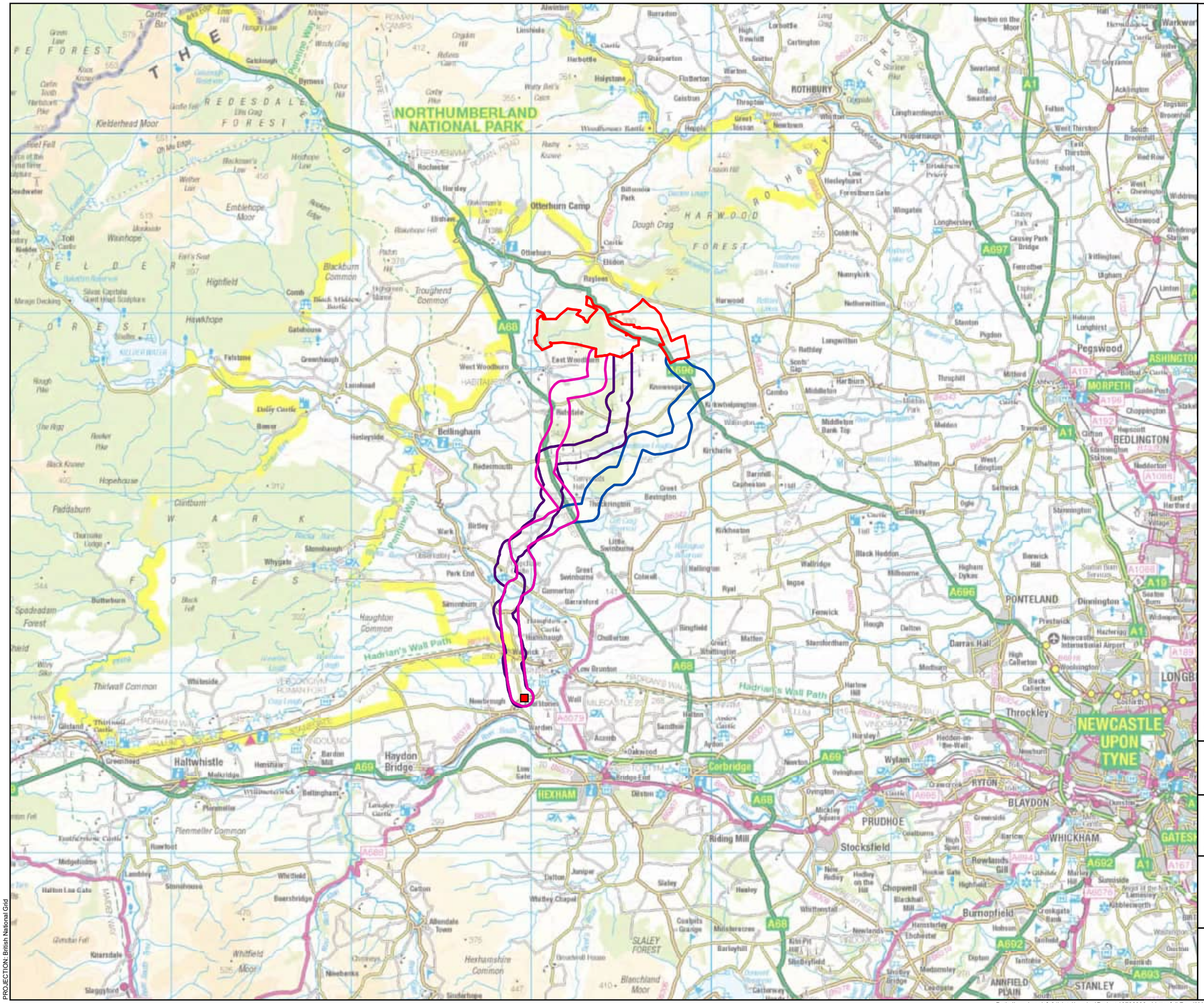


The Site

Cable Corridor Options

Route Option 1

Route Option 2

Route Option 3

Existing Fourstones Substation

The proposed Scoping Boundary is made up of the Site and the Cable Corridor Options

0 2 4 6 8 10

Kilometres

N

SCALE: See Scale Bar	VERSION: A03
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: LH
DATE: 2026-05-06	APPROVED: BD

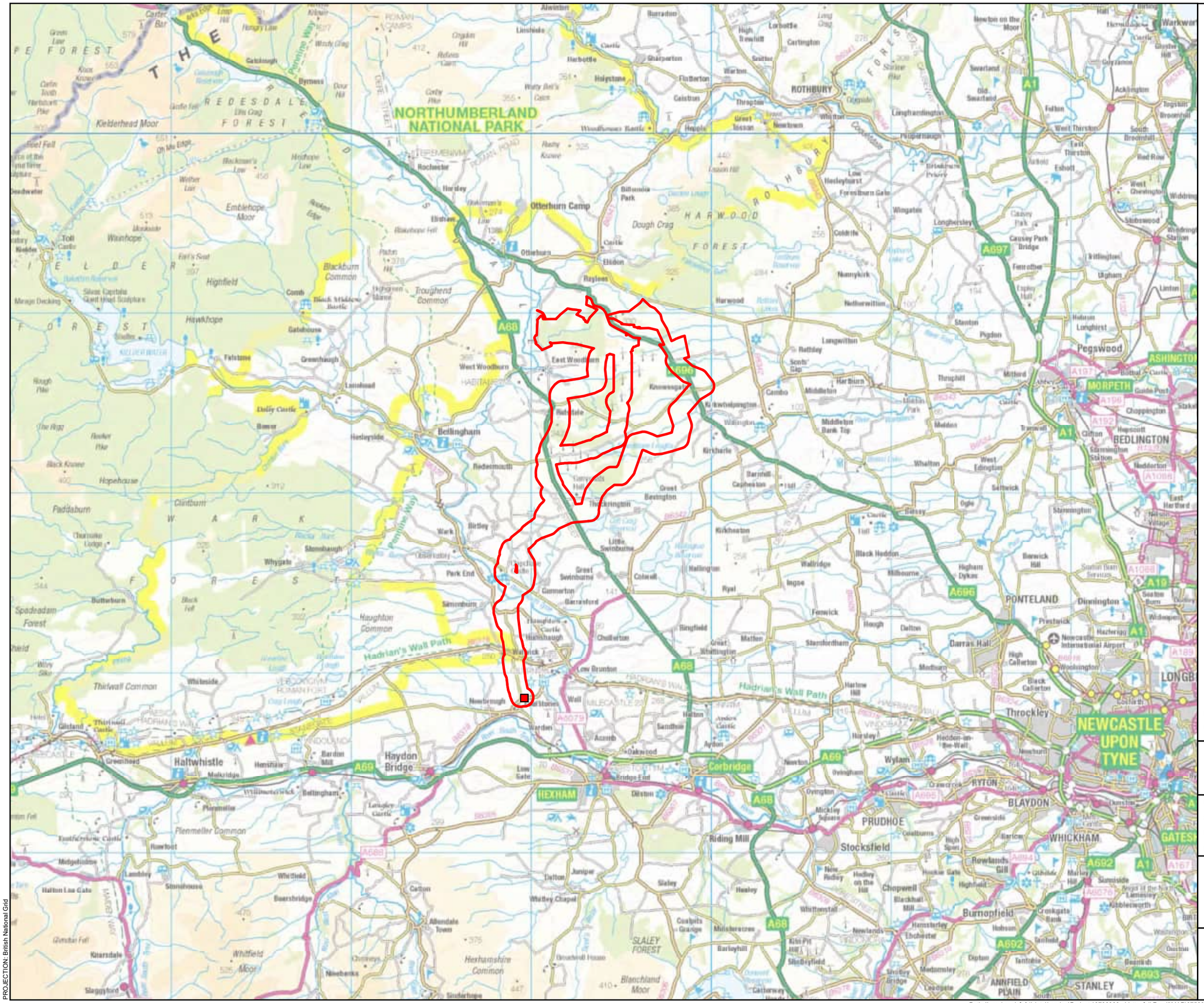
Figure 1.1a
Site Location

ERM

VATTENFALL

PROJECTION: British National Grid

Path: \\vmukspgisfs01\data\London\Projects\0706303 - Vattenfall Ray II\MAP\0758386 - Vattenfall Ray II.aprx / 0758386 - Introduction - SCO - Site Location - A03



Proposed Order Limits

Existing Fourstones Substation

The proposed Scoping Boundary is made up of the Site and the Cable Corridor Options

0 2 4 6 8 10
Kilometres

N

SCALE: See Scale Bar	VERSION: A01
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: LH
DATE: 2026-05-06	APPROVED: BD

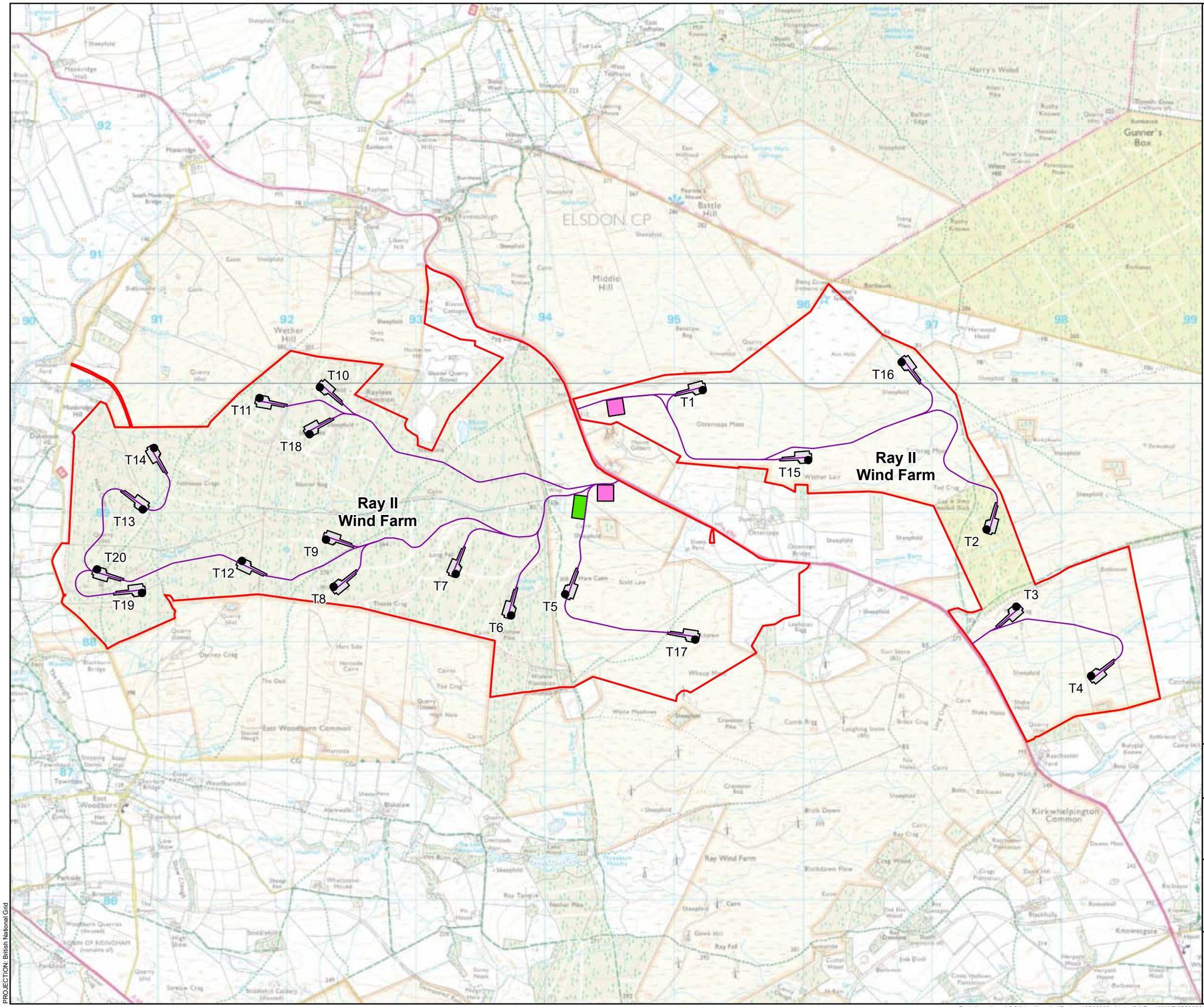
Figure 1.1b
Proposed Order Limits

ERM

VATTENFALL

PROJECTION: British National Grid

Path: \\vmukspgisfs01\data\London\Projects\0706303 - Vattenfall Ray II\MAP\0758386 - Vattenfall Ray II.aprx / 0758386 - Introduction - SCO - Proposed Order Limits - A01



The Site
Proposed Turbine Location
Proposed Access Track
Proposed Substation/BESS Compound
Proposed Temporary Construction Compound
Proposed Turbine Hardstanding

0 0.2 0.4 0.6 0.8 1
Kilometres

N

SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: LH
DATE: 2026-04-30	APPROVED: BD

Figure 2.1
Site Layout

ERM

VATTENFALL

PROJECTION: British National Grid

Path: \\vmukspgisfs01\data\London\Projects\0706303 - Vattenfall Ray II\MAP\0758386 - Vattenfall Ray II.aprx / 0758386 - The Proposed Development - SCO - Site Layout - A02

The Site

45 km Buffer of The Site (Study Area)

Wind Farm Location

Status

Operational

Consented

Single turbine Wind Farm developments are only shown up to 5 km from The Site

0 5 10 15 20 N

Kilometres

SCALE: See Scale Bar	VERSION: A01
SIZE: A3	DRAWN: CR/JG
PROJECT: 0758386	CHECKED: LH
DATE: 2026-05-01	APPROVED: BD

Figure 3.1
Wind Farm developments within the 45 km Study Area

ERM

VATTENFALL

PROJECTION: British National Grid

Path: \\vmukspgisfs01\data\London\Projects\0706303 - Vattenfall Ray II\MAP\0758386 - Vattenfall Ray II.aprx / 0758386 - EIA Process - SCO - Wind Farm developments within the 45 km Study Area - A01

The Site

Cable Corridor Options

Route Option 1

Route Option 2

Route Option 3

Existing Fourstones Substation

1 km Buffer (Cable Corridor Options)

20 km Buffer (Detailed Study Area)

45 km Buffer (Study Area)

0 2 4 6 8 10

Kilometres

N

SCALE: See Scale Bar	VERSION: A01
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: NO
DATE: 2026-04-24	APPROVED: BD

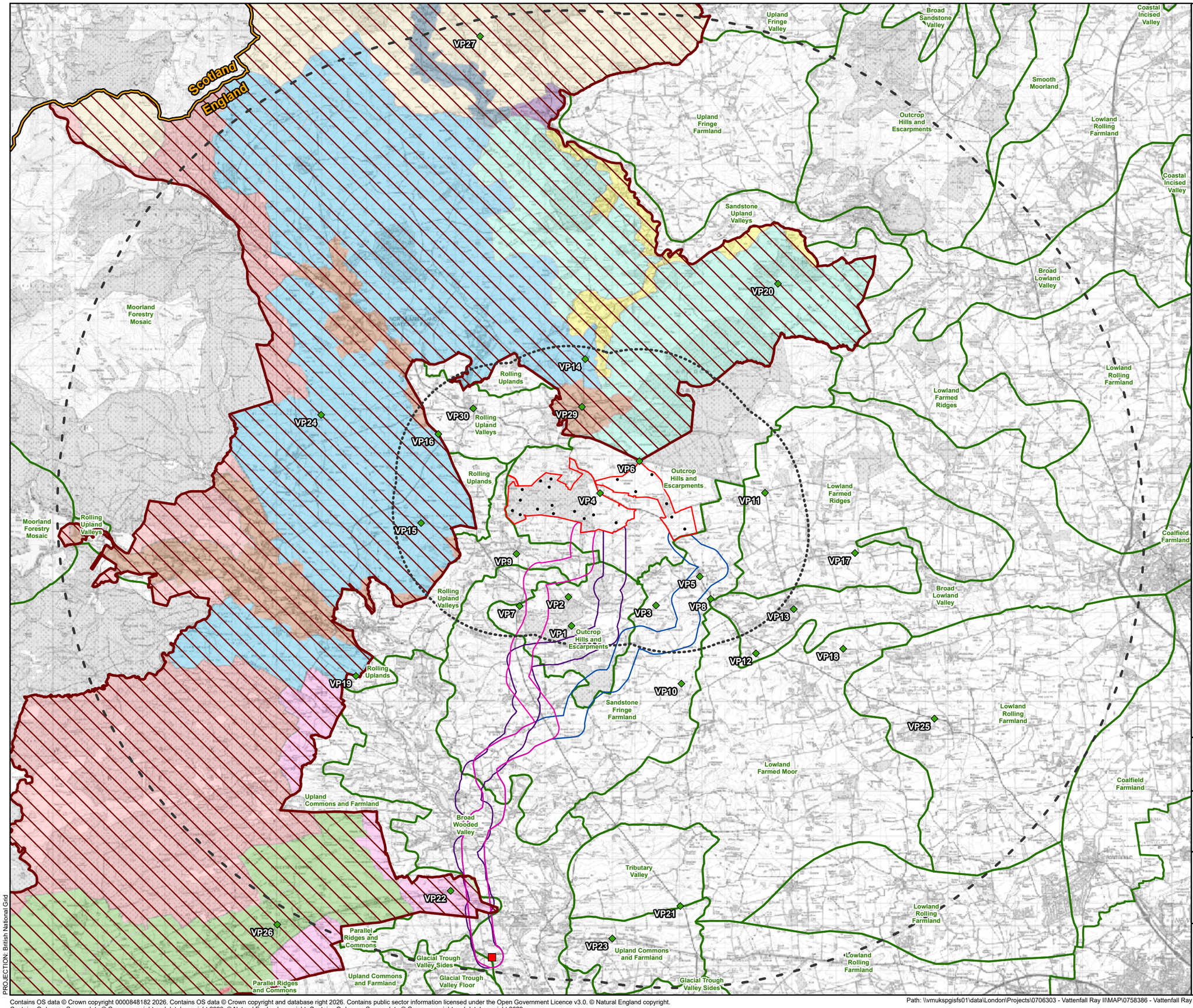
Figure 6.1
Landscape and Visual Assessment Study Area

ERM

VATTENFALL

PROJECTION: British National Grid

Path: \\vmukspgisfs01\data\London\Projects\0706303 - Vattenfall Ray II\MAP\0758386 - Vattenfall Ray II Landscape and Visual.aprx / 0758386 - LAV - SCO - Landscape and Visual Assessment Study Area - A01



The Site

Proposed Turbine Location

Cable Corridor Options

Route Option 1

Route Option 2

Route Option 3

Existing Fourstones Substation

5 km Buffer

20 km Buffer (Detailed Study Area)

Viewpoint

Northumberland National Park (Natural England)

Landscape Character Areas (Northumberland County Council)

Landscape Character Area (Northumberland National Park Authority)

1. Upland Burn Valleys
2. Rounded Hills
3. Foothills and Fringe Valleys
4. Estate Farmland
5. Rolling Uplands
6. Moorland Forestry Mosaic
7. Rolling Upland Valleys
8. Outcrop Hills and Escarpment
9. Sandstone Upland Valleys
12. Broad Wooded Valley
14. Parallel Ridges and Commons
15. Upland Commons and Farmland
17. Glacial Trough - valley sides

Country Region (Ordnance Survey)

0 1 2 3 4 5
Kilometres

N

SCALE: See Scale Bar	VERSION: A01
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: NO
DATE: 2026-04-24	APPROVED: BD

Figure 6.2
Landscape Character Areas

ERM

VATTENFALL

PROJECTION: British National Grid

Path: \\vmukspgisfs01\data\London\Projects\0706303 - Vattenfall Ray II\MAP\0758386 - Vattenfall Ray II Landscape and Visual.aprx / 0758386 - LAV - SCO - Landscape Character Areas - A01

The Site
Proposed Turbine Location
Cable Corridor Options
Route Option 1
Route Option 2
Route Option 3
Existing Fourstones Substation
20 km Buffer (Detailed Study Area)
45 km Buffer (Study Area)
Viewpoint
Northumberland National Park (Natural England)
National Landscape (formerly AONB) (Natural England)
Registered Park and Garden (Historic England)
Valued Landscape (Northumberland County Council)
Northumberland Dark Sky Park Indicative Extent[1]

1. Northumberland Dark Sky Park Indicative Extent was derived from the extents of Northumberland National Park boundary (data source: Natural England) and the 'Northumberland' Unitary Region area (data source: Ordnance Survey) between Northumberland National Park and the 'Northumberland' Unitary Region boundary which coincides with the England/Scotland border.
A map showing the boundary of the Northumberland Dark Sky Park can be found here: https://northumberlandnationalpark.org.uk/wp-content/uploads/2017/05/Dark-Sky-Park-Map.pdf

0 2 4 6 8 10
Kilometres

N

SCALE: See Scale Bar	VERSION: A01
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: NO
DATE: 2026-04-24	APPROVED: BD

Figure 6.3
Landscape Designations

ERM
VATTENFALL

PROJECTION: British National Grid

Path: \\vmukspgisfs01\data\London\Projects\0706303 - Vattenfall Ray II\MAP\0758386 - Vattenfall Ray II Landscape and Visual.aprx / 0758386 - LAV - SCO - Landscape Designations - A01

This drawing is based on a computer-generated Zone of Theoretical Visibility. The areas shown on the map indicate the maximum possible visibility of the proposed turbines using Digital Terrain Models (DTM) collected by Ordnance Survey. This does not take into account the screening effect from buildings, tree canopy, electrical power lines, and other features. The terrain data used in creating this map has a grid cell size of 50 metres by 50 metres.

This figure has been based on the following parameters:
Maximum turbine tip height: 230 m
Eye Level: 2 m

The Site
Proposed Turbine Location
Cable Corridor Options
Route Option 1
Route Option 2
Route Option 3
Existing Fourstones Substation
10 km Buffer
20 km Buffer (Detailed Study Area)
45 km Buffer (Study Area)
Viewpoint
ZTV (230 m Blade Tip)
No. of Turbines Visible (2 m observer height)
20
1
Northumberland National Park (Natural England)

Viewpoint No.	Name
1	View north west from Great Wanney Crag
2	View east from Middlehill Common
3	View north west from Minor road at Corsehills
4	View north from A68 west of Otterscops
5	View west from A696 at Kennersgate
6	View south from Winter's Gibbet
7	View north east from A68 south of Ridsdale
8	View west from Kirkwhelpington
9	View east from minor road south of East Woodburn
10	View north from trig point north of Great Bavington
11	View west from B6342 at Harwood Gate
12	View north west from Kirkharle
13	View west from Wallington Estate
14	View south from B6341 north of Elsdon
15	View east from Cursenside Common
16	View east from A68 north of B6320
17	View west from B6343 east of Scot's Gap
18	View north west from footpath to Shaftoe Crags
19	View east from Pennine Way south of Bellingham
20	View south from summit of Simonside
21	View north from A68 at Soakley
22	View north from Hadrian's Wall near Milecastle 30
23	View north from Hadrian's Wall near Errington Hill Head
24	View east from Pennine Way at Peiton Hill
25	View north west from A696 west of Belsay
26	View north east from Hadrian's Wall at Sewingshields Crags
27	View south from Copper Scout / Clennel Street Walk
28	View north from B6305 west of Heaham
29	View south from Elsdon
30	View south east from Otterburn

0 2 4 6 8 10
Kilometres

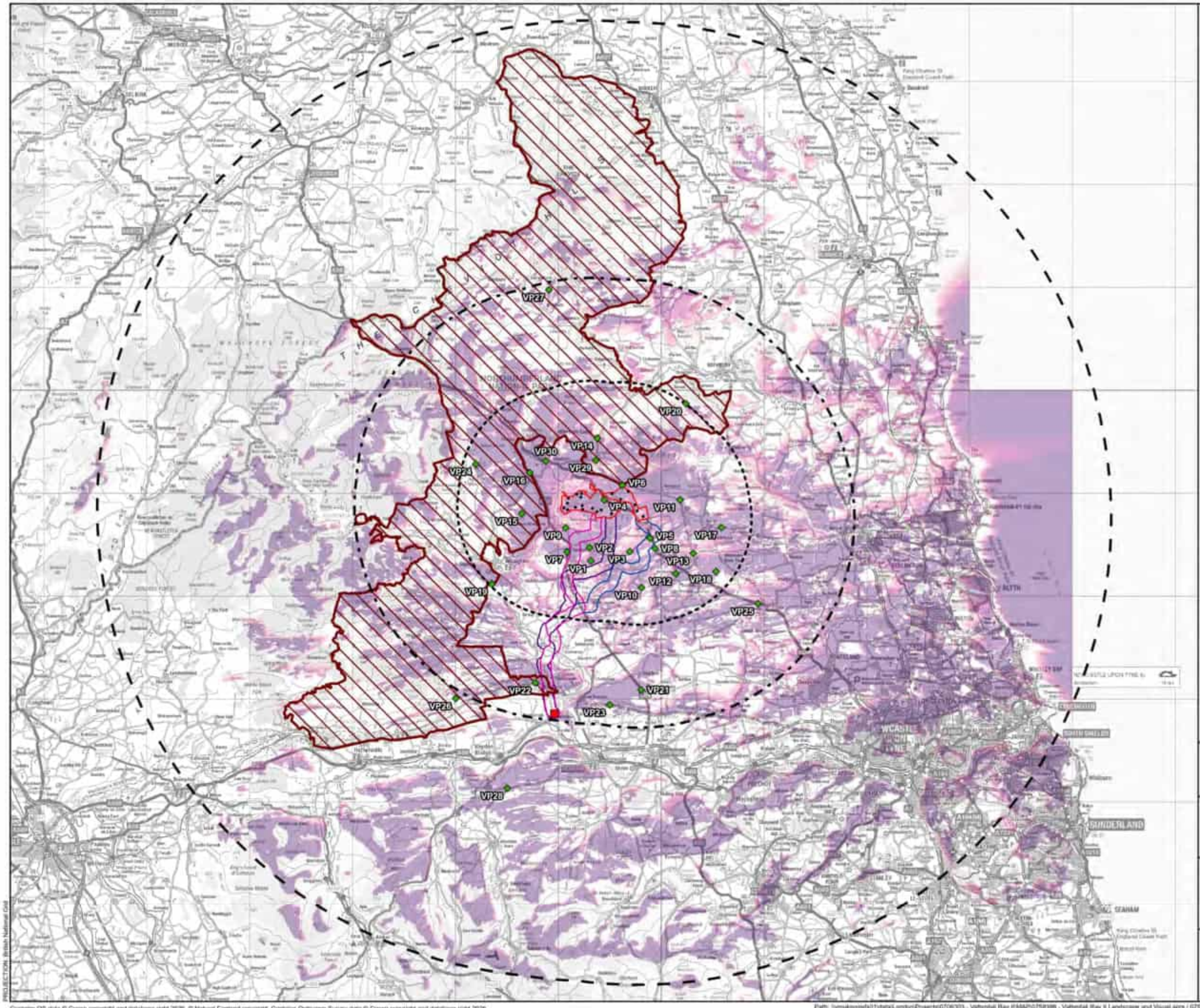
N

SCALE: See Scale Bar	VERSION: A01
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: NO
DATE: 2026-04-24	APPROVED: BD

Figure 6.4
Viewpoint Location Plan

ERM
VATTENFALL

PROJECTION: British National Grid



The Site

Proposed Turbine Location

Cable Corridor Options

Route Option 1

Route Option 2

Route Option 3

Existing Fourstones Substation

10 km Buffer

20 km Buffer (Detailed Study Area)

45 km Buffer (Study Area)

Viewpoint

ZTV (230 m Blade Tip)

No. of Turbines Visible (2 m observer height)

20

1

Northumberland National Park (Natural England)

This drawing is based on a computer-generated Zone of Theoretical Visibility.
The areas shown on the map indicate the maximum possible visibility of the proposed turbines using Digital Terrain Models (DTM) collected by Ordnance Survey. This does not take into account the screening effect from buildings, tree canopy, electrical power lines, and other features. The terrain data used in creating this map has a grid cell size of 50 metres by 50 metres.

This figure has been based on the following parameters:
Maximum turbine tip height: 230 m
Eye Level: 2 m

0 2 4 6 8 10
Kilometres

N

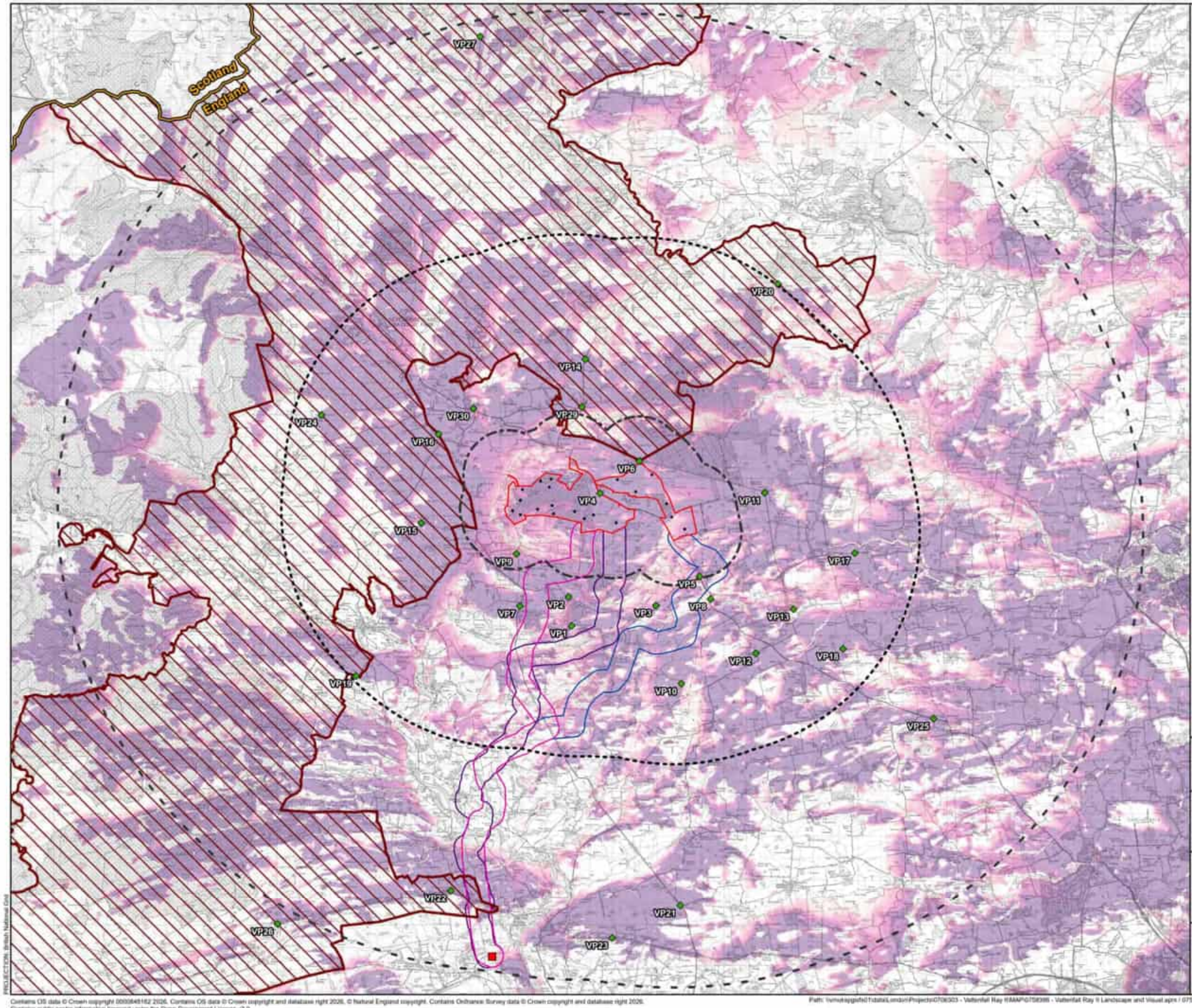
SCALE: See Scale Bar	VERSION: A01
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: NO
DATE: 2026-04-24	APPROVED: BD

Figure 6.5
Turbine Blade Tip Height Zone of Theoretical Visibility to 45 km

ERM

VATTENFALL

PROJECTION: British National Grid



The Site
Proposed Turbine Location
Cable Corridor Options
Route Option 1
Route Option 2
Route Option 3
Existing Fourstones Substation
2 km Buffer
10 km Buffer
20 km Buffer (Detailed Study Area)
Viewpoint
ZTV (230 m Blade Tip)
No. of Turbines Visible (2 m observer height)
20
1
Northumberland National Park (Natural England)
Country Region (Ordnance Survey)

This drawing is based on a computer-generated Zone of Theoretical Visibility.
The areas shown on the map indicate the maximum possible visibility of the proposed turbines using Digital Terrain Models (DTM) collected by Ordnance Survey. This does not take into account the screening effect from buildings, tree canopy, electrical power lines, and other features. The terrain data used in creating this map has a grid cell size of 50 metres by 50 metres.

This figure has been based on the following parameters:
Maximum turbine tip height: 230 m
Eye Level: 2 m

0 1 2 3 4 5
Kilometres

N

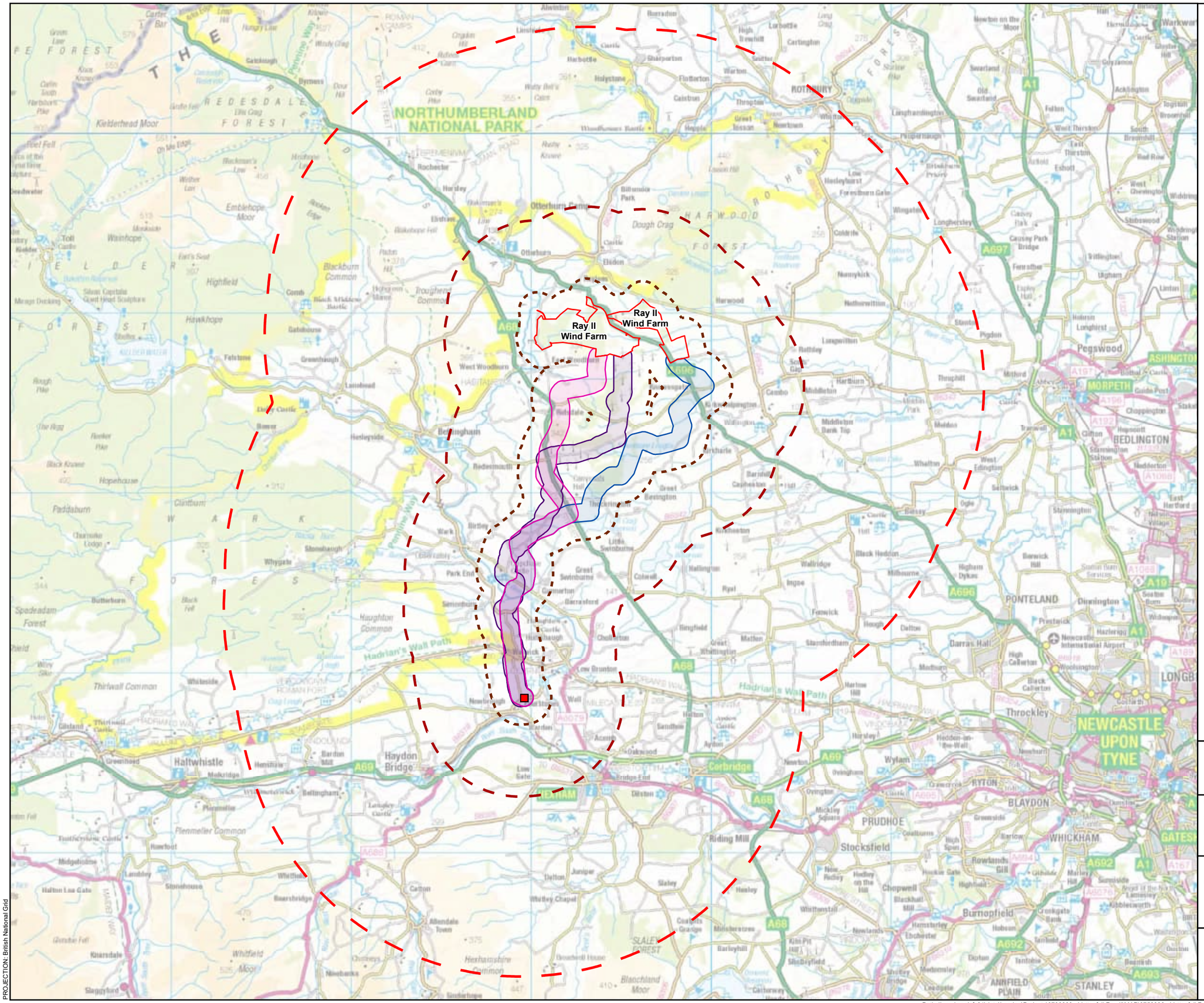
SCALE: See Scale Bar	VERSION: A01
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: NO
DATE: 2026-04-24	APPROVED: BD

Figure 6.6
Turbine Blade Tip Height Zone of Theoretical Visibility to 20 km

ERM

VATTENFALL

Path: \\emukpgpfs01\data\London\Projects\0758303 - Vattenfall Ray II\MAPS\0758386 - Vattenfall Ray II Landscape and Visual.aprx / 0758386 - LAV - SCO - Turbine Blade Tip Height Zone of Theoretical Visibility to 20 km - A01



The Site

Cable Corridor Options

Route Option 1

Route Option 2

Route Option 3

Existing Fourstones Substation

1 km Buffer

5 km Buffer

15 km Buffer

0 1 2 3 4 5

Kilometres

N

SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: LT
DATE: 2026-04-30	APPROVED: BD

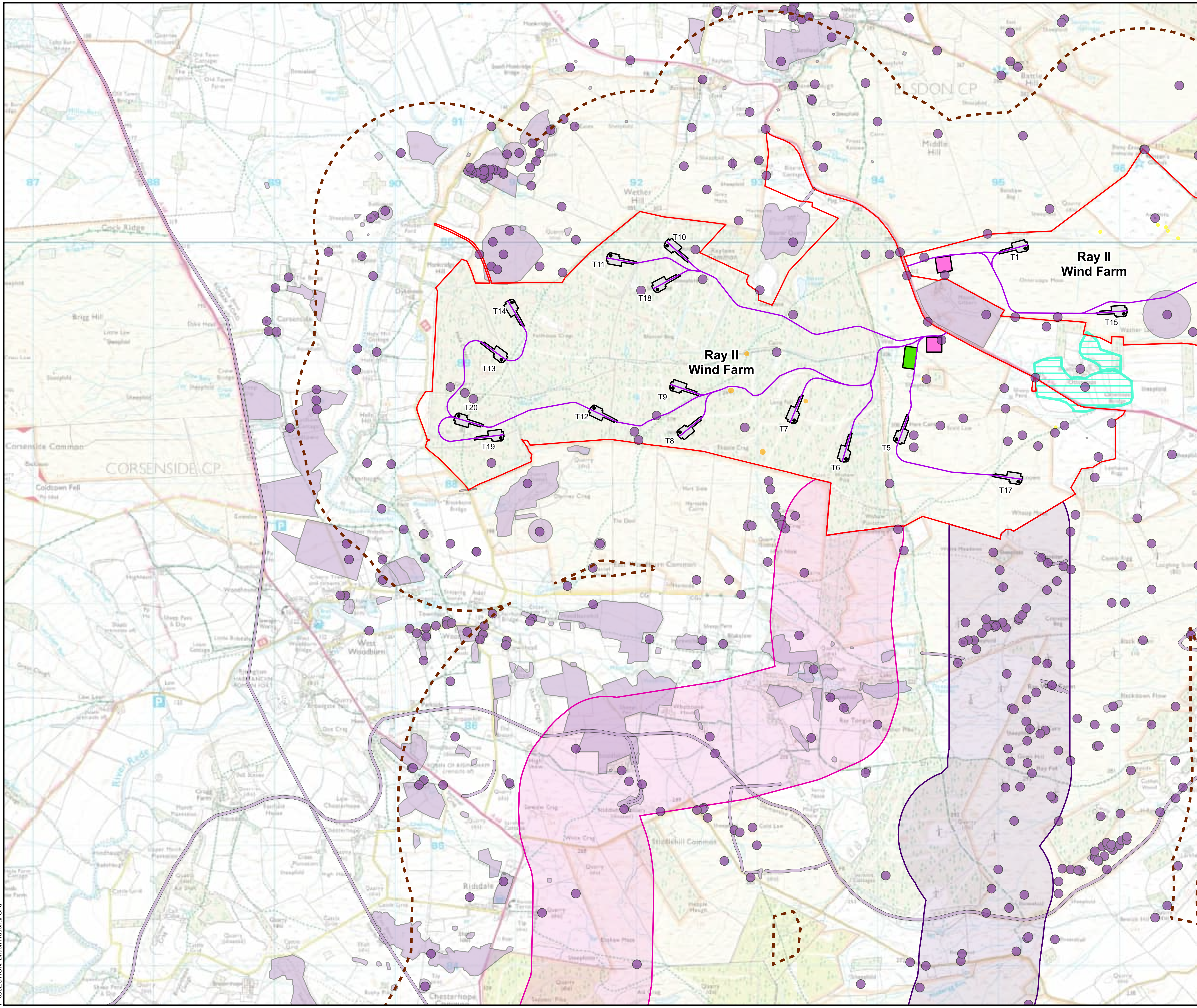
Figure 7.1
Cultural Heritage Study Areas

ERM

VATTENFALL

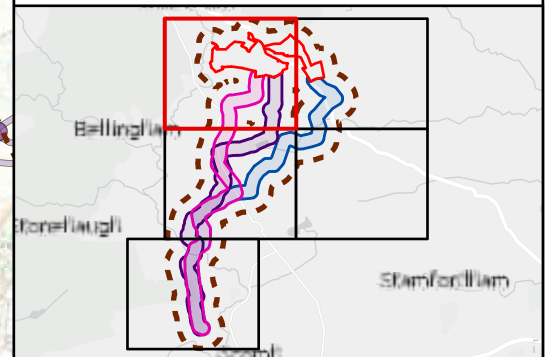
PROJECTION: British National Grid

Path: \\vmukspgisfs01\data\London\Projects\0706303 - Vattenfall Ray II\MAP\0758386 - Vattenfall Ray II Cultural Heritage.aprx / 0758386 - HIS - SCO - Cultural Heritage Study Areas - A02



The Site
• Proposed Turbine Location
Proposed Access Track
Proposed Substation/BESS Compound
Proposed Temporary Construction Compound
Proposed Turbine Hardstanding
Cable Corridor Options
Route Option 1
Route Option 2
1 km Buffer
Non-Designated Asset*
● HER Point
HER Line
HER Polygon
Historic Map
LiDAR
Walkover

*within approx. 1 km (HER, Site Walkover, LiDAR and OS Six Inch Map (1830-1880's))



0 0.5 1 1.5
Kilometres
N

SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: LT
DATE: 2026-04-30	APPROVED: BD

Figure 7.2
Non-Designated Assets within 1 km
Sheet 1

ERM
VATTENFALL

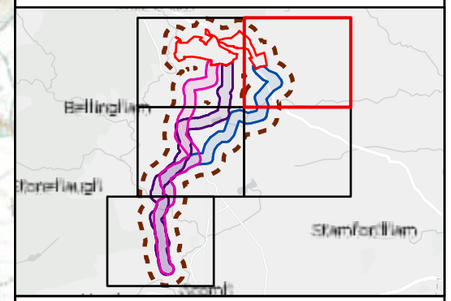
PROJECTION: British National Grid

Path: \\vmukspgisfs01\data\London\Projects\0706303 - Vattenfall Ray II\MAP\0758386 - Vattenfall Ray II Cultural Heritage.aprx / 0758386 - HIS - SCO - Non-Designated Assets within 1 km - A02

T16
T2
T3
T4
Ray II
Wind Farm
ROTHLEY CP
KIRKWHELPINGTON CP
WALLINGTON DEMESNE CP
Harwood
Scots' Gap
Bellingham
Stamfordham
Kirkwhelpington Common

The Site
Proposed Turbine Location
Proposed Access Track
Proposed Turbine Hardstanding
Cable Corridor Options
Route Option 3
1 km Buffer
Non-Designated Asset*
HER Point
HER Line
HER Polygon
LiDAR

*within approx. 1 km (HER, Site Walkover, LiDAR and OS Six Inch Map (1830-1880's))



0 0.5 1 1.5
Kilometres
N

SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: LT
DATE: 2026-04-30	APPROVED: BD

Figure 7.2
Non-Designated Assets within 1 km
Sheet 2

ERM
VATTENFALL

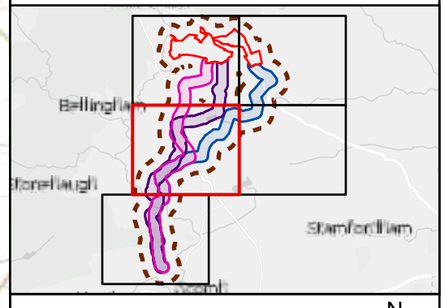
PROJECTION: British National Grid

Path: \\vmukspgisfs01\data\London\Projects\0706303 - Vattenfall Ray II\MAP\0758386 - Vattenfall Ray II Cultural Heritage.aprx / 0758386 - HIS - SCO - Non-Designated Assets within 1 km - A02

Cable Corridor Options
- Route Option 1
- Route Option 2
- Route Option 3
- 1 km Buffer

Non-Designated Asset*
- HER Point
- HER Line
- HER Polygon

*within approx. 1 km (HER, Site Walkover, LiDAR and OS Six Inch Map (1830-1880's))



0 0.5 1 1.5
Kilometres

N

SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: LT
DATE: 2026-04-30	APPROVED: BD

Figure 7.2
Non-Designated Assets within 1 km
Sheet 3

ERM

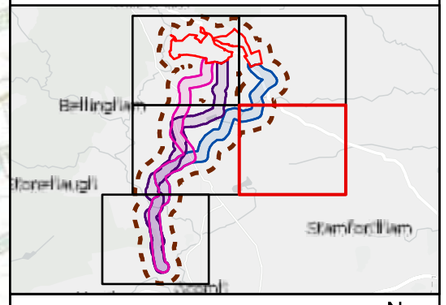
VATTENFALL

PROJECTION: British National Grid

Cable Corridor Options
- Route Option 3
- 1 km Buffer

Non-Designated Asset*
- HER Point
- HER Polygon

*within approx. 1 km (HER, Site Walkover, LiDAR and OS Six Inch Map (1830-1880's))



0 0.5 1 1.5
Kilometres

N

SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: LT
DATE: 2026-04-30	APPROVED: BD

Figure 7.2
Non-Designated Assets within 1 km
Sheet 4

ERM

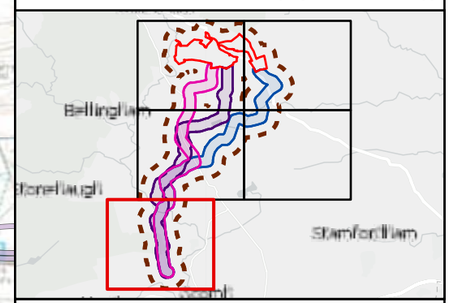
VATTENFALL

PROJECTION: British National Grid

Cable Corridor Options
- Route Option 1
- Route Option 2
- Route Option 3
- Existing Fourstones Substation
- 1 km Buffer

Non-Designated Asset*
- HER Point
- HER Line
- HER Polygon
- Historic Environment Aerial Imagery Mapping Monument Extent

*within approx. 1 km (HER, Site Walkover, LiDAR and OS Six Inch Map (1830-1880's))



0 0.5 1 1.5
Kilometres

N

SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: LT
DATE: 2026-04-30	APPROVED: BD

Figure 7.2
Non-Designated Assets within 1 km
Sheet 5

ERM

VATTENFALL

PROJECTION: British National Grid

Path: \\vmukspgisfs01\data\London\Projects\0706303 - Vattenfall Ray II\MAP\0758386 - Vattenfall Ray II Cultural Heritage.aprx / 0758386 - HIS - SCO - Non-Designated Assets within 1 km - A02

The Site

5 km Buffer

Listed Building within 5 km (Historic England)

Grade

II*

II

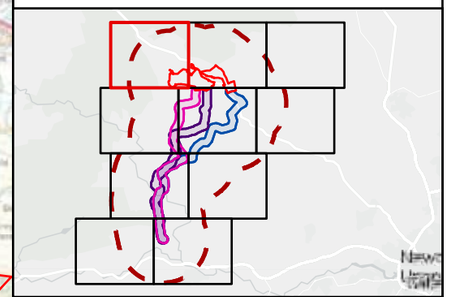
Scheduled Monument within 5 km (Historic England)

Battlefields Inventory within 5 km (Historic England)

LB1156315
LB1044867
LB1156287
LB1044868
LB1370517
LB1156307
SM1007527
BI1000029
LB1044864
LB1156222
LB1156191
LB1156215
LB1044863
LB1044865
LB1370514
LB1370513
LB1302979
LB1044862
LB1156242
LB1370515
LB1156260
SM1009377
SM1009378
SM1009673
SM1007526
LB1302920
LB1370518
LB1044869
LB1156318
LB1044861
SM1009608
LB1156275
LB1044866
LB1370516
SM1009380
LB1041271
SM1006467
LB1044972
LB1153920
LB1370445
LB1153976

OTTERBURN CP
CORSENSIDE CP
Redesdale
DANGER AREA

Ray II
Wind Farm



0 0.2 0.4 0.6 0.8 1
Kilometres

N

SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: LT
DATE: 2026-04-30	APPROVED: BD

Figure 7.3
Designated Assets within 5 km
Sheet 1

ERM

VATTENFALL

PROJECTION: British National Grid

NORTHUMBERLAND

ELSDON CP

Ray II
Wind Farm

Ray II
Wind Farm

Harwood Forest

LB1041272
LB1371439
LB1155072
SM1007524
LB1041236
LB1041233
LB1041239
LB1041238
LB1041231
LB1303503
LB1041232
LB1041234
LB1303514
LB1371476
LB1041230
LB1041240
LB1041237
LB1371477
LB1041235
LB1371475
LB1155121
SM1007521
LB1041241
SM1008283
SM1008837
SM1006608
LB1371456
SM1006485
LB1042057
LB1303366
LB1155367
LB1041270
SM1013542
LB1371455
LB1371064
LB1371063
LB1155403
LB1042059
SM1011114
LB1155407
LB1042058

- The Site
- Cable Corridor Options
- Route Option 1
- 5 km Buffer
- Listed Building within 5 km (Historic England)
- Grade
  - I
  - II
- Scheduled Monument within 5 km (Historic England)

0 0.2 0.4 0.6 0.8 1
Kilometres

N

SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: LT
DATE: 2026-04-30	APPROVED: BD

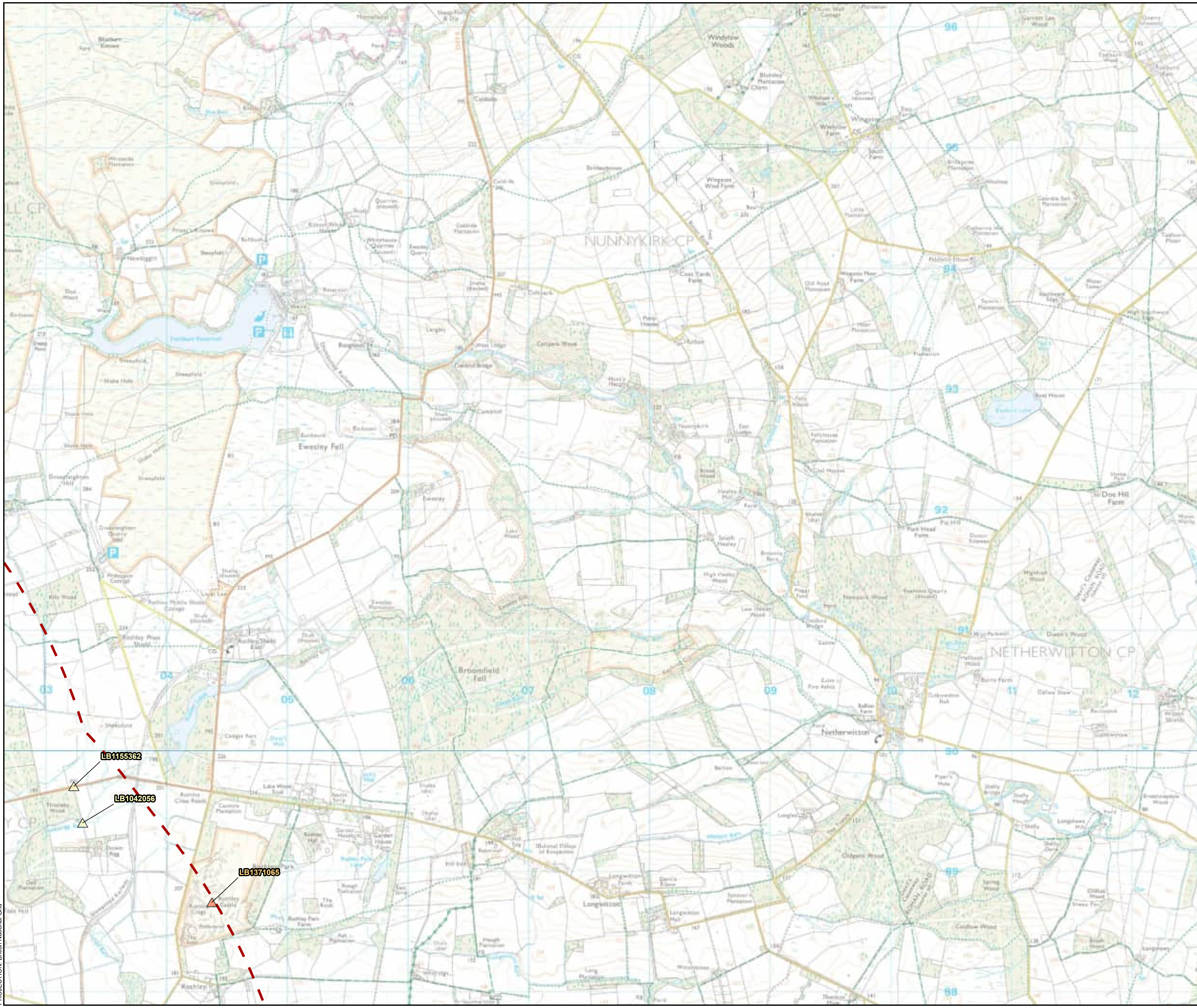
Figure 7.3
Designated Assets within 5 km
Sheet 2

ERM

VATTENFALL

PROJECTION: British National Grid

Path: \\vmukspgisfs01\data\London\Projects\0706303 - Vattenfall Ray II\MAP\0758386 - Vattenfall Ray II Cultural Heritage.aprx / 0758386 - HIS - SCO - Designated Assets within 5 km - A02

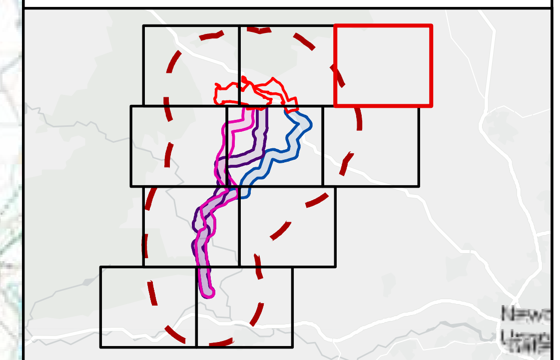


5 km Buffer

Listed Building within 5 km (Historic England)

Grade

- II*
- II



0 0.2 0.4 0.6 0.8 1

Kilometres

N

SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: LT
DATE: 2026-04-30	APPROVED: BD

Figure 7.3
Designated Assets within 5 km
Sheet 3

ERM

VATTENFALL

PROJECTION: British National Grid

Path: \\vmukspgisfs01\data\London\Projects\0706303 - Vattenfall Ray II\MAP\0758386 - Vattenfall Ray II Cultural Heritage.aprx / 0758386 - HIS - SCO - Designated Assets within 5 km - A02

Cable Corridor Options

- Route Option 1
- Route Option 2
- 5 km Buffer

Listed Building within 5 km (Historic England)

Grade

- II*
- II

Scheduled Monument within 5 km (Historic England)

0 0.2 0.4 0.6 0.8 1

Kilometres

N

SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: LT
DATE: 2026-04-30	APPROVED: BD

Figure 7.3
Designated Assets within 5 km
Sheet 4

ERM

VATTENFALL

PROJECTION: British National Grid

Ray II Wind Farm

Ray II Wind Farm

LB1154021
LB1044910
SM1011100
SM1011106
LB1155382
SM1011112
SM1011108
SM1011107
SM1011110
SM1011113
SM1011105
SM1011109
SM1011103
SM1009108
SM1011111
SM1011104
LB1044918
LB1155544
LB1044915
LB1044876
LB1044916
CA9178
LB1303313
LB1155532
LB1044877
LB1044917
SM1006503
SM1011101
SM1007530
SM1008436
SM1011102
LB1044911
LB1303354
LB1303342
LB1155432
LB1370499
GDL1001049
LB1303324
LB1303335
LB1044914
LB1155480
SM1011556
SM1007529
LB1044878
SM1011555
LB1044928
LB1044909
SM1011553
SM1011554
LB1155034
CA9171
LB1155038
LB1155103
LB1155082
LB1370468
LB1155100
LB1155089
SM1011552
SM1011551

PROJECTION: British National Grid

The Site

Cable Corridor Options

Route Option 1

Route Option 2

Route Option 3

5 km Buffer

Listed Building within 5 km (Historic England)

Grade

I

II*

II

Scheduled Monument within 5 km (Historic England)

Registered Park and Garden within 5 km (Historic England)

Conservation Area within 5 km (Historic England)

0 0.2 0.4 0.6 0.8 1

Kilometres

N

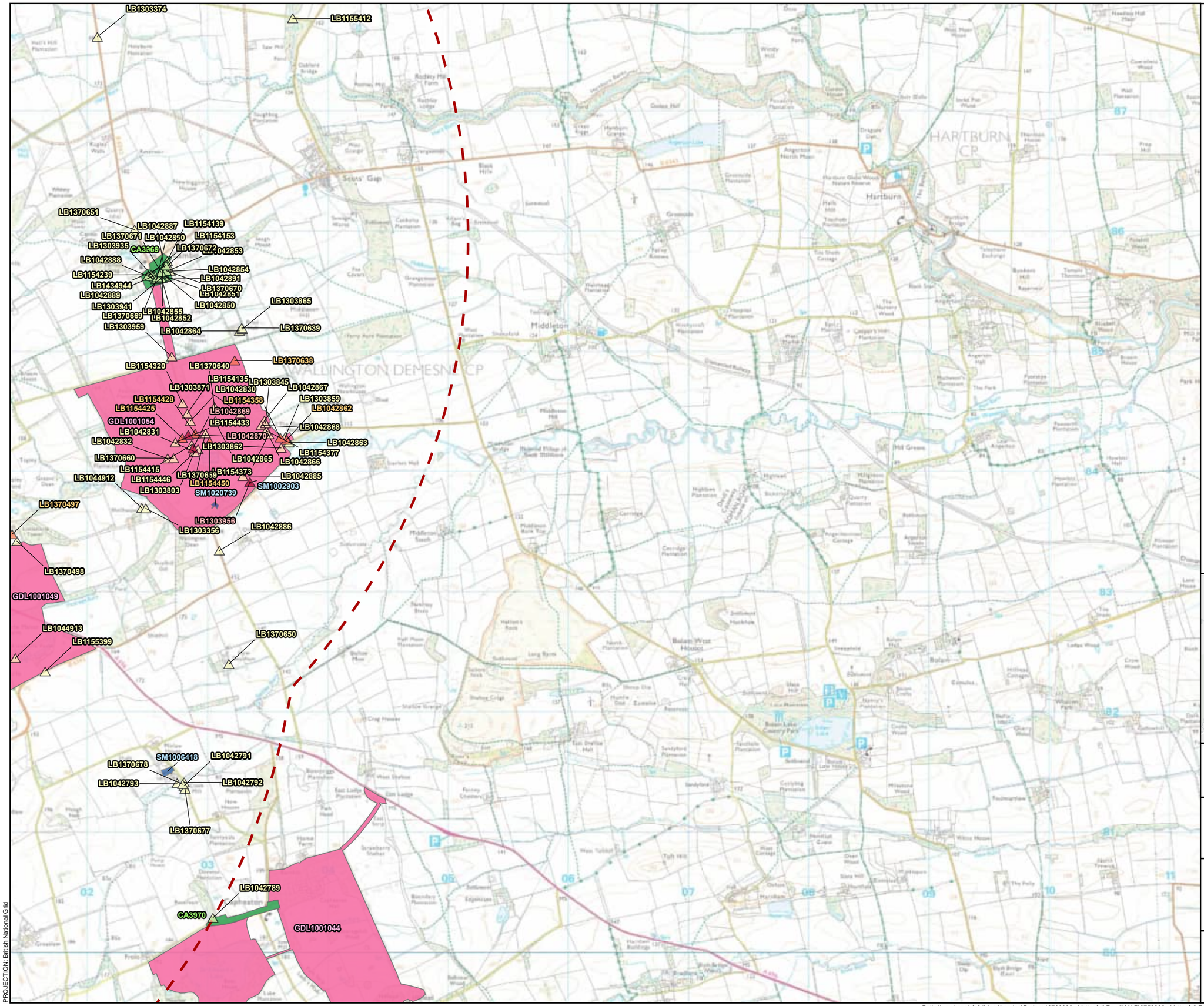
SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: LT
DATE: 2026-04-30	APPROVED: BD

Figure 7.3
Designated Assets within 5 km
Sheet 5

ERM

VATTENFALL

Path: \\vmukspgisfs01\data\London\Projects\0706303 - Vattenfall Ray II\MAP\0758386 - Vattenfall Ray II Cultural Heritage.aprx / 0758386 - HIS - SCO - Designated Assets within 5 km - A02



5 km Buffer

Listed Building within 5 km (Historic England)

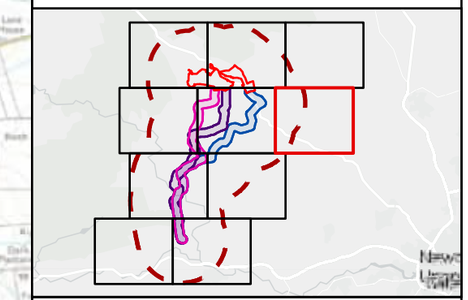
Grade

- I
- II*
- II

Scheduled Monument within 5 km (Historic England)

Registered Park and Garden within 5 km (Historic England)

Conservation Area within 5 km (Historic England)



0 0.2 0.4 0.6 0.8 1

Kilometres

N

SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: LT
DATE: 2026-04-30	APPROVED: BD

Figure 7.3
Designated Assets within 5 km
Sheet 6

ERM

VATTENFALL

PROJECTION: British National Grid

Path: \\vmukspgisfs01\data\London\Projects\0706303 - Vattenfall Ray II\MAP\0758386 - Vattenfall Ray II Cultural Heritage.aprx / 0758386 - HIS - SCO - Designated Assets within 5 km - A02

Cable Corridor Options

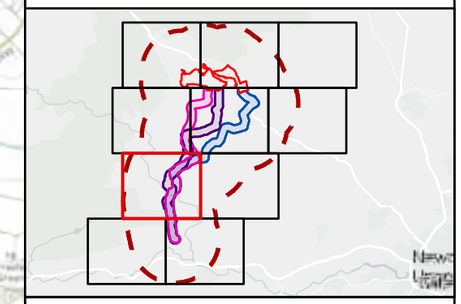
- Route Option 1
- Route Option 2
- Route Option 3
- 5 km Buffer

Listed Building within 5 km (Historic England)

Grade

- I
- II*
- II

- Scheduled Monument within 5 km (Historic England)
- Registered Park and Garden within 5 km (Historic England)
- Conservation Area within 5 km (Historic England)
- World Heritage Site within 5 km (Historic England)



0 0.2 0.4 0.6 0.8 1

Kilometres

N

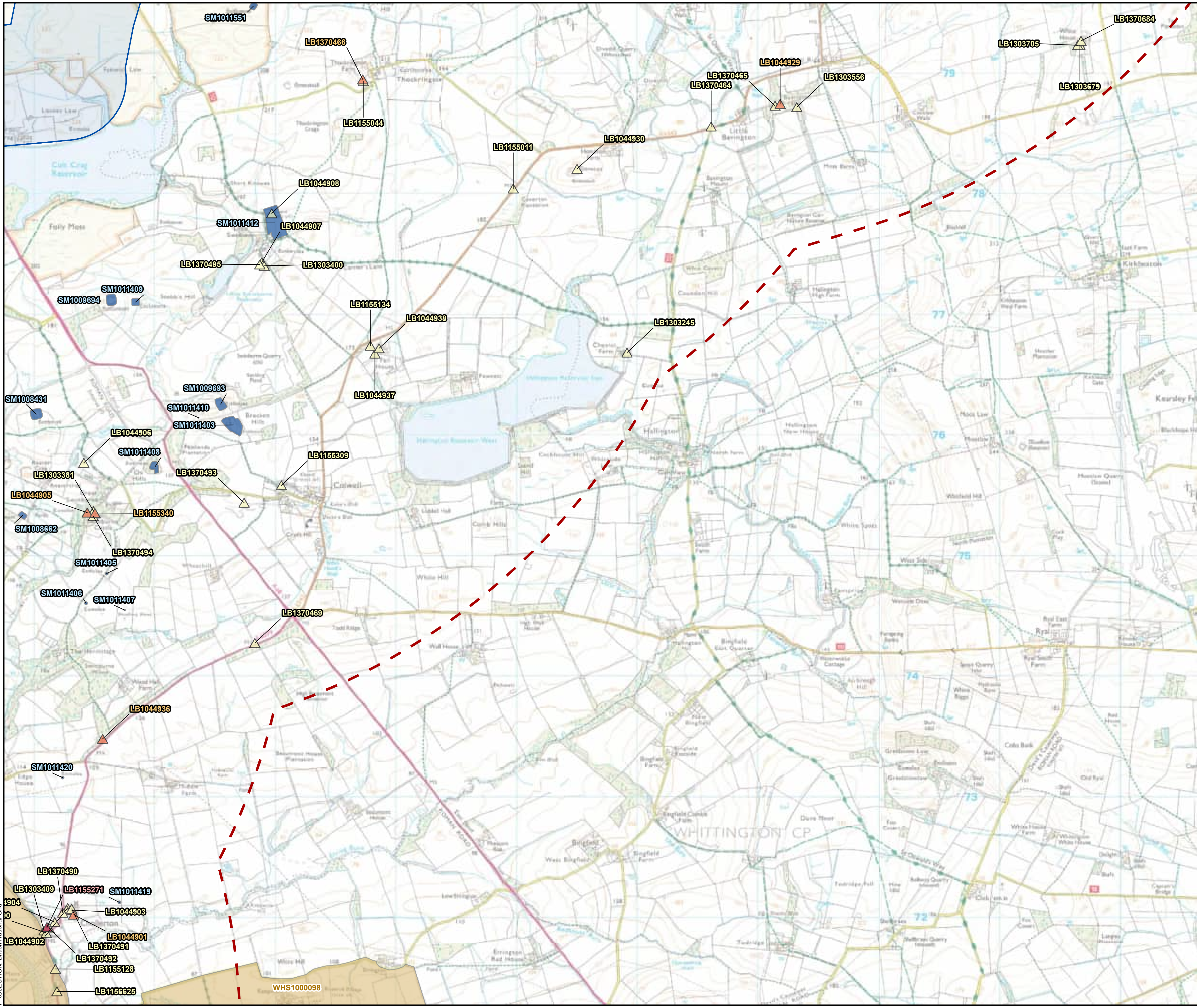
SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: LT
DATE: 2026-04-30	APPROVED: BD

Figure 7.3
Designated Assets within 5 km
Sheet 7

ERM

VATTENFALL

PROJECTION: British National Grid



Cable Corridor Options

Route Option 3

5 km Buffer

Listed Building within 5 km (Historic England)

Grade

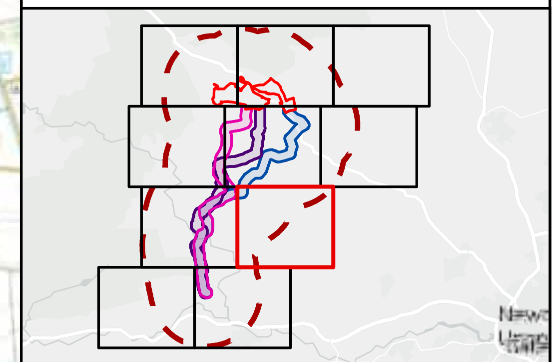
I

II*

II

Scheduled Monument within 5 km (Historic England)

World Heritage Site within 5 km (Historic England)



0 0.2 0.4 0.6 0.8 1

Kilometres

N

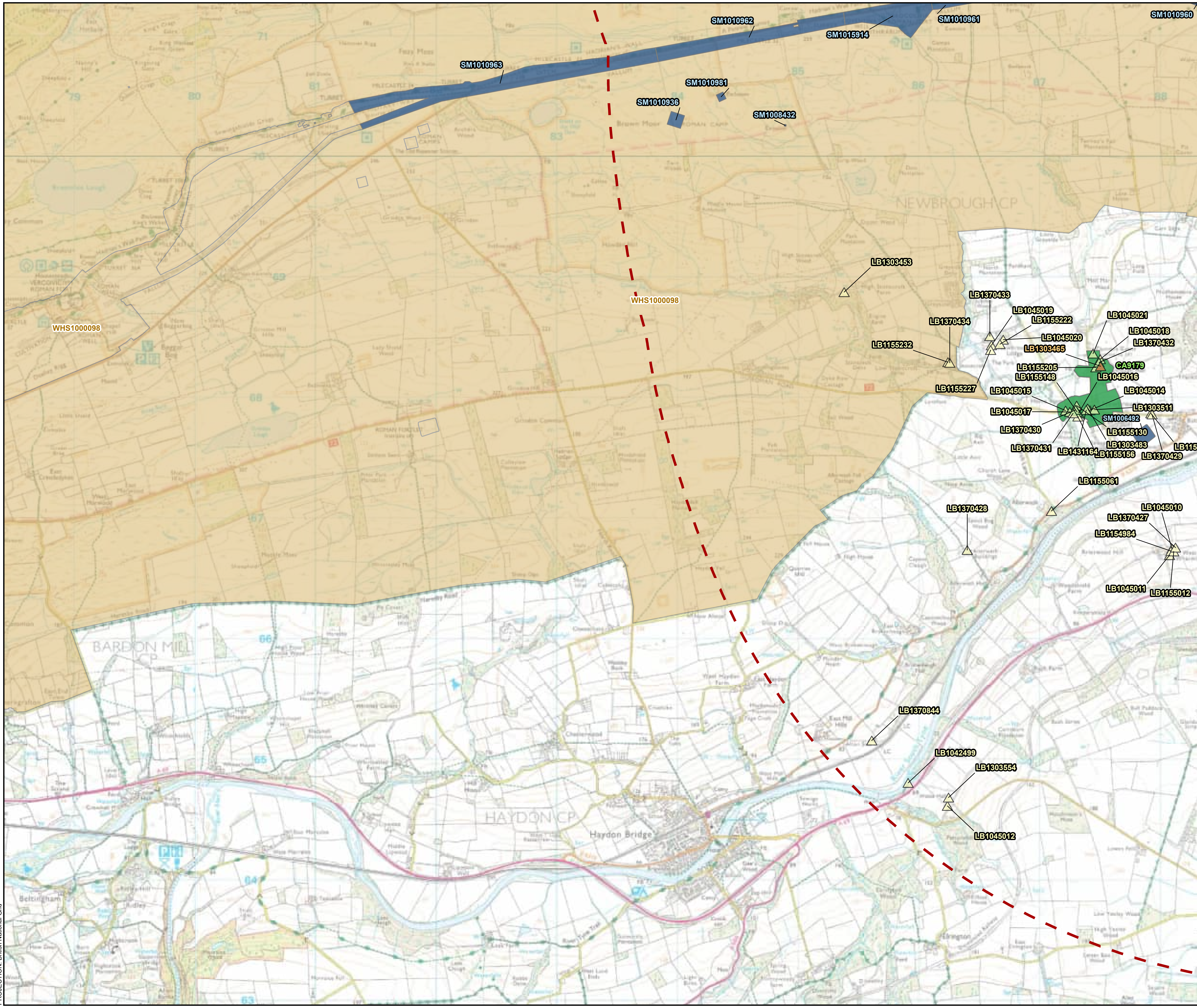
SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: LT
DATE: 2026-04-30	APPROVED: BD

Figure 7.3
Designated Assets within 5 km
Sheet 8

ERM

VATTENFALL

Path: \\vmukspgisfs01\data\London\Projects\0706303 - Vattenfall Ray II\MAP\0758386 - Vattenfall Ray II Cultural Heritage.aprx / 0758386 - HIS - SCO - Designated Assets within 5 km - A02



5 km Buffer

Listed Building within 5 km (Historic England)

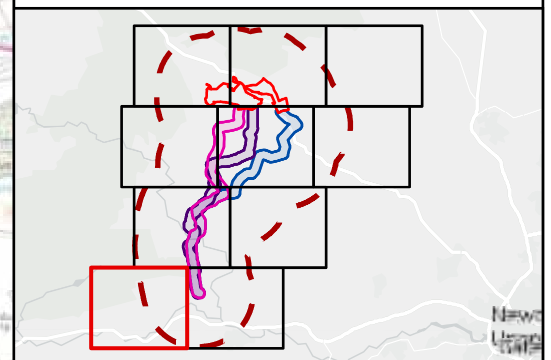
Grade

- II*
- II

Scheduled Monument within 5 km (Historic England)

Conservation Area within 5 km (Historic England)

World Heritage Site within 5 km (Historic England)



0 0.2 0.4 0.6 0.8 1

Kilometres

N

SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: LT
DATE: 2026-04-30	APPROVED: BD

Figure 7.3
Designated Assets within 5 km
Sheet 9

ERM

VATTENFALL

PROJECTION: British National Grid

Path: \\vmukspgisfs01\data\London\Projects\0706303 - Vattenfall Ray II\MAP\0758386 - Vattenfall Ray II Cultural Heritage.aprx / 0758386 - HIS - SCO - Designated Assets within 5 km - A02

Cable Corridor Options

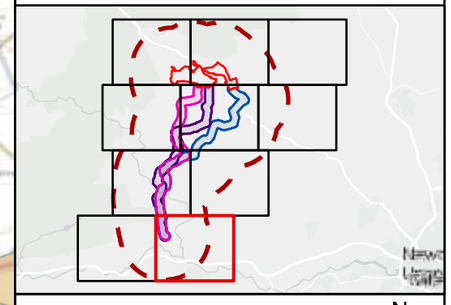
- Route Option 1
- Route Option 2
- Route Option 3
- Existing Fourstones Substation
- 5 km Buffer

Listed Building within 5 km (Historic England)

Grade

- I
- II*
- II

- Scheduled Monument within 5 km (Historic England)
- Registered Park and Garden within 5 km (Historic England)
- Conservation Area within 5 km (Historic England)
- World Heritage Site within 5 km (Historic England)



0 0.2 0.4 0.6 0.8 1

Kilometres

N

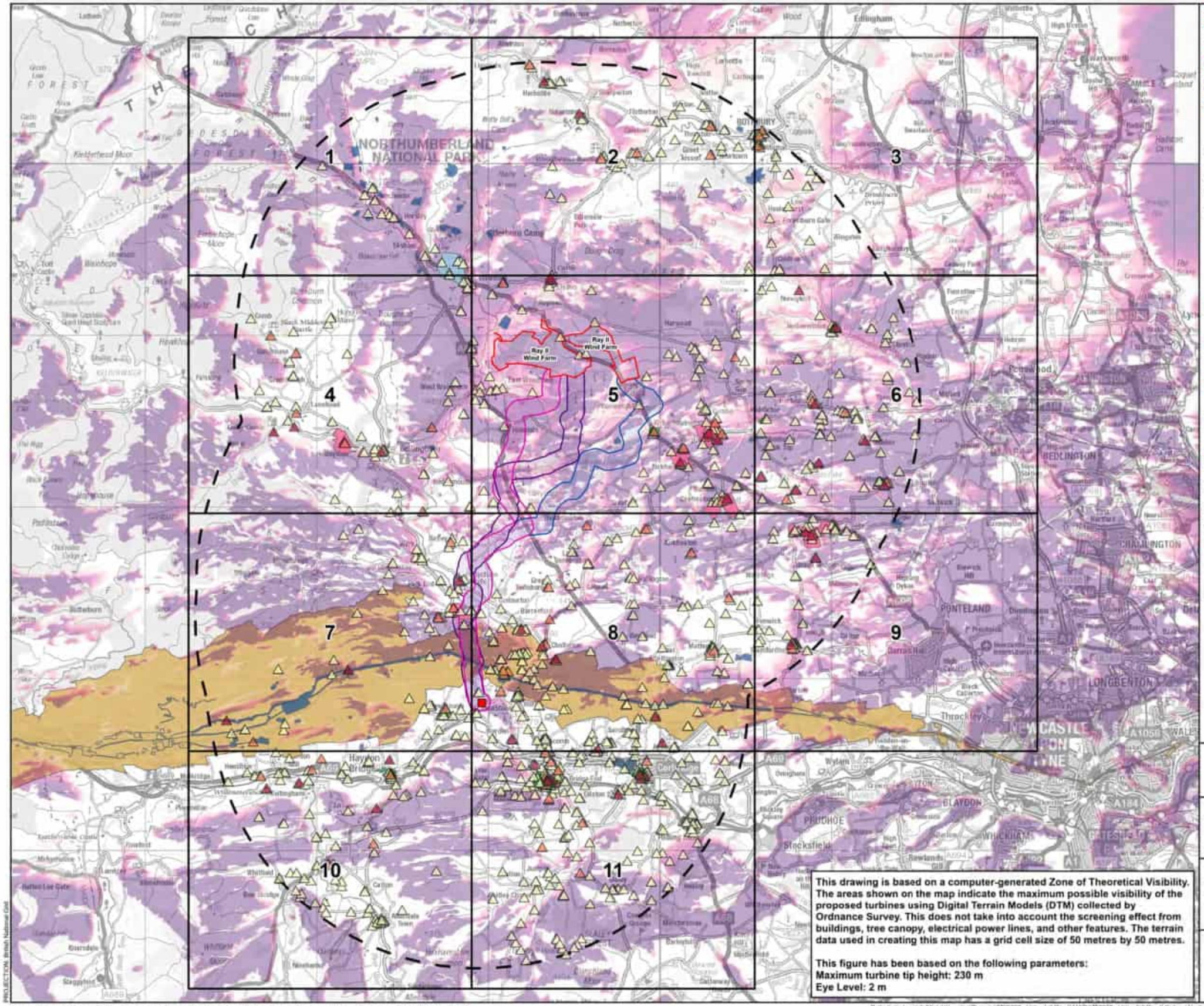
SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: LT
DATE: 2026-04-30	APPROVED: BD

Figure 7.3
Designated Assets within 5 km
Sheet 10

ERM

VATTENFALL

PROJECTION: British National Grid



The Site

Cable Corridor Options

- Route Option 1
- Route Option 2
- Route Option 3

Existing Fourstones Substation

15 km Buffer

Listed Building within 15 km (Historic England)

Grade

- I
- II*
- II

Scheduled Monument within 15 km (Historic England)

Registered Park and Garden within 15 km (Historic England)

Conservation Area within 15 km (Historic England)

Battlefields Inventory within 15 km (Historic England)

World Heritage Site within 15 km (Historic England)

ZTV (230 m Blade Tip)

No. of Turbines Visible (2 m observer height)

20

1

Map Series Sheet Extent

0 2 4 6 8 10 Kilometres

N

SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: JG
PROJECT: 0758388	CHECKED: LT
DATE: 2026-04-30	APPROVED: BD

Figure 7.4
Designated Assets within 15 km and ZTV Index

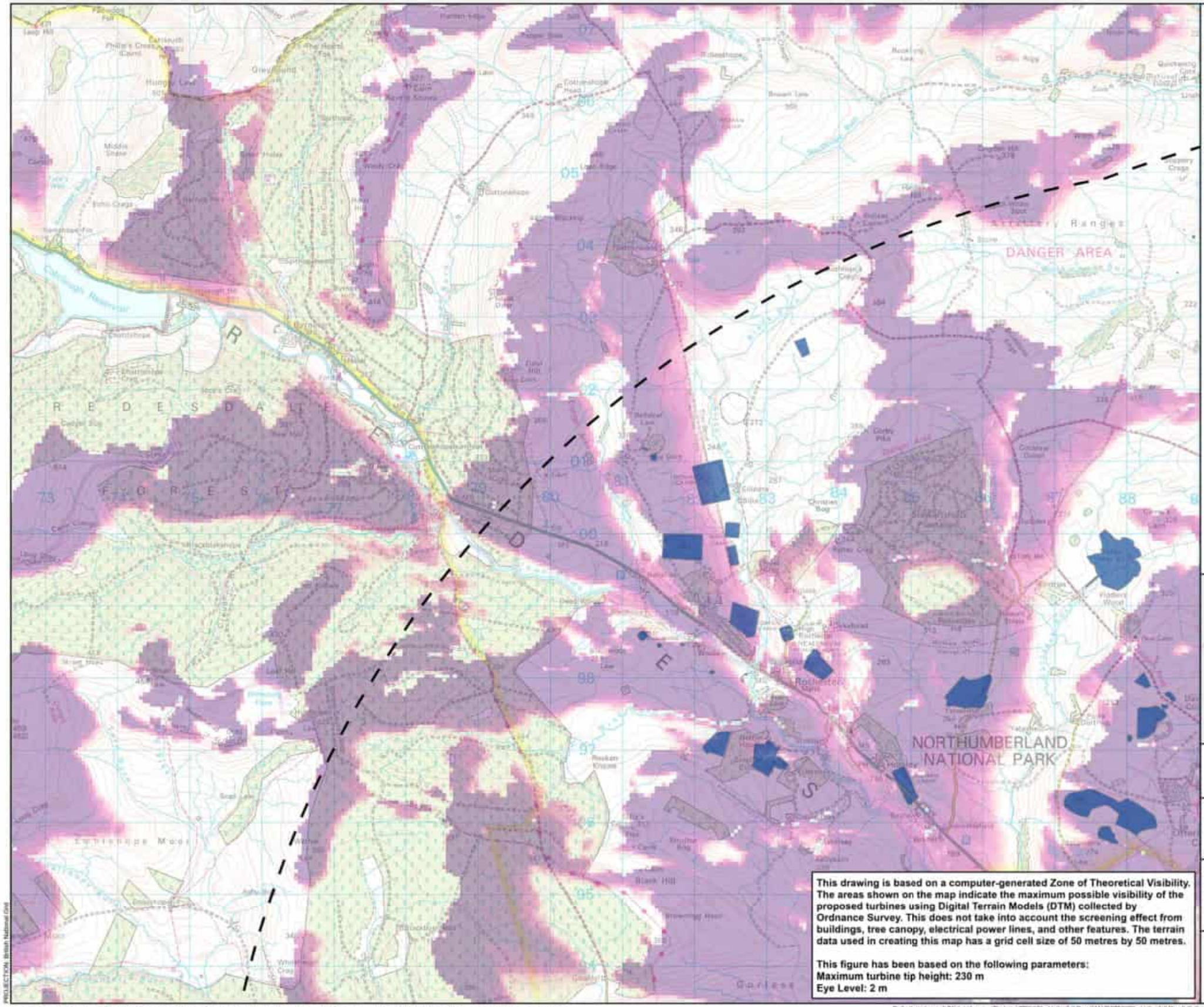
This drawing is based on a computer-generated Zone of Theoretical Visibility. The areas shown on the map indicate the maximum possible visibility of the proposed turbines using Digital Terrain Models (DTM) collected by Ordnance Survey. This does not take into account the screening effect from buildings, tree canopy, electrical power lines, and other features. The terrain data used in creating this map has a grid cell size of 50 metres by 50 metres.

This figure has been based on the following parameters:
Maximum turbine tip height: 230 m
Eye Level: 2 m

ERM

VATTENFALL

PROJECTION: British National Grid



This drawing is based on a computer-generated Zone of Theoretical Visibility. The areas shown on the map indicate the maximum possible visibility of the proposed turbines using Digital Terrain Models (DTM) collected by Ordnance Survey. This does not take into account the screening effect from buildings, tree canopy, electrical power lines, and other features. The terrain data used in creating this map has a grid cell size of 50 metres by 50 metres.

This figure has been based on the following parameters:
Maximum turbine tip height: 230 m
Eye Level: 2 m

SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: LT
DATE: 2026-04-30	APPROVED: BD

Figure 7.4
Designated Assets within 15 km and ZTV Sheet 1

ERM

VATTENFALL

PROJECTION: British National Grid

Path: I:\mke\pgis\01\data\Landscape\Projects\0705\353 - Vattenfall Ray II\MAP\0758386 - Vattenfall Ray II Cultural Heritage.aprx / 0758386 - HIS - SO3 - Designated Assets within 15 km and ZTV - A02

15 km Buffer

Scheduled Monument within 15 km (Historic England)

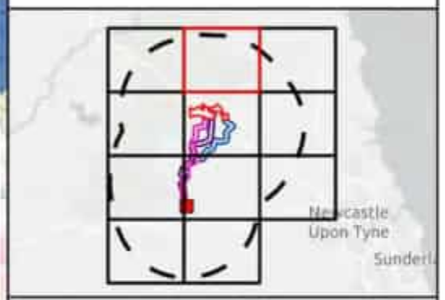
Conservation Area within 15 km (Historic England)

ZTV (230 m Blade Tip)

No. of Turbines Visible (2 m observer height)

20

1



0 0.5 1 1.5 2
Kilometres

N

SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: LT
DATE: 2026-04-30	APPROVED: BD

Figure 7.4
Designated Assets within 15 km and ZTV
Sheet 2

This drawing is based on a computer-generated Zone of Theoretical Visibility. The areas shown on the map indicate the maximum possible visibility of the proposed turbines using Digital Terrain Models (DTM) collected by Ordnance Survey. This does not take into account the screening effect from buildings, tree canopy, electrical power lines, and other features. The terrain data used in creating this map has a grid cell size of 50 metres by 50 metres.

This figure has been based on the following parameters:
Maximum turbine tip height: 230 m
Eye Level: 2 m

ERM

VATTENFALL

PROJECTION: British National Grid

Path: \\mukspgisfs01\data\Livewire\Projects\0758301 - Vattenfall Ray II\MAPS\758386 - Vattenfall Ray II Cultural Heritage.aprx - 0758386 - HIS - SG3 - Designated Assets within 15 km and ZTV - A02

15 km Buffer

Scheduled Monument within 15 km (Historic England)

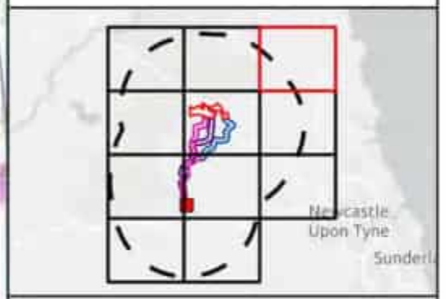
Conservation Area within 15 km (Historic England)

ZTV (230 m Blade Tip)

No. of Turbines Visible (2 m observer height)

20

1



0 0.5 1 1.5 2
Kilometres

N

SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: LT
DATE: 2026-04-30	APPROVED: BD

Figure 7.4
Designated Assets within 15 km and ZTV Sheet 3

This drawing is based on a computer-generated Zone of Theoretical Visibility. The areas shown on the map indicate the maximum possible visibility of the proposed turbines using Digital Terrain Models (DTM) collected by Ordnance Survey. This does not take into account the screening effect from buildings, tree canopy, electrical power lines, and other features. The terrain data used in creating this map has a grid cell size of 50 metres by 50 metres.

This figure has been based on the following parameters:
Maximum turbine tip height: 230 m
Eye Level: 2 m

ERM

VATTENFALL

PROJECTION: British National Grid

Path: I:\vrs\sg\pdf\Vattenfall\Projects\0758383 - Vattenfall Ray II\MAP\0758386 - Vattenfall Ray II Cultural Heritage.aprx - 0758386 - HIS - SG3 - Designated Assets within 15 km and ZTV - A02

15 km Buffer

Scheduled Monument within 15 km (Historic England)

Registered Park and Garden within 15 km (Historic England)

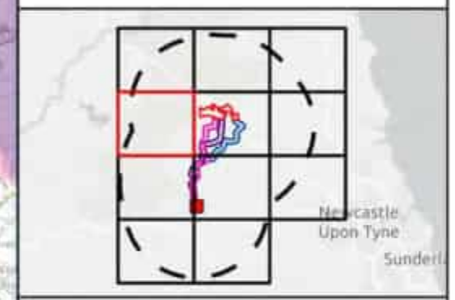
Battlefields Inventory within 15 km (Historic England)

ZTV (230 m Blade Tip)

No. of Turbines Visible (2 m observer height)

20

1



0 0.5 1 1.5 2

Kilometres

N

SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: LT
DATE: 2026-04-30	APPROVED: BD

Figure 7.4
Designated Assets within 15 km and ZTV
Sheet 4

This drawing is based on a computer-generated Zone of Theoretical Visibility. The areas shown on the map indicate the maximum possible visibility of the proposed turbines using Digital Terrain Models (DTM) collected by Ordnance Survey. This does not take into account the screening effect from buildings, tree canopy, electrical power lines, and other features. The terrain data used in creating this map has a grid cell size of 50 metres by 50 metres.

This figure has been based on the following parameters:
Maximum turbine tip height: 230 m
Eye Level: 2 m

ERM

VATTENFALL

PROJECTION: British National Grid

Path: I:\mukspgis\s01\data\Livison\Projects\0758\0758386 - Vattenfall Ray II\MAPS\758386 - Vattenfall Ray II Cultural Heritage.aprx / 0758386 - H05 - 6D3 - Designated Assets within 15 km and ZTV - A02

Ray II Wind Farm

Ray II Wind Farm

Kirkwhelpington

Newcastle Upon Tyne

- The Site
- Cable Corridor Options
  - Route Option 1
  - Route Option 2
  - Route Option 3
- 15 km Buffer
- Scheduled Monument within 15 km (Historic England)
- Registered Park and Garden within 15 km (Historic England)
- Conservation Area within 15 km (Historic England)
- ZTV (230 m Blade Tip)
- No. of Turbines Visible (2 m observer height)
  - 20
  - 1

0 0.5 1 1.5 2 Kilometres

N

This drawing is based on a computer-generated Zone of Theoretical Visibility. The areas shown on the map indicate the maximum possible visibility of the proposed turbines using Digital Terrain Models (DTM) collected by Ordnance Survey. This does not take into account the screening effect from buildings, tree canopy, electrical power lines, and other features. The terrain data used in creating this map has a grid cell size of 50 metres by 50 metres.

This figure has been based on the following parameters:
Maximum turbine tip height: 230 m
Eye Level: 2 m

SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: LT
DATE: 2026-04-30	APPROVED: BD

Figure 7.4
Designated Assets within 15 km and ZTV
Sheet 5

ERM

VATTENFALL

PROJECTION: British National Grid

15 km Buffer

Scheduled Monument within 15 km (Historic England)

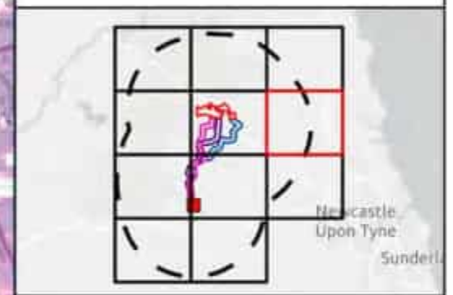
Conservation Area within 15 km (Historic England)

ZTV (230 m Blade Tip)

No. of Turbines Visible (2 m observer height)

20

1



0 0.5 1 1.5 2

Kilometres

N

SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: LT
DATE: 2026-04-30	APPROVED: BD

Figure 7.4
Designated Assets within 15 km and ZTV
Sheet 6

This drawing is based on a computer-generated Zone of Theoretical Visibility. The areas shown on the map indicate the maximum possible visibility of the proposed turbines using Digital Terrain Models (DTM) collected by Ordnance Survey. This does not take into account the screening effect from buildings, tree canopy, electrical power lines, and other features. The terrain data used in creating this map has a grid cell size of 50 metres by 50 metres.

This figure has been based on the following parameters:
Maximum turbine tip height: 230 m
Eye Level: 2 m

ERM

VATTENFALL

PROJECTION: British National Grid

Path: I:\vwaspgis01\data\Livrosoft\Projects\0758386 - Vattenfall Ray II\MAPs\0758386 - Vattenfall Ray II Cultural Heritage.aprx - 0758386 - HIS - SC03 - Designated Assets within 15 km and ZTV - A02

Cable Corridor Options

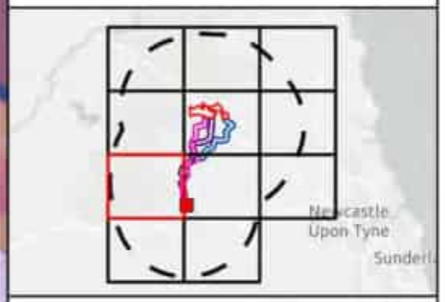
- Route Option 1
- Route Option 2
- Route Option 3
- 15 km Buffer
- Scheduled Monument within 15 km (Historic England)
- Registered Park and Garden within 15 km (Historic England)
- Conservation Area within 15 km (Historic England)
- World Heritage Site within 15 km (Historic England)

ZTV (230 m Blade Tip)

No. of Turbines Visible (2 m observer height)

20

1



0 0.5 1 1.5 2

Kilometres

N

SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: JG
PROJECT: 0758388	CHECKED: LT
DATE: 2026-04-30	APPROVED: BD

Figure 7.4
Designated Assets within 15 km and ZTV
Sheet 7

This drawing is based on a computer-generated Zone of Theoretical Visibility. The areas shown on the map indicate the maximum possible visibility of the proposed turbines using Digital Terrain Models (DTM) collected by Ordnance Survey. This does not take into account the screening effect from buildings, tree canopy, electrical power lines, and other features. The terrain data used in creating this map has a grid cell size of 50 metres by 50 metres.

This figure has been based on the following parameters:
Maximum turbine tip height: 230 m
Eye Level: 2 m

ERM

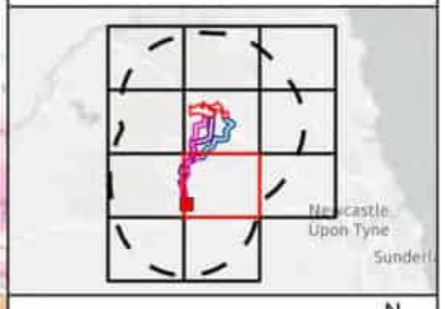
VATTENFALL

PROJECTION: British National Grid

Cable Corridor Options
- Route Option 1
- Route Option 2
- Route Option 3
- Existing Fourstones Substation
- 15 km Buffer
- Scheduled Monument within 15 km (Historic England)
- Registered Park and Garden within 15 km (Historic England)
- Conservation Area within 15 km (Historic England)
- World Heritage Site within 15 km (Historic England)

ZTV (230 m Blade Tip)

No. of Turbines Visible (2 m observer height)
- 20
- 1



0 0.5 1 1.5 2
Kilometres

N

SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: LT
DATE: 2026-04-30	APPROVED: BD

Figure 7.4
Designated Assets within 15 km and ZTV
Sheet 8

ERM

VATTENFALL

This drawing is based on a computer-generated Zone of Theoretical Visibility. The areas shown on the map indicate the maximum possible visibility of the proposed turbines using Digital Terrain Models (DTM) collected by Ordnance Survey. This does not take into account the screening effect from buildings, tree canopy, electrical power lines, and other features. The terrain data used in creating this map has a grid cell size of 50 metres by 50 metres.

This figure has been based on the following parameters:
Maximum turbine tip height: 230 m
Eye Level: 2 m

PROJECTION: British National Grid

15 km Buffer

Scheduled Monument within 15 km (Historic England)

Registered Park and Garden within 15 km (Historic England)

Conservation Area within 15 km (Historic England)

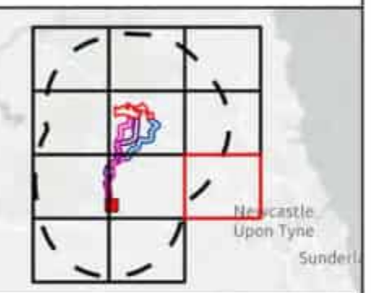
World Heritage Site within 15 km (Historic England)

ZTV (230 m Blade Tip)

No. of Turbines Visible (2 m observer height)

20

1



0 0.5 1 1.5 2

Kilometres

N

SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: LT
DATE: 2026-04-30	APPROVED: BD

Figure 7.4
Designated Assets within 15 km and ZTV
Sheet 9

This drawing is based on a computer-generated Zone of Theoretical Visibility. The areas shown on the map indicate the maximum possible visibility of the proposed turbines using Digital Terrain Models (DTM) collected by Ordnance Survey. This does not take into account the screening effect from buildings, tree canopy, electrical power lines, and other features. The terrain data used in creating this map has a grid cell size of 50 metres by 50 metres.

This figure has been based on the following parameters:
Maximum turbine tip height: 230 m
Eye Level: 2 m

ERM

VATTENFALL

PROJECTION: British National Grid

15 km Buffer

Scheduled Monument within 15 km (Historic England)

Conservation Area within 15 km (Historic England)

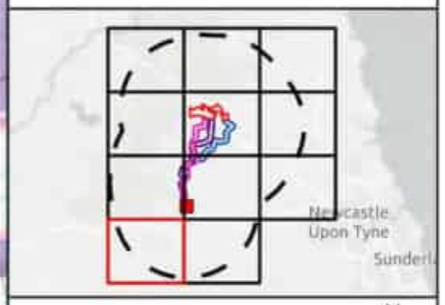
World Heritage Site within 15 km (Historic England)

ZTV (230 m Blade Tip)

No. of Turbines Visible (2 m observer height)

20

1



0 0.5 1 1.5 2
Kilometres

N

SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: LT
DATE: 2026-04-30	APPROVED: BD

Figure 7.4
Designated Assets within 15 km and ZTV
Sheet 10

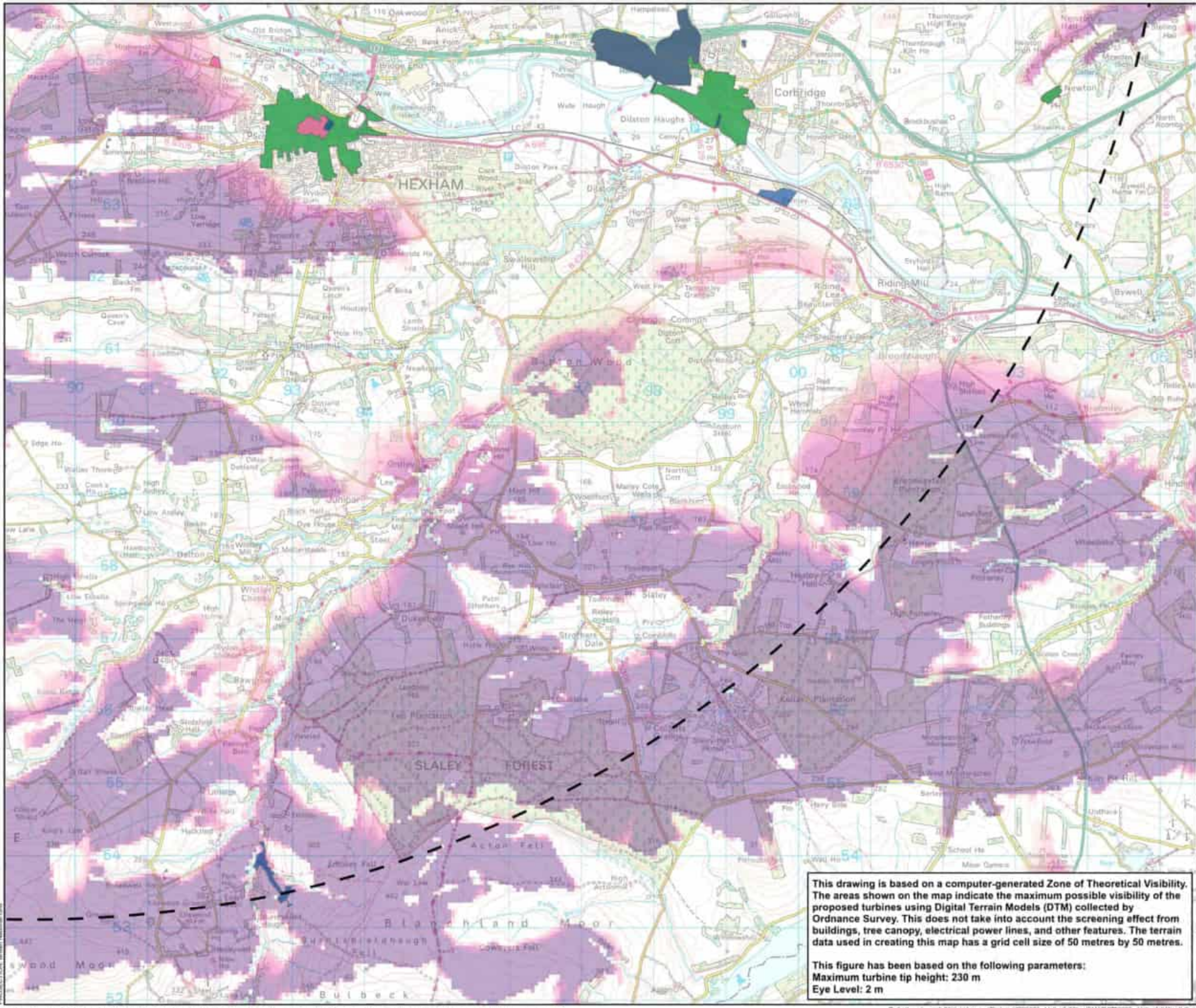
ERM

VATTENFALL

This drawing is based on a computer-generated Zone of Theoretical Visibility. The areas shown on the map indicate the maximum possible visibility of the proposed turbines using Digital Terrain Models (DTM) collected by Ordnance Survey. This does not take into account the screening effect from buildings, tree canopy, electrical power lines, and other features. The terrain data used in creating this map has a grid cell size of 50 metres by 50 metres.

This figure has been based on the following parameters:
Maximum turbine tip height: 230 m
Eye Level: 2 m

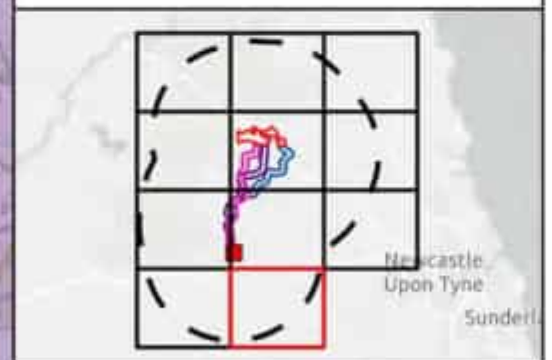
PROJECTION: British National Grid



This drawing is based on a computer-generated Zone of Theoretical Visibility. The areas shown on the map indicate the maximum possible visibility of the proposed turbines using Digital Terrain Models (DTM) collected by Ordnance Survey. This does not take into account the screening effect from buildings, tree canopy, electrical power lines, and other features. The terrain data used in creating this map has a grid cell size of 50 metres by 50 metres.

This figure has been based on the following parameters:
Maximum turbine tip height: 230 m
Eye Level: 2 m

15 km Buffer
Scheduled Monument within 15 km (Historic England)
Registered Park and Garden within 15 km (Historic England)
Conservation Area within 15 km (Historic England)
World Heritage Site within 15 km (Historic England)
ZTV (230 m Blade Tip)
No. of Turbines Visible (2 m observer height)
20
1



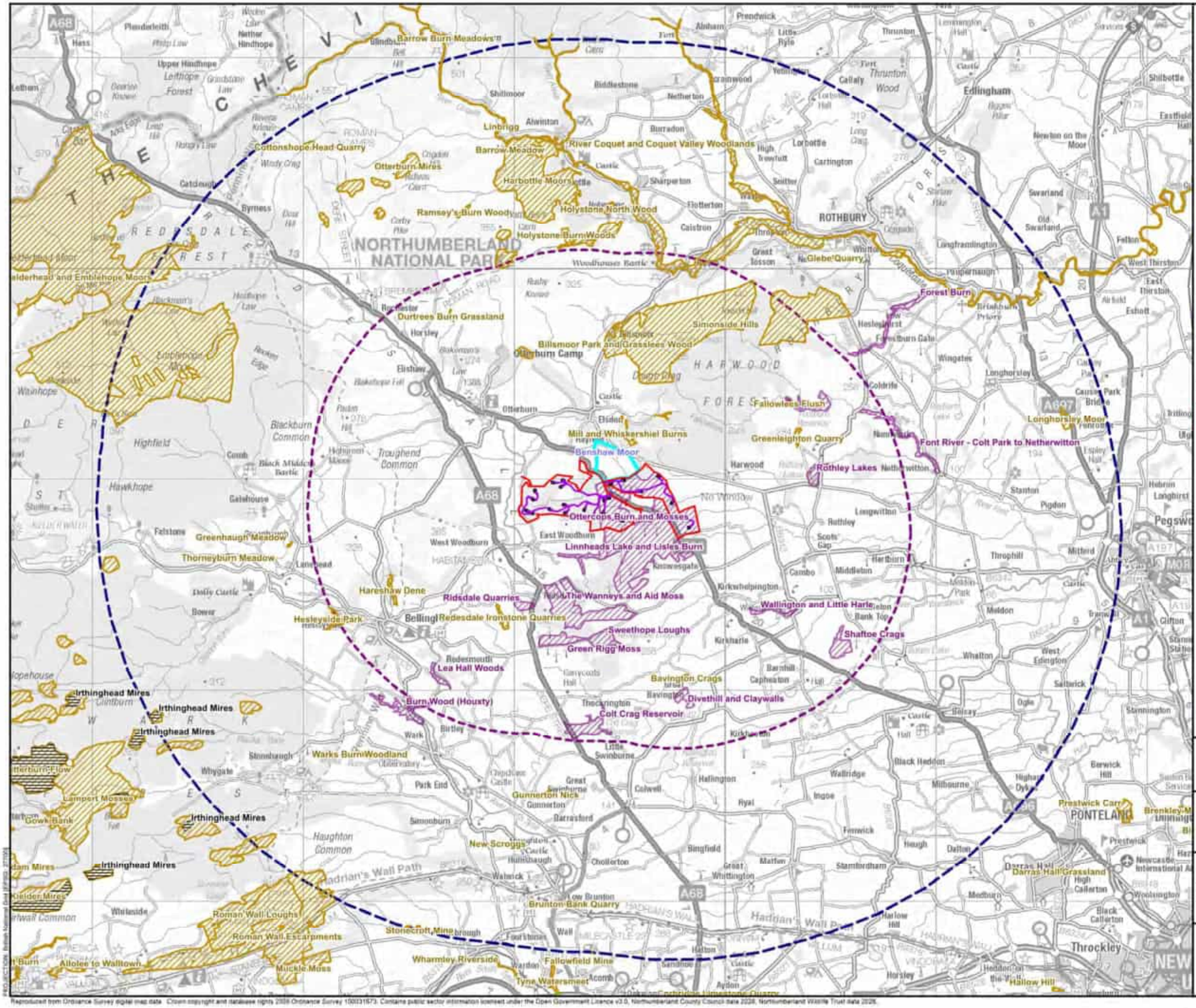
0 0.5 1 1.5 2
Kilometres
N

SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: LT
DATE: 2026-04-30	APPROVED: BD

Figure 7.4
Designated Assets within 15 km and ZTV
Sheet 11

ERM
VATTENFALL

PROJECTION: British National Grid



The Site

Proposed Turbine Location

Proposed Access Track

Proposed Substation/BESS Compound

Proposed Temporary Construction Compound

Proposed Turbine Hardstanding

Site Boundary 10 km Buffer

Site Boundary 20 km Buffer

International Statutory Designations

RAMSAR Site

National Statutory Designations

Site of Special Scientific Interest (SSSI)

Local Statutory Designations

Local Wildlife and Geological Site (LWGS)

Non-statutory Designations

Northumberland Wildlife Trust Reserve - Benshaw Moor

MBEC

0 1.0 2.0 4.0 6.0

Kilometres

N

SCALE: See Scale Bar	VERSION: A01
SIZE: A3	DRAWN: SR
PROJECT: RAY II Wind Farm	CHECKED: PB
DATE: 2026-04-29	APPROVED: PB

Figure 8.1a
Relevant Designated Sites within the Wind Farm Study Area

ERM

VATTENFALL

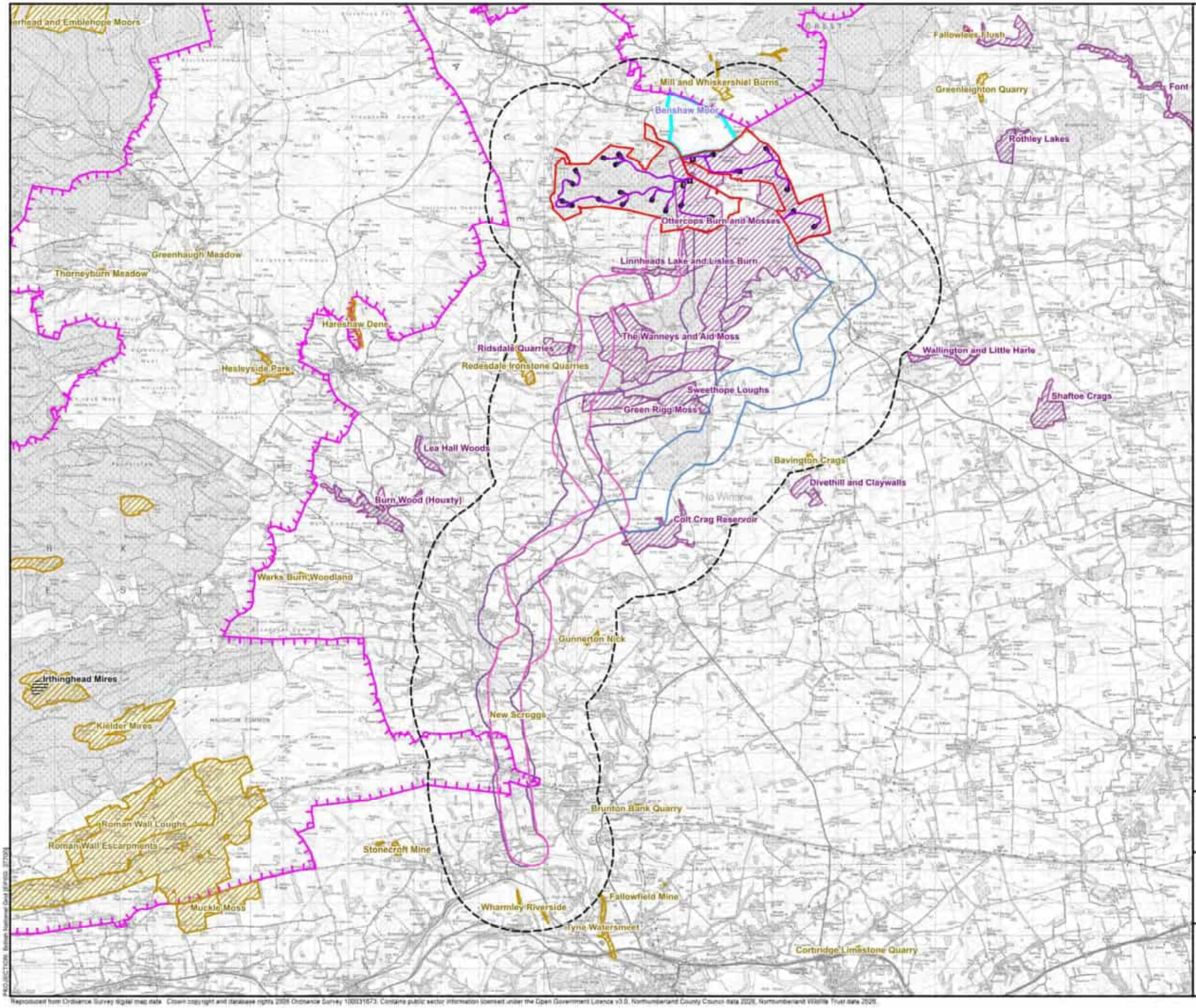
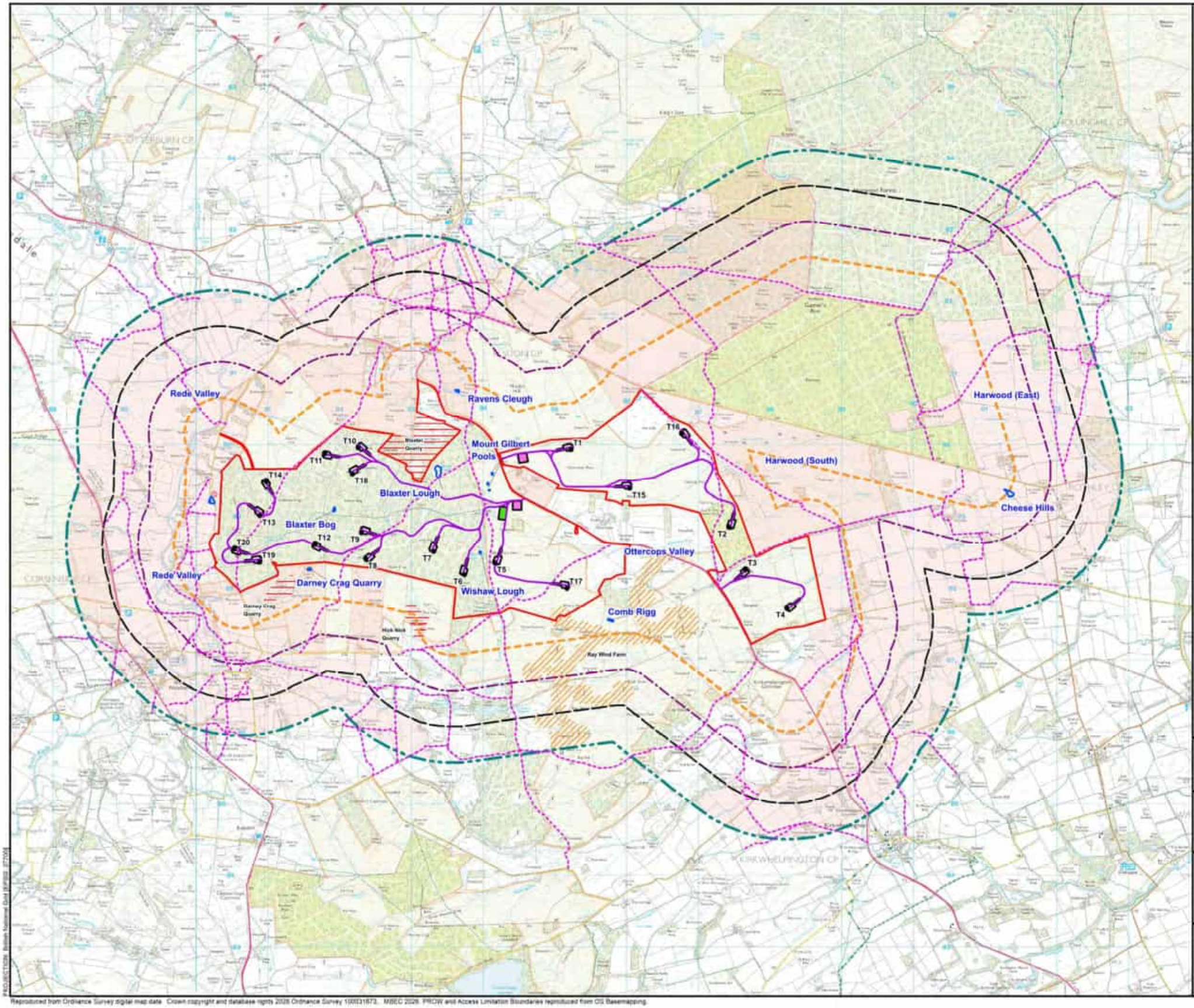


Figure 8.1b
Relevant Designated Sites within the Grid Connection Study Area



The Site
Proposed Turbine Location
Proposed Access Track
Proposed Substation/BESS Compound
Proposed Temporary Construction Compound
Proposed Turbine Hardstanding
Core Survey Area
Wintering Bird Survey Area
Black Grouse Survey Area
Raptor Survey Area
Waterbodies
Public Right of Way (PROW)

Access Limitations
Third Party Land, PROW access only
Active Quarry
Ray Wind Farm

MBEC
MACKENZIE BRADSHAW ENVIRONMENTAL CONSULTING

0 0.5 1.0 1.5 2.0
Kilometres

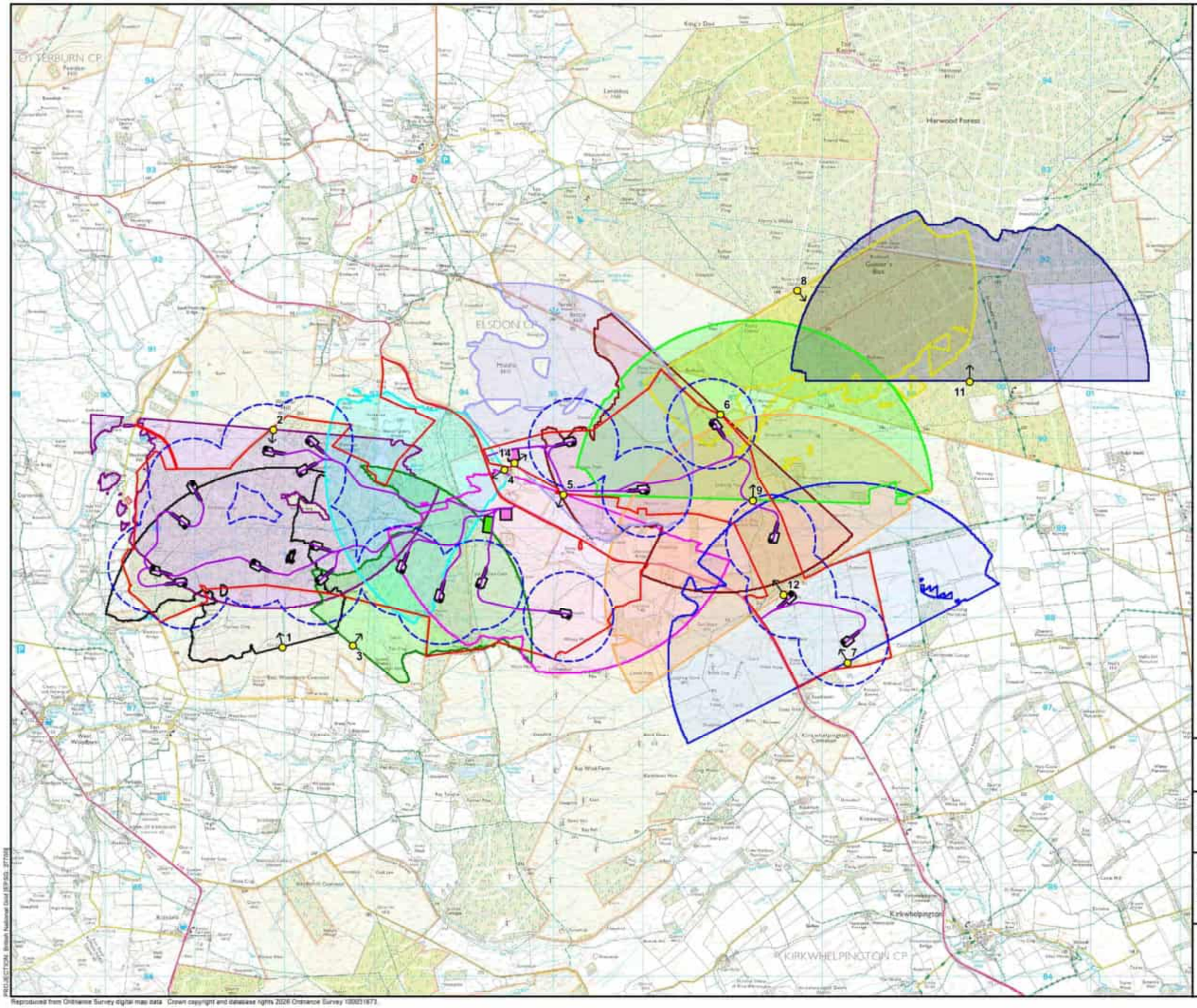
N

SCALE: See Scale Bar	VERSION: A01
SIZE: A3	DRAWN: SR
PROJECT: RAY II Wind Farm	CHECKED: PB
DATE: 2026-04-09	APPROVED: PB

Figure 8.2
Ornithological Survey Areas 2023-2025

ERM

VATTENFALL



The Site
Proposed Turbine Location
Proposed Access Track
Ecology Survey Areas
Route Option 1
Route Option 2
Route Option 3
Existing Fourstones Substation
Ecological Study Area

0 1 2 3 4 5
Kilometres

N

SCALE: See Scale Bar	VERSION: A01
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: DM
DATE: 2026-05-01	APPROVED: BD

Figure 9.1
Ecological Study Area

ERM

VATTENFALL

PROJECTION: British National Grid

Path: \\vmukspgisfs01\data\London\Projects\0706303 - Vattenfall Ray II\MAP\0758386 - Vattenfall Ray II Ecology.aprx / 0758386 - Ecology - SCO - Ecological Study Area - A01

North Pennine Dales Meadows SAC
Durtrees Burn Grassland SSSI
NORTHUMBERLAND NATIONAL PARK
Billsmoor Park and Grasslees Wood SSSI
Simonside Hills SAC
Simonside Hills SSSI
Otterburn Mires SSSI
Billsmoor Park and Grasslees Wood SSSI
Simonside Hills SSSI
HARWOOD FOREST
Mill and Whiskershiel Burns SSSI
Mill and Whiskershiel Burns SSSI
Mill and Whiskershiel Burns SSSI
Fallowlees Flush SSSI
Greenleighton Quarry SSSI
T10
T11
T18
T14
T13
T20
T19
T12
T9
T8
T7
T6
T5
T17
T1
T16
T15
T2
T3
T4
Hareshaw Dene SSSI
Redesdale Ironstone Quarries SSSI
Bavington Crags SSSI

- The Site
- Proposed Turbine Location
- Proposed Access Track
- Proposed Substation/BESS Compound
- Proposed Temporary Construction Compound
- Proposed Turbine Hardstanding

Cable Corridor Options

- Route Option 1
- Route Option 2
- Route Option 3
- 5 km Buffer
- Site of Special Scientific Interest (Natural England)
- Special Area Of Conservation (Natural England)

0 0.5 1 1.5 2
Kilometres

N

SCALE: See Scale Bar	VERSION: A01
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: DM
DATE: 2026-05-01	APPROVED: BD

Figure 9.2
Designated Sites within 5 km of the Proposed Order Limits
Sheet 1

ERM

VATTENFALL

PROJECTION: British National Grid

Path: \\vmukspgisfs01\data\London\Projects\0706303 - Vattenfall Ray II\MAP\0758386 - Vattenfall Ray II Ecology.aprx / 0758386 - Ecology - SCO - Designated Sites within 5 km of the Proposed Order Limits - A01

T10
T11
T18
T14
T13
T20
T12
T19
T9
T8
T7
T6
T5
T17
T1
T16
T15
T2
T3
T4

Hareshaw Dene SSSI

Hesleyside Park SSSI

Hesleyside Park SSSI

Redesdale Ironstone Quarries SSSI

Bavington Crags SSSI

Warks Burn Woodland SSSI

Gunnerton Nick SSSI

New Scroggs SSSI

The Site
Proposed Turbine Location
Proposed Access Track
Proposed Substation/BESS Compound
Proposed Temporary Construction Compound
Proposed Turbine Hardstanding
Cable Corridor Options
Route Option 1
Route Option 2
Route Option 3
5 km Buffer
Site of Special Scientific Interest (Natural England)

0 0.5 1 1.5 2
Kilometres

N

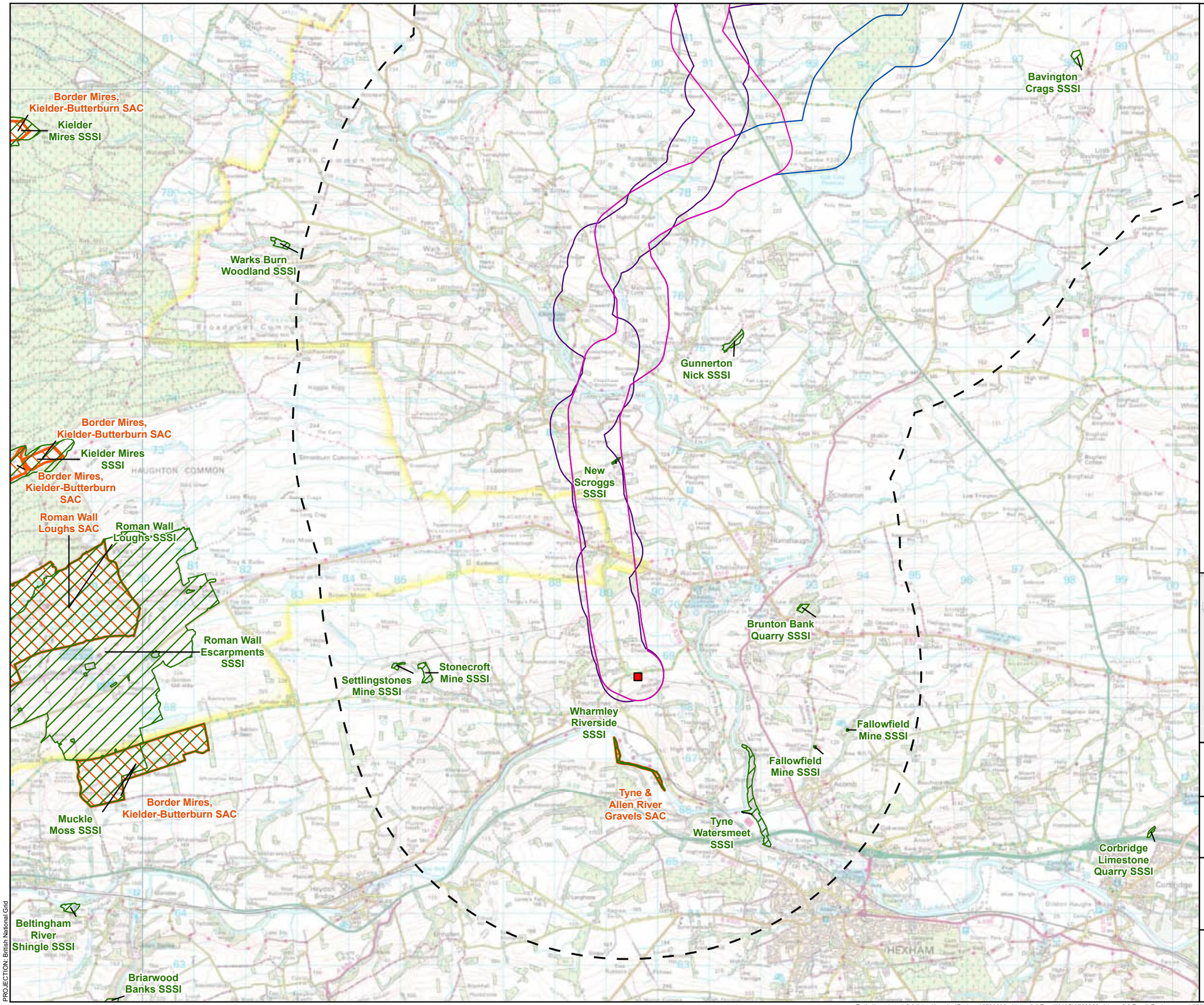
SCALE: See Scale Bar	VERSION: A01
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: DM
DATE: 2026-05-01	APPROVED: BD

Figure 9.2
Designated Sites within 5 km of the Proposed Order Limits
Sheet 2

ERM

VATTENFALL

PROJECTION: British National Grid

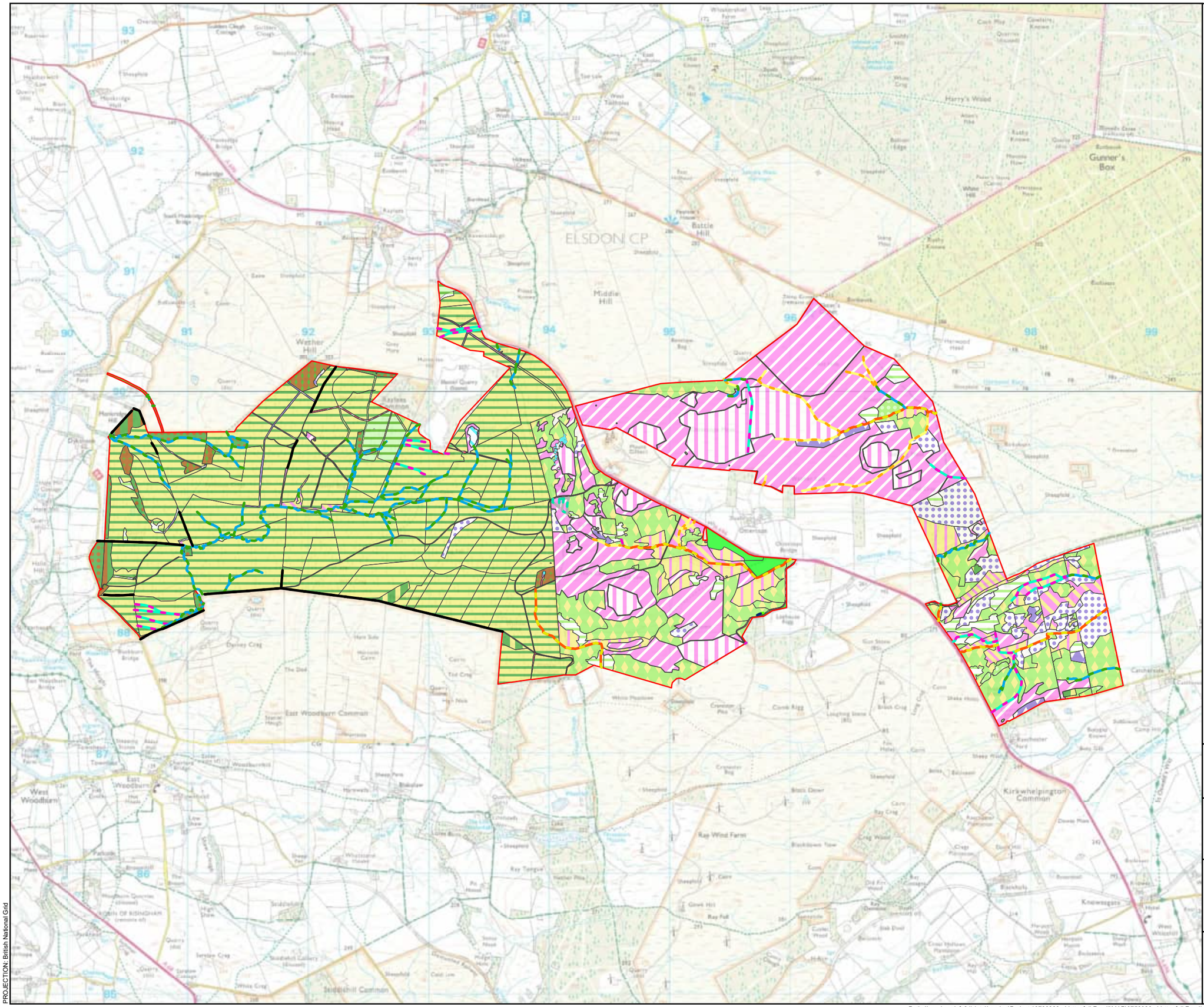


PROJECTION: British National Grid

SCALE: See Scale Bar	VERSION: A01
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: DM
DATE: 2026-05-01	APPROVED: BD

Figure 9.2
Designated Sites within 5 km of the Proposed Order Limits
Sheet 3

Path: \\vmukspgisfs01\data\London\Projects\0706303 - Vattenfall Ray II\MAP\0758386 - Vattenfall Ray II Ecology.aprx / 0758386 - Ecology - SCO - Designated Sites within 5 km of the Proposed Order Limits - A01



The Site

UK Habitat Classification

- f2c - Upland flushes, fens and swamps
- r1 - Standing open water and canals
- r1g - Other standing water
- r2a6 - Other priority habitat rivers
- r2b - Other rivers and streams
- u1e - Built linear features
- w2b - Other Scot's Pine woodland
- f1a5 - Blanket bog (H7130)
- f1a6 - Degraded blanket bog
- f2b - Purple moor-grass and rush pastures
- f2b5 - Purple moor-grass meadows (H6410)
- f2c - Upland flushes, fens and swamps
- f2d - Aquatic marginal vegetation
- g1b - Upland acid grassland
- g1b6 - Other upland acid grassland
- g1c - Bracken
- g3c6 - Lolium-Cynosurus neutral grassland
- g3c7 - Deschampsia neutral grassland
- g3c8 - Holcus-Juncus neutral grassland
- g4 - Modified grassland
- h1b5 - Dry heaths, upland (H4030)
- h1b6 - Wet heathland with cross-leaved heath, upland (H4010)
- r1c - Oligotrophic and dystrophic lakes
- r1g - Other standing water
- s1d - Other inland rock and scree
- u1b5 - Buildings
- u1b6 - Other developed land
- u1c - Artificial unvegetated unsealed surface
- w1d - Wet woodland
- w1e - Upland birchwoods
- w1g - Other woodland, broadleaved
- w1h5 - Other woodland, mixed, mainly broadleaved
- w1h6 - Other woodland, mixed, mainly conifer
- w2b - Other Scot's Pine woodland
- w2c - Other coniferous woodland

0 0.2 0.4 0.6 0.8 1
Kilometres

N

SCALE: See Scale Bar	VERSION: A01
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: DM
DATE: 2026-05-01	APPROVED: BD

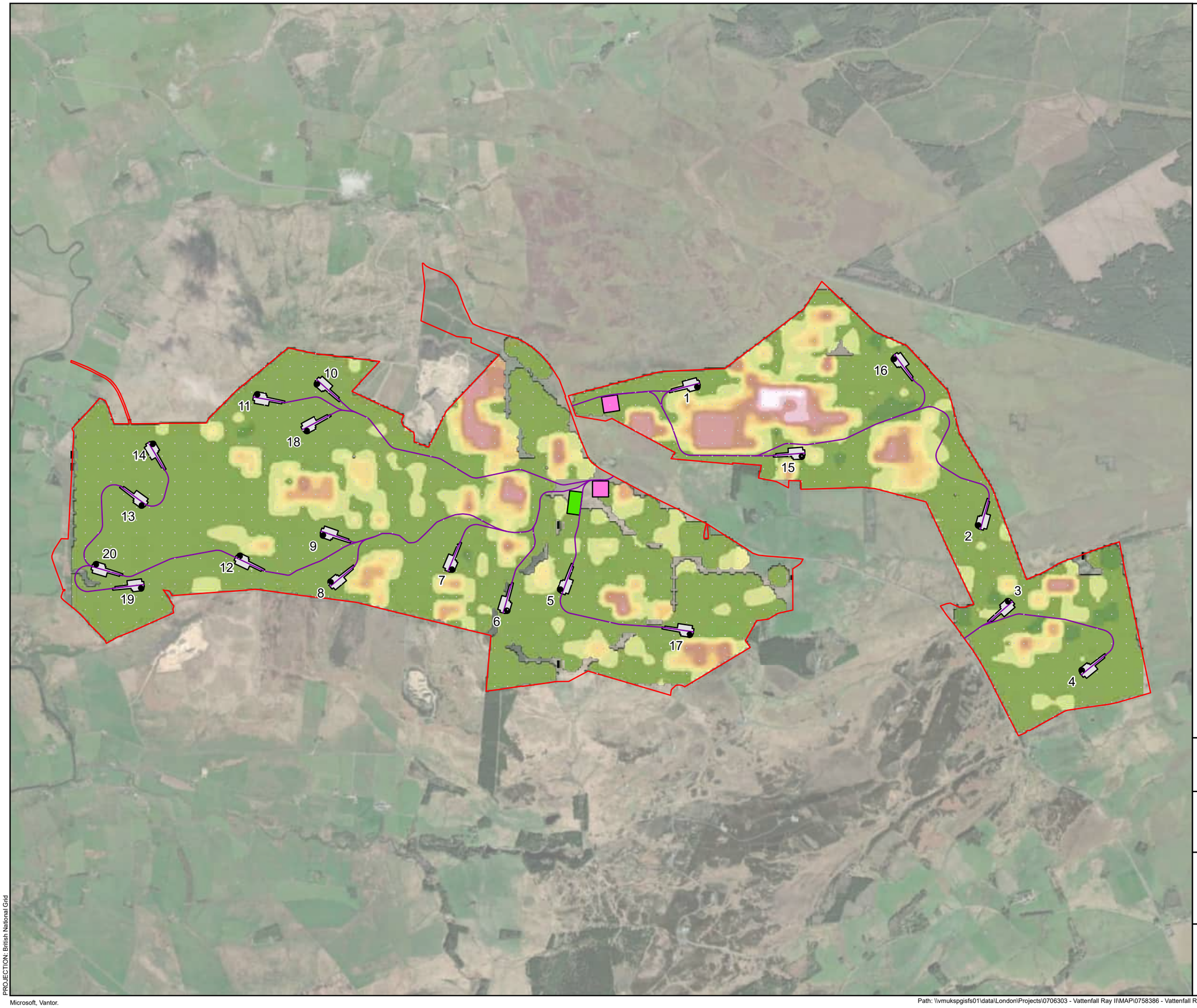
Figure 9.3
UK Habitat Classification Survey Results

ERM

VATTENFALL

PROJECTION: British National Grid

Path: \\vmukspgisfs01\data\London\Projects\0706303 - Vattenfall Ray II\MAP\0758386 - Vattenfall Ray II Ecology.aprx / 0758386 - Ecology - SCO - UK Habitat Classification Survey Results - A01



The Site
Proposed Turbine Location
Proposed Access Track
Proposed Substation/BESS Compound
Proposed Temporary Construction Compound
Proposed Turbine Hardstanding
Peat Depth Survey Point

Interpolated Peat Depth (m)

0.00 - 0.10
0.11 - 0.40
0.41 - 1.00
1.01 - 1.50
1.51 - 2.00
2.01 - 2.50
2.51 - 3.00
3.01 - 4.00
4.01 - 5.00
5.01 - 6.00
>6.00

0 0.2 0.4 0.6 0.8 1
Kilometres

N

SCALE: See Scale Bar	VERSION: A01
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: CM
DATE: 2026-04-24	APPROVED: BD

Figure 10.1
Phase 1 Interpolated Peat Depths

ERM

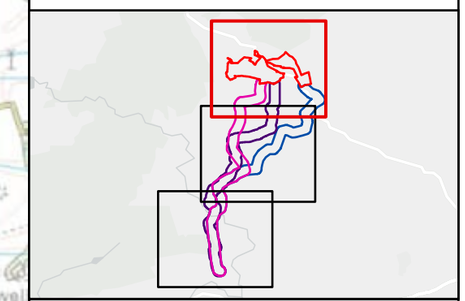
VATTENFALL

PROJECTION: British National Grid

Microsoft, Vantor.

Path: \\vmukspgisfs01\data\London\Projects\0706303 - Vattenfall Ray II\MAP\0758386 - Vattenfall Ray II Geology.aprx / 0758386 - Geology - SCO - Phase 1 Interpolated Peat Depths - A01

The Site
Proposed Turbine Location
Proposed Access Track
Proposed Substation/BESS Compound
Proposed Temporary Construction Compound
Proposed Turbine Hardstanding
Cable Corridor Options
Route Option 1
Route Option 2
Route Option 3
Study Area (1 km)



0 0.2 0.4 0.6 0.8 1
Kilometres

N

SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: BM
DATE: 2026-04-30	APPROVED: BD

Figure 11.1
Water Resources and Flood Risk Study Area
Sheet 1

ERM

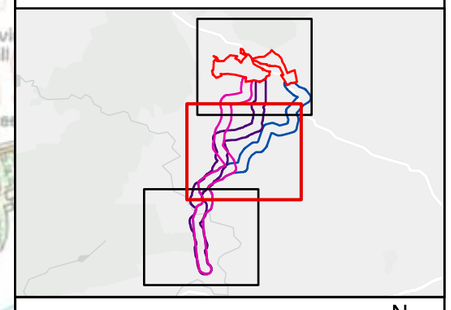
VATTENFALL

PROJECTION: British National Grid

Path: \\vmukspgisfs01\data\London\Projects\0706303 - Vattenfall Ray II\MAP\0758386 - Vattenfall Ray II Hydrology.aprx / 0758386 - HYD - SCO - Water Resources and Flood Risk Study Area - A02

Cable Corridor Options

- Route Option 1
- Route Option 2
- Route Option 3



0 0.2 0.4 0.6 0.8 1

Kilometres

N

SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: BM
DATE: 2026-04-30	APPROVED: BD

Figure 11.1
Water Resources and Flood Risk Study Area
Sheet 2

ERM

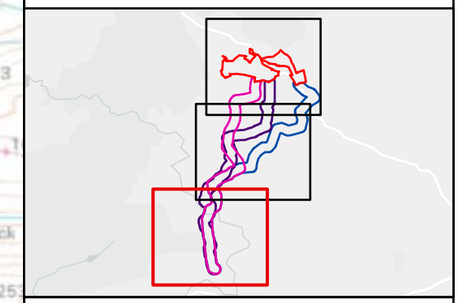
VATTENFALL

PROJECTION: British National Grid

Path: \\vmukspgisfs01\data\London\Projects\0706303 - Vattenfall Ray II\MAP\0758386 - Vattenfall Ray II Hydrology.aprx / 0758386 - HYD - SCO - Water Resources and Flood Risk Study Area - A02

Cable Corridor Options

- Route Option 1
- Route Option 2
- Route Option 3
- Existing Fourstones Substation



0 0.2 0.4 0.6 0.8 1

Kilometres

N

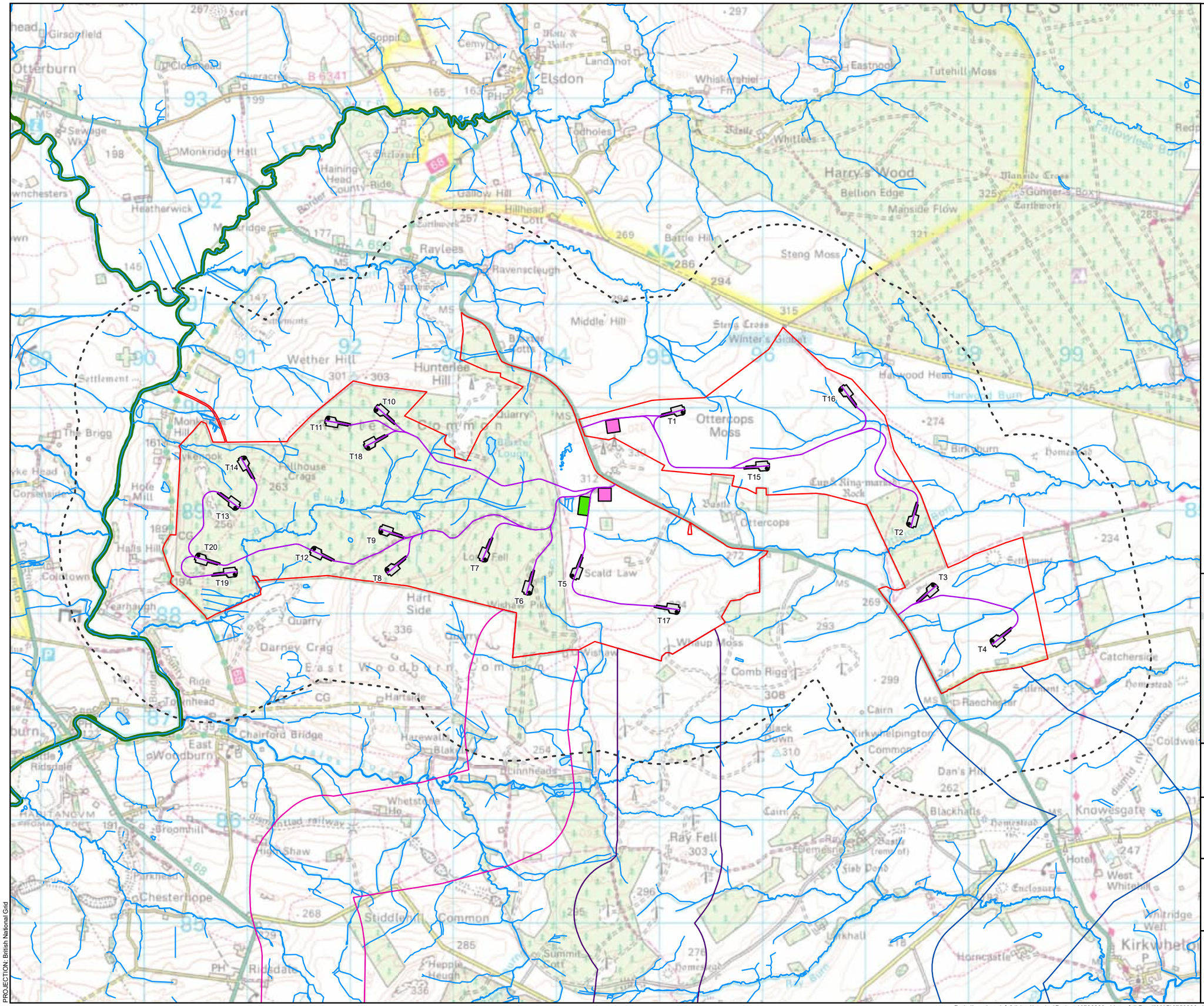
SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: BM
DATE: 2026-04-30	APPROVED: BD

Figure 11.1
Water Resources and Flood Risk Study Area
Sheet 3

ERM

VATTENFALL

PROJECTION: British National Grid



- The Site
- Proposed Turbine Location
- Proposed Access Track
- Proposed Substation/BESS Compound
- Proposed Temporary Construction Compound
- Proposed Turbine Hardstanding

Cable Corridor Options

- Route Option 1
- Route Option 2
- Route Option 3
- Study Area (1 km)
- Main River (EA)
- Watercourse (OS Open River and OS Surface Water Line)
- Waterbody (OS Surface Water Area)

SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: BM
DATE: 2026-04-30	APPROVED: BD

Figure 11.2
Surface Water Hydrology
Sheet 1

ERM

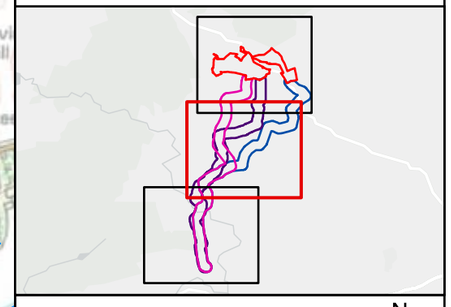
VATTENFALL

PROJECTION: British National Grid

Path: \\vmukspgisfs01\data\London\Projects\0706303 - Vattenfall Ray II\MAP\0758386 - Vattenfall Ray II Hydrology.aprx / 0758386 - HYD - SCO - Surface Water Hydrology - A02

Cable Corridor Options

- Route Option 1
- Route Option 2
- Route Option 3
- Main River (EA)
- Watercourse (OS Open River and OS Surface Water Line)
- Waterbody (OS Surface Water Area)



0 0.2 0.4 0.6 0.8 1

Kilometres

N

SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: BM
DATE: 2026-04-30	APPROVED: BD

Figure 11.2
Surface Water Hydrology
Sheet 2

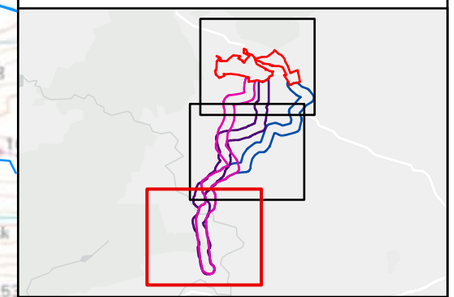
ERM

VATTENFALL

PROJECTION: British National Grid

Path: \\vmukspgisfs01\data\London\Projects\0706303 - Vattenfall Ray II\MAP\0758386 - Vattenfall Ray II Hydrology.aprx / 0758386 - HYD - SCO - Surface Water Hydrology - A02

Cable Corridor Options
- Route Option 1
- Route Option 2
- Route Option 3
- Existing Fourstones Substation
- Main River (EA)
- Watercourse (OS Open River and OS Surface Water Line)
- Waterbody (OS Surface Water Area)



0 0.2 0.4 0.6 0.8 1
Kilometres

N

SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: BM
DATE: 2026-04-30	APPROVED: BD

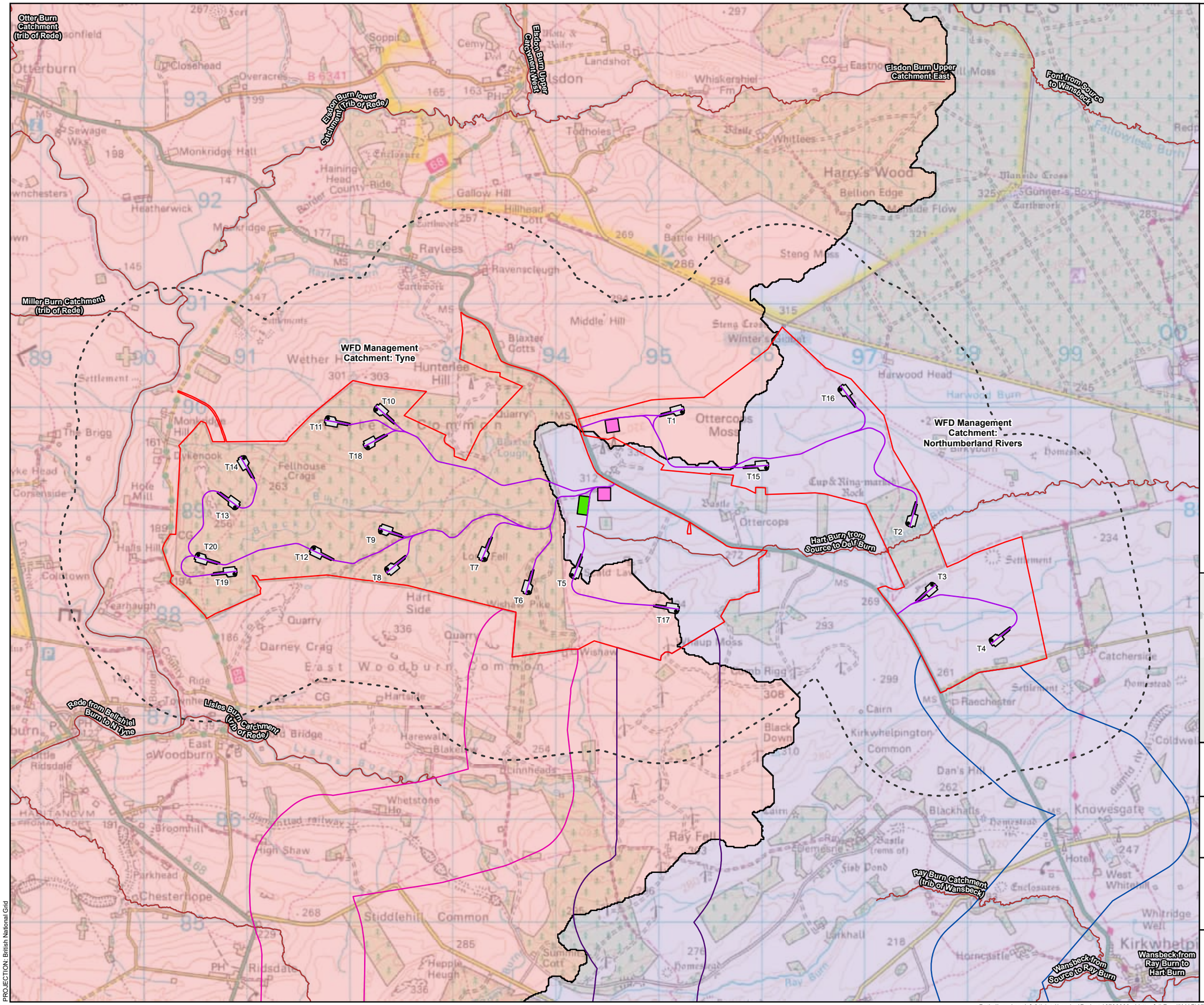
Figure 11.2
Surface Water Hydrology
Sheet 3

ERM

VATTENFALL

PROJECTION: British National Grid

Path: \\vmukspgisfs01\data\London\Projects\0706303 - Vattenfall Ray II\MAP\0758386 - Vattenfall Ray II Hydrology.aprx / 0758386 - HYD - SCO - Surface Water Hydrology - A02



The Site
Proposed Turbine Location
Proposed Access Track
Proposed Substation/BESS Compound
Proposed Temporary Construction Compound
Proposed Turbine Hardstanding

Cable Corridor Options

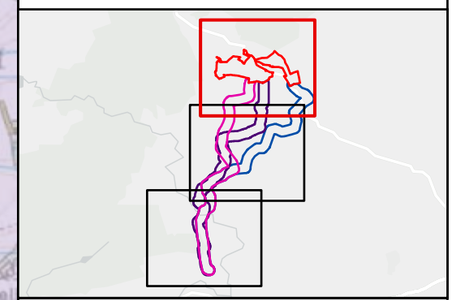
Route Option 1
Route Option 2
Route Option 3
Study Area (1 km)

WFD Watercourse Cycle 3 (2022) (EA)

River

WFD Surface Water Management Catchment Cycle 3 (EA)

Northumberland Rivers
Tyne



0 0.2 0.4 0.6 0.8 1
Kilometres

N

SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: BM
DATE: 2026-04-30	APPROVED: BD

Figure 11.3
WFD Hydrology
Sheet 1

ERM

VATTENFALL

PROJECTION: British National Grid

Path: \\vmukspgisfs01\data\London\Projects\0706303 - Vattenfall Ray II\MAP\0758386 - Vattenfall Ray II Hydrology.aprx / 0758386 - HYD - SCO - WFD Hydrology - A02

Rede from Bellshiel Burn to N Tyne

Rede from Bellshiel Burn to N Tyne

Ray Burn Catchment (trib of Wansbeck)

WFD Management Catchment: Northumberland Rivers

Wansbeck from Source to Ray Burn

Sweethope Loughs

WFD Management Catchment: Tyne

Colt Crag Reservoir

Little Swinburne Reservoir

Gunnerton Burn from Source to N Tyne

Barrasford Burn Catchment (trib of N Tyne)

Hallington Reservoirs

Erring Burn Catchment (trib of Tyne)

N Tyne from Rede to Gunnerton Burn

Cable Corridor Options

- Route Option 1
- Route Option 2
- Route Option 3

WFD Watercourse Cycle 3 (2022) (EA)

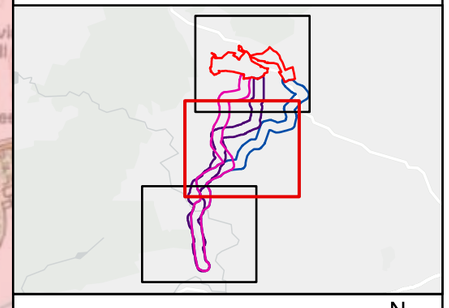
- River

WFD Lake Water Body Cycle 3 (2022)(EA)

- WFD Lake Water Body Cycle 3 (2022)(EA)

WFD Surface Water Management Catchment Cycle 3 (EA)

- Northumberland Rivers
- Tyne



0 0.2 0.4 0.6 0.8 1

Kilometres

N

SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: BM
DATE: 2026-04-30	APPROVED: BD

Figure 11.3
WFD Hydrology
Sheet 2

ERM

VATTENFALL

PROJECTION: British National Grid

Warks Burn from Middle Burn to N Tyne
Simon Burn from Source to N Tyne
Crook Burn from Source to Simon Burn
N Tyne from Rede to Gunnerton Burn
Gunnerton Burn from Source to N Tyne
N Tyne from Barrasford to S Tyne confluence
Barrasford Burn Catchment (trib of N Tyne)
Erring Burn Catchment (trib of Tyne)
WFD Management Catchment: Tyne
Newbrough Burn Catchment (trib of South Tyne)
South Tyne from Allen to North Tyne
Red Burn (trib of Tyne)

Cable Corridor Options
- Route Option 1
- Route Option 2
- Route Option 3
- Existing Fourstones Substation

WFD Watercourse Cycle 3 (2022) (EA)
- River

WFD Surface Water Management Catchment Cycle 3 (EA)
- Tyne

0 0.2 0.4 0.6 0.8 1
Kilometres

N

SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: BM
DATE: 2026-04-30	APPROVED: BD

Figure 11.3
WFD Hydrology
Sheet 3

PROJECTION: British National Grid

Path: \\vmukspgisfs01\data\London\Projects\0706303 - Vattenfall Ray II\MAP\0758386 - Vattenfall Ray II Hydrology.aprx / 0758386 - HYD - SCO - WFD Hydrology - A02

Tyne Carboniferous Limestone

Northumberland Carboniferous Limestone and Coal Measures

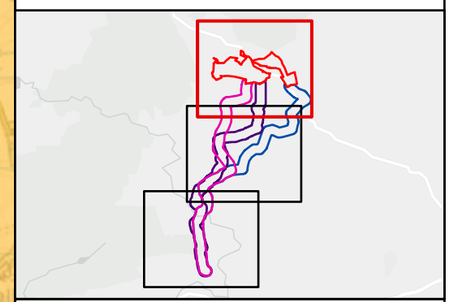
T1 T2 T3 T4 T5 T6 T7 T8 T9 T10 T11 T12 T13 T14 T15 T16 T17 T18 T19 T20

The Site
Proposed Turbine Location
Proposed Access Track
Proposed Substation/BESS Compound
Proposed Temporary Construction Compound
Proposed Turbine Hardstanding

Cable Corridor Options
Route Option 1
Route Option 2
Route Option 3
Study Area (1 km)

WFD Groundwater Body C3 (EA) Classification 2022

Overall Water Body Class
Good
Poor



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SIZE: A3	DRAWN: JG
PROJECT: 0758386	CHECKED: BM
DATE: 2026-04-30	APPROVED: BD

Figure 11.4
Groundwater Bodies
Sheet 1

ERM

VATTENFALL

PROJECTION: British National Grid

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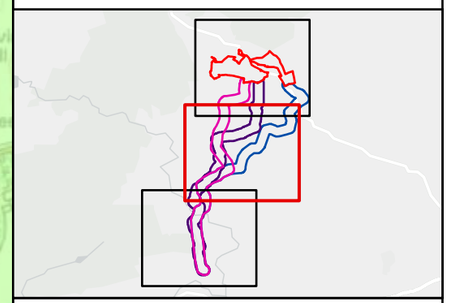
Northumberland Carboniferous Limestone and Coal Measures

Tyne Carboniferous Limestone

Cable Corridor Options
- Route Option 1
- Route Option 2
- Route Option 3

WFD Groundwater Body C3 (EA) Classification 2022

Overall Water Body Class
- Good
- Poor



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DATE: 2026-04-30	APPROVED: BD

Figure 11.4
Groundwater Bodies
Sheet 2

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VATTENFALL

PROJECTION: British National Grid

Tyne Carboniferous Limestone

Tyne Carboniferous Limestone and Coal Measures

Cable Corridor Options
- Route Option 1
- Route Option 2
- Route Option 3
- Existing Fourstones Substation

WFD Groundwater Body C3 (EA) Classification 2022

Overall Water Body Class
- Good
- Poor

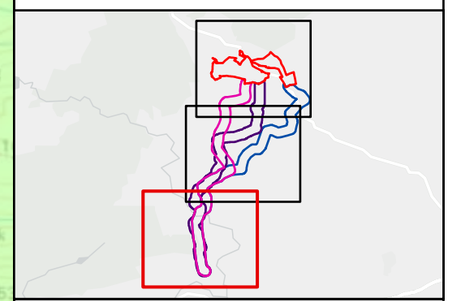

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Figure 11.4
Groundwater Bodies
Sheet 3

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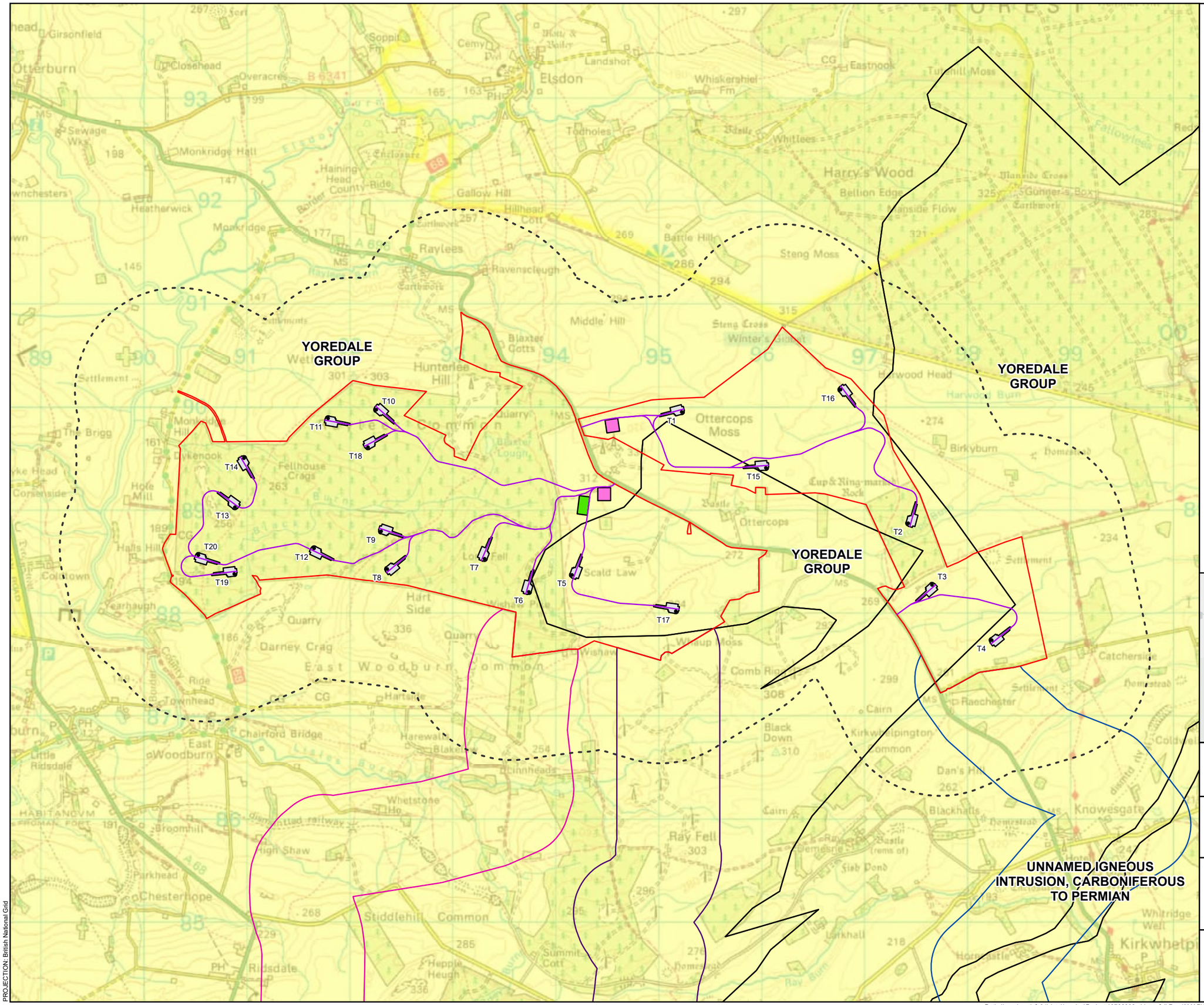
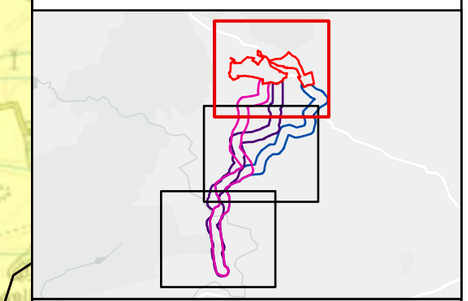
VATTENFALL

PROJECTION: British National Grid

Path: \\vmukspgisfs01\data\London\Projects\0706303 - Vattenfall Ray II\MAP\0758386 - Vattenfall Ray II Hydrology.aprx / 0758386 - HYD - SCO - Groundwater Bodies - A02



The Site
Proposed Turbine Location
Proposed Access Track
Proposed Substation/BESS Compound
Proposed Temporary Construction Compound
Proposed Turbine Hardstanding
Cable Corridor Options
Route Option 1
Route Option 2
Route Option 3
Study Area (1 km)
Hydrogeology (BGS)
Character
Moderately productive aquifer



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SIZE: A3	DRAWN: JG
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Figure 11.5
Hydrogeology
Sheet 1

ERM

VATTENFALL

PROJECTION: British National Grid

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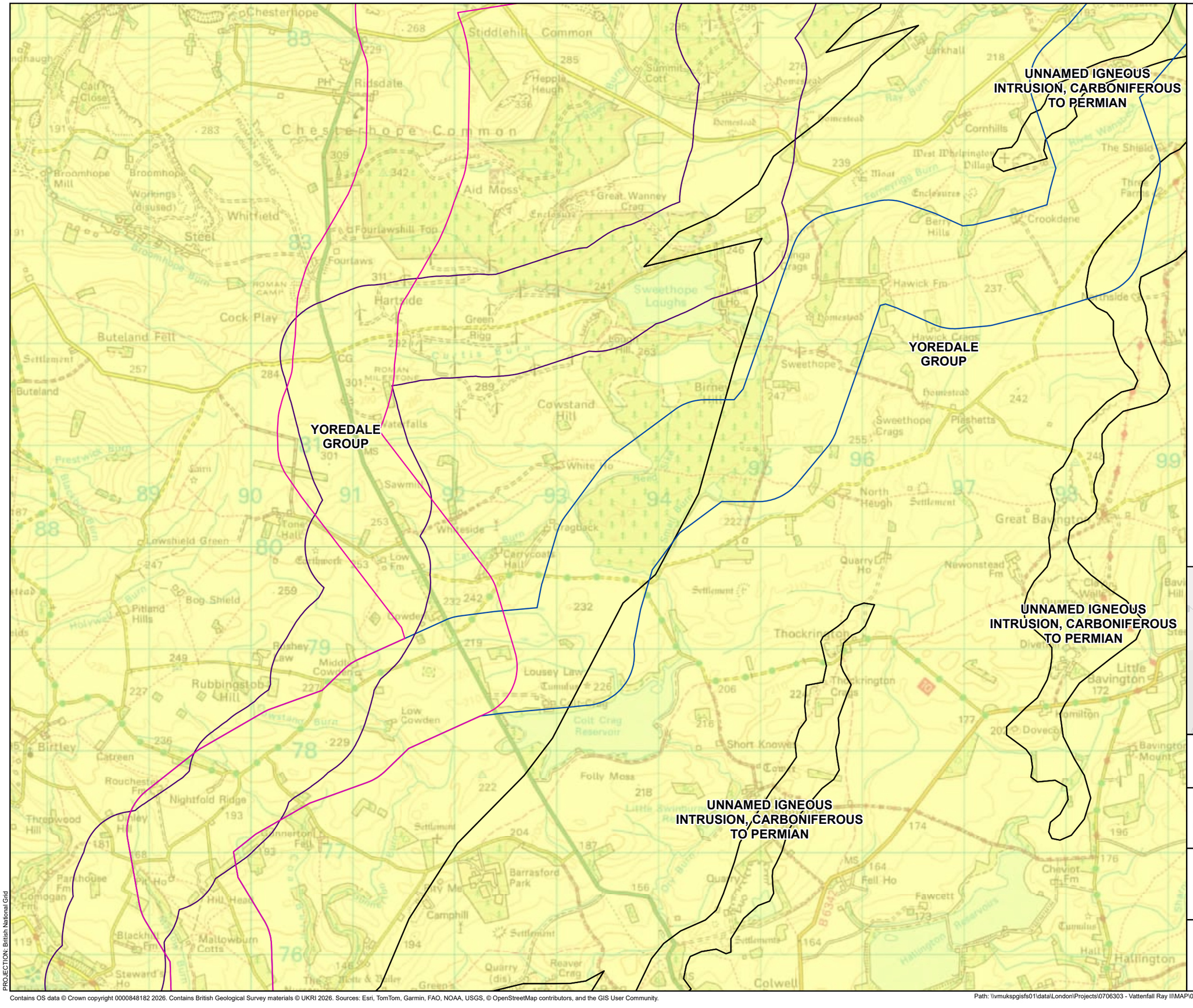


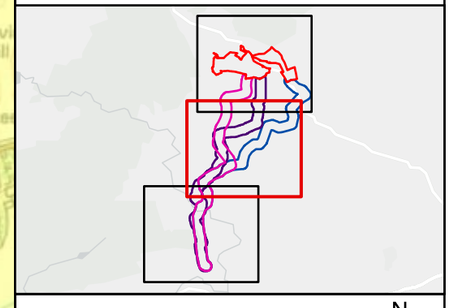
Cable Corridor Options

- Route Option 1
- Route Option 2
- Route Option 3

Hydrogeology (BGS)

Character

- Moderately productive aquifer



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Kilometres

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SCALE: See Scale Bar	VERSION: A02
SIZE: A3	DRAWN: JG
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DATE: 2026-04-30	APPROVED: BD

Figure 11.5
Hydrogeology
Sheet 2

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VATTENFALL

PROJECTION: British National Grid

Path: \\vmukspgisfs01\data\London\Projects\0706303 - Vattenfall Ray II\MAP\0758386 - Vattenfall Ray II Hydrology.aprx / 0758386 - HYD - SCO - Hydrogeology - A02

YOREDALE GROUP

UNNAMED IGNEOUS INTRUSION, CARBONIFEROUS TO PERMIAN

UNNAMED IGNEOUS INTRUSION, CARBONIFEROUS TO PERMIAN

YOREDALE GROUP

UNNAMED IGNEOUS INTRUSION, CARBONIFEROUS TO PERMIAN

YOREDALE GROUP

Cable Corridor Options

- Route Option 1
- Route Option 2
- Route Option 3
- Existing Fourstones Substation

Hydrogeology (BGS)

Character

- Moderately productive aquifer

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Kilometres

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Figure 11.5
Hydrogeology
Sheet 3

ERM

VATTENFALL

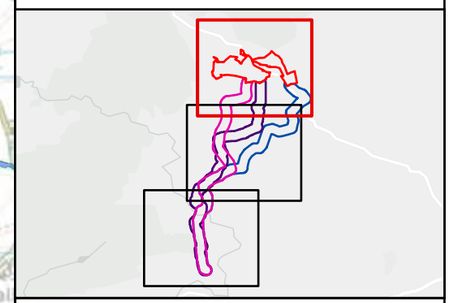
PROJECTION: British National Grid

T1 T2 T3 T4 T5 T6 T7 T8 T9 T10 T11 T12 T13 T14 T15 T16 T17 T18 T19 T20

The Site
Proposed Turbine Location
Proposed Access Track
Proposed Substation/BESS Compound
Proposed Temporary Construction Compound
Proposed Turbine Hardstanding

Cable Corridor Options
Route Option 1
Route Option 2
Route Option 3
Study Area (1 km)

Flood Map for Planning (EA)
Flood Zone 3
Flood Zone 2



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DATE: 2026-04-30	APPROVED: BD

Figure 11.6
EA Flood Map Rivers and Sea
Sheet 1

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VATTENFALL

PROJECTION: British National Grid

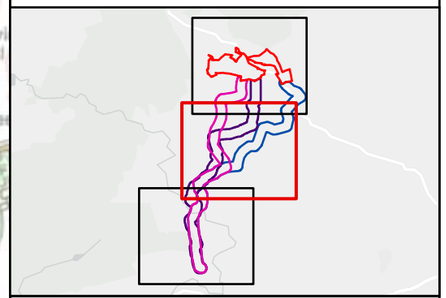
Path: \\vmukspgisfs01\data\London\Projects\0706303 - Vattenfall Ray II\MAP\0758386 - Vattenfall Ray II Hydrology.aprx / 0758386 - HYD - SCO - EA Flood Map Rivers and Sea - A02

Cable Corridor Options

- Route Option 1
- Route Option 2
- Route Option 3

Flood Map for Planning (EA)

- Flood Zone 3
- Flood Zone 2



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DATE: 2026-04-30	APPROVED: BD

Figure 11.6
EA Flood Map Rivers and Sea
Sheet 2

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VATTENFALL

PROJECTION: British National Grid

Path: \\vmukspgisfs01\data\London\Projects\0706303 - Vattenfall Ray II\MAP\0758386 - Vattenfall Ray II Hydrology.aprx / 0758386 - HYD - SCO - EA Flood Map Rivers and Sea - A02

Cable Corridor Options

- Route Option 1
- Route Option 2
- Route Option 3
- Existing Fourstones Substation

Flood Map for Planning (EA)

- Flood Zone 3
- Flood Zone 2

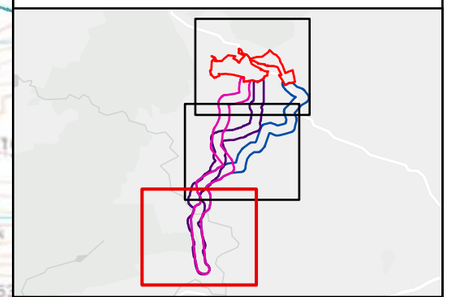

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Figure 11.6
EA Flood Map Rivers and Sea
Sheet 3

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VATTENFALL

PROJECTION: British National Grid

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The Site
Proposed Turbine Location
Proposed Access Track
Proposed Substation/BESS Compound
Proposed Temporary Construction Compound
Proposed Turbine Hardstanding
Cable Corridor Options
Route Option 1
Route Option 2
Route Option 3
Study Area (1 km)
Risk of Flooding Surface Water (EA)
Risk Band
High
Medium
Low

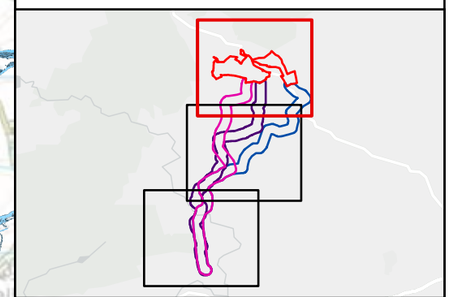

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Figure 11.6
EA Surface Water Flood Map
Sheet 1

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VATTENFALL

PROJECTION: British National Grid

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Cable Corridor Options

- Route Option 1
- Route Option 2
- Route Option 3

Risk of Flooding Surface Water (EA)

Risk Band

- High
- Medium
- Low

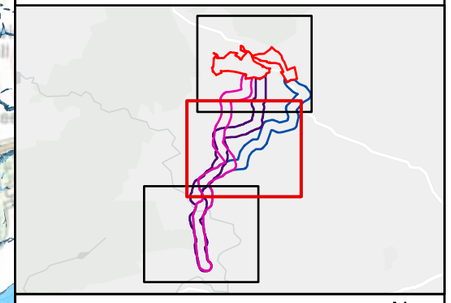

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Figure 11.6
EA Surface Water Flood Map
Sheet 2

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VATTENFALL

PROJECTION: British National Grid