AN BORD PLEANÁLA
10 AUG 2020
LTR DATED _____ FROM _____
LDG-
ABP-

tli GROUP

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PROJECT
Clondardis Solar park Grid Connection

CLIENT
Harmony Solar

CONSULTANTS
FEHILY TIMONEY & COMPANY

NOTES: -

LEGEND: -
Proposed MGC 1 (0.10km spacing) shown thus
Natural Monument shown thus
Rivers shown thus
Lakes shown thus

ISSUE/REVISION

REV	DATE	DESCRIPTION
P01	25.03.20	Issued For Section 5 Application
P02	17.04.20	Issued For Information

KEY PLAN

PROJECT NUMBER
05-745

SHEET TITLE
Overall Site Layout

SHEET NUMBER
05745-DR-001

Project Management Initials: Designer: AF Checked: DS Approved: NO

ISO A1 594mm x 841mm

Site Layout Plan (Sh 1 of 3)

SCALE :1;2,500

Joint Bay Distancing Summary

Section From	Section To	Section Length [m]
Substation	JB01	884
JB01	JB02	818

Project Management Initials: Designer: AF Checked: SK Approved: RG

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PROJECT

Clondardis Solar Park Grid Connection

CLIENT

Harmony Solar

CONSULTANTS

FEHILY TIMONEY & COMPANY

AN BORD PLEANÁLA
10 AUG 2020
LDG-
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DATED
FROM

LEGEND: -

Proposed UGC 1 (5.10km approx) shown thus

National Monuments shown thus

Rivers shown thus

Lakes shown thus

Existing ESB O/H LV/MV Networks shown thus

Existing ESB O/H 110kV & 38kV Network shown thus

Existing ESB U/G LV/MV cable shown thus

Existing ESB UG HV cable shown thus

Irish Water shown thus

ISSUE/REVISION

I/R	DATE	DESCRIPTION
P01	26.05.20	Issued For Section 5 Application
P00	17.04.20	Issued For Information

PROJECT NUMBER

05-745

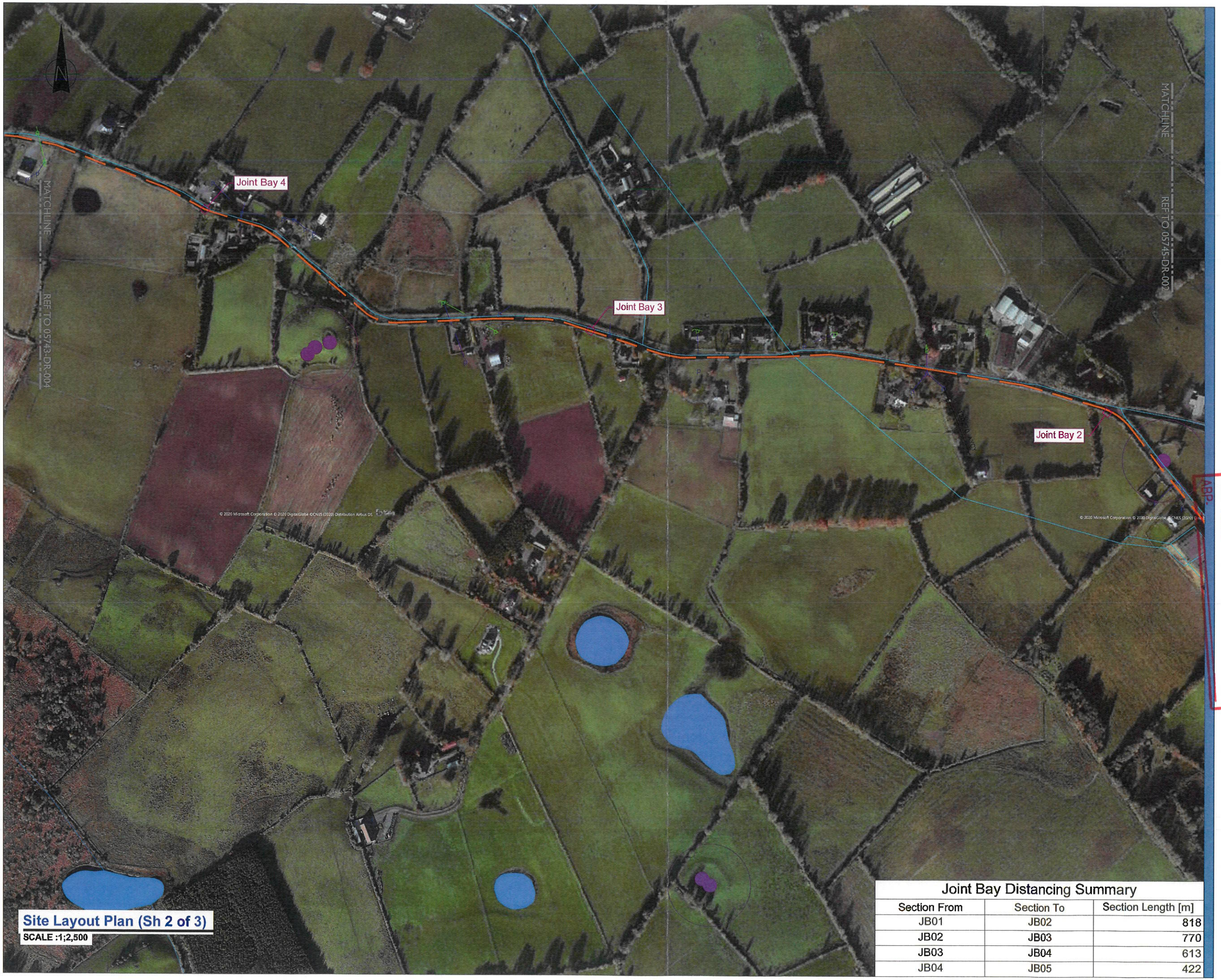
SHEET TITLE

Site Layout Plan
Sheet 3 of 3

SHEET NUMBER

05745-DR-002

ISO A1 594mm x 841mm



Site Layout Plan (Sh 2 of 3)

SCALE :1;2,500

Joint Bay Distancing Summary

Section From	Section To	Section Length [m]
JB01	JB02	818
JB02	JB03	770
JB03	JB04	613
JB04	JB05	422

Project Management Initials:
Designer: AF
Checked: SK
Approved: RG

tli GROUP

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PROJECT

Clondardis Solar Park Grid Connection

CLIENT

Harmony Solar

CONSULTANTS

FEHILY TIMONEY & COMPANY

NOTES: -

LEGEND: -

Proposed UGC 1 (5-10km approx) shown thus

National Monuments shown thus

Rivers shown thus

Lakes shown thus

Existing ESB O/H LV/MV Networks shown thus

Existing ESB O/H 110kV & 38kV Network shown thus

Existing ESB U/G LV/MV cable shown thus

Existing ESB UG HV cable shown thus

Irish Water shown thus

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10 AUG 2020
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LTR DATED

ISSUE/REVISION

I/R	DATE	DESCRIPTION
P01	26.05.20	Issued For Section 5 Application
P00	17.04.20	Issued For Information

PROJECT NUMBER

05-745

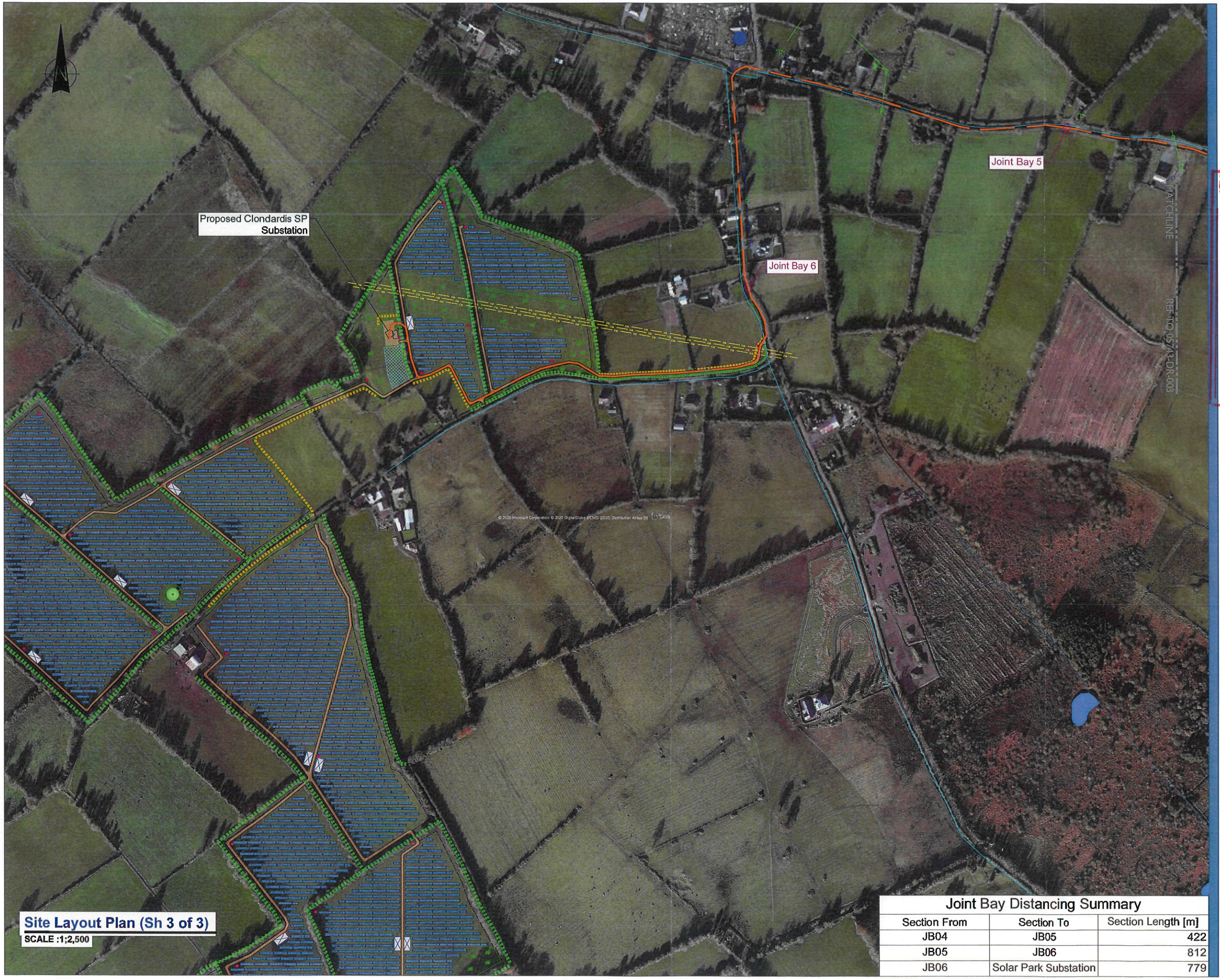
SHEET TITLE

Site Layout Plan
Sheet 2 of 3

SHEET NUMBER

05745-DR-003

ISO A1 594mm x 841mm



Site Layout Plan (Sh 3 of 3)

SCALE :1;2,500

Joint Bay Distancing Summary

Section From	Section To	Section Length [m]
JB04	JB05	422
JB05	JB06	812
JB06	Solar Park Substation	779

Project Management Initials: Designer: AF Checked: SK Approved: RG

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PROJECT

Clondardis Solar Park Grid Connection

AN BORD PLEANÁLA
10 AUG 2020
ABP-
DDG-
TR DATED
FROM

CLIENT

Harmony Solar

CONSULTANTS

FEHILY TIMONEY & COMPANY

NOTES: -

LEGEND: -

- Proposed UGC 1 (5.10km approx) shown thus
- National Monuments shown thus
- Rivers shown thus
- Lakes shown thus
- Existing ESB O/H LV/MV Networks shown thus
- Existing ESB O/H 110kV & 38kV Network shown thus
- Existing ESB U/G LV/MV cable shown thus
- Existing ESB UG HV cable shown thus
- Irish Water shown thus

ISSUE/REVISION

I/R	DATE	DESCRIPTION
P01	28.05.20	Issued For Section 5 Application
P00	17.04.20	Issued For Information

PROJECT NUMBER

05-745

SHEET TITLE

Site Layout Plan
Sheet 1 of 3

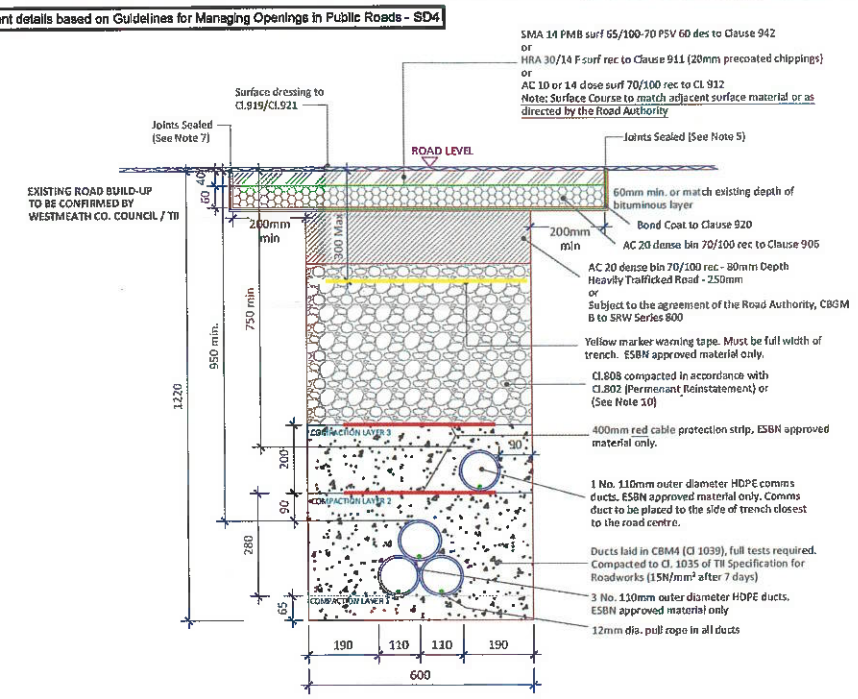
SHEET NUMBER

05745-DR-004

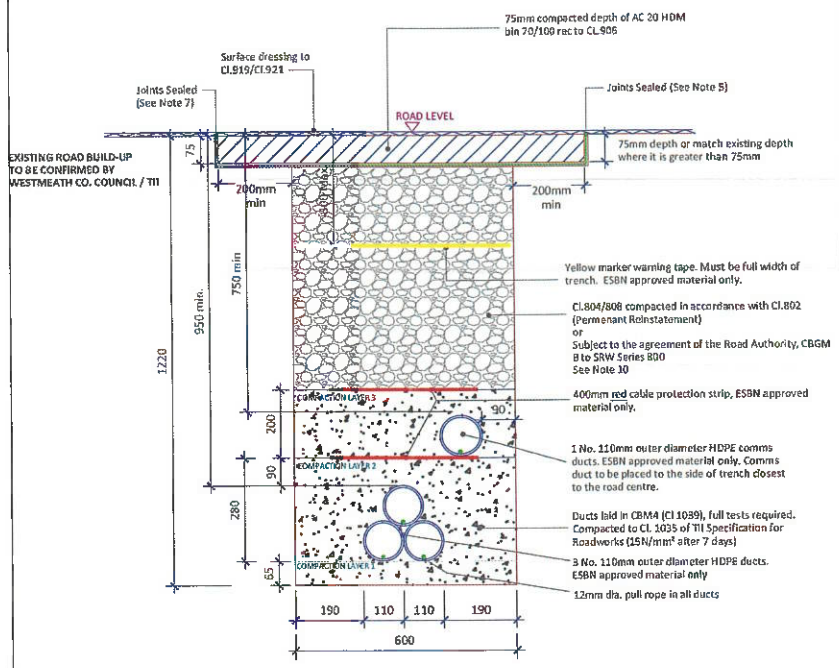
ISO A1 594mm x 841mm

Permanent Reinstatement

Reinstatement details based on Guidelines for Managing Openings in Public Roads - SD4



Reinstatement details based on Guidelines for Managing Openings in Public Roads - SD5

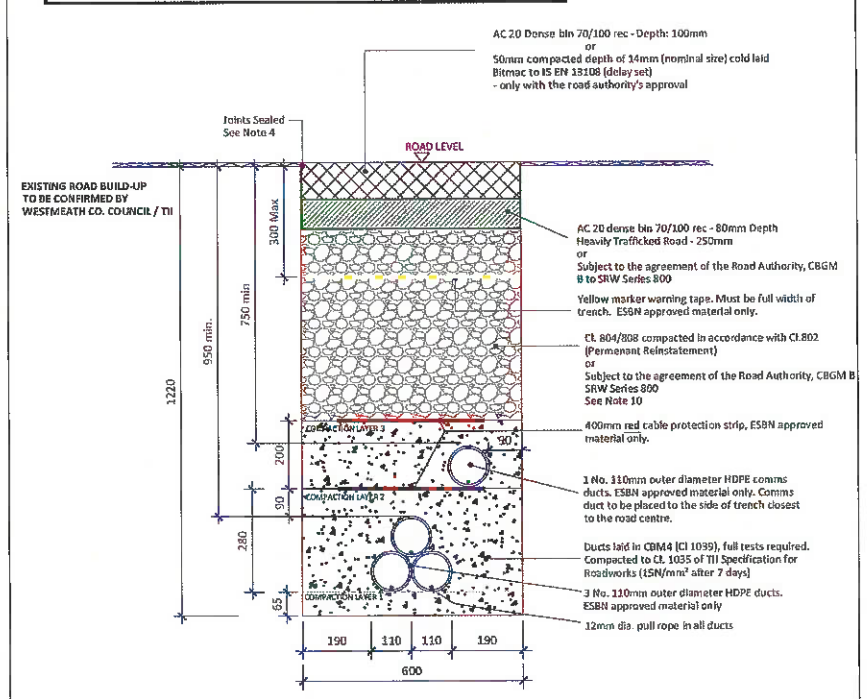


ALL REINSTATEMENT WORKS ARE TO BE IN ACCORDANCE WITH LOCAL AREA ENGINEERS REQUIREMENTS AND GUIDELINES FOR MANAGING OPENINGS IN PUBLIC ROADS

Note:
1. Refer to Guidelines for managing Openings in Public Roads (Purple Book - April 2017), Chapter 6 'Specifications' for guidance on Duct type / colour and Marker Tape type / colour.
2. All bound edges shall be saw cut to expose the full vertical thickness of each layer prior to excavation. All edges shall be essentially straight, smooth and vertical.
3. Where a temporary surface has been used, material shall be planed out to the depth specified in this drawing. The new permanent surface shall be machined laid and mechanically compacted with a vibrating roller.
4. Where the trimmed edge of excavation is within 400mm* of a joint / edge, ironwork or other reinstatement, this trimmed edge shall be extended to include same and the area of reinstatement shall be extended accordingly (* increase to 800mm where this is pre-existing practice).
5. Any damaged area adjacent to the opening and resulting from the excavation operation shall be included within the area to be reinstated.
6. Clause 808 or Cement Bound Granular Material surface to be sprayed per clause 920 prior to application of Asphalt Concrete Layer.
7. Joint sealer shall be a hot 50 pen bitumen binder or cold thixtropic bitumen 50 -70 pen to be applied to all vertical cuts in accordance with B.S.594987 prior to application of bituminous materials.
8. For roads without asphalt concrete surface (e.g. may be Cl.804 with double surface dressing), the road authority may as its discretion permit the temporary reinstatement surface of asphalt concrete to be regulated in lieu of excavation and reinstatement; and subsequently surface dressed.
9. On highly trafficked roads services must have a minimum cover of 750mm.
10. Where required by the Road authority the trench may be reinstated with a Cement Bound Granular Material.
11. Full lane width reinstatement will be carried out for the effected sections of the R439 and full carriageway width reinstatement will be carried out on the effected sections of the L70152.

Temporary Reinstatement

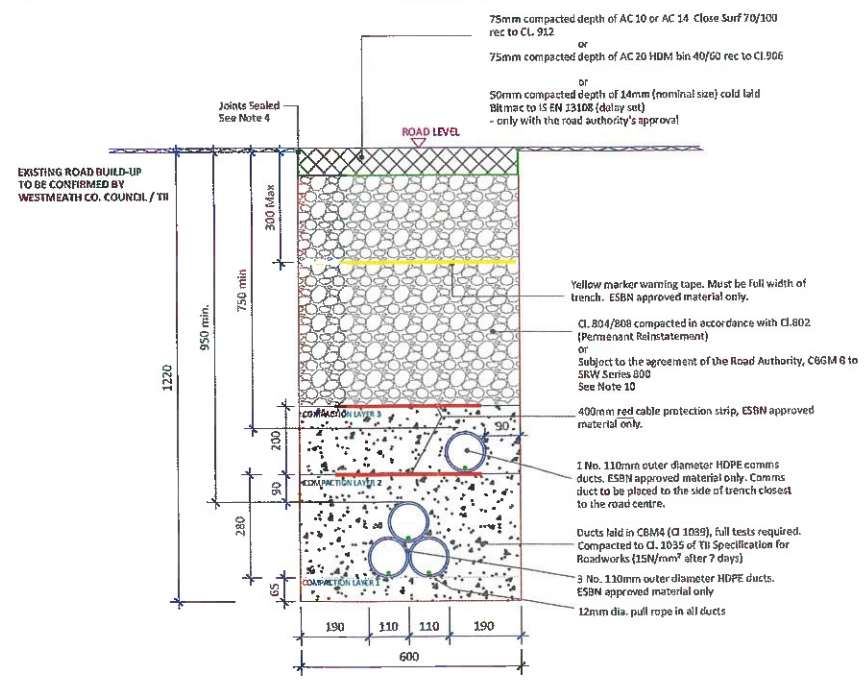
Reinstatement details based on Guidelines for Managing Openings in Public Roads - SD1



Typical Section Through Temporary Reinstatement of Longitudinal Opening in Roadway

SCALE 1:10

Reinstatement details based on Guidelines for Managing Openings in Public Roads - SD2



Typical Section Through Temporary Reinstatement of Longitudinal Opening in Dressed Rural Unbound Roadway

SCALE 1:10

ALL REINSTATEMENT WORKS ARE TO BE IN ACCORDANCE WITH LOCAL AREA ENGINEERS REQUIREMENTS AND GUIDELINES FOR MANAGING OPENINGS IN PUBLIC ROADS

Note:
1. Refer to 'Guidelines for managing Openings in Public Roads (Purple Book - April 2017), Chapter 6 'Specifications' for guidance on Duct type / colour and Marker Tape type / colour.
2. All bound edges shall be saw cut to expose the full vertical thickness of each layer prior to excavation. All edges shall be essentially straight, smooth and vertical.
3. Clause 808 surface to be sprayed per clause 920 prior to application of Asphalt Concrete Layer.
4. Joint sealer shall be a hot 50 pen bitumen binder or cold thixotropic bitumen 50-70 pen to be applied to all vertical cuts in accordance with B.S. 594987 prior to application of bituminous materials.
5. Licence holder must maintain temporary reinstatement to a safe and acceptable standard.
6. Any damaged area adjacent to the opening and resulting from the excavation operation shall be included within the area to be reinstated.
7. Temporary Road Surface warning signs must be used in accordance with the Traffic Signs Manual (Chaper 8 - Temporary Traffic Measures and Signs for Roadworks).
8. Refer to detail Permanent Reinstatement of Road for advice on permanent reinstatement - all permanent reinstatement shall be carried out when adequate settlement has occurred as determined by the Road Authority.

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10 AUG 2020
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FROM
LTR DATED

tli GROUP

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PROJECT

Clondardis Solar Park

38kV Grid Connection

CLIENT

Harmony Solar

CONSULTANTS

FEHILY TIMONEY & COMPANY

NOTES: -

LEGEND: -

ISSUE/REVISION

I/R	DATE	DESCRIPTION
P01	29.05.20	Issued For Section 5 Application
P00	15.04.20	Issued For Information

PROJECT NUMBER

05-745

SHEET TITLE

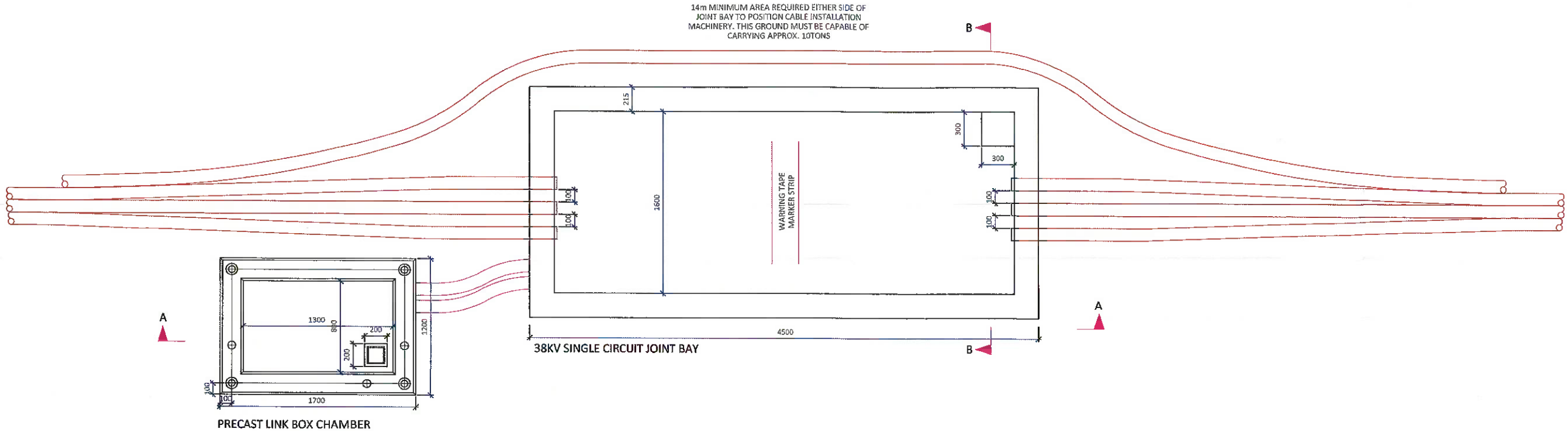
Ducting Through Regional / Local Roadways

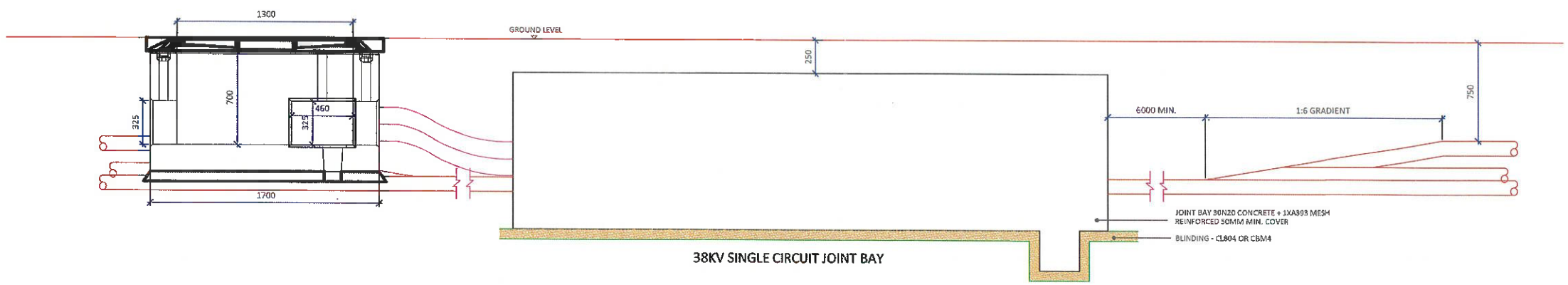
SHEET NUMBER

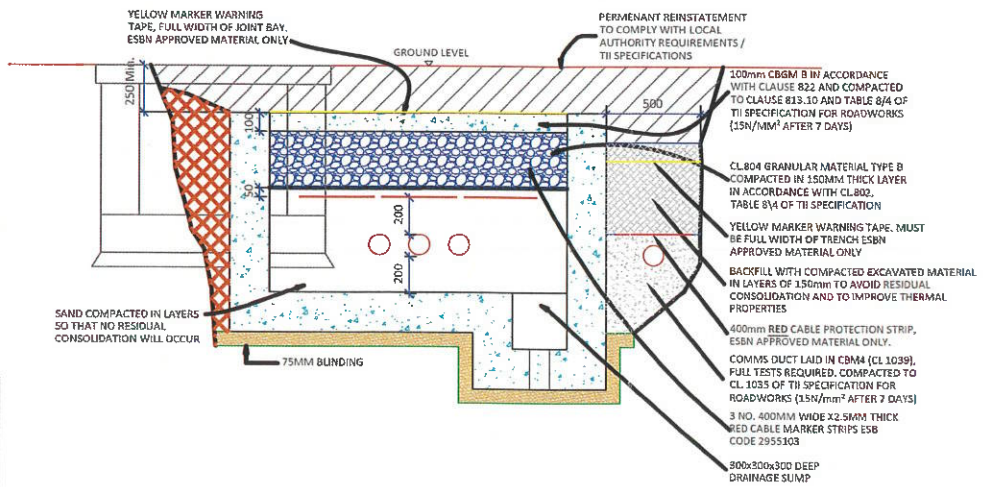
05745-DR-005

Project Management Initials: Designer: AF Checked: DB Approved: RG

ISO A1 594mm x 841mm







NOTES:

- The following design is subject to ESB approval and should be used for tender purposes only.
- This drawing is to be used only for the purpose of issue that it was issued and is subject to amendment.
- This drawing is to be read in conjunction with relevant drawings, specifications and reports
- Dimensions are in millimeters, unless noted otherwise
- Drawings are not to be scaled use figured dimensions only
- Suitability of standard joint bay foundations can only be confirmed following ground investigation. Standard foundations are based on the formation at the base of the excavation shown being suitable for a minimum bearing pressure of 100N/m2. Where this is not achievable and where peat is encountered , the contractor shall refer to the Engineer for guidance.

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PROJECT

Clondardis Solar Park

38kV Grid Connection

CLIENT

Harmony Solar

CONSULTANTS

FEHILY TIMONEY & COMPANY

NOTES: -

LEGEND: -

AN BORD PLEANÁLA
10 AUG 2020
LTR DATED FROM
LDG-
ABP-

ISSUE/REVISION

I/R	DATE	DESCRIPTION
P01	29.05.20	Issued For Section 5 Application
P00	15.04.20	Issued For Information

PROJECT NUMBER

05-745

SHEET TITLE

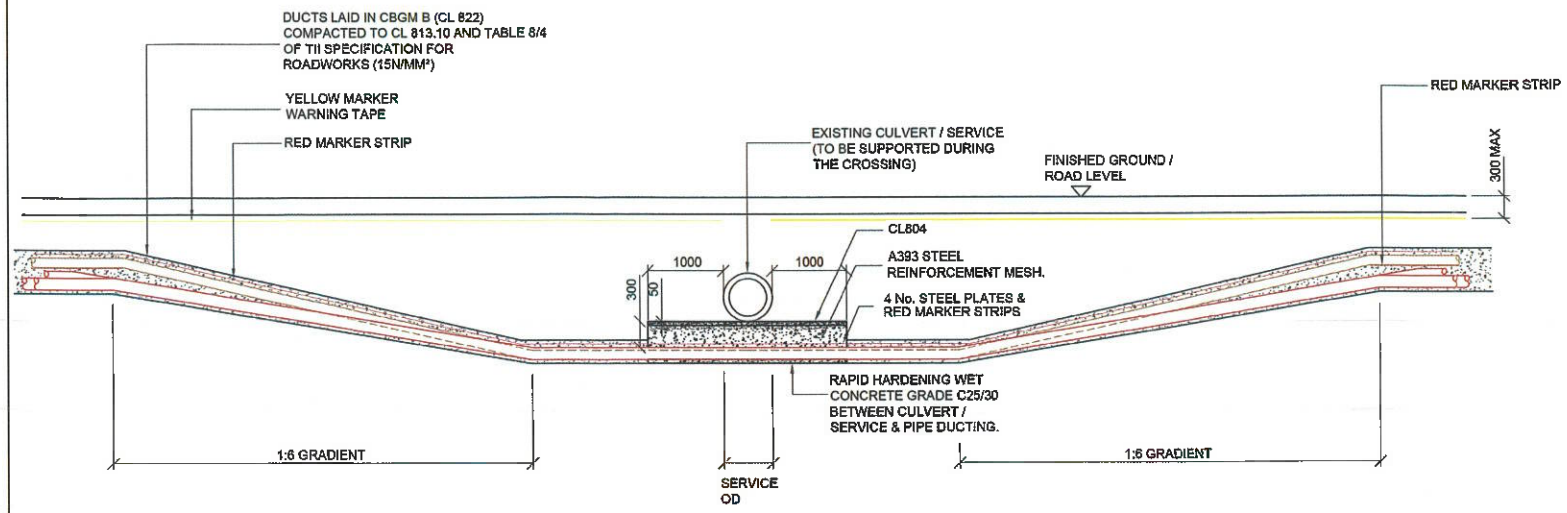
Joint Bay General Arrangement

SHEET NUMBER

05745-DR-006

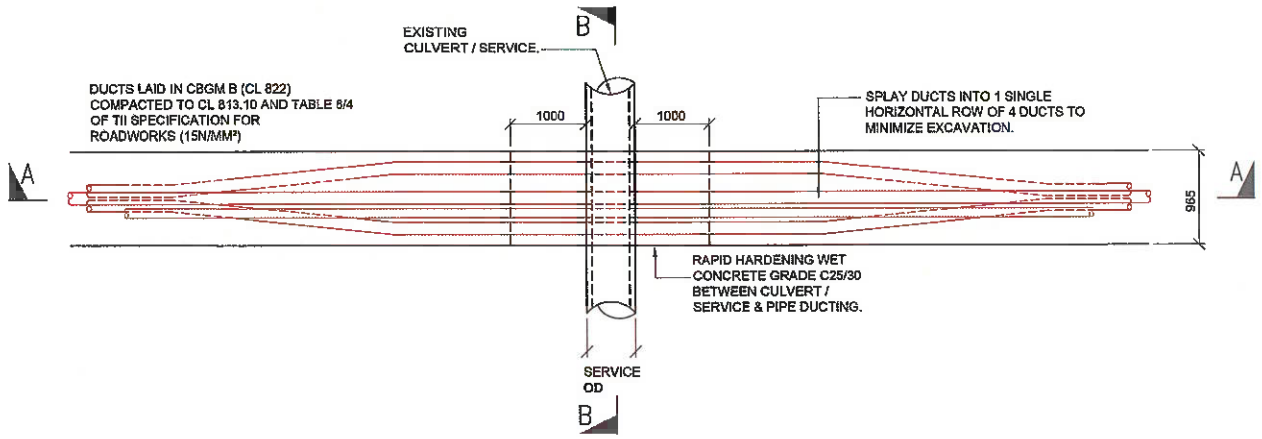
Project Management: Designer: AF Checked: DB Approved: RG

ISO A1 594mm x 841mm



SECTION A-A

SCALE 1:50



PLAN VIEW

SCALE 1:50

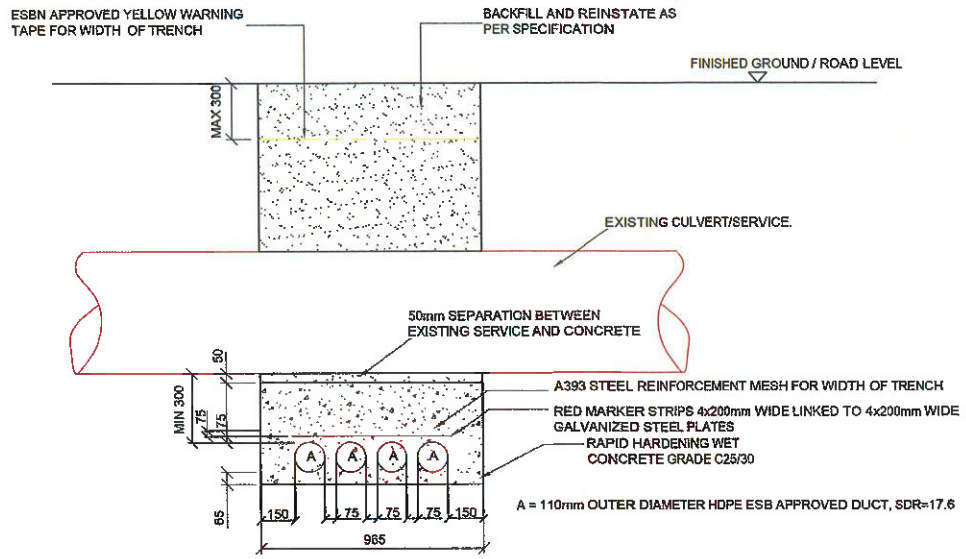
1. SERVICE/CULVERT UNDERCROSSING

LEGEND

- 110mm Ø HDPE POWER DUCT WITH 12mm DIAMTER PULL ROPE
- 110mm Ø HDPE COMMUNICATION DUCT WITH 12mm DIAMTER PULL ROPE
- RED MARKER STRIP OR STEEL PLATES
- YELLOW MARKER WARNING TAPE
- A393 STEEL REINFORCEMNET MESH
- 6mm GALVANISED STEEL PLATE

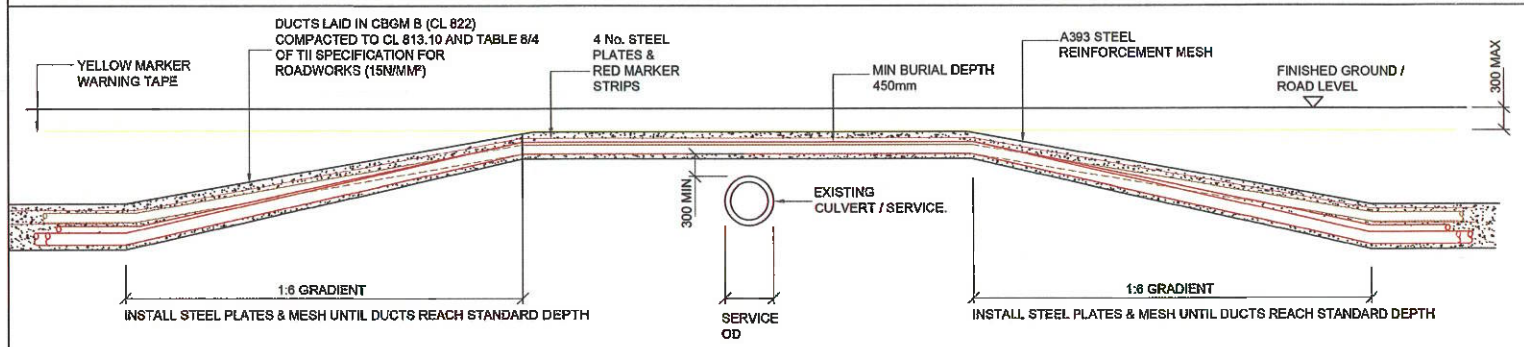
NOTES

1. This design is subject to ESB approval and should be used for tender purposes only.
2. This drawing is to be read in conjunction with all other relevant documentation.
3. Do not scale from this drawing use only printed dimensions.
4. All dimensions are in millimetres, all chainages, levels and co-ordinates are in metres unless defined otherwise.
5. This drawing is to be read in conjunction with the project Health & Safety file for any identified potential risks.
6. No excavation shall commence until the contractor has consulted up to date services drawings and carried out an Electromagnetic Locator (EML) Scan.
7. Hand dig only within 500mm of existing services.
8. If compacting CBGM B could cause damage to the culvert / service below, use rapid hardening cement grade C25/30 following engineers prior approval.
9. For standard trench cross section drawings and minimum horizontal separation to existing services, see 05618-222 (TREFOIL) and 05618-234 (FLAT).
10. Where depths exceed 3000mm to the top of duct the contractor shall consult the cable system design engineer for phase spacing requirements.
11. For Watermain crossings, see 05618-227



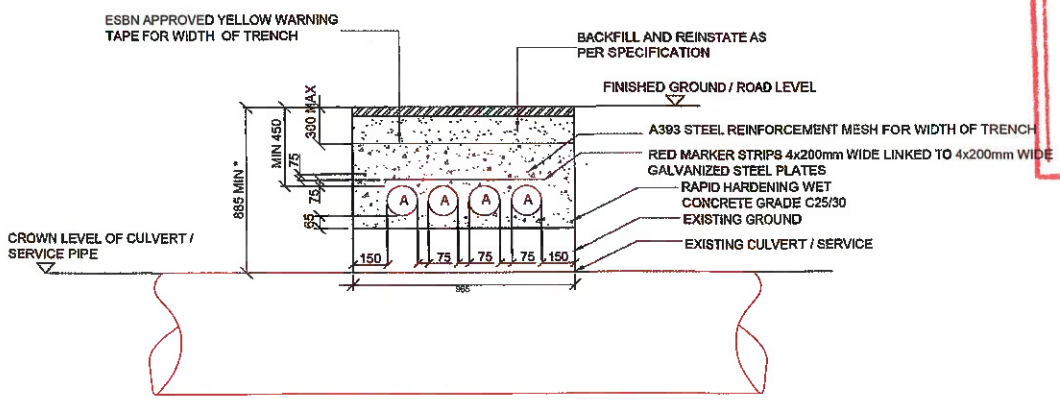
SECTION B-B

SCALE: NTS



SECTION C-C

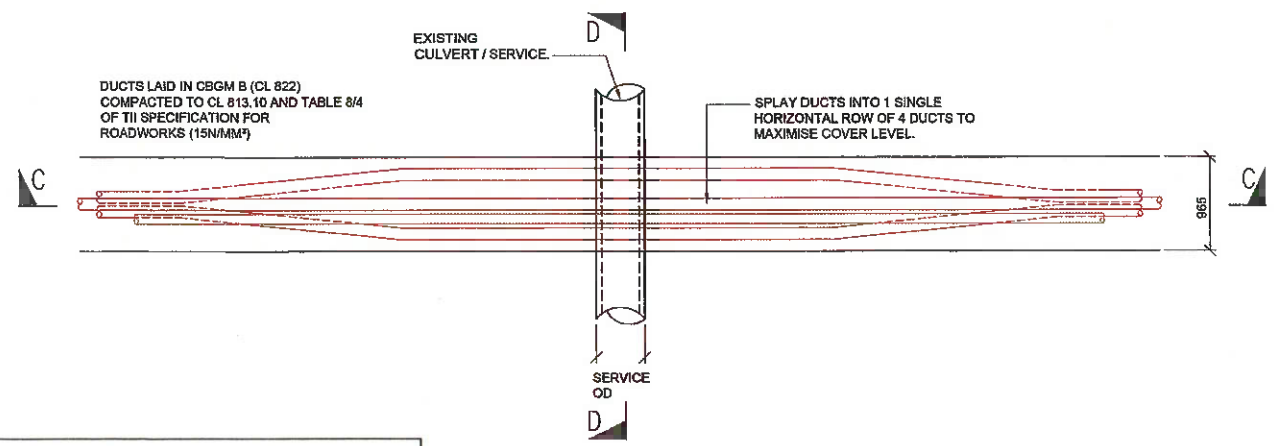
SCALE 1:50



* ALL EXISTING SERVICES WITH COVER LESS THAN MIN. DIMENSIONS ABOVE SHALL BE CROSSED BY UNDERCROSSING METHOD

SECTION D-D

SCALE: NTS



PLAN VIEW

2. SERVICE/CULVERT OVERCROSSING

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PROJECT

Clondardis Solar Park 38kV Grid Connection

CLIENT

Harmony Solar

CONSULTANTS

FEHILY TIMONEY & COMPANY

NOTES: -

LEGEND: -

AN BORD PLEANÁLA
10 AUG 2020
LTR DATED FROM
LDG-
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I/R	DATE	DESCRIPTION
P01	29.05.20	Issued For Section 5 Application
P00	15.10.20	Issued For Information

PROJECT NUMBER

05-745

SHEET TITLE

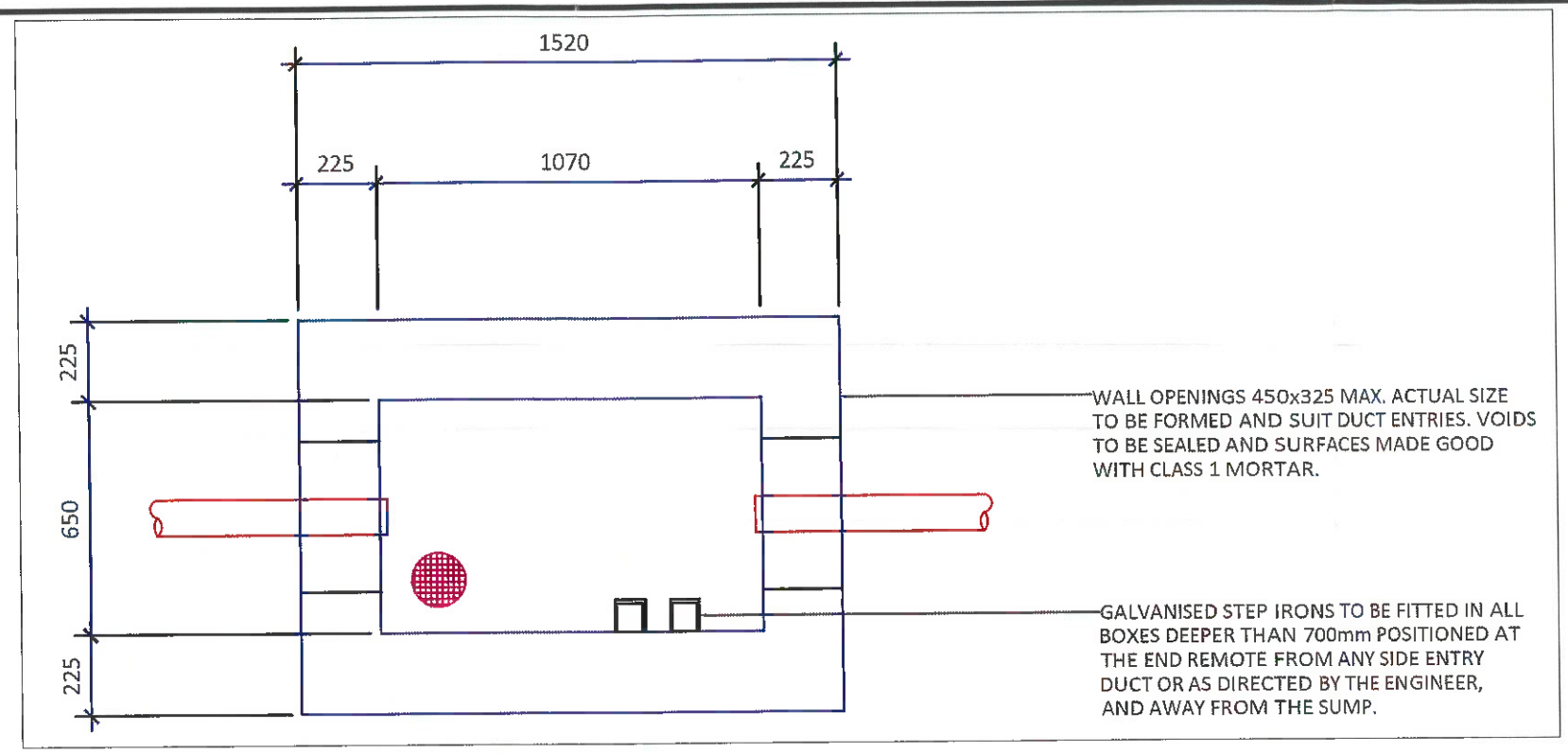
Service/Culvert Crossing Detail

SHEET NUMBER

05745-DR-007

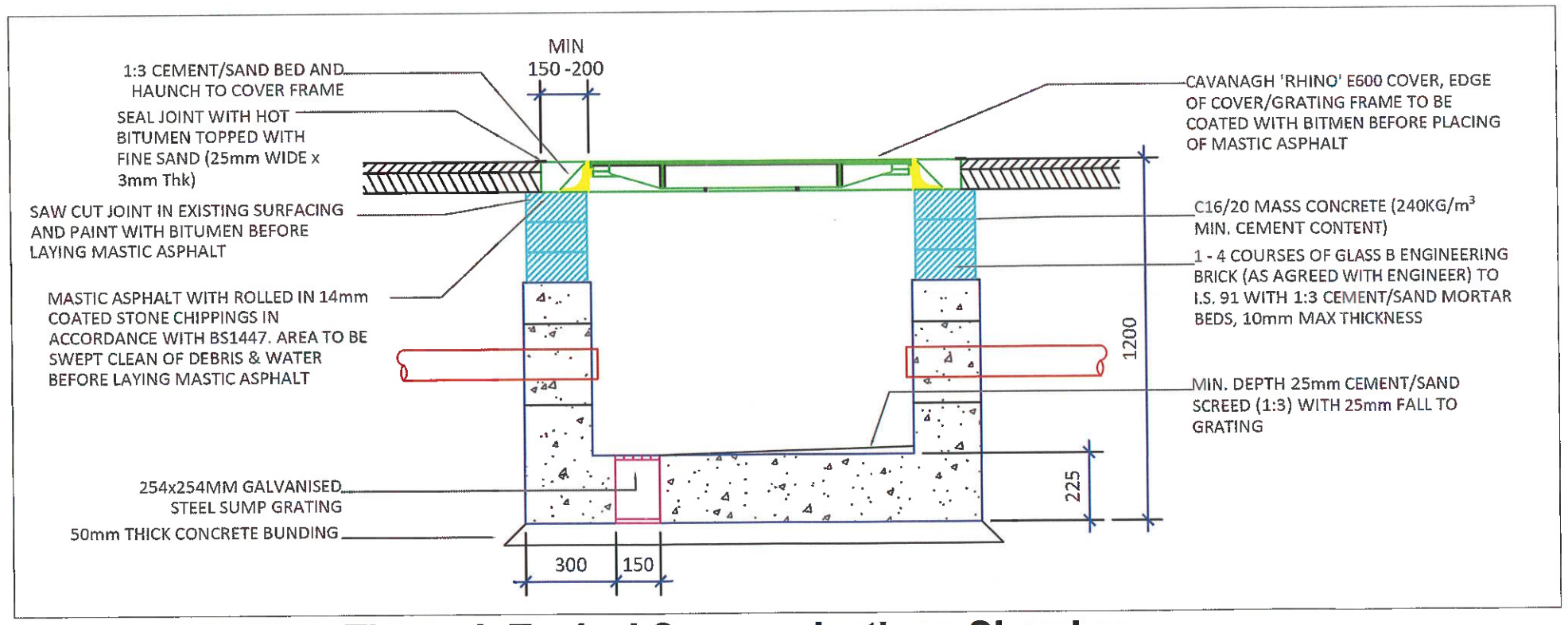
Project Management No.: Designer: AF Checked: DB Approved: RG

- The following design is subject to ESB approval and should be used for tender purposes only.
- This drawing is to be read in conjunction with relevant drawings, specifications and reports.
- Dimensions are in millimetres, unless noted otherwise.
- Drawings are not to be scaled use figured dimensions only.



Plan View - Typical Communications Chamber

SCALE 1:20



Section Through Typical Communications Chamber

SCALE 1:20

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10 AUG 2020
LTR DATED ____ FROM ____
LDG- ____
ABP- ____

tli GROUP
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CLIENT
Harmony Solar

PROJECT
Clondardis Solar Park
38kV Grid Connection

PROJECT NUMBER
05-745

SHEET NUMBER
0574-DR-008

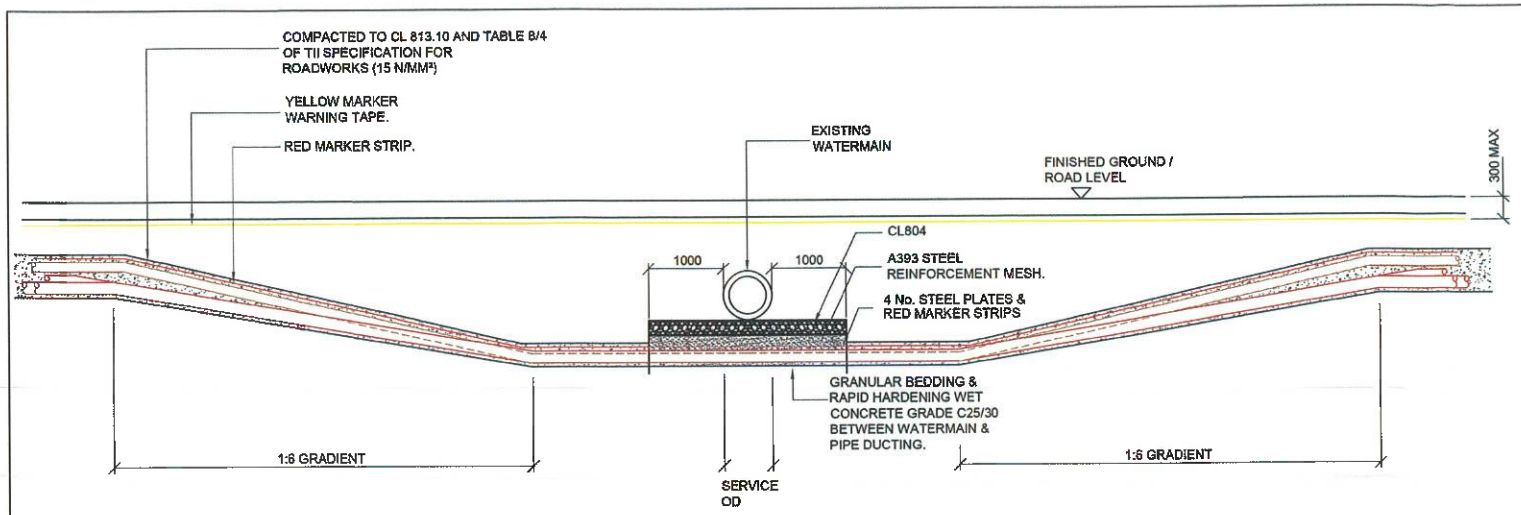
SHEET TITLE
Typical Communications Chamber Details

DRAWING STATUS
For Section 5 Application

ISSUE/REVISION

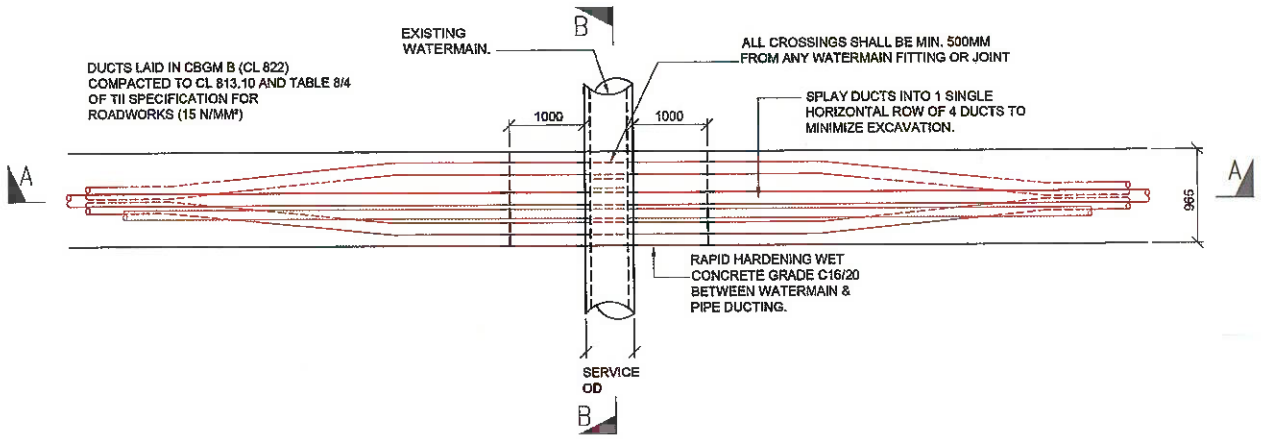
I/R	DATE	DESCRIPTION
P01	29.05.20	Issued For Section 5 Application
P00	15.04.20	Issued For Information

ISO A1 594mm x 841mm



SECTION A-A

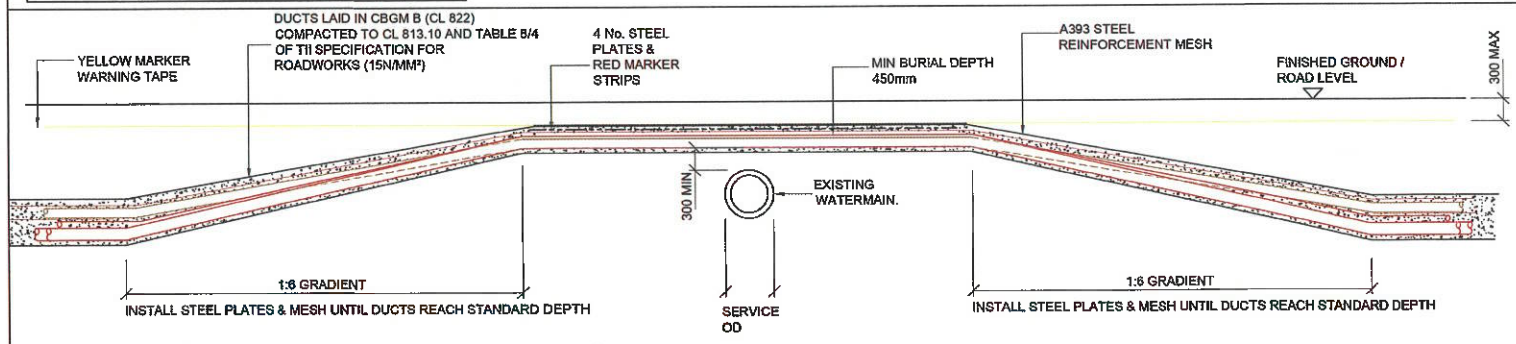
SCALE 1:50



PLAN VIEW

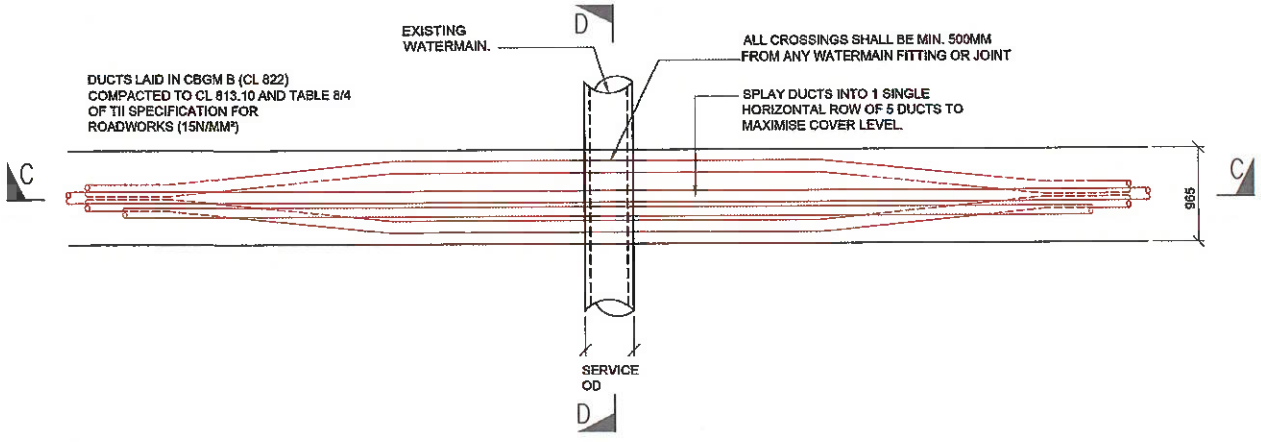
SCALE 1:50

2. WATERMAIN UNDERCROSSING



SECTION C-C

SCALE 1:50



PLAN VIEW

SCALE 1:50

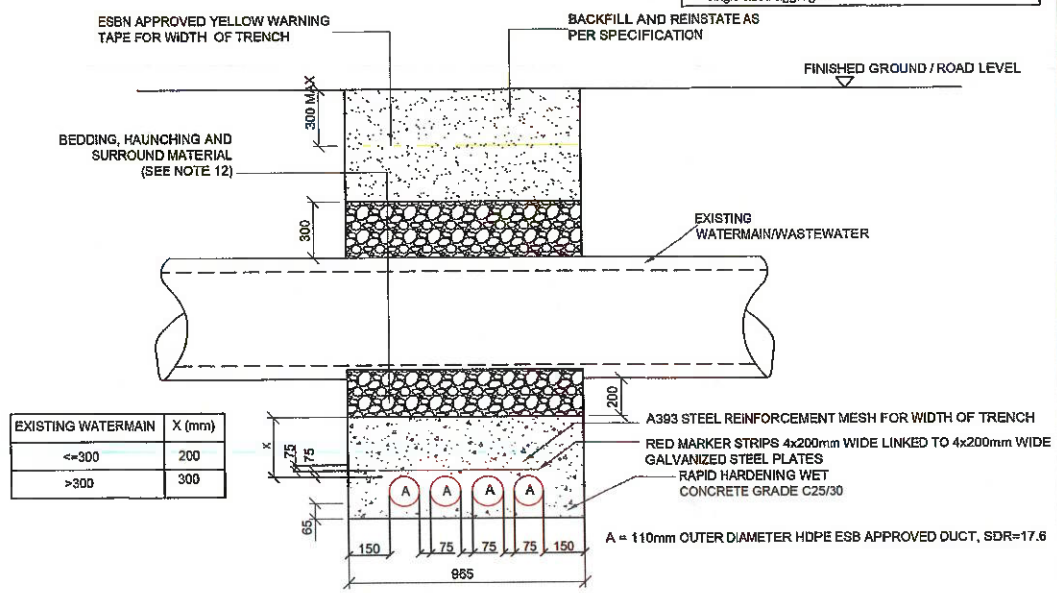
2. WATERMAIN OVERCROSSING

LEGEND

- 110mm Ø HDPE POWER DUCT WITH 12mm DIAMTER PULL ROPE
- 110mm Ø HDPE COMMUNICATION DUCT WITH 12mm DIAMTER PULL ROPE
- RED MARKER STRIP OR STEEL PLATES
- YELLOW MARKER WARNING TAPE
- A393 STEEL REINFORCEMNET MESH
- 6mm GALVANISED STEEL PLATE

NOTES

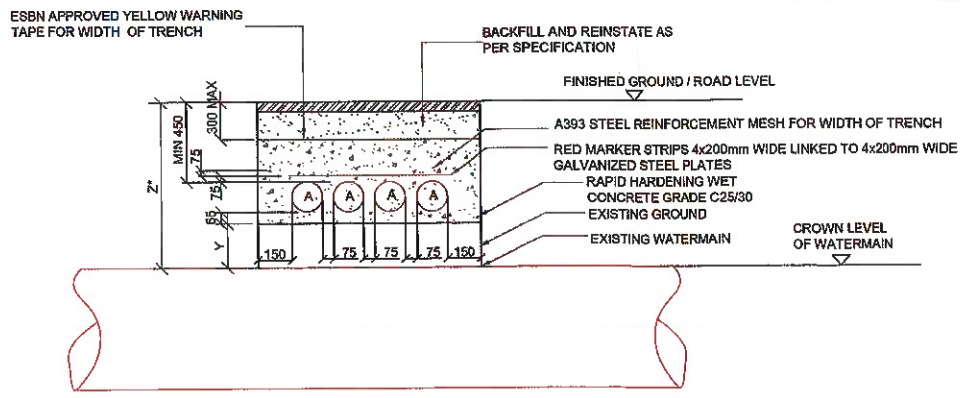
1. This design is subject to ESB approval and should be used for tender purposes only.
2. This drawing is to be read in conjunction with all other relevant documentation.
3. Do not scale from this drawing use only printed dimensions.
4. All dimensions are in millimetres, all chainages, levels and co-ordinates are in metres unless defined otherwise.
5. This drawing is to be read in conjunction with the project Health & Safety file for any identified potential risks.
6. No excavation shall commence until the contractor has consulted up to date services drawings and carried out an Electromagnetic Locator (EML) Scan.
7. Hand dig only within 500mm of existing services.
8. If compacting CBGM B could cause damage to the culvert / service below, use rapid hardening cement grade C25/30 following engineers prior approval.
9. For standard trench cross section drawings and minimum horizontal separation to existing services, see 05618-222 (TREFOIL) and 05618-234 (FLAT).
10. Where depths exceed 3000mm to the top of duct the contractor shall consult the cable system design engineer for phase spacing requirements.
11. All works shall be in accordance with Irish Water code of practice for infrastructure.
12. Backfill as per guidelines for the opening, backfilling and reinstatement of openings in public roads (2015)
13. As per WIS 4-08-02 & IGN 4-08-01 granular material shall be 14mm to 5mm graded aggregate or 10mm single sized aggregate



EXISTING WATERMAIN	X (mm)
<=300	200
>300	300

SECTION B-B

SCALE: NTS



SECTION D-D

SCALE: NTS

EXISTING WATERMAIN	Y (mm)	Z* (mm)
<=300	235	885 MIN
>300	435	1085 MIN

* ALL EXISTING SERVICES WITH COVER LESS THAN MIN. DIMENSIONS ABOVE SHALL BE CROSSED BY UNDERCROSSING METHOD

AN BORD PLEANÁLA
LDG-
ABP-
10 AUG 2020
Fee: €
Type:
Time:
By:

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PROJECT

Clondardis Solar Park 38kV Grid Connection

CLIENT

Harmony Solar

CONSULTANTS

FEHILY TIMONEY & COMPANY

NOTES: -

LEGEND: -

ISSUE/REVISION

I/R	DATE	DESCRIPTION
P01	29.05.20	Issued For Section 5 Application
P00	15.10.20	Issued For Information

PROJECT NUMBER

05-745

SHEET TITLE

Watermain / Wastewater Crossing Detail

SHEET NUMBER

05745-DR-009

Approved: RG
Checked: DB
Designer: AF
Project Management Issues:

Image 1 : Typical Directional Drilling Rig

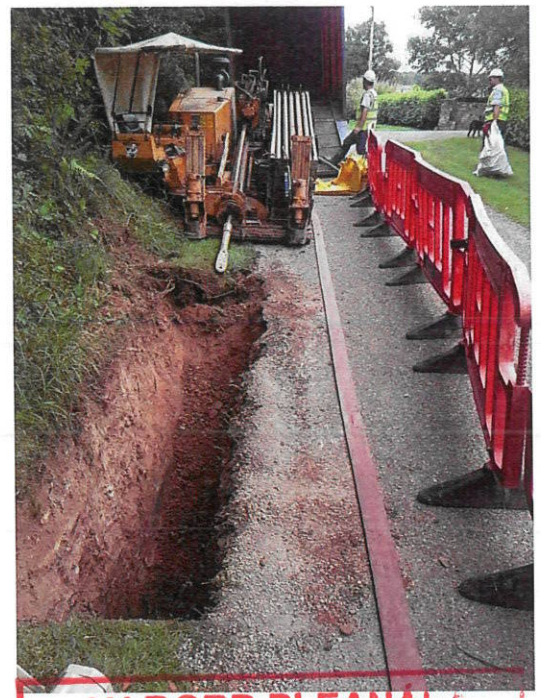

Image 2 : Typical Drilling Rig and Launch Pit

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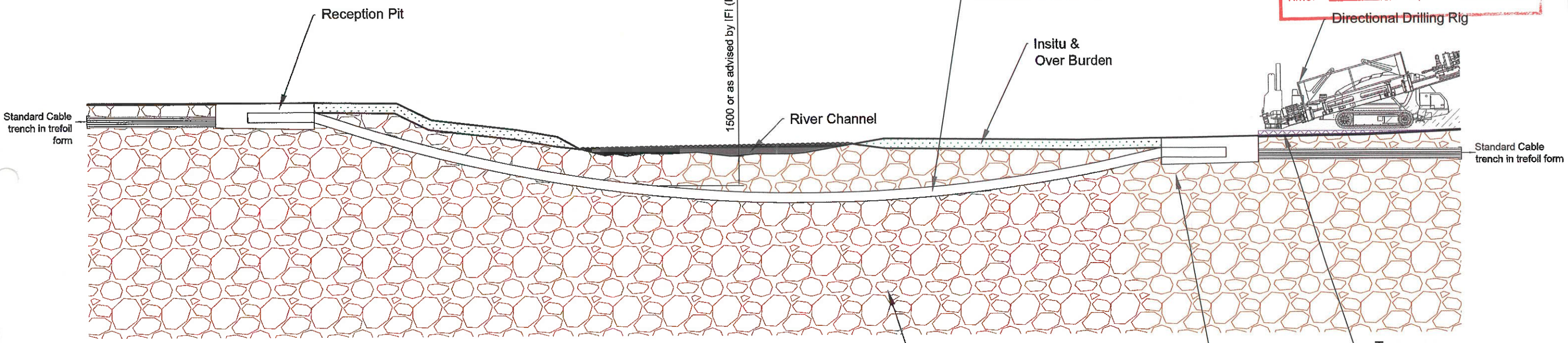
LDG-
ABP-
10 2020
Fee: € Type:
Time: By:



Typical Directional Drilling Water Crossing Detail

SCALE - 1:200

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PROJECT
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38kV Grid Connection

PROJECT NUMBER
05-745

SHEET NUMBER
05745-DR-010

SHEET TITLE
Typical Horizontal Directional Drilling (HDD) Detail

DRAWING STATUS
For Section 5 Application

ISSUE/REVISION

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