

### **TA10.3: Groundwater Dependent Terrestrial Ecosystems Risk Assessment**

# STRATHY SOUTH WIND FARM

## Technical Appendix 10.3 Groundwater Dependent Terrestrial Ecosystems Risk Assessment

Prepared for: SSE Generation Limited

### BASIS OF REPORT

This document has been prepared by SLR with reasonable skill, care and diligence, and taking account of the manpower, timescales and resources devoted to it by agreement with SSE Generation Limited (the Client) as part or all of the services it has been appointed by the Client to carry out. It is subject to the terms and conditions of that appointment.

SLR shall not be liable for the use of or reliance on any information, advice, recommendations and opinions in this document for any purpose by any person other than the Client. Reliance may be granted to a third party only in the event that SLR and the third party have executed a reliance agreement or collateral warranty.

Information reported herein may be based on the interpretation of public domain data collected by SLR, and/or information supplied by the Client and/or its other advisors and associates. These data have been accepted in good faith as being accurate and valid.

The copyright and intellectual property in all drawings, reports, specifications, bills of quantities, calculations and other information set out in this report remain vested in SLR unless the terms of appointment state otherwise.

This document may contain information of a specialised and/or highly technical nature and the Client is advised to seek clarification on any elements which may be unclear to it.

Information, advice, recommendations and opinions in this document should only be relied upon in the context of the whole document and any documents referenced explicitly herein and should then only be used within the context of the appointment.

SLR Ref: 428.00660.00070  
Version No: Final  
August 2020



## CONTENTS

<b>EXECUTIVE SUMMARY .....</b>	<b>1</b>
<b>1.0 INTRODUCTION .....</b>	<b>2</b>
1.1 Report Scope.....	2
<b>2.0 GEOLOGY, HYDROLOGY AND HYDROGEOLOGY .....</b>	<b>3</b>
2.1 Geology.....	3
2.1.1 Drift and Solid Geology.....	3
2.1.2 Peat Occurrence and Depth.....	3
2.2 Hydrology and Hydrogeology.....	4
2.3 Conceptual Hydrological Site Model.....	4
<b>3.0 NVC MAPPING AND OCCURRENCE OF POTENTIAL GWDTE .....</b>	<b>5</b>
3.1 NVC Mapping.....	5
3.2 Occurrence of Potential GWDTE.....	5

## DOCUMENT REFERENCES

### TABLES

Table 2-1 Peat Probing Data.....	3
Table 3-1 Assessment of Potential Highly Groundwater Dependent Habitat.....	6

### DRAWINGS

Figure 10.3.1a-c Local Hydrology
Figure 10.3.2 Superficial Geology
Figure 10.3.3 Solid Geology
Figure 10.3.4 Peat Depth
Figure 10.3.5 National Vegetation Classification (NVC)
Figure 10.3.6 Groundwater Dependent Terrestrial Ecosystems

## EXECUTIVE SUMMARY

Site investigations have been completed to assess the occurrence of peat, the underlying geology and vegetation cover at the site of the Proposed Varied Development. The investigations have been used to develop a conceptual hydrological site model and to assess the potential for habitats at site to be sustained by groundwater.

Using this information, this report concludes that as areas of potential groundwater dependent habitat are sustained by rainfall and surface water runoff rather than groundwater, SEPA's buffers to these potential Groundwater Dependent Terrestrial Ecosystems need not apply. It is concluded that these habitats should not be considered a development constraint. However, measures would be required during construction to maintain existing surface water flow paths to these habitats.

## 1.0 INTRODUCTION

The Strathy South wind farm Section 36 application (Planning Ref.07/00263/S365U) was approved by the Scottish Government Energy Consents Unit (ECU) on 27<sup>th</sup> April 2018. SSE Generation Limited (SSE) seek to increase the height of the consented turbines to improve the sites efficiency and economics and support development of the wind farm.

It is confirmed that it is not proposed to remove or relocate any of the consented (39 no.) turbines. It is proposed, however, to reduce track lengths, where possible, and to optimise the location of the tracks so as to further avoid areas of deeper peat, where possible.

The layout of the Proposed Varied Development is shown on Figure 10.3.1a-c.

A draft of this report was submitted to the Scottish Environment Protection Agency (SEPA) in November 2019. The report considered the scoping layout for the Proposed Varied Development. Following review of the draft report SEPA provided comment by email (Susan Haslam to Laurie Winter and Gordon Robb, 15/01/2020, 09:56) and stated:

*“We are in agreement that the main construction area has been subject to habitat changes caused by forestry, tracks and other activities therefore any GWDTEs within this area are unlikely to be of specific value or groundwater dependent. There are some GWDTE outside the forested areas but we are content that they are unlikely to be in hydraulic connection and/or are downslope to the proposed infrastructure. We therefore do not consider that GWDTE are a specific constraint to layout at this site but would nonetheless expect to see the standard mitigation measures put in place to ensure that existing groundwater flow paths are maintained.”*

### 1.1 Report Scope

This report updates the draft November 2019 GWDTE report to account for the design freeze layout of the Proposed Varied Development.

The purpose of this report is to provide a summary of the site’s hydrological setting, geology and peat depth surveys, and habitat mapping.

The content this report has been informed by investigations completed at the site, including National Vegetation Classification (NVC) surveys<sup>1</sup>, a programme of peat probing and site walkovers. Reporting also makes reference to guidance contained within SEPA Guidance Note 31<sup>2</sup>.

<sup>1</sup> Strathy South Wind Farm 2013 Environmental Statement Addendum; Volume 4: Technical Appendix A10.2: Strathy South Wind Farm Habitats, Vegetation and Protected Species (RPS, 2013)

<sup>2</sup> Land Use Planning System – SEPA Guidance Note 31: Guidance on Assessing the Impacts of Development Proposals on Groundwater Abstractions and Groundwater Dependent Terrestrial Ecosystems. Version 3 Published 11<sup>th</sup> September 2017.

## 2.0 GEOLOGY, HYDROLOGY AND HYDROGEOLOGY

### 2.1 Geology

#### 2.1.1 Drift and Solid Geology

An extract of the published British Geological Survey (BGS) superficial geological map<sup>3</sup> is shown as Figure 10.3.2. Peat is mapped extensively across the site and is shown to directly overlie bedrock. The mapping suggests that glacial deposits (e.g. sand and gravels and Glacial Till) do not underlie the peat. Adjacent to the larger watercourses Alluvium is recorded and hummocky glacial deposits are recorded north of the main site. Peat and superficial deposits are shown as absent on the hill tops locally.

An extract of the published BGS solid geological map<sup>3</sup> is shown as Figure 10.3.3 and shows that the site is underlain by metasediments of the Bettyhill Formation (in the west) and Kirkatomy Gneiss (in the east). The Swordly Thrust Fault passes through the site and is oriented in a north northwest to south southeast direction. There are a number of small granite intrusions within the site.

#### 2.1.2 Peat Occurrence and Depth

The occurrence, depth and distribution of peat at the site has been subject to much previous assessment and the depth and condition of peat at site is well understood. More than 2,200 peat depth measurements have been obtained and have been used to generate a peat depth drawing (Figure 10.3.4 and EIAR Volume 4: Technical Appendix 10.1 (Peat Landslide and Hazard Risk Assessment).

Peat has been recorded up to 5.0 m in depth. The peat has been witnessed to be thin adjacent to higher ground within the site and typically to be fibrous.

Table 2-1 shows the distribution of recorded peat depths and confirms that at most of the peat probes recorded depths of <1.5 m deep.

**Table 2-1  
Peat Probing Data**

Peat Thickness (m)	No. of Probes	Percentage (of total probes undertaken on-site)
0 (no peat)	39	<2
0.01 – 0.49 (peaty soil)	458	20.7
0.50 – 1.49	955	43.2
1.50 – 1.99	278	12.6
2.00 – 2.49	192	8.7
2.50 – 2.99	165	7.5
3.00 – 3.99	103	4.7
> 4.0	19	<1

<sup>3</sup> British Geological Survey (BGS) 1:50,000 scale data, available at <http://mapapps2.bgs.ac.uk/geoindex/home.html> [accessed on 19/03/2020]

## 2.2 Hydrology and Hydrogeology

The site lies within the headwaters of the River Strathy which flows northwards to Strathy and Strathy Bay. A number of tributaries of the River Strathy also rise within the site prior to joining the River Strathy e.g. the Yellowbog Burn, Allt Badain and Allt nan Clach.

The standard average annual rainfall (SAAR) for the River Strathy catchment recorded by the Flood Estimation Handbook (FEH) Web Service (CEH, 2019)<sup>4</sup> confirms a wet climate and an average annual rainfall of 1,123 mm.

BGS hydrogeological mapping confirms that the bedrock is classified as 'Regions underlain by impermeable rocks'. The strong nature of the metasediments means that there is virtually no intergranular or fracture groundwater flow within the bedrock, although limited shallow groundwater flow within near surface weathered horizons is possible.

The superficial deposits are not classified by the BGS; however, the Glacial Till typically exhibits limited groundwater potential due to the dominance of clay within the till and the isolated pockets of poorly sorted sand and gravel within the clay. Groundwater will be present in the Alluvium adjacent to the larger watercourse channels and this is likely to be in hydraulic continuity with the water in the watercourses.

Peat deposits typically comprise two layers: a thin (up to 50 cm) acrotelm layer, which allows relatively free water movement; and the lower catotelm layer comprising the thicker bulk of peat. Water movement in the catotelm layer is very slow and normally the water table in peat never drops below the acrotelm layer. The existing high yield forest has impaired / degraded the peat and drainage associated with the forest will allow rainfall runoff to be collected and shed to the forest edges.

## 2.3 Conceptual Hydrological Site Model

Following review of the site setting, the following conceptual model has been developed:

- the site is located in an area that receives frequent rainfall and has a high annual rainfall total;
- the presence of commercial forest has introduced drainage and changed the characteristics of the surface habitats;
- where there are no drift deposits present (e.g. on the hill tops), there is limited potential for some shallow groundwater to be present in the upper weathered surface of the bedrock. This is however generally on elevated, sloping ground where rainfall would preferentially form surface runoff;
- any groundwater flow in the upper weathered surface of the bedrock will readily flow within the weathered upper surface of the bedrock and follow topography to the valleys between the hills (e.g. groundwater and surface water catchments are likely to be similar); and
- in other areas (e.g. on the lower flanks of the hills and across the valley bases) any potential for rainwater recharge to groundwater within the bedrock will be limited by the presence of peat and clays associated with the Glacial Till. Again, rainfall is likely to preferentially form surface runoff and is encouraged by the presence of forest drains.

<sup>4</sup> Flood Estimation Handbook web service, available at <https://fehweb.ceh.ac.uk/> [date accessed 06/03/2020]

## 3.0 NVC Mapping and Occurrence of Potential GWDTE

An Extended Phase 1 and NVC survey for the site was undertaken in 2004 and 2005 respectively to inform the 2007 Environmental Statement (ES). Updated NVC surveys of the site were completed in 2011 for the 2013 ES Addendum submission; these results were validated in 2019 by site inspection and it is confirmed no change to the NVC survey mapping has been required.

### 3.1 NVC Mapping

Figure 10.3.5 shows the NVC communities recorded at site.

The main site is dominated by commercial forest comprising a mixed crop of Sitka spruce and lodgepole pine. Rides bisecting the forest predominately consist of heath or mire communities (M15, M17, M19, M20 and M23), a number of these are listed as Annex 1 Biotopes under the EC Habitats Directive and Habitats Regulations 1994 (as amended), and on the Scottish Biodiversity List and Sutherland Local Biodiversity Action Plan. However, the majority of these habitats within the site are of poor quality, limited in species diversity and atypical in nature from those listed within the relevant literature (Rodwell, 1991 - 2000<sup>5</sup>) because of the drying influences of the surrounding forest. Larger glade areas in the west of the plantation where peat depths are greater and the drying influences of the surrounding forest have less effect, provide areas of more typical blanket bog. Habitats include bog pools and intact mire of the M1 and M18 mire communities respectively. However, these are limited in their overall coverage within the site.

### 3.2 Occurrence of Potential GWDTE

The assessment of GWDTE began with identifying the NVC communities in the main site which are cited in SEPA guidance<sup>6</sup> as potentially moderately or highly groundwater dependent. The particular characteristics of these communities were then subject to further site-specific scrutiny in terms of topography and hydro-ecological context. The results of this analysis is presented below.

Areas of potential moderate or high groundwater dependent habitat are shown on Figure 10.3.6.

Review of Figure 10.3.6 shows that areas of potential moderate groundwater dependent habitat are located outside of the site boundary and adjacent to forest rides or watercourse corridors within the site boundary. This distribution is not consistent with habitat sustained by groundwater but rather, given the proven site geology and hydrogeology, it is considered that potential moderately groundwater dependent habitat is sustained by the high average annual rainfall, surface water runoff and surface water ponding and not by groundwater. Buffers to this habitat therefore need not apply, but safeguards would be required during construction to maintain existing overland surface water flow paths.

Buffers of 100 m and 250 m (as specified in SEPA guidance) to potential high groundwater dependent habitat are also shown on Figure 10.3.6. It is noted that buffers have been applied to areas of M6 habitat in accordance with SEPA guidance. M6 habitat was not considered to be potential GWDTE habitat in the 2013 ES Addendum submission, and as a result additional areas of potential GWDTE are considered in this assessment (see, for example, M6 habitat recorded near to T33, T49, T29, T19, T4 and T1). This assessment has also considered a

<sup>5</sup> Rodwell, J.S. (ed.) 1991. *British Plant Communities. Volume 1. Woodlands and scrub.* Cambridge University Press.

Rodwell, J.S. (ed.) 1991. *British Plant Communities. Volume 2. Mires and heath.* Cambridge University Press.

Rodwell, J. S. (ed.) 1992. *British Plant Communities. Volume 3. Grassland and montane communities.* Cambridge University Press.

Rodwell, J.S. (ed.) 1995. *British Plant Communities. Volume 4. Aquatic communities, swamps and tall-herb fens.* Cambridge University Press.

Rodwell, J.S. (ed.) 2000. *British plant communities. Volume 5. Maritime communities and vegetation of open habitats.* Cambridge University Press.

<sup>6</sup> Land Use Planning System – SEPA Guidance Note 31: Guidance on Assessing the Impacts of Development Proposals on Groundwater Abstractions and Groundwater Dependent Terrestrial Ecosystems. Version 3 Published 11<sup>th</sup> September 2017.

buffer of more than 100 m from the main site which results in some additional areas of potential GWDTE being identified when compared to the 2013 ES Addendum. Notwithstanding this, it is evident that most of the infrastructure for the Proposed Varied Development does not lie close or in the buffer to potential highly groundwater dependent habitat.

Table 3-1 details where potentially high groundwater dependent habitat is recorded within 250 m of the infrastructure for the Proposed Varied Development and discusses whether this habitat is likely to be sustained by groundwater.

**Table 3-1**  
**Assessment of Potential Highly Groundwater Dependent Habitat**

Location	Habitat	Discussion
T49	M6c and M25a	Small area of habitat recorded to the west of the T49, outside the site boundary and downslope of the proposed infrastructure. OS mapping shows habitat is associated with the watercourse channel of the Allt nan Clach. It is concluded that the habitat is sustained by rainfall and surface water runoff rather than groundwater. Not a development constraint subject to safeguards required to maintain existing surface water flow paths to this habitat.
Laydown Area and Concrete Batching Plant North of T43	M6c	Linear habitat extent within commercial forest which is likely to reflect the presence of a drain within the forest. Habitat not at a topographical low point, where a groundwater spring might be expected, and considered therefore not to be sustained by groundwater but rather by surface water runoff. Not a development constraint subject to safeguards required to maintain existing surface water flow paths to this habitat.
T33	M6c	Small area of habitat recorded to the immediate south of proposed T33. Habitat on an east facing slope on edge of commercial forest and above lower lying ground. Unlikely to be sustained by groundwater but rather outflow of surface water from artificial forest drainage system. Not a development constraint subject to safeguards required to maintain existing surface water flow paths to this habitat.
T19	M6c and M25a	Linear habitat associated with a forest ride and probable forest drain which discharges to the River Strathy to the west of T19. Probable that habitat sustained by rainfall and surface water runoff rather than groundwater. Not a development constraint subject to safeguards required to maintain existing surface water flow paths to this habitat.
T15 and T18	M15a and M23a	Linear habitat associated with the Allt Badain watercourse corridor located at a lower elevation than proposed turbines T15 and T18. Probable that habitat sustained by rainfall and surface water runoff rather than groundwater.

Location	Habitat	Discussion
		Not a development constraint subject to safeguards required to maintain existing surface water flow paths to this habitat.
T4	M6c	Linear habitat associated with a forest ride and probable forest drain. Probable that habitat sustained by rainfall and surface water runoff rather than groundwater. Not a development constraint subject to safeguards required to maintain existing surface water flow paths to this habitat.
T1	M6c and M25	Habitat located at a lower elevation than T1 and within Yellow Bog. River Strathy lies between T1 and the M6C and M25 habitat. Habitat likely to be sustained by rainfall and surface water ponding and not in hydraulic continuity with the Proposed Varied Development.

Table 3-1 shows that the potential highly groundwater dependent habitat is likely to be sustained by surface water rather than by groundwater. Industry standard safeguards will be required and included in the embedded design of the Proposed Varied Development to ensure (a) existing overland surface water flow paths are maintained to these habitats (e.g. where the surface water catchments to the habitats are crossed by proposed infrastructure), and (b) aggregate used to establish tracks and hardstanding's etc. is derived on site or has similar geochemical characteristics to the geology present at the site.

It is concluded from the analysis above that the areas of potential GWDTE at the site are not sustained by groundwater and therefore the 100 m and 250 m buffers specified in SEPA guidance to potential GWDTE habitat need not be applied.

Figure 10.3.1c

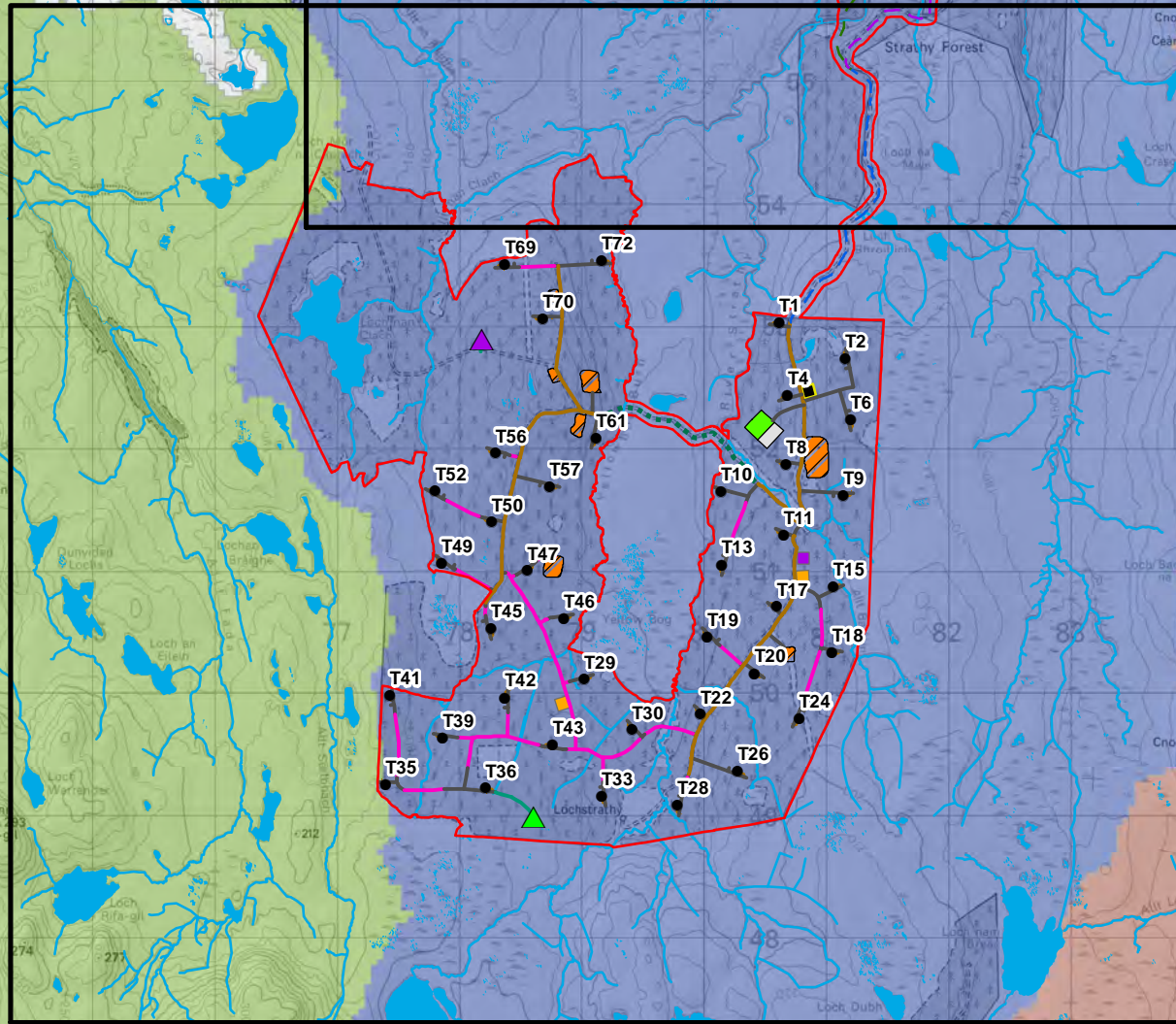
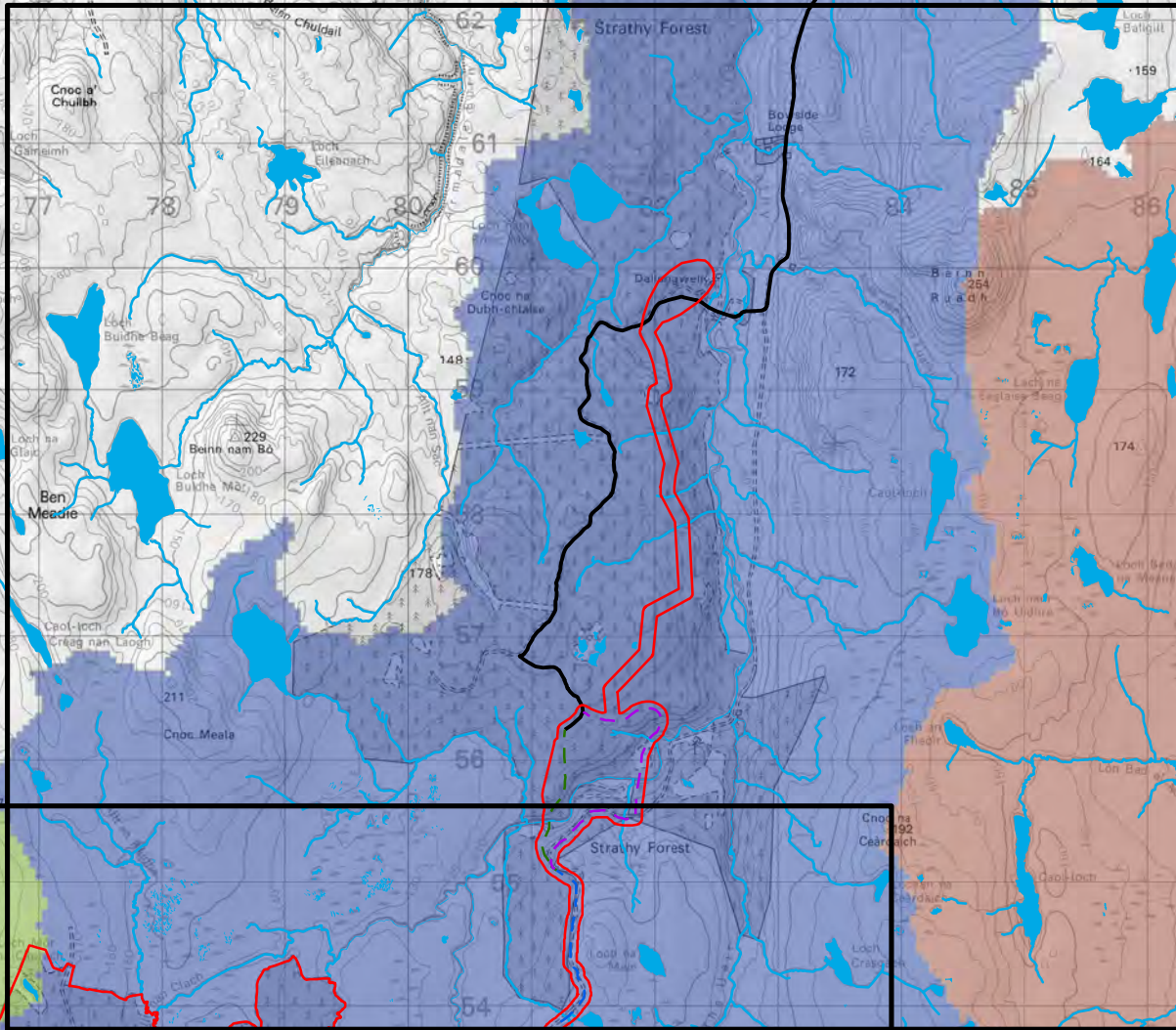


Figure 10.3.1b

**Key**

Site Boundary	Watercourse (OS Vectormap Local)
Turbines	<b>SEPA Water Catchment Areas - Over 100km<sup>2</sup></b>
LiDAR A	Halladale River - d/s Forsinain Burn
LiDAR B	Loch Badanloch / nan Clar / Rimsdale
Preferred Access Route	River Helmsdale - Kinbrace Burn to sea
Alternative Access Route	River Helmsdale - Loch Badanloch to Kinbrace Burn
Common Access Route	River Naver - sea to Loch Naver
Existing Yellow Bog Track, Surfacing to be Upgraded and Minor Localised Widening	River Strathy - The Uair to sea
Strathy North Access Route	
LiDAR Track	

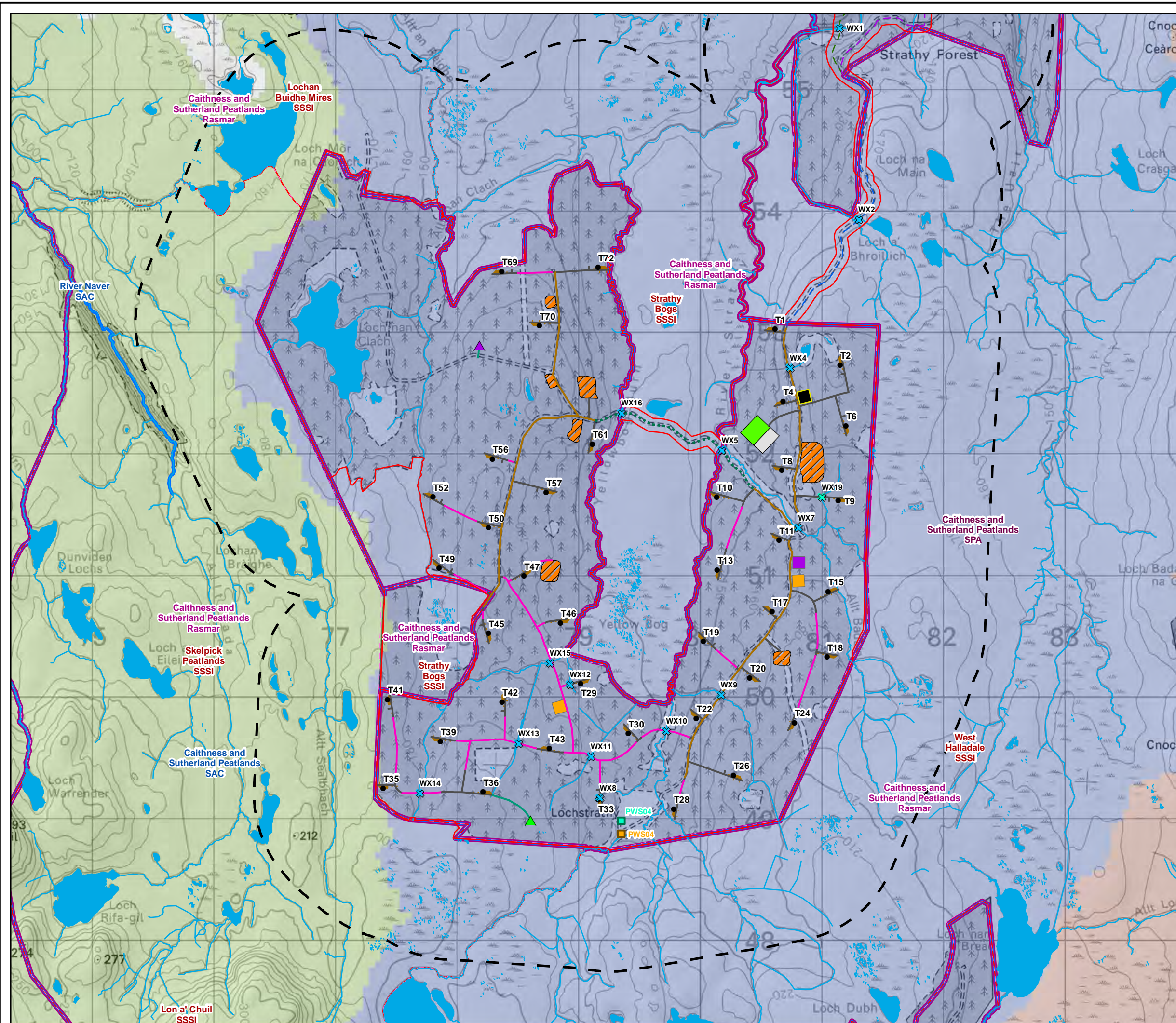
**Access Track**

Cut	Floating
Upgrade	Borrow Pit
Laydown Area	Temporary Laydown Area
Construction Compound	Substation
Batching Plant	Hardstanding

Scale 1:60,000 @ A3

**Figure 10.3.1a**  
Local Hydrology

**Strathy South Wind Farm**  
EIA R 2020



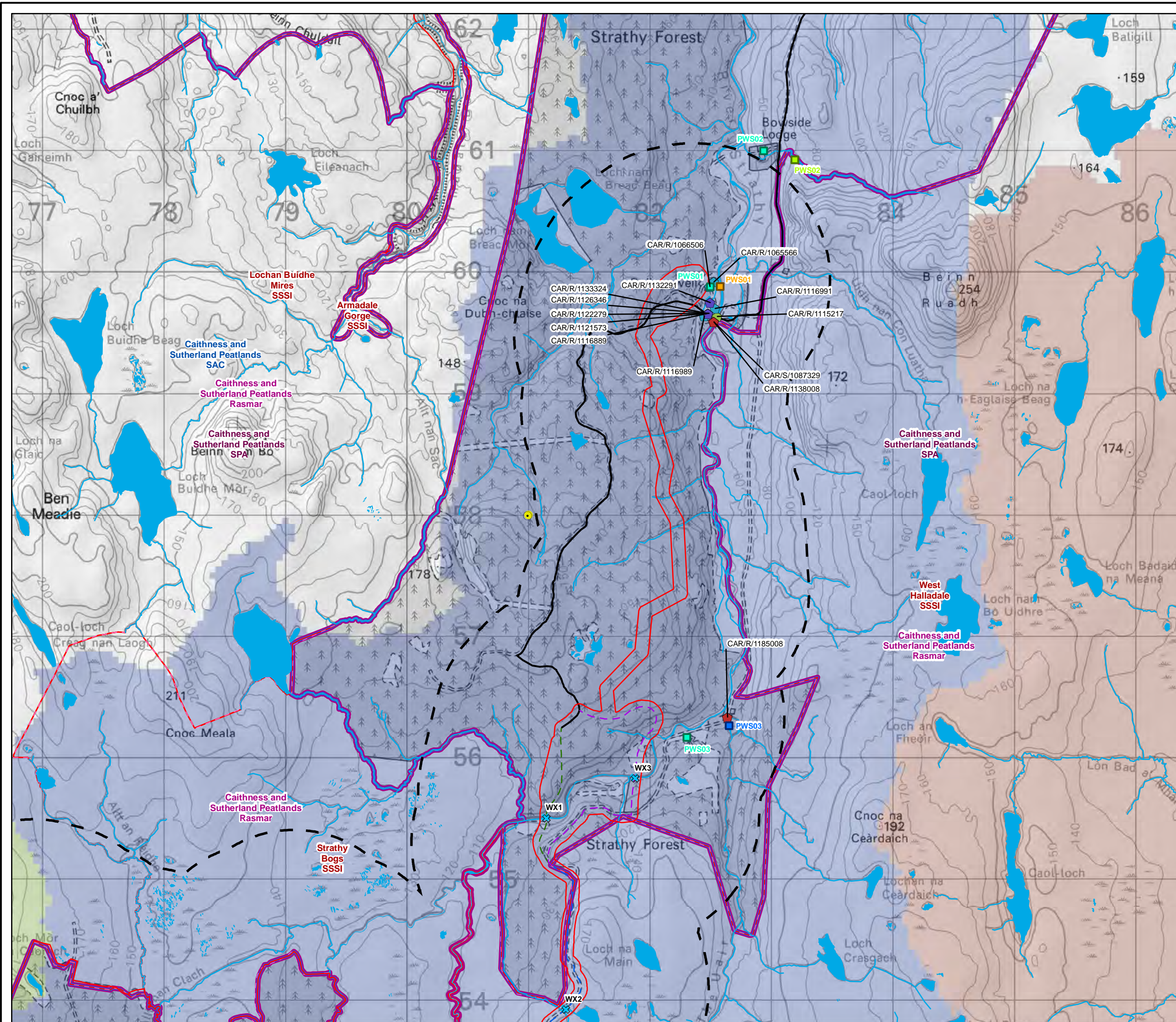
**Key**

Site Boundary	Water Crossing Remaining from 2013
Site Boundary 1km Buffer	Water Crossing New to 2019
Turbines	<b>Private Water Supply - Source</b>
LiDAR A	Property
LiDAR B	Stream - Unconfirmed
Preferred Access Route	Watercourse (OS Vectomap Local)
Alternative Access Route	Ramsar Site
Common Access Route	Site of Special Scientific Interest
Existing Yellow Bog Track, Surfacing to be Upgraded and Minor Localised Widening	Special Area of Conservation
LiDAR Track	Special Protection Area
Cut	<b>SEPA Water Catchment Areas - Over 100 km<sup>2</sup></b>
Floating	Halladale River - d/s Forsinain Burn
Upgrade	River Naver - sea to Loch Naver
Borrow Pit	River Strathy - The Uair to sea
Laydown Area	
Temporary Laydown Area	
Construction Compound	
Substation	
Batching Plant	
Hardstanding	

Scale 1:30,000 @ A3

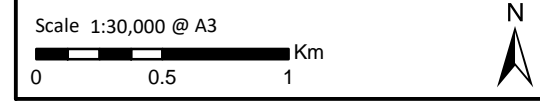
**Figure 10.3.1b**  
**Local Hydrology**  
**Strathy South Wind Farm**  
**EIAR 2020**





**Key**

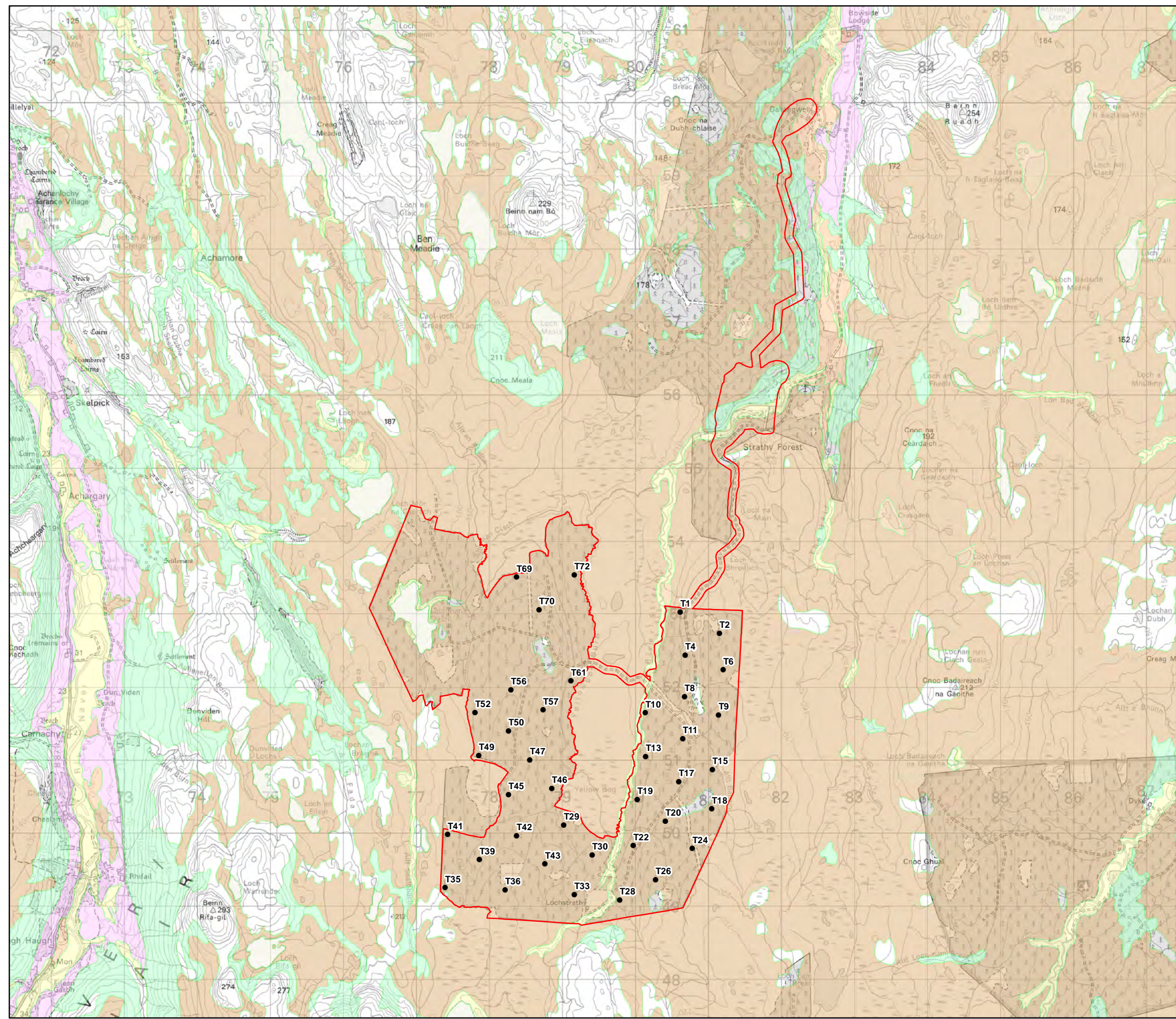
- Site Boundary
- Site Boundary 1km Buffer
- Preferred Access Route
- Alternative Access Route
- Common Access Route
- Strathy North Access Route
- Strathy North Abstraction Borehole
- X Water Crossing Remaining from 2013
- Controlled Activities Regulation Licensed Sites**
- ◆ Bridge
- ◆ Bridging Culvert
- ◆ Removal of River / Loch Crossing
- ◆ Sewage (Private) Primary
- Private Water Supply - Source**
- Loch - Unconfirmed
- Property
- Stream
- Stream - Unconfirmed
- Watercourse (OS Vectormap Local)
- Ramsar Site
- Site of Special Scientific Interest
- Special Area of Conservation
- Special Protection Area
- SEPA Water Catchment Areas - Over 100 km<sup>2</sup>**
- Halladale River - d/s Forsinain Burn
- River Naver - sea to Loch Naver
- River Strathy - The Uair to sea



**Figure 10.3.1c**  
Local Hydrology

---

**Strathy South Wind Farm**  
EIAR 2020



**Key**

- Site Boundary
- Turbines

**Superficial Deposits**

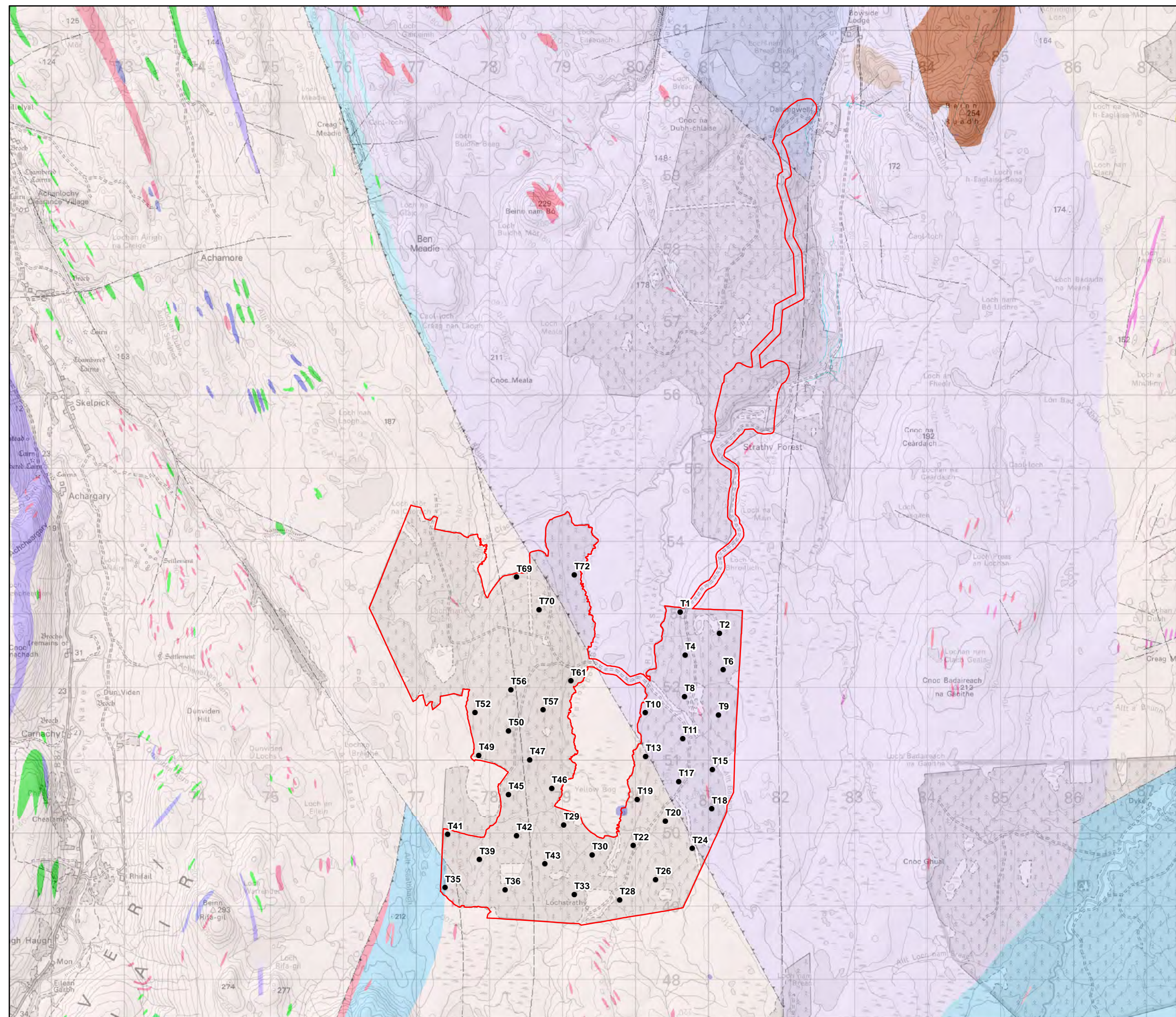
- Peat
- Alluvium – Clay, Silt, Sand and Gravel
- Alluvial Fan Deposits - Gravel, Sand, Silt and Clay
- River Terrace Deposits (Undifferentiated) – Gravel, Sand and Silt
- Lacustrine Deposits - Clay, Silt and Sand
- Glaciofluvial Deposits - Gravel, Sand and Silt
- Hummocky (Moundy) Glacial Deposits – Diamicton, Sand and Gravel
- Hummocky (Moundy) Glacial Deposits – Sand, Gravel and Boulders
- Not Mapped - Likely to be Shallow Bedrock

Scale 1:50,000 @ A3

N

**Figure 10.3.2**  
**Superficial Geology**

**Strathy South Wind Farm**  
**EIAR 2020**



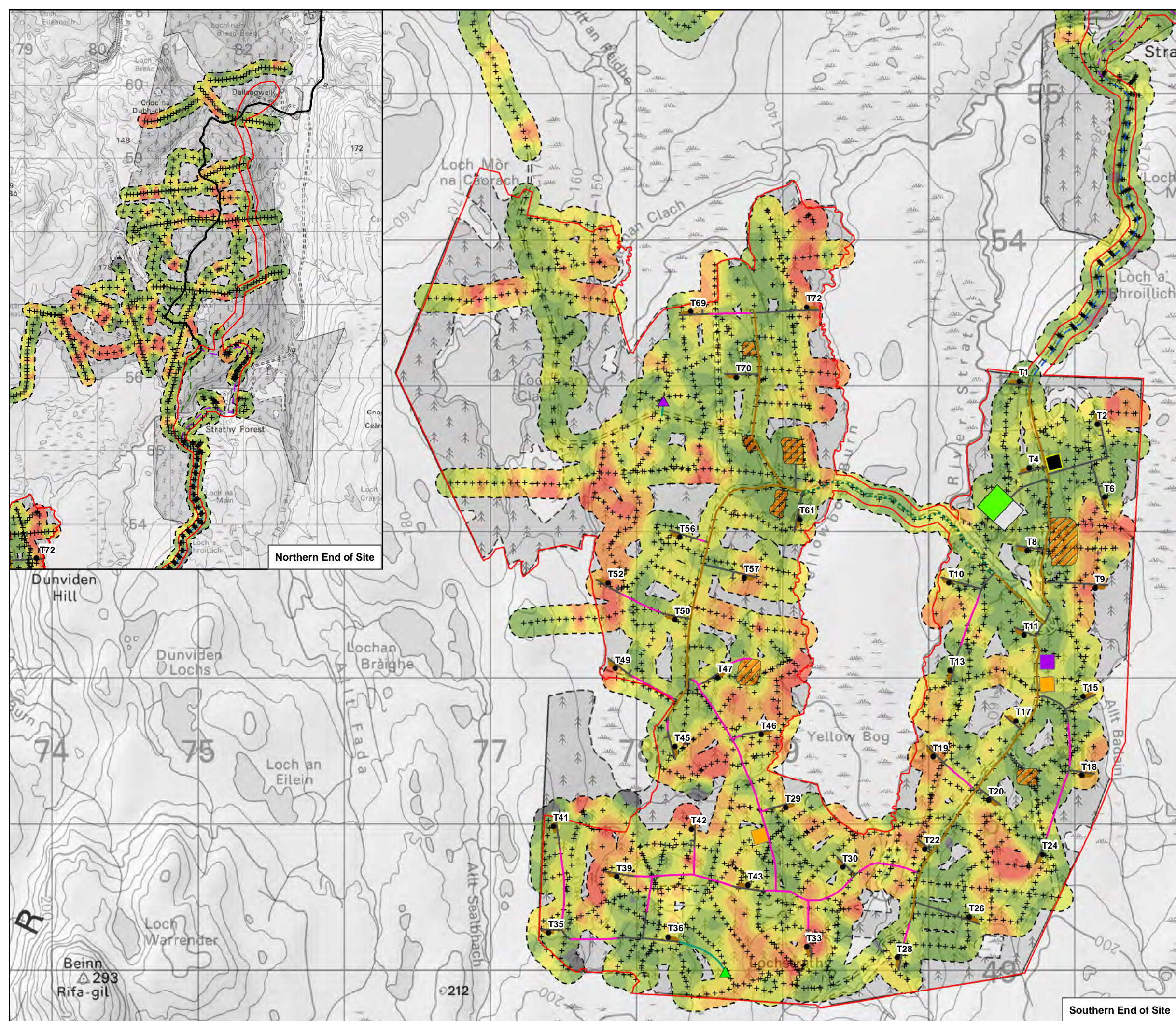
**Key**

- Site Boundary
- Turbines
- Linear Feature**
- Fault Inferred, Displacement Unknown
- Reverse or Thrust Fault, Inferred
- Igneous Bedrock**
- Strath Halladale Granite - Granite, Biotite
- Strath Halladale Granite - Granite, Foliated-Biotite
- Scottish Highland Ordovician Minor Intrusion Suite - Granite
- Scottish Highland Ordovician Minor Intrusion Suite - Granite, Foliated
- Scottish Highland Ordovician Minor Intrusion Suite - Pegmatite
- Unnamed Igneous Intrusion, Pre-Caledonian - Amphibolite, Schistose
- Metamorphic and Sedimentary Bedrock - Devonian**
- Lower Old Red Sandstone Group - Conglomerate and [Subequal/Subordinate] Sandstone, Interbedded
- Metamorphic and Sedimentary Bedrock - Silurian**
- Clerkhill Appinite Suite - Amphibolite
- Clerkhill Appinite Suite - Diorite, Hornblende
- Clerkhill Appinite Suite - Ultramafite
- Metamorphic and Sedimentary Bedrock - Neoproterozoic**
- Kirtomy Gneisses - Semipelite, Gneissose
- Strathy Complex - Gneiss
- Swordly Pelite Member - Pelite
- Bettyhill Formation - Gneiss, K-Feldspar-Augen
- Bettyhill Formation - Migmatitic Psammite with Migmatitic Semipelite
- Bettyhill Formation - Pelite, Gneissose
- Bettyhill Formation - Semipelite, Gneissose
- Invernaver Pelite Member - Pelite, Gneissose
- Bettyhill Suite - Amphibolite,
- Loch Coire Formation - Migmatitic Psammite with Migmatitic Semipelite
- Loch Coire Formation - Migmatitic Pelite and Migmatitic Semipelite
- Bighouse Formation - Sandstone, Conglomerate and [Subordinate] Argillaceous Rocks
- Portserra Psammite Formation - Migmatitic Psammite with Migmatitic Semipelite
- Lewisian Complex - Metaperidotite
- Lewisian Complex - Orthogneiss
- Lewisianoid Gneiss Complex - Orthogneiss, Hornblende-Bearing



**Figure 10.3.3**  
**Solid Geology**

**Strathy South Wind Farm**  
**EIAR 2020**



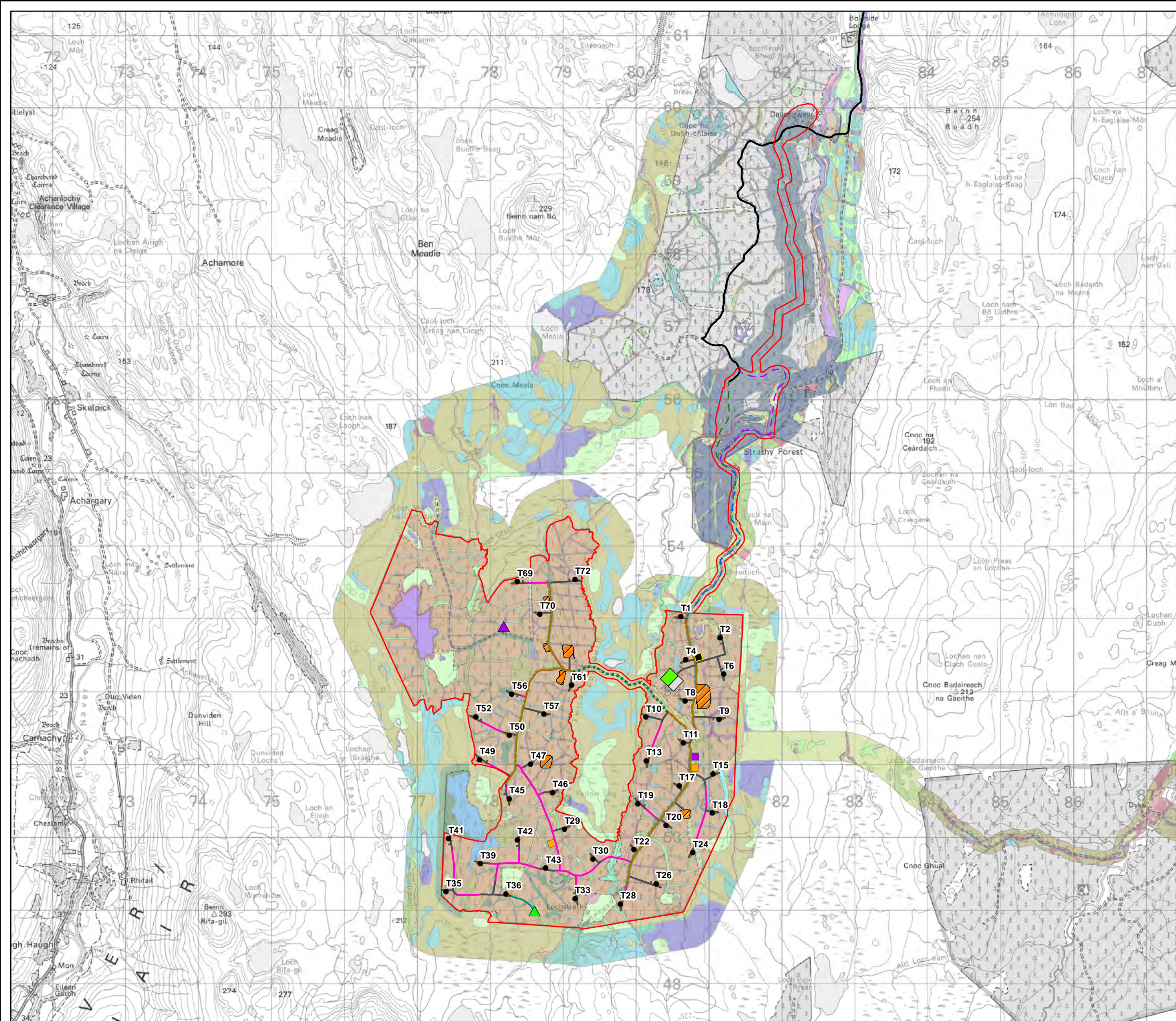
- Site Boundary
  - Turbines
  - ▲ LiDAR A
  - ▲ LiDAR B
  - Preferred Access
  - Alternative Access
  - Common Access
  - Existing Yellow Bog Track, Surfacing to be Upgraded and Minor Localised Widening
  - LiDAR Track
- Access Track**
- Cut
  - Floating
  - Upgrade
  - Borrow Pit
  - Laydown Area
  - Temporary Laydown
  - Construction Compound
  - Substation
  - Batching Plant
  - Hardstanding
  - + Peat Probe Locations
- Peat Depths (m)**
- 0
  - 0 - 0.5
  - 0.5 - 1
  - 1 - 1.5
  - 1.5 - 2
  - 2 - 2.5
  - 2.5 - 3
  - > 3



**Figure 10.3.4**  
**Peat Depth**

**Strathy South Wind Farm**  
**EIAR 2020**

Contains BGS Hydrogeological Maps of Scotland Data. Reproduced with the permission of the British Geological Survey ©UKRI. All rights Reserved.



**Key**

- Site Boundary
- Turbines
- LIDAR A
- LIDAR B
- Preferred Access Route
- Alternative Access Route
- Common Access Route
- Existing Yellow Bog Track, Surfacing to be Upgraded and Minor Localised Widening
- Strathy North Access Route
- LIDAR Track

**Access Track**

- Cut
- Floating
- Upgrade
- Borrow Pit
- Laydown Area
- Temporary Laydown Area
- Construction Compound
- Substation
- Batching Plant
- Hardstanding

**NVC Survey**

BPU	M18+M17	PC
Bet	M18a	PS
Broadleaved Trees	M18b	PI
Building	M19	Px
FC	M19a	Quarry
Forestry	M20	Running water
Fs	M20a	S4
H10	M25	S9
H10+U20	M25/M15	S9b
H10b	M25a	Standing water
H12	M25b	Track
M15	M29	U20
M15+M25	M4	U4
M15/17	M4+S9	U4a
M15a	M6	U4a+MG9a
M15b	M6a	U4a/U20/H10
M15b+c	M6c	U4a/U20/M15c
M15c	M6c+M25	U4b
M15c+H10	M6c+M25a	U4d+M25a
M17	MG10	U6d
M17+M15	MG23+M6c	W1
M17+M18	MG23+U20	W23
M17+M25	MG6	W23+U20
M17a	MG6b	nil
M17a+b	MG9	nilFC
M17b	Mixed trees	nilNG
M17c	Open Water	nilNP
M18		Pond

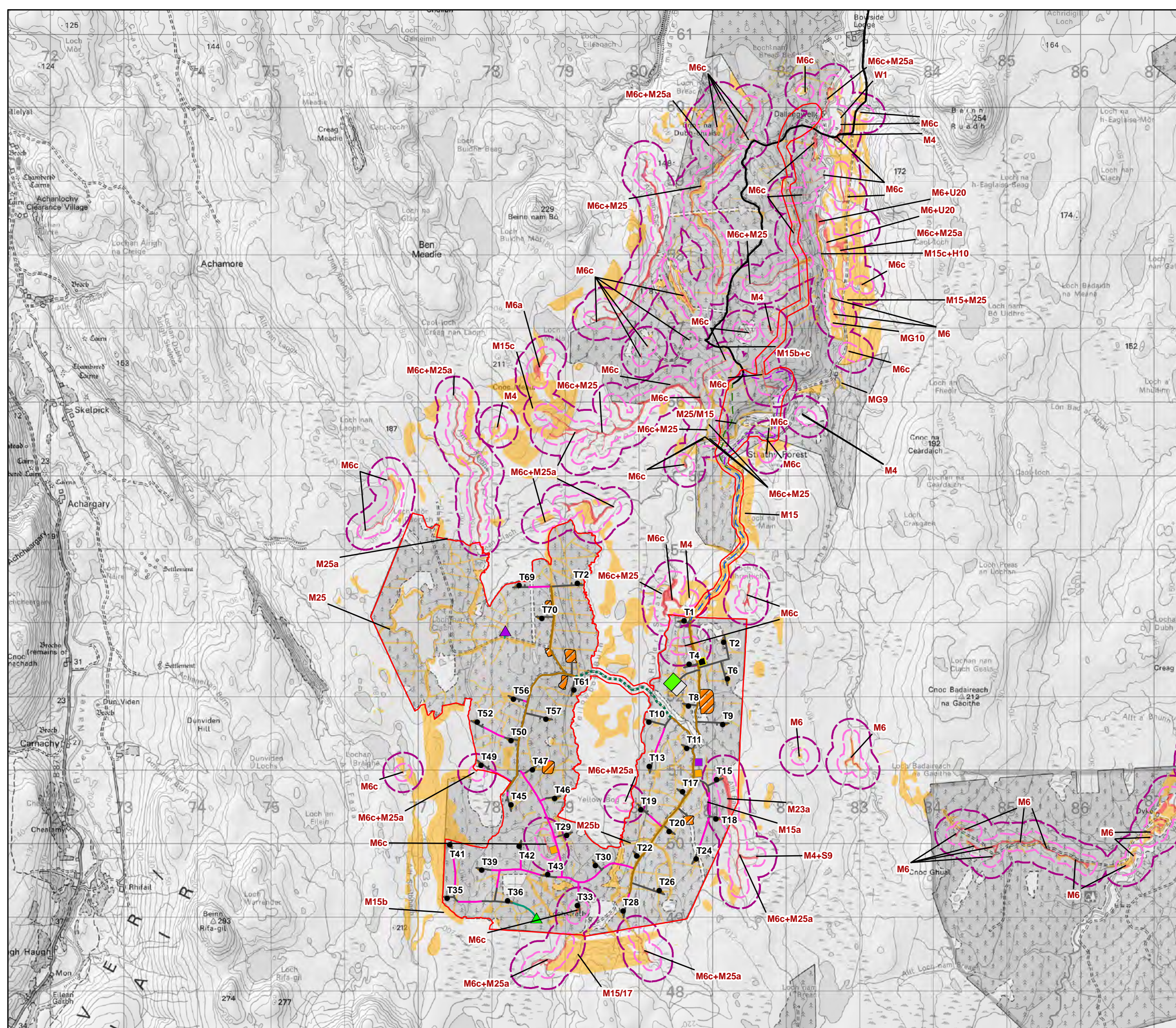
Scale 1:50,000 @ A3

0 1 2 Km

N

**Figure 10.3.5  
National Vegetation Classification  
(NVC)**

**Strathy South Wind Farm  
EIAR 2020**



**Key**

- Site Boundary
- Turbines
- ▲ LIDAR A
- ▲ LIDAR B
- Preferred Access Route
- Alternative Access Route
- Common Access Route
- Existing Yellow Bog Track, Surfacing to be Upgraded and Minor Localised Widening
- Strathy North Access Route
- LIDAR Track

**Access Track**

- Cut
- Floating
- Upgrade
- Borrow Pit
- Laydown Area
- Temporary Laydown Area
- Construction Compound
- Substation
- Batching Plant
- Hardstanding

**Groundwater Dependent Terrestrial Ecosystems**

- Potentially High Groundwater Dependent
- Potentially Moderate Groundwater Dependent
- 100m Buffer from Potentially High GWDE
- 250m Buffer from Potentially High GWDE



**Figure 10.3.6  
Groundwater Dependent  
Terrestrial Ecosystems**

**Strathy South Wind Farm  
EIAR 2020**

## EUROPEAN OFFICES

### United Kingdom

<b>AYLESBURY</b> T: +44 (0)1844 337380	<b>LONDON</b> T: +44 (0)203 805 6418
<b>BELFAST</b> T: +44 (0)28 9073 2493	<b>MAIDSTONE</b> T: +44 (0)1622 609242
<b>BRADFORD-ON-AVON</b> T: +44 (0)1225 309400	<b>MANCHESTER</b> T: +44 (0)161 872 7564
<b>BRISTOL</b> T: +44 (0)117 906 4280	<b>NEWCASTLE UPON TYNE</b> T: +44 (0)191 261 1966
<b>CARDIFF</b> T: +44 (0)29 2049 1010	<b>NOTTINGHAM</b> T: +44 (0)115 964 7280
<b>CHELMSFORD</b> T: +44 (0)1245 392170	<b>SHEFFIELD</b> T: +44 (0)114 245 5153
<b>EDINBURGH</b> T: +44 (0)131 335 6830	<b>SHREWSBURY</b> T: +44 (0)1743 23 9250
<b>EXETER</b> T: + 44 (0)1392 490152	<b>STIRLING</b> T: +44 (0)1786 239900
<b>GLASGOW</b> T: +44 (0)141 353 5037	<b>WORCESTER</b> T: +44 (0)1905 751310
<b>GUILDFORD</b> T: +44 (0)1483 889800	

### Ireland

**DUBLIN**  
T: + 353 (0)1 296 4667

### France

**GRENOBLE**  
T: +33 (0)6 23 37 14 14