

Plan

PROJECT TITLE:
**Laurclavagh Renewable Energy
 Development, Co. Galway**

DRAWING TITLE:
**Wind Turbine
 Elevation & Plan**

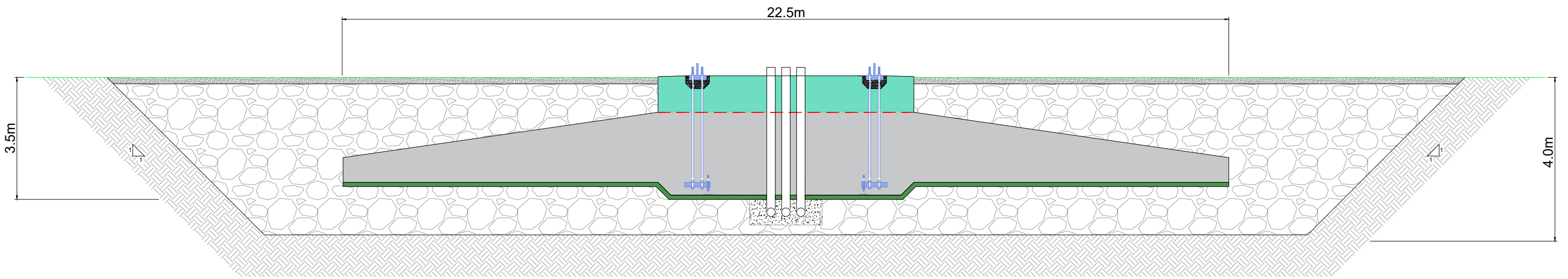
PROJECT No.:	DRAWING No.:	SCALE:
210627	210627 - 20	1:500 @ A1
DRAWN BY:	CHECKED BY:	DATE:
JOB	TH	08.03.2024
		REVISION:
		P01

Drawing Notes

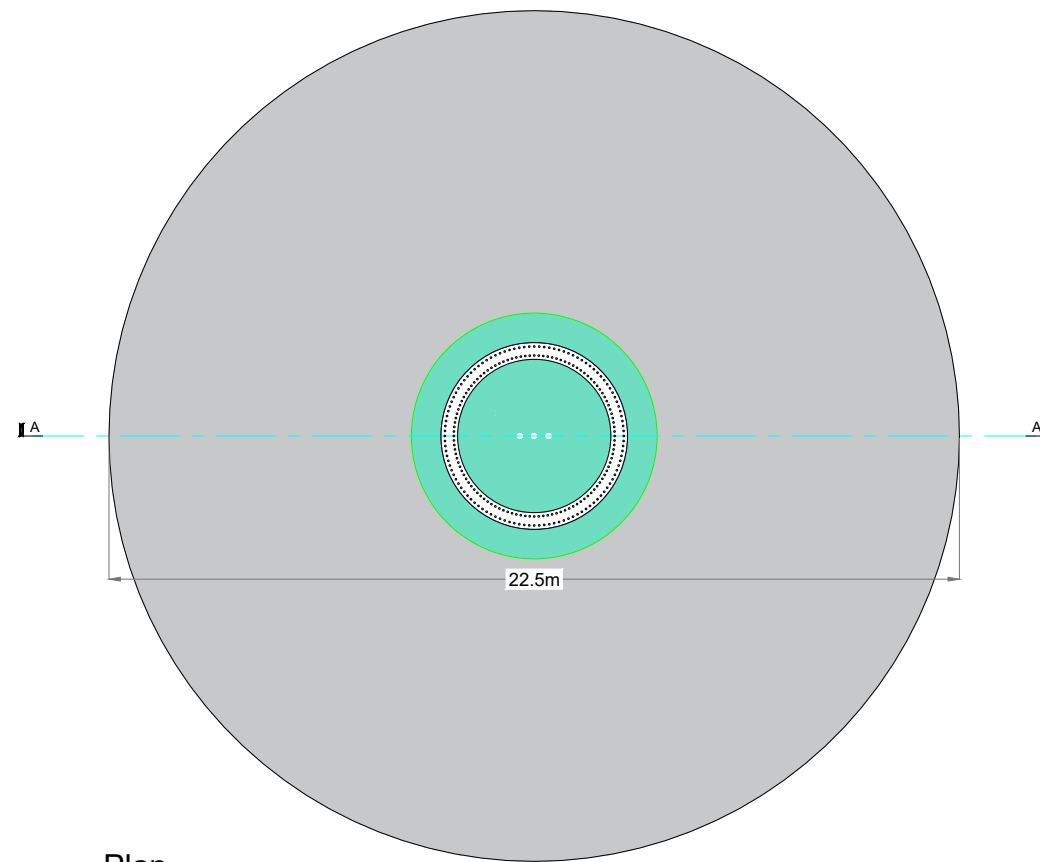
- Proposed wind turbines to have a maximum ground to blade tip height of 185m, blade length of 81.5m and hub height of 103.5m



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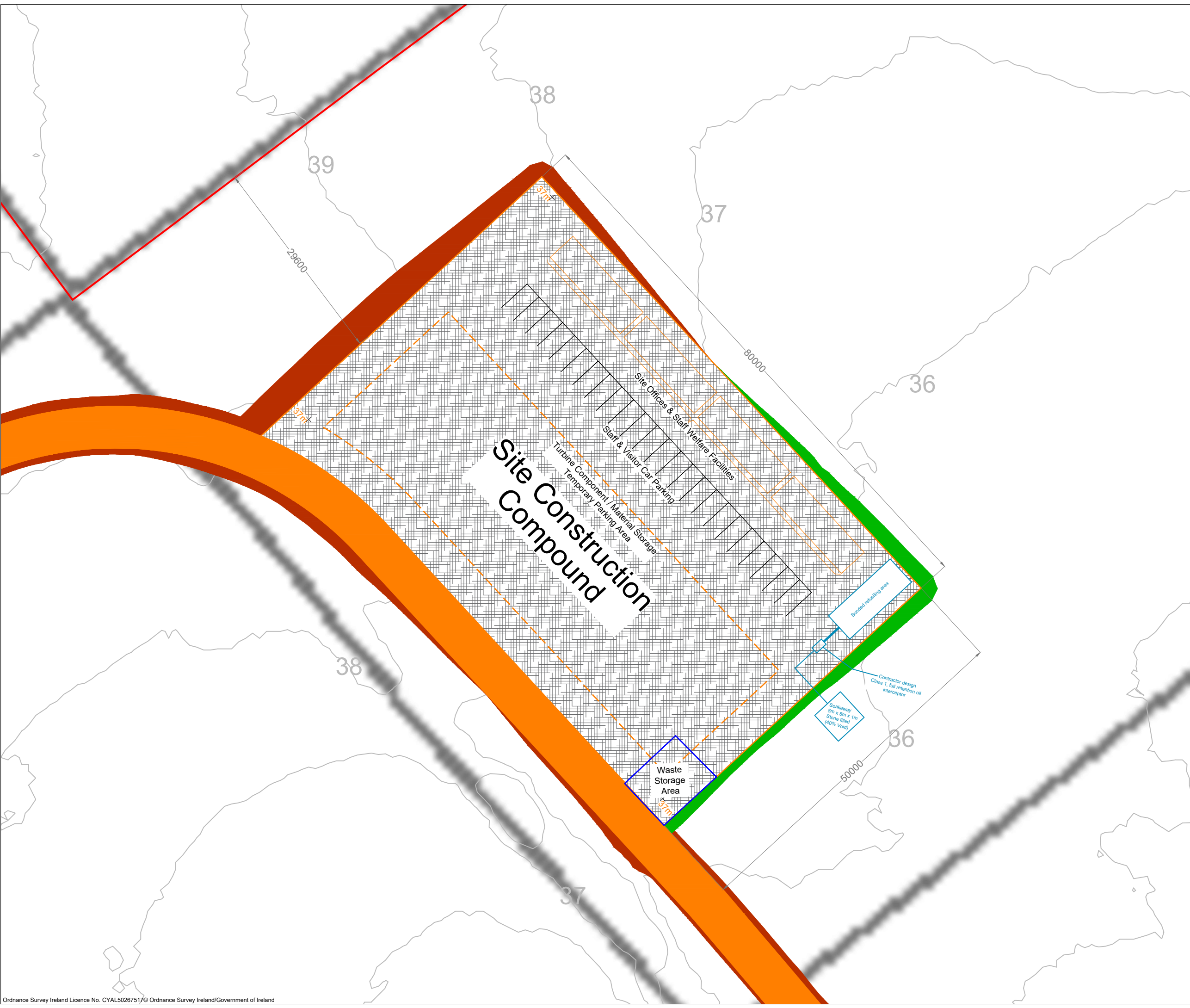
Section A-A
Scale 1:100



Plan
Scale: 1:200

PROJECT TITLE: Laurclavagh Renewable Energy Development, Co. Galway			
DRAWING TITLE: Turbine Foundation			
PROJECT No.: 210627	DRAWING No.: 210627 - 21	SCALE: As Shown @ A3	
DRAWN BY: JOB	CHECKED BY: TH	DATE: 08.03.2024	REVISION: P01





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 6. The use of or reliance upon this drawing shall be deemed to be acceptance of these conditions of use unless otherwise agreed in writing, such written agreement to be sought from and issued by the copyright holder to the use or reliance upon this drawing.
 7. Layout plans show Turbine rotor diameter as per turbine drawing.
 8. Final levels may vary depending on local ground conditions.

- Drawing Legend**
- Planning Application Boundary
 - Proposed Road
 - Cut
 - Fill

PROJECT TITLE:
Laurclavagh Renewable Energy Development, Co. Galway

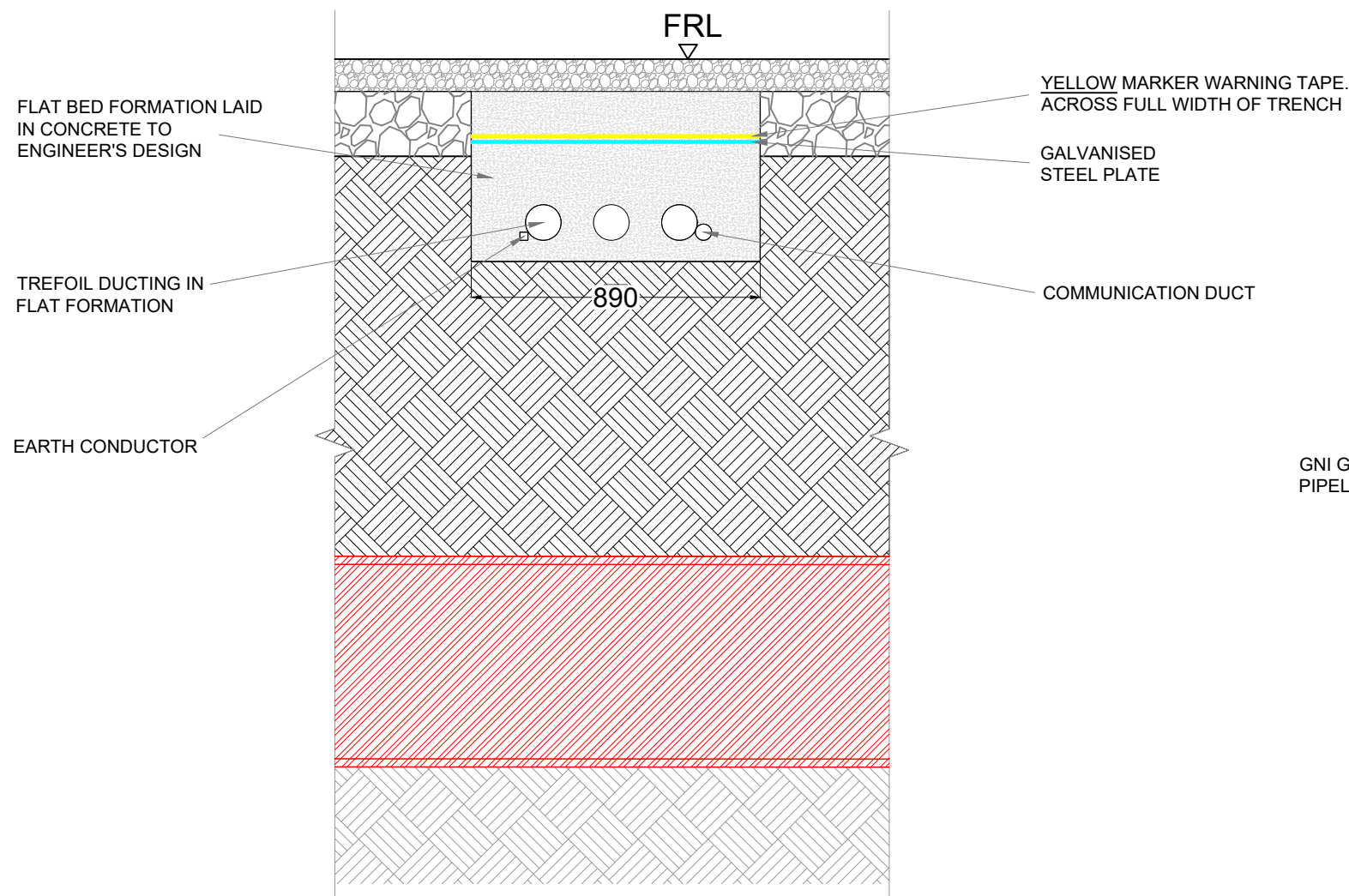
DRAWING TITLE:
Temporary Construction Compound

PROJECT No.:	DRAWING No.:	SCALE:
210627	210627 - 22	1:500 @ A3
DRAWN BY:	CHECKED BY:	DATE:
JOB	TH	08.03.2024
OS SHEET No.:		REVISION.:
2878, 2879, 2880, 2881, 2947, 2948, 2949, 2950, 3017, 3018, 3019, 3020, 3085, 3086, 3087, 3088		P01

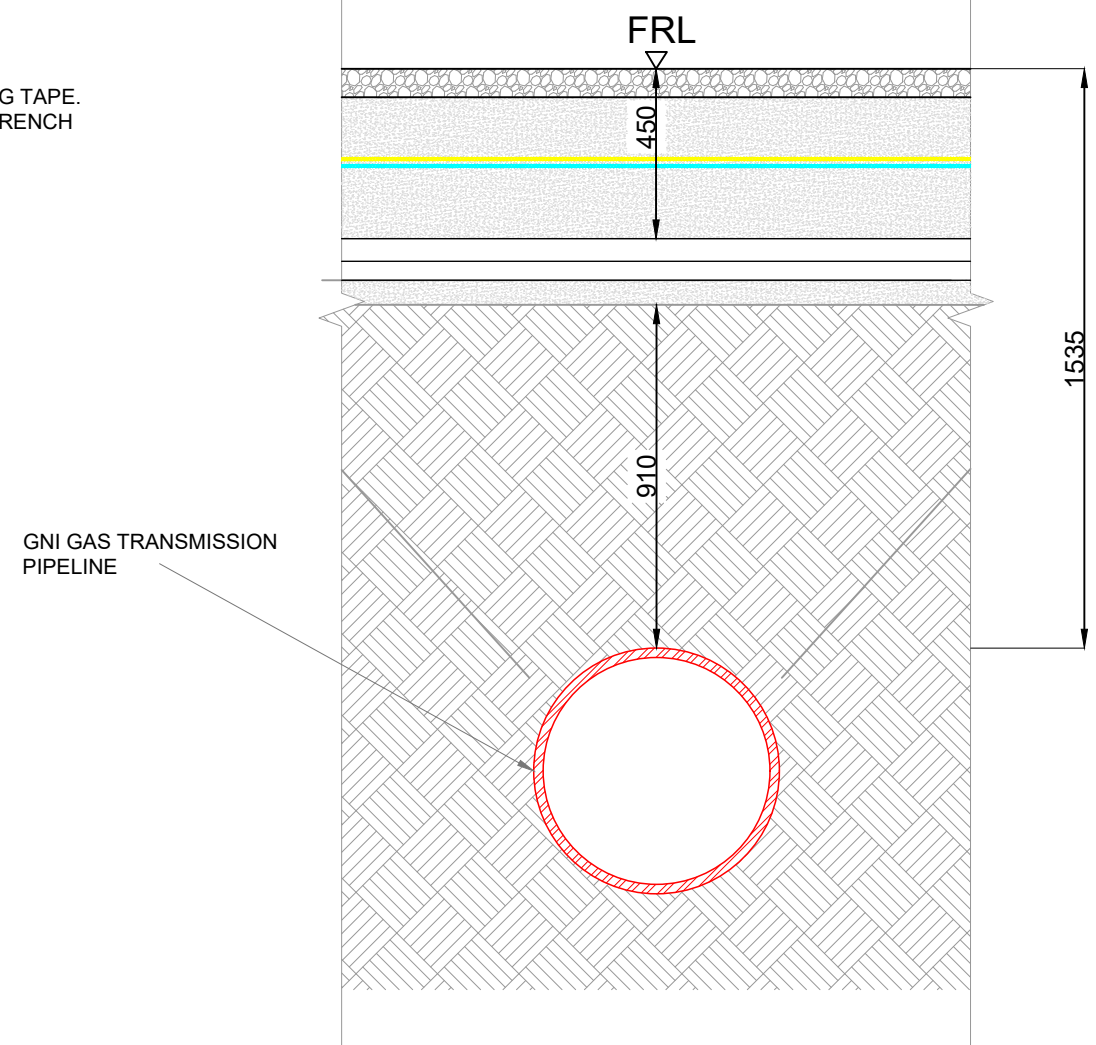


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- Project Design Drawing Notes**
1. Widening can occur to either side of existing roads dependent on site conditions.
 2. Depths of road fill to vary dependent on site conditions.
 3. The cabling may be placed on either side of the roads, on both sides of the road or within the road. The exact configuration of the underground cabling will be set by the requirements of the electrical designers at detailed design stage.
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 10. Design will be subject to GNI requirements



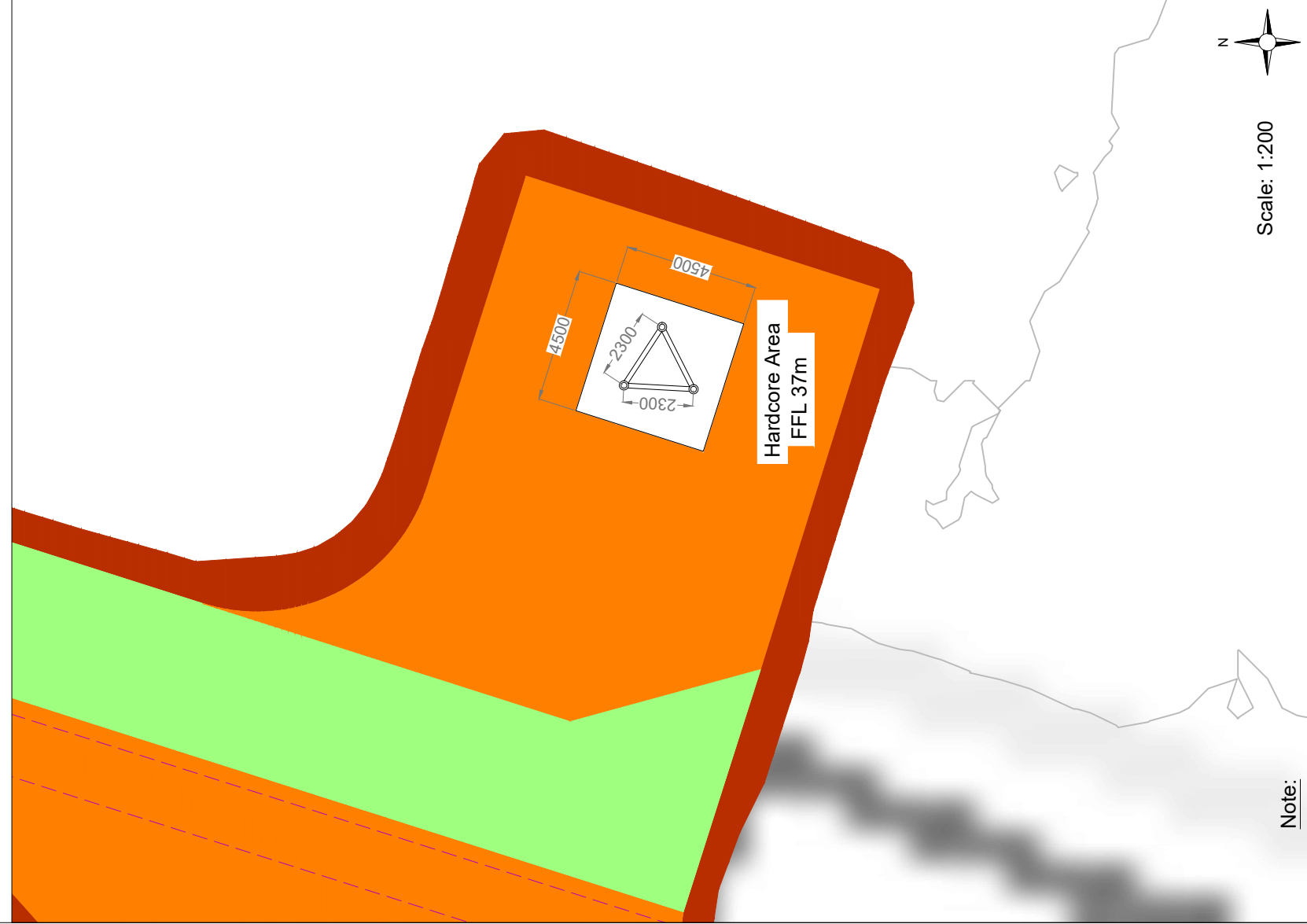
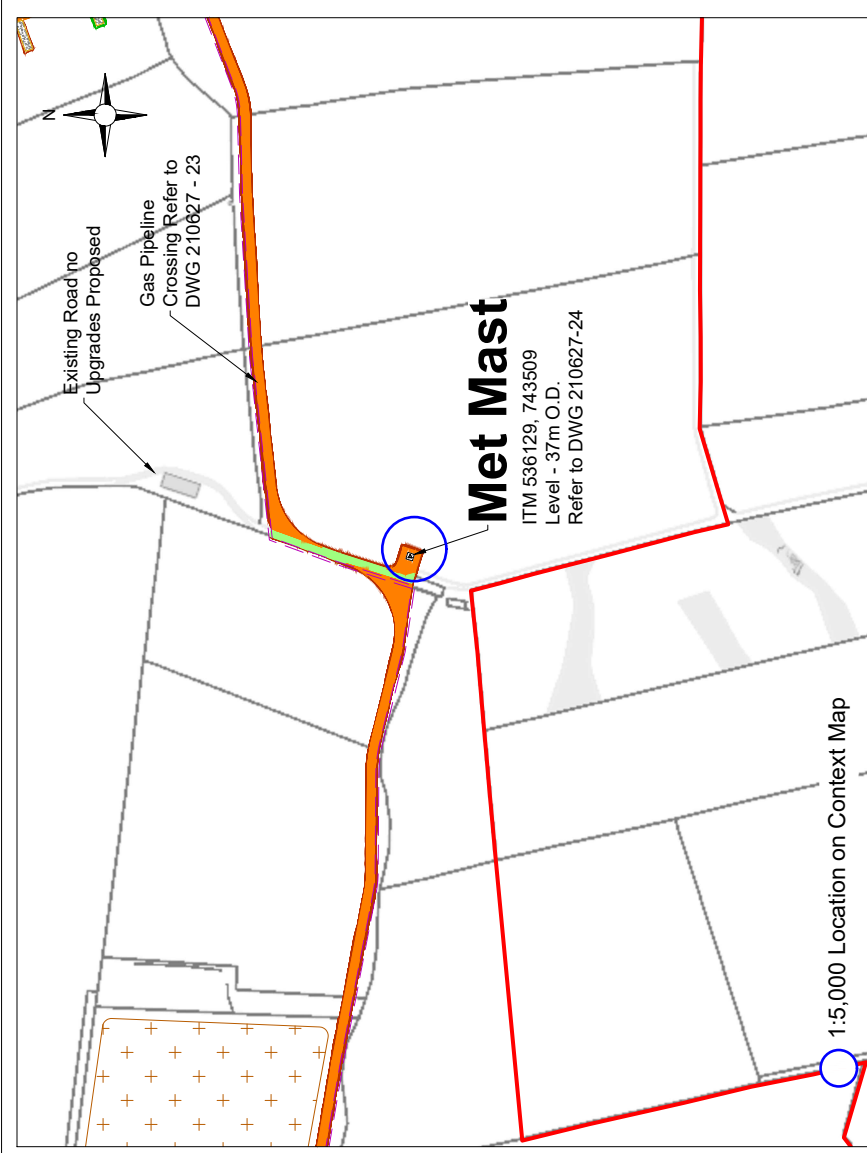
33kV Flat Bed Over Cable Crossing - High Pressure Gas Transmission Pipeline - Cross Section
1:20



33kV Flat Bed Over Cable Crossing - High Pressure Gas Transmission Pipeline - Longitudinal Section
1:20

PROJECT TITLE: Laurclavagh Renewable Energy Development, Co. Galway			
DRAWING TITLE: High Pressure Gas Transmission Pipeline - 33kV Crossing Detail			
PROJECT No.: 210627	DRAWING No.: 210627 - 23	SCALE: 1:20 @ A3	
DRAWN BY: JOB	CHECKED BY: TH	DATE: 13.03.2024	REVISION: P01





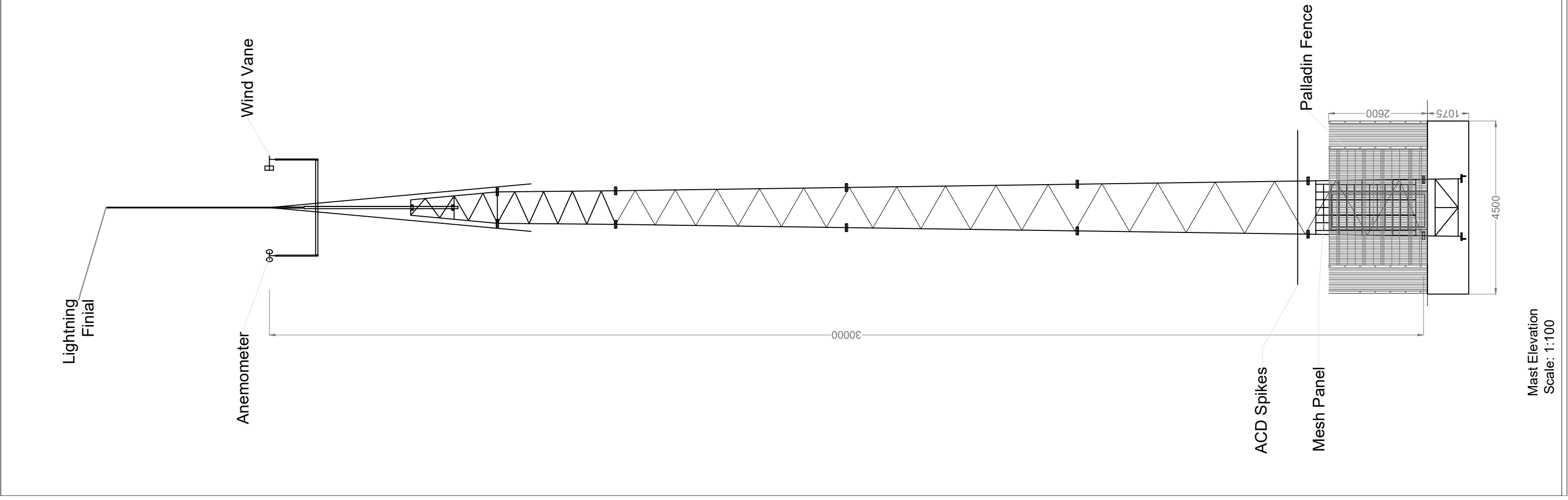
Note:

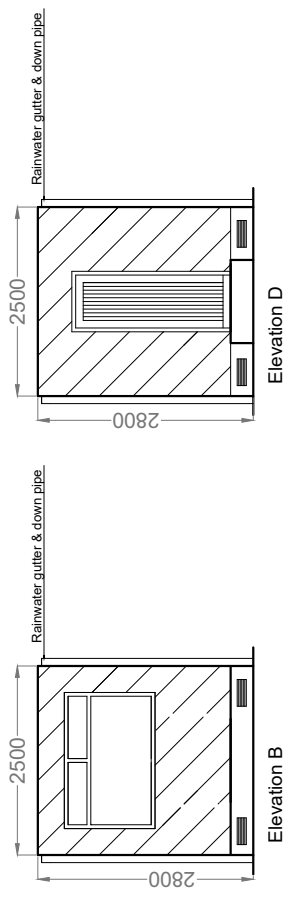
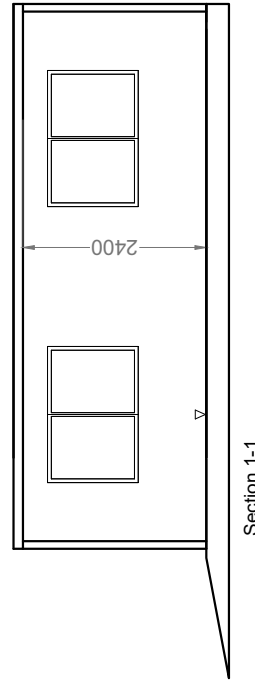
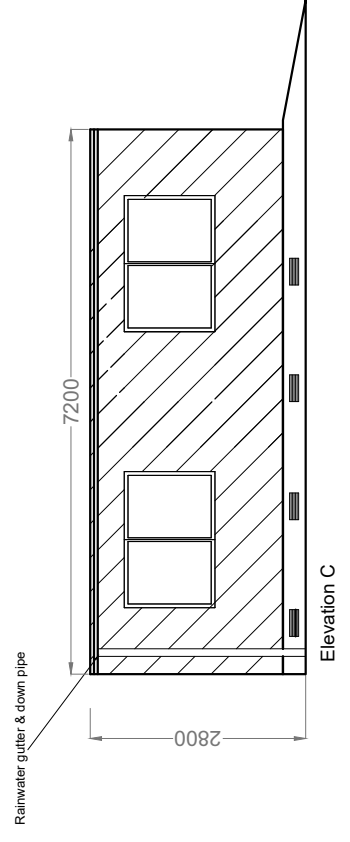
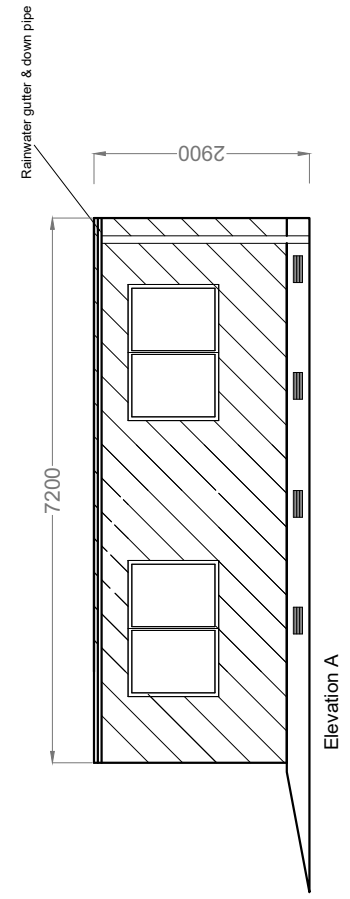
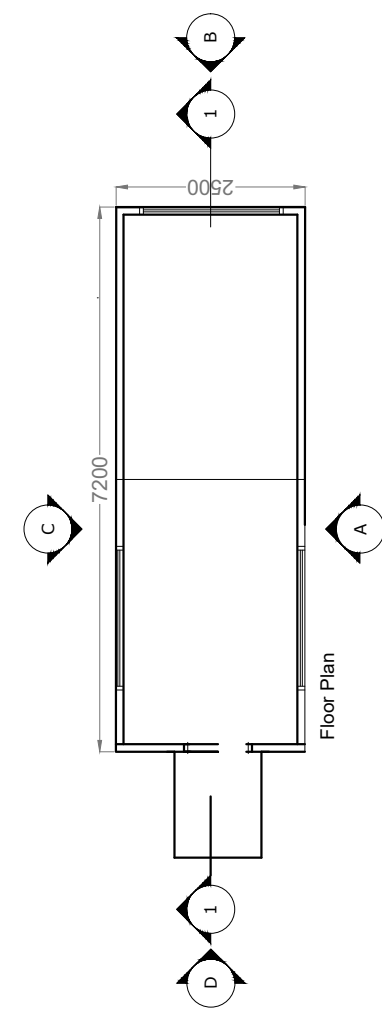
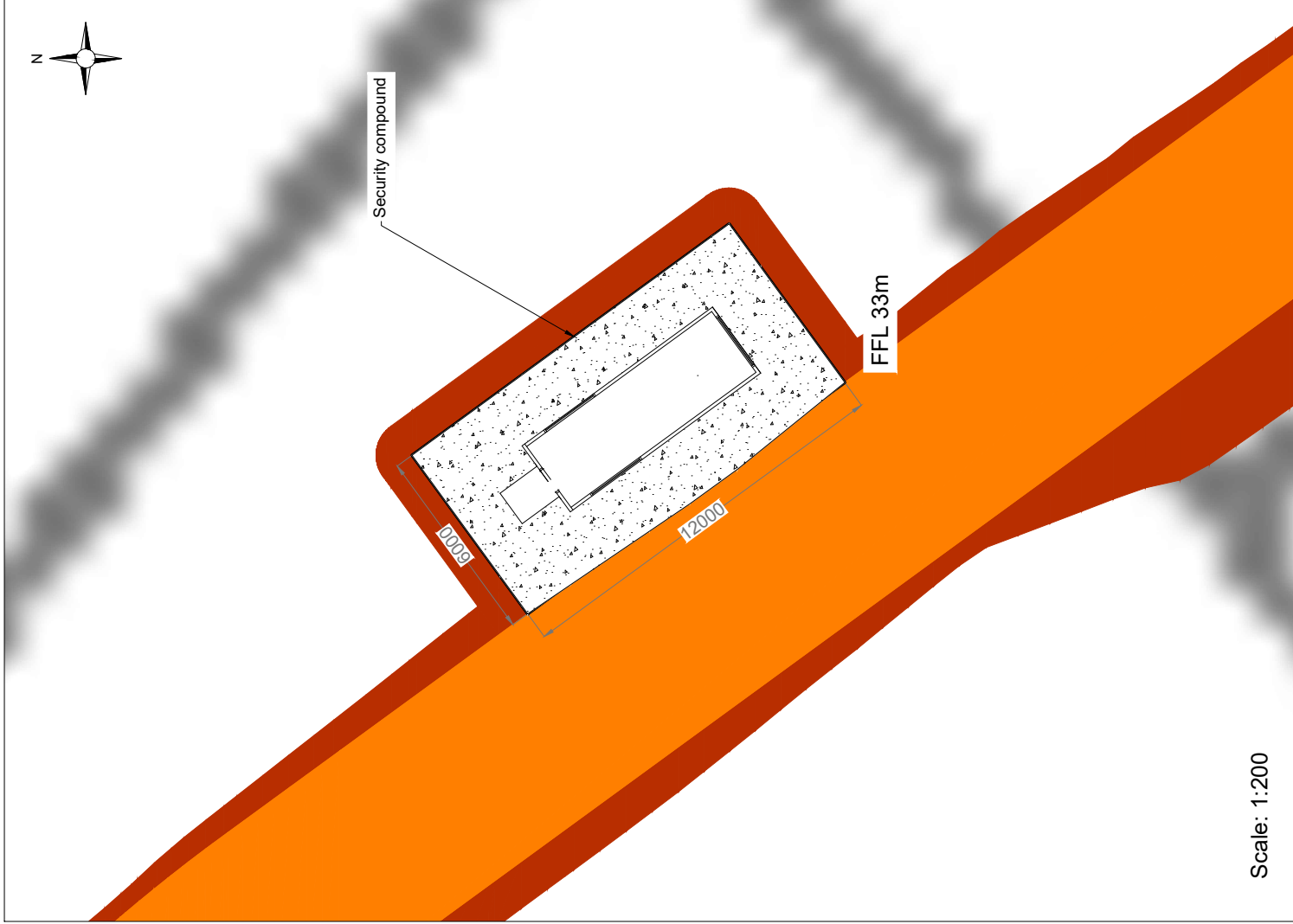
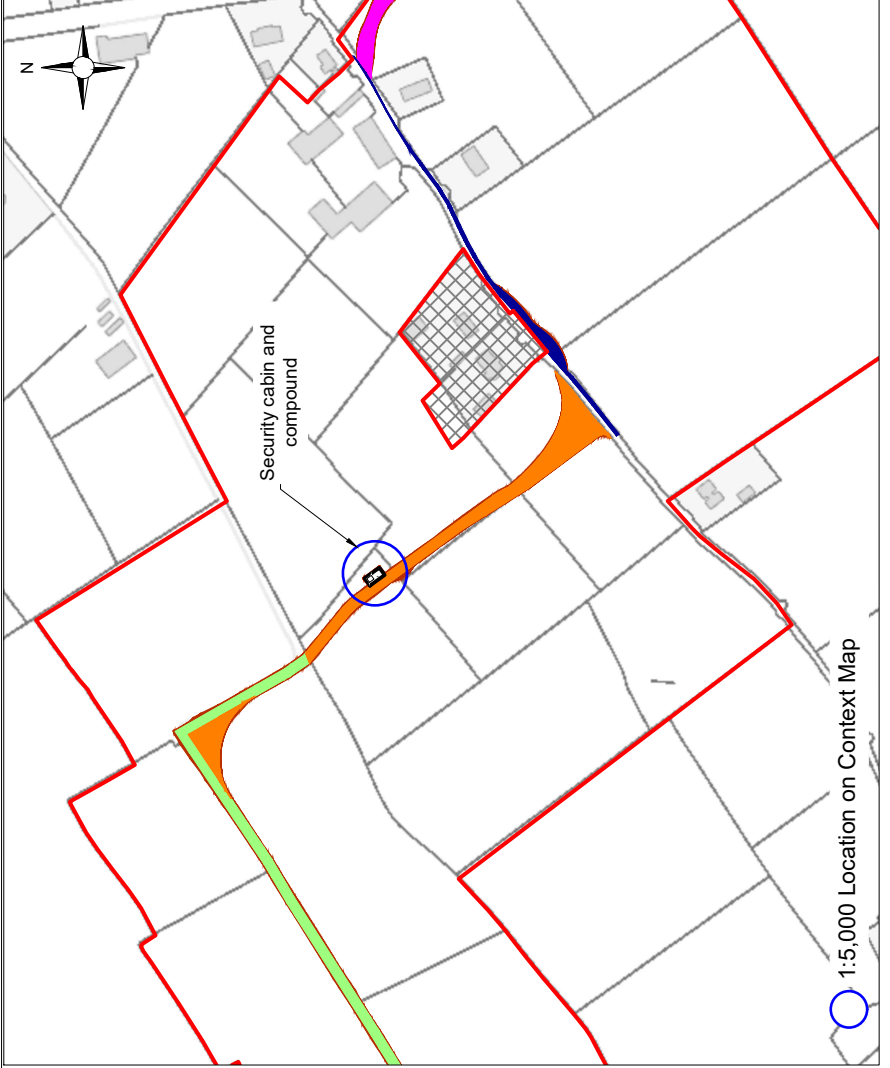
1. Met Mast exact detail may differ depending on the selected manufacturer.
2. Finished level of the mast to match ground conditions.
3. Mast/foundation orientation to be confirmed with met mast supplier.
4. Earthing and ducting requirements to be confirmed with met mast supplier and forwarded to foundation designer

PROJECT TITLE:
Laurclavagh Renewable Energy Development, Co. Galway

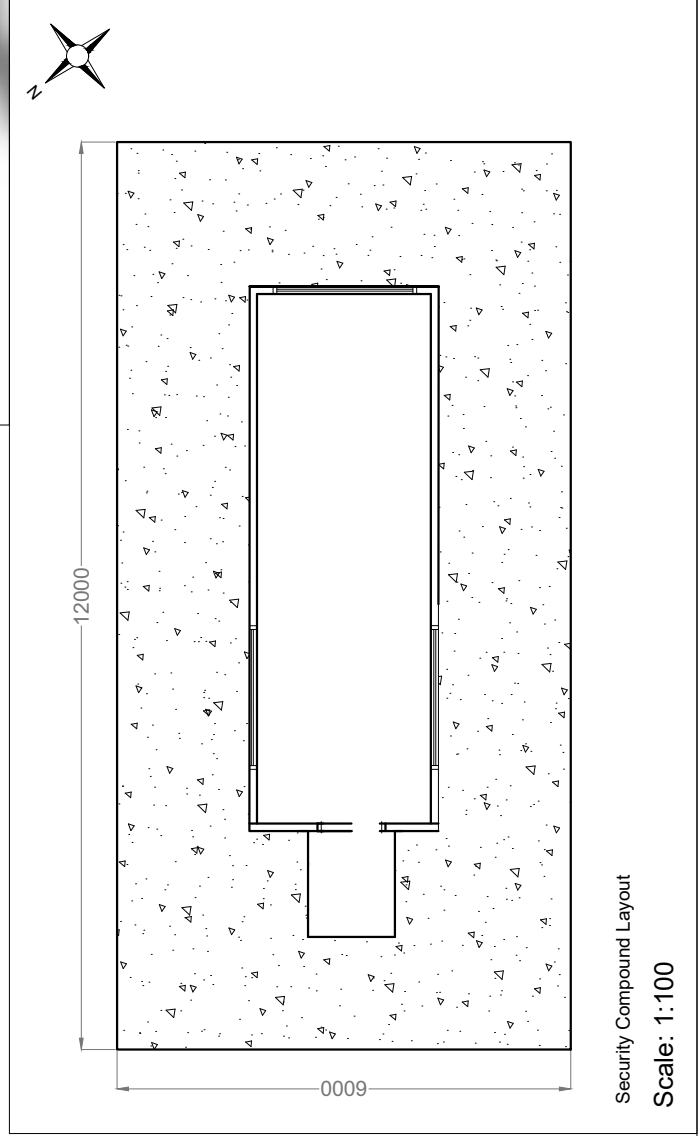
DRAWING TITLE:
Met Mast

PROJECT No.:	DRAWING No.:	SCALE:
210627	210627 - 24	As shown @ A3
DRAWN BY: JOB	CHECKED BY: TH	DATE: 08.03.2024
		REVISION: P01

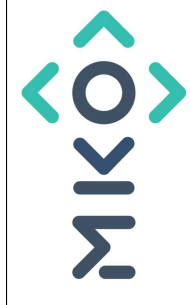




Scale: 1:100

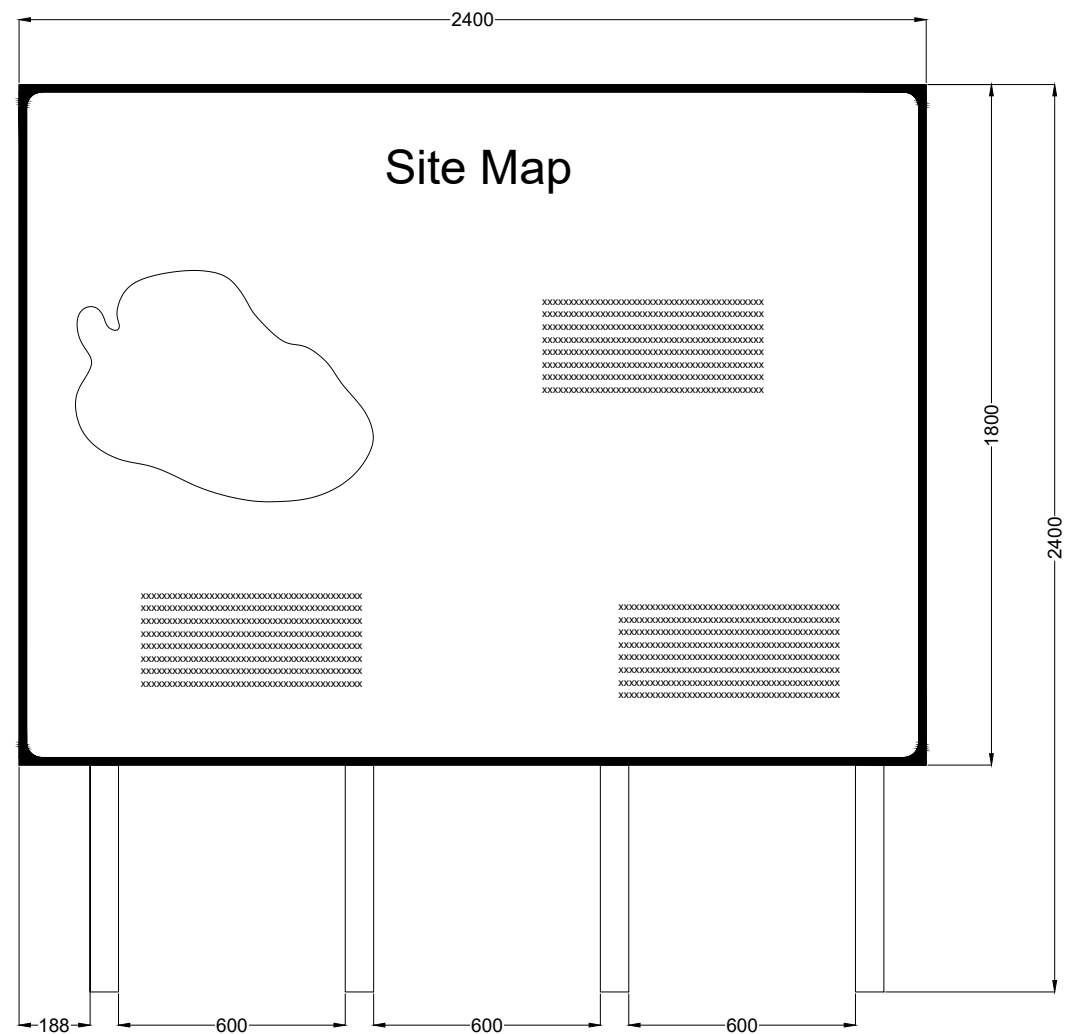


PROJECT TITLE: Laurclavagh Renewable Energy Development, Co. Galway	
DRAWING TITLE: Standard Security Cabin & Compound	
PROJECT No.: 210627	SCALE: As shown @ A3
DRAWN BY: TH	CHECKED BY: TH
DATE: 08.03.2024	REVISION: P01

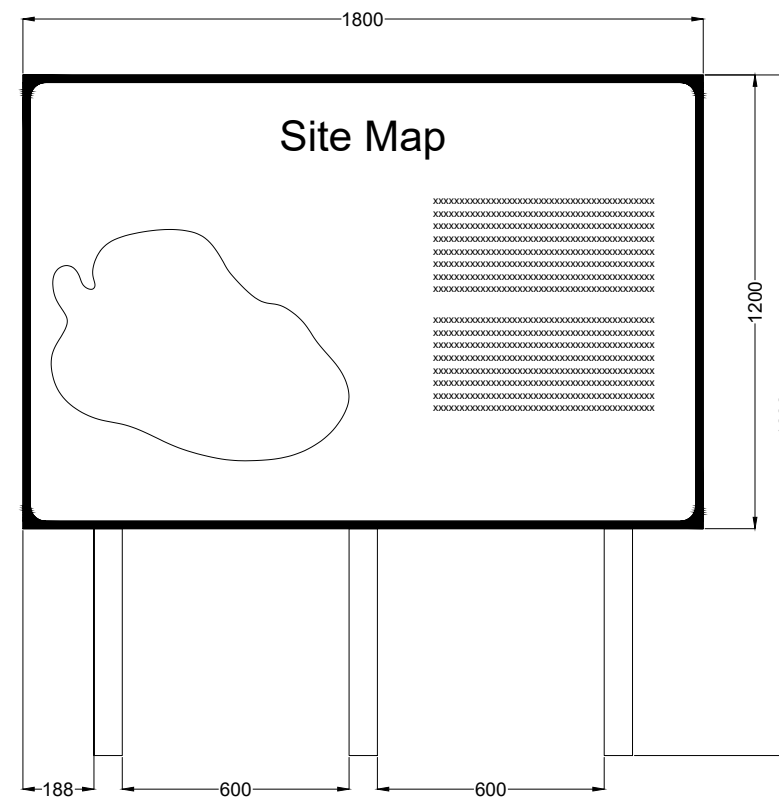


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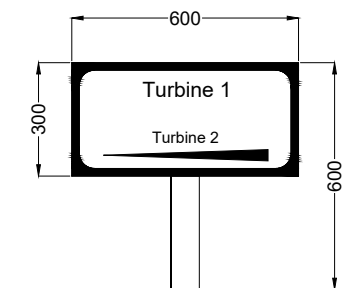
Note
For illustrative purposes only
exact details to be confirmed



Signage Type A - Waypoint Map Signage



Signage Type B -Entry Point Signage



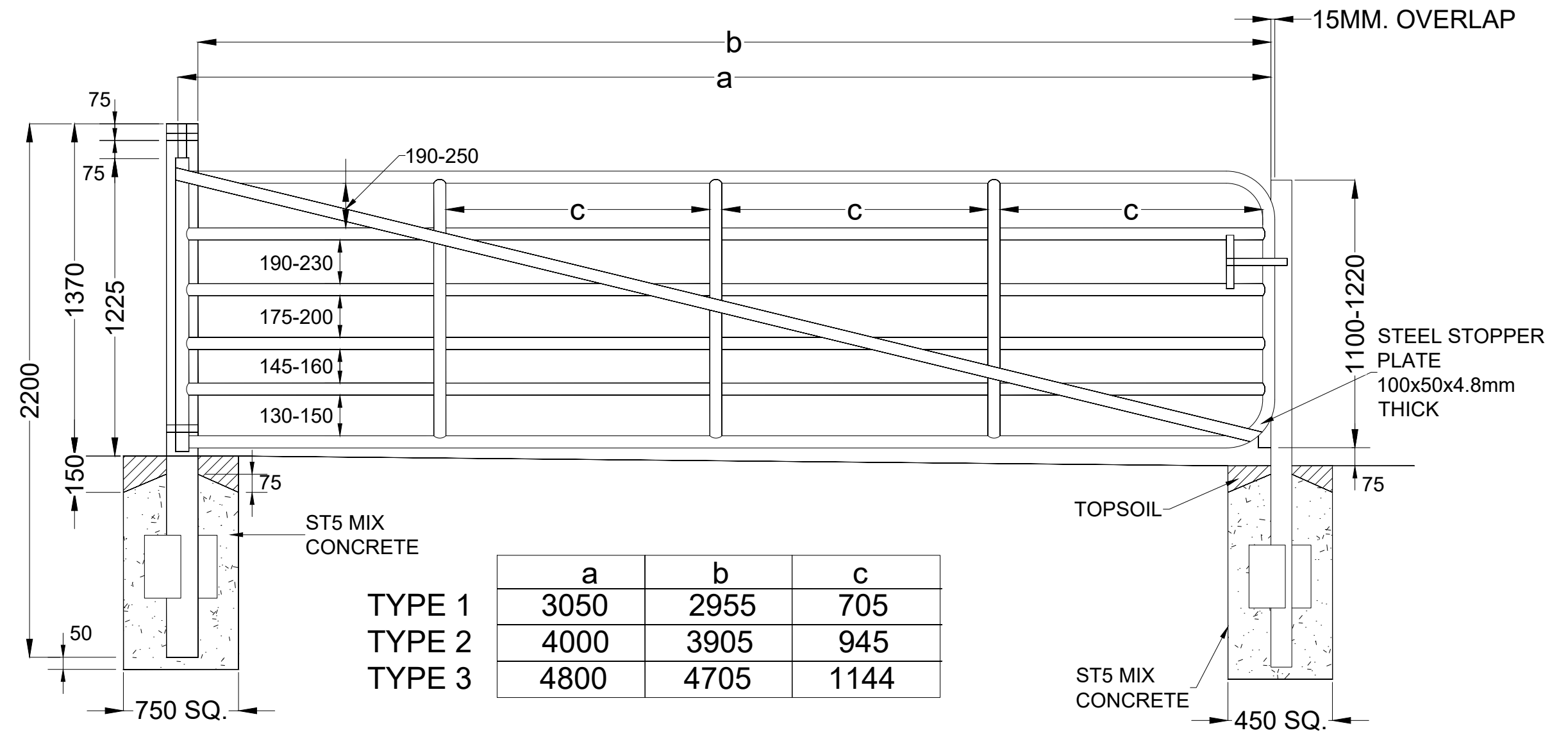
Signage Type C - Way Point Direction Signage

PROJECT TITLE: Laurclavagh Renewable Energy Development, Co. Galway			
DRAWING TITLE: Signage Detail			
PROJECT No.: 210627	DRAWING No.: 210627 - 26	SCALE: 1:20 @ A3	
DRAWN BY: JOB	CHECKED BY: TH	DATE: 08.03.2024	REVISION.: P01



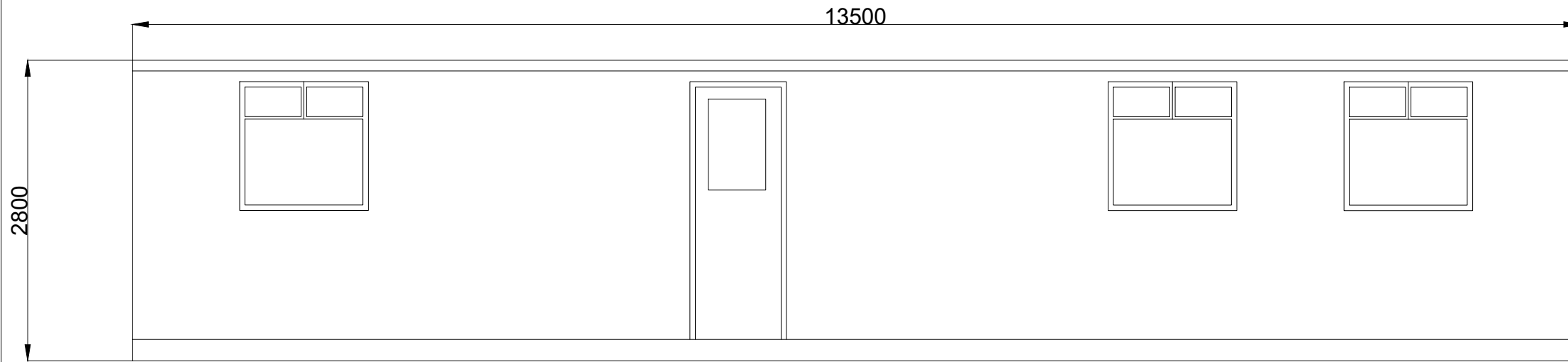
Email: info@www.mkoireland.ie /Website: www.mkoireland.ie

Note:
Security gates to be installed as single or double gated systems as per contractor design requirements

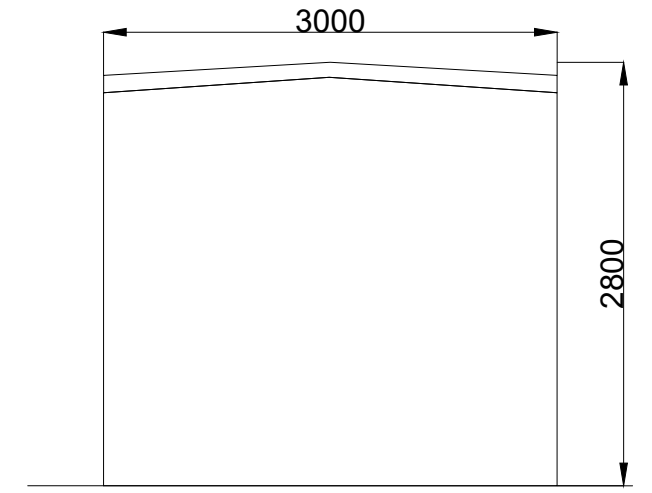


PROJECT TITLE: Laurclavagh Renewable Energy Development, Co. Galway		
DRAWING TITLE: Field Gate Detail		
PROJECT No.: 210627	DRAWING No.: 210627 - 27	SCALE: 1: 20 @ A3
DRAWN BY: JOB	CHECKED BY: TH	DATE: 08.03.2024
		REVISION: P01

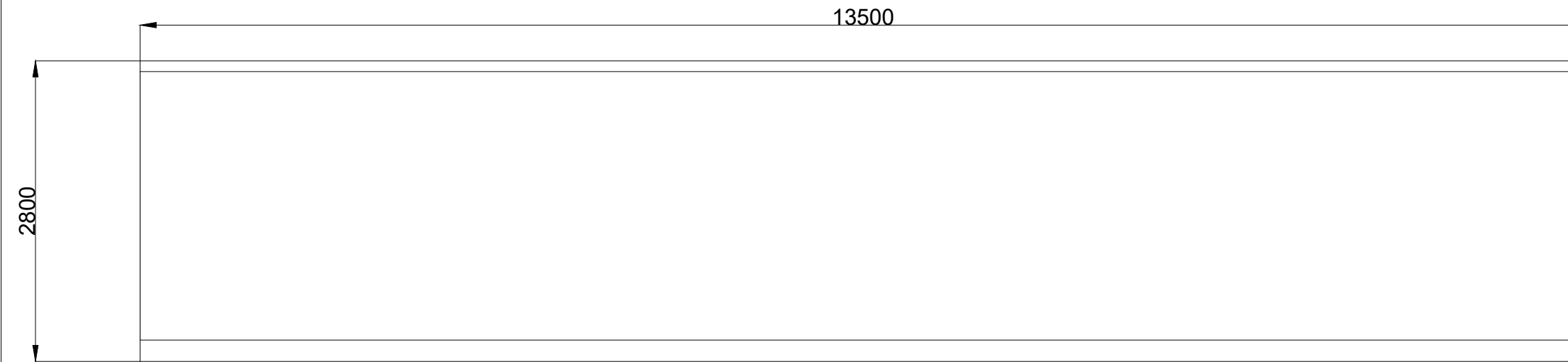




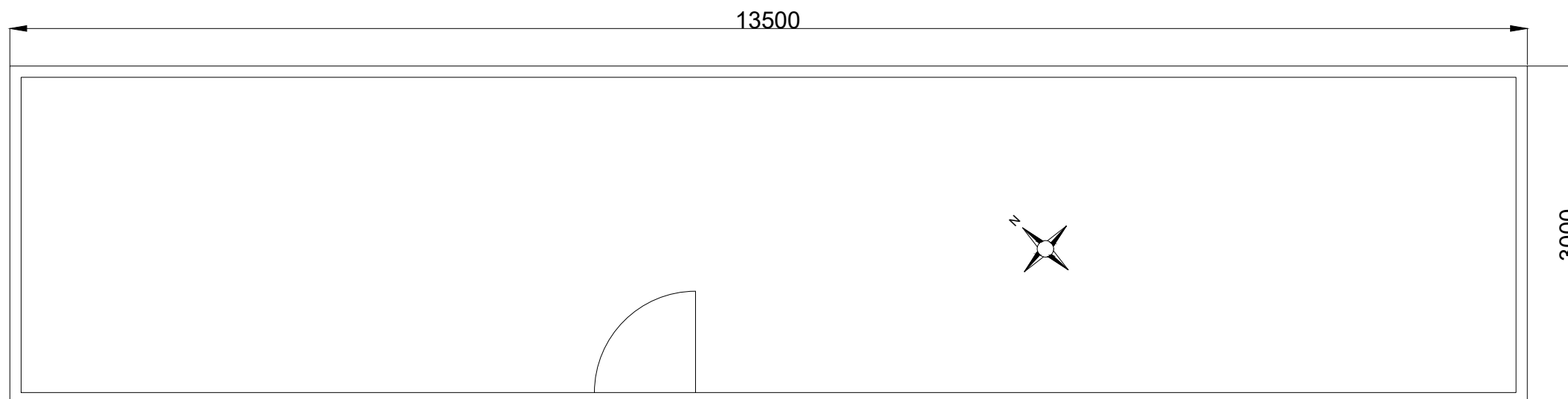
FRONT ELEVATION



SIDE ELEVATION



REAR ELEVATION

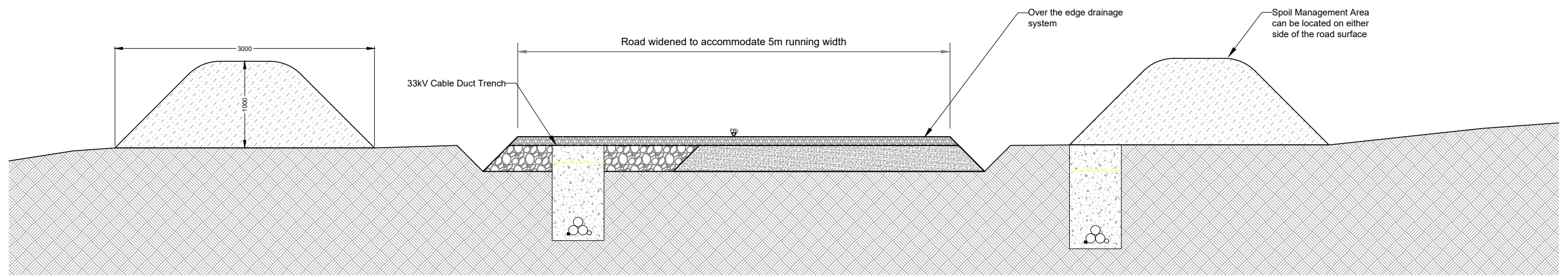


PLAN VIEW

PROJECT TITLE: Laurclavagh Renewable Energy Development, Co. Galway			
DRAWING TITLE: Site Office & Staff Facilities Detail			
PROJECT No.: 210627	DRAWING No.: 210627 - 28	SCALE: 1:50 @ A3	
DRAWN BY: JOB	CHECKED BY: TH	DATE: 08.03.2024	REVISION.: P01



- Project Design Drawing Notes**
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Existing Excavated Road Widening Cross Section
1:50

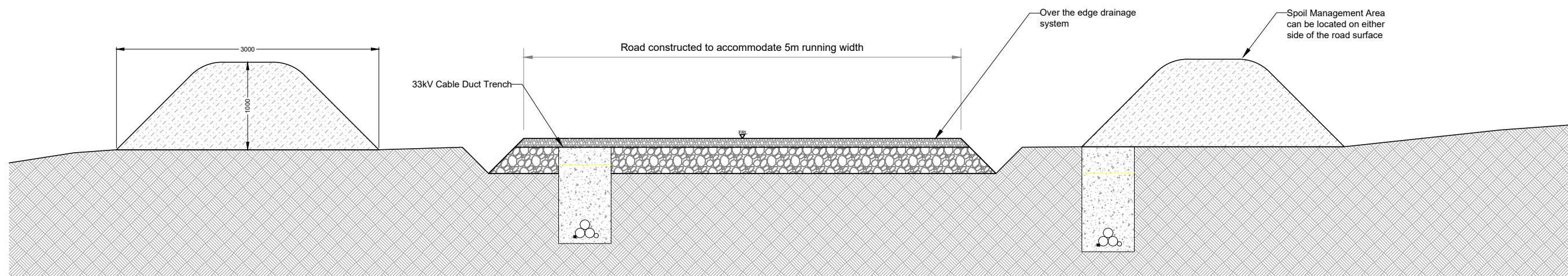
PROJECT TITLE: Laurclavagh Renewable Energy Development, Co. Galway			
DRAWING TITLE: Upgrade of Existing Access Roads Section			
PROJECT No.: 210627	DRAWING No.: 210627 - 29	SCALE: 1:50 @ A3	
DRAWN BY: JOB	CHECKED BY: TH	DATE: 08.03.2024	REVISION:. P01



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Project Design Drawing Notes

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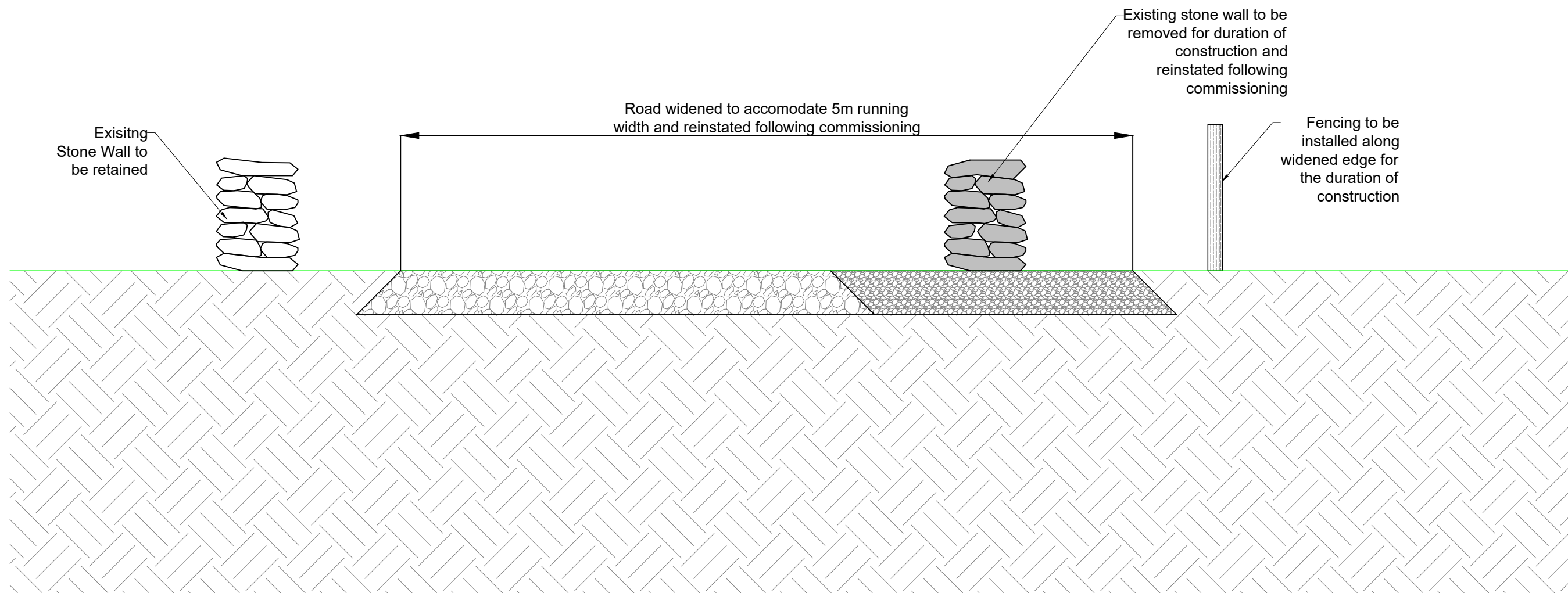


Excavated Road Cross Section
1:50

PROJECT TITLE:			
Laurclavagh Renewable Energy Development, Co. Galway			
DRAWING TITLE:			
New excavate and replace access road section			
PROJECT No.:	DRAWING No.:	SCALE:	
210627	210627 - 30	1:50 @ A3	
DRAWN BY:	CHECKED BY:	DATE:	REVISION.:
JOB	TH	08.03.2024	P01



- Project Design Drawing Notes**
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 10. Road to be reinstated with a fresh layer of tar & chip during the seasonal months.



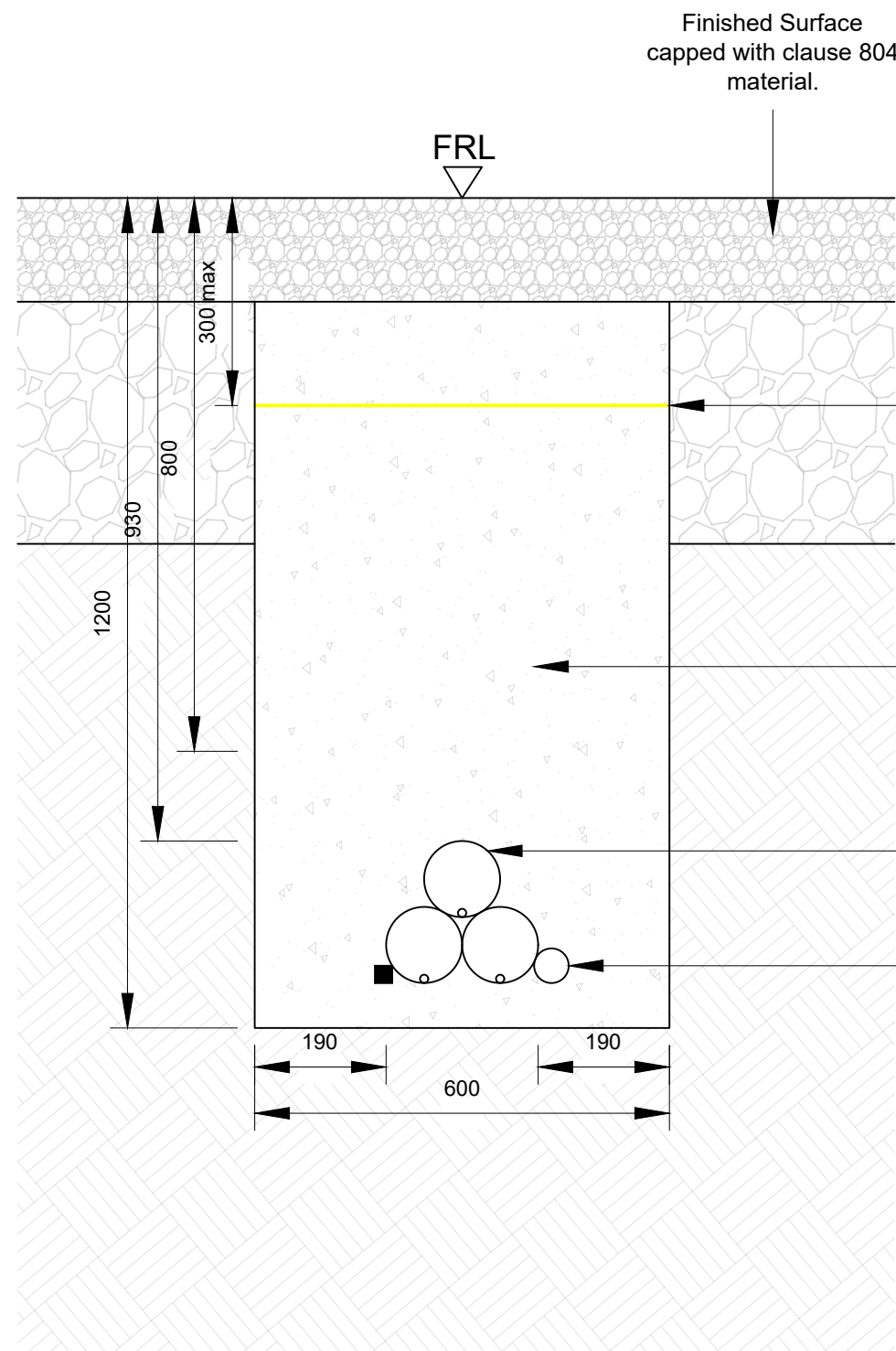
Upgrade of Existing Tar & Chip Roads - Construction Detail

Scale 1:30

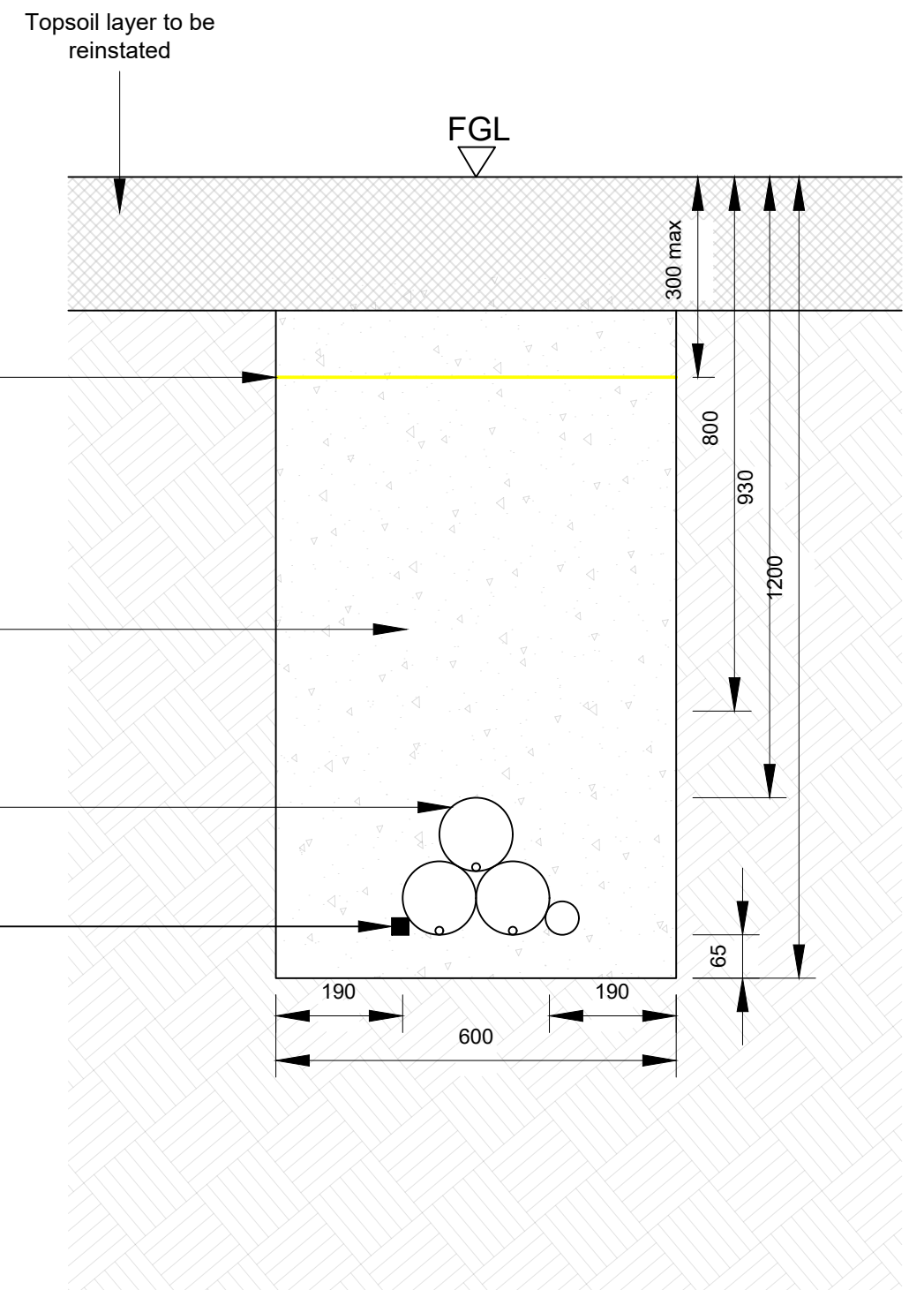
PROJECT TITLE: Laurclavagh Renewable Energy Development, Co. Galway			
DRAWING TITLE: Upgrade of Existing Tar & Chip Roads			
PROJECT No.: 210627	DRAWING No.: 210627 - 31	SCALE: 1:30 @ A3	
DRAWN BY: JOB	CHECKED BY: TH	DATE: 08.03.2024	REVISION: P01



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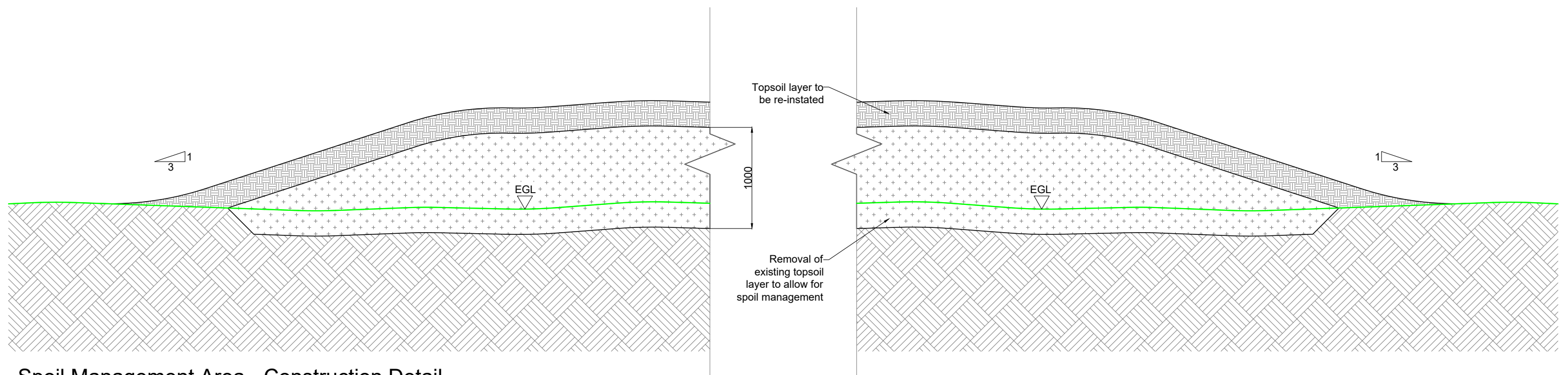
33kV Cable - On Road Trench Detail - Cross Section



33kV Cable - Off Road Trench Detail - Cross Section

PROJECT TITLE: Laurclavagh Renewable Energy Development, Co. Galway			
DRAWING TITLE: 33kV Cable Trench Sections			
PROJECT No.: 210627	DRAWING No.: 210627 - 32	SCALE: 1:10 @ A3	
DRAWN BY: JOB	CHECKED BY: TH	DATE: 08.03.2024	REVISION: P01





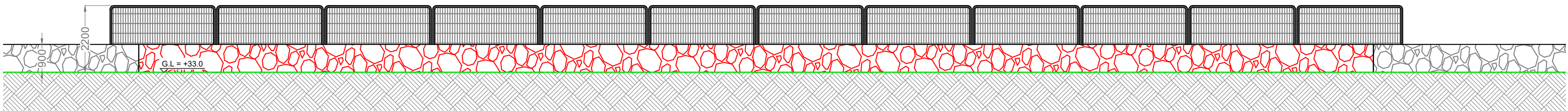
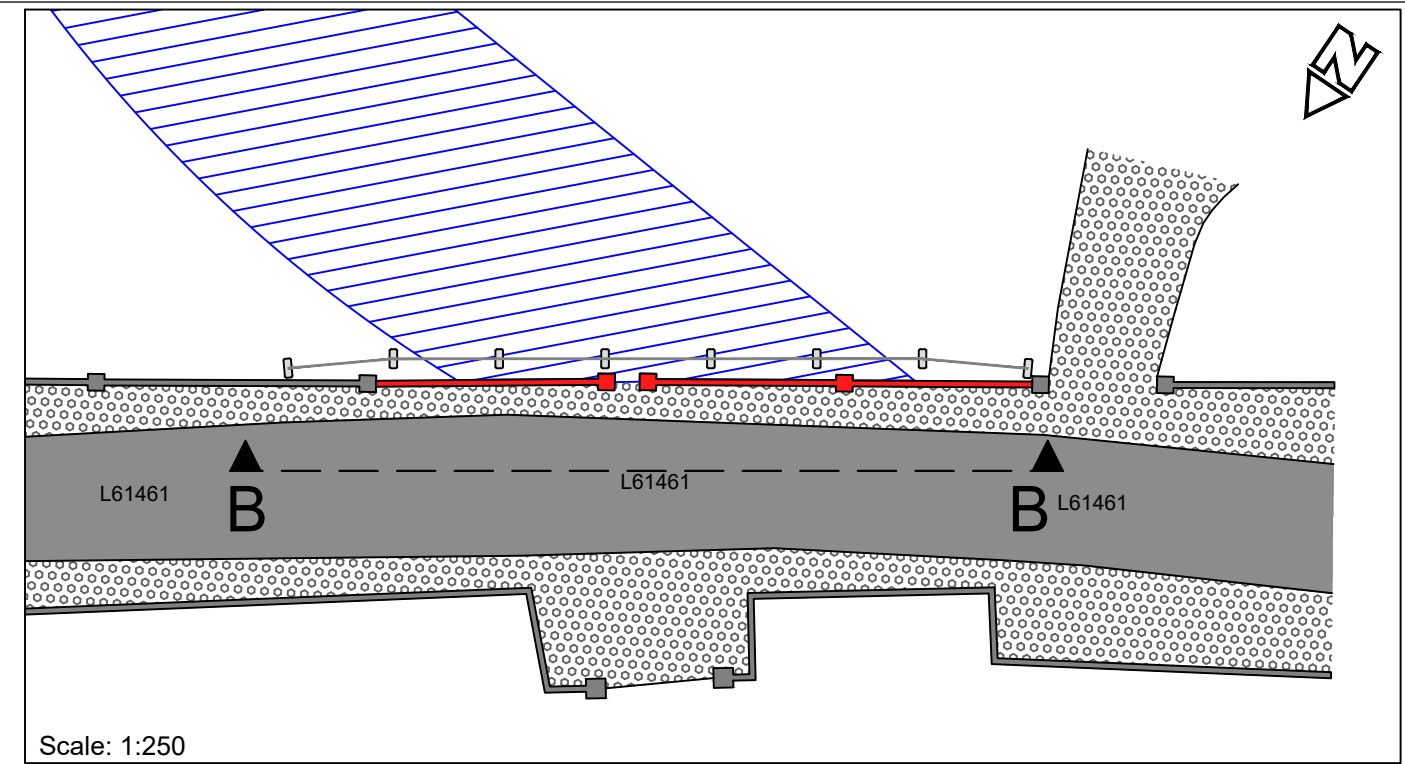
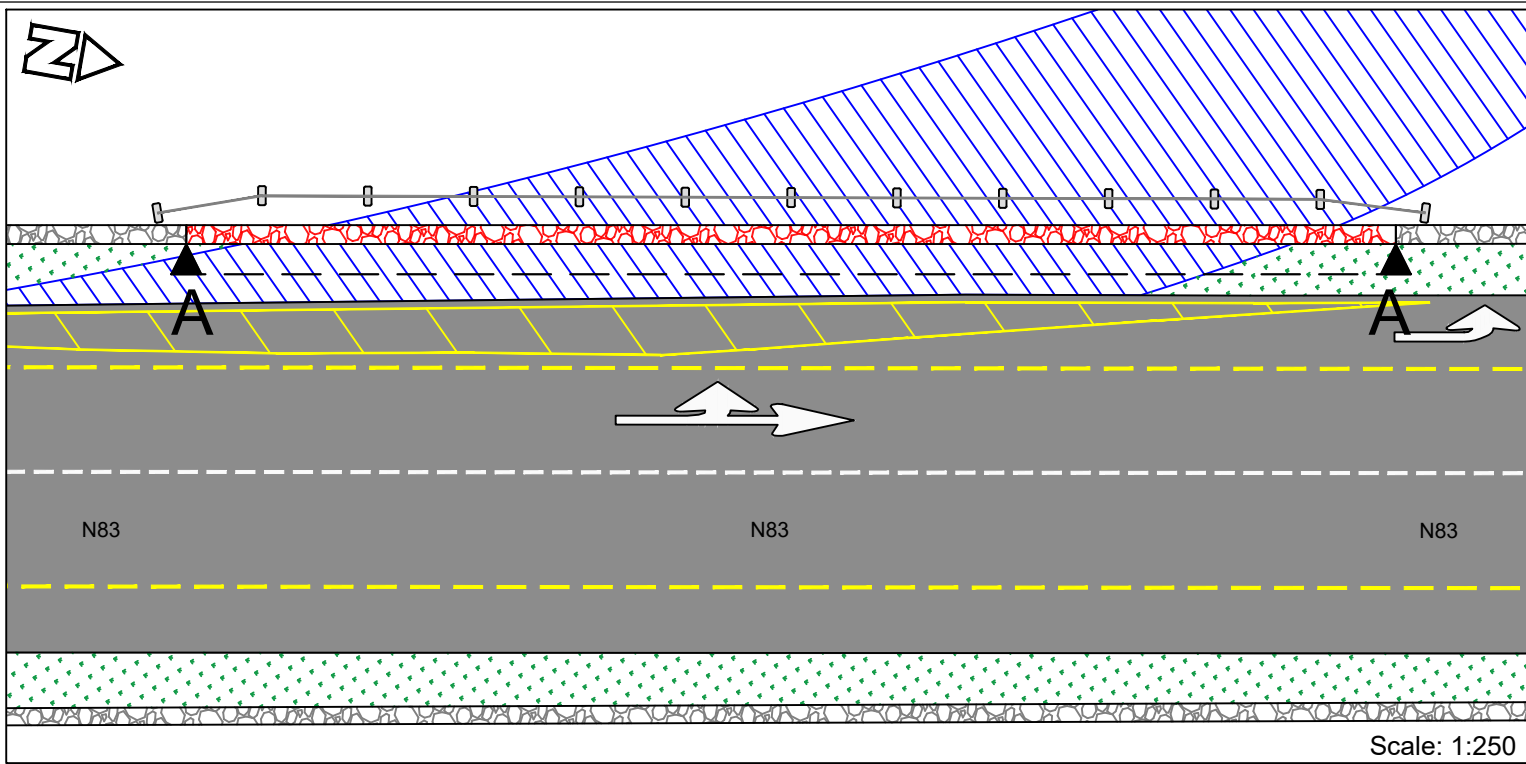
Spoil Management Area - Construction Detail

Scale 1:40

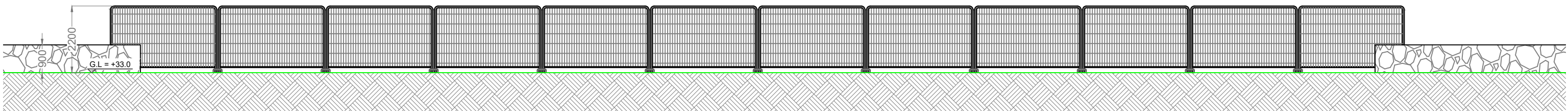
PROJECT TITLE:			
Laurclavagh Renewable Energy Development, Co. Galway			
DRAWING TITLE:			
Spoil Management Area			
PROJECT No.:	DRAWING No.:	SCALE:	
210627	210627 - 33	1:40 @ A3	
DRAWN BY:	CHECKED BY:	DATE:	REVISION.:
JOB	TH	08.03.2024	P01



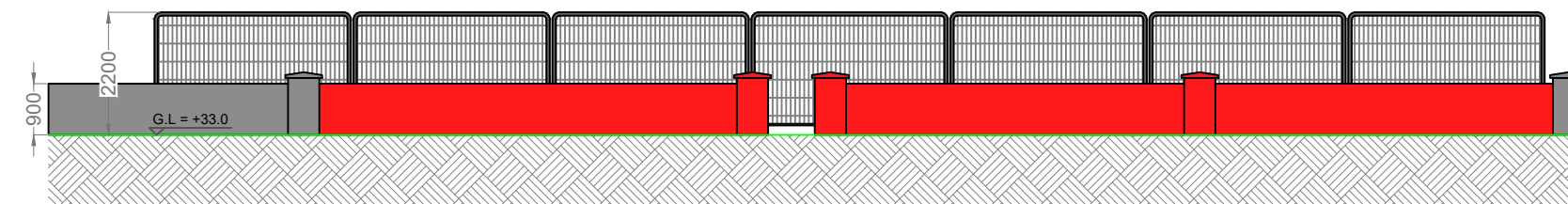
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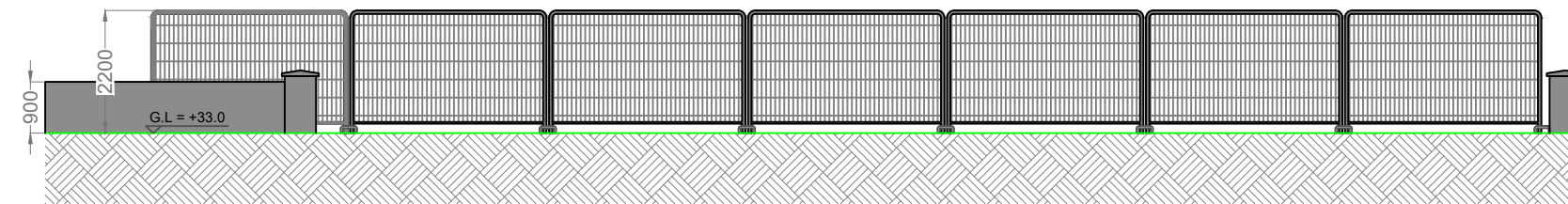
Elevation A-A - Stone wall to be removed and re-instated post construction
Scale: 1:125



Elevation A-A - Construction Phase
Scale: 1:125



Elevation B-B - Stone wall to be removed and re-instated post construction
Scale: 1:125



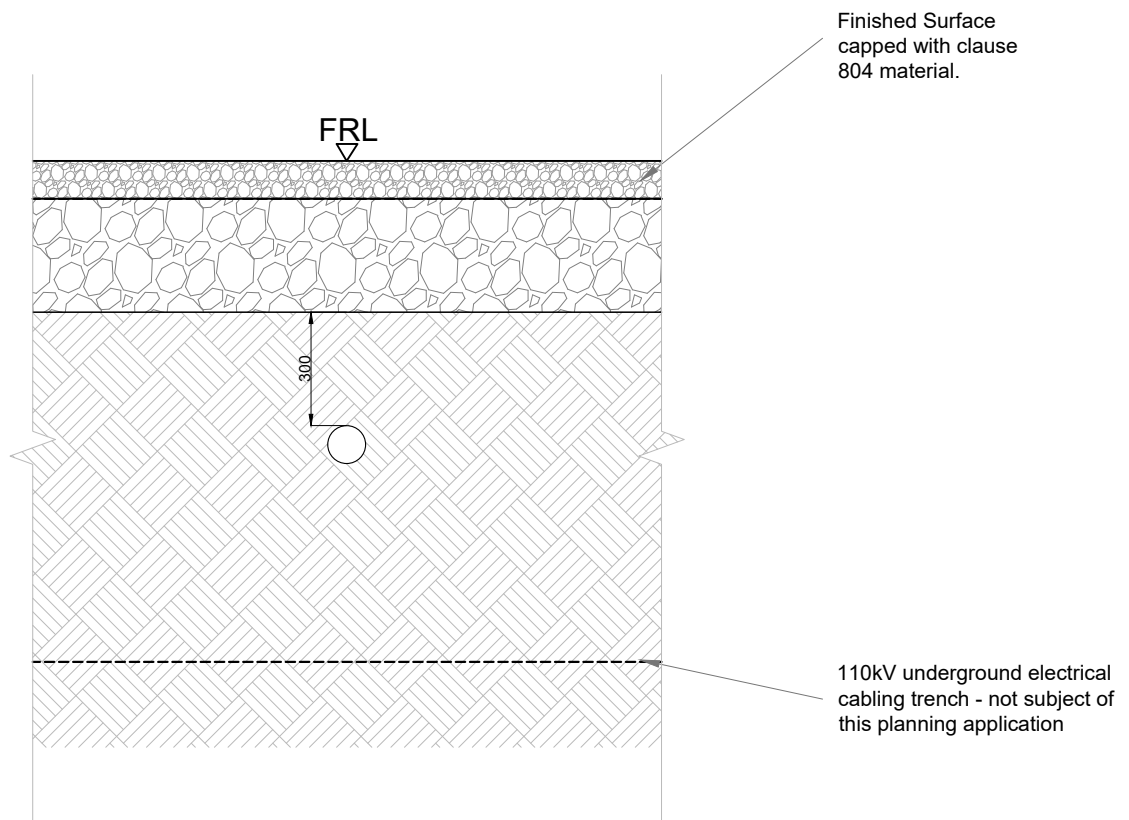
Elevation B-B - Construction Phase
Scale: 1:125

- Legend:
- Block wall to be temporarily removed/reinstated
 - Stone wall to be temporarily removed/reinstated
 - Temporary Link Road
 - Temporary Fencing

PROJECT TITLE: Laurclavagh Renewable Energy Development, Co. Galway			
DRAWING TITLE: Proposed Temporary Link Road - Elevations			
PROJECT No.: 210627	DRAWING No.: 210627 - 35	SCALE: As Shown @ A3	
DRAWN BY: JOB	CHECKED BY: TH	DATE: 08.03.2024	REVISION.: P01

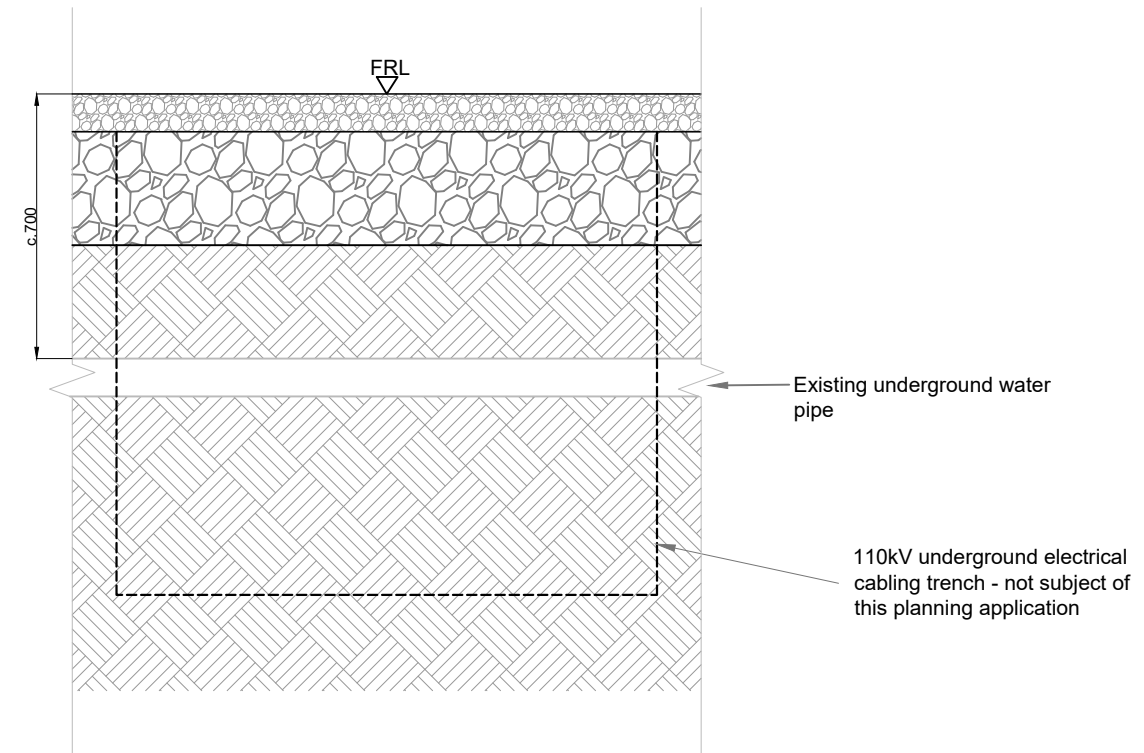


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Excavated Road over Existing Water Pipe - Longitudinal Section

1:20



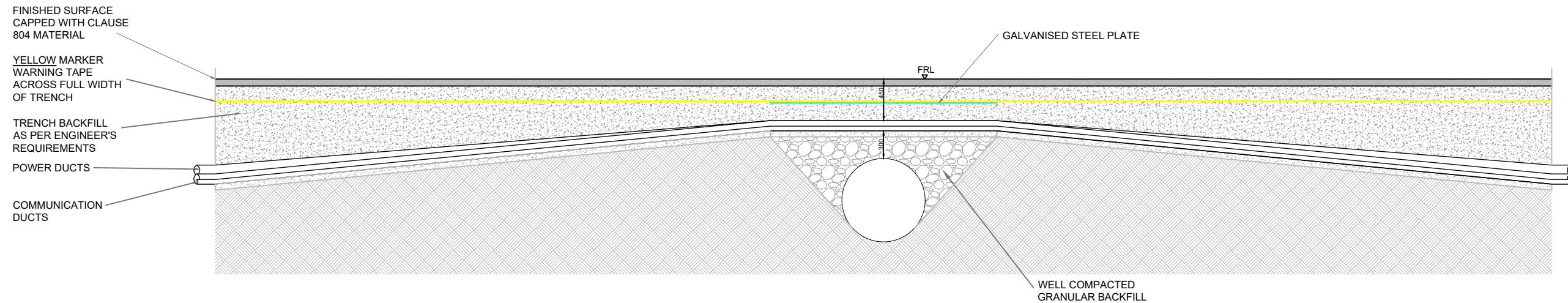
Excavated Road Over Existing Water Pipe - Cross Section

1:20

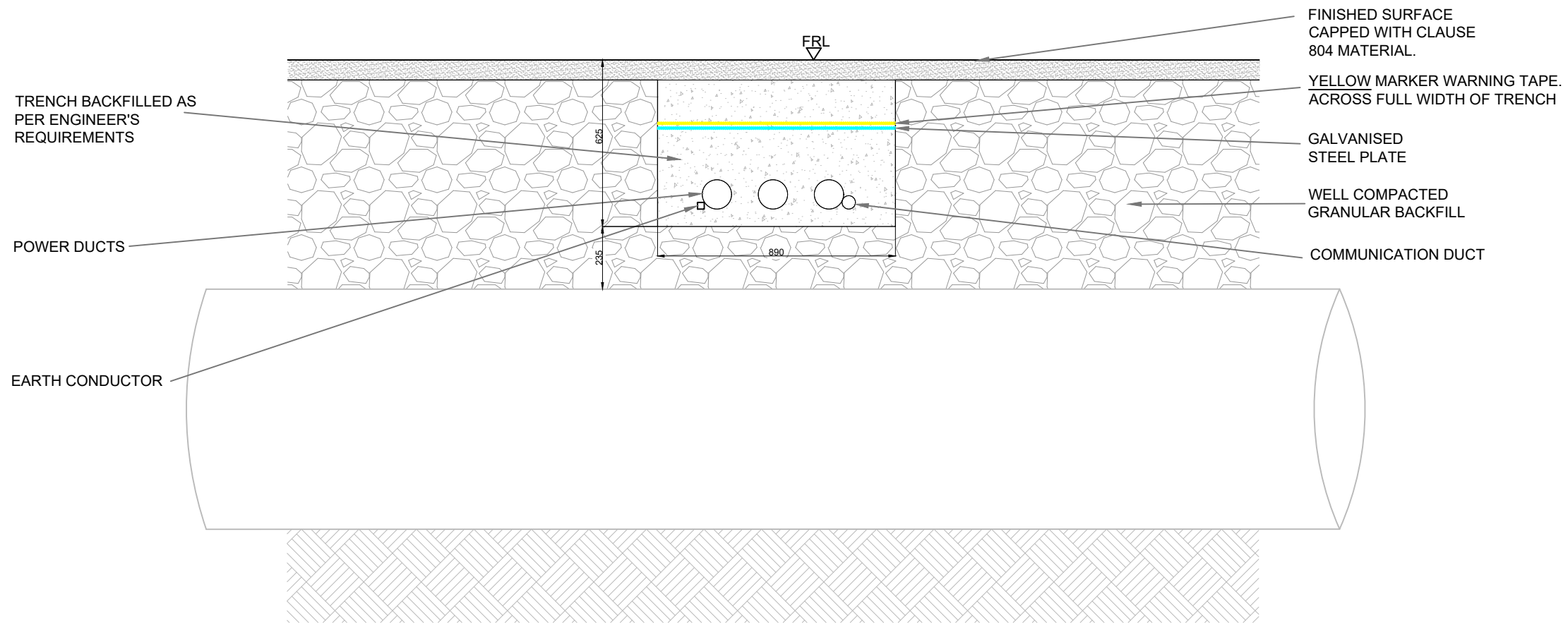
PROJECT TITLE: Laurclavagh Renewable Energy Development, Co. Galway			
DRAWING TITLE: Service Crossing Detail			
PROJECT No.: 210627	DRAWING No.: 210627 - 36	SCALE: 1:20 @ A3	
DRAWN BY: JOB	CHECKED BY: TH	DATE: 08.03.2024	REVISION.: P01



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Culvert Crossing - 33kV - Longitudinal Section
SCALE 1:50



Culvert Crossing - 33kV - Cross Section
SCALE 1:20

PROJECT TITLE: Laurclavagh Renewable Energy Development, Co. Galway			
DRAWING TITLE: Standard 33kV Culvert Crossing			
PROJECT No.: 210627	DRAWING No.: 210627 - 37	SCALE: As shown @ A3	
DRAWN BY: JOB	CHECKED BY: TH	DATE: 08.03.2024	REVISION: P01



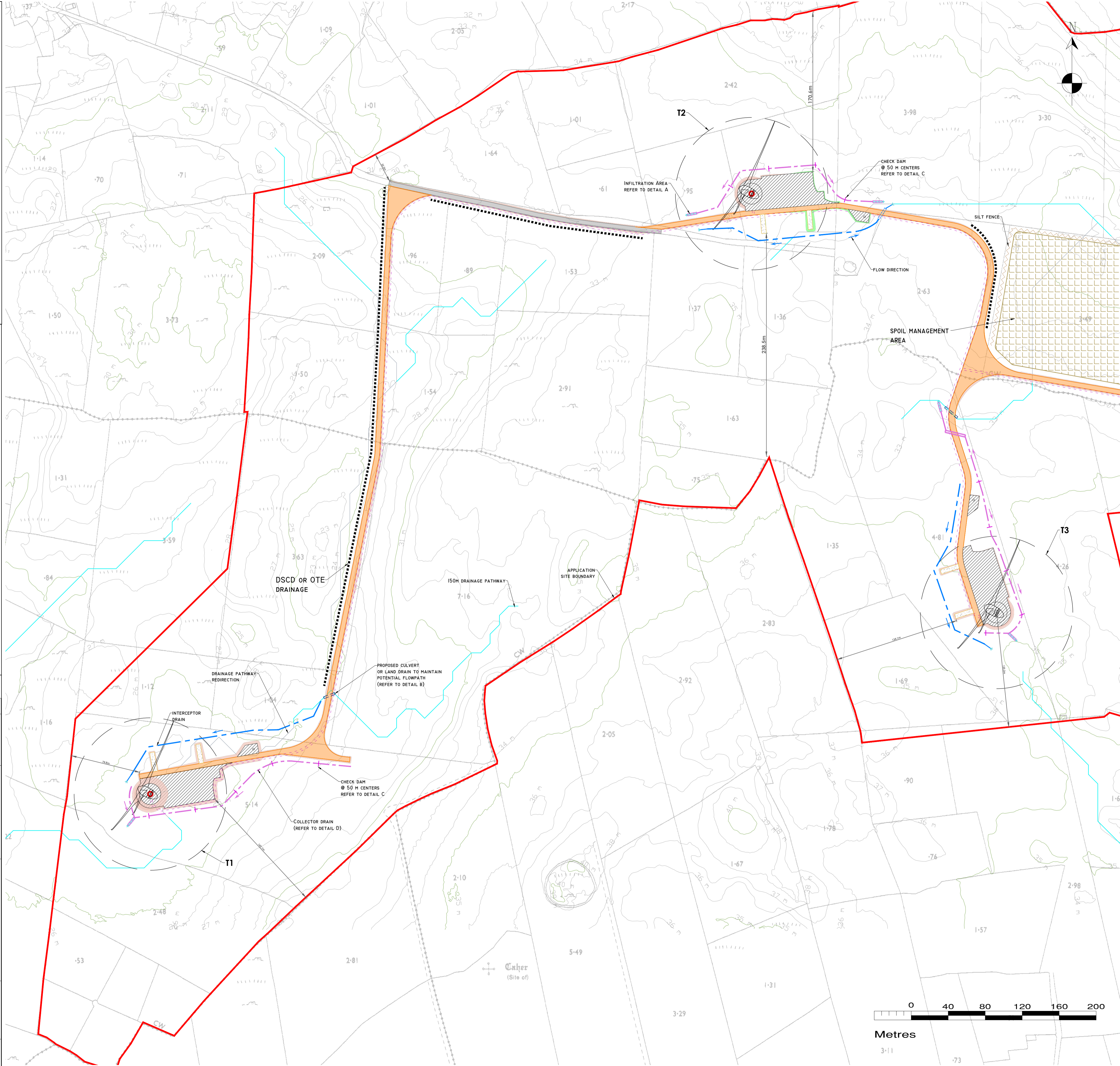
POLLUTION PREVENTION NOTES:

- SITE MANAGEMENT PROPOSALS ARE INTENDED TO ENSURE PROTECTION AGAINST GROUNDWATER POLLUTION, SILTATION AND EROSION.
 - SUITABLE DRAINAGE CONTROL MEASURES WILL BE IN PLACE AT ALL TIMES MANAGE SILT AND DRAINAGE RUNOFF.
 - SILTY WATER CAN ARISE FROM DEWATERING EXCAVATIONS, EROSION OF EXPOSED/DISTURBED GROUND, TEMPORARY STOCKPILES, PLANT AND WHEEL WASH, SITE ROADS/TRACKS, AND DISTURBANCE OF DRAINAGE PATHWAYS.
 - ALL DRAINAGE DISCHARGES TO BE MADE OVER OPEN GROUND OR INTO INFILTRATION DRAIN OR INFILTRATION AREA. ALL DISCHARGES WILL BE TO GROUND. THERE ARE NO NATURAL WATERCOURSES AT THIS SITE.
 - PUMPED WATER WILL BE DIRECTED INTO TRACK SIDE INFILTRATION DRAINS AND TREATED IN THOSE DRAINS AND THE INFILTRATIONS AREAS PRIOR TO RECHARGE TO GROUND.
 - PUMPING OF CLEAN WATER FROM EXCAVATIONS / OR OVER-PUMPING IN DRAINS/DITCHES WILL BE COMPLETED IN A MANNER THAT DOES NOT CAUSE SCOUR OR EROSION AT THE POINT OF RELEASE/DISCHARGE. THIS WILL BE DONE BY REDUCING THE FLOW VELOCITIES OR BY USE OF SPLASH PLATES, AND OTHER SIMILAR DISCHARGE CONTROLS.
 - WHERE DEEP EXCAVATIONS ARE PROPOSED CUT-OFF DRAINS WILL BE USED TO REDUCE THE AMOUNT OF SURFACE WATER ENTERING THE EXCAVATION. THIS WILL BE THE CASE AROUND TURBINE BASE EXCAVATIONS.
 - THE AMOUNT OF EXPOSED GROUND AND TEMPORARY STOCKPILES OPEN AT ANY ONE TIME WILL BE MINIMISED, AS FAR AS PRACTICABLE.
 - USE OF TRACK SIDE SWALES (INFILTRATION DRAINS) WITH CHECK DAMS, WILL REDUCE SILT IN DRAINAGE WATER AS REQUIRED.
 - CHECK DAMS TO BE INSPECTED AND CLEANED REGULARLY.
 - REFUELLING OF MOBILE PLANT WILL BE COMPLETED IN DESIGNATED REFUELLING AREAS ONLY, PREFERABLY ON AN IMPERMEABLE SURFACE AND AWAY FROM INFILTRATION DRAINS / DITCHES.
 - SPILL KITS AND DRIP TRAYS WILL BE AVAILABLE ON SITE FOR USE AS REQUIRED.
 - CARE WILL BE TAKEN WHEN COMPLETING CONCRETE WORKS ON SITE TO ENSURE NO DISCHARGES TO GROUND OCCUR.
 - CONCRETE WASH WATER, AND WASTE CONCRETE WILL BE MANAGED APPROPRIATELY ON SITE.
- IF WATER POLLUTION IS IDENTIFIED THE FOLLOWING STEPS WOULD BE ADHERED TO:
- STOP** - WORK IN THE IMMEDIATE AREA SHOULD BE STOPPED AND THE SOURCE OF THE POLLUTION IDENTIFIED.
- CONTAIN** - THE SOURCE OF THE POLLUTION SHOULD BE BUNDED USING A SUITABLE METHOD.
- NOTIFY** - THE RELEVANT AUTHORITIES (SITE MANAGER / FISHERIES / NPWS / LOCAL AUTHORITY ETC.) SHOULD BE NOTIFIED IMMEDIATELY TO ENSURE THAT MEASURES CAN BE IMPLEMENTED DOWNSTREAM TO PROTECT SENSITIVE RECEPTORS.

- DRAINAGE NOTES:**
- ROADWAY SURFACING DESIGN AND CONSTRUCTION TO ENGINEER'S SPECIFICATION (I.E. BY OTHERS).
 - SPARE STRAW BALES/SILT FENCING/ OR SIMILAR, TO BE STORED ON SITE. THE LEVEL OF SILT IN DRAINAGE WATER DURING CONSTRUCTION IS TO BE MONITORED VISUALLY AND EXCESSIVE SILT LEVELS IN ANY AREA TO BE TEMPORARILY MANAGED BY PLACING ADDITIONAL CHECK DAMS, SILT FENCES, STRAW BALES / OR SIMILAR AT THE PROBLEM AREAS.
 - SUDS SYSTEM TO BE CONSTRUCTED PRIOR TO, OR AT THE SAME TIME AS THE ACCESS TRACKS. INTERIM MEASURES SUCH AS THE PLACEMENT OF STRAW BALES/SILT FENCING OR SIMILAR APPROVED METHOD OR ADDITIONAL CHECK DAMS AND SILT FENCES TO BE EMPLOYED IN ALL INSTANCES WHERE WORK CARRIED OUT TO CONSTRUCT THE ACCESS TRACKS IS LIKELY TO CAUSE ADVERSE ENVIRONMENTAL EFFECTS THROUGH INCREASED SILT LOADINGS BEING GENERATED DURING THE CONSTRUCTION PHASE.
 - SUITABLE DRAINAGE MANAGEMENT/PREVENTION MEASURES WILL BE IN PLACE AT ALL TIMES TO PREVENT THE CONVEYANCE OF SIGNIFICANT VOLUMES OF SILT TO THE DRAINAGE SYSTEM.
 - INTERCEPTOR SWALES / DITCHES TO BE USED TO COLLECT UPSTREAM CLEAN SURFACE WATER FLOWS. REGULAR CROSS DRAINS / FIELD DRAINS WILL BE REQUIRED TO TRANSFER RUNOFF IN INTERCEPTOR DRAINS TO SUITABLE DOWNSTREAM RECHARGE AREAS.
 - DRAINAGE SWALES / DOWNSTREAM COLLECTOR DRAINS TO BE EXCAVATED ADJACENT TO THE ACCESS TRACKS AS REQUIRED. REGULAR CROSS DRAINS/FIELD DRAINS TO BE LOCATED ALONG ACCESS TRACKS TO MAINTAIN DRAINAGE PATHWAYS, AND TO PREVENT EXCESSIVE VOLUMES OF WATER COLLECTING IN THE SWALES / DITCHES. LOCATIONS OF CROSS DRAINS TO BE AGREED WITH THE ENGINEER ON SITE.
 - BATTERS OF ALL PROPOSED SWALES / DITCHES TO HAVE A SLOPE OF BETWEEN 1 : 1.5 TO 1 : 2 DEPENDING UPON DEPTH OF SWALE/DITCH AND WILL BE LEFT AS CUT TO RE-VEGETATE WITH LOCAL SPECIES.
 - TRACK SIDE SWALES / INFILTRATION DRAINS TO BE SHALLOW WITH MODERATE GRADIENTS TO PREVENT SCOURING. IN STEEP AREAS CHECK DAMS WILL BE INSTALLED TO REDUCE FLOW VELOCITIES AND PROVIDE SOURCE CONTROL OF SILT CONTAINMENT.
 - STRAW BALES / OR SIMILAR AND SILT FENCES TO BE USED ALSO AROUND SPOIL STORAGE AREAS TO MITIGATE SILT RUNOFF. SILT FENCES WILL BE REMOVED WHEN SUITABLE VEGETATION COVER IS ESTABLISHED.
 - SLOPES OF THE SWALES / DITCHES TO BE VEGETATED OR PROTECTED FROM EROSION UNTIL VEGETATION HAS BEEN ESTABLISHED. STRIPPED VEGETATIVE LAYER ('SCRAW') FROM EXCAVATIONS TO BE STORED LOCALLY AND USED TO LINE SLOPES AND BASE OF SWALES / DITCHES OR LONGITUDINAL MOUNDS OF VEGETATION SWALES AT INFILTRATION AREAS.
 - AREAS STRIPPED OF VEGETATION SHOULD BE KEPT TO A MINIMUM.
 - CLEAN STONE FLOW CONTROL CHECK DAMS TO BE MADE OF LOCALLY SOWN / GEOLOGICALLY SIMILAR WELL GRADED STONE. AGGREGATE SIZE FOR STONE CHECK DAMS TO BE TYPICALLY 20-40MM CLEAN STONE. ON SLOPING SECTIONS OF THE ACCESS TRACKS, 40MM CHECK DAMS TO BE PROTECTED FROM WASHING AWAY THROUGH THE PLACEMENT OF 100M STONE ON THE DOWNHILL FACE OF THE CHECK DAM AND BY WRAPPING IN GEOTEXTILE.
 - BUILD UP OF SILT LEVELS AT CHECK DAMS TO BE REMOVED AND DISPOSED OF APPROPRIATELY. SILT LEVELS AT CHECK DAMS TO BE VISUALLY INSPECTED AS PART OF AN ONGOING DRAINAGE MAINTENANCE PROGRAMME DURING THE CONSTRUCTION PHASE. WHERE CHECK DAMS BECOME CLOGGED WITH SILT OR VEGETATION, STONE CHECK DAM TO BE REMOVED AND REPLACED SUBSEQUENT TO THE REMOVAL OF SILT.
 - SPACING AND FREQUENCY OF CHECK DAMS WILL BE DEPENDENT UPON LONGITUDINAL GRADIENT OF SWALE/INFILTRATION DRAIN.
 - OIL FUEL SHOULD BE STORED WITHIN BUNDED CONTAINMENT STRUCTURES.
 - SILT BAGS WILL BE USED ON SITE AS NECESSARY.

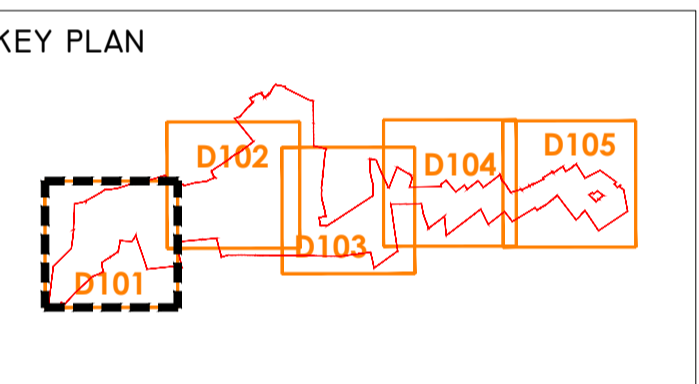
MITIGATION / DRAINAGE CONTROLS AVAILABLE FOR USE ACROSS THE SITE

MANAGEMENT TYPE	DESCRIPTION OF SUDS DRAINAGE CONTROL METHODS
AVOIDANCE CONTROLS:	1) USING SMALL WORKING AREAS 2) WORKING IN APPROPRIATE WEATHER, AND SUSPENDING CERTAIN WORK ACTIVITIES IN ADVANCE OF FORECASTED WET WEATHER
SOURCE CONTROLS:	1) USE OF UPSTREAM INTERCEPTOR DRAINS AND DOWNSTREAM COLLECTOR DRAINS / OVERSIZED SWALES, DIVERSION DRAINS, LAND DRAINS AND CULVERT PIPES 2) EROSION AND VELOCITY CONTROL MEASURES SUCH AS: A) CHECK DAMS AND SAND BAGS B) OYSTER BAGS FILLED WITH GRAVEL C) FILTER FABRICS D) AND OTHER SIMILAR/EQUIVALENT OR APPROPRIATE SYSTEMS
IN-LINE CONTROLS:	1) USING SMALL WORKING AREAS 2) SURROUNDING TEMPORARY STOCKPILES WITH SILT FENCING 3) WEATHERING OFF / SEALING PEAT STOCKPILES 4) INTERCEPTOR DRAINS, OVERSIZED SWALES/COLLECTOR DRAINS 5) EROSION AND VELOCITY CONTROL MEASURES SUCH AS: A) CHECK DAMS AND SAND BAGS B) OYSTER BAGS FILLED WITH GRAVEL C) FILTER FABRICS D) STRAW BALES E) AND/OR OTHER SIMILAR/EQUIVALENT OR APPROPRIATE SYSTEMS.
WATER TREATMENT CONTROLS:	1) TEMPORARY SUMPS 2) TEMPORARY STORAGE LAGOONS 3) INFILTRATION DRAINS / AREAS 4) PROPRIETARY SETTLEMENT SYSTEMS SUCH AS SILTBUSTER, AND/OR OTHER SIMILAR/EQUIVALENT OR APPROPRIATE SYSTEMS. 5) SILT DEWATERING BAGS
OUTFALL CONTROLS:	1) INFILTRATION DRAINS 2) INFILTRATION AREAS 3) SILT DEWATERING BAGS



DRAWING LEGEND :

- EXISTING DRAINAGE AT THE PROPOSED WIND FARM SITE IS DOMINATED BY RECHARGE TO GROUND, AND THERE ARE NO MAPPED NATURAL WATERCOURSES POTENTIAL DRAINAGE PATHWAYS >150M LENGTH*
- PROPOSED DRAINAGE PATHWAY REDIRECTION
- PROPOSED LAND DRAIN
- UPSTREAM INTERCEPTOR DRAIN
- INFILTRATION SWALES/DSCD**
- DSCD OR OVER THE EDGE DRAINAGE (OTE)
- DIRECTION OF FLOW
- SILT FENCE(S)
- CHECK DAM 'TYPE A'
- INFILTRATION AREA
- RUN OFF DRAIN (CLEAN) WITH INFILTRATION ACD DRAIN
- EXISTING GROUND SURFACE CONTOUR (1 M INTERVAL)
- TURBINE AND SWEPT AREA
- PROPOSED NEW ROADS
- EXISTING ROADS PROPOSED TO BE UPGRADED
- TEMPORARY CONSTRUCTION ENTRANCE
- TEMPORARY CONSTRUCTION COMPOUND
- SPOIL MANAGEMENT AREA
- HARDSTAND
- ELECTRICITY CABLE TRENCH
- SUBSTATION AND TEMPORARY CONSTRUCTION COMPOUND (SUBJECT TO A SEPARATE PLANNING APPLICATION)
- CUT AREA
- FILL AREA
- DISTANCES FROM THE PROPOSED INFRASTRUCTURE TO THE APPLICATION SITE BOUNDARY
- POTENTIAL DRAINAGE FLOWPATHS ARE MODELLED BASED ON LIDAR DATA AND DO NOT INDICATE THE PRESENCE OF A DRAIN OR WATERCOURSE-DOMINATED BY RECHARGE TO GROUND, AND THERE ARE NO MAPPED NATURAL WATERCOURSES
- DSCD - DOWNSTREAM COLLECTOR DRAIN



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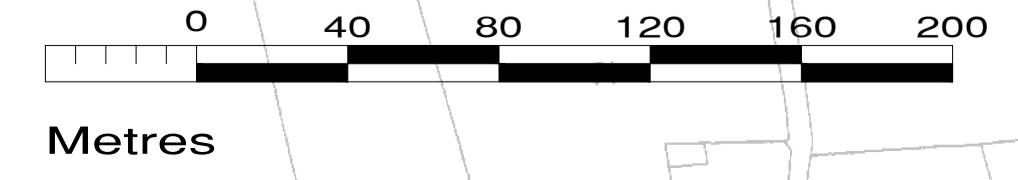
Job: LAURCLAVAGH RENEWABLE ENERGY DEVELOPMENT, CO. GALWAY

Title: PROPOSED DRAINAGE LAYOUT

Figure No: D101

Drawing No: P1574-0-0324-A1-D101-00D

Sheet Size: A1 Project No.: P1574-0
Scale: 1:2,000 (A1) Drawn By: GA
Date: 11/03/2024 Checked By: MG



POLLUTION PREVENTION NOTES:

- SITE MANAGEMENT PROPOSALS ARE INTENDED TO ENSURE PROTECTION AGAINST GROUNDWATER POLLUTION, SILTATION AND EROSION.
- SUITABLE DRAINAGE CONTROL MEASURES WILL BE IN PLACE AT ALL TIMES MANAGE SILT AND DRAINAGE RUNOFF.
- SILTY WATER CAN ARISE FROM DEWATERING EXCAVATIONS, EROSION OF EXPOSED/DISTURBED GROUND, TEMPORARY STOCKPILES, PLANT AND WHEEL WASH, SITE ROADS/TRACKS, AND DISTURBANCE OF DRAINAGE PATHWAYS.
- ALL DRAINAGE DISCHARGES TO BE MADE OVER OPEN GROUND OR INTO INFILTRATION DRAIN OR INFILTRATION AREA. ALL DISCHARGES WILL BE TO GROUND. THERE ARE NO NATURAL WATERCOURSES AT THIS SITE.
- PUMPED WATER WILL BE DIRECTED INTO TRACK SIDE INFILTRATION DRAINS AND TREATED IN THOSE DRAINS AND THE INFILTRATIONS AREAS PRIOR TO RECHARGE TO GROUND.
- PUMPING OF CLEAN WATER FROM EXCAVATIONS / OR OVER-PUMPING IN DRAINS/DITCHES WILL BE COMPLETED IN A MANNER THAT DOES NOT CAUSE SCOUR OR EROSION AT THE POINT OF RELEASE/DISCHARGE. THIS WILL BE DONE BY REDUCING THE FLOW VELOCITIES OR BY USE OF SPLASH PLATES, AND OTHER SIMILAR DISCHARGE CONTROLS.

EXCAVATIONS

- WHERE DEEP EXCAVATIONS ARE PROPOSED CUT-OFF DRAINS WILL BE USE TO REDUCE THE AMOUNT OF SURFACE WATER ENTERING THE EXCAVATION. THIS WILL BE THE CASE AROUND TURBINE BASE EXCAVATIONS.

EXPOSED GROUND & STOCKPILES

- THE AMOUNT OF EXPOSED GROUND AND TEMPORARY STOCKPILES OPEN AT ANY ONE TIME WILL BE MINIMISED, AS FAR AS PRACTICABLE.

SITE TRACKS

- USE OF TRACK SIDE SWALES (INFILTRATION DRAINS) WITH CHECK DAMS, WILL REDUCE SILT IN DRAINAGE WATER AS REQUIRED.
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IF WATER POLLUTION IS IDENTIFIED THE FOLLOWING STEPS WOULD BE ADHERED TO:

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CONTAIN - THE SOURCE OF THE POLLUTION SHOULD BE BUNDED USING A SUITABLE METHOD.

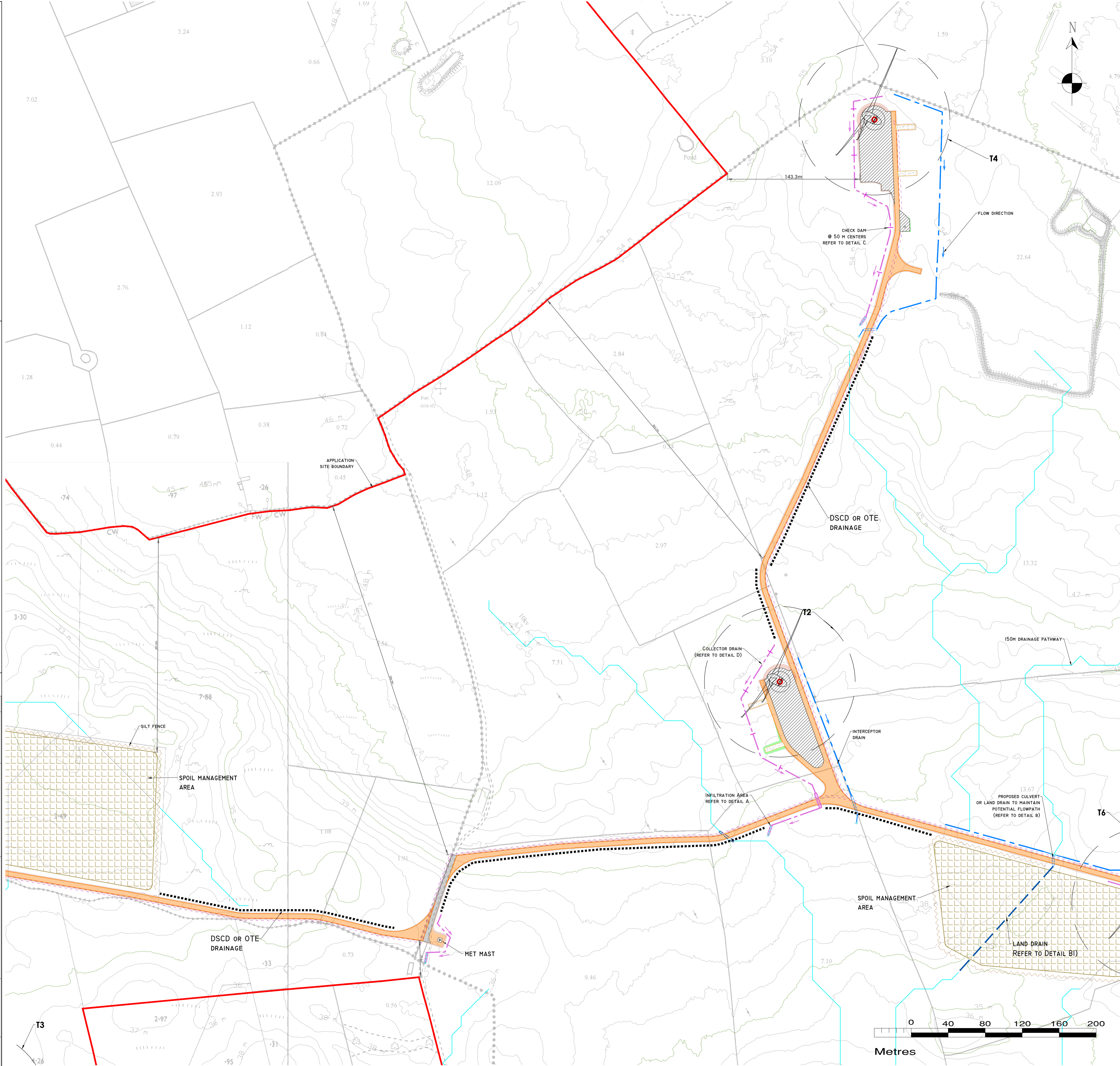
NOTIFY - THE RELEVANT AUTHORITIES (SITE MANAGER / FISHERIES / NPWS / LOCAL AUTHORITY ETC.) SHOULD BE NOTIFIED IMMEDIATELY TO ENSURE THAT MEASURES CAN BE IMPLEMENTED DOWNSTREAM TO PROTECT SENSITIVE RECEPTORS.

DRAINAGE NOTES:

- ROADWAY SURFACING DESIGN AND CONSTRUCTION TO ENGINEER'S SPECIFICATION (I.E. BY OTHERS).
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- SUDS SYSTEM TO BE CONSTRUCTED PRIOR TO, OR AT THE SAME TIME AS THE ACCESS TRACKS. INTERIM MEASURES SUCH AS THE PLACEMENT OF STRAW BALES/SILT FENCING/OR SIMILAR APPROVED METHOD OR ADDITIONAL CHECK DAMS AND SILT FENCES TO BE EMPLOYED IN ALL INSTANCES WHERE WORK CARRIED OUT TO CONSTRUCT THE ACCESS TRACKS IS LIKELY TO CAUSE ADVERSE ENVIRONMENTAL EFFECTS THROUGH INCREASED SILT LOADINGS BEING GENERATED DURING THE CONSTRUCTION PHASE.
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- BATTERS OF ALL PROPOSED SWALES / DITCHES TO HAVE A SLOPE OF BETWEEN 1 : 1.5 TO 1 : 2 DEPENDING UPON DEPTH OF SWALE/DITCH AND WILL BE LEFT AS CUT TO RE-VEGETATE WITH LOCAL SPECIES.
- TRACK SIDE SWALES / INFILTRATION DRAINS TO BE SHALLOW WITH MODERATE GRADIENTS TO PREVENT SCOURING. IN STEEP AREAS CHECK DAMS WILL BE INSTALLED TO REDUCE FLOW VELOCITIES AND PROVIDE SOURCE CONTROL OF SILT CONTAINMENT.
- STRAW BALES / OR SIMILAR AND SILT FENCES TO BE USED ALSO AROUND SPOIL STORAGE AREAS TO MITIGATE SILT RUNOFF. SILT FENCES WILL BE REMOVED WHEN SUITABLE VEGETATION COVER IS ESTABLISHED.
- SLOPES OF THE SWALES / DITCHES TO BE VEGETATED OR PROTECTED FROM EROSION UNTIL VEGETATION HAS BEEN ESTABLISHED. STRIPPED VEGETATIVE LAYER ('SCRAW') FROM EXCAVATIONS TO BE STORED LOCALLY AND USED TO LINE SLOPES AND BASE OF SWALES / DITCHES OR LONGITUDINAL MOUNDS OF VEGETATION SWALES AT INFILTRATION AREAS.
- AREAS STRIPPED OF VEGETATION SHOULD BE KEPT TO A MINIMUM.
- CLEAN STONE FLOW CONTROL CHECK DAMS TO BE MADE OF LOCALLY WON / GEOLOGICALLY SIMILAR WELL GRADED STONE. AGGREGATE SIZE FOR STONE CHECK DAMS TO BE TYPICALLY 20 - 40MM CLEAN STONE. ON SLOPING SECTIONS OF THE ACCESS TRACKS, 40MM CHECK DAMS TO BE PROTECTED FROM WASHING AWAY THROUGH THE PLACEMENT OF 100MM STONE ON THE DOWNHILL FACE OF THE CHECK DAM AND BY WRAPPING IN GEOTEXTILE.
- BUILD UP OF SILT LEVELS AT CHECK DAMS TO BE REMOVED AND DISPOSED OF APPROPRIATELY. SILT LEVELS AT CHECK DAMS TO BE VISUALLY INSPECTED AS PART OF AN ONGOING DRAINAGE MAINTENANCE PROGRAMME DURING THE CONSTRUCTION PHASE. WHERE CHECK DAMS BECOME CLOGGED WITH SILT OR VEGETATION, STONE CHECK DAM TO BE REMOVED AND REPLACED SUBSEQUENT TO THE REMOVAL OF SILT.
- SPACING AND FREQUENCY OF CHECK DAMS WILL BE DEPENDENT UPON LONGITUDINAL GRADIENT OF SWALE/INFILTRATION DRAIN.
- OIL FUEL SHOULD BE STORED WITHIN BUNDED CONTAINMENT STRUCTURES.
- SILT BAGS WILL BE USED ON SITE AS NECESSARY.

MITIGATION / DRAINAGE CONTROLS AVAILABLE FOR USE ACROSS THE SITE

MANAGEMENT TYPE	DESCRIPTION OF SUDS DRAINAGE CONTROL METHODS
AVOIDANCE CONTROLS	1) USING SMALL WORKING AREAS 2) WORKING IN APPROPRIATE WEATHER, AND SUSPENDING CERTAIN WORK ACTIVITIES IN ADVANCE OF FORECASTED WET WEATHER
SOURCE CONTROLS	1) USE OF UPSTREAM INTERCEPTOR DRAINS AND DOWNSTREAM COLLECTOR DRAINS / OVERSIZED SWALES, OVERFLOW DRAINS, LAND DRAINS AND CULVERT PIPES. 2) EROSION AND VELOCITY CONTROL MEASURES SUCH AS: A) CHECK DAMS AND SAND BAGS B) OYSTER BAGS FILLED WITH GRAVEL C) FILTER FABRICS D) AND OTHER SIMILAR/EQUIVALENT OR APPROPRIATE SYSTEMS. 3) USING SMALL WORKING AREAS 4) SURROUNDING TEMPORARY STOCKPILES WITH SILT FENCING 5) WEATHERING OFF / SEALING PEAT STOCKPILES
IN-LINE CONTROLS	1) INTERCEPTOR DRAINS, OVERSIZED SWALES/COLLECTOR DRAINS 2) EROSION AND VELOCITY CONTROL MEASURES SUCH AS: A) CHECK DAMS AND SAND BAGS B) OYSTER BAGS FILLED WITH GRAVEL C) FILTER FABRICS D) STRAW BALES E) AND/OR OTHER SIMILAR/EQUIVALENT OR APPROPRIATE SYSTEMS. 3) SILT FENCES, FILTER FABRICS 4) TEMPORARY SUMPS, PUMPING SYSTEMS 5) SWALES/INFILTRATION DRAINS, AND INFILTRATION AREAS
WATER TREATMENT CONTROLS	1) TEMPORARY SUMPS 2) TEMPORARY STORAGE LAGOONS 3) INFILTRATION DRAINS / AREAS 4) PROPRIETARY SETTLEMENT SYSTEMS SUCH AS SILTBUSTER, AND/OR OTHER SIMILAR/EQUIVALENT OR APPROPRIATE SYSTEMS. 5) SILT DEWATERING BAGS
OUTFALL CONTROLS	1) INFILTRATION DRAINS 2) INFILTRATION AREAS 3) SILT DEWATERING BAGS

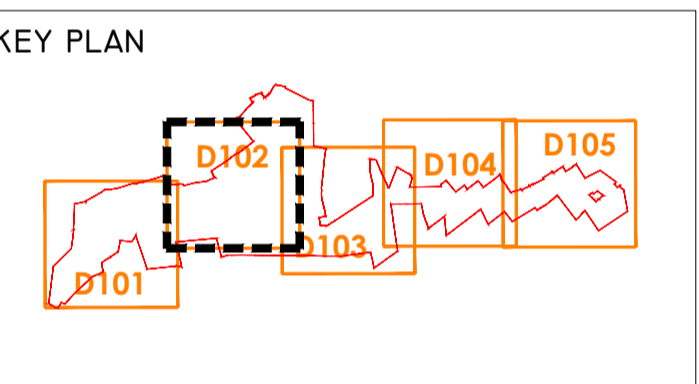


DRAWING LEGEND :

- EXISTING DRAINAGE AT THE PROPOSED WIND FARM SITE IS DOMINATED BY RECHARGE TO GROUND, AND THERE ARE NO MAPPED NATURAL WATERCOURSES >150M LENGTH*
- PROPOSED DRAINAGE PATHWAY REDIRECTION
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- INFILTRATION SWALES/DSCD**
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- PROPOSED NEW ROADS
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* POTENTIAL DRAINAGE FLOWPATHS ARE MODELLED BASED ON LIDAR DATA AND DO NOT INDICATE THE PRESENCE OF A DRAIN OR WATERCOURSE-DOMINATED BY RECHARGE TO GROUND, AND THERE ARE NO MAPPED NATURAL WATERCOURSES

** DSCD - DOWNSTREAM COLLECTOR DRAIN



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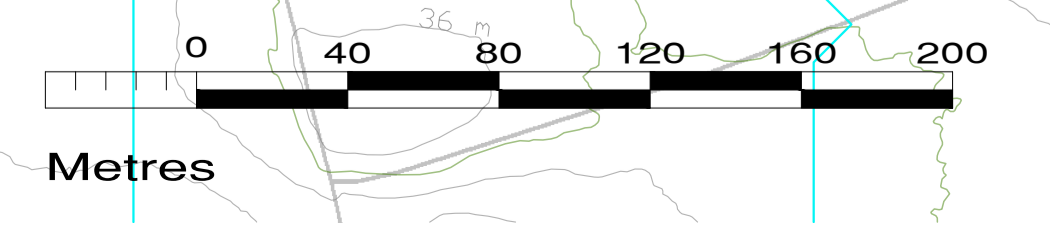
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Title: PROPOSED DRAINAGE LAYOUT

Figure No: D102

Drawing No: P1574-0-0324-A1-D102-00D

Sheet Size: A1 Project No.: P1574-0
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Date: 11/03/2024 Checked By: MG



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- ALL DRAINAGE DISCHARGES TO BE MADE OVER OPEN GROUND OR INTO INFILTRATION DRAIN OR INFILTRATION AREA. ALL DISCHARGES WILL BE TO GROUND. THERE ARE NO NATURAL WATERCOURSES AT THIS SITE.
- PUMPED WATER WILL BE DIRECTED INTO TRACK SIDE INFILTRATION DRAINS AND TREATED IN THOSE DRAINS AND THE INFILTRATION AREAS PRIOR TO RECHARGE TO GROUND.
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- THE AMOUNT OF EXPOSED GROUND AND TEMPORARY STOCKPILES OPEN AT ANY ONE TIME WILL BE MINIMISED, AS FAR AS PRACTICABLE.

SITE TRACKS

- USE OF TRACK SIDE SWALES (INFILTRATION DRAINS) WITH CHECK DAMS, WILL REDUCE SILT IN DRAINAGE WATER AS REQUIRED.
- CHECK DAMS TO BE INSPECTED AND CLEANED REGULARLY.

REFUELLING

- REFUELLING OF MOBILE PLANT WILL BE COMPLETED IN DESIGNATED REFUELLING AREAS ONLY, PREFERABLY ON AN IMPERMEABLE SURFACE AND AWAY FROM INFILTRATION DRAINS / DITCHES.
- SPILL KITS AND DRIP TRAYS WILL BE AVAILABLE ON SITE FOR USE AS REQUIRED.

CONCRETE

- CARE WILL BE TAKEN WHEN COMPLETING CONCRETE WORKS ON SITE TO ENSURE NO DISCHARGES TO GROUND OCCUR.
- CONCRETE WASH WATER, AND WASTE CONCRETE WILL BE MANAGED APPROPRIATELY ON SITE.

IF WATER POLLUTION IS IDENTIFIED THE FOLLOWING STEPS WOULD BE ADHERED TO:

STOP - WORK IN THE IMMEDIATE AREA SHOULD BE STOPPED AND THE SOURCE OF THE POLLUTION IDENTIFIED.

CONTAIN - THE SOURCE OF THE POLLUTION SHOULD BE BUNDED USING A SUITABLE METHOD.

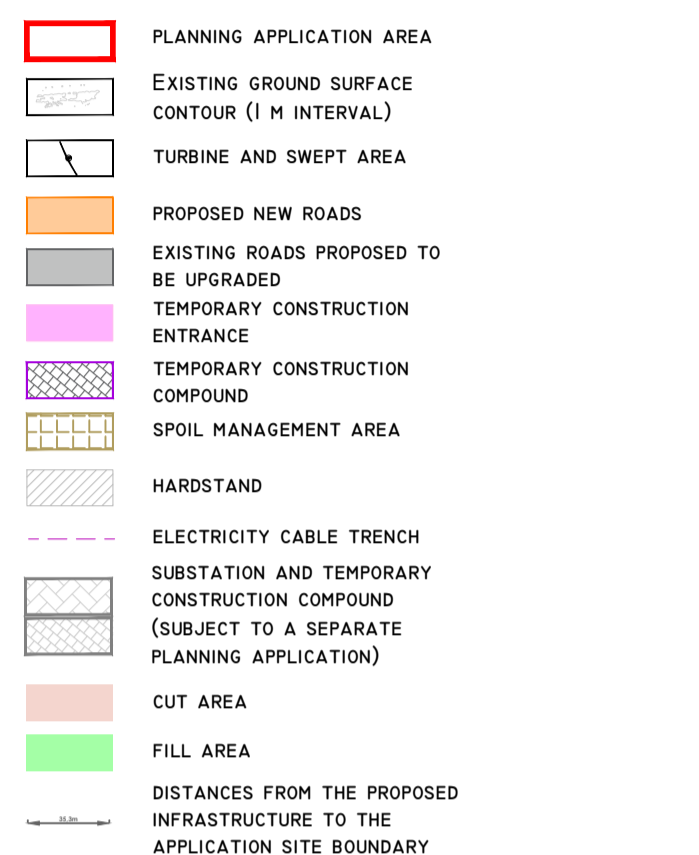
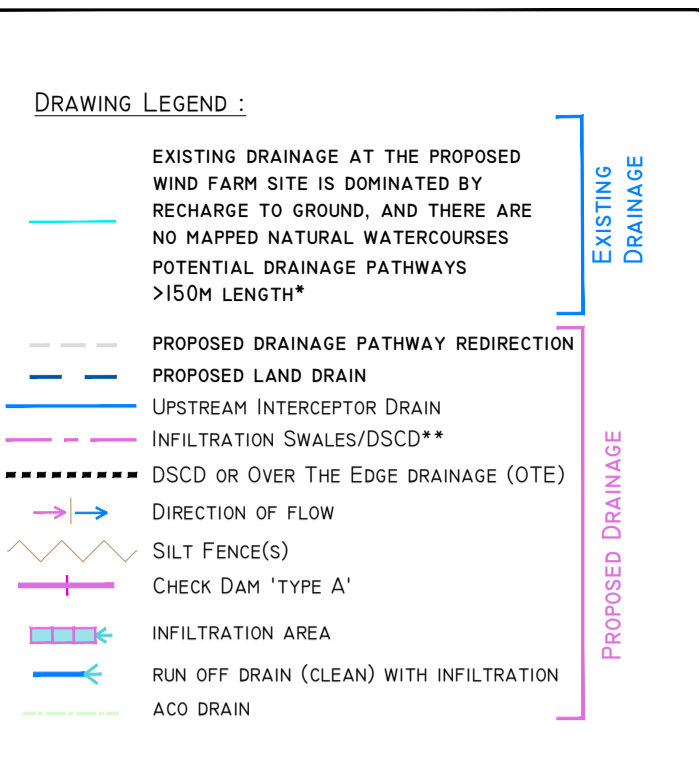
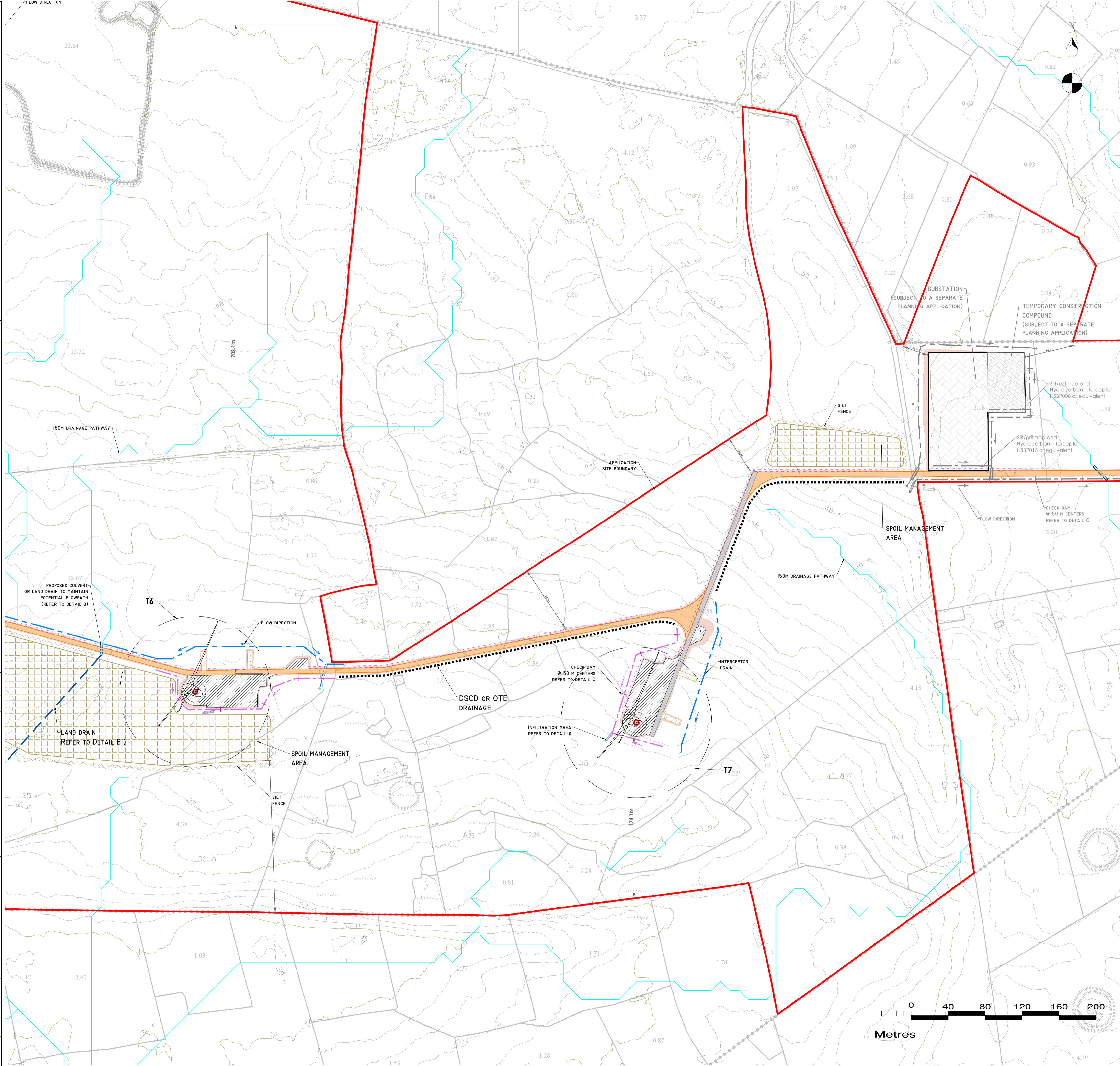
NOTIFY - THE RELEVANT AUTHORITIES (SITE MANAGER / FISHERIES / NPWS / LOCAL AUTHORITY ETC.) SHOULD BE NOTIFIED IMMEDIATELY TO ENSURE THAT MEASURES CAN BE IMPLEMENTED DOWNSTREAM TO PROTECT SENSITIVE RECEPTORS.

DRAINAGE NOTES:

- ROADWAY SURFACING DESIGN AND CONSTRUCTION TO ENGINEER'S SPECIFICATION (I.E. BY OTHERS).
- SPARE STRAW BALES/SILT FENCING/ OR SIMILAR, TO BE STORED ON SITE. THE LEVEL OF SILT IN DRAINAGE WATER DURING CONSTRUCTION IS TO BE MONITORED VISUALLY AND EXCESSIVE SILT LEVELS IN ANY AREA TO BE TEMPORARILY MANAGED BY PLACING ADDITIONAL CHECK DAMS, SILT FENCES, STRAW BALES / OR SIMILAR AT THE PROBLEM AREAS.
- SUDS SYSTEM TO BE CONSTRUCTED PRIOR TO, OR AT THE SAME TIME AS THE ACCESS TRACKS. INTERIM MEASURES SUCH AS THE PLACEMENT OF STRAW BALES/SILT FENCING/OR SIMILAR APPROVED METHOD OR ADDITIONAL CHECK DAMS AND SILT FENCES TO BE EMPLOYED IN ALL INSTANCES WHERE WORK CARRIED OUT TO CONSTRUCT THE ACCESS TRACKS IS LIKELY TO CAUSE ADVERSE ENVIRONMENTAL EFFECTS THROUGH INCREASED SILT LOADINGS BEING GENERATED DURING THE CONSTRUCTION PHASE.
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- DRAINAGE SWALES / DOWNSTREAM COLLECTOR DRAINS TO BE EXCAVATED ADJACENT TO THE ACCESS TRACKS AS REQUIRED. REGULAR CROSS DRAINS/FIELD DRAINS TO BE LOCATED ALONG ACCESS TRACKS TO MAINTAIN DRAINAGE PATHWAYS, AND TO PREVENT EXCESSIVE VOLUMES OF WATER COLLECTING IN THE SWALES / DITCHES. LOCATIONS OF CROSS DRAINS TO BE AGREED WITH THE ENGINEER ON SITE.
- BATTERS OF ALL PROPOSED SWALES / DITCHES TO HAVE A SLOPE OF BETWEEN 1 : 1.5 TO 1 : 2 DEPENDING UPON DEPTH OF SWALE/DITCH AND WILL BE LEFT AS CUT TO RE-VEGETATE WITH LOCAL SPECIES.
- TRACK SIDE SWALES / INFILTRATION DRAINS TO BE SHALLOW WITH MODERATE GRADIENTS TO PREVENT SCOURING. IN STEEP AREAS CHECK DAMS WILL BE INSTALLED TO REDUCE FLOW VELOCITIES AND PROVIDE SOURCE CONTROL OF SILT CONTAINMENT.
- STRAW BALES / OR SIMILAR AND SILT FENCES TO BE USED ALSO AROUND SPOIL STORAGE AREAS TO MITIGATE SILT RUNOFF. SILT FENCES WILL BE REMOVED WHEN SUITABLE VEGETATION COVER IS ESTABLISHED.
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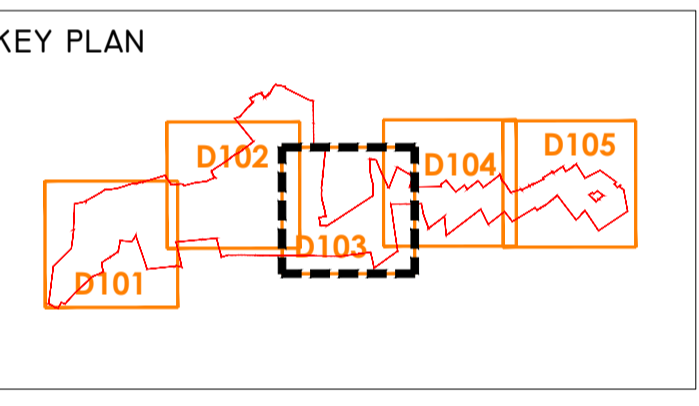
MITIGATION / DRAINAGE CONTROLS AVAILABLE FOR USE ACROSS THE SITE

MANAGEMENT TYPE	DESCRIPTION OF SUDS DRAINAGE CONTROL METHODS
AVOIDANCE CONTROLS	1) USING SMALL WORKING AREAS 2) WORKING IN APPROPRIATE WEATHER, AND SUSPENDING CERTAIN WORK ACTIVITIES IN ADVANCE OF FORECASTED WET WEATHER
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IN-LINE CONTROLS	1) INTERCEPTOR DRAINS, OVERSIZED SWALES/COLLECTOR DRAINS 2) EROSION AND VELOCITY CONTROL MEASURES SUCH AS: A) CHECK DAMS AND SAND BAGS B) OYSTER BAGS FILLED WITH GRAVEL C) FILTER FABRICS D) STRAW BALES E) AND/OR OTHER SIMILAR/EQUIVALENT OR APPROPRIATE SYSTEMS. 3) SILT FENCES, FILTER FABRICS 4) TEMPORARY SUDS, PUMPING SYSTEMS 5) SWALES/INFILTRATION DRAINS, AND INFILTRATION AREAS
WATER TREATMENT CONTROLS	1) TEMPORARY SUDS 2) TEMPORARY STORAGE LAGOONS 3) INFILTRATION DRAINS / AREAS 4) PROPRIETARY SETTLEMENT SYSTEMS SUCH AS SILTBUSTER, AND/OR OTHER SIMILAR/EQUIVALENT OR APPROPRIATE SYSTEMS. 5) SILT DEWATERING BAGS
OUTFALL CONTROLS	1) INFILTRATION DRAINS 2) INFILTRATION AREAS 3) SILT DEWATERING BAGS



* POTENTIAL DRAINAGE FLOWPATHS ARE MODELLED BASED ON LIDAR DATA AND DO NOT INDICATE THE PRESENCE OF A DRAIN OR WATERCOURSE FORMED BY RECHARGE TO GROUND, AND THERE ARE NO MAPPED NATURAL WATERCOURSES

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Job: LAURCLAVAGH RENEWABLE ENERGY DEVELOPMENT, CO. GALWAY

Title: PROPOSED DRAINAGE LAYOUT

Figure No: D103

Drawing No: P1574-0-0324-A1-D103-00D

Sheet Size: A1 Project No.: P1574-0

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Date: 11/03/2024 Checked By: MG

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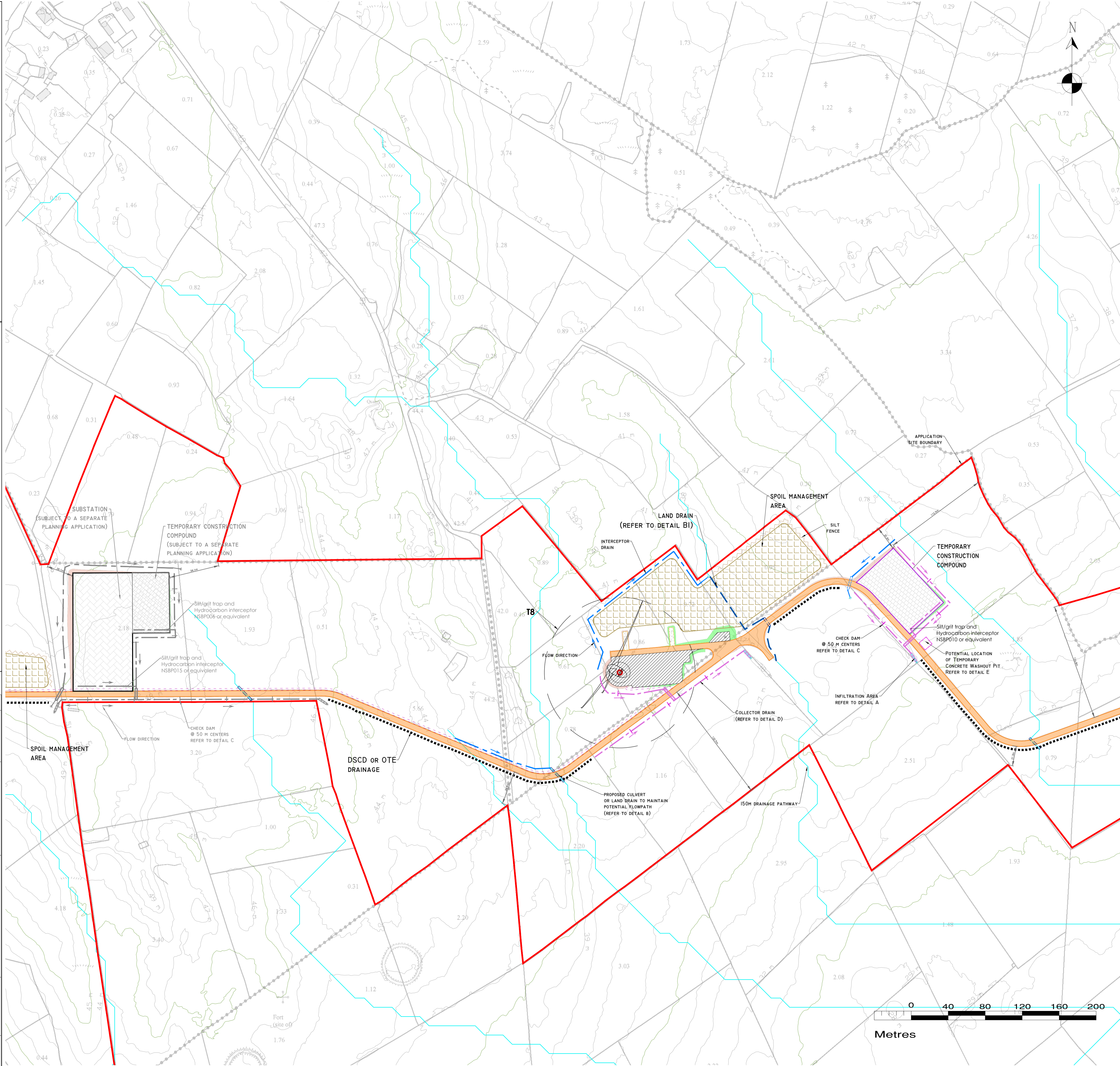
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- NOTIFY** - THE RELEVANT AUTHORITIES (SITE MANAGER / FISHERIES / NPWS / LOCAL AUTHORITY ETC.) SHOULD BE NOTIFIED IMMEDIATELY TO ENSURE THAT MEASURES CAN BE IMPLEMENTED DOWNSTREAM TO PROTECT SENSITIVE RECEPTORS.

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MITIGATION / DRAINAGE CONTROLS AVAILABLE FOR USE ACROSS THE SITE

MANAGEMENT TYPE	DESCRIPTION OF SUDS DRAINAGE CONTROL METHODS
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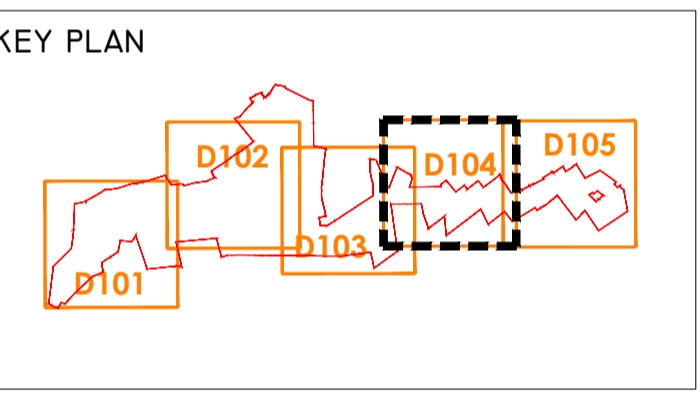
DRAWING LEGEND :

- EXISTING DRAINAGE AT THE PROPOSED WIND FARM SITE IS DOMINATED BY RECHARGE TO GROUND, AND THERE ARE NO MAPPED NATURAL WATERCOURSES POTENTIAL DRAINAGE PATHWAYS >150M LENGTH*
- PROPOSED DRAINAGE PATHWAY REDIRECTION
- PROPOSED LAND DRAIN
- UPSTREAM INTERCEPTOR DRAIN
- INFILTRATION SWALES/DSCD**
- DSCD OR OVER THE EDGE DRAINAGE (OTE)
- DIRECTION OF FLOW
- SILT FENCE(S)
- CHECK DAM *TYPE A*
- INFILTRATION AREA
- RUN OFF DRAIN (CLEAN) WITH INFILTRATION
- ACC DRAIN

- PLANNING APPLICATION AREA
- EXISTING GROUND SURFACE CONTOUR (1 M INTERVAL)
- TURBINE AND SWEEP AREA
- PROPOSED NEW ROADS
- EXISTING ROADS PROPOSED TO BE UPGRADED
- TEMPORARY CONSTRUCTION ENTRANCE
- TEMPORARY CONSTRUCTION COMPOUND
- SPOIL MANAGEMENT AREA
- HARDSTAND
- ELECTRICITY CABLE TRENCH
- SUBSTATION AND TEMPORARY CONSTRUCTION COMPOUND (SUBJECT TO A SEPARATE PLANNING APPLICATION)
- CUT AREA
- FILL AREA
- DISTANCES FROM THE PROPOSED INFRASTRUCTURE TO THE APPLICATION SITE BOUNDARY

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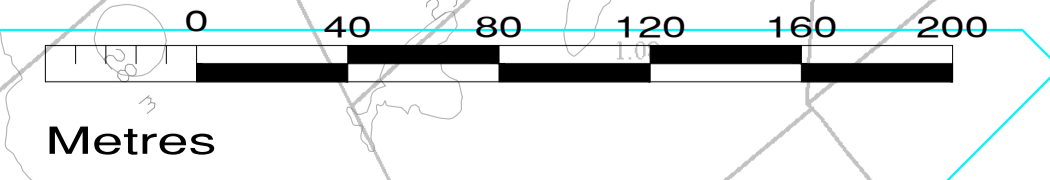
Job: LAURCLAVAGH RENEWABLE ENERGY DEVELOPMENT, CO. GALWAY

Title: PROPOSED DRAINAGE LAYOUT

Figure No: D104

Drawing No: P1574-0-0324-A1-D104-00D

Sheet Size: A1 Project No.: P1574-0
Scale: 1:2,000 (A1) Drawn By: GA
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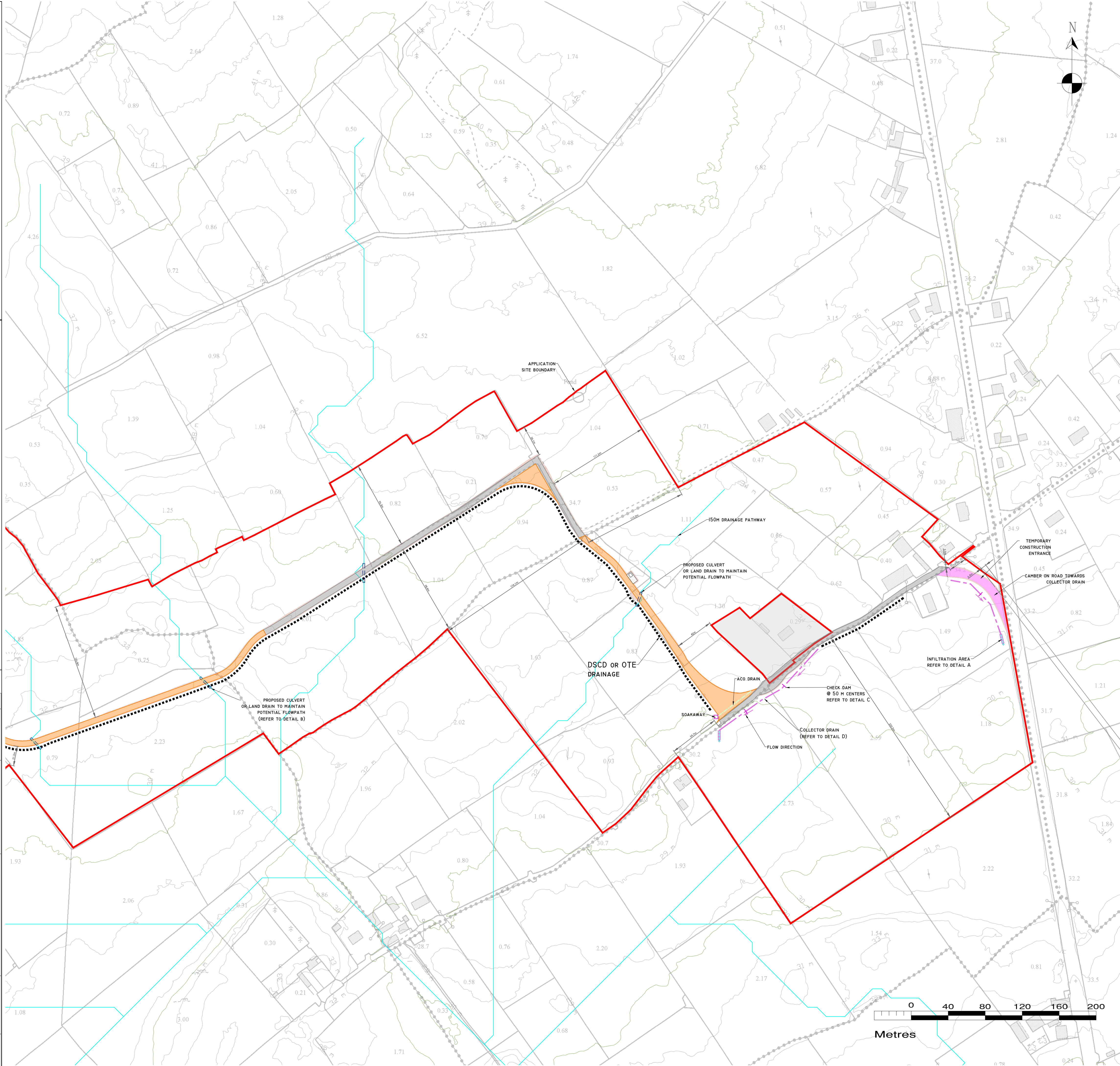
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- ROADWAY SURFACING DESIGN AND CONSTRUCTION TO ENGINEER'S SPECIFICATION (I.E. BY OTHERS).
 - SPARE STRAW BALES/SILT FENCING/ OR SIMILAR, TO BE STORED ON SITE. THE LEVEL OF SILT IN DRAINAGE WATER DURING CONSTRUCTION IS TO BE MONITORED VISUALLY AND EXCESSIVE SILT LEVELS IN ANY AREA TO BE TEMPORARILY MANAGED BY PLACING ADDITIONAL CHECK DAMS, SILT FENCES, STRAW BALES / OR SIMILAR AT THE PROBLEM AREAS.
 - SUDS SYSTEM TO BE CONSTRUCTED PRIOR TO, OR AT THE SAME TIME AS THE ACCESS TRACKS. INTERIM MEASURES SUCH AS THE PLACEMENT OF STRAW BALES/SILT FENCING/OR SIMILAR APPROVED METHOD OR ADDITIONAL CHECK DAMS AND SILT FENCES TO BE EMPLOYED IN ALL INSTANCES WHERE WORK CARRIED OUT TO CONSTRUCT THE ACCESS TRACKS IS LIKELY TO CAUSE ADVERSE ENVIRONMENTAL EFFECTS THROUGH INCREASED SILT LOADINGS BEING GENERATED DURING THE CONSTRUCTION PHASE.
 - SUITABLE DRAINAGE MANAGEMENT/PREVENTION MEASURES WILL BE IN PLACE AT ALL TIMES TO PREVENT THE CONVEYANCE OF SIGNIFICANT VOLUMES OF SILT TO THE DRAINAGE SYSTEM.
 - INTERCEPTOR SWALES / DITCHES TO BE USED TO COLLECT UPSTREAM CLEAN SURFACE WATER FLOWS. REGULAR CROSS DRAINS / FIELD DRAINS WILL BE REQUIRED TO TRANSFER RUNOFF IN INTERCEPTOR DRAINS TO SUITABLE DOWNSTREAM RECHARGE AREAS.
 - DRAINAGE SWALES / DOWNSTREAM COLLECTOR DRAINS TO BE EXCAVATED ADJACENT TO THE ACCESS TRACKS AS REQUIRED. REGULAR CROSS DRAINS/FIELD DRAINS TO BE LOCATED ALONG ACCESS TRACKS TO MAINTAIN DRAINAGE PATHWAYS, AND TO PREVENT EXCESSIVE VOLUMES OF WATER COLLECTING IN THE SWALES / DITCHES. LOCATIONS OF CROSS DRAINS TO BE AGREED WITH THE ENGINEER ON SITE.
 - BATTERS OF ALL PROPOSED SWALES / DITCHES TO HAVE A SLOPE OF BETWEEN 1 : 1.5 TO 1 : 2 DEPENDING UPON DEPTH OF SWALE/DITCH AND WILL BE LEFT AS CUT TO RE-VEGETATE WITH LOCAL SPECIES.
 - TRACK SIDE SWALES / INFILTRATION DRAINS TO BE SHALLOW WITH MODERATE GRADIENTS TO PREVENT SCOURING. IN STEEP AREAS CHECK DAMS WILL BE INSTALLED TO REDUCE FLOW VELOCITIES AND PROVIDE SOURCE CONTROL OF SILT CONTAINMENT.
 - STRAW BALES / OR SIMILAR AND SILT FENCES TO BE USED ALSO AROUND SPOIL STORAGE AREAS TO MITIGATE SILT RUNOFF. SILT FENCES WILL BE REMOVED WHEN SUITABLE VEGETATION COVER IS ESTABLISHED.
 - SLOPES OF THE SWALES / DITCHES TO BE VEGETATED OR PROTECTED FROM EROSION UNTIL VEGETATION HAS BEEN ESTABLISHED. STRIPPED VEGETATIVE LAYER ('SCRAW') FROM EXCAVATIONS TO BE STORED LOCALLY AND USED TO LINE SLOPES AND BASE OF SWALES / DITCHES OR LONGITUDINAL MOUNDS OF VEGETATION SWALES AT INFILTRATION AREAS.
 - AREAS STRIPPED OF VEGETATION SHOULD BE KEPT TO A MINIMUM.
 - CLEAN STONE FLOW CONTROL CHECK DAMS TO BE MADE OF LOCALLY WON / GEOLOGICALLY SIMILAR WELL GRADED STONE. AGGREGATE SIZE FOR STONE CHECK DAMS TO BE TYPICALLY 20 - 40MM CLEAN STONE. ON SLOPING SECTIONS OF THE ACCESS TRACKS, 100MM CHECK DAMS TO BE PROTECTED FROM WASHING AWAY THROUGH THE PLACEMENT OF 100M STONE ON THE DOWNHILL FACE OF THE CHECK DAM AND BY WRAPPING IN GEOTEXTILE.
 - BUILD UP OF SILT LEVELS AT CHECK DAMS TO BE REMOVED AND DISPOSED OF APPROPRIATELY. SILT LEVELS AT CHECK DAMS TO BE VISUALLY INSPECTED AS PART OF AN ONGOING DRAINAGE MAINTENANCE PROGRAMME DURING THE CONSTRUCTION PHASE. WHERE CHECK DAMS BECOME CLOGGED WITH SILT OR VEGETATION, STONE CHECK DAM TO BE REMOVED AND REPLACED SUBSEQUENT TO THE REMOVAL OF SILT.
 - SPACING AND FREQUENCY OF CHECK DAMS WILL BE DEPENDENT UPON LONGITUDINAL GRADIENT OF SWALE/INFILTRATION DRAIN.
 - OIL FUEL SHOULD BE STORED WITHIN BUNDED CONTAINMENT STRUCTURES.
 - SILT BAGS WILL BE USED ON SITE AS NECESSARY.

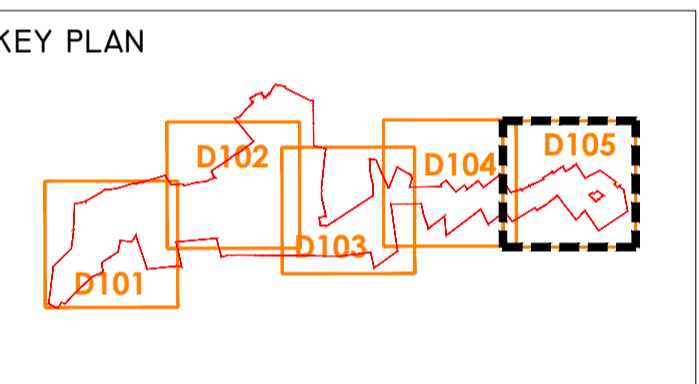
MITIGATION / DRAINAGE COINTROLS AVAILABLE FOR USE ACROSS THE SITE

MANAGEMENT TYPE	DESCRIPTION OF SUDS DRAINAGE CONTROL METHODS
AVOIDANCE CONTROLS	1) USING SMALL WORKING AREAS 2) WORKING IN APPROPRIATE WEATHER, AND SUSPENDING CERTAIN WORK ACTIVITIES IN ADVANCE OF FORECASTED WET WEATHER
SOURCE CONTROLS	1) USE OF UPSTREAM INTERCEPTOR DRAINS AND DOWNSTREAM COLLECTOR DRAINS / OVERSIZED SWALES, DIVERSION DRAINS, LAND DRAINS AND CULVERT PIPES 2) EROSION AND VELOCITY CONTROL MEASURES SUCH AS: A) CHECK DAMS AND SAND BAGS B) OYSTER BAGS FILLED WITH GRAVEL C) FILTER FABRICS D) AND OTHER SIMILAR/EQUIVALENT OR APPROPRIATE SYSTEMS 3) USING SMALL WORKING AREAS 4) SURROUNDING TEMPORARY STOCKPILES WITH SILT FENCING 5) WEATHERING OFF / SEALING PEAT STOCKPILES
IN-LINE CONTROLS	1) INTERCEPTOR DRAINS, OVERSIZED SWALES/COLLECTOR DRAINS 2) EROSION AND VELOCITY CONTROL MEASURES SUCH AS: A) CHECK DAMS AND SAND BAGS B) OYSTER BAGS FILLED WITH GRAVEL C) FILTER FABRICS D) STRAW BALES E) AND/OR OTHER SIMILAR/EQUIVALENT OR APPROPRIATE SYSTEMS. 3) SILT FENCES, FILTER FABRICS 4) TEMPORARY SUMPS, PUMPING SYSTEMS 5) SWALES/INFILTRATION DRAINS, AND INFILTRATION AREAS
WATER TREATMENT CONTROLS	1) TEMPORARY SUMPS 2) TEMPORARY STORAGE LAGOONS 3) INFILTRATION DRAINS / AREAS 4) PROPRIETARY SETTLEMENT SYSTEMS SUCH AS SILTBUSTER, AND/OR OTHER SIMILAR/EQUIVALENT OR APPROPRIATE SYSTEMS. 5) SILT DEWATERING BAGS
OUTFALL CONTROLS	1) INFILTRATION DRAINS 2) INFILTRATION AREAS 3) SILT DEWATERING BAGS



DRAWING LEGEND:

- EXISTING DRAINAGE AT THE PROPOSED WIND FARM SITE IS DOMINATED BY RECHARGE TO GROUND, AND THERE ARE NO MAPPED NATURAL WATERCOURSES POTENTIAL DRAINAGE PATHWAYS >150M LENGTH*
- PROPOSED DRAINAGE PATHWAY REDIRECTION
- PROPOSED LAND DRAIN
- UPSTREAM INTERCEPTOR DRAIN
- INFILTRATION SWALES/DSCD**
- DSCD OR OVER THE EDGE DRAINAGE (OTE)
- DIRECTION OF FLOW
- SILT FENCE(S)
- CHECK DAM "TYPE A"
- INFILTRATION AREA
- RUN OFF DRAIN (CLEAN) WITH INFILTRATION
- ACO DRAIN
- EXISTING GROUND SURFACE CONTOUR (1 M INTERVAL)
- TURBINE AND SWEEP AREA
- PROPOSED NEW ROADS
- EXISTING ROADS PROPOSED TO BE UPGRADED
- TEMPORARY CONSTRUCTION ENTRANCE
- TEMPORARY CONSTRUCTION COMPOUND
- SPOIL MANAGEMENT AREA
- HARDSTAND
- ELECTRICITY CABLE TRENCH
- SUBSTATION AND TEMPORARY CONSTRUCTION COMPOUND (SUBJECT TO A SEPARATE PLANNING APPLICATION)
- CUT AREA
- FILL AREA
- DISTANCES FROM THE PROPOSED INFRASTRUCTURE TO THE APPLICATION SITE BOUNDARY
- POTENTIAL DRAINAGE FLOWPATHS ARE MODELLED BASED ON LIDAR DATA AND DO NOT INDICATE THE PRESENCE OF A DRAIN OR WATERCOURSE/INFLUENCED BY RECHARGE TO GROUND, AND THERE ARE NO MAPPED NATURAL WATERCOURSES
- DSCD - DOWNSTREAM COLLECTOR DRAIN



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Revisions

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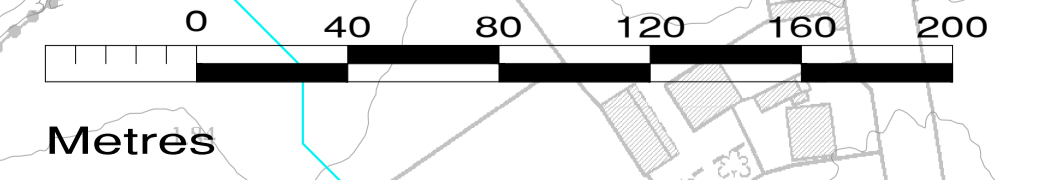
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Title: PROPOSED DRAINAGE LAYOUT

Figure No: D105

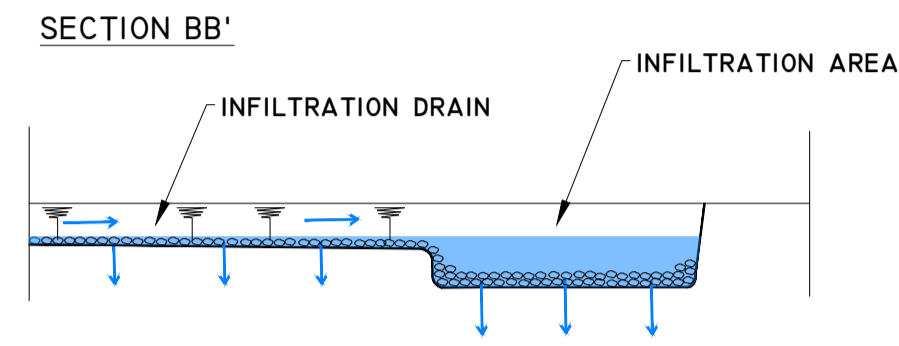
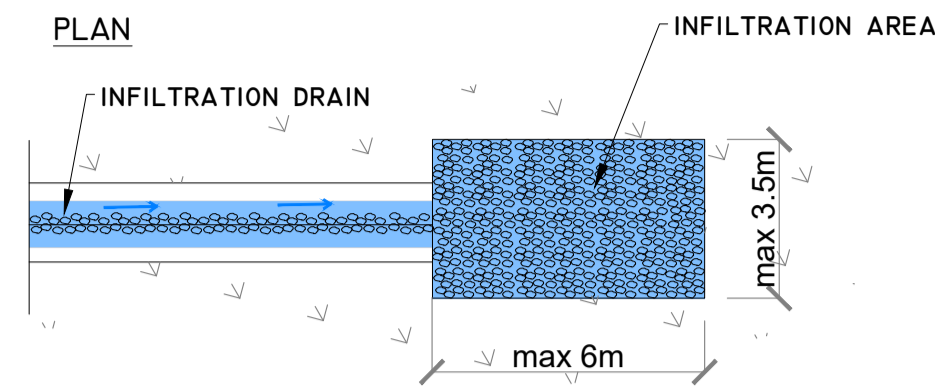
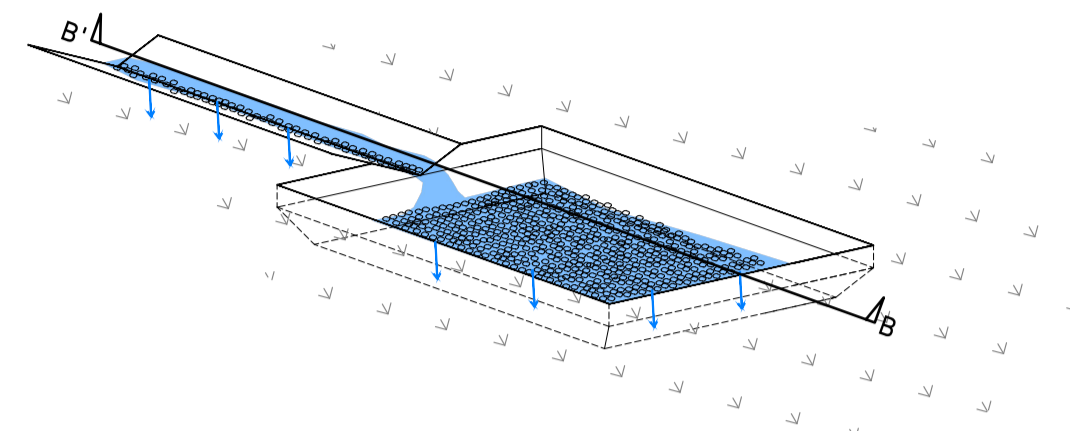
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Date: 11/03/2024 Checked By: MG



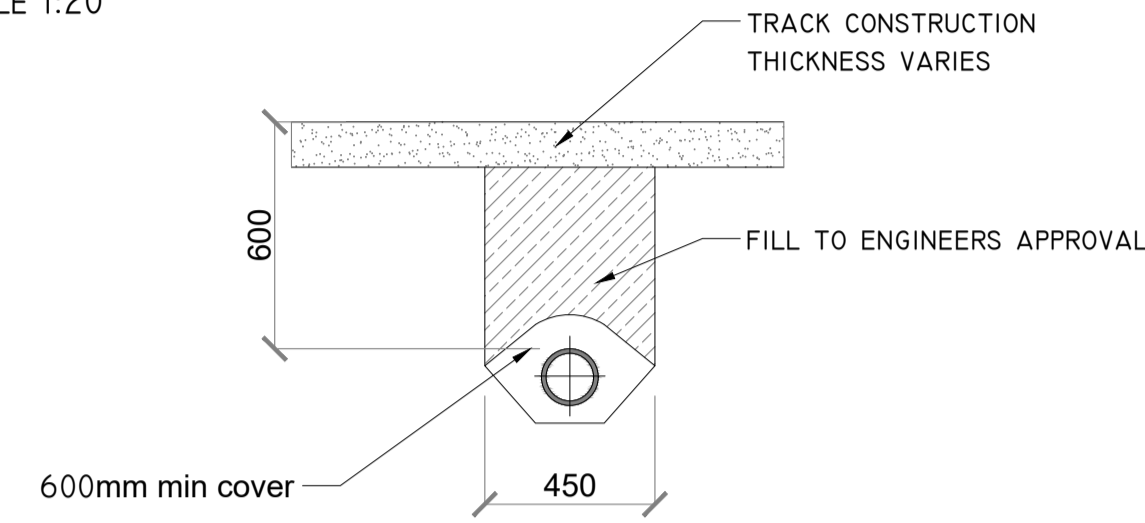
DETAIL A

INFILTRATION AREA
SCHEMATIC - NOT TO SCALE



DETAIL B

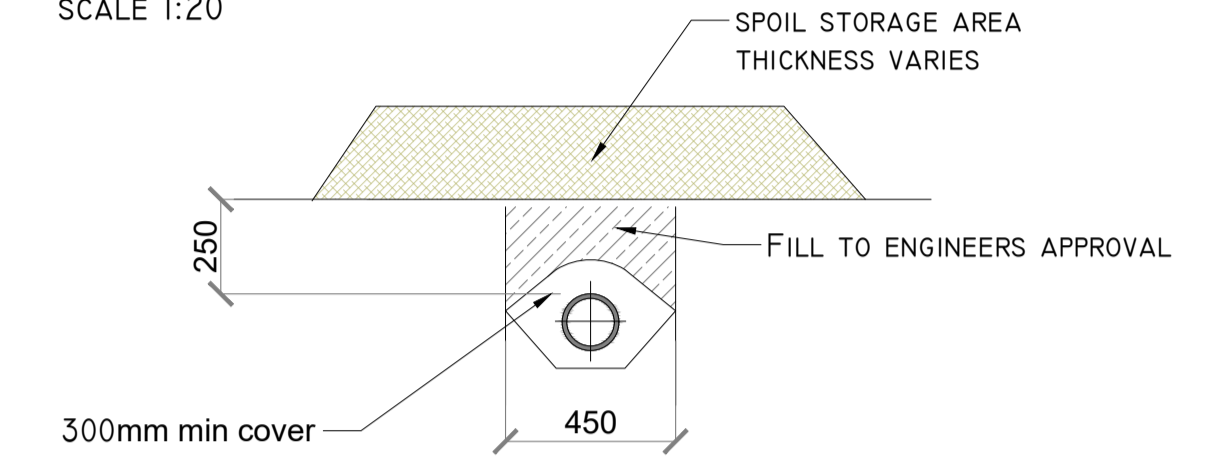
TYPICAL UNDER TRACK DRAINAGE
SCALE 1:20



NOTE:
150-300mm DIAMETER UPVC PIPES FOR
EXISTING DRAINAGE PATHWAYS
TO DISCHARGE TO TRACKSIDE INFILTRATION
DRAIN OR INFILTRATION AREA

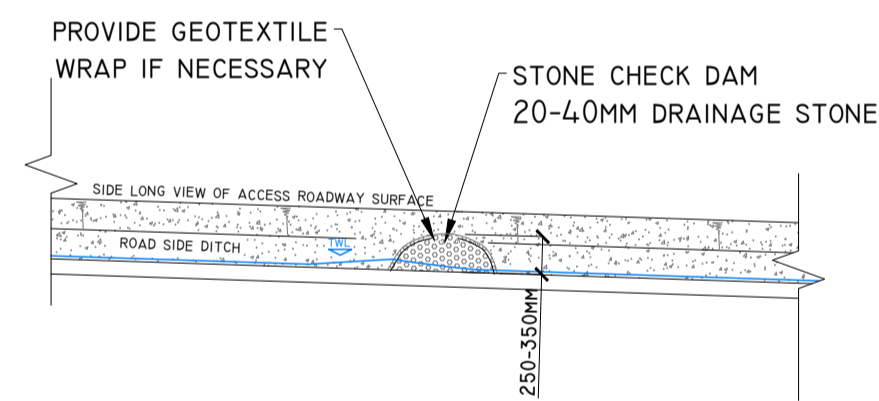
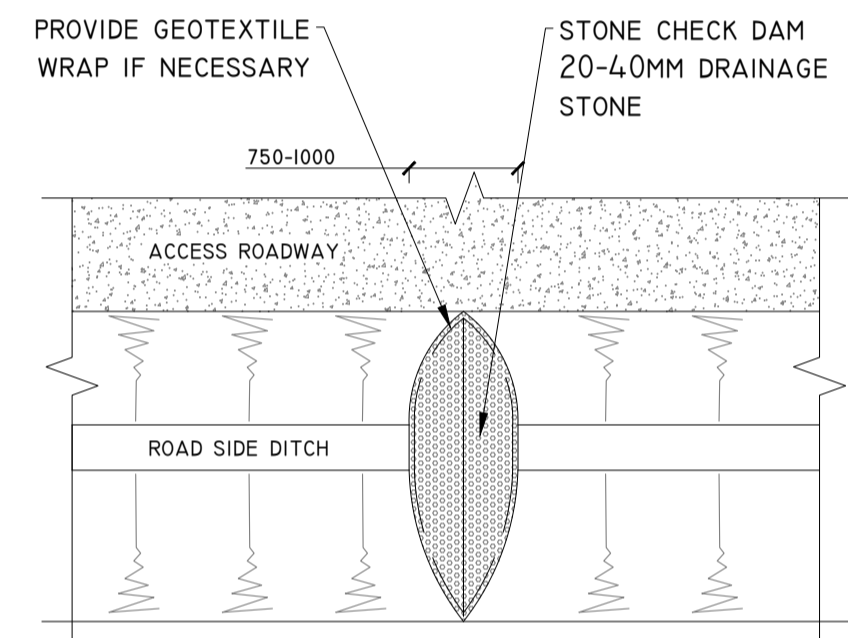
DETAIL BI

TYPICAL LAND DRAIN
SCALE 1:20



NOTE:
150-300mm DIAMETER UPVC PIPES
DISCHARGE TO DOWNSTREAM INFILTRATION DRAIN
OR INFILTRATION AREA.

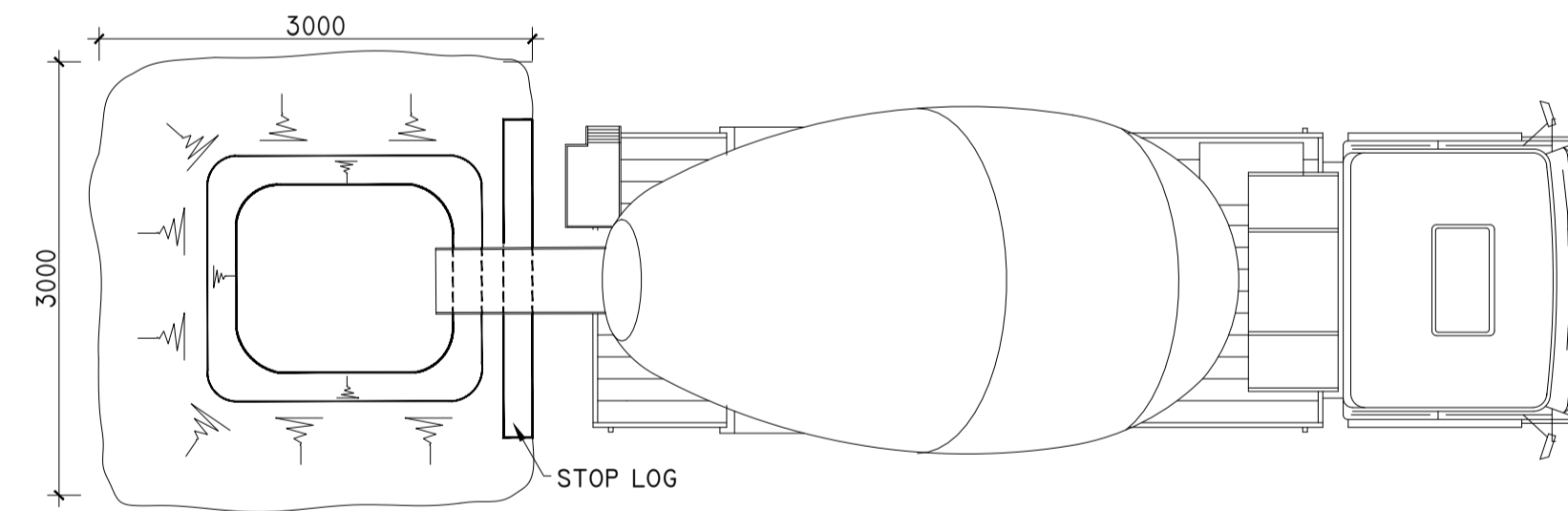
DETAIL C



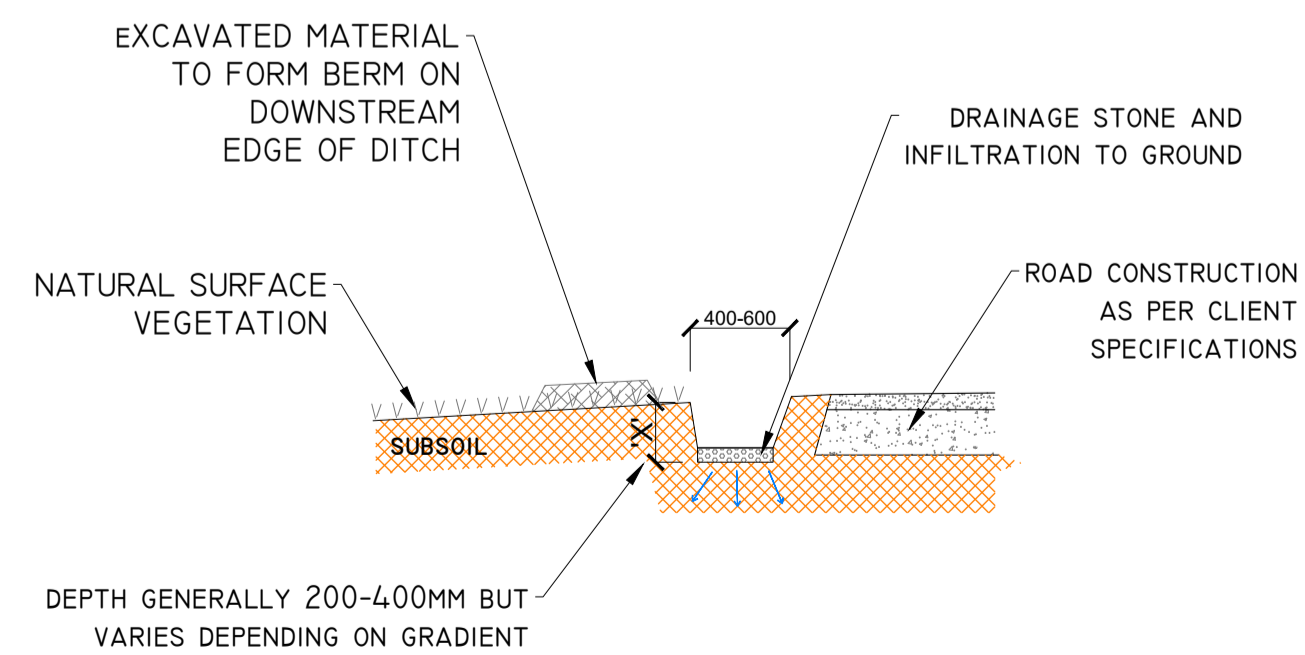
TYPE X - CHECK DAM DETAIL
SCALE 1:50

DETAIL E

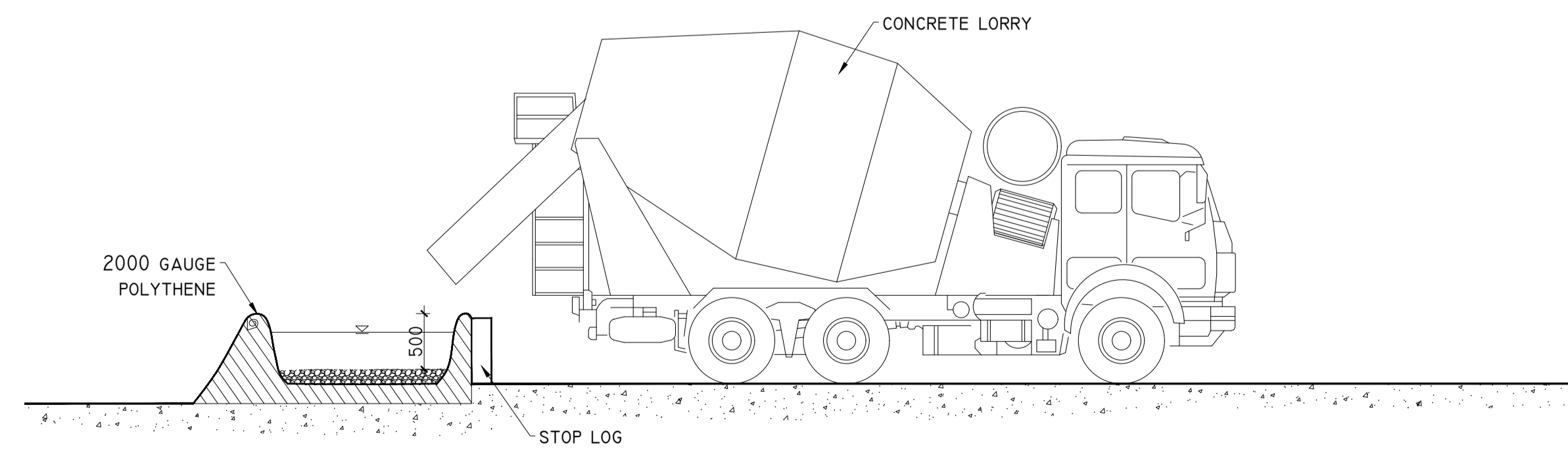
TEMPORARY CONCRETE WASH OUT PIT
SCALE 1:50



DETAIL D



TYPICAL COLLECTOR DITCH WITH INFILTRATION
SCALE 1:50



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Title: DRAINAGE DETAILS

Figure No: D501

Drawing No: P1574-0-0324-A1-D501-00B

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Scale: as shown (A1) Drawn By: MG/GA

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