

MAGHERAMORE WIND FARM

Environmental Statement



Volume 3 - Figures

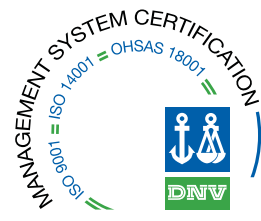
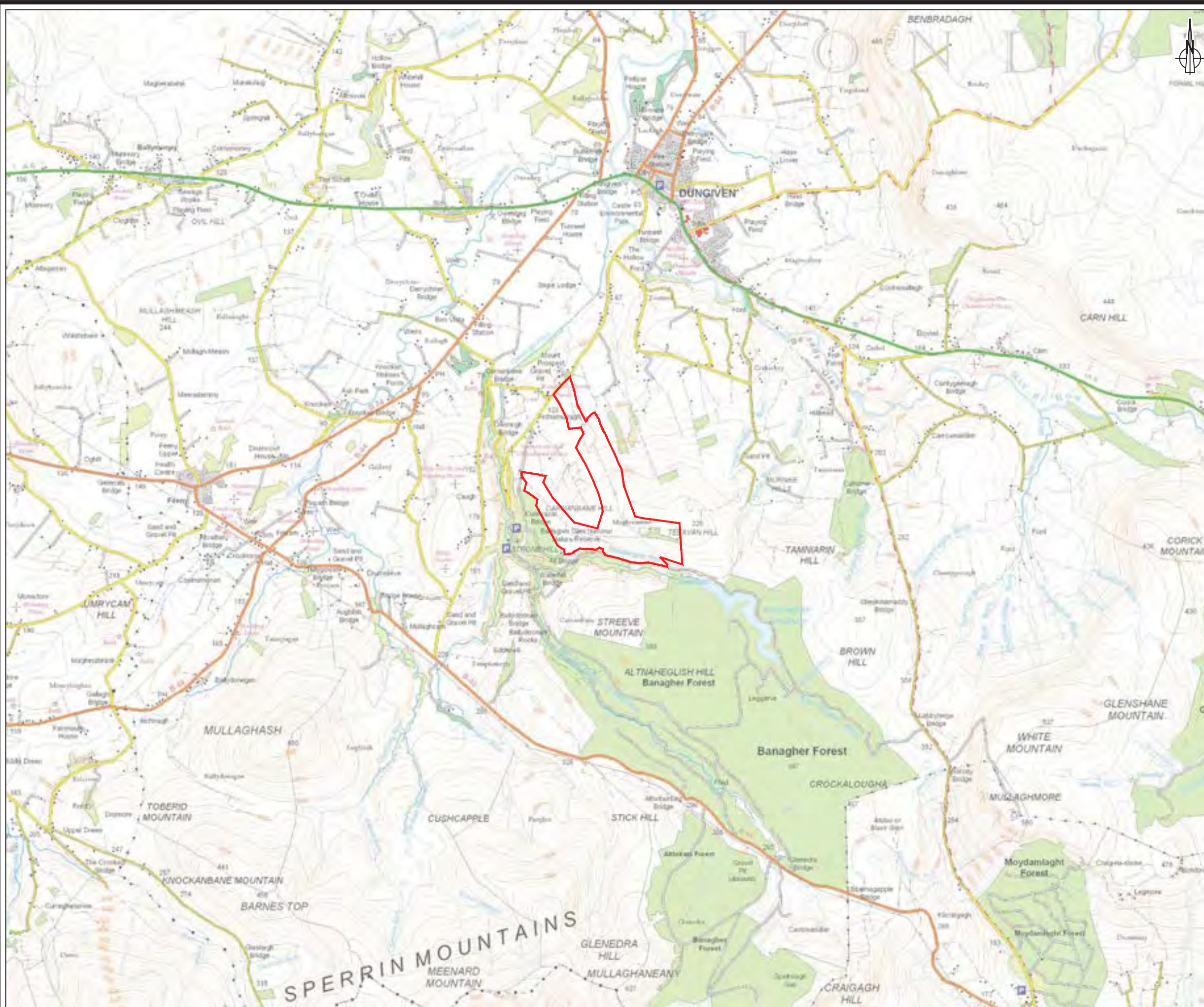


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Introduction & Policy Context



**MAGHERAMORE
WIND FARM**

FIGURE 1.1

SITE LOCATION MAP

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KEY:

— SITE LOCATION

LAYOUT DWG N/A T-LAYOUT NO. N/A

DRAWING NUMBER
03426D2202-01

SCALE - 1:50,000 @ A3

ENVIRONMENTAL STATEMENT

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MAGHERAMORE WIND FARM

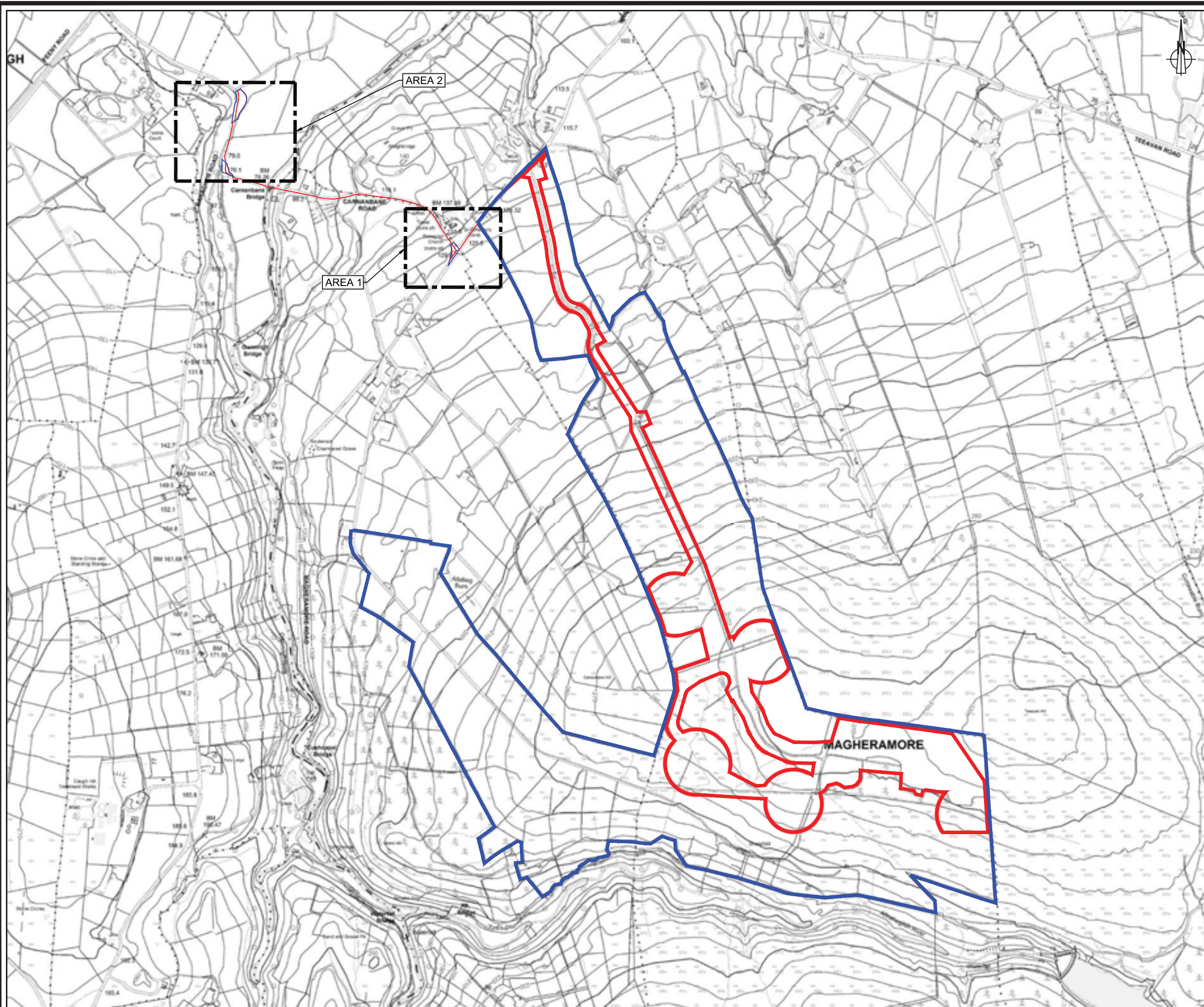
FIGURE 1.2

PLANNING APPLICATION BOUNDARY

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KEY

-  PLANNING APPLICATION BOUNDARY (OUTSIDE OF LINE DENOTES BOUNDARY)
-  LAND UNDER APPLICANT CONTROL (INSIDE OF LINE DENOTES BOUNDARY)



OVERVIEW SHEET 1 OF 4

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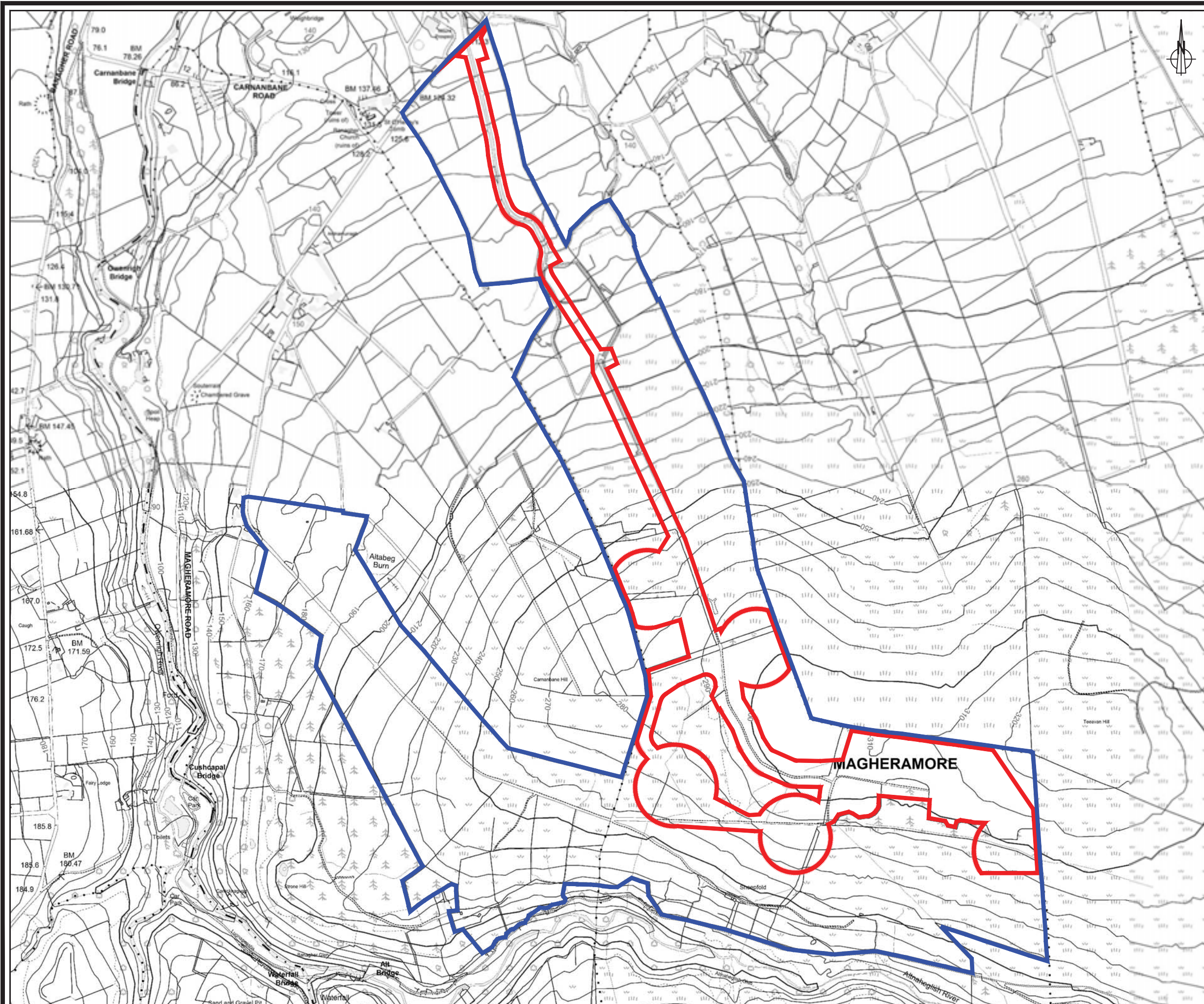
FIGURE 1.2

PLANNING APPLICATION BOUNDARY

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KEY

- PLANNING APPLICATION BOUNDARY (OUTSIDE OF LINE DENOTES BOUNDARY)
- LAND UNDER APPLICANT CONTROL (INSIDE OF LINE DENOTES BOUNDARY)



MAIN SITE SHEET 2 OF 4

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FIGURE 1.2

PLANNING APPLICATION BOUNDARY

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KEY

-  PLANNING APPLICATION BOUNDARY (OUTSIDE OF LINE DENOTES BOUNDARY)
-  LAND UNDER APPLICANT CONTROL (INSIDE OF LINE DENOTES BOUNDARY)

AREA 1
SHEET 3 OF 4

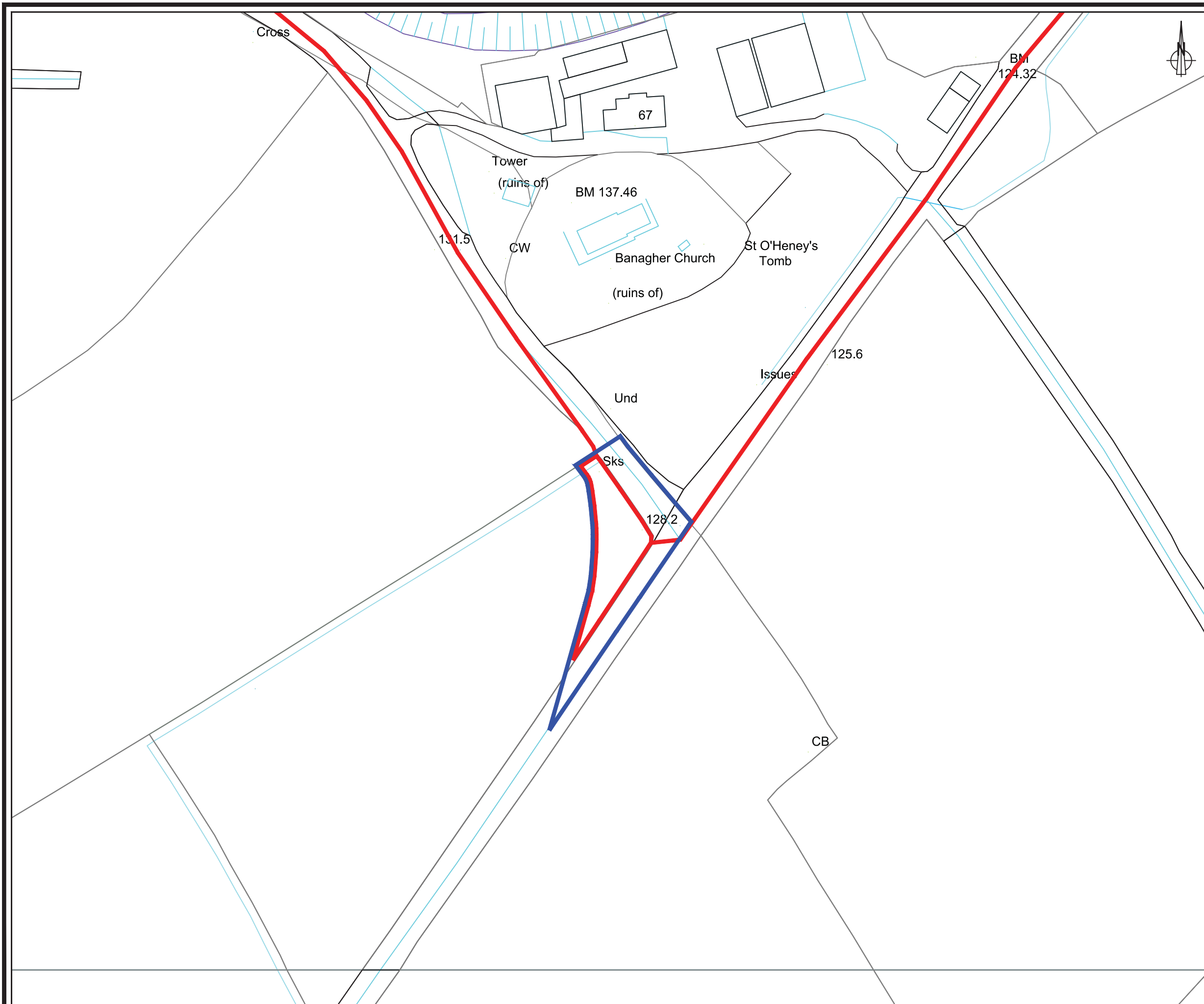
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FIGURE 1.2

PLANNING APPLICATION BOUNDARY

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KEY

- PLANNING APPLICATION BOUNDARY (OUTSIDE OF LINE DENOTES BOUNDARY)
- LAND UNDER APPLICANT CONTROL (INSIDE OF LINE DENOTES BOUNDARY)

AREA 2
SHEET 4 OF 4

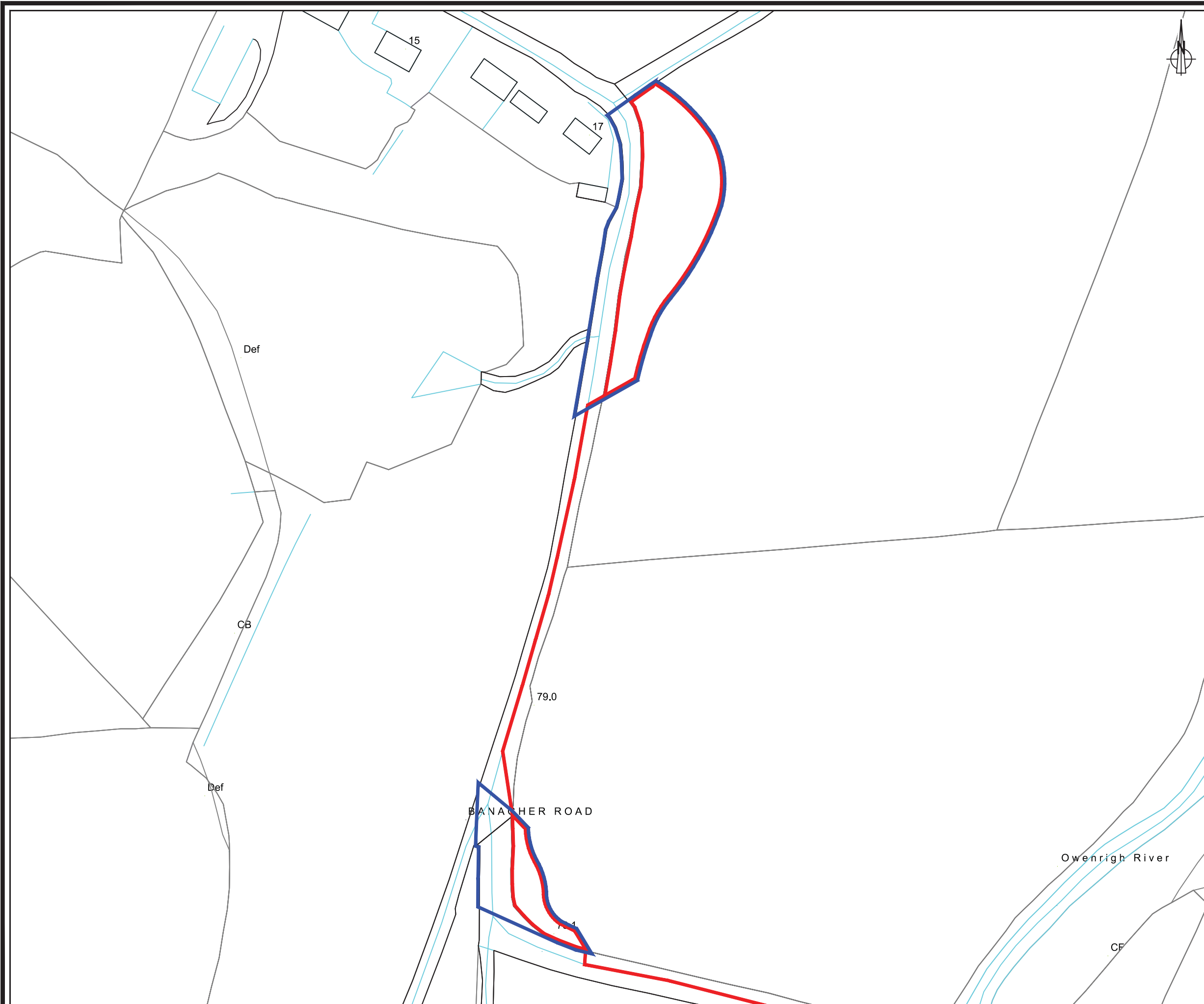
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2

Proposed Development



MAGHERAMORE WIND FARM

FIGURE 2.1

INFRASTRUCTURE LAYOUT

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- KEY**
- PLANNING APPLICATION BOUNDARY
 - WIND TURBINE LOCATION
 - TURBINE MICROSITING
 - NEW SITE TRACKS
 - UPGRADED SITE TRACKS
 - EXISTING TRACKS
 - WATERCOURSE CROSSING
 - CRANE HARDSTANDING AREA
 - PERMANENT
 - TEMPORARY
 - TEMPORARY ENABLING CONSTRUCTION COMPOUND
 - TEMPORARY CONSTRUCTION COMPOUND/ ENERGY STORAGE AREA.
 - CONTROL BUILDING & SUBSTATION COMPOUND WITH PERMANENT HARDSTANDING AREA
 - FORESTRY TO BE RETAINED
 - FORESTRY TO BE REMOVED
 - SITE ENTRANCE LOCATION



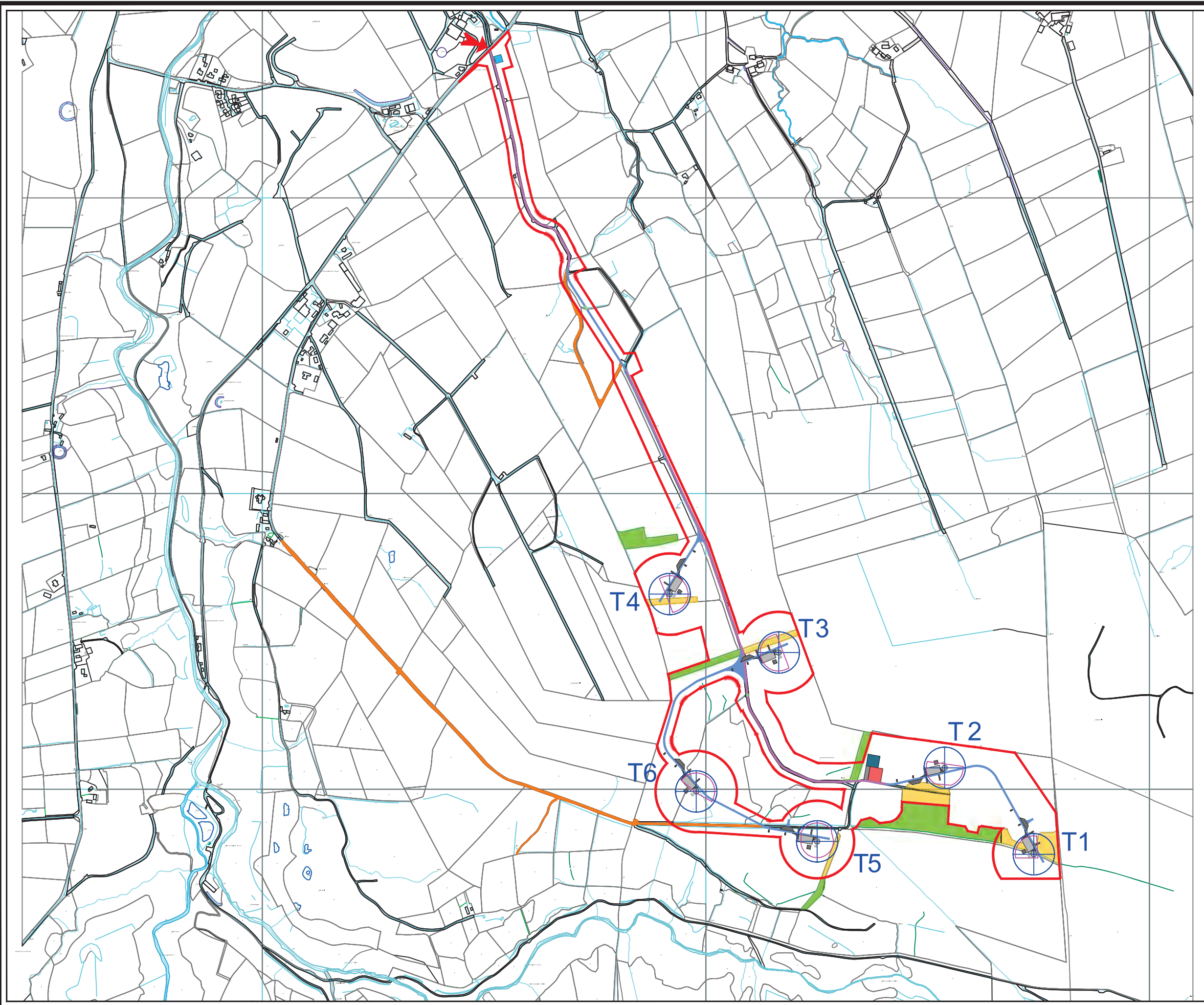
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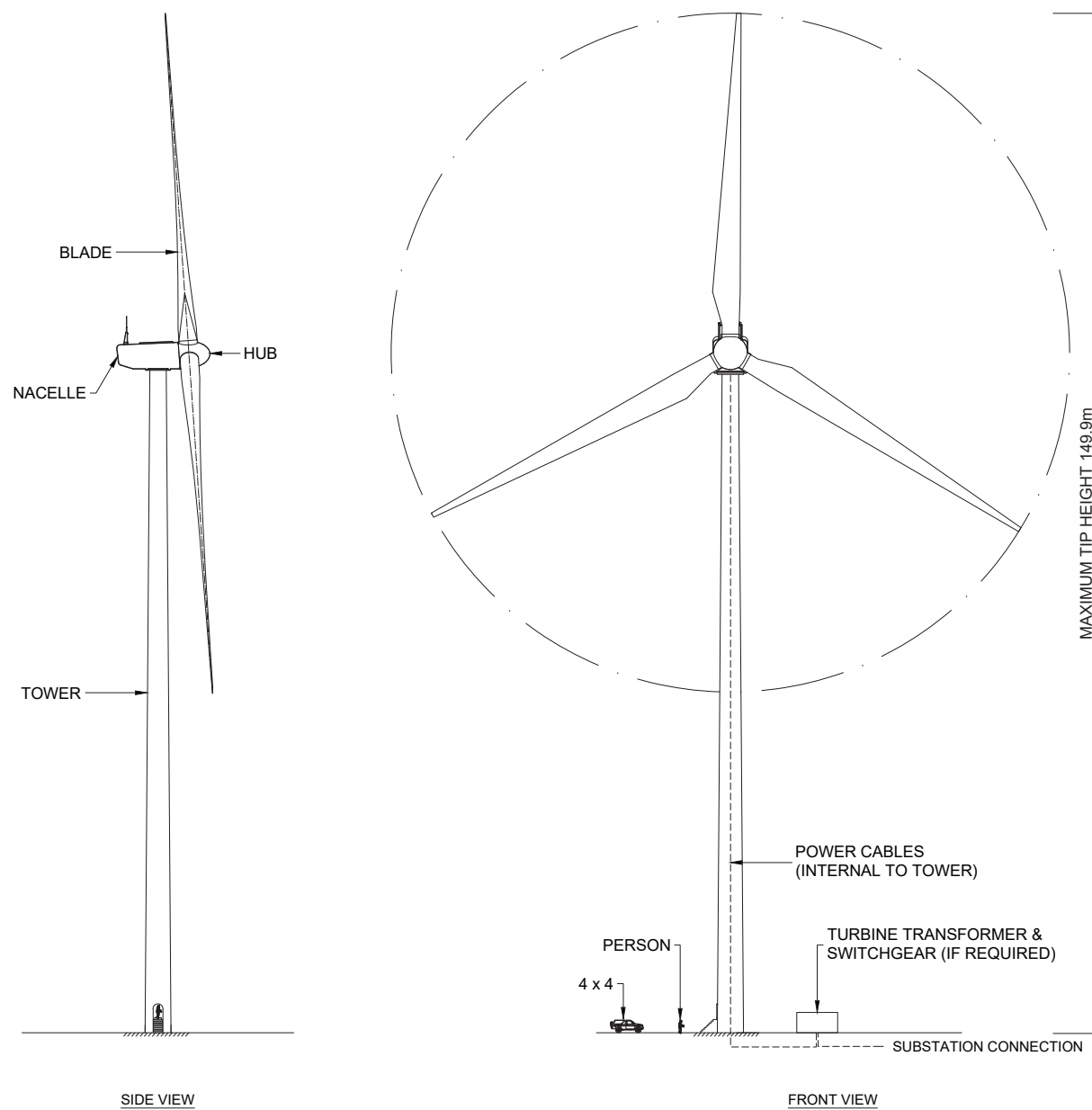
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**MAGHERAMORE
WIND FARM**

**FIGURE 2.2
TURBINE ELEVATION**



PHOTOGRAPH OF TYPICAL TURBINE

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DRAWING NUMBER
03426D2902-01

SCALE - 1:1000 @ A3

ENVIRONMENTAL STATEMENT

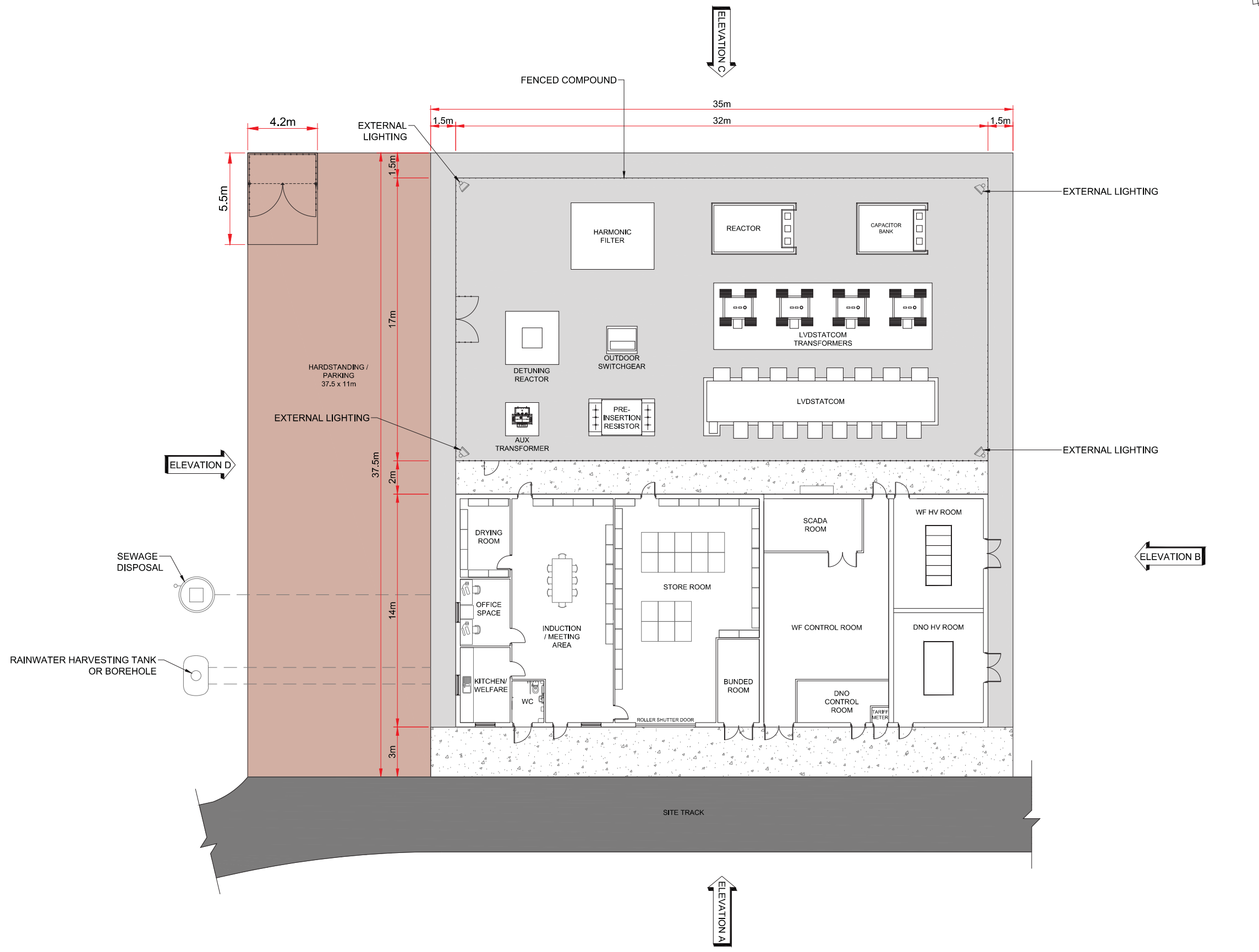
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MAGHERAMORE WIND FARM

FIGURE 2.3

CONTROL BUILDING & SUBSTATION COMPOUND LAYOUT PLAN



KEY:

- INDICATIVE MV CABLE DUCTING LAYOUT
- ☀ EXTERNAL LIGHTING
- ▭ 1m WIDE GRAVEL PATH
- ▨ CONCRETE APRON
- ↔ ELEVATION MARKER

NOTES:

1. FULL CONVERTOR SOLUTIONS ARE NOW REQUIRED FOR GRID CODE COMPLIANCE.
2. REACTORS ARE INCLUDED FOR BALANCING CABLE CAPACITIVE EXPORT
3. CONTROL BUILDING ROOM LAYOUT & COMPOUND LAYOUT IS INDICATIVE ONLY AND MAY CHANGE.
4. STONED HARDSTAND AREA FOR CRANE DURING INSTALLATION PHASE AND PARKING DURING OPERATIONAL PHASE
5. ALL ELECTRICAL EQUIPMENT TO HAVE A MINIMUM SEPARATION OF 1m.

LAYOUT DWG N/A T-LAYOUT NO. N/A

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SCALE - 1:250 @ A3

ENVIRONMENTAL STATEMENT

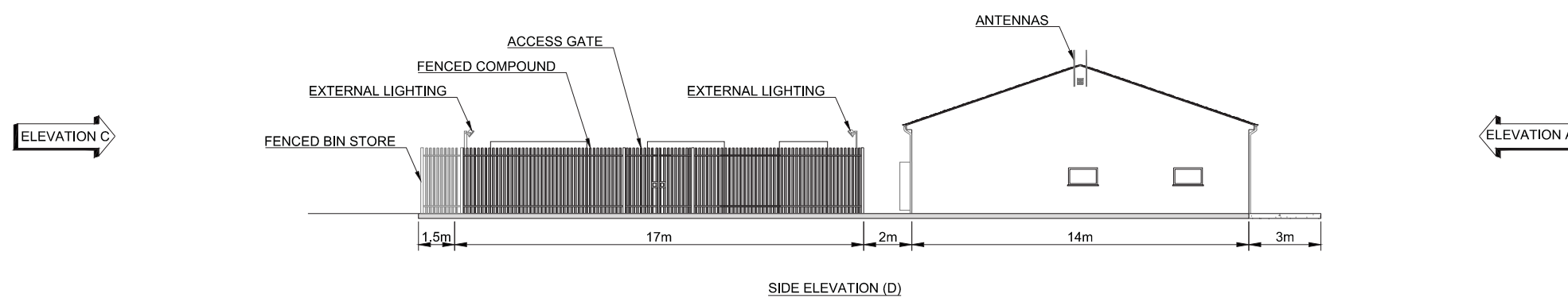
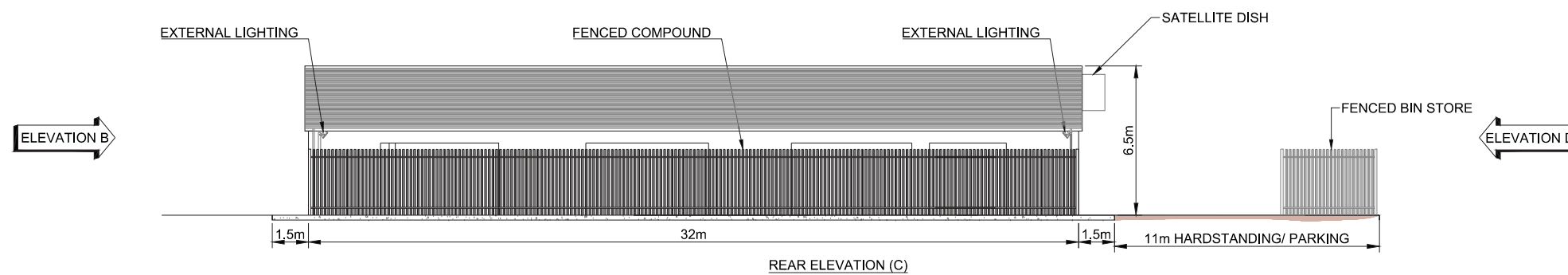
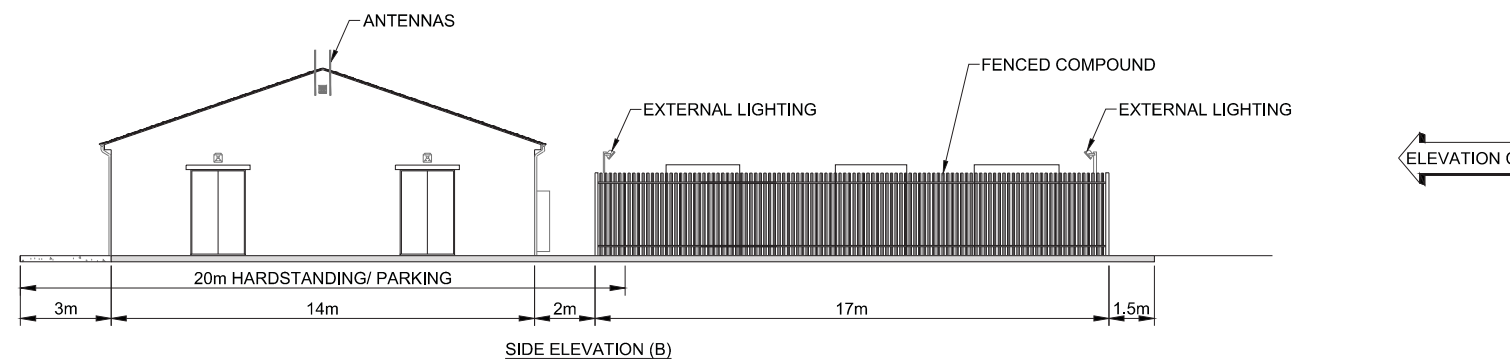
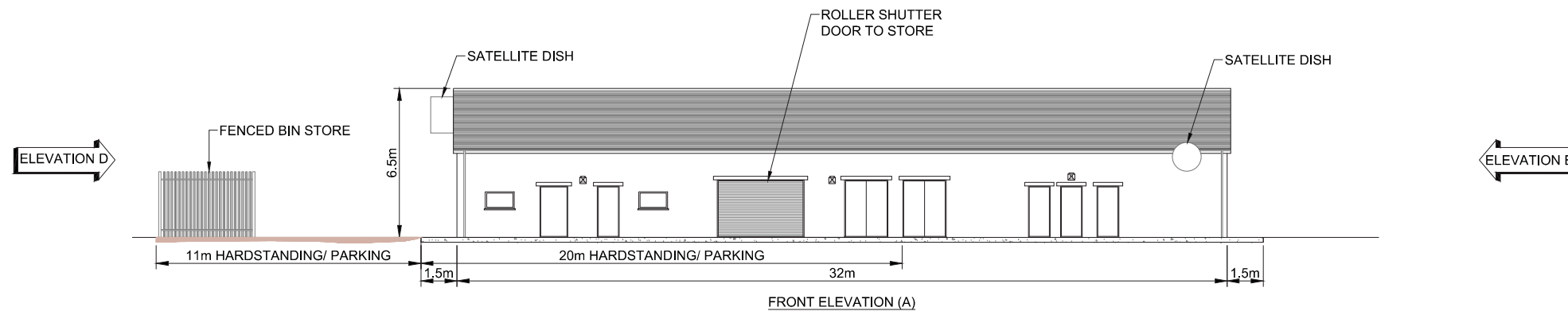
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**MAGHERAMORE
WIND FARM**

FIGURE 2.4

**CONTROL BUILDING
ELEVATIONS**



LAYOUT DWG N/A T-LAYOUT NO. N/A

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SCALE - 1:250 @ A3

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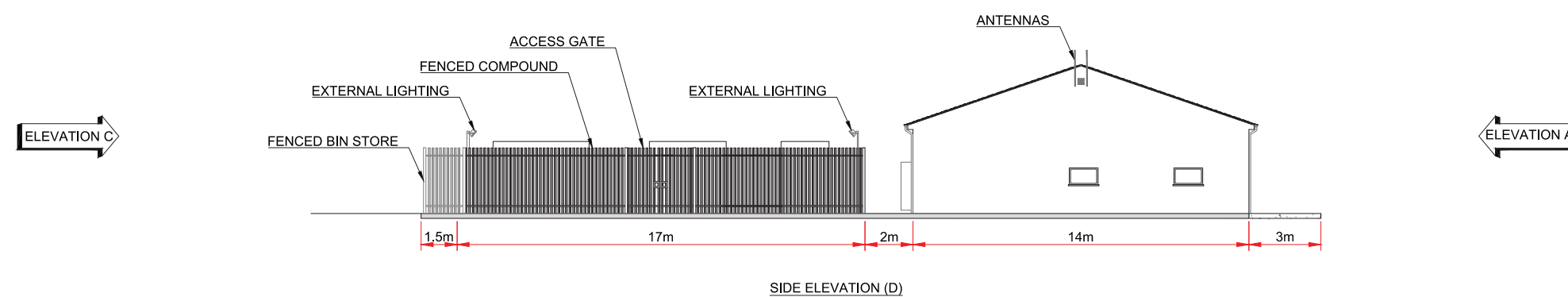
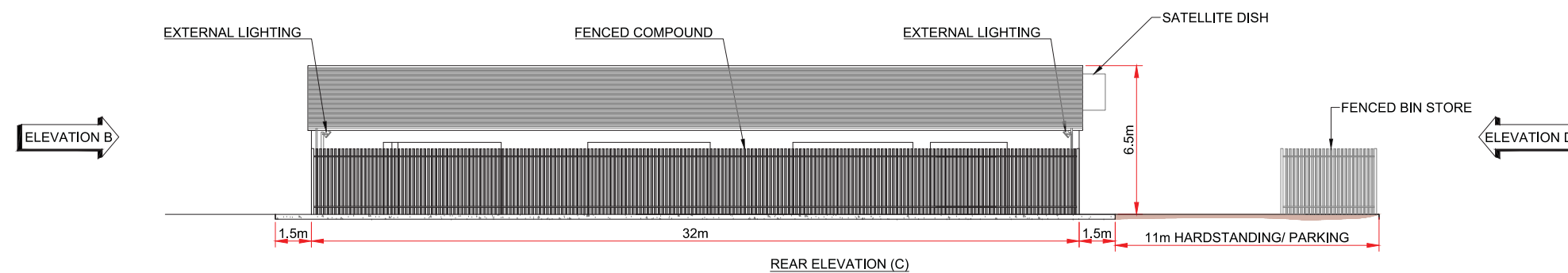
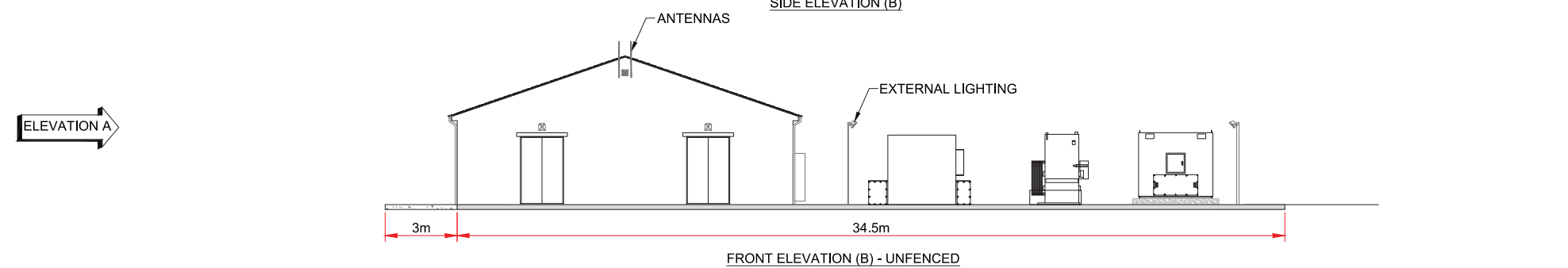
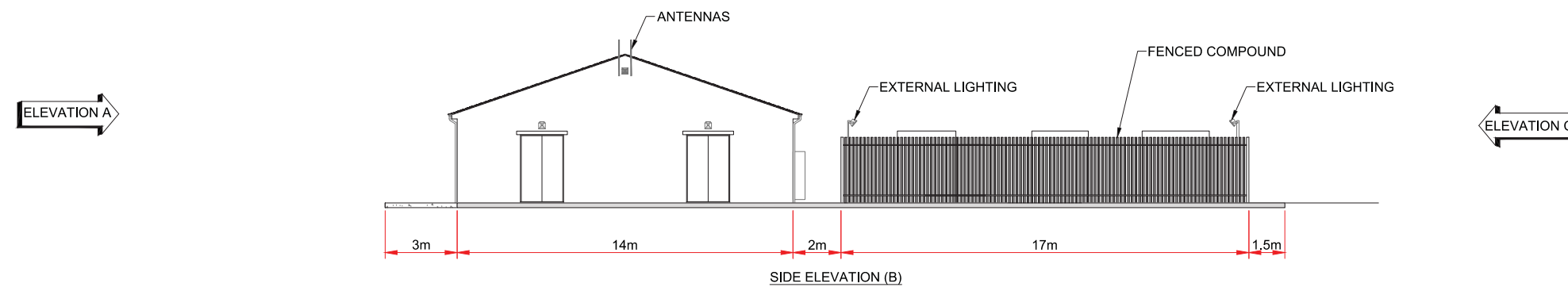
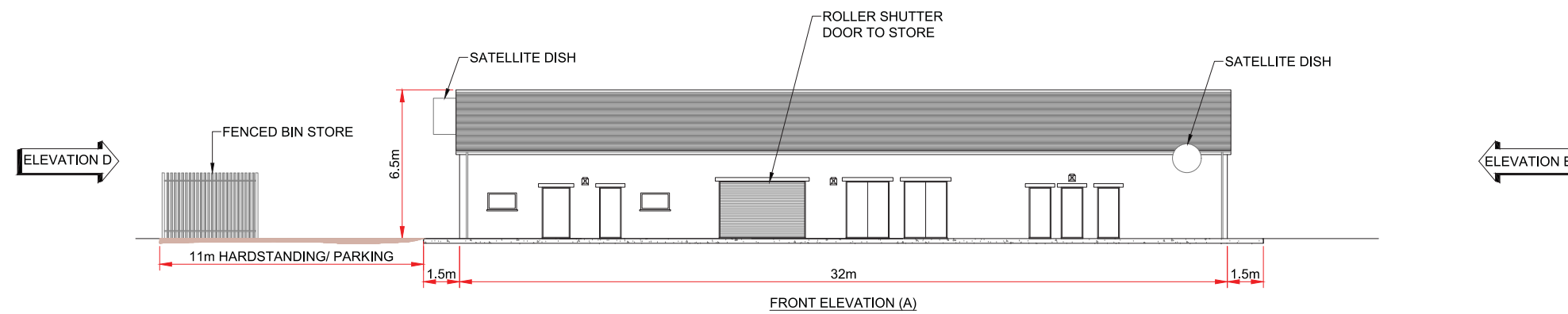
**MAGHERAMORE
WIND FARM**

FIGURE 2.5

**CONTROL BUILDING &
SUBSTATION COMPOUND
ELEVATIONS**

NOTES:

1. REFER TO SHEETS 3 - 12 FOR INFORMATION ON INDICATIVE COMPOUND COMPONENTS.



COMPOUND ELEVATIONS
SHEET 1 OF 12

LAYOUT DWG N/A T-LAYOUT NO. N/A

DRAWING NUMBER
03426D2205-01

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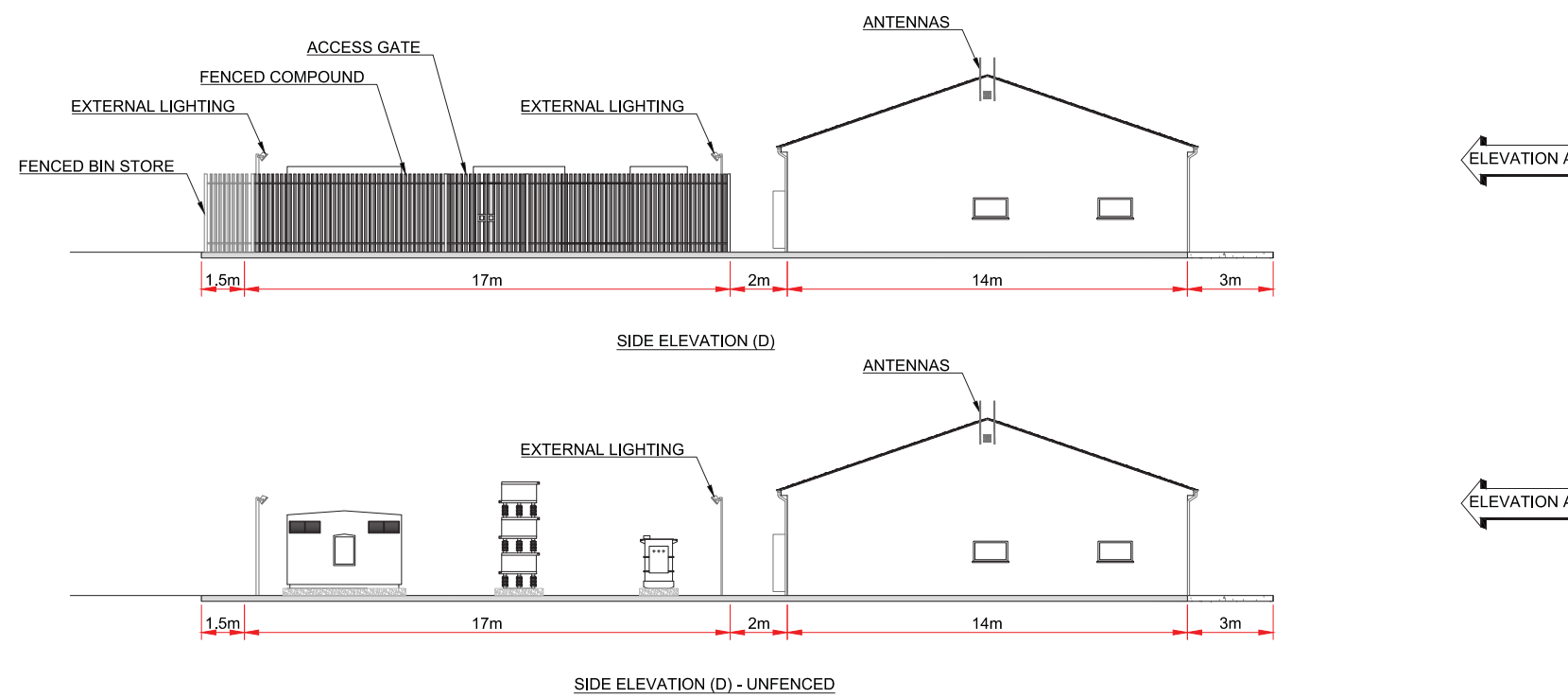
MAGHERAMORE WIND FARM

FIGURE 2.5

CONTROL BUILDING & SUBSTATION COMPOUND ELEVATIONS

NOTES:

- 1. REFER TO SHEETS 3 - 12 FOR INFORMATION ON INDICATIVE COMPOUND COMPONENTS.
- 2. WARNING SIGNAGE TO COMPLY WITH RELEVANT H&S LEGISLATION; TO BE DISPLAYED ON FENCE ENTRANCE.



COMPOUND ELEVATIONS
SHEET 2 OF 12

LAYOUT DWG N/A T-LAYOUT NO. N/A

DRAWING NUMBER
03426D2205-01

SCALE - 1:250 @ A3

ENVIRONMENTAL STATEMENT

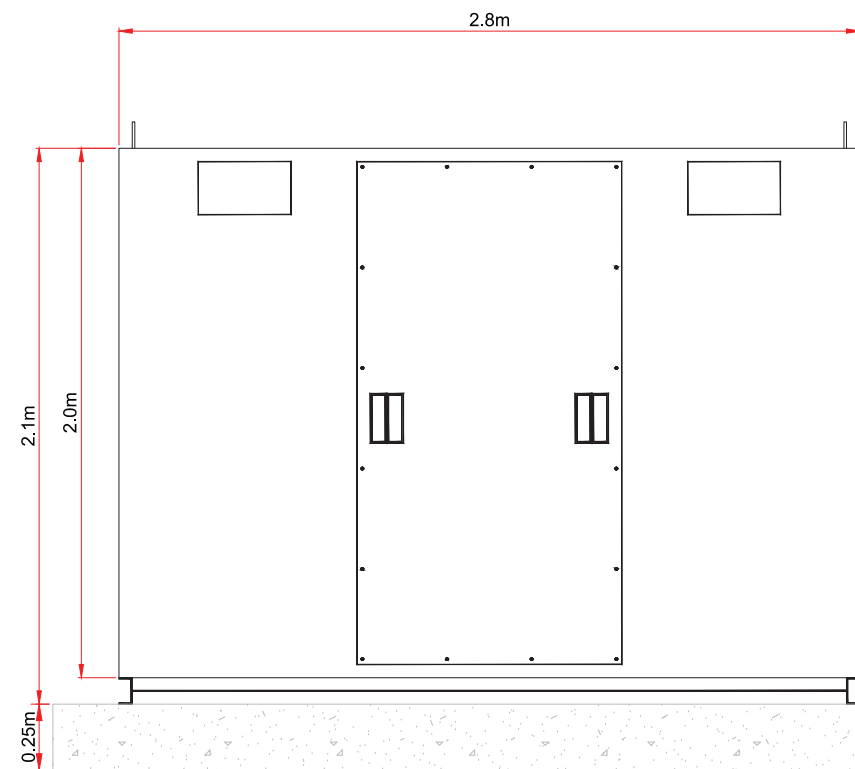
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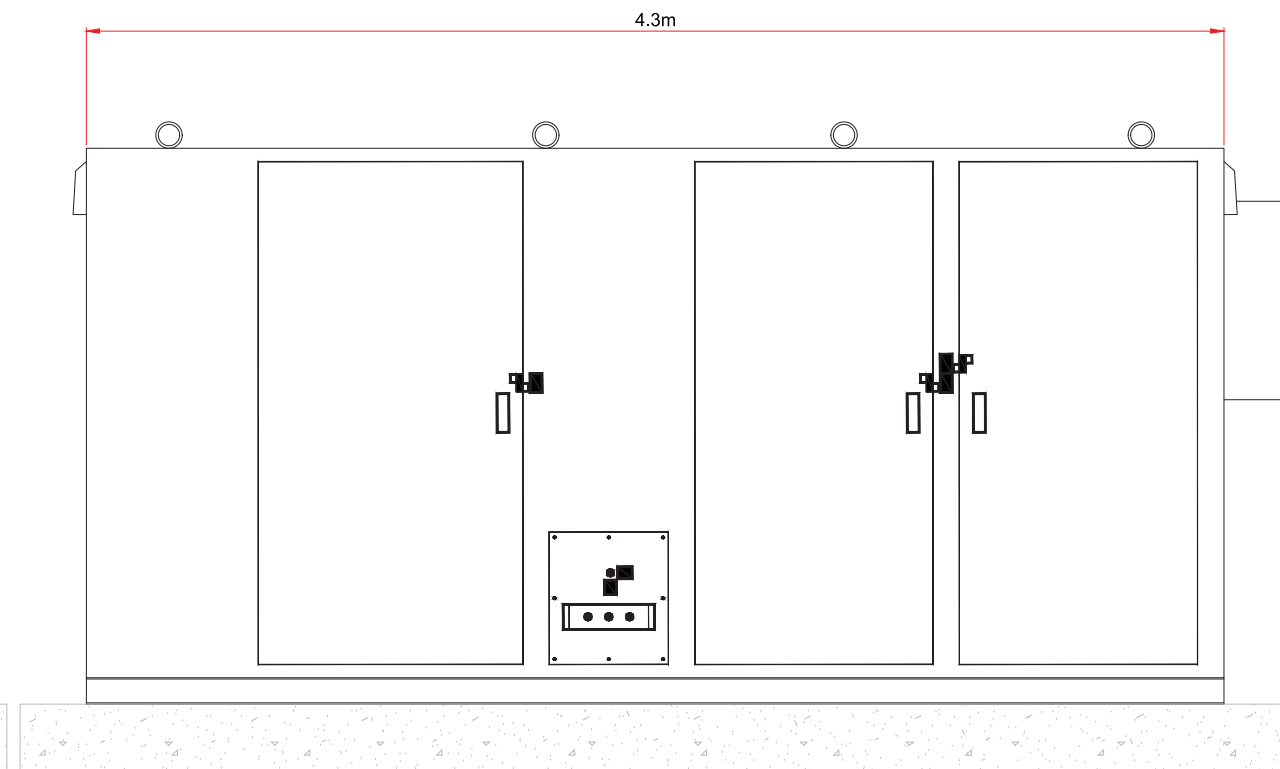
**MAGHERAMORE
WIND FARM**

FIGURE 2.5

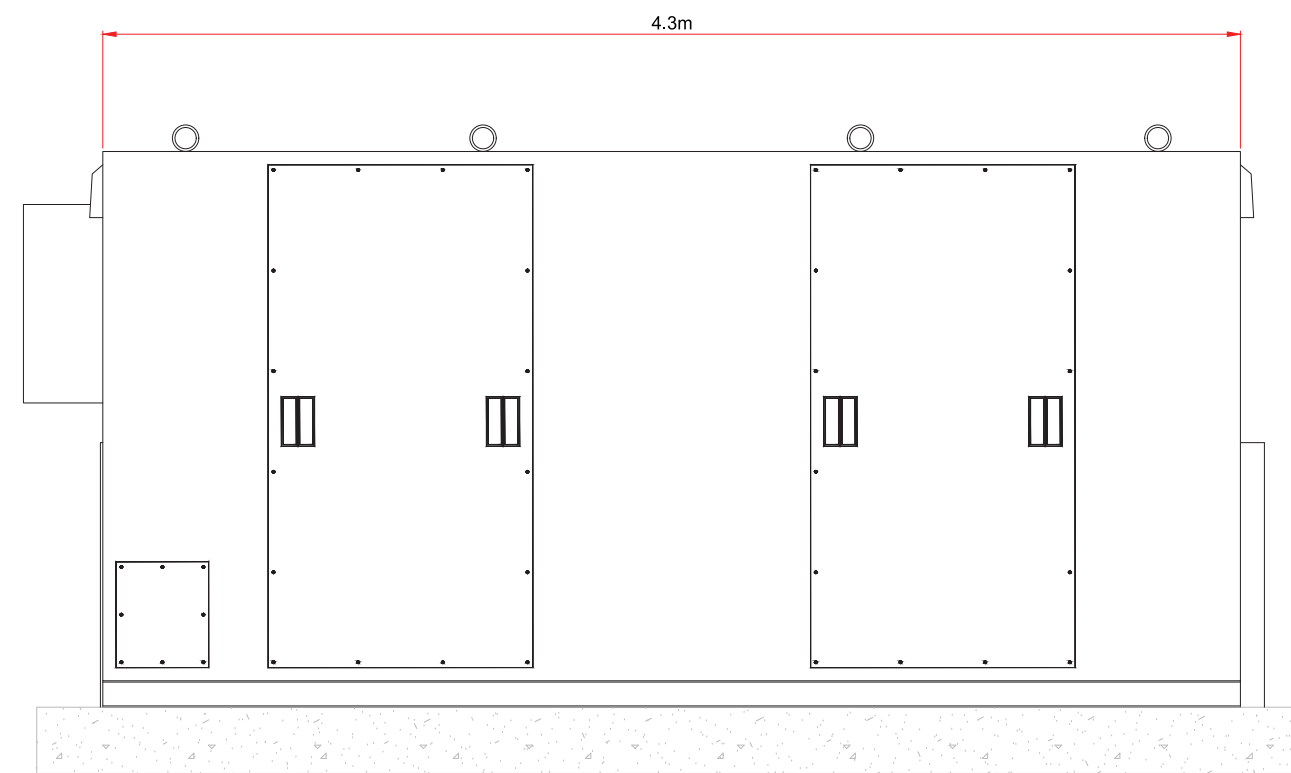
**CONTROL BUILDING &
SUBSTATION COMPOUND
ELEVATIONS**



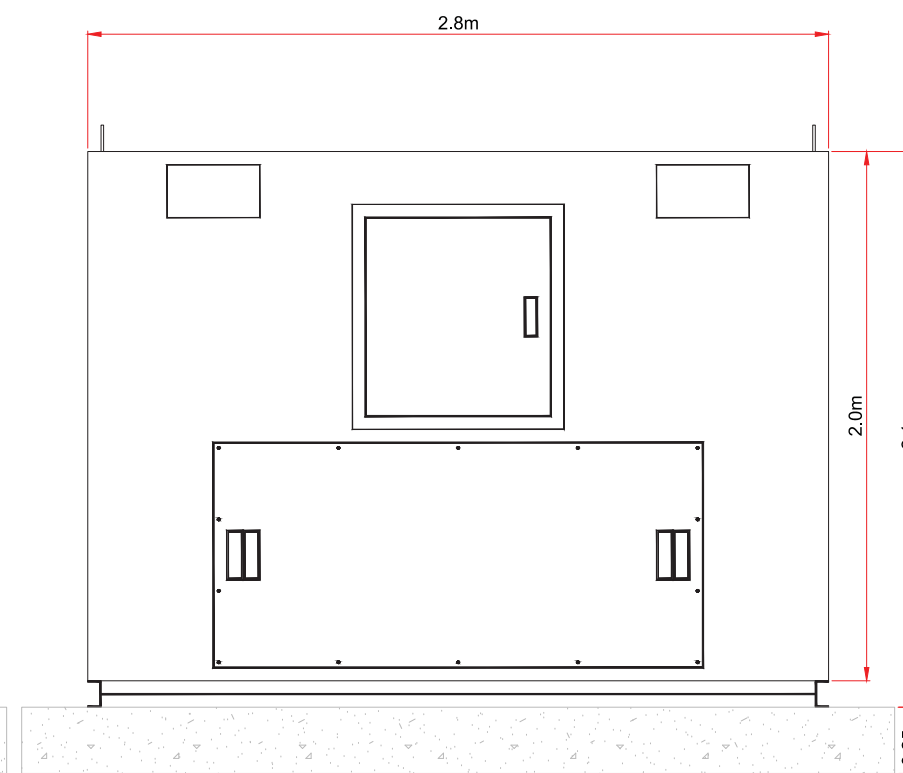
INDICATIVE CAPACITOR BANK - EXTERNAL LHS
SCALE - NTS



INDICATIVE CAPACITOR BANK - EXTERNAL FRONT
SCALE - NTS



INDICATIVE CAPACITOR BANK - EXTERNAL REAR
SCALE - NTS



INDICATIVE CAPACITOR BANK - EXTERNAL RHS
SCALE - NTS

COMPOUND ELEVATIONS
SHEET 3 OF 12

LAYOUT DWG N/A T-LAYOUT NO. N/A

DRAWING NUMBER
03426D2205-01

SCALE - NTS @ A3

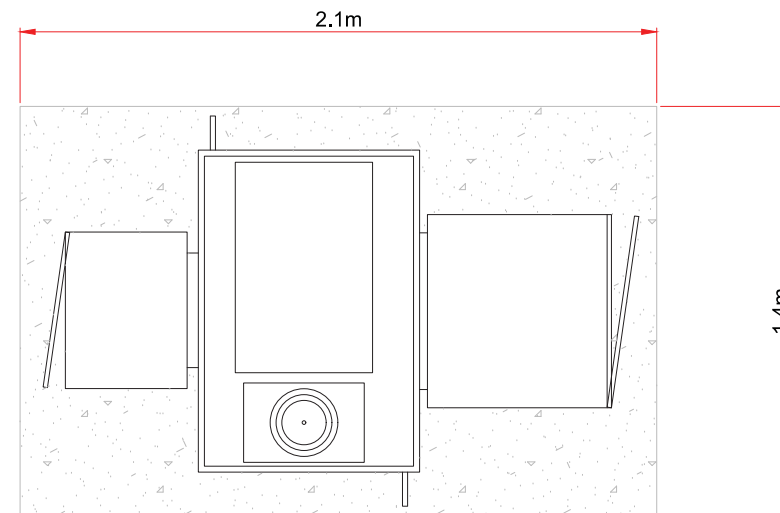
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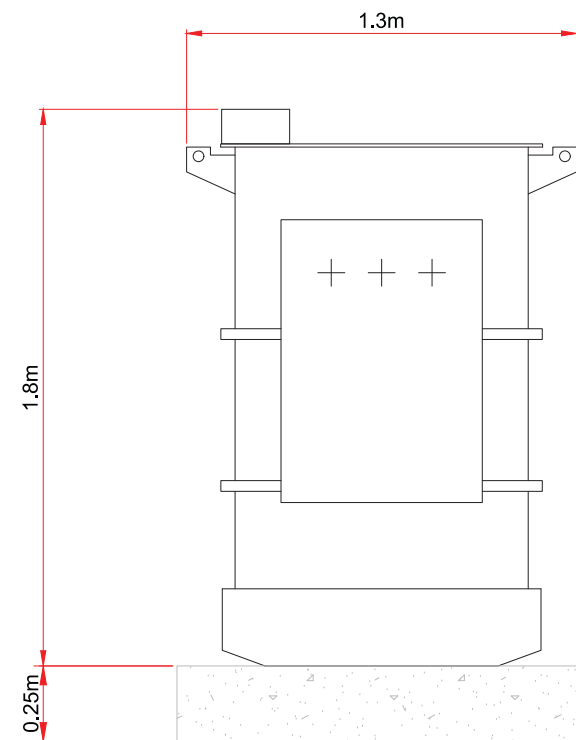
**MAGHERAMORE
WIND FARM**

FIGURE 2.5

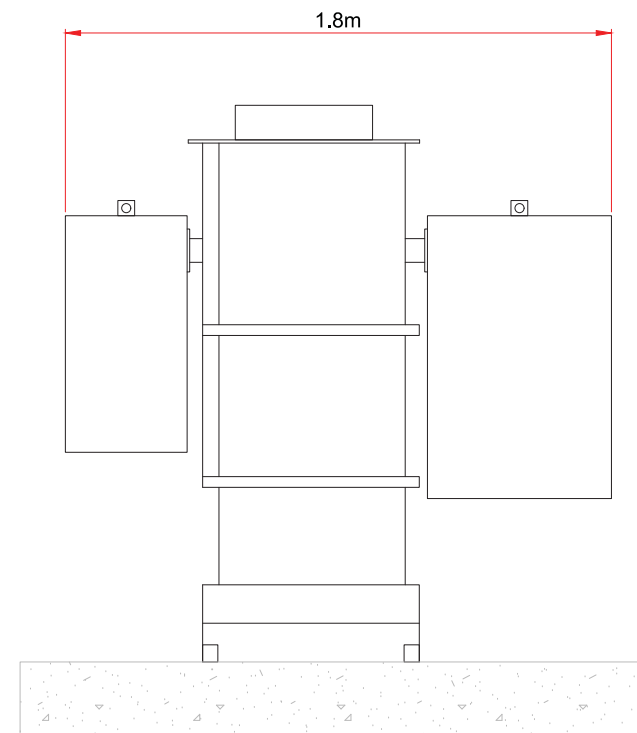
**CONTROL BUILDING &
SUBSTATION COMPOUND
ELEVATIONS**



**INDICATIVE AUXILIARY TRANSFORMER -
PLAN VIEW**
SCALE - 1:25



**INDICATIVE AUXILIARY TRANSFORMER -
SIDE ELEVATION**
SCALE - 1:25



**INDICATIVE AUXILIARY TRANSFORMER -
FRONT ELEVATION**
SCALE - 1:25

COMPOUND ELEVATIONS
SHEET 4 OF 12

LAYOUT DWG N/A T-LAYOUT NO. N/A

DRAWING NUMBER
03426D2205-01

SCALE - 1:25 @ A3

ENVIRONMENTAL STATEMENT

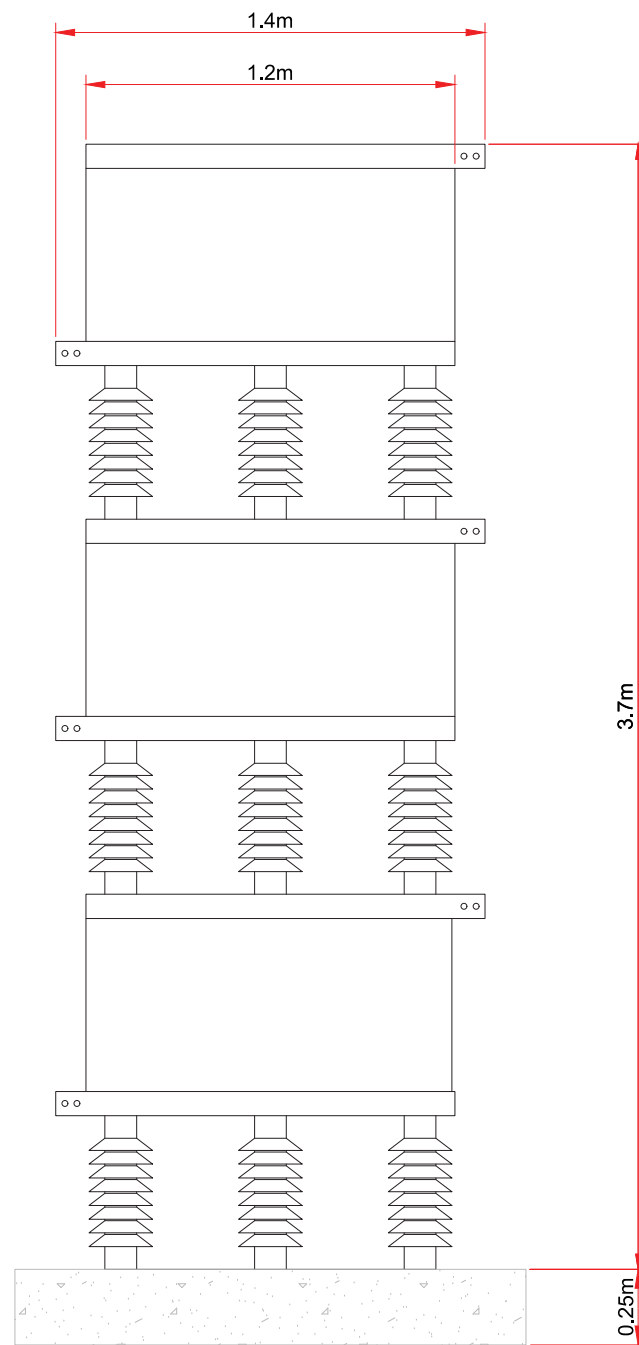
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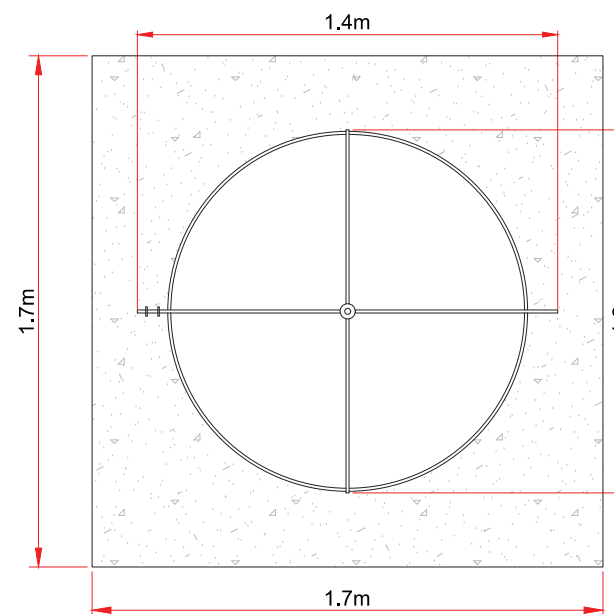
**MAGHERAMORE
WIND FARM**

FIGURE 2.5

**CONTROL BUILDING &
SUBSTATION COMPOUND
ELEVATIONS**



**INDICATIVE DETUNING REACTOR -
SIDE ELEVATION**
SCALE - 1:25



**INDICATIVE DETUNING REACTOR -
SIDE ELEVATION**
SCALE - 1:25

COMPOUND ELEVATIONS
SHEET 5 OF 12

LAYOUT DWG N/A T-LAYOUT NO. N/A

DRAWING NUMBER
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SCALE - 1:25 @ A3

ENVIRONMENTAL STATEMENT

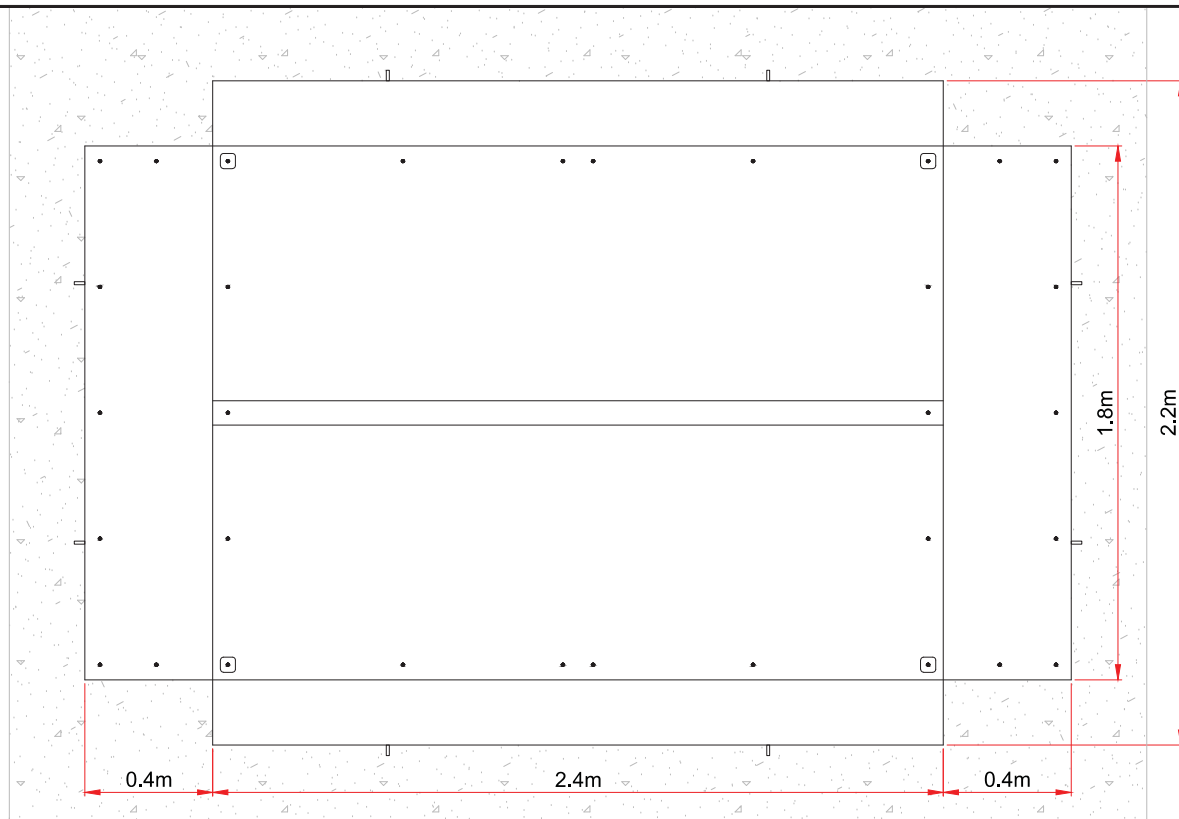
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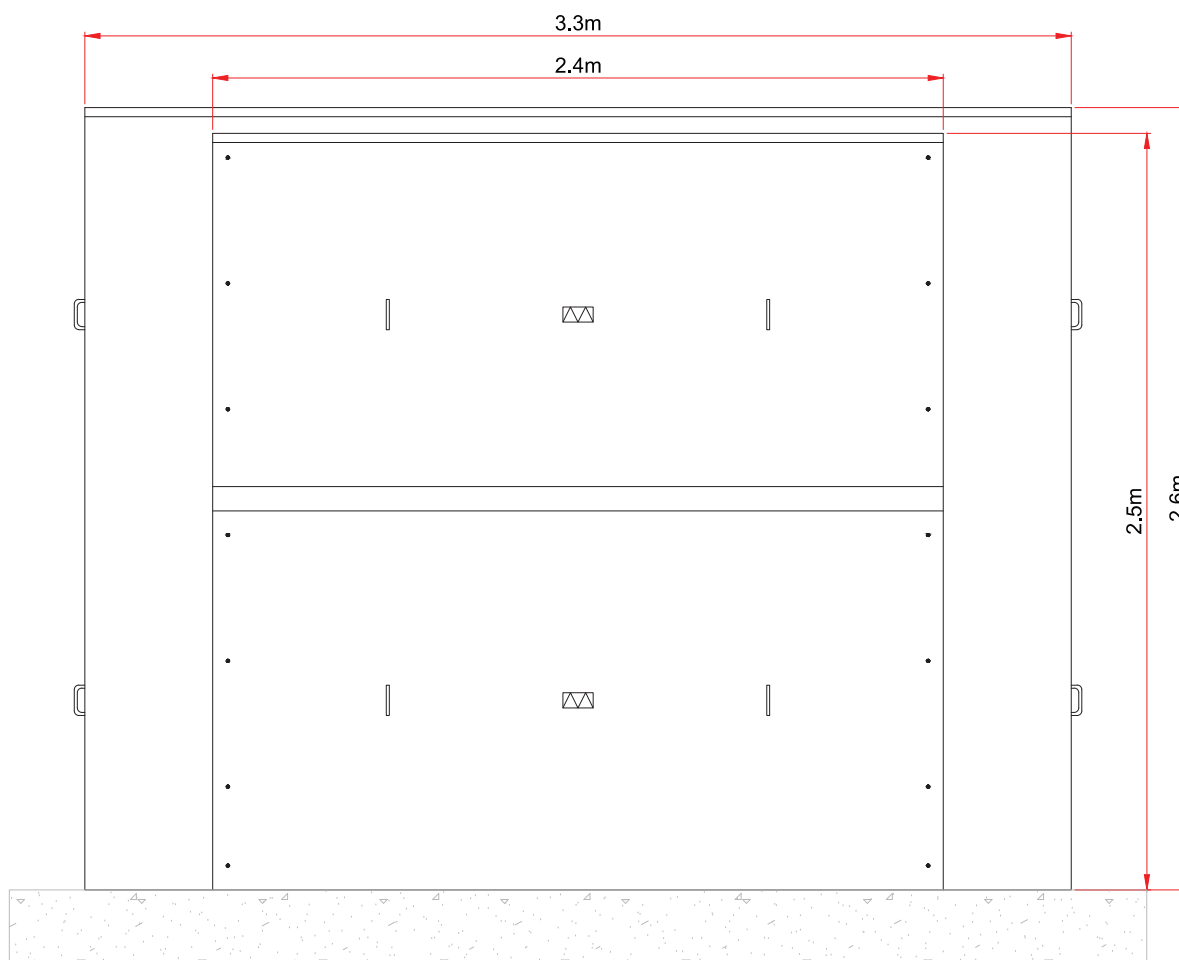
**MAGHERAMORE
WIND FARM**

FIGURE 2.5

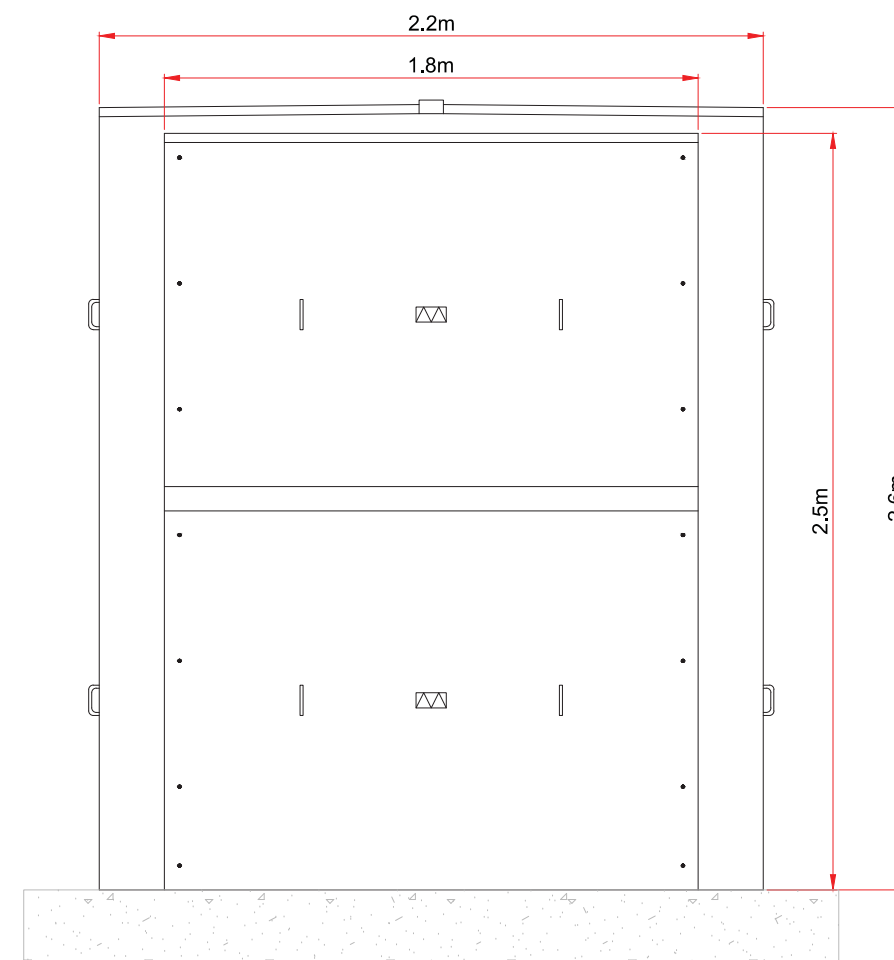
**CONTROL BUILDING &
SUBSTATION COMPOUND
ELEVATIONS**



**INDICATIVE PRE-INSERTION RESISTOR -
PLAN VIEW**
SCALE - 1:25



**INDICATIVE PRE-INSERTION RESISTOR -
FRONT ELEVATION**
SCALE - 1:25



**INDICATIVE PRE-INSERTION RESISTOR -
SIDE ELEVATION**
SCALE - 1:25

COMPOUND ELEVATIONS
SHEET 6 OF 12

LAYOUT DWG N/A T-LAYOUT NO. N/A

DRAWING NUMBER
03426D2205-01

SCALE - 1:25 @ A3

ENVIRONMENTAL STATEMENT

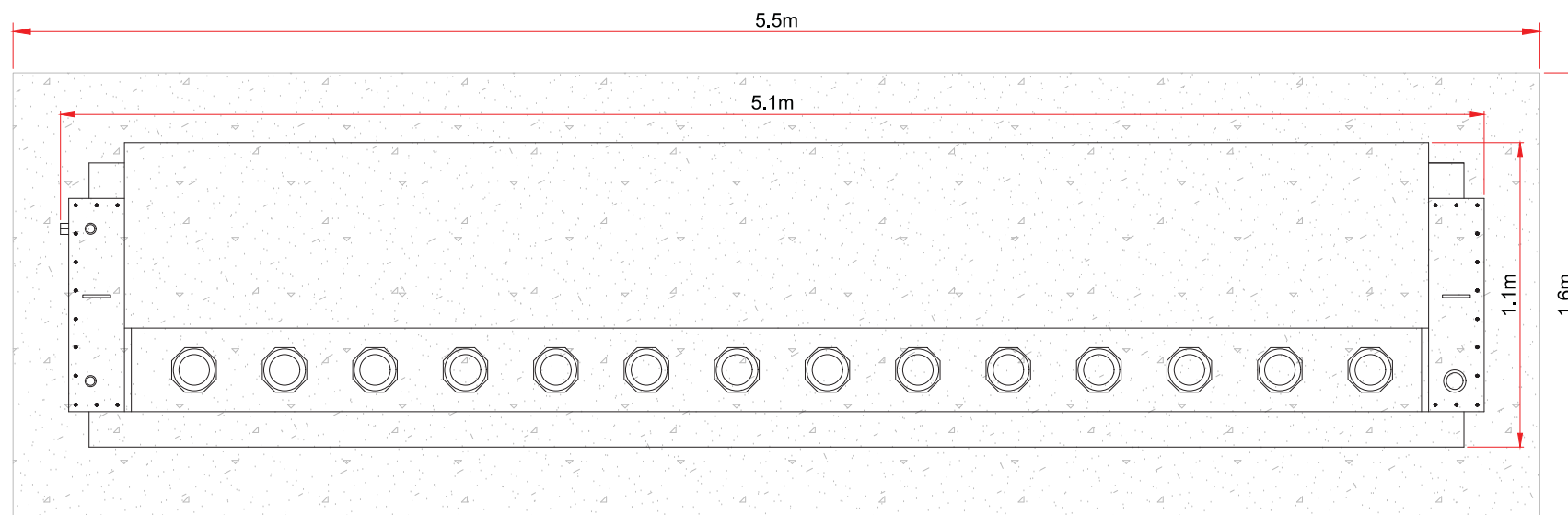
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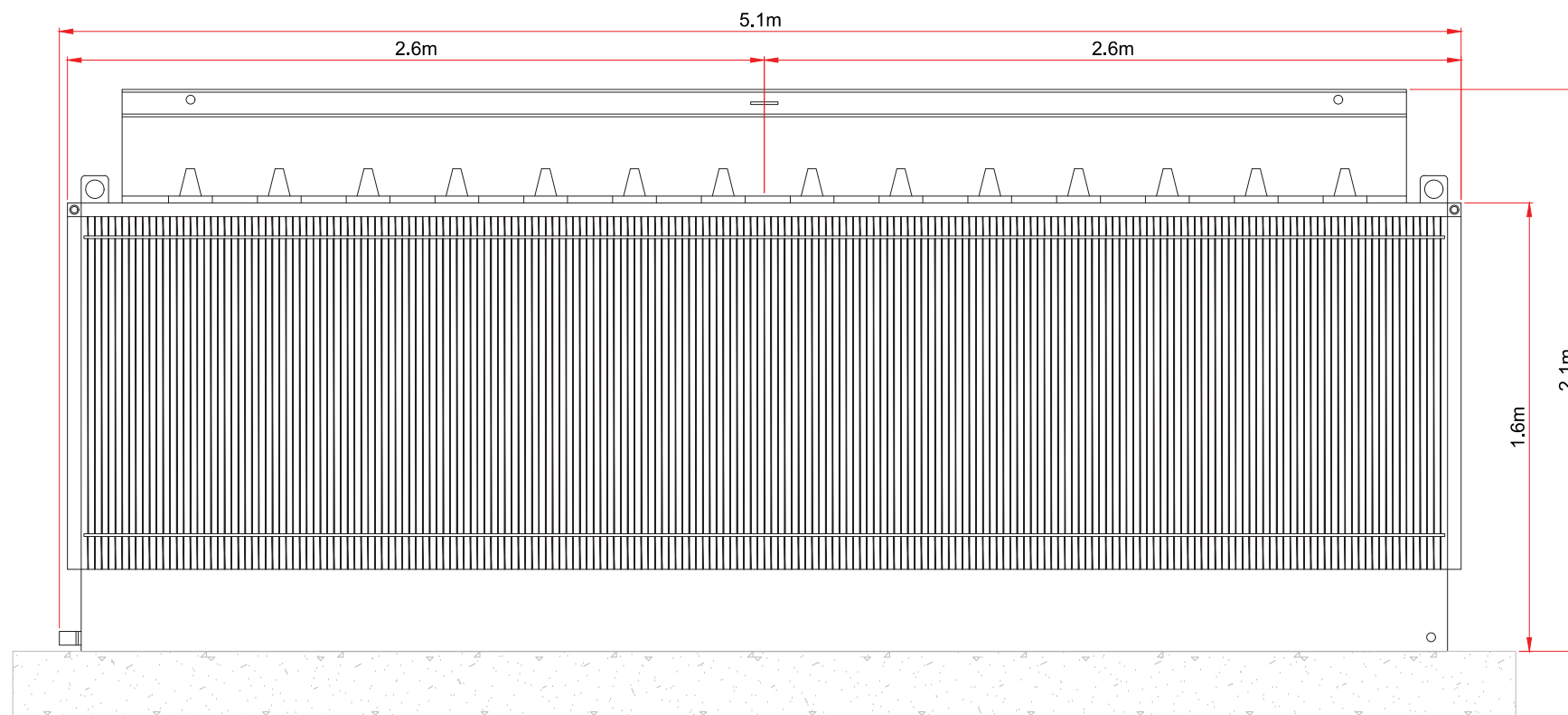
**MAGHERAMORE
WIND FARM**

FIGURE 2.5

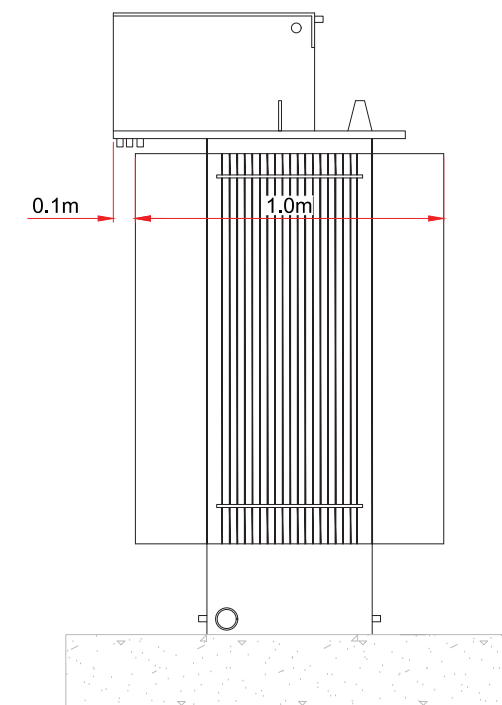
**CONTROL BUILDING &
SUBSTATION COMPOUND
ELEVATIONS**



**INDICATIVE SHUNT REACTOR -
PLAN VIEW**
SCALE - 1:25



**INDICATIVE SHUNT REACTOR -
FRONT ELEVATION**
SCALE - 1:25



**INDICATIVE SHUNT REACTOR -
SIDE ELEVATION**
SCALE - 1:25

COMPOUND ELEVATIONS
SHEET 7 OF 12

LAYOUT DWG N/A T-LAYOUT NO. N/A

DRAWING NUMBER
03426D2205-01

SCALE - 1:25 @ A3

ENVIRONMENTAL STATEMENT

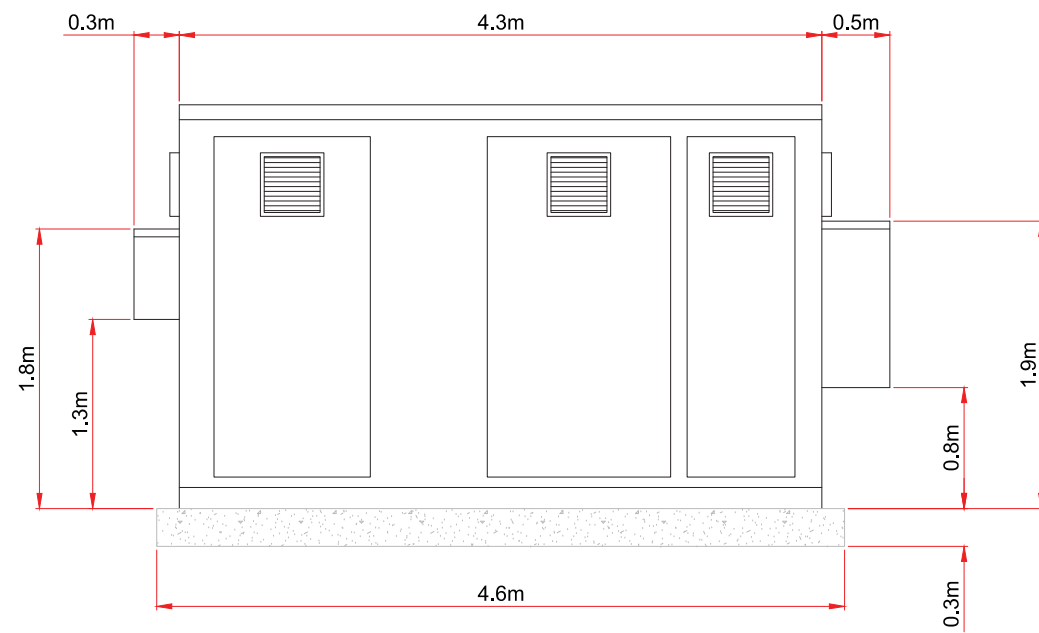
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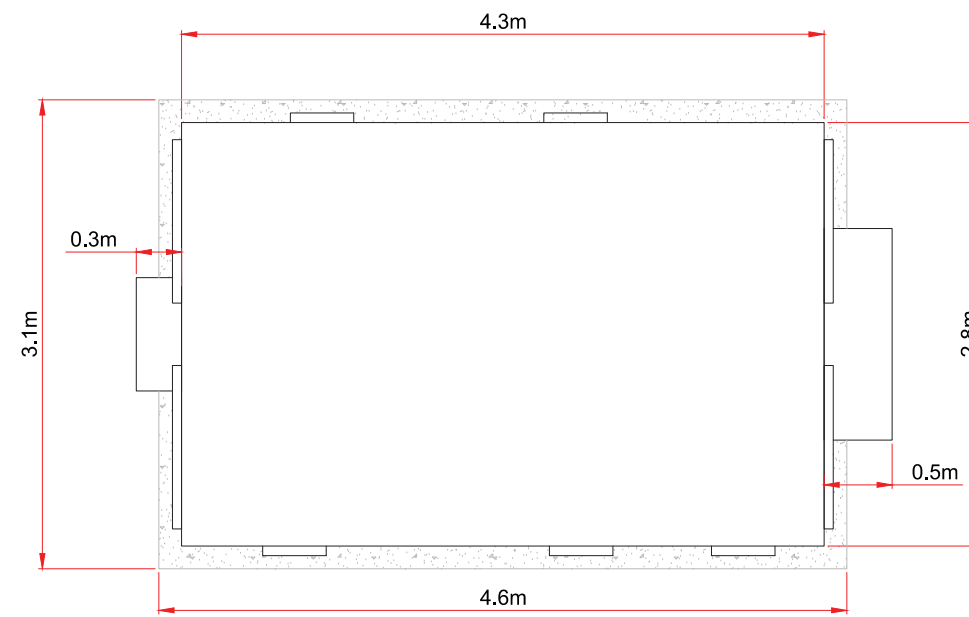
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FIGURE 2.5

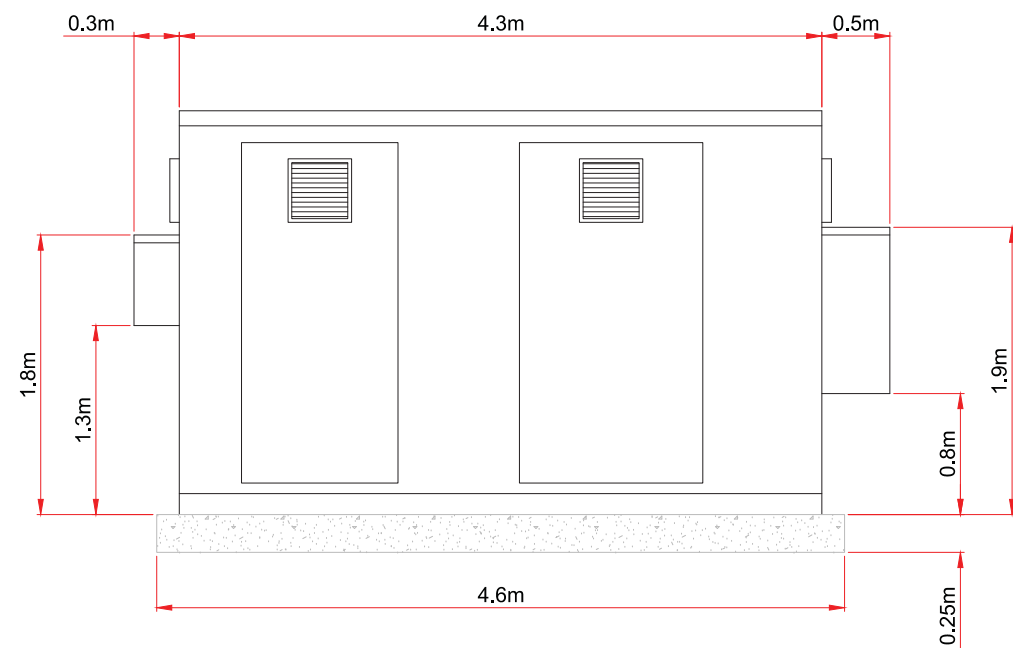
**CONTROL BUILDING &
SUBSTATION COMPOUND
ELEVATIONS**



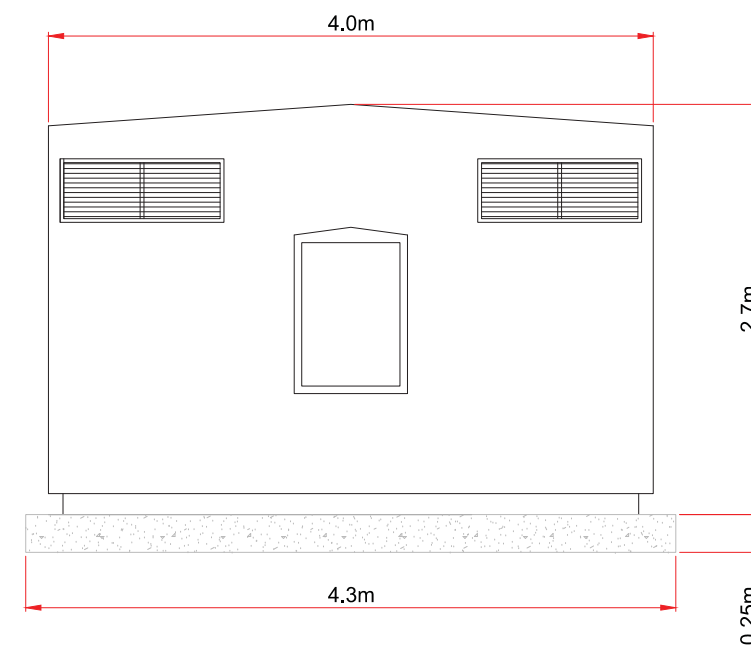
**INDICATIVE HARMONIC FILTER -
FRONT ELEVATION**
SCALE - 1:50



**INDICATIVE HARMONIC FILTER -
PLAN VIEW**
SCALE - 1:50



**INDICATIVE HARMONIC FILTER -
REAR ELEVATION**
SCALE - 1:50



**INDICATIVE HARMONIC FILTER -
SIDE ELEVATION**
SCALE - 1:50

COMPOUND ELEVATIONS
SHEET 8 OF 12

LAYOUT DWG N/A T-LAYOUT NO. N/A

DRAWING NUMBER
03426D2205-01

SCALE - 1:50 @ A3

ENVIRONMENTAL STATEMENT

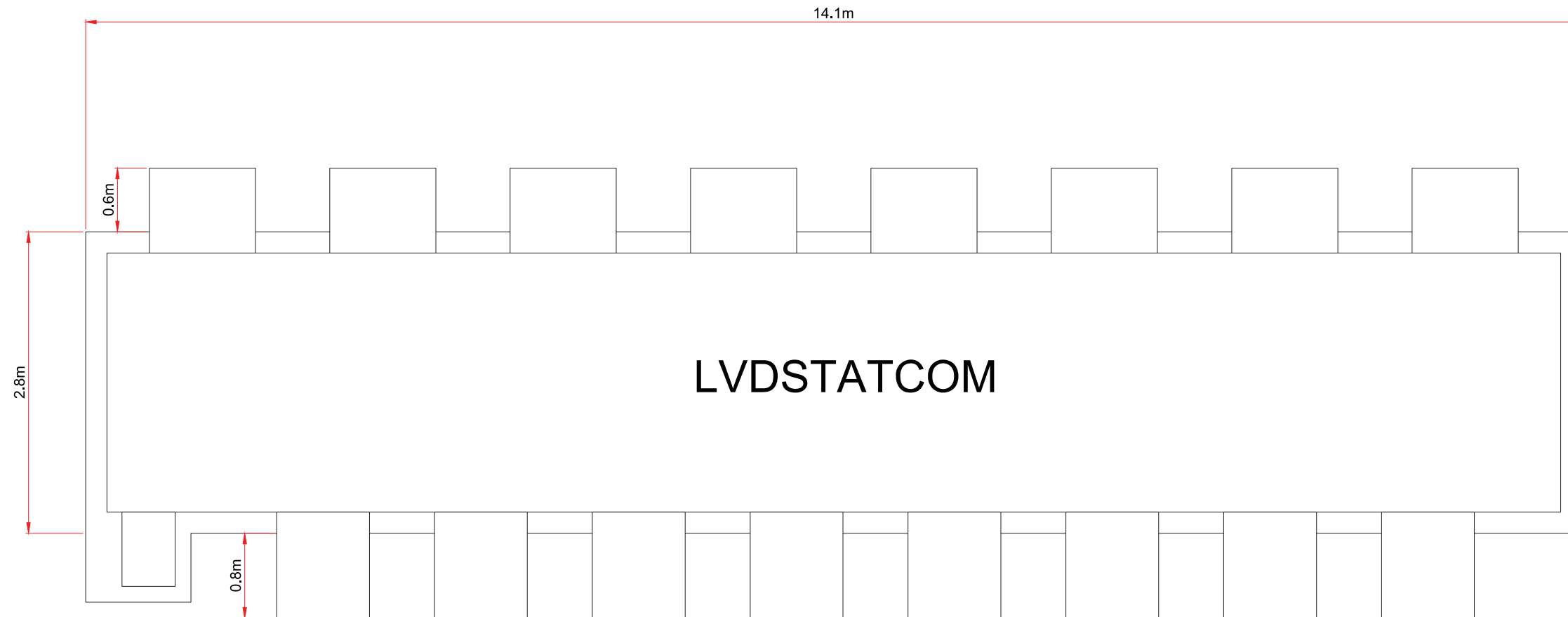
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**MAGHERAMORE
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FIGURE 2.5

**CONTROL BUILDING &
SUBSTATION COMPOUND
ELEVATIONS**



**INDICATIVE LVDSTATCOM -
PLAN VIEW**
SCALE - 1:25

COMPOUND ELEVATIONS
SHEET 9 OF 12

LAYOUT DWG N/A T-LAYOUT NO. N/A

DRAWING NUMBER
03426D2205-01

SCALE - 1:25 @ A3

ENVIRONMENTAL STATEMENT

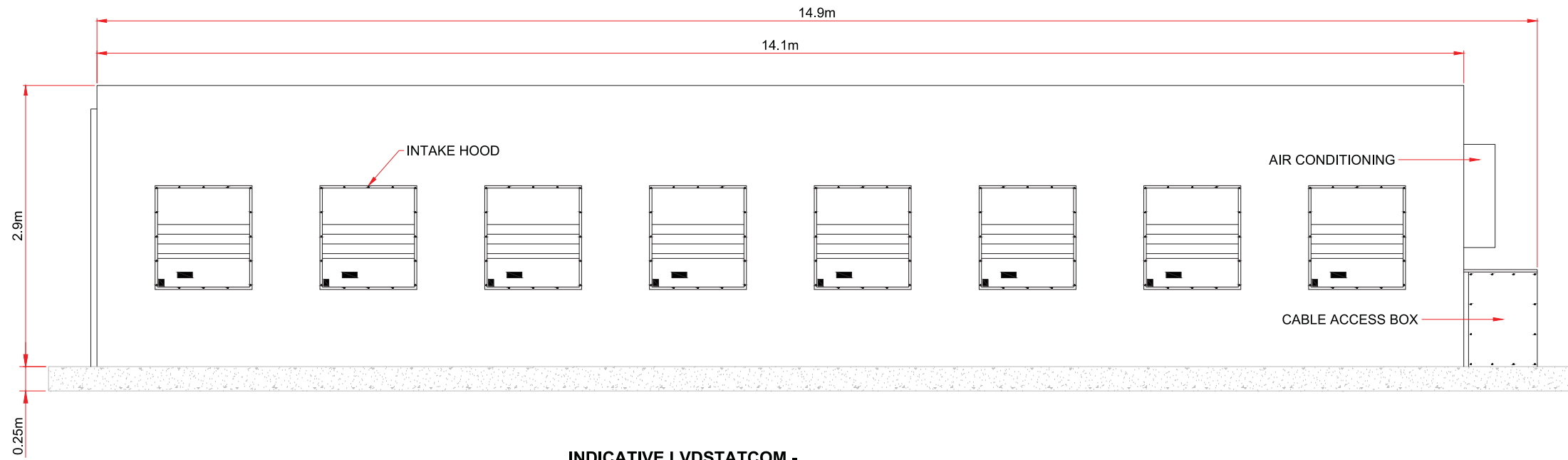
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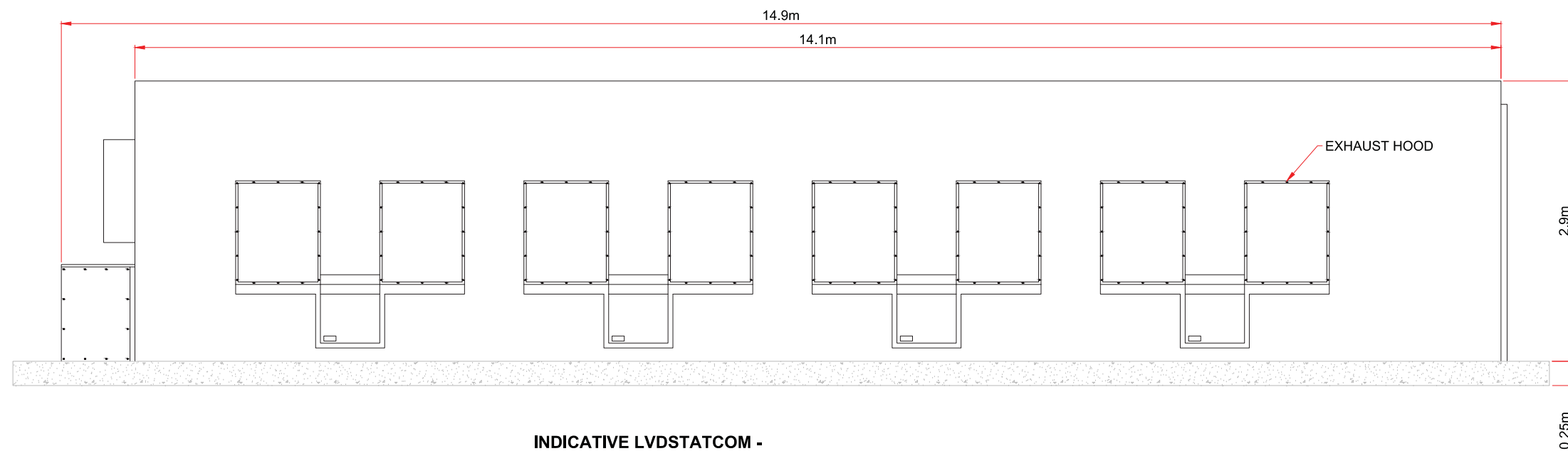
**MAGHERAMORE
WIND FARM**

FIGURE 2.5

**CONTROL BUILDING &
SUBSTATION COMPOUND
ELEVATIONS**



**INDICATIVE LVDSTATCOM -
FRONT ELEVATION**
SCALE - NTS



**INDICATIVE LVDSTATCOM -
REAR ELEVATION**
SCALE - NTS

COMPOUND ELEVATIONS
SHEET 10 OF 12

LAYOUT DWG N/A T-LAYOUT NO. N/A

DRAWING NUMBER
03426D2205-01

SCALE - NTS @ A3

ENVIRONMENTAL STATEMENT

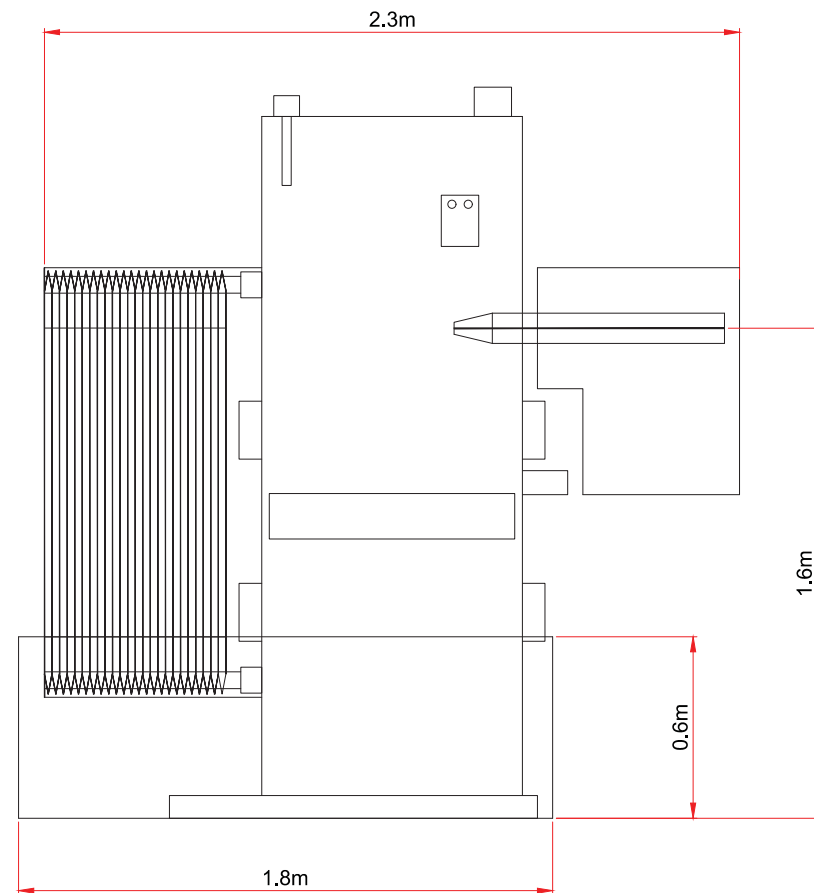
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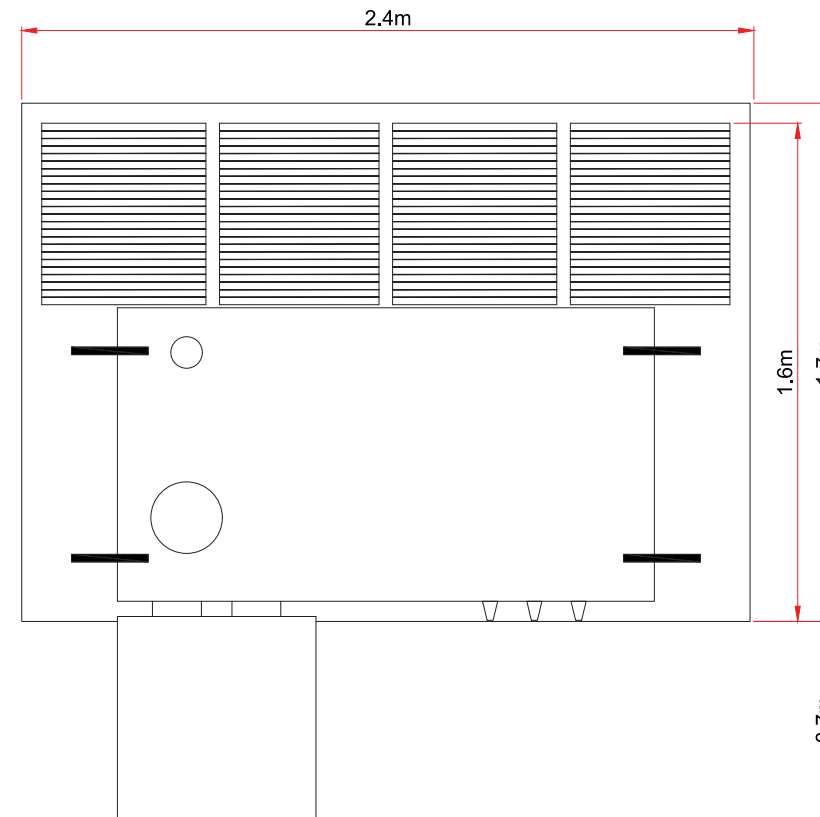
**MAGHERAMORE
WIND FARM**

FIGURE 2.5

**CONTROL BUILDING &
SUBSTATION COMPOUND
ELEVATIONS**



**INDICATIVE LVDSTATCOM TRANSFORMER -
SIDE ELEVATION**
SCALE - 1:25



**INDICATIVE LVDSTATCOM TRANSFORMER -
PLAN VIEW**
SCALE - 1:25

COMPOUND ELEVATIONS
SHEET 11 OF 12

LAYOUT DWG N/A T-LAYOUT NO. N/A

DRAWING NUMBER
03426D2205-01

SCALE - 1:25 @ A3

ENVIRONMENTAL STATEMENT

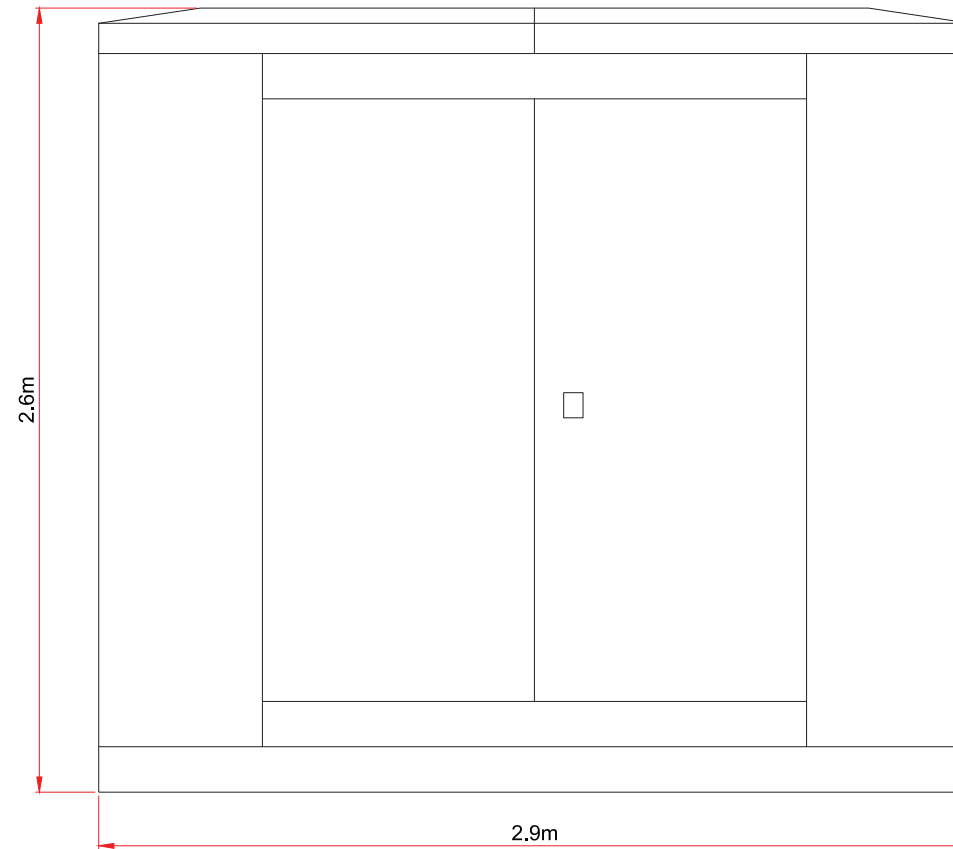
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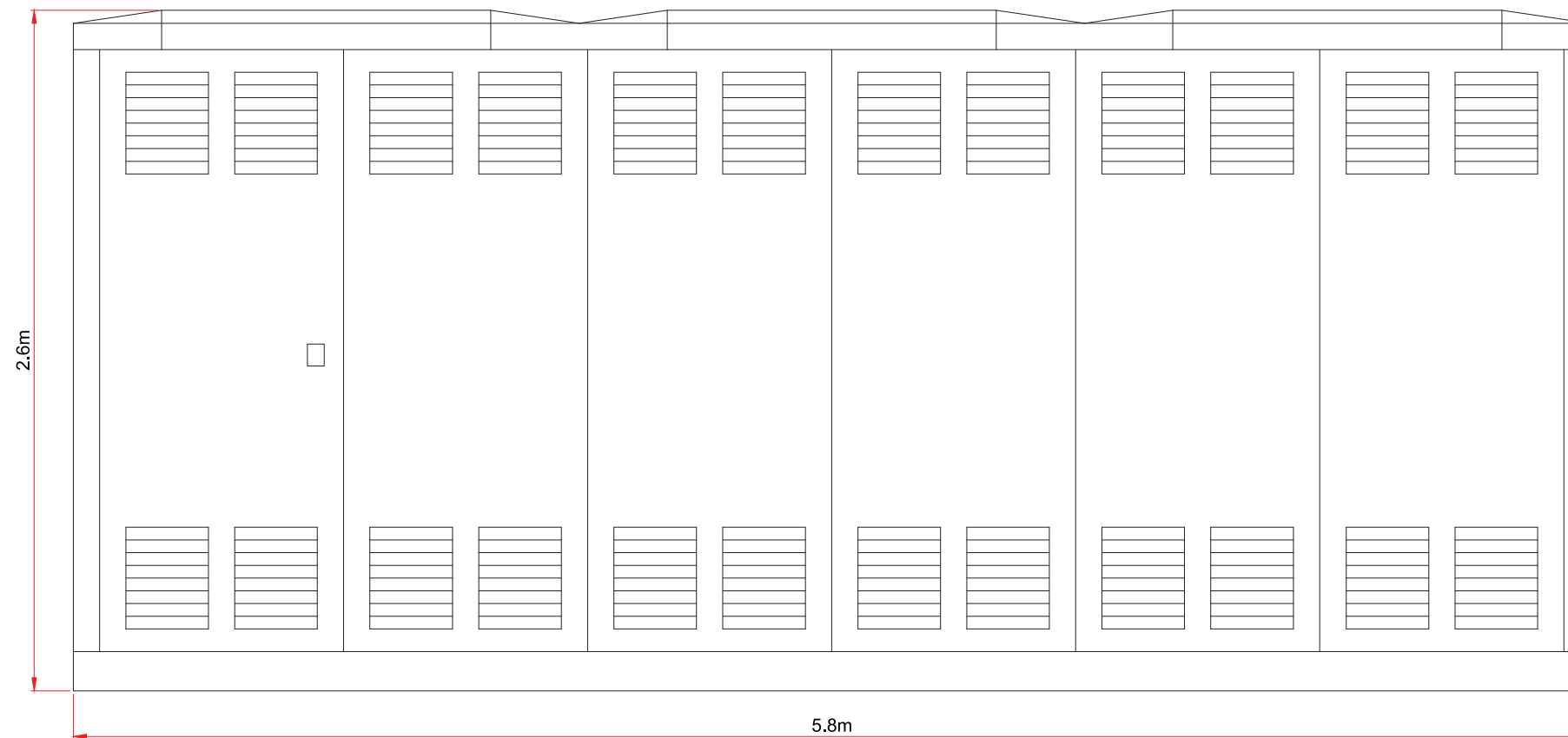
**MAGHERAMORE
WIND FARM**

FIGURE 2.5

**CONTROL BUILDING &
SUBSTATION COMPOUND
ELEVATIONS**



**INDICATIVE OUTDOOR SWITCHGEAR - SIDE
ELEVATION**
SCALE - 1:25



**INDICATIVE OUTDOOR SWITCHGEAR -
FRONT ELEVATION**
SCALE - 1:25

COMPOUND ELEVATIONS
SHEET 12 OF 12

LAYOUT DWG N/A T-LAYOUT NO. N/A

DRAWING NUMBER
03426D2205-01

SCALE - 1:25 @ A3

ENVIRONMENTAL STATEMENT

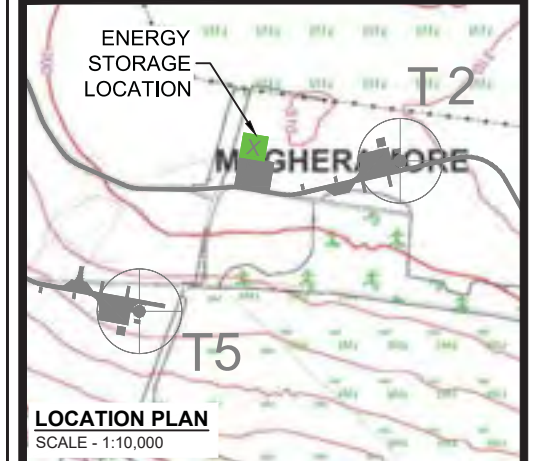
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MAGHERAMORE WIND FARM

FIGURE 2.6

ENERGY STORAGE COMPOUND PLAN & ELEVATION (SHEET 1 OF 3) LAYOUT PLAN



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- KEY:**
- INFRASTRUCTURE
 - 18-25mm GRADE, 150mm DEEP, CLEAN CRUSHED ROCK
 - PALISADE FENCE 2.4m HIGH
 - MAX. 4.5m HIGH 50W HALIDE LAMP OR SIMILAR. COLUMNS SHALL BE TELESCOPIC, HINGED OR SIMILAR TO FACILITATE GROUND LEVEL BULB REPLACEMENT. EXACT POSITIONS TBC BASED ON SELECTED PRODUCT(S).
 - ENERGY STORAGE LOCATION

NOTE:
1. ALL DIMENSIONS ARE MAXIMUM ANTICIPATED AND SUBJECT TO DETAILED DESIGN.

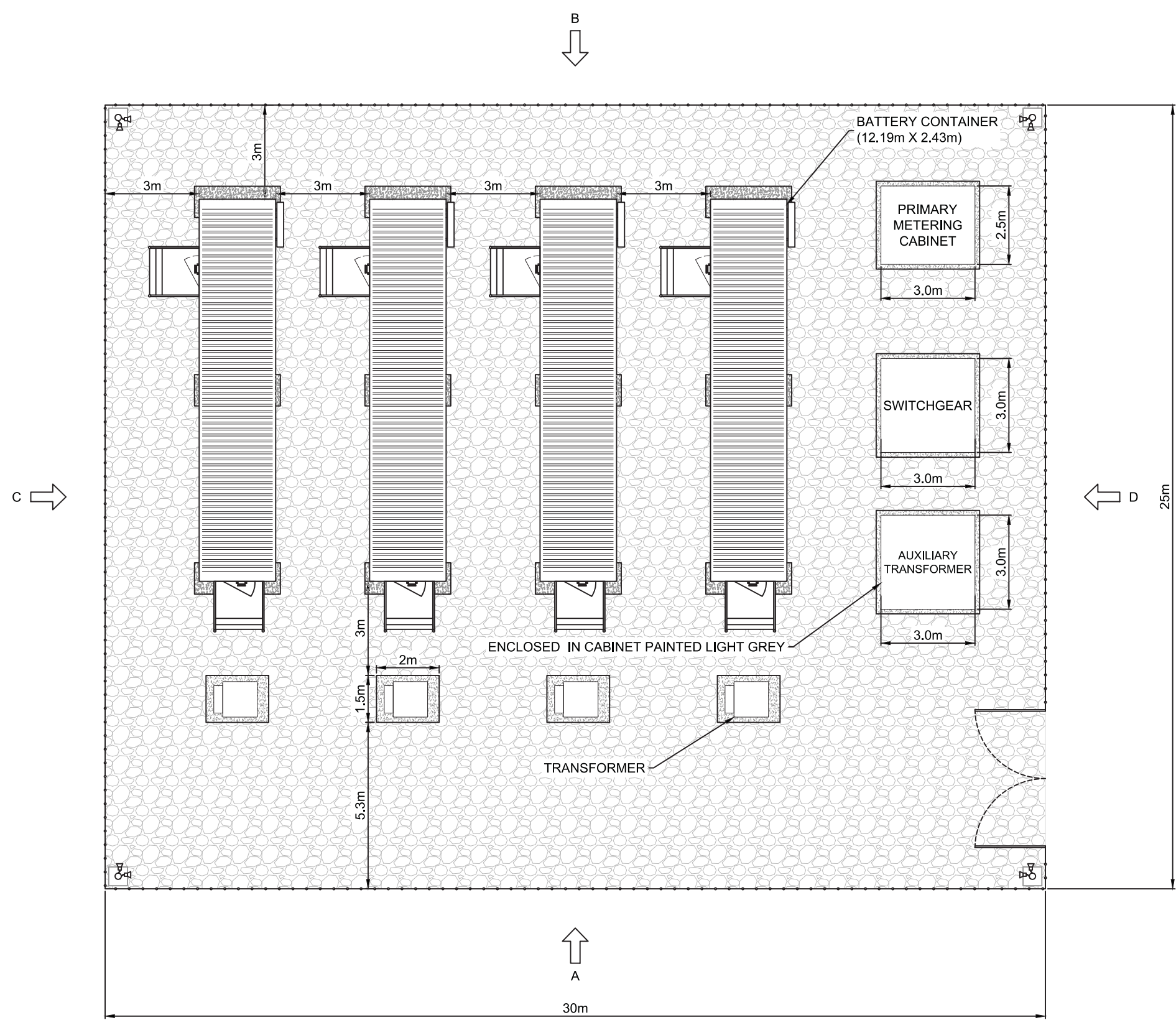
LAYOUT DWG 03426D0001-06 T-LAYOUT NO. PNIRmgh020

DRAWING NUMBER
03426D2206-01

SCALE - 1:150 @ A3

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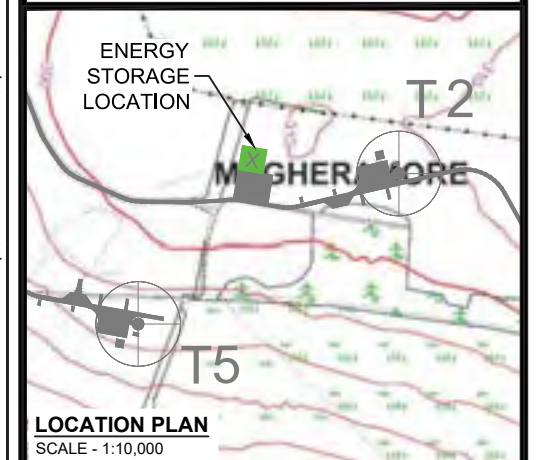




**MAGHERAMORE
WIND FARM**

FIGURE 2.6

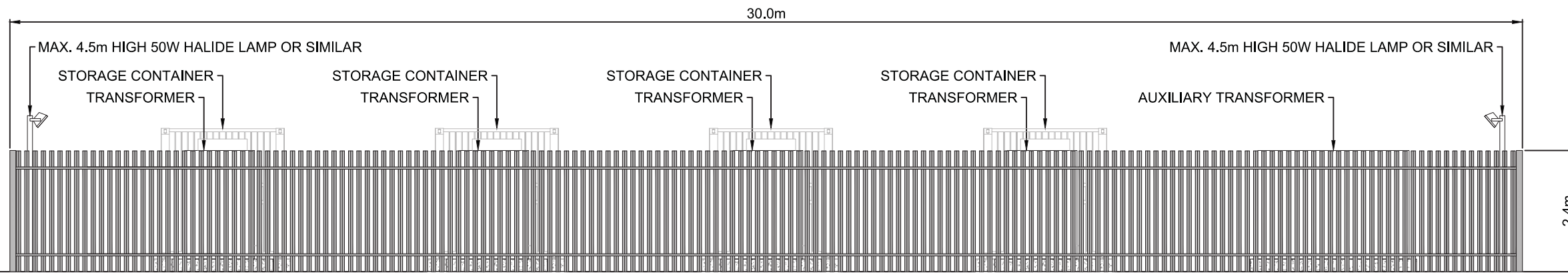
**ENERGY STORAGE COMPOUND
PLAN & ELEVATION
(SHEET 2 OF 3)
ELEVATIONS WITH FENCE**



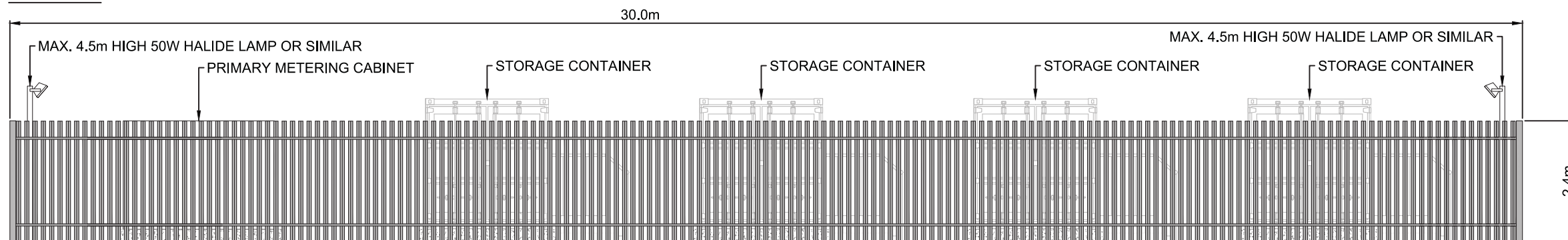
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- KEY:**
- INFRASTRUCTURE
 - ENERGY STORAGE LOCATION

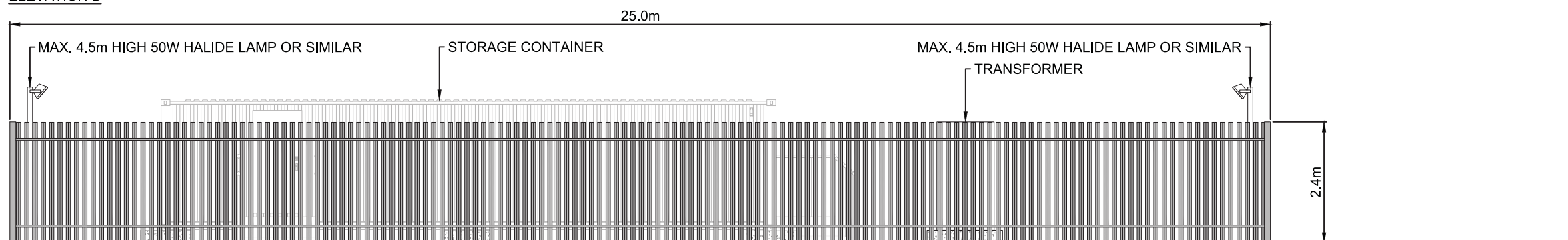
- NOTE:**
- ALL DIMENSIONS ARE MAXIMUM ANTICIPATED AND SUBJECT TO DETAILED DESIGN.



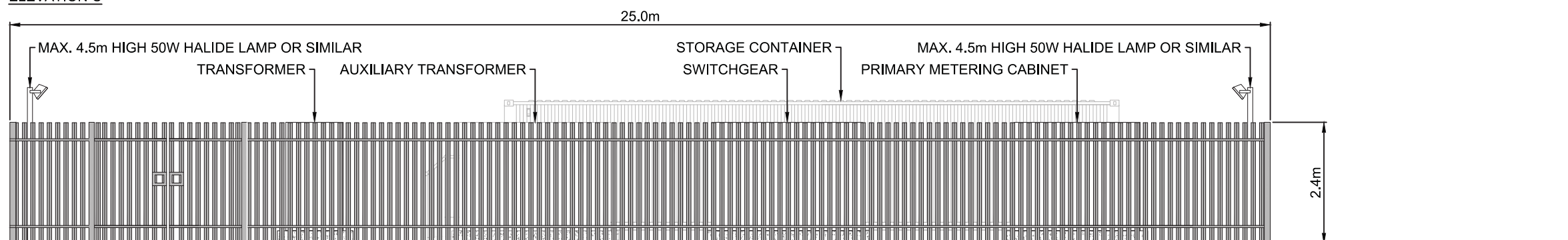
ELEVATION A



ELEVATION B



ELEVATION C



ELEVATION D



INDICATIVE PRIMARY METERING CABINET



INDICATIVE SWITCHGEAR



INDICATIVE TRANSFORMER

LAYOUT DWG 03426D0001-06 T-LAYOUT NO. PNIRmgh020

DRAWING NUMBER
03426D2206-01

SCALE - 1:100 @ A3

ENVIRONMENTAL STATEMENT

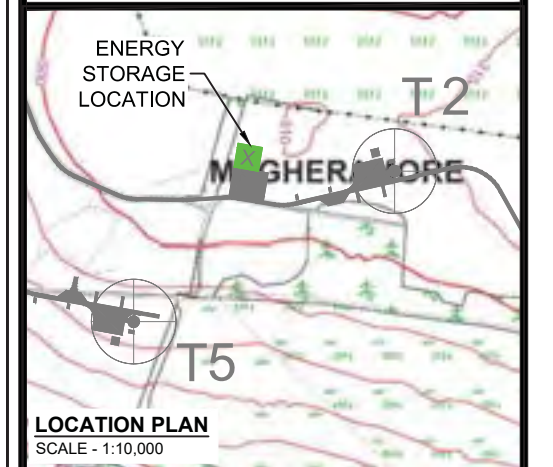
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**MAGHERAMORE
WIND FARM**

FIGURE 2.6

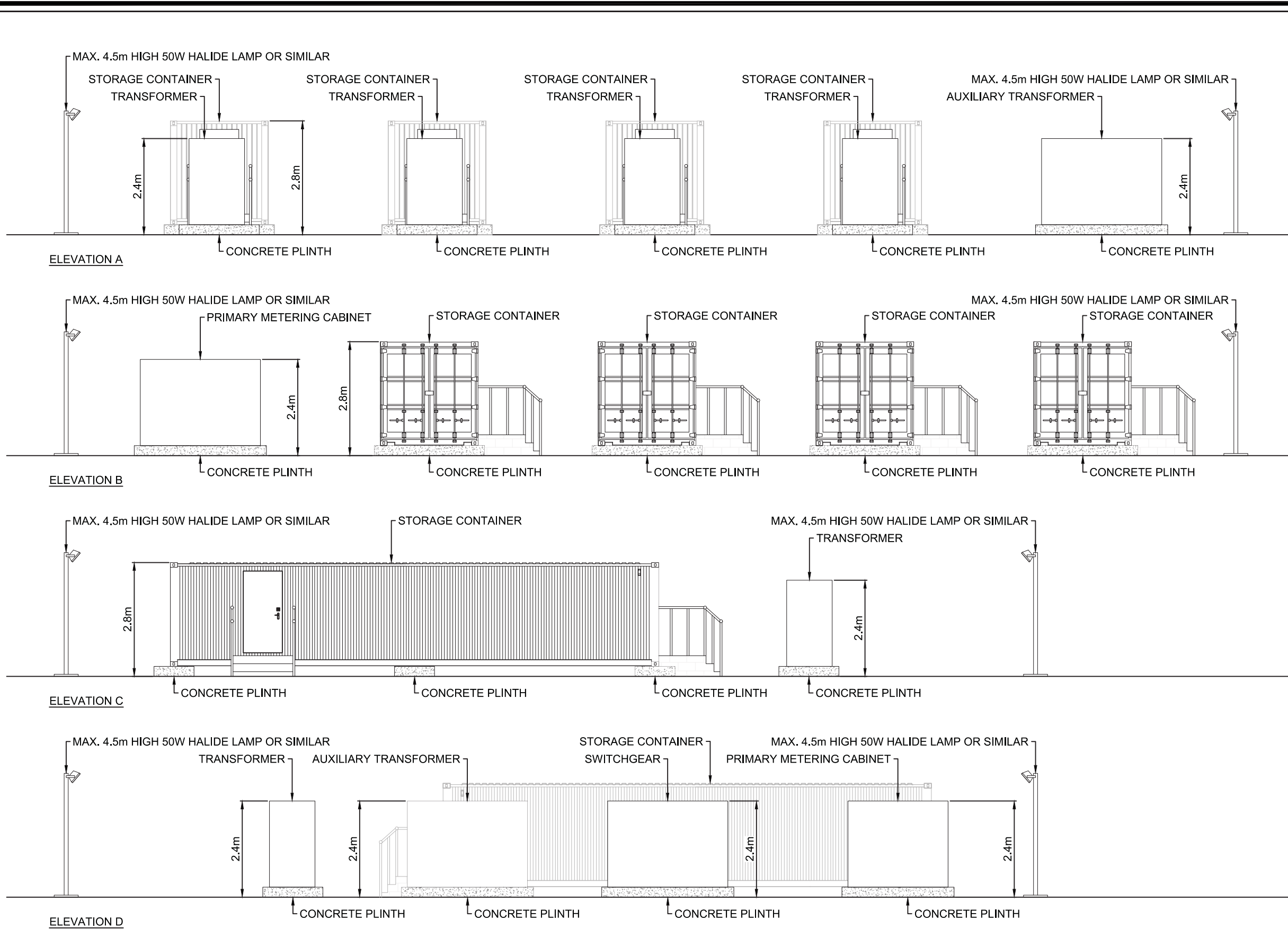
**ENERGY STORAGE COMPOUND
PLAN & ELEVATION
(SHEET 3 OF 3)
ELEVATIONS WITHOUT FENCE**



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KEY:
 — INFRASTRUCTURE
 ■ ENERGY STORAGE LOCATION

NOTE:
 1. ALL DIMENSIONS ARE MAXIMUM ANTICIPATED AND SUBJECT TO DETAILED DESIGN.



INDICATIVE PRIMARY METERING CABINET



INDICATIVE SWITCHGEAR



INDICATIVE TRANSFORMER

LAYOUT DWG 03426D0001-06 T-LAYOUT NO. PNIRmgh020

DRAWING NUMBER
03426D2206-01

SCALE - 1:100 @ A3

ENVIRONMENTAL STATEMENT

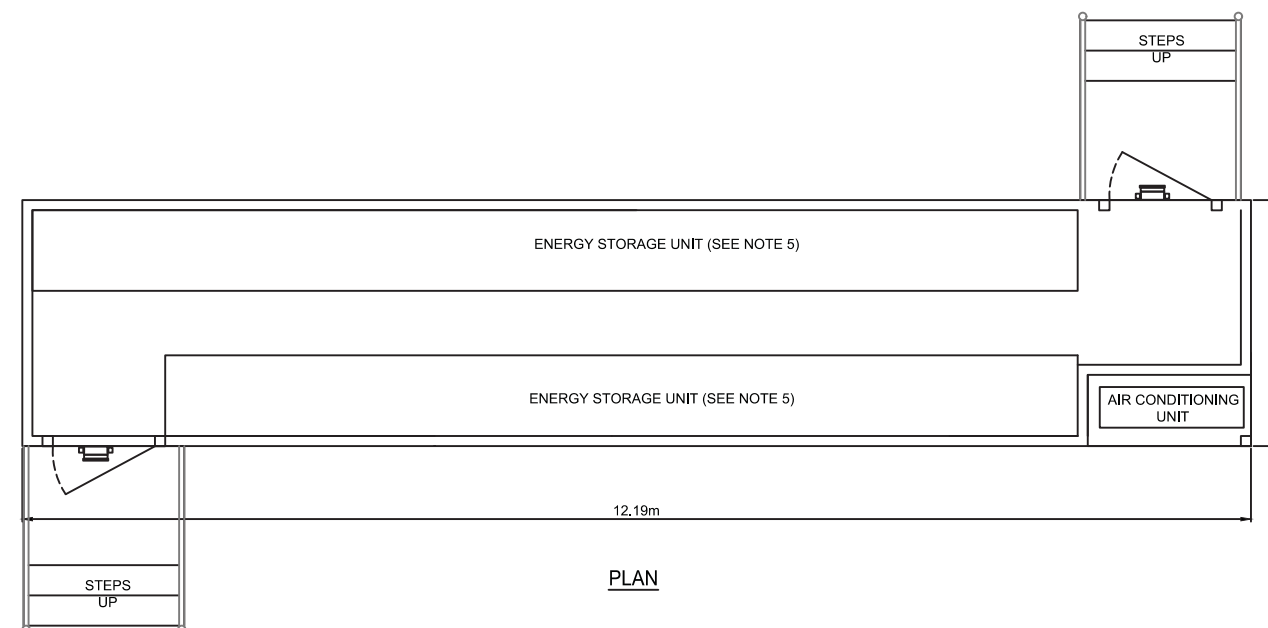
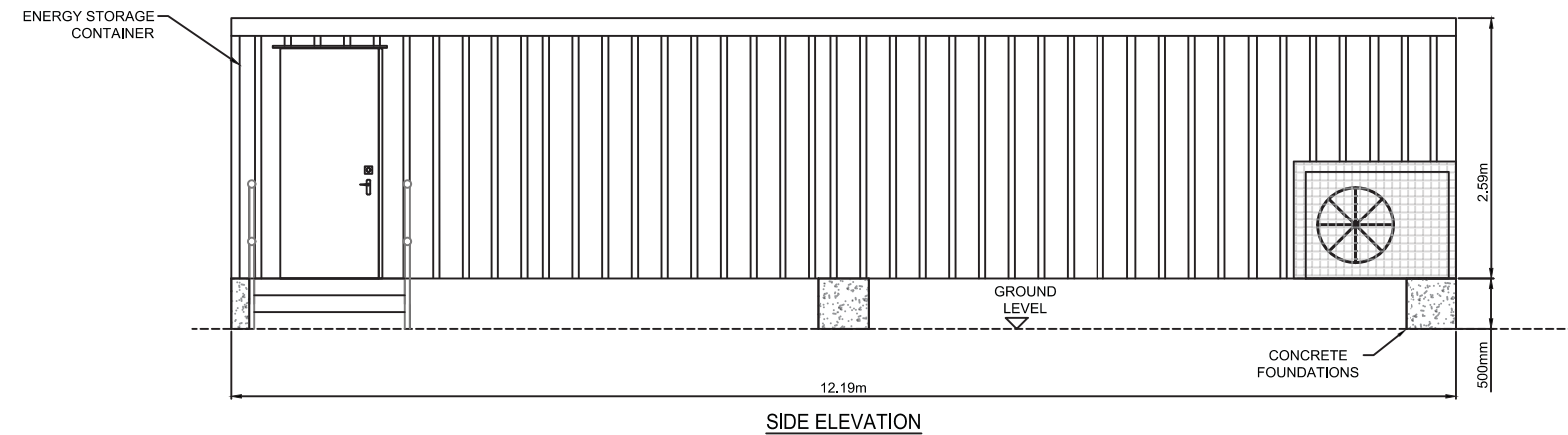
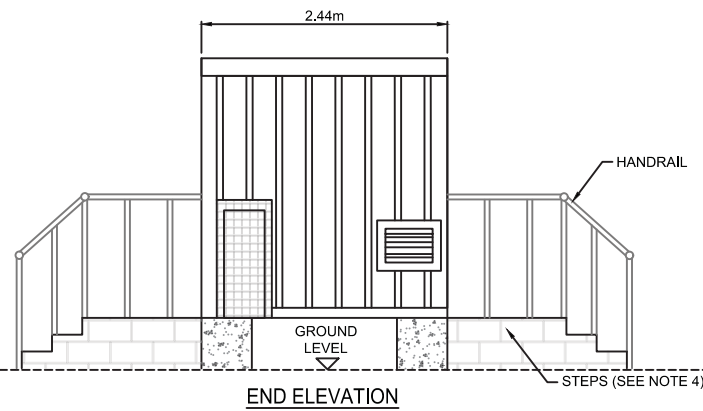
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**MAGHERAMORE
WIND FARM**

FIGURE 2.7

**TYPICAL ENERGY
STORAGE CONTAINER
ELEVATION**



NOTES:

1. ALL DIMENSIONS ARE MAXIMUM ANTICIPATED AND SUBJECT TO DETAILED DESIGN
2. DOOR AND STEPS POSITIONS ARE INDICATIVE AND SUBJECT TO DETAILED DESIGN.
3. APPROXIMATE FINISHED FLOOR LEVEL 500mm ABOVE EXISTING GROUND LEVEL.
4. STEPS TO BE EITHER CONSTRUCTED ON SITE FROM MASS CONCRETE OR MASONRY BLOCKS OR PREFABRICATED OFF SITE AND INSTALLED ON SITE FOLLOWING POSITIONING OF THE STORAGE UNIT.
5. THE LOCATION AND SIZE OF ENERGY STORAGE UNIT WITHIN THE CONTAINER TO BE DETERMINED AT DETAILED DESIGN STAGE.
6. EXTERNAL COLOUR OF ENERGY STORAGE UNIT TO BE AGREED WITH PLANNING AUTHORITY

KEY:

- DOOR
- PASSIVE INFRARED LIGHTING (PLAN)
- PASSIVE INFRARED LIGHTING (ELEVATION)

LAYOUT DWG N/A T-LAYOUT NO. N/A

DRAWING NUMBER
03426D2207-01

SCALE - 1:75 @ A3

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MAGHERAMORE WIND FARM

FIGURE 2.8

SITE ENTRANCE

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- KEY:**
- EXISTING ROAD
 - EXISTING SITE TRACK
 - SITE ENTRANCE COMPOUND
 - VISIBILITY SPLAY
 - PROPOSED ABNORMAL LOADS: AREA WILL BE REINSTATED ON COMPLETION OF WIND FARM CONSTRUCTION
 - EXISTING FENCE
 - EXISTING GATE
 - VERGE
 - PLANNING APPLICATION BOUNDARY
- MINIMUM 150mm TYPE 1 SUB-BASE SOFT AREAS AND UNSUITABLE MATERIAL (PEAT, TOPSOIL, SILT) TO BE REMOVED

- NOTES:**
1. DO NOT SCALE FROM DRAWING
 2. DETAILS AND DIMENSIONS ARE INDICATIVE ONLY AND SUBJECT TO CHANGES AT DETAILED DESIGN STAGE.
 3. APPROPRIATE SUDS DESIGN MEASURES WILL BE EMPLOYED AT DETAIL DESIGN STAGE.
 4. ANY SURFACE WATER RUNOFF WILL BE TARGETED USING APPROPRIATE SUDS MEASURES TO BE DESIGN AT A LATER DATE.
 5. ALL VISIBILITY SPLAYS SHOWN ARE WITHIN LANDS UNDER APPLICANTS CONTROL.



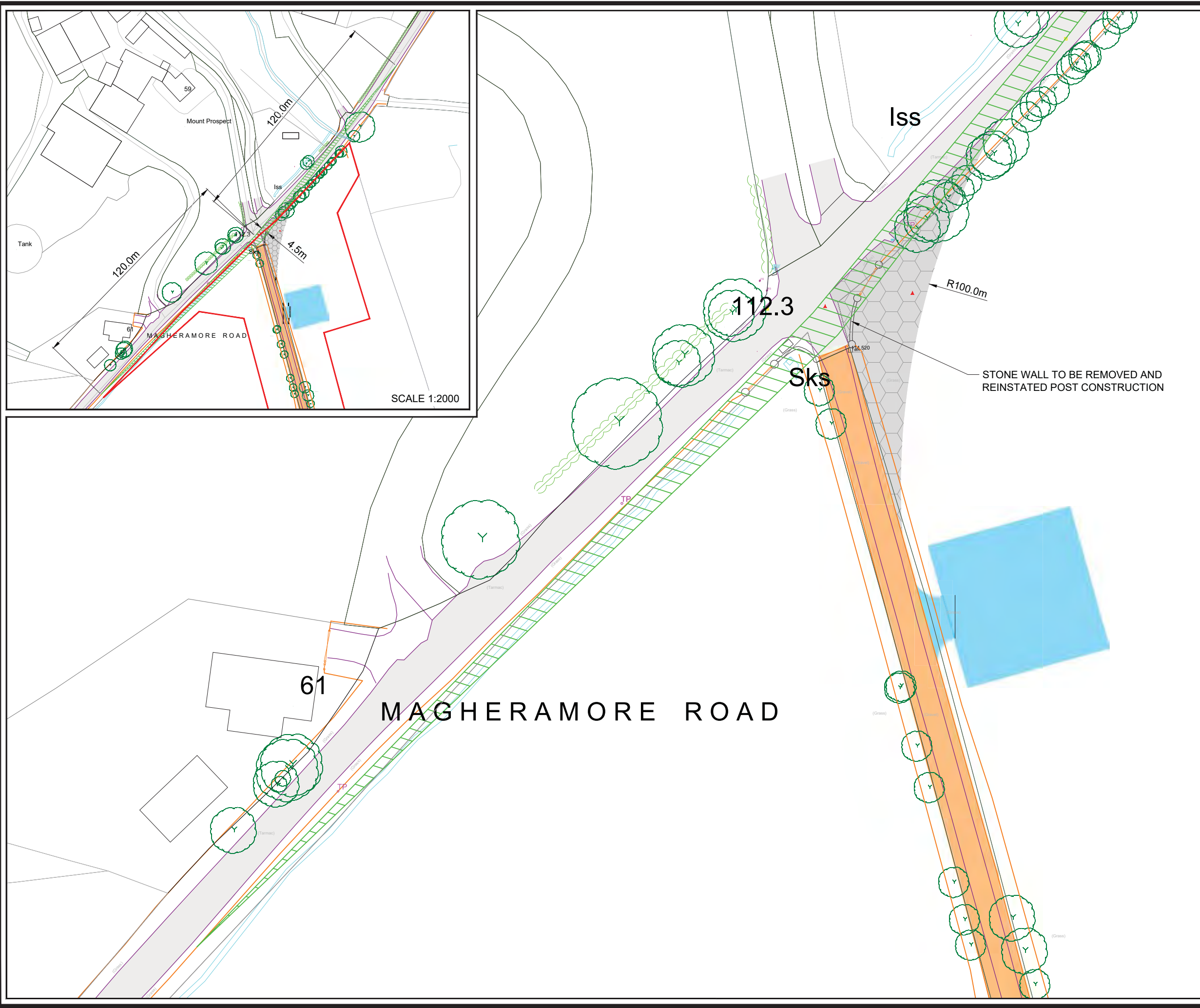
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SCALE - **1:500 @ A3**

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SCALE 1:2000

MAGHERAMORE ROAD

61











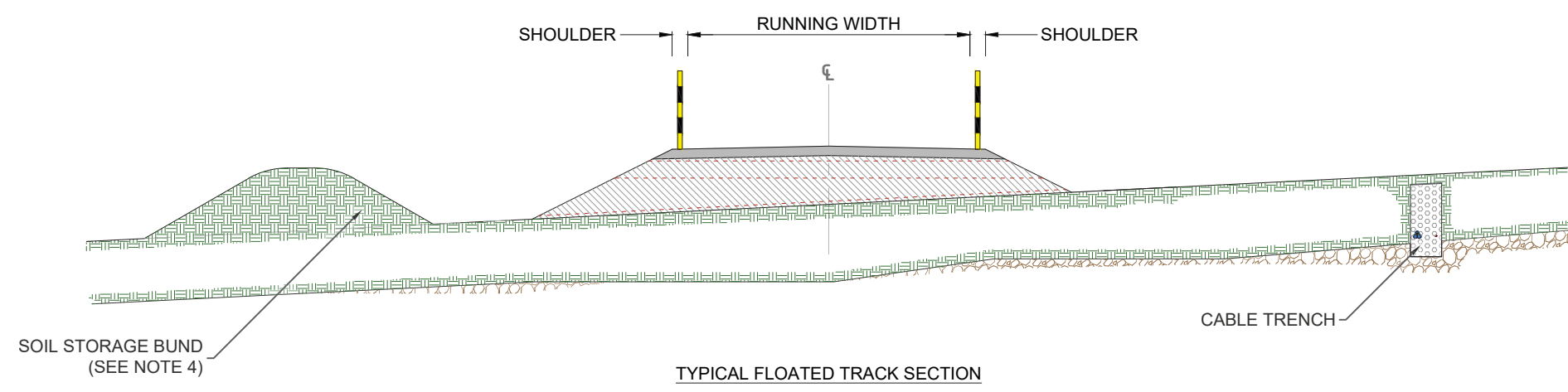
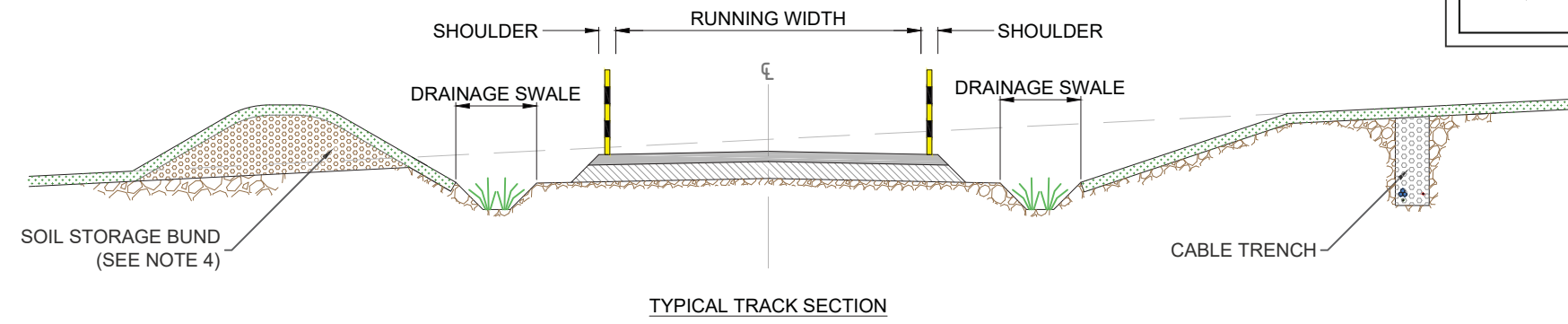
**MAGHERAMORE
WIND FARM**

FIGURE 2.9

**ACCESS TRACK
TYPICAL DETAILS**

KEY:

-  RUNNING SURFACE
-  BASE/CAPPING LAYER
-  TOPSOIL
-  SUBGRADE
-  PEAT LAYER/SOFT GROUND
-  GEOGRID
-  EXISTING GROUND LEVEL
-  SNOW POLES (WHERE REQUIRED)



NOTES:

1. DO NOT SCALE FROM THIS DRAWING.
2. TRACK WIDTH TO INCREASE ON BENDS AND PASSING PLACES.
3. ALL EMBANKMENT SLOPES TO BE PROVIDED AT A STABLE ANGLE BASED ON THE PROPERTIES OF THE MATERIAL ENCOUNTERED ON SITE.
4. EXCAVATED MATERIAL WILL BE PLACED IN AGREED LOCATIONS. REINSTATEMENT AND/OR SPOIL MANAGEMENT PLANS WILL BE DEVELOPED IN LINE WITH CURRENT BEST PRACTICE.
5. TRACK CONSTRUCTION TYPE TO BE DETERMINED DURING DETAILED DESIGN. LAYOUT OF DRAINAGE, CABLE TRENCHES AND STORAGE BUNDS MAY VARY.
6. RUNNING SURFACE AND BASE/CAPPING LAYER TO BE FORMED FROM SUITABLE MATERIALS COMPACTED IN LAYERS.
7. GEOSYNTHETIC REINFORCEMENT OR SOIL STABILISATION MAY BE USED TO REDUCE THE DEPTH OF TRACK CONSTRUCTION. REQUIREMENT TO BE DETERMINED DURING DETAILED DESIGN.

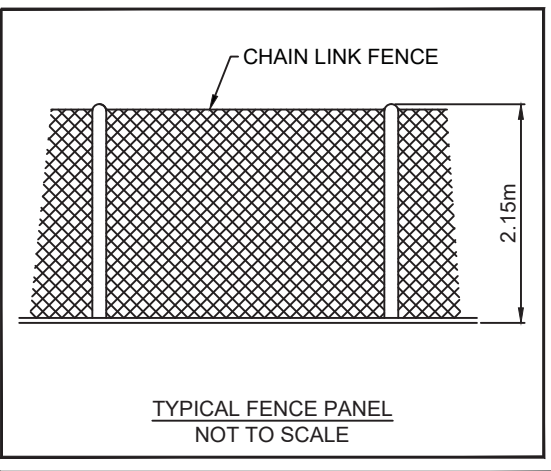
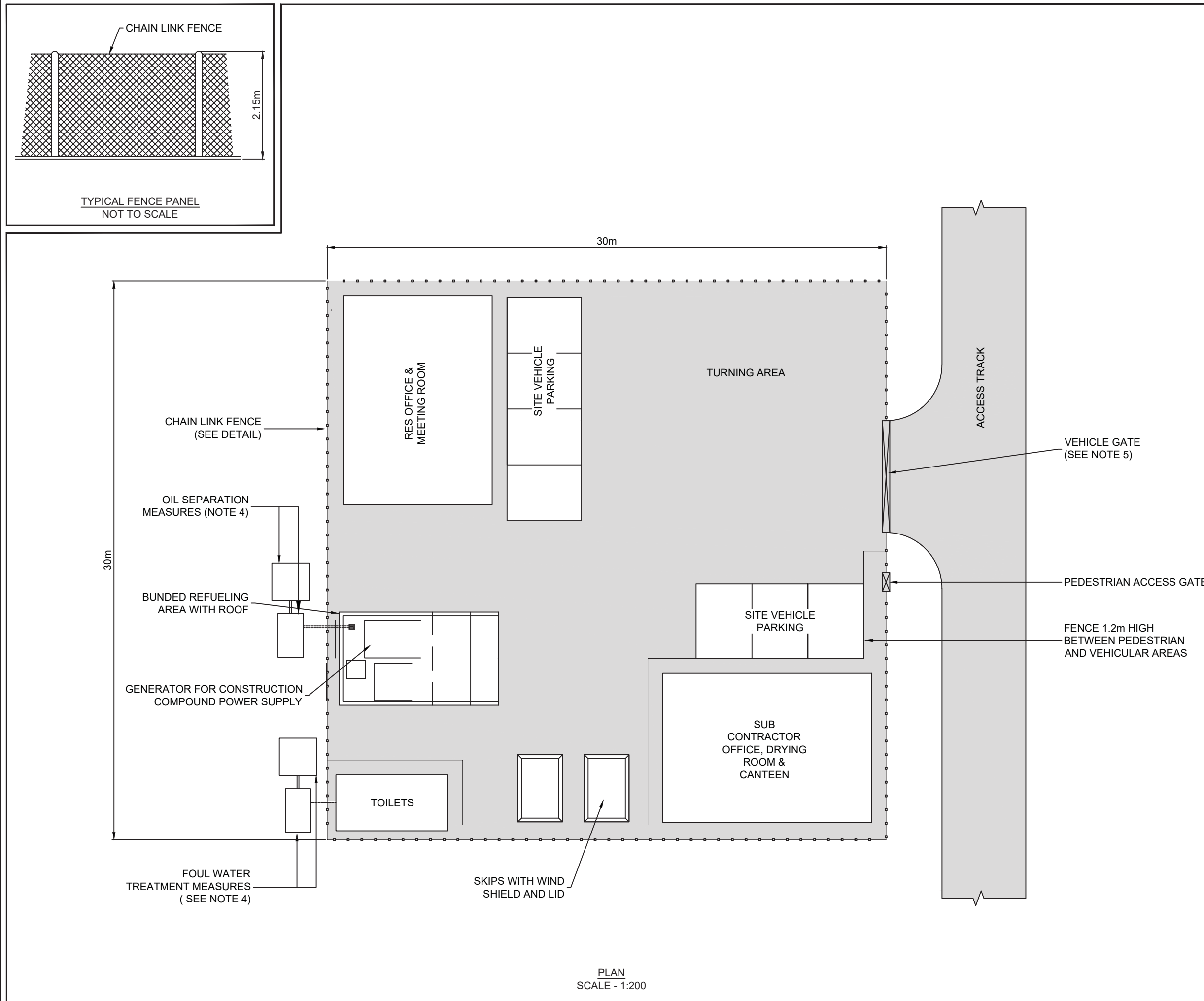
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DRAWING NUMBER	03426D2302-01		
SCALE - NOT TO SCALE			
ENVIRONMENTAL STATEMENT			
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**MAGHERAMORE
WIND FARM**

FIGURE 2.10

**TEMPORARY CONSTRUCTION
COMPOUND LAYOUT PLAN**



NOTES:

1. SIZE, NUMBER AND LOCATION OF COMPOUND EQUIPMENT AND FACILITIES ARE INDICATIVE ONLY
2. STRUCTURE TO BE TEMPORARY AND TO BE REMOVED AFTER CONSTRUCTION.
3. COMPOUND HARDSTANDING CONSISTING OF COMPACTED STONE OVER A LAYER OF GEOTEXTILE TO PROVIDE A CLEAN, FIRM, LEVEL AND FREE DRAINING SURFACE SUITABLE FOR CABINS AND HEAVY TRAFFIC.
4. APPROPRIATE MEASURES FOR SEPARATION OF OILS AND TREATMENT OF FOUL WATER TO BE AGREED WITH THE RELEVANT AUTHORITIES.
5. VEHICULAR GATES TO BE 6m WIDE CONSISTING OF 2 x 3m LEAVES

LAYOUT DWG N/A T-LAYOUT NO. N/A

DRAWING NUMBER
03426D2208-01

SCALE - AS SHOWN @ A3

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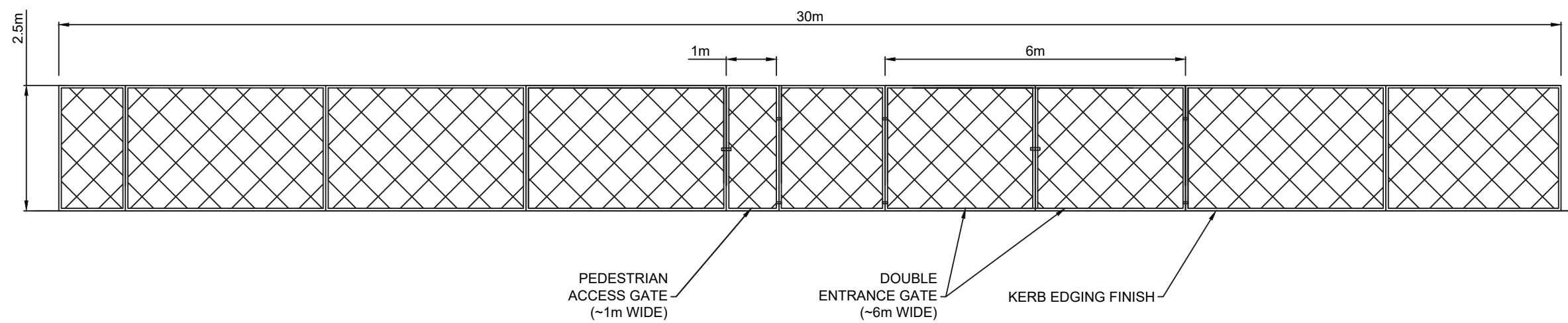
PLAN
SCALE - 1:200



**MAGHERAMORE
WIND FARM**

FIGURE 2.11

**TEMPORARY
CONSTRUCTION
COMPOUND ELEVATION**



SECURITY FENCE ELEVATION
SCALE - 1:100

LAYOUT DWG N/A T-LAYOUT NO. N/A

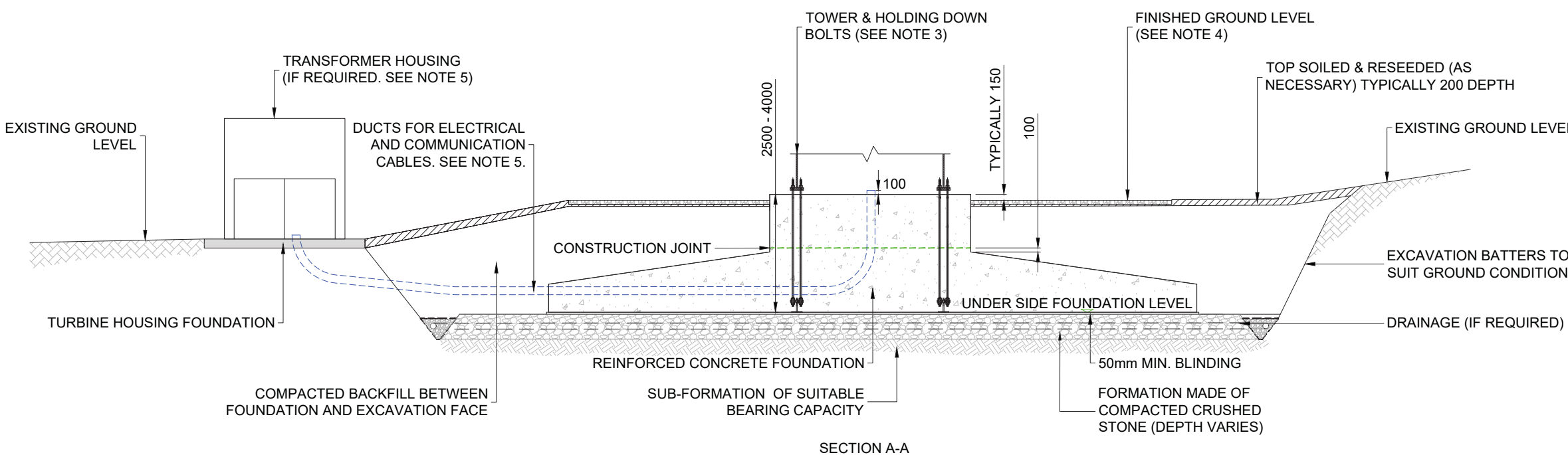
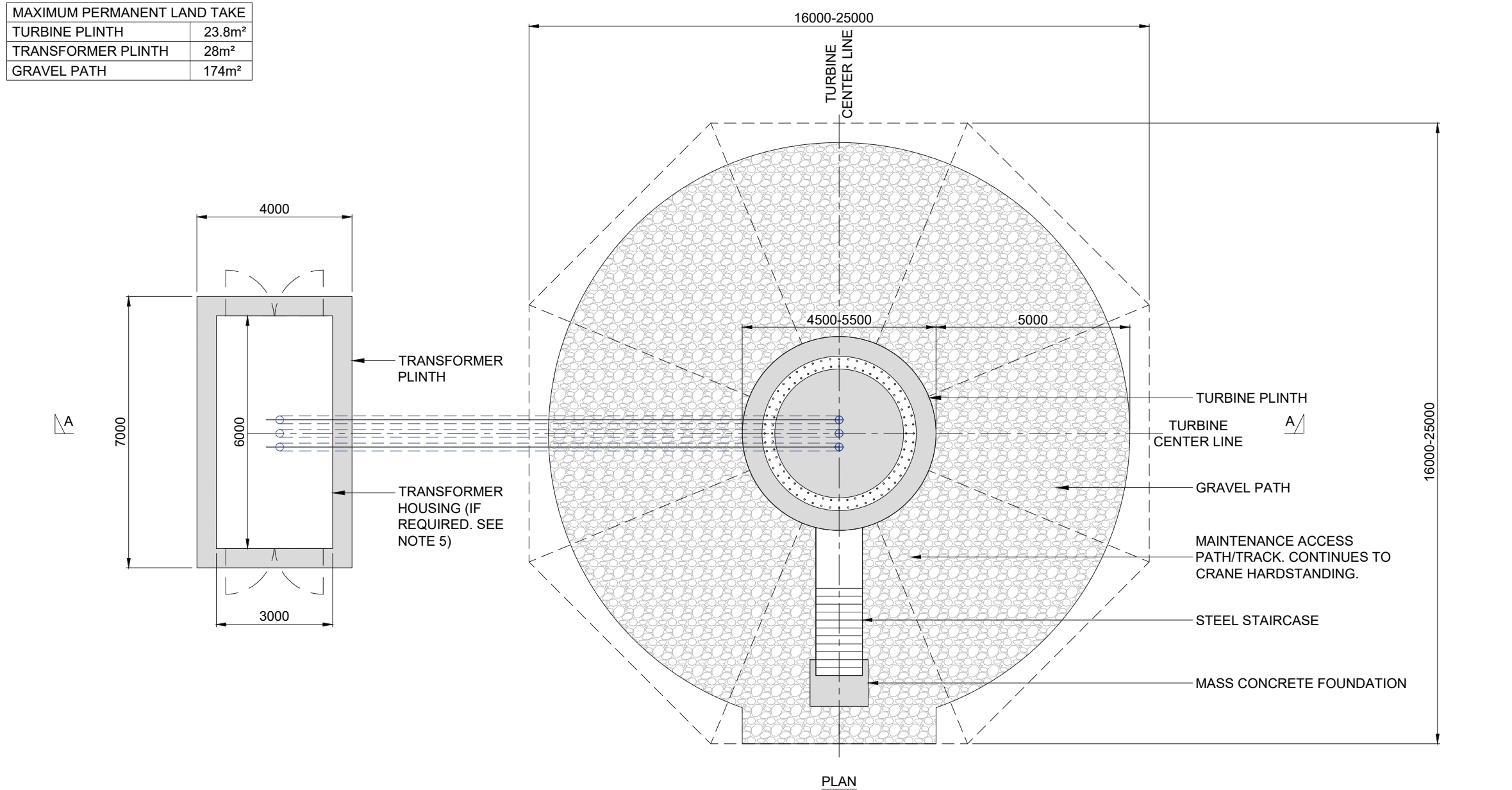
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MAXIMUM PERMANENT LAND TAKE	
TURBINE PLINTH	23.8m ²
TRANSFORMER PLINTH	28m ²
GRAVEL PATH	174m ²



MAGHERAMORE WIND FARM

FIGURE 2.12

WIND TURBINE FOUNDATION

NOTES:

- DIMENSIONS AND DETAILS ARE INDICATIVE ONLY AND MAY VARY DUE TO SPECIFIC TURBINE OR GROUND CONDITIONS.
- ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED
- THE HOLDING DOWN BOLT ARRANGEMENT SHOWN ON THIS DRAWING IS TYPICAL. HOWEVER ALTERNATIVE CAST IN ARRANGEMENTS ARE AVAILABLE AND MAY BE SUBSTITUTED DEPENDING ON ACTUAL TURBINE SELECTION.
- GRADIENT OF FINISHED GROUND LEVEL OVER TURBINE BASE, MAX 1:12.
- EXTERNAL TRANSFORMER NOT REQUIRED FOR ALL TURBINES AND NEED FOR TRANSFORMER HOUSING WILL DEPEND ON THE TURBINE SELECTED DURING DETAILED DESIGN.
- MATERIALS ARISING FROM EXCAVATIONS TO BE SEGREGATED AND PLACED IN AGREED LOCATIONS ADJACENT TO THE WORKING AREA FOR RE-USE. REINSTATEMENT AND /OR PEAT MANAGEMENT PLANS WILL BE DEVELOPED DURING THE DETAILED DESIGN OF SITE INFRASTRUCTURE, IN LINE WITH CURRENT BEST PRACTICE.

LAYOUT DWG N/A T-LAYOUT NO. N/A

DRAWING NUMBER **03426D2303-01**

SCALE - 1:125 @ A3

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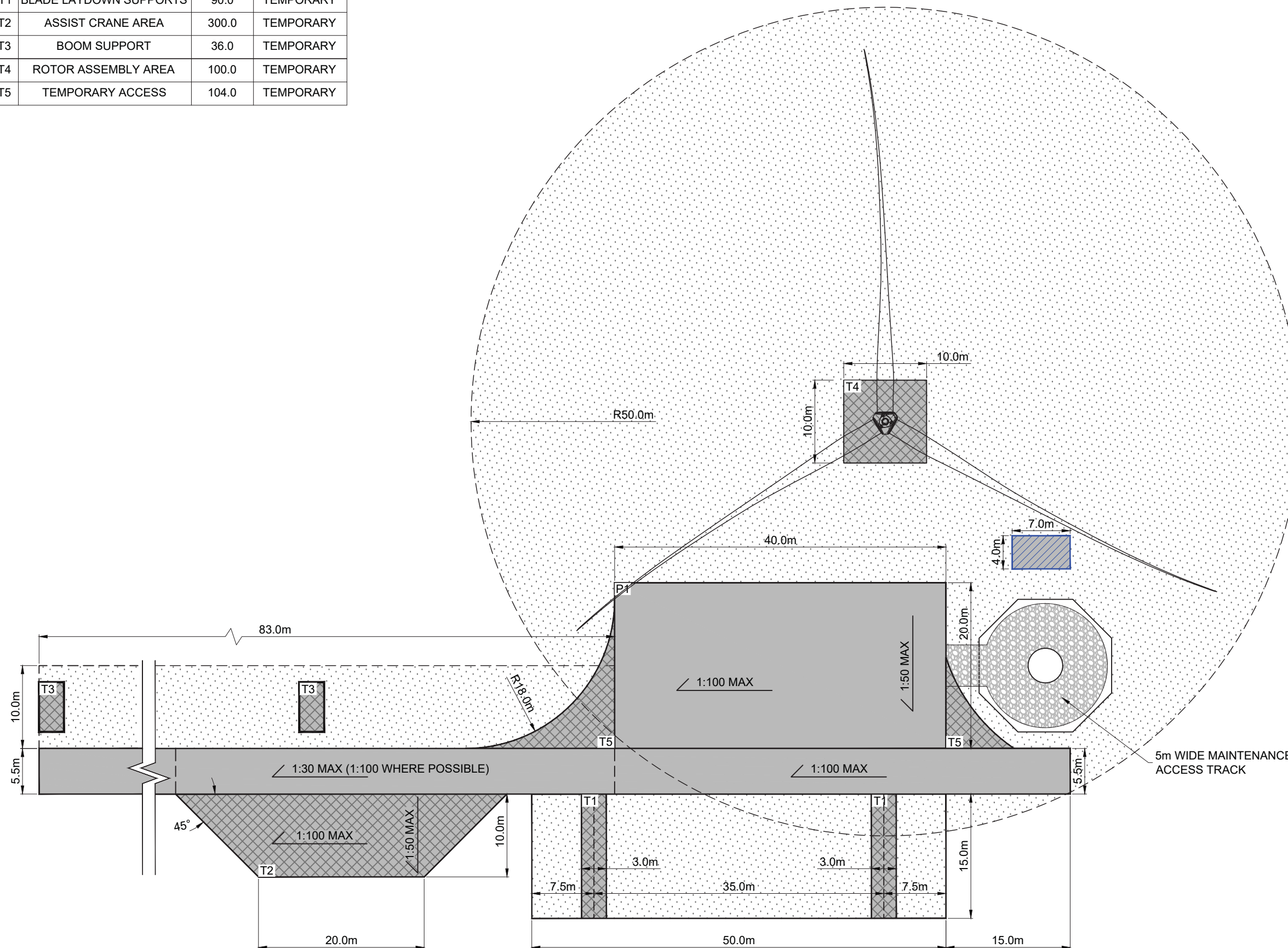


MAGHERAMORE WIND FARM

FIGURE 2.13

CRANE HARDSTANDING GENERAL ARRANGEMENT

REF	DESCRIPTION	AREA (m ²)	MAINTENANCE
P1	MAIN HARDSTANDING	800.0	PERMANENT
T1	BLADE LAYDOWN SUPPORTS	90.0	TEMPORARY
T2	ASSIST CRANE AREA	300.0	TEMPORARY
T3	BOOM SUPPORT	36.0	TEMPORARY
T4	ROTOR ASSEMBLY AREA	100.0	TEMPORARY
T5	TEMPORARY ACCESS	104.0	TEMPORARY



KEY:

- PERMANENT WORKS
- TEMPORARY WORKS
- EXTERNAL TRANSFORMER AND SWITCHGEAR ENCLOSURE
- AREA TO BE FREE FROM TOPOGRAPHICAL CONSTRAINTS
- MAINTENANCE ACCESS TRACK

NOTES:

1. ALL DIMENSIONS IN METRES.
2. HARDSTANDING ARRANGEMENT SUBJECT TO CHANGE DEPENDENT ON SPECIFIC WIND TURBINE MODEL SELECTED FOR CONSTRUCTION.
3. ALL HARDSTANDINGS TO BE CONSTRUCTED ON SUITABLE FOUNDATION MATERIAL.
4. ALL HARDSTANDINGS TO BE FINISHED WITH CRUSHED ROCK, FORMING A FREE DRAINING SURFACE.
5. TRACK ADJACENT TO CRANE HARDSTANDING TO BE DESIGNED TO ACCEPT CRANE OUTRIGGER LOADING.
6. THE PRELIMINARY CRANE HARDSTANDING LAYOUT HAS BEEN DEVELOPED TO ACCOMMODATE EITHER A SINGLE BLADE LIFT OR FULL ROTOR LIFT.

LAYOUT DWG N/A T-LAYOUT NO. N/A

DRAWING NUMBER
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SCALE - 1:500 @ A3

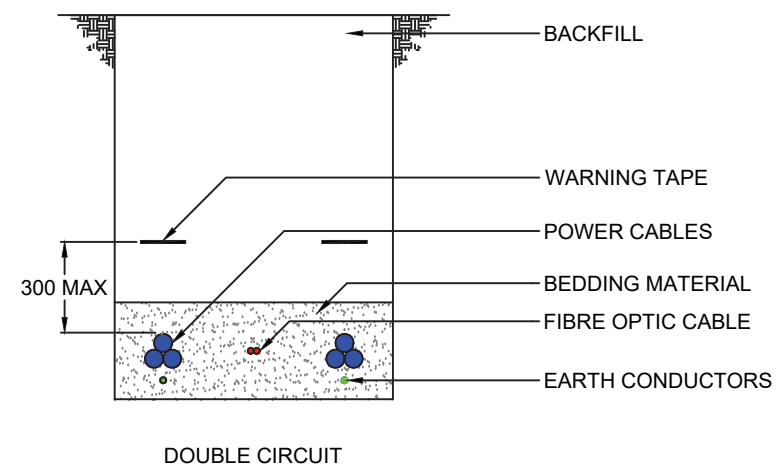
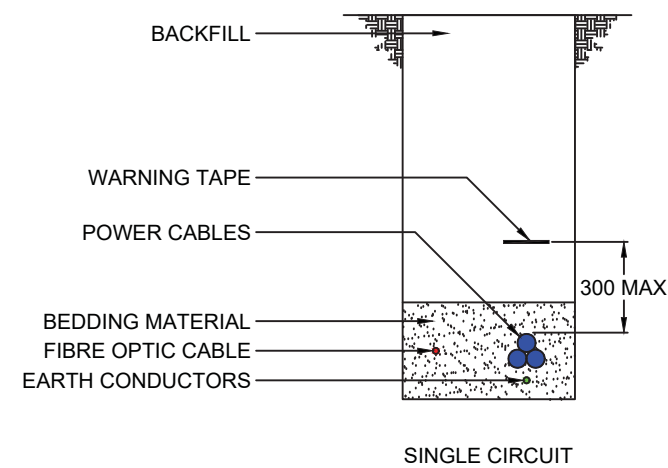
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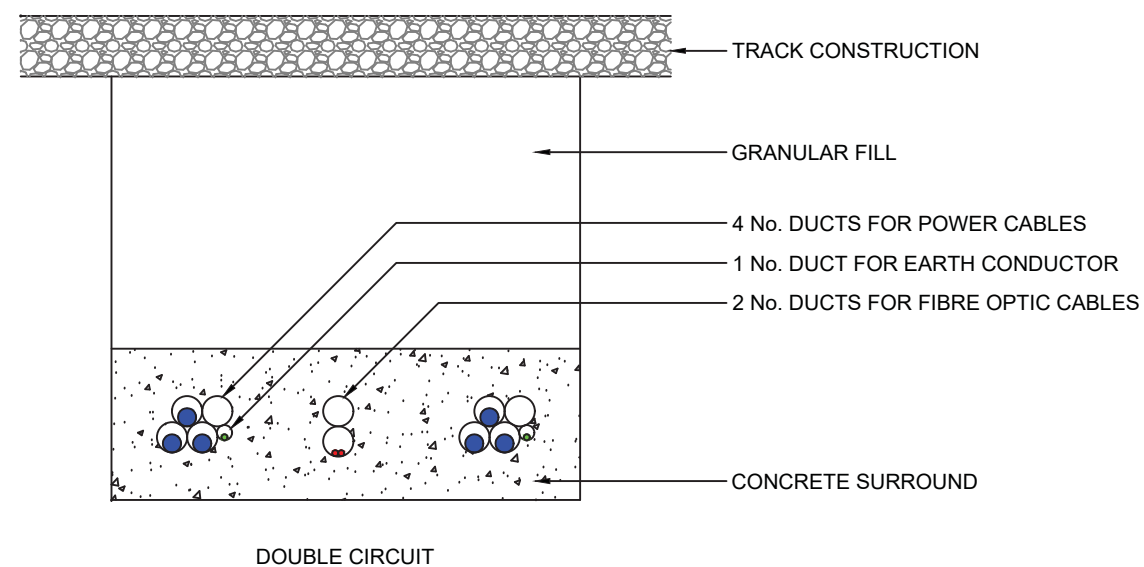
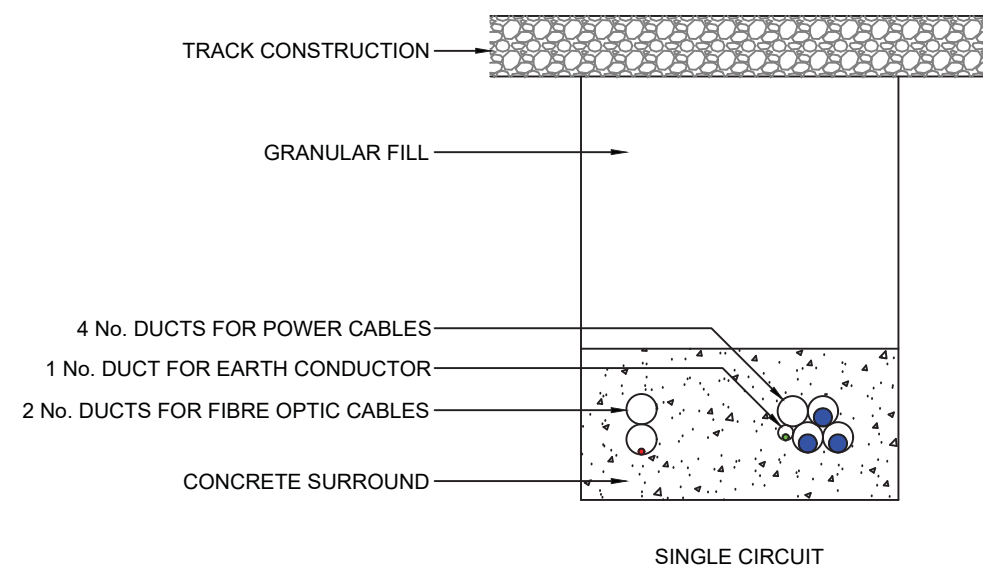
**MAGHERAMORE
WIND FARM**

FIGURE 2.14

**CROSS SECTION
OF UNDERGROUND
CABLE TRENCH**



TYPICAL CABLE TRENCHES



TYPICAL TRACK CROSSINGS

NOTES:

1. THIS DRAWING IS INDICATIVE ONLY AND IS SUBJECT TO CHANGE AT THE DETAILED DESIGN STAGE.
2. ALL DIMENSIONS IN mm.
3. CABLES MAY BE INSTALLED BY CABLE PLOUGH FOR DISTANCES GREATER THAN 1km.

LAYOUT DWG N/A T-LAYOUT NO. N/A

DRAWING NUMBER
03426D2305-01

SCALE - NOT TO SCALE

ENVIRONMENTAL STATEMENT

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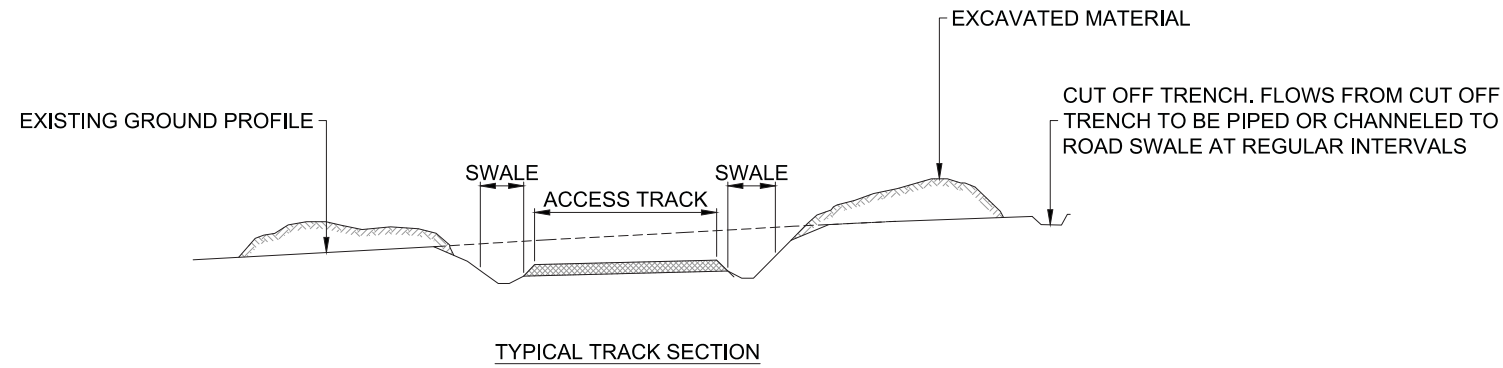
MAGHERAMORE WIND FARM

FIGURE 2.15

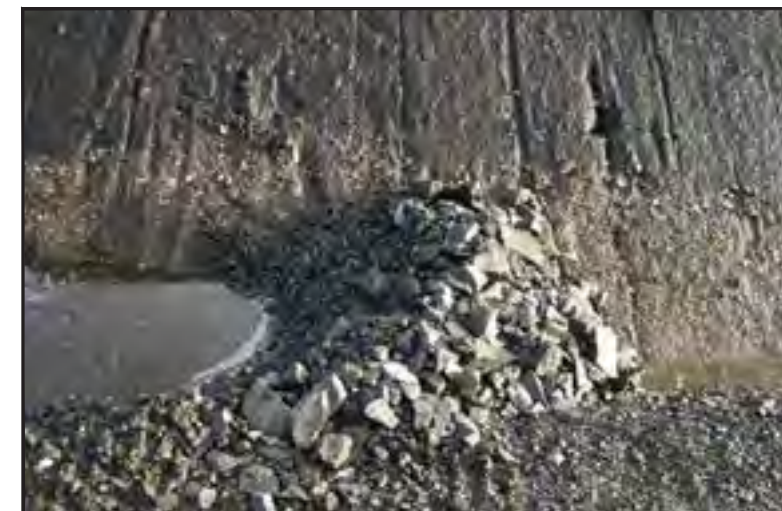
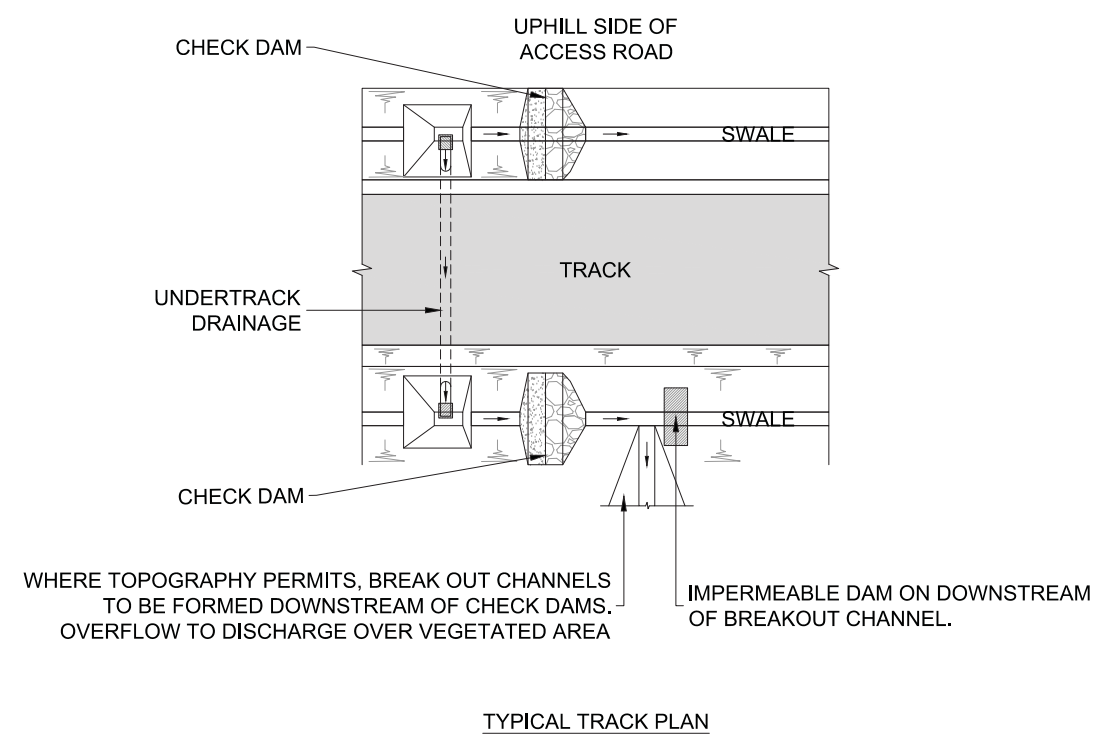
TYPICAL DRAINAGE DETAILS

NOTES:

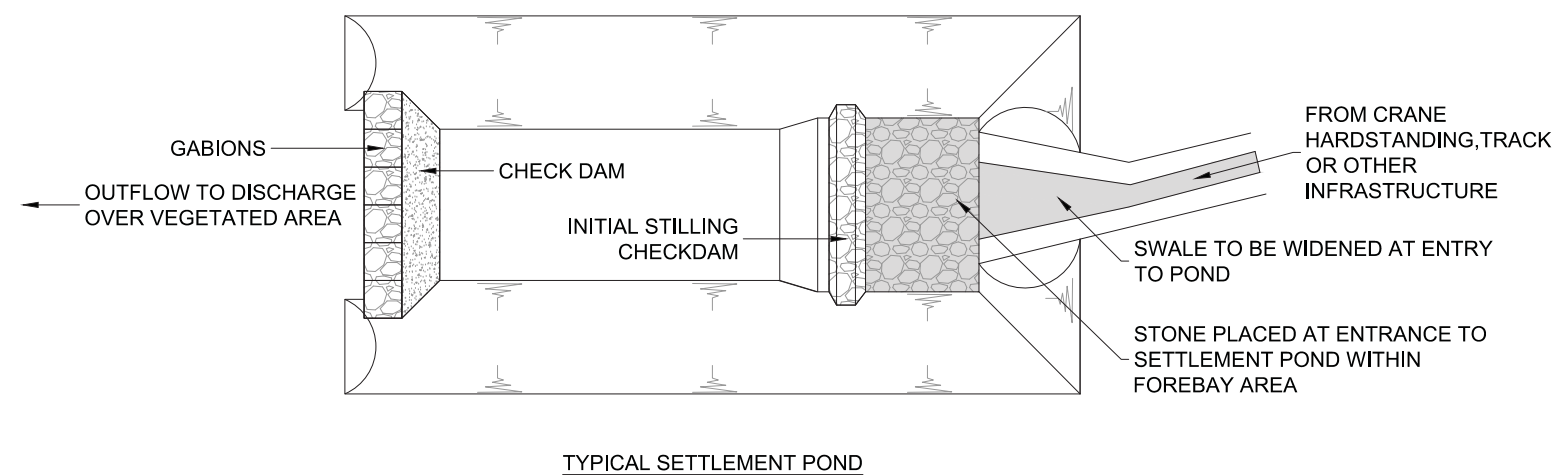
1. SUDS SYSTEM TO BE CONSTRUCTED PRIOR TO, OR AT THE SAME TIME AS THE ACCESS ROAD.
2. SUSTAINABLE PREVENTION MEASURES SHOULD BE IN PLACE AT ALL TIMES TO PREVENT THE CONVEYANCE OF SILTS TO RECEIVING WATERCOURSE.
3. DRAINAGE SWALES TO BE EXCAVATED ADJACENT TO THE ACCESS TRACK. REGULAR CROSS DRAINS TO BE LOCATED ALONG ACCESS TRACKS TO PREVENT EXCESSIVE VOLUMES OF WATER COLLECTING IN THE SWALES.
4. ROADSIDE SWALES TO BE SHALLOW WITH MODERATE GRADIENTS TO PREVENT SCOURING. IN STEEP AREAS CHECK DAMS WILL BE DESIGNED TO REDUCE FLOW RATE AND PROVIDE SOURCE CONTROL SILT CONTAINMENT. WHERE NECESSARY THESE WILL BE DESIGNED IN CONJUNCTION WITH SETTLEMENT PONDS AND/OR CROSS DRAINS.
5. BUILD UP OF SILT LEVELS AT CHECK DAMS TO BE REMOVED AND DISPOSED OF APPROPRIATELY. SILT LEVELS AT CHECK DAMS TO BE VISUALLY INSPECTED AS PART OF AN ONGOING MAINTENANCE PROGRAMME.
6. SPACING AND FREQUENCY OF CHECK DAMS WILL BE DEPENDENT UPON LONGITUDINAL GRADIENT OF SWALE.



TYPICAL UNDER TRACK DRAINAGE



TYPICAL CHECK DAM



TYPICAL SETTLEMENT POND

LAYOUT DWG N/A T-LAYOUT NO. N/A

DRAWING NUMBER **03426D2306-01**

SCALE - NOT TO SCALE

ENVIRONMENTAL STATEMENT

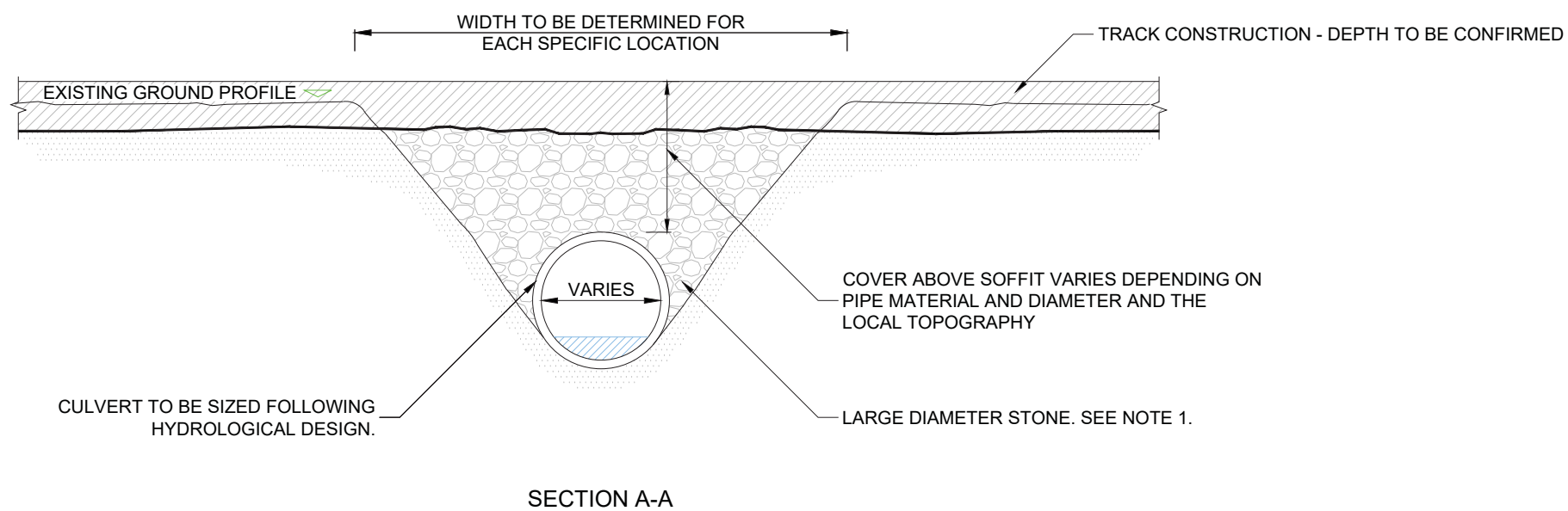
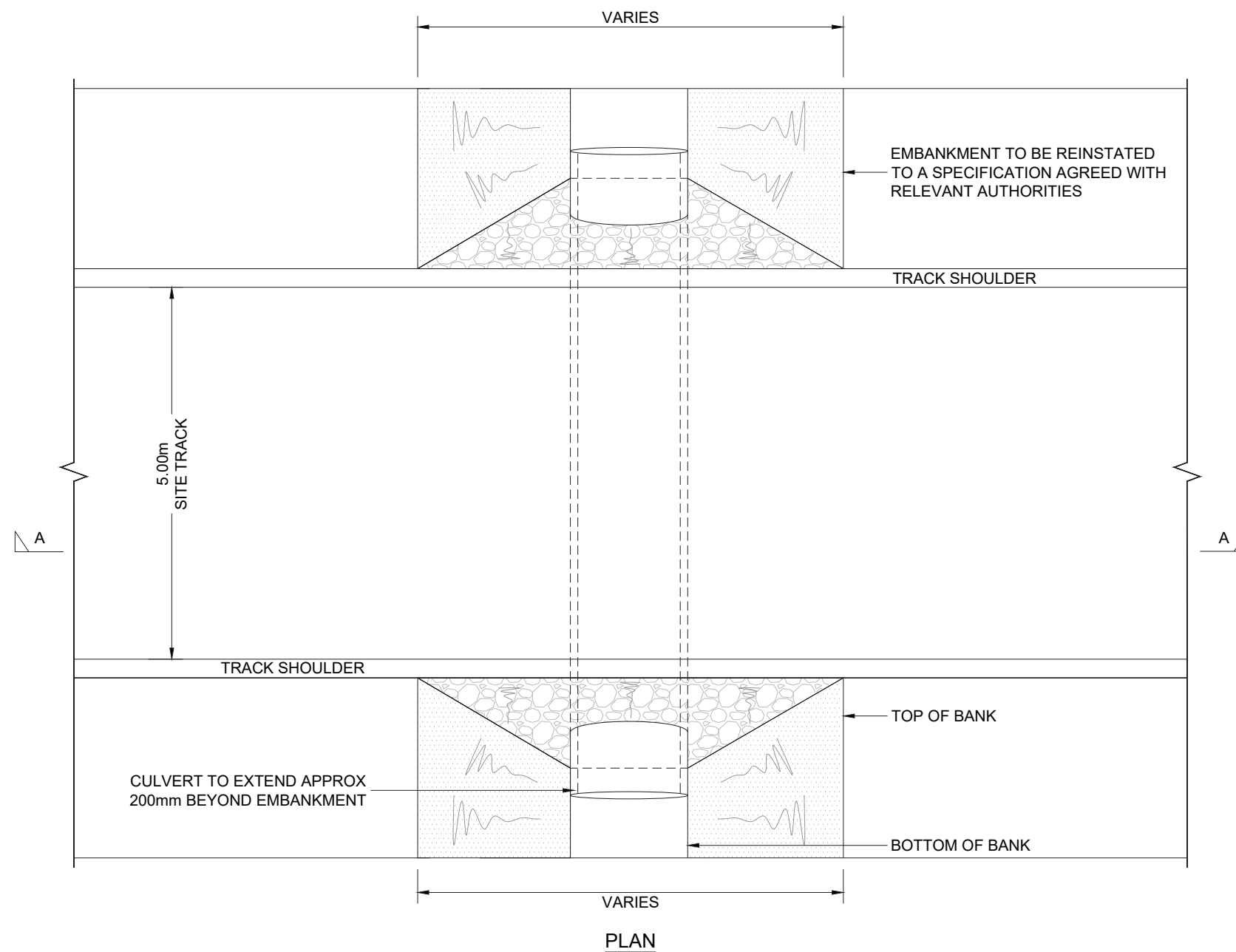
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**MAGHERAMORE
WIND FARM**

FIGURE 2.16

**TYPICAL WATER
CROSSING DESIGN**



NOTES:

1. FINAL SPECIFICATION AND INSTALLATION METHOD TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE RELEVANT AUTHORITIES.
2. CULVERT TYPE AND SIZING TO BE DEFINED DURING DESIGN OF ON-SITE DRAINAGE SYSTEMS.
3. INFILL MATERIAL TO BE CLEAN CRUSHED ROCK.

LAYOUT DWG N/A T-LAYOUT NO. N/A

DRAWING NUMBER
03426D2210-01

SCALE - NOT TO SCALE

ENVIRONMENTAL STATEMENT

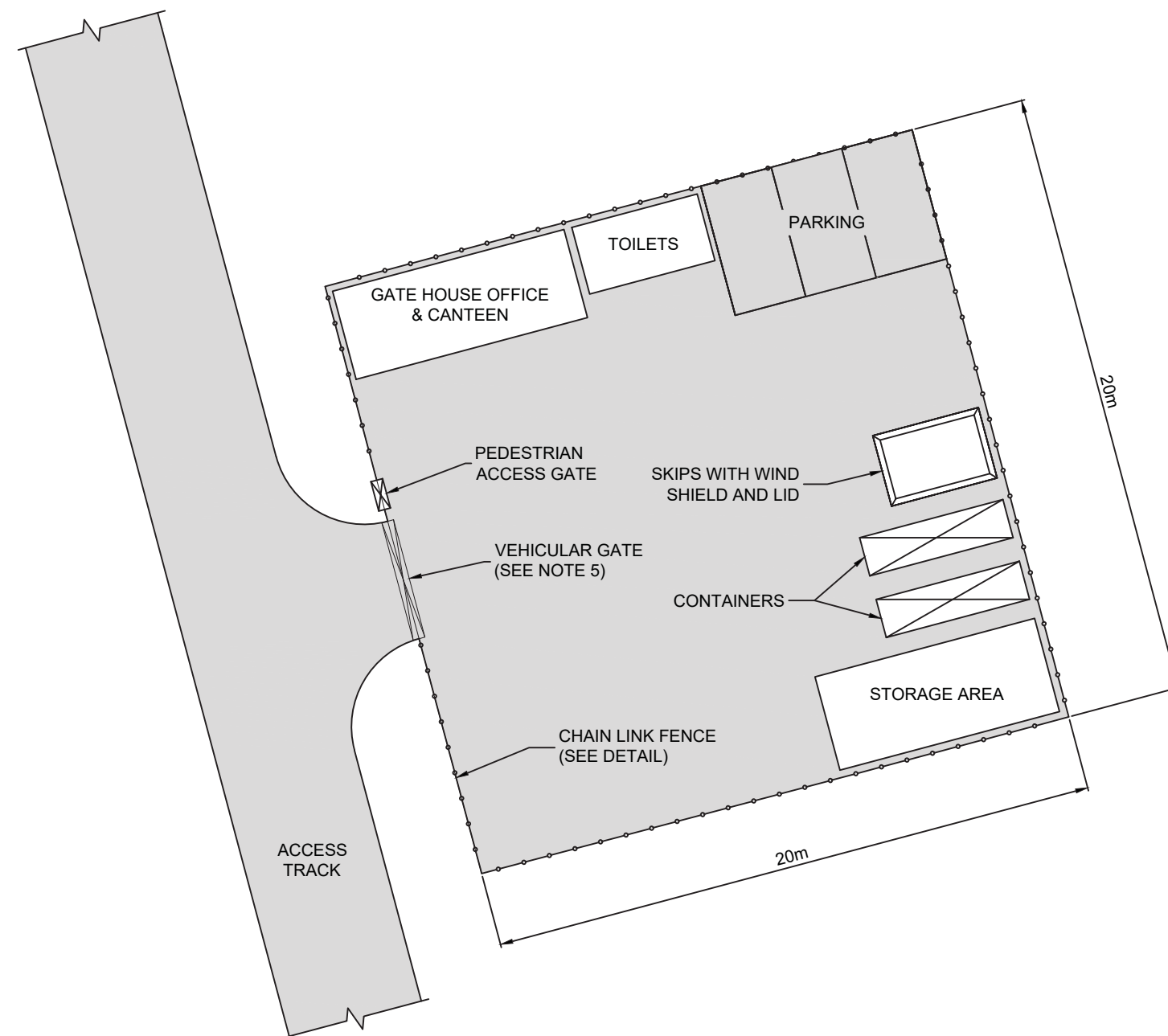
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MAGHERAMORE WIND FARM

FIGURE 2.17

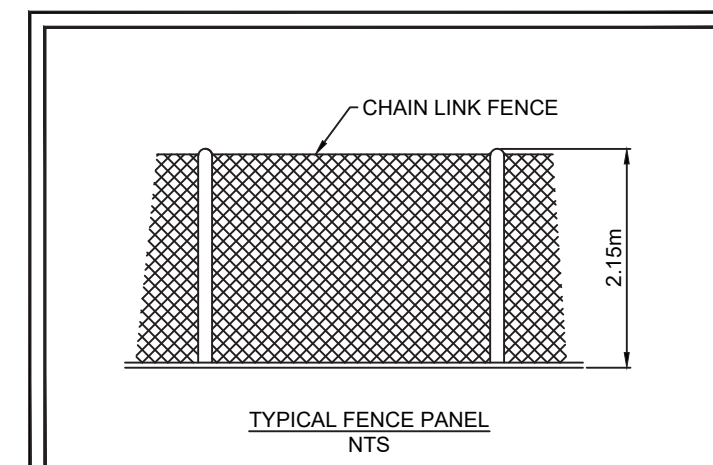
ENABLING WORKS COMPOUND LAYOUT PLAN



PLAN
SCALE 1:200

NOTES

1. DO NOT SCALE FROM THIS DRAWING.
2. SIZE, NUMBER AND LOCATION OF COMPOUND EQUIPMENT AND FACILITIES ARE INDICATIVE ONLY AND SUBJECT TO CHANGE TO SUIT SITE CONDITIONS.
3. COMPOUND HARDSTANDING TO BE REMOVED FOLLOWING CONSTRUCTION WORKS BEING COMPLETED AND GROUND REINSTATED TO ORIGINAL CONDITION.
4. APPROPRIATE MEASURES FOR SEPARATION OF OILS AND TREATMENT OF FOUL WATER TO BE AGREED WITH THE RELEVANT AUTHORITIES
5. VEHICULAR GATES TO BE 6m WIDE CONSISTING OF 2 x 3m LEAVES.
6. COMPOUND HARDSTANDING TO CONSIST OF COMPACTED STONE OVER A LAYER OF GEOTEXTILE TO PROVIDE A CLEAN, FIRM, LEVEL AND FREE DRAINING SURFACE SUITABLE FOR CABINS/HEAVY TRAFFIC.
7. FOLLOWING MOBILISATION OF THE MAIN CONSTRUCTION COMPOUND, ALL STRUCTURES, WITH EXCEPTION OF THE GATE HOUSE OFFICE, SHALL BE REMOVED AND THE HARDSTANDING AREA WILL BE USED AS A TEMPORARY CAR PARK FOR CONTRACTORS STAFF



LAYOUT DWG N/A T-LAYOUT NO. N/A

DRAWING NUMBER
03426D2224-01

SCALE - 1:200 @ A3

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3



Design Evolution & Alternatives



MAGHERAMORE WIND FARM

FIGURE 3.1 TURBINE LAYOUT EVOLUTION

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2019 LICENCE NUMBER 242.

-  Turbine Location
-  Site Boundary

Layout 1 - PNIRmgh007
7 turbines x 112 m rotor diameter

Layout 2 - PNIRmgh020
6 turbines x 112 m rotor diameter



LAYOUT DWG: N/A T-LAYOUT NO.: AS SHOWN

DRAWING NUMBER: **03426D0002-02**

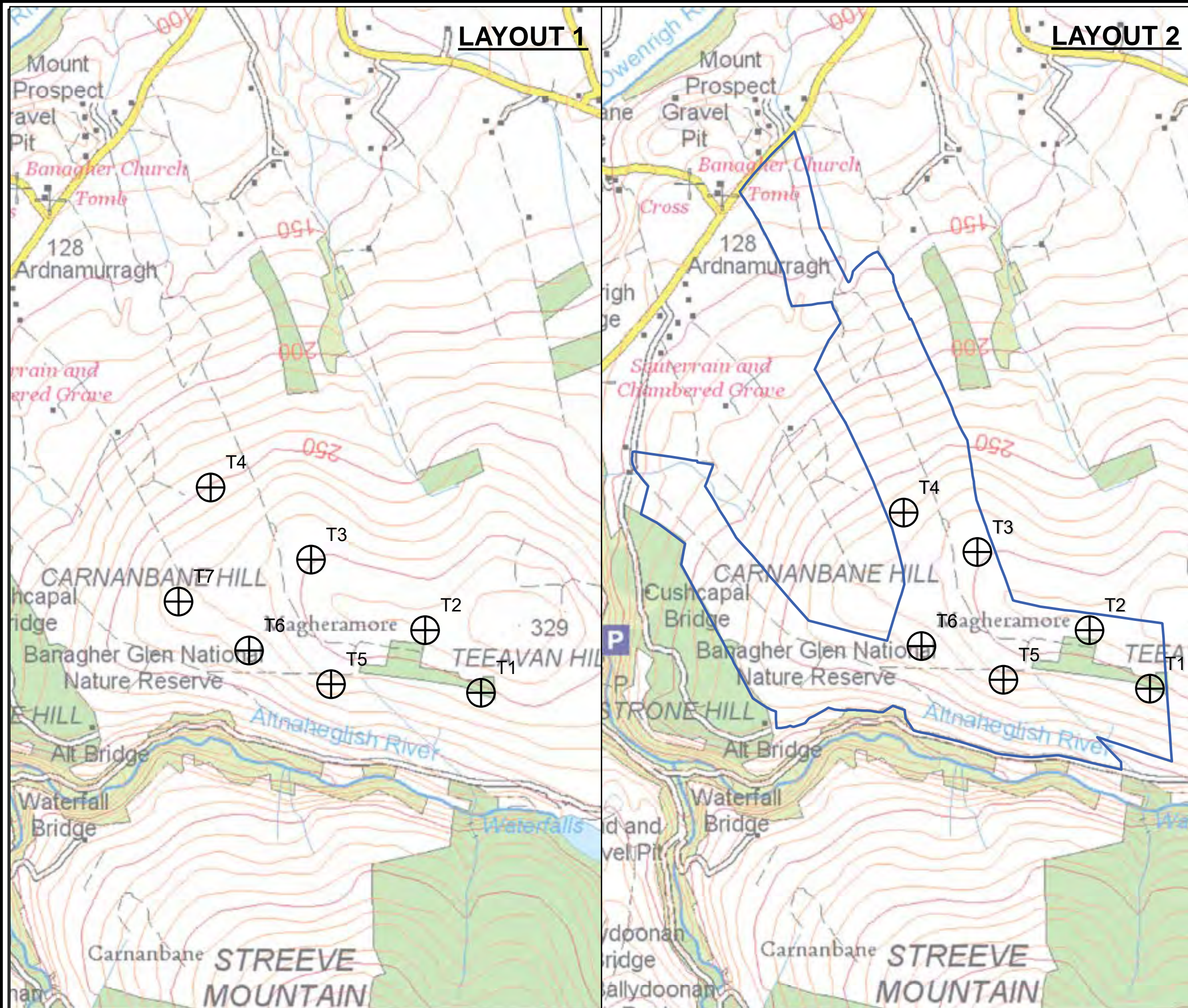
SCALE - 1:15,000 @ A3

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LAYOUT 1

LAYOUT 2



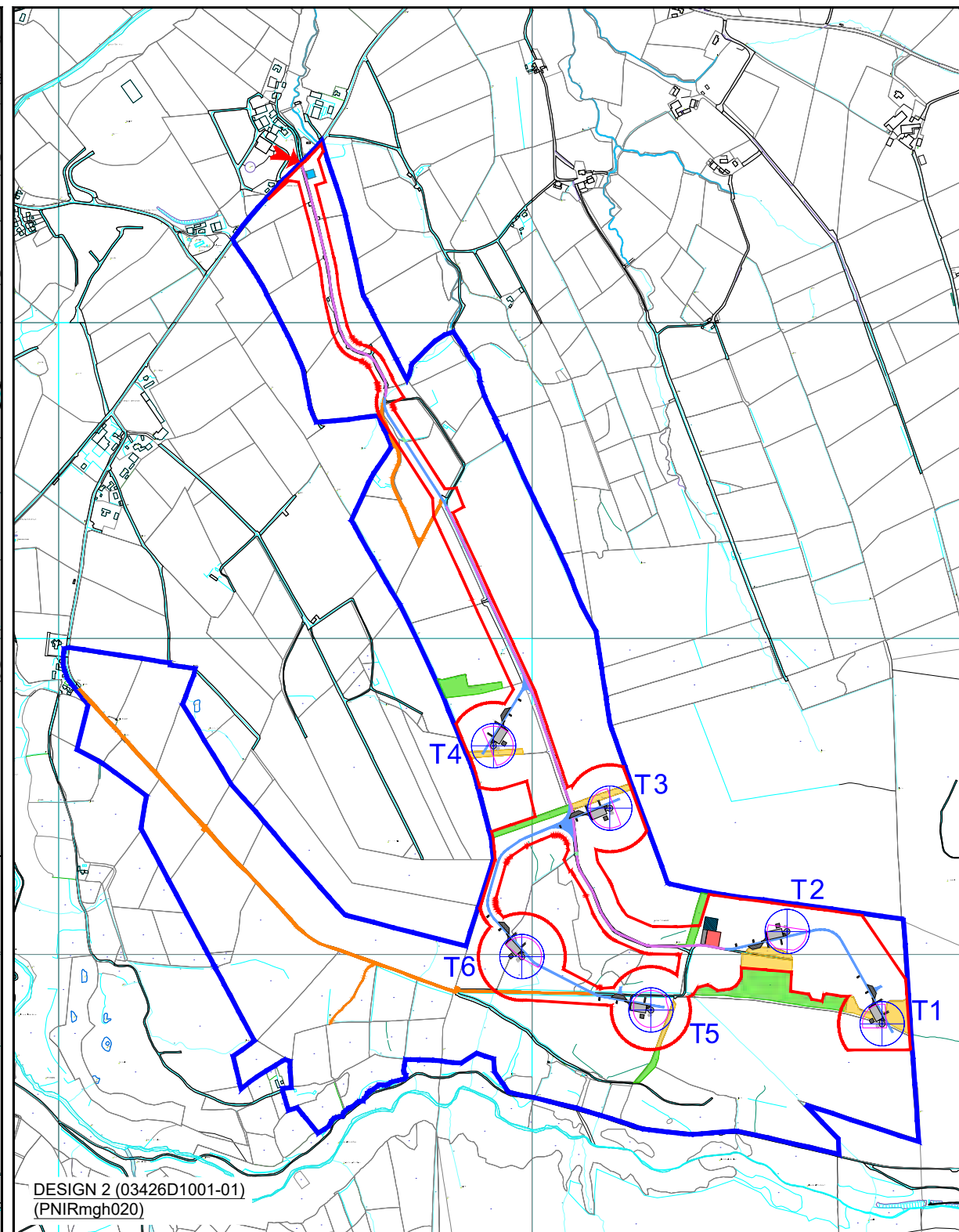
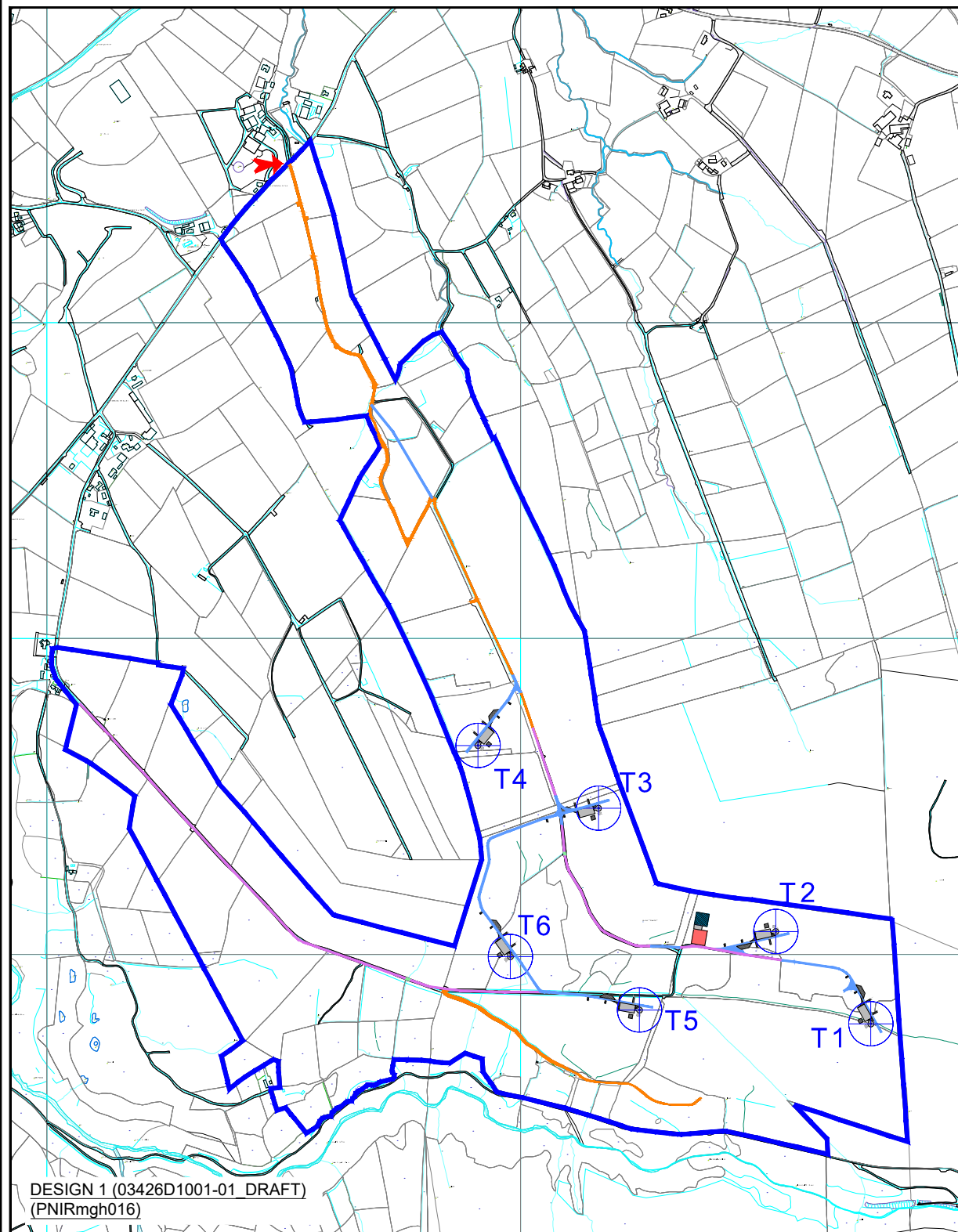


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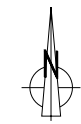
FIGURE 3.2

INFRASTRUCTURE DESIGN EVOLUTION

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- KEY**
- PLANNING APPLICATION BOUNDARY
 - LAND UNDER APPLICANT CONTROL
 - WIND TURBINE LOCATION
 - TURBINE MICROSITING
 - NEW SITE TRACKS
 - UPGRADED SITE TRACKS
 - EXISTING TRACKS
 - WATERCOURSE CROSSING
 - CRANE HARDSTANDING AREA
 - PERMANENT
 - TEMPORARY
 - TEMPORARY ENABLING CONSTRUCTION COMPOUND
 - TEMPORARY CONSTRUCTION COMPOUND/ ENERGY STORAGE AREA.
 - CONTROL BUILDING & SUBSTATION COMPOUND WITH PERMANENT HARDSTANDING AREA
 - FORESTRY TO BE RETAINED
 - FORESTRY TO BE REMOVED
 - SITE ENTRANCE LOCATION



LAYOUT DWG AS SHOWN T-LAYOUT NO. AS SHOWN

DRAWING NUMBER
03426D1002-01

SCALE - 1:15,000 @ A3

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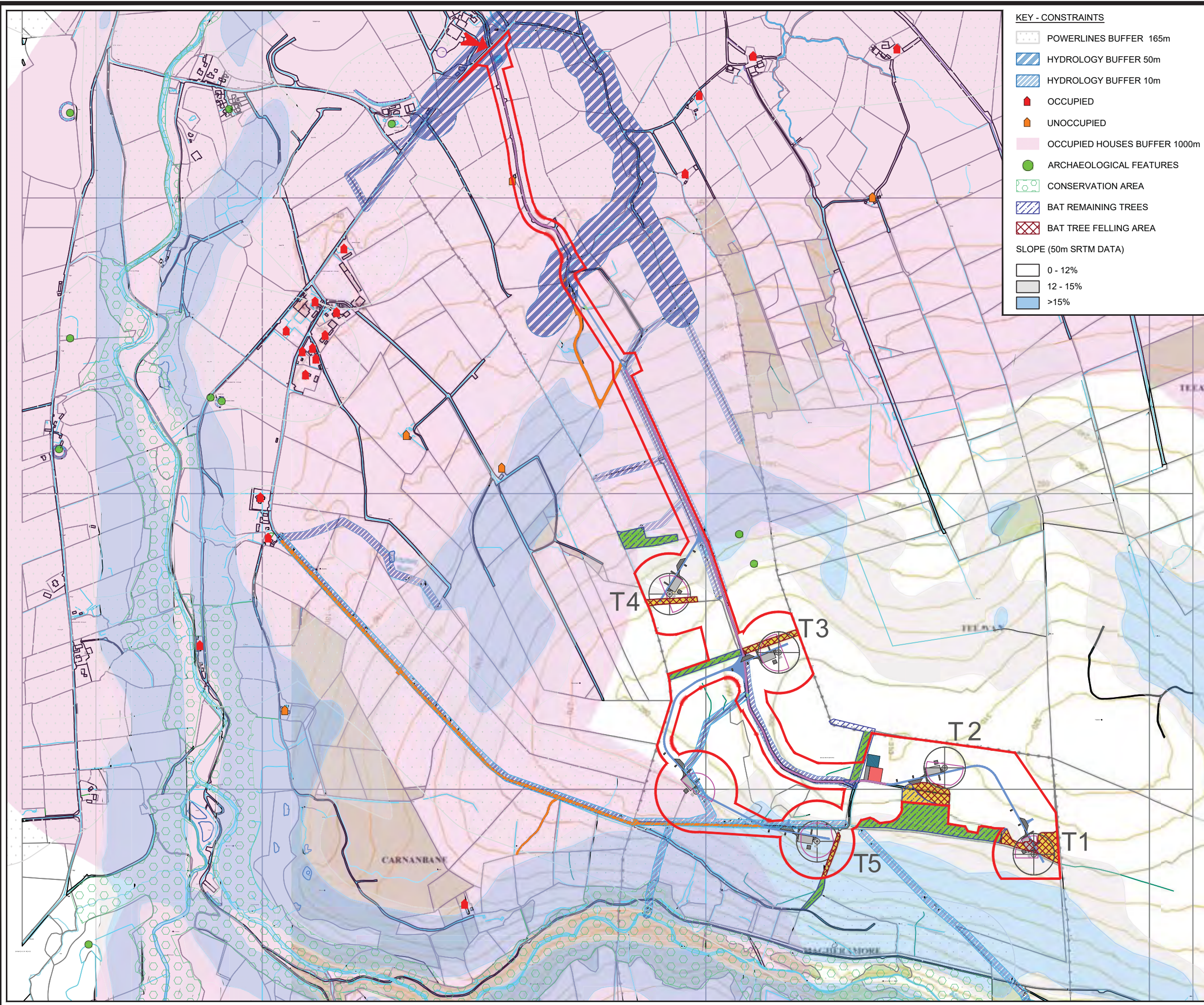
MAGHERAMORE WIND FARM

FIGURE 3.3

COMBINED CONSTRAINTS & INFRASTRUCTURE

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- KEY - CONSTRAINTS**
- POWERLINES BUFFER 165m
 - HYDROLOGY BUFFER 50m
 - HYDROLOGY BUFFER 10m
 - OCCUPIED
 - UNOCCUPIED
 - OCCUPIED HOUSES BUFFER 1000m
 - ARCHAEOLOGICAL FEATURES
 - CONSERVATION AREA
 - BAT REMAINING TREES
 - BAT TREE FELLING AREA
 - SLOPE (50m SRTM DATA)
 - 0 - 12%
 - 12 - 15%
 - >15%
- KEY - INFRASTRUCTURE**
- PLANNING APPLICATION BOUNDARY
 - WIND TURBINE LOCATION
 - TURBINE MICROSITING
 - NEW SITE TRACKS
 - UPGRADED SITE TRACKS
 - EXISTING TRACKS
 - WATERCOURSE CROSSING
 - CRANE HARDSTANDING AREA
 - PERMANENT
 - TEMPORARY
 - TEMPORARY ENABLING CONSTRUCTION COMPOUND
 - TEMPORARY CONSTRUCTION COMPOUND/ ENERGY STORAGE AREA
 - CONTROL BUILDING & SUBSTATION COMPOUND WITH PERMANENT HARDSTANDING AREA
 - FORESTRY TO BE RETAINED
 - FORESTRY TO BE REMOVED
 - SITE ENTRANCE LOCATION



LAYOUT DWG 03426D0001-06 T-LAYOUT NO. PNIRmgh020

DRAWING NUMBER
03426D2233-01

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4

Landscape & Visual

PURPOSE AND UNDERSTANDING OF THESE FIGURES:

These map-based Figures provide information on the baseline conditions within the 30 km Study Area that has been used for this Landscape and Visual Impact Assessment. They must be viewed in conjunction with the analysis of landscape and visual effects contained in Chapter 4 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in Technical Appendix 4.2.

For ease of reference, the Reverse Zone of Theoretical Visibility (ZTV) is shown on Figures 4.2 and 4.4. The shaded areas indicate parts of the Study Area which would experience no blade tip visibility of the Development. The same is illustrated in Figure 4.10: Reverse Blade Tip ZTV and the means of understanding ZTV diagrams are further explained on the cover sheet preceding the ZTV Figures 4.6 – 4.12.

Figure 4.1 collates key information from other LVIA Figures. It provides an overview of the key landscape and visual characteristics of the Study Area. More detailed information on the baseline conditions in the Study Area are provided on the other Figures in this section.

Figure 4.2 illustrates the location of statutory landscape designations defined by planning policy and Development Plans. These provide evidence of the value placed on various parts of the Study Area for landscape and/ or visual characteristics and which may be subject to particular development control or planning policies. Non-statutory classifications, such as tourist routes and visitor attractions within the Study Area are also mapped on this figure. These give an indication of the wider value of the Study Area to society although these classifications may not equate to any statutory protection.

Landscape Character Areas are presented separately on Figure 4.3. These are defined by a published Landscape Character Assessment for Northern Ireland which defines areas of distinct, recognisable or common character. LCAs are further analysed by site survey and, where they are not deemed to be of relevance to this Development, this is indicated on the figure.

Figure 4.4 illustrates the location of Provisional Viewpoints that were used to gain an initial understanding of the visual characteristics of the Development within the Study Area. It also illustrates the location of final Viewpoints that were chosen to provide a representative sample of viewers (receptors) and types of views of the Development across the Study Area and, most importantly, to demonstrate potential views of the Development rather than to show the screening effect of landscape features. A full and detailed description of the viewpoint selection process is provided in Technical Appendix 4.4 and should be referred to in conjunction with this figure.

Figure 4.5 illustrates the locations of other wind farms and single turbines that are considered to form the 'Cumulative Baseline' for this LVIA which comprises existing, consented and proposed (in-planning) wind farms which are likely to be visible from the selected Viewpoints (see Figures 4.13 – 4.33). A full description of the Cumulative Baseline is provided in Technical Appendix 4.5.



MAGHERAMORE WIND FARM

FIGURES 4.1 - 4.5

BASELINE ASSESSMENT FIGURES

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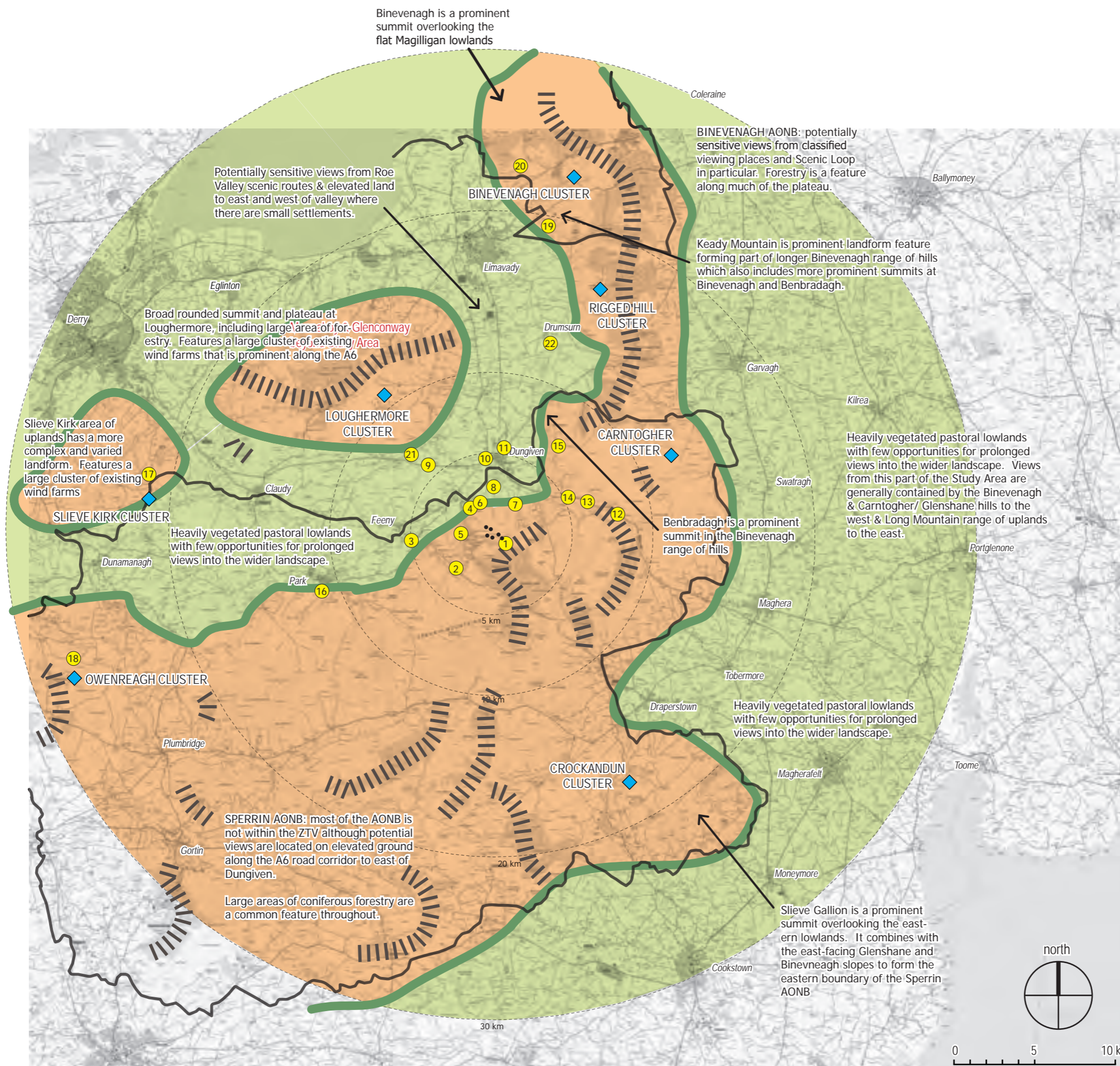
LANDSCAPE AND VISUAL
IMPACT ASSESSMENT



MAGHERAMORE WIND FARM

FIGURE 4.1

L VIA STUDY AREA ANALYSIS



KEY

- Magheramore proposed turbines
- Shortlisted Viewpoints (see Figure 4.3 for detail)
- Broad division between upland and lowland parts of the Study Area
- Large areas of coniferous forestry
- Clusters of existing & consented wind farms (see Figure 4.5 for detail)
- Areas of Outstanding Natural Beauty

NOTE: This Figure will be viewed in conjunction with the analysis of landscape and visual effects contained in Chapter 4 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in Technical Appendix 4.2.

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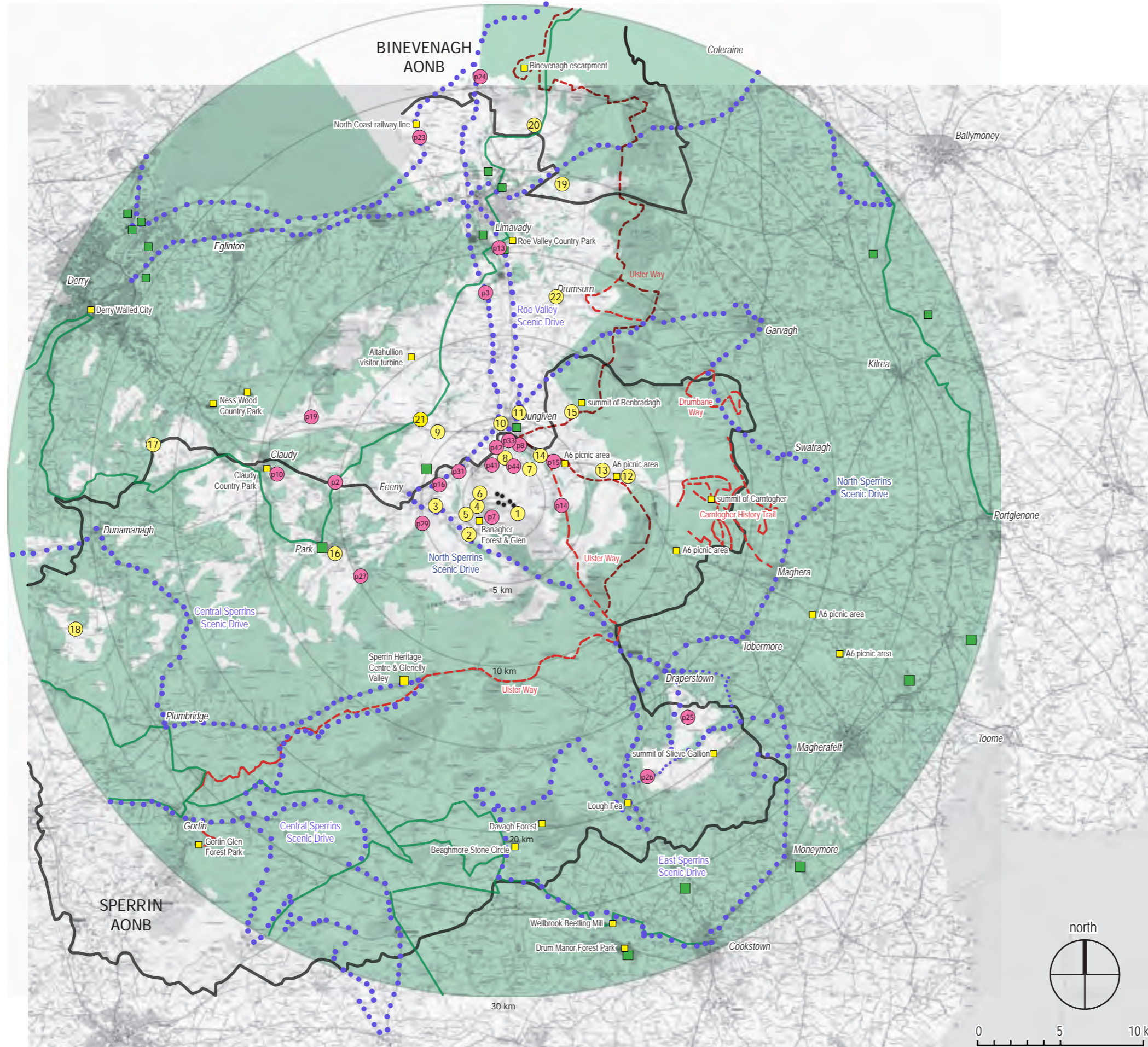
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MAGHERAMORE WIND FARM

FIGURE 4.2

LANDSCAPE DESIGNATIONS & CLASSIFICATIONS



KEY

-  Magheramore proposed turbines
-  Shortlisted Viewpoints (see Figure 4.4 for detail)
-  Reverse Zone of Theoretical Visibility (see Figure 4.10 for detail)
- Statutory Designations:**
-  Areas of Outstanding Natural Beauty
-  Registered Parks, Gardens & Demesnes within ZTV
- Non-Statutory Classifications:**
-  Scenic drives
-  Rights of way
-  National Cycle Network
-  Visitor attractions & destinations

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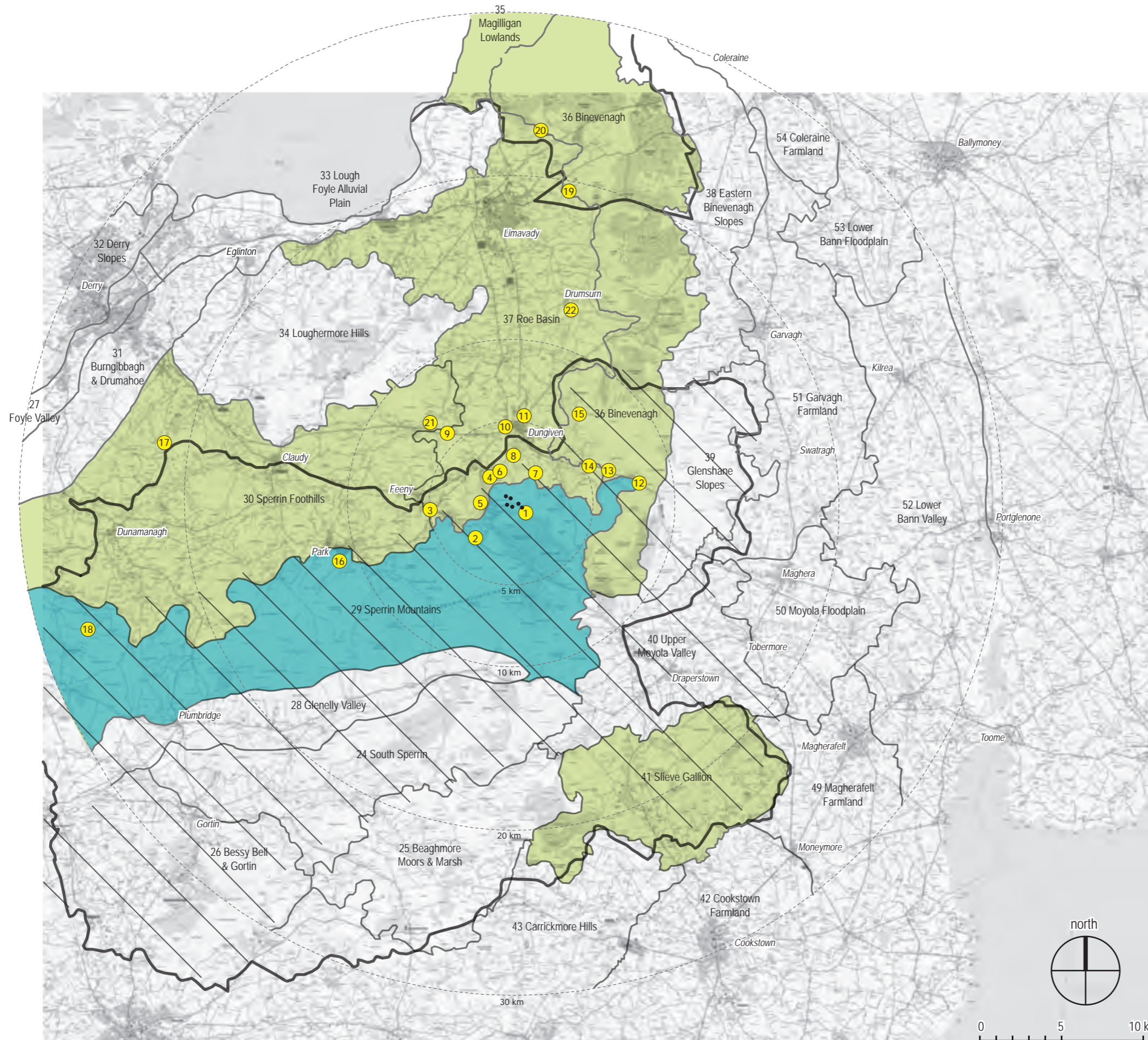
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MAGHERAMORE WIND FARM

FIGURE 4.3

LANDSCAPE CHARACTER AREAS



KEY

- Magheramore proposed turbines
- Viewpoint locations (see Figure 4.4 for more detail)
- Landscape Character Areas containing the Development
- Other LCAs assessed in the LVIA (see LVIA Chapter 4 & Tech. Appendix 4.3)
- LCAs not assessed in detail (see LVIA Chapter 4 & Tech. Appendix 4.3)
- Regional Landscape Character Area 7: Sperrin (containing the Development)
- Areas of Outstanding Natural Beauty

Turbine dimensions illustrated:
 max. tip height above ground level 149.9 m
 hub height 94 m
 rotor diameter 112 m

NOTE: This Figure must be viewed in conjunction with the analysis of landscape and visual effects contained in Chapter 4 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in Technical Appendix 4.2.

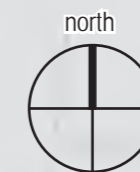
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NOTE: This Figure must be viewed in conjunction with the analysis of landscape and visual effects contained in Chapter 4 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in Technical Appendix 4.2.

Turbine dimensions illustrated: max. tip height above ground level 149.9 m; hub height 94 m; rotor diameter 112 m

INSET: Shortlisted Viewpoint Categories

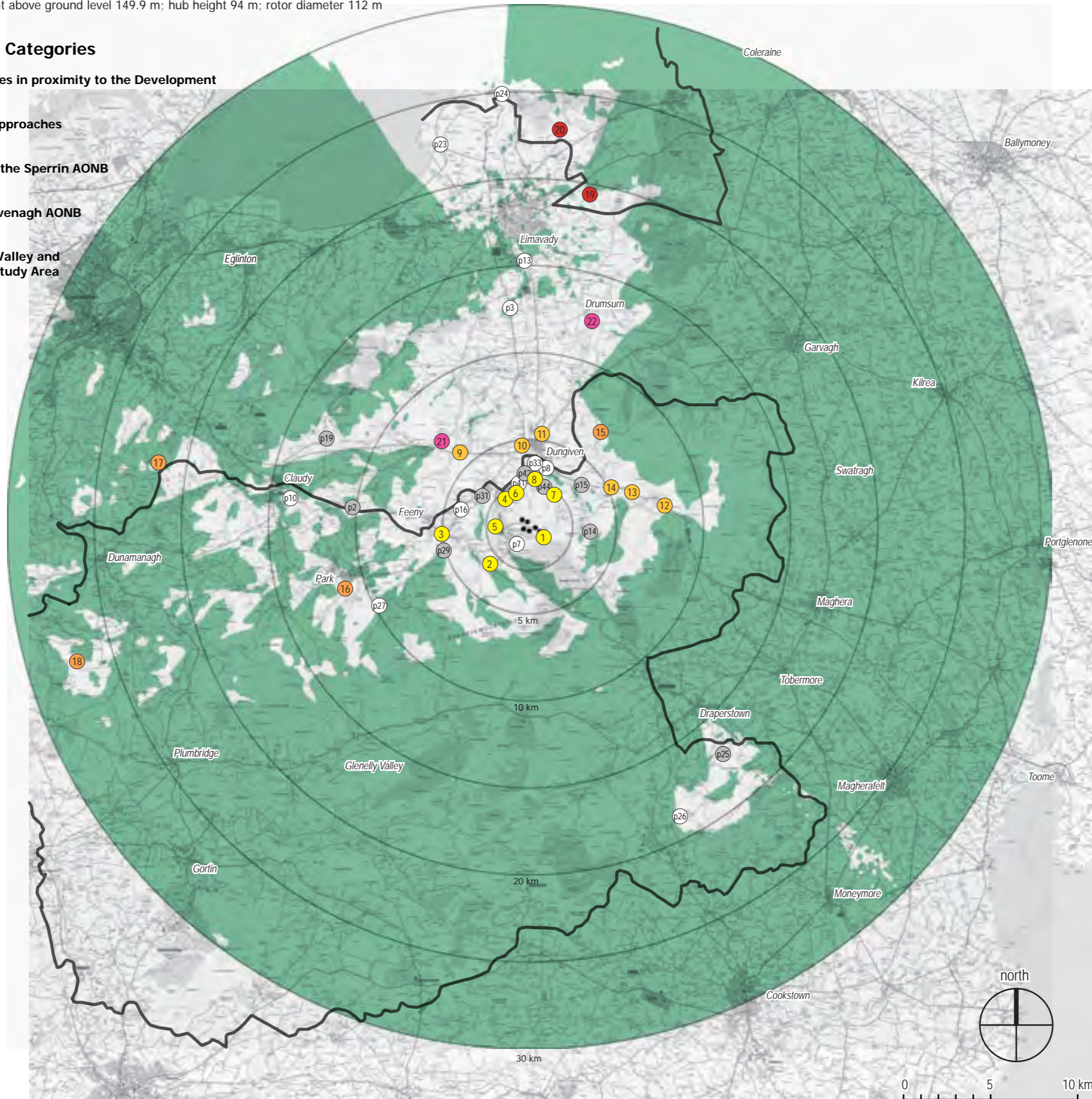
Category A: Rural roads and amenity sites in proximity to the Development
Viewpoints 1 - 8

Category B: Views from Dungiven and approaches
Viewpoints 9 - 14

Category C: Elevated views from within the Sperrin AONB
Viewpoints 15 - 18

Category D: Views from within the Binevenagh AONB
Viewpoints 19 - 20

Category E: Views overlooking the Roe Valley and the landscape in the north west of the Study Area
Viewpoints 21 - 22



MAGHERAMORE WIND FARM

FIGURE 4.4

VIEWPOINT SELECTION

KEY

- Magheramore proposed turbines
- Shortlisted viewpoint location, Category A (see 'Inset')
- Shortlisted viewpoint location, Category B (see 'Inset')
- Shortlisted viewpoint location, Category C (see 'Inset')
- Shortlisted viewpoint location, Category D (see 'Inset')
- Shortlisted viewpoint location, Category E (see 'Inset')
- Preliminary Viewpoint Location not shortlisted
- Preliminary Viewpoint Location not shortlisted due to absence of view
- Reverse Zone of Theoretical Visibility (see Figure 4.10 for details)
- Areas of Outstanding Natural Beauty

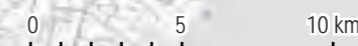
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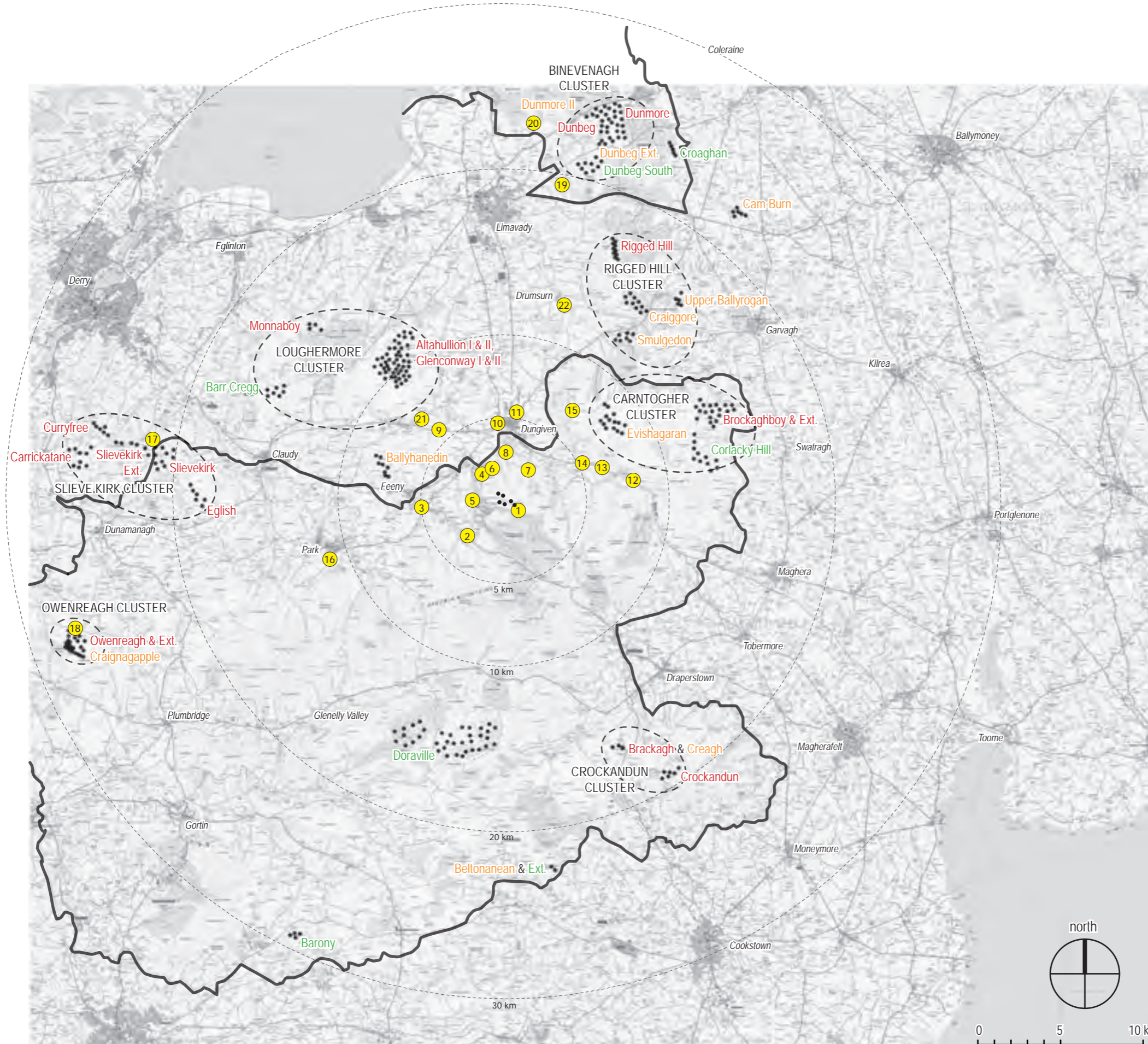








MAGHERAMORE WIND FARM

FIGURE 4.5

CUMULATIVE BASELINE



KEY

-  Magheramore proposed turbines
-  Viewpoint locations (see Figure 4.4 for details)
-  Other wind farms within 30 km Study Area:
Existing shown in red;
Consented shown in orange;
Proposed shown in green
-  Areas of Outstanding Natural Beauty

Turbine dimensions illustrated:
max. tip height above ground level 149.9 m
hub height 94 m
rotor diameter 112 m

NOTE: This Figure must be viewed in conjunction with the analysis of landscape and visual effects contained in Chapter 4 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in Technical Appendix 4.2.

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PURPOSE AND UNDERSTANDING OF THESE FIGURES:

These map-based Figures provide information on the baseline conditions within the 30 km Study Area that has been used for this Landscape and Visual Impact Assessment. They must be viewed in conjunction with the analysis of landscape and visual effects contained in Chapter 4 of the Environmental Statement and the detailed methodology for the LVIA that is described in Technical Appendix 4.2.

A Zone of Theoretical Visibility (ZTV) is a map-based diagram showing where the Development and other wind farms in the Cumulative Baseline would theoretically be visible from within the Study Area. They are created using computer-generated contour data and are useful in providing an initial indication of visibility within the Study Area that allows for more detailed assessment in the field. They do not illustrate actual visibility because they do not take account of above-ground features such as vegetation or buildings, or contour variations between 50 m intervals. A number of ZTV scenarios are assessed in this LVIA and categories of theoretical visibility are indicated using different colours, for example, areas with theoretical visibility of all the proposed turbines would be indicated by one colour, and areas with visibility of lesser numbers of turbines would be indicated by contrasting colours. The coverage of these areas is expressed as a percentage of the overall Study Area.

Blade tip visibility illustrates any parts of the Study Area where at least one blade tip would theoretically be visible without taking account of screening provided by contour variations or land cover elements such as trees and hedgerows. It shows the highest potential levels of theoretical visibility but not necessarily the most realistic because blade tips may be counted even where they protrude only a small amount above a skyline and this type of visibility will change continuously as the turbines rotate. This approach is in accordance with the SNH recommendation to err on the side of over-representation of potential effects.

Hub height ZTV diagrams represent a more realistic illustration because they show theoretical visibility of all points of the turbines to the hub/ nacelle, and therefore also include the upper parts of the turbine blades as a minimum.

Reverse ZTV diagrams are used as a clear means of illustrating the parts of the Study Area where no turbines would be visible. Both blade tip and hub-height diagrams are presented.



MAGHERAMORE WIND FARM

FIGURES 4.6 - 4.12

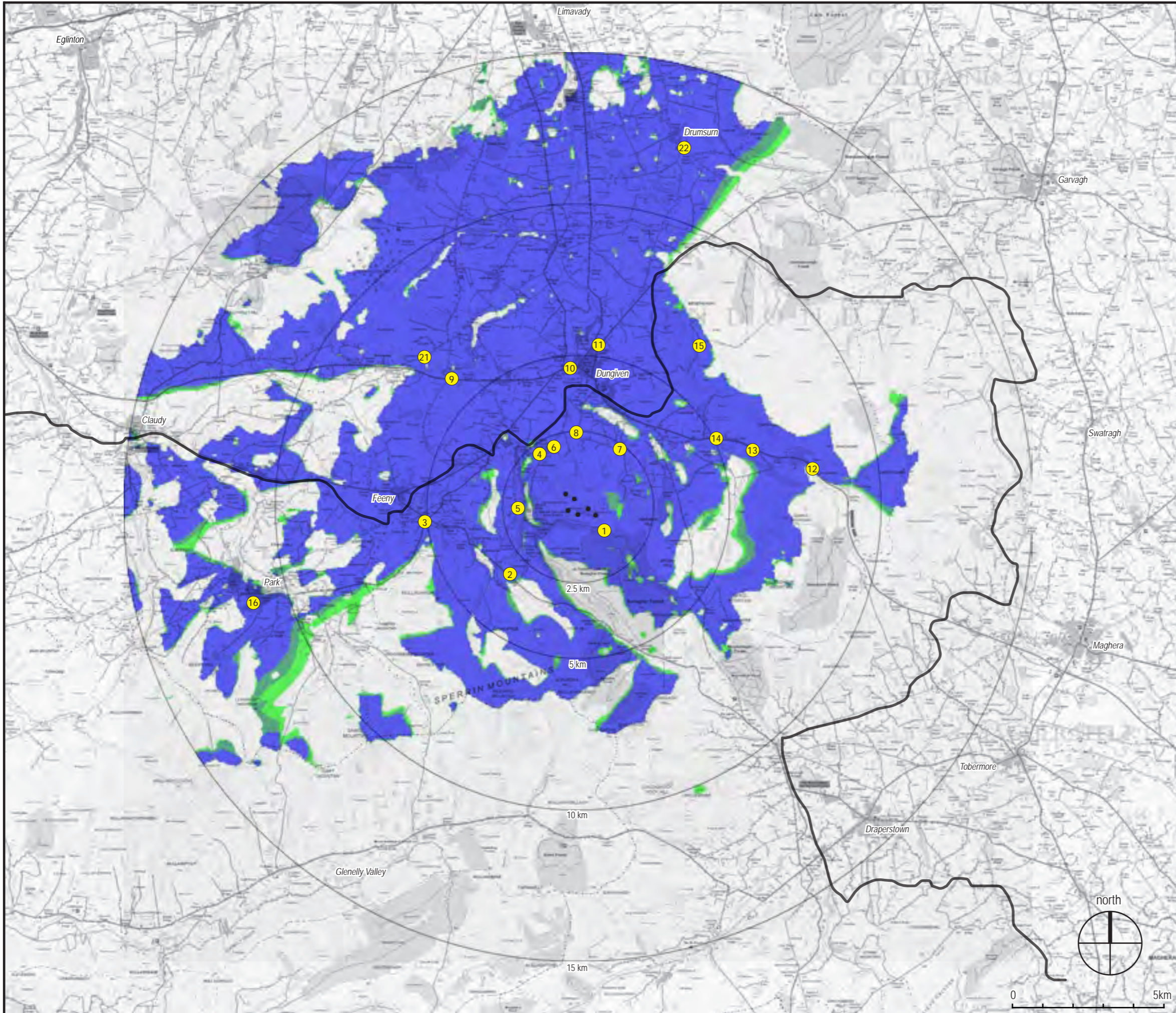
ZONE OF THEORETICAL VISIBILITY DIAGRAMS

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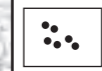
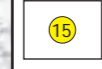







MAGHERAMORE WIND FARM

FIGURE 4.6

ZONE OF THEORETICAL VISIBILITY, 15km RADIUS, BLADE TIP HEIGHT

KEY

-  Magheramore proposed turbines
-  Viewpoint location (see Figure 4.4 for detail)
-  Theoretical visibility of 1 - 2 turbines
1.7 %
-  Theoretical visibility of 3 - 4 turbines
1.86 %
-  Theoretical visibility of 5 - 6 turbines
36.13 %
- Total area within 15 km with theoretical visibility of at least 1 blade tip: 39.69 %
-  Parts of Study Area with no visibility of the Development are unshaded:
60.31 %
-  Areas of Outstanding Natural Beauty

Turbine dimensions illustrated:
 max. tip height above ground level 149.9 m
 hub height 94 m
 rotor diameter 112 m

NOTE: This Figure must be viewed in conjunction with the analysis of landscape and visual effects contained in Chapter 4 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in Technical Appendix 4.2.

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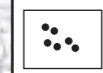
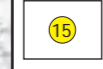







MAGHERAMORE WIND FARM

FIGURE 4.7

ZONE OF THEORETICAL VISIBILITY, 15km RADIUS, HUB HEIGHT

KEY

-  Magheramore proposed turbines
-  Viewpoint location (see Figure 4.4 for detail)
-  Theoretical visibility of 1 - 2 turbines
1.93 %
-  Theoretical visibility of 3 - 4 turbines
2.38 %
-  Theoretical visibility of 5 - 6 turbines
32.04 %
- Total area within 15 km with theoretical visibility of at least 1 hub: 36.35 %
-  Parts of Study Area with no visibility of the Development are unshaded:
63.65 %
-  Areas of Outstanding Natural Beauty

Turbine dimensions illustrated:
 max. tip height above ground level 149.9 m
 hub height 94 m
 rotor diameter 112 m

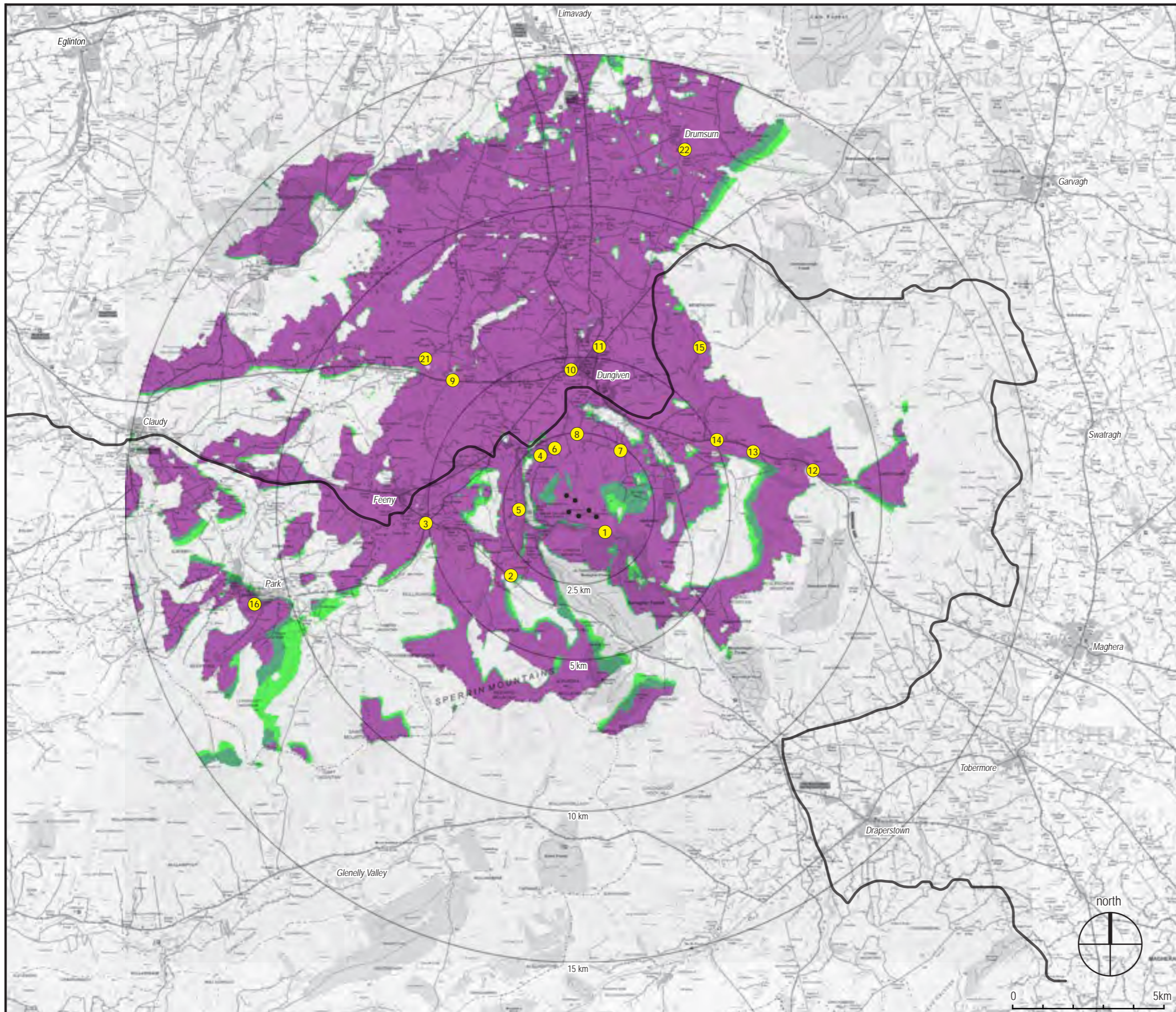
NOTE: This Figure must be viewed in conjunction with the analysis of landscape and visual effects contained in Chapter 4 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in Technical Appendix 4.2.

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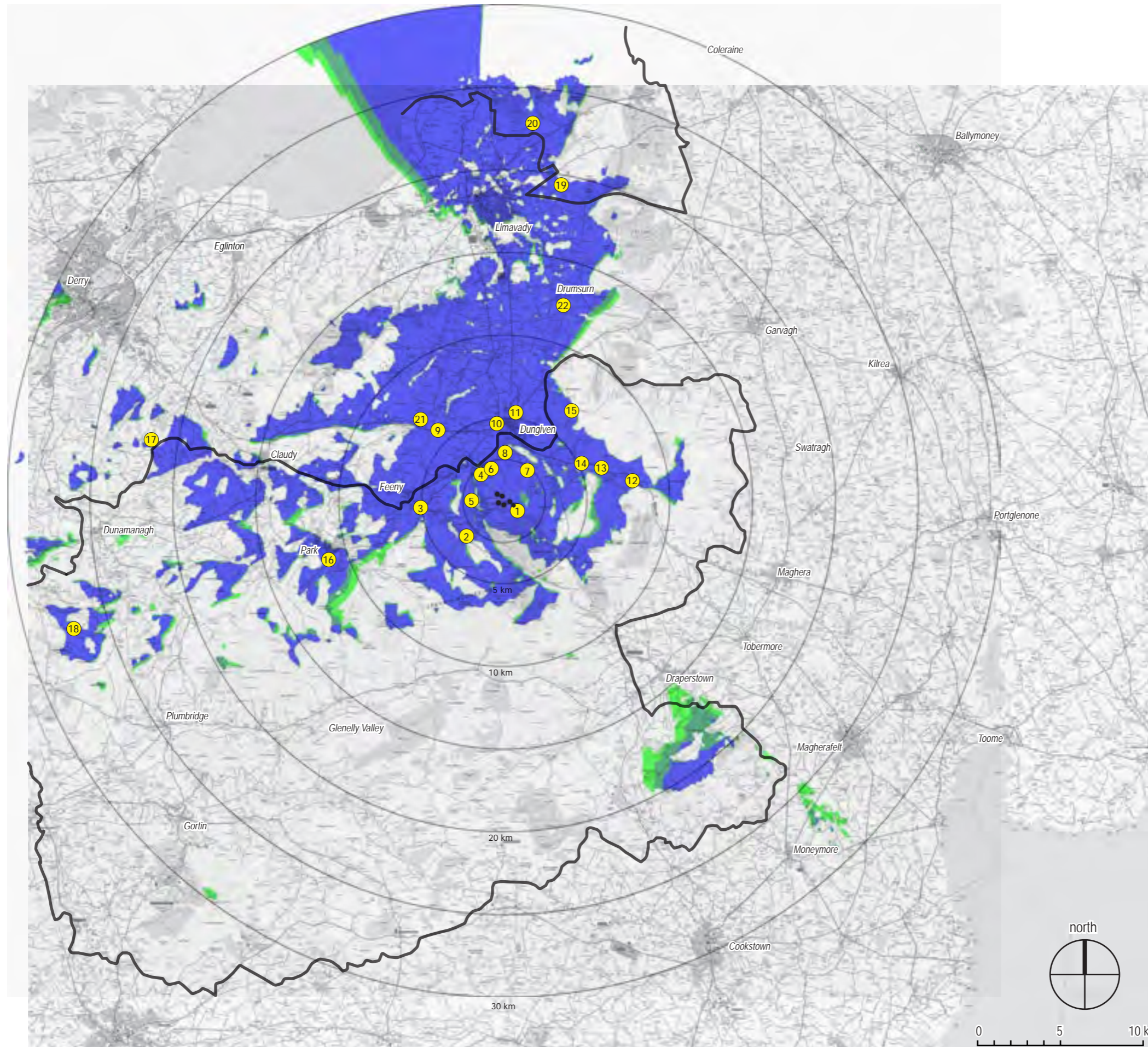




MAGHERAMORE WIND FARM

FIGURE 4.8

ZONE OF THEORETICAL VISIBILITY, 30km RADIUS, BLADE TIP HEIGHT



KEY

- Magheramore proposed turbines
- Viewpoint location (see Figure 4.4 for detail)
- Theoretical visibility of 1 - 2 turbines
1.22 %
- Theoretical visibility of 3 - 4 turbines
1.31 %
- Theoretical visibility of 5 - 6 turbines
15.43 %
- Total area within 15 km with theoretical visibility of at least 1 blade tip: 17.96 %
- Parts of Study Area with no visibility of the Development are unshaded:
82.04 %
- Areas of Outstanding Natural Beauty

Turbine dimensions illustrated:
 max. tip height above ground level 149.9 m
 hub height 94 m
 rotor diameter 112 m

NOTE: This Figure must be viewed in conjunction with the analysis of landscape and visual effects contained in Chapter 4 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in Technical Appendix 4.2.

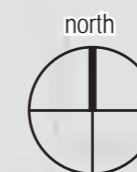
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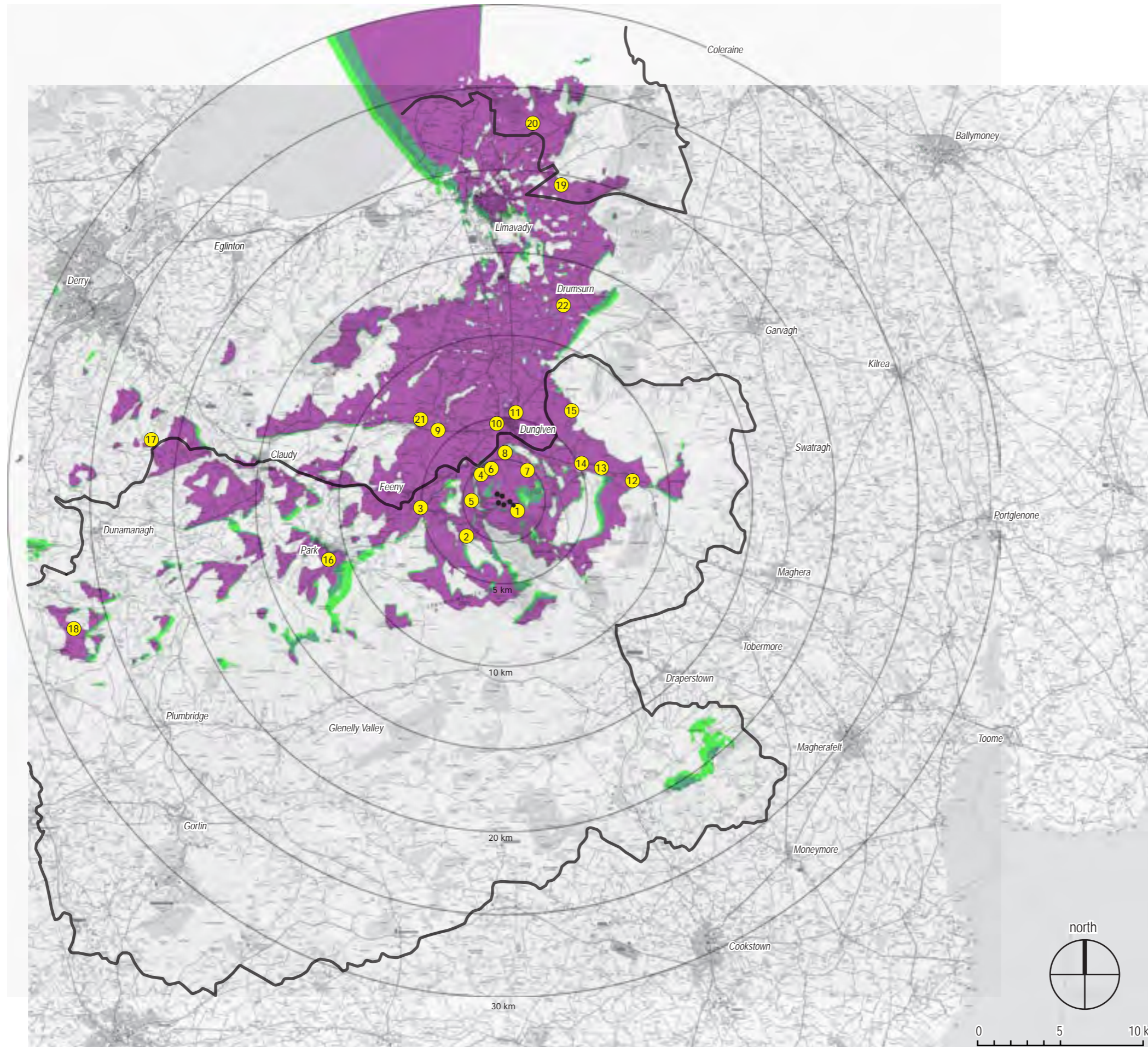











MAGHERAMORE WIND FARM

FIGURE 4.9

ZONE OF THEORETICAL VISIBILITY, 30km RADIUS, HUB HEIGHT



KEY

-  Magheramore proposed turbines
-  Viewpoint location (see Figure 4.4 for detail)
-  Theoretical visibility of 1 - 2 turbines
1.07 %
-  Theoretical visibility of 3 - 4 turbines
1.26 %
-  Theoretical visibility of 5 - 6 turbines
13.06 %
- Total area within 15 km with theoretical visibility of at least 1 hub: 15.39 %
-  Parts of Study Area with no visibility of the Development are unshaded:
84.61 %
-  Areas of Outstanding Natural Beauty

Turbine dimensions illustrated:
 max. tip height above ground level 149.9 m
 hub height 94 m
 rotor diameter 112 m

NOTE: This Figure must be viewed in conjunction with the analysis of landscape and visual effects contained in Chapter 4 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in Technical Appendix 4.2.

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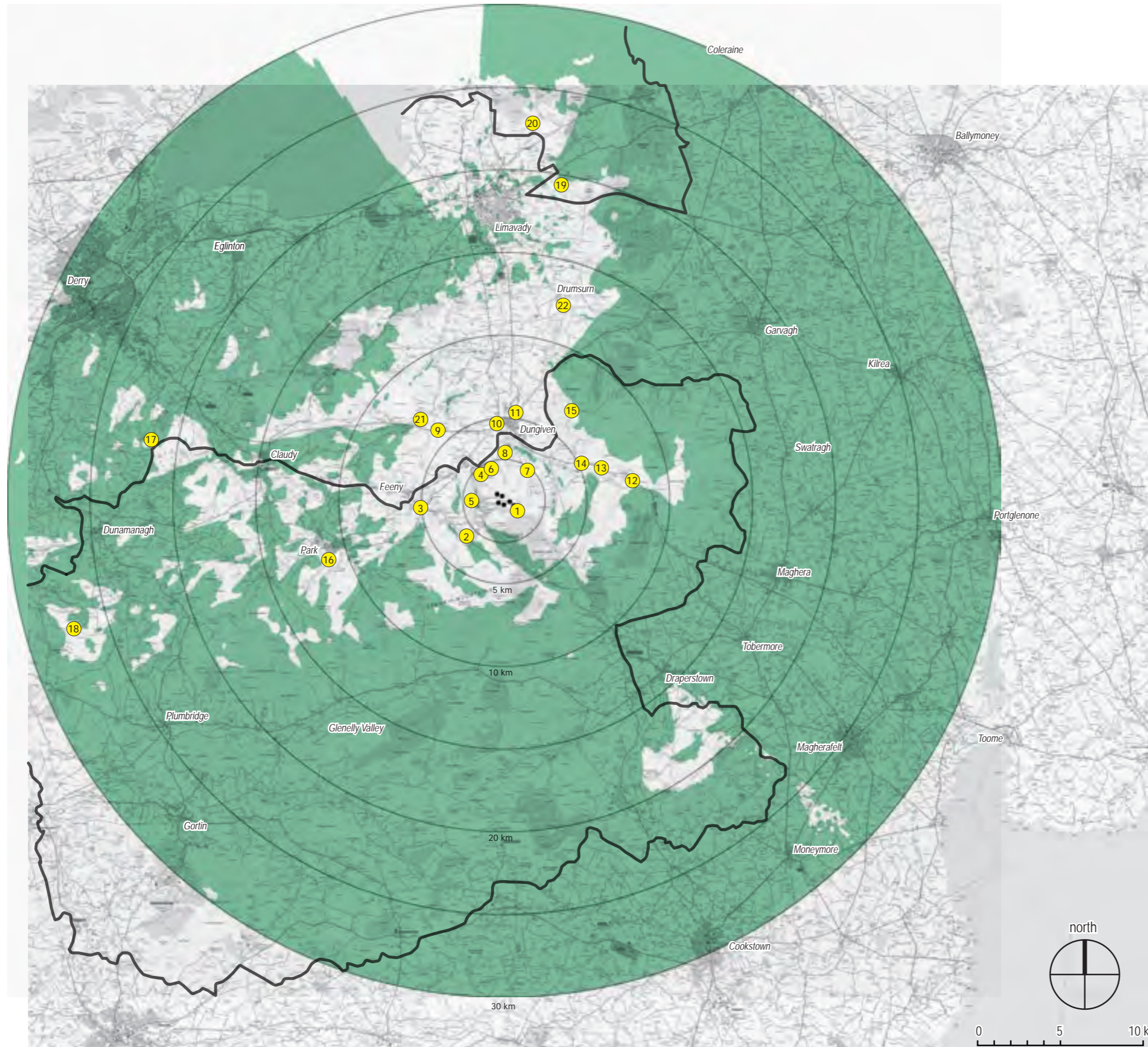
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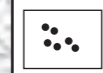
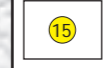


MAGHERAMORE WIND FARM

FIGURE 4.10 (page 1/2)

REVERSE ZONE OF THEORETICAL VISIBILITY 30 KM RADIUS, BLADE TIP



KEY

-  Magheramore proposed turbines
-  Viewpoint location (see Figure 4.4 for detail)
-  Parts of Study Area with no blade tip visibility of the Development: 82.04 %
-  Areas of Outstanding Natural Beauty

Turbine dimensions illustrated:
 max. tip height above ground level 149.9 m
 hub height 94 m
 rotor diameter 112 m

NOTE:
 This Figure must be viewed in conjunction with the analysis of landscape and visual effects contained in Chapter 4 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in Technical Appendix 4.2.

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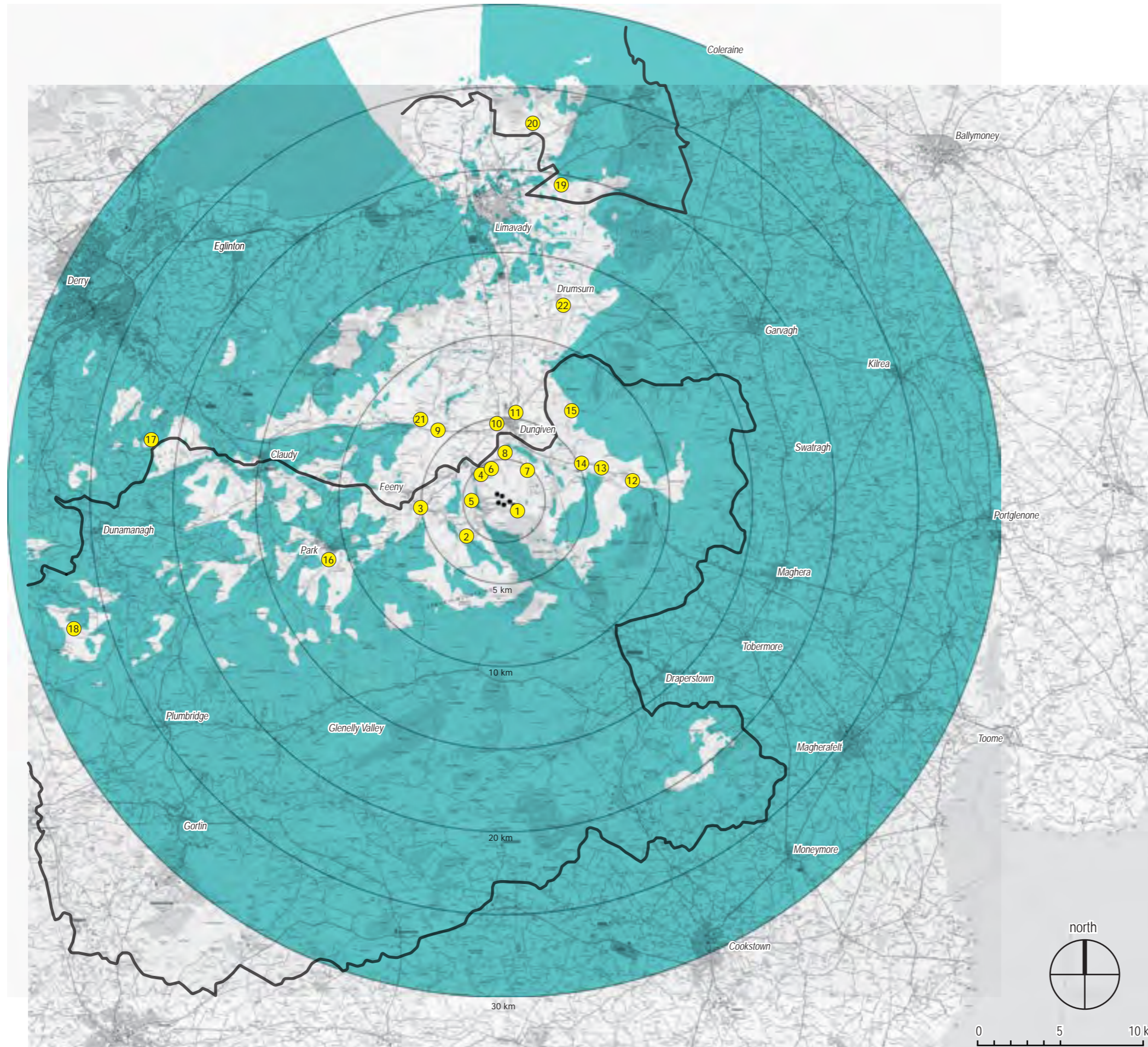
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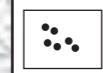
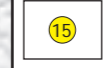


MAGHERAMORE WIND FARM

FIGURE 4.10 (page 2/2)

REVERSE ZONE OF THEORETICAL VISIBILITY 30 KM RADIUS, HUB HEIGHT



KEY

-  Magheramore proposed turbines
-  Viewpoint location (see Figure 4.4 for detail)
-  Parts of Study Area with no hub height visibility of the Development: 84.61 %
-  Areas of Outstanding Natural Beauty

Turbine dimensions illustrated:
 max. tip height above ground level 149.9 m
 hub height 94 m
 rotor diameter 112 m

NOTE:
 This Figure must be viewed in conjunction with the analysis of landscape and visual effects contained in Chapter 4 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in Technical Appendix 4.2.

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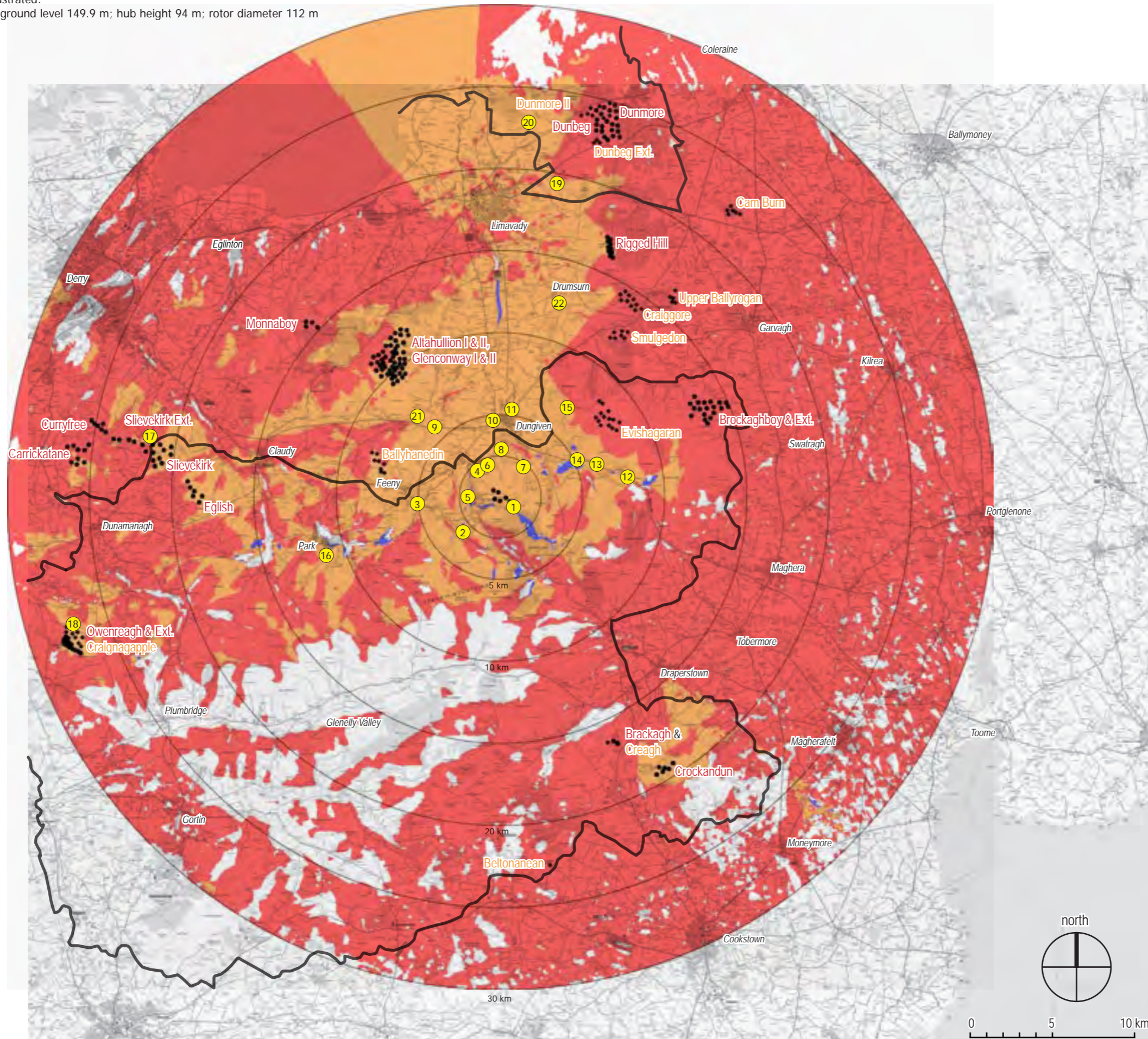
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Turbine dimensions illustrated:
max. tip height above ground level 149.9 m; hub height 94 m; rotor diameter 112 m











MAGHERAMORE WIND FARM

FIGURE 4.11

CUMULATIVE ZTV, EXISTING & CONSENTED WIND FARMS, 30km, BLADE TIP HEIGHT

KEY

-  Magheramore proposed turbines
-  Existing / Consented Turbines
-  Viewpoint location (see Figure 4.4 for detail)
-  Theoretical visibility of existing and consented wind farms where Development is not visible 69.53 %
-  Theoretical visibility of Development where there is already visibility of other wind farms 17.78 %
- Total area within 30 km with theoretical visibility of other wind farms 87.31 %
-  Additional theoretical visibility of Development where there is no visibility of other wind farms 0.18 %
- Total area within 30 km with theoretical visibility of Development: 17.96 %
-  Parts of Study Area with no visibility of wind farms are unshaded: 12.51 %
-  Area of Outstanding Natural Beauty

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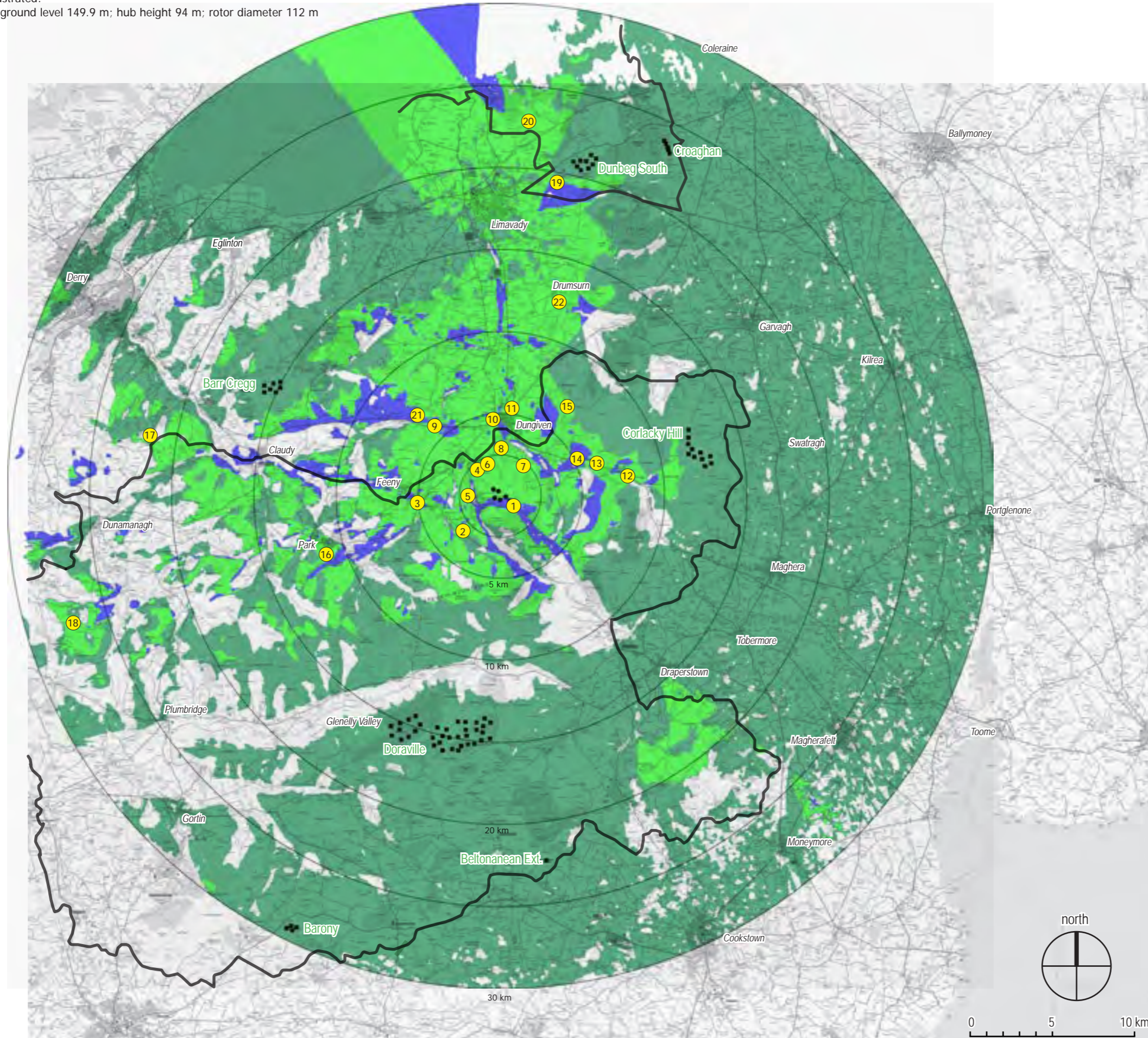
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Turbine dimensions illustrated:
max. tip height above ground level 149.9 m; hub height 94 m; rotor diameter 112 m












MAGHERAMORE WIND FARM

FIGURE 4.12

CUMULATIVE ZTV, PROPOSED WIND FARMS, 30km, BLADE TIP HEIGHT

KEY

-  Magheramore proposed turbines
-  Proposed Turbines
-  Viewpoint location (see Figure 4.4 for detail)
-  Theoretical visibility of proposed wind farms where Development is not visible 61.40 %
-  Theoretical visibility of Development where there is already visibility of other wind farms 15.09 %
-  Additional theoretical visibility of Development where there is no visibility of other wind farms 2.87 %
- Total area within 30 km with theoretical visibility of other wind farms 76.49 %
-  Additional theoretical visibility of Development where there is no visibility of other wind farms 2.87 %
- Total area within 30 km with theoretical visibility of Development: 17.96 %
-  Parts of Study Area with no visibility of wind farms are unshaded: 20.64 %
-  Area of Outstanding Natural Beauty

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PURPOSE AND UNDERSTANDING OF THESE FIGURES:

These Figures are intended to accompany the detailed written descriptions of the final 22 Viewpoints that have been included to represent views of the Development from various parts of the Study Area. They include computer-generated wirelines and photomontages. The purpose of these is to help the assessor establish what the Development's visual effect might be by providing a 'snapshot' of what the Development would look like within the landscape. They should always be viewed in conjunction with the LVIA chapter which provides a detailed written assessment of visual effects, as well as a visit to all of the viewpoints in appropriate weather conditions. Wirelines are not intended to be visually representative images but they are generally accepted as an illustrative digital imaging tool. They provide a good indication of the location of turbines within the landscape and their relationship with the Cumulative Baseline of other wind farms in the Study Area. If these limitations are recognised, visualisations can be accepted as adequate representations for the purpose of the LVIA. The methodology for producing these visualisations is described in detail in Technical Appendix 4.2. The methodology conforms to the best practice guidance documents listed in Technical Appendix 4.1.

These Figures must be viewed in conjunction with the analysis of landscape and visual effects contained in Chapter 4 of the Environmental Statement and the detailed methodology for the LVIA that is described in Technical Appendix 4.2. Detailed descriptions of the final Viewpoints are an integral part of the Visual Impact Assessment section of Chapter 4, LVIA. Viewpoint locations are shown on Figure 4.4 and all other map-based Figures for ease of reference.

On the wireline diagrams the turbine blades are displayed at an angle of 0°, i.e. the uppermost blade is always shown pointing directly upwards, in order to demonstrate the highest possible level of visibility. All cumulative wind farms, including any which may appear within the view but which are located beyond the field of view that it is possible to illustrate on A3-sized figures, are also labelled on the wireline. However, only existing wind farms and single turbines are shown on the photomontages (i.e. those that are already present within the Study Area). This is in accordance with best practice guidance.

In many scenarios wind farms are visible as elements of wide angle views which can only be appreciated if viewers turn their heads from side to side or move through the landscape. Wirelines and photomontages show the turbines in accurate proportion to other visual elements. However, the overall scale of the view is reduced by the practical need to illustrate the view on a single sheet of paper that allows as many people as possible to have fair and easy access to the published Environmental Statement. Features that are of note in wider views, but which are beyond the angle that can be illustrated in the viewpoint figures, such as other wind farms, are included in the detailed written descriptions of viewpoints in the LVIA report.

Visualisations are prepared in accordance with the SNH best practice guidance as far as practical and SNH's best practice guidance recommends that the following information on the limitations of visualisations is included in all LVIA methodologies:

"Visualisations of wind farms have a number of limitations which you should be aware of when using them to form a judgement on a wind farm proposal. These include:

- *A visualisation can never show exactly what the wind farm will look like in reality due to factors such as: different lighting, weather and seasonal conditions which vary through time and the resolution of the image;*
- *The images provided give a reasonable impression of the scale of the turbines and the distance to the turbines, but can never be 100% accurate;*
- *A static image cannot convey turbine movement, or flicker or reflection from the sun on the turbine blades as they move;*
- *The viewpoints illustrated are representative of views in the area, but cannot represent visibility at all locations;*
- *To form the best impression of the impacts of the wind farm proposal these images are best viewed at the viewpoint location shown;*
- *The images must be printed at the right size to be viewed properly (The visualisations in this LVIA are 130 mm x 42 mm at A3); You should hold the images flat at a comfortable arm's length. If viewing these images on a wall or board at an exhibition, you should stand at arm's length from the image presented to gain the best impression.*
- *It is preferable to view printed images rather than view images on screen. If you do view images on screen you should do so using a normal PC screen with the image enlarged to the full screen height to give a realistic impression. Do not use a tablet or other device with a smaller screen to view the visualisations described in this guidance."*



MAGHERAMORE WIND FARM

FIGURES 4.13 - 4.33

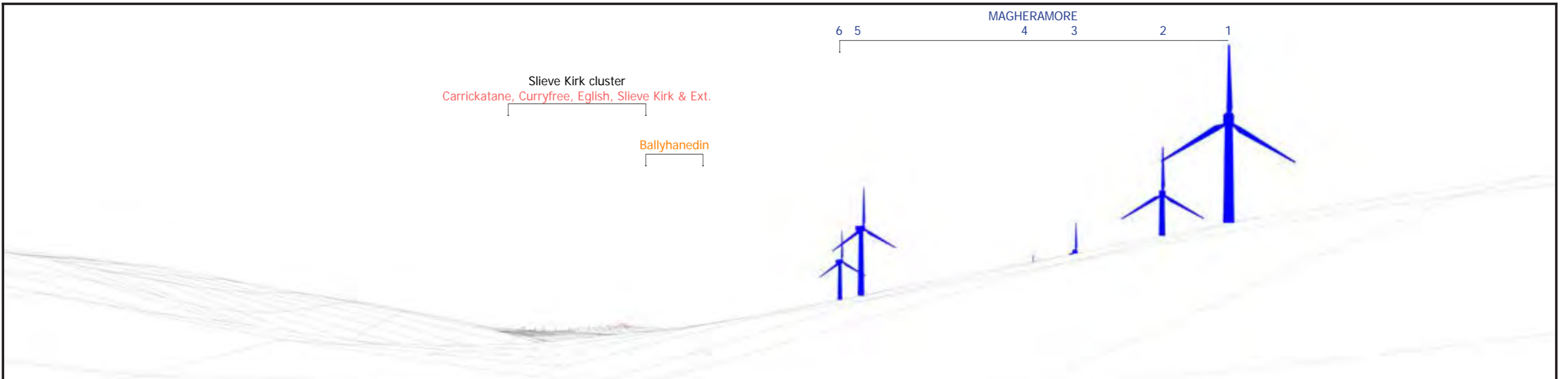
VIEWPOINT VISUALISATION FIGURES

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Where present in view: Magheramore Wind Farm turbines shown in blue; Existing wind farms in red; Consented wind farms in orange; Proposed wind farms in green; Single turbines in pink

Turbine dimensions shown for the Development: max. tip height above ground level 149.9 m; hub height 94 m; rotor diameter 112 m

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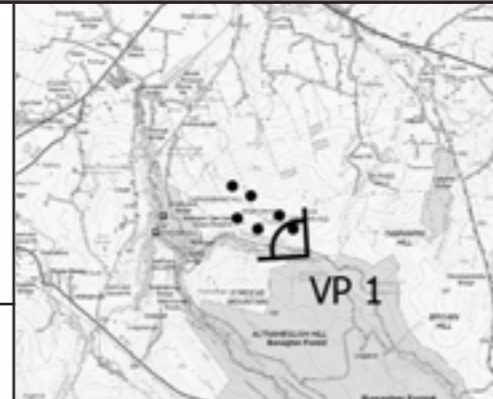
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MAGHERAMORE WIND FARM

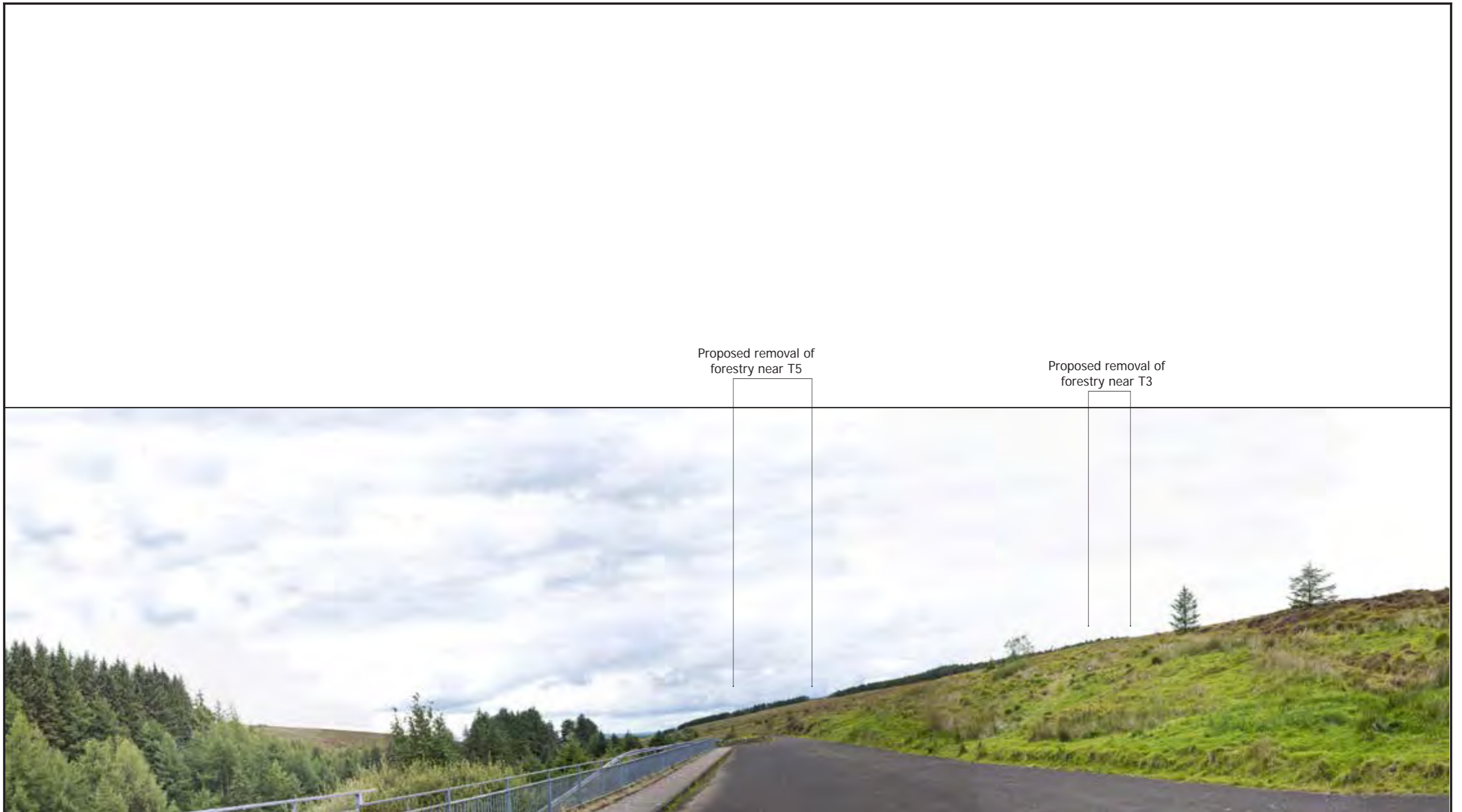
FIGURE 4.13 (page 1/2)

**VIEWPOINT 1, WIRELINE & PHOTOMONTAGE
ALTNAHEGLISH DAM, BANAGHER FOREST**

Easting:	269567
Northing:	404185
Elevation A.O.D	256 m
Bearing:	308.1 °
Approx. Included Angle:	80 °
Approx. distance to nearest turbine:	0.52 km to T1



NOTE: This Figure should be viewed at a comfortable arms length. It will be viewed in conjunction with the analysis of landscape and visual effects contained in Chapter 4 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in Technical Appendix 4.2, in particular the paragraphs referencing Scottish Natural Heritage Guidance regarding the limitations of visualisations.



Proposed removal of forestry near T5

Proposed removal of forestry near T3

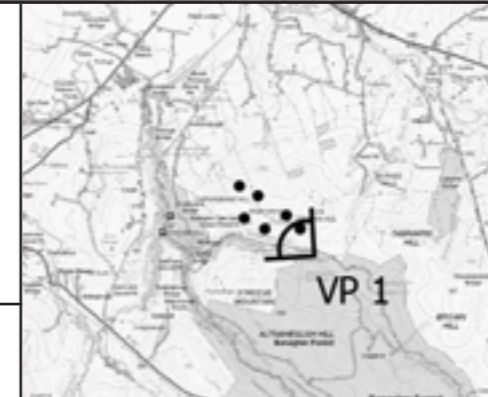
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MAGHERAMORE WIND FARM

FIGURE 4.13 (page 2/2)

**VIEWPOINT 1, BASELINE PHOTOGRAPH
 ALTNAHEGLISH DAM, BANAGHER FOREST**

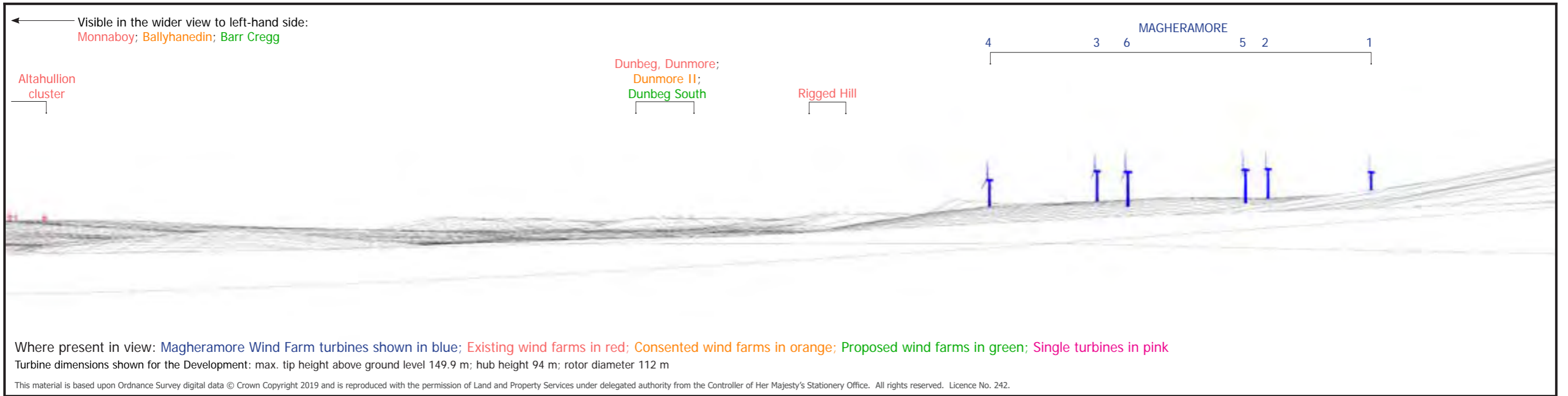
Easting: 269567
 Northing: 404185
 Elevation A.O.D: 256 m
 Bearing: 308.1 °
 Approx. Included Angle: 80 °
 Approx. distance to nearest turbine: 0.52 km to T1



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Shanti McAllister landscape planning and design info@shantimcallister.co.uk www.shantimcallister.co.uk	MAGHERAMORE WIND FARM FIGURE 4.14 (page 1/2) VIEWPOINT 2, WIRELINE & PHOTOMONTAGE NORTH SPERRINS SCENIC DRIVE, B40 GLENEDRA ROAD		Easting: 266432 Northing: 402728 Elevation A.O.D: 230 m Bearing: 44.4 ° Approx. Included Angle: 80 ° Approx. distance to nearest turbine: 2.83 km to T6		
	LANDSCAPE AND VISUAL IMPACT ASSESSMENT		<small>NOTE: This Figure should be viewed at a comfortable arms length. It will be viewed in conjunction with the analysis of landscape and visual effects contained in Chapter 4 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in Technical Appendix 4.2, in particular the paragraphs referencing Scottish Natural Heritage Guidance regarding the limitations of visualisations.</small>		
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Proposed removal of forestry near T4 & T3

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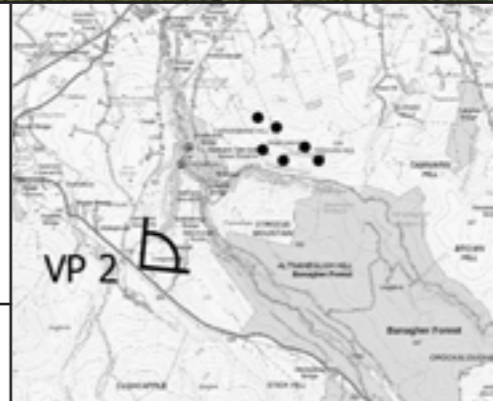
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MAGHERAMORE WIND FARM

FIGURE 4.14 (page 2/2)

VIEWPOINT 2, BASELINE PHOTOGRAPH
NORTH SPERRINS SCENIC DRIVE,
B40 GLENEDRA ROAD

Easting:	266432
Northing:	402728
Elevation A.O.D	230 m
Bearing:	44.4 °
Approx. Included Angle:	80 °
Approx. distance to nearest turbine:	2.83 km to T6



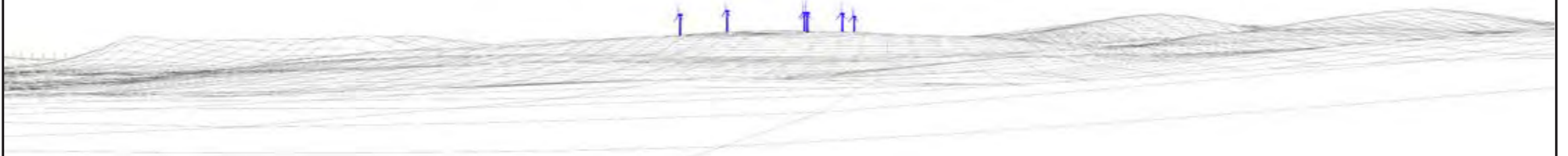
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← Visible to left-hand side:
 Rigged Hill; Dunmore II; Dunbeg South
 Visible in the wider view / in other directions:
 Loughermore Cluster; Altahullion & Glenconway
 Ballyhanedin

MAGHERAMORE
 4 3 2 6 5 1

Craigigore

Evishagaran



Where present in view: Magheramore Wind Farm turbines shown in blue; Existing wind farms in red; Consented wind farms in orange; Proposed wind farms in green; Single turbines in pink

Turbine dimensions shown for the Development: max. tip height above ground level 149.9 m; hub height 94 m; rotor diameter 112 m

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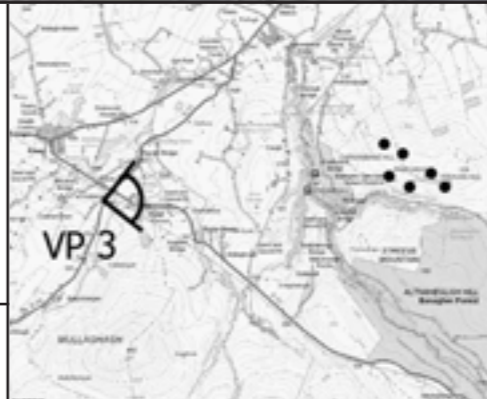
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MAGHERAMORE WIND FARM

FIGURE 4.15 (page 1/2)

**VIEWPOINT 3, WIRELINE & PHOTOMONTAGE
 FINCARN CROSSROADS AT B40 - B44 JUNCTION**

Easting: 263667
 Northing: 404445
 Elevation A.O.D: 135 m
 Bearing: 84.36 °
 Approx. Included Angle: 70 °
 Approx. distance to nearest turbine: 4.71 km to T4



NOTE: This Figure should be viewed at a comfortable arms length. It will be viewed in conjunction with the analysis of landscape and visual effects contained in Chapter 4 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in Technical Appendix 4.2, in particular the paragraphs referencing Scottish Natural Heritage Guidance regarding the limitations of visualisations.

No visible changes to forestry from this location



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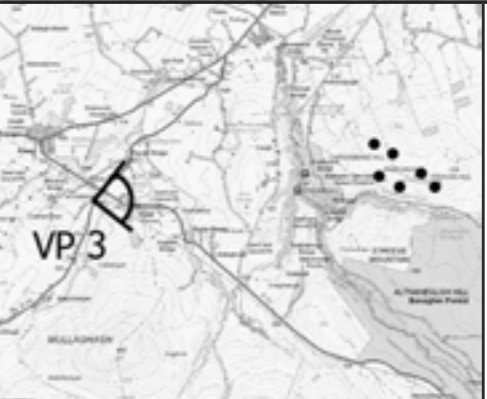
MAGHERAMORE WIND FARM

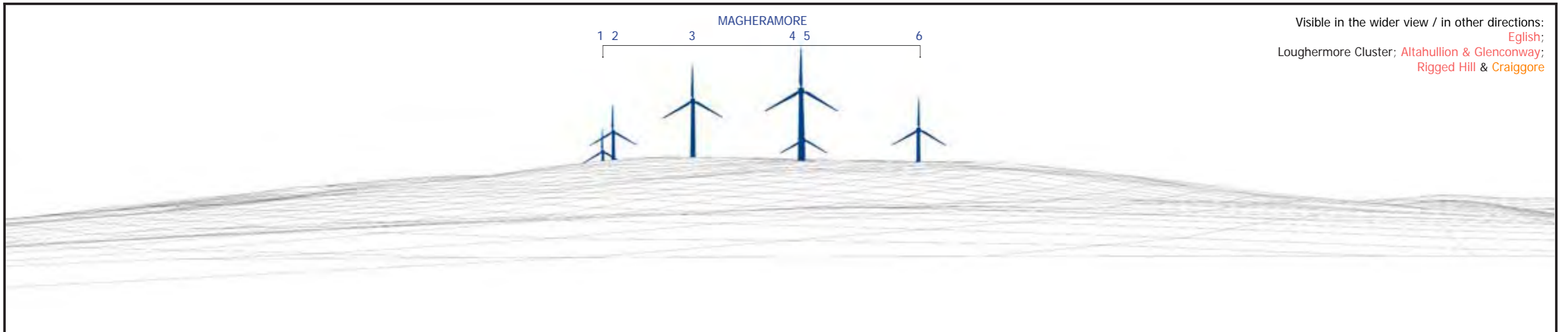
FIGURE 4.15 (page 2/2)

**VIEWPOINT 3, BASELINE PHOTOGRAPH
 FINCARN CROSSROADS AT B40 - B44 JUNCTION**

NOTE: This Figure should be viewed at a comfortable arms length. It will be viewed in conjunction with the analysis of landscape and visual effects contained in Chapter 4 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in Technical Appendix 4.2, in particular the paragraphs referencing Scottish Natural Heritage Guidance regarding the limitations of visualisations.

Easting:	263667
Northing:	404445
Elevation A.O.D	135 m
Bearing:	84.36 °
Approx. Included Angle:	70 °
Approx. distance to nearest turbine:	4.71 km to T4





Visible in the wider view / in other directions:
 English;
 Loughermore Cluster; Altahullion & Glenconway;
 Rigged Hill & Craiggore

Where present in view: Magheramore Wind Farm turbines shown in blue; Existing wind farms in red; Consented wind farms in orange; Proposed wind farms in green; Single turbines in pink

Turbine dimensions shown for the Development: max. tip height above ground level 149.9 m; hub height 94 m; rotor diameter 112 m

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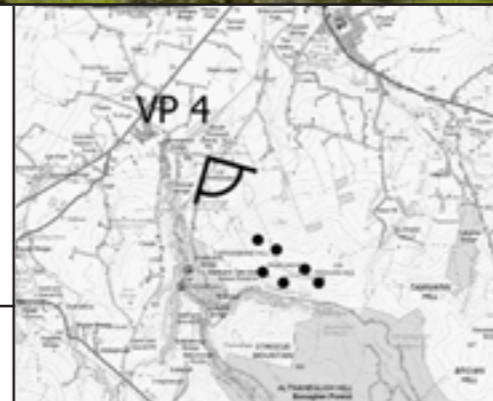
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MAGHERAMORE WIND FARM

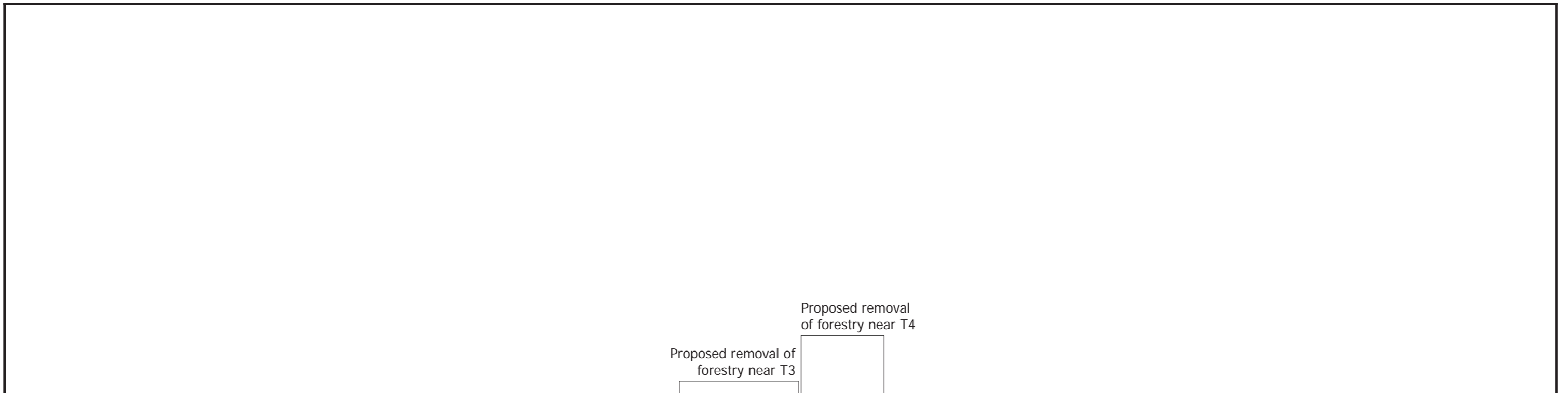
FIGURE 4.16 (page 1/2)

VIEWPOINT 4, WIRELINE & PHOTOMONTAGE BANAGHER OLD CHURCH

Easting:	267509
Northing:	406593
Elevation A.O.D	140 m
Bearing:	144.43 °
Approx. Included Angle:	80 °
Approx. distance to nearest turbine:	1.49 km to T4



NOTE: This Figure should be viewed at a comfortable arms length. It will be viewed in conjunction with the analysis of landscape and visual effects contained in Chapter 4 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in Technical Appendix 4.2, in particular the paragraphs referencing Scottish Natural Heritage Guidance regarding the limitations of visualisations.



Proposed removal of forestry near T3

Proposed removal of forestry near T4



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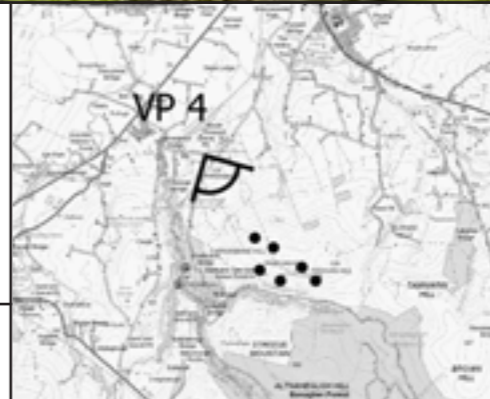
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MAGHERAMORE WIND FARM

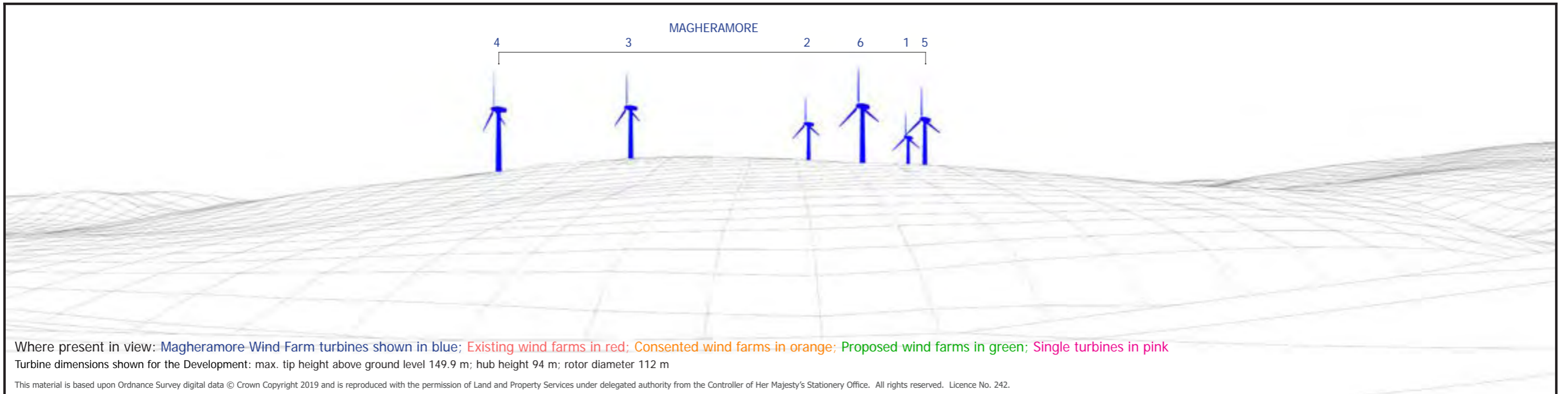
FIGURE 4.16 (page 2/2)

VIEWPOINT 4, BASELINE PHOTOGRAPH BANAGHER OLD CHURCH

Easting:	267509
Northing:	406593
Elevation A.O.D	140 m
Bearing:	144.43 °
Approx. Included Angle:	80 °
Approx. distance to nearest turbine:	1.49 km to T4



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MAGHERAMORE WIND FARM

FIGURE 4.17 (page 1/2)

VIEWPOINT 5, WIRELINE & PHOTOMONTAGE BANAGHER ROAD

Easting:	266634
Northing:	404918
Elevation A.O.D	179 m
Bearing:	89.53 °
Approx. Included Angle:	70 °
Approx. distance to nearest turbine:	1.71 km to T4



NOTE: This Figure should be viewed at a comfortable arms length. It will be viewed in conjunction with the analysis of landscape and visual effects contained in Chapter 4 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in Technical Appendix 4.2, in particular the paragraphs referencing Scottish Natural Heritage Guidance regarding the limitations of visualisations.

Proposed removal of forestry at T4

Proposed removal of forestry in front of T3



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MAGHERAMORE WIND FARM

FIGURE 4.17 (page 2/2)

VIEWPOINT 5, BASELINE PHOTOGRAPH
BANAGHER ROAD

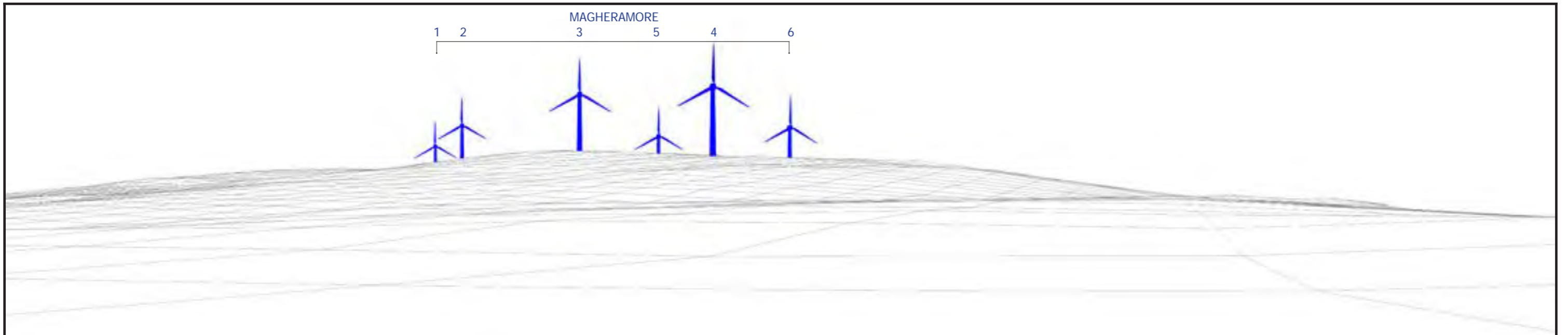
Easting: 266634
 Northing: 404918
 Elevation A.O.D: 179 m
 Bearing: 89.53 °
 Approx. Included Angle: 70 °
 Approx. distance to nearest turbine: 1.71 km to T4



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Where present in view: Magheramore Wind Farm turbines shown in blue; Existing wind farms in red; Consented wind farms in orange; Proposed wind farms in green; Single turbines in pink

Turbine dimensions shown for the Development: max. tip height above ground level 149.9 m; hub height 94 m; rotor diameter 112 m

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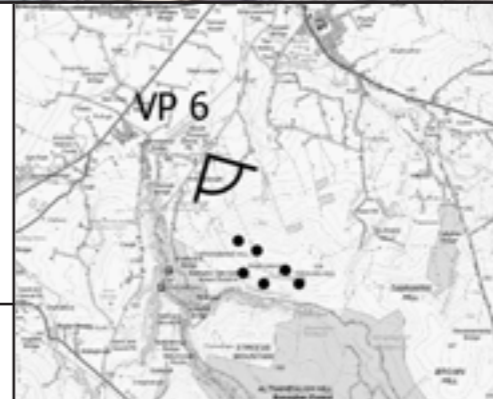
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MAGHERAMORE WIND FARM

FIGURE 4.18 (page 1/2)

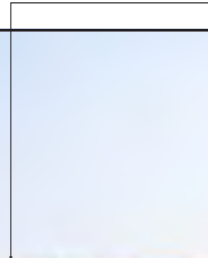
**VIEWPOINT 6, WIRELINE & PHOTOMONTAGE
MAGHERAMORE ROAD NEAR SITE ENTRANCE**

Easting:	267707
Northing:	406752
Elevation A.O.D	115 m
Bearing:	153.18 °
Approx. Included Angle:	80 °
Approx. distance to nearest turbine:	1.54 km to T4



NOTE: This Figure should be viewed at a comfortable arms length. It will be viewed in conjunction with the analysis of landscape and visual effects contained in Chapter 4 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in Technical Appendix 4.2, in particular the paragraphs referencing Scottish Natural Heritage Guidance regarding the limitations of visualisations.

Proposed removal of forestry near T3



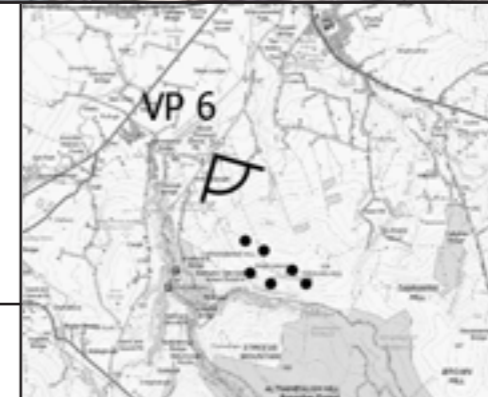
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MAGHERAMORE WIND FARM

FIGURE 4.18 (page 2/2)

**VIEWPOINT 6, BASELINE PHOTOGRAPH
 MAGHERAMORE ROAD NEAR SITE ENTRANCE**

Easting: 267707
 Northing: 406752
 Elevation A.O.D: 115 m
 Bearing: 153.18 °
 Approx. Included Angle: 80 °
 Approx. distance to nearest turbine: 1.54 km to T4

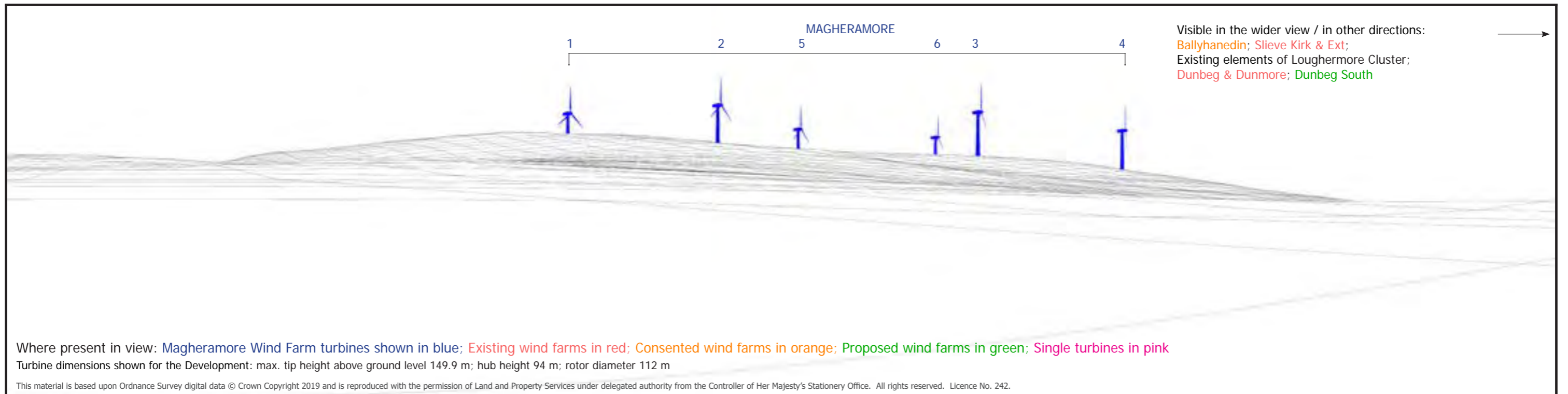


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<p>Shanti McAllister landscape planning and design info@shantimcallister.co.uk www.shantimcallister.co.uk</p>	<p>MAGHERAMORE WIND FARM</p> <p>FIGURE 4.19 (page 1/2)</p> <p>VIEWPOINT 7, WIRELINE & PHOTOMONTAGE CREEBARKY - TEEAVAN ROAD JUNCTION</p>	<p>Easting: 270175 Northing: 406757 Elevation A.O.D: 174 m Bearing: 218.23 ° Approx. Included Angle: 75 ° Approx. distance to nearest turbine: 2.20 km to T2</p>										
<p>LANDSCAPE AND VISUAL IMPACT ASSESSMENT</p>												
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">DRAWN / APPROVED:</td> <td style="width: 25%;">DATE:</td> <td style="width: 25%;">PRINT SIZE:</td> <td style="width: 25%;">REVISION:</td> </tr> <tr> <td>SMc / GM</td> <td>June 2019</td> <td>A3</td> <td>A</td> </tr> </table>	DRAWN / APPROVED:	DATE:	PRINT SIZE:	REVISION:	SMc / GM	June 2019	A3	A	<p>NOTE: This Figure should be viewed at a comfortable arms length. It will be viewed in conjunction with the analysis of landscape and visual effects contained in Chapter 4 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in Technical Appendix 4.2, in particular the paragraphs referencing Scottish Natural Heritage Guidance regarding the limitations of visualisations.</p>			
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No visible changes to forestry from this location



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MAGHERAMORE WIND FARM

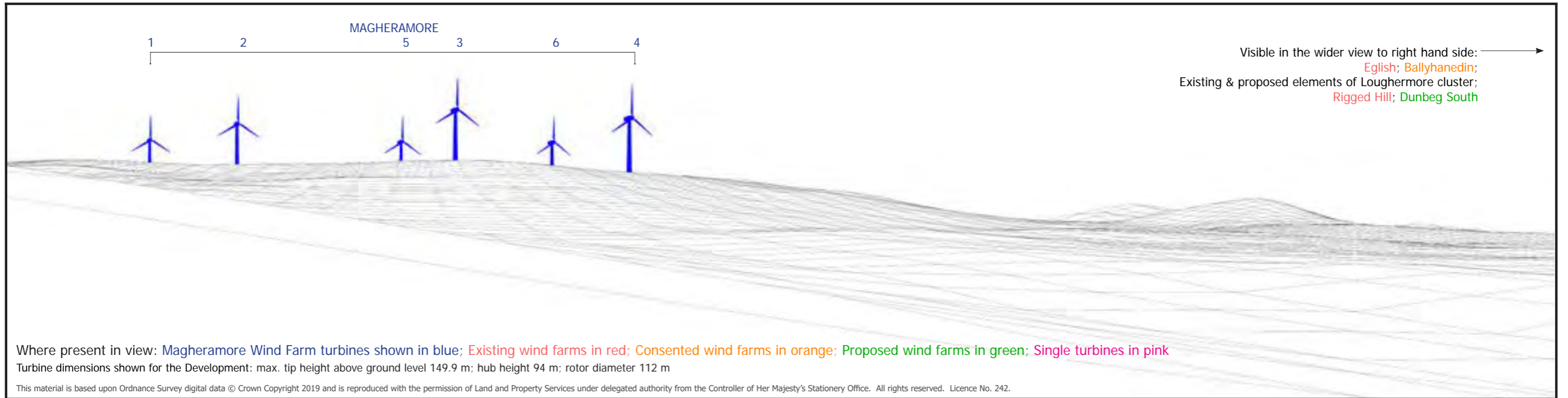
FIGURE 4.19 (page 2/2)

**VIEWPOINT 7, BASELINE PHOTOGRAPH
 CREEBARKY - TEEAVAN ROAD JUNCTION**

Easting:	270175
Northing:	406757
Elevation A.O.D	174 m
Bearing:	218.23 °
Approx. Included Angle:	75 °
Approx. distance to nearest turbine:	2.20 km to T2



NOTE: This Figure should be viewed at a comfortable arms length. It will be viewed in conjunction with the analysis of landscape and visual effects contained in Chapter 4 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in Technical Appendix 4.2, in particular the paragraphs referencing Scottish Natural Heritage Guidance regarding the limitations of visualisations.



<p>Shanti McAllister landscape planning and design info@shantimcallister.co.uk www.shantimcallister.co.uk</p>	<p align="center">MAGHERAMORE WIND FARM</p> <p align="center">FIGURE 4.20 (page 1/2)</p> <p align="center">VIEWPOINT 8, WIRELINE & PHOTOMONTAGE TEEAVAN ROAD TO NORTH EAST OF SITE</p>	<p>Easting: 268679 Northing: 407379 Elevation A.O.D: 132 m Bearing: 179.14 ° Approx. Included Angle: 80 ° Approx. distance to nearest turbine: 2.08 km to T4</p>						
<p>LANDSCAPE AND VISUAL IMPACT ASSESSMENT</p> <table border="1"> <tr> <td>DRAWN / APPROVED:</td> <td>DATE:</td> <td>PRINT SIZE:</td> <td>REVISION:</td> </tr> <tr> <td>SMc / GM</td> <td>June 2019</td> <td>A3</td> <td>A</td> </tr> </table> <p><small>THIS DRAWING IS THE PROPERTY OF RENEWABLE ENERGY SYSTEMS LTD. AND NO REPRODUCTION MAY BE MADE IN WHOLE OR IN PART WITHOUT PERMISSION</small></p>					DRAWN / APPROVED:	DATE:	PRINT SIZE:	REVISION:
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Proposed removal of forestry near T3

Proposed removal of forestry near T4



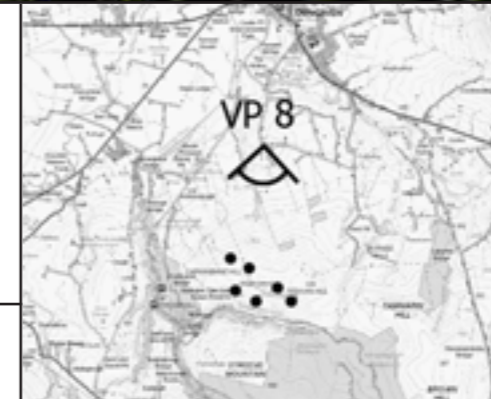
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MAGHERAMORE WIND FARM

FIGURE 4.20 (page 2/2)

**VIEWPOINT 8, BASELINE PHOTOGRAPH
 TEEAVAN ROAD TO NORTH EAST OF SITE**

Easting: 268679
 Northing: 407379
 Elevation A.O.D: 132 m
 Bearing: 179.14 °
 Approx. Included Angle: 80 °
 Approx. distance to nearest turbine: 2.08 km to T4



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MAGHERAMORE
21 3 4 5 6



Where present in view: Magheramore Wind Farm turbines shown in blue; Existing wind farms in red; Consented wind farms in orange; Proposed wind farms in green; Single turbines in pink

Turbine dimensions shown for the Development: max. tip height above ground level 149.9 m; hub height 94 m; rotor diameter 112 m

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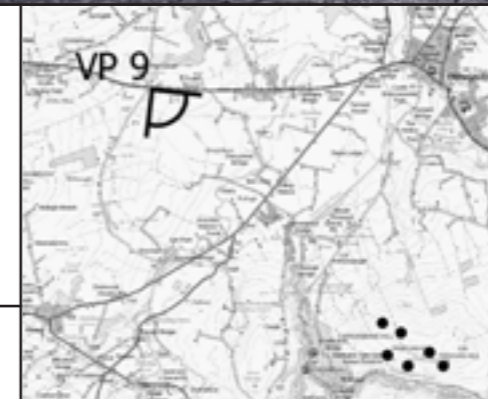
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MAGHERAMORE WIND FARM

FIGURE 4.21 (page 1/2)

**VIEWPOINT 9, WIRELINE & PHOTOMONTAGE
KILLUNAGHT ROAD, A6 NEAR DUNGIVEN**

Easting: 264590
Northing: 409150
Elevation A.O.D: 126 m
Bearing: 136.5 °
Approx. Included Angle: 75 °
Approx. distance to nearest turbine: 5.32 km to T4



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Proposed removal of forestry behind T3



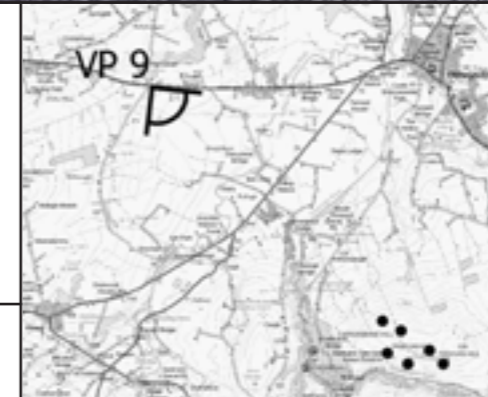
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MAGHERAMORE WIND FARM

FIGURE 4.21 (page 2/2)

**VIEWPOINT 9, BASELINE PHOTOGRAPH
 KILLUNAGHT ROAD, A6 NEAR DUNGIVEN**

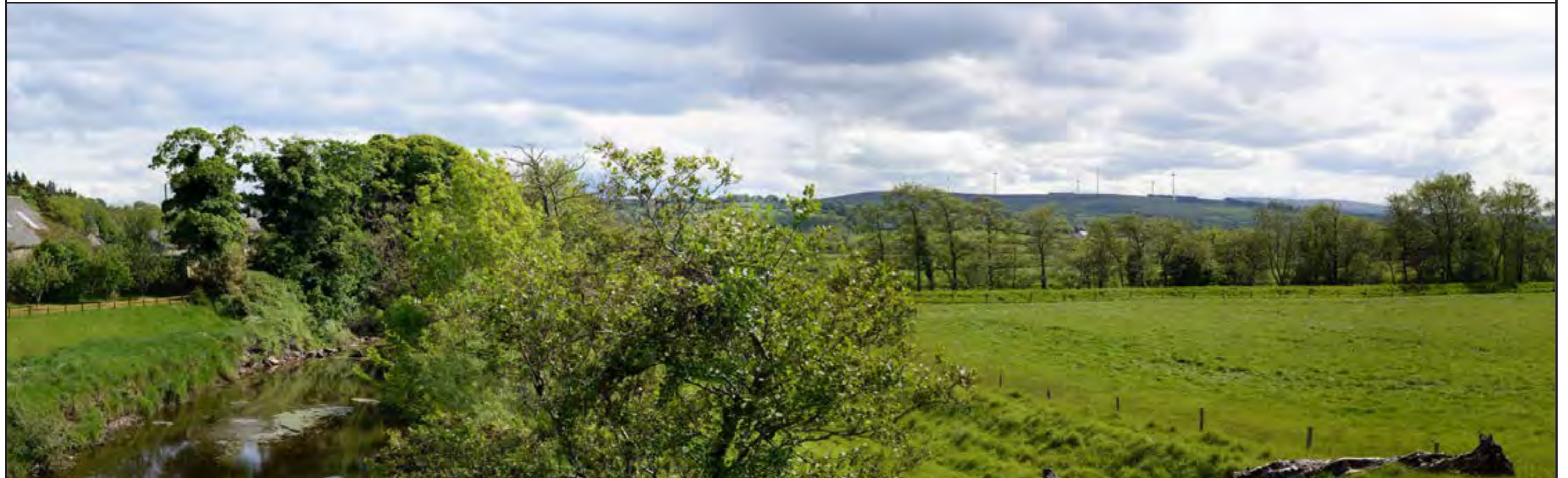
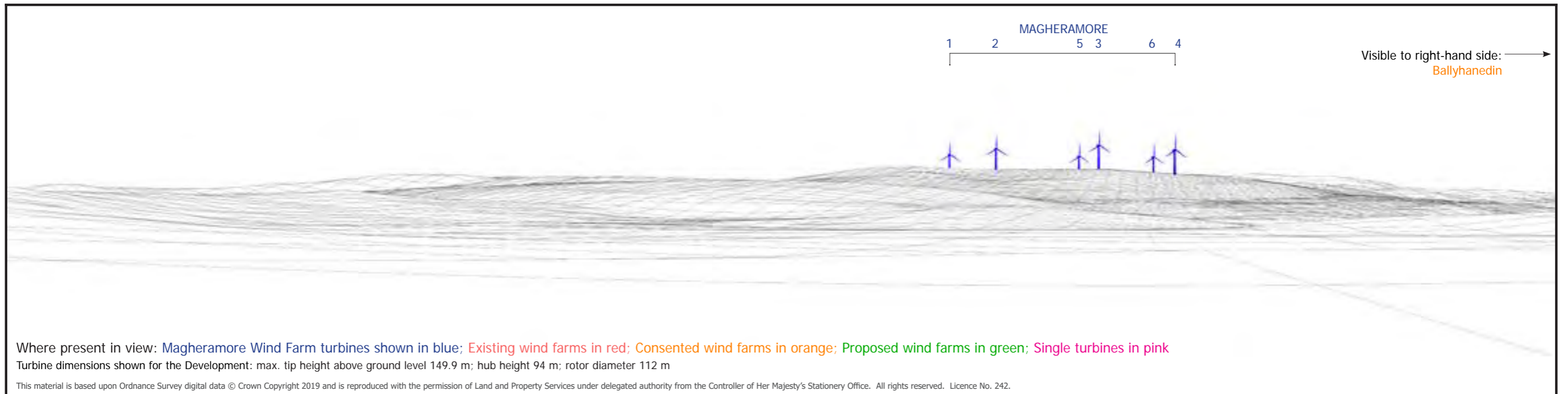
Easting: 264590
 Northing: 409150
 Elevation A.O.D: 126 m
 Bearing: 136.5 °
 Approx. Included Angle: 75 °
 Approx. distance to nearest turbine: 5.32 km to T4



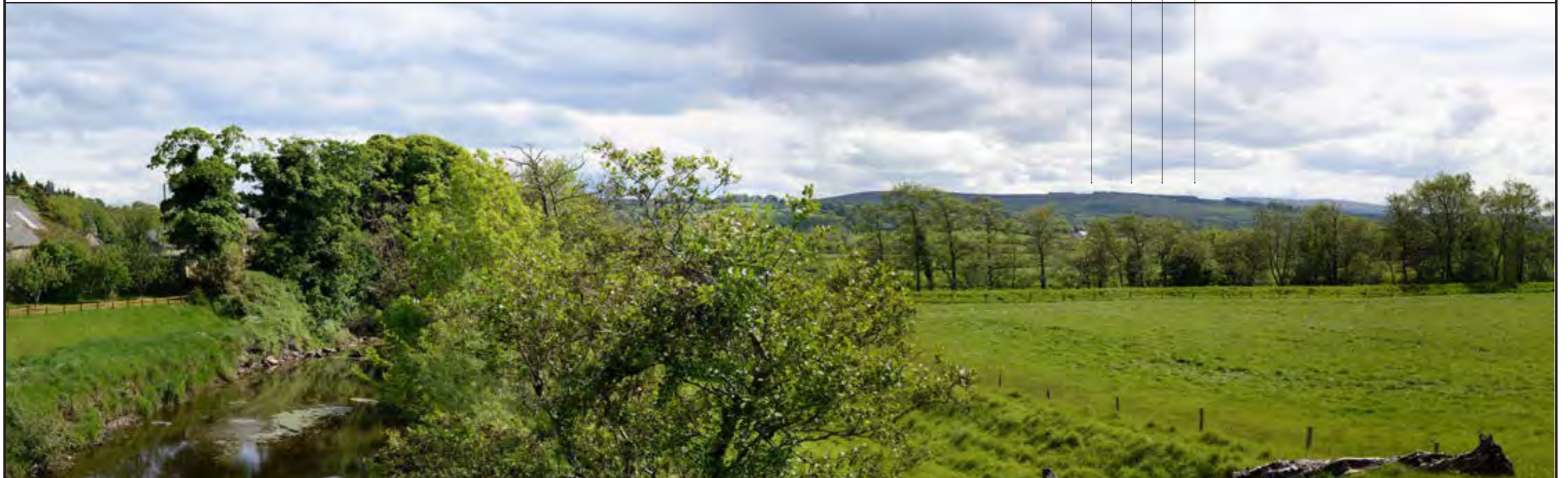
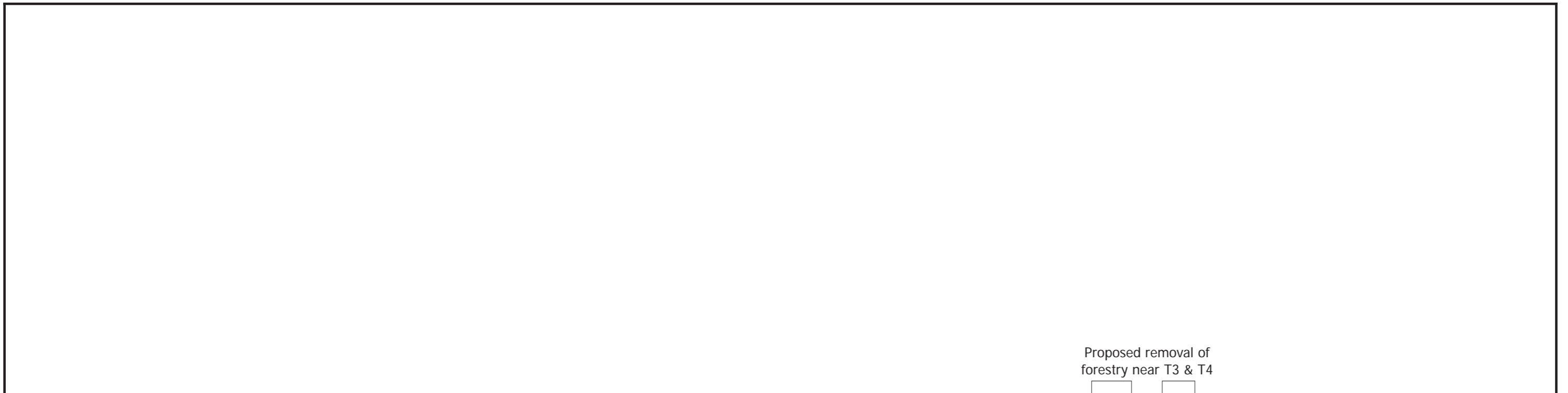
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<p>LANDSCAPE AND VISUAL IMPACT ASSESSMENT</p>												
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Proposed removal of forestry near T3 & T4

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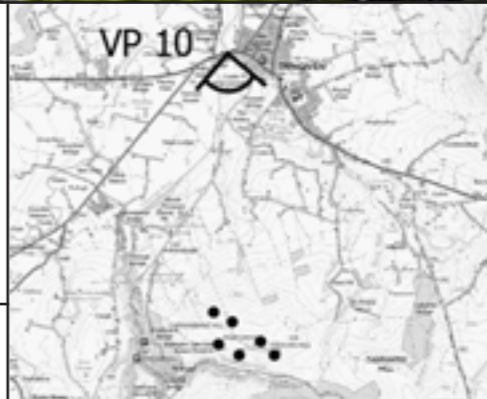
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MAGHERAMORE WIND FARM

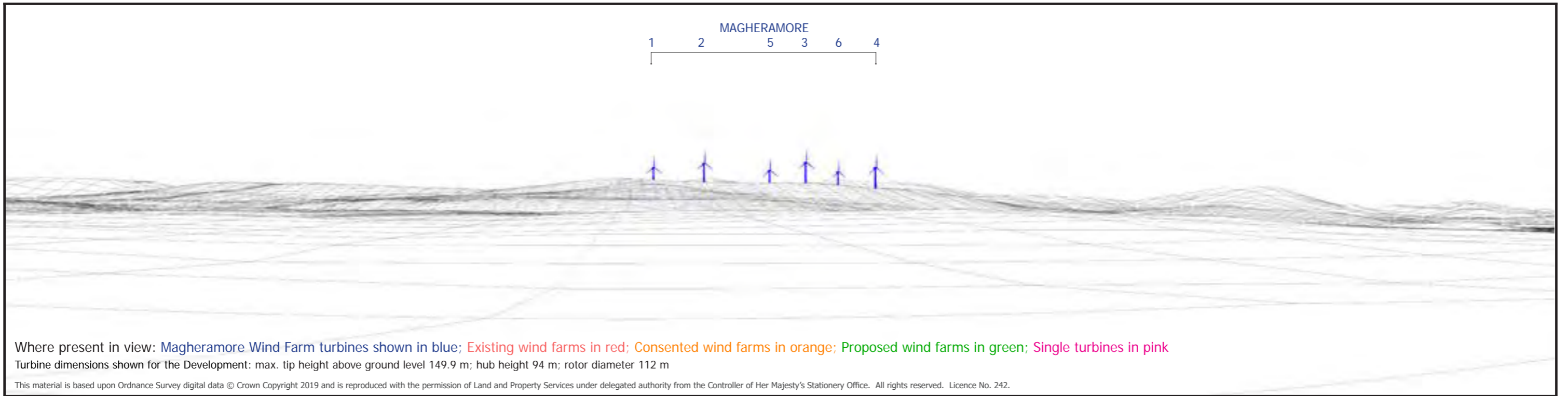
FIGURE 4.22 (page 2/2)

VIEWPOINT 10, BASELINE PHOTOGRAPH DUNGIVEN, BRIDGE OVER RIVER ROE

Easting:	268455
Northing:	409530
Elevation A.O.D	63 m
Bearing:	176.77 °
Approx. Included Angle:	80 °
Approx. distance to nearest turbine:	4.2 km to T4

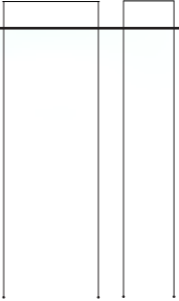


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<p>LANDSCAPE AND VISUAL IMPACT ASSESSMENT</p>												
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">DRAWN / APPROVED:</td> <td style="width: 25%;">DATE:</td> <td style="width: 25%;">PRINT SIZE:</td> <td style="width: 25%;">REVISION:</td> </tr> <tr> <td>SMc / GM</td> <td>June 2019</td> <td>A3</td> <td>A</td> </tr> </table>	DRAWN / APPROVED:	DATE:	PRINT SIZE:	REVISION:	SMc / GM	June 2019	A3	A	<p>NOTE: This Figure should be viewed at a comfortable arms length. It will be viewed in conjunction with the analysis of landscape and visual effects contained in Chapter 4 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in Technical Appendix 4.2, in particular the paragraphs referencing Scottish Natural Heritage Guidance regarding the limitations of visualisations.</p>			
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Proposed removal of forestry
near T3, T6 & T4



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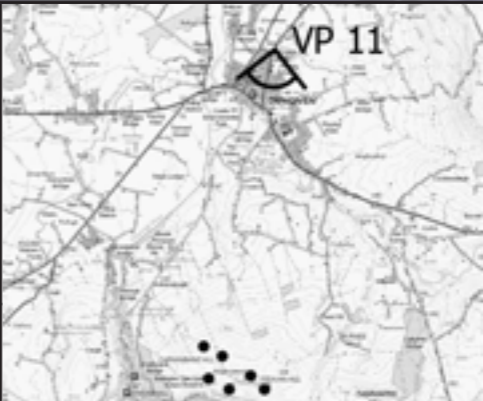
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MAGHERAMORE WIND FARM

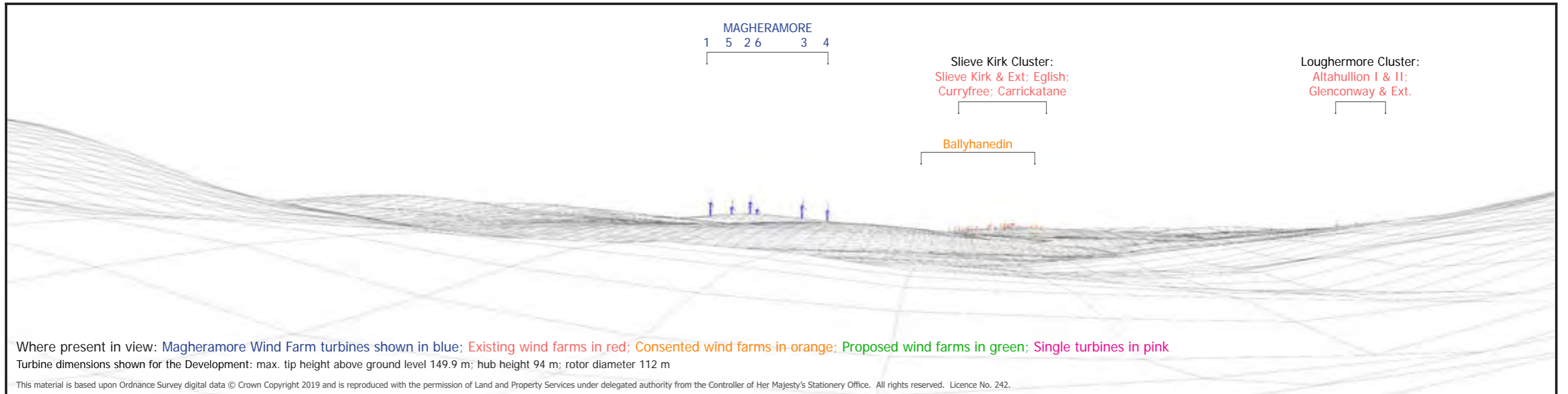
FIGURE 4.23 (page 2/2)

**VIEWPOINT 11, BASELINE PHOTOGRAPH
B64, GARVAGH ROAD, DUNGIVEN**

Easting:	269392
Northing:	410211
Elevation A.O.D	81 m
Bearing:	188.4 °
Approx. Included Angle:	75 °
Approx. distance to nearest turbine:	5.00 km to T4



NOTE: This Figure should be viewed at a comfortable arms length. It will be viewed in conjunction with the analysis of landscape and visual effects contained in Chapter 4 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in Technical Appendix 4.2, in particular the paragraphs referencing Scottish Natural Heritage Guidance regarding the limitations of visualisations.



<p>Shanti McAllister landscape planning and design</p> <p>info@shantimcallister.co.uk www.shantimcallister.co.uk</p>	<p>MAGHERAMORE WIND FARM</p> <p>FIGURE 4.24 (page 1/2)</p> <p>VIEWPOINT 12, WIRELINE & PHOTOMONTAGE</p> <p>A6 AT FP McCANN QUARRY</p>	<p>Easting: 276459 Northing: 406159 Elevation A.O.D: 235 m Bearing: 261.11 ° Approx. Included Angle: 75 ° Approx. distance to nearest turbine: 7.33 km to T1</p>										
<p>LANDSCAPE AND VISUAL IMPACT ASSESSMENT</p>												
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">DRAWN / APPROVED:</td> <td style="width: 25%;">DATE:</td> <td style="width: 25%;">PRINT SIZE:</td> <td style="width: 25%;">REVISION:</td> </tr> <tr> <td>SMc / GM</td> <td>June 2019</td> <td>A3</td> <td>A</td> </tr> </table>	DRAWN / APPROVED:	DATE:	PRINT SIZE:	REVISION:	SMc / GM	June 2019	A3	A	<p>NOTE: This Figure should be viewed at a comfortable arms length. It will be viewed in conjunction with the analysis of landscape and visual effects contained in Chapter 4 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in Technical Appendix 4.2, in particular the paragraphs referencing Scottish Natural Heritage Guidance regarding the limitations of visualisations.</p>			
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No visible changes to forestry from this location



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**LANDSCAPE AND VISUAL
 IMPACT ASSESSMENT**

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MAGHERAMORE WIND FARM

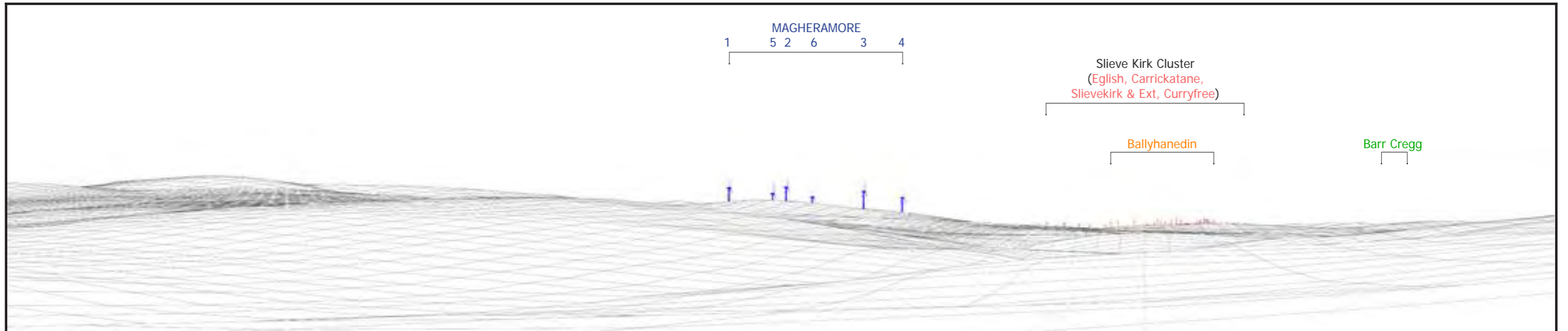
FIGURE 4.24 (page 2/2)

**VIEWPOINT 12, BASELINE PHOTOGRAPH
 A6 AT FP McCANN QUARRY**

Easting:	276459
Northing:	406159
Elevation A.O.D	235 m
Bearing:	261.11 °
Approx. Included Angle:	75 °
Approx. distance to nearest turbine:	7.33 km to T1



NOTE: This Figure should be viewed at a comfortable arms length. It will be viewed in conjunction with the analysis of landscape and visual effects contained in Chapter 4 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in Technical Appendix 4.2, in particular the paragraphs referencing Scottish Natural Heritage Guidance regarding the limitations of visualisations.



Where present in view: Magheramore Wind Farm turbines shown in blue; Existing wind farms in red; Consented wind farms in orange; Proposed wind farms in green; Single turbines in pink

Turbine dimensions shown for the Development: max. tip height above ground level 149.9 m; hub height 94 m; rotor diameter 112 m

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<p>Shanti McAllister landscape planning and design info@shantimcallister.co.uk www.shantimcallister.co.uk</p>	<p>MAGHERAMORE WIND FARM</p> <p>FIGURE 4.25 (page 1/2)</p> <p>VIEWPOINT 13, WIRELINE & PHOTOMONTAGE A6 AT CORICK ROAD JUNCTION</p>	<p>Easting: 274600 Northing: 406750 Elevation A.O.D: 202 m Bearing: 253.15 ° Approx. Included Angle: 80 ° Approx. distance to nearest turbine: 5.72 km to T1</p>							
<p>LANDSCAPE AND VISUAL IMPACT ASSESSMENT</p> <table border="1"> <tr> <td>DRAWN / APPROVED:</td> <td>DATE:</td> <td>PRINT SIZE:</td> <td>REVISION:</td> </tr> <tr> <td>SMc / GM</td> <td>June 2019</td> <td>A3</td> <td>A</td> </tr> </table> <p>THIS DRAWING IS THE PROPERTY OF RENEWABLE ENERGY SYSTEMS LTD. AND NO REPRODUCTION MAY BE MADE IN WHOLE OR IN PART WITHOUT PERMISSION</p>		DRAWN / APPROVED:	DATE:	PRINT SIZE:	REVISION:	SMc / GM	June 2019	A3	A
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No visible changes to forestry from this location



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LANDSCAPE AND VISUAL IMPACT ASSESSMENT

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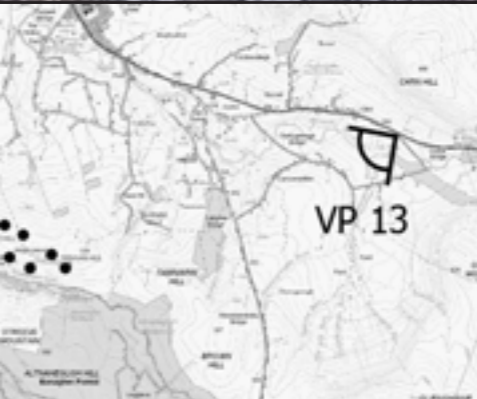
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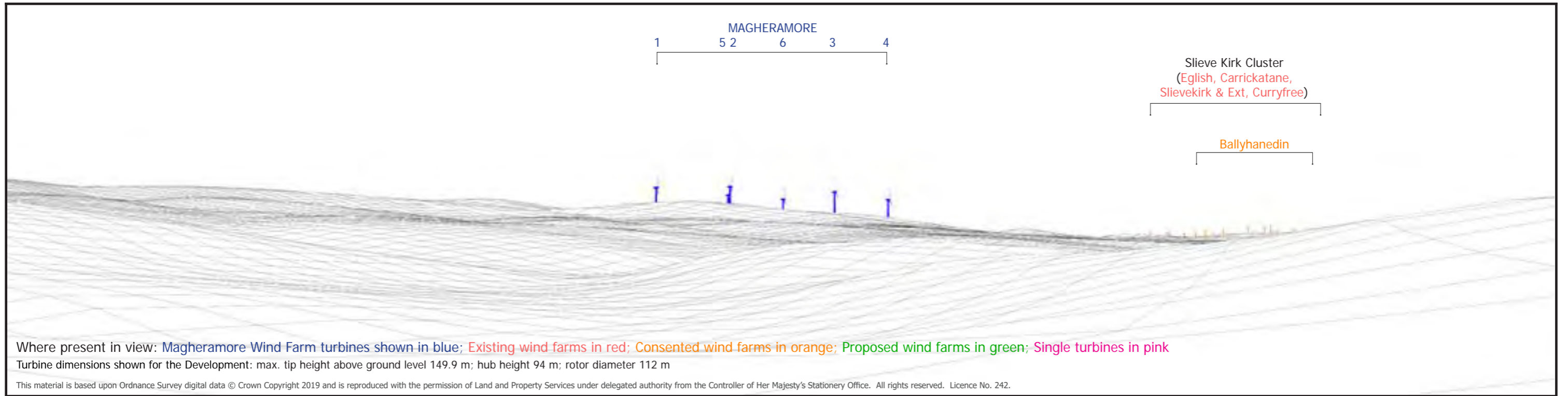
MAGHERAMORE WIND FARM

FIGURE 4.25 (page 2/2)

**VIEWPOINT 13, BASELINE PHOTOGRAPH
 A6 AT CORICK ROAD JUNCTION**

Easting:	274600
Northing:	406750
Elevation A.O.D	202 m
Bearing:	253.15 °
Approx. Included Angle:	80 °
Approx. distance to nearest turbine:	5.72 km to T1





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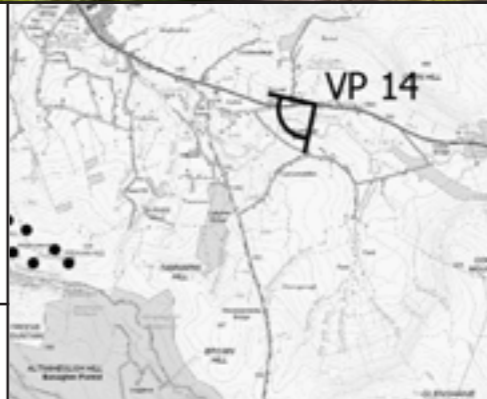
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MAGHERAMORE WIND FARM

FIGURE 4.26 (page 1/2)

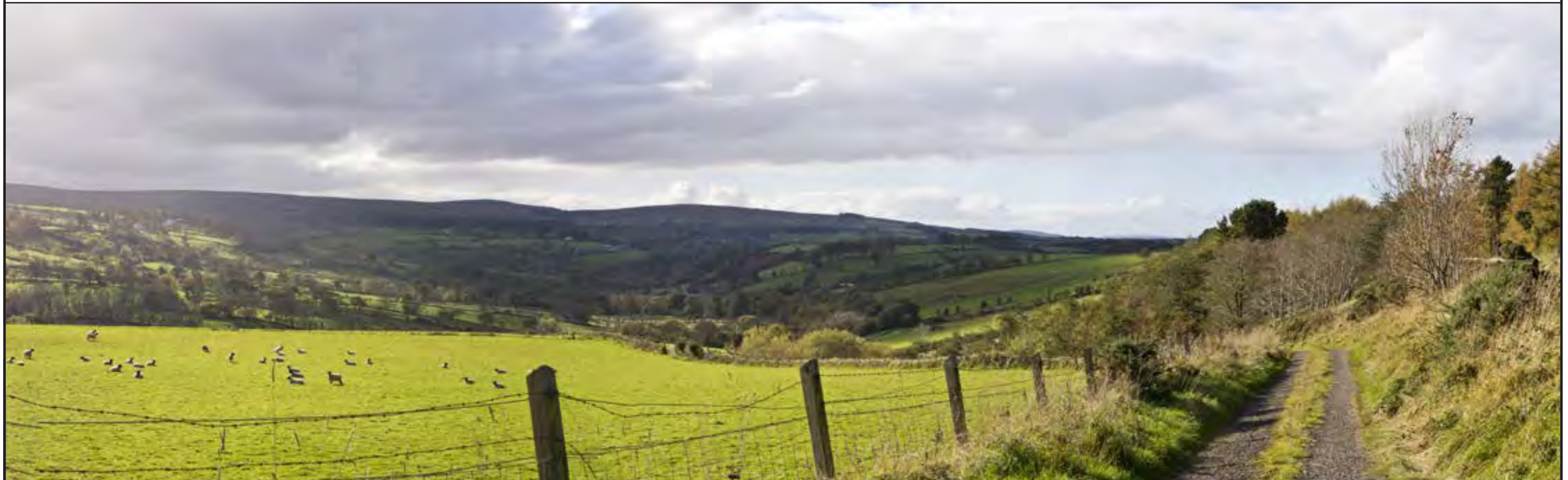
VIEWPOINT 14, WIRELINE & PHOTOMONTAGE A6 AT CASHEL ROAD JUNCTION

Easting:	273271
Northing:	407167
Elevation A.O.D	185 m
Bearing:	243.5 °
Approx. Included Angle:	75 °
Approx. distance to nearest turbine:	4.72 km to T1



NOTE: This Figure should be viewed at a comfortable arms length. It will be viewed in conjunction with the analysis of landscape and visual effects contained in Chapter 4 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in Technical Appendix 4.2, in particular the paragraphs referencing Scottish Natural Heritage Guidance regarding the limitations of visualisations.

No visible changes to forestry from this location



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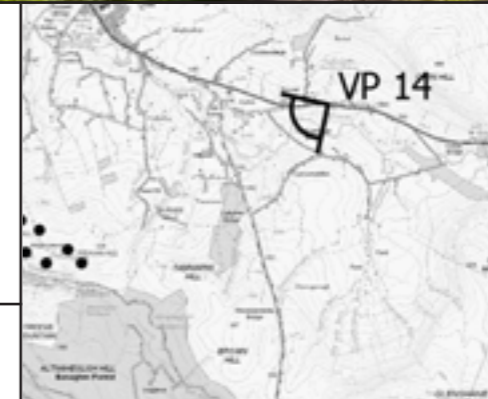
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MAGHERAMORE WIND FARM

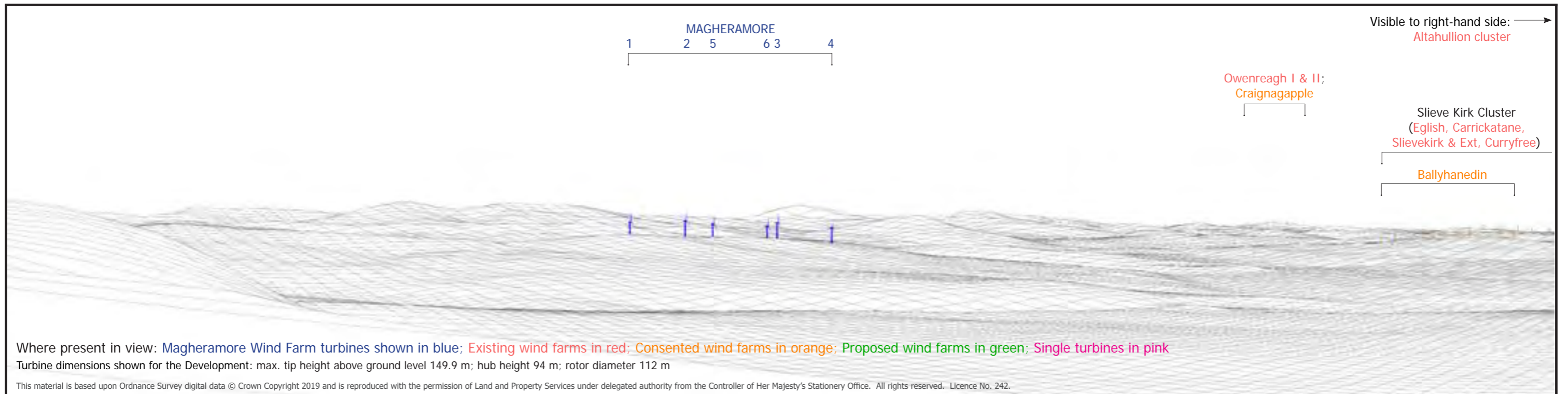
FIGURE 4.26 (page 2/2)

VIEWPOINT 14, BASELINE PHOTOGRAPH A6 AT CASHEL ROAD JUNCTION

Easting:	273271
Northing:	407167
Elevation A.O.D	185 m
Bearing:	243.5 °
Approx. Included Angle:	75 °
Approx. distance to nearest turbine:	4.72 km to T1



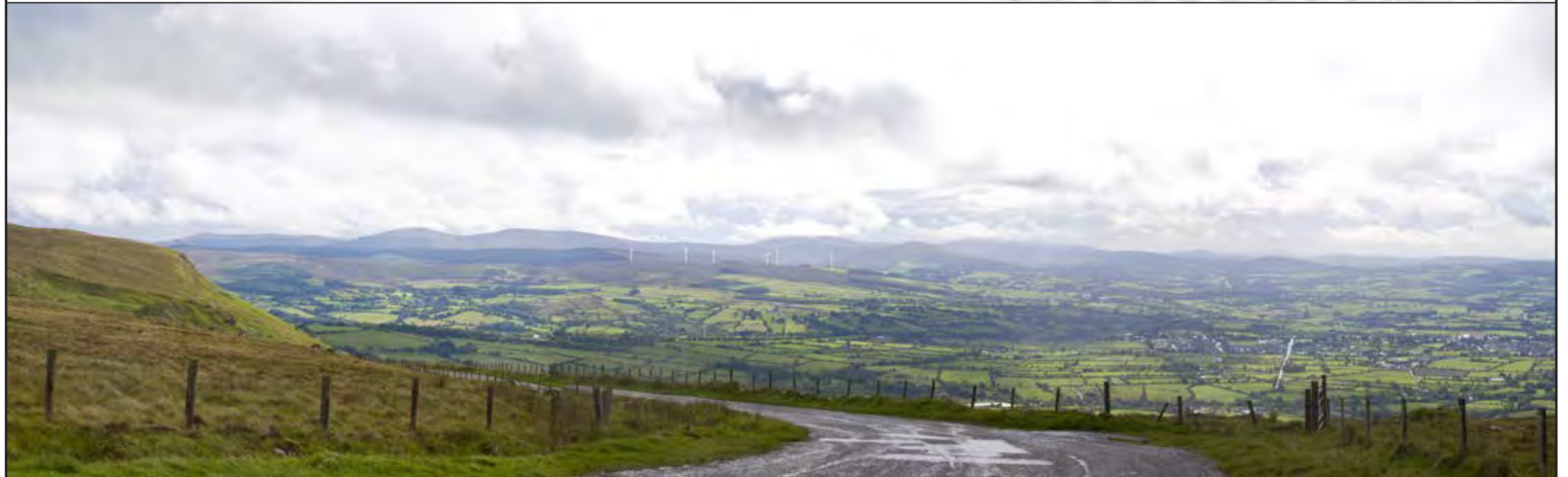
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Where present in view: Magheramore Wind Farm turbines shown in blue; Existing wind farms in red; Consented wind farms in orange; Proposed wind farms in green; Single turbines in pink

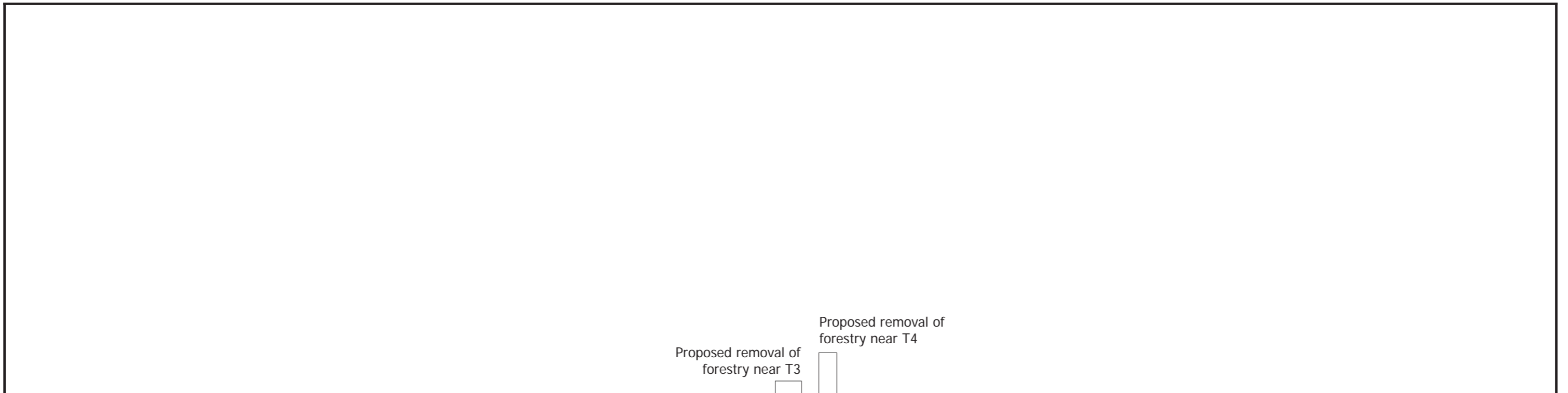
Turbine dimensions shown for the Development: max. tip height above ground level 149.9 m; hub height 94 m; rotor diameter 112 m

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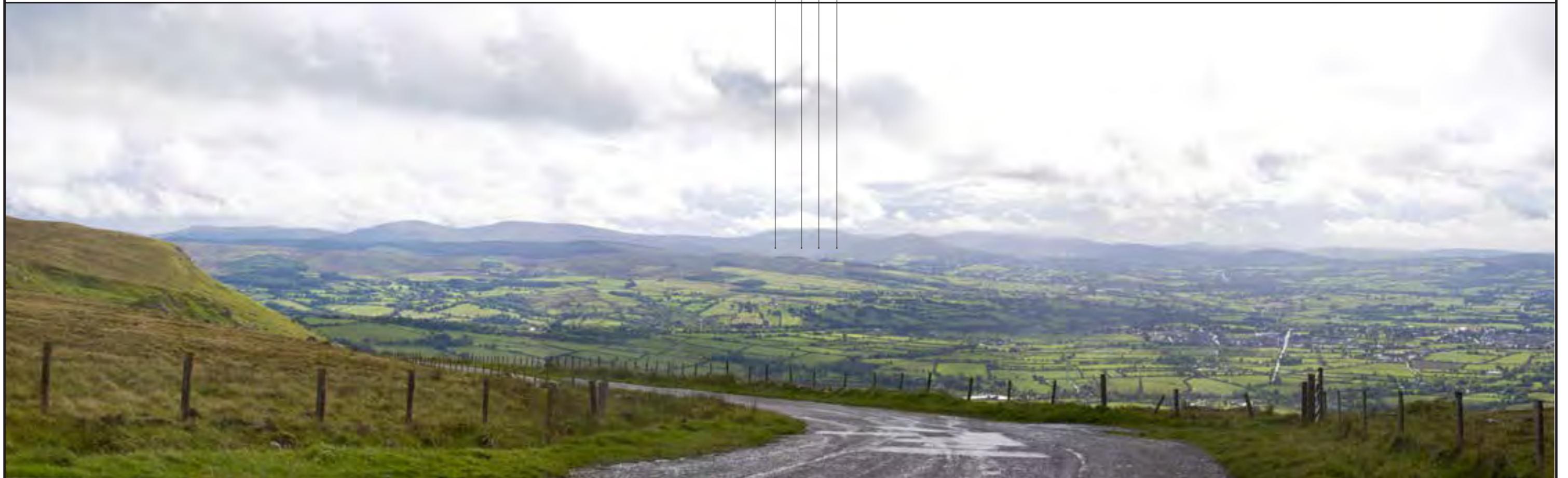
<p>Shanti McAllister landscape planning and design info@shantimcallister.co.uk www.shantimcallister.co.uk</p>	<p>MAGHERAMORE WIND FARM</p> <p>FIGURE 4.27 (page 1/2) VIEWPOINT 15, WIRELINE & PHOTOMONTAGE BENBRADAGH MOUNTAIN</p>	<p>Easting: 272732 Northing: 410267 Elevation A.O.D: 390 m Bearing: 217.68 ° Approx. Included Angle: 80 ° Approx. distance to nearest turbine: 6.54 km to T2</p>		
<p>LANDSCAPE AND VISUAL IMPACT ASSESSMENT</p> <table border="1"> <tr> <td>DRAWN / APPROVED: SMc / GM</td> <td>DATE: June 2019</td> <td>PRINT SIZE: A3</td> <td>REVISION: A</td> </tr> </table> <p>THIS DRAWING IS THE PROPERTY OF RENEWABLE ENERGY SYSTEMS LTD. AND NO REPRODUCTION MAY BE MADE IN WHOLE OR IN PART WITHOUT PERMISSION</p>				
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Proposed removal of forestry near T3

Proposed removal of forestry near T4



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MAGHERAMORE WIND FARM

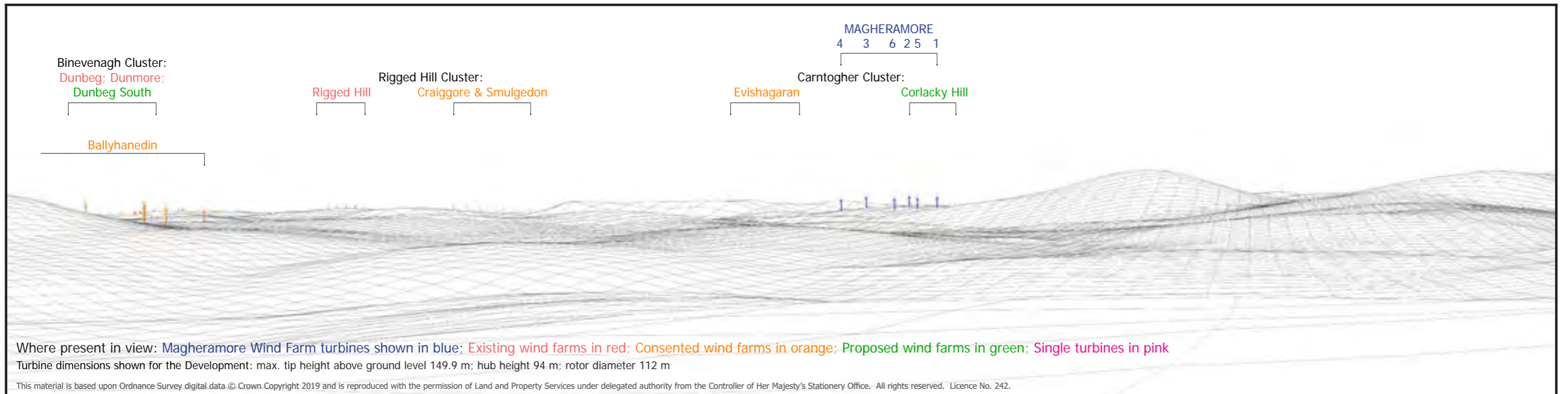
FIGURE 4.27 (page 2/2)

VIEWPOINT 15, BASELINE PHOTOGRAPH
BENBRADAGH MOUNTAIN

Easting:	272732
Northing:	410267
Elevation A.O.D	390 m
Bearing:	217.68 °
Approx. Included Angle:	80 °
Approx. distance to nearest turbine:	6.54 km to T2

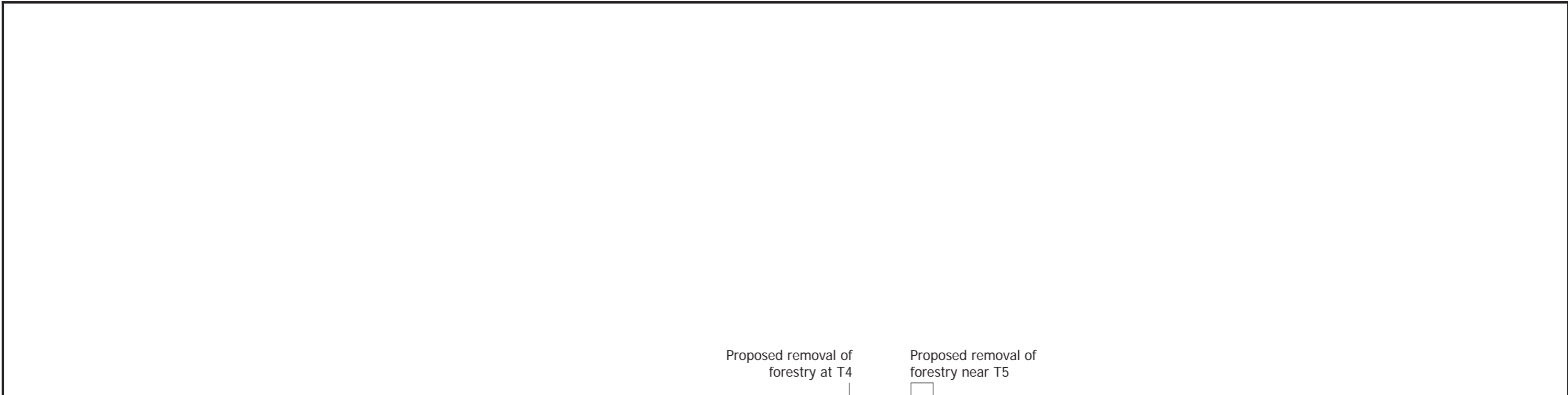


NOTE: This Figure should be viewed at a comfortable arms length. It will be viewed in conjunction with the analysis of landscape and visual effects contained in Chapter 4 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in Technical Appendix 4.2, in particular the paragraphs referencing Scottish Natural Heritage Guidance regarding the limitations of visualisations.



<p>Shanti McAllister landscape planning and design</p> <p>info@shantimcallister.co.uk www.shantimcallister.co.uk</p>	<p>MAGHERAMORE WIND FARM</p> <p>FIGURE 4.28 (page 1/2)</p> <p>VIEWPOINT 16, WIRELINE & PHOTOMONTAGE PLANTATION ROAD NEAR PARK</p>	<p>Easting: 258109 Northing: 401347 Elevation A.O.D: 240 m Bearing: 71.6 ° Approx. Included Angle: 70 ° Approx. distance to nearest turbine: 10.82km to T6</p>		
<p>LANDSCAPE AND VISUAL IMPACT ASSESSMENT</p> <table border="1"> <tr> <td>DRAWN / APPROVED: SMc / GM</td> <td>DATE: June 2019</td> <td>PRINT SIZE: A3</td> <td>REVISION: A</td> </tr> </table> <p>THIS DRAWING IS THE PROPERTY OF RENEWABLE ENERGY SYSTEMS LTD. AND NO REPRODUCTION MAY BE MADE IN WHOLE OR IN PART WITHOUT PERMISSION</p>				
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Proposed removal of forestry at T4

Proposed removal of forestry near T5



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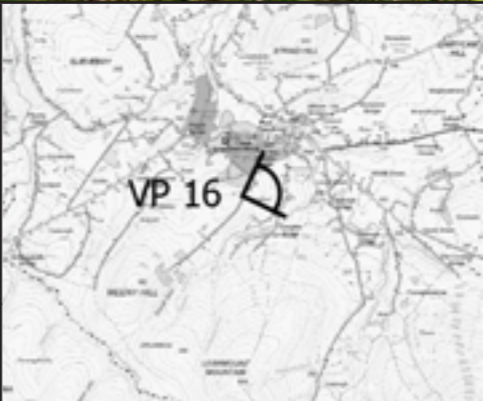
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MAGHERAMORE WIND FARM

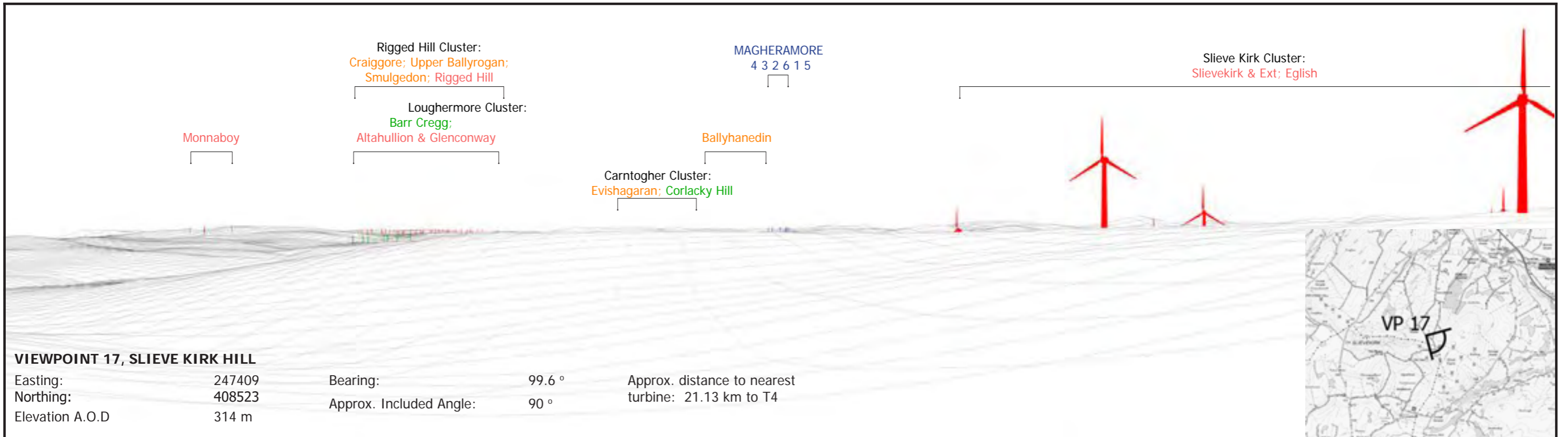
FIGURE 4.28 (page 2/2)

VIEWPOINT 16, BASELINE PHOTOGRAPH PLANTATION ROAD NEAR PARK

Easting:	258109
Northing:	401347
Elevation A.O.D	240 m
Bearing:	71.6 °
Approx. Included Angle:	70 °
Approx. distance to nearest turbine:	10.82km to T6

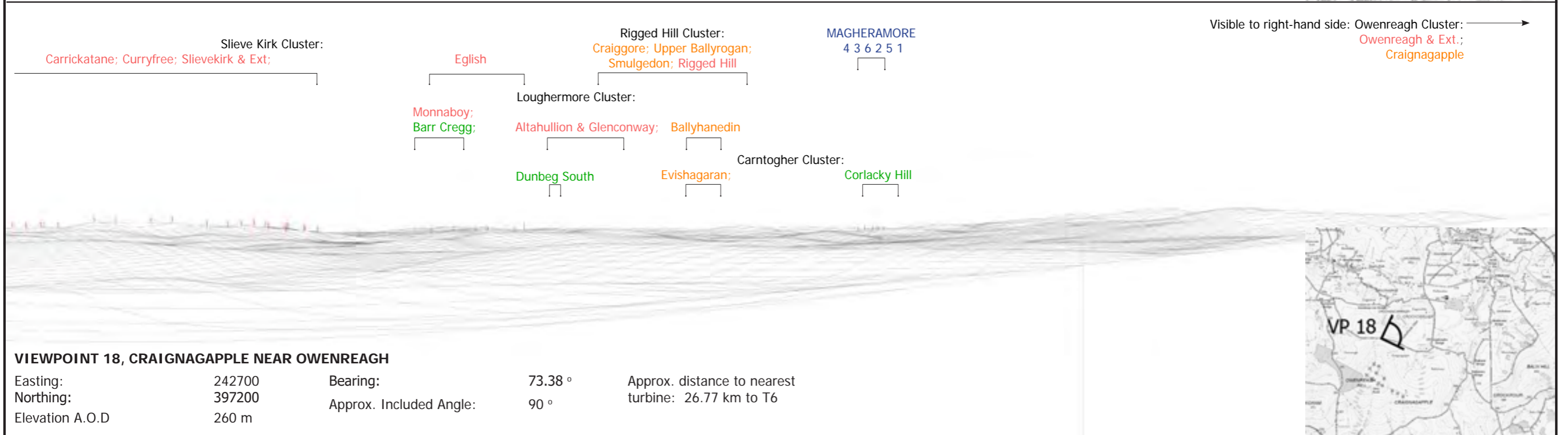


NOTE: This Figure should be viewed at a comfortable arms length. It will be viewed in conjunction with the analysis of landscape and visual effects contained in Chapter 4 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in Technical Appendix 4.2, in particular the paragraphs referencing Scottish Natural Heritage Guidance regarding the limitations of visualisations.



VIEWPOINT 17, SLIEVE KIRK HILL

Easting: 247409 Bearing: 99.6 ° Approx. distance to nearest turbine: 21.13 km to T4
 Northing: 408523 Approx. Included Angle: 90 °
 Elevation A.O.D: 314 m



VIEWPOINT 18, CRAIGNAGAPPLE NEAR OWENREAGH

Easting: 242700 Bearing: 73.38 ° Approx. distance to nearest turbine: 26.77 km to T6
 Northing: 397200 Approx. Included Angle: 90 °
 Elevation A.O.D: 260 m

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MAGHERAMORE WIND FARM

FIGURE 4.29

WIRELINE-ONLY FIGURES FOR VIEWPOINT 17, SLIEVE KIRK HILL & VIEWPOINT 18, CRAIGNAGAPPLE NEAR OWENREAGH

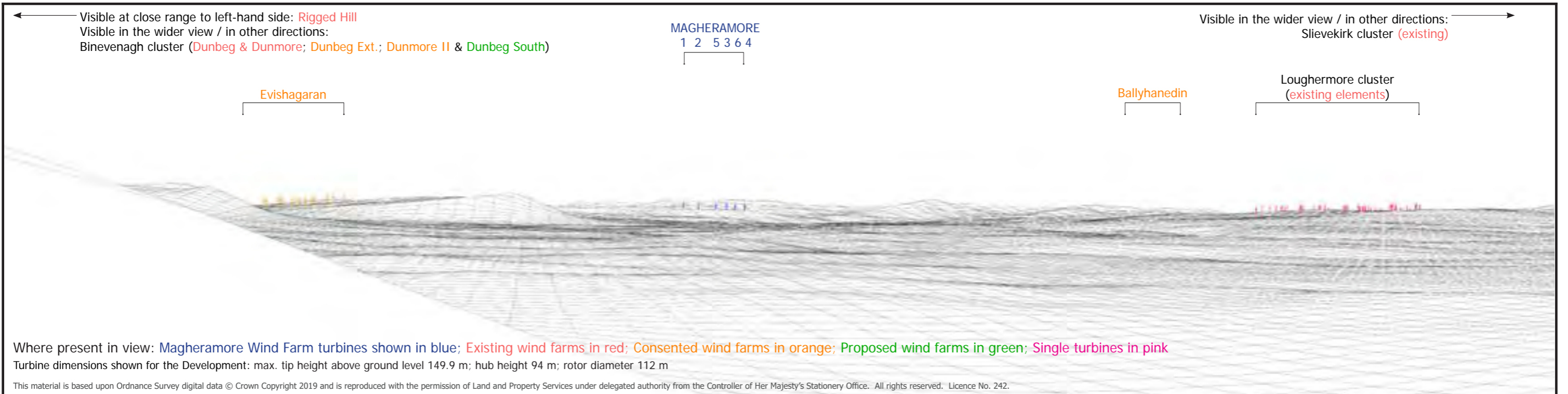
NOTE: This Figure should be viewed at a comfortable arms length. It will be viewed in conjunction with the analysis of landscape and visual effects contained in Chapter 4 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in Technical Appendix 4.2, in particular the paragraphs referencing Scottish Natural Heritage Guidance regarding the limitations of visualisations.

Where present in view:
 Magheramore Wind Farm turbines shown in blue; Existing wind farms in red; Consented wind farms in orange; Proposed wind farms in green; Single turbines in pink

Turbine dimensions shown for the Development: max. tip height above ground level 149.9 m; hub height 94 m; rotor diameter 112 m

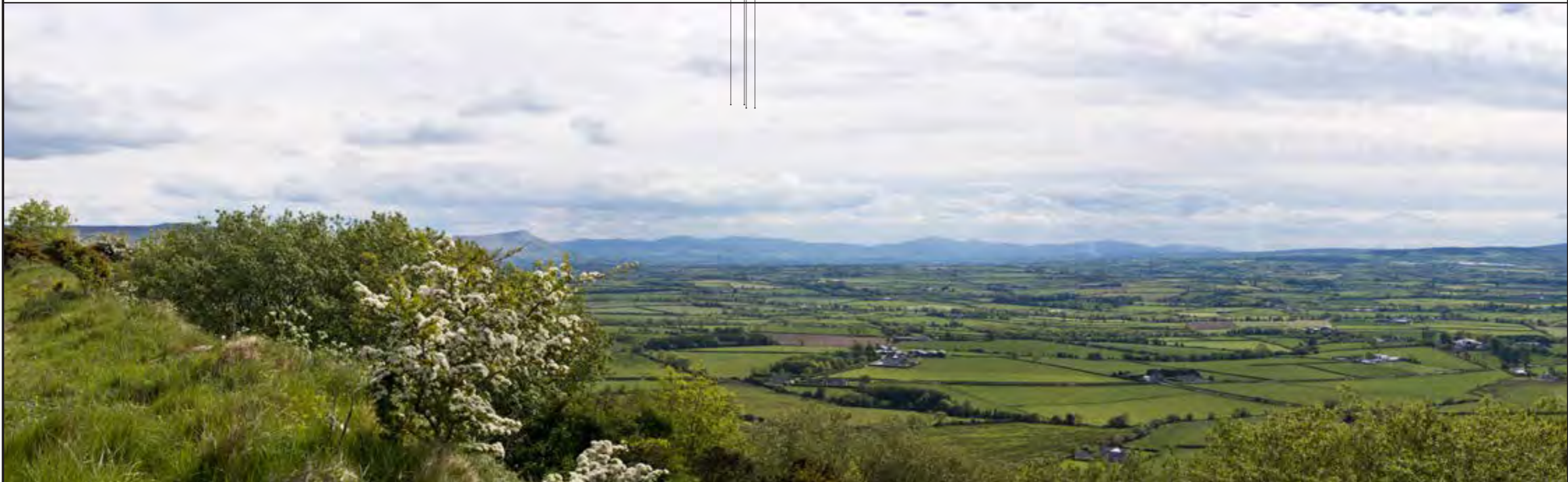
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<p>Shanti McAllister landscape planning and design info@shantimcallister.co.uk www.shantimcallister.co.uk</p>	<p align="center">MAGHERAMORE WIND FARM</p> <p align="center">FIGURE 4.30 (page 1/2)</p> <p align="center">VIEWPOINT 19, WIRELINE & PHOTOMONTAGE</p> <p align="center">KEADY MOUNTAIN</p>	<p>Easting: 272086 Northing: 424045 Elevation A.O.D: 199 m Bearing: 189.98 ° Approx. Included Angle: 75 ° Approx. distance to nearest turbine: 19.04 km to T4</p>		
<p align="center">LANDSCAPE AND VISUAL IMPACT ASSESSMENT</p> <table border="1"> <tr> <td>DRAWN / APPROVED: SMc / GM</td> <td>DATE: June 2019</td> <td>PRINT SIZE: A3</td> <td>REVISION: A</td> </tr> </table> <p><small>THIS DRAWING IS THE PROPERTY OF RENEWABLE ENERGY SYSTEMS LTD. AND NO REPRODUCTION MAY BE MADE IN WHOLE OR IN PART WITHOUT PERMISSION</small></p>				
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Proposed removal of
forestry T3 & T4



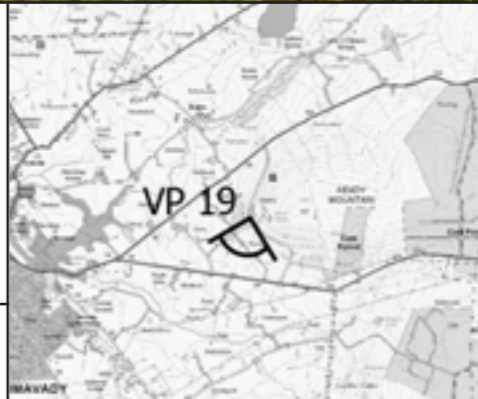
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MAGHERAMORE WIND FARM

FIGURE 4.30 (page 2/2)

**VIEWPOINT 19, BASELINE PHOTOGRAPH
KEADY MOUNTAIN**

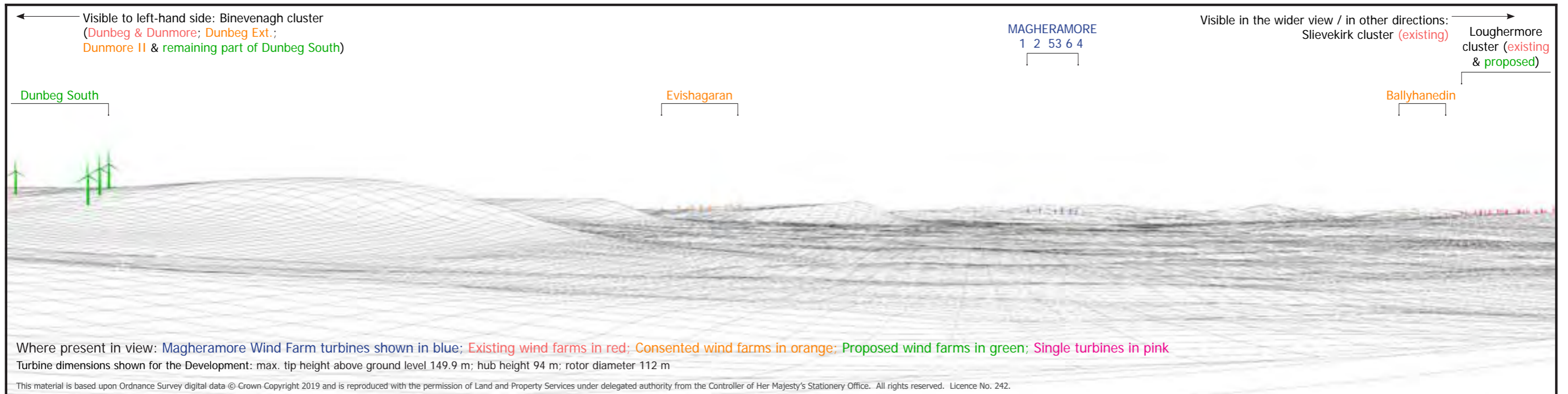
Easting: 272086
Northing: 424045
Elevation A.O.D: 199 m
Bearing: 189.98 °
Approx. Included Angle: 75 °
Approx. distance to nearest turbine: 19.04 km to T4



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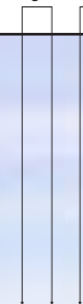
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Shanti McAllister landscape planning and design info@shantimcallister.co.uk www.shantimcallister.co.uk	MAGHERAMORE WIND FARM FIGURE 4.31 (page 1/2) VIEWPOINT 20, WIRELINE & PHOTOMONTAGE BINEVENAGH SCENIC LOOP AT LISNAGRIB		Easting: 270487 Northing: 427688 Elevation A.O.D: 168 m Bearing: 184.9 ° Approx. Included Angle: 75 ° Approx. distance to nearest turbine: 22.46 km to T4		
	LANDSCAPE AND VISUAL IMPACT ASSESSMENT	NOTE: This Figure should be viewed at a comfortable arms length. It will be viewed in conjunction with the analysis of landscape and visual effects contained in Chapter 4 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in Technical Appendix 4.2, in particular the paragraphs referencing Scottish Natural Heritage Guidance regarding the limitations of visualisations.			
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Proposed removal of forestry behind T3 & T4



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MAGHERAMORE WIND FARM

FIGURE 4.31 (page 2/2)
VIEWPOINT 20, BASELINE PHOTOGRAPH
BINEVENAGH SCENIC LOOP AT LISNAGRIB

Easting:	270487
Northing:	427688
Elevation A.O.D	168 m
Bearing:	184.9 °
Approx. Included Angle:	75 °
Approx. distance to nearest turbine:	22.46 km to T4



NOTE: This Figure should be viewed at a comfortable arms length. It will be viewed in conjunction with the analysis of landscape and visual effects contained in Chapter 4 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in Technical Appendix 4.2, in particular the paragraphs referencing Scottish Natural Heritage Guidance regarding the limitations of visualisations.

← Visible to left-hand side:
 Rigged Hill Cluster: **Rigged Hill**; **Craiggore**;
Smulgedon & Upper Ballyrogan
Evishagaran

MAGHERAMORE
 21 3 4 5 6

Visible to right-hand side: →
 Slieve Kirk Cluster: **Eglis**; **Slivelirk & Ext.**
Ballyhanedin

Visible in the wider view / in other directions:
Altahullion & Glenconway

existing
 single turbine
 in foreground

Where present in view: **Magheramore Wind Farm turbines shown in blue**; **Existing wind farms in red**; **Consented wind farms in orange**; **Proposed wind farms in green**; **Single turbines in pink**

Turbine dimensions shown for the Development: max. tip height above ground level 149.9 m; hub height 94 m; rotor diameter 112 m

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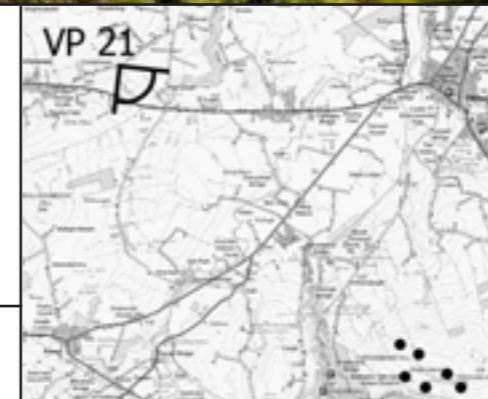
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MAGHERAMORE WIND FARM

FIGURE 4.32 (page 1/2)

**VIEWPOINT 21, WIRELINE & PHOTOMONTAGE
 DRUM ROAD NEAR ALTAHULLION**

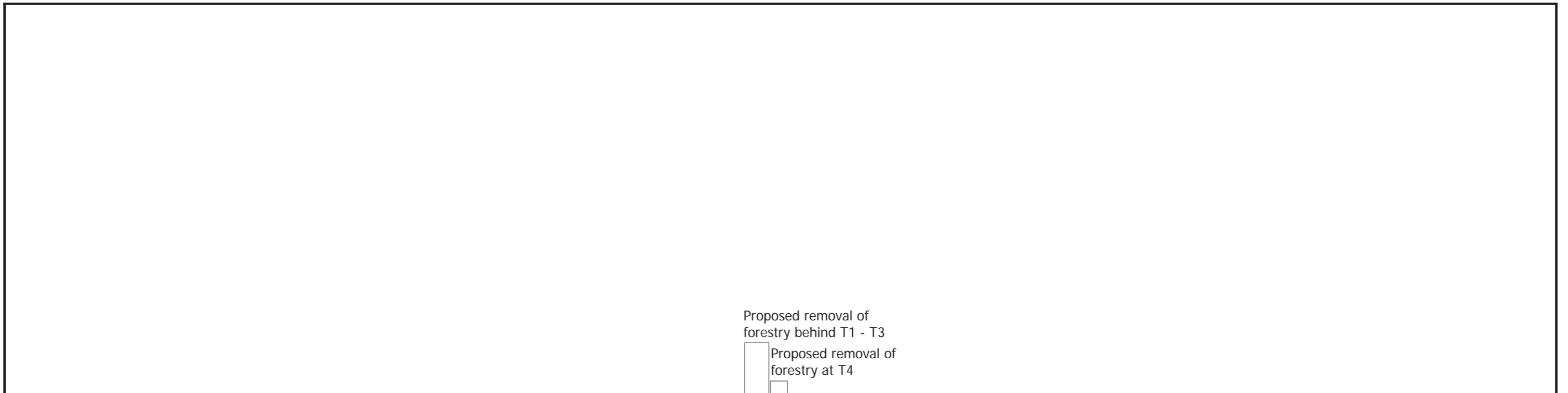
Easting: 263687
 Northing: 409861
 Elevation A.O.D: 144 m
 Bearing: 134.9 °
 Approx. Included Angle: 75 °
 Approx. distance to nearest turbine: 6.46 km to T4



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Proposed removal of forestry behind T1 - T3
 Proposed removal of forestry at T4



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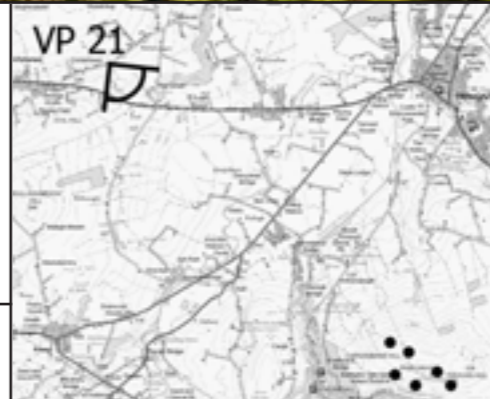
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MAGHERAMORE WIND FARM

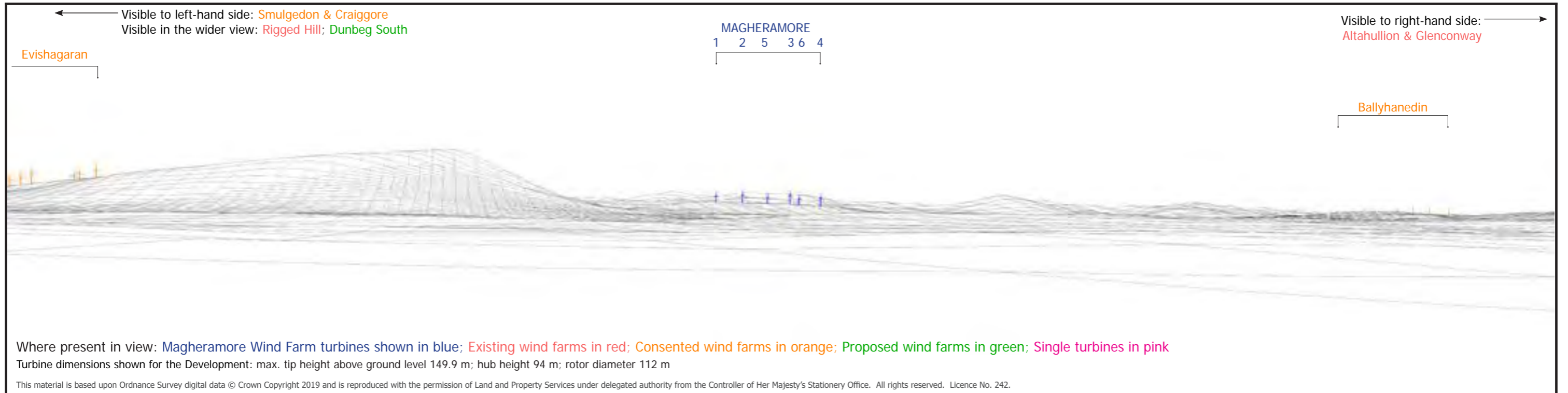
FIGURE 4.32 (page 2/2)

**VIEWPOINT 21, BASELINE PHOTOGRAPH
 DRUM ROAD NEAR ALTAHULLION**

Easting:	263687
Northing:	409861
Elevation A.O.D	144 m
Bearing:	134.9 °
Approx. Included Angle:	75 °
Approx. distance to nearest turbine:	6.46 km to T4



NOTE: This Figure should be viewed at a comfortable arms length. It will be viewed in conjunction with the analysis of landscape and visual effects contained in Chapter 4 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in Technical Appendix 4.2, in particular the paragraphs referencing Scottish Natural Heritage Guidance regarding the limitations of visualisations.



Shanti McAllister landscape planning and design info@shantimcallister.co.uk www.shantimcallister.co.uk	MAGHERAMORE WIND FARM FIGURE 4.33 (page 1/2) VIEWPOINT 22, WIRELINE & PHOTOMONTAGE EDGE OF DRUMSURN VILLAGE		Easting: 272227 Northing: 416701 Elevation A.O.D: 97 m Bearing: 197.01 ° Approx. Included Angle: 70 ° Approx. distance to nearest turbine: 12.03 km to T4		
	LANDSCAPE AND VISUAL IMPACT ASSESSMENT	NOTE: This Figure should be viewed at a comfortable arms length. It will be viewed in conjunction with the analysis of landscape and visual effects contained in Chapter 4 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in Technical Appendix 4.2, in particular the paragraphs referencing Scottish Natural Heritage Guidance regarding the limitations of visualisations.			
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No visible changes to forestry from this location



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**LANDSCAPE AND VISUAL
 IMPACT ASSESSMENT**

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MAGHERAMORE WIND FARM

FIGURE 4.33 (page 2/2)

**VIEWPOINT 22, BASELINE PHOTOGRAPH
 EDGE OF DRUMSURN VILLAGE**

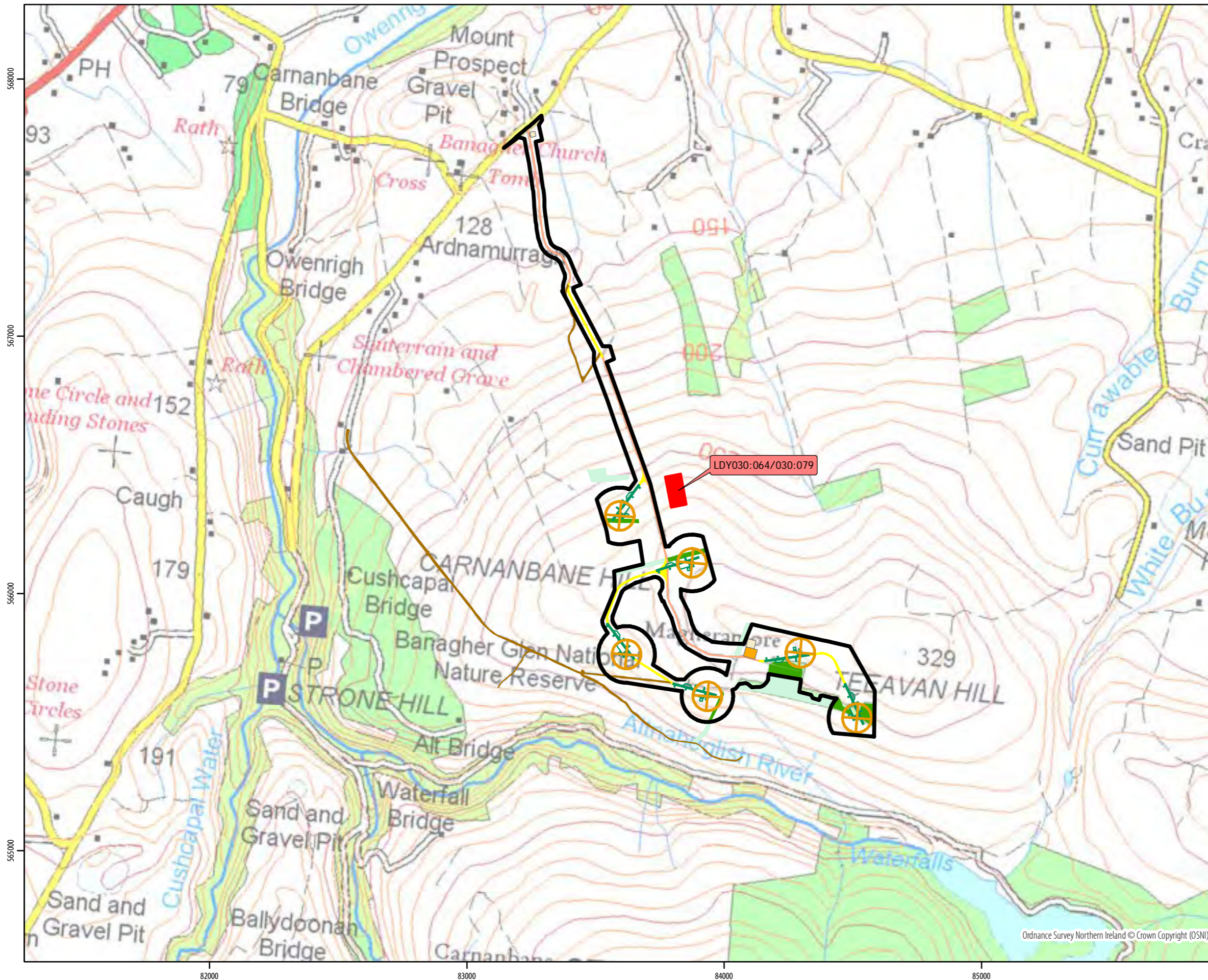
Easting:	272227
Northing:	416701
Elevation A.O.D	97 m
Bearing:	197.01 °
Approx. Included Angle:	70 °
Approx. distance to nearest turbine:	12.03 km to T4



NOTE: This Figure should be viewed at a comfortable arms length. It will be viewed in conjunction with the analysis of landscape and visual effects contained in Chapter 4 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in Technical Appendix 4.2, in particular the paragraphs referencing Scottish Natural Heritage Guidance regarding the limitations of visualisations.

5

Archaeology & Cultural Heritage



KEY

- Scheduled monument
- Inner study area
- Turbine Layout
- Construction Compounds
- Control Building
- Crane Hardstanding
- Exiting Tracks
- Upgraded Tracks
- Truning Heads
- New Tracks
- Forestry (removed)
- Forestry (retained)

Scheduled Monument information derived from NIEA data dated 15.05.19. © Crown Copyright (NIEA).

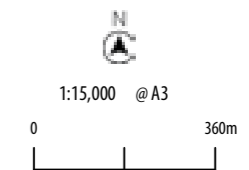
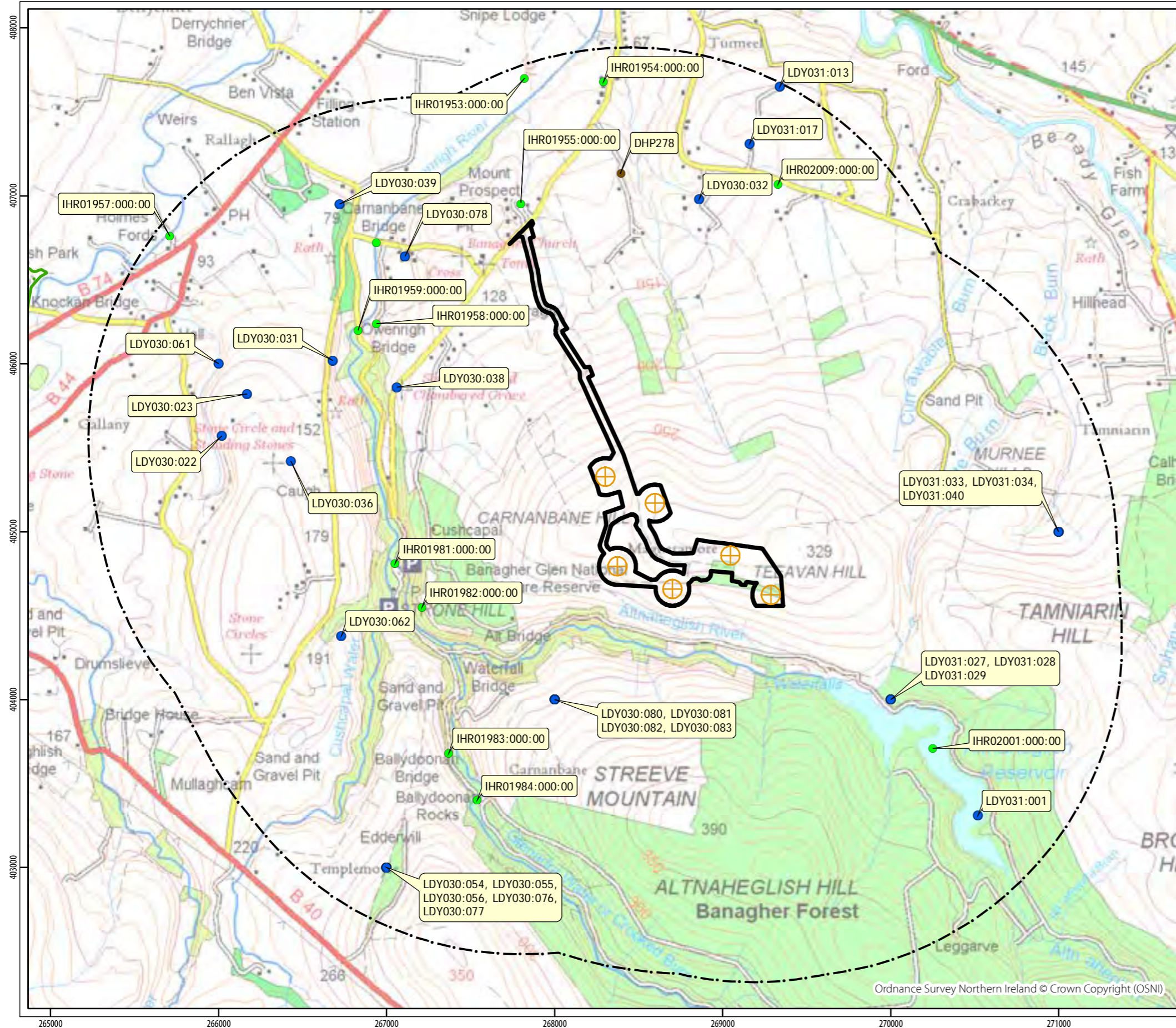


Figure 5.1 Cultural heritage assets in the Inner Study Area



KEY

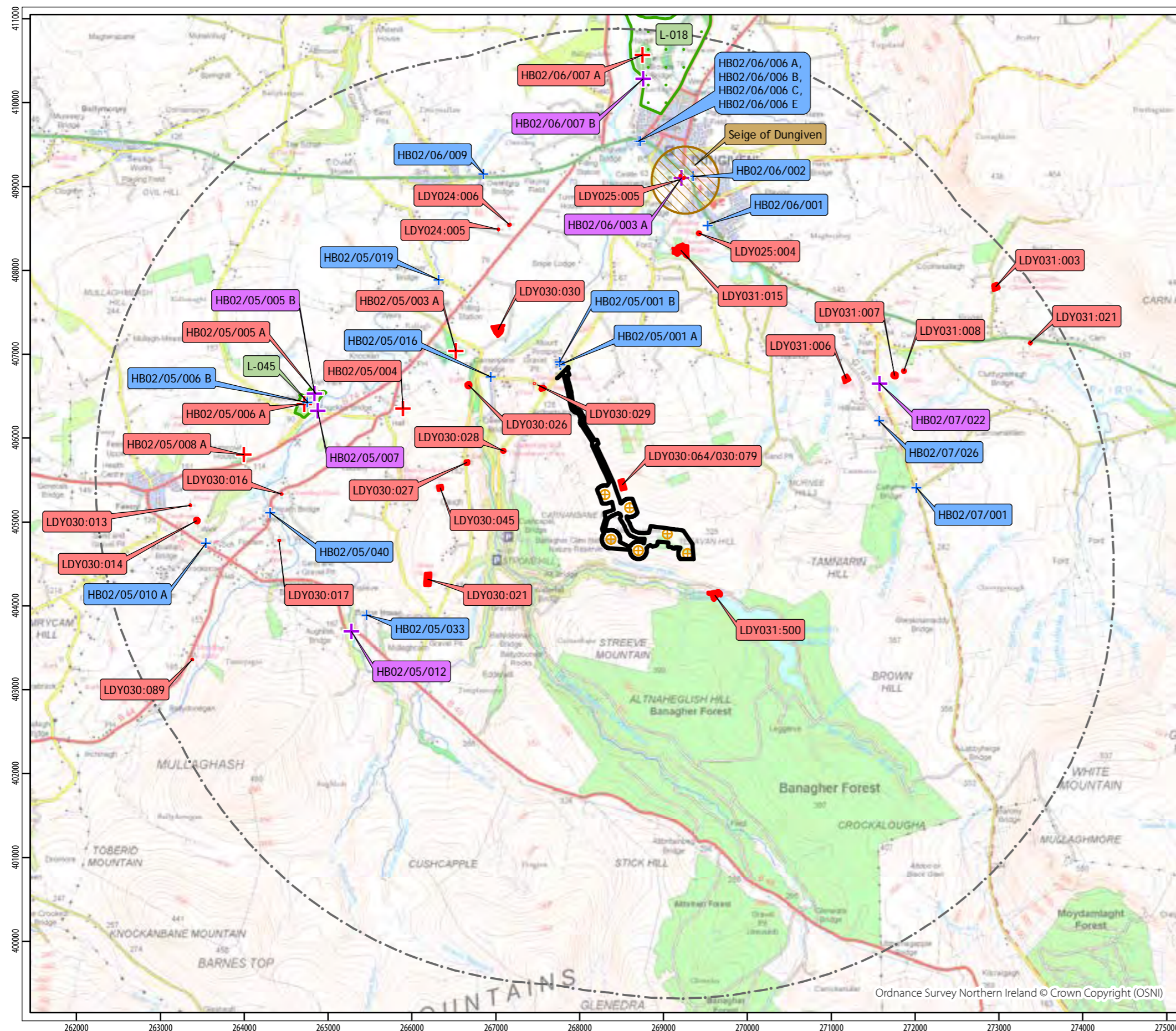
- Turbine
- SMR asset
- Industrial heritage asset
- Defence heritage asset
- Inner study area
- 2km study area

Sites and Monuments Record information derived from NIEA data dated 15.05.19 © Crown Copyright (NIEA).

1:25,000 @ A3

0 500m

Figure 5.2
Undesignated heritage assets in 2km study area



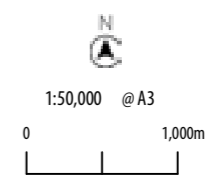
KEY

- Scheduled monument
- ▭ Registered park and garden
- + Grade B+ listed building
- + Grade B1 listed building
- + Grade B2 listed building
- Battlefield
- Turbine
- Inner study area
- 5km outer study area

Registered Park and Garden information derived from NIEA data dated 15.05.19. © Crown Copyright (NIEA).

Scheduled monument area information derived from NIEA data dated 15.05.19 © Crown Copyright (NIEA)

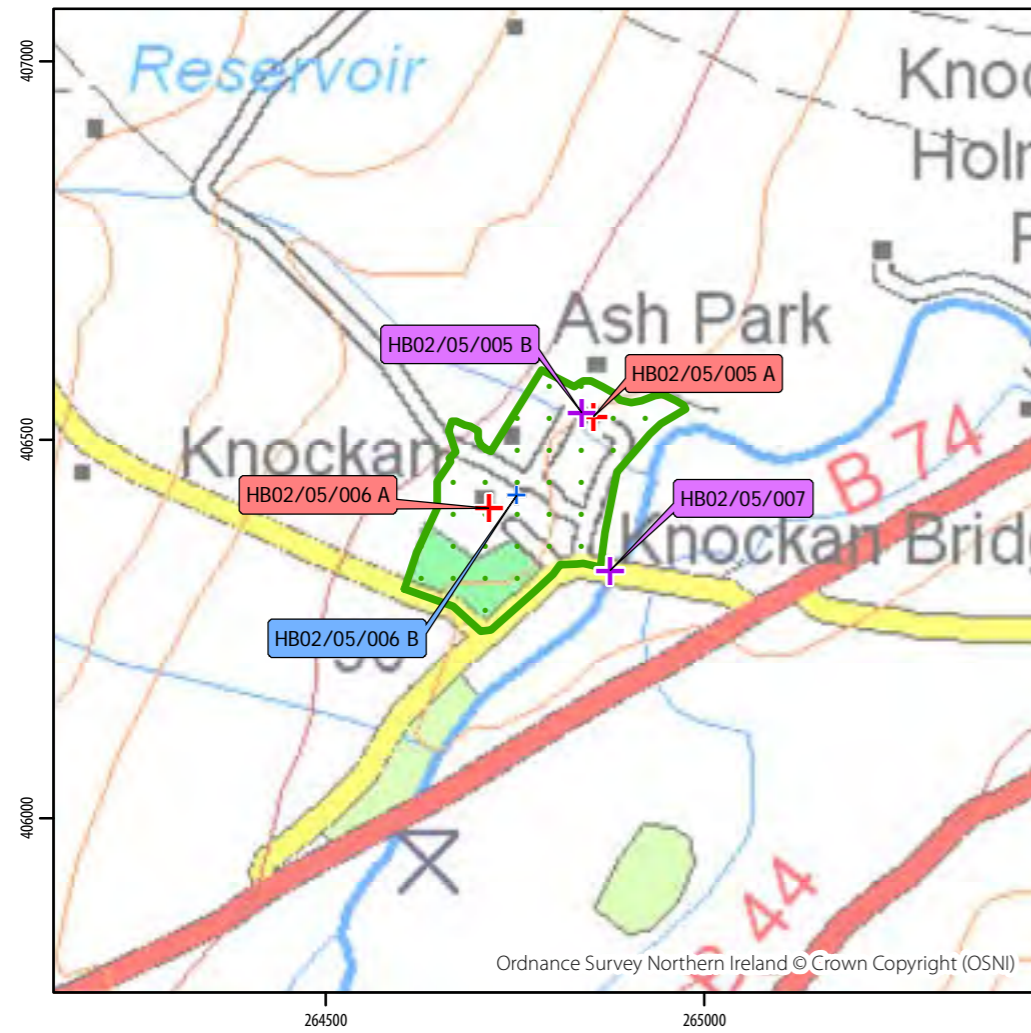
Listed Building data provided by NIEA dated 15.05.19 © Crown Copyright (NIEA)



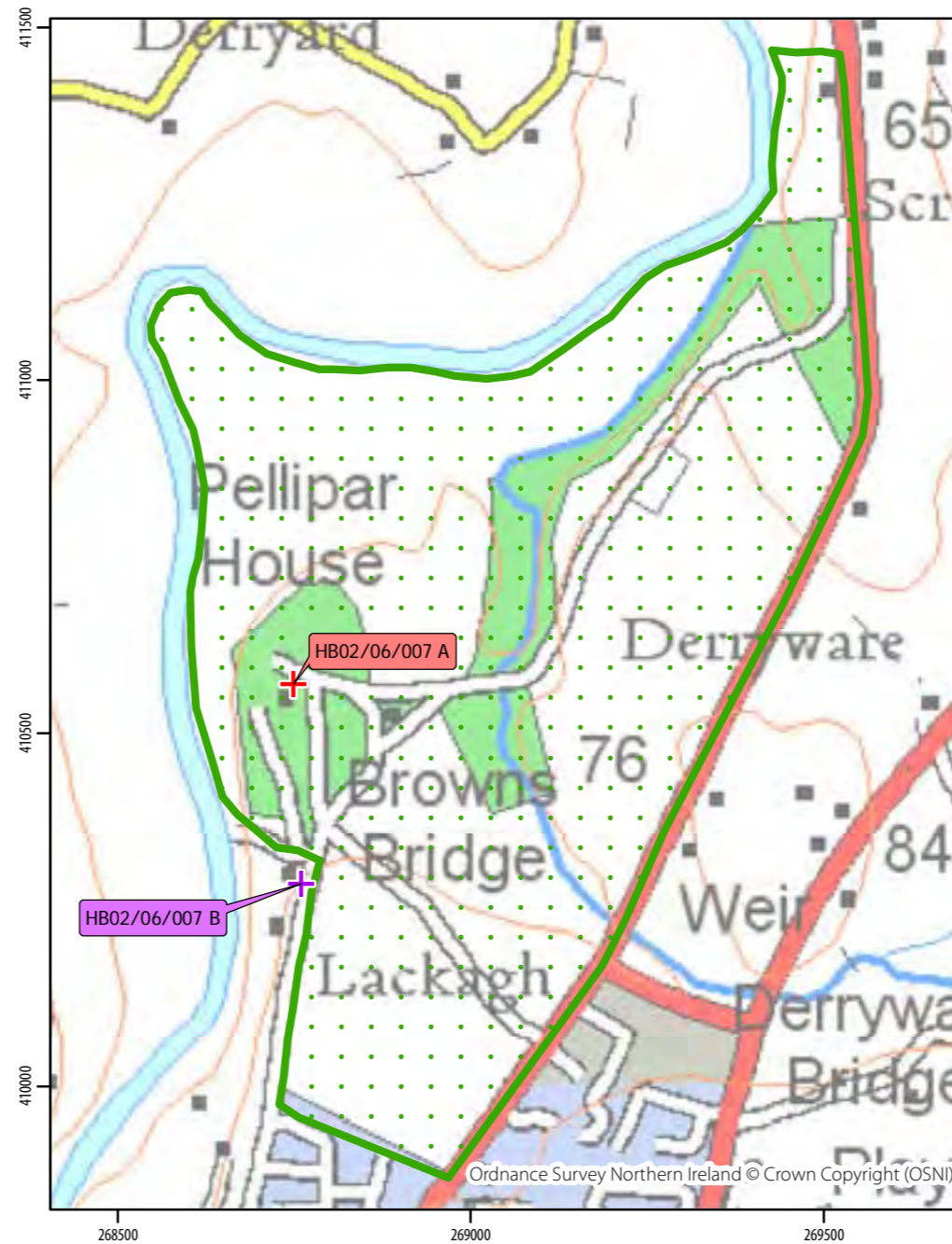
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Figure 5.3
Designated cultural heritage assets in 5km study area

Knockan/ Ash Park Registered Park and Garden



Pellipar House Registered Park and Garden



- KEY
- ▭ Registered park and garden
 - + Grade B+ listed building
 - + Grade B1 listed building
 - + Grade B2 listed building

Registered Park and Garden information derived from NIEA data dated 15.05.19. © Crown Copyright (NIEA).

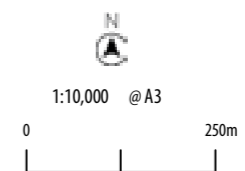
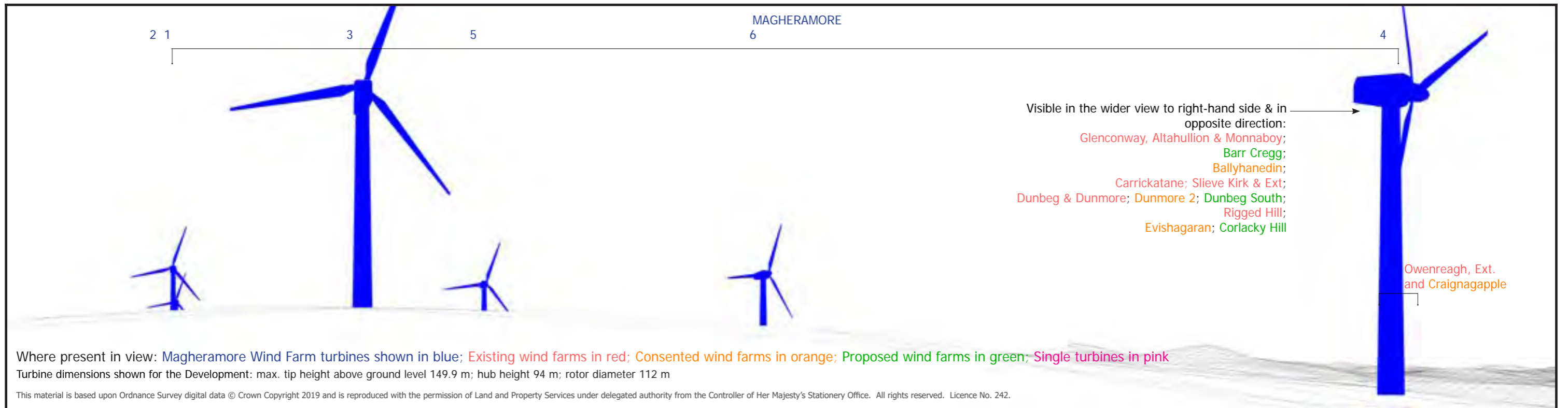





Figure 5.4
Detail of Registered Parks and Gardens in 5km study area



 <p>HEADLAND ARCHAEOLOGY</p> <p>Shanti McAllister landscape planning and design</p> <p>info@shantimcallister.co.uk www.shantimcallister.co.uk</p>	<p>MAGHERAMORE WIND FARM</p> <p>FIGURE 5.5a (page 1/2)</p> <p>WIRELINE & PHOTOMONTAGE</p> <p>LDY 030:064 & 030:079</p> <p>MAGHERAMORE COURT & PORTAL TOMBS</p>	<p>Eastings: 268475 Northing: 405392 Elevation A.O.D: 281 m Bearing: 153.67 ° Approx. Included Angle: 80 ° Approx. distance to nearest turbine: 0.19 km to T4</p>										
<p>ARCHAEOLOGY & CULTURAL HERITAGE IMPACT ASSESSMENT</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">DRAWN / APPROVED:</td> <td style="width: 25%;">DATE:</td> <td style="width: 25%;">PRINT SIZE:</td> <td style="width: 25%;">REVISION:</td> </tr> <tr> <td>SMc / LG</td> <td>May 2019</td> <td>A3</td> <td>A</td> </tr> </table>		DRAWN / APPROVED:	DATE:	PRINT SIZE:	REVISION:	SMc / LG	May 2019	A3	A	<p>NOTE: This Figure must be viewed in conjunction with the analysis of archaeology and cultural heritage effects contained in Chapter 5 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in LVIA Technical Appendix 4.2, in particular the paragraphs referencing Scottish Natural Heritage Guidance regarding the limitations of visualisations.</p>		
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Proposed removal of forestry near T3



Proposed removal of forestry near T4



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SMc / LG	May 2019	A3	A

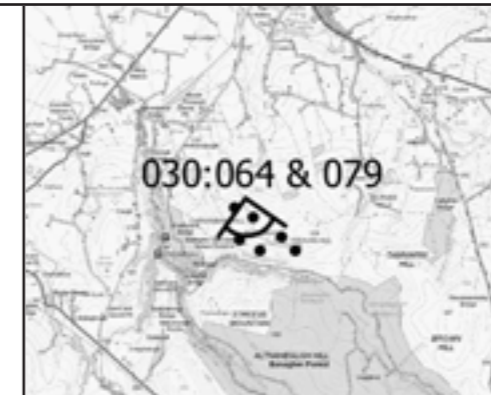
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MAGHERAMORE WIND FARM

FIGURE 5.5a (page 2/2)

**BASELINE PHOTOGRAPH
LDY 030:064 & 030:079
MAGHERAMORE COURT & PORTAL TOMBS**

Easting:	268475
Northing:	405392
Elevation A.O.D	281 m
Bearing:	153.67 °
Approx. Included Angle:	80 °
Approx. distance to nearest turbine:	0.19 km to T4



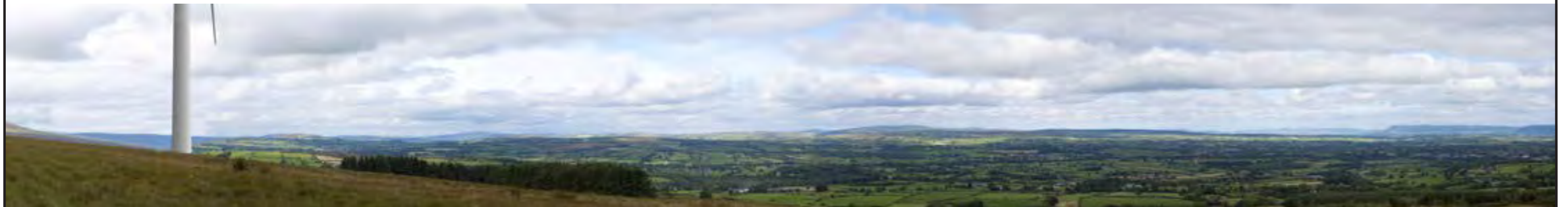
NOTE: This Figure should be viewed at a comfortable arms length. It will be viewed in conjunction with the analysis of landscape and visual effects contained in Chapter 4 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in Technical Appendix 4.2, in particular the paragraphs referencing Scottish Natural Heritage Guidance regarding the limitations of visualisations.



Extent of view from south east to north east of Magheramore Wind Farm



Portion of view looking towards Magheramore Wind Farm






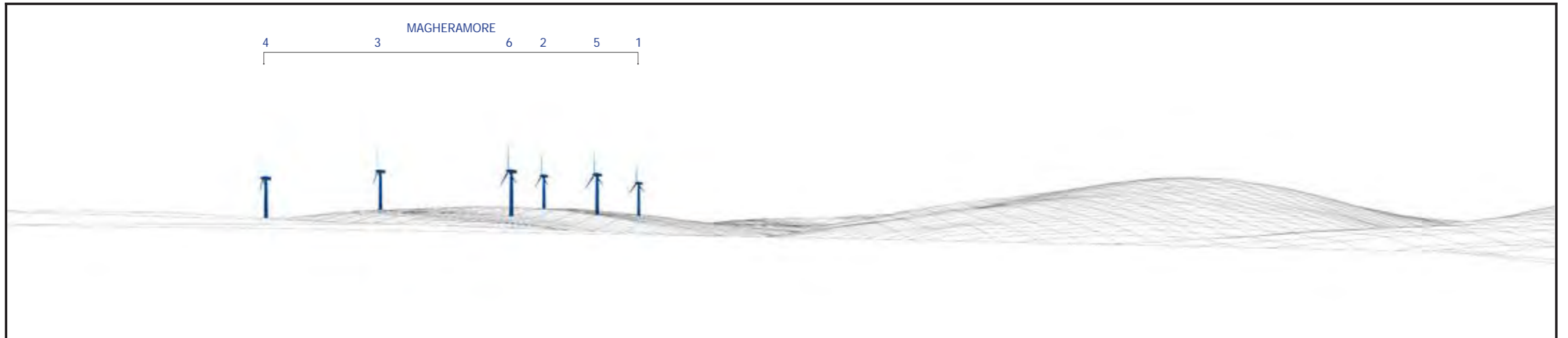
Extent of view from south west to north west of Magheramore Wind Farm

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Turbine dimensions shown for the Development: max. tip height above ground level 149.9 m; hub height 94 m; rotor diameter 112 m

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DRAWN / APPROVED:	DATE:	PRINT SIZE:	REVISION:																					
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Approx. Included Angle:	360 °																							
Approx. distance to nearest turbine:	0.19 km to T4																							



Where present in view: Magheramore Wind Farm turbines shown in blue; Existing wind farms in red; Consented wind farms in orange; Proposed wind farms in green; Single turbines in pink
 Turbine dimensions shown for the Development: max. tip height above ground level 149.9 m; hub height 94 m; rotor diameter 112 m

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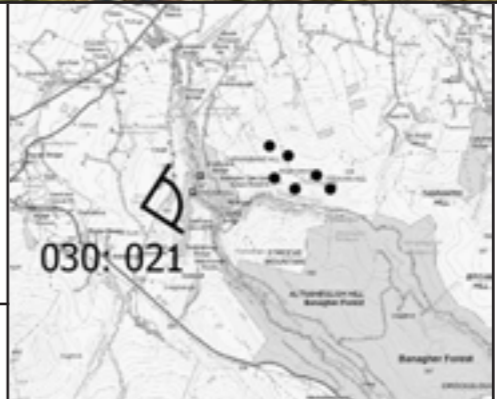
MAGHERAMORE WIND FARM

FIGURE 5.6 (page 1/2)

**WIRELINE & PHOTOMONTAGE
 LDY 030:021
 AUGHLISH STONE CIRCLES & ALIGNMENTS**

NOTE: This Figure must be viewed in conjunction with the analysis of archaeology and cultural heritage effects contained in Chapter 5 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in LVIA Technical Appendix 4.2, in particular the paragraphs referencing Scottish Natural Heritage Guidance regarding the limitations of visualisations.

Easting:	266120
Northing:	404272
Elevation A.O.D	208 m
Bearing:	76.65 °
Approx. Included Angle:	80 °
Approx. distance to nearest turbine:	2.23 km to T6



Proposed removal of forestry near T5 & T1



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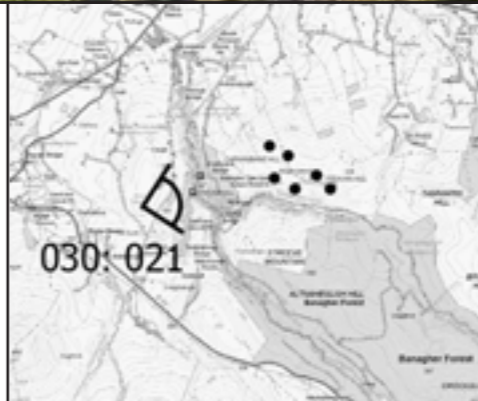
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MAGHERAMORE WIND FARM

FIGURE 5.6 (page 2/2)

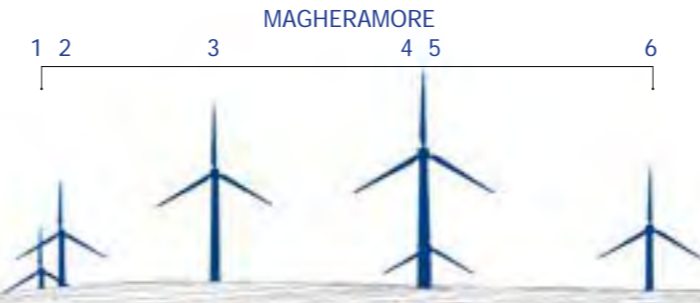
BASELINE PHOTOGRAPH
SITE 030:021
AUGHLISH STONE CIRCLES & ALIGNMENTS

Easting: 266120
 Northing: 404272
 Elevation A.O.D: 208 m
 Bearing: 76.65 °
 Approx. Included Angle: 80 °
 Approx. distance to nearest turbine: 2.23 km to T6



NOTE: This Figure should be viewed at a comfortable arms length. It will be viewed in conjunction with the analysis of landscape and visual effects contained in Chapter 4 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in Technical Appendix 4.2, in particular the paragraphs referencing Scottish Natural Heritage Guidance regarding the limitations of visualisations.

← Visible in the wider view / opposite direction:
 Altahullion, Glenconway & Monnaboy; Ballyhanedin;
 Eglish; Rigged Hill; Craiggore; Dunbeg South



Where present in view: Magheramore Wind Farm turbines shown in blue; Existing wind farms in red; Consented wind farms in orange; Proposed wind farms in green; Single turbines in pink

Turbine dimensions shown for the Development: max. tip height above ground level 149.9 m; hub height 94 m; rotor diameter 112 m

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MAGHERAMORE WIND FARM

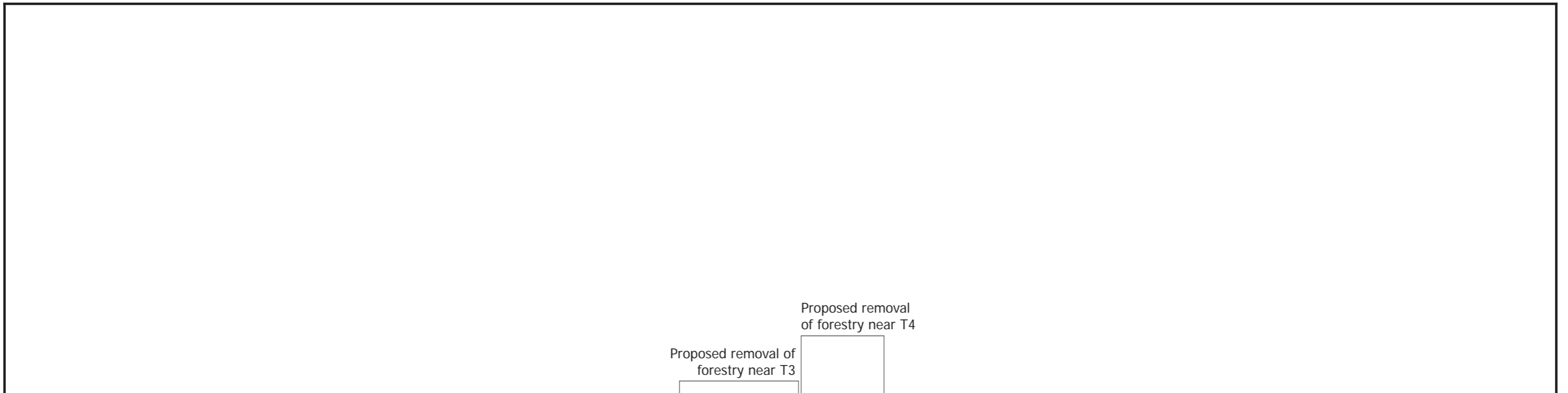
FIGURE 5.7 (page 1/2)

**WIRELINE & PHOTOMONTAGE
 LDY 030:029
 BANAGHER OLD CHURCH & STONE CROSS**

Easting: 267509
 Northing: 406593
 Elevation A.O.D: 140 m
 Bearing: 144.43 °
 Approx. Included Angle: 80 °
 Approx. distance to nearest turbine: 1.49 km to T4



NOTE: This Figure must be viewed in conjunction with the analysis of archaeology and cultural heritage effects contained in Chapter 5 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in LVIA Technical Appendix 4.2, in particular the paragraphs referencing Scottish Natural Heritage Guidance regarding the limitations of visualisations.



Proposed removal of forestry near T3

Proposed removal of forestry near T4



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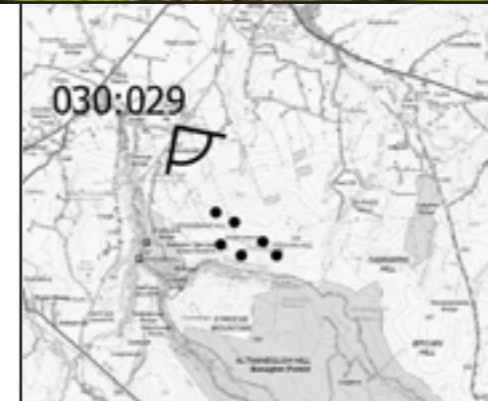
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MAGHERAMORE WIND FARM

FIGURE 5.7 (page 2/2)

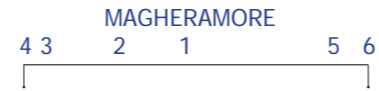
**BASELINE PHOTOGRAPH
 LDY 030:029
 BANAGHER OLD CHURCH & STONE CROSS**

Easting: 267509
 Northing: 406593
 Elevation A.O.D: 140 m
 Bearing: 144.43 °
 Approx. Included Angle: 80 °
 Approx. distance to nearest turbine: 1.49 km to T4



NOTE: This Figure should be viewed at a comfortable arms length. It will be viewed in conjunction with the analysis of landscape and visual effects contained in Chapter 4 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in Technical Appendix 4.2, in particular the paragraphs referencing Scottish Natural Heritage Guidance regarding the limitations of visualisations.

← Visible in the wider view to left-hand side and in opposite direction:
 Craiggore; Rigged Hill; Dunbeg South;
 Dunmore II; Altahullion & Glenconway cluster; Monnaboy; Ballyhanedin



Where present in view: Magheramore Wind Farm turbines shown in blue; Existing wind farms in red; Consented wind farms in orange; Proposed wind farms in green; Single turbines in pink
 Turbine dimensions shown for the Development: max. tip height above ground level 149.9 m; hub height 94 m; rotor diameter 112 m

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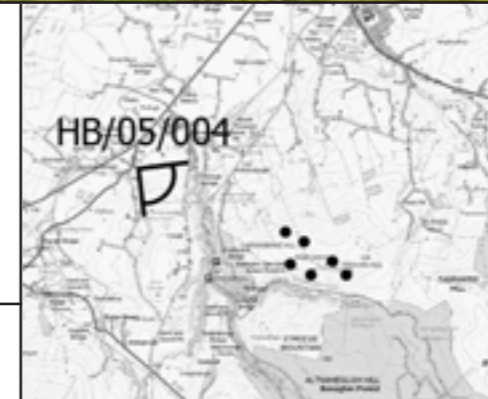
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MAGHERAMORE WIND FARM

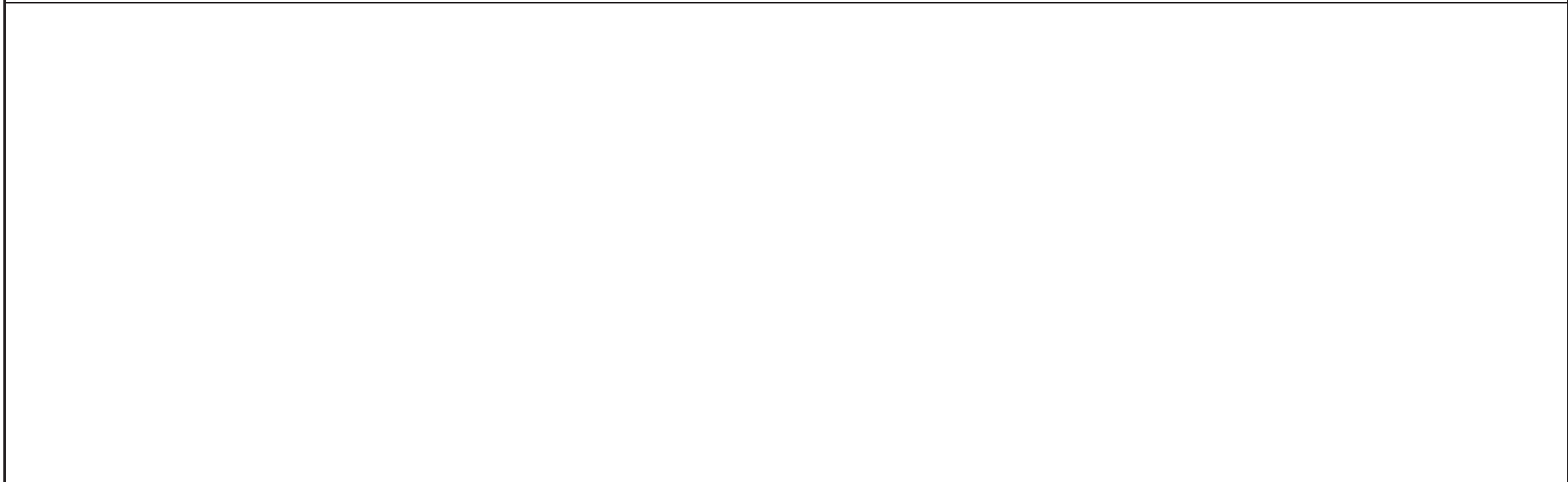
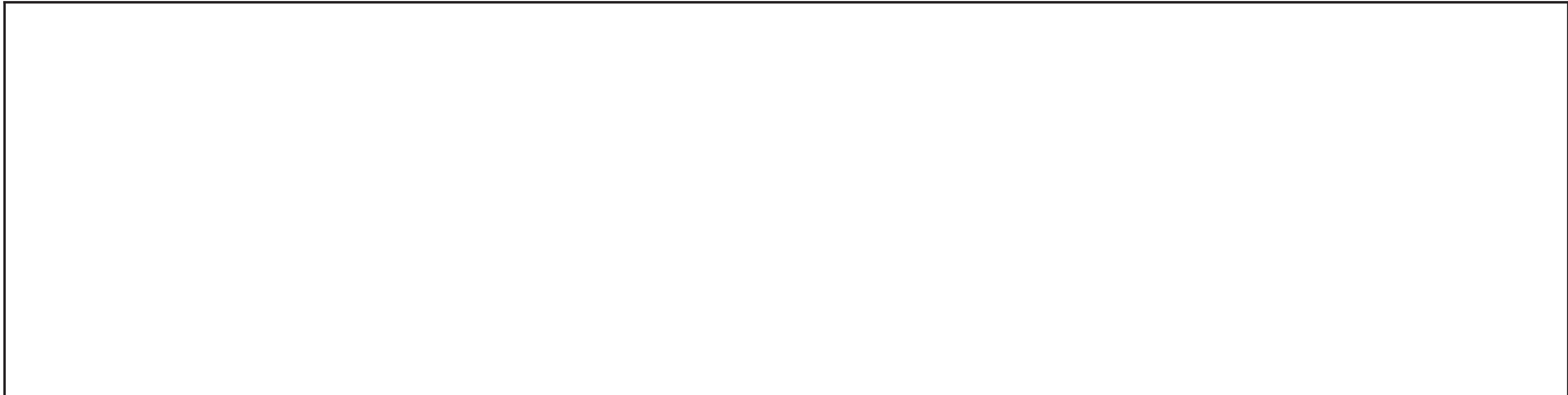
FIGURE 5.8

**WIRELINE & PHOTOMONTAGE
 HB02/05/004
 BANAGHER CHURCH OF IRELAND**

Easting: 265823
 Northing: 406325
 Elevation A.O.D: 126 m
 Bearing: 117.30 °
 Approx. Included Angle: 80 °
 Approx. distance to nearest turbine: 2.68 km to T4



NOTE: This Figure must be viewed in conjunction with the analysis of archaeology and cultural heritage effects contained in Chapter 5 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in LVIA Technical Appendix 4.2, in particular the paragraphs referencing Scottish Natural Heritage Guidance regarding the limitations of visualisations.



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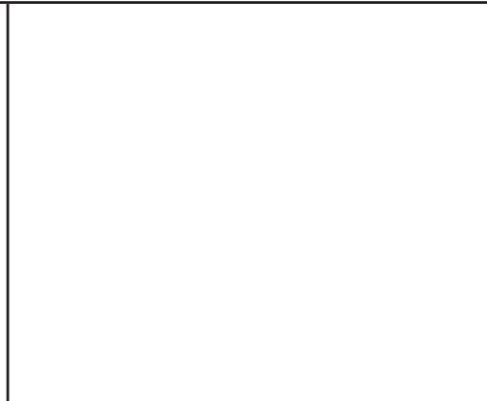
MAGHERAMORE WIND FARM

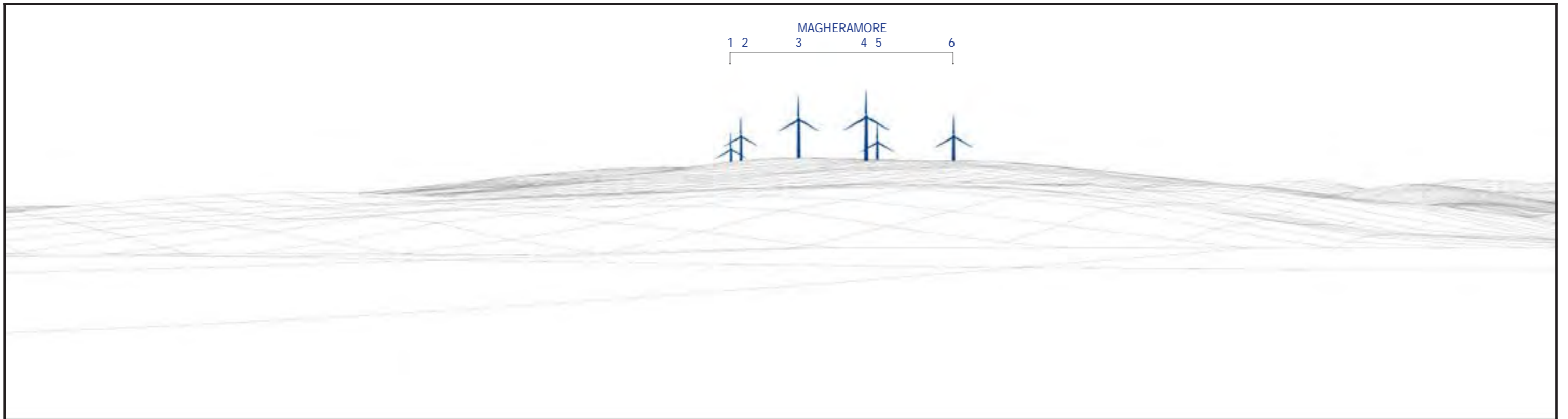
FIGURE 5.8 (page 2/2- NOT USED)

**BASELINE PHOTOGRAPH
 SITE HB02/05/004
 BANAGHER CHURCH OF IRELAND**

NOTE: This Figure should be viewed at a comfortable arms length. It will be viewed in conjunction with the analysis of landscape and visual effects contained in Chapter 4 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in Technical Appendix 4.2, in particular the paragraphs referencing Scottish Natural Heritage Guidance regarding the limitations of visualisations.

Easting:	265823
Northing:	406325
Elevation A.O.D	126 m
Bearing:	117.30 °
Approx. Included Angle:	80 °
Approx. distance to nearest turbine:	2.68 km to T4





Where present in view: Magheramore Wind Farm turbines shown in blue; Existing wind farms in red; Consented wind farms in orange; Proposed wind farms in green; Single turbines in pink
 Turbine dimensions shown for the Development: max. tip height above ground level 149.9 m; hub height 94 m; rotor diameter 112 m

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**ARCHAEOLOGY & CULTURAL HERITAGE
 IMPACT ASSESSMENT**

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MAGHERAMORE WIND FARM

FIGURE 5.9 (page 1/2)

**WIRELINE & PHOTOMONTAGE
 LDY 030:030
 TEMPLEMOYLE CHURCH SITE**

NOTE: This Figure must be viewed in conjunction with the analysis of archaeology and cultural heritage effects contained in Chapter 5 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in LVIA Technical Appendix 4.2, in particular the paragraphs referencing Scottish Natural Heritage Guidance regarding the limitations of visualisations.

Easting:	266976
Northing:	407300
Elevation A.O.D	82 m
Bearing:	144.00 °
Approx. Included Angle:	80 °
Approx. distance to nearest turbine:	2.37 km to T4



Proposed removal of
forestry near T3



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MAGHERAMORE WIND FARM

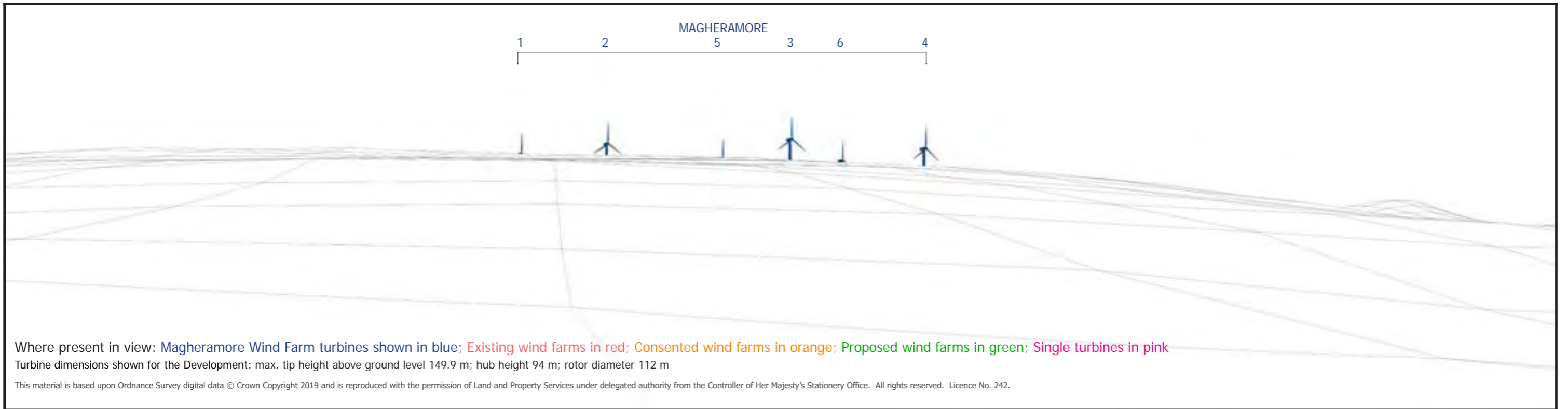
FIGURE 5.9 (page 2/2)




**BASELINE PHOTOGRAPH
LDY 030:030
TEMPLEMOYLE CHURCH SITE**

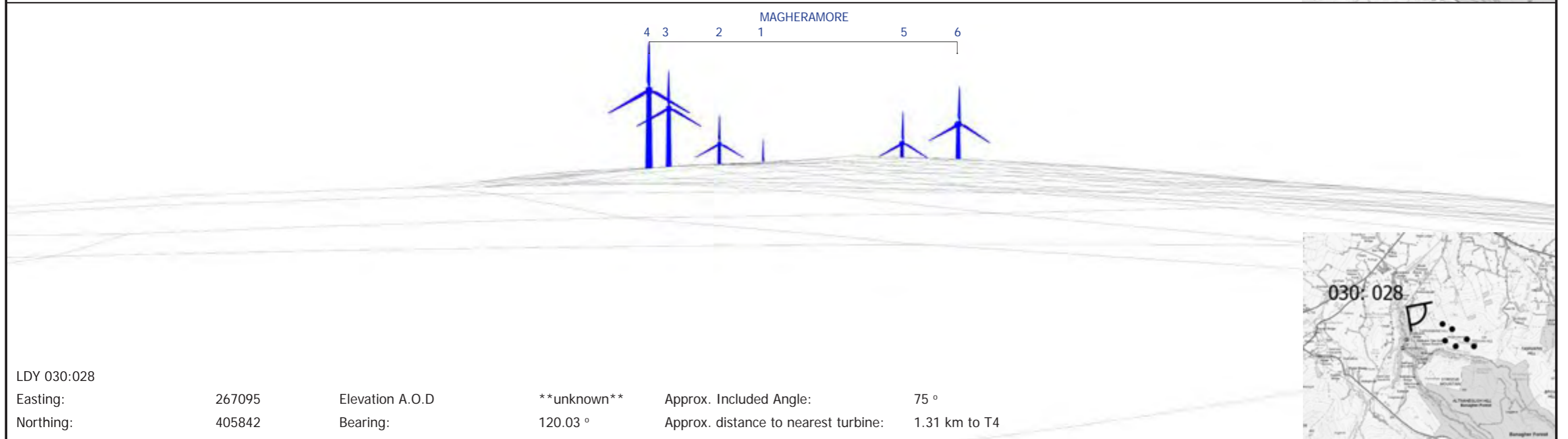
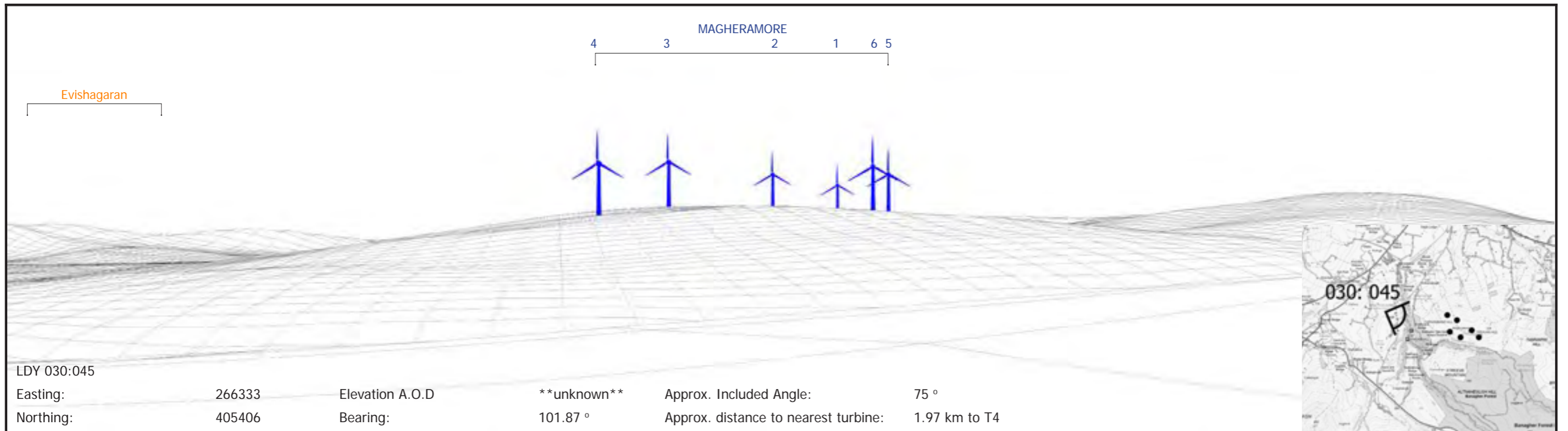
Easting: 266976
 Northing: 407300
 Elevation A.O.D: 82 m
 Bearing: 144.00 °
 Approx. Included Angle: 80 °
 Approx. distance to nearest turbine: 2.37 km to T4



NOTE: This Figure should be viewed at a comfortable arms length. It will be viewed in conjunction with the analysis of landscape and visual effects contained in Chapter 4 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in Technical Appendix 4.2, in particular the paragraphs referencing Scottish Natural Heritage Guidance regarding the limitations of visualisations.



 Shanti McAllister landscape planning and design info@shantimcallister.co.uk www.shantimcallister.co.uk	MAGHERAMORE WIND FARM FIGURE 5.10 WIRELINE & PHOTOMONTAGE LDY 031:015 DUNGIVEN PRIORY & MONASTIC SITE		Easting: 269201 Northing: 408258 Elevation A.O.D: 109 m Bearing: 188.23 ° Approx. Included Angle: 80 ° Approx. distance to nearest turbine: 3.08 km to T4		
	ARCHAEOLOGY & CULTURAL HERITAGE IMPACT ASSESSMENT	NOTE: This Figure must be viewed in conjunction with the analysis of archaeology and cultural heritage effects contained in Chapter 5 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in LVIA Technical Appendix 4.2, in particular the paragraphs referencing Scottish Natural Heritage Guidance regarding the limitations of visualisations.			
DRAWN / APPROVED: SMC / LG DATE: May 2019 PRINT SIZE: A3 REVISION: A	<small>THIS DRAWING IS THE PROPERTY OF RENEWABLE ENERGY SYSTEMS LTD. AND NO REPRODUCTION MAY BE MADE IN WHOLE OR IN PART WITHOUT PERMISSION</small>				



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MAGHERAMORE WIND FARM

FIGURE 5.11 (above)

**WIRELINE
LDY 030:045
TEMPLEMOYLE STONE CIRCLE**

NOTE: This Figure must be viewed in conjunction with the analysis of archaeology and cultural heritage effects contained in Chapter 5 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in LVIA Technical Appendix 4.2, in particular the paragraphs referencing Scottish Natural Heritage Guidance regarding the limitations of visualisations.

MAGHERAMORE WIND FARM

FIGURE 5.12 (above)

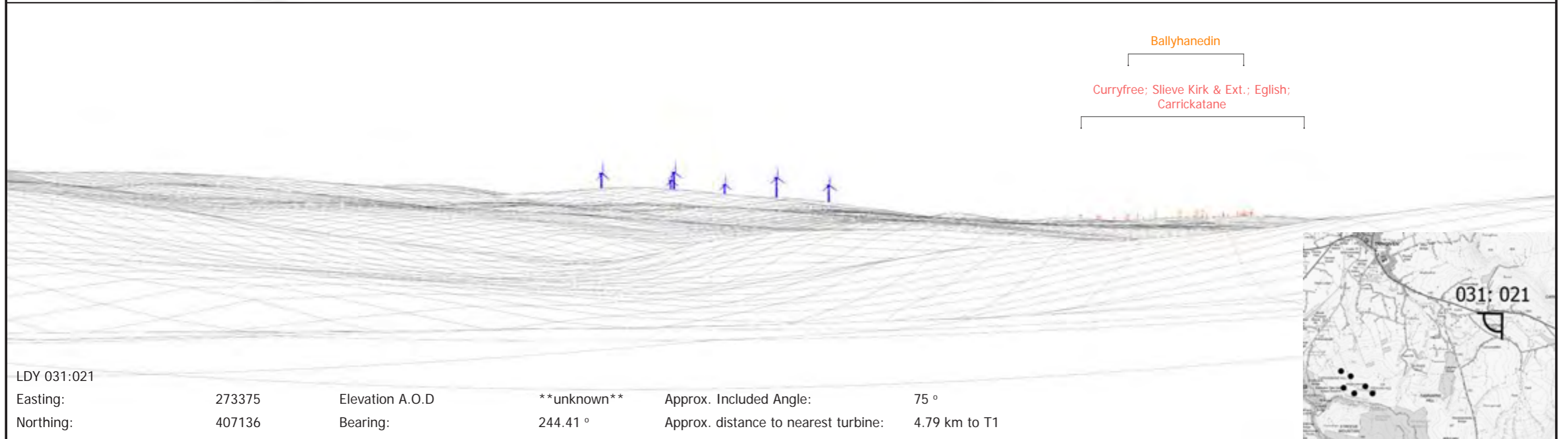
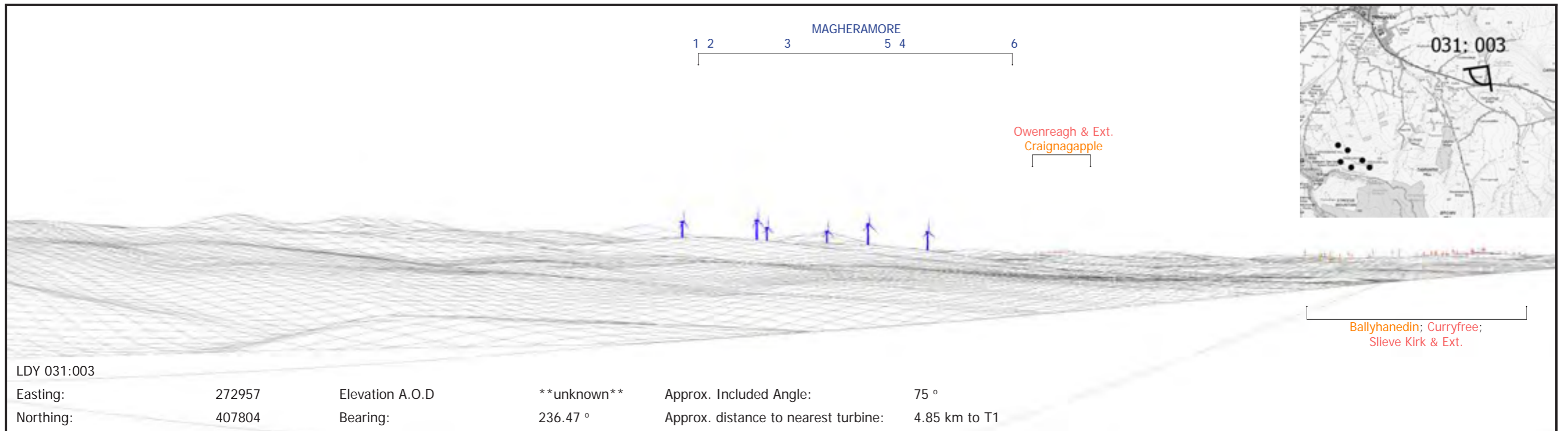
**WIRELINE
LDY 030:028
CARNANBANE COURT TOMB**

Where present in view:
Magheramore Wind Farm turbines shown in blue; Existing wind farms in red; Consented wind farms in orange; Proposed wind farms in green; Single turbines in pink

Turbine dimensions shown for the Development: max. tip height above ground level 149.9 m; hub height 94 m; rotor diameter 112 m

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MAGHERAMORE WIND FARM

FIGURE 5.13 (above)

**WIRELINE
LDY 031:003
CLOGHNAGALLA WEDGE TOMB**

NOTE: This Figure must be viewed in conjunction with the analysis of archaeology and cultural heritage effects contained in Chapter 5 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in LVIA Technical Appendix 4.2, in particular the paragraphs referencing Scottish Natural Heritage Guidance regarding the limitations of visualisations.

MAGHERAMORE WIND FARM

FIGURE 5.14 (below)

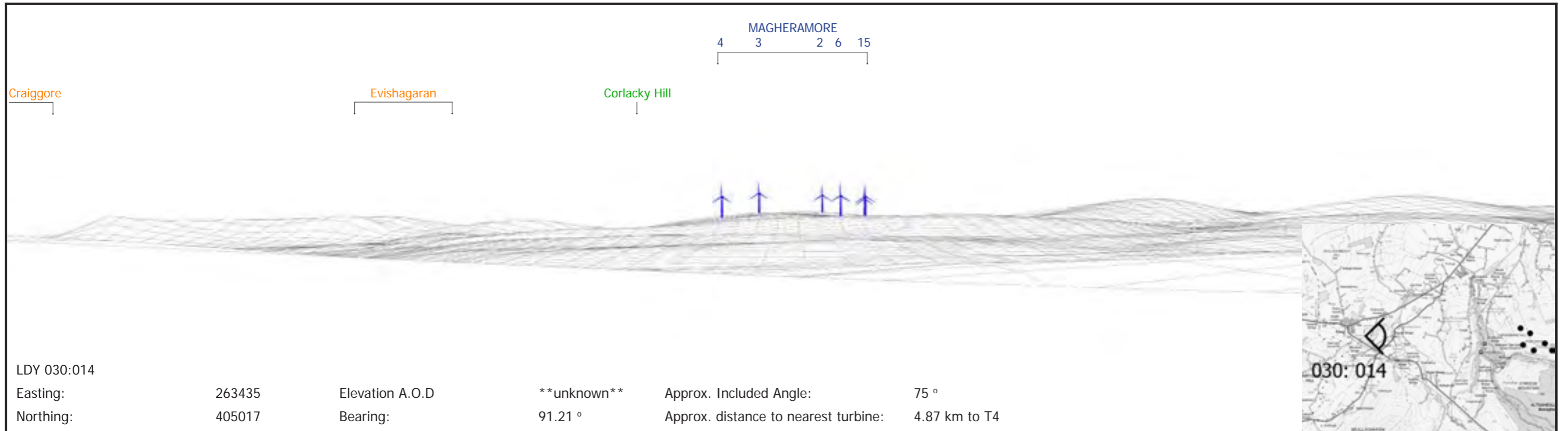
**WIRELINE
LDY 031:021
CARN WEDGE TOMB**

Where present in view:
Magheramore Wind Farm turbines shown in blue; Existing wind farms in red; Consented wind farms in orange; Proposed wind farms in green; Single turbines in pink

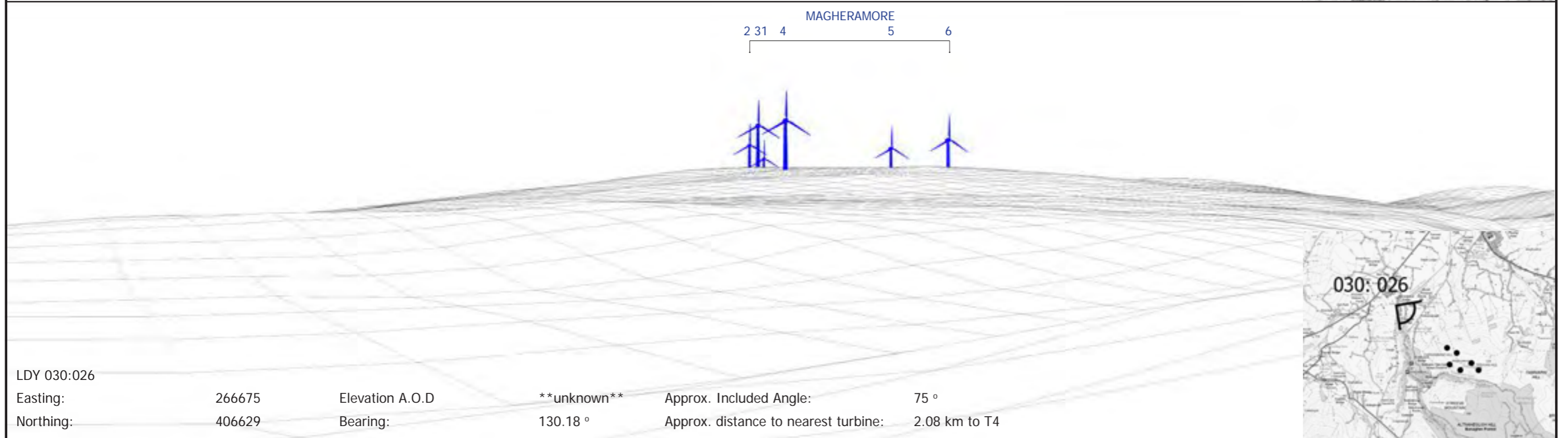
Turbine dimensions shown for the Development: max. tip height above ground level 149.9 m; hub height 94 m; rotor diameter 112 m

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LDY 030:014
 Easting: 263435 Elevation A.O.D: **unknown** Approx. Included Angle: 75 °
 Northing: 405017 Bearing: 91.21 ° Approx. distance to nearest turbine: 4.87 km to T4



LDY 030:026
 Easting: 266675 Elevation A.O.D: **unknown** Approx. Included Angle: 75 °
 Northing: 406629 Bearing: 130.18 ° Approx. distance to nearest turbine: 2.08 km to T4

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MAGHERAMORE WIND FARM

FIGURE 5.15 (above)

**WIRELINE
 LDY 030:014
 TANDRAGEE FORT**

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MAGHERAMORE WIND FARM

FIGURE 5.16 (below)

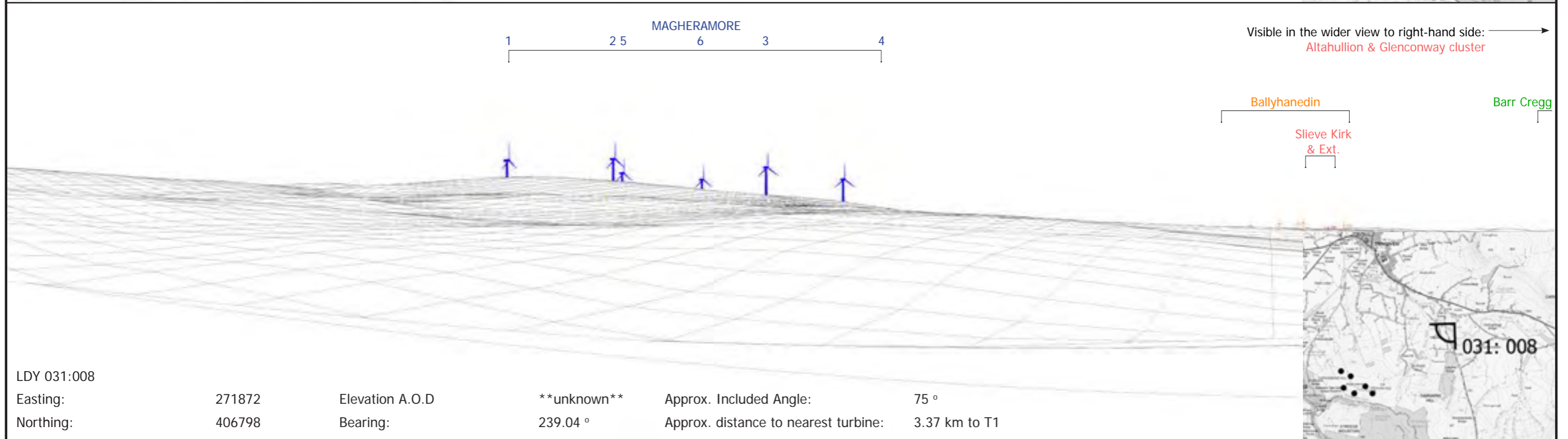
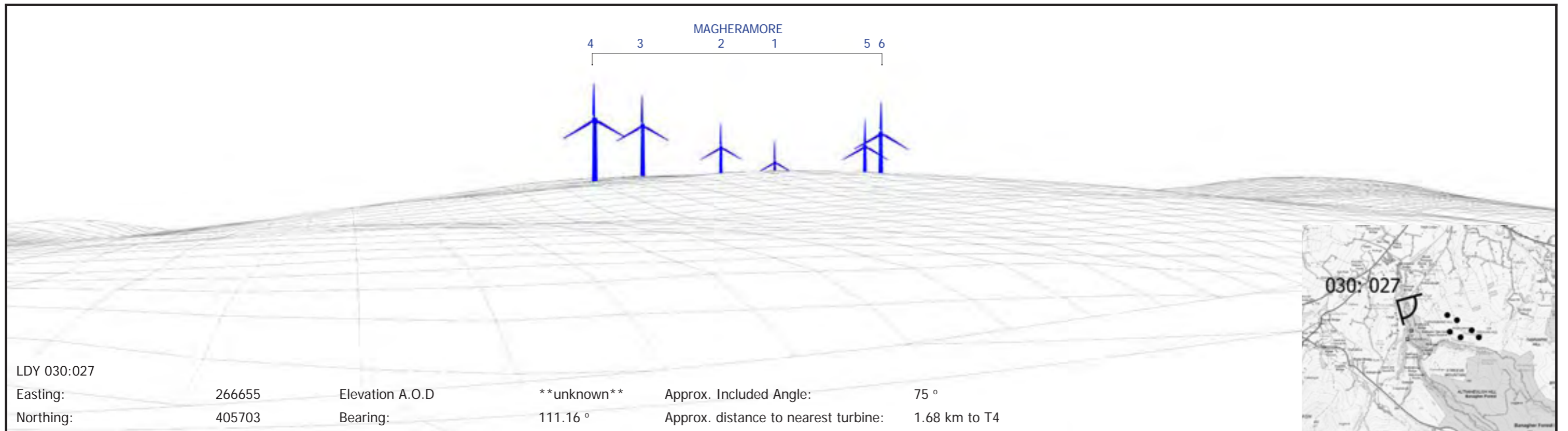
**WIRELINE
 LDY 030:026
 RALLAGH FORT**

Where present in view:
 Magheramore Wind Farm turbines shown in blue; Existing wind farms in red; Consented wind farms in orange; Proposed wind farms in green; Single turbines in pink

Turbine dimensions shown for the Development: max. tip height above ground level 149.9 m; hub height 94 m; rotor diameter 112 m

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MAGHERAMORE WIND FARM

FIGURE 5.17 (above)

**WIRELINE
LDY 030:027
TEMPLEMOYLE RATH**

MAGHERAMORE WIND FARM

FIGURE 5.18 (below)

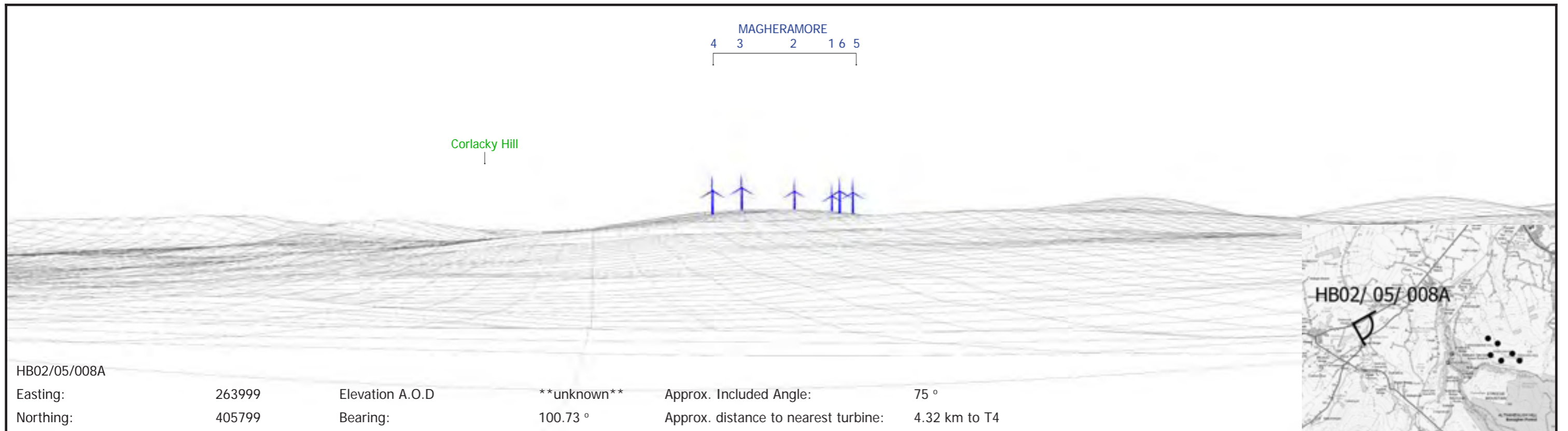
**WIRELINE
LDY 031:008
THE WHITE FORT**

Where present in view:
Magheramore Wind Farm turbines shown in blue; Existing wind farms in red; Consented wind farms in orange; Proposed wind farms in green; Single turbines in pink

Turbine dimensions shown for the Development: max. tip height above ground level 149.9 m; hub height 94 m; rotor diameter 112 m

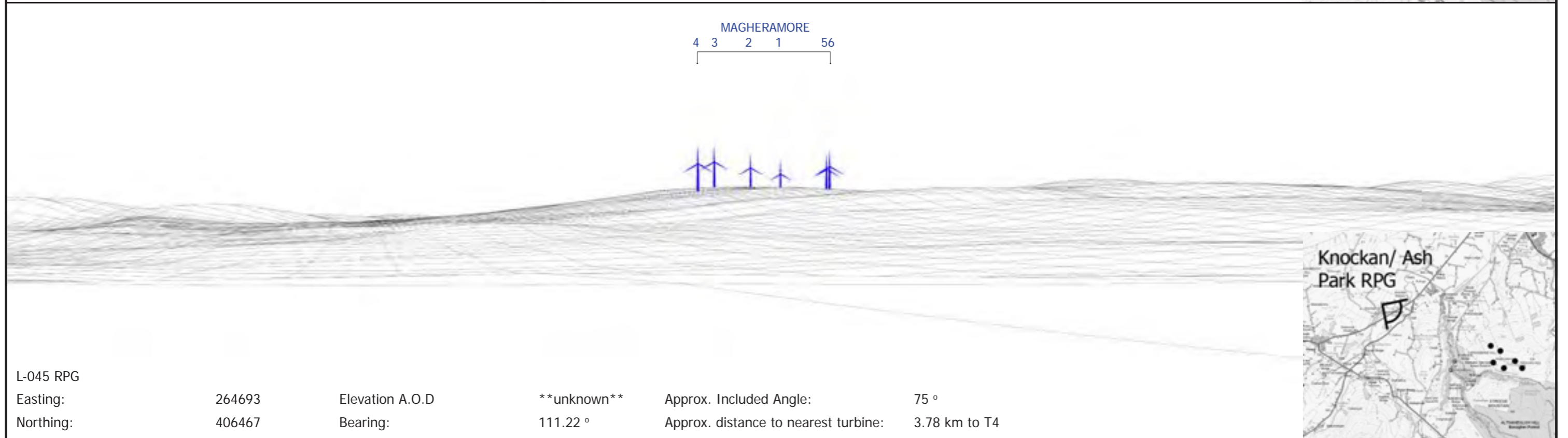
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HB02/05/008A

Easting:	263999	Elevation A.O.D	**unknown**	Approx. Included Angle:	75 °
Northing:	405799	Bearing:	100.73 °	Approx. distance to nearest turbine:	4.32 km to T4



L-045 RPG

Easting:	264693	Elevation A.O.D	**unknown**	Approx. Included Angle:	75 °
Northing:	406467	Bearing:	111.22 °	Approx. distance to nearest turbine:	3.78 km to T4

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MAGHERAMORE WIND FARM

FIGURE 5.19 (above)

**WIRELINE
 HB02/05/008A
 DRUMCOVIT HOUSE**

NOTE: This Figure must be viewed in conjunction with the analysis of archaeology and cultural heritage effects contained in Chapter 5 of the Environmental Statement and the detailed methodology for the preparation of visualisations contained in LVIA Technical Appendix 4.2, in particular the paragraphs referencing Scottish Natural Heritage Guidance regarding the limitations of visualisations.

MAGHERAMORE WIND FARM

FIGURE 5.20 (below)

**WIRELINE
 KNOCKAN / ASH PARK
 REGISTERED PARK AND GARDEN**

Where present in view:
 Magheramore Wind Farm turbines shown in blue; Existing wind farms in red; Consented wind farms in orange; Proposed wind farms in green; Single turbines in pink

Turbine dimensions shown for the Development: max. tip height above ground level 149.9 m; hub height 94 m; rotor diameter 112 m

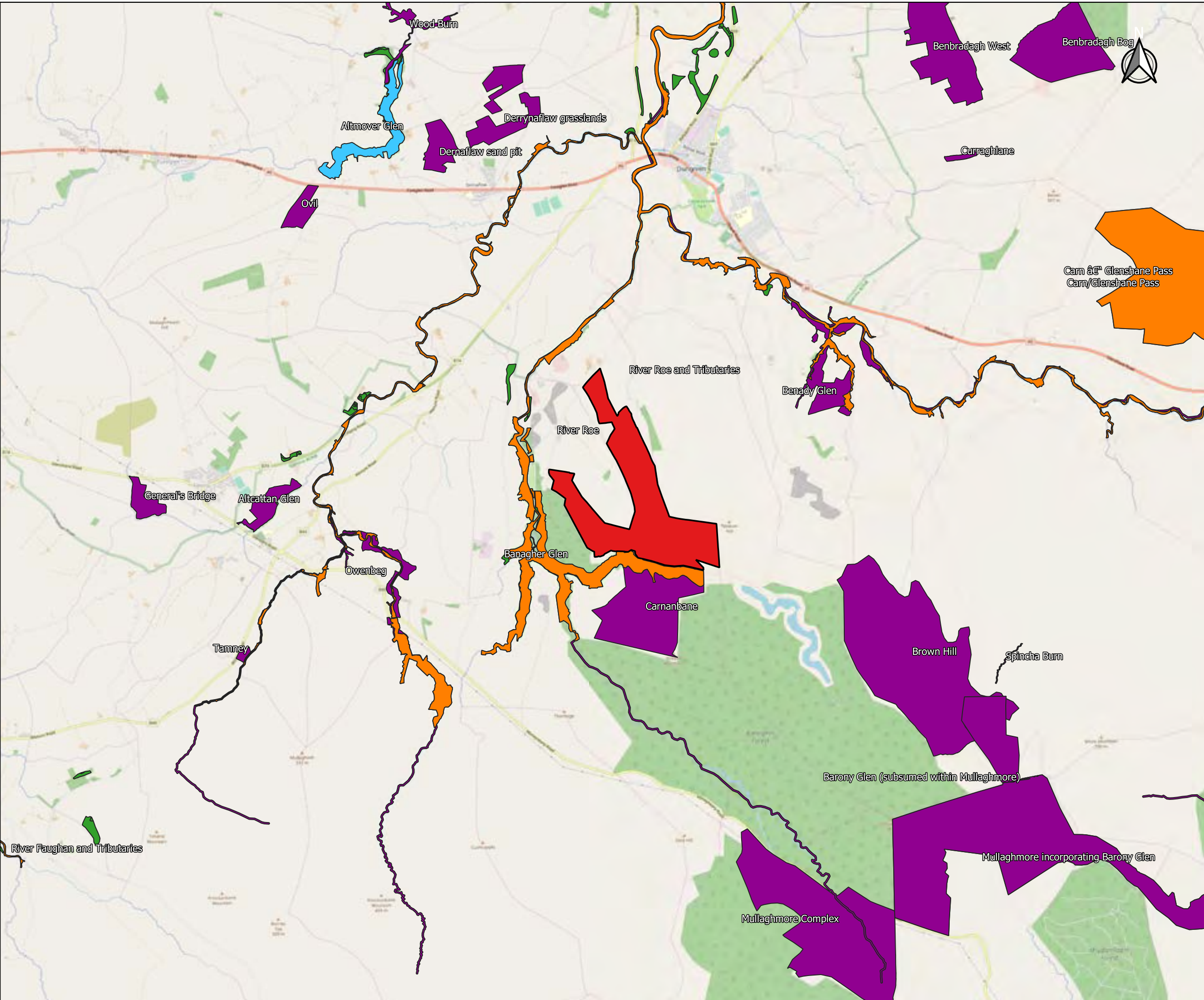
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6

Ecology

- KEY**
- SITE BOUNDARY
 - SPECIAL AREA OF CONSERVATION (SAC)
 - SITE OF LOCAL NATURE CONSERVATION IMPORTANCE (SLNCI)
 - AREAS OF SPECIAL SCIENTIFIC INTEREST (ASSI)
 - ANCIENT WOODLAND INVENTORY (AWI)



SURVEYORS 

DRAWING NUMBER

COORDS **TM65 IRISH GRID**

PURPOSE **ENVIRONMENTAL IMPACT ASSESSMENT**

SCALE **1 : 35,000** ORIGINAL PLOT SIZE **A3**

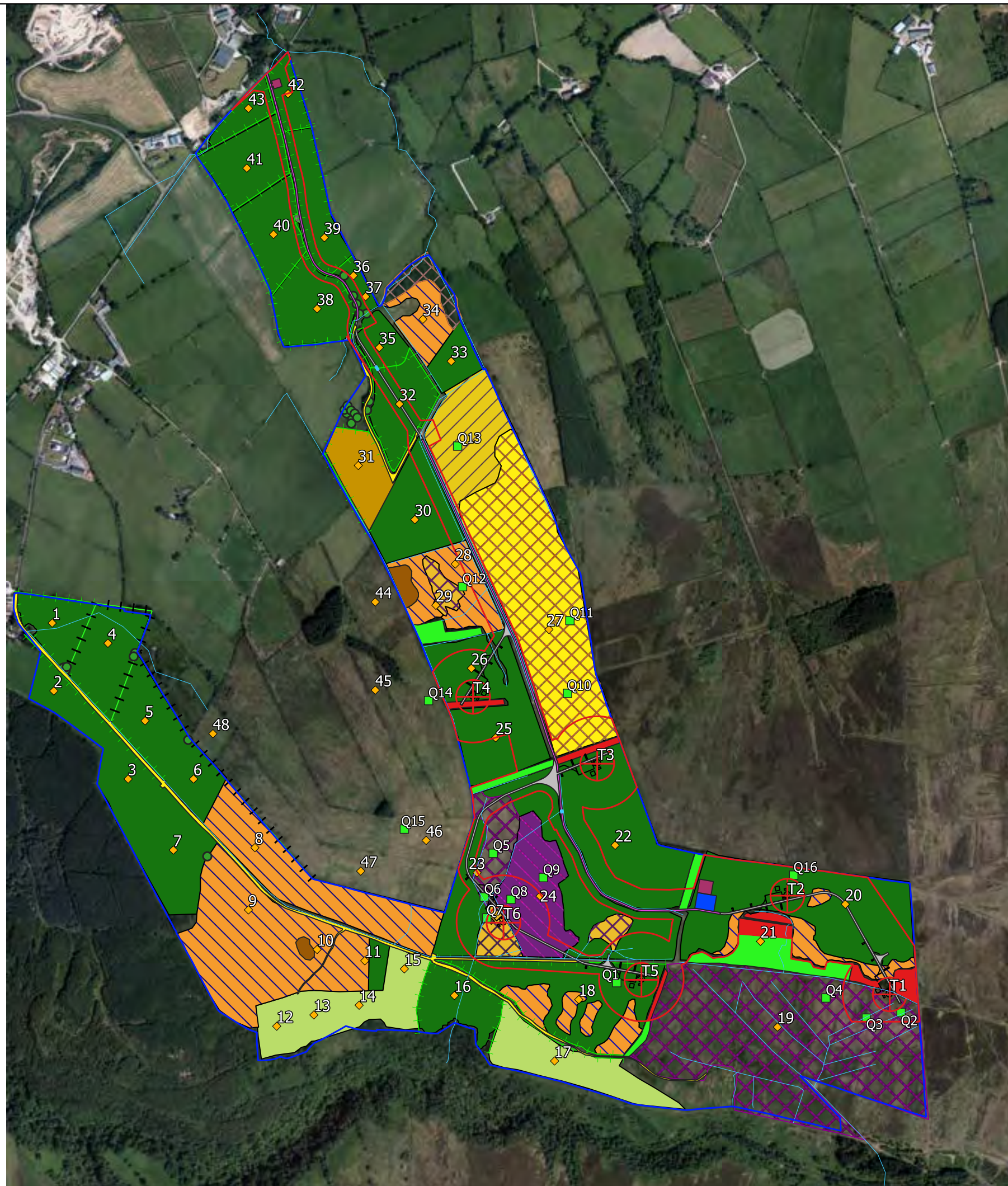
PROJECT TITLE **MAGHERAMORE WIND FARM**

FIGURE 6.1 DESIGNATED SITES WITHIN 5KM

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CLIENT





- KEY**
- PLANNING APPLICATION BOUNDARY
 - LAND UNDER APPLICANT CONTROL
 - QUADRAT LOCATION
 - ◆ FIELD NUMBER
 - + TURBINE LOCATION
 - CRANE HARDSTANDING AREA
 - ACCESS TRACK
 - UPGRADED ACCESS TRACK
 - EXISTING TRACK
 - WATERCOURSE CROSSING
 - WATERCOURSE
 - CONTROL BUILDING
 - TEMPORARY CONSTRUCTION COMPOUND
 - FORESTRY (RETAINED)
 - FORESTRY (REMOVED)
 - ISOLATED TREE
 - CONTINUOUS HEDGEROW
 - DISCONTINUOUS HEDGEROW
 - CONIFEROUS PLANTATION
 - SCRUB
 - AREA OF ACID GRASSLAND
 - ARABLE LAND
 - MODIFIED WET BOG, WET HEATH MOSAIC
 - DRY HEATH
 - WET HEATH
 - DRY, WET HEATH MOSAIC
 - MARSHY GRASSLAND
 - DRY, WET MODIFIED BOG MOSAIC
 - SEMI IMPROVED GRASSLAND
 - IMPROVED GRASSLAND



DRAWING NUMBER

COORDS **TM65 IRISH GRID**

PURPOSE **ENVIRONMENTAL IMPACT ASSESSMENT**

SCALE **1 : 10,000** ORIGINAL PLOT SIZE **A3**

PROJECT TITLE **MAGHERAMORE WIND FARM**

FIGURE 6.2 HABITAT SURVEY RESULTS

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- KEY**
- PLANNING APPLICATION BOUNDARY
 - LAND UNDER APPLICANT CONTROL
 - TRANSECT
 - ▼ NATHUSIUS' PIPISTRELLE
 - ▲ SOPRANO PIPISTRELLE
 - + TURBINE LOCATION
 - UPGRADED ACCESS TRACK
 - ACCESS TRACK (NEW)
 - CRANE HARDSTANDING AREA
 - EXISTING TRACK
 - WATERCOURSE
 - TEMPORARY CONSTRUCTION COMPOUND
 - CONTROL BUILDING



DRAWING NUMBER

COORDS **TM65 IRISH GRID**

PURPOSE **ENVIRONMENTAL IMPACT ASSESSMENT**

SCALE 1 : 10,000	ORIGINAL PLOT SIZE A3
-------------------------	------------------------------

PROJECT TITLE

MAGHERAMORE WIND FARM

**FIGURE 6.3
BAT TRANSECT (SPRING)**

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- KEY**
- PLANNING APPLICATION BOUNDARY
 - LAND UNDER APPLICANT CONTROL
 - TRANSECT
 - ▼ LEISLER'S BAT
 - + TURBINE LOCATION
 - UPGRADED ACCESS TRACK
 - ACCESS TRACK (NEW)
 - CRANE HARDSTANDING AREA
 - EXISTING TRACK
 - WATERCOURSE
 - TEMPORARY CONSTRUCTION COMPOUND
 - CONTROL BUILDING



DRAWING NUMBER

COORDS **TM65 IRISH GRID**

PURPOSE **ENVIRONMENTAL IMPACT ASSESSMENT**

SCALE 1 : 10,000	ORIGINAL PLOT SIZE A3
-------------------------	------------------------------

PROJECT TITLE

MAGHERAMORE WIND FARM

**FIGURE 6.4
BAT TRANSECT (SUMMER)**

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- KEY**
- PLANNING APPLICATION BOUNDARY
 - LAND UNDER APPLICANT CONTROL
 - TRANSECT
 - ▲ COMMON PIPISTRELLE
 - ▲ SOPRANO PIPISTRELLE
 - + TURBINE LOCATION
 - UPGRADED ACCESS TRACK
 - ACCESS TRACK (NEW)
 - CRANE HARDSTANDING AREA
 - EXISTING TRACK
 - WATERCOURSE
 - TEMPORARY CONSTRUCTION COMPOUND
 - CONTROL BUILDING



DRAWING NUMBER

COORDS **TM65 IRISH GRID**

PURPOSE **ENVIRONMENTAL IMPACT ASSESSMENT**

SCALE 1 : 10,000	ORIGINAL PLOT SIZE A3
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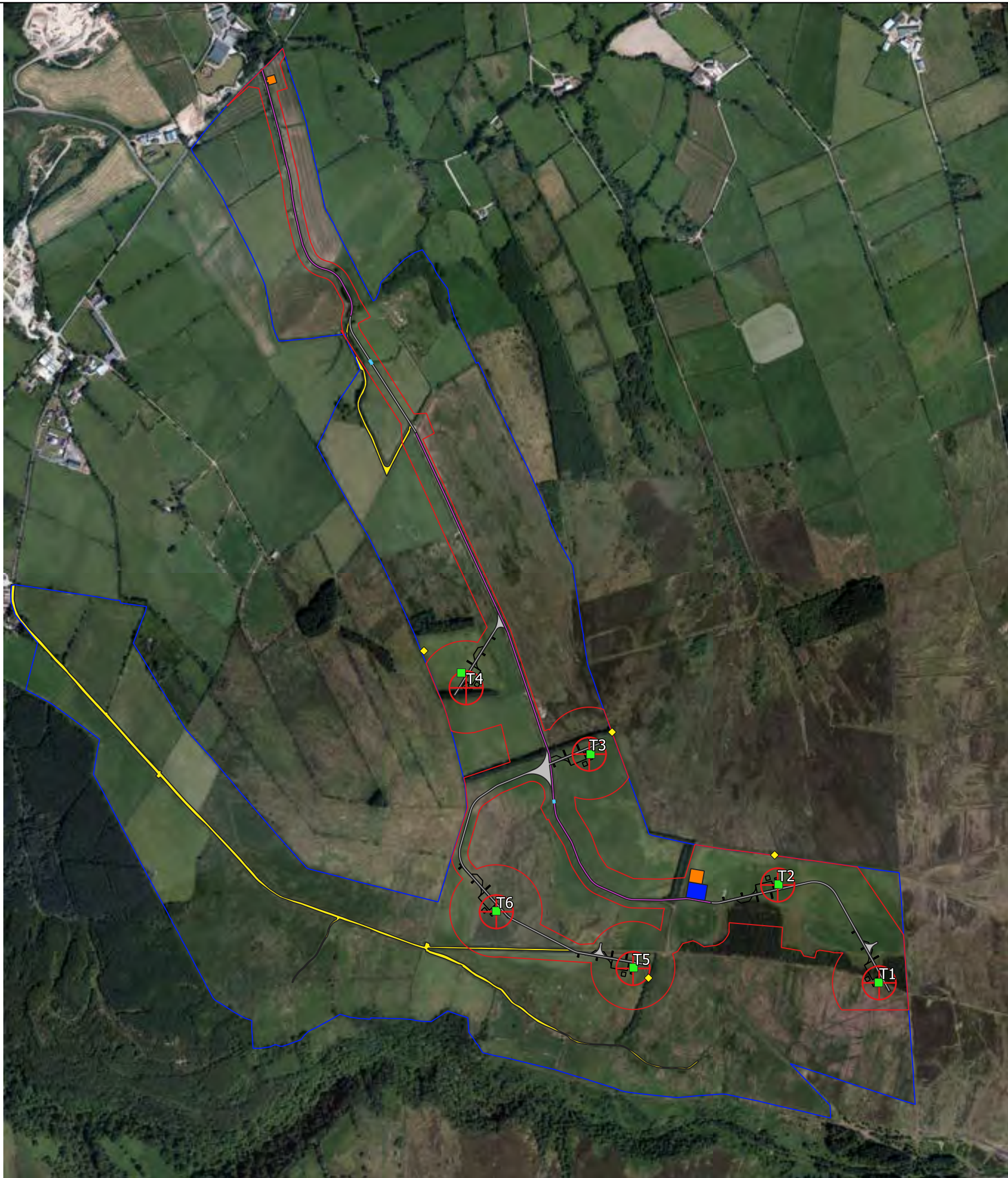
PROJECT TITLE

MAGHERAMORE WIND FARM

**FIGURE 6.5
BAT TRANSECT (AUTUMN)**

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- KEY**
- PLANNING APPLICATION BOUNDARY
 - LAND UNDER APPLICANT CONTROL
 - TURBINE
 - FEATURE
 - + TURBINE LOCATION
 - UPGRADED ACCESS TRACK
 - ACCESS TRACK (NEW)
 - CRANE HARDSTANDING AREA
 - EXISTING TRACK
 - WATERCOURSE
 - TEMPORARY CONSTRUCTION COMPOUND
 - CONTROL BUILDING



DRAWING NUMBER

COORDS **TM65 IRISH GRID**

PURPOSE **ENVIRONMENTAL IMPACT ASSESSMENT**

SCALE 1 : 10,000	ORIGINAL PLOT SIZE A3
-------------------------	------------------------------

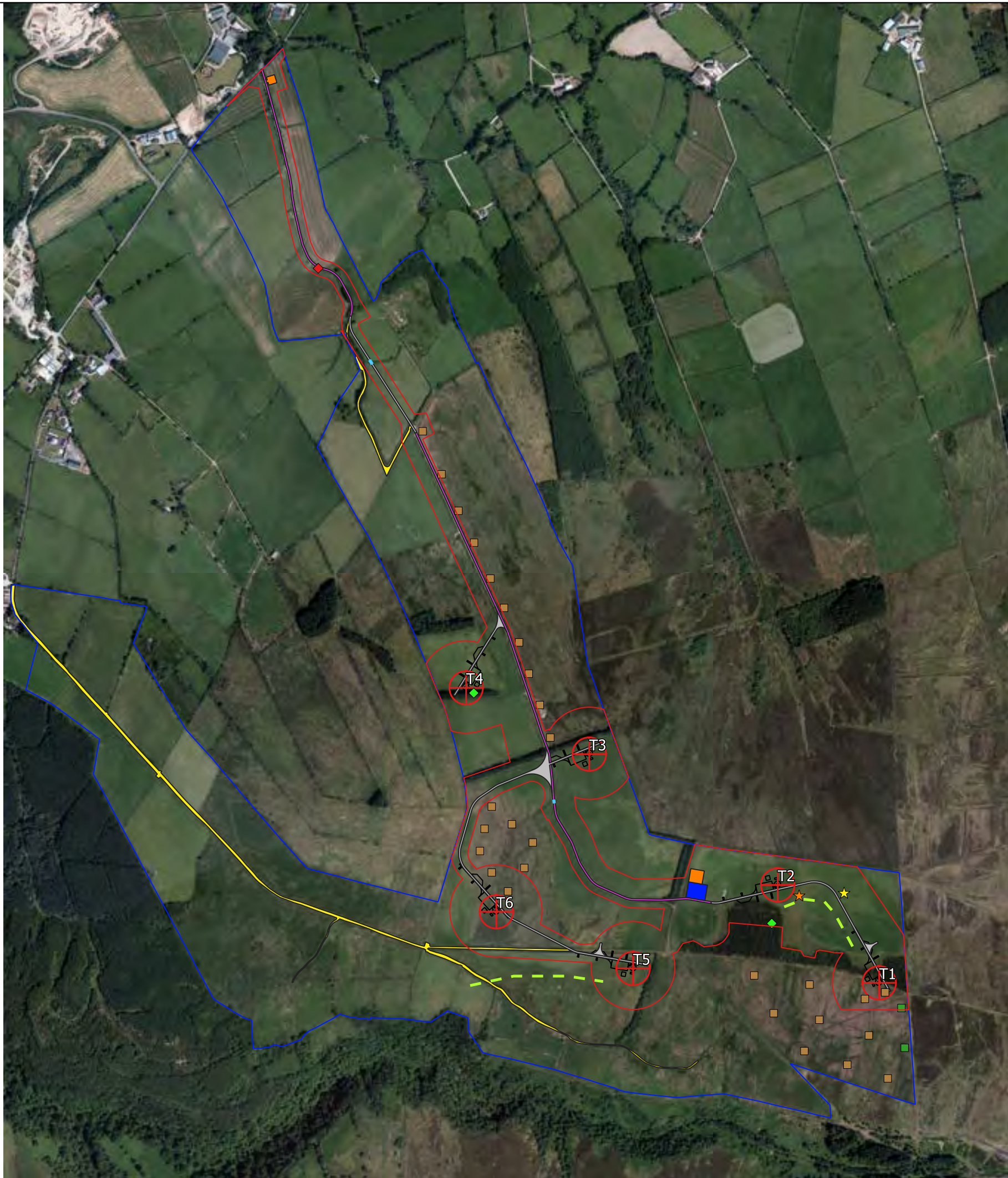
PROJECT TITLE

MAGHERAMORE WIND FARM

**FIGURE 6.6
STATIC DETECTOR
LOCATIONS**

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- KEY**
- PLANNING APPLICATION BOUNDARY
 - LAND UNDER APPLICANT CONTROL
 - ★ BADGER SIGHTING 29-05-18
 - ★ BADGER SIGHTING 09-08-18
 - BADGER TRAIL
 - ◆ TRAIL CAMERA (BADGER)
 - ◆ TRAIL CAMERA (SQUIRREL)
 - ARTIFICIAL REFUGIA LOCATION
 - LIZARD SIGHTING
 - ⊕ TURBINE LOCATION
 - UPGRADED ACCESS TRACK
 - ACCESS TRACK (NEW)
 - CRANE HARDSTANDING AREA
 - EXISTING TRACK
 - WATERCOURSE
 - TEMPORARY CONSTRUCTION COMPOUND
 - CONTROL BUILDING



DRAWING NUMBER

COORDS **TM65 IRISH GRID**

PURPOSE **ENVIRONMENTAL IMPACT ASSESSMENT**

SCALE 1 : 10,000	ORIGINAL PLOT SIZE A3
-------------------------	------------------------------

PROJECT TITLE

MAGHERAMORE WIND FARM

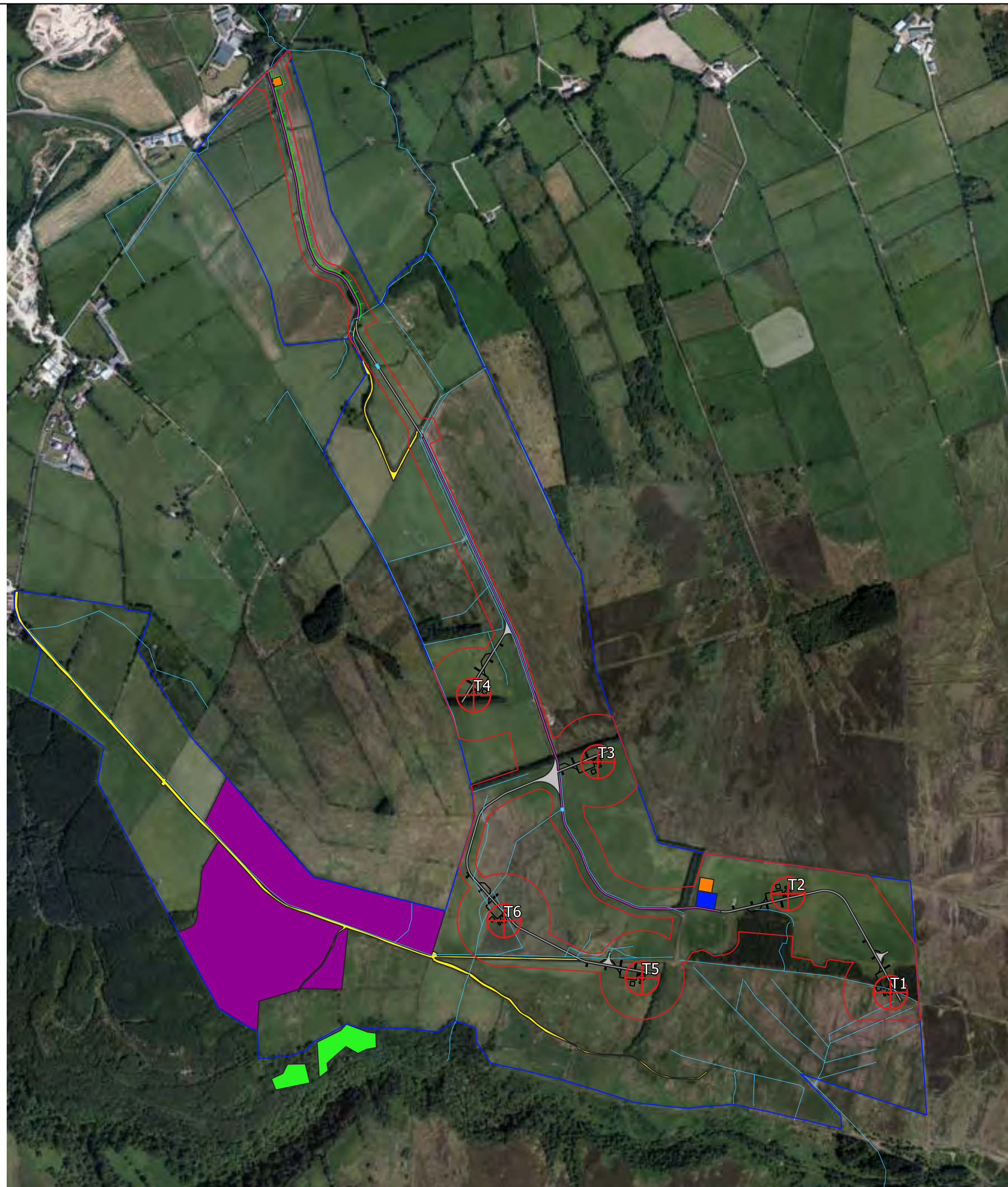
**FIGURE 6.7
MAMMAL & HERPETOLOGICAL
SURVEY RESULTS**

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- KEY**
- PLANNING APPLICATION BOUNDARY
 - LAND UNDER APPLICANT CONTROL
 - HABITAT MANAGEMENT AREA (15.5ha)
 - NATURAL (WOODLAND) REGENERATION (1.13ha)
 - + TURBINE LOCATION
 - UPGRADED ACCESS TRACK
 - ACCESS TRACK (NEW)
 - CRANE HARDSTANDING AREA
 - EXISTING TRACK
 - WATERCOURSE
 - WATERCOURSE CROSSING
 - PROPOSED NEW HEDGING
 - TEMPORARY CONSTRUCTION COMPOUND
 - CONTROL BUILDING



DRAWING NUMBER

COORDS **TM65 IRISH GRID**

PURPOSE **ENVIRONMENTAL IMPACT ASSESSMENT**

SCALE 1 : 10,000	ORIGINAL PLOT SIZE A3
-------------------------	------------------------------

PROJECT TITLE
MAGHERAMORE WIND FARM

**FIGURE 6.8
HABITAT MANAGEMENT AREAS**

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7

Ornithology



MAGHERAMORE WIND FARM

FIGURE 7.1

ORNITHOLOGY VIEWPOINT COVERAGE

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- Turbines
- 500m Turbine Buffer
- Viewpoint 1 (VP1)
- Viewpoint 2 (VP2)
- Viewpoint 3 (VP3)
- Site Boundary
- Area Visible from VP1 only
- VP1 2km Extent
- Area Visible from VP2 only
- VP2 2km Extent
- Area Visible from VP3 Only
- VP3 2km Extent
- Area visible from VP1 and VP2
- Area visible from VP1 and VP3
- Area visible from VP2 and VP3
- Area Visible from VP1, VP2 and VP3

The shaded regions represent areas 38m above ground level, which can be seen from 1.8m above ground level from the viewpoints.



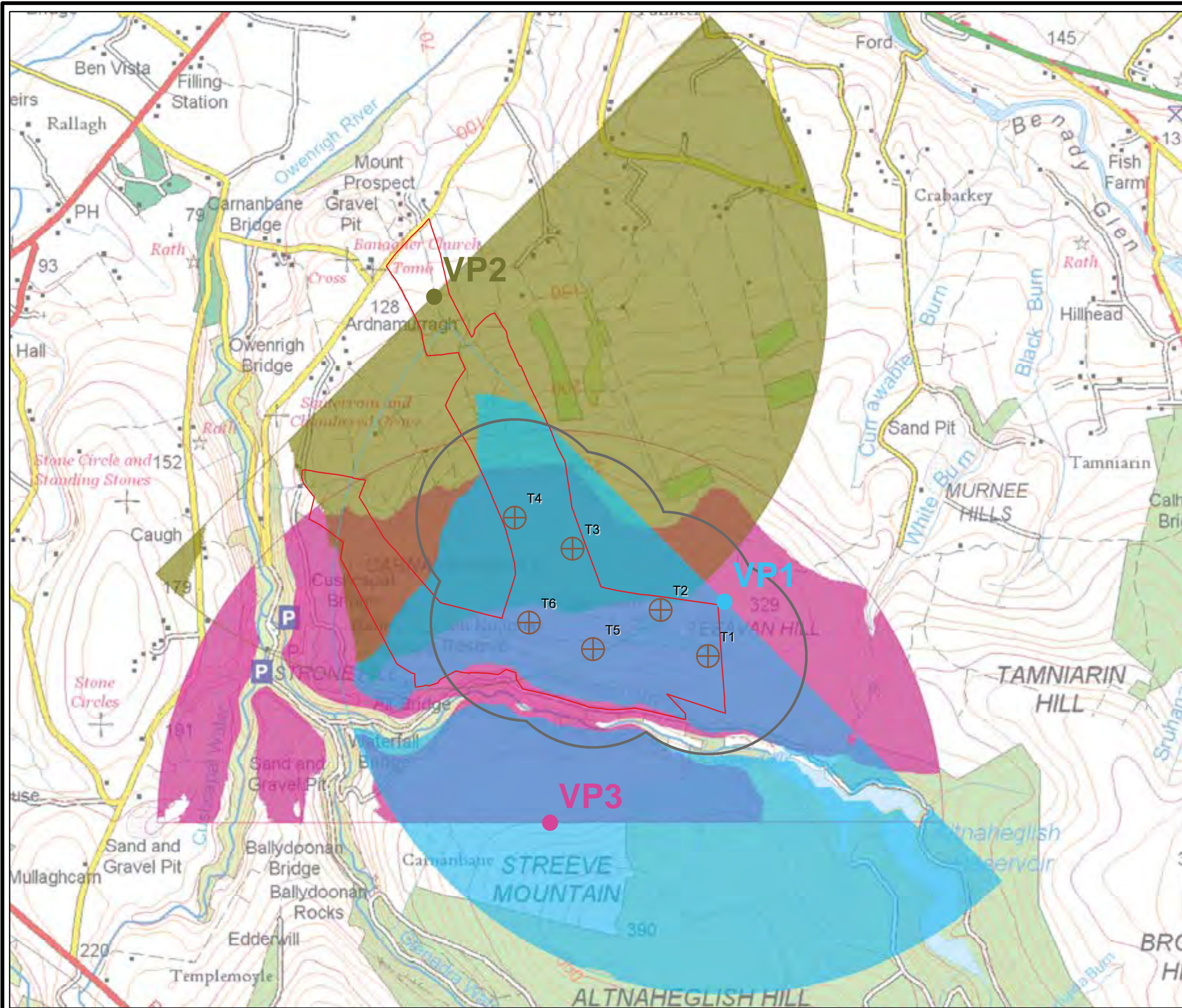
LAYOUT DWG: 03426D0001-07 T-LAYOUT NO: PNIRmgh020

DRAWING NUMBER: **03426D2211-01**

SCALE - 1:19,000 @ A3

ENVIRONMENTAL STATEMENT

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MAGHERAMORE WIND FARM

FIGURE 7.2

LOCATIONS OF RED GROUSE SIGHTINGS

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-  turbine locations
-  500m turbine buffer
-  red grouse male 20th Sep 2018
-  red grouse male 16th May 2018
-  red grouse male 23rd Apr 2018
-  red grouse male 16th Sep 2015
-  red grouse male 22nd May 2014
-  red grouse droppings 9th Dec 2013



LAYOUT DWG: 03426D0001-07 T-LAYOUT NO: PNIRmgh020

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MAGHERAMORE WIND FARM

FIGURE 7.3

LOCATIONS OF BREEDING SKYLARKS

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-  turbine locations
-  500m turbine buffer
-  singing males 5th Jul 2018
-  singing males 10th Jun 2018
-  singing males 24th May 2018
-  singing males 23rd Apr 2018
-  territories 2015
-  territories 2014



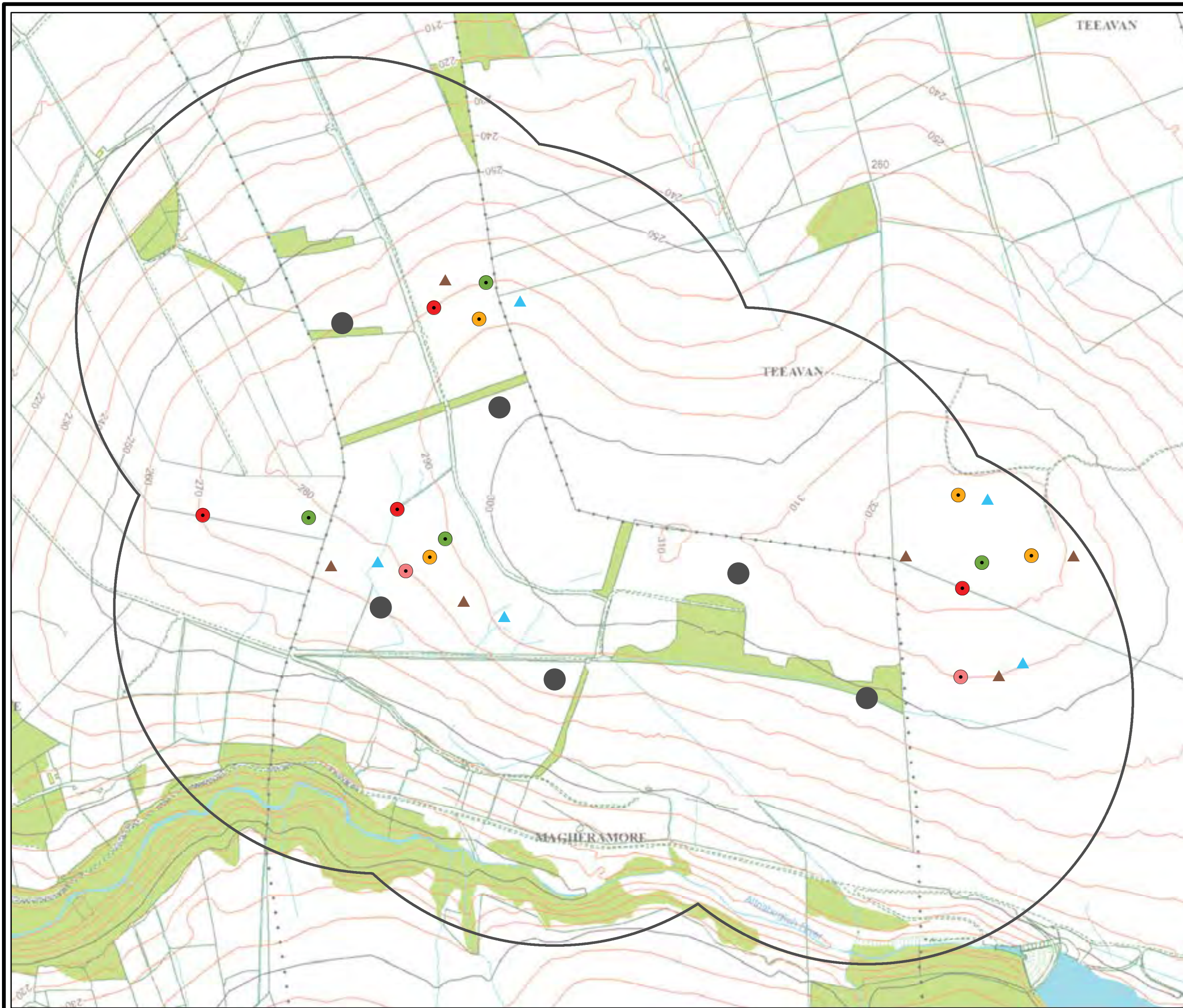
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MAGHERAMORE WIND FARM

FIGURE 7.4

LOCATIONS OF BREEDING MEADOW PIPITS

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- turbine locations
- 500m turbine buffer
- singing males/pairs 5th Jul 2018
- singing males/pairs 10th Jun 2018
- singing males/pairs 24th May 2018
- singing males/pairs 23rd Apr 2018



LAYOUT DWG 03426D0001-07 T-LAYOUT NO. PNIRmgh020

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MAGHERAMORE WIND FARM

FIGURE 7.5

LOCATIONS OF OTHER BREEDING BIRDS - 1

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- turbine locations
- 500m turbine buffer
- cuckoos 24th May 2018 (*singing males*)
- cuckoos 2015 (*singing males*)
- cuckoos 2014 (*singing males*)
- linnets 2018 (*pairs*)
- grasshopper warbler (2015 only)
- reed buntings 2018 (*pairs*)
- redpolls 2018 (*pairs*)
- song thrushes 2018 (*pairs*)



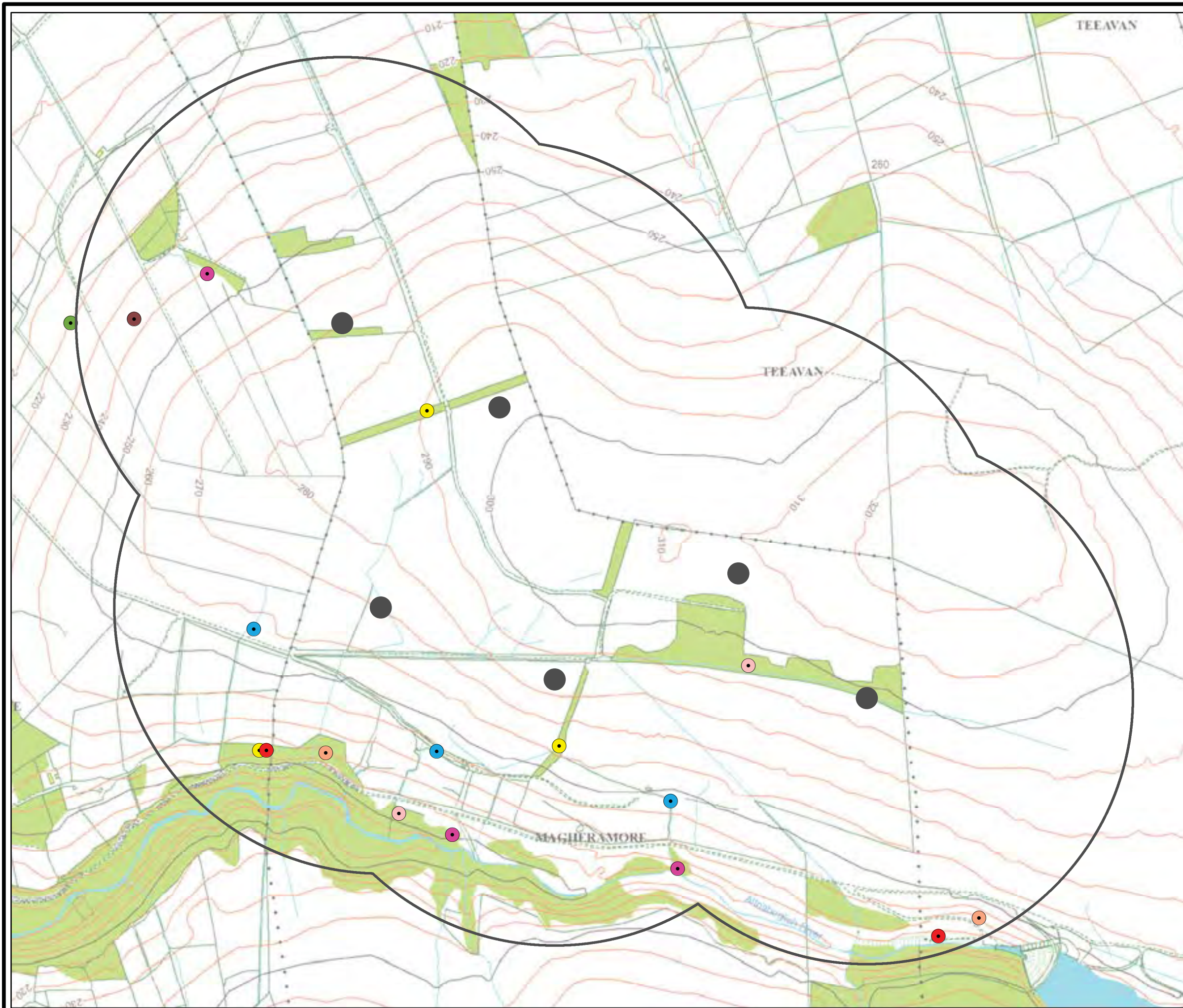
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MAGHERAMORE WIND FARM

FIGURE 7.6

LOCATIONS OF OTHER BREEDING BIRDS - 2

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- turbine locations
- 500m turbine buffer
- stonechats 2018 (pairs)
- willow warblers 2018 (singing males)
- blackcaps 2018 (singing males)
- crossbill pair (2014 only)
- whitethroat (2014 only)



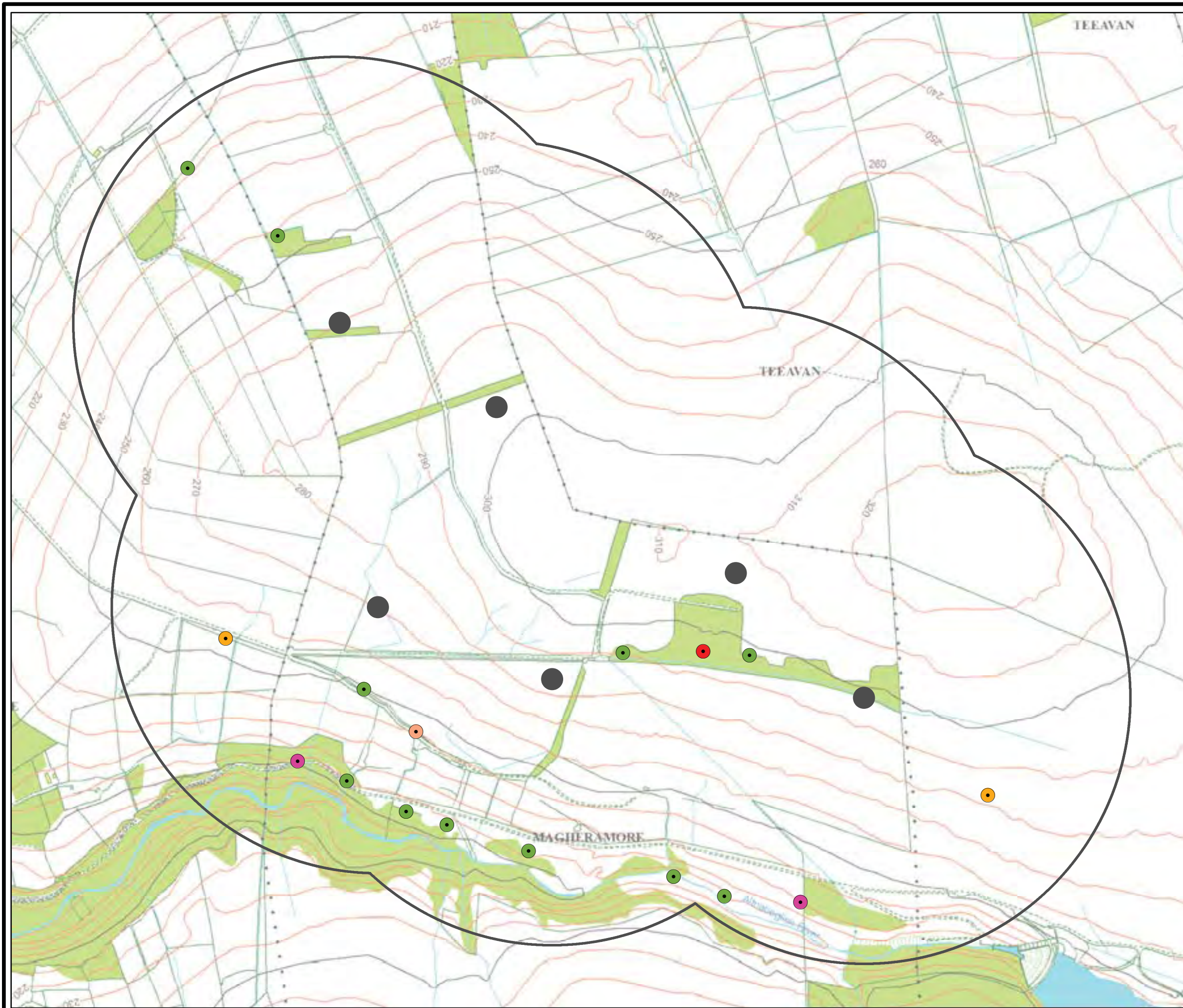
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MAGHERAMORE WIND FARM

FIGURE 7.7 HEN HARRIERS FLIGHTLINES

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- turbine locations
- 500m turbine buffer
- immature/adult female 18th Feb 2019
- immature male 11th Aug 2015
- adult male 5th Nov 2014
- juvenile 12th Sep 2014



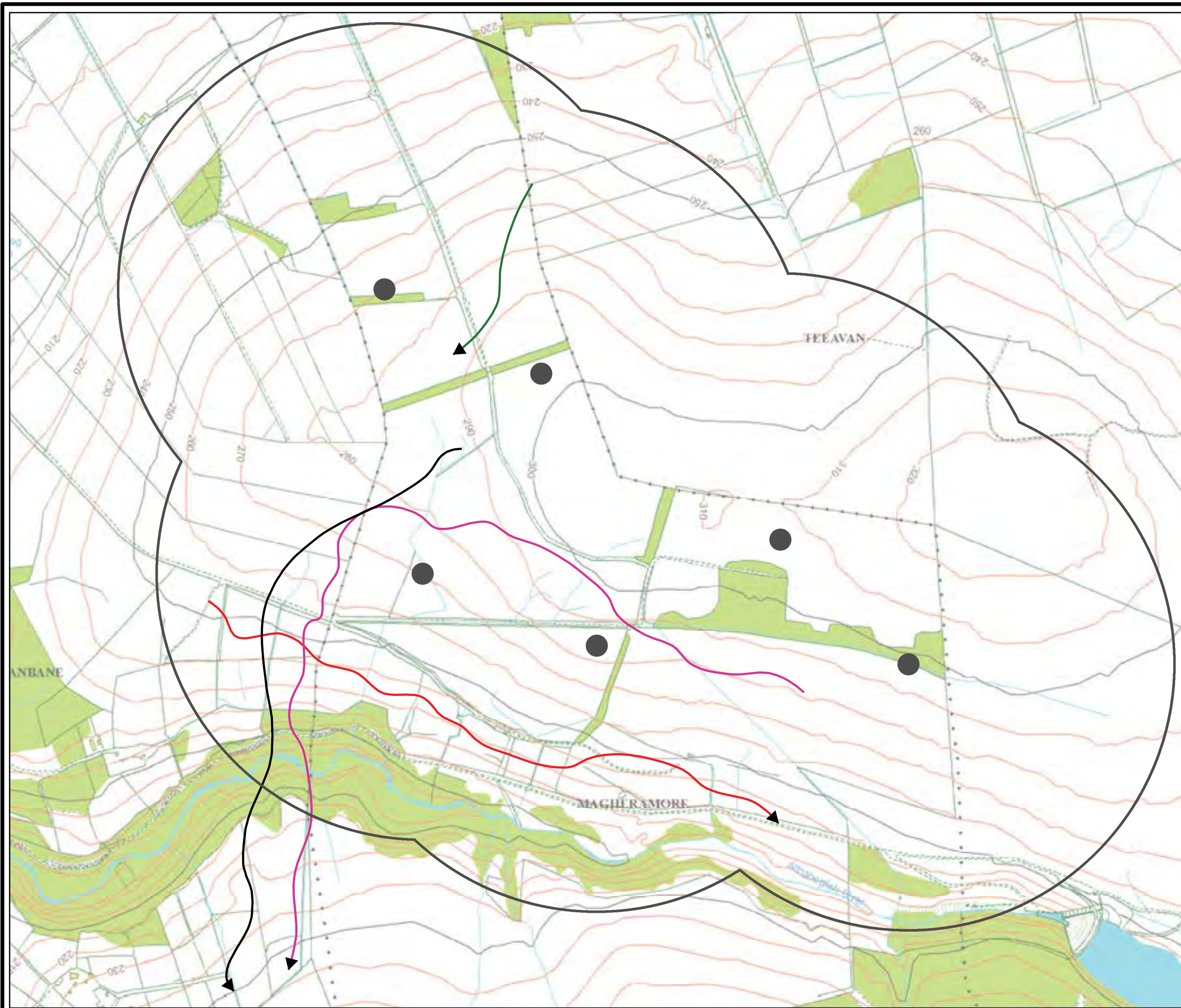
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**MAGHERAMORE
WIND FARM**

FIGURE 7.8

**FLIGHTLINES FOR OTHER
ANNEX 1 SPECIES**

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-  turbine locations
-  500m turbine buffer
-  peregrines year 3 (2018)
-  peregrines year 2 (2015)
-  peregrines year 1 (2014)
-  merlins (all years)



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MAGHERAMORE WIND FARM

FIGURE 7.9

KESTREL FLIGHTLINES

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● turbine locations

□ 500m turbine buffer

→ kestrels VP1

→ kestrels VP2

→ kestrels VP3



LAYOUT DWG 03426D0001-07

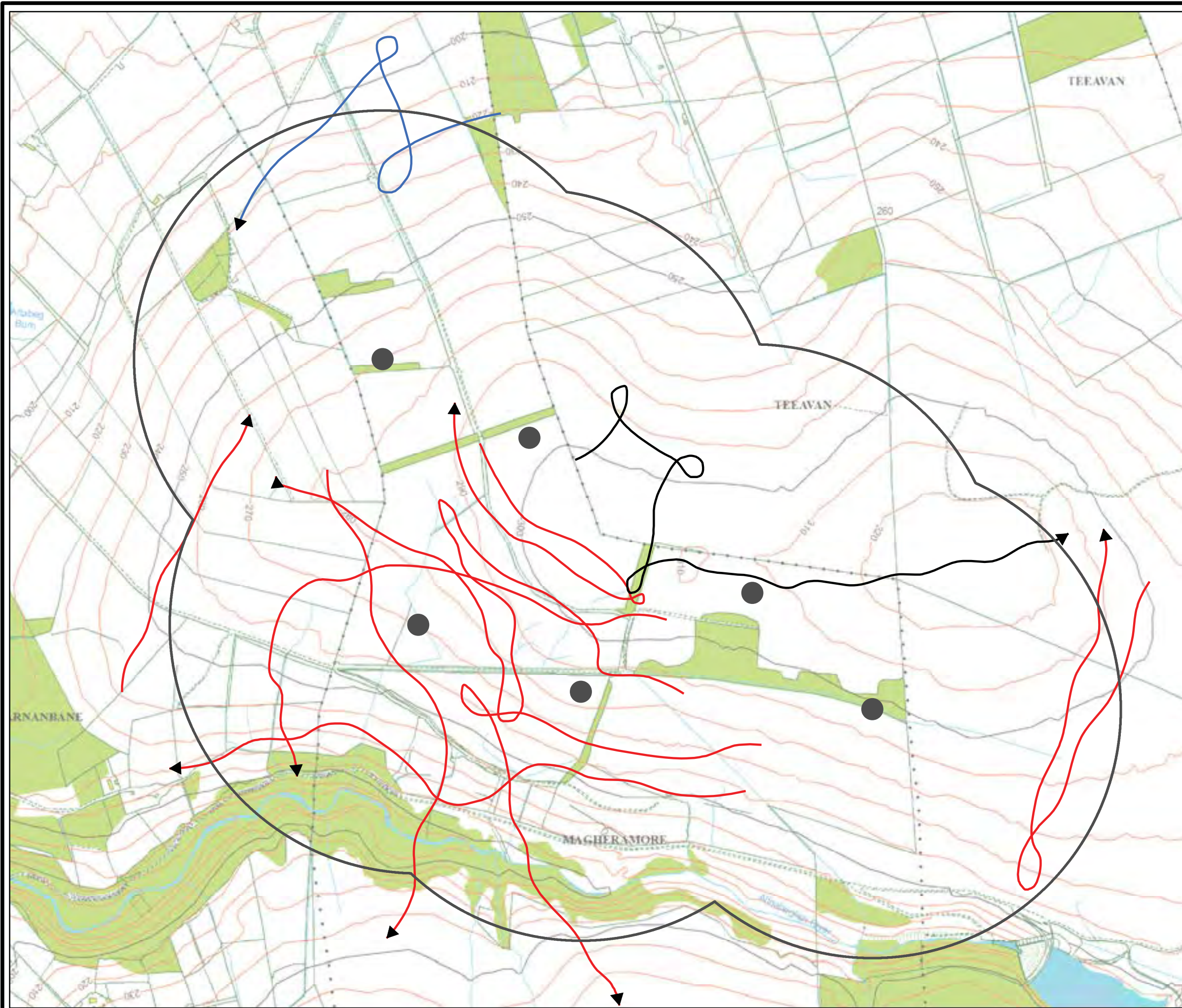
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**MAGHERAMORE
WIND FARM**

FIGURE 7.10

BUZZARD FLIGHTLINES

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-  turbine locations
-  500m turbine buffer
-  buzzards VP1
-  buzzards VP2
-  buzzards VP3



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**MAGHERAMORE
WIND FARM**

FIGURE 7.11

WINTER BIRD SIGHTINGS

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-  turbine locations
-  500m turbine buffer
-  eight golden plovers
-  single golden plover
-  twenty golden plovers
-  two golden plovers
-  100 redpolls (flock)
-  jack snipe
-  dipper



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8

Fisheries

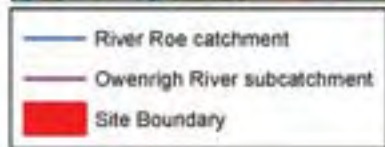
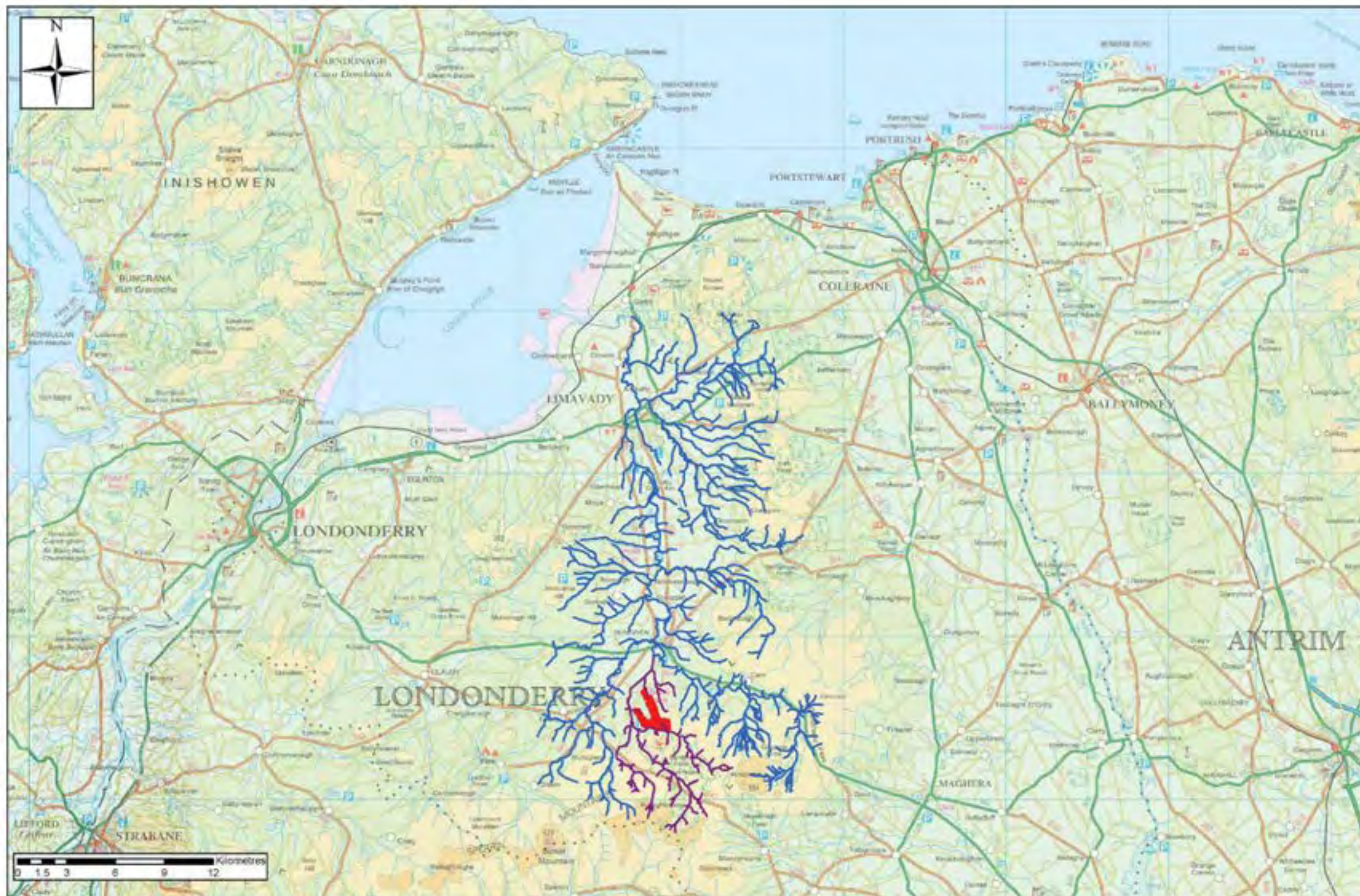


MAGHERAMORE WIND FARM

FIGURE 8.1

Magheramore WF within River Roe and Owenrigh sub-catchment

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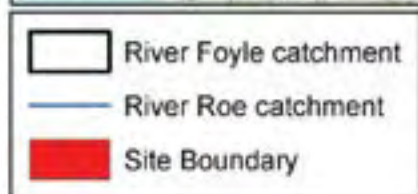
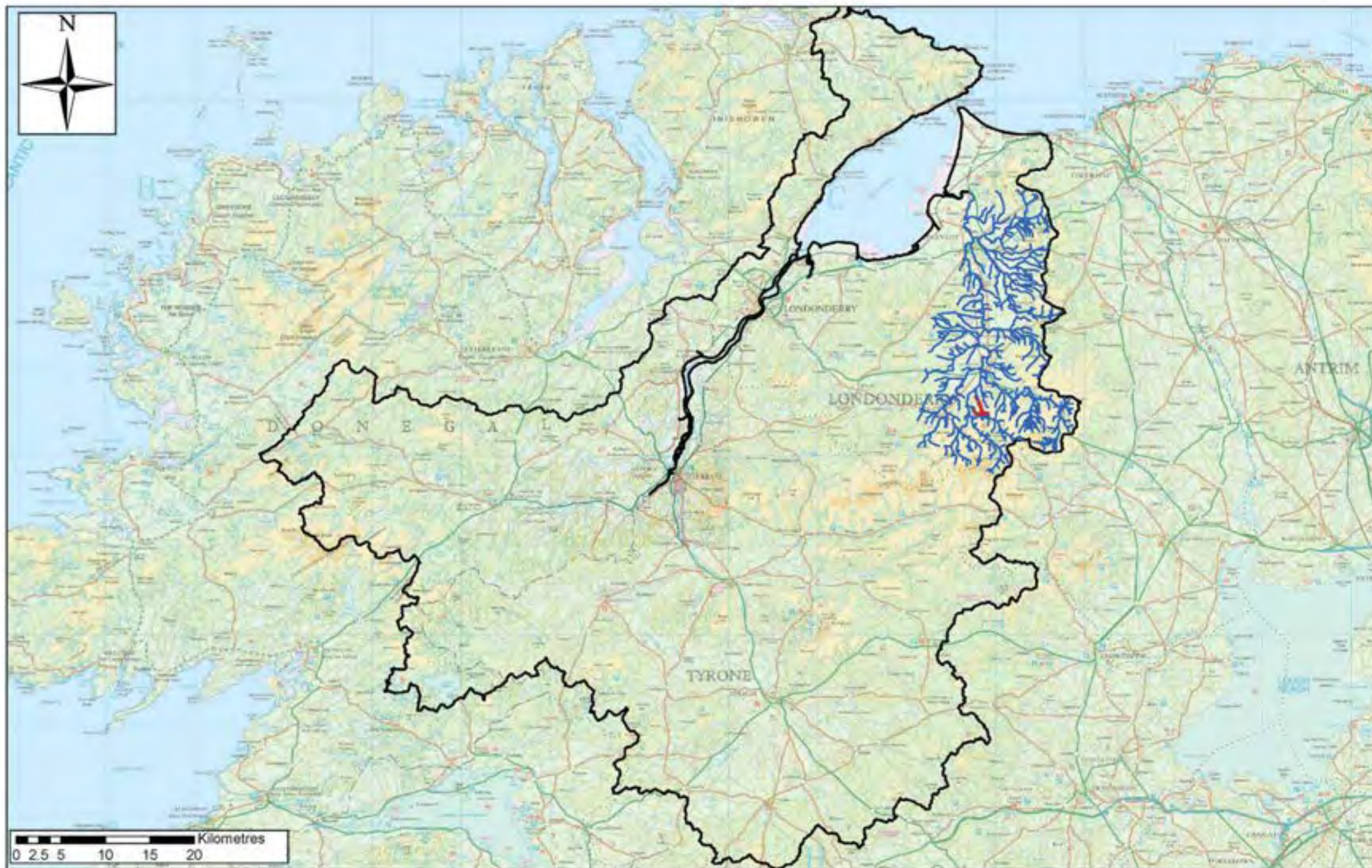


**MAGHERAMORE
WIND FARM**

FIGURE 8.2

**River Roe catchment within
River Foyle System**

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MAGHERAMORE WIND FARM

FIGURE 8.3

Salmon fry (Age 0) abundance indices in Owenrigh River

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Site Boundary
Salmon 0+ abundance class
Excellent



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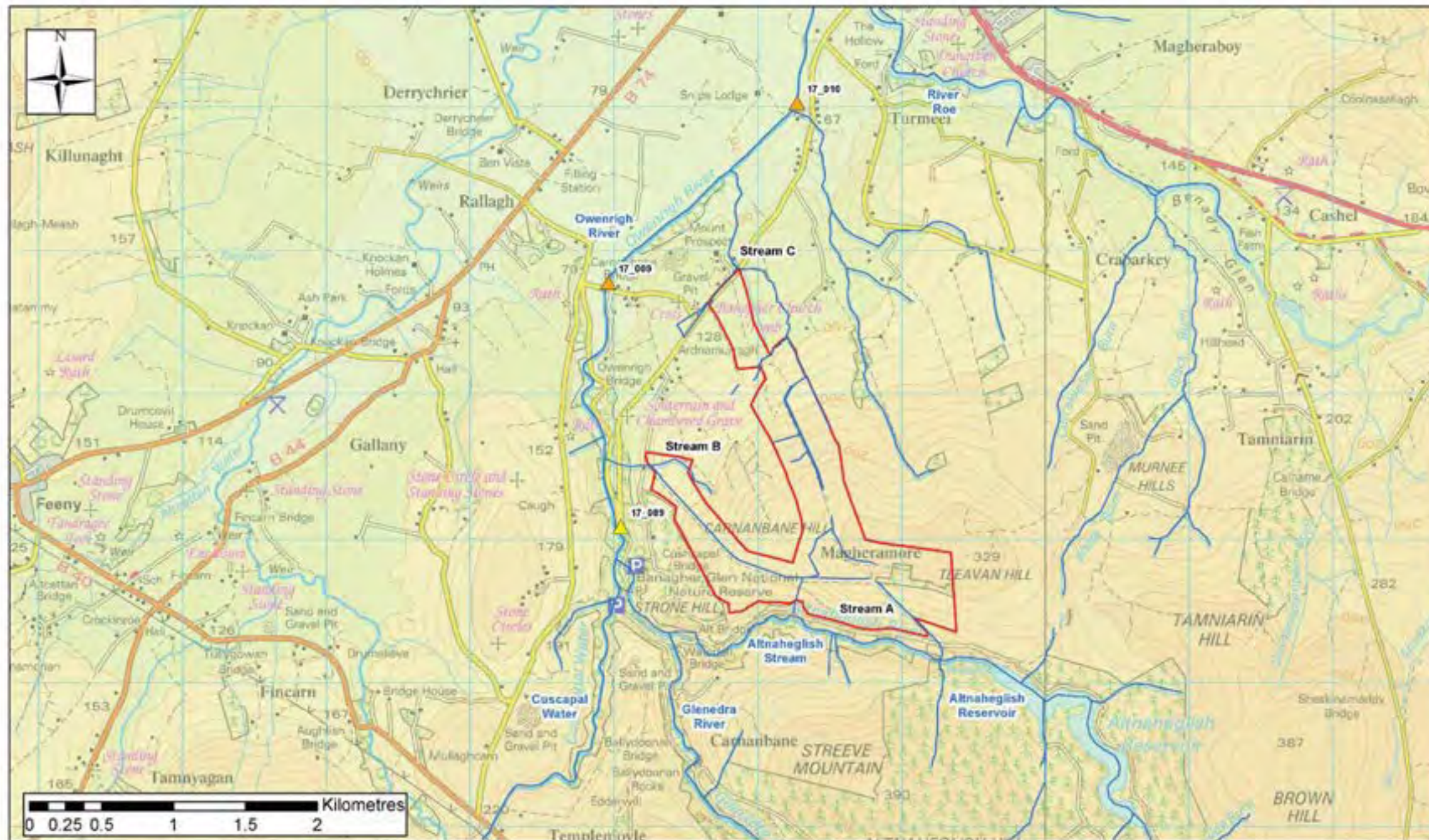


MAGHERAMORE WIND FARM

FIGURE 8.4

Trout fry (Age 0) abundance indices in Owenrigh River

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Site Boundary

Trout 0+ abundance class

- Poor/ Fair
- Moderate



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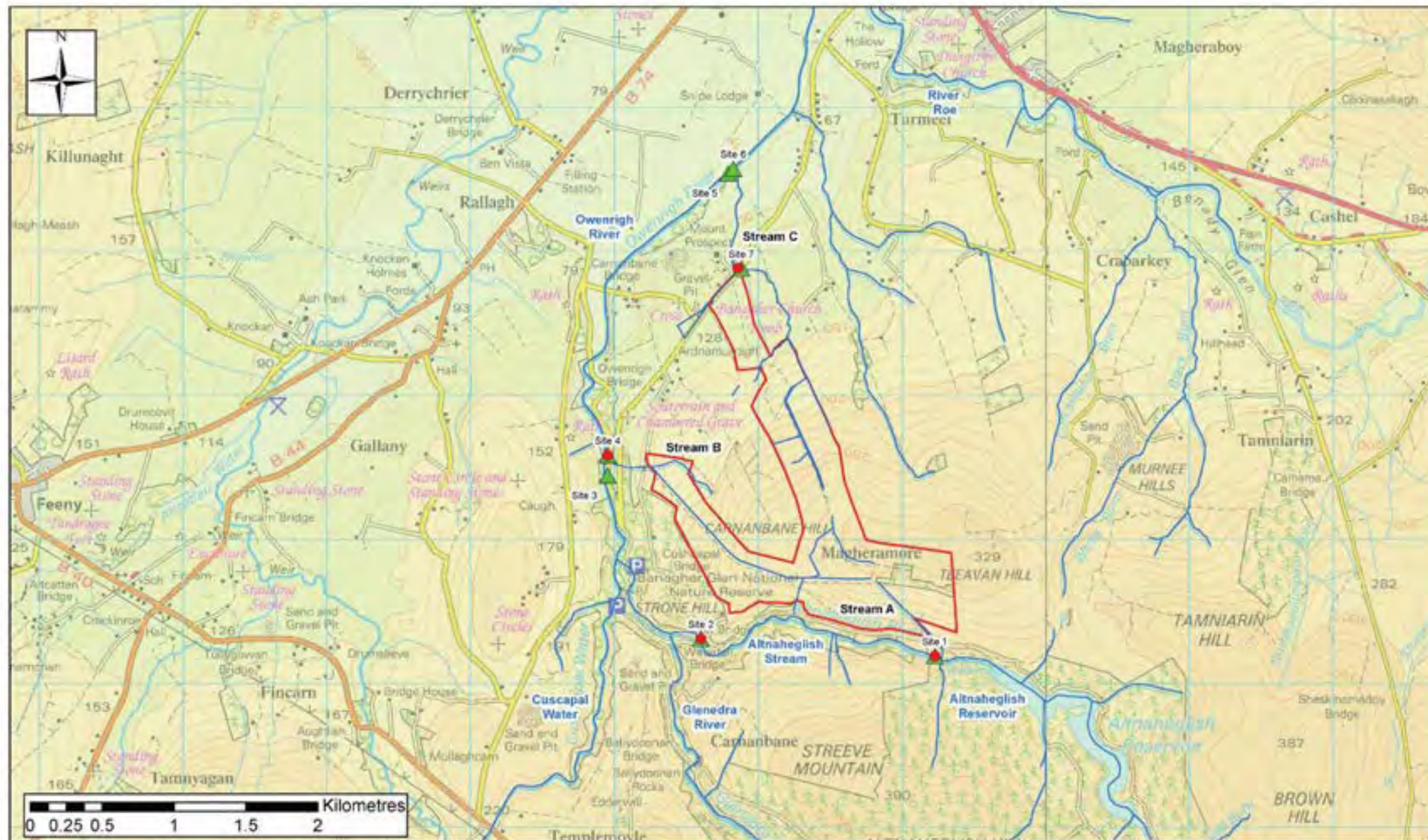


MAGHERAMORE WIND FARM

FIGURE 8.5

Survey Sites

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- Site Boundary
- ▲ Stream quality survey sites
- PJA fish survey sites



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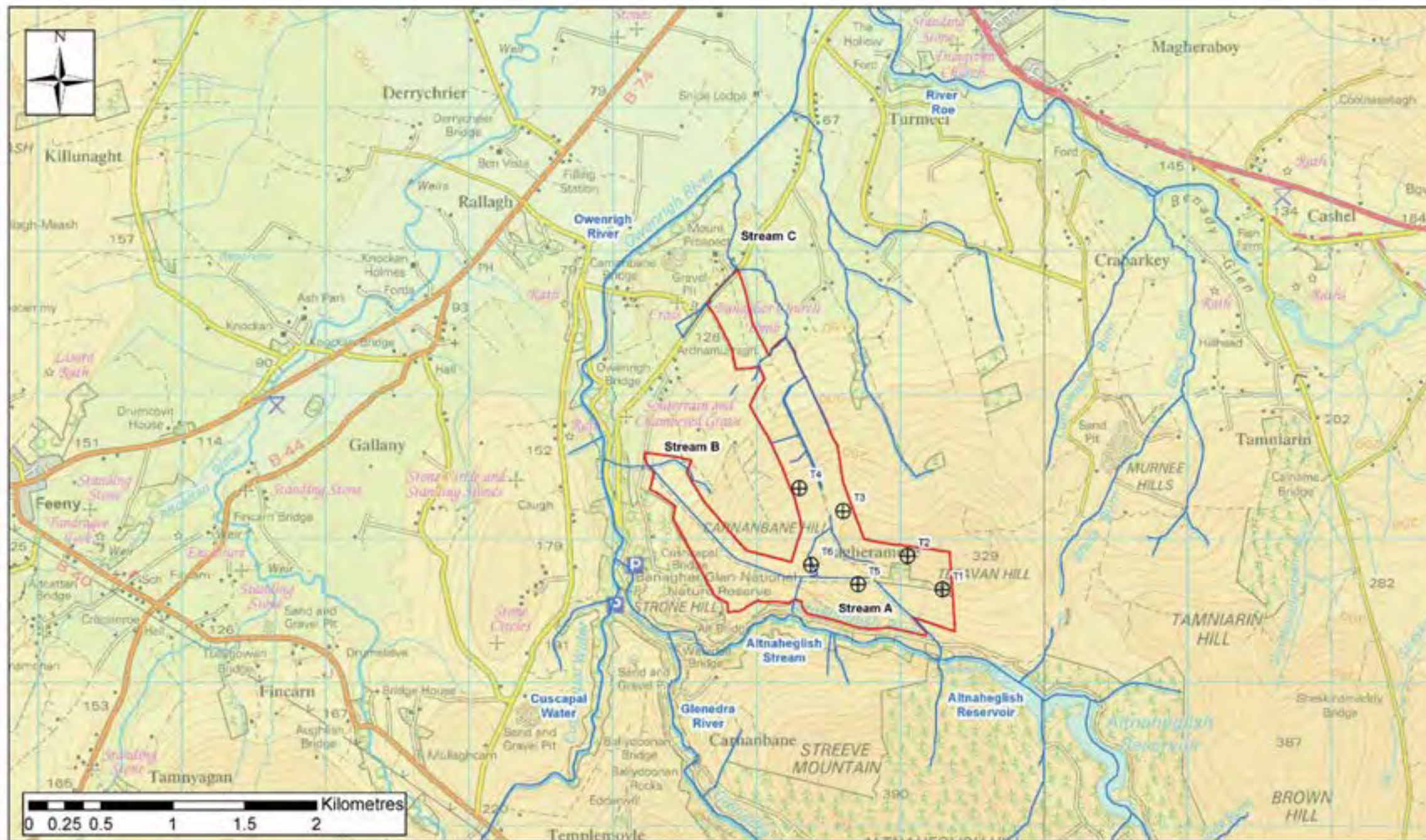


MAGHERAMORE WIND FARM

FIGURE 8.6

Site drainage to Altnaheglish/Owenrigh River

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	Wind_Turbines
	Site Boundary



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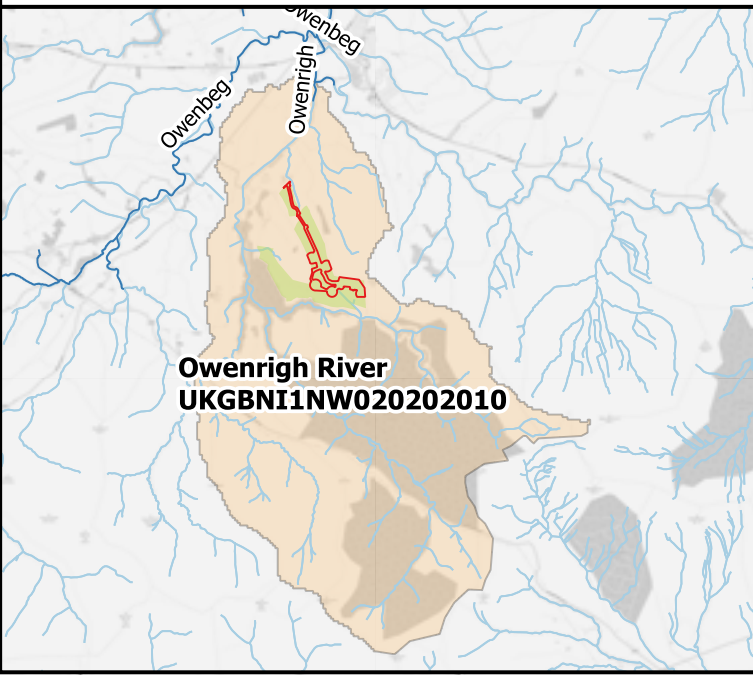
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9

Geology & Water Environment



RIVER BASIN CONTEXT



MAGHERAMORE WIND FARM

**M01616-05 CHAPTER 9 -
EIAR_FIG_9.1**

SITE HYDROLOGY

The Site

- Lands under applicant control
- as Survey Boundary
- Planning Application Boundary

Hydrology

Flooding

- FMNI Indicative 0.5% AEP Surface Water

Watercourses

- Significant Watercourse
- Minor Watercourse (<0.25 sq km area)
- Field or Peat Drain

Height Data - OSNI 10m DTM

- 20m Contour

River Basin Context Map

NIEA WFD River Water Bodies

- Owenrigh River

SCALE - 1:10,000 @ A3 (MAIN MAP)

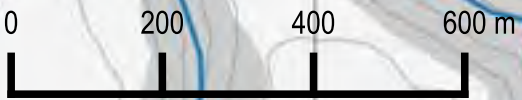
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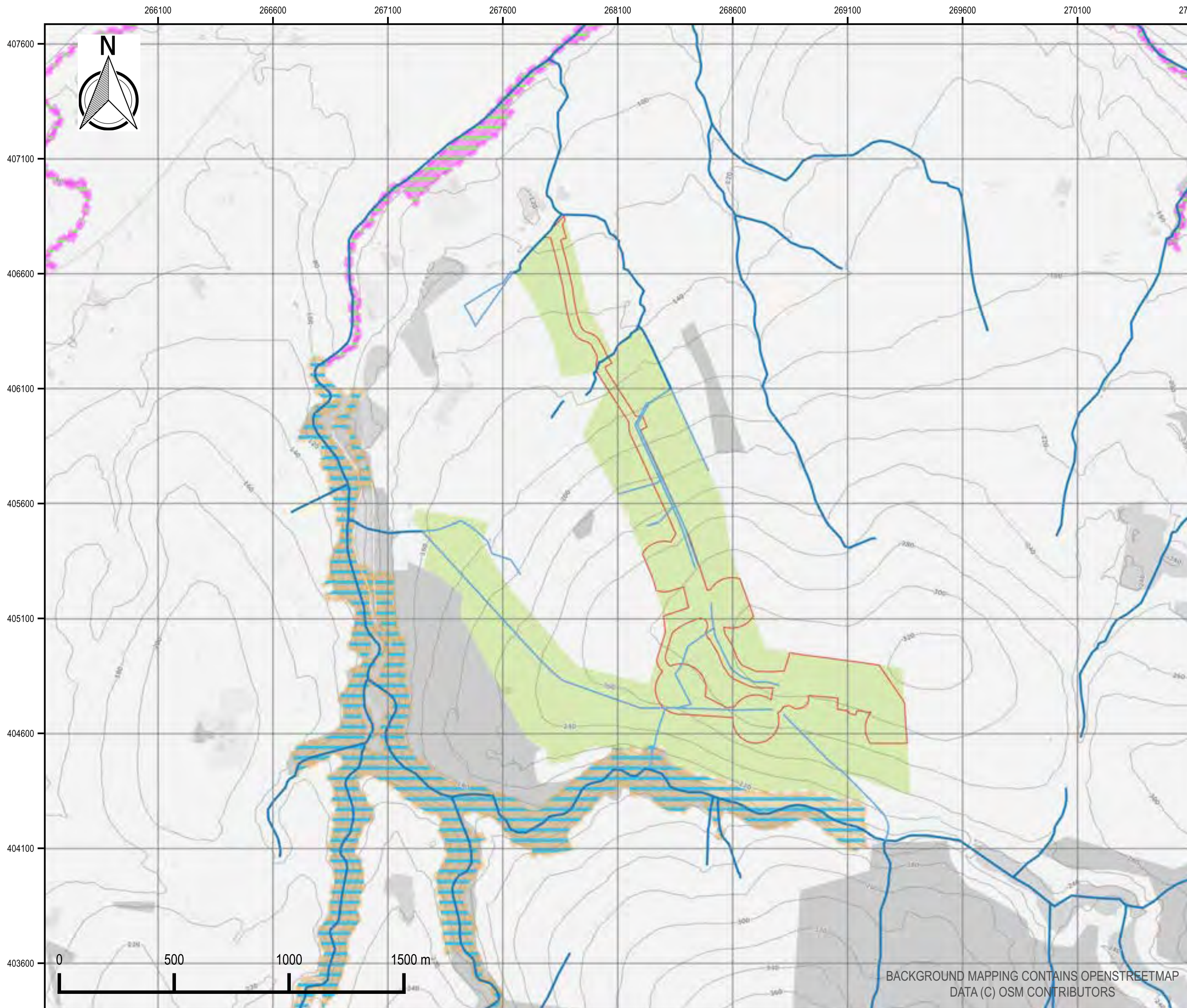


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BACKGROUND MAPPING CONTAINS OPENSTREETMAP
DATA (C) OSM CONTRIBUTORS



MAGHERAMORE WIND FARM

**M01616-05 CHAPTER 9 -
EIAR_FIG_9.2**

DESIGNATED SITES

- The Site**
- Lands under applicant control
 - as Survey Boundary
 - Planning Application Boundary
- Height Data - OSNI 10m DTM**
- 20m Contour
- Special Area of Conservation**
- Banagher Glen
 - River Roe and Tributaries
- ASSI**
- Banagher Glen
 - River Roe and Tributaries

SCALE - 1:15,000 @ A3

ENVIRONMENTAL STATEMENT

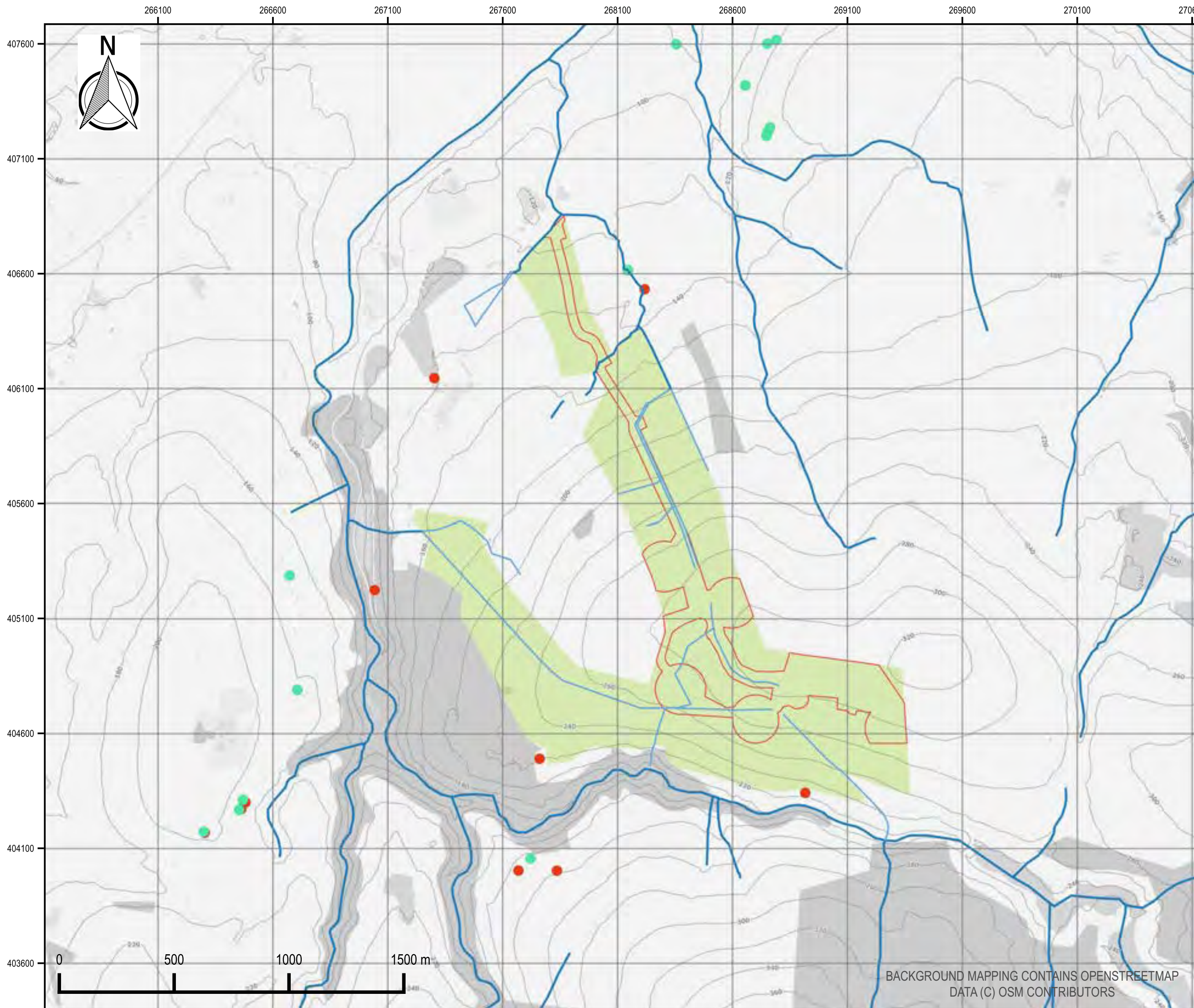
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MAGHERAMORE WIND FARM

**M01616-05 CHAPTER 9 -
EIAR FIG_9.3**

**ABSTRACTIONS AND WATER
USERS**

- The Site**
- Lands under applicant control
- as Survey Boundary
 - Planning Application Boundary
- Height Data - OSNI 10m DTM**
- 20m Contour
- Abstraction Locations**
- Private Water Supplies - Causeway Coast and Glens Borough Council
 - Private Water Supplies - NIEA:Drinking Water Inspectorate
 - Licenced Abstractions (Commercial) NIEA:Water Management Unit
 - Historic Well (Disused)

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MAGHERAMORE WIND FARM

M01616-05 CHAPTER 9 -
EIAR FIG 9.4

SITE WATER QUALITY ASSESSMENT

The Site

- Lands under applicant control
- as Survey Boundary
- Planning Application Boundary

Height Data - OSNI 10m DTM

- 20m Contour

Water Quality Data

Baseline Surface Water Quality Sample Locations

- Baseline Surface Water Quality
Sample Locations

Sample locations exclude offsite water quality sampling and analysis undertaken in support of Chapter 8 - Fisheries.

SCALE - 1:10,000 @ A3

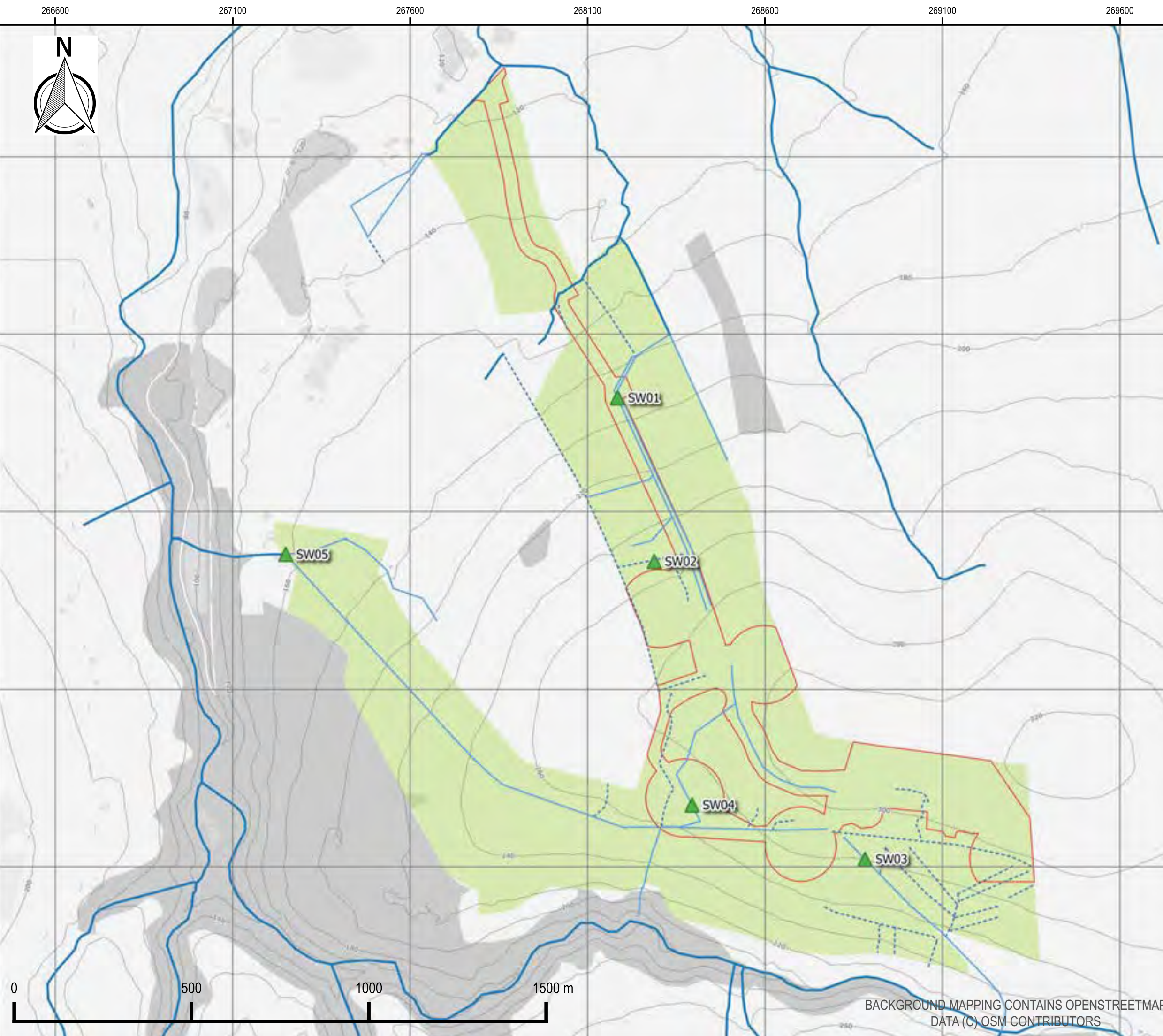
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10

Noise



MAGHERAMORE WIND FARM

FIGURE 10.1

PREDICTED NOISE FOOTPRINT FOR THE DEVELOPMENT

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- Turbine Location
- Unoccupied Property
- Occupied Property
- Survey Location

Predicted Noise Level

- 0 - 35 dBA
- 35 - 40 dBA
- 40 - 45 dBA
- 45 - 50 dBA
- 50 - 55 dBA
- 55 - 60 dBA

Grid intervals at 1 km

The LA90,10min descriptor has been used

The noise footprint has been calculated at a wind speed of 8m/s at 10m height using the interpretation of the ISO:9613-2 propagation model recommended by the Institute of Acoustics Good Practice Guide.



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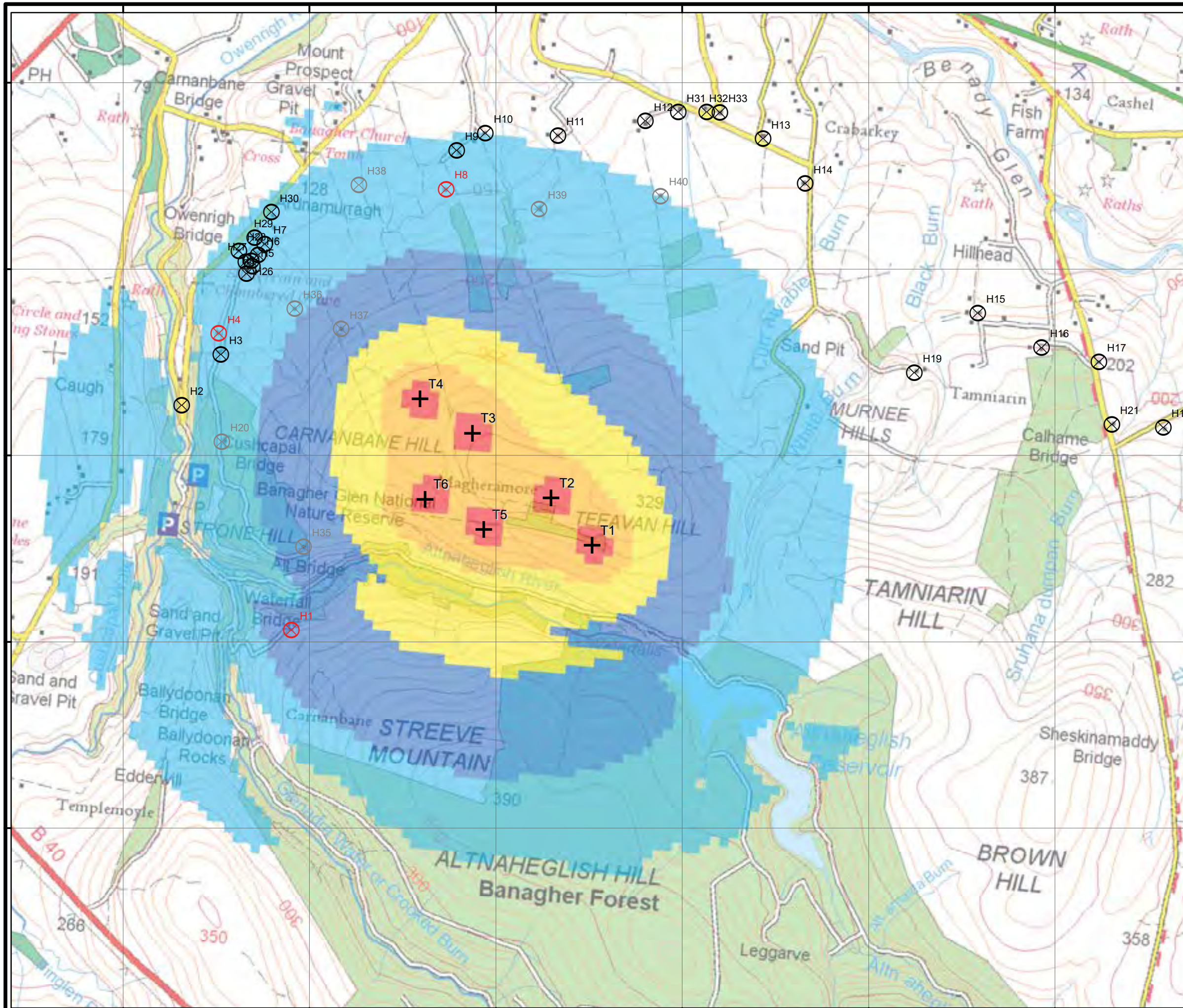
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MAGHERAMORE WIND FARM

FIGURE 10.2

PREDICTED CUMULATIVE NOISE FOOTPRINT

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- Turbine Location
- Unoccupied Property
- Occupied Property
- Survey Location

Predicted Noise Level

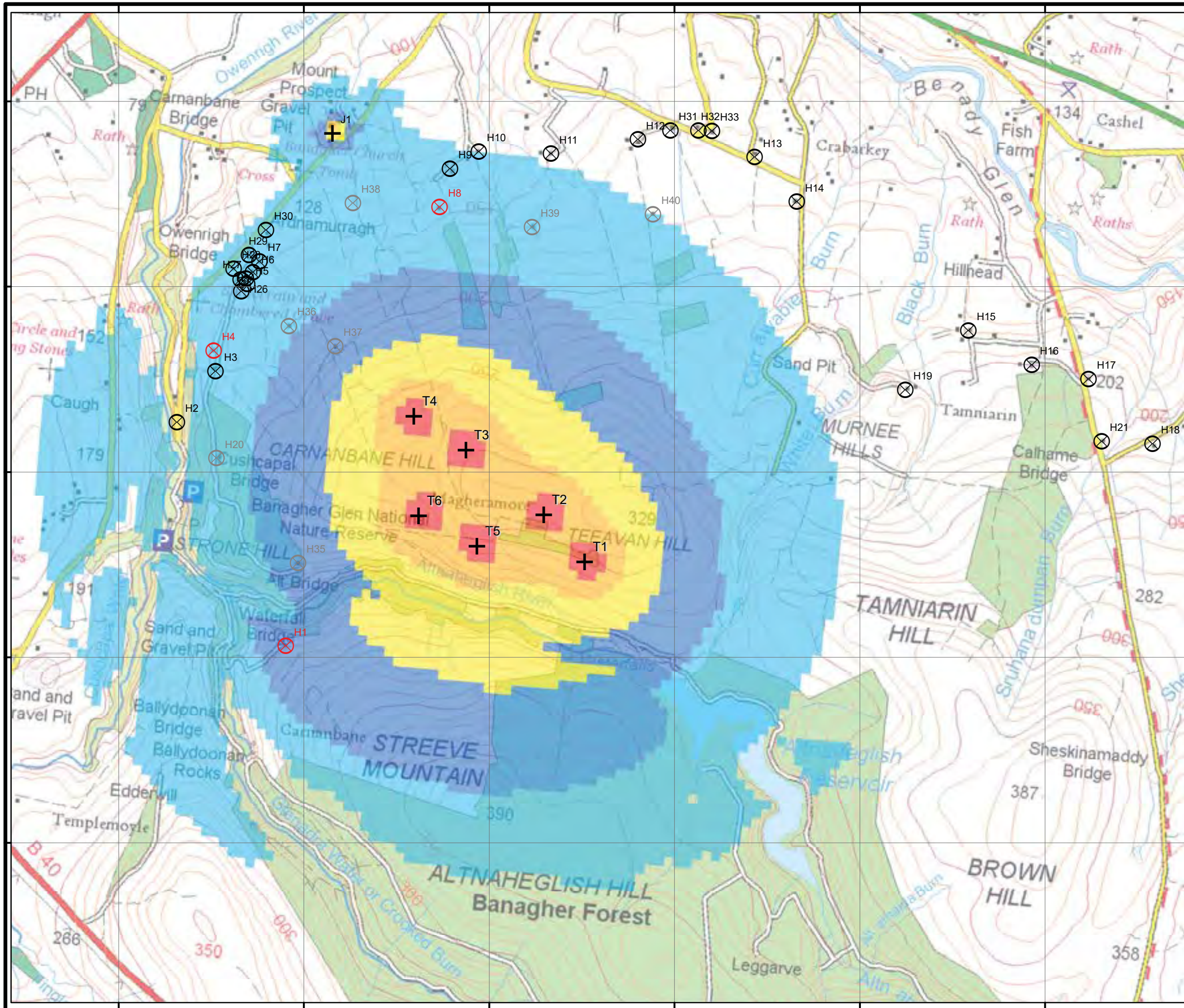
- 0 - 35 dBA
- 35 - 40 dBA
- 40 - 45 dBA
- 45 - 50 dBA
- 50 - 55 dBA
- 55 - 60 dBA

Grid intervals at 1 km

The LA90, 10min descriptor has been used

The noise footprint has been calculated at a wind speed of 8m/s at 10m height using the interpretation of the ISO:9613-2 propagation model recommended by the Institute of Acoustics Good Practice Guide.

Turbines prefixed 'T' belong to the Development, 'J1' is the existing single turbine.



LAYOUT DWG: 03426D0001-07 LAYOUT NO.: PNIRmgh020

DRAWING NUMBER: **03426D2904-01**

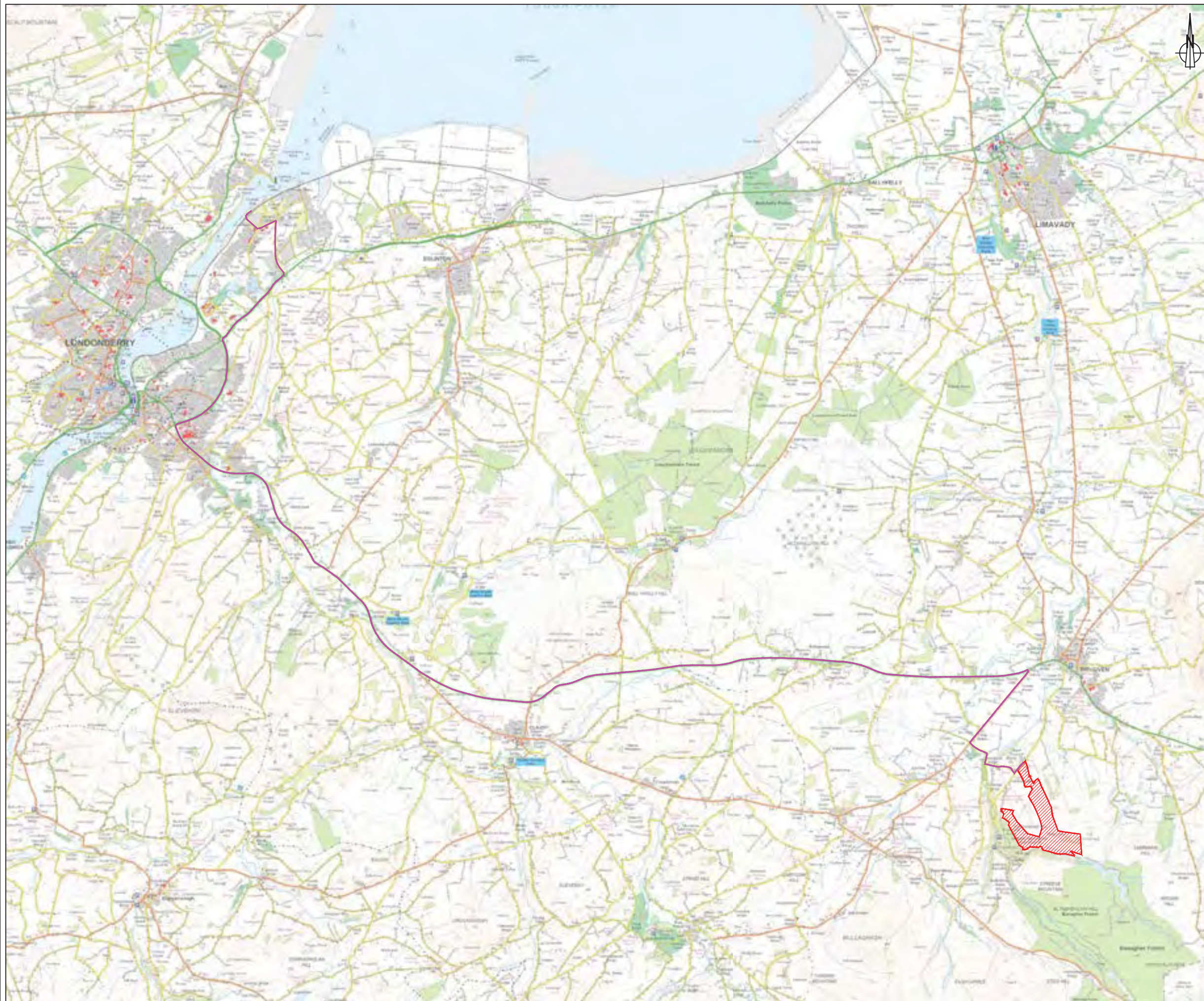
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11

Traffic & Transport



**MAGHERAMORE
WIND FARM**

FIGURE 11.1

TURBINE DELIVERY ROUTE

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- KEY:**
- SITE
 - PROPOSED DELIVERY ROUTE

LAYOUT DWG	N/A	T-LAYOUT NO.	N/A
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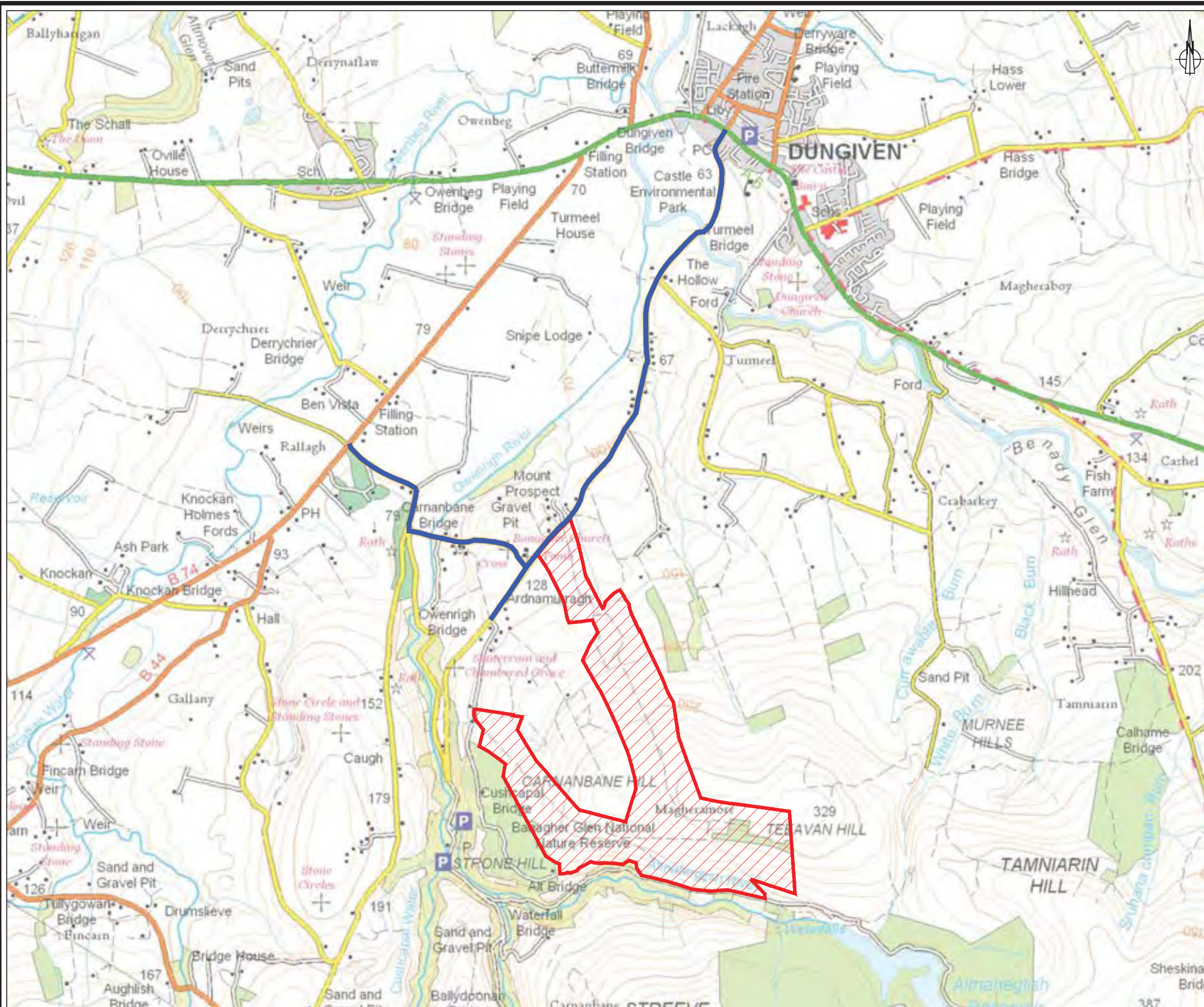
**MAGHERAMORE
WIND FARM**
FIGURE 11.2
HGV ROUTE

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KEY:

 SITE

 PROPOSED HGV ROUTE



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