar Guide should be used for Lime Mortar pointing in accordance with Table 24.4 CC-SPW-02400 Specification for Road Works:
- For the spandrel wall and external side of parapet an NHL 3.5 mortar should be used.
- For parapet coping and parapet on the traffic side an NHL 5 mortar should be used.
- For abutments and soffit of arch barrel NHL 5 mortar should be used. Where the arch barrel is above flood level an NHL 3.5 mortar could be used.
- 2.8 Refer to lime mortar re-pointing guidelines specified in Section 6 below.

#### 3 Re-pointing Guidelines

- 3.1 All loose mortar, soil, deleterious material etc should be removed from the joint and the joint cleaned prior to re-pointing. Debris from this operation should be captured by the protecting barrier on the scaffolding and appropriately disposed of offsite in accordance with the applicable legislation
- 3.2 Angle grinders or other disc machinery should not be used to remove existing mortar from the joints. Mortar joint should be raked out using hand tools to a minimum depth of 50mm to allow adequate bond to form.
- 3.3 The area raked out should be no larger than 1m x 2m before re-pointing is carried out.
- 3.4 Remaining mortar should be brushed clean and washed with water before re-pointing. Absorbent masonry should be dampened at time of application of the fresh mortar. Non-absorbent masonry should be dry at the time of application.
- 3.5 Often the use of rotating drum cement mixers does not sufficiently distribute the lime binder among the aggregate without the addition of excessive quantities of water. Care should be taken to thoroughly mix the mortar in small batches in accordance with CC-SPW-02400 using only the amount of water specified.
- 3.6 Mortar shall be applied using flat steel jointing tools of varying width to suit individual joint.
- 3.7 Joint shall be fully filled flush with the surrounding masonry, or the weathered edges. Once the surface of the mortar is firm the surface should be tamped with a stiff brush or lightly scraped to expose the aggregate and improve the appearance of the mortal
- 3.8 Any overspill/ splashback on the face of the stone shall be cleared to remove all traces of excess mortar. Overspill should be minimized using suitably experienced masons
- 3.9 Suitably sized pinning stones should be used to limit the joint width to a maximum of 20mm for the full depth of joint.
- 3.10 Pinning stones shall be supported with props or other method as agreed with the Employers representative. The use of steel tving wire shall not be allowed
- 3.11 Immediately after re-pointing for a period of at least 3-4 days or longer if conditions dictate, the mortar shall be protected against the harmful effects of weather (wind rain sun and frost)
- 3.12 New mortar shall be kept in a dampened condition for 72 hours after placing
- 3.13 Re-pointing shall not take places where there is a risk the temperature will drop below 5deg C in the 2-3 weeks following the re-pointing. If necessary, the works should be protected from the cold weather with appropriate insulation and a heat source to ensure temperature stavs above 5deg C.

#### 4 Masonry Reconstruction

- 4.1 Areas of masonry to be reconstructed are identified in the detailed design drawings Rehabilitation Works.
- 4.2 Any missing and collapsed stone should be recovered on site as much as possible
- 4.3 Existing masonry recovered should be inspected by Employer's Representative before use. Recovered stone proven to be unsuitable should not be used in the reconstruction.
- 4.4 New stone to be used for reconstruction should match the existing masonry in type, appearance and quality

#### 5 Masonry Crack Repairs

5.1 The type and areas of crack repairs are identified in the detailed design drawings - Rehabilitation Works.

#### Grouting, Deep Pointing and Filling of Non-Progressive Cracks

- 5.2 For deep pointing, eroded joints and non-progressive cracks where normal pointing technique is not suitable a "dry mix process" should be used.
- 5.3 Joints and cracks should be prepared in accordance with Re-pointing Guidelines outlined in Section 3.
- 5.4 Mortar should be injected into the joint under pressure using mortar sprayed equipment. The mortar should be built up in lavers from the back of the join to the front.
- 5.5 Injecting mortar used should have proven characteristic compressive strength of max. 2N/mm² at 28 days and 5N/mm² at 91 days. Grouting materials should be approved by Employer's Representative before use.

#### 6 Crack Stitching Guidance

- 6.1 Depending in the position of longitudinal cracks, certain structures may require the option of a number of stitching bars to be drilled completely through the structure/drilled from each face and overlapped in a crack-free zone.
- 6.2 Stitching bar positions to be marked out and drilled with rotary/rock drilling equipment. Stitching bars or anchors shall be installed horizontally trough the voussoirs and arch barrel, parallel to the springing. The level of the bar shall be equidistant from the intrados and extrados of the arch barrel. Hole diameter to be drilled with a tolerance of 0% to +5%.
- 6.3 Stitching bars should be stainless steel threaded bar 304 (1.4301). Stitching bar should be installed in accordance with
- 6.4 Stitching bars installation should be carried out using core drilling method. Percussion drilling should not be used
- 6.5 Holes shall, wherever reasonably practicable be formed through bricks or masonry units as applicable and not through joints or where damage to new brickwork or bonding may occur. Holes to be flushed clear of all dirt and debris, and any
- 6.6 Grout to be injected into the anchor hole at a pressure recommended by the supplier/manufacturer. The grout chosen shall be a low heat of hydration and low plastic shrinkage, with a high resistance to sulphate and or other chemical
- 6.7 Insert the anchors bars into the holes ensuring that when fully inserted, a clearance of 40mm from the face of the arch is maintained.
- 6.8 Remove any surplus grout from drilled hole and face of structure. Point up any remaining holes with mortar to match the existing structure. Crack to be pointed up & grouted on completion
- 6.9 The contractor is at liberty to propose alternative methods and/materials for carrying out the works, in a separate project specific from the design submission.
- 6.10 The contractor shall provide a method statement with details of the cracks to be injected, the procedure for cleaning out cracks, the injection process and proposed materials to be used ensuring no damage occurs to be to the existing structure. Crack injection using proprietary systems shall be in accordance with the manufacturers recommendations. Mortar or sealing compounds used to seal the face of the crack shall have achieved sufficient strength strength before

injection commences. The choice of mortar, sealing compound and injection material shall take into account the

crack width, depth, presence of water and compatibility with the "parent" material.

#### NOTES

This drawing is the property of CCC. This drawing should not be relied on or used circumstances other than those for which it was originally prepared and for which CCC was commissioned

#### **GENERAL NOTES**

- Design Notes to be read in conjunction with the specification.

  Design Notes to be read in conjunction with the Detailed Design Notes
  KCCBFW-CCC-ST-XX-DR-S-0001

  Design Notes to be read in conjunction with the Standard Details
  KCCBFW-CCC-ST-XX-DR-S-0002 Standard Details, Sheet 1 of 2
  KCCBFW-CCC-ST-XX-DR-S-0003 Standard Details, Sheet 2 of 2

  Design Notes to be seed in provinced the provinced to the provinced to
- Design Notes to be read in conjunction with the Drawings:
- KCCBFW-CCC-ST-S01-DR-S-0001 to 000x Balfeaghan Bridge KCCBFW-CCC-ST-S02-DR-S-0001 to 000x Clogharinka 1 Bridge

- KCCBFW-CCC-S1-S02-DR-S-0001 to 000x Cloghannka 1 Bridge
   KCCBFW-CCC-ST-S03-DR-S-0001 to 000x Staplestown Bridge
   KCCBFW-CCC-ST-S04-DR-S-0001 to 000x Clogharinka 2 Bridge
   KCCBFW-CCC-ST-S05-DR-S-0001 to 000x Baltreacey Bridge
   KCCBFW-CCC-ST-S06-DR-S-0001 to 000x Passlands Bridge
   KCCBFW-CCC-ST-S07-DR-S-0001 to 000x Bridge at Newtown
   KCCBFW-CCC-ST-S08-DR-S-0001 to 000x Boherbaun Bridge

ΕV	DATE	DESCRIPTION	BY	СНК	APD
00	08/05/2024	DETAILED DESIGN	PT	PT	SC
01	02/07/2024	DETAILED DESIGN	PT	PT	SC
00	25/07/2024	TENDER DESIGN	SS	PT	SC
02	22/11/2024	SECTION 177 ISSUE	PT	PT	SC

**Comhairle Contae Chill Dara** 

Kildare County Council

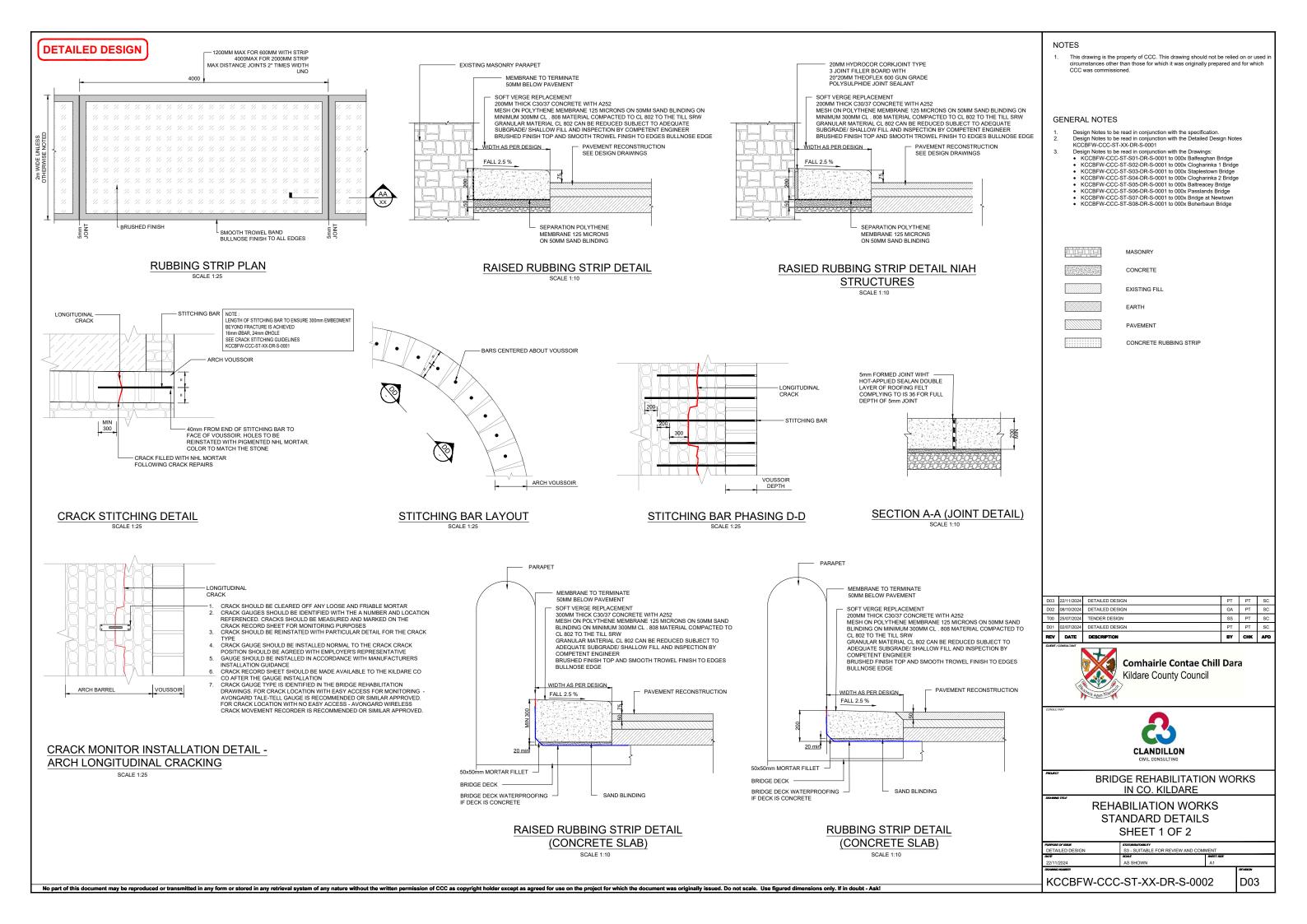
CLANDILLON

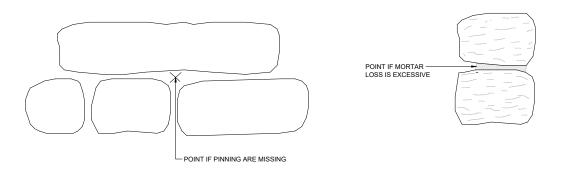
BRIDGE REHABILITATION WORKS IN CO. KII DARE

REHABILITATION WORKS **DESIGN NOTES** 

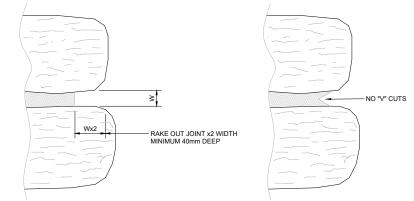
S3 - SUITABLE FOR REVIEW AND COMMEN

KCCBFW-CCC-ST-XX-DR-S-0001

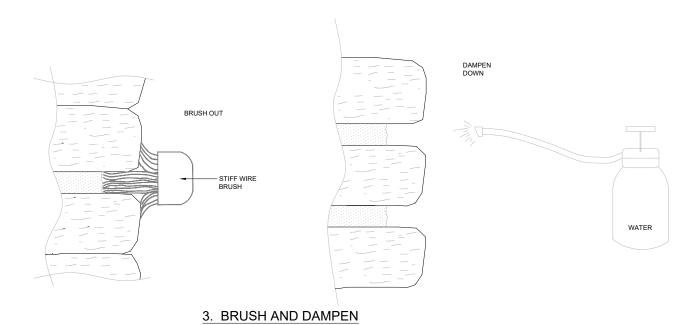




## 1. WHEN TO REPOINT



2. RAKE OUT EXISTING JOINTS



4. REPOINT JOINT FLUSH

## NOTES

1. This drawing is the property of CCC. This drawing should not be relied on or used in circumstances other than those for which it was originally prepared and for which CCC was commissioned.

#### GENERAL NOTES

- Design Notes to be read in conjunction with the specification.
  Design Notes to be read in conjunction with the Detailed Design Notes
  KCCBFW-CCC-ST-XX-DR-S-0001
  Design Notes to be read in conjunction with the Drawings:

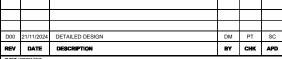
  KCCBFW-CCC-ST-S01-DR-S-0001 to 000x Balfreaghan Bridge
  KCCBFW-CCC-ST-S02-DR-S-0001 to 000x Clogharinka 1 Bridge
  KCCBFW-CCC-ST-S02-DR-S-0001 to 000x Staplestown Bridge
  KCCBFW-CCC-ST-S03-DR-S-0001 to 000x Clogharinka 2 Bridge
  KCCBFW-CCC-ST-S05-DR-S-0001 to 000x Baltreacey Bridge
  KCCBFW-CCC-ST-S06-DR-S-0001 to 000x Baltreacey Bridge
  KCCBFW-CCC-ST-S05-DR-S-0001 to 000x Baltreacey Bridge
  KCCBFW-CCC-ST-S05-DR-S-0001 to 000x Bridge at Newtown
  KCCBFW-CCC-ST-S05-DR-S-0001 to 000x Bridge at Newtown

#### MASONRY REPOINTING NOTES:

- Masonry repointing should be carried out when the conditions presented in Step 1) are encountered and agreed with Employer's Representative. Refer to the scope of the Rehabilitation Works in the drawings for the expected areas to be repointed.
   Rake out existing joint to remove loose and friable mortar. Joints shall be raked out to a depth of twice the joint width as shown in Step 2) using a plugging chisel and hammer. Grinders and breakers should not be used. Joints shall be raked out square with no "V" cuts.
   Joints shall be brushed out using a stiff wire brush. The surrounding masonry shall be suitable dampened, the contractor shall ensure no water flow, weeping, or pooled water is present prior to repointing.
   Joints shall be repointed flush with the existing masonry unless specifically noted in the design drawings that pointing should match the existing e.g. strap pointing, weathered pointing etc.
   Repointing shall be carried out using an appropriate lime or cementitious mortar to match existing. Refer to each bridge element in the design drawings for the type of mortar specified.

- mortar specified.

  Refer to the Design Notes for the mortar selection and application.





Comhairle Contae Chill Dara Kildare County Council



BRIDGE REHABILITATION WORKS IN CO. KILDARE

**REHABILIATION WORKS** STANDARD DETAILS SHEET 2 of 2

PUNPUSE UP ISSUE	DIAIUDIOUIIADILII F		
DETAILED DESIGN	S3 - SUITABLE FOR REVIEW AND COMP		
DATE	SCALE	SHEET SIZE	
22/11/2024	N.T.S.	A1	
DRAWING NUMBER			REVISION
KCCBFW-CCC	D00		

No part of this document may be reproduced or transmitted in any form or stored in any retrieval system of any nature without the written permission of CCC as copyright holder except as agreed for use on the project for which the document was originally issued. Do not scale. Use figured dimensions only. If in doubt - Askl