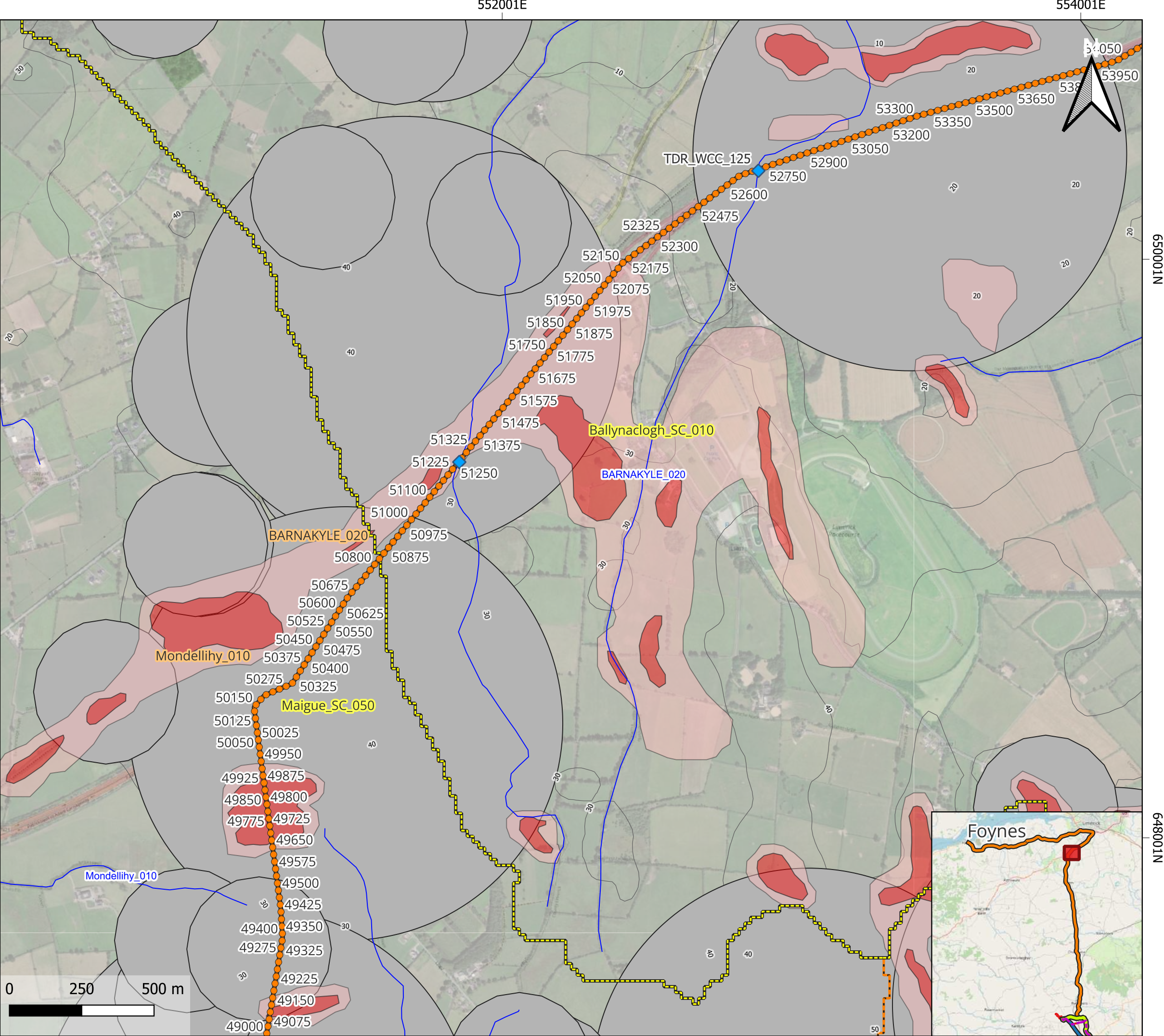
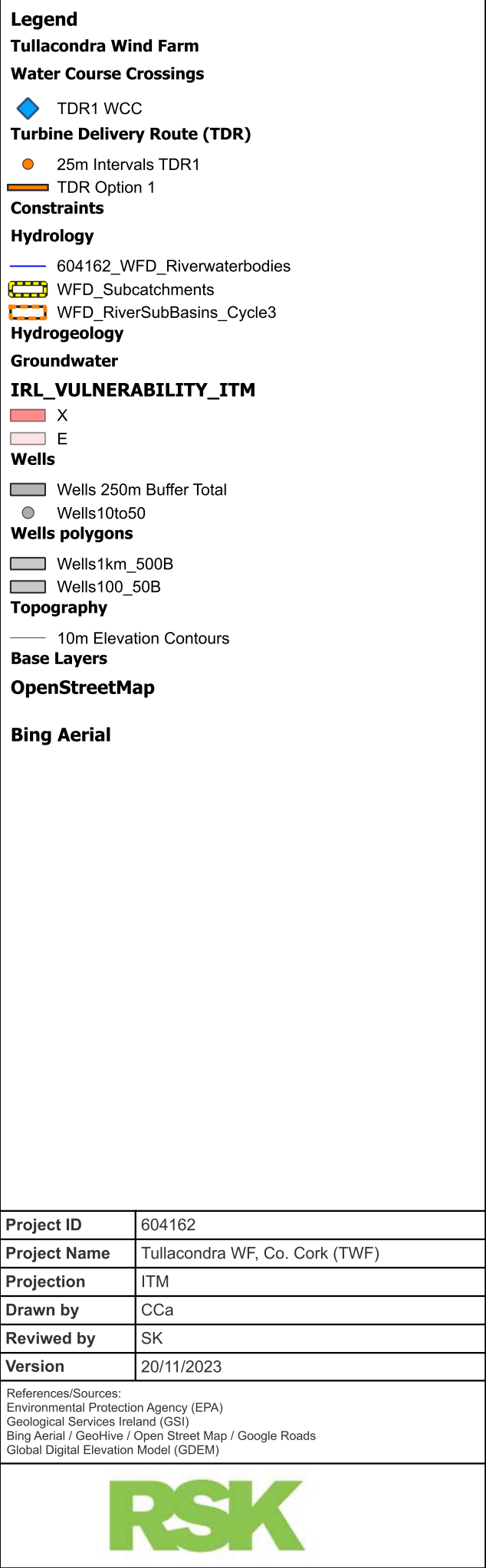


Figure 9.14c - Constraints TDR Option 1
Tile_20



Note: Data points presented are georeferenced using open source data and/or a handheld GPS. This drawing / map is considered a conceptual model with reasonable accuracy for the purposes of environmental assessment. This drawing should not be relied upon for detailed design puporses.

Figure 9.14c - Constraints TDR Option 1
Tile_21

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

Wells

Wells 250m Buffer Total

Wells polygons

Wells1km_500B

Topography

10m Elevation Contours

Base Layers

OpenStreetMap

Bing Aerial

Project ID	604162
Project Name	Tullacondra WF, Co. Cork (TWF)
Projection	ITM
Drawn by	CCa
Reviwed by	SK
Version	20/11/2023

References/Sources:

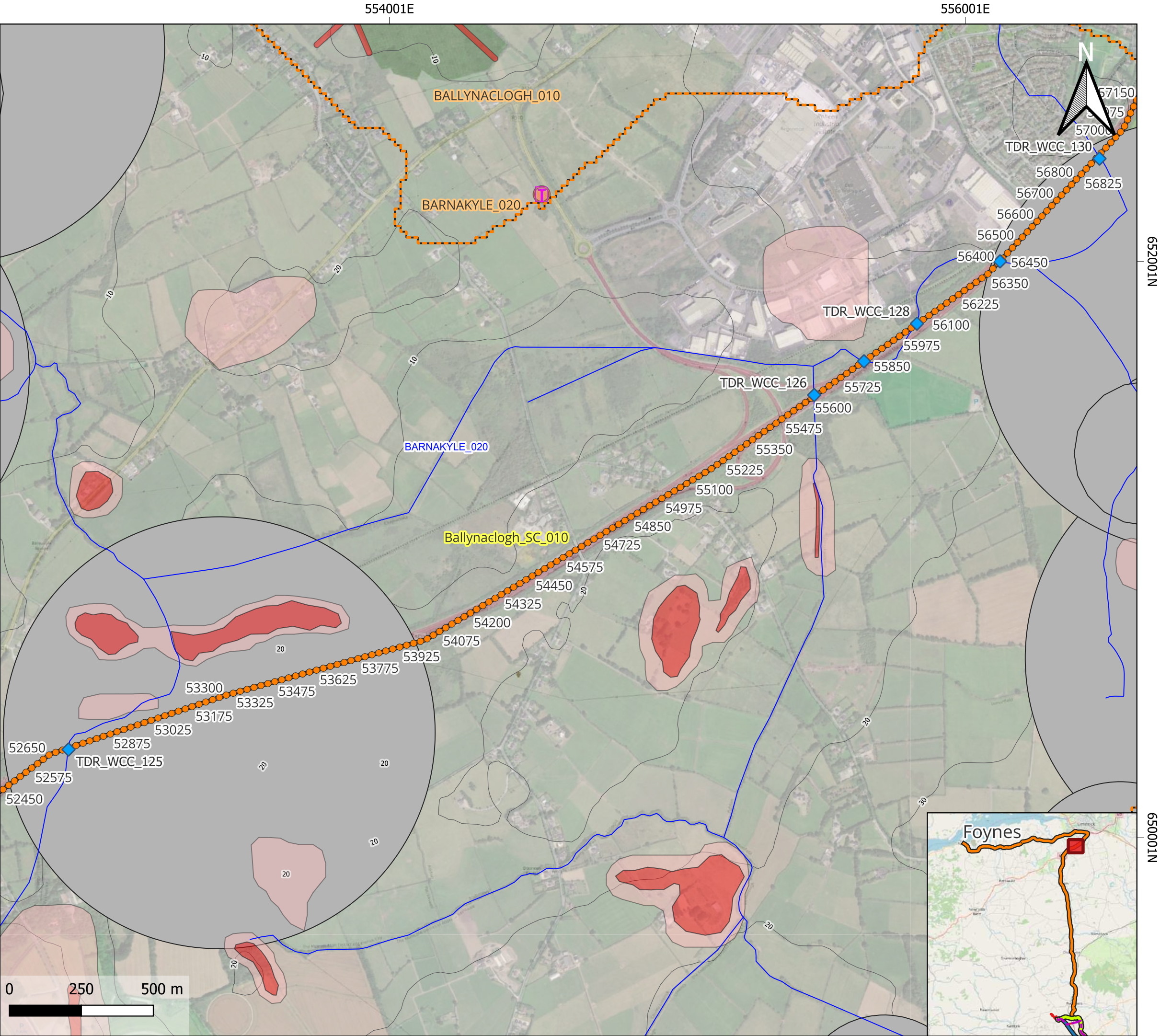
Environmental Protection Agency (EPA)

Geological Services Ireland (GSI)

Bing Aerial / GeoHive / Open Street Map / Google Roads

Global Digital Elevation Model (GDEM)

RSK

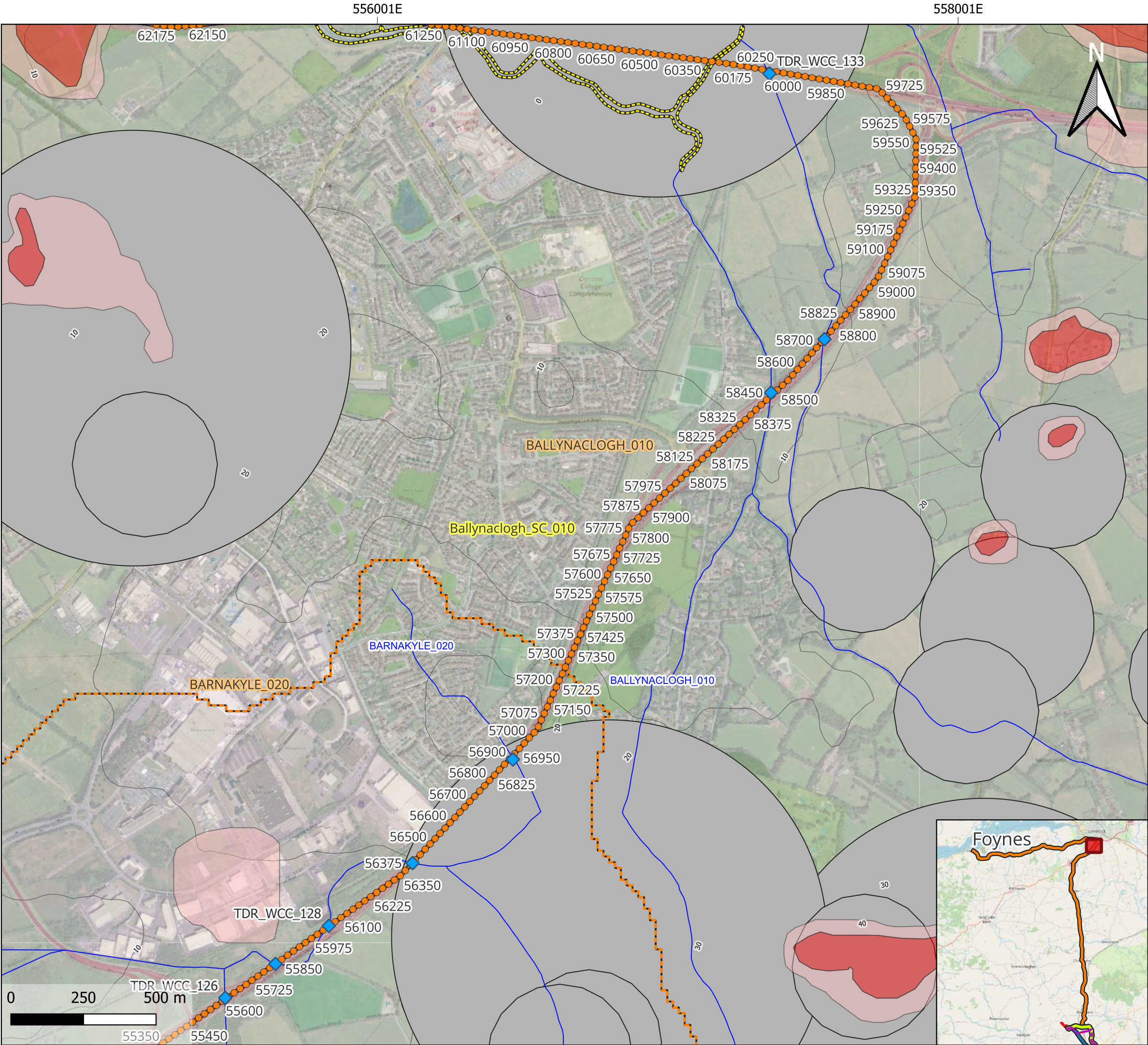


Note: Data points presented are georeferenced using open source data and/or a handheld GPS. This drawing / map is considered a conceptual model with reasonable accuracy for the purposes of environmental assessment. This drawing should not be relied upon for detailed design puporses.

Figure 9.14c - Constraints TDR Option 1
Tile_22

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

Project ID	604162
Project Name	Tullacondra WF, Co. Cork (TWF)
Projection	ITM
Drawn by	CCa
Reviwed by	SK
Version	20/11/2023
References/Sources: Environmental Protection Agency (EPA) Geological Services Ireland (GSI) Bing Aerial / GeoHive / Open Street Map / Google Roads Global Digital Elevation Model (GDEM)	



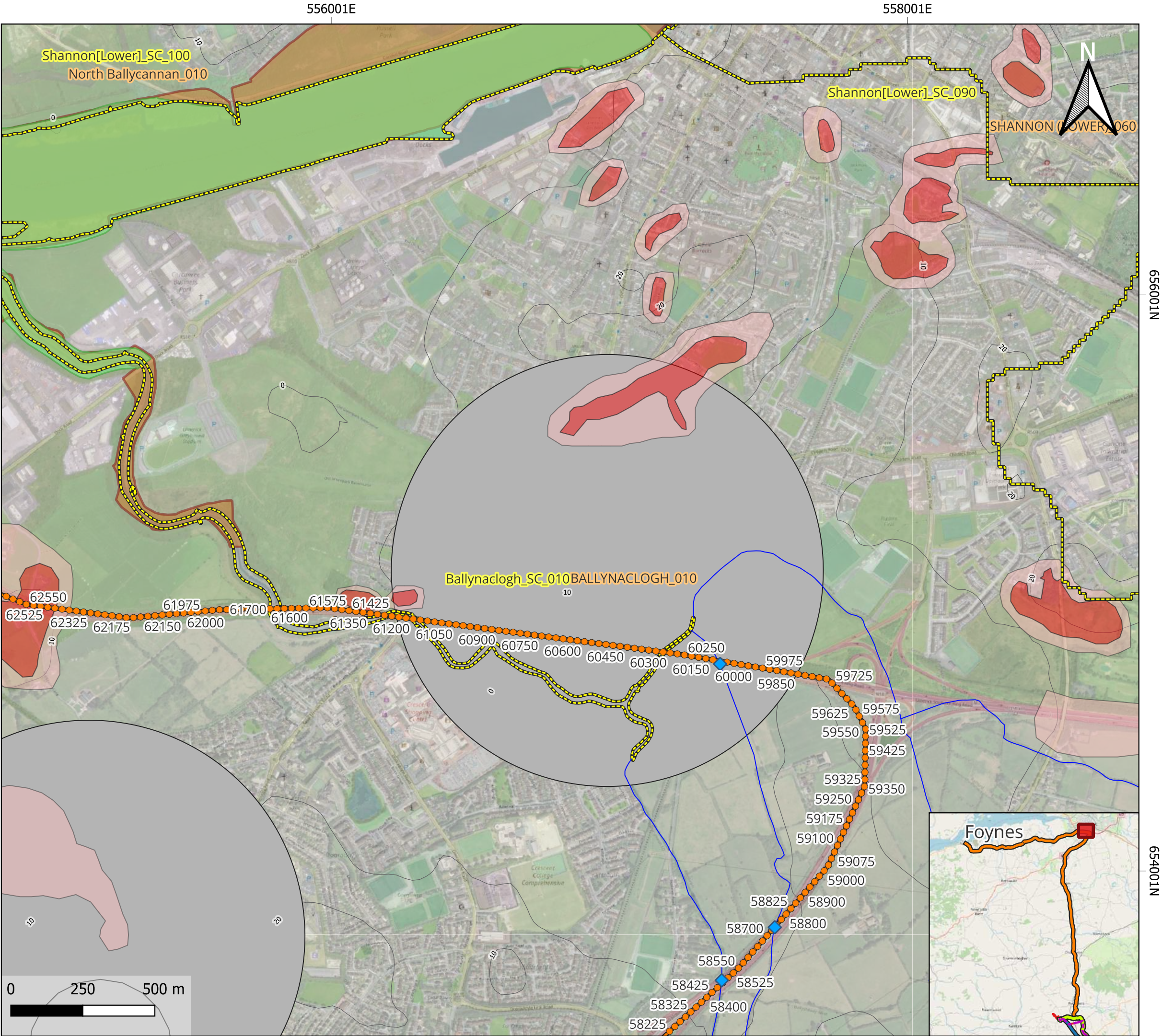
Note: Data points presented are georeferenced using open source data and/or a handheld GPS. This drawing / map is considered a conceptual model with reasonable accuracy for the purposes of environmental assessment. This drawing should not be relied upon for detailed design puporses.

Figure 9.14c - Constraints TDR Option 1
Tile_23

- 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
- Wells polygons**
- Wells1km_500B
- Designated Areas**
- SPA_ITM_2021_10
 - SAC_ITM_2023_02
- Topography**
- 10m Elevation Contours
- Base Layers**
- OpenStreetMap**
- Bing Aerial**

Project ID	604162
Project Name	Tullacondra WF, Co. Cork (TWF)
Projection	ITM
Drawn by	CCa
Reviwed by	SK
Version	20/11/2023

References/Sources:
Environmental Protection Agency (EPA)
Geological Services Ireland (GSI)
Bing Aerial / GeoHive / Open Street Map / Google Roads
Global Digital Elevation Model (GDEM)



Note: Data points presented are georeferenced using open source data and/or a handheld GPS. This drawing / map is considered a conceptual model with reasonable accuracy for the purposes of environmental assessment. This drawing should not be relied upon for detailed design puporses.

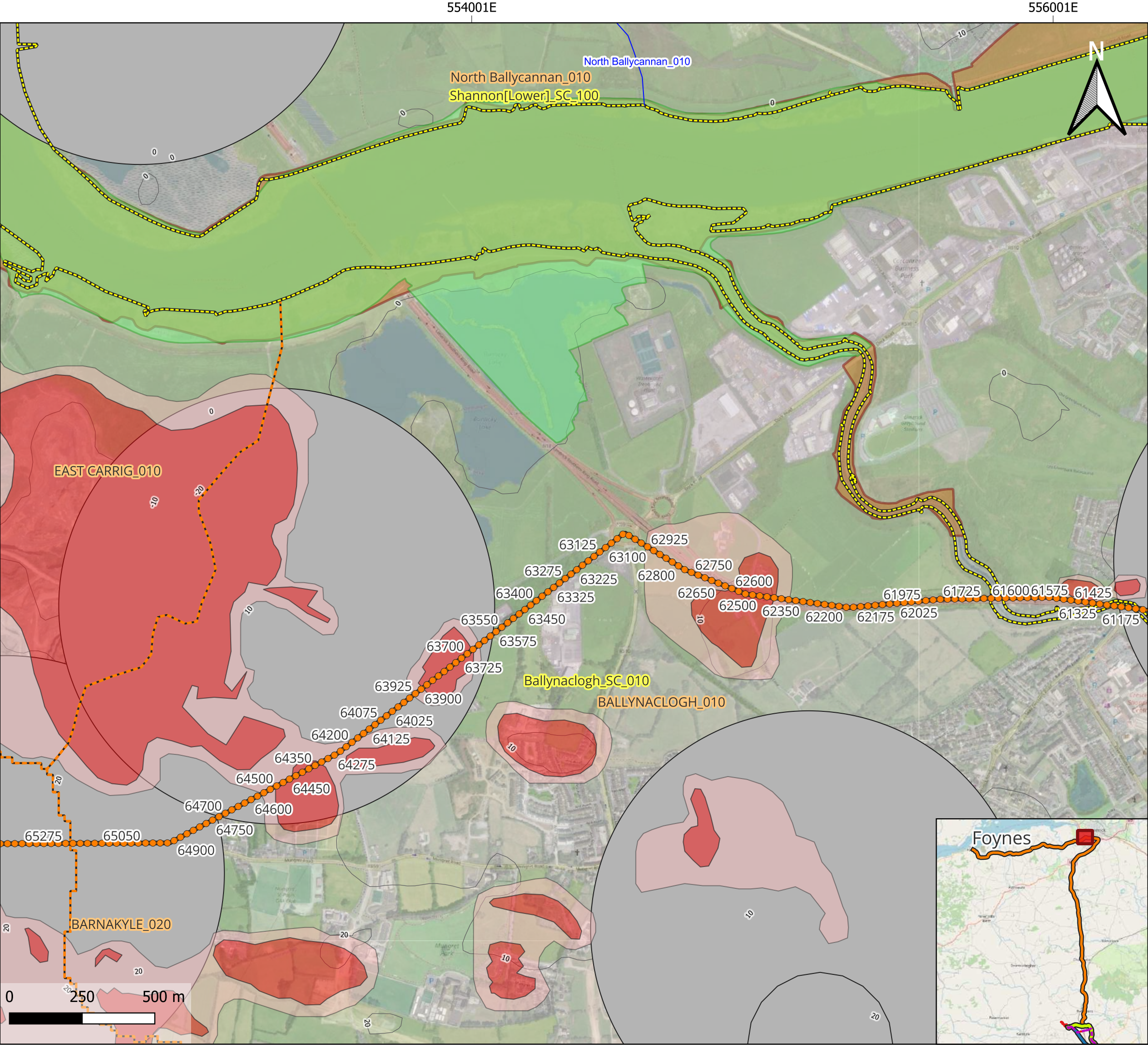
Figure 9.14c - Constraints TDR Option 1
Tile_24

Legend
Tullacondra Wind Farm
Turbine Delivery Route (TDR)
● 25m Intervals TDR1
— TDR Option 1
Constraints
Hydrology
WFD_Subcatchments
WFD_RiverSubBasins_Cycle3
Hydrogeology
Groundwater
IRL_VULNERABILITY_ITM
X
E
Wells
Wells 250m Buffer Total
Wells polygons
Wells1km_500B
Designated Areas
SPA_ITM_2021_10
SAC_ITM_2023_02
Topography
10m Elevation Contours
Base Layers
OpenStreetMap
Bing Aerial

Project ID	604162
Project Name	Tullacondra WF, Co. Cork (TWF)
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References/Sources:
Environmental Protection Agency (EPA)
Geological Services Ireland (GSI)
Bing Aerial / GeoHive / Open Street Map / Google Roads
Global Digital Elevation Model (GDEM)

RSK



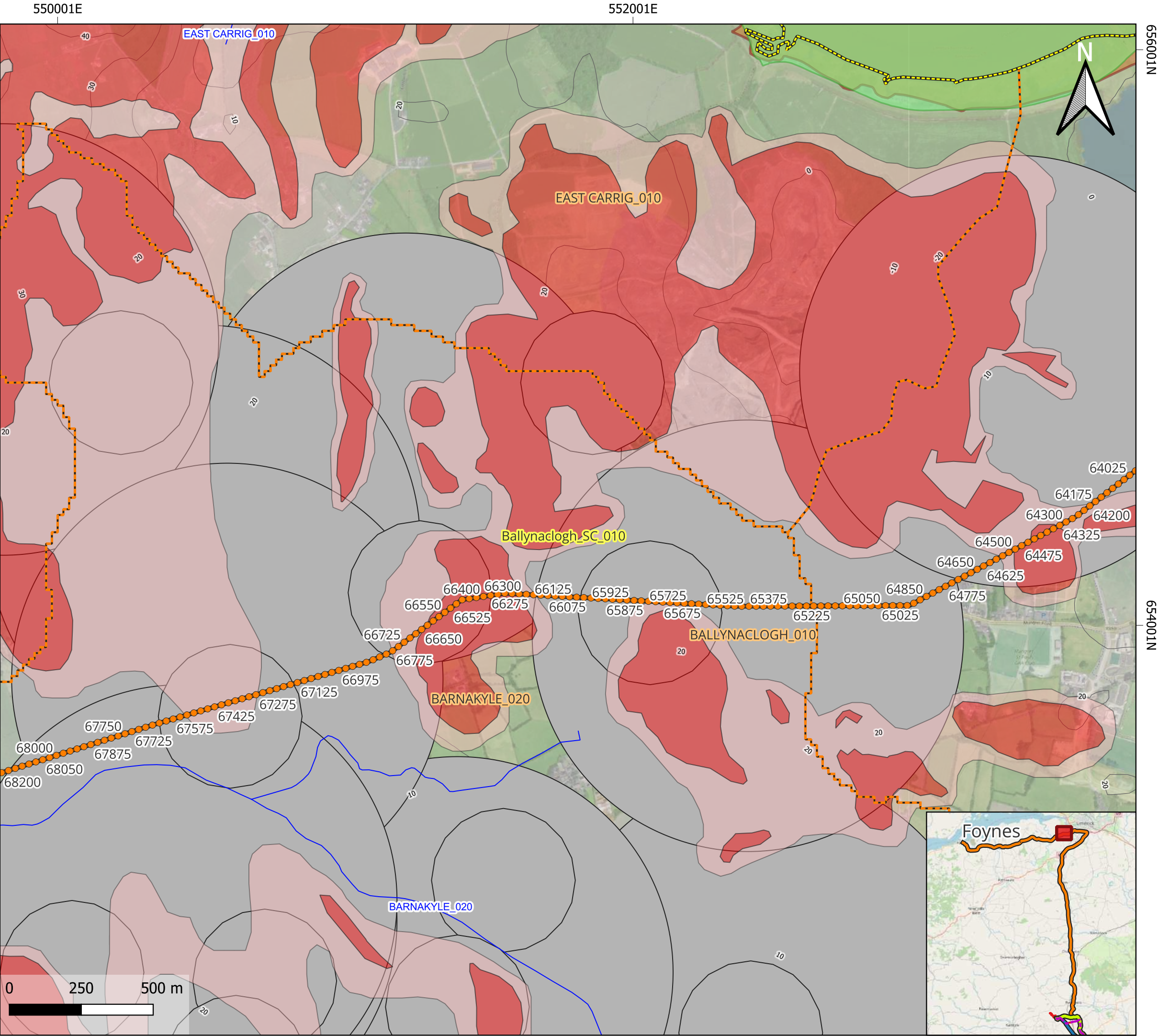
Note: Data points presented are georeferenced using open source data and/or a handheld GPS. This drawing / map is considered a conceptual model with reasonable accuracy for the purposes of environmental assessment. This drawing should not be relied upon for detailed design puporses.

Figure 9.14c - Constraints TDR Option 1
Tile_25

- 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**
- Bing Aerial**

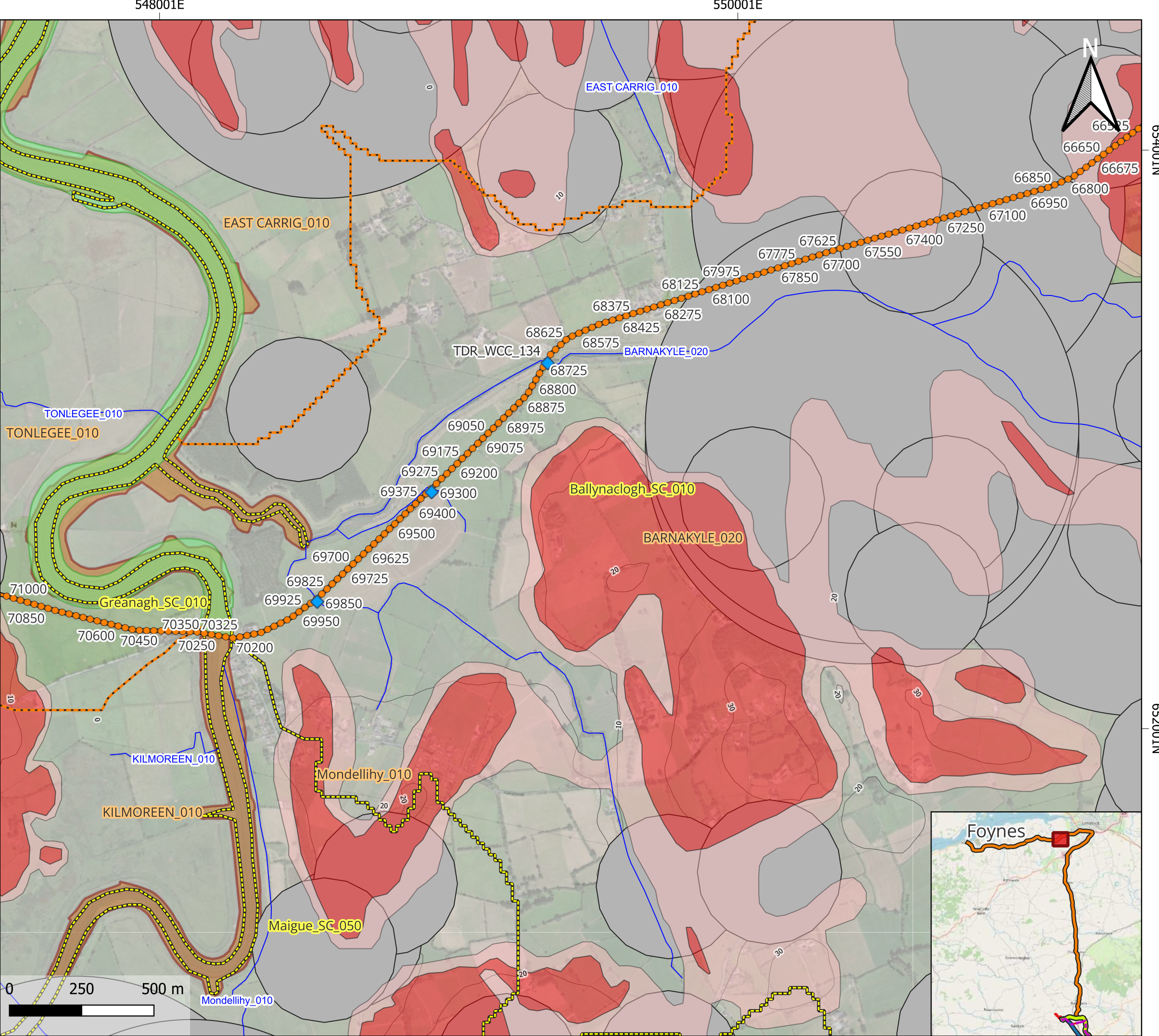
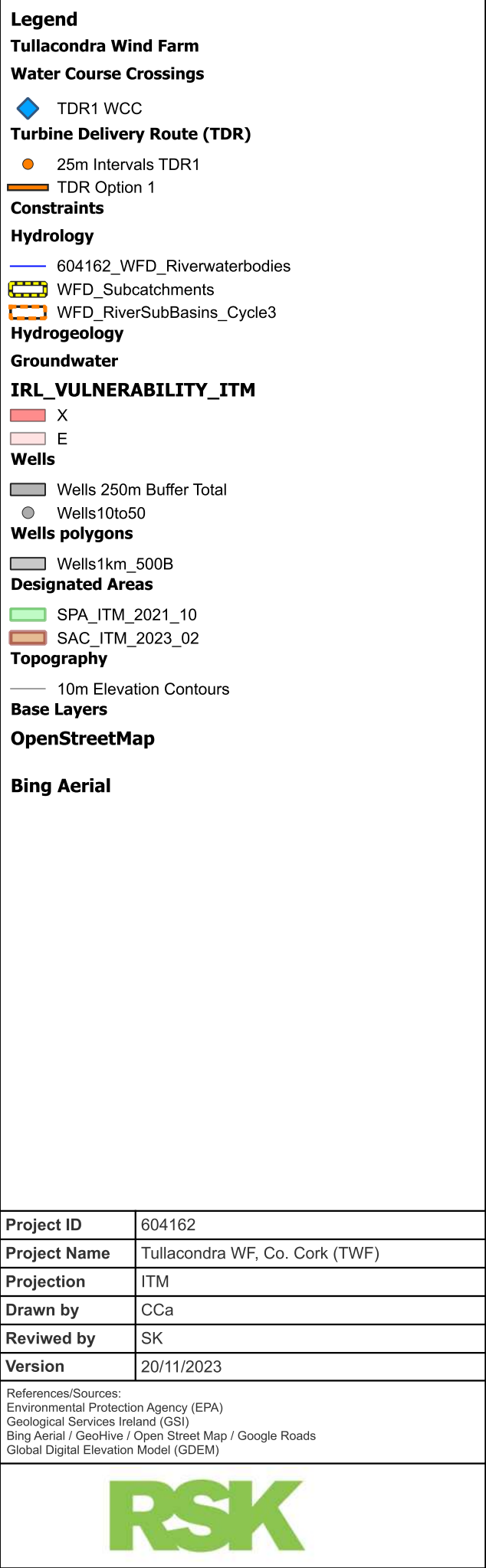
Project ID	604162
Project Name	Tullacondra WF, Co. Cork (TWF)
Projection	ITM
Drawn by	CCa
Reviwed by	SK
Version	20/11/2023

References/Sources:
Environmental Protection Agency (EPA)
Geological Services Ireland (GSI)
Bing Aerial / GeoHive / Open Street Map / Google Roads
Global Digital Elevation Model (GDEM)



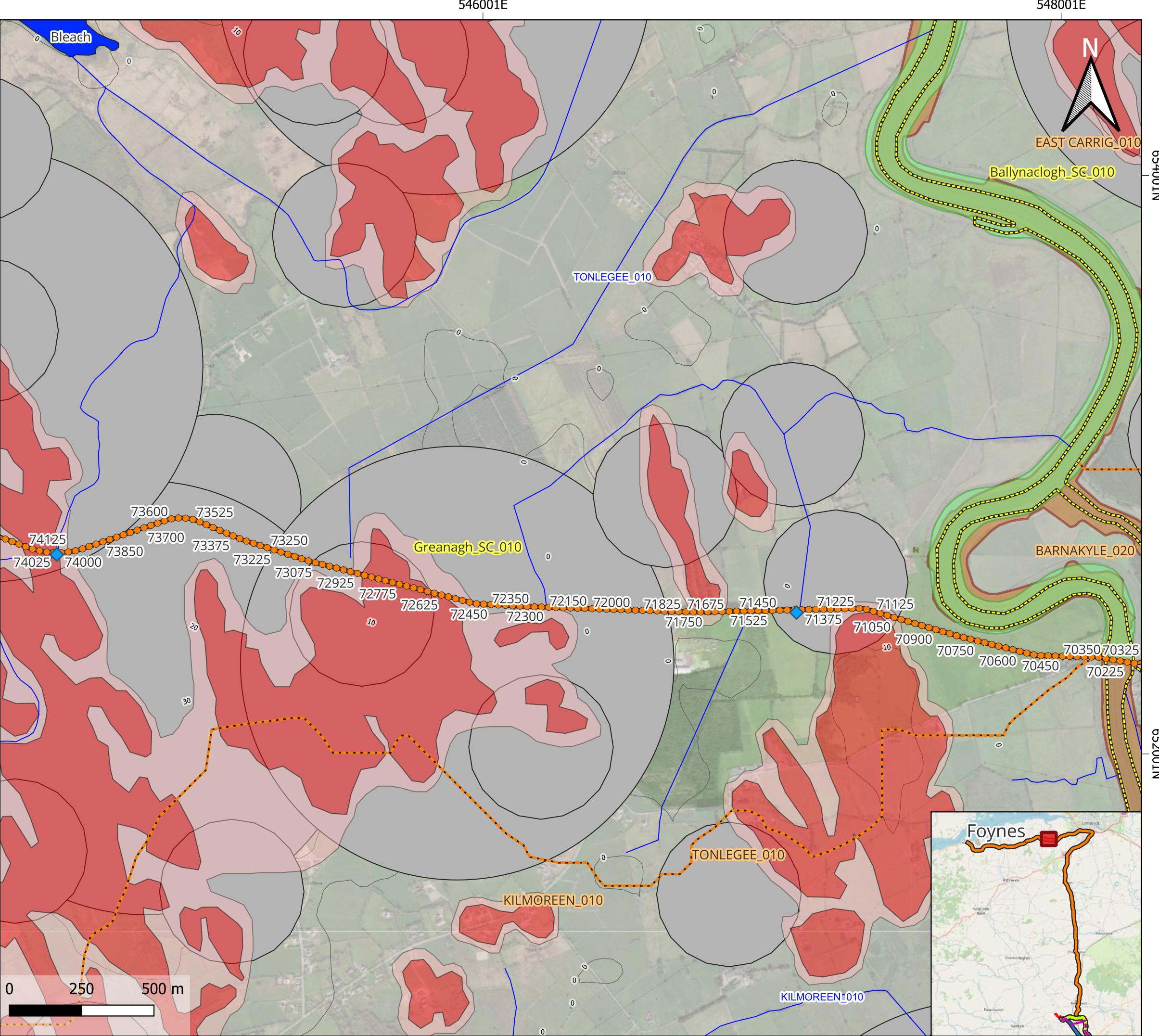
Note: Data points presented are georeferenced using open source data and/or a handheld GPS. This drawing / map is considered a conceptual model with reasonable accuracy for the purposes of environmental assessment. This drawing should not be relied upon for detailed design puporses.

Figure 9.14c - Constraints TDR Option 1
Tile_26



Note: Data points presented are georeferenced using open source data and/or a handheld GPS. This drawing / map is considered a conceptual model with reasonable accuracy for the purposes of environmental assessment. This drawing should not be relied upon for detailed design puporses.

Figure 9.14c - Constraints TDR Option 1
Tile_27



Note: Data points presented are georeferenced using open source data and/or a handheld GPS. This drawing / map is considered a conceptual model with reasonable accuracy for the purposes of environmental assessment. This drawing should not be relied upon for detailed design puporses.

Figure 9.14c - Constraints TDR Option 1
Tile_28

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

Wells200_100B

Designated Areas

SAC_ITM_2023_02

Topography

10m Elevation Contours

Base Layers

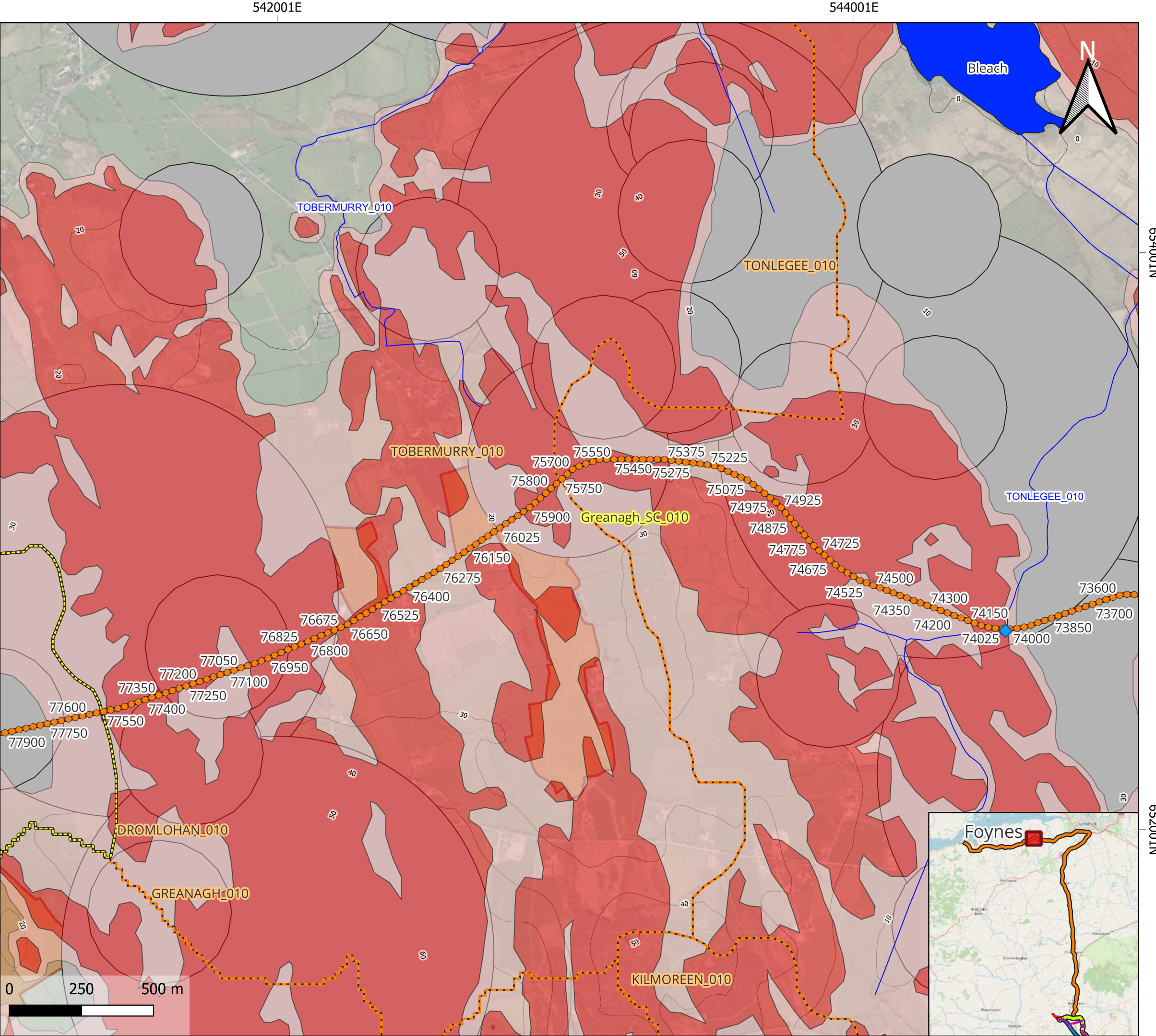
OpenStreetMap

Bing Aerial

Project ID	604162
Project Name	Tullacondra WF, Co. Cork (TWF)
Projection	ITM
Drawn by	CCa
Reviwed by	SK
Version	20/11/2023

References/Sources:
Environmental Protection Agency (EPA)
Geological Services Ireland (GSI)
Bing Aerial / GeoHive / Open Street Map / Google Roads
Global Digital Elevation Model (GDEM)

RSK



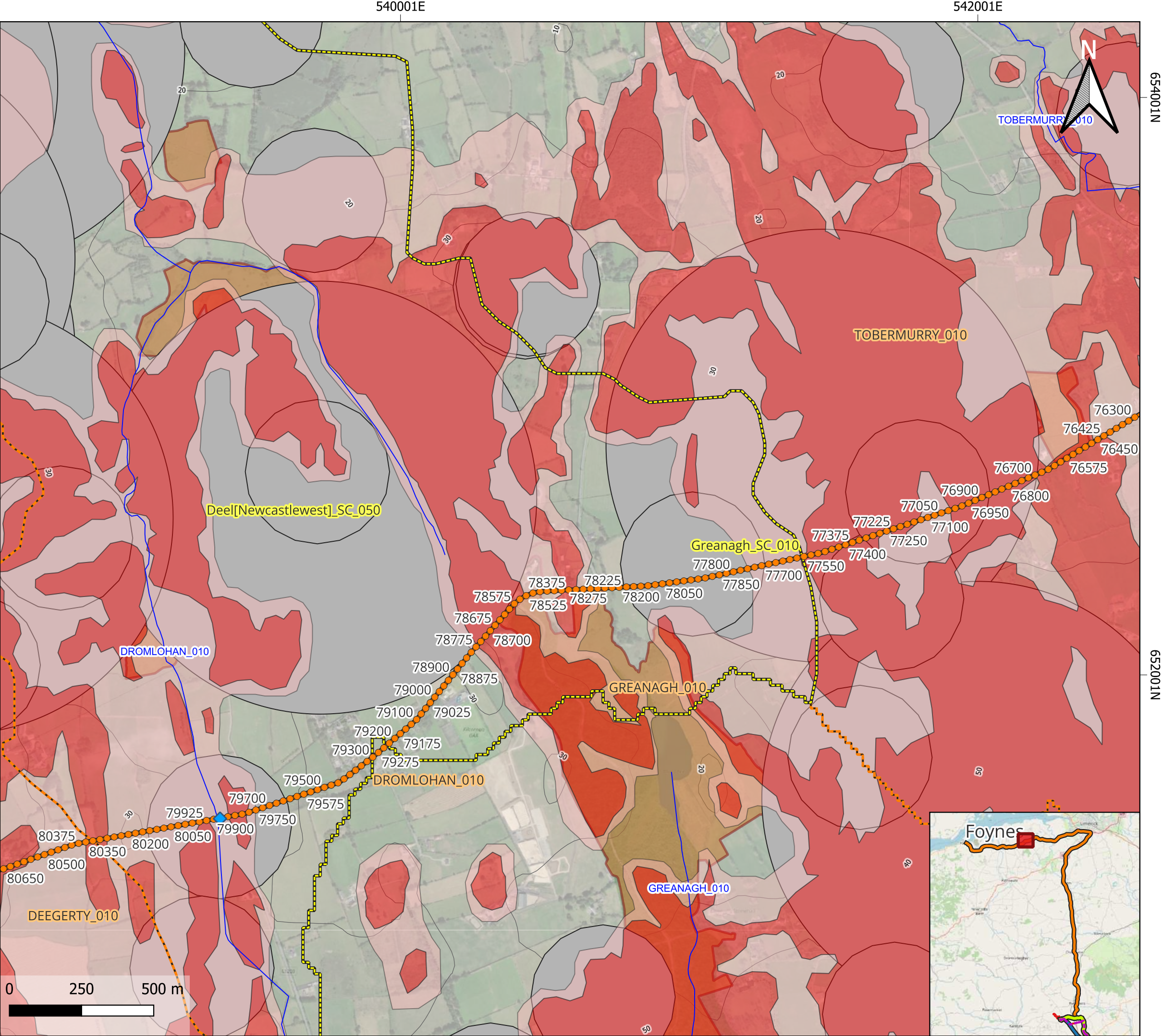
Note: Data points presented are georeferenced using open source data and/or a handheld GPS. This drawing / map is considered a conceptual model with reasonable accuracy for the purposes of environmental assessment. This drawing should not be relied upon for detailed design puporses.

Figure 9.14c - Constraints TDR Option 1
Tile_29

- 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
- Designated Areas**
- SAC_ITM_2023_02
- Topography**
- 10m Elevation Contours
- Base Layers**
- OpenStreetMap**
- Bing Aerial**

Project ID	604162
Project Name	Tullacondra WF, Co. Cork (TWF)
Projection	ITM
Drawn by	CCa
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Version	20/11/2023

References/Sources:
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Bing Aerial / GeoHive / Open Street Map / Google Roads
Global Digital Elevation Model (GDEM)



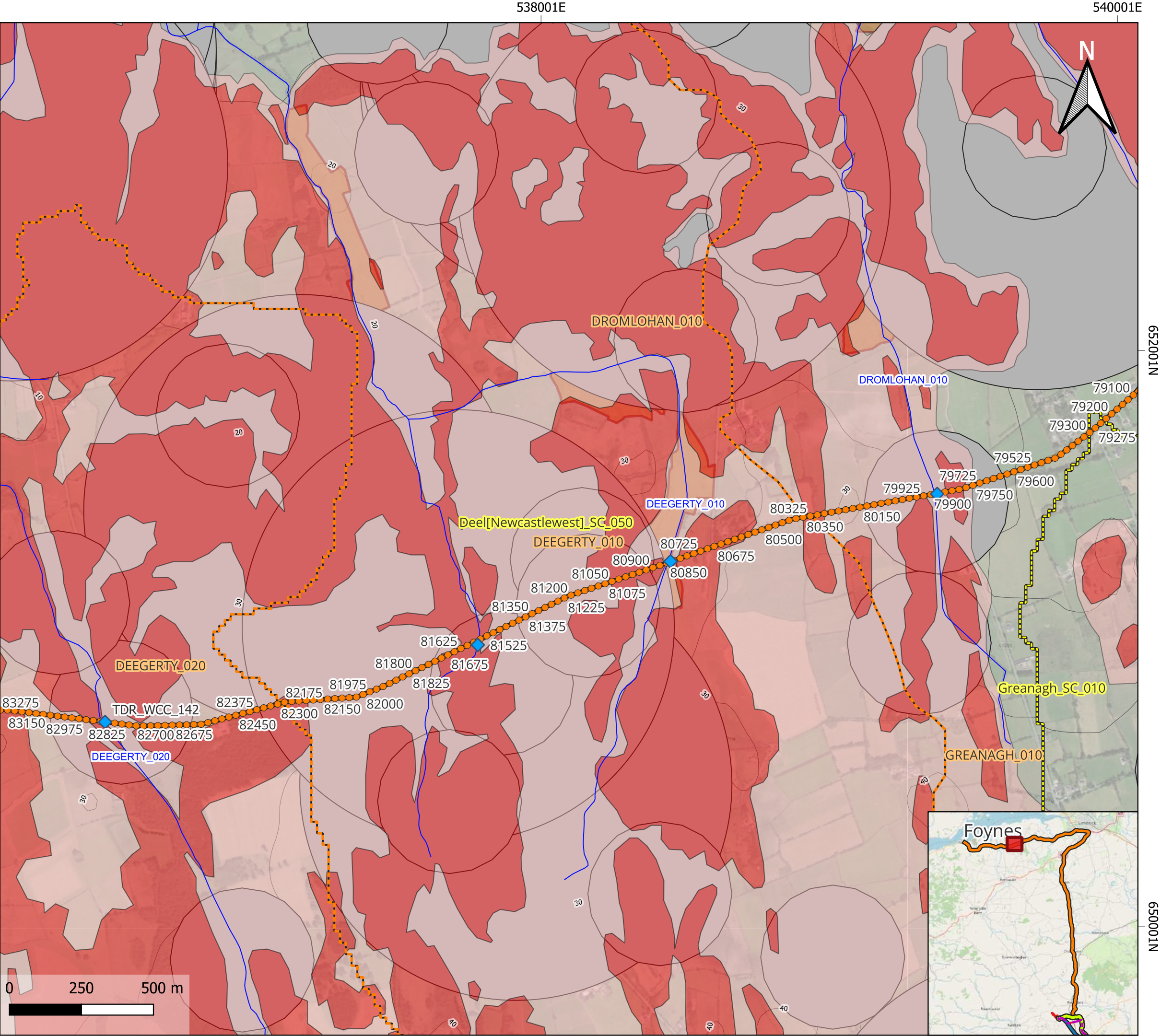
Note: Data points presented are georeferenced using open source data and/or a handheld GPS. This drawing / map is considered a conceptual model with reasonable accuracy for the purposes of environmental assessment. This drawing should not be relied upon for detailed design puporses.

Figure 9.14c - Constraints TDR Option 1
Tile_30

- 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
- Designated Areas**
- SAC_ITM_2023_02
- Topography**
- 10m Elevation Contours
- Base Layers**
- OpenStreetMap**
- Bing Aerial**

Project ID	604162
Project Name	Tullacondra WF, Co. Cork (TWF)
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References/Sources:
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Geological Services Ireland (GSI)
Bing Aerial / GeoHive / Open Street Map / Google Roads
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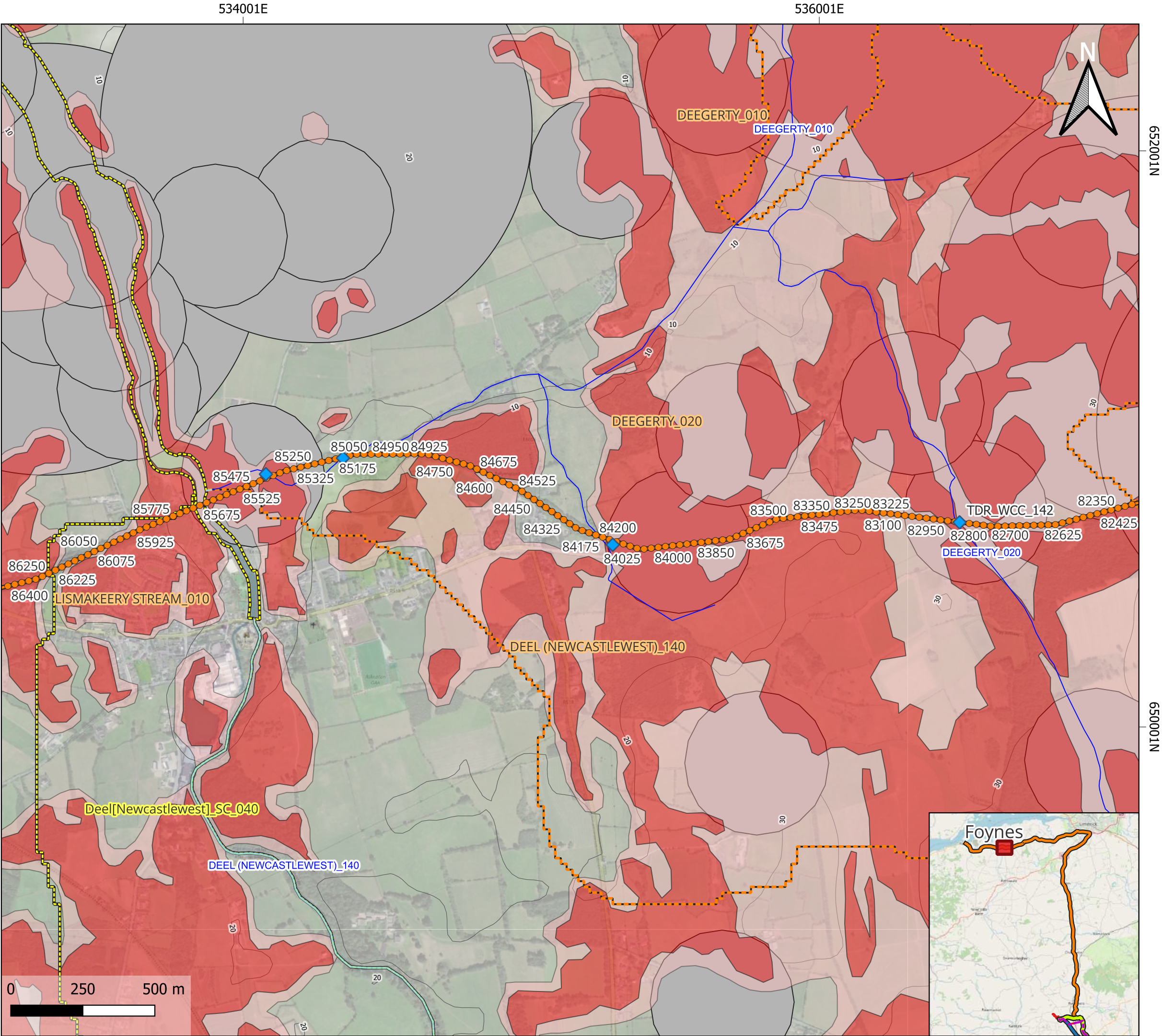


Note: Data points presented are georeferenced using open source data and/or a handheld GPS. This drawing / map is considered a conceptual model with reasonable accuracy for the purposes of environmental assessment. This drawing should not be relied upon for detailed design puporses.

Figure 9.14c - Constraints TDR Option 1
Tile_31

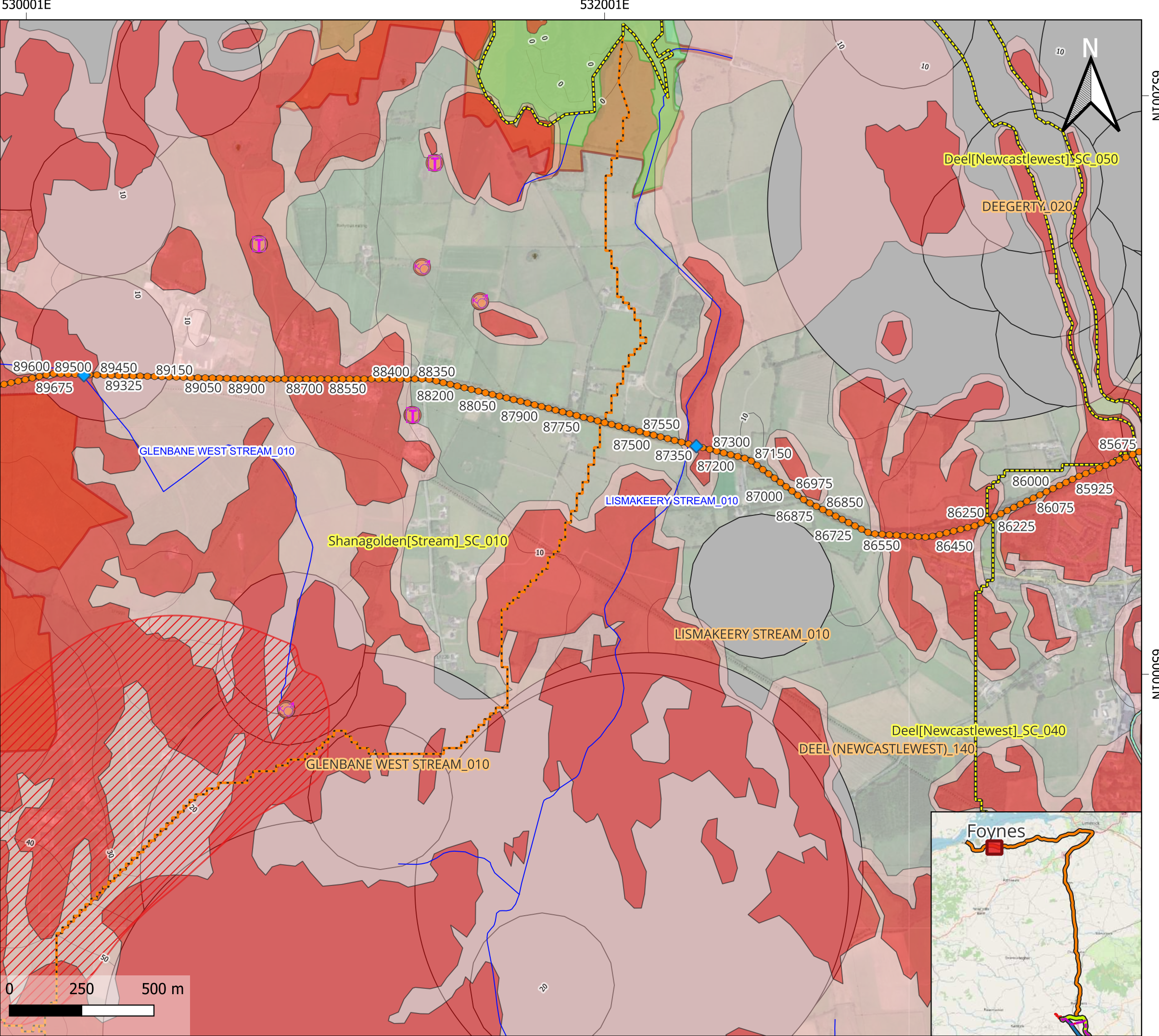
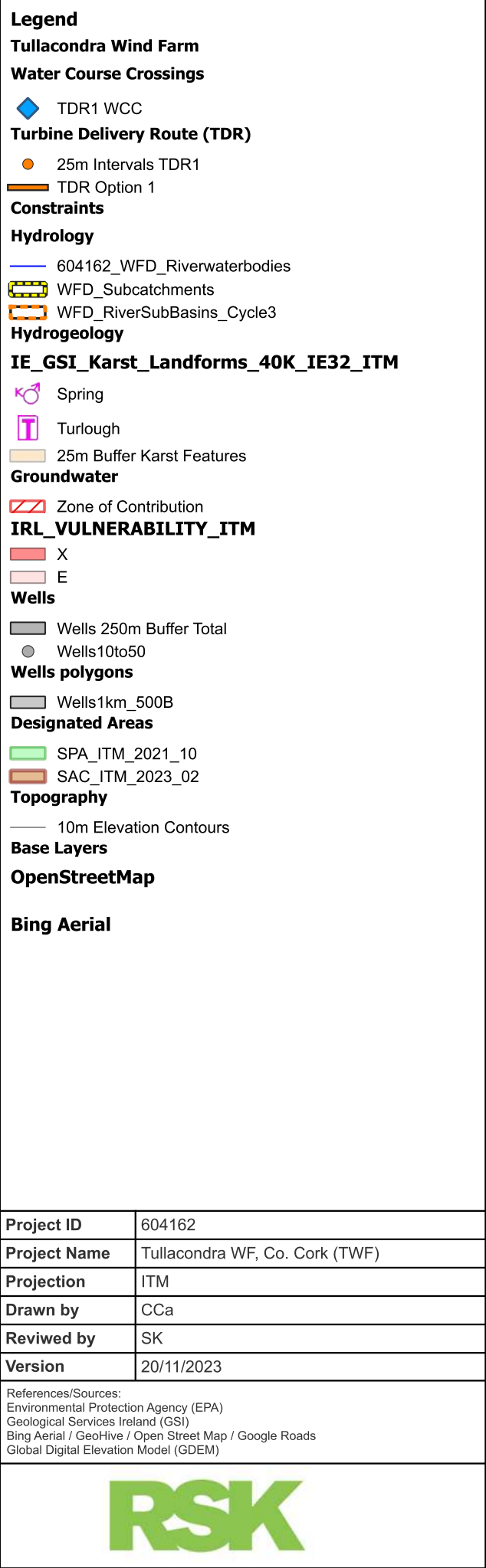
Legend
Tullacondra Wind Farm
Water Course Crossings
TDR1 WCC
Turbine Delivery Route (TDR)
25m Intervals TDR1
TDR Option 1
Constraints
Hydrology
604162_WFD_Riverwaterbodies
WFD_Subcatchments
WFD_RiverSubBasins_Cycle3
Hydrogeology
Groundwater
IRL_VULNERABILITY_ITM
X
E
Wells
Wells 250m Buffer Total
Wells10to50
Wells polygons
Wells1km_500B
Designated Areas
SPA_ITM_2021_10
Topography
10m Elevation Contours
Base Layers
OpenStreetMap
Bing Aerial

Project ID	604162
Project Name	Tullacondra WF, Co. Cork (TWF)
Projection	ITM
Drawn by	CCa
Reviwed by	SK
Version	20/11/2023
References/Sources: Environmental Protection Agency (EPA) Geological Services Ireland (GSI) Bing Aerial / GeoHive / Open Street Map / Google Roads Global Digital Elevation Model (GDEM)	



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Figure 9.14c - Constraints TDR Option 1
Tile_32



Note: Data points presented are georeferenced using open source data and/or a handheld GPS. This drawing / map is considered a conceptual model with reasonable accuracy for the purposes of environmental assessment. This drawing should not be relied upon for detailed design puporses.

Figure 9.14c - Constraints TDR Option 1
Tile_33

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

Designated Areas

■ SPA_ITM_2021_10

■ SAC_ITM_2023_02

Topography

— 10m Elevation Contours

Base Layers

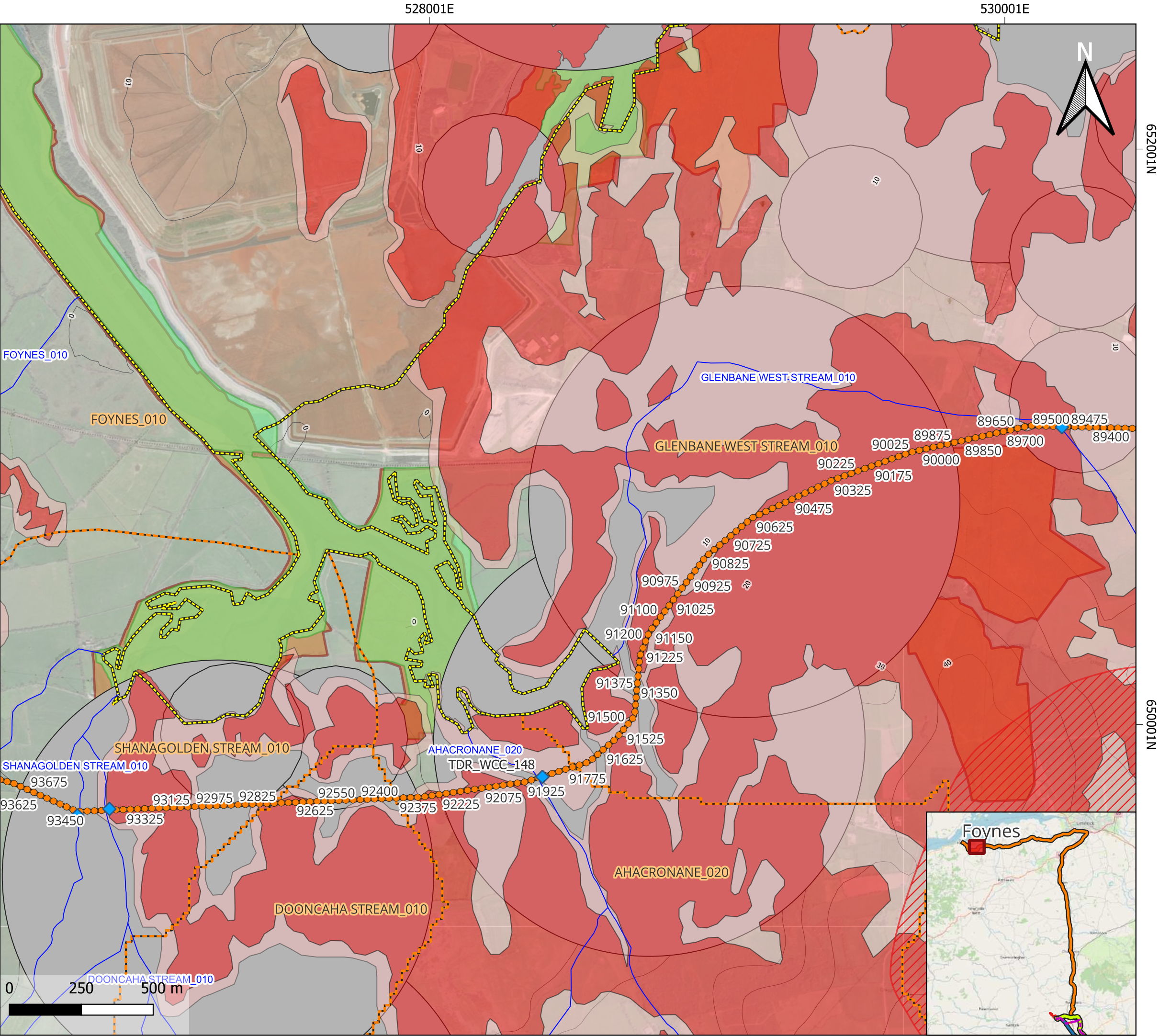
OpenStreetMap

Bing Aerial

Project ID	604162
Project Name	Tullacondra WF, Co. Cork (TWF)
Projection	ITM
Drawn by	CCa
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Version	20/11/2023

References/Sources:
Environmental Protection Agency (EPA)
Geological Services Ireland (GSI)
Bing Aerial / GeoHive / Open Street Map / Google Roads
Global Digital Elevation Model (GDEM)

RSK



Note: Data points presented are georeferenced using open source data and/or a handheld GPS. This drawing / map is considered a conceptual model with reasonable accuracy for the purposes of environmental assessment. This drawing should not be relied upon for detailed design puporses.

Figure 9.14c - Constraints TDR Option 1
Tile_34

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

■ Wells500_250B

■ Wells100_50B

Designated Areas

■ SPA_ITM_2021_10

■ SAC_ITM_2023_02

Topography

— 10m Elevation Contours

Base Layers

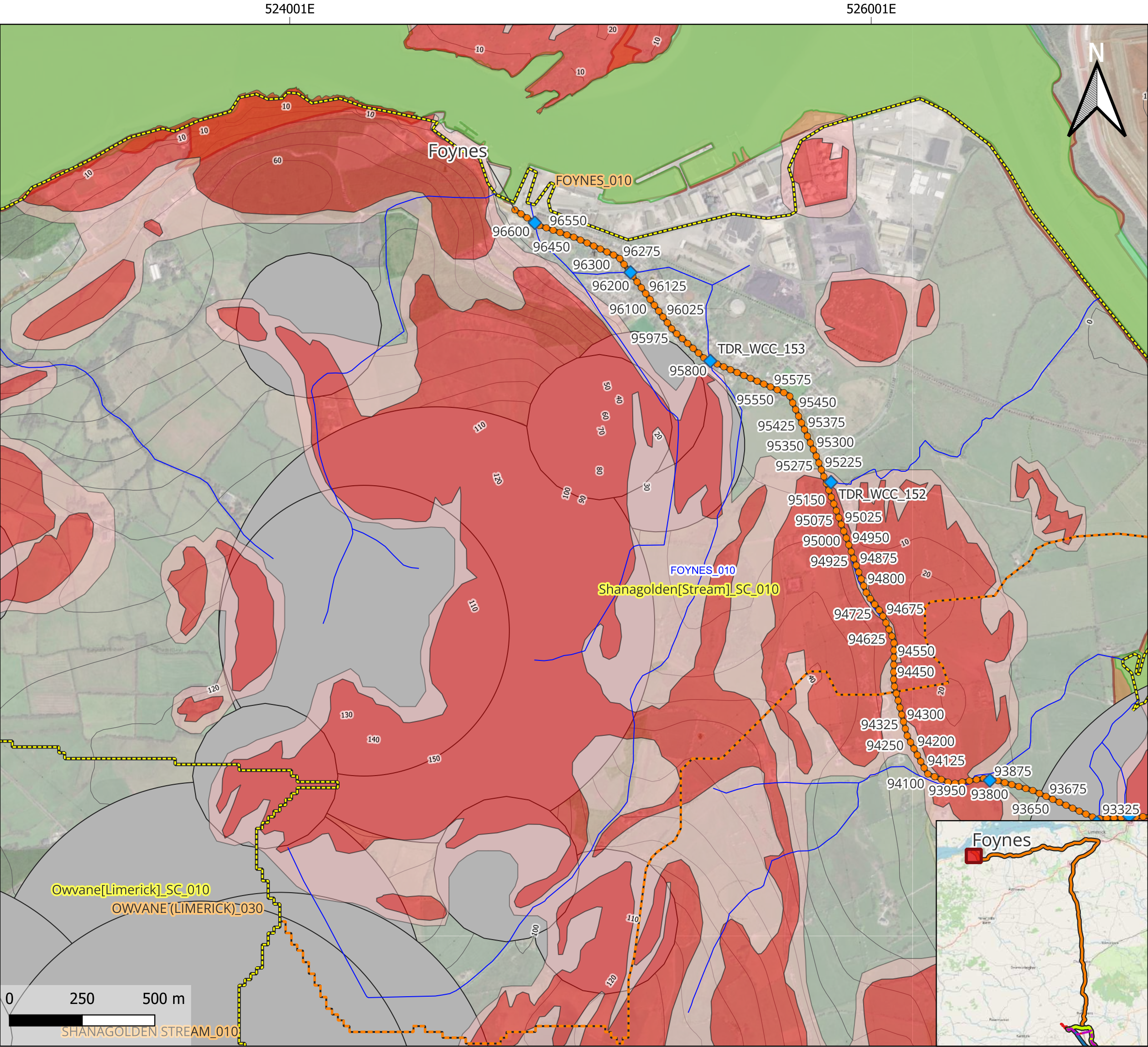
OpenStreetMap

Bing Aerial

Project ID	604162
Project Name	Tullacondra WF, Co. Cork (TWF)
Projection	ITM
Drawn by	CCa
Reviwed by	SK
Version	20/11/2023

References/Sources:
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Bing Aerial / GeoHive / Open Street Map / Google Roads
Global Digital Elevation Model (GDEM)

RSK



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Figure 9.14d - Constraints TDR Option 2
Tile_01

Legend

Tullacondra Wind Farm

Mapped Drainage

Non-Mapped Drainage on Site

Layout Drainage Lines

Turbine Delivery Route (TDR)

Wind Farm Site Layout

Constraints

Hydrology

Hydrogeology

IE_GSI_Karst_Landforms_40K_IE32_ITM

Groundwater

IRL_VULNERABILITY_ITM

Wells

Topography

Base Layers

OpenStreetMap

Bing Aerial

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

Collection Pipelines - Outfall Proposed

Collection Structures - INTER Ditch

Collection Structures - Road Ditch

25m Intervals TDR1

25m Intervals TDR2

TDR Option 1

TDR Option 2

Redline Boundary

604162_WFD_Riverwaterbodies

WFD_Subcatchments

WFD_RiverSubBasins_Cycle3

Enclosed Depression

Spring

Swallow Hole

25m Buffer Karst Features

Source Protection Areas

X

E

Wells 250m Buffer Total

10m Elevation Contours

Project ID	604162
Project Name	Tullacondra WF, Co. Cork (TWF)
Projection	ITM
Drawn by	CCa
Reviwed by	SK
Version	20/11/2023
References/Sources: Environmental Protection Agency (EPA) Geological Services Ireland (GSI) Bing Aerial / GeoHive / Open Street Map / Google Roads Global Digital Elevation Model (GDEM)	
RSK	

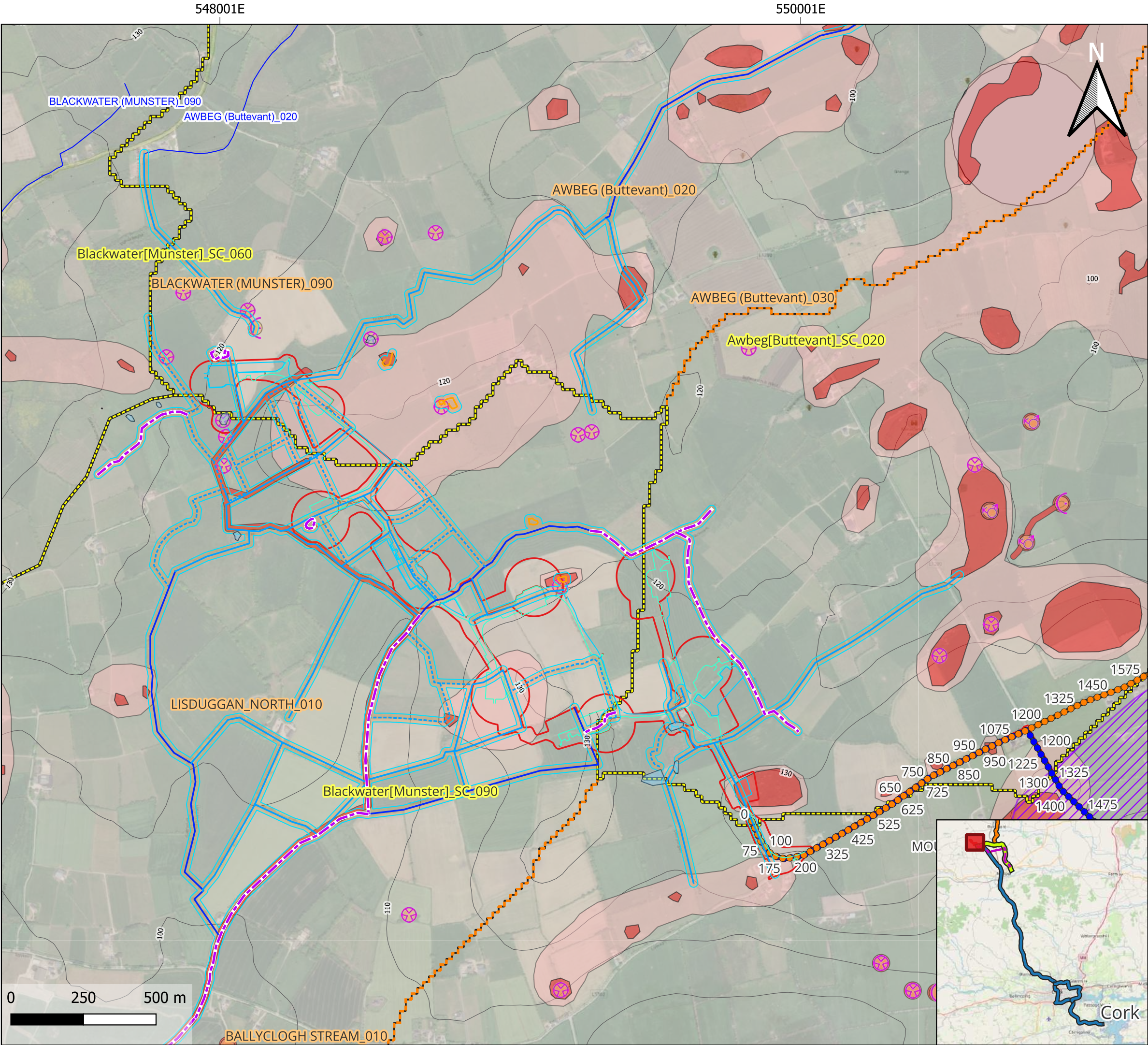


Figure 9.14d - Constraints TDR Option 2
Tile_02

Legend

Tullacondra Wind Farm

Water Course Crossings

TDR2 WCC

Mapped Drainage

Non-Mapped Drainage on Site

Historic Surface Water Feature

Moderate Non-Mapped Drain

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

Wells polygons

Wells1km_500B

Topography

10m Elevation Contours

Base Layers

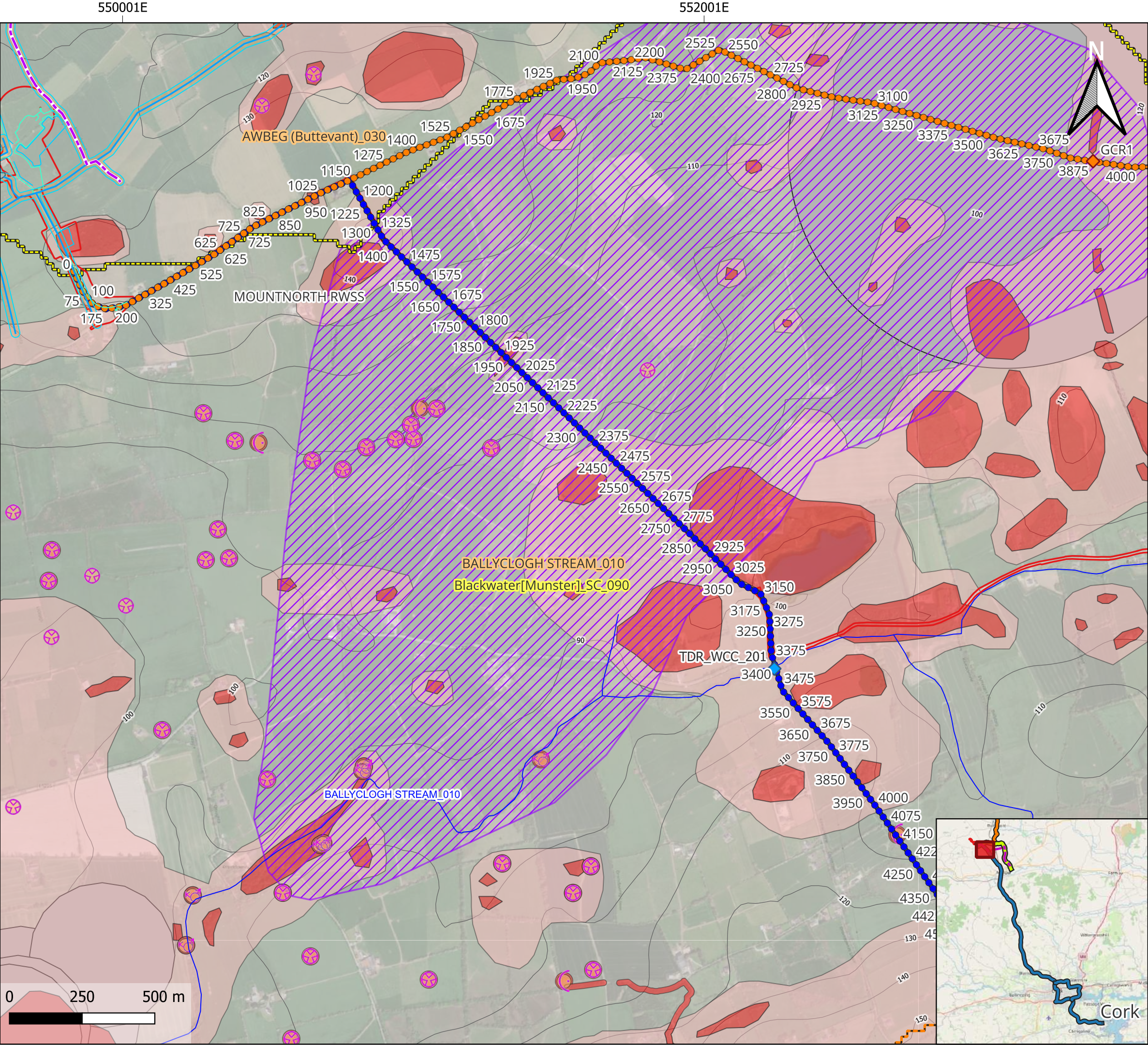
OpenStreetMap

Bing Aerial

Bing Aerial

Project ID	604162
Project Name	Tullacondra WF, Co. Cork (TWF)
Projection	ITM
Drawn by	CCa
Reviwed by	SK
Version	20/11/2023

References/Sources:
Environmental Protection Agency (EPA)
Geological Services Ireland (GSI)
Bing Aerial / GeoHive / Open Street Map / Google Roads
Global Digital Elevation Model (GDEM)



Note: Data points presented are georeferenced using open source data and/or a handheld GPS. This drawing / map is considered a conceptual model with reasonable accuracy for the purposes of environmental assessment. This drawing should not be relied upon for detailed design puporses.

Figure 9.14d - Constraints TDR Option 2
Tile_03

Legend

Tullacondra Wind Farm

Water Course Crossings

TDR2 WCC

Turbine Delivery Route (TDR)

25m Intervals TDR2

TDR Option 2

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

Wells500_250B

Topography

10m Elevation Contours

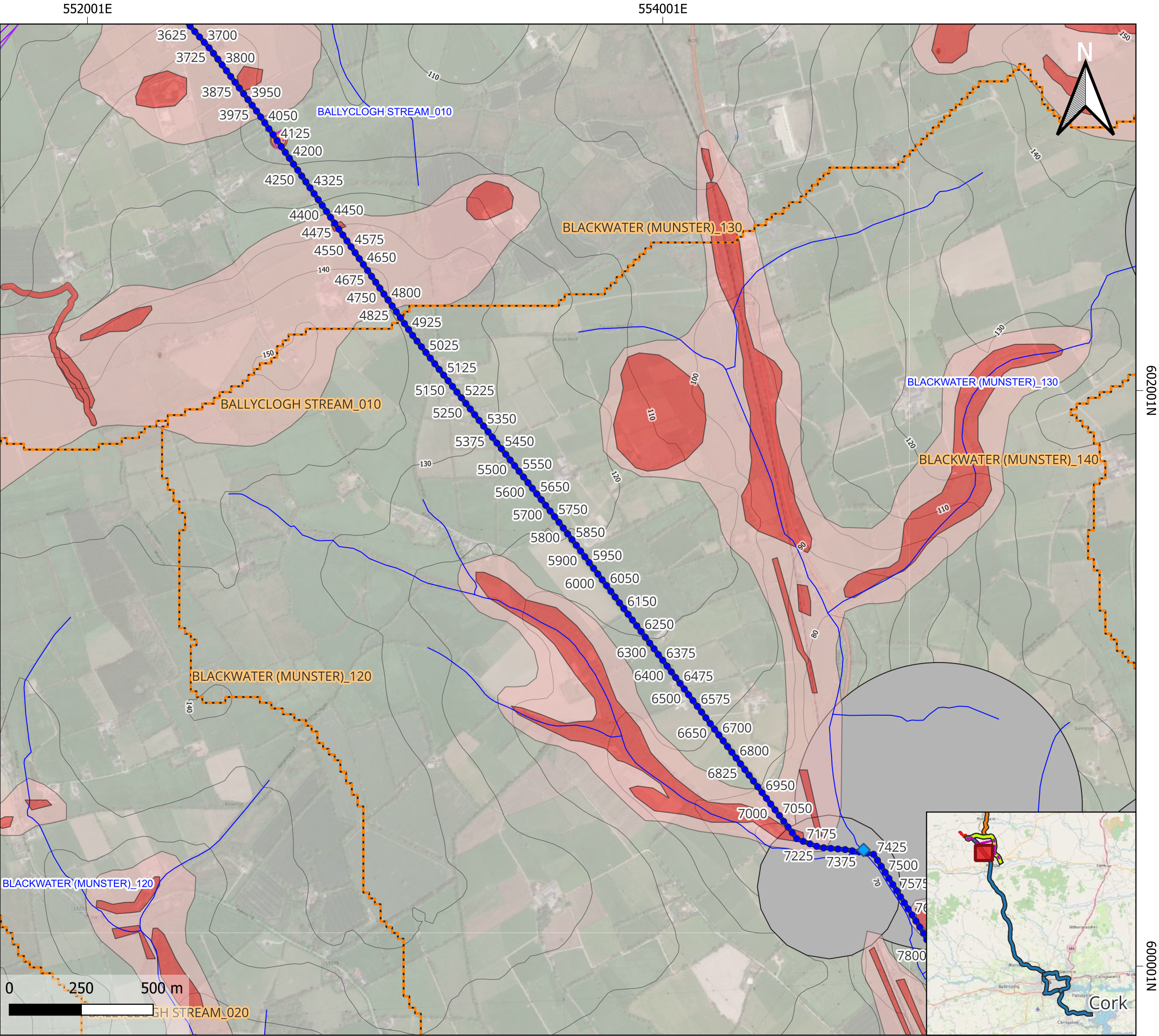
Base Layers

OpenStreetMap

Bing Aerial

Project ID	604162
Project Name	Tullacondra WF, Co. Cork (TWF)
Projection	ITM
Drawn by	CCa
Reviwed by	SK
Version	20/11/2023

References/Sources:
Environmental Protection Agency (EPA)
Geological Services Ireland (GSI)
Bing Aerial / GeoHive / Open Street Map / Google Roads
Global Digital Elevation Model (GDEM)

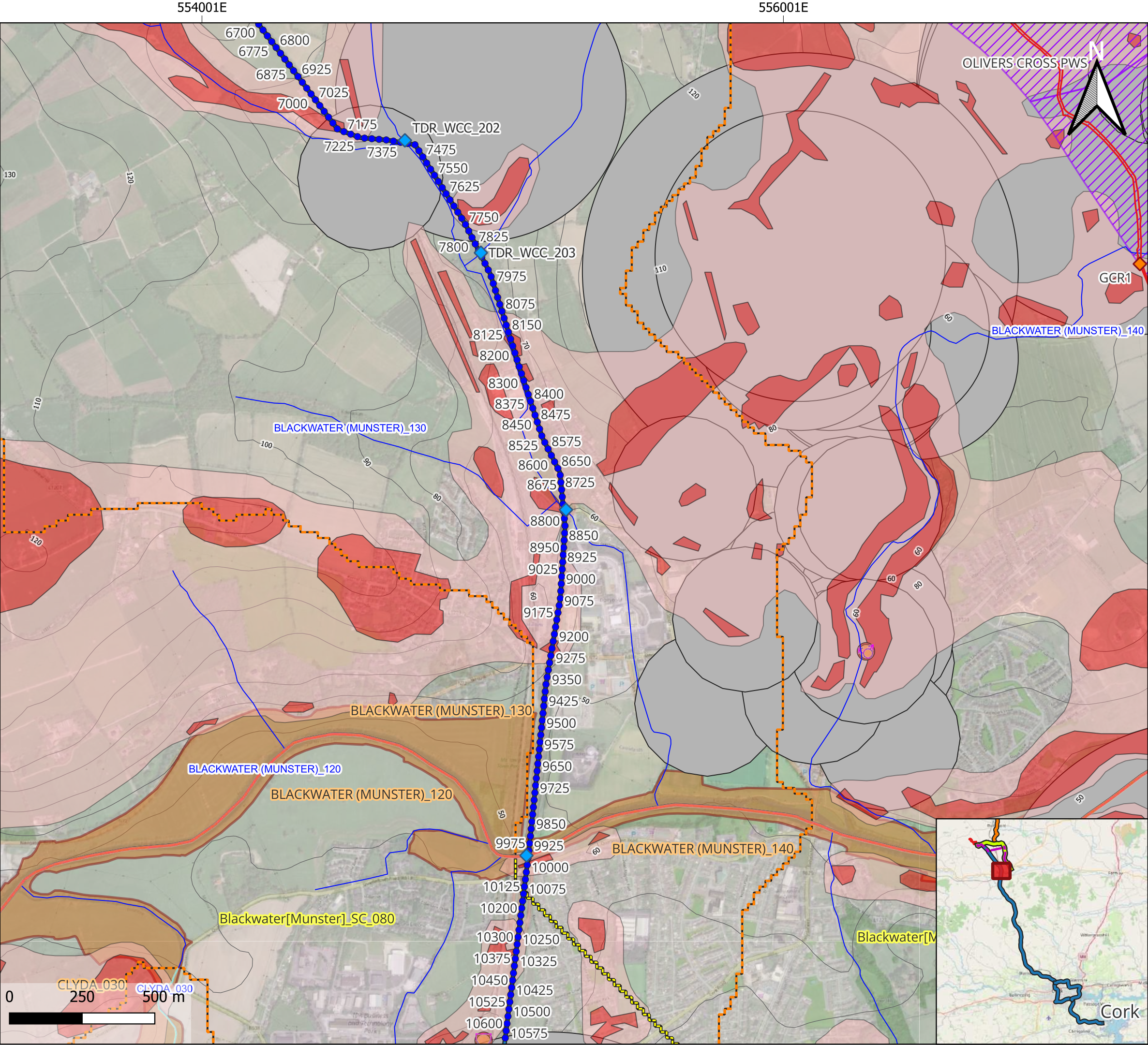


Note: Data points presented are georeferenced using open source data and/or a handheld GPS. This drawing / map is considered a conceptual model with reasonable accuracy for the purposes of environmental assessment. This drawing should not be relied upon for detailed design puporses.

Figure 9.14d - Constraints TDR Option 2
Tile_04

- Legend**
- Tullacondra Wind Farm**
- Water Course Crossings**
- TDR2 WCC
- Turbine Delivery Route (TDR)**
- 25m Intervals TDR2
 - TDR Option 2
- Constraints**
- Hydrology**
- 604162_WFD_Riverwaterbodies
 - WFD_Subcatchments
 - WFD_RiverSubBasins_Cycle3
- Hydrogeology**
- IE_GSI_Karst_Landforms_40K_IE32_ITM**
- Spring
 - 25m Buffer Karst Features
- Groundwater**
- Source Protection Areas
- IRL_VULNERABILITY_ITM**
- X
 - E
- Wells**
- Wells 250m Buffer Total
 - Wells10to50
- Wells polygons**
- Wells1km_500B
 - Wells500_250B
 - Wells200_100B
- Designated Areas**
- SAC_ITM_2023_02
- Topography**
- 10m Elevation Contours
- Base Layers**
- OpenStreetMap**
- Bing Aerial**

Project ID	604162
Project Name	Tullacondra WF, Co. Cork (TWF)
Projection	ITM
Drawn by	CCa
Reviwed by	SK
Version	20/11/2023
References/Sources: Environmental Protection Agency (EPA) Geological Services Ireland (GSI) Bing Aerial / GeoHive / Open Street Map / Google Roads Global Digital Elevation Model (GDEM)	



Note: Data points presented are georeferenced using open source data and/or a handheld GPS. This drawing / map is considered a conceptual model with reasonable accuracy for the purposes of environmental assessment. This drawing should not be relied upon for detailed design puporses.

Figure 9.14d - Constraints TDR Option 2
Tile_05

Legend

Tullacondra Wind Farm

Water Course Crossings

◆ TDR2 WCC

Turbine Delivery Route (TDR)

● 25m Intervals TDR2

— TDR Option 2

Constraints

Hydrology

— 604162_WFD_Riverwaterbodies

▨ WFD_Subcatchments

▨ WFD_RiverSubBasins_Cycle3

Hydrogeology

IE_GSI_Karst_Landforms_40K_IE32_ITM

◡ Cave

■ 25m Buffer Karst Features

Groundwater

IRL_VULNERABILITY_ITM

■ X

■ E

Wells

■ Wells 250m Buffer Total

Wells polygons

■ Wells1km_500B

Designated Areas

■ SAC_ITM_2023_02

Topography

— 10m Elevation Contours

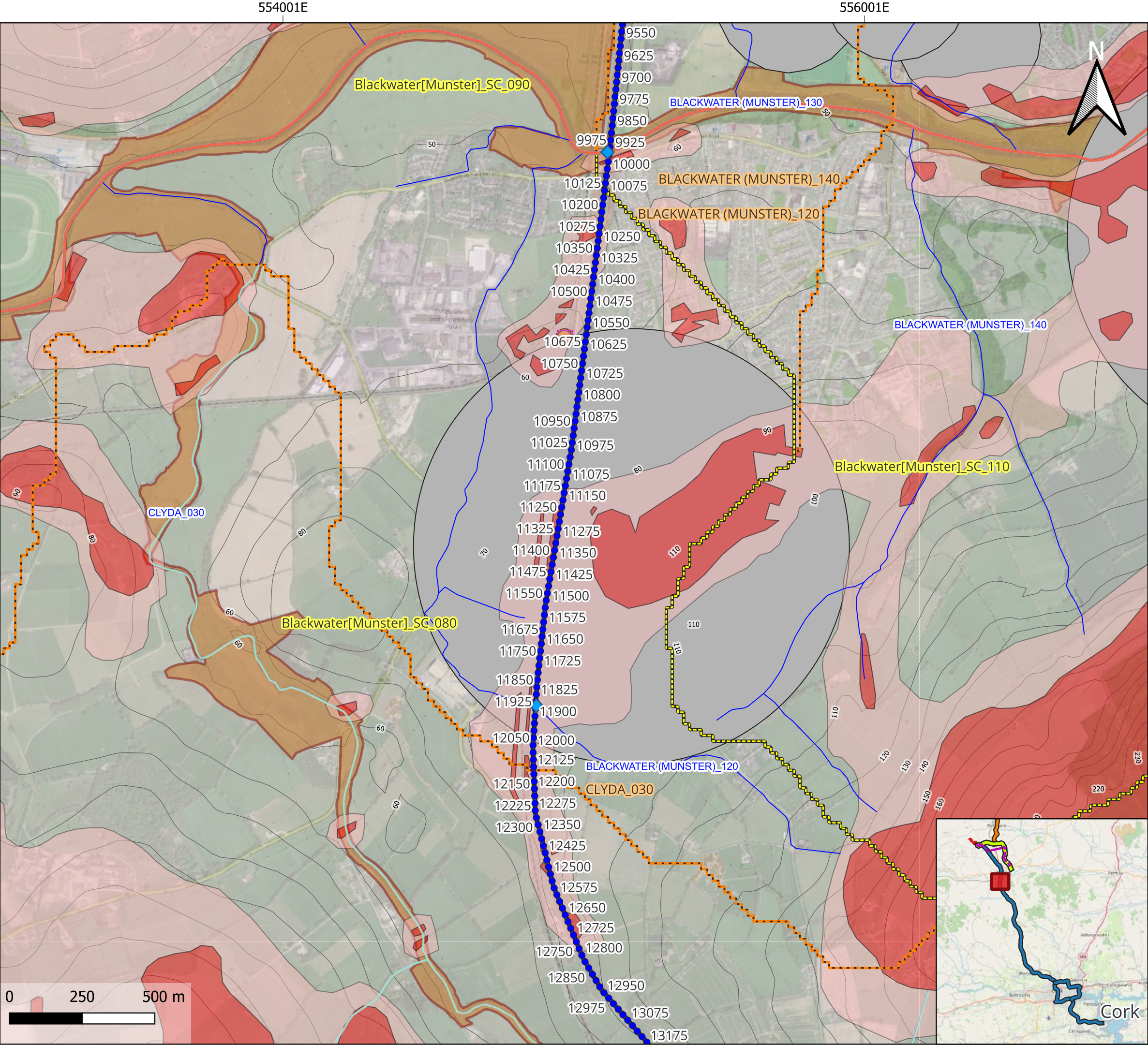
Base Layers

OpenStreetMap

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