

EIAR VOLUME III
Appendices

**CHAPTER 9 – HYDROLOGY AND
HYDROGEOLOGY**

Appendix 9.9: Turbine Delivery Route
Constraints

Figure 9.14c - Constraints TDR Option 1
Tile_01

Legend

Tullacondra Wind Farm

Mapped Drainage

Non-Mapped Drainage on Site

- Historic Surface Water Feature
- Minor Non-Mapped Drain
- Moderate Non-Mapped Drain
- Significant Non-Mapped Drain
- Historically Mapped SW Features (Gone / Not Observed)
- Non-Mapped Waterbodies
- 15m Buffer Around Non-Mapped Waterbodies

Layout Drainage Lines

- Collection Pipelines - Outfall Proposed
- Collection Structures - INTER Ditch
- Collection Structures - Road Ditch

Turbine Delivery Route (TDR)

- 25m Intervals TDR1
- 25m Intervals TDR2
- TDR Option 1
- TDR Option 2

Wind Farm Site Layout

- Redline Boundary

Constraints

Hydrology

- 604162_WFD_Riverwaterbodies
- WFD_Subcatchments
- WFD_RiverSubBasins_Cycle3

Hydrogeology

IE_GSI_Karst_Landforms_40K_IE32_ITM

- Enclosed Depression
- Spring
- Swallow Hole
- 25m Buffer Karst Features

Groundwater

- Source Protection Areas

IRL_VULNERABILITY_ITM

- X
- E

Wells

- Wells 250m Buffer Total

Topography

- 10m Elevation Contours

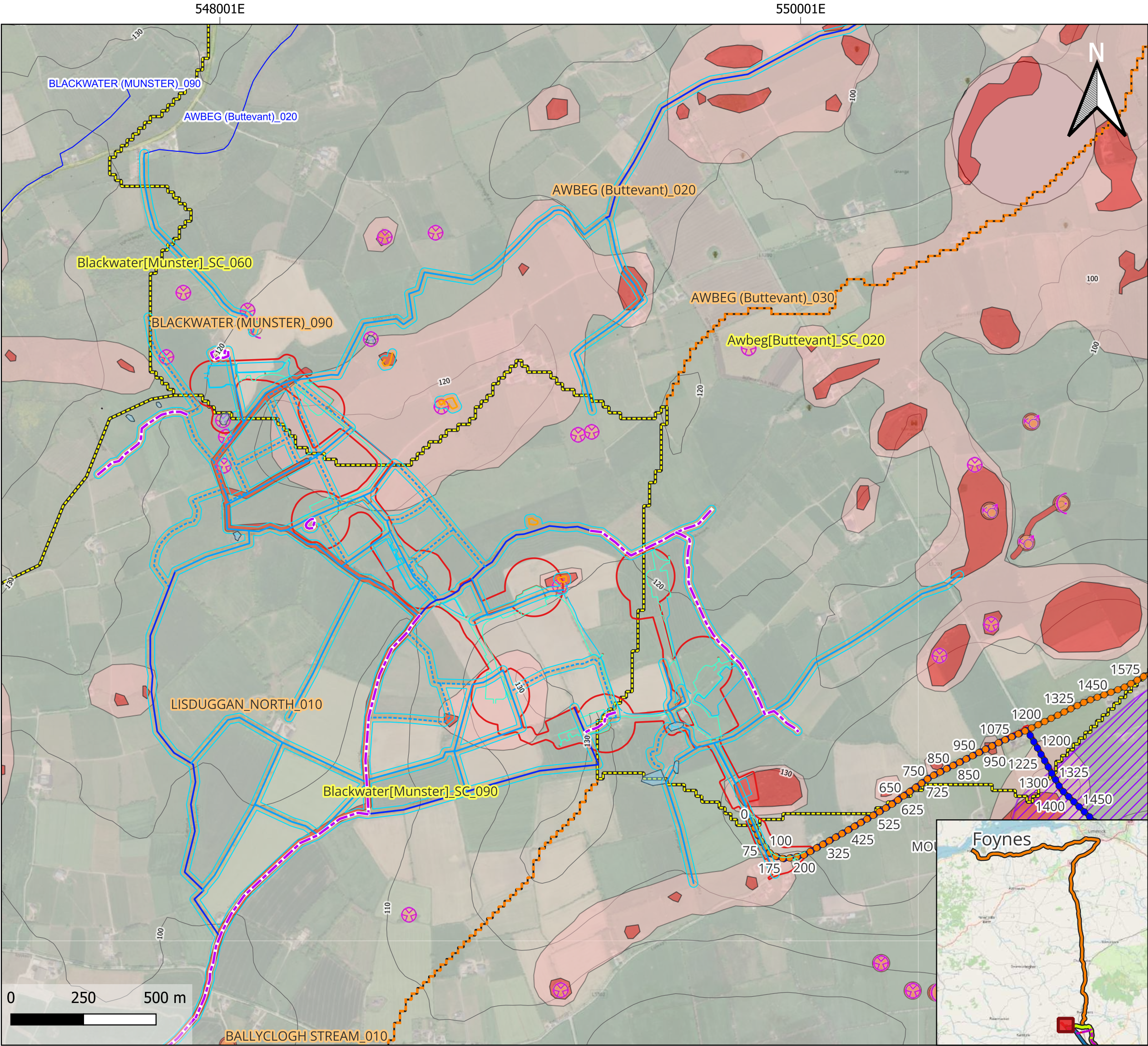
Base Layers

OpenStreetMap

Bing Aerial

Project ID	604162
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Projection	ITM
Drawn by	CCa
Reviwed by	SK
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Figure 9.14c - Constraints TDR Option 1

Tile_02

Legend

Tullacondra Wind Farm

Water Course Crossings

Mapped Drainage

Non-Mapped Drainage on Site

Turbine Delivery Route (TDR)

Wind Farm Site Layout

Constraints

Hydrology

Hydrogeology

IE_GSI_Karst_Landforms_40K_IE32_ITM

Groundwater

IRL_VULNERABILITY_ITM

Wells

Wells polygons

Topography

Base Layers

OpenStreetMap

Bing Aerial

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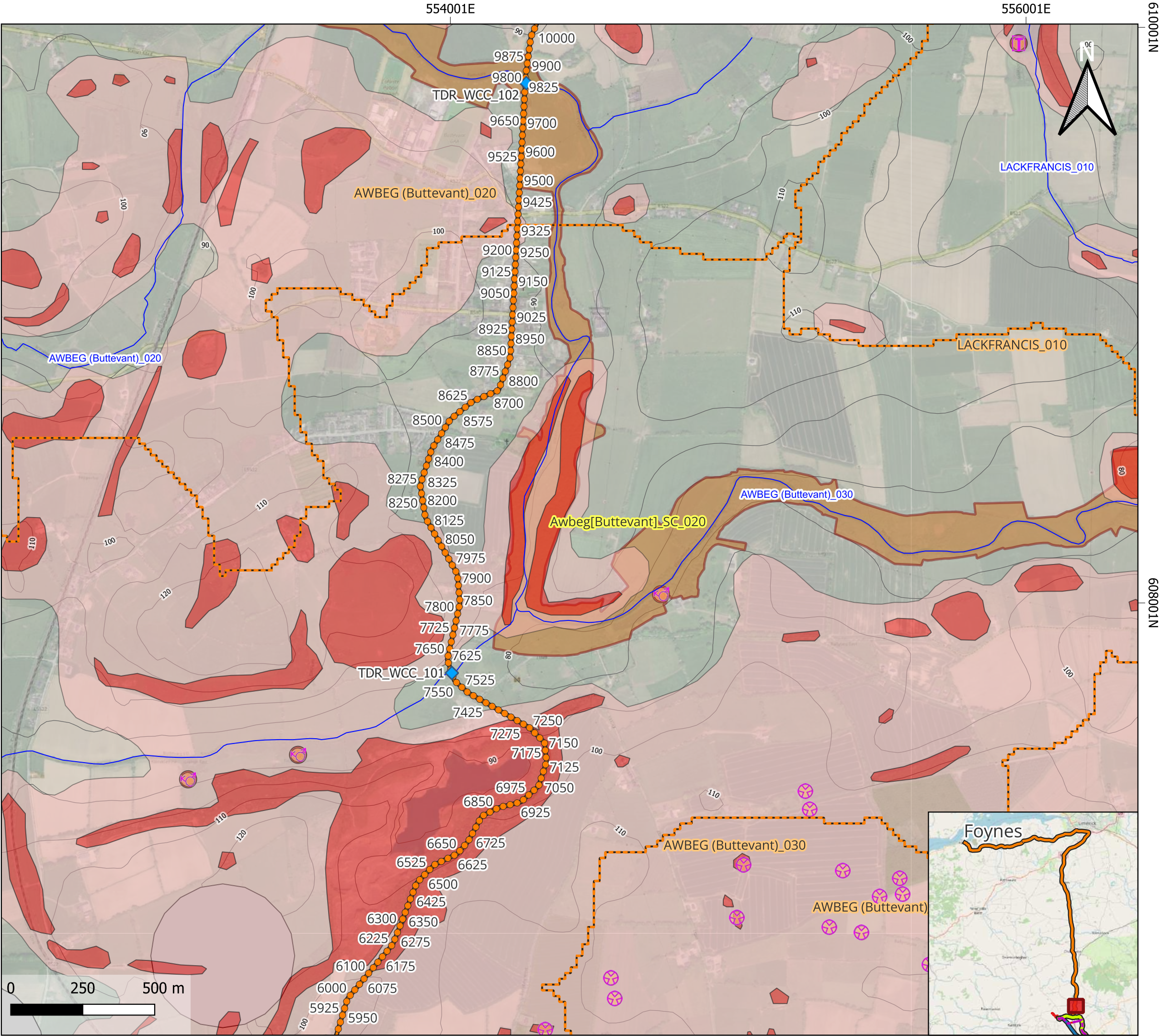
RSK

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Figure 9.14c - Constraints TDR Option 1
Tile_03

- Legend**
- Tullacondra Wind Farm**
- Water Course Crossings**
- TDR1 WCC
- Turbine Delivery Route (TDR)**
- 25m Intervals TDR1
 - TDR Option 1
- Constraints**
- Hydrology**
- 604162_WFD_Riverwaterbodies
 - WFD_Subcatchments
 - WFD_RiverSubBasins_Cycle3
- Hydrogeology**
- IE_GSI_Karst_Landforms_40K_IE32_ITM**
- Enclosed Depression
 - Spring
 - 25m Buffer Karst Features
- Groundwater**
- IRL_VULNERABILITY_ITM**
- X
 - E
- Wells**
- Wells 250m Buffer Total
- Designated Areas**
- SAC_ITM_2023_02
- Topography**
- 10m Elevation Contours
- Base Layers**
- OpenStreetMap**
- Bing Aerial**

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Figure 9.14c - Constraints TDR Option 1
Tile_04

Legend

Tullacondra Wind Farm

Water Course Crossings

TDR1 WCC

Turbine Delivery Route (TDR)

25m Intervals TDR1

TDR Option 1

Constraints

Hydrology

604162_WFD_Riverwaterbodies

WFD_Subcatchments

WFD_RiverSubBasins_Cycle3

Hydrogeology

IE_GSI_Karst_Landforms_40K_IE32_ITM

Turlough

25m Buffer Karst Features

Groundwater

IRL_VULNERABILITY_ITM

X

E

Designated Areas

SAC_ITM_2023_02

Topography

10m Elevation Contours

Base Layers

OpenStreetMap

Bing Aerial

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Figure 9.14c - Constraints TDR Option 1
Tile_05

Legend

Tullacondra Wind Farm

Water Course Crossings

- ◆ TDR1 WCC

Turbine Delivery Route (TDR)

- 25m Intervals TDR1

- TDR Option 1

Constraints

Hydrology

- 604162_WFD_Riverwaterbodies

-
- WFD_Subcatchments

- WFD_RiverSubBasins_Cycle3

Hydrogeology

Groundwater

IRL_VULNERABILITY_ITM

-  X

- ☐ E

Wells

- Wells 250m Buffer Total

Designated Areas

- SAC_ITM_2023_02

Topography

- 10m Elevation Contours

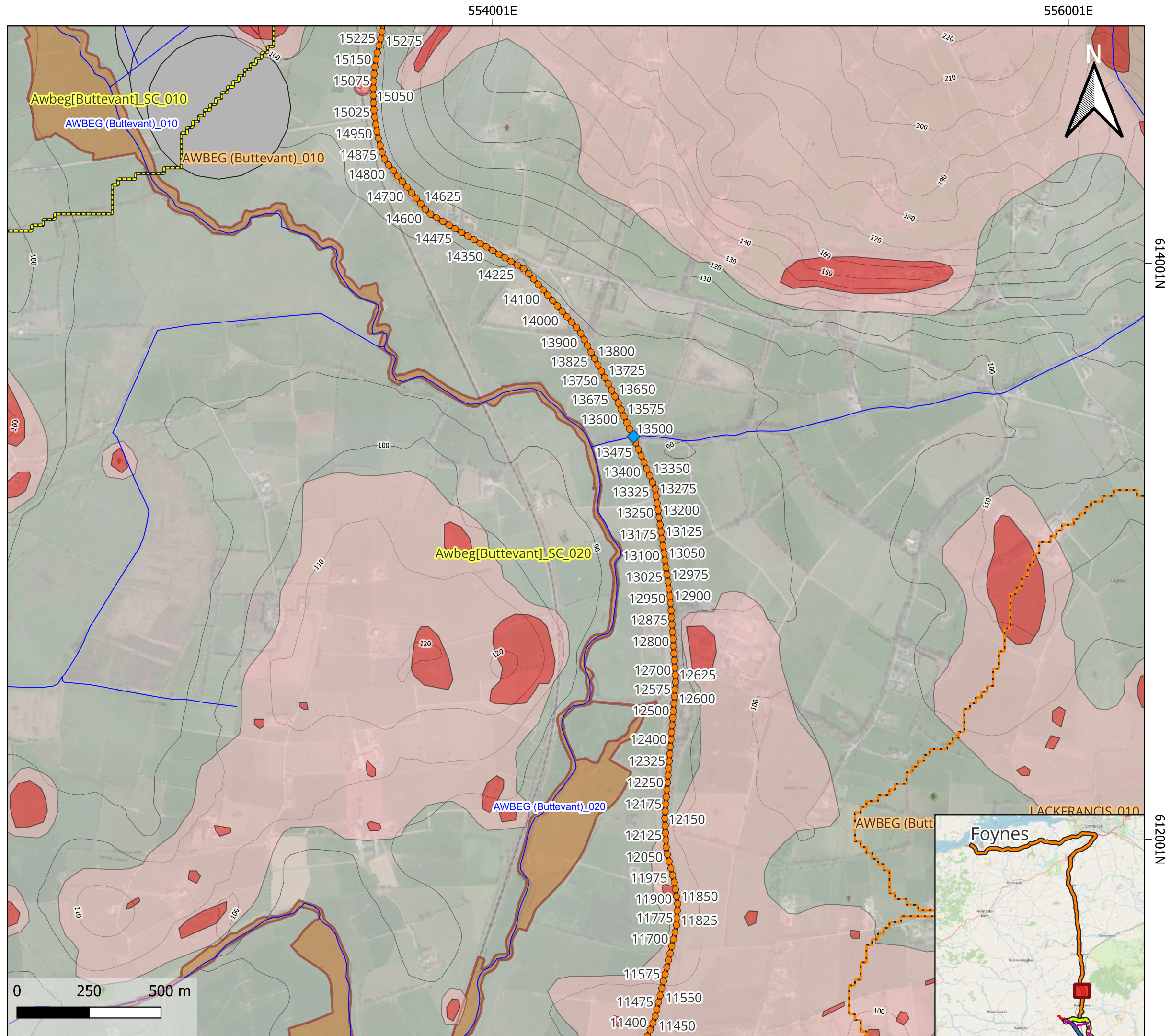
Base Layers

OpenStreetMap

Bing Aerial

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Figure 9.14c - Constraints TDR Option 1
Tile_06

Legend

Tullacondra Wind Farm

Water Course Crossings

◆ TDR1 WCC

Turbine Delivery Route (TDR)

● 25m Intervals TDR1

— TDR Option 1

Constraints

Hydrology

— 604162_WFD_Riverwaterbodies

▤ WFD_Subcatchments

▤ WFD_RiverSubBasins_Cycle3

Hydrogeology

IE_GSI_Karst_Landforms_40K_IE32_ITM

♂ Spring

■ 25m Buffer Karst Features

Groundwater

IRL_VULNERABILITY_ITM

■ X

■ E

Wells

■ Wells 250m Buffer Total

● Wells10to50

Designated Areas

■ SAC_ITM_2023_02

Topography

— 10m Elevation Contours

Base Layers

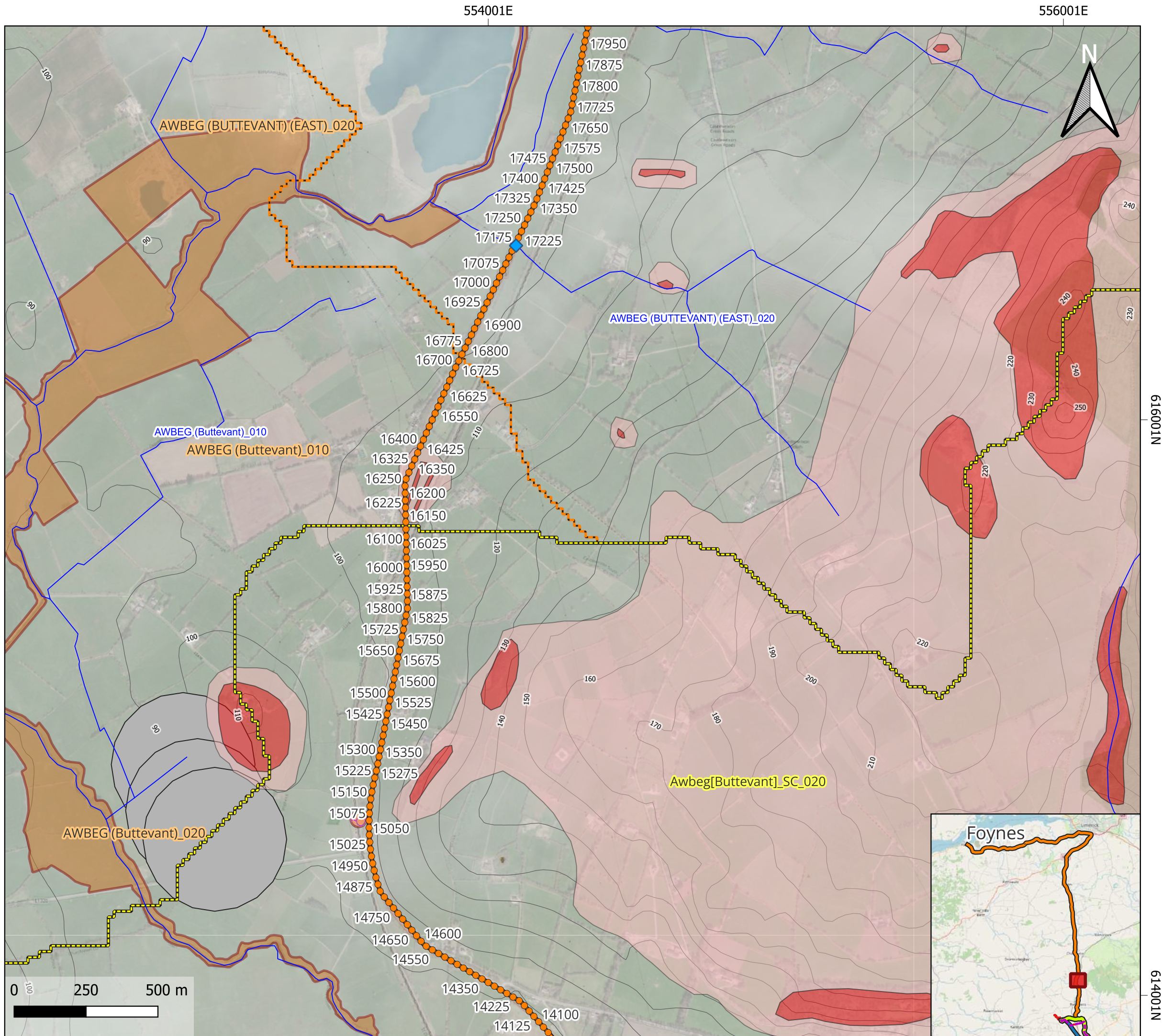
OpenStreetMap

Bing Aerial

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Figure 9.14c - Constraints TDR Option 1
Tile_07

Legend

Tullacondra Wind Farm

Water Course Crossings

TDR1 WCC

Turbine Delivery Route (TDR)

25m Intervals TDR1

TDR Option 1

Constraints

Hydrology

604162_WFD_Riverwaterbodies

WFD_Subcatchments

WFD_RiverSubBasins_Cycle3

Hydrogeology

Groundwater

IRL_VULNERABILITY_ITM

X

E

Designated Areas

SAC_ITM_2023_02

Topography

10m Elevation Contours

Base Layers

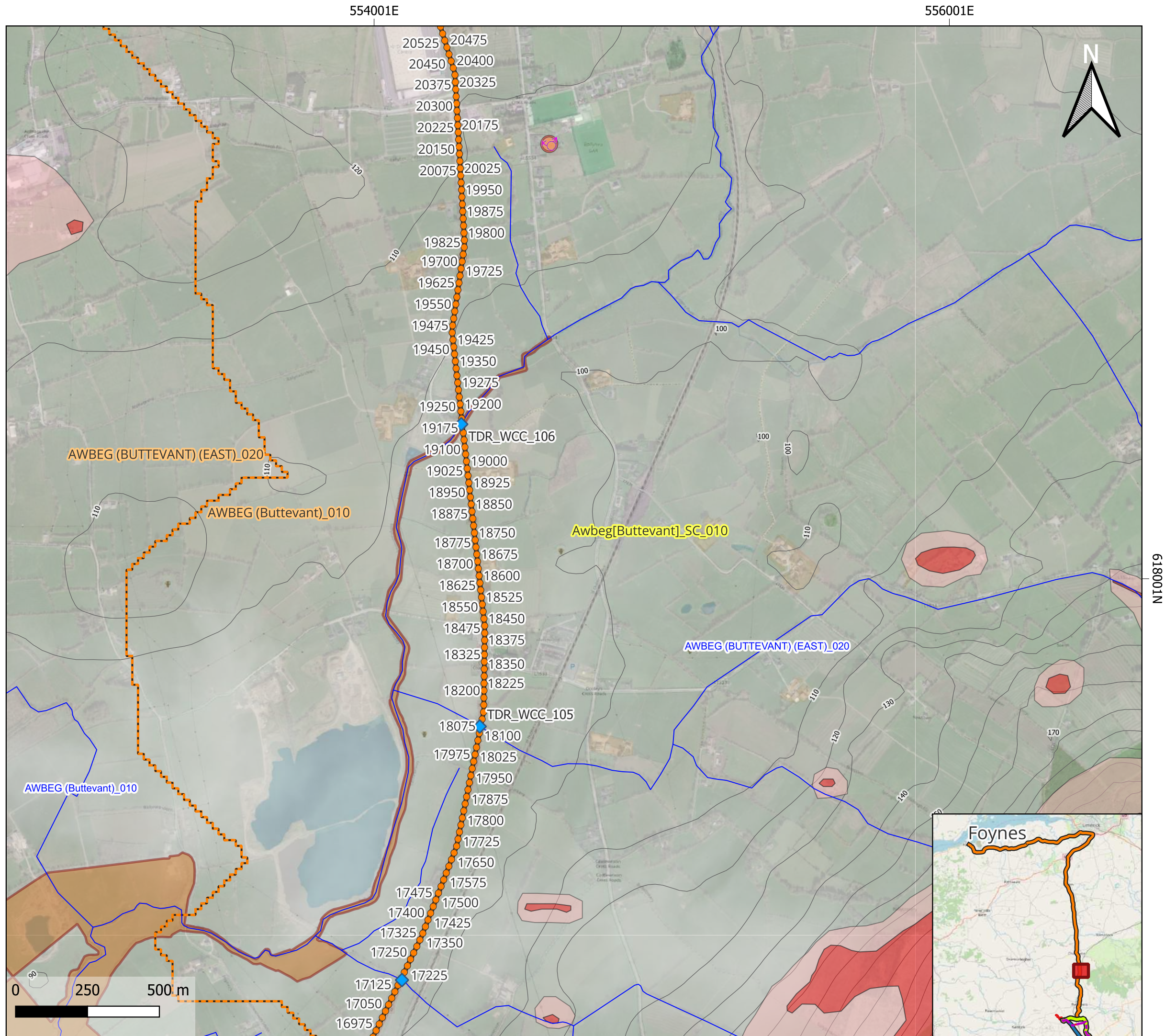
OpenStreetMap

Bing Aerial

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Figure 9.14c - Constraints TDR Option 1
Tile_08

Legend

Tullacondra Wind Farm

Water Course Crossings

TDR1 WCC

Turbine Delivery Route (TDR)

25m Intervals TDR1

TDR Option 1

Constraints

Hydrology

604162_WFD_Riverwaterbodies

WFD_Subcatchments

WFD_RiverSubBasins_Cycle3

Hydrogeology

IE_GSI_Karst_Landforms_40K_IE32_ITM

Spring

25m Buffer Karst Features

Groundwater

IRL_VULNERABILITY_ITM

X

E

Topography

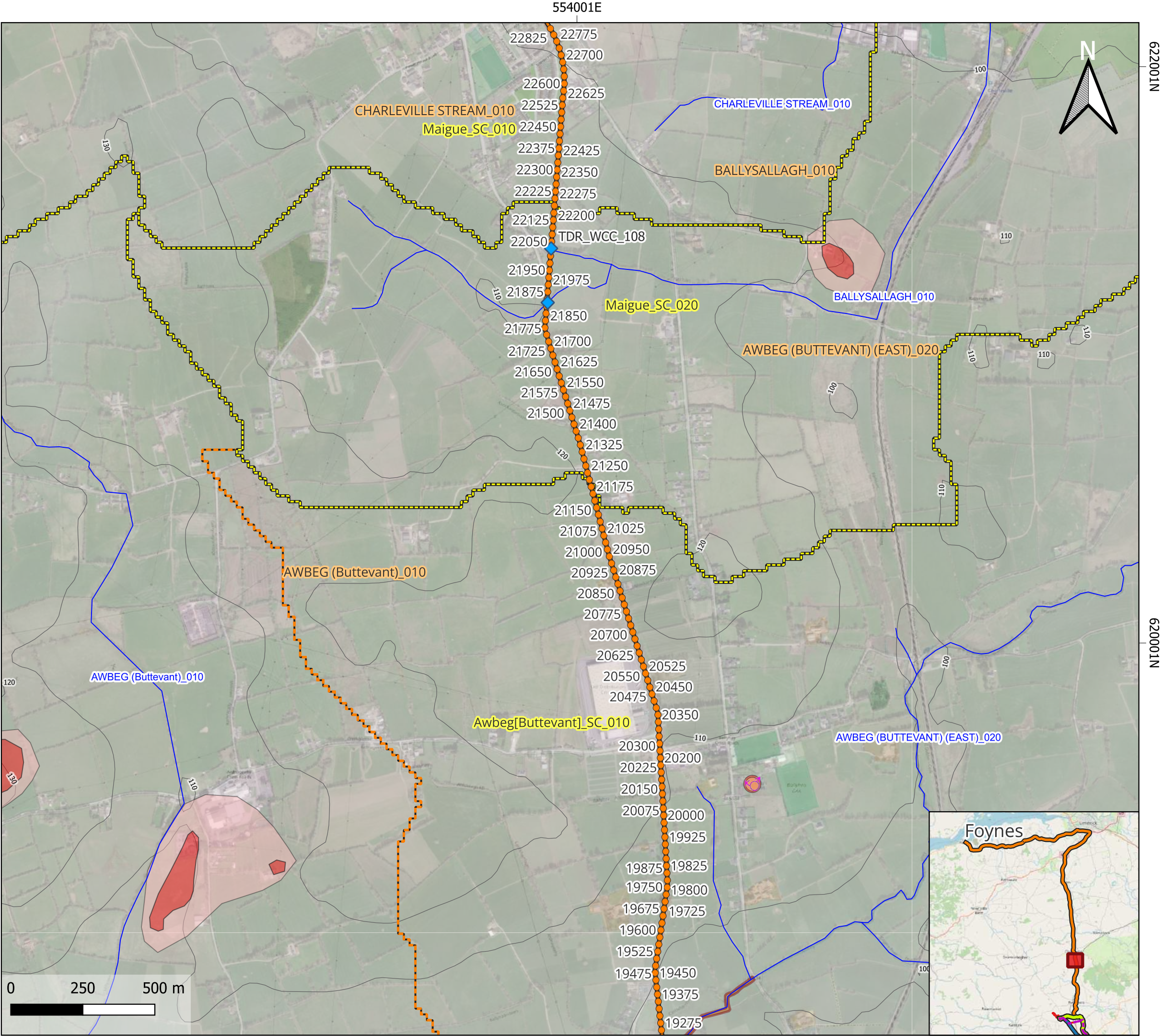
10m Elevation Contours

Base Layers

OpenStreetMap

Bing Aerial

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Figure 9.14c - Constraints TDR Option 1
Tile_12

Legend

Tullacondra Wind Farm

Water Course Crossings

TDR1 WCC

Turbine Delivery Route (TDR)

25m Intervals TDR1

TDR Option 1

Constraints

Hydrology

604162_WFD_Riverwaterbodies

WFD_Subcatchments

WFD_RiverSubBasins_Cycle3

Hydrogeology

Groundwater

Source Protection Areas

IRL_VULNERABILITY_ITM

X

E

Wells

Wells 250m Buffer Total

Wells10to50

Wells polygons

Wells1km_500B

Wells100_50B

Topography

10m Elevation Contours

Base Layers

OpenStreetMap

Bing Aerial

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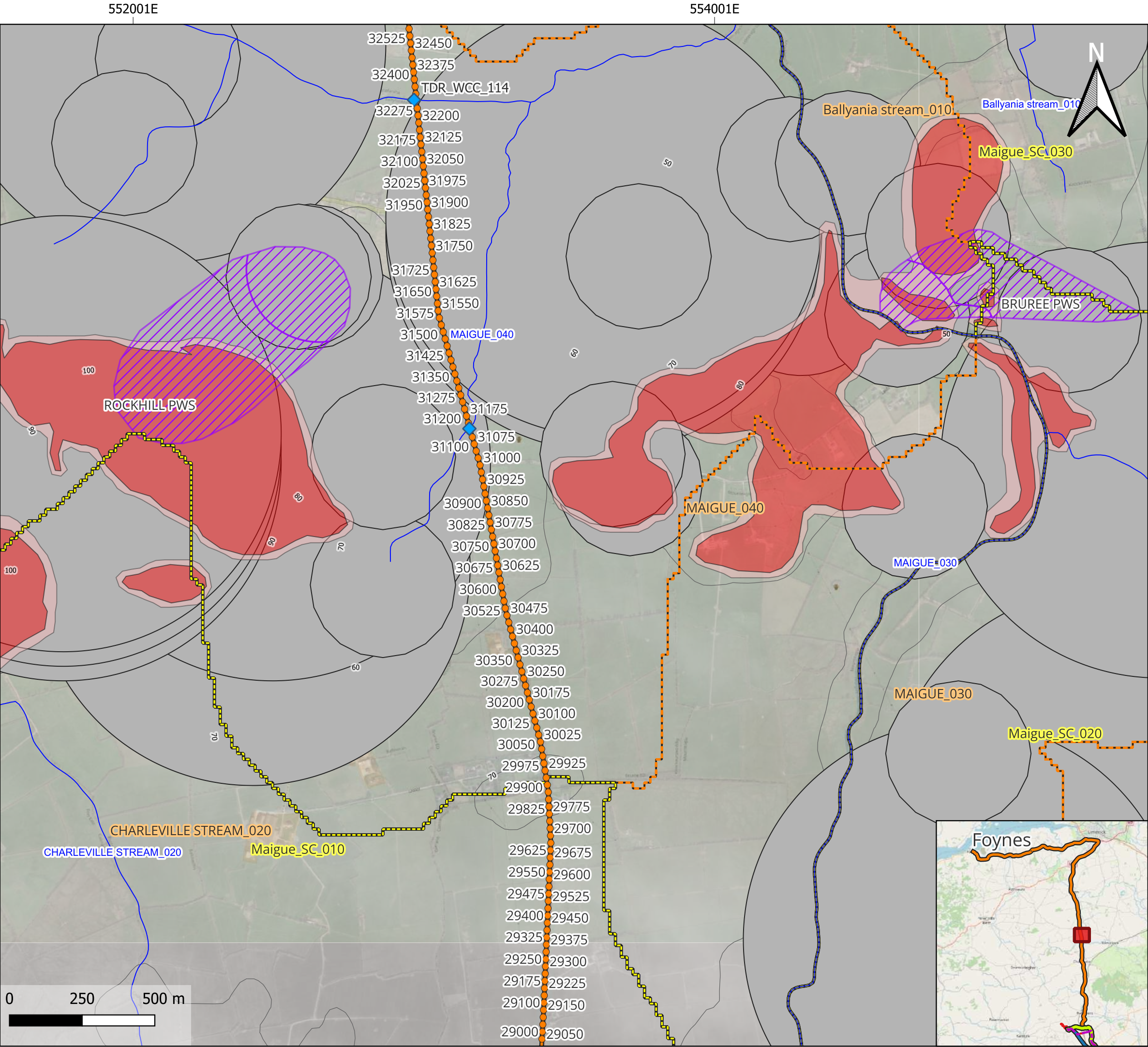


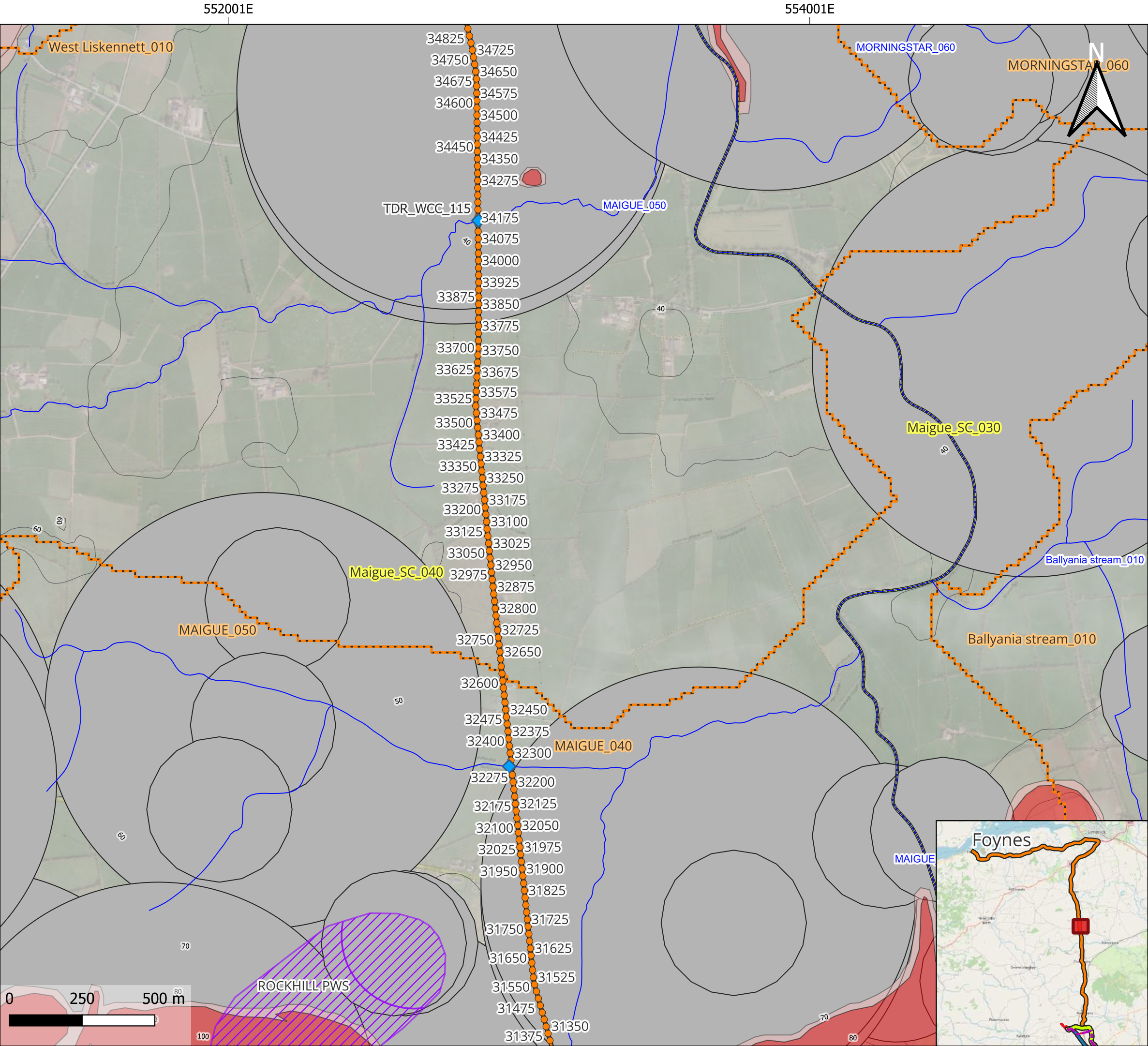
Figure 9.14c - Constraints TDR Option 1
Tile_13

Legend
Tullacondra Wind Farm
Water Course Crossings
TDR1 WCC
Turbine Delivery Route (TDR)
25m Intervals TDR1
TDR Option 1
Constraints
Hydrology
604162_WFD_Riverwaterbodies
WFD_Subcatchments
WFD_RiverSubBasins_Cycle3
Hydrogeology
Groundwater
Source Protection Areas
IRL_VULNERABILITY_ITM
X
E
Wells
Wells 250m Buffer Total
Wells10to50
Wells polygons
Wells1km_500B
Topography
10m Elevation Contours
Base Layers
OpenStreetMap
Bing Aerial

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Figure 9.14c - Constraints TDR Option 1

Tile_14

Legend

Tullacondra Wind Farm

Turbine Delivery Route (TDR)

25m Intervals TDR1

TDR Option 1

Constraints

Hydrology

604162_WFD_Riverwaterbodies

WFD_Subcatchments

WFD_RiverSubBasins_Cycle3

Hydrogeology

Groundwater

IRL_VULNERABILITY_ITM

X

E

Wells

Wells 250m Buffer Total

Wells10to50

Wells polygons

Wells1km_500B

Topography

10m Elevation Contours

Base Layers

OpenStreetMap

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RSK

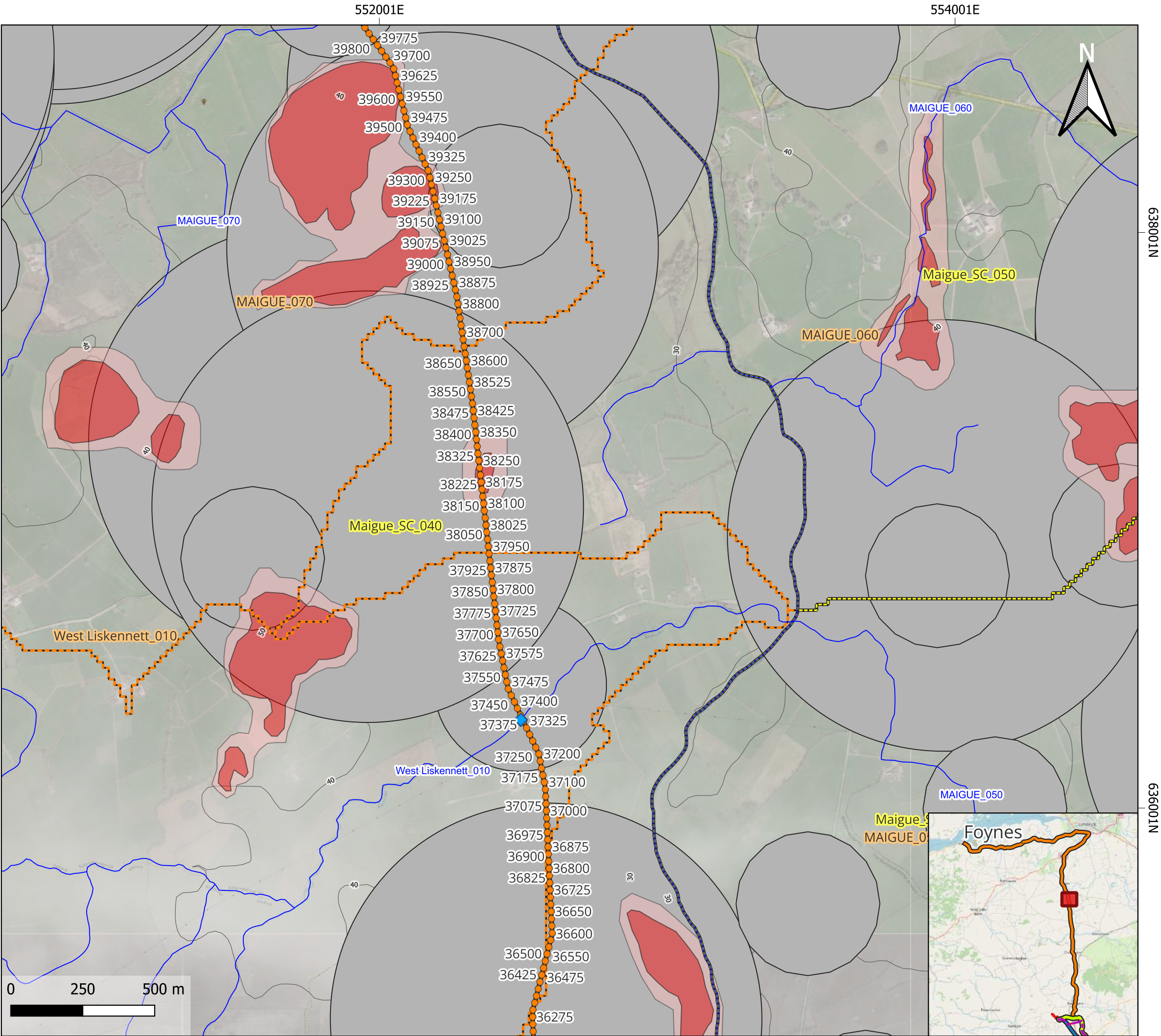
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Figure 9.14c - Constraints TDR Option 1
Tile_15

- Legend**
- Tullacondra Wind Farm**
- Water Course Crossings**
- TDR1 WCC
- Turbine Delivery Route (TDR)**
- 25m Intervals TDR1
 - TDR Option 1
- Constraints**
- Hydrology**
- 604162_WFD_Riverwaterbodies
 - WFD_Subcatchments
 - WFD_RiverSubBasins_Cycle3
- Hydrogeology**
- Groundwater**
- IRL_VULNERABILITY_ITM**
- X
 - E
- Wells**
- Wells 250m Buffer Total
 - Wells10to50
- Wells polygons**
- Wells1km_500B
 - Wells100_50B
- Topography**
- 10m Elevation Contours
- Base Layers**
- OpenStreetMap**
- Bing Aerial**

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Figure 9.14c - Constraints TDR Option 1
Tile_16

Legend

Tullacondra Wind Farm

Water Course Crossings

TDR1 WCC

Turbine Delivery Route (TDR)

25m Intervals TDR1

TDR Option 1

Constraints

Hydrology

604162_WFD_Riverwaterbodies

WFD_Subcatchments

WFD_RiverSubBasins_Cycle3

Hydrogeology

Groundwater

Source Protection Areas

IRL_VULNERABILITY_ITM

X

E

Wells

Wells 250m Buffer Total

Wells10to50

Wells polygons

Wells1km_500B

Topography

10m Elevation Contours

Base Layers

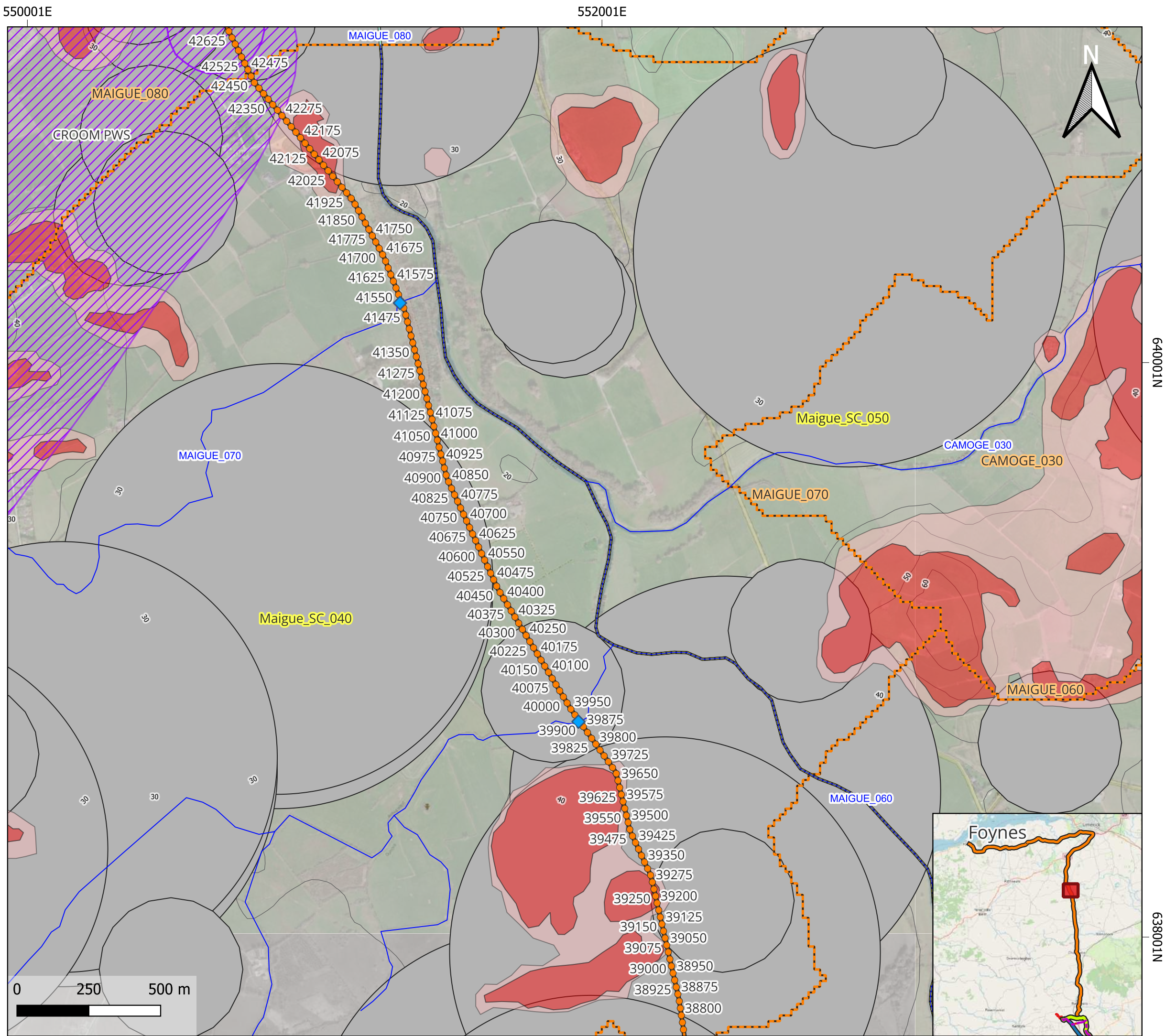
OpenStreetMap

Bing Aerial

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Figure 9.14c - Constraints TDR Option 1
Tile_17

Legend

Tullacondra Wind Farm

Water Course Crossings

TDR1 WCC

Turbine Delivery Route (TDR)

25m Intervals TDR1

TDR Option 1

Constraints

Hydrology

604162_WFD_Riverwaterbodies

WFD_Subcatchments

WFD_RiverSubBasins_Cycle3

Hydrogeology

Groundwater

Source Protection Areas

IRL_VULNERABILITY_ITM

X

E

Wells

Wells 250m Buffer Total

Wells10to50

Wells polygons

Wells1km_500B

Wells500_250B

Wells100_50B

Topography

10m Elevation Contours

Base Layers

OpenStreetMap

Bing Aerial

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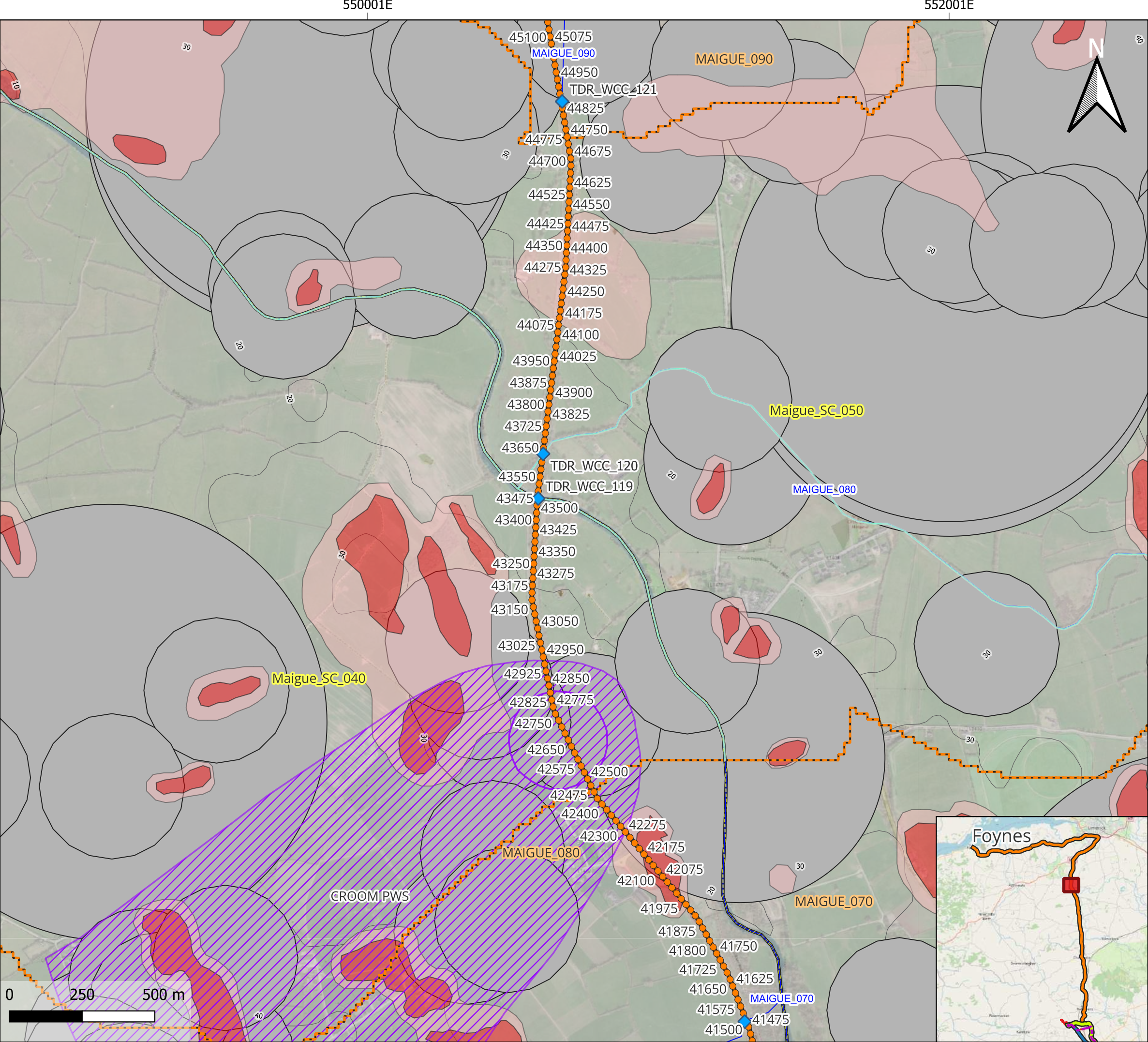
Environmental Protection Agency (EPA)

Geological Services Ireland (GSI)

Bing Aerial / GeoHive / Open Street Map / Google Roads

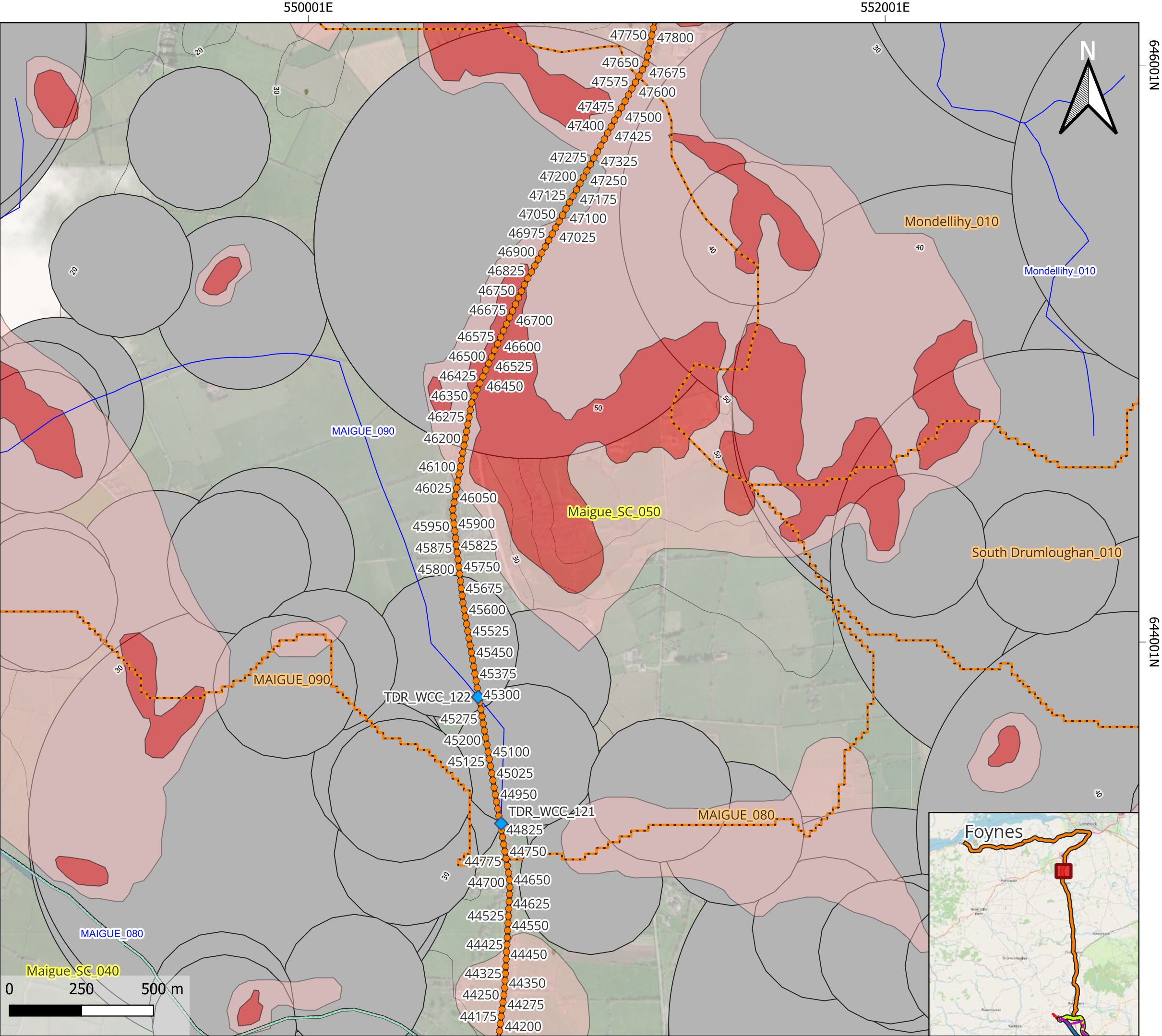
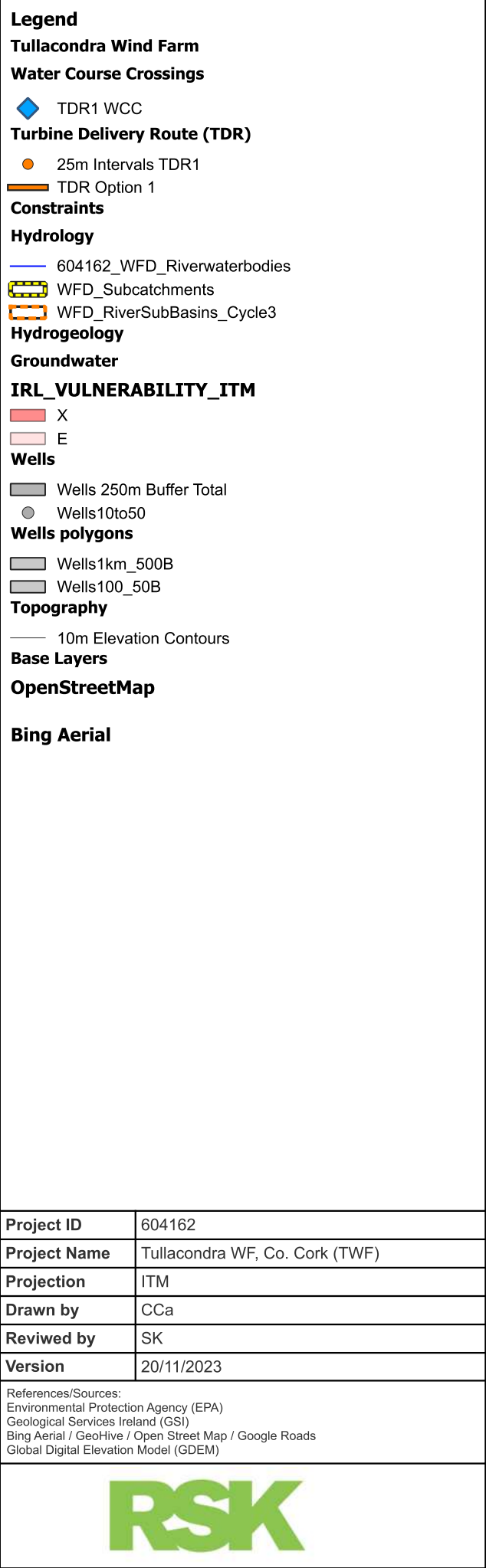
Global Digital Elevation Model (GDEM)

RSK



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Figure 9.14c - Constraints TDR Option 1
Tile_18



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Figure 9.14c - Constraints TDR Option 1
Tile_19

Legend

Tullacondra Wind Farm

Water Course Crossings

◆ TDR1 WCC

Turbine Delivery Route (TDR)

● 25m Intervals TDR1

— TDR Option 1

Constraints

Hydrology

— 604162_WFD_Riverwaterbodies

▤ WFD_Subcatchments

▤ WFD_RiverSubBasins_Cycle3

Hydrogeology

Groundwater

▤ Zone of Contribution

IRL_VULNERABILITY_ITM

■ X

■ E

Wells

■ Wells 250m Buffer Total

● Wells10to50

Wells polygons

■ Wells1km_500B

■ Wells200_100B

Topography

— 10m Elevation Contours

Base Layers

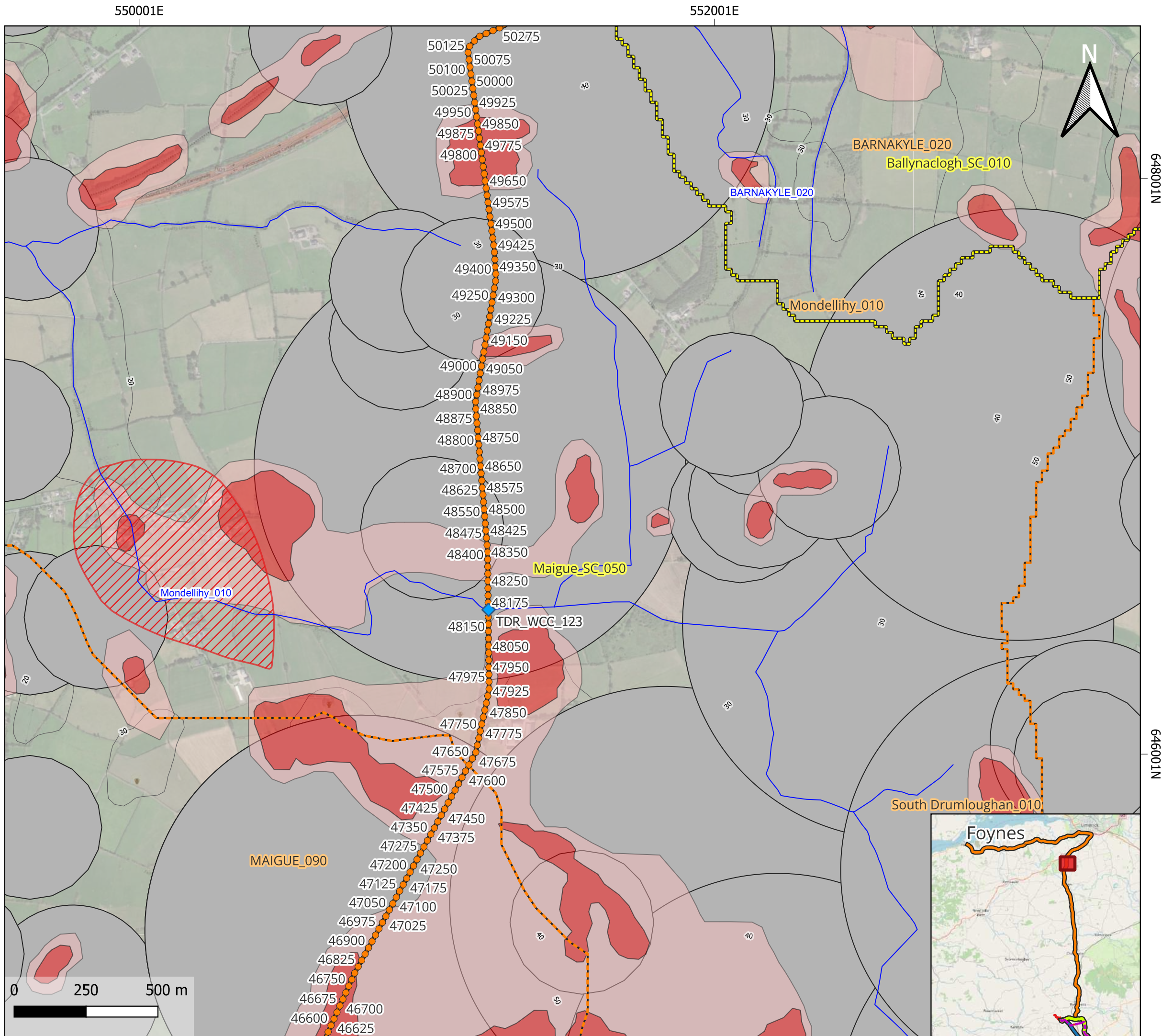
OpenStreetMap

Bing Aerial

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