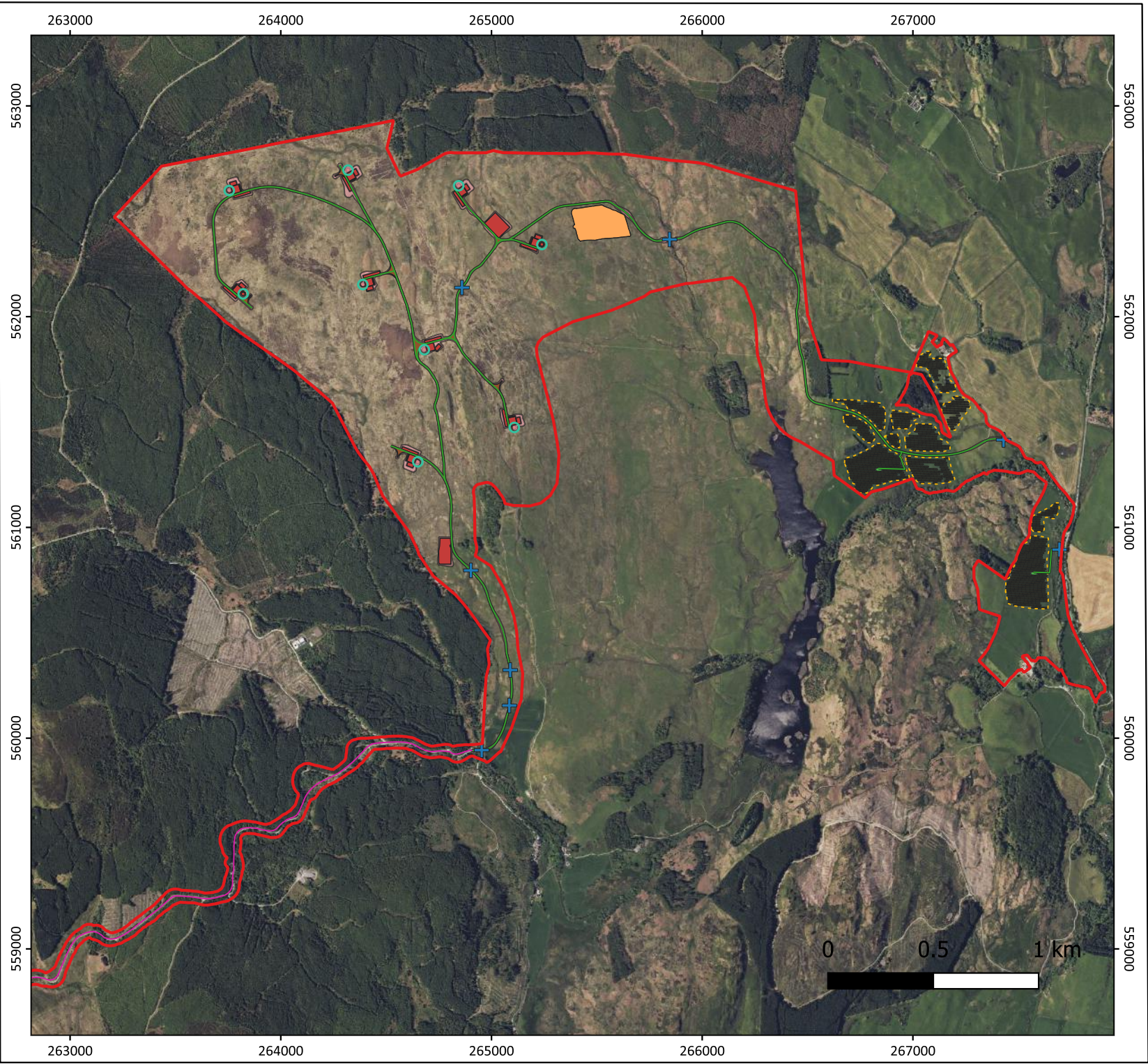


## **APPENDIX B – MATERIALS CALCULATOR – ATMOS**

### Volume of rock required on Lairdmannoch Energy Park

Infrastructure	Length (m)	As built surface width (m)	Construction width (m)	As built area (m²)	Depth (m)	Number	Volume (m³)	Adjusted volume (m³)	Notes:
Access Tracks on site - new; wind and shared				63,001	0.7	1	44,101	<b>44,101</b>	From infrastructure polygon footprint, excludes floating track
Access Tracks offsite - upgrade; resurfacing		4	4	1372	0.3	1	412	<b>412</b>	Assume 4m width at present
Access Tracks offsite - upgrade; widening		1	2	538	0.7	1	377	<b>377</b>	Assumes widening from 4m to 6m along existing forestry roads
Access Tracks on site - new; solar				2,302	0.7	1	1,611	<b>1,611</b>	From infrastructure polygon footprint
Passing Places	30		5		0.7	30	3,150	<b>3,150</b>	Based on three 20m passing places per km of track (10km)
Turbine Bases - formation only	26	26			1.5	9	9,000	<b>9,000</b>	Assumes all concrete imported
Crane Pads	40	40			1	9	14,400	<b>14,400</b>	
Crane Pad smaller areas (total per turbine)				228	0.5	9	1,026	<b>1,026</b>	Auxiliary crane pad from infrastructure polygon, excludes laydown areas
Substation / BESS	100	75			1	1	7,500	<b>7,500</b>	
Solar switching/breaking station	6.8	2.4			0.5	1	8	<b>8</b>	
Solar power station	12	2.4			0.5	2	29	<b>29</b>	
Temporary construction compound	125	60		7,210	1	1	7,210	<b>7,210</b>	Non-rectangular
TOTAL								<b>88,824</b>	All volumes measurements in m³, based on finding no material along route which may reduce requirements

## **APPENDIX C – DRAWINGS**



Lairdmannoch Energy Park  
Preliminary Borrow Pit Location

Legend

- Preliminary Borrow Pit Location
- Site Boundary
- Site Infrastructure (Design Freeze)
  - Watercourse\_crossings
  - Turbines\_Rev10
  - Access\_tracks\_lines\_SW\_access
  - Access\_tracks\_lines
  - Earthworks\_Development\_site
  - Access\_tracks\_areas
  - Wind\_infrastructure
  - Solar\_security\_fence
  - Solar\_panels
  - Solar\_infrastructure

Site Boundary and Infrastructure as provided by Atmos.



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22 Northumberland Street,  
South West Lane  
Edinburgh, EH3 6JD  
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Geodetic Prameters :

Datum: OSGB 1936/ British National Grid  
Projection: Transverse Meracator  
Ellipsoid: Airy 1830  
Prime meridian: Greenwich  
Unit: metre  
EPSG:27700

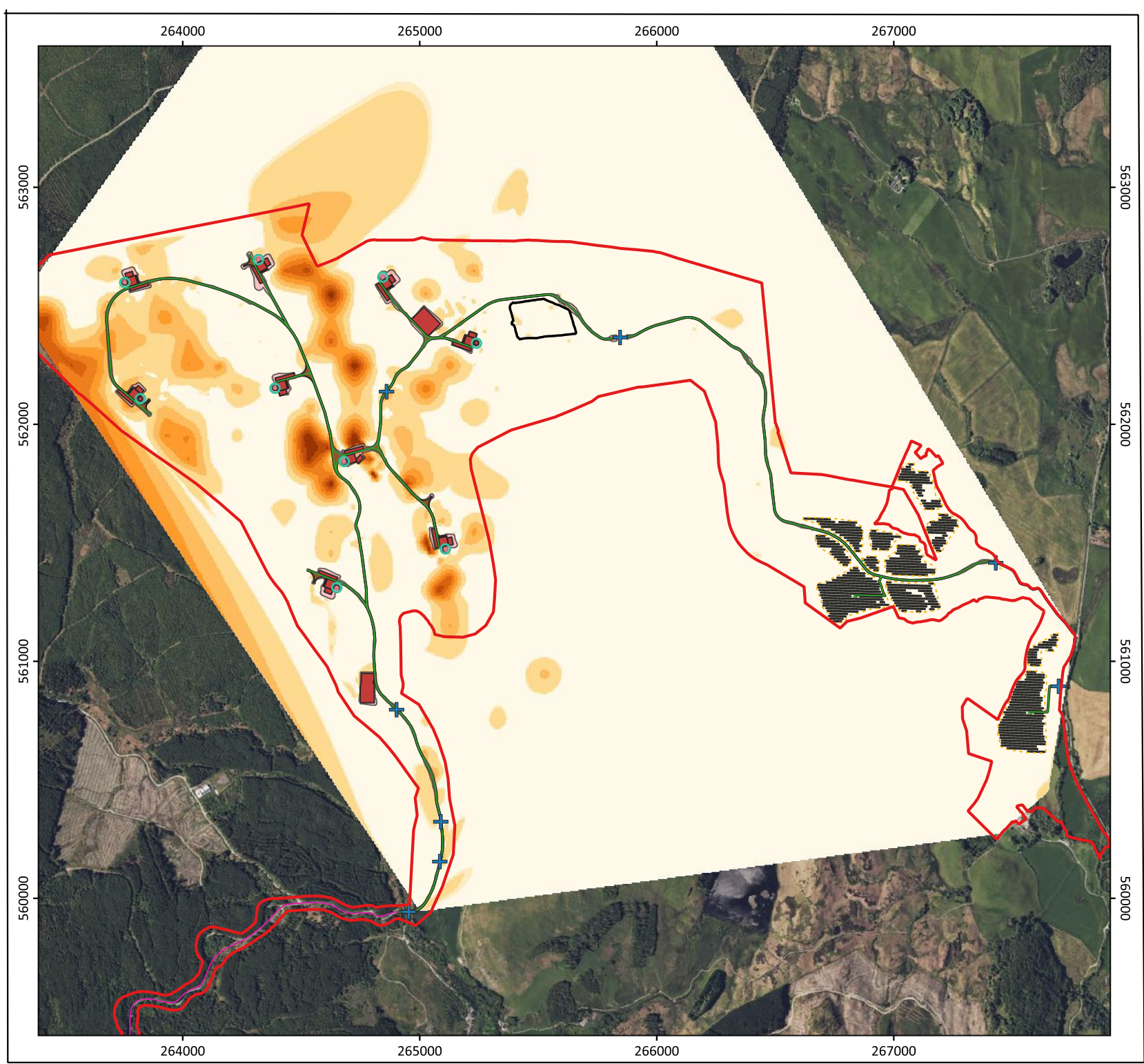


Map Number: 20181-GDG-ZZ-XX-DR-C-0001

Revision	Date	Remarks	Drawn	Checked	Approved
00	09/10/2024	Issue for Client Comment	EC	AY	AL
01	14/01/2025	Update, without BP1 & BP2	EC	AY	AL
02	16/04/2025	Update to infrastructure following Design Freeze	EC	AY	AL

Scale	Plot Size	Datum	Projection
1:25,000	A4	OSGB 1936	Transverse Mercator





Lairdmannoch Energy Park

Interpolated Peat Depths

Legend

- Preliminary Borrow Pit Location
- Site Boundary

Site Infrastructure (Design Freeze)

- Watercourse\_crossings
- Turbines\_Rev10
- Access\_tracks\_lines\_SW\_access
- Access\_tracks\_lines
- Earthworks\_Development\_site
- Access\_tracks\_areas
- Wind\_infrastructure
- Solar\_security\_fence
- Solar\_panels
- Solar\_infrastructure

Interpolated Peat Depth (m)

- <= 0.5
- <0.5
- 0.5 - 1.0
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 2.5
- 2.5 - 3.0
- 3.0 - 3.5
- > 3.5

Site Boundary, Infrastructure and Phase 1 & 2 Interpolated Peat Depths as provided by Atmos.



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Geodetic Prameters :

Datum: OSGB 1936/ British National Grid  
Projection: Transverse Meracator  
Ellipsoid: Airy 1830  
Prime meridian: Greenwich  
Unit: metre  
EPSG:27700

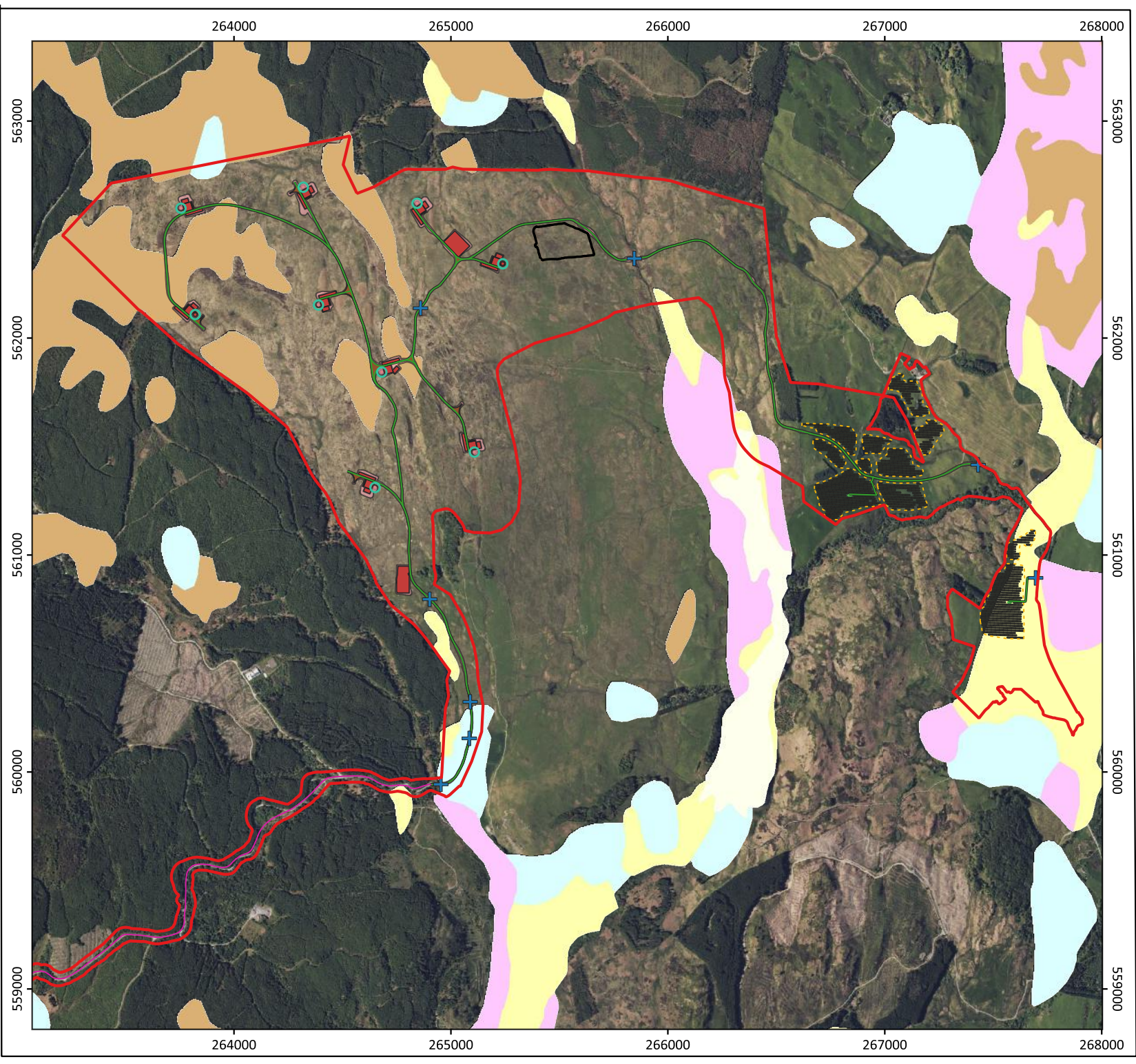


Map Number: 20181-GDG-ZZ-XX-DR-C-0002

Revision	Date	Remarks	Drawn	Checked	Approved
00	09/10/2024	Issue for Client Comment	EC	AY	AL
01	14/01/2025	Update, without BP1 & BP2	EC	AY	AL
02	17/04/2025	Update infrastructure following Design Freeze and inclusion of Phase 2 peat probe data	EC	AY	AL

Scale	Plot Size	Datum	Projection
1:25,000	A4	OSGB 1936	Transverse Mercator





Lairdmannoch Energy Park

Superficial Deposits

Legend

Preliminary Borrow Pit Location

Site Boundary

+

Watercourse crossings

Turbines\_Rev10

Access\_tracks\_lines\_SW\_access

Access\_tracks\_lines

Earthworks\_Development\_site

Access\_tracks\_areas

Wind\_infrastructure

Solar\_security\_fence

Solar\_panels

Solar\_infrastructure

GBR BGS 1:50k Superficial deposits

Peat

Alluvium

Till, Devensian

Glaciofluvial Deposits

Site Boundary and Infrastructure as provided by Atmos.

GDG

GAVIN & DOHERTY

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Geodetic Prameters :

Datum: OSGB 1936/ British National Grid

Projection: Transverse Meracator

Ellipsoid: Airy 1830

Prime meridian: Greenwich

Unit: metre

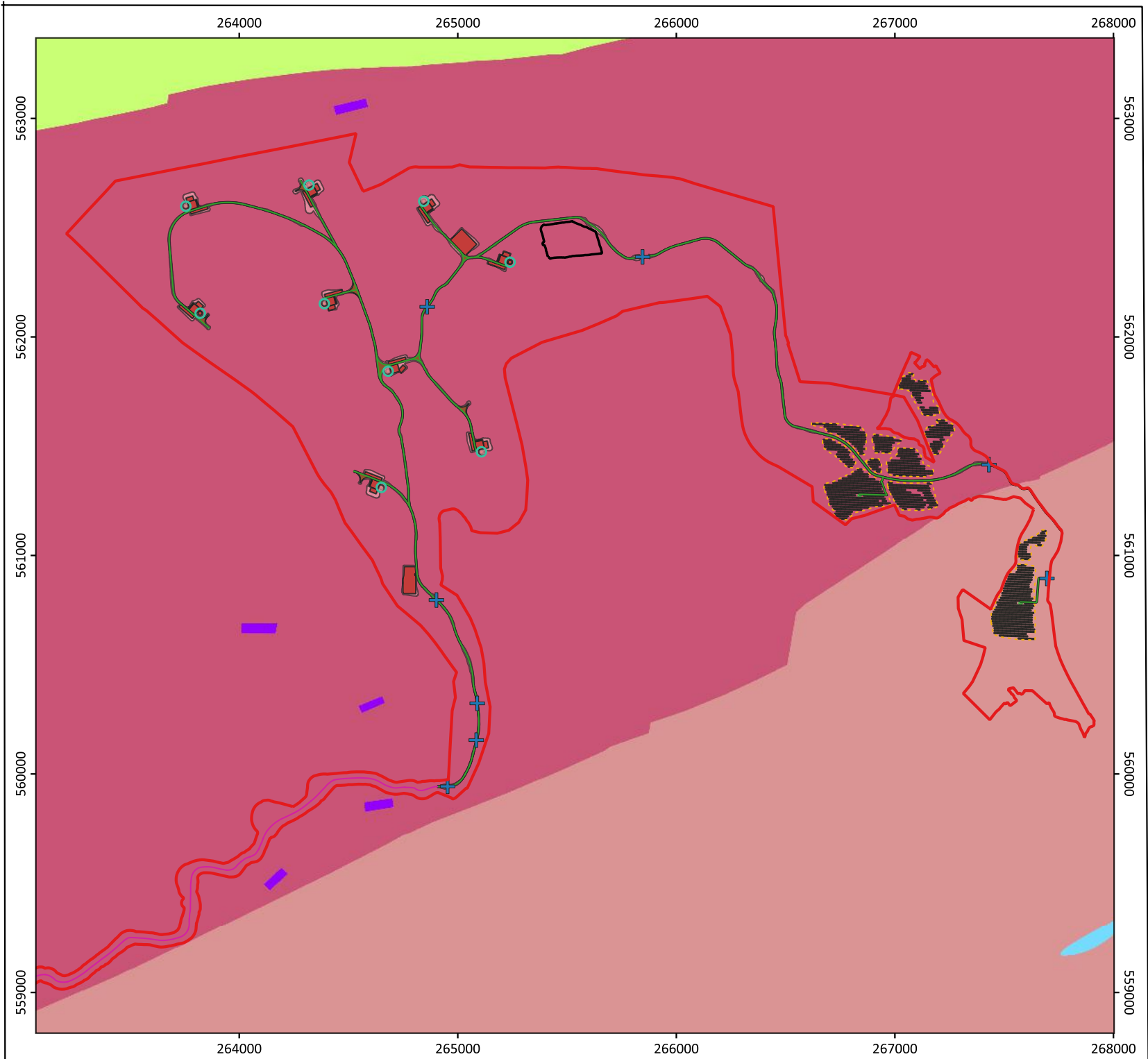
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Map Number: 20181-GDG-ZZ-XX-DR-C-0003

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02	16/04/2025	Update to infrastructure following Design Freeze	EC	AY	AL

Scale	Plot Size	Datum	Projection
1:25,000	A4	OSGB 1936	Transverse Mercator



## Lairdmannoch Energy Park

### Bedrock Geology

#### Legend

- Preliminary Borrow Pit Location
- Site Boundary

#### Site Infrastructure (Design Freeze)

- Watercourse\_crossings
- Turbines\_Rev10
- Access\_tracks\_lines\_SW\_access
- Access\_tracks\_lines
- Earthworks\_Development\_site
- Access\_tracks\_areas
- Wind\_infrastructure
- Solar\_security\_fence
- Solar\_panels
- Solar\_infrastructure

#### GBR BGS 1:50k Bedrock

- CAIRNHARROW FORMATION - WACKE
- KIRKMAIDEN FORMATION - WACKE
- GALA UNIT 7 - WACKE
- NORTH BRITAIN SILURO-DEVONIAN  
CALC-ALKALINE DYKE SUITE

Site Boundary and Infrastructure as provided by Atmos.



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#### Geodetic Parameters :

Datum: OSGB 1936/ British National Grid  
Projection: Transverse Mercator  
Ellipsoid: Airy 1830  
Prime meridian: Greenwich  
Unit: metre  
EPSG:27700

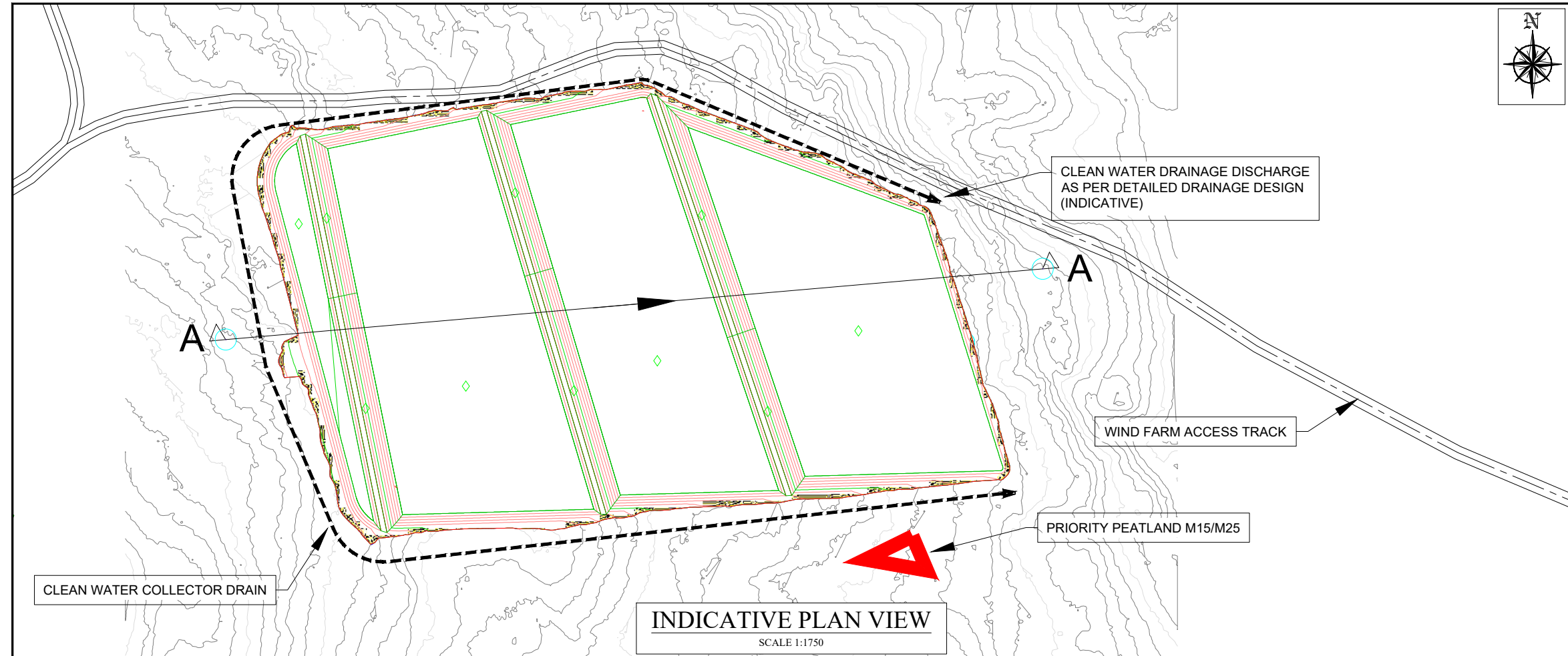


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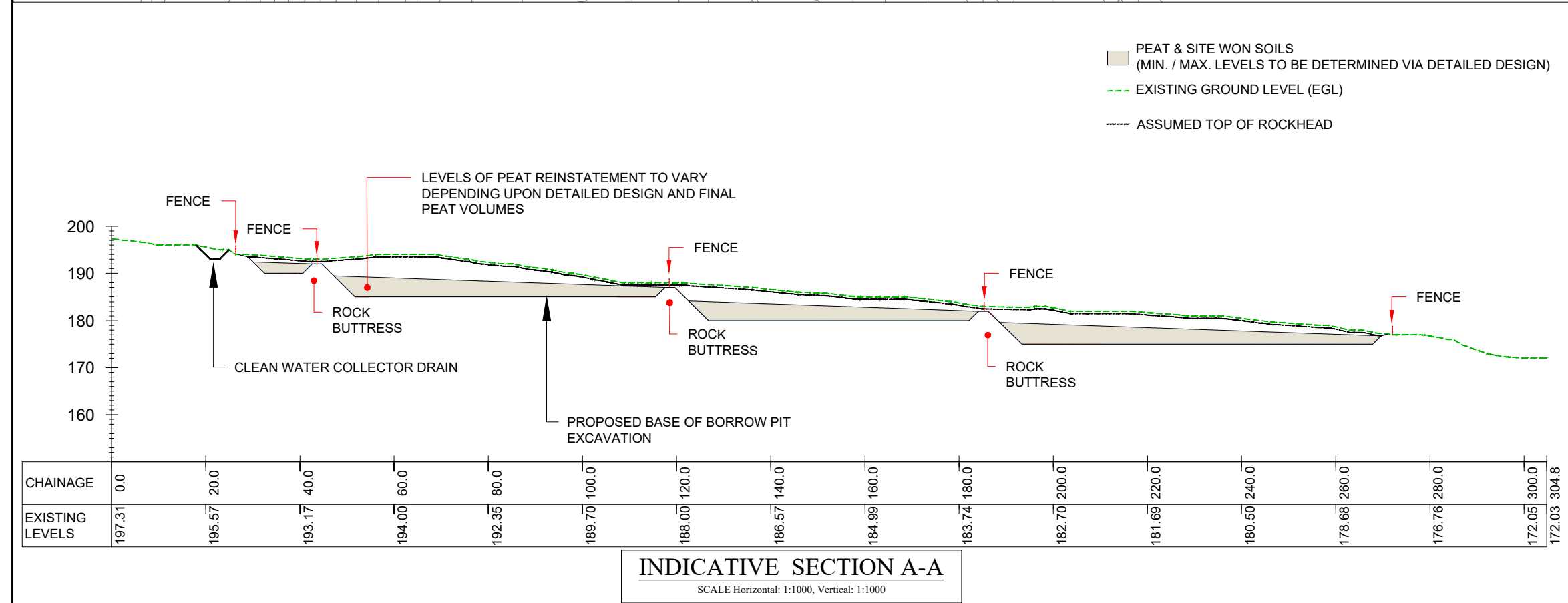
Revision	Date	Remarks	Drawn	Checked	Approved
00	09/10/2024	Issue for Client Comment	EC	AY	AL
01	14/01/2025	Update, without BP1 & BP2	EC	AY	AL
02	16/04/2025	Update to infrastructure following Design Freeze	EC	AY	AL

Scale	Plot Size	Datum	Projection
1:25,000	A4	OSGB 1936	Transverse Mercator





INDICATIVE PLAN VIEW  
SCALE 1:1750



INDICATIVE SECTION A-A  
SCALE Horizontal: 1:1000, Vertical: 1:1000

- NOTES:**
1. THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ENGINEER'S DRAWINGS AND SPECIFICATIONS.
  2. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
  3. THE OUTLINE AND CROSS SECTIONS ARE INDICATIVE AND ARE SUBJECT TO DETAILED DESIGN AND SLOPE STABILITY ASSESSMENT.
  4. EXPOSED ROCK SLOPES SHALL BE FORMED AT SHALLOWER INCLINATIONS (TYPICALLY 45°) WITH FACE LEFT IRREGULAR WITH DECLIVITIES TO PROMOTE RE-VEGETATION AND PROVIDE A NATURAL APPEARANCE.
  5. ENGINEERED ROCK BUTTRESS MAY BE LEFT IN-SITU TO RESTRAIN CELLS OF PLACED PEAT OVERBURDEN.
  6. EXCAVATION SHOULD BE OPTIMISED TO AVOID AREAS OF DEEPER PEAT.
  7. IN-SITU ROCK SLOPE SHALL BE FORMED AT STABLE INCLINATIONS TO SUIT LOCAL ROCK CONDITIONS AND SUBJECT TO DETAILED DESIGN.
  8. GEOGRID TO BE PLACED TO STRENGTHEN SURFACE OF PLACED PEAT & SPOIL, AS REQUIRED.
  9. THE LOCATION OF THE ROCK BUTTRESSES SHOWN FOR THE BORROW AREAS ARE INDICATIVE ONLY AND SUBJECT TO DETAILED DESIGN.
  10. THE EXCAVATABILITY OF THE ROCK AND DEPTH TO TOP OF ROCK WITHIN EACH OF THE BORROW AREAS WILL NEED TO BE DETERMINED FROM A GROUND INVESTIGATION.
  11. REINSTATEMENT OF PEAT TO BE CARRIED OUT IN LINE WITH APPROVED PEAT MANAGEMENT PLAN.
  12. EXCAVATION TECHNIQUES TO BE CONFIRMED FOLLOWING GROUND INVESTIGATION.
  13. GEOGRID REINFORCEMENT TO BE LAID NEAR SURFACE OF REINSTATEMENT MATERIAL TO MAXIMISE STABILITY FOR SURFACE LAYER.
  14. BORROW PIT ACCESS AND DRAINAGE PROVISIONS (UP SLOPE CUT OFF DRAINS ETC.) TO BE DETERMINED THROUGH DETAILED DESIGN.

REV:	S2 -01	DATE:	14/01/25	DWG BY:	JvN	CHECK BY:	AY
DESCRIPTION:	ISSUED FOR INFORMATION						

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ISSUED AS:  
FOR INFORMATION

CLIENT:

**atmos**  
CONSULTING

PROJECT TITLE:  
LAIRDMANNOCH WIND FARM  
BORROW PIT DESIGN

PROJECT No:  
20181 - GDG - ZZ - XX - DR - C - 0005

Revision: - S2 - P01

DRAWING TITLE:  
BORROW PIT 3  
INDICATIVE PLAN & SECTION

SCALE:	SHOWN	SHEET SIZE:	A3	DATE:	14/01/2025
DWG BY:	JvN	CHECKED BY:	AY	APPROVED BY:	AS



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