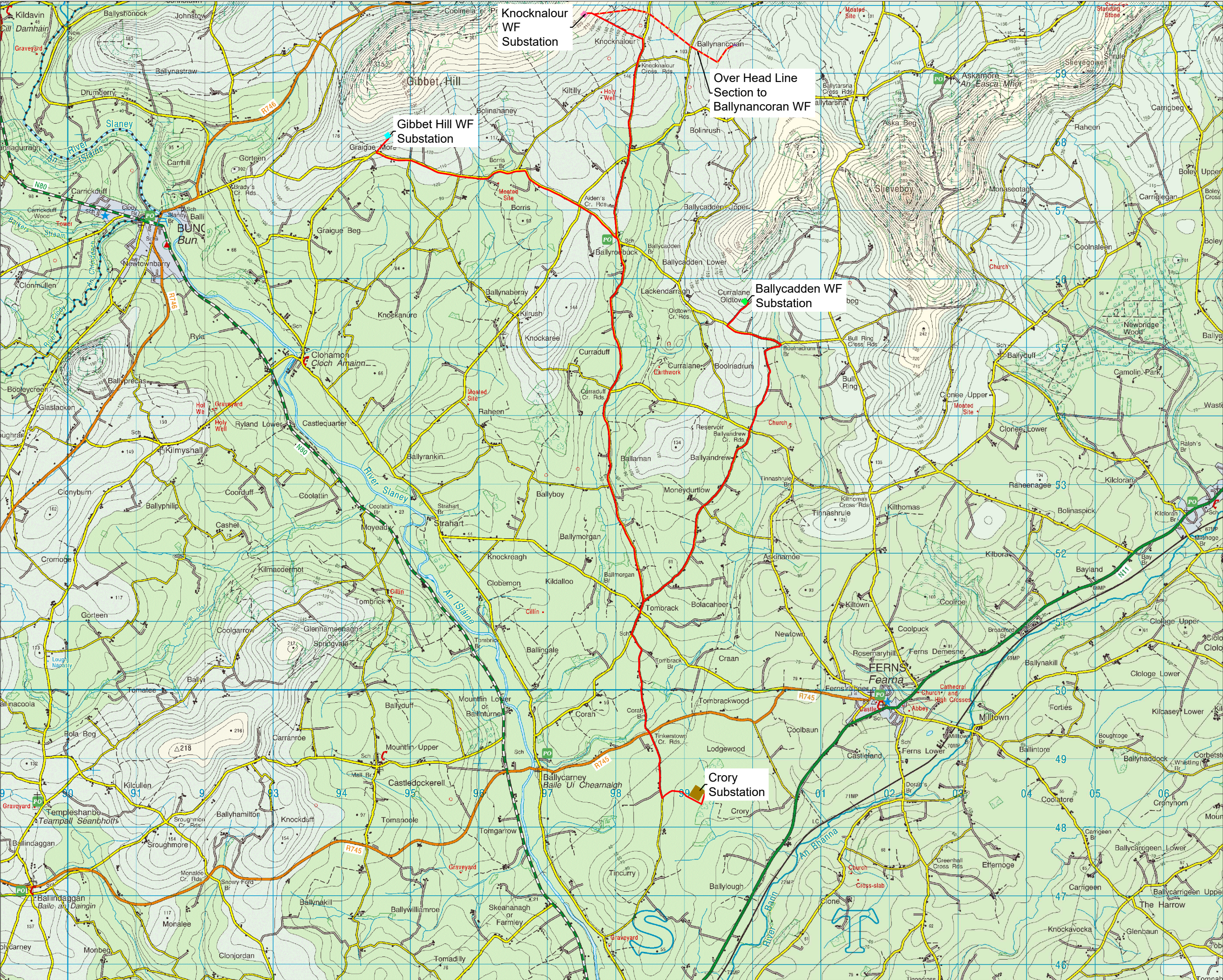




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Drawing Legend

— Planning Application Boundary

Location Context Map

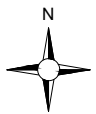
PROJECT TITLE:
Crory Wind Farm Group Grid Connection

DRAWING BY: Joseph O'Brien	CHECKED BY: Jimmy Green
PROJECT No.: 190806	DRAWING No.: 190806 - 01
SCALE: 1:50,000 @ A3	DATE: 06.03.2020
OS SHEET No.: OS2814, OS2816, OS3014, OS3016	



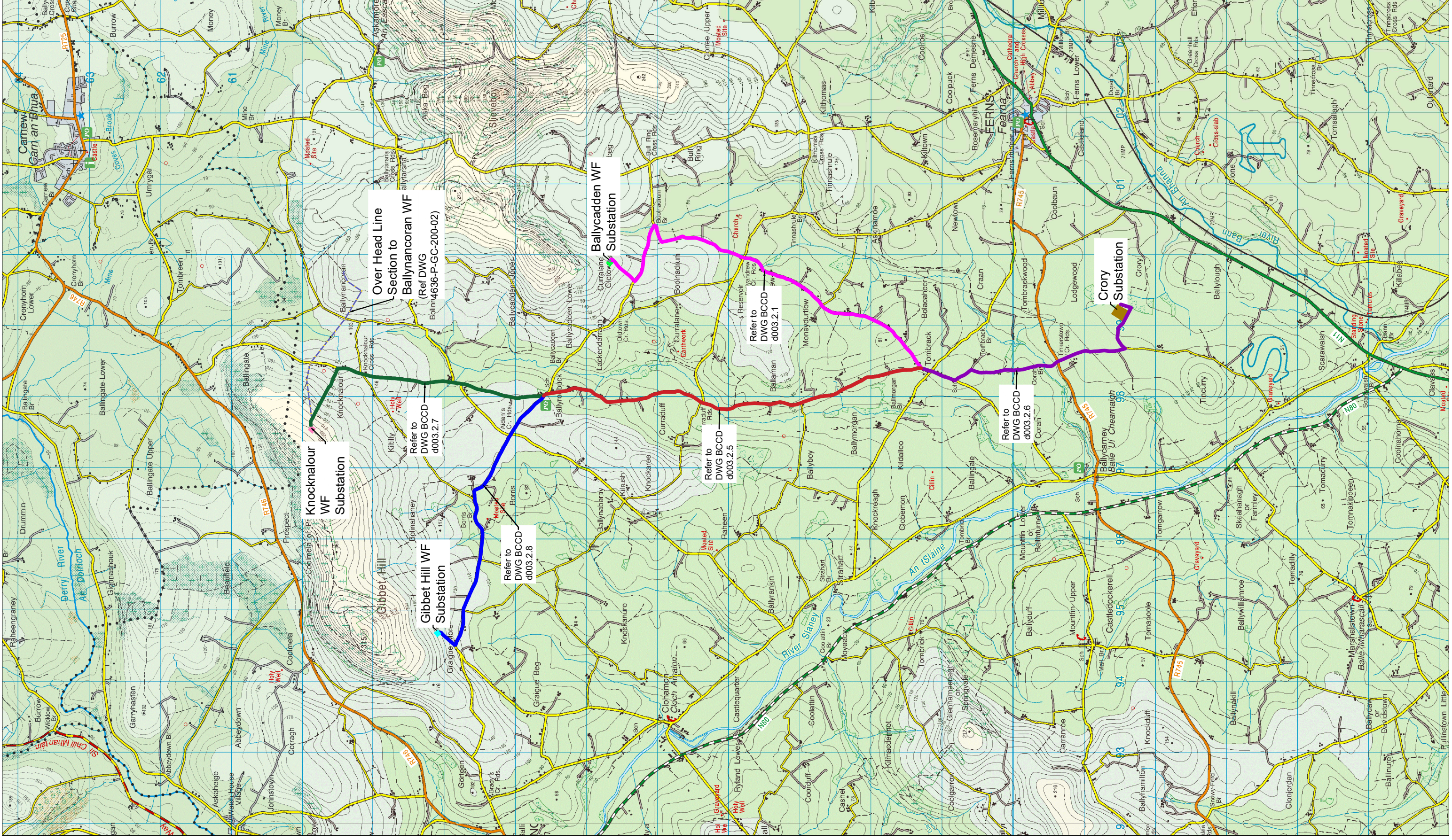
MKO
Planning and
Environmental
Consultants

Tuam Road, Galway
Ireland, H91 VW64
+353 (0) 91 735611
email: info@www.mkoireland.ie
Website: www.mkoireland.ie



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Drawing Legend

- | Overhead Line | Refer to DWG 40
for Polesets) |
|---|----------------------------------|
|  | Refer to DWG BCDD d003.2.1 |
|  | Refer to DWG BCDD d003.2.5 |
|  | Refer to DWG BCDD d003.2.6 |
|  | Refer to DWG BCDD d003.2.7 |
|  | Refer to DWG BCDD d003.2.8 |



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DRAWING TITLE:
**Typical OHL Pole Set & Cable
Ducting Reference Map**

PROJECT TITLE:

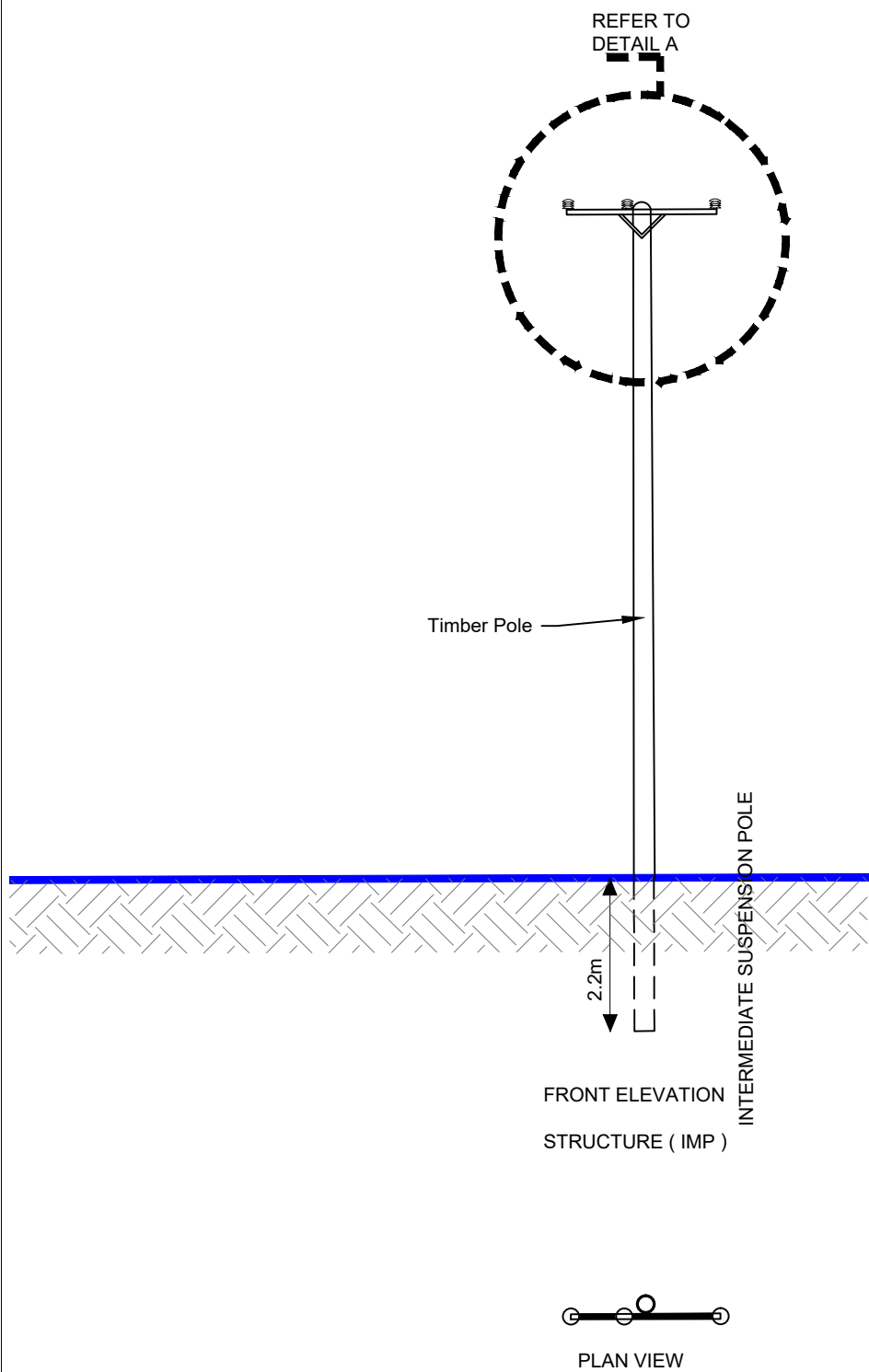
DRAWING BY: Joseph O'Brien	CHECKED BY: Jimmy Green
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PROJECT No.: 190806	DRAWING No.: 190806 - 16
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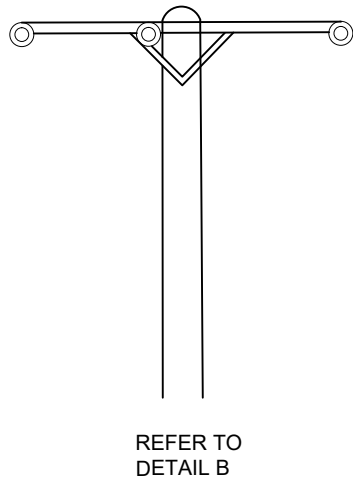
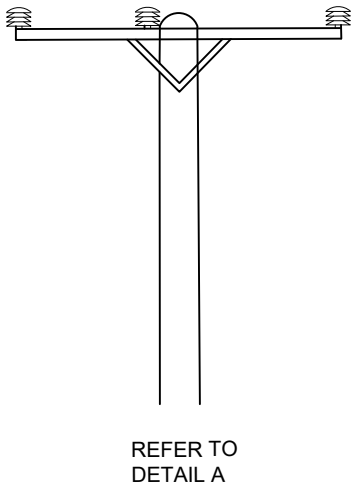
OS SHEET No.: **OS2814. OS2816. OS3014. OS3016**



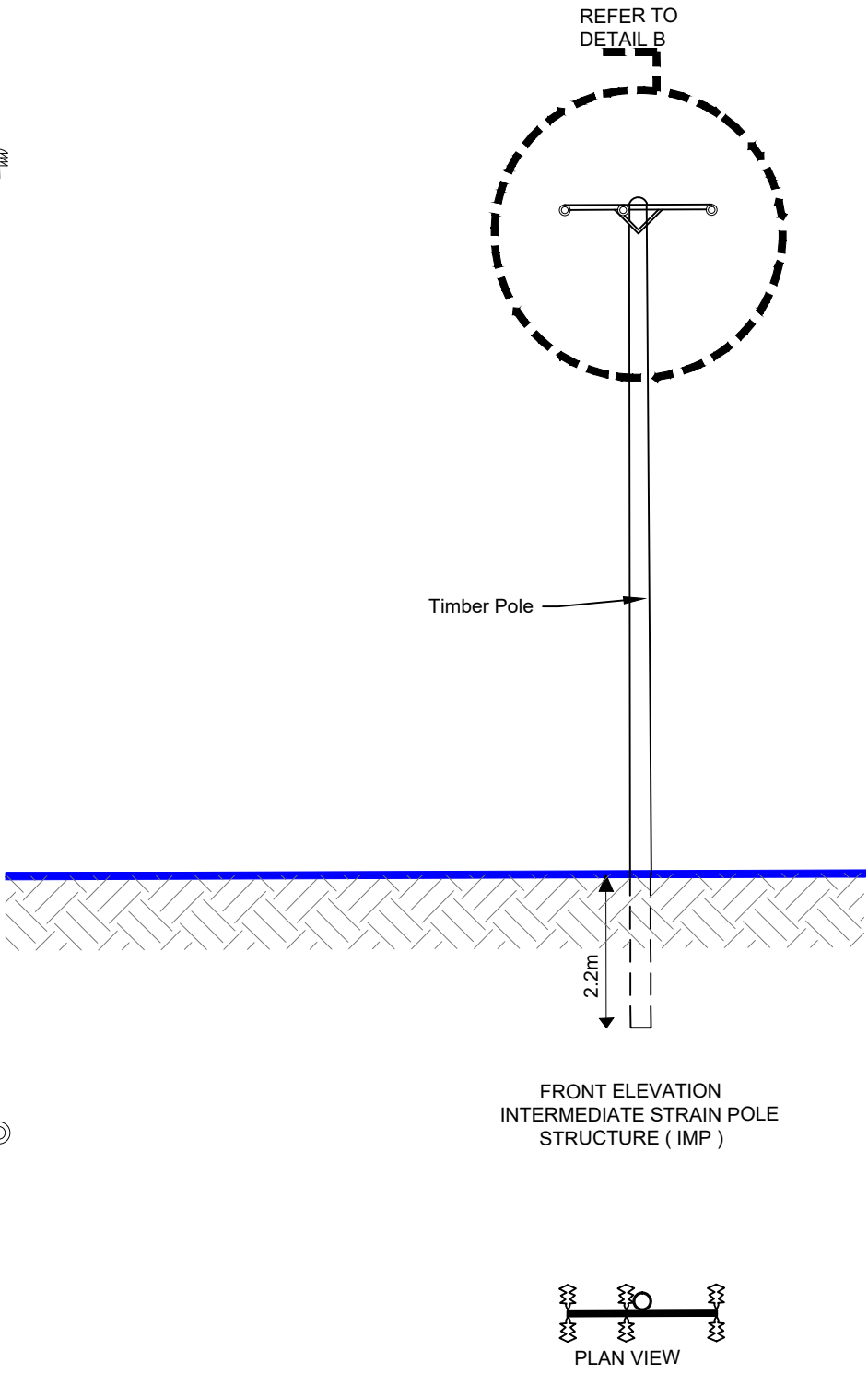
MKO
Planning and
Environmental
Consultants
Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email: info@www.mkoireland.ie
Website: www.mkoireland.ie



POLE LENGTHS RANGE FROM 12m TO 14m
WITH 2.2m BELOW GROUND LEVEL.
12m POLE STRUCTURE SHOWN.

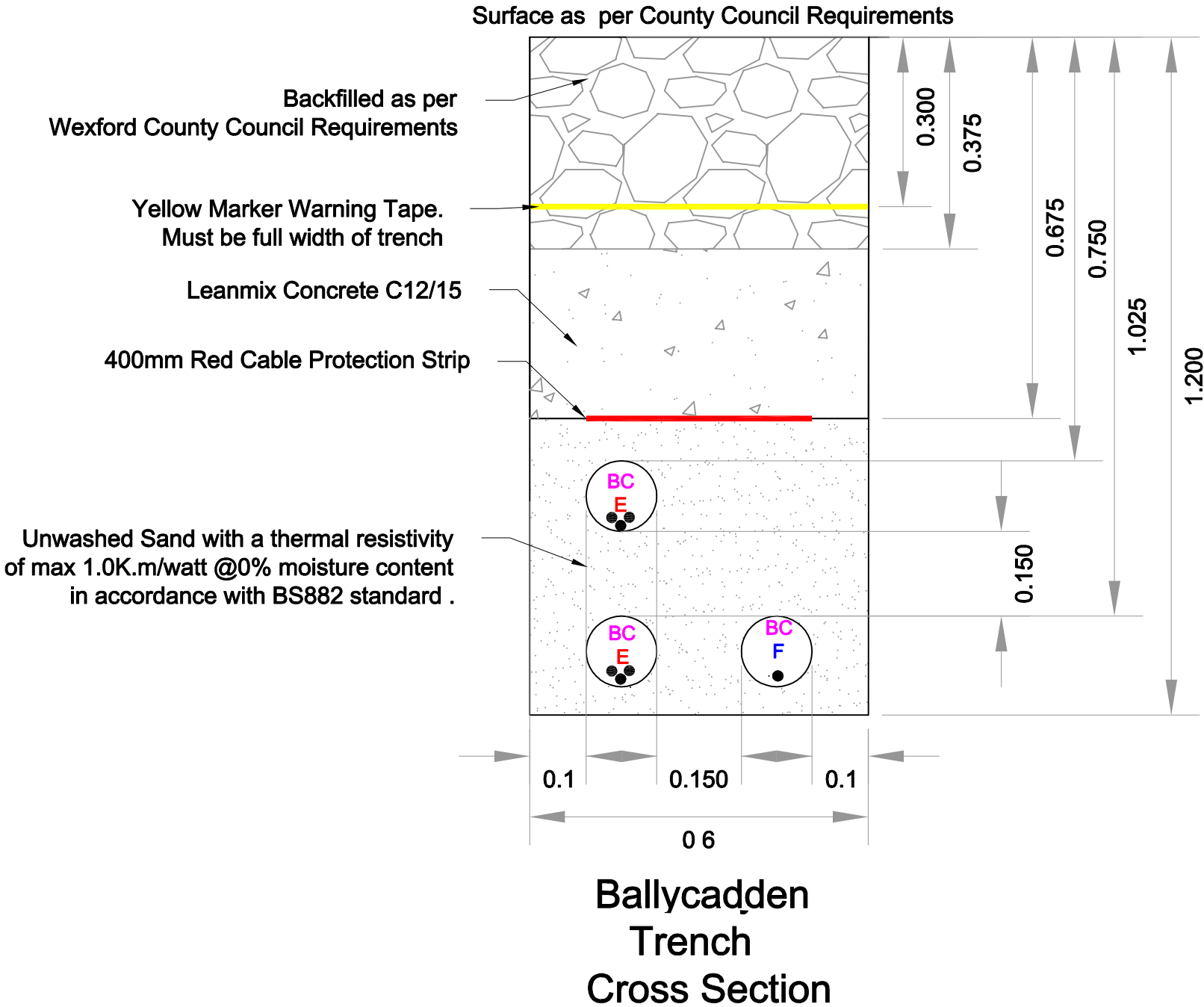


POLE



POLE LENGTHS RANGE FROM 12m TO 14m
WITH 2.2m BELOW GROUND LEVEL.
12m POLE STRUCTURE SHOWN.

DRAWING TITLE:	
Typical Polesets	
Crory Wind Farm Group Grid Connection	
DRAWING BY: Joseph O'Brien	CHECKED BY: Jimmy Green
PROJECT No.: 190806	DRAWING No.: 4636-P-GC-200-02
SCALE: 1:100 @A3	DATE: 06.03.2020
	
MKO Planning and Environmental Consultants Tuam Road, Galway Ireland, H91 VW84 +353 (0) 91 735611 email: info@www.mkofireland.ie Website: www.mkofireland.ie	



- WIND FARM NAME
- GH = GIBBET HILL
 - KB = KNOCKNALOUR/BALLYNANCORAN
 - BB = BALLAMAN/BALLYDUFF
 - BC = BALLYCADDEN
- CABLE TYPE
- E = ELECTRICAL
 - F = FIBRE OPTIC
- DUCT TYPE ESB CODE 9317553
- 125mm OUTER DIAMETER uPVC DUCT WITH 12mm DRAW ROPES.
 - MINIMUM SEPARATION TO ADJACENT DUCTS ON THE SAME CIRCUIT 150mm
 - MINIMUM SEPARATION TO ADJACENT DUCTS ON THE SEPARATE CIRCUIT 300mm
 - COMM. DUCTS 125mm OUTER DIAMETER uPVC DUCT WITH 12mm DRAW ROPES
- NOTES:
- JOINT BAYS TO BE TEMPORARILY BACKFILLED WITH C1804. PERMANENT BACKFILLED FOLLOWING PULLING AND JOINTING OF CABLES

D	29.07.11	M.K	J.O.C	FINAL TRENCH DETAIL
C	04.07.11	M.K	J.O.C	TRENCH REDESIGN
B	13.06.11	M.K	J.O.C	DUCT SPACING AMENDMENT
A	20.04.11	M.K	J.O.C	FIRST ISSUE
REV	DATE	DRAWN BY	CHECKED BY	DETAILS
ENGINEER				CLIENT
 Wind Prospect Ireland Ltd Headland House 1 – 3 The Green Malahide Co. Dublin Tel +353 (0) 1 845 5031 Fax +353 (0) 1 845 5612 Email ireland@windprospect.com				
PROJECT				
CRORY SUB GROUP				
TITLE				
TYPICAL BALLYCADDEN TRENCH CROSS SECTION				
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1:10		APPROVED		
PAPER SIZE		DRAWN BY	CHECKED AND APPROVED	
A3		M.KRAS	J.O'CONNOR	
PROJECT PHASE		DATE	DATE	
CONSTRUCTION		29/07/2011	29/07/2011	
DRAWING NUMBER				REVISION
BCCD d003.2.1				D
FILE NAME				
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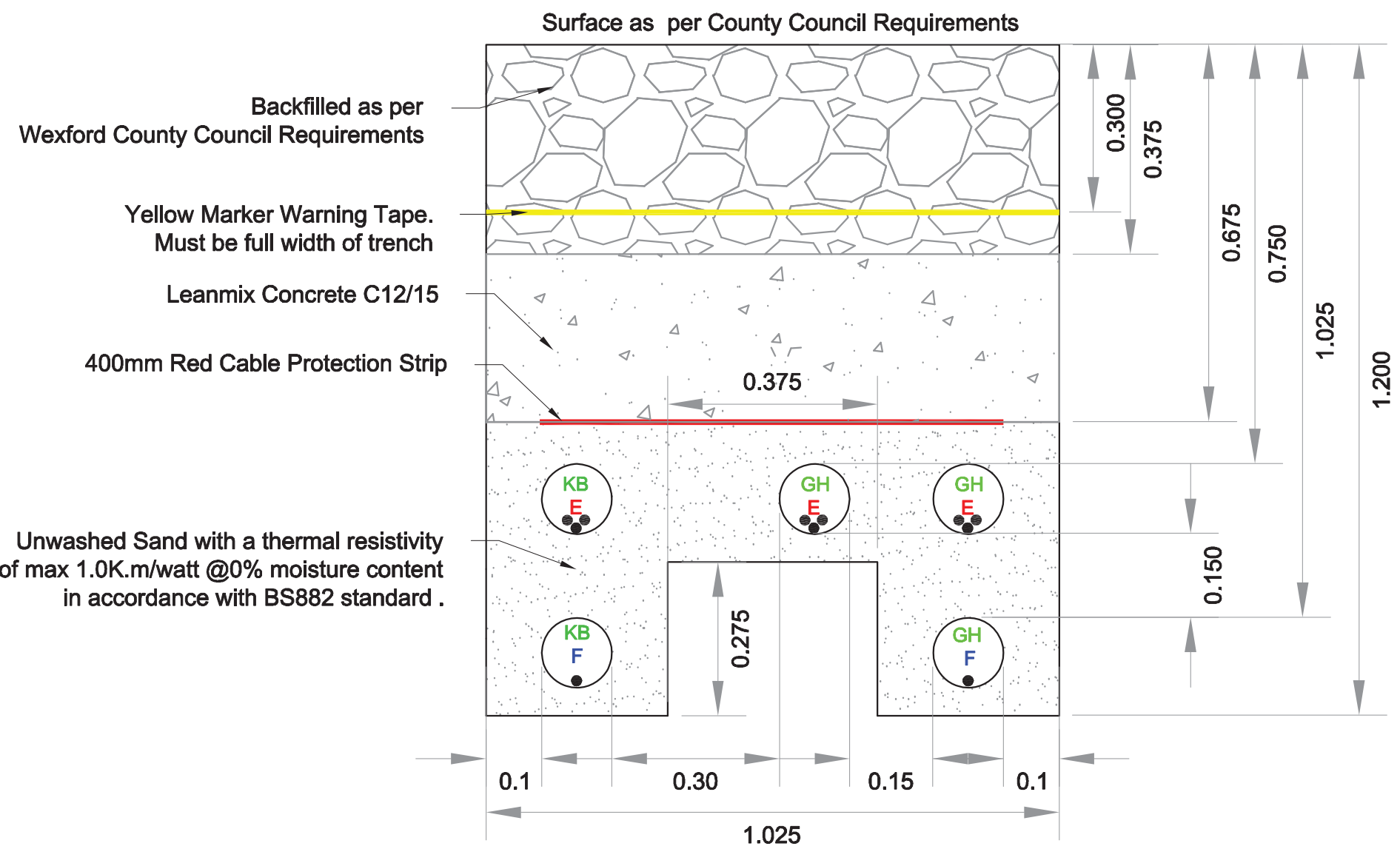
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 - KB = KNOCKNALOUR/BALLYNANCORAN
 - BB = BALLAMAN/BALLYDUFF
 - BC = BALLYCADDEN

- CABLE_TYPE**
- E = ELECTRICAL
 - F = FIBRE OPTIC

- DUCT_TYPE_ESB_CODE_9317553**
- 125mm OUTER DIAMETER uPVC DUCT WITH 12mm DRAW ROPES.
 - MINIMUM SEPARATION TO ADJACENT DUCTS ON THE SAME CIRCUIT 150mm
 - MINIMUM SEPARATION TO ADJACENT DUCTS ON THE SEPARATE CIRCUIT 300mm
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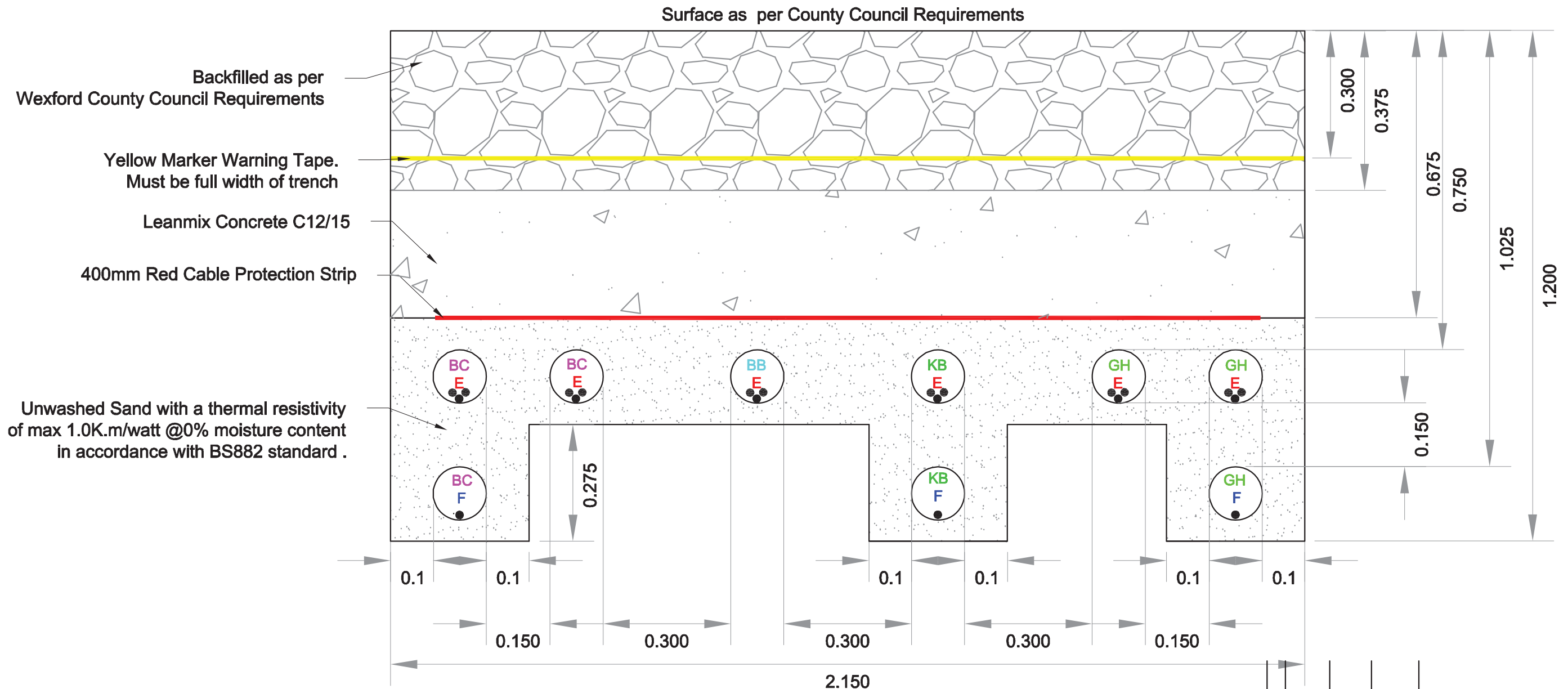
- NOTES:**
- JOINT BAYS TO BE TEMPORARILY BACKFILLED WITH C1804. PERMANENT BACKFILLED FOLLOWING PULLING AND JOINTING OF CABLES

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C	04.07.11	M.K	J.O.C	TRENCH REDESIGN
B	13.08.11	M.K	J.O.C	DUCT SPACING AMENDMENT
A	20.04.11	M.K	J.O.C	FIRST ISSUE
REV DATE		DRAWN BY	CHECKED BY	DETAILS
ENGINEER		CLIENT		
		Wind Prospect Ireland Ltd Headland House 1 – 3 The Green Malahide Co. Dublin Tel +353 (0) 1 845 5031 Fax +353 (0) 1 845 5612 Email ireland@windprospect.com		
PROJECT				
CRORY SUB GROUP				
TITLE				
COMBINED KB/GH TRENCH CROSS SECTION				
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PAPER SIZE		DRAWN BY		CHECKED AND APPROVED
A3		M.KRAS		J.O'CONNOR
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DRAWING NUMBER				REVISION
BCCD d003.2.5 KB/GH				D
FILE NAME				
2:\Projects\Crory Subgroup BCCD d003.2.5 KB/GH\BCCD d003.2.5 Trench Details\BCCD d003.2.5 Trench Details REV D				



Knocknalour/Gibbet Hill
Trench C
Cross Section

AS BUILT



Combined Crory Sub-Group Trench A Cross Section



WIND FARM NAME

- GH = GIBBET HILL
- KB = KNOCKNALOUR/BALLYNANCORAN
- BB = BALLAMAN/BALLYDUFF
- BC = BALLYCADDEN

CABLE TYPE

- E = ELECTRICAL
- F = FIBRE OPTIC

DUCT TYPE ESB CODE 9317553

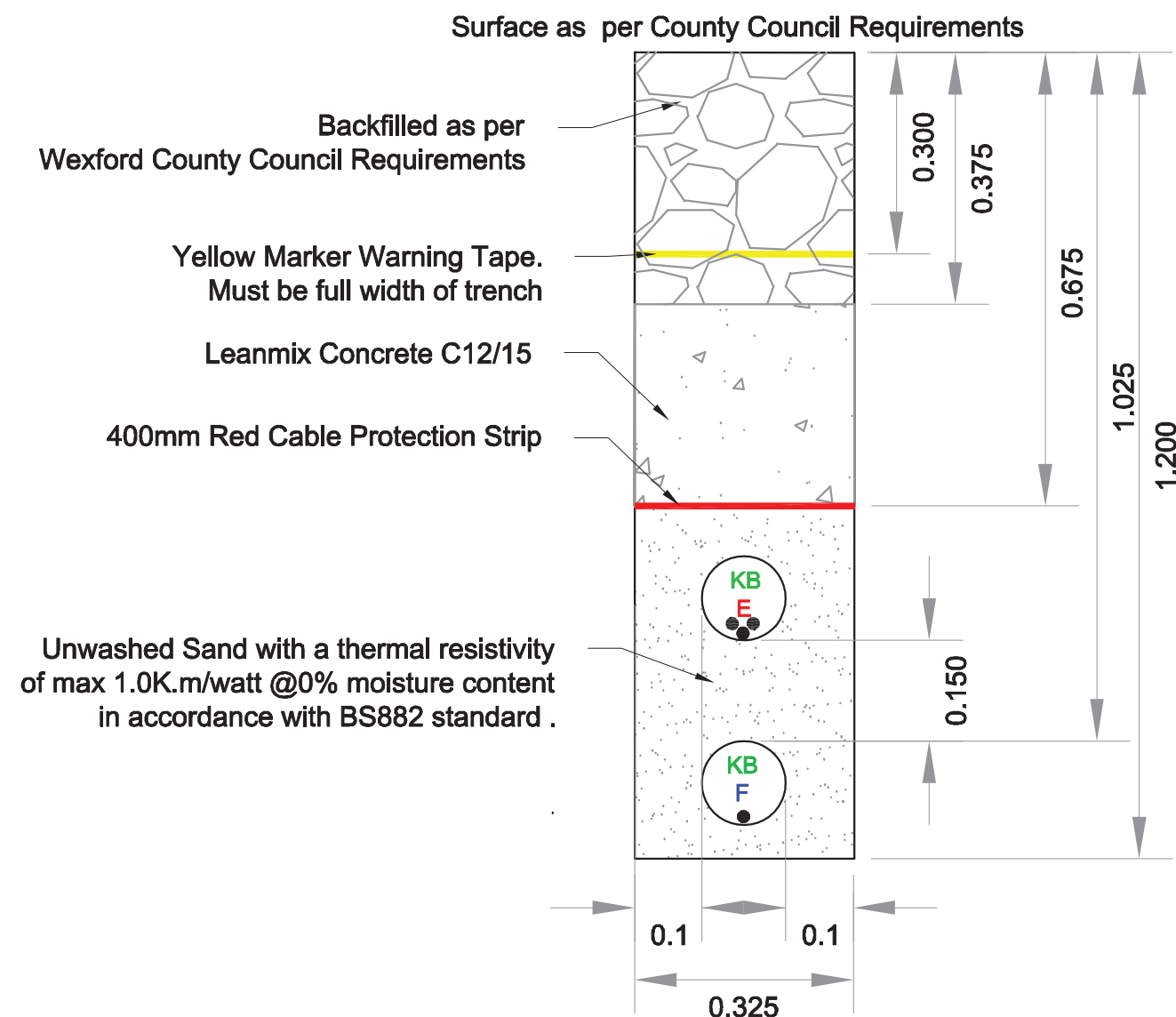
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- MINIMUM SEPARATION TO ADJACENT DUCTS ON THE SAME CIRCUIT 150mm
- MINIMUM SEPARATION TO ADJACENT DUCTS ON THE SEPARATE CIRCUIT 300mm
- COMM. DUCTS 125mm OUTER DIAMETER uPVC DUCT WITH 12mm DRAW ROPES

NOTES:

- JOINT BAYS TO BE TEMPORARILY BACKFILLED WITH C1804. PERMANENT BACKFILLED FOLLOWING PULLING AND JOINTING OF CABLES

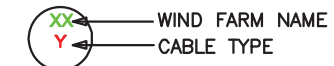
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A	20.04.11	M.K	J.O.C	FIRST ISSUE		
REV		DATE	DRAWN BY	CHECKED BY	DETAILS	CLIENT
ENGINEER						
		Wind Prospect Ireland Ltd Headland House 1 – 3 The Green Malahide Co. Dublin Tel +353 (0) 1 845 5031 Fax +353 (0) 1 845 5612 Email ireland@windprospect.com				
PROJECT						
CRORY SUB GROUP						
TITLE						
COMBINED TRENCH CROSS SECTION						
SCALE			STATUS			
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PAPER SIZE			DRAWN BY		CHECKED AND APPROVED	
A3			M.KRAS		J.O'CONNOR	
PROJECT PHASE			DATE		DATE	
CONSTRUCTION			29/07/2011		29/07/2011	
DRAWING NUMBER					REVISION	
BCCD d003.2.6 Combined					D	
FILE NAME						



Knocknalour/Ballynancoran
Trench G
Cross Section

AS BUILT



- WIND FARM NAME
- GH = GIBBET HILL
 - KB = KNOCKNALOUR/BALLYNANCORAN
 - BB = BALLAMAN/BALLYDUFF
 - BC = BALLYCADDEN

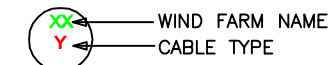
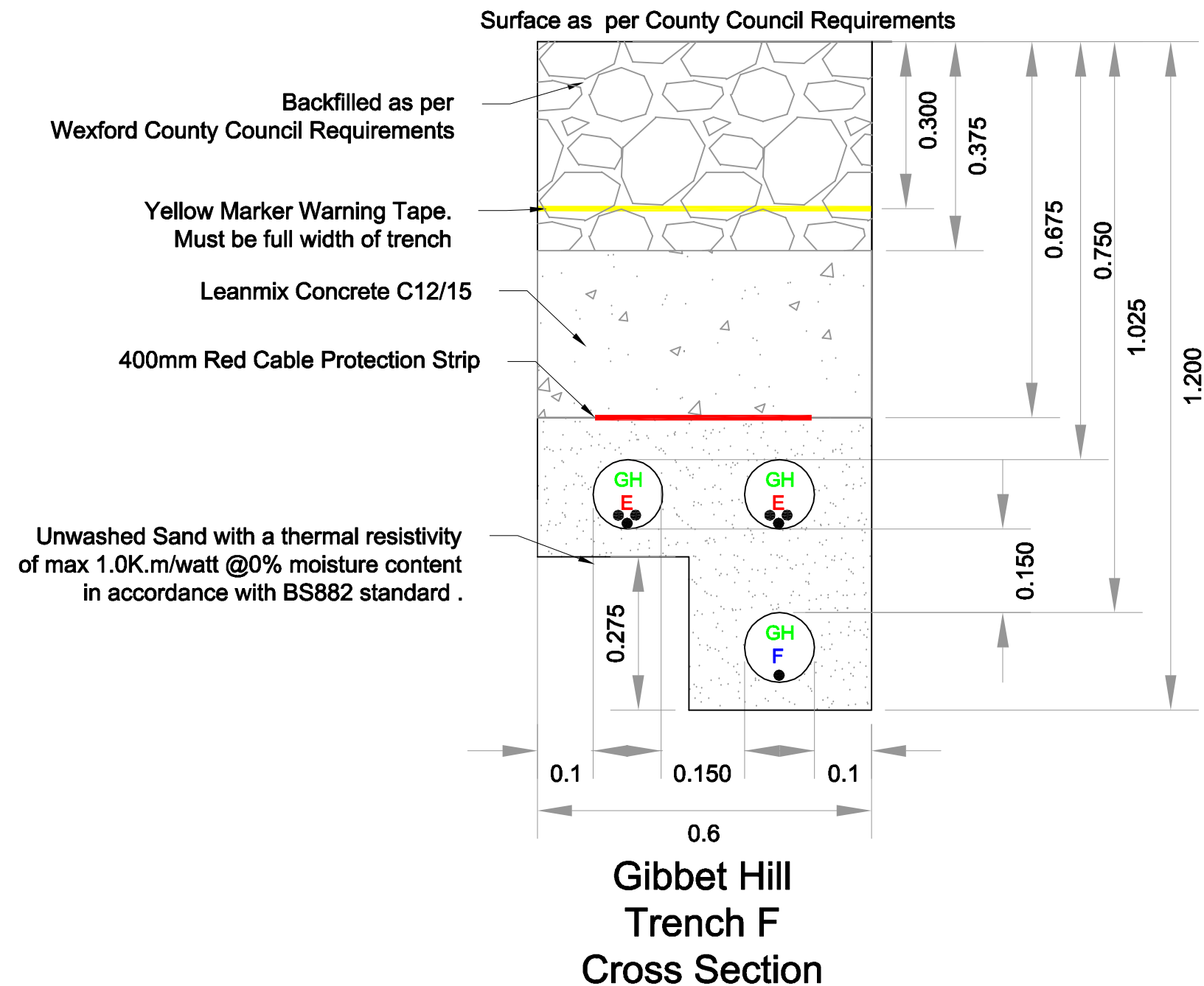
- CABLE TYPE
- E = ELECTRICAL
 - F = FIBRE OPTIC

- DUCT TYPE ESB CODE 9317553
- 125mm OUTER DIAMETER uPVC DUCT WITH 12mm DRAW ROPES.
 - MINIMUM SEPARATION TO ADJACENT DUCTS ON THE SAME CIRCUIT 150mm
 - MINIMUM SEPARATION TO ADJACENT DUCTS ON THE SEPARATE CIRCUIT 300mm
 - COMM. DUCTS 125mm OUTER DIAMETER uPVC DUCT WITH 12mm DRAW ROPES

- NOTES:
- JOINT BAYS TO BE TEMPORARILY BACKFILLED WITH C1804. PERMANENT BACKFILLED FOLLOWING PULLING AND JOINTING OF CABLES

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C	04.07.11	M.K	J.O.C	TRENCH REDESIGN
B	13.06.11	M.K	J.O.C	DUCT SPACING AMENDMENT
A	20.04.11	M.K	J.O.C	FIRST ISSUE
REV DATE		DRAWN BY		CHECKED BY
ENGINEER		DETAILS		CLIENT
		Wind Prospect Ireland Ltd Headland House 1 – 3 The Green Malahide Co. Dublin Tel +353 (0) 1 845 5031 Fax +353 (0) 1 845 5612 Email ireland@windprospect.com		
PROJECT				
CRORY SUB GROUP				
TITLE				
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SCALE		STATUS		
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PAPER SIZE		DRAWN BY		CHECKED AND APPROVED
A3		M.KRAS		J.O'CONNOR
PROJECT PHASE		DATE		DATE
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DRAWING NUMBER				REVISION
BCCD d003.2.7 KB				D
FILE NAME				

AS BUILT



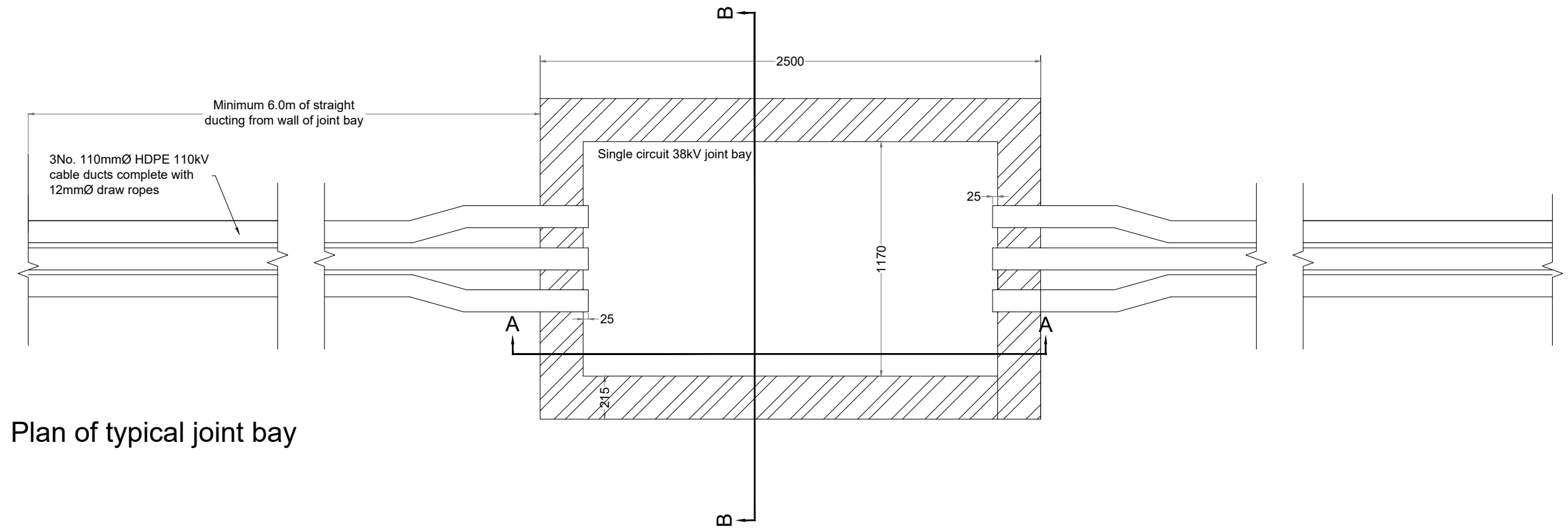
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- GH = GIBBET HILL
 - KB = KNOCKNALOUR/BALLYNANCORAN
 - BB = BALLAMAN/BALLYDUFF
 - BC = BALLYCADDEN

- CABLE TYPE
- E = ELECTRICAL
 - F = FIBRE OPTIC

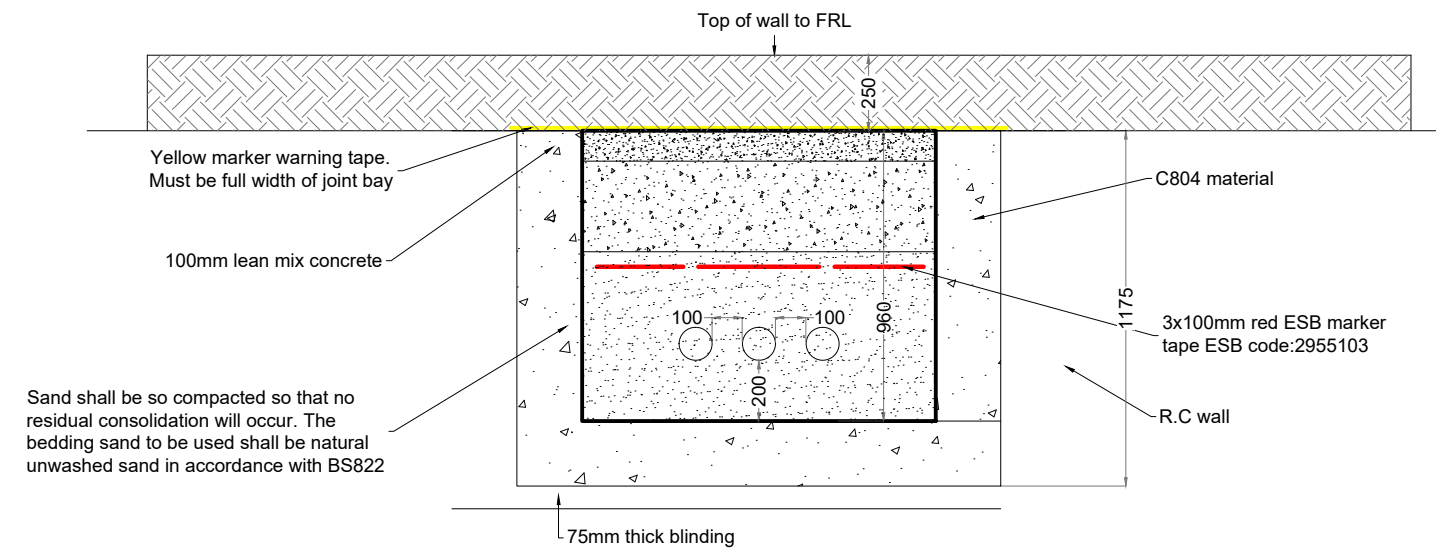
- DUCT TYPE FSB CODE 9317553
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 - MINIMUM SEPARATION TO ADJACENT DUCTS ON THE SAME CIRCUIT 150mm
 - MINIMUM SEPARATION TO ADJACENT DUCTS ON THE SEPARATE CIRCUIT 300mm
 - COMM. DUCTS 125mm OUTER DIAMETER uPVC DUCT WITH 12mm DRAW ROPES

- NOTES:
- JOINT BAYS TO BE TEMPORARILY BACKFILLED WITH C1804. PERMANENT BACKFILLED FOLLOWING PULLING AND JOINTING OF CABLES

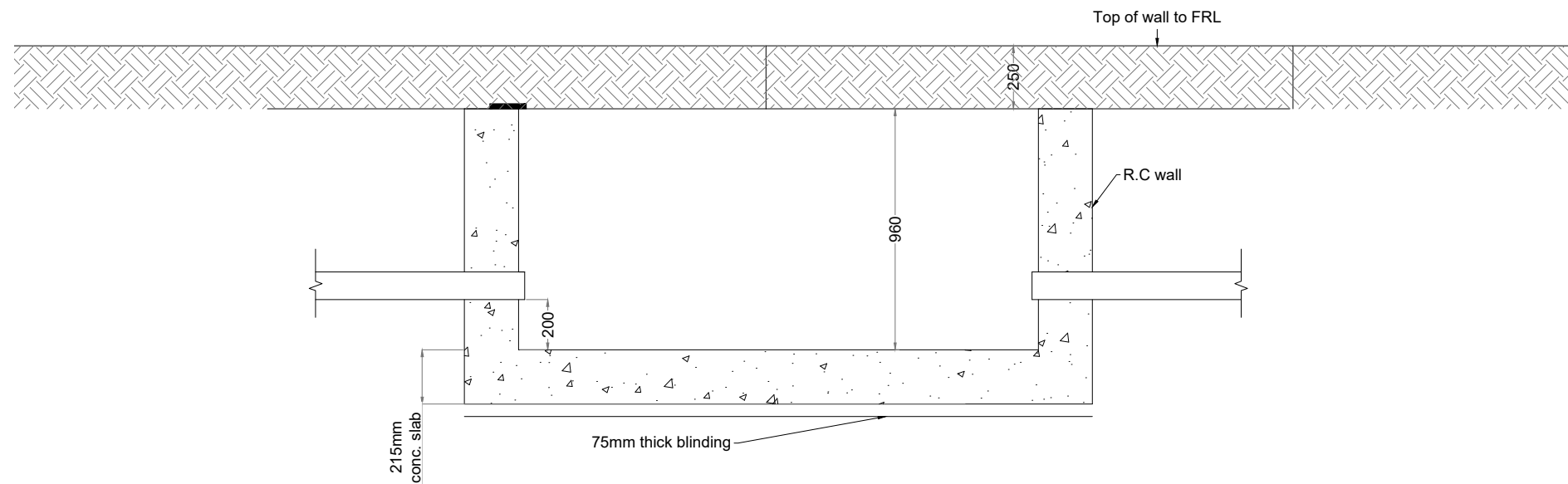
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A	20.04.11	M.K	J.O.C	FIRST ISSUE
REV	DATE	DRAWN BY	CHECKED BY	DETAILS
ENGINEER				CLIENT
 Wind Prospect Ireland Ltd Headland House 1 - 3 The Green Malahide Co. Dublin Tel +353 (0) 1 845 5031 Fax +353 (0) 1 845 5612 Email ireland@windprospect.com				
PROJECT				
CRORY SUB GROUP				
TITLE				
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PAPER SIZE		DRAWN BY		CHECKED AND APPROVED
A3		M.KRAS		J.O'CONNOR
PROJECT PHASE		DATE		DATE
CONSTRUCTION		29/07/2011		29/07/2011
DRAWING NUMBER				REVISION
BCCD d003.2.8 GH				D
FILE NAME				



Plan of typical joint bay



Section B-B

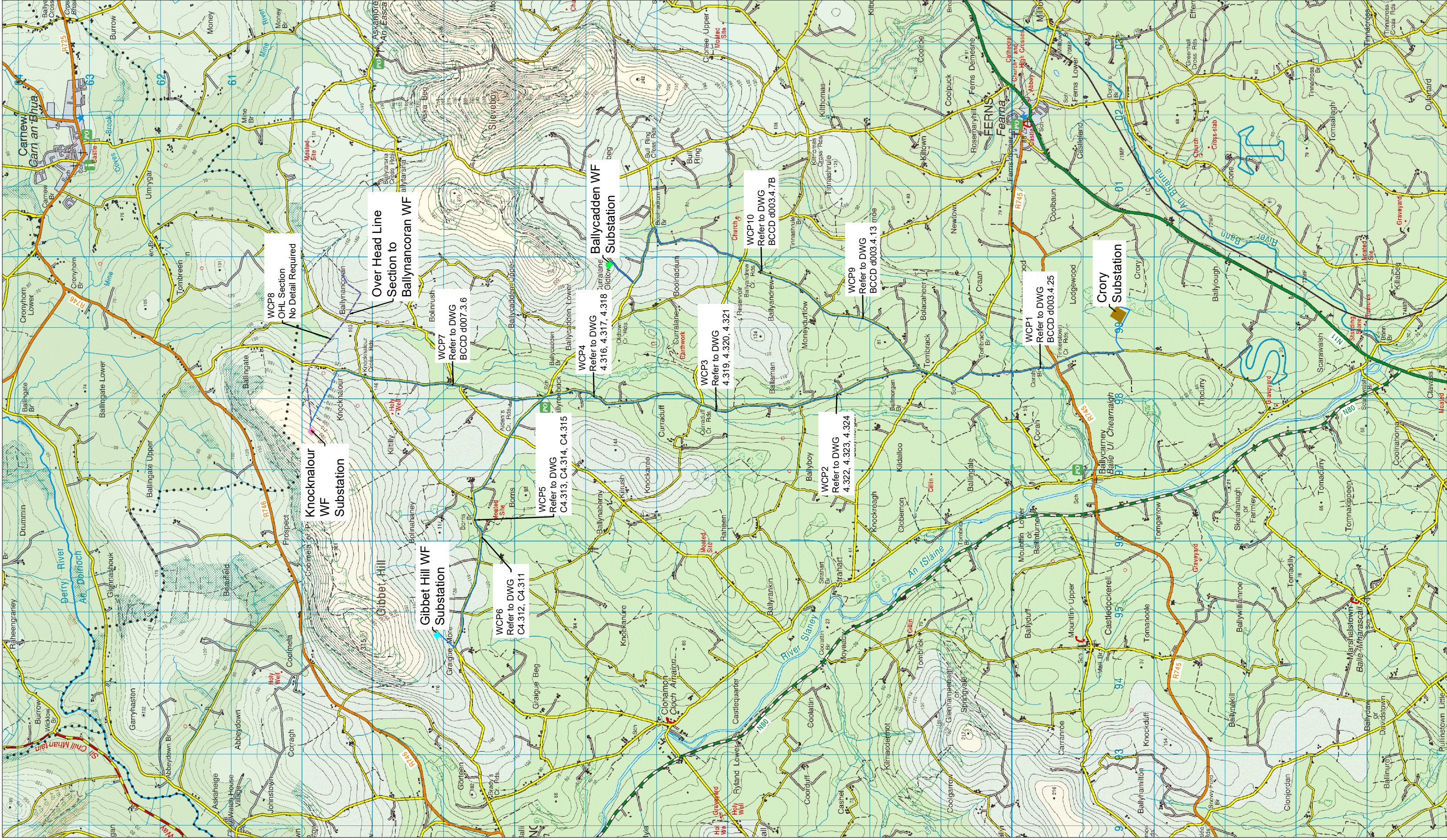


Section A-A

DRAWING TITLE: Typical Joint Bay Detail	
PROJECT TITLE: Crory Wind Farm Group Grid Connection	
DRAWING BY: Joseph O'Brien	CHECKED BY: Jimmy Green
PROJECT No.: 190806	DRAWING No.: 190806 - 18
SCALE: 1:25 @ A3	DATE: 06.03.2020
 MKO Planning and Environmental Consultants Tuam Road, Galway Ireland, H91 VW64 +353 (0) 91 735611 email: info@www.mkoireland.ie Website: www.mkoireland.ie	

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Drawing Legend

- | | |
|---|------------------------------|
| | Underground Grid Connection |
| | Overhead Line |
|  | Culvert/Water Crossing Point |



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DRAWING TITLE:
**Water Course Crossings
Reference Map**

PROJECT TITLE:
Croy Wind Farm Group Grid Connection

DRAWING BY:	Joseph O'Brien	CHECKED BY:	Jimmy Green
PROJECT No.:	190806	DRAWING No.:	190806 - 17
SCALE:	1:50,000 @ A3	DATE:	06.03.2020
OS SHEET No.:		OS2814, OS2816, OS3014, OS3016	



MKO
Planning and
Environmental
Consultants

Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email: info@www.mkoireland.ie
Website: www.mkoireland.ie

DIRECTIONAL DRILLING LONG SECTION A-A

DRILLING POINT ENTRANCE

0.25

1.5

16.0

2.2

WL

2.1

1.8

0.5

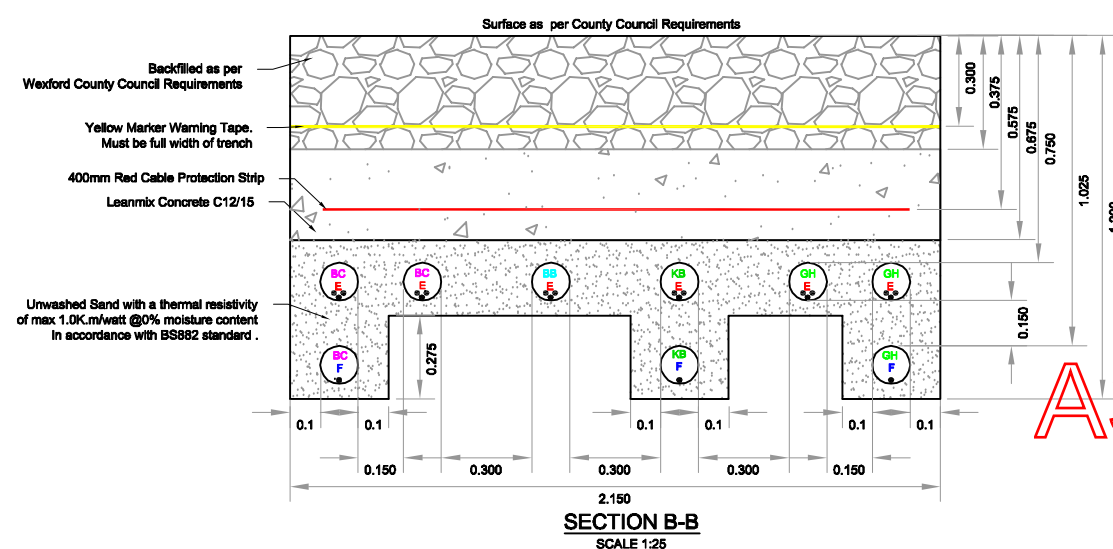
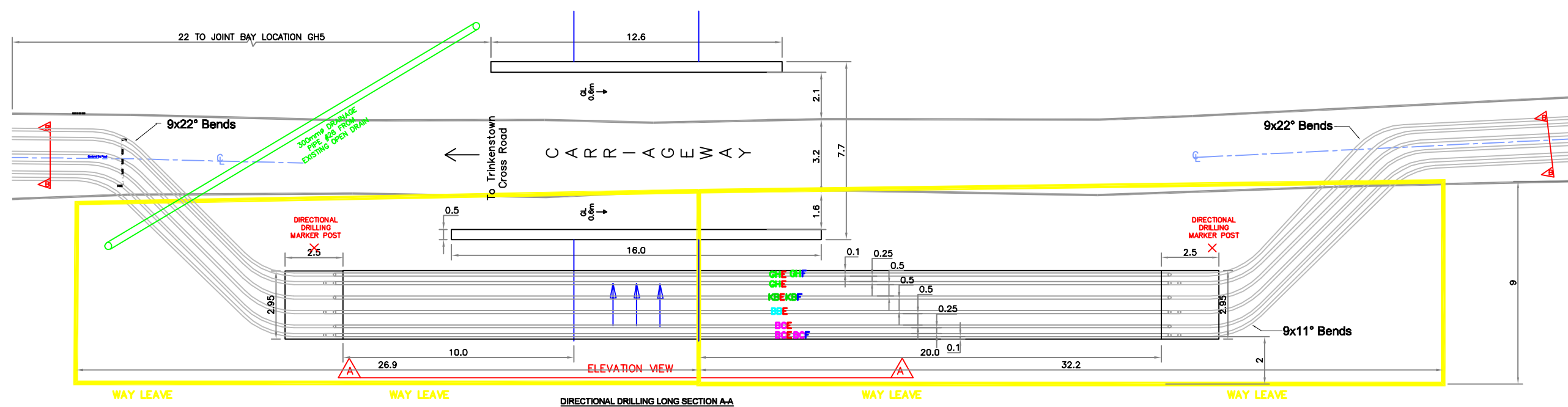
DRILLING POINT ENTRANCE

0.25

1.5

6no. 175mm drilled core filled with bentonite
6no. od SDR14.5 107mm ducts

3no. 175mm drilled core filled with bentonite
3no. od SDR14.5 107mm ducts



WIND_FARM_NAME

- GH = GIBBET HILL
- KB = KNOCKNALOUR/BALLYNANCORAN
- BB = BALLAMAN/BALLYDUFF
- BC = BALLYCADDEN

CABLE TYPE

- E = ELECTRICAL
- F = FIBRE OPTIC

DUCT TYPE ESB CODE 9317553

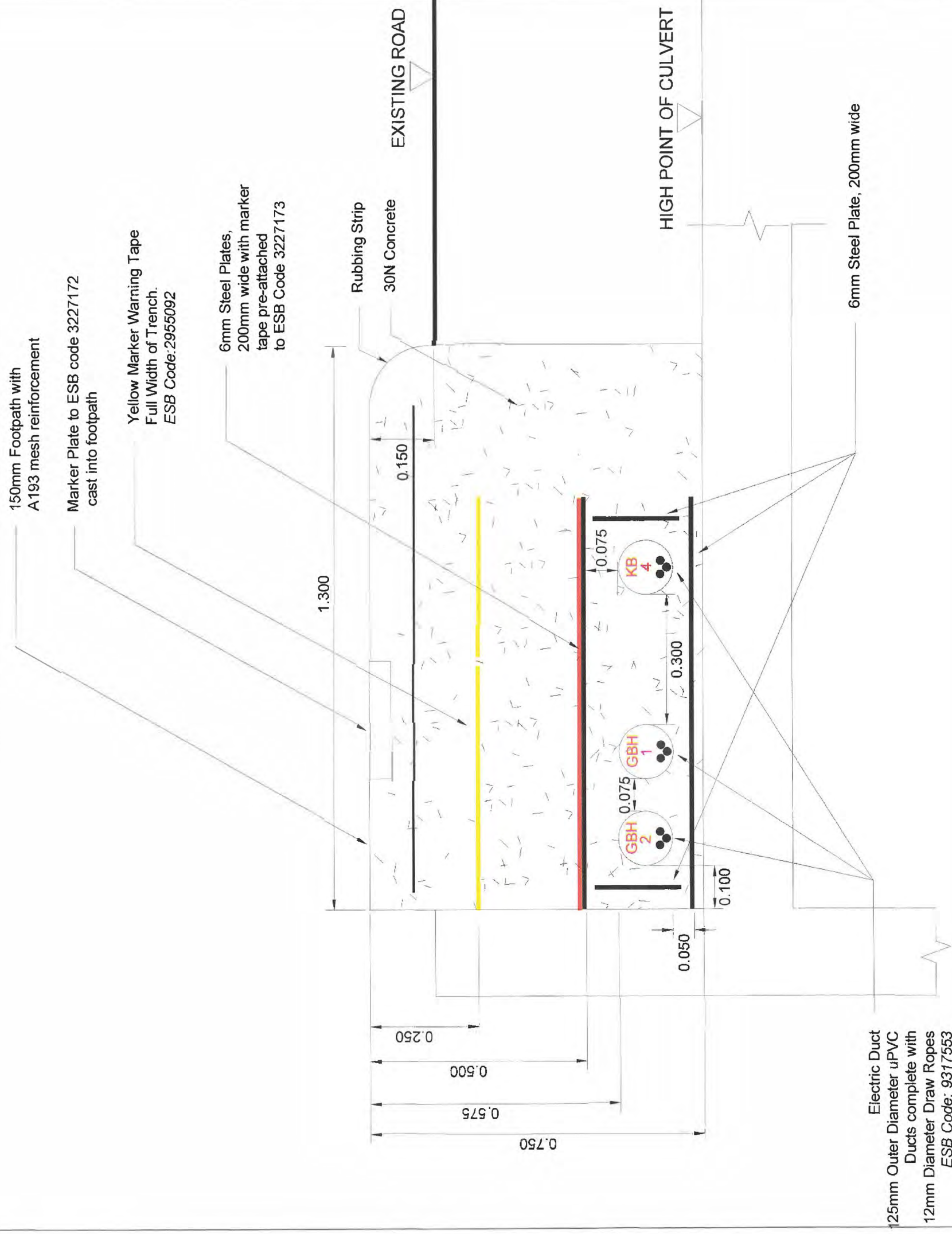
- 125mm OUTER DIAMETER uPVC DUCT WITH 12mm DRAW ROPES.
- MINIMUM SEPARATION TO ADJACENT DUCTS ON THE SAME CIRCUIT 150mm
- MINIMUM SEPARATION TO ADJACENT DUCTS ON THE SEPARATE CIRCUIT 300mm
- COMM. DUCTS 125mm OUTER DIAMETER uPVC DUCT WITH 12mm DRAW ROPES

NOTES:

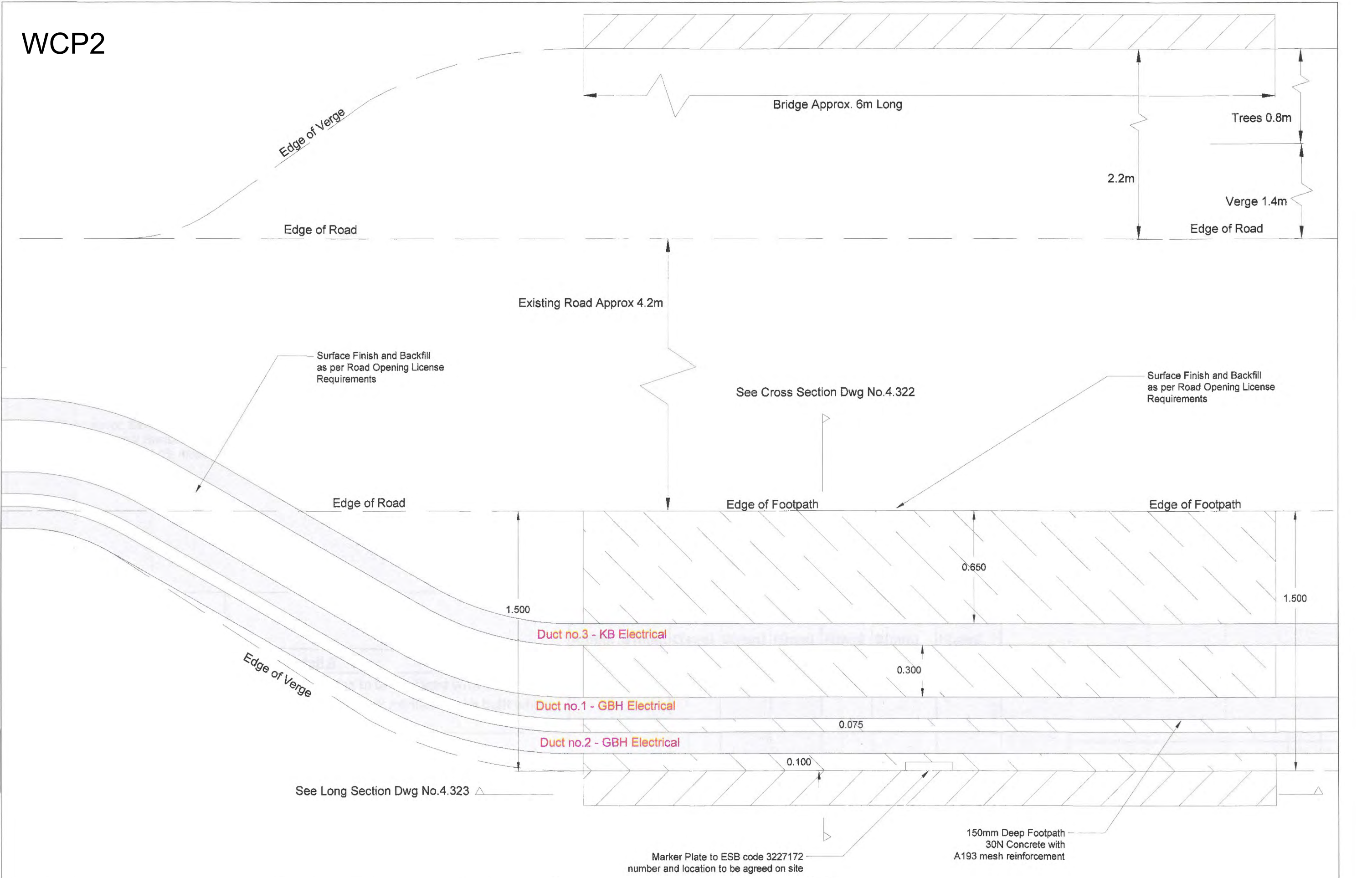
- JOINT BAYS TO BE TEMPORARILY BACKFILLED WITH C1804. PERMANENT BACKFILLED FOLLOWING PULLING AND JOINTING OF CABLES

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E	07.11.11	M.B.	J.O'C.	22" BENDS SHOWN
D	02.08.11	M.K	J.O'C	TRANCH UPDATED, ADDITIONAL DETAILS ADDED
C	-	-	-	-
B	-	-	-	-
A	20.04.11	M.K	J.O'C	FIRST ISSUE
REV	DATE	DRAWN BY	CHECKED BY	DETAILS
ENGINEER				CLIENT
 Wind Prospect Ireland Ltd Headland House 1 - 3 The Green Malahide Co. Dublin Tel +353 (0) 1 845 5031 Fax +353 (0) 1 845 5612 Email ireland@windprospect.com				
PROJECT				
CRORY SUB GROUP				
TITLE				
CORAH BRIDGE				
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A3		M.KRAS		J.O'CONNOR
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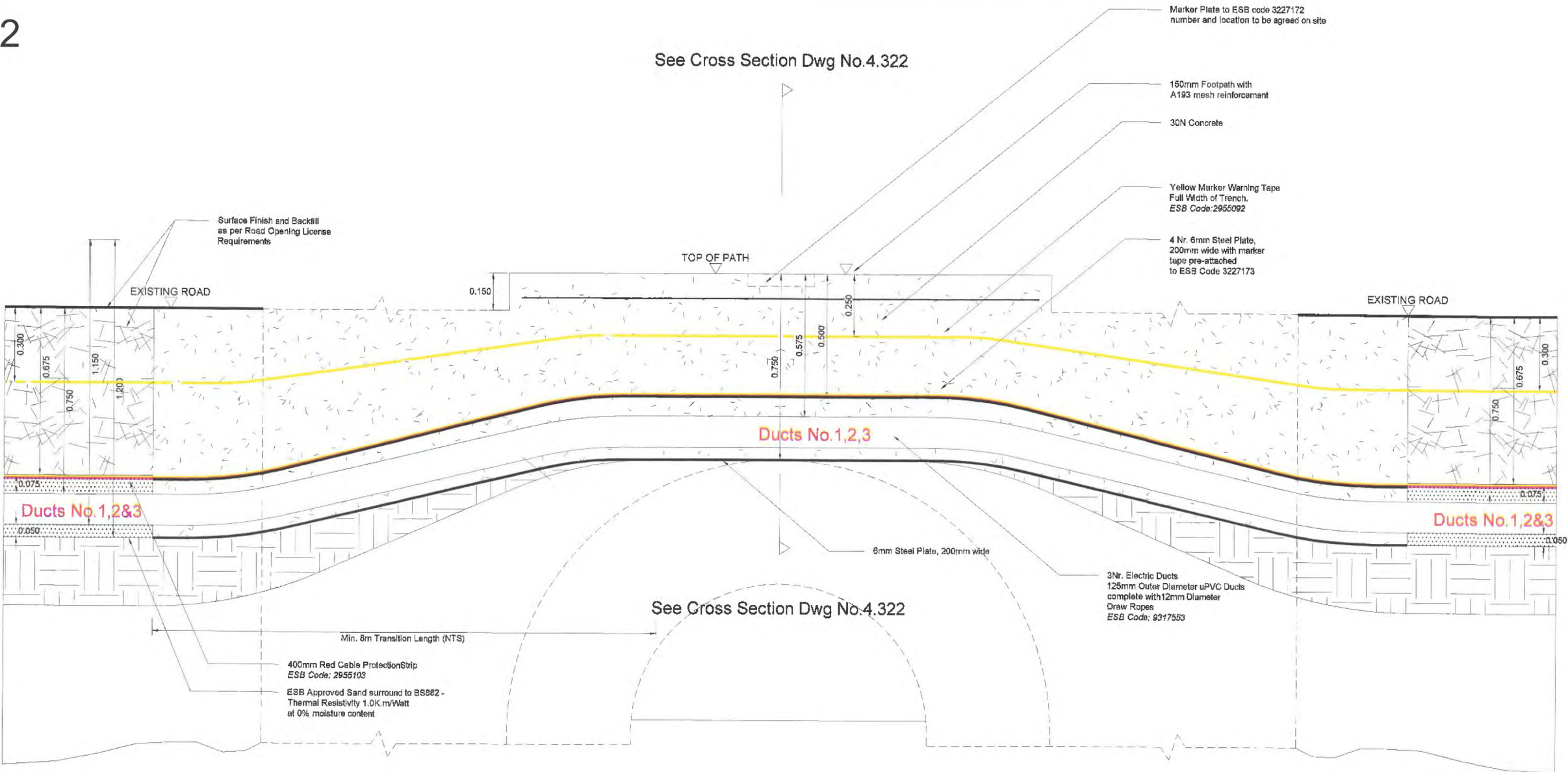
Trench Cross Section at Culvert

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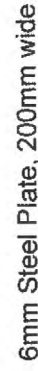
Plan Content
External Cable Route
Culvert - Cross Section



Project		Stage									
Gibbet Hill Windfarm Co. Wexford		As Built		Proj.-no.: IR003							
				Page no.: 4.324							
ABO WIND Ireland Ltd. Dublin Office 53 Glashuile Road Sandycove, Dublin Tel. +353 (01) 6636133 Fax +353 (01) 2304058		Plan Content External Cable Route Culvert - Plan		Date: 09.10.12							
				Drawn by: LR							
				Scale: 1:20@A3							
				Amendment		amended		Date:		ID:	



Amendment	amended	Date:	ID:
Stage	Proj.-no.:	IR003	
As Built	Page no.:	4.323	
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Project	Drawn by:	LR	
Gibbet Hill Windfarm Co. Wexford	Scale:	1:20@A3	
Plan Content			
External Cable Route Culvert - Long Section			
		Dublin Office 53 Glashtule Road Sandycove, Dublin Tel. +353 (01) 6636133 Fax +353 (01) 2304058	

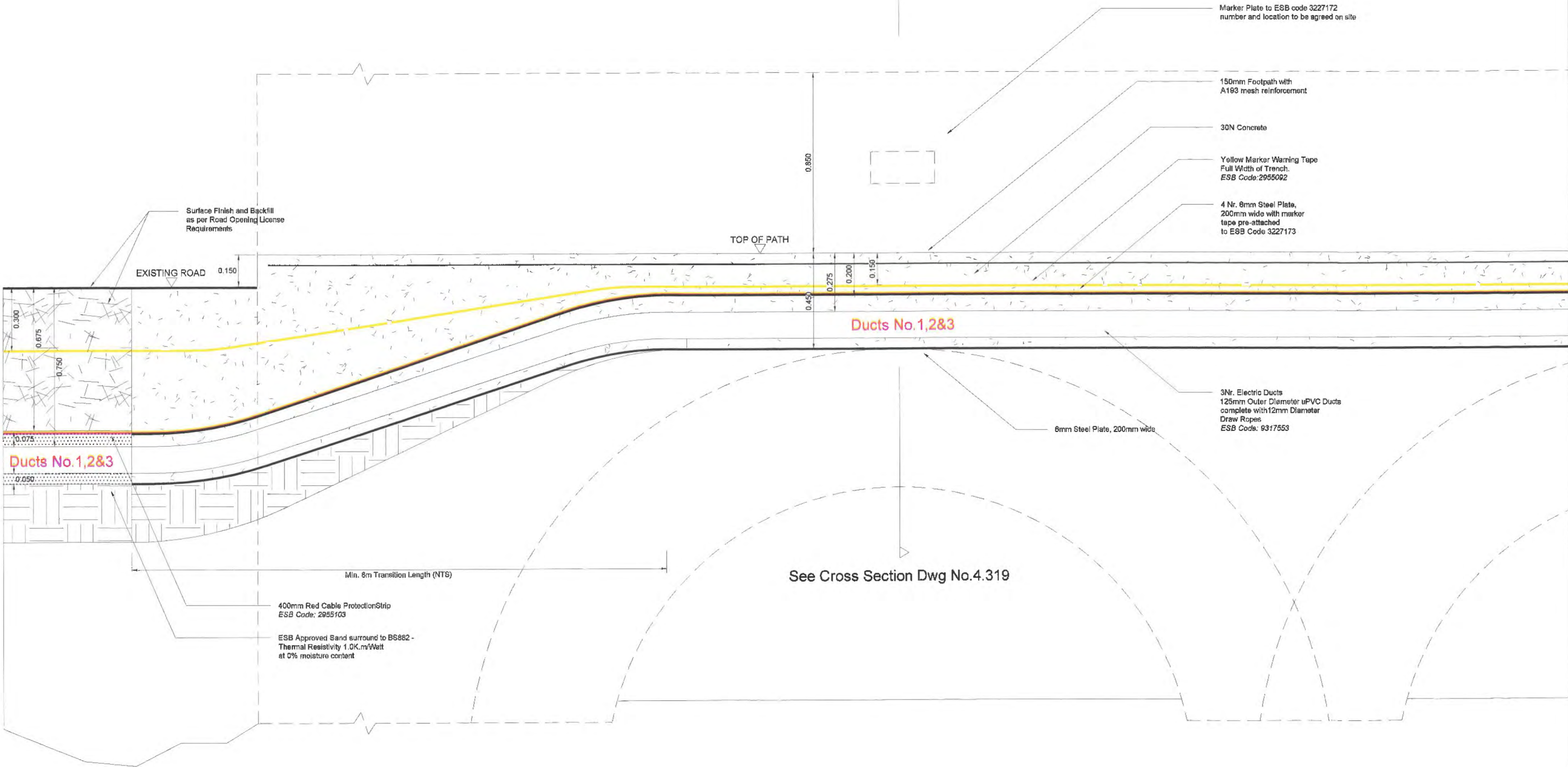


Trench Cross Section

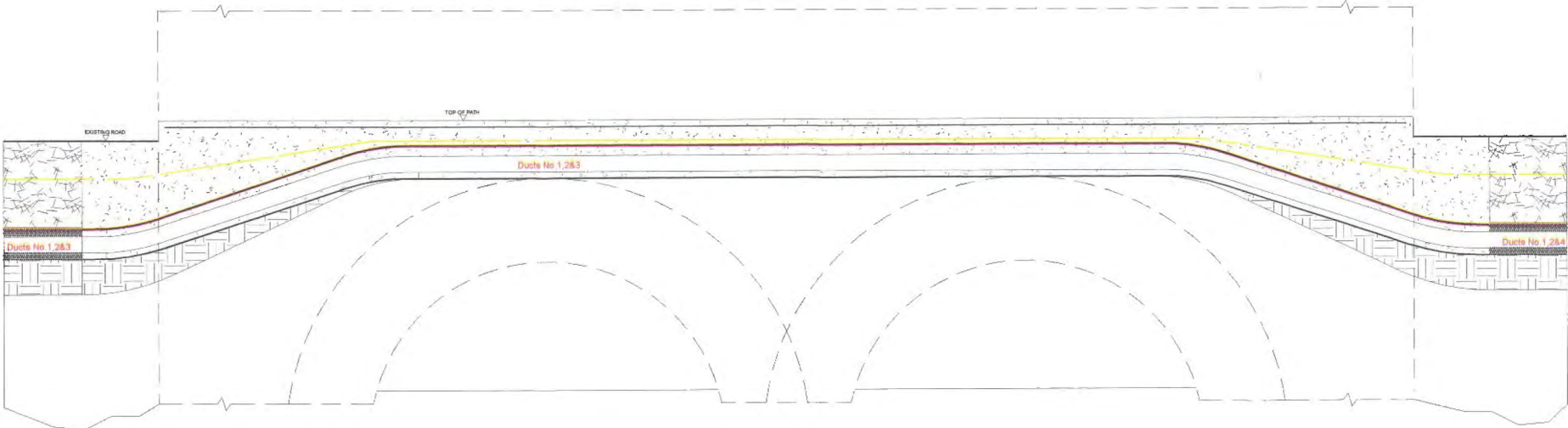
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As Built		Page no.:		4.319	
		Date:		09.10.12	
Project		Drawn by:		LR	
Gibbet Hill Windfarm		Scale:		1:10@A3	
Co. Wexford					

External Cable Route
Bridge - Cross Section

See Cross Section Dwg No.4.319

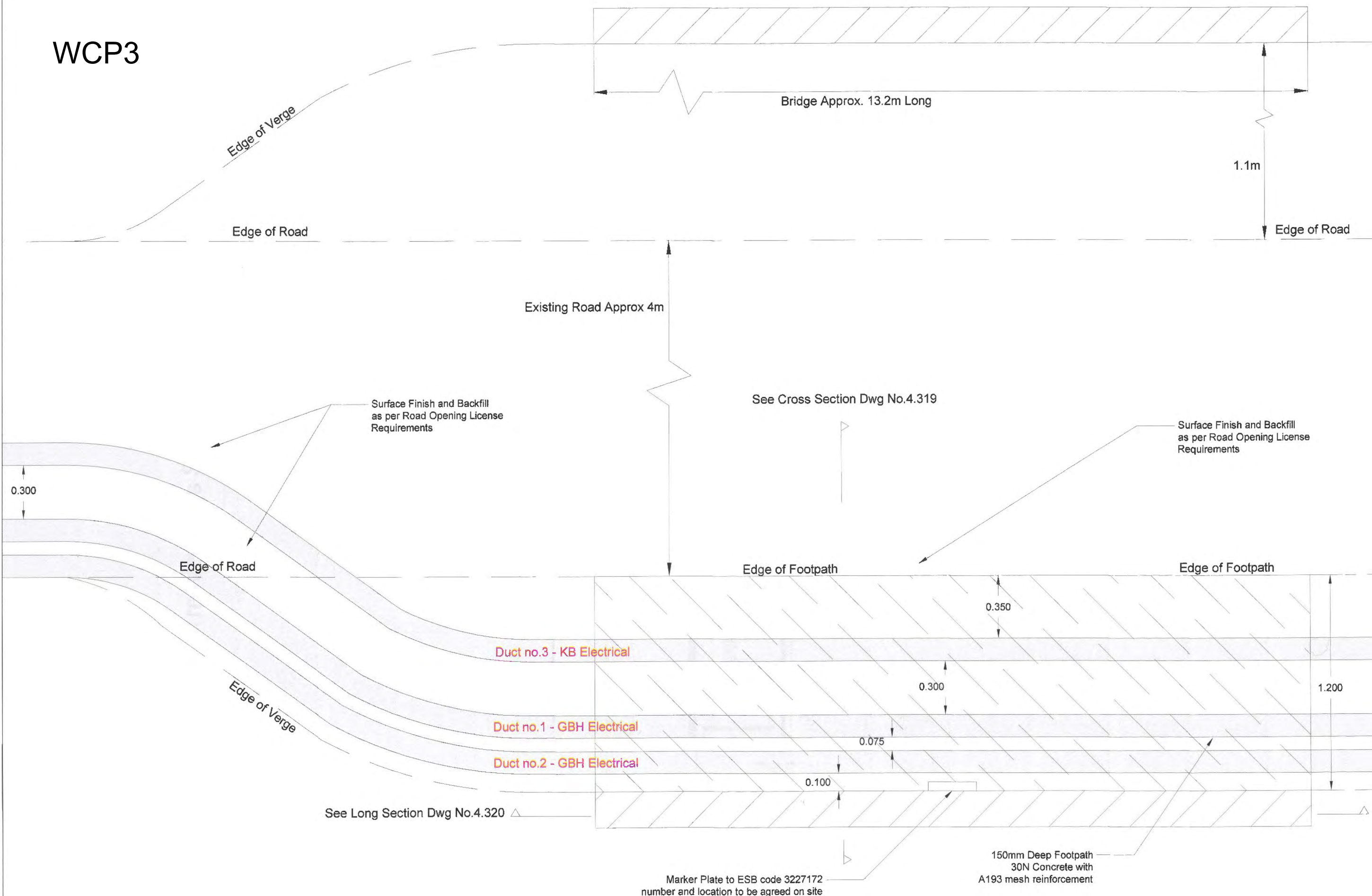


See Cross Section Dwg No.4.319



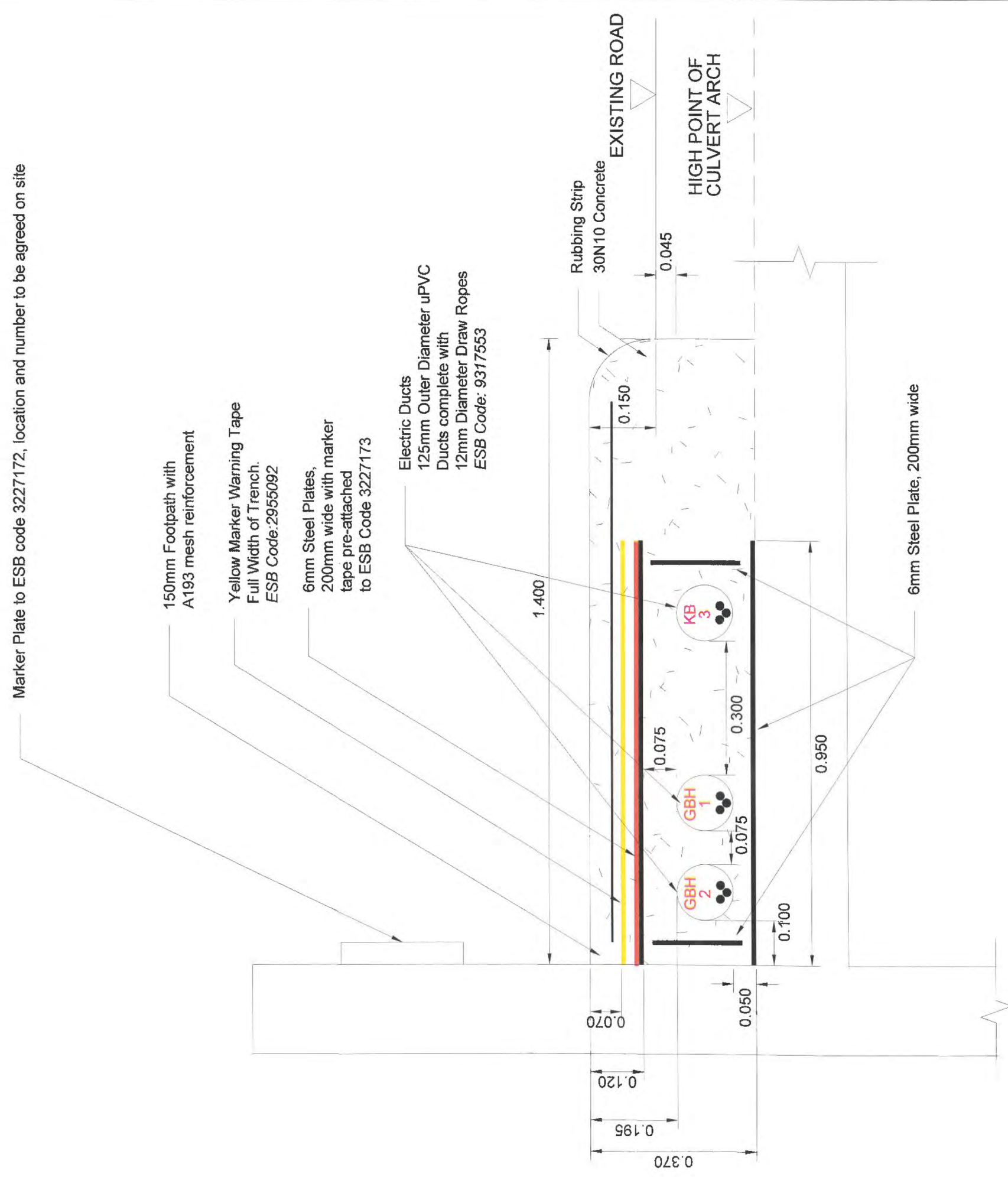
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Stage	Proj.-no.:	IR003	
As Built	Page no.:	4.320	
	Date:	09.10.12	
Project	Drawn by:	LR	
Gibbet Hill Windfarm	Scale:	1:20@A3	
Co. Wexford			
Plan Content			
External Cable Route			
Bridge - Long Section			
ABO WIND Ireland Ltd. Dublin Office 53 Glashule Road Sandycove, Dublin Tel. +353 (01) 6636133 Fax +353 (01) 2304058			

WCP3



Project Gibbet Hill Windfarm Co. Wexford	Stage As Built	Proj.-no.:	IR003				
		Page no.:	4.321				
		Date:	09.10.12				
		Drawn by:	LR				
		Scale:	1:20@A3				
 Dublin Office 53 Glashule Road Sandycove, Dublin Tel. +353 (01) 6636133 Fax +353 (01) 2304058	Plan Content External Cable Route Bridge - Plan	Amendment		amended	Date:	ID:	

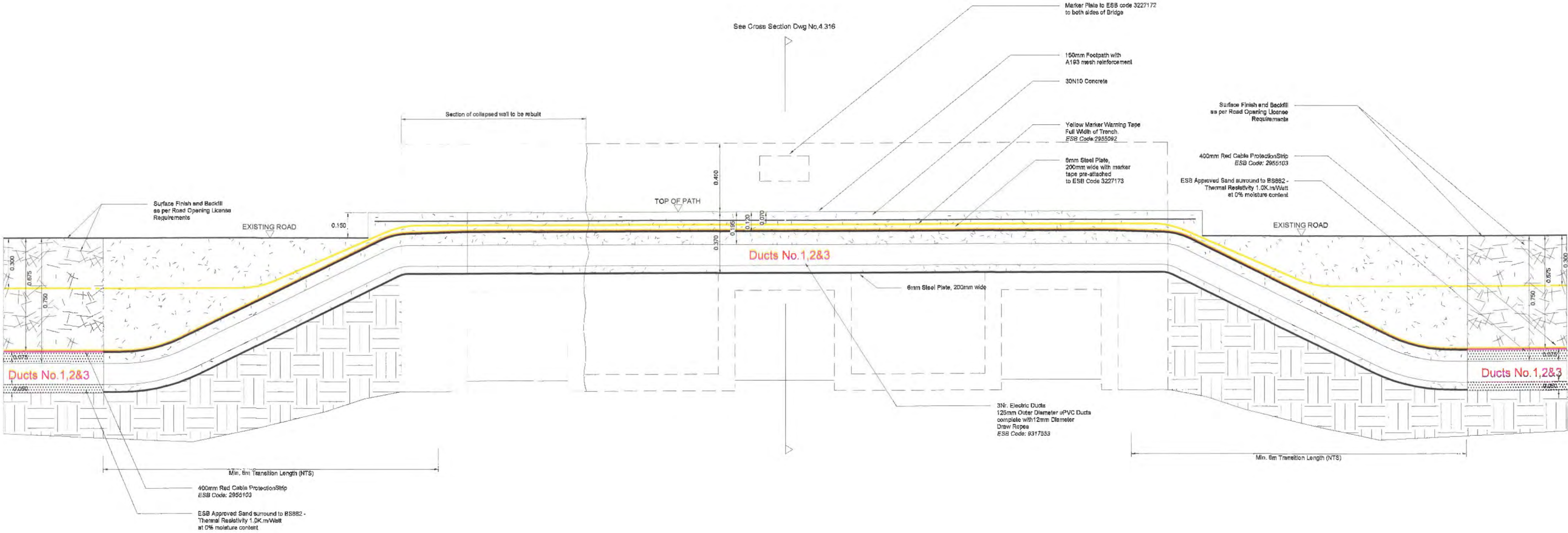
WCP4



Trench Cross Section at Culvert

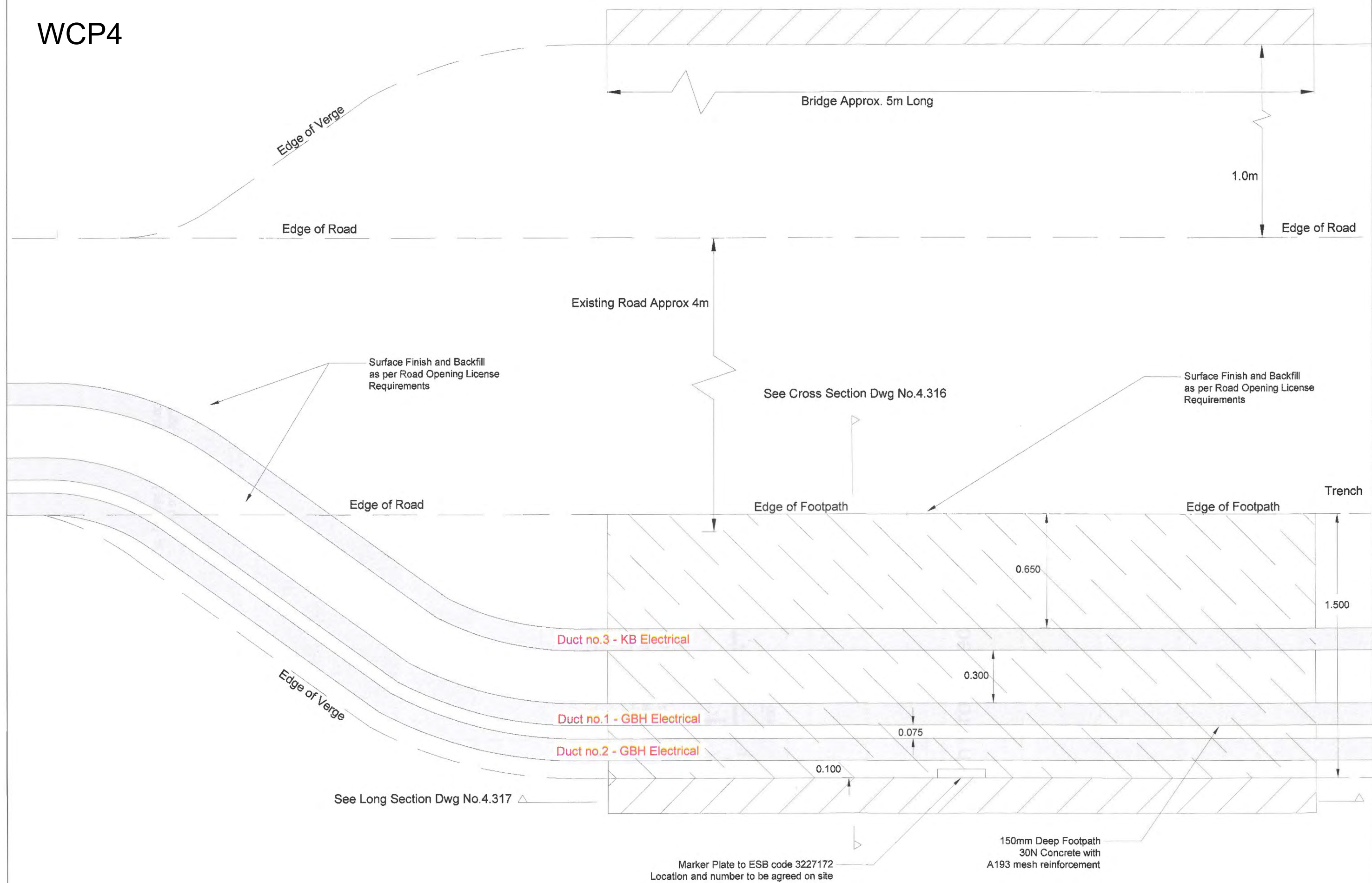
cover revised, concrete changed to 30N10	LR	06.06.12	C
Amendment	amended	Date:	ID:
Stage	Proj.-no.:		
As Built	Page no.:	09.10.12	
	Date:		
Project	Drawn by:	LR	
Gibbet Hill Windfarm	Scale:		
Co. Wexford			1:10@A3
Plan Content			
External Cable Route			
Culvert - Cross Section			

WCP4



Amendment	amended	Date:	ID:
Stage	Proj.-no.:	IR003	
As Built	Page no.:	4.317	
	Date:	09.10.12	
Project	Drawn by:	LR	
Gibbet Hill Windfarm	Scale:	1:25@A3	
Co. Wexford			
Plan Content			
External Cable Route			
Culvert - Long Section			
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WCP4

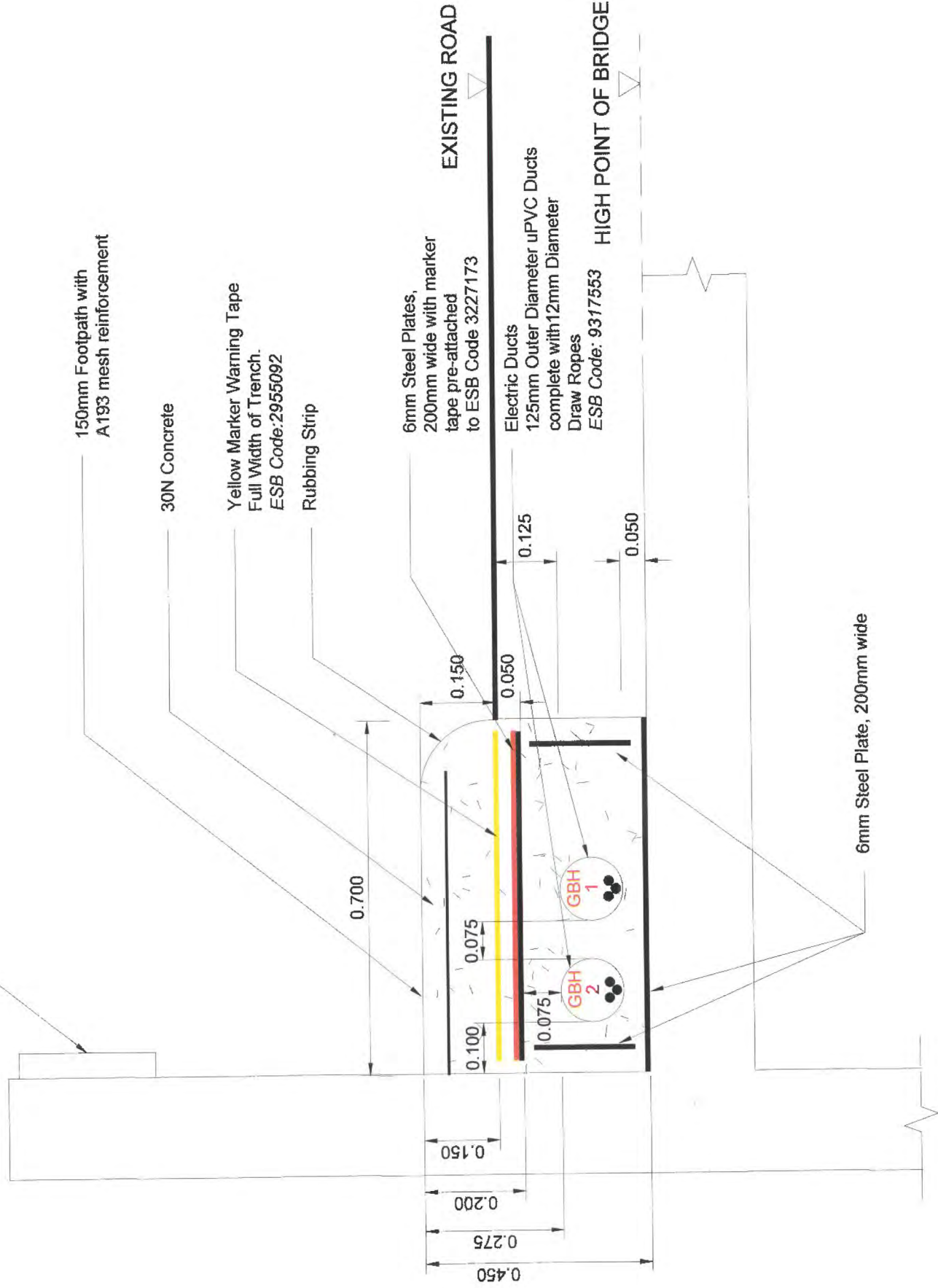


Project Gibbet Hill Windfarm Co. Wexford  Dublin Office 53 Glashule Road Sandycove, Dublin Tel. +353 (01) 6636133 Fax +353 (01) 2304058	Stage As Built	Plan Content External Cable Route Culvert - Plan	Proj.-no.: IR003			
			Page no.: 4,318			
			Date: 09.10.12			
			Drawn by: LR			
			Scale: 1:20@A3	Amendment	omended	Date: ID:

WCP5

Trench Cross Section at (Borris Bridge)

Marker Plate to ESB code 3227172 to both sides of Bridge



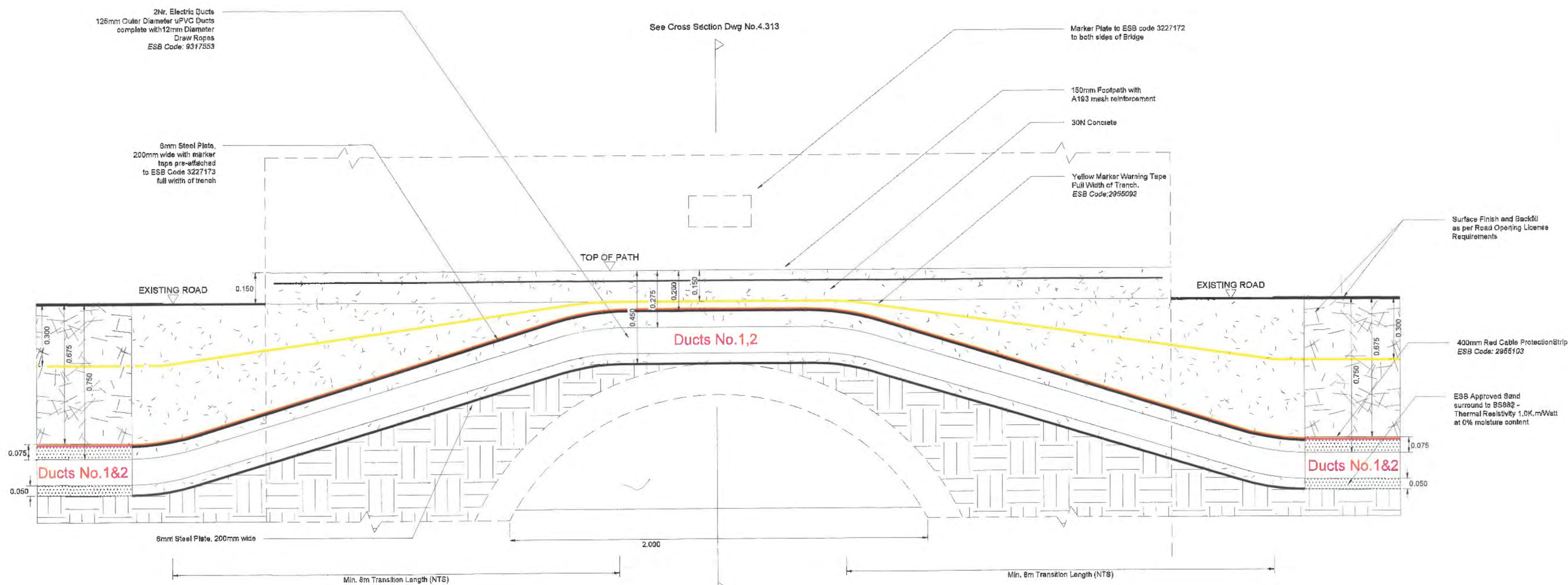
Depth of cover revised	LR	31.05.12	C
Road tape on bottom steel plate removed from drawing	LR	19.01.12	B
Steel plate added to inner and outer side of bridge crossing	LR	23.11.11	A
Communications duct removed	LR	23.11.11	A
Attachment	amended	Date:	ID:
Stage	Proj.-no.:	IR003	
Contract	Page no.:	C4.313	
	Date:	23.09.11	
	Drawn by:	LR	
	Scale:	1:10@A3	

Project	Gibbet Hill Windfarm
Co. Wexford	
Plan Content	External Cable Route
Bridge - Cross Section	

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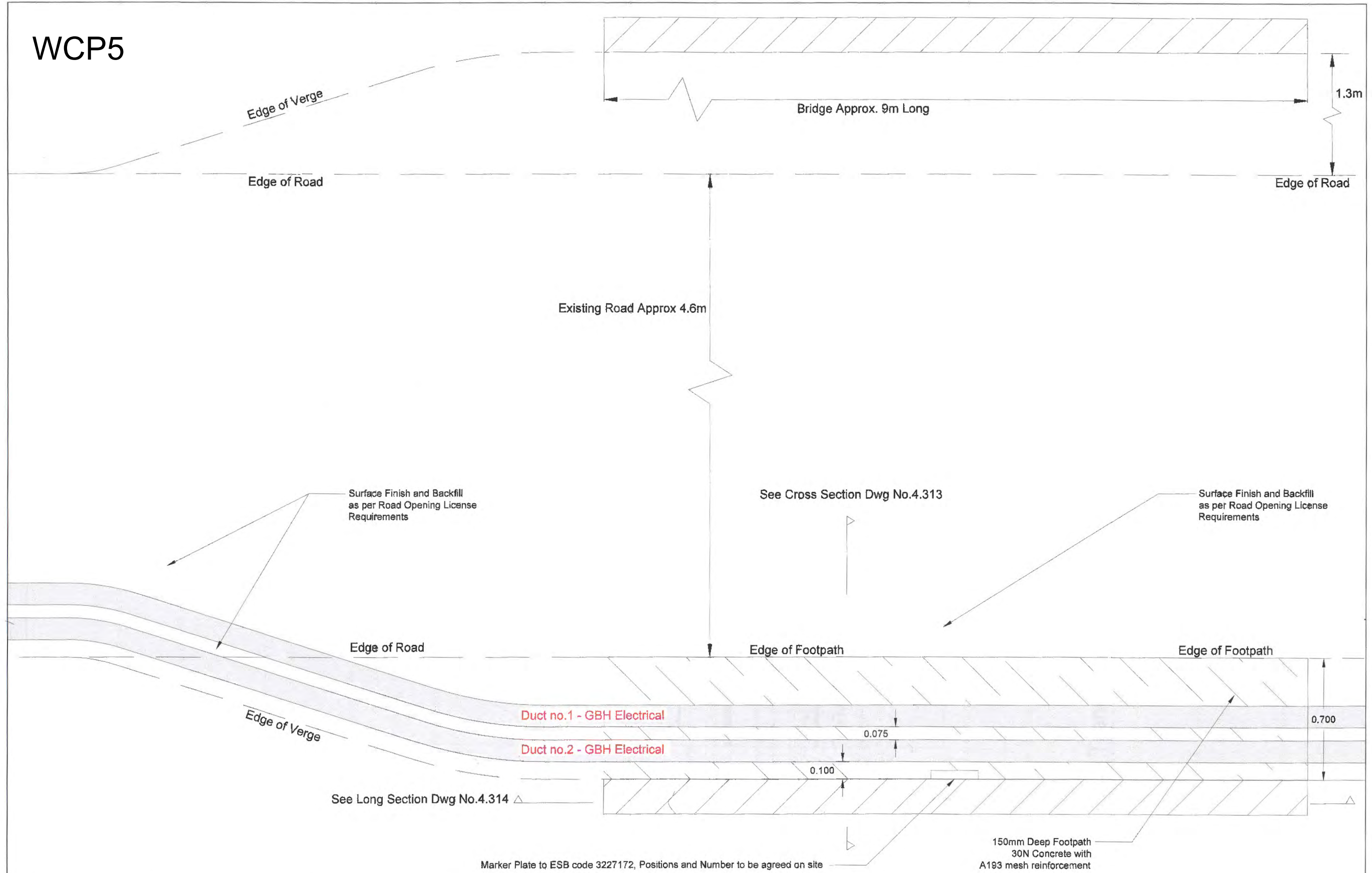
WCP5



Depth of cover revised	LR	31.05.12	C
Red tape removed from bottom steel plate	LR	19.01.12	B
Communications duct removed	PJB	23.11.11	A
Amendment	amended	Date:	ID:
Stage	Proj.-no.:	IR003	
Contract	Page no.:	C4.314	
	Date:	23.09.11	
Project	Drawn by:	LR	
Gibbet Hill Windfarm Co. Wexford	Scale:	1:20@A3	

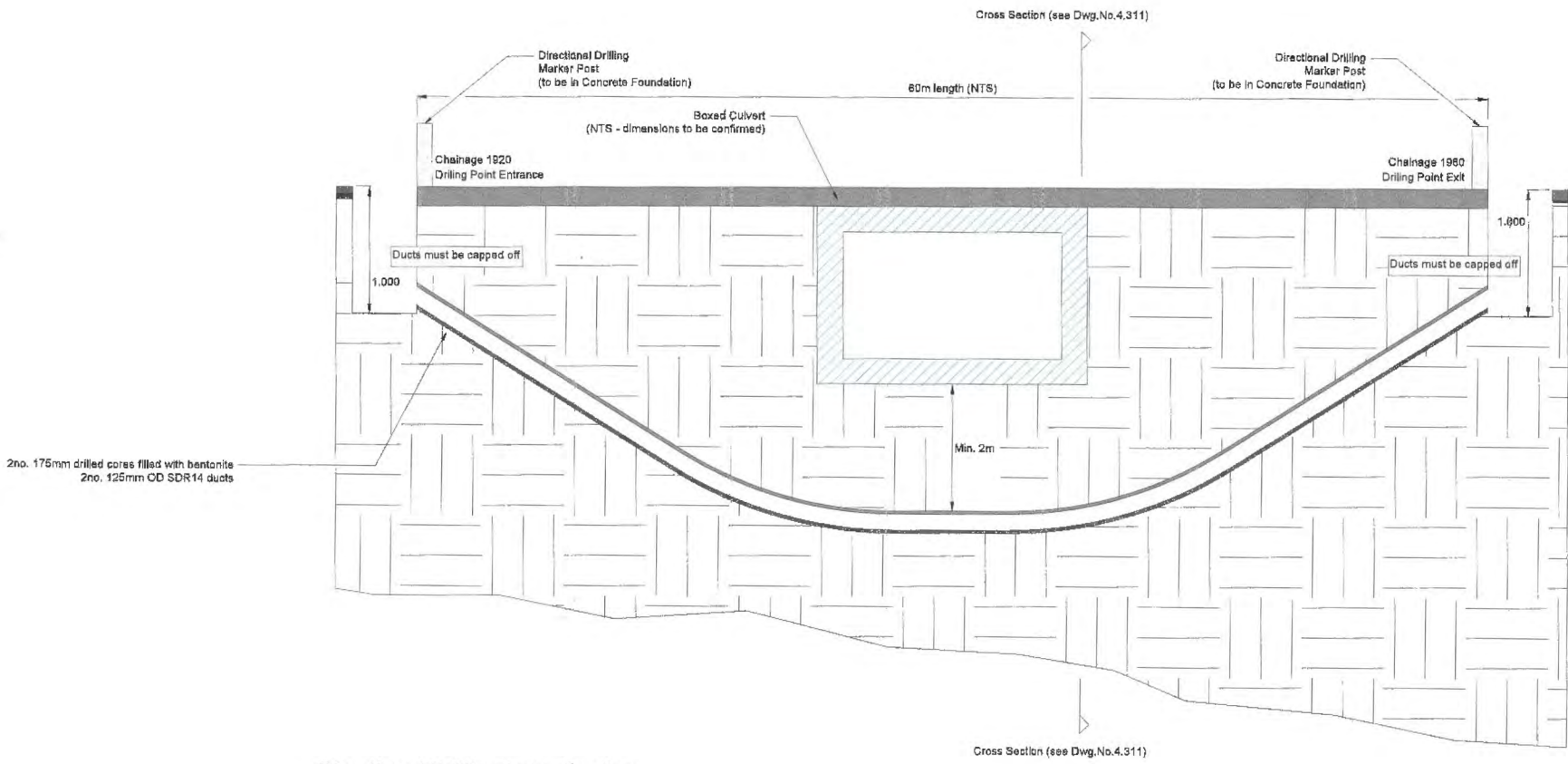
Plan Content			
External Cable Route Bridge - Long Section			
ABO WIND Ireland Ltd.		Dublin Office 53 Glashule Road Sandycove, Dublin Tel. +353 (01) 8636133 Fax +353 (01) 2304058	

WCP5



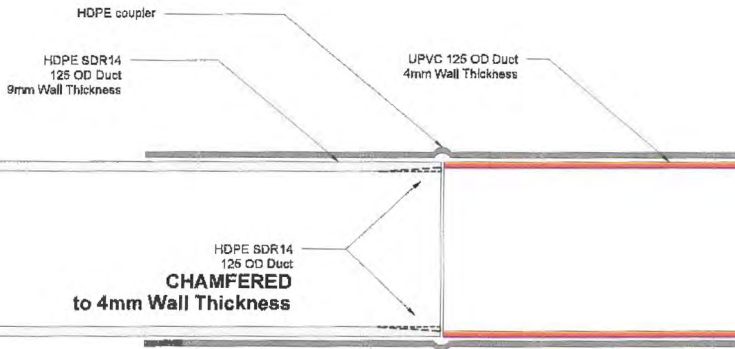
Project Gibbet Hill Windfarm Co. Wexford	Stage Contract				
		Proj.-no.:	IR003		
		Page no.:	C4.315		
		Date:	23.08.11		
 Dublin Office 53 Glashule Road Sandycove, Dublin Tel. +353 (0)1 6636133 Fax +353 (0)1 2304058	Plan Content External Cable Route Bridge - Plan	Drawn by:	LR	Marker plates note added	LR 19.01.12 B
		Scale:	1:20@A3	Communications duct removed	PJB 24.11.11 A
				Amendment	amended Date: ID:

WCP6



Directional Drilling Long Section

1:50@A3



Long Section Detail of Link from UPVC duct to SDR duct

1:5@A3

Note:
E,N location of Launch & Exit pit and gradient of pipe at Launch & Exit Pit to be included in As-Built drawings.

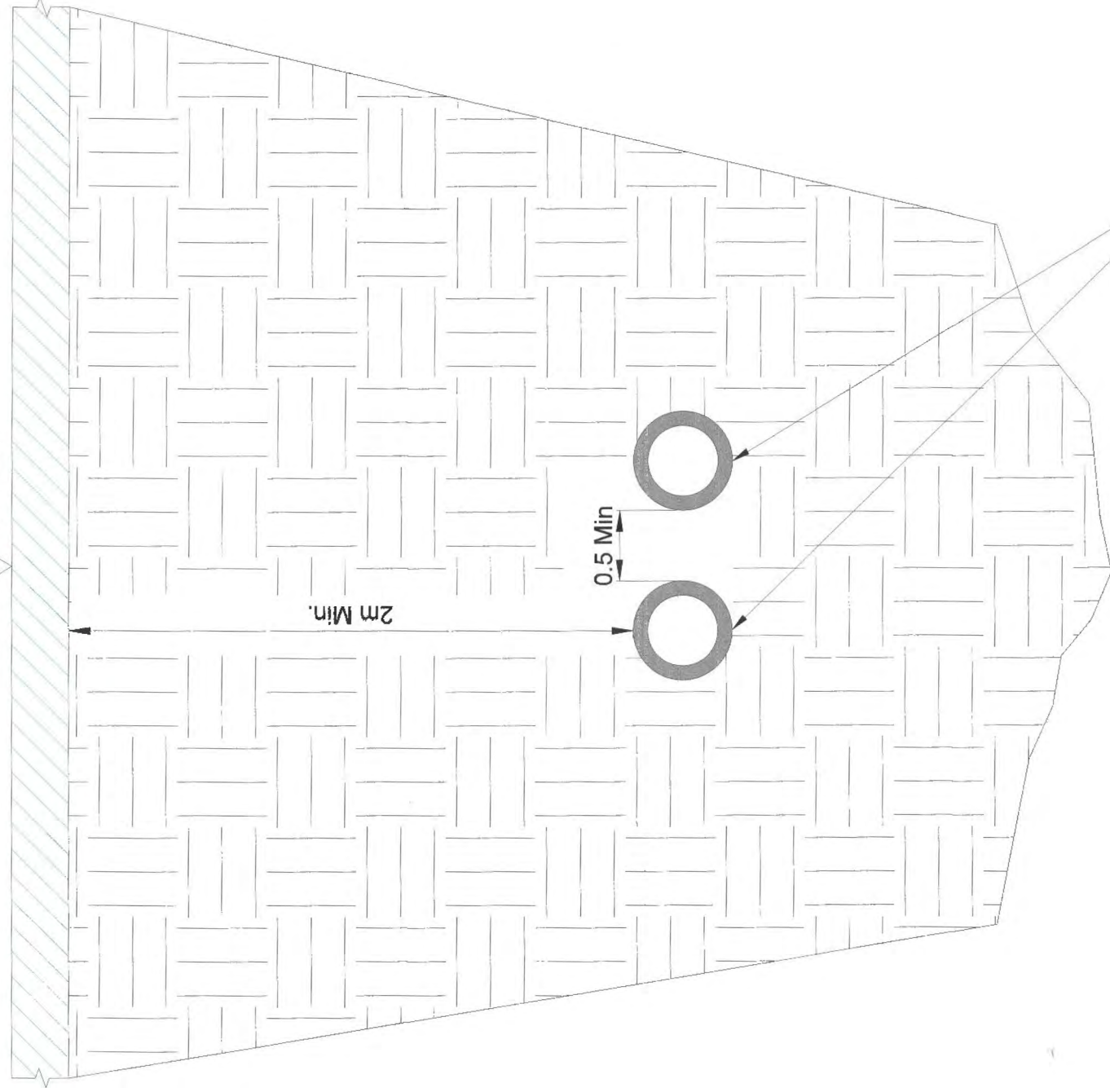
Note Added, Min Depth changed to 2m	LR	19.01.12	B
Communications duct removed	PJB	23.11.11	A
Amendment	amended	Date:	ID:
Stage	Proj.-no.: IR003		
Contract	Page no.: C4.312		
	Date: 23.09.11		
Project	Drawn by: LR		
Gibbet Hill Windfarm Co. Wexford	Scale:		
	As Shown@A3		

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WCP6

Base of Box Culvert

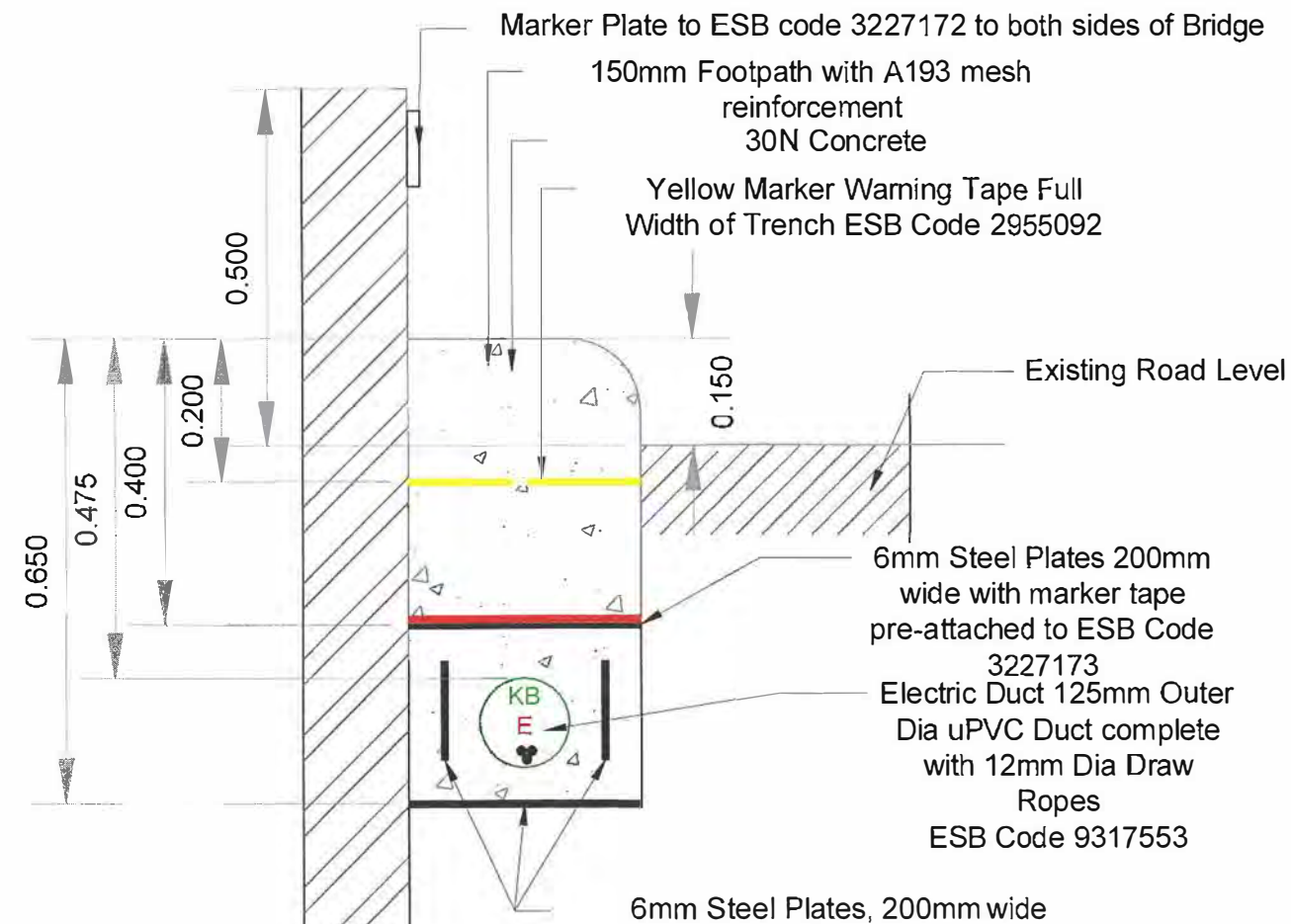


175mm drilled core
filled with bentonite
125mm OD SDR14 ducts

Minimum depth changed to 2m	LR	19.01.12	B		
Communications duct removed	RUB	23.11.11	A		
Amendment	amended	Date:	ID:		
Stage	Proj.-no.:	IR003			
Contract	Page no.:	C4.311			
	Date:	23.09.11			
Project	Drawn by:	LR			
Gibbet Hill Windfarm Co. Wexford	Scale:	1:20@A3			

Plan Content
External Cable Route
Culvert - Directional Drill Cross Section

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Bridge Crossing; Cross
Section A-A

AS BUILT

WCP7

A	21/03/12	MK	JB	PRINT ISSUE	
REV	DATE	DRAWN BY	CHECKED BY	DETAILS	
ENGINEER				CLIENT	
 Wind Prospect Ireland Ltd Headland House 1 - 3 The Green Malahide Co. Dublin Tel +353 (0) 1 845 5031 Fax +353 (0) 1 845 5612 Email Ireland@windprospect.com					
PROJECT					
CRORY SUB-GROUP KNOCKNALOUR/BALLYNANCORAN					
TITLE					
CONCRETE SUPPORT AT BRIDGE CROSSING					
SCALE			STATUS		
1:10					
PAPER SIZE		DRAWN BY		CHECKED AND APPROVED	
A3		M.KRAS		J.O'CONNOR	
PROJECT PHASE		DATE		DATE	
		21/03/2012		CONSTRUCTION	
DRAWING NUMBER					REVISION
BCCD d007.3.6					A

Figure 1: Schematic diagram of the experimental setup. The diagram shows a cross-section of a duct with a granular material (gray dots) and a central channel (white). The duct is labeled "DUCT". The granular material is labeled "Min. 0.300". The central channel is labeled "0.275". The duct walls are labeled "0.1" and "0.150". The central channel is labeled "0.300". The total width is labeled "1.025". The duct is divided into three sections: "BC E" (top left), "BC E" (top middle), and "BB E" (top right). The bottom section is labeled "BC F".

Yellow Marker Warning Tape.
Must be full width of trench

**6mm Steel Plate, 200mm wide
with marker tape pre-attached to
The Steel Plate to be extend 1m
in each direction,
beyond the outer most duct**

C12/15 Leanmix Concrete

Unwashed Sand with a thermal resistivity of max 1.0K.m/watt @0% moisture content in accordance with BS882 standard .

AS BUILT

Ø0.375

Ø0.375

0.375

1m

1m

Crossing Pipes Long Section

Crossing Pipes Cross Section

WCP9



—WIND FARM NAME

—CABLE TYPE

WIND FARM NAME

- GH = GIBBET HILL
- KB = KNOCKNALOUR/BALLYNANCORAN
- BB = BALLAMAN/BALLYDUFF
- BC = BALLYCADDEN

CABLE TYPE

- E = ELECTRICAL
- F = FIBRE OPTIC

DUCT TYPE ESB CODE 9317553

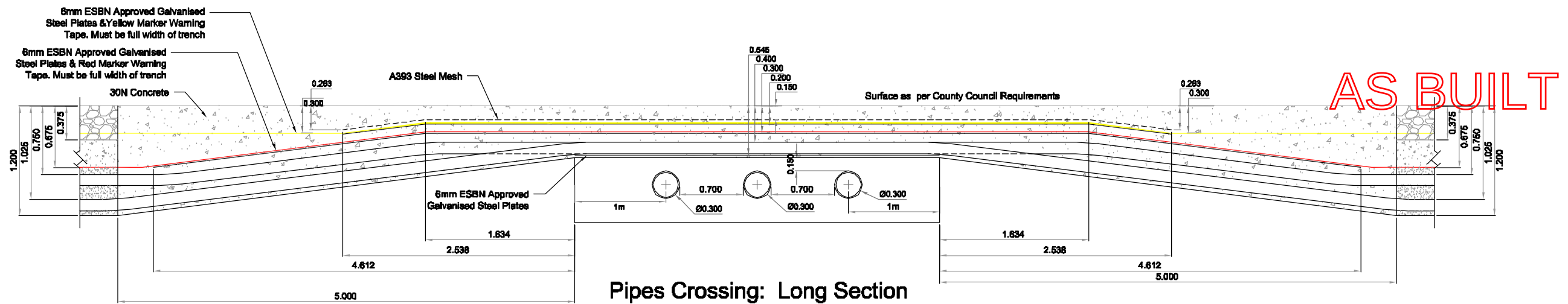
- 125mm OUTER DIAMETER uPVC DUCT WITH 12mm DRAW ROPES.
- MINIMUM SEPARATION TO ADJACENT DUCTS ON THE SAME CIRCUIT 150mm
- MINIMUM SEPARATION TO ADJACENT DUCTS ON THE SEPARATE CIRCUIT 300mm
- COMM. DUCTS 125mm OUTER DIAMETER uPVC DUCT WITH 12mm DRAW ROPES

NOTES:

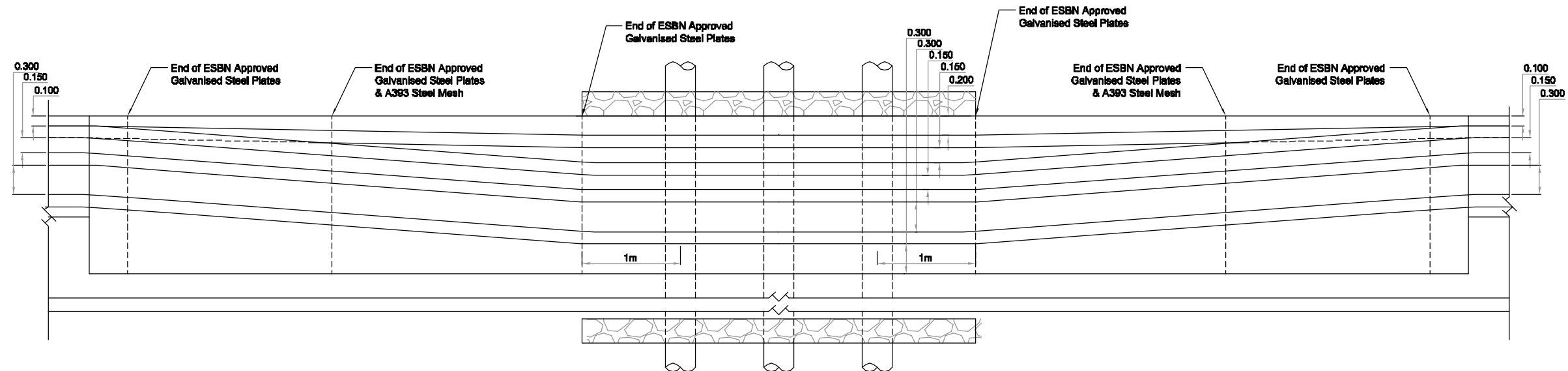
- **JOINT BAYS TO BE TEMPORARILY BACKFILLED WITH C1804. PERMANENT BACKFILLED FOLLOWING PULLING AND JOINTING OF CABLES**

D	02.08.11	MK	JOC	Trench Update
C	06/07/2011	MK	JOC	Trench Redesign
B	21.04.11	MJK	JOC	UPDATED TO NEW DESIGN
A	20.04.11	MJK	JOC	FIRST ISSUE

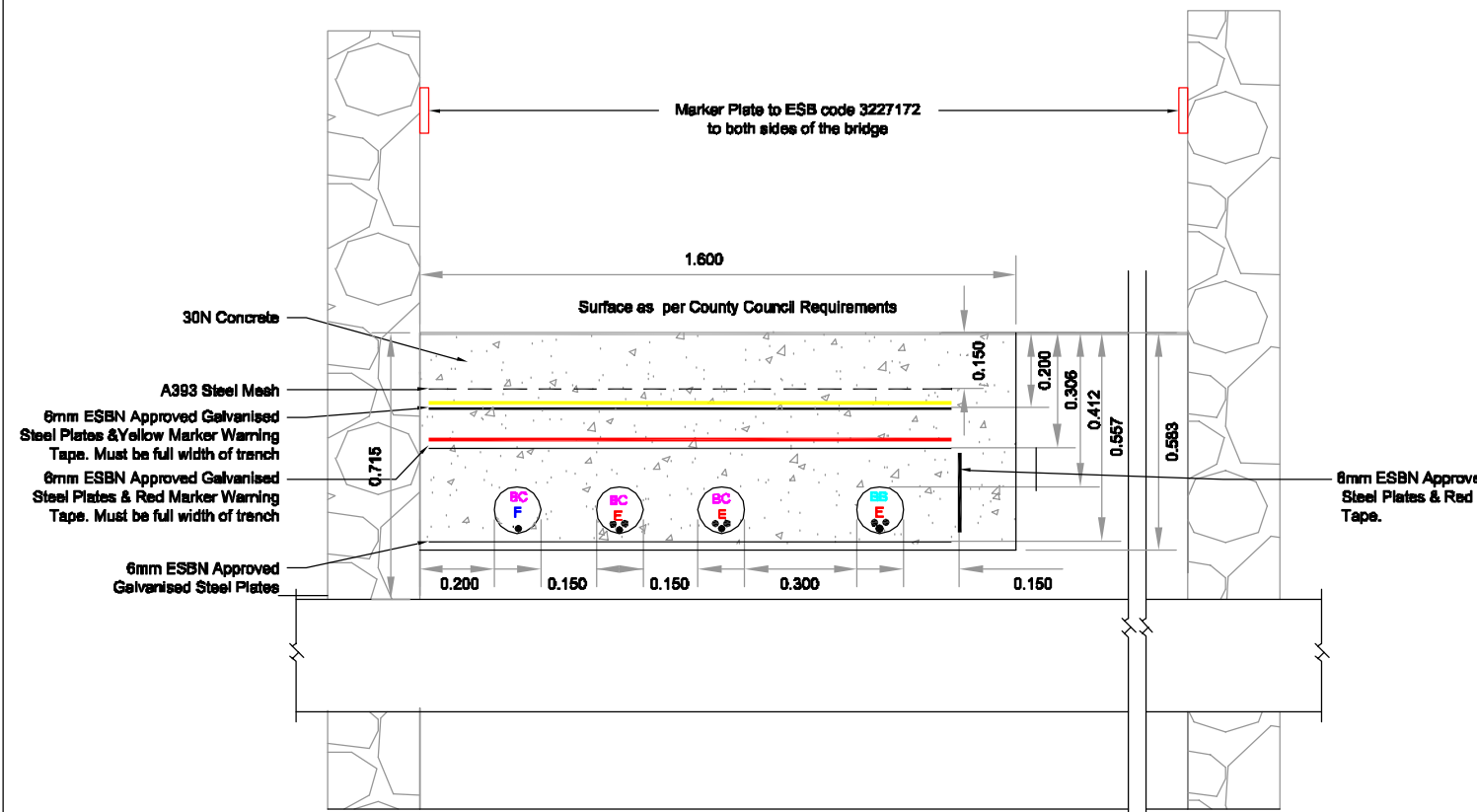
REV	DATE	DRAWN BY	CHECKED BY	DETAILS
ENGINEER				CLIENT
 Wind Prospect Ireland Ltd Headland House 1 – 3 The Green Malahide Co. Dublin Tel +353 (0) 1 845 5031 Fax +353 (0) 1 845 5612 Email ireland@windprospect.com				
PROJECT				
CRORY SUB GROUP				
TITLE				
2x375mm CROSSING PIPE				
SCALE		STATUS		
1:10				
PAPER SIZE		DRAWN BY		CHECKED AND APPROVED
A3		M.KRAS		J.O'CONNOR
PROJECT PHASE		DATE		DATE
PRE CONSTRUCTION		21/06/2011		21/06/2011
DRAWING NUMBER				REVISION
BCCD d003.4.13				D
FILE NAME				



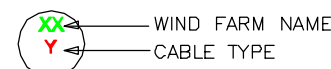
Pipes Crossing: Long Section



Pipes Crossing: Plan



Pipes Crossing: Cross Section



WIND FARM NAME

- GH = GIBBET HILL
- KB = KNOCKNALOUR/BALLYNANCORAN
- BB = BALLAMAN/BALLYDUFF
- BC = BALLYCADDEN

CABLE TYPE

- E = ELECTRICAL
- F = FIBRE OPTIC

DUCT TYPE ESB CODE 9317553

- 125mm OUTER DIAMETER uPVC DUCT WITH 12mm DRAW ROPES.
- MINIMUM SEPARATION TO ADJACENT DUCTS ON THE SAME CIRCUIT 150mm
- MINIMUM SEPARATION TO ADJACENT DUCTS ON THE SEPARATE CIRCUIT 300mm
- COMM. DUCTS 125mm OUTER DIAMETER uPVC DUCT WITH 12mm DRAW ROPES

NOTES:

- JOINT BAYS TO BE TEMPORARILY BACKFILLED WITH C1804. PERMANENT BACKFILLED FOLLOWING PULLING AND JOINTING OF CABLES

WCP10

F	30.09.11	M.B.	J.O'C.	DIMENSIONS REVISED
E	16.09.11	M.B.	J.O'C.	New Crossing Added
D	02.08.11	M.K	JOC	Trench Update
C	06/07/2011	M.K	JOC	Trench Redesign
B	21.06.11	M.K	JOC	UPDATED TO NEW DESIGN
A	20.04.11	M.K	JOC	FIRST ISSUE
REV	DATE	DRAWN BY	CHECKED BY	DETAILS
ENGINEER				CLIENT
 Wind Prospect Ireland Ltd Headland House 1 – 3 The Green Malahide Co. Dublin Tel +353 (0) 1 845 5031 Fax +353 (0) 1 845 5612 Email ireland@windprospect.com				
PROJECT				
CRORY SUB GROUP				
TITLE				
3x300mm CROSSING PIPES				
SCALE		STATUS		
1: 20				
PAPER SIZE	DRAWN BY		CHECKED AND APPROVED	
A3	M.KRAS		J.O'CONNOR	
PROJECT PHASE	DATE		DATE	
PRE CONSTRUCTION	21/06/2011		21/06/2011	
DRAWING NUMBER				REVISION
BCCD d003.4.7B				G
FILE NAME				
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