

Topic Chapter:Description of Development
Figure GC 5.1
Location of the UWF Grid Connection
on OSI Discovery Mapping

Map Number:
Map 1 of 1

- Legend:
- 110kV UGC
 - Mountphilips Substation Site
 - Consented Upperchurch Windfarm Substation

Project:
UWF Grid Connection (2019)

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AB	PK	October 19	A3



Aoife Butler
Ecopower Developments Ltd
Zetec House,
Purcellsinn Business Park, Kilkenny
TEL: +353 56 7750140
MOB: +353 83 8805644



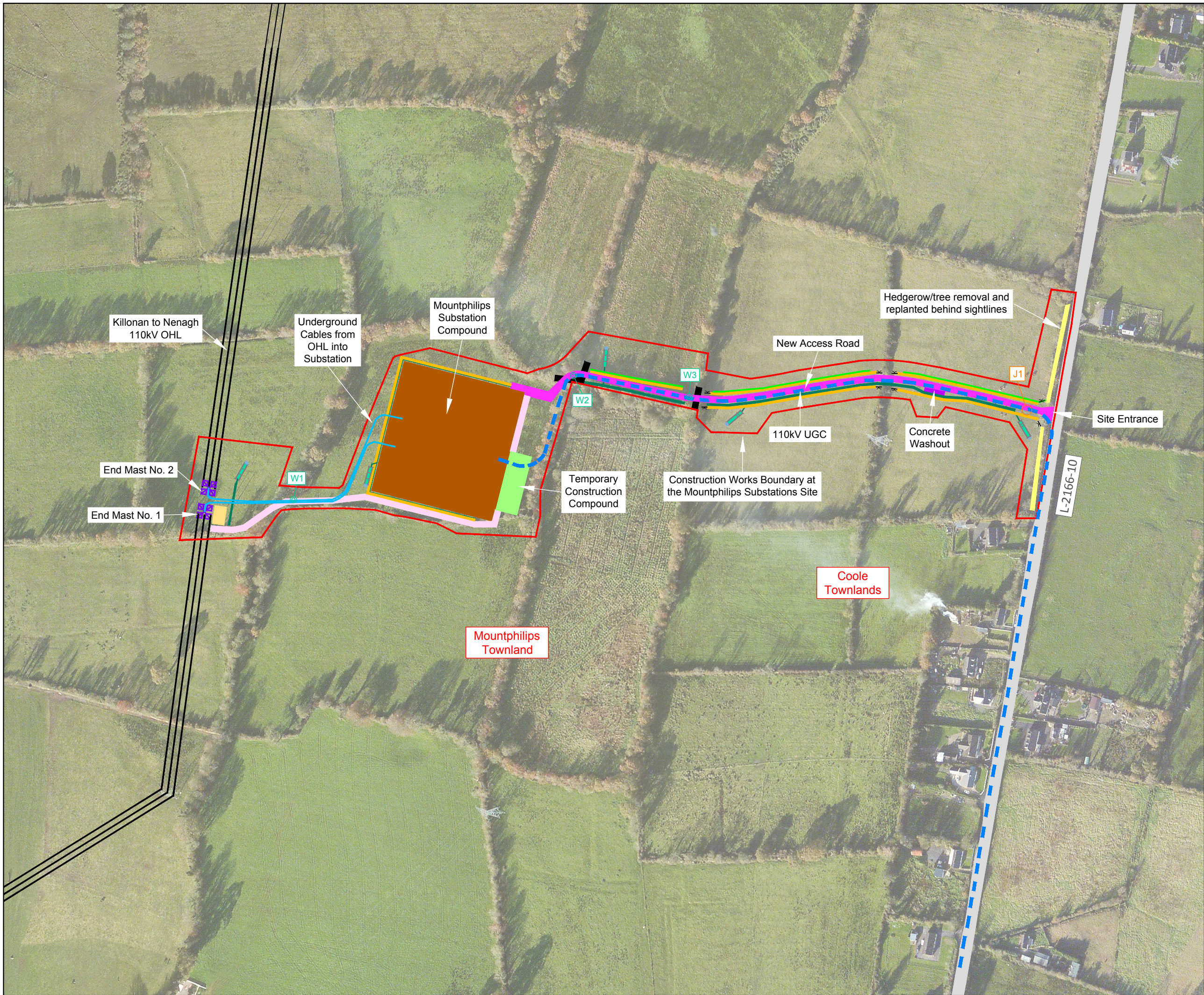


Figure GC 5.2

Layout of the Mountphilips Substation Site on Aerial Photography Mapping

Map Number:
Map 1 of 1

Legend:

PROPOSED

- UWF Grid Connection - 110kV UGC
- 110kV Substation Compound
- Joint Bay Location
- New Permanent Access Road
- Permanent Berms with new hedgerow planted
- Underground Cable from the Killonan to Nenagh 110kV OHL into Mountphilips Substation
- End Masts
- End Masts temporary crane hardstands
- Watercourse Crossings
- Concrete Washout
- Dirty water drain
- Settlement Pond
- Clean water drain
- Hedgerow/tree removal at site entrance within visual splay and replanted behind sightlines
- Permanent hedge/tree removal at watercourse crossings W2 and W3
- New Field Gate
- Temporary Construction Compound
- Temporary Access Road
- Mountphilips Substation Site Construction Works Boundary

EXISTING

- Existing Killonan to Nenagh 110kV OHL
- Public Road Identification Number
- Public Road
- Townlands



Project:

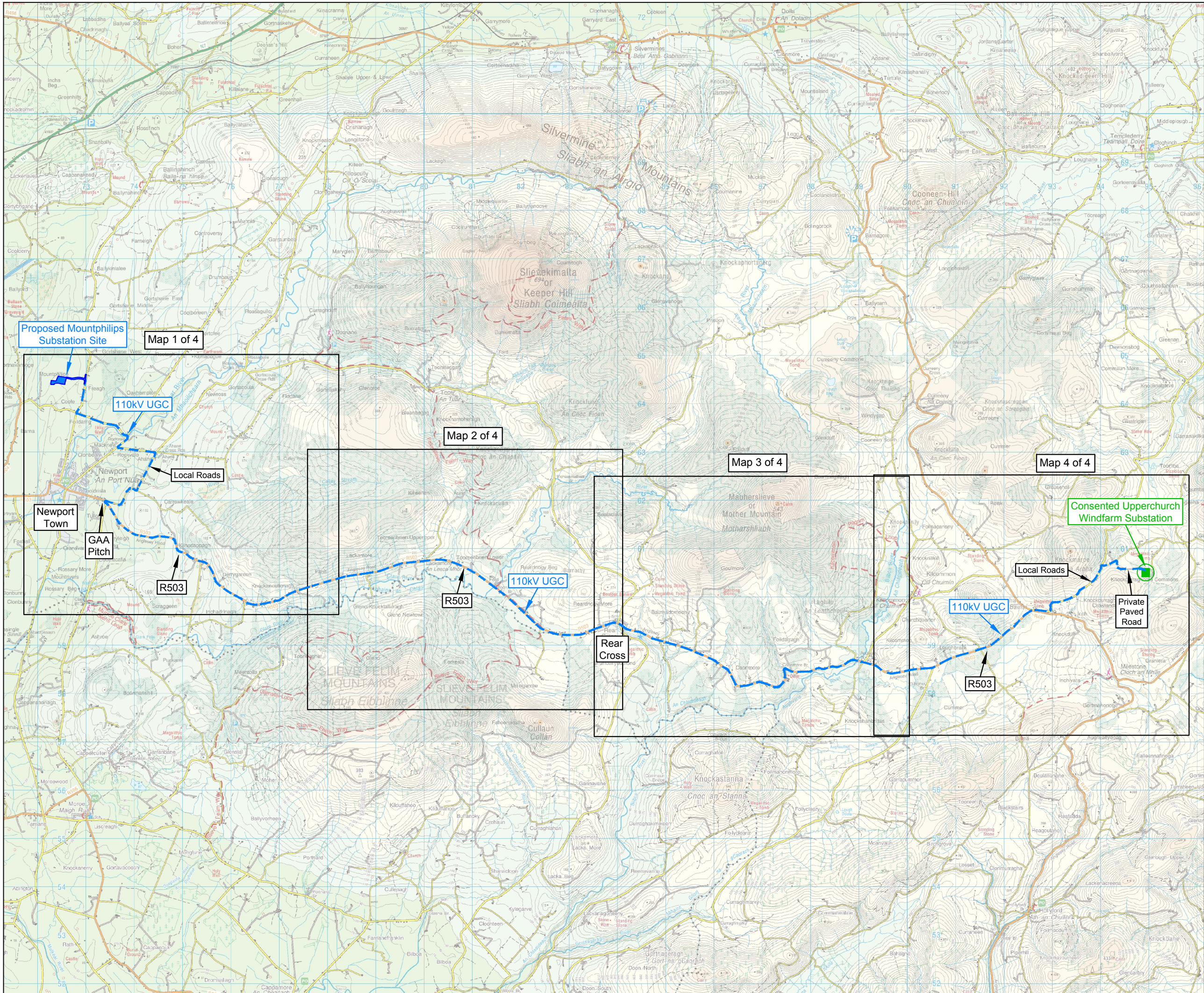
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Aoife Butler
Ecopower Developments Ltd
Zetec House,
Purcellsinch Business Park, Kilkenny
TEL: +353 56 7750140
MOB: +353 83 8805644

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Topic Chapter:Description of Development
Figure GC 5.3

Layout of the 110kV UGC outside of
the Mountphilips Substation Site

Map Number:
Overview Map

Legend:

- UWF Grid Connection - 110kV UGC
- UWF Grid Connection - Mountphilips Substation Site
- Consented Upperchurch Windfarm Substation

Map 1 of 4 Map 1 of 4



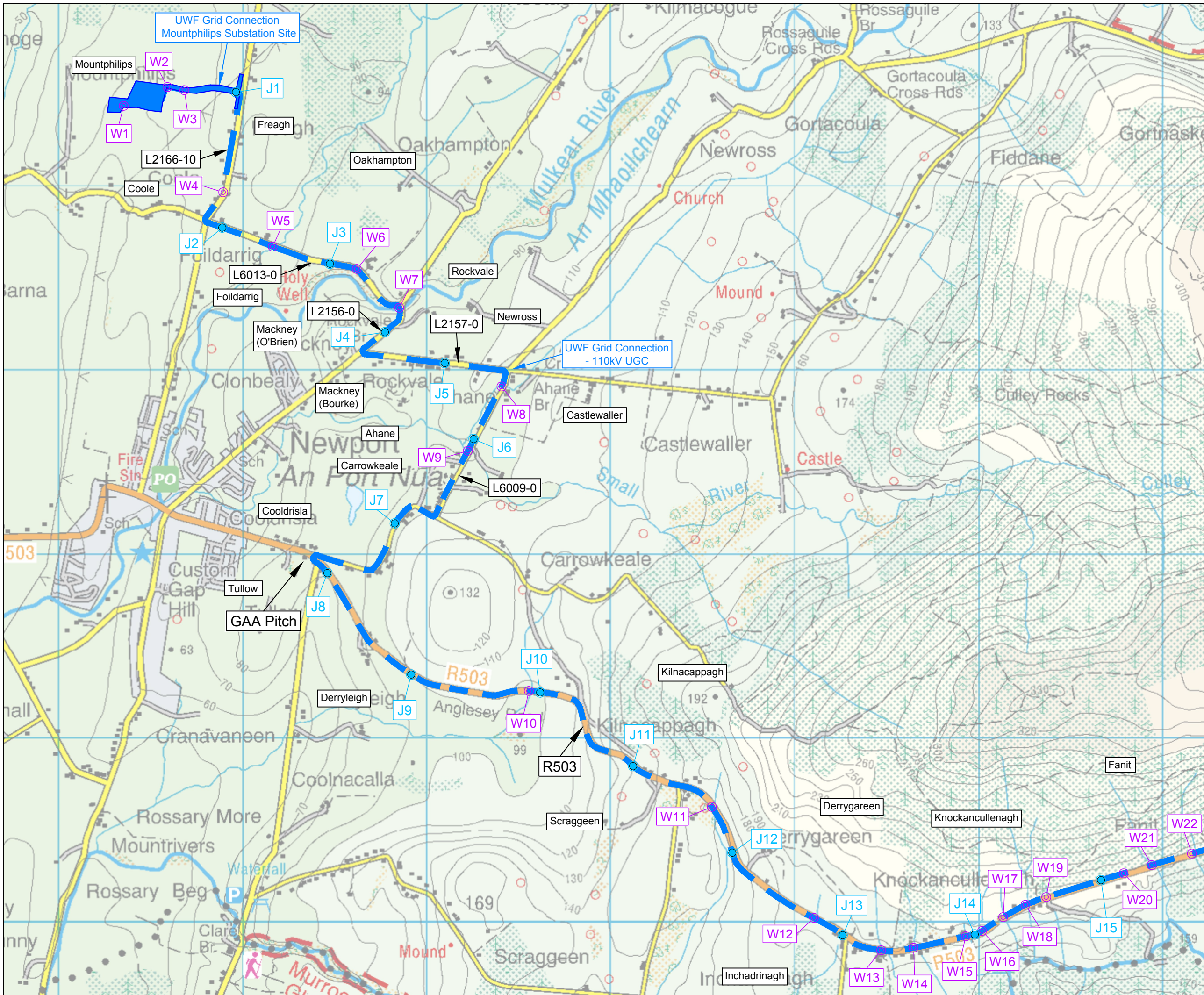
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Aoife Butler
Ecopower Developments Ltd
Zetec House,
Purcellsinch Business Park, Kilkenny
TEL: +353 56 7750140
MOB: +353 83 8805644

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Topic Chapter:Description of Development

Figure GC 5.3

Layout of the 110kV UGC outside of the Mountphilips Substation Site

Map Number:

Map 1 of 4

Legend:

UWF Grid Connection - 110kV UGC

UWF Grid Connection - Mountphilips Substation

Watercourse Crossing Locations

Joint Bay Locations

Townlands



Project:

UWF Grid Connection (2019)

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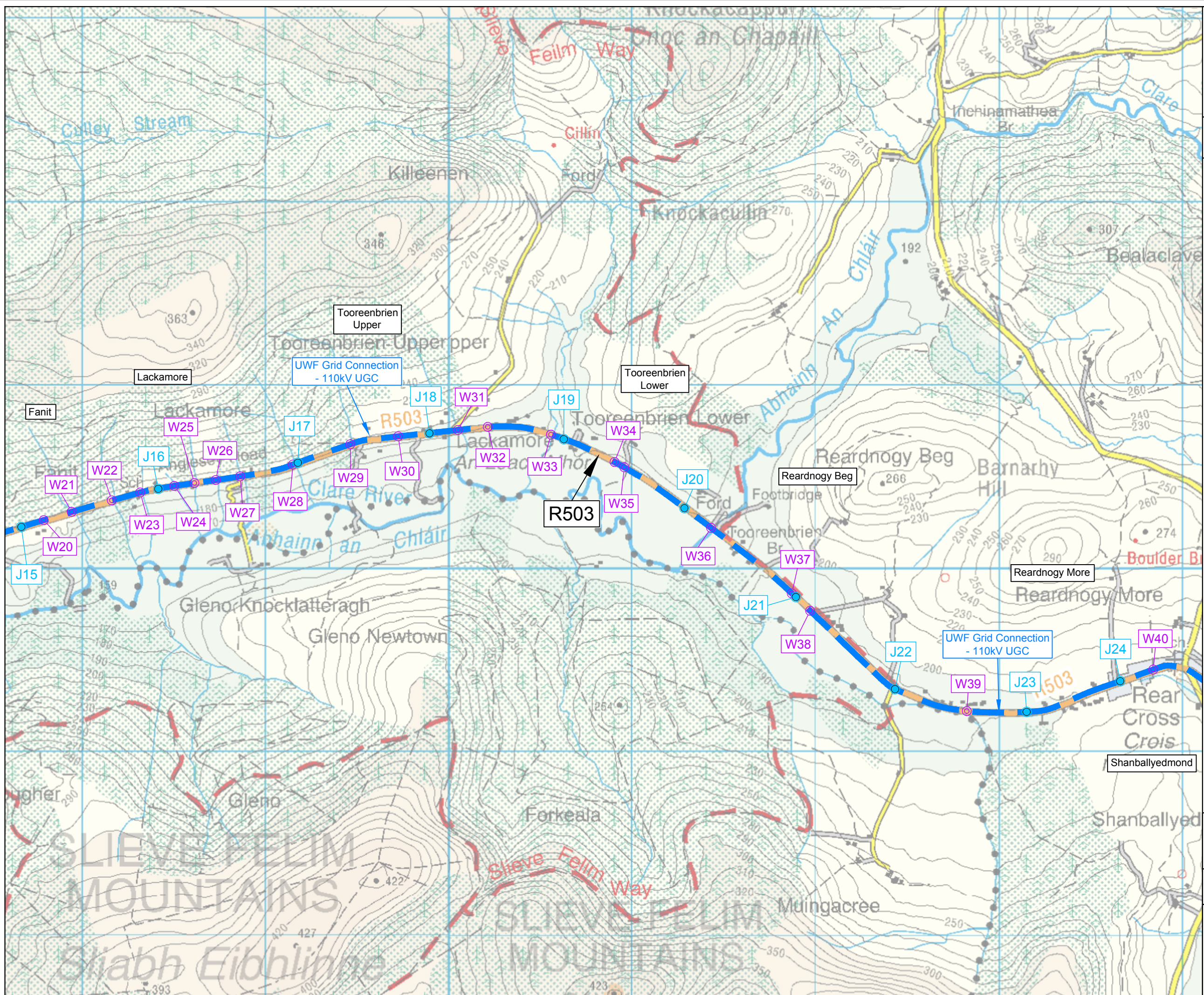
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Aoife Butler
Ecopower Developments Ltd
Zetec House,
Purcellsinch Business Park, Kilkenny
TEL: +353 56 7750140
MOB: +353 83 8805644

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Figure GC 5.3

Layout of the 110kV UGC outside of the Mountphilips Substation Site

Map Number:
Map 2 of 4

- Legend:
- UWF Grid Connection - 110kV UGC
 - W62 Watercourse Crossing Locations
 - J16 Joint Bay Locations
 - Coole Townlands



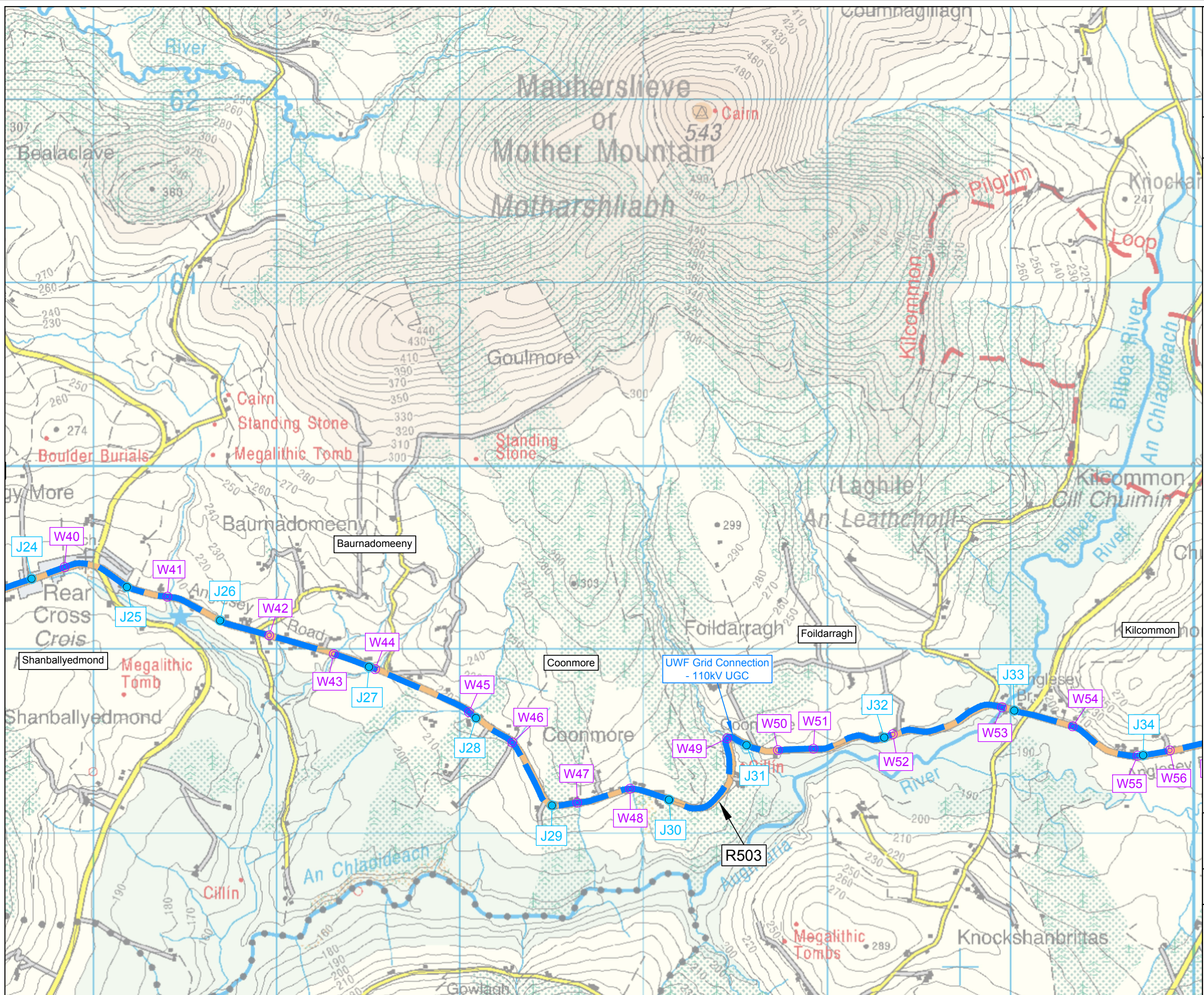
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Aoife Butler
Ecopower Developments Ltd
Zetec House,
Purcellsinn Business Park, Kilkenny
TEL: +353 56 7750140
MOB: +353 83 8805644

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Figure GC 5.3

Layout of the 110kV UGC outside of the Mountphilips Substation Site

Map Number:
Map 3 of 4

- Legend:
- UWF Grid Connection - 110kV UGC
 - Watercourse Crossing Locations
 - Joint Bay Locations
 - Townlands



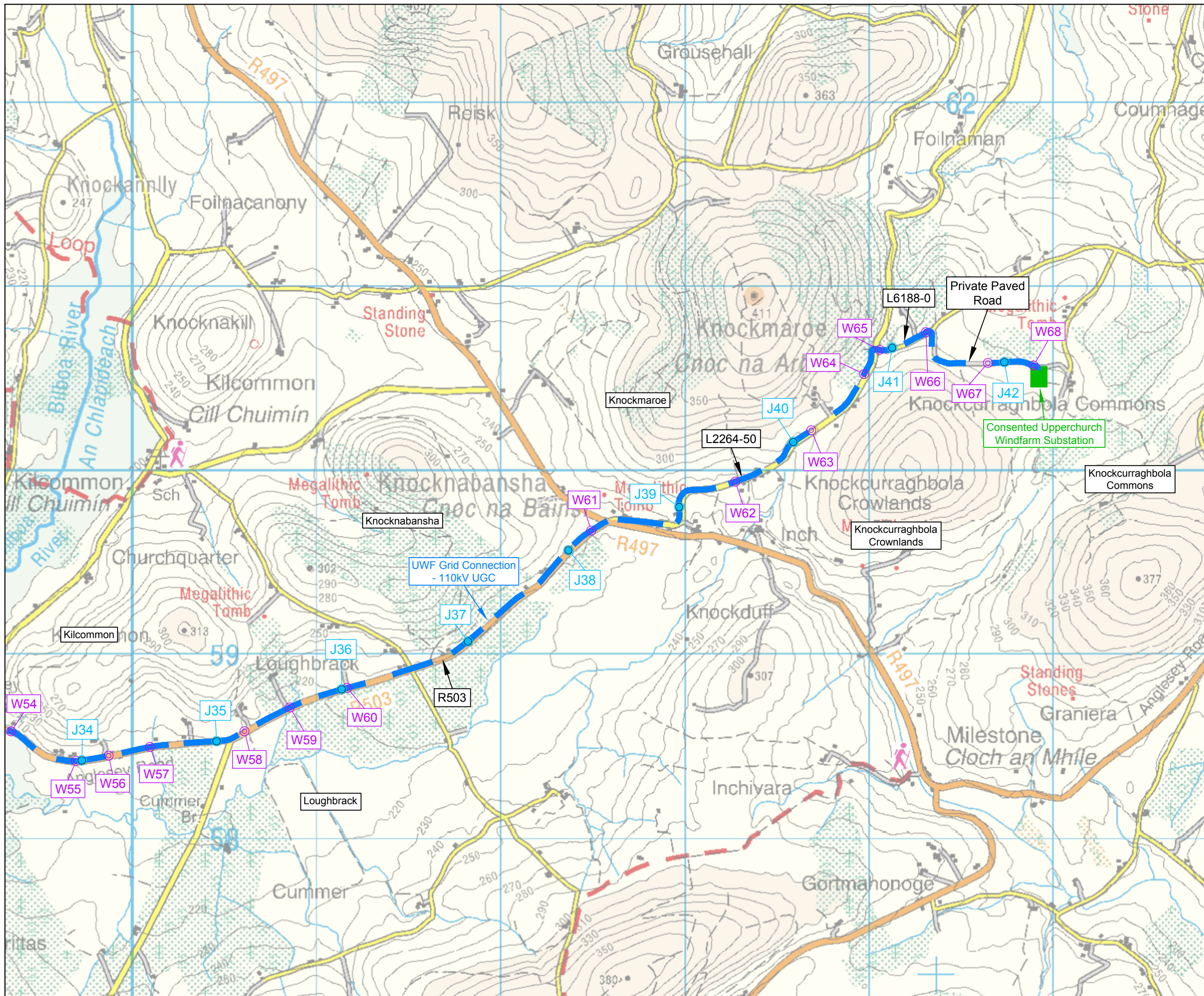
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Aoife Butler
Ecopower Developments Ltd
Zetec House,
Purcellsinch Business Park, Kilkenny
TEL: +353 56 7750140
MOB: +353 83 8805644

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Figure GC 5.3

Layout of the 110kV UGC outside of
the Mountphilips Substation Site

Map Number:
Map 4 of 4

Legend:

- UWF Grid Connection - 110kV UGC
- W62 Watercourse Crossing Locations
- J16 Joint Bay Locations
- Coole Townlands

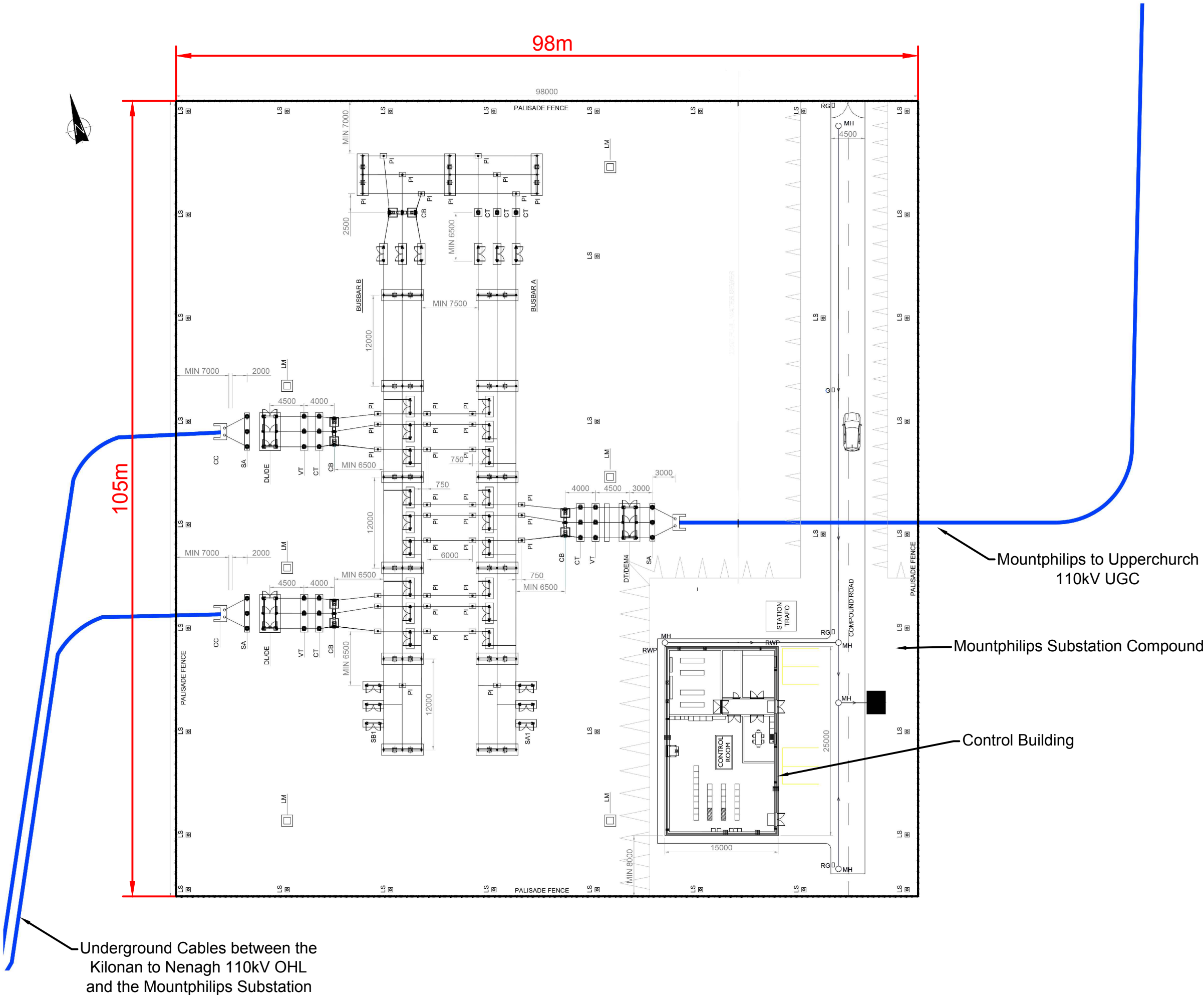
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Aoife Butler
Ecopower Developments Ltd
Zetec House,
Purcellsinch Business Park, Kilkenny
TEL: +353 56 7750140
MOB: +353 83 8805644

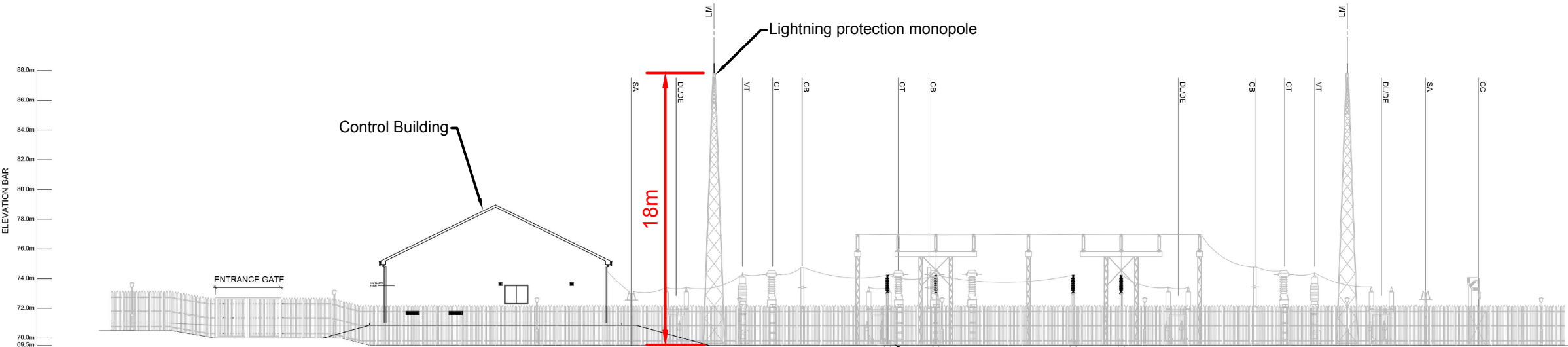
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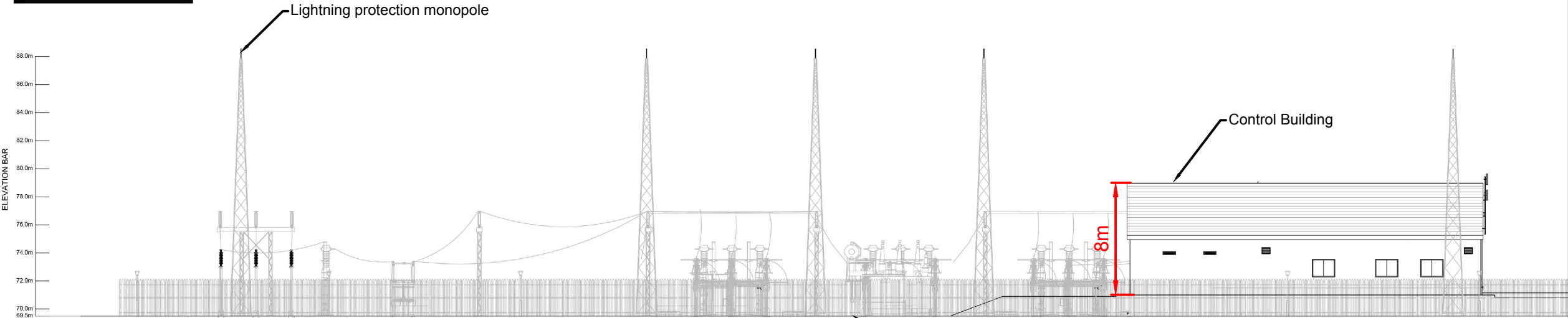
This figure is included as a scaled drawing in Volume B: Planning Drawings See drawing: 05654-202

Project:
UWF Grid Connection (2019)

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North Elevation

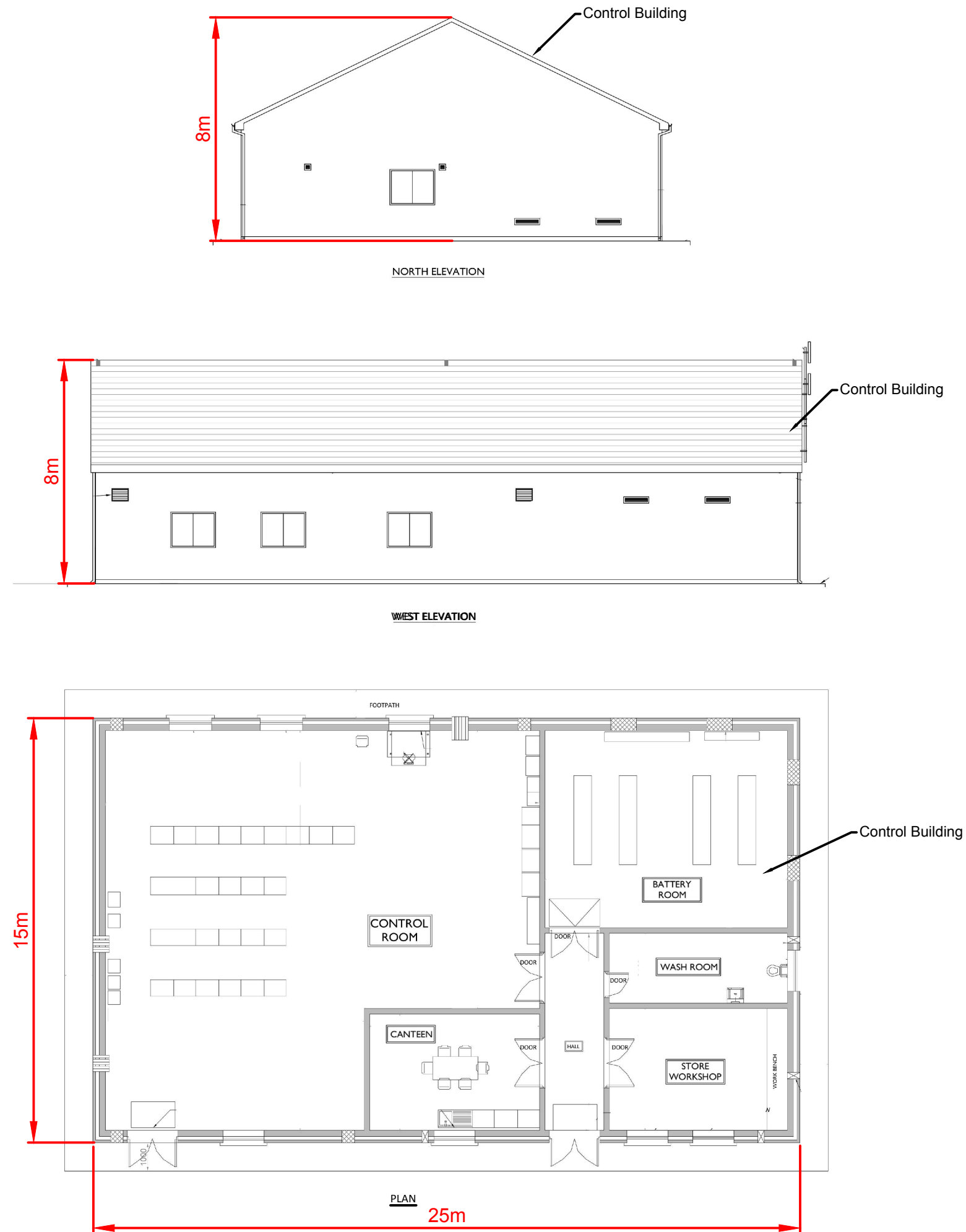


West Elevation

This figure is included as a scaled drawing in
Volume B: Planning Drawings
See drawing: 05654-203

Project:
UWF Grid Connection (2019)

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Topic Chapter:Description of Development
Figure GC 5.6

Plan and Elevation of the Control Building
at Mountphilips Substation

Map Number:
N/A

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Volume B: Planning Drawings
See drawing: 05654-204 & 05654-205

Project:
UWF Grid Connection (2019)

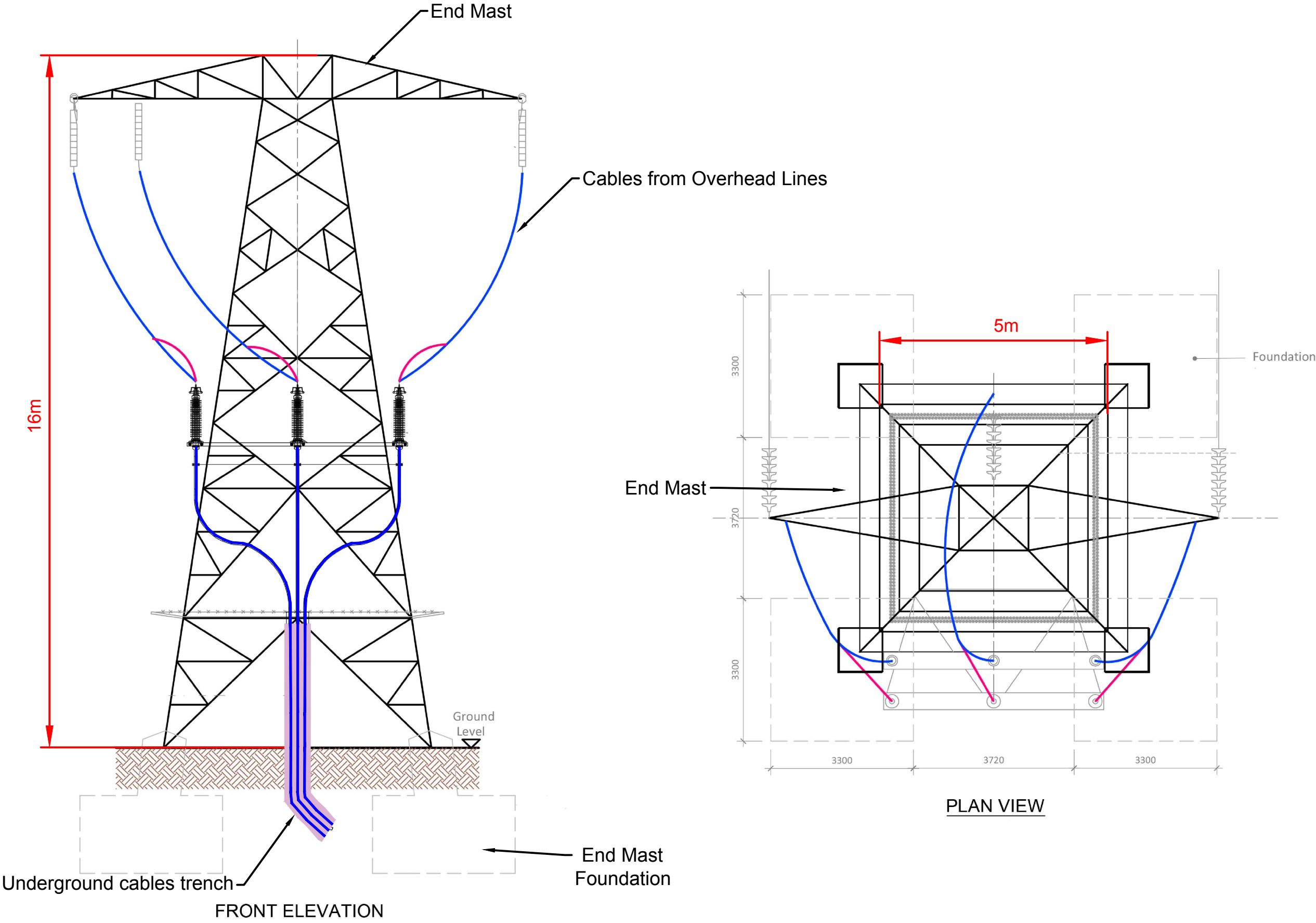
Drawn by:	Checked by:	Date:	Sheet Size:
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Figure GC 5.7

Plan and Elevation of the End Masts at
Mountphilips Substation

Map Number:

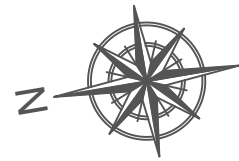
N/A



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See drawing: 05654-206

Project:
UWF Grid Connection (2019)

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54.5 meters

Palisade fence

Office (10m x 4m)

Office (10m x 4m)

Canteen (10m x 4m)

Toilets
(5m x 4m)

Bunded
Storage
Unit
6m x 4m

Bunded
Storage
Unit
6m x 4m



Mobile Generator

Skip Area
7m x 4m

Materials Storage Area
7m x 10m

Tool
Storage
7m x 4m



Vehicle Parking Area

Delivery Vehicle Parking Area

Gate

Palisade fence

Plan View

Topic Chapter:Description of Development

Figure GC 5.8

Plan View of the Temporary Construction
Compound at Mountphilips Substation

Map Number:

N/A

Notes:

Project:

UWF Grid Connection (2019)

Drawn by:

CB

Checked by:

PK

Date:

October
19

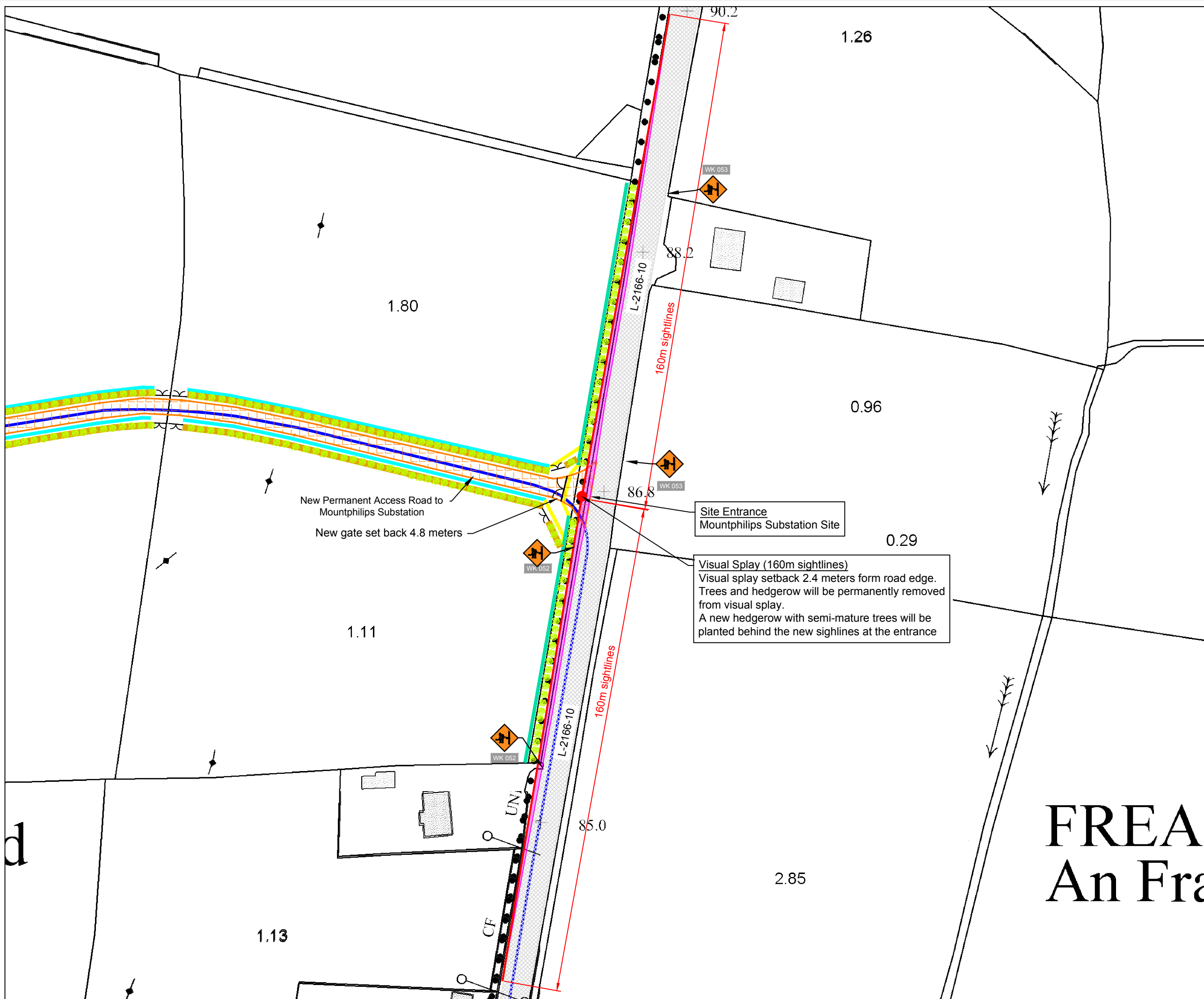
Sheet Size:

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Conor Brett
Ecopower Limited
Zetec House, Purcellsinnich IDA Business Park
Dublin Road, Kilkenny - R95 WV80
Landline - 056-7750140 (Ext 204)
Mobile - +353 (0)87-6531458

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Topic Chapter:Description of Development
Figure GC 5.9
Plan View of Site Entrance at Coole
(Mountphilips Substation Site Entrance)

Map Number:
N/A

- Legend:
- UWF Grid Connection - 110kV UGC
 - Hardcored site entrance and new permanent access road
 - Public Roadway L-2166-10
 - 160m Sightlines
 - Visual Splay - Trees and hedgerow will be permanently removed from visual splay.
 - New hedgerow with semi-mature trees will be planted behind the new sightlines at the Mountphilips Substation site entrance.
 - New farm gate
 - New permanent berms planted with new hedgerow
 - Consealed drain
 - New field drains directed to existing field drainage (Operational Stage)
 - Existing field drainage
 - Traffic Management Signage (Construction Stage)



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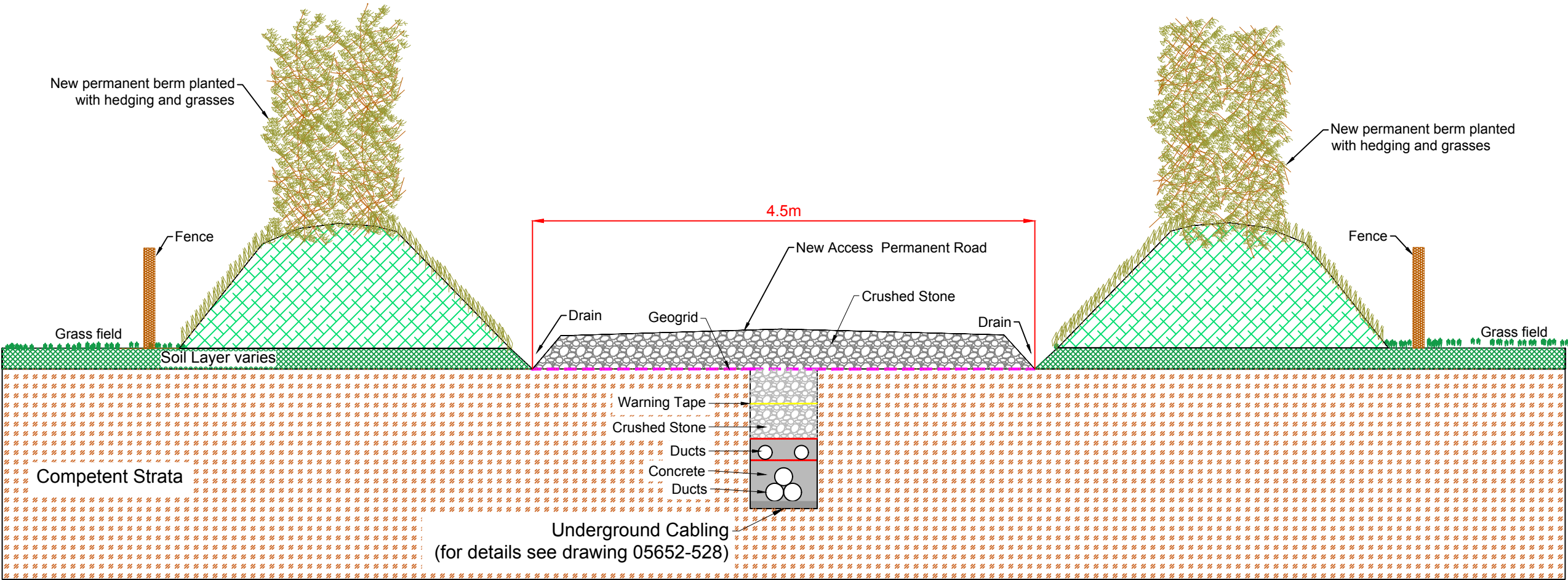
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Drawn by: JB	Checked by: PK	Date: October 19	Sheet Size: A3



Conor Brett
Ecopower Limited
Zetec House, Purcellstown IDA Business Park
Dublin Road, Kilkenny - R95 WV80
Landline - 056-7750140 (Ext 204)
Mobile - +353 (0)87-6531458

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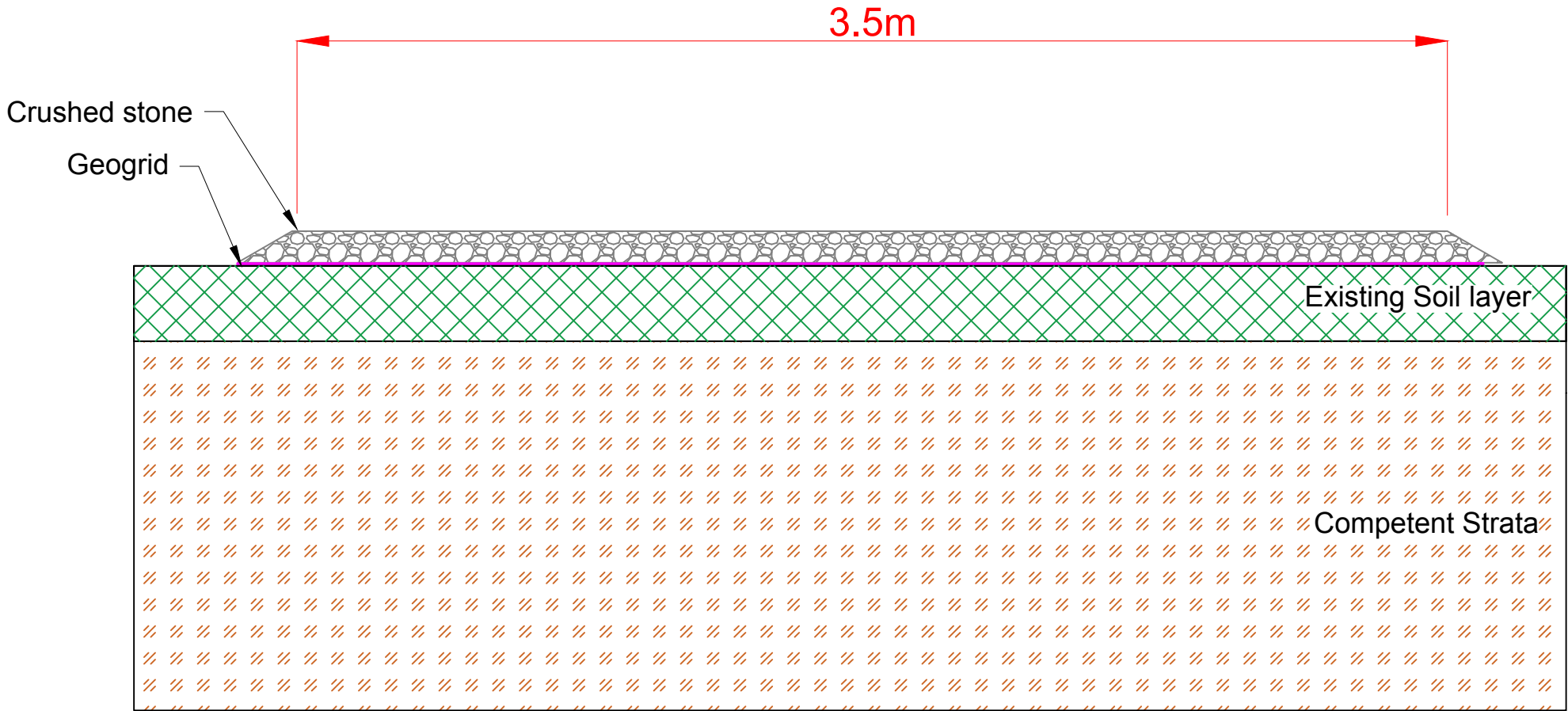
Map Number:
N/A



**Cross Section of New Permanent Access Road
to Mountphilips Substation**

Project:
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Cross Section of Temporary Access Road

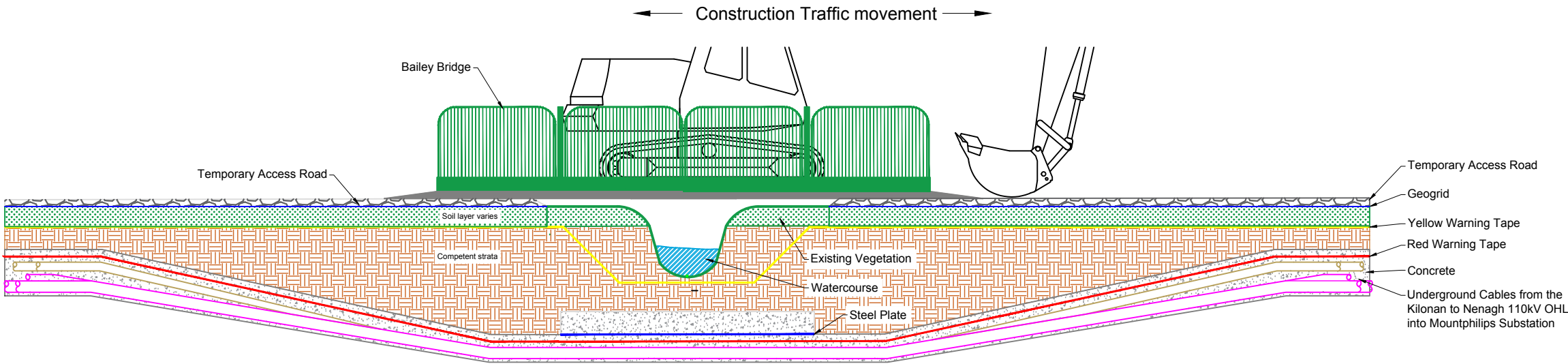
Figure GC 5.12

Cross Sections of Temporary Bailey Bridge
Crossing at Mountphilips Substation Site

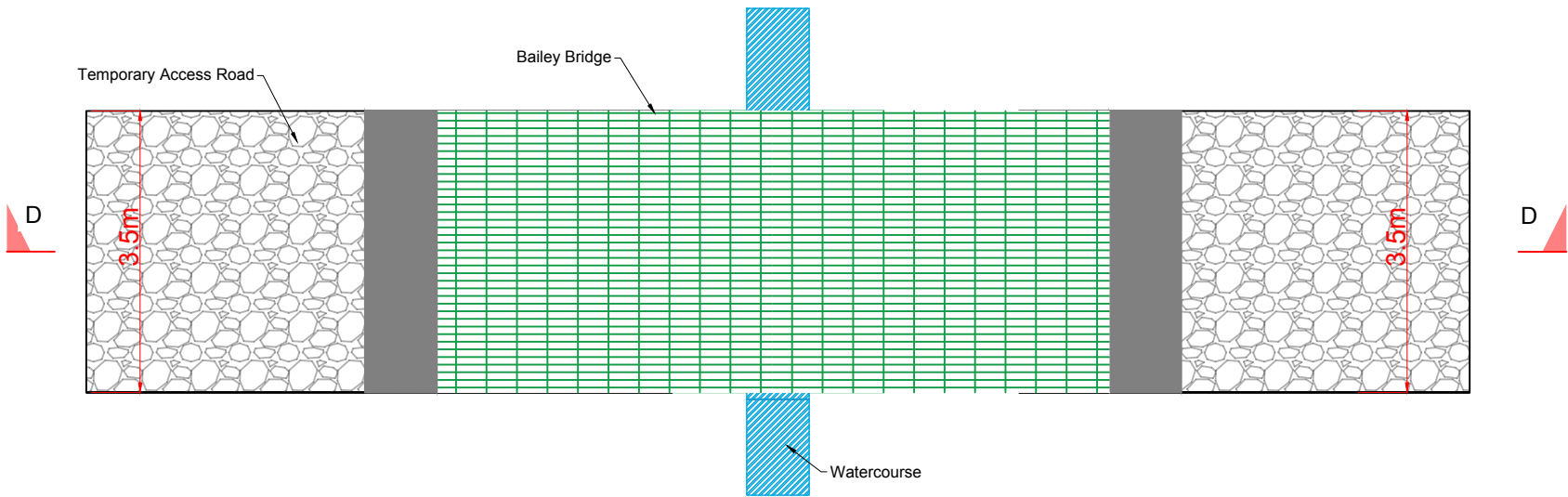
Note:
Drawing relevant to watercourse crossing
W1 at the Mountphilips Substation Site

Underground cables shown are between
the Kilonan to Nenagh 110kV OHL and the
Mountphilips Substation

Temporary crossing and temporary access
road used to access End Masts during
construction. Once construction is
complete, the temporary crossing and
temporary access road will be removed and
the lands reinstated.



Cross Section D - D

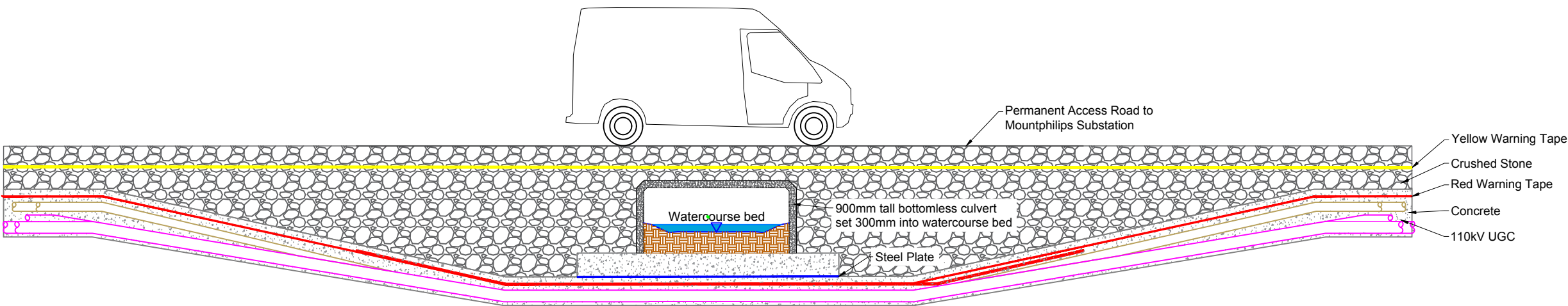


Plan View

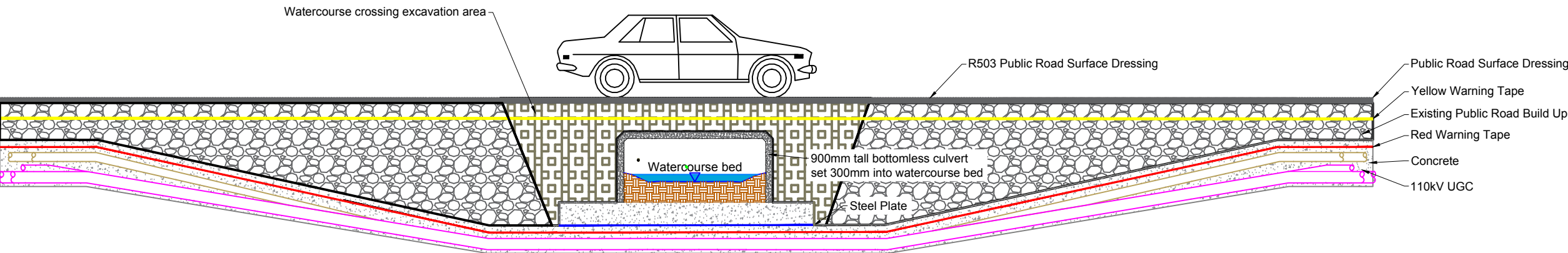
Project:
UWF Grid Connection (2019)

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Project Design Measure PD48: The new permanent cross structures at the Mountphilips Substation site and the replacement culvert at W14 along the R503 will be bottomless or clear spanning.



Cross Section of New Permanent Culvert Crossings W2 and W3



Cross Section of Replacement Culvert W14

Topic Chapter:Description of Development
Figure GC 5.13
Cross Sections of New Permanent Culverts
W2 and W3 at Mountphilips Substation
Site and Replacement Culvert W14 along
the 110kV UGC

Note:

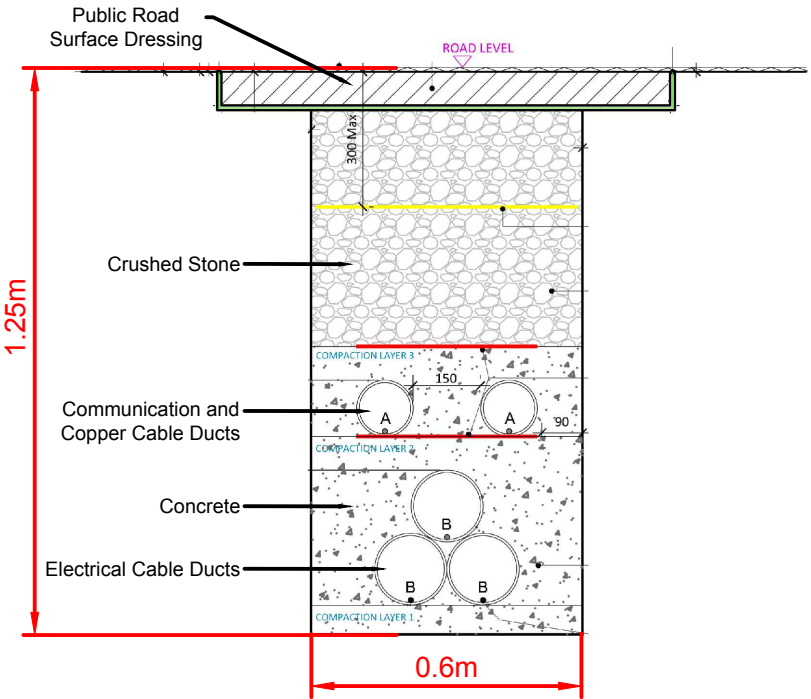
Drawing relevant to new permanent culvert
crossings W2 and W3 along the new
permanent access road to Mountphilips
Substation and culvert replacement W14
along the public road.

At least 900mm tall bottomless culvert to
be used, set 300mm into stream bed.

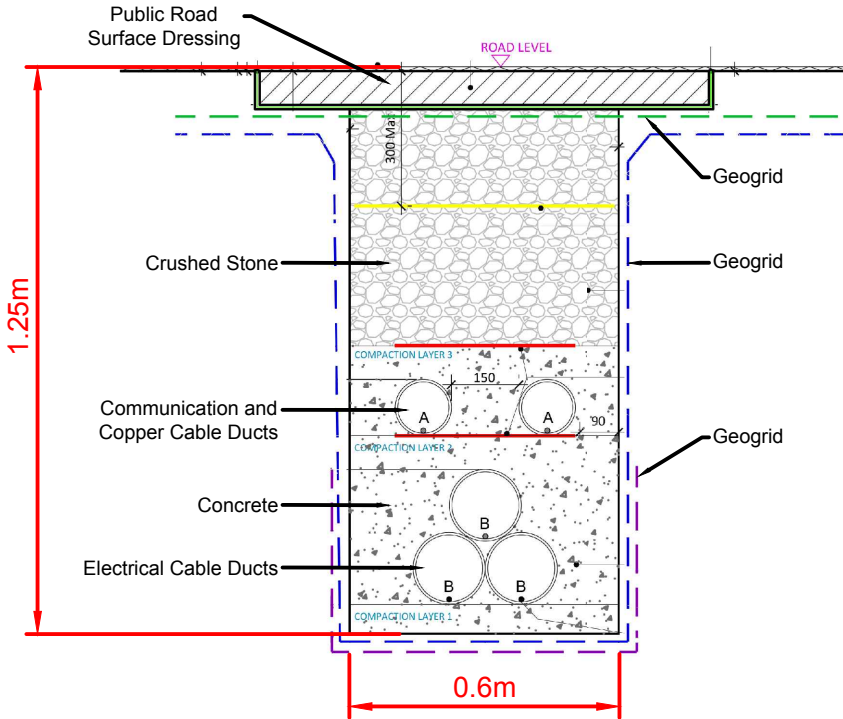
Road surface at W2 and W3 will be
finished in crushed stone, road surface at
W14 will be finished with public road
surface dressing

Project:
UWF Grid Connection (2019)

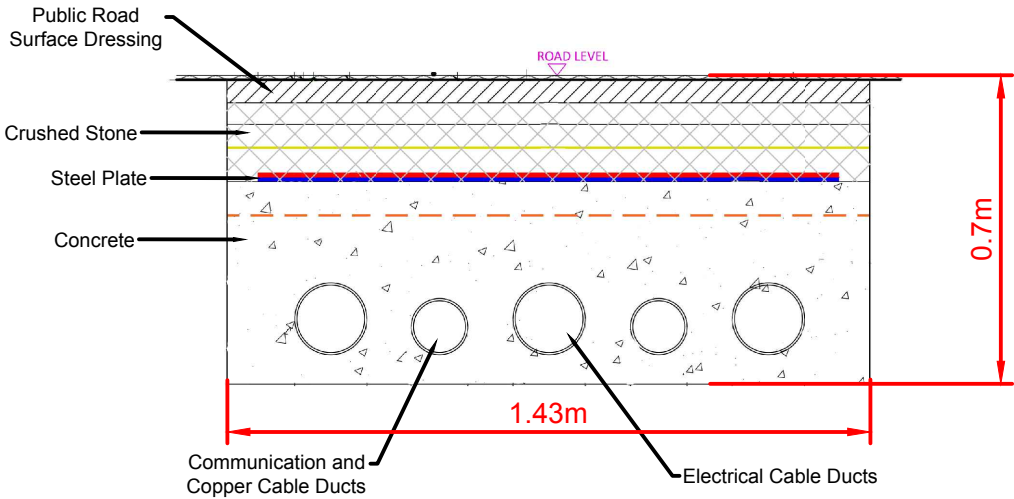
Drawn by:	Checked by:	Date:	Sheet Size:
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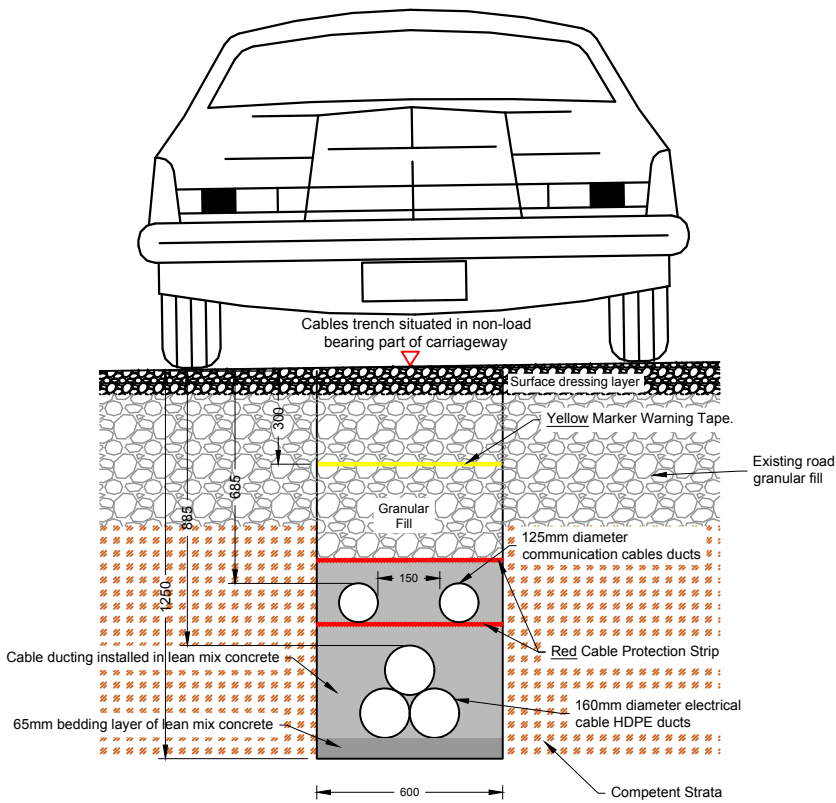
Elevation
110kV UGC
(along majority of UGC route)



Elevation
110kV UGC
(Supported trench through peat, if required)



Elevation
110kV UGC
(in Flat Formation over Bridges / Culverts / Services, if required)

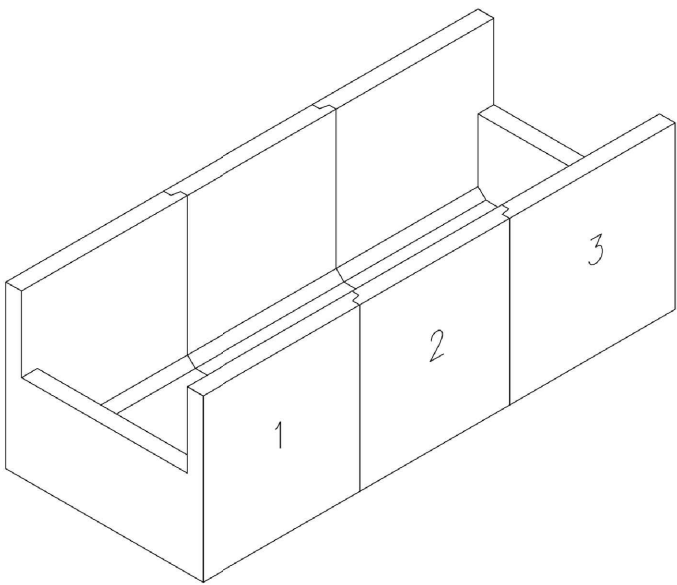


TYPICAL SECTION OF 110kV CABLES TRENCH ALONG PUBLIC ROADS

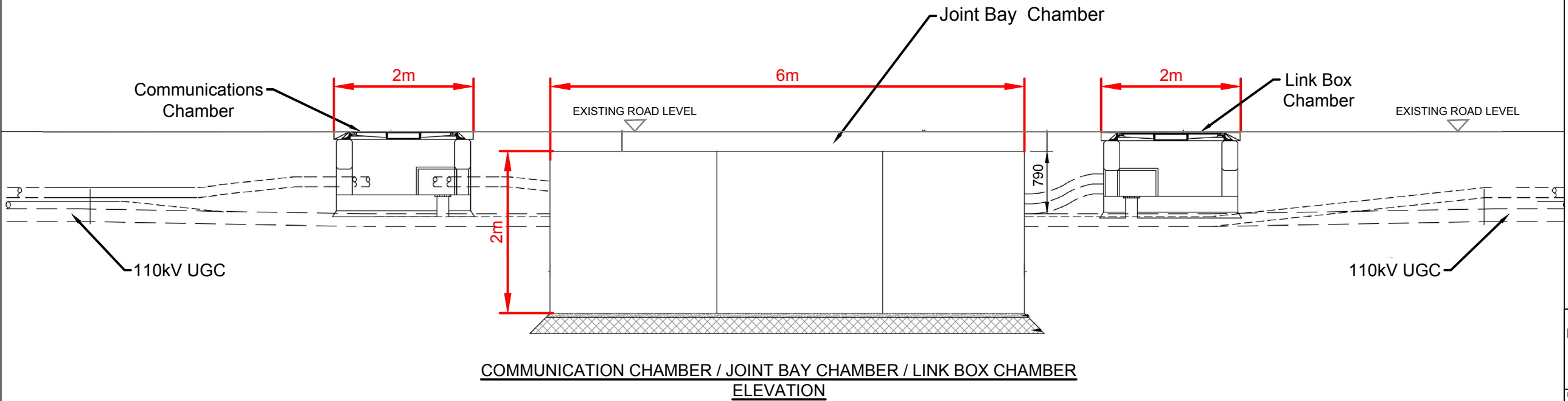
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Volume B: Planning Drawings
See drawings: 05652-529, 05652-530 & 05652-549

Project:
UWF Grid Connection (2019)

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ISOMETRIC VIEW OF PRECAST CHAMBER



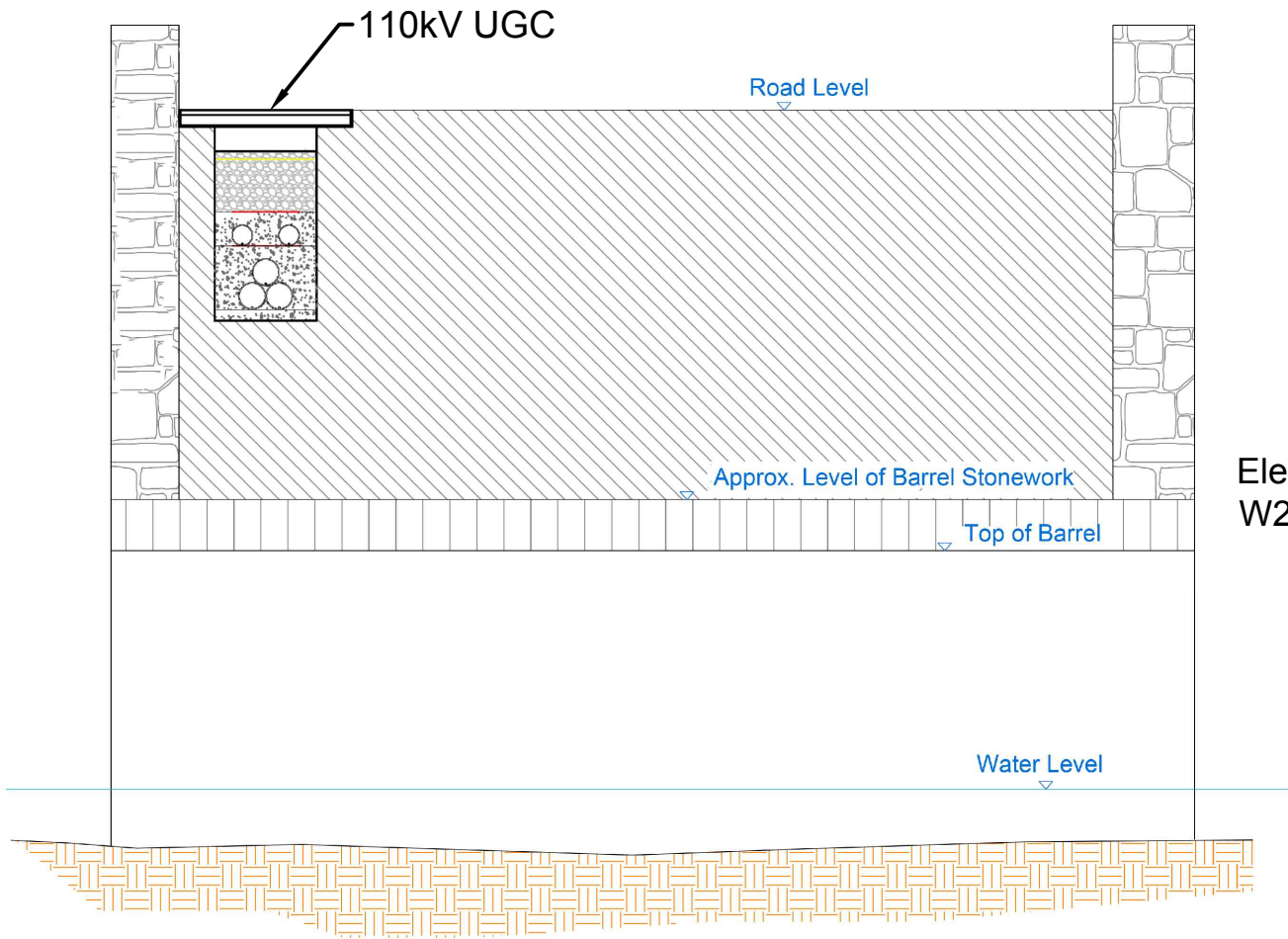
This figure is included as a scaled drawing in
Volume B: Planning Drawings
See drawing: 05652-531

Project:
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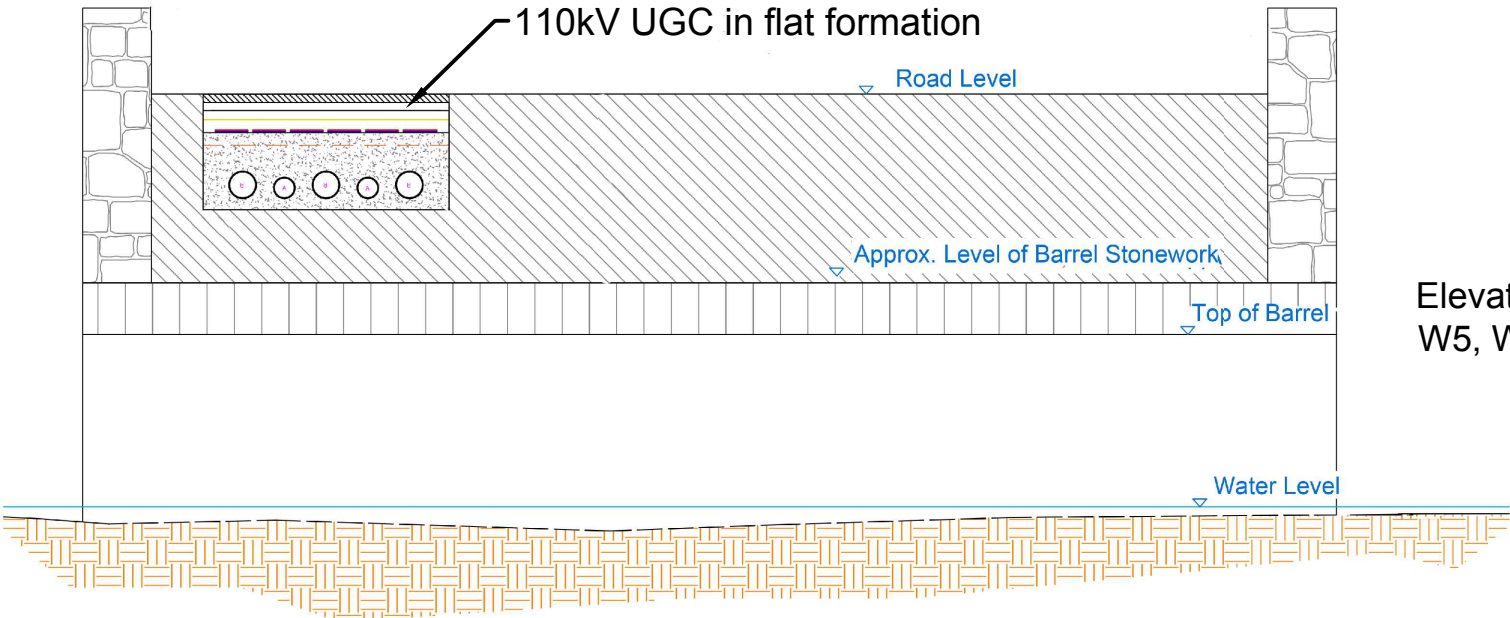
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Cross Sections of 110kV UGC
at Bridge Crossing

Map Number:
N/A



Elevation of 110kV UGC at Watercourse Crossings (Bridges)
W22, W23, W29, W43 & W44

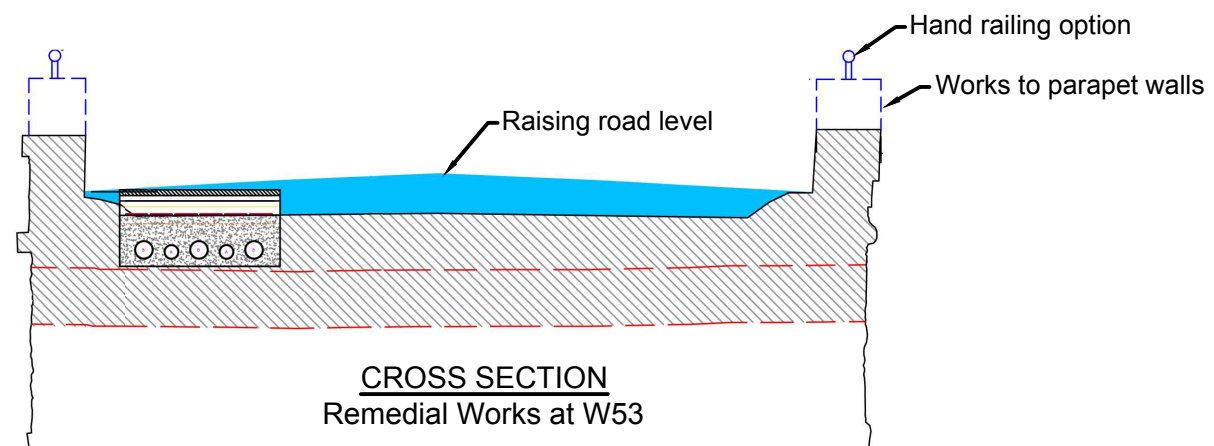
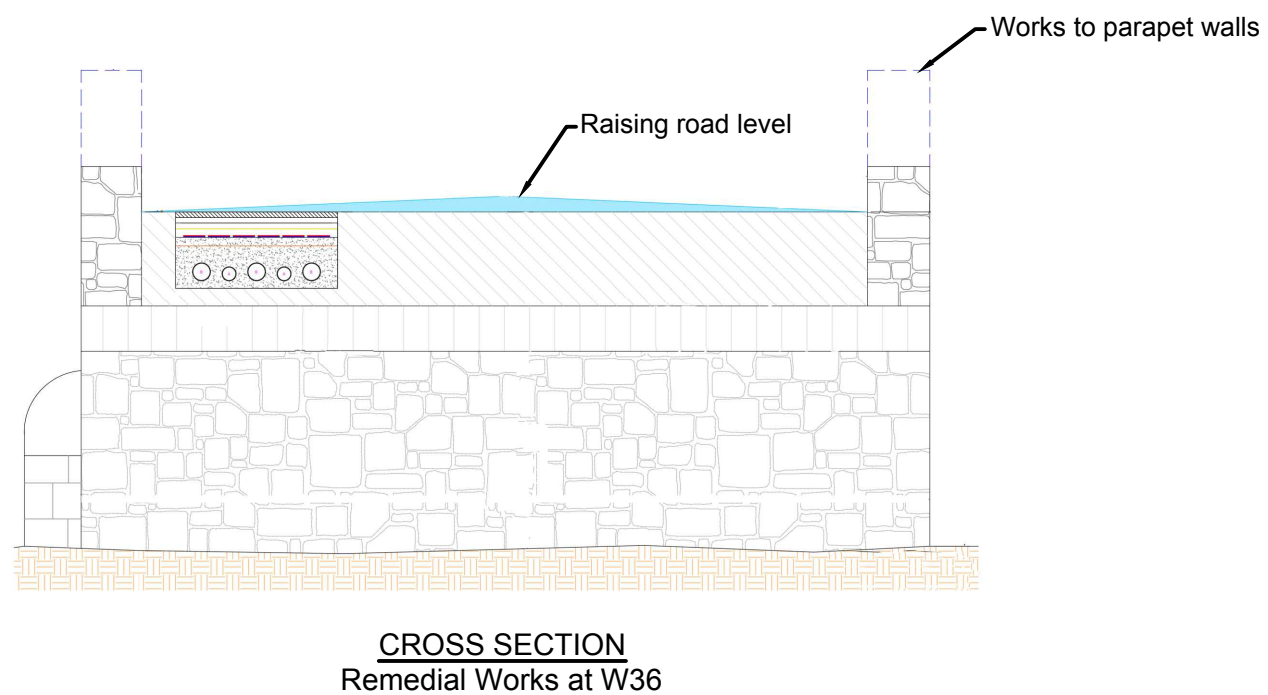
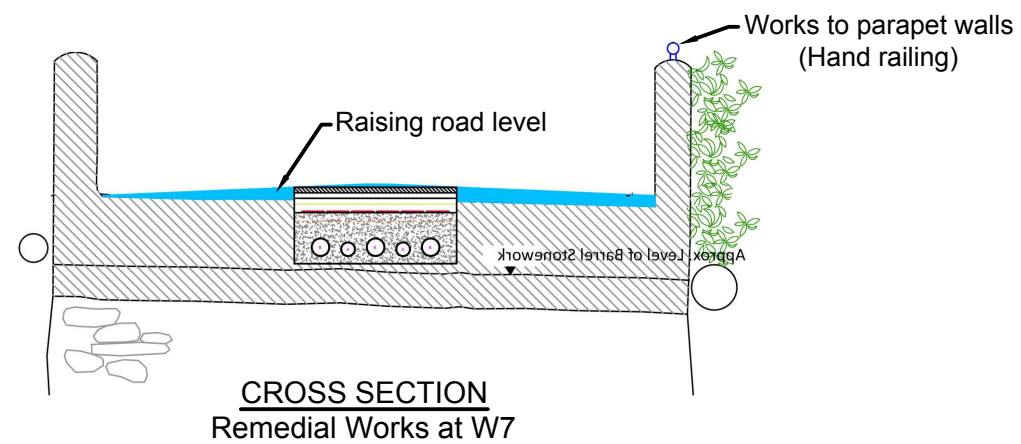


Elevation of 110kV UGC at Watercourse Crossings (Bridges)
W5, W7, W21, W33, W35, W36, W49 & W53

This figure is included as a scaled drawing in
Volume B: Planning Drawings
See drawings: 05652-519 - 05652-527
05652-535 - 05652-539
05652-544 - 05652-547

Project:
UWF Grid Connection (2019)

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Topic Chapter:Description of Development
Figure GC 5.17

Remedial Works to Bridges
at W7, W36 and W53

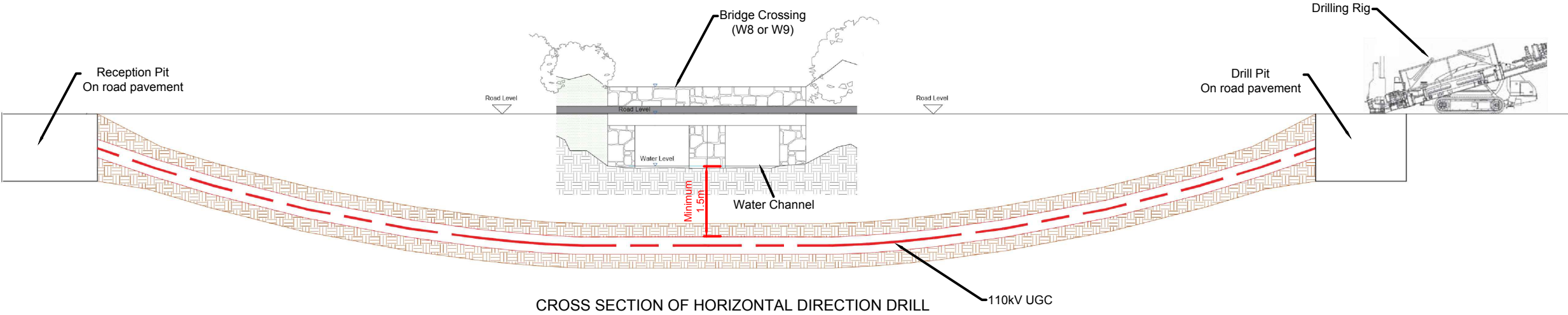
Map Number:
N/A

This figure is included as a scaled drawing in
Volume B: Planning Drawings
See drawings: 05652-545 & 05652-525
05652-536 - 05652-539

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tli GROUP
Head Office
Beenreigh,
Abbeydorney,
Tralee, Co. Kerry
Ireland
Tel: 00353 66 7135710

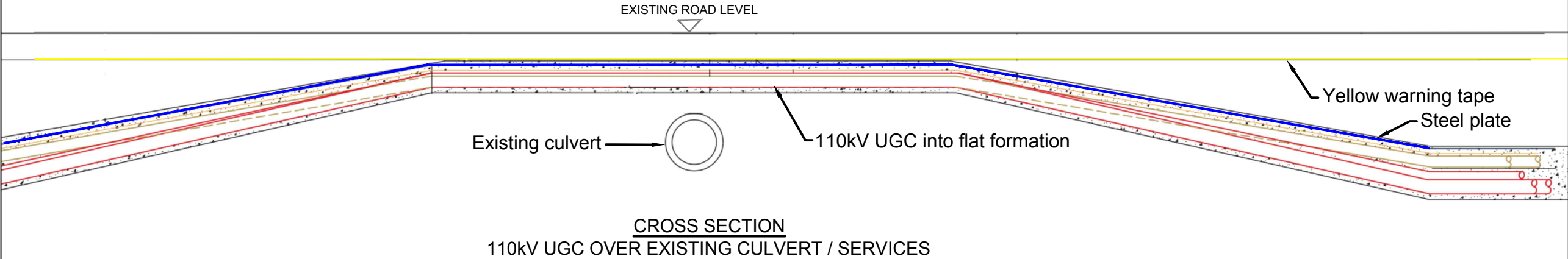
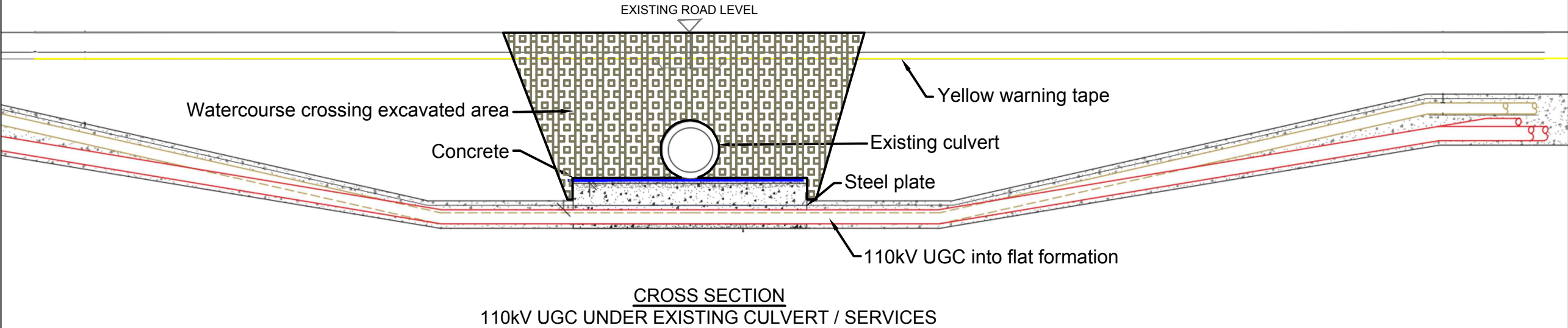


This figure is included as a scaled drawing in
Volume B: Planning Drawings
See drawings: 05652-546 & 05652-547

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UWF Grid Connection (2019)

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Map Number:
N/A



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See drawings: 05652-533 & 05652-534

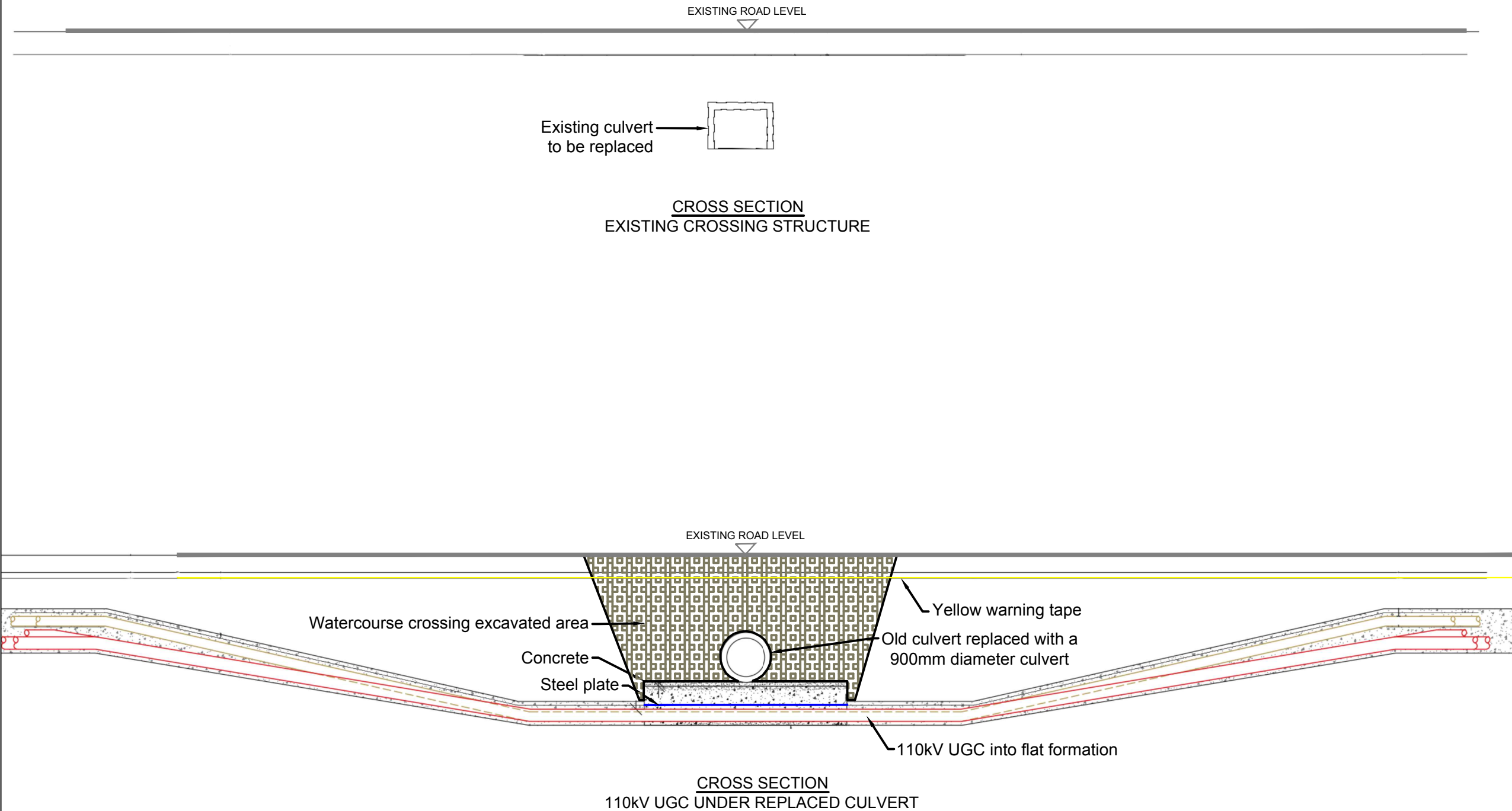
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Figure GC 5.20

Cross Section of Replaced Culvert
along the 110kV UGC

Note :
Old crossing structure replaced with a 900mm
diameter culvert



Designed in conjunction with

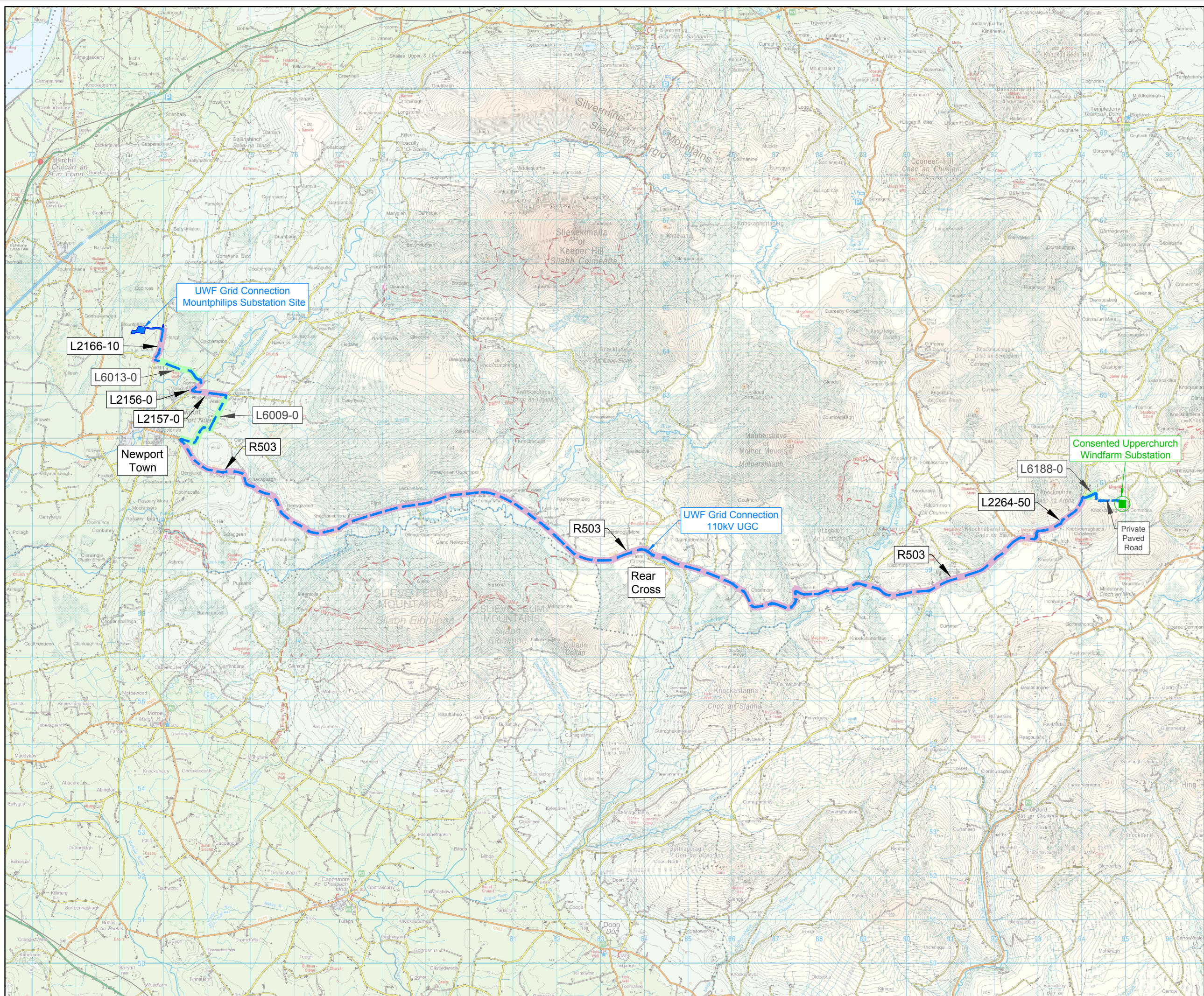
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Conor Brett
Ecopower Limited
Zetec House, Purcellstown IDA Business Park
Dublin Road, Kilkenny - R95 WV80
Landline - 056-7750140 (Ext 204)
Mobile - +353 (0)87-6531458

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Topic Chapter:Description of Development
Figure GC 5.21

Location of Road Closures and One-Lane
Closures along the 110kV UGC

Map Number:
Map 1 of 1

Legend:

- Mountphilips Substation Site
- 110kV UGC
- Consented Upperchurch Windfarm Substation
- Public road subject to sequential to one-lane closure during construction
- Public road subject to periodic road closure during construction

L2166-10|Local Road Numbers

Project:
UWF Grid Connection (2019)

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Aoife Butler
Ecopower Developments Ltd
Zetec House,
Purcellsinch Business Park, Kilkenny
TEL: +353 56 7750140
MOB: +353 83 8805644

Topic Chapter:Description of Development






Figure GC 5.22

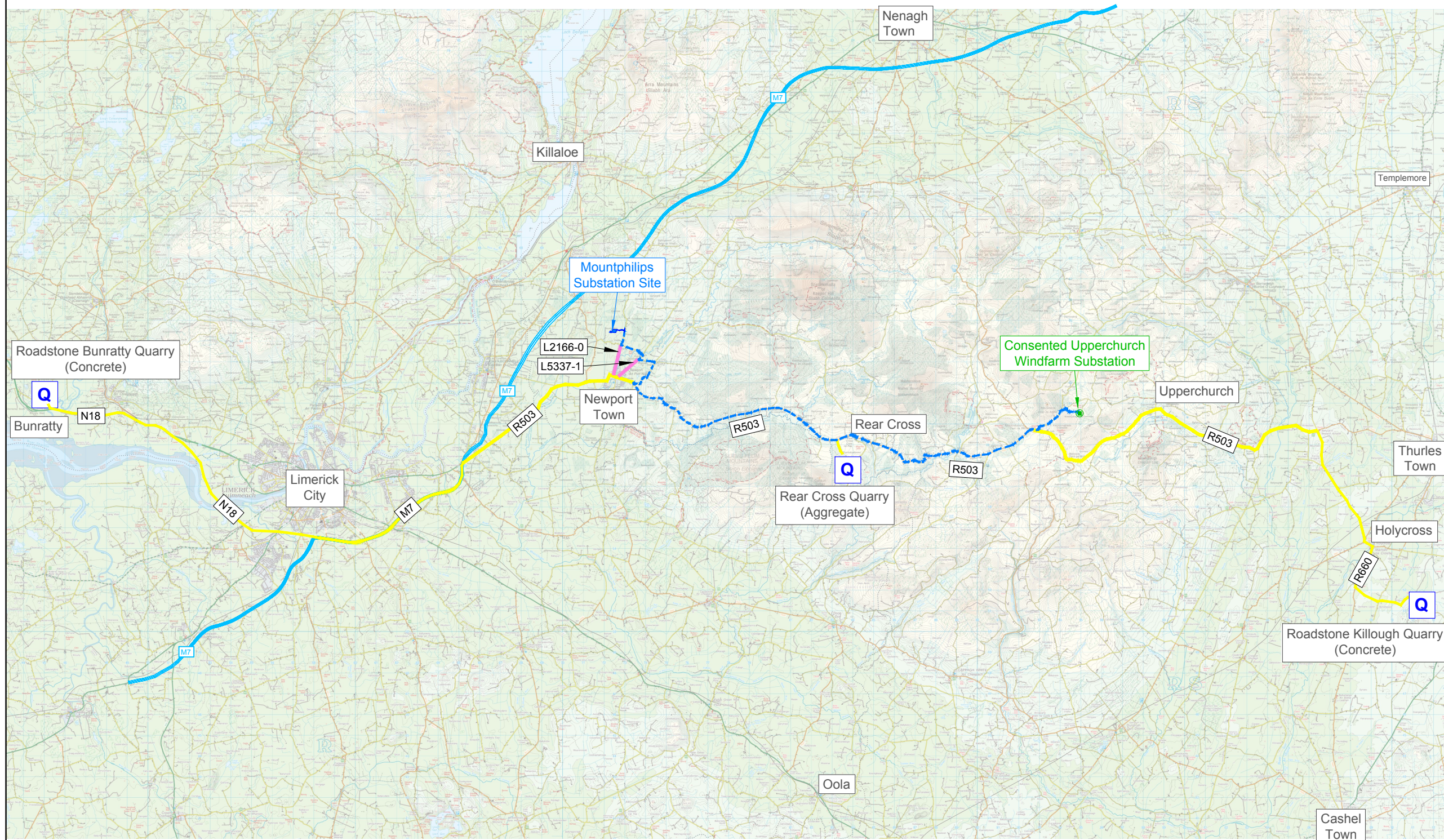
Haul Routes for Aggregate and Concrete Deliveries

Map Number:

Map 1 of 1

Legend:

-  Mountphilips Substation Site
 -  Consented Upperchurch Windfarm Substation
 -  Haul Route from Quarries
 -  Haul Route along local roads
 -  Haul Route along the 110kV UGC roads
- L2166-0
- Local Road Numbers



Project:

UWF Grid Connection (2019)

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Aoife Butler
Ecopower Developments Ltd
Zetec House,
Purcellsinn Business Park, Kilkenny
TEL: +353 56 7750140
MOB: +353 83 8805644

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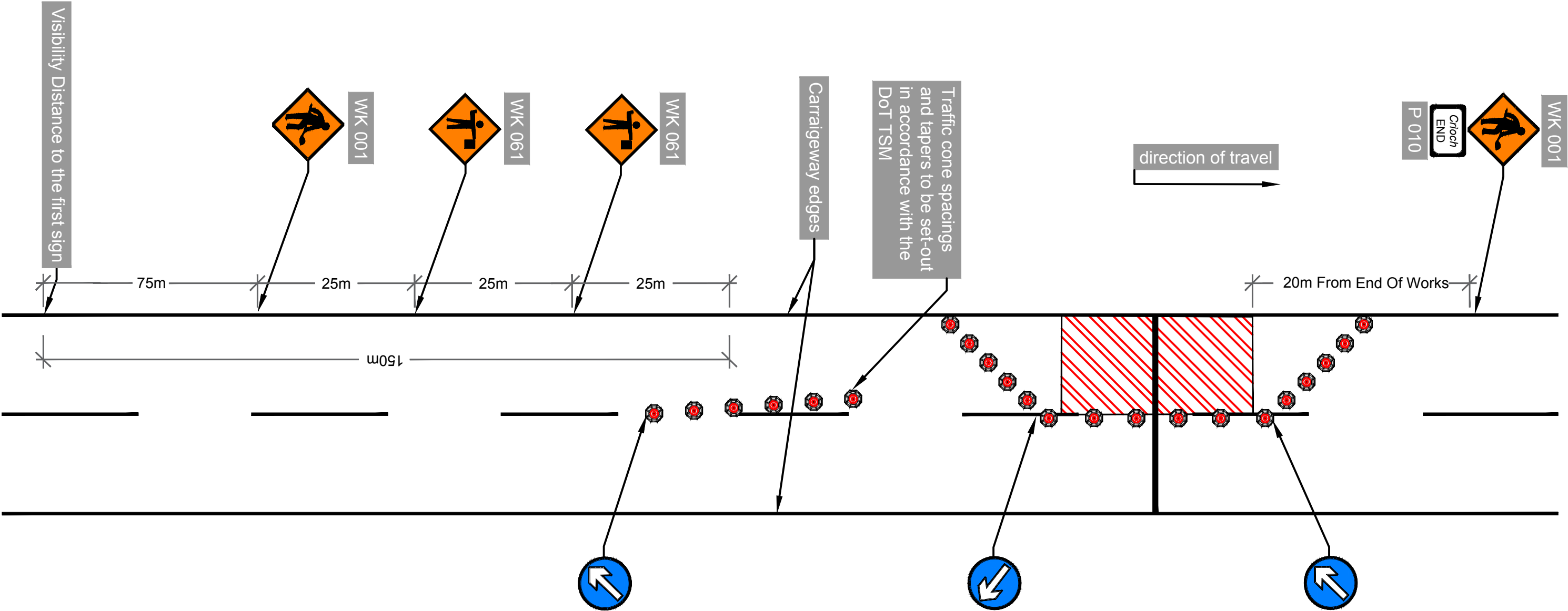


Figure GC 5.23
Advance Warning Signage
for Road Works on 50km/hr Roads

Designed in conjunction with
Malachy Walsh and Partners
Engineering and Environmental Consultants
Cork | Tralee | Limerick | London

Note: This drawing is not to scale

Department of Transport
Traffic Signs Manual 2010 (DOT TSM)

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Aoife Butler
Ecopower Developments Ltd
Zetec House
Purcellstown Business Park, Kilkenny
TEL: +353 56 7750140
MOB: +353 83 8805644

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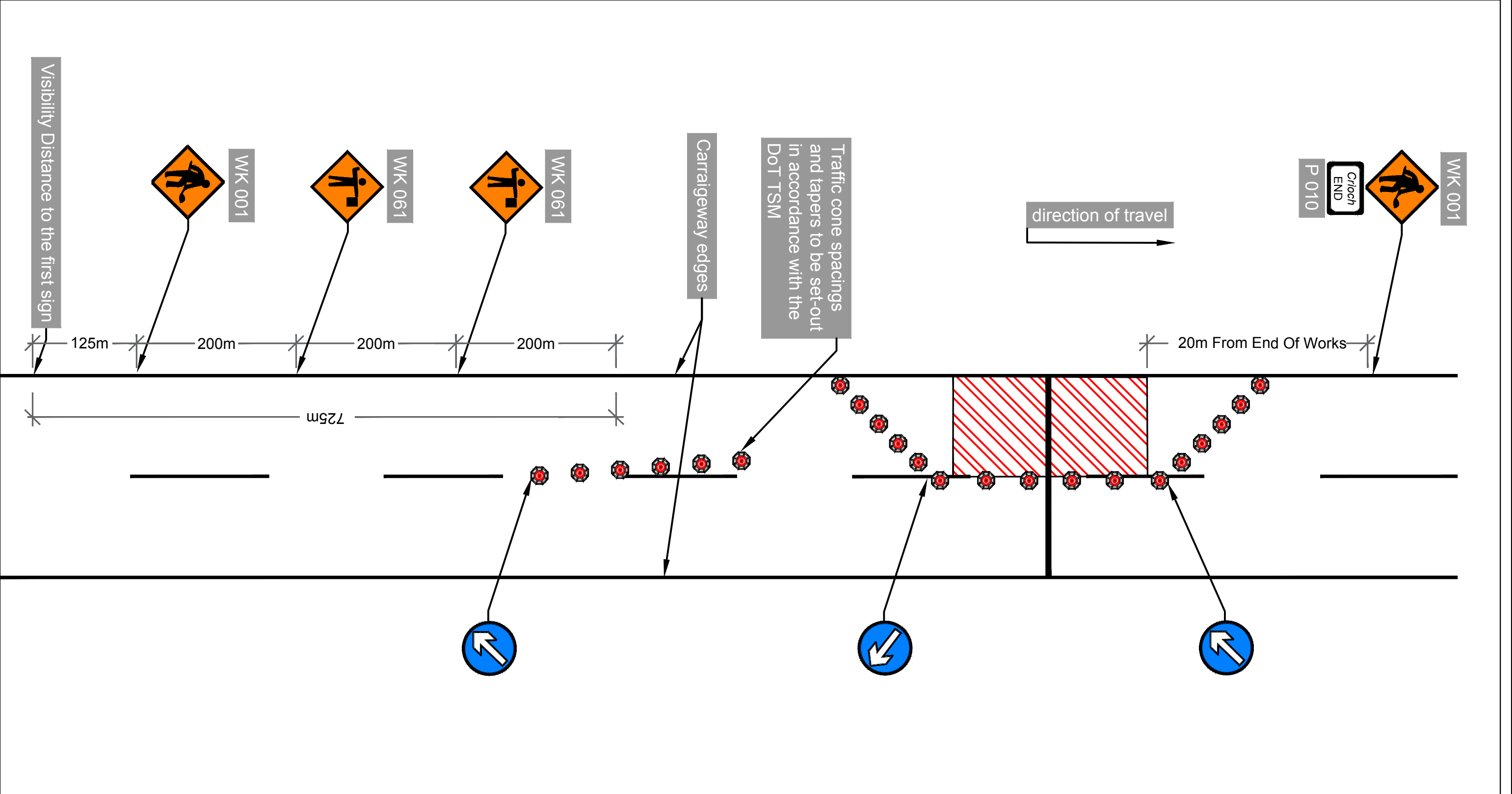


Figure GC 5.24
Advance Warning Signage
for Road Works on 80km/hr Roads

Designed in conjunction with
Malachy Walsh and Partners
Engineering and Environmental Consultants
Cork | Tralee | Limerick | London

Note: This drawing is not to scale

Department of Transport
Traffic Signs Manual 2010 (DoT TSM)

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UWF Grid Connection (2019)

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Aoife Butler
Ecopower Developments Ltd
Zeeac House
Purcellstown Business Park, Kilkenny
TEL: +353 56 7750140
MOB: +353 83 8805644

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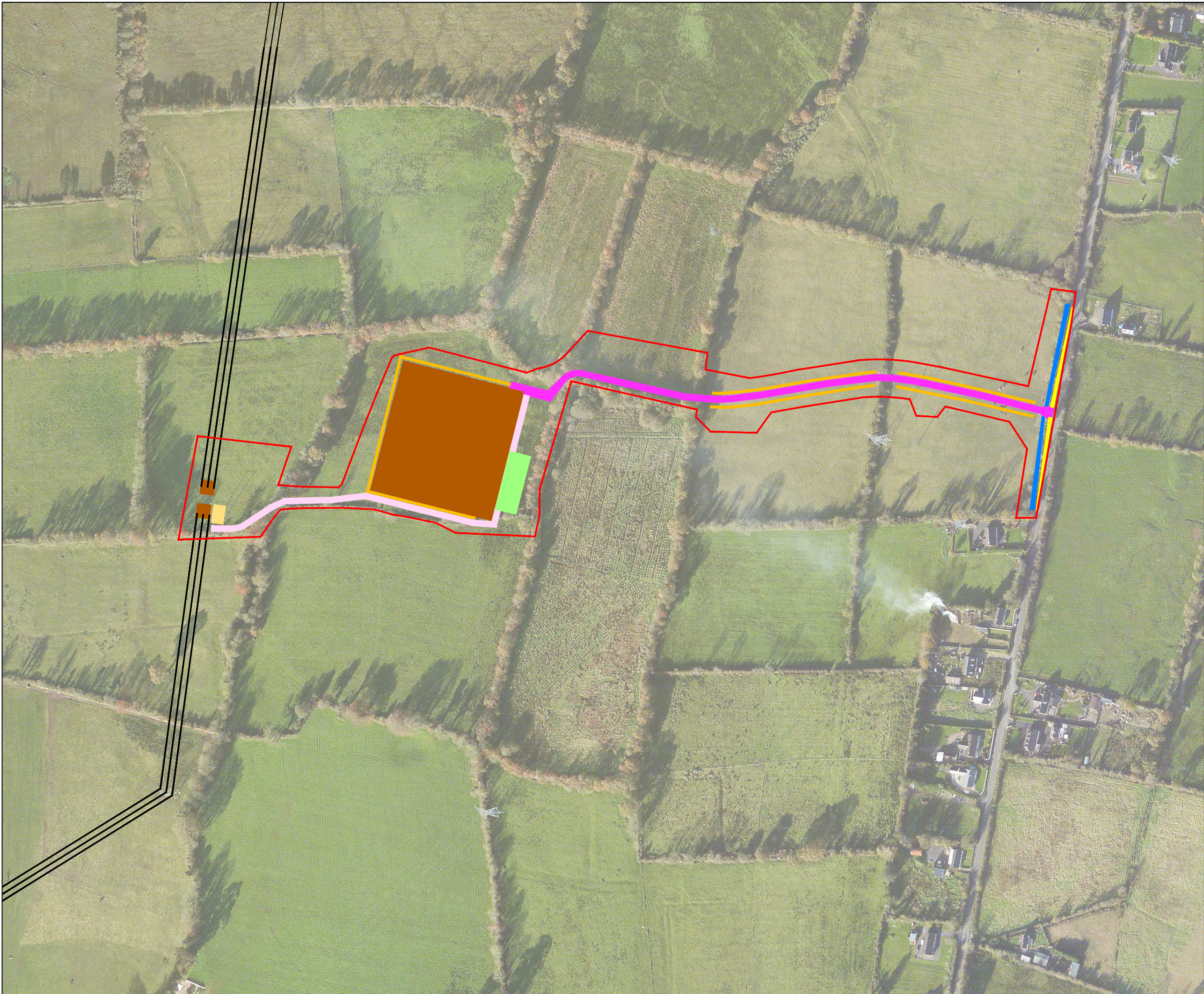


Figure GC 5.25

Land Use

Map Number:
Map 1 of 1

Legend:

Permanent Land Use Change:

- Agricultural land to utility
- Agricultural land to permanent road
- Agricultural land to permanent berm with hedge
- Hedge to public road verge
- Agricultural land to hedge

Temporary Land Use Change:

- Temporary access road and watercourse crossing
- Temporary construction compound
- Temporary crane hardstand

Map Information:

- Mountphilips Substation Site Construction Works Boundary
- Existing Killonan to Nenagh 110kV OHL



Project:
UWF Grid Connection (2019)

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ECOPOWER

Aoife Butler
Ecopower Developments Ltd
Zetec House,
Purcellsinch Business Park, Kilkenny
TEL: +353 56 7750140
MOB: +353 83 8805644

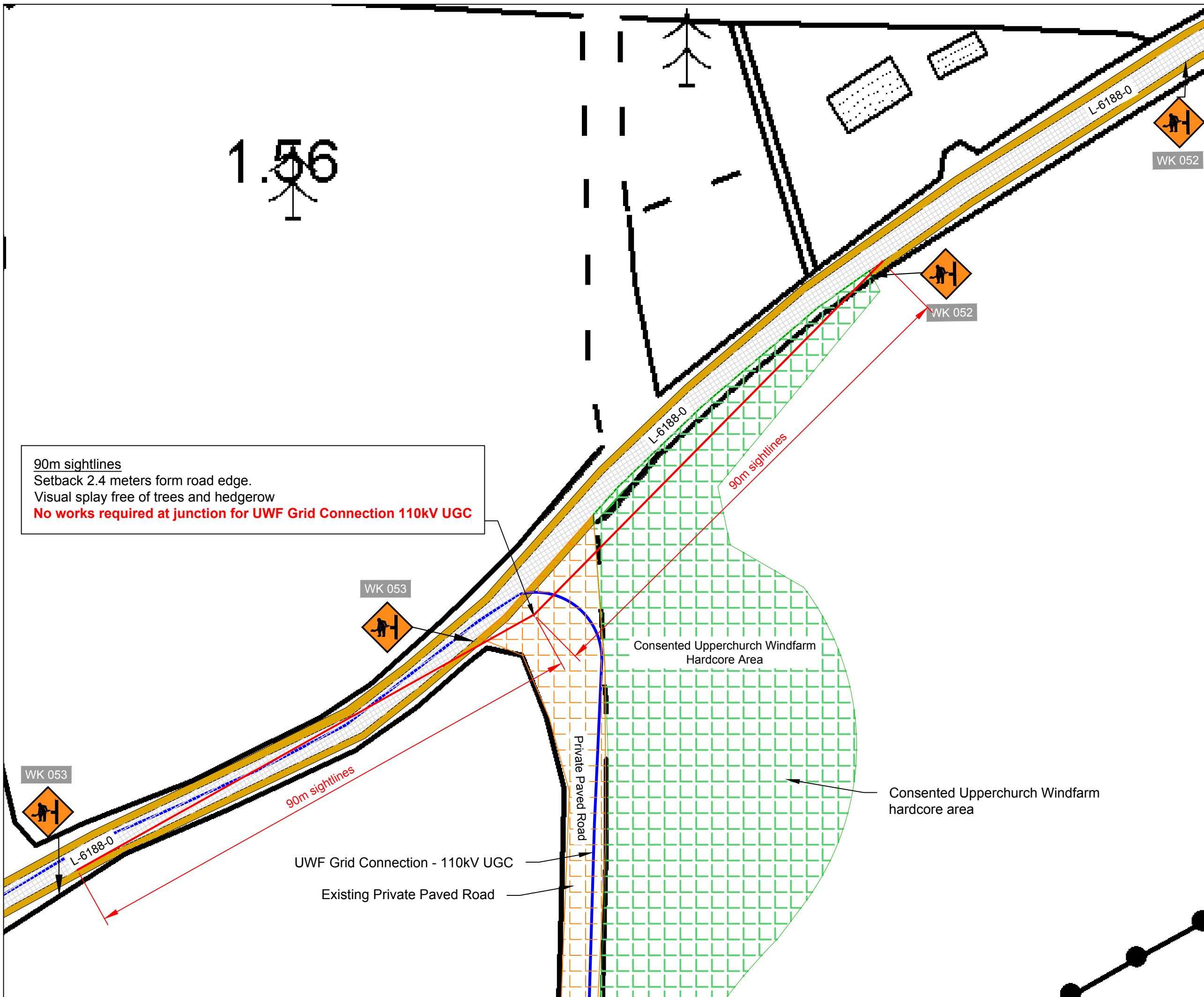


Figure GC 5.26

Plan View of 110kV UGC at junction of L6188-0 with private paved road in Knockcurraghbola Commons

Map Number:
N/A

Legend:

- UWF Grid Connection - 110kV UGC
- Existing Private Paved Road
- Public Roadway L-6188-0
- Roadside Verge
- Consented Upperchurch Windfarm Hardcore Area
- 90m Sightlines
- Traffic Management Signage (Construction Stage)



Project:
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Conor Brett
Ecopower Limited
Zetec House, Purcellstown IDA Business Park
Dublin Road, Kilkenny - R95 WV80
Landline - 056-7750140 (Ext 204)
Mobile - +353 (0)87-6531458

ECOPOWER