

11. POPULATION AND HEALTH

This section of the report describes the potential impacts of the proposed afforestation on Population & Human Health and has been completed in accordance with the guidance set out by the Environmental Protection Agency in ‘Draft Guidelines on the Information to be contained in Environmental Impact Statements (EPA, 2017).

One of the principal concerns in the development process is that people, as individuals or communities, should experience no diminution in their quality of life from the direct or indirect impacts arising from the construction and operation of a development. The key issues examined in this section of the document include population, employment, health and safety, land-use, residential amenity, community facilities and services, and tourism.

11.1 Replanting Area 1: Stranamart, Cavan

11.1.1 Baseline Environment

11.1.1.1 Population

The proposed replanting land Stranamart is located approximately 6.3km southeast of the nearest town of Blacklion, within the District Electoral Division (DED) of Killinagh / Teebane. Population data for the Killinagh / Teebane DED has been sourced from the results of the Census of Ireland 2016 (the most recent Census for which detailed data are yet available), as provided on the Central Statistics Office website, www.cso.ie. Population data for the DED and Co. Cavan are presented in Table 11.1.

Table 11-1 Population 2011-2016 (Source: CSO)

Area	Population		% Population Change
	2011	2016	2016-2011
Killinagh / Teebane DED	154	137	-11.03%
Co. Cavan	73,183	76,176	+4.09%

The population of Killinagh / Teebane DED recorded during the 2016 Census was 137 persons. The population density of the DED at this time was 0.25 persons per square kilometre, based on a total DED area of 33.8 km². This is significantly lower than the population density of County Cavan as a whole during the 2016 Census, which equates to 39.43 persons per square kilometre, based on the County area of 1,932km².

The population of Killinagh / Teebane DED declined by 11.03% between the 2011 and 2016 Censuses. The rate of population change within the DED between these Censuses is different to the average rate of population growth within the County as a whole, which had a growth of 4.09% in the same time.

There were 67 households recorded within the DED during the 2016 Census. The proposed replanting site is located adjacent to local unnamed road which connects to the R205 to the west of the site and R206 to the east. The overall level of residential development within a kilometre of this site is low, with intermittent houses located along the local road network.

11.1.1.2 **Employment**

Employment in the area is likely to be based primarily on agriculture, with various small commercial activities in the area.

11.1.1.3 **Land-use**

The current land-use on the proposed replanting area is agriculture. This site is located within a rural, working landscape in which agriculture and forestry form the primary land-uses. The site is bordered to the south by existing coniferous forestry with further forestry to the northeast, west and south in the wider environs.

11.1.1.4 **Community Facilities and Amenities**

The nearest schools and community facilities to the proposed planting site are located in Blacklion, approximately 6.3km north of the site.

The nearest designated amenity route to the replanting site is the Dowra to Blacklion Scenic Route (Kingfisher Cycle Trail) which runs northeast to southwest approximately 400m east of the site, along the R206. This amenity route bypasses large areas of existing coniferous forestry.

11.1.1.5 **Tourism**

Ireland is divided into seven tourism regions. The northwest Region, in which the site of the replanting site is located, comprises Counties Cavan, Donegal, Leitrim, Monaghan and Sligo.

The nearest tourist attraction to the replanting area is the Cavan Burren Park which is located in Blacklion. The park comprises 5 walking trails through forestry which also contains various prehistoric monuments such as cairns, wedge tombs and rock art. The Park is located 3.9km northeast of the replanting site north of the Cuilcagh Mountains.

11.1.2 **Impact Assessment and Proposed Mitigation Measures**

11.1.2.1 **‘Do-Nothing’ Scenario**

The lands have been Technically Approved and will be afforested should the Croagh Wind Farm proceed or not. If the land was not replanted, the current land use would continue at the site.

11.1.2.2 **Operational Phase**

11.1.2.2.1 **Population**

Afforestation of the replanting site will have no impact on population trends or population density in the vicinity of the site.

11.1.2.2.2 **Employment**

The preparation and planting of the proposed replanting lands will provide short-term employment for three people; one person to operate an excavator for installation of drainage features, and two people to plant the site by hand.

In the longer-term, maintenance and felling of the site will provide part-term employment for two people.

11.1.2.2.3 **Health and Safety**

Health and safety in forestry is the concern of all those involved, including forest owners, managers, supervisors, operators, recreational users and trespassers (*'Code of Best Forest Practice'*, Forest Service, 2000). Forest practice must ensure that operations do not endanger workers and others. In the absence of the correct health and safety measures, forestry-related activities have the potential to have a significant negative effect on the health and safety of workers and members of the public, on and in the vicinity of the site.

The Forest Service's *'Code of Best Forest Practice'* states that the Safety, Health and Welfare at Work Act 1989 and the Safety, Health and Welfare at Work (General Application) Regulations 1993 place responsibilities on all involved in work activities and set out a basis for managing health and safety in all workplaces. Forest owners have legal responsibilities to ensure that the workplace and all articles and substances situated there are safe and free from health risk. This involves informing contractors of potential hazards, work agreements and monitoring. Employers, self-employed and employees all have clear responsibility to ensure safe working practices for themselves and others.

All Forest Service guidelines and Health and Safety legislation will be adhered to during all forestry-related activities at the proposed replanting lands. The residual potential for a significant negative impact on worker and public health and safety is therefore reduced to minimal.

11.1.2.2.4 **Land-use**

Afforestation of the replanting site will result in a long-term change in use of the site, from agriculture to forestry. This change in land-use is in keeping with the character of the surrounding landscape, as forestry is already an established land-use in the area. The impact of the change in land-use is therefore neutral, i.e. a change which does not affect the quality of the environment.

11.1.2.2.5 **Residential Amenity**

Planting at the site will have a short-term, slight negative impact on the residential amenity of dwellings dotted along the local road to the east and north of the site as a result of the of site activity/disturbance during the replanting phase. In the longer term, nearby views from these houses will be restricted by forestry. However, existing nearby views include areas of forestry immediately south, southeast and northeast of the replanting site while distant views also contain large tracts of existing forestry. Therefore, the additional forestry attributed by the replanting site will be visually indistinguishable from the existing surrounding forestry.

11.1.2.2.6 **Community Facilities and Amenities**

There are no community facilities or amenities located on or in the immediate vicinity of the proposed replanting lands. No walks pass through the site, and there will be no impact to community amenities within the area. All appropriate health and safety measures, including signage, will be adopted at the site to ensure the safety of workers and the general public.

11.1.2.2.7 **Tourism**

Afforestation of the proposed replanting lands will have no impact on tourism. There are no tourist facilities or attractions located at the replanting lands. Views west from the Dowra to Blacklion Scenic Route (Kingfisher Cycle Trail) which runs northeast to southwest 400m east of the site currently comprises vase areas of existing forestry. Forestry is an established land-use in this area, and a common feature in the landscape.

11.1.2.3 Significance of the Effects

Based on the above, there will be no significant effects, on human beings, population or health, associated with afforestation the at this site.

11.2 Replanting Area 2: Brackloon, Co. Roscommon

11.2.1 Baseline Environment

11.2.1.1 Population

The proposed replanting land at Brackloon is located approximately 3.81km northeast of the nearest village of Ballinagare. The towns of Frenchpark and Elphin are located 5.58km and 7.2km from the site respectively. The replanting site is located within the District Electoral Division (DED) of Lisgarve/Mantua. Population data for the Lisgarve/Mantua DED has been sourced from the results of the Census of Ireland 2016 (the most recent Census for which detailed data are yet available), as provided on the Central Statistics Office website, www.cso.ie. Population data for Lisgarve/Mantua DED and Co. Roscommon are presented in Table 11.2.

Table 11-2 Population 2011-2016 (Source: CSO)

Area	Population		% Population Change
	2011	2016	2016-2011
Lisgarve/Mantua DED	237	226	-4.6%
Co. Roscommon	64,065	64,544	+0.75%

The population of the Lisgarve/Mantua DED recorded during the 2016 Census was 266 persons. The population density of the DED at this time was 8.26 persons per square kilometre, based on a total DED area of 32.2 km². This is much lower than the population density of County Roscommon as a whole during the 2016 Census, which equates to 25.331 persons per square kilometre, based on the County area of 2,548km².

The population of the Lisgarve/Mantua DED declined by 4.6% between the 2011 and 2016 Censuses. The rate of population change within the DED between these Censuses is different to the average rate of population growth within the County as a whole, which had a growth of 0.75% in the same time.

The number of households recorded within the DED during the 2016 Census was 105 households. The proposed replanting site is located adjacent to a local road. The overall level of residential development within a kilometre of this site is low, with intermittent houses located along the local road network. The nearest dwelling to the proposed replanting site is adjacent to site.

11.2.1.2 Employment

Employment in the area is likely to be based primarily on agriculture, with various small commercial activities in the area.

11.2.1.3 Land-use

The current land-use on the proposed replanting area is agriculture. This site is located within a rural, working landscape in which agriculture and forestry form the primary land-uses. The site is bordered

to the south by existing coniferous forestry with further forestry to the northeast, west and south in the wider environs.

11.2.1.4 **Community Facilities and Amenities**

The nearest schools and community facilities to the proposed planting site are located in the town of Frenchpark, approximately 5.58km west of the site.

The nearest designated walking route to the replanting site is the Miner's Way & Historical Trail which runs through Counties Roscommon, Sligo and Leitrim. It is located 13.1km to the north of the replanting site and comprises a 118km loop route that begins and terminates in Arigna, Co. Roscommon. The walking route passes through large areas of existing coniferous forestry.

11.2.1.5 **Tourism**

Ireland is divided into seven tourism regions. The West Region, in which the site of the replanting site is located, comprises Counties Galway, Mayo and Roscommon.

The nearest tourist attractions to the replanting area is the Elphin Windmill approximately 7.68km east of the site and Cruachan Ai Heritage site 9m southeast of the site.

There are no scenic views or routes located near the replanting site.

11.2.2 **Impact Assessment and Proposed Mitigation Measures**

11.2.2.1 **'Do-Nothing' Scenario**

The lands have been Technically Approved and will be afforested should the Croagh Wind Farm proceed or not. If the land was not replanted, the current land use would continue at the site.

11.2.2.1.1 **Population**

Afforestation of the replanting site will have no impact on population trends or population density in the vicinity of the site.

11.2.2.1.2 **Employment**

The preparation and planting of the proposed replanting lands will provide short-term employment for three people; one person to operate an excavator for installation of drainage features, and two people to plant the site by hand.

In the longer-term, maintenance and felling of the site will provide part-term employment for two people.

11.2.2.1.3 **Health and Safety**

Health and safety in forestry is the concern of all those involved, including forest owners, managers, supervisors, operators, recreational users and trespassers (*'Code of Best Forest Practice'*, Forest Service, 2000). Forest practice must ensure that operations do not endanger workers and others. In the absence of the correct health and safety measures, forestry-related activities have the potential to have a significant negative effect on the health and safety of workers and members of the public, on and in the vicinity of the site.

The Forest Service's 'Code of Best Forest Practice' states that the Safety, Health and Welfare at Work Act 1989 and the Safety, Health and Welfare at Work (General Application) Regulations 1993 place responsibilities on all involved in work activities and set out a basis for managing health and safety in all workplaces. Forest owners have legal responsibilities to ensure that the workplace and all articles and substances situated there are safe and free from health risk. This involves informing contractors of potential hazards, work agreements and monitoring. Employers, self-employed and employees all have clear responsibility to ensure safe working practices for themselves and others.

All Forest Service guidelines and Health and Safety legislation will be adhered to during all forestry-related activities at the proposed replanting lands. The residual potential for a significant negative impact on worker and public health and safety is therefore reduced to minimal.

11.2.2.1.4 **Land-use**

Afforestation of the replanting site will result in a long-term change in use of the site, from agriculture to forestry. This change in land-use is in keeping with the character of the surrounding landscape, as forestry is already an established land-use in the area. The impact of the change in land-use is therefore neutral, i.e. a change which does not affect the quality of the environment.

11.2.2.1.5 **Residential Amenity**

Planting at the site will have a short-term, slight negative impact on the residential amenity of the dwelling located adjacent to the site and dwellings in the wider environs. This impact will be the result of the visual impact of site activity/disturbance. Views from these houses toward the replanting site are currently restricted by forestry. In the long term, as the replanting site matures, it will be indistinguishable from the surrounding large areas of forestry. Views west, north and south from the dwelling located adjacent to the replanting site will be shortened by the additional planting in the long term. However, existing views in these directions from this dwelling comprises large areas of forestry.

It is a requirement of the Technical Approval for the site that the owners of the house adjacent to the site will be consulted in advance of planting in order to resolve any concerns they may have prior to works being carried out.

11.2.2.1.6 **Community Facilities and Amenities**

There are no community facilities or amenities located on or in the immediate vicinity of the proposed replanting lands. No walks pass directly through the site, and there will be no impact to this or any other community amenities within the area. All appropriate health and safety measures, including signage, will be adopted at the site to ensure the safety of workers and the general public.

11.2.2.1.7 **Tourism**

Afforestation of the proposed replanting lands will have no impact on tourism. There are no tourist facilities or attractions located at the replanting lands or within the vicinity of the site. Forestry is a well-established land-use in this area; along with bogland, it is a common and dominating feature dominating of the landscape.

11.2.2.2 **Significance of the Effects**

Based on the above, there will be no significant effects, on human beings, population or health, associated with afforestation the at this site.

11.3 Replanting Area 3: Ballard, Co. Wicklow

11.3.1 Baseline Environment

11.3.1.1 Population

The proposed replanting land at Ballard is located approximately 1.3km west of Ballinaclash village. The replanting site is located within the District Electoral Division (DED) of Ballinaclash. Population data for the Ballinaclash DED has been sourced from the results of the Census of Ireland 2016 (the most recent Census for which detailed data are yet available), as provided on the Central Statistics Office website, www.cso.ie. Population data for Ballinaclash DED and Co. Wicklow are presented in Table 11.3.

Table 11-3 Population 2011-2016 (Source: CSO)

Area	Population		% Population Change
	2011	2016	2016-2011
Ballinaclash DED	636	633	-0.47%
Co. Wicklow	136,640	142,425	+4.2%

The population of the Ballinaclash DED recorded during the 2016 Census was 633 persons. The population density of the DED at this time was 32.131 persons per km², based on a total DED area of 19.7 km². This is much lower than the population density of County Wicklow as a whole during the 2016 Census, which equates to 70.26 persons per km², based on the County area of 2,027km².

The population of the Ballinaclash DED declined by 0.47% between the 2011 and 2016 Censuses. The rate of population change within the DED between these Censuses is different to the average rate of population growth within the County as a whole, which had a growth of 4.2% in the same time.

The number of households recorded within the DED during the 2016 Census was 254 households. The proposed replanting site is located adjacent to a local road. The overall level of residential development within a kilometre of this site is low, with intermittent houses located along the local road network. The nearest dwelling to the proposed replanting site is adjacent to site.

11.3.1.2 Employment

Employment in the area is likely to be based primarily on agriculture, with various small commercial activities in the area.

11.3.1.3 Land-use

The current land-use on the proposed replanting area is agriculture. This site is located within a rural, working landscape in which agriculture and forestry form the primary land-uses. To the south, west and small areas to the north comprise existing forestry, with further forestry in the wider environs.

11.3.1.4 Community Facilities and Amenities

The nearest schools and community facilities to the proposed planting site are located in the town of Rathdrum, approximately 4.2km northeast of the site.

The nearest designated walking route to the replanting site is Wicklow Way which is a 131km route that begins in Dublin's Marlay Park, crosses the Wicklow Mountains and terminates in Clonegal, Co. Carlow. The walking route passes through large areas of existing coniferous forestry.

11.3.1.5 Tourism

Ireland is divided into seven tourism regions. The East Coast & Midlands Region, in which the site of the replanting site is located, comprises Kildare, Laois, Longford, Louth, Offaly, Meath, Westmeath and Wicklow. The nearest tourist attraction is the Avoca Mines which is located 4.58km southeast of the replanting area.

There are no scenic views or routes located near the replanting site.

11.4 Impact Assessment and Proposed Mitigation Measures

11.4.1.1 'Do-Nothing' Scenario

The lands have been Technically Approved and will be afforested should the Croagh Wind Farm proceed or not. If the land was not replanted, the current land use would continue at the site.

11.4.1.1.1 Population

Afforestation of the replanting site will have no impact on population trends or population density in the vicinity of the site.

11.4.1.1.2 Employment

The preparation and planting of the proposed replanting lands will provide short-term employment for three people; one person to operate an excavator for installation of drainage features, and two people to plant the site by hand.

In the longer-term, maintenance and felling of the site will provide part-term employment for two people.

11.4.1.1.3 Health and Safety

Health and safety in forestry is the concern of all those involved, including forest owners, managers, supervisors, operators, recreational users and trespassers (*'Code of Best Forest Practice'*, Forest Service, 2000). Forest practice must ensure that operations do not endanger workers and others. In the absence of the correct health and safety measures, forestry-related activities have the potential to have a significant negative effect on the health and safety of workers and members of the public, on and in the vicinity of the site.

The Forest Service's *'Code of Best Forest Practice'* states that the Safety, Health and Welfare at Work Act 1989 and the Safety, Health and Welfare at Work (General Application) Regulations 1993 place responsibilities on all involved in work activities and set out a basis for managing health and safety in all workplaces. Forest owners have legal responsibilities to ensure that the workplace and all articles and substances situated there are safe and free from health risk. This involves informing contractors of potential hazards, work agreements and monitoring. Employers, self-employed and employees all have clear responsibility to ensure safe working practices for themselves and others.

All Forest Service guidelines and Health and Safety legislation will be adhered to during all forestry-related activities at the proposed replanting lands. The residual potential for a significant negative impact on worker and public health and safety is therefore reduced to minimal.

11.4.1.1.4 **Land-use**

Afforestation of the replanting site will result in a long-term change in use of the site, from agriculture to forestry. This change in land-use is in keeping with the character of the surrounding landscape, as forestry is already an established land-use in the area. The impact of the change in land-use is therefore neutral, i.e. a change which does not affect the quality of the environment.

11.4.1.1.5 **Residential Amenity**

Planting at the site will have a short-term, slight negative impact on the residential amenity of the dwelling located adjacent to the site and dwellings in the wider environs. This impact will be the result of the visual impact of site activity/disturbance. Views from these houses toward the replanting site are currently restricted by forestry. In the long term, as the replanting site matures, it will be indistinguishable from the surrounding large areas of forestry. Views west, north and south from the closest dwellings will be shortened by the additional planting in the long term as existing views in these directions from this dwelling comprises large areas of forestry. Views eastwards toward the village of Ballinaclash will contain a new landuse type in the form of forestry. However, the existing mature fields boundaries and vast areas of forestry to the north, south and west will help assimilate this new landuse into the surrounding environs. Furthermore, it is a requirement of the Technical Approval for the site that the owners of the house adjacent to the site will be consulted in advance of planting in order to resolve any concerns they may have prior to works being carried out.

11.4.1.1.6 **Community Facilities and Amenities**

There are no community facilities or amenities located on or in the immediate vicinity of the proposed replanting lands. No walks pass directly through the site, and there will be no impact to this or any other community amenities within the area. All appropriate health and safety measures, including signage, will be adopted at the site to ensure the safety of workers and the general public.

11.4.1.1.7 **Tourism**

Afforestation of the proposed replanting lands will have no impact on tourism as forestry is a well-established land-use of the landscape. There are no tourist facilities or attractions located at the replanting lands or within the vicinity of the site. The recorded Record of Monuments and Places within and adjacent to the site are not visible on the ground, are inaccessible and in poor condition.

11.4.1.2 **Significance of the Effects**

Based on the above, there will be no significant effects, on human beings, population or health, associated with afforestation the at this site.

12. MATERIAL ASSETS

Material Assets are resources that are valued and intrinsic to specific places. Economic assets of natural heritage include non-renewable resources such as minerals or soils, and renewable resources such as wind and water. These assets are dealt with in Sections 6, 7 and 8 of this report. Cultural assets are discussed in Section 9. Transportation infrastructure and land-use practices, which are economic assets of human origin, are discussed in this section of the report.

12.1 Replanting Area 1: Stranamart, Co. Cavan

12.1.1 Do-Nothing' Scenario

The lands have been Technically Approved and will be afforested should the Croagh Wind Farm proceed or not. If the land was not replanted, the current land use would continue at the site.

12.1.2 Planting Phase

12.1.2.1 Transportation

Traffic movements associated with the preparation and planting of the site will be minimal. Preparation of the site will require the use of an excavator for drainage, and travel to the site by the driver. Planting of the site will be by hand and will be carried out by one to two people over a two-week period approximately.

Forestry felling would typically occur within 0.5km of access points (roads & tracks) to the main forest body. Due to the small size of this site, additional access tracks or roads will not be required. This site is located adjacent an existing road network with which will not require upgrading or alteration.

12.1.2.2 Land-Use

Land-use on the site will change from pastoral agriculture to coniferous forestry. Forestry, like agriculture, is an extractive industry, i.e. it produces a raw material which is then processed to add value.

12.1.3 Operational Phase

12.1.3.1 Transportation

Traffic movements associated with the operation of the site will be minimal and will comprise maintenance workers only in Light Goods Vehicles.

12.1.3.2 Land-Use

Land-use on the site will change from pastoral agriculture to coniferous forestry. The use of the proposed replanting lands for coniferous forestry will have a positive effect on the economic assets of the site.

12.1.4 **Significance of the Effects**

Based on the above, there will be no significant effects on traffic associated with afforestation at this site.

12.2 **Replanting Area 2: Brackloon, Co. Roscommon**

12.2.1 **Do-Nothing' Scenario**

The lands have been Technically Approved and will be afforested should the Croagh Wind Farm proceed or not. If the land was not replanted, the current land use would continue at the site.

12.2.2 **Transportation**

Traffic movements associated with the preparation and planting of the site will be minimal. Preparation of the site will require the use of an excavator for drainage, and travel to the site by the driver. Planting of the site will be by hand and will be carried out by one to two people over a two-week period approximately.

Forestry felling would typically occur within 0.5km of access points (roads & tracks) to the main forest body. Due to the small size of this site, additional access tracks or roads will not be required. This site is located adjacent an existing road network with which will not require upgrading or alteration.

12.2.2.1 **Land-Use**

Land-use on the site will change from pastoral agriculture to coniferous forestry. Forestry, like agriculture, is an extractive industry, i.e. it produces a raw material which is then processed to add value.

12.2.3 **Operational Phase**

12.2.3.1 **Transportation**

Traffic movements associated with the operation of the site will be minimal and will comprise maintenance workers only in Light Goods Vehicles.

12.2.3.2 **Land-Use**

Land-use on the site will change from pastoral agriculture to coniferous forestry. The use of the proposed replanting lands for coniferous forestry will have a positive effect on the economic assets of the site.

12.3 **Replanting Area 3: Ballard, Co. Wicklow**

12.3.1 **Do-Nothing' Scenario**

The lands have been Technically Approved and will be afforested should the Croagh Wind Farm proceed or not. If the land was not replanted, the current land use would continue at the site.

12.3.2 Transportation

Traffic movements associated with the preparation and planting of the site will be minimal. Preparation of the site will require the use of an excavator for drainage, and travel to the site by the driver. Planting of the site will be by hand and will be carried out by one to two people over a two-week period approximately.

Forestry felling would typically occur within 0.5km of access points (roads & tracks) to the main forest body. Due to the small size of this site, additional access tracks or roads will not be required. This site is located adjacent an existing road network with which will not require upgrading or alteration.

12.3.2.1 Land-Use

Land-use on the site will change from pastoral agriculture to coniferous forestry. Forestry, like agriculture, is an extractive industry, i.e. it produces a raw material which is then processed to add value.

12.3.3 Operational Phase

12.3.3.1 Transportation

Traffic movements associated with the operation of the site will be minimal and will comprise maintenance workers only in Light Goods Vehicles.

12.3.3.2 Land-Use

Land-use on the site will change from pastoral agriculture to coniferous forestry. The use of the proposed replanting lands for coniferous forestry will have a positive effect on the economic assets of the site.

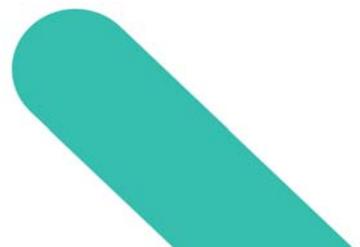


APPENDIX 1

**APPROPRIATE ASSESSMENT
SCREENING REPORT –
STRANAMAR, T CO. CAVAN**

Article 6 (3) Appropriate Assessment Screening Report

Assessment of Forestry
Replacement Lands for
Croagh Wind Farm at
Stranamart, Co. Cavan





DOCUMENT DETAILS

Client: **Coillte Teoranta**

Project Title: **Assessment of Forestry Replacement Lands for Croagh Wind Farm at Stranamart, Co. Cavan**

Project Number: **180511**

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1. INTRODUCTION

1.1 Background

MKO has been appointed to provide the information necessary to allow the competent authority to conduct an Article 6(3) Screening for Appropriate Assessment of the proposed replacement area in the townland of Stranamart in Co. Cavan.

Screening for Appropriate Assessment is required under Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the Habitats Directive). Where it cannot be excluded that a project or plan, either alone or in combination with other projects or plans, would have a significant effect on a European Site then same shall be subject to an appropriate assessment of its implications for the site in view of the site's conservation objectives. The current project is not directly connected with, or necessary for, the management of any European Site consequently the project has been subject to the Appropriate Assessment Screening process.

The assessment in this report is based on a desk study was undertaken during 2020. It specifically assesses the potential for the proposed development to result in significant effects on European sites in the absence of any best practice, mitigation or preventative measures.

This Appropriate Assessment Screening Report has been prepared in accordance with the European Commission's Assessment of Plans and Projects Significantly affecting Natura 2000 Sites: Methodological Guidance on the provisions of Article 6(3) and 6(4) of the Habitats Directive 92/43/EEC (EC, 2001) and Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (EC, 2018) as well as the Department of the Environment's Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities (DoEHLG, 2010).

In addition to the guidelines referenced above, the following relevant documents were also considered in the preparation of this report:

1. *Council of the European Commission (1992) Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora. Official Journal of the European Communities. Series L 20, pp. 7-49.*
2. *EC (2000) Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg.*
3. *EC (2007) Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence. Opinion of the commission.*
4. *EC (2013) Interpretation Manual of European Union Habitats. Version EUR 28. European Commission.*

1.2 Appropriate Assessment

1.2.1 Screening for Appropriate Assessment

Screening is the process of determining whether an Appropriate Assessment is required for a plan or project. Under Part XAB of the Planning and Development Act, 2000, as amended, screening must be carried out by the Competent Authority. As per Section 177U of the Planning and Development Act, 2000, as amended 'A screening for appropriate assessment shall be carried out by the competent authority to assess, in view of best scientific knowledge, if that Land use plan or proposed development, individually or in combination with another plan or project is likely to have a significant effect on the European site'. The Competent Authority's determination as to whether an Appropriate Assessment is

required must be made on the basis of objective information and should be recorded. The Competent Authority may request information to be supplied to enable it to carry out screening.

Consultants or project proponents may provide for the competent authority, the information necessary for them to determine whether an Appropriate Assessment is required and provide advice to assist them in the Article 6(3) Appropriate Assessment Screening decision.

Where it cannot be excluded beyond reasonable scientific doubt at the Screening stage, that a proposed plan or project, individually or in combination with other plans and projects, would have a significant effect on the conservation objectives of a European site, an Appropriate Assessment is required.

Where An Appropriate Assessment is required, the Competent Authority may require the applicant to prepare a Natura Impact Statement.

The term Natura Impact Statement (NIS) is defined in legislation¹. An NIS, where required, should present the data, information and analysis necessary to reach a definitive determination as to 1) the implications of the plan or project, alone or in combination with other plans and projects, for a European site in view of its conservation objectives, and 2) whether there will be adverse effects on the integrity of a European site. The NIS should be underpinned by best scientific knowledge, objective information and by the precautionary principle.

This Article 6(3) Appropriate Assessment Screening Report has been prepared in compliance with the provision of section 177U of the Planning & Development Act 2010 as amended.

Statement of Authority

This report has been prepared by Claire Stephens (B.Sc. Env.) of MKO. Claire is an experienced ecologist with over 2 years' professional ecological consultancy experience. The report has been reviewed by David McNicholas (B.Sc., M.Sc., MCIEEM) who has over 9 years' professional ecological consultancy experience and is a full member of the Chartered Institute of Ecology and Environmental Management.

¹ As defined in Section 177T of the Planning and Development Act, 2000 as amended, an NIS means a statement, for the purposes of Article 6 of the Habitats Directive, of the implications of a proposed development, on its own and in combination with other plans and projects, for a European site in view of its conservation objectives. It is required to include a report of a scientific examination of evidence and data, carried out by competent persons to identify and classify any implications for the European site in view of its conservation objectives

2. DESCRIPTION OF THE PROPOSED DEVELOPMENT

2.1 Site Location

The replacement area is located within the townland of Stranamart, Co. Cavan (Grid Reference: E 203907 N 333027). This replacement area comprising several small fields is located within a rural setting between the R207 to the west and the R206 to the east, in County Cavan. The nearest town is Blacklion approximately 6.3km to the northeast. The site is accessed via an existing track directly off a local road which connects to both the R207 and R206. The Technical Approval area for afforestation at Stranamart measures 12.57 hectares in total. A site location map is provided in Figure 2.1.

2.2 Characteristics of the Proposed Development

2.2.1 Description of the project

This report provides a description of the proposed replacement land and an assessment of the potential impacts including cumulative impacts associated with afforestation at Stranamart, Co. Cavan

Construction of the proposed Croagh Wind Farm will require felling of 54.2 hectares of forestry. The site of 12.57ha at Stranamart, Co. Cavan was identified as a potential forestry replacement area. The proposed replacement land has been assessed as part of the Afforestation Approval – Form 1 process described above and has obtained Technical Approval for Afforestation from the Forest Service. If these replacement lands become unavailable, other similarly approved replant lands will be identified for replacement should the proposed wind farm be developed.

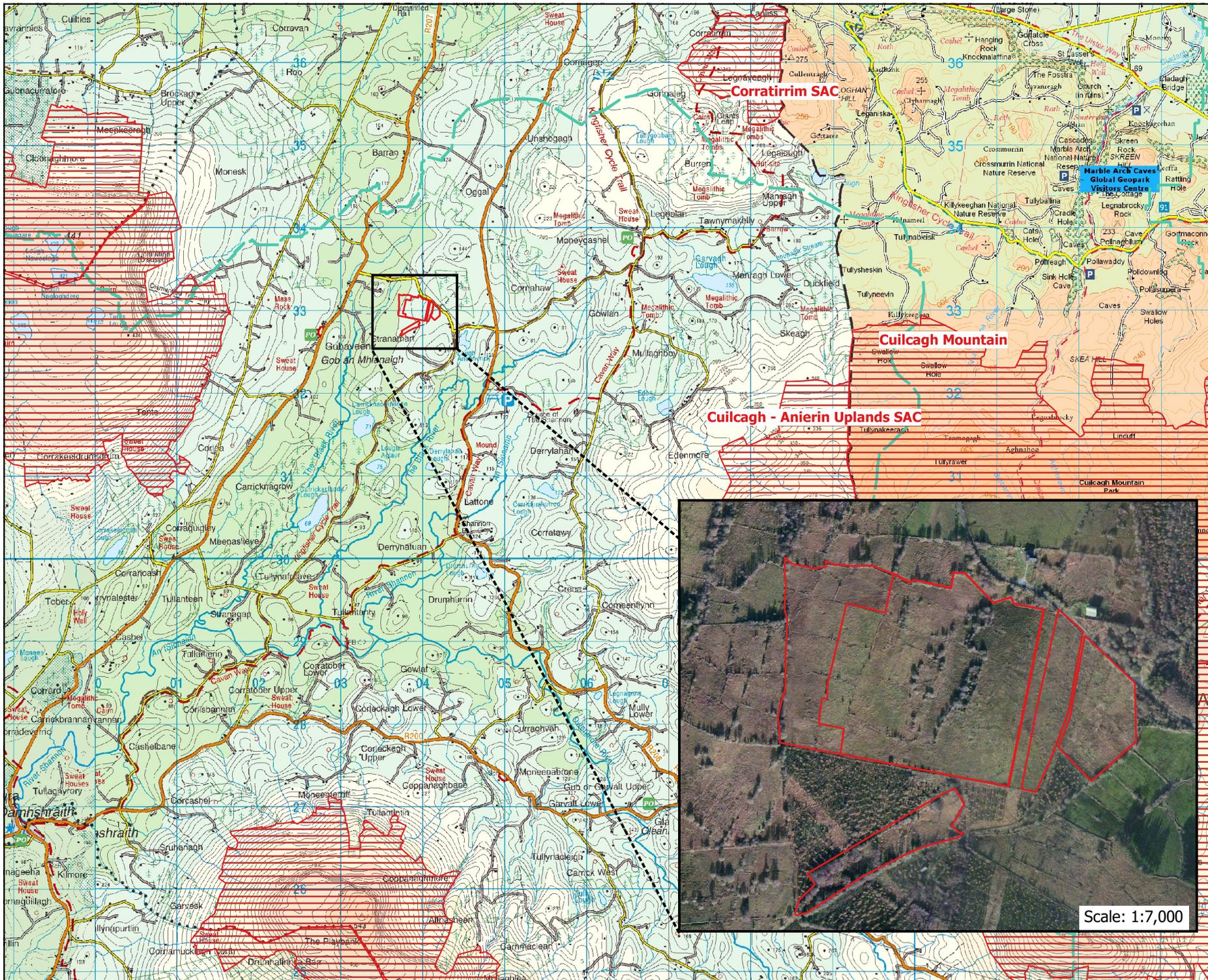
2.3 Description of the Baseline Ecological Environment

The site at Stanamart consists of ringfenced planted forestry classified as *conifer plantation (WD4)*. A *drainage ditch (FW4)* exists along the eastern boundary of the site.

2.3.1 Significance of Habitats

The Ecological evaluation within this section follows a methodology that is set out in Chapter 3 of the ‘Guidelines for Assessment of Ecological Impacts of National Roads Schemes’ (NRA, 2009).

The conifer plantation and drainage ditches that are present within the site, given their highly modified nature, are of Local Importance (*Lower Value*) as they contain areas which are of some local importance for wildlife. However, these habitats are common in the wider landscape and are not of ecological Impact Assessment



Map Legend

- Site Boundary
- Special Area of Conservation

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Drawing Title

Site Location - Stranamart

Project Title

Coillte Carrane Hill WF -
Replanting Assessment

Drawn by

CS

Checked by

JH

Project No.

180511

Drawing No.

Figure 2.1

Scale

1:60000

Date

20-04-2020

Scale: 1:7,000



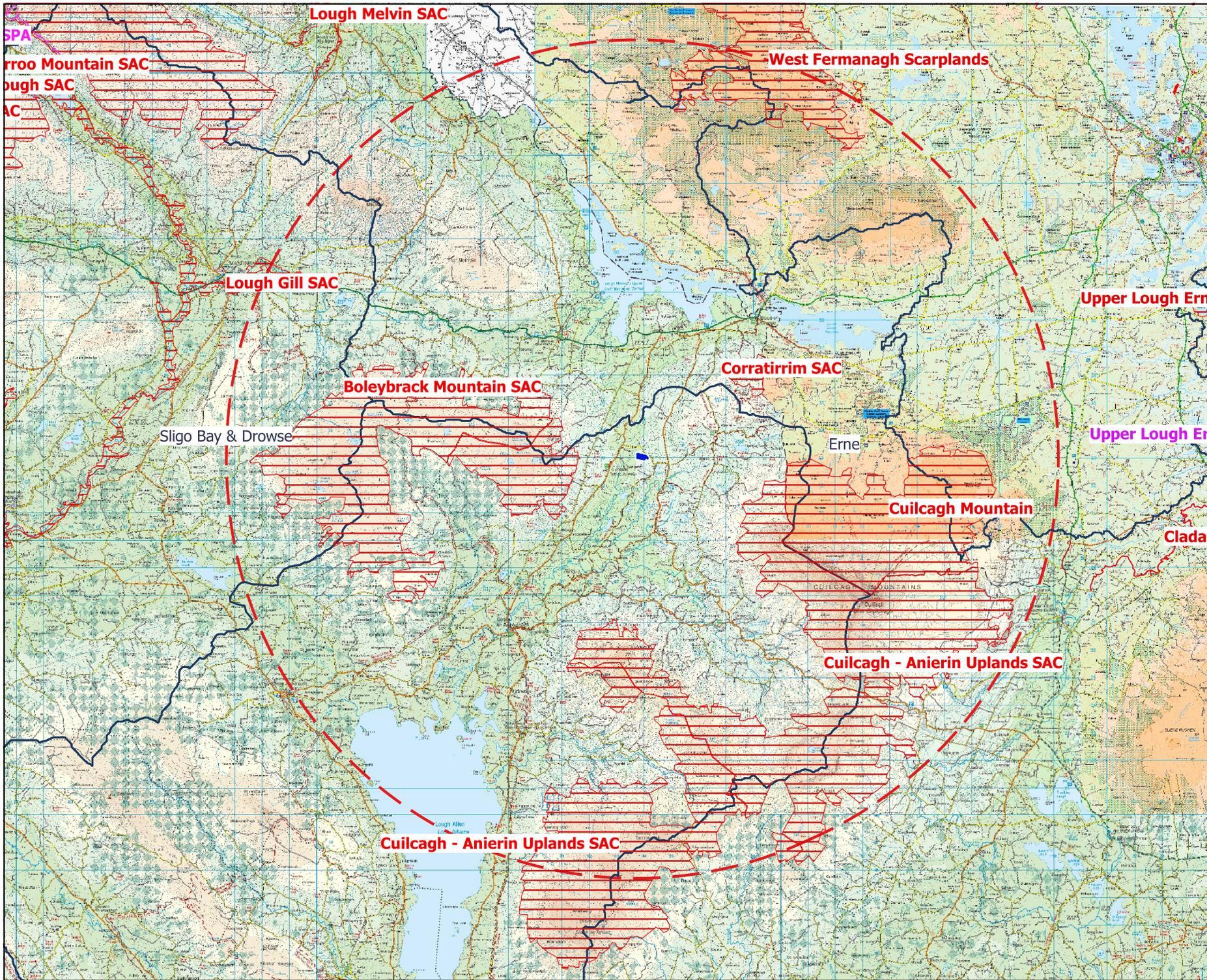
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3. IDENTIFICATION OF RELEVANT EUROPEAN SITES

3.1 Identification of the European Sites within the Likely Zone of Impact

The following methodology was used to establish which European Sites are within the Likely Zone of Impact of the proposed development:

- Initially the most up to date GIS spatial datasets for European designated sites and water catchments were downloaded from the NPWS website (www.npws.ie) and the EPA website (www.epa.ie) on the 24/06/2020. The datasets were utilized to identify European Sites which could feasibly be affected by the proposed development.
- All European Sites within a distance of 15km surrounding the development site were identified and are shown on Figure 3.1. In addition, the potential for connectivity with European Sites at distances of greater than 15km from the proposed development was also considered in this initial assessment. In this case, no potential connectivity with sites located at a distance of over 15km from the proposed development was identified.
- The catchment mapping was used to establish or discount potential hydrological connectivity between the site of the proposed development and any European Sites. The hydrological catchments are also shown in Figure 3.1.
- In relation to Special Protection Areas, in the absence of any specific European or Irish guidance in relation to such sites, the Scottish Natural Heritage (SNH) Guidance, 'Assessing Connectivity with Special Protection Areas (SPA)' (2016) was consulted. This document provides guidance in relation to the identification of connectivity between proposed development and Special Protection Areas. The guidance takes into consideration the distances species may travel beyond the boundary of their SPAs and provides information on dispersal and foraging ranges of bird species which are frequently encountered when considering plans and projects.
- Table 3.1, provides details of all relevant European Sites as identified in the preceding steps and assesses which are within the likely Zone of Impact. The assessment considers any likely direct or indirect impacts of the proposed development, both alone and in combination with other plans and projects, on European Sites by virtue of the following criteria: size and scale, land-take, distance from the European Site or key features of the site, resource requirements, emissions, excavation requirements, transportation requirements and duration of construction, operation and decommissioning were considered in this screening assessment
- The site synopses and conservation objectives of these sites, as per the NPWS website (www.npws.ie), were consulted and reviewed at the time of preparing this report 24/06/2020. Figure 3.1 shows the location of the proposed development in relation to all European sites within 15km of the proposed development.
- Where potential pathways for Significant Effect are identified, the site is included within the Likely Zone of Impact and further assessment is required.



Map Legend

-  Special Area of Conservation
-  Special Protection Area
-  Site Location
Stranamart, Co. Cavan
-  15km Buffer
-  WFD Hydrological Catchments

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Drawing Title	
European Designated Sites within 15km - Stranamart	
Project Title	
Croagh Wind Farm - Replanting Assessment	
Drawn By	Checked By
Claire Stephens	David McNicholas
Project No.	Drawing No.
180511	Figure 3.1
Scale	Date
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Table 3.1 Identification of Designated sites within the Likely Zone of Impact

European Sites and distance from proposed development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie and www.daera-ni.gov.uk on the 24/06/2020	Conservation Objectives	Likely Zone of Impact Determination
Special Areas of Conservation (SAC)			
Boleybrack Mountain SAC (002032) Distance: 2.0km	<ul style="list-style-type: none"> ➤ Natural dystrophic lakes and ponds [3160] ➤ Northern Atlantic wet heaths with <i>Erica tetralix</i> [4010] ➤ European dry heaths [4030] ➤ Molinia meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinia caeruleae</i>) [6410] ➤ Blanket bogs (* if active bog) [7130] 	Detailed conservation objectives for this site (Version 1, August 2016) were reviewed as part of the assessment and are available at www.npws.ie	<p>There will be no direct effects as the project footprint is located entirely outside the designated site.</p> <p>There is no hydrological connectivity between the proposed afforestation site and this SAC and therefore no potential for indirect effects on the SAC exists as a result of the proposed small scale works.</p> <p>No pathway for significant effect was identified and the site is not within the Likely Zone of Impact.</p>
Cuilcagh - Anierin Uplands SAC (000584) Distance: 3.8km	<ul style="list-style-type: none"> ➤ Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>) [3110] ➤ Natural dystrophic lakes and ponds [3160] ➤ Northern Atlantic wet heaths with <i>Erica tetralix</i> [4010] ➤ European dry heaths [4030] 	Detailed conservation objectives for this site (Version 1, September 2016) were reviewed as part of the assessment and are available at www.npws.ie	<p>There will be no direct effects as the project footprint is located entirely outside the designated site.</p> <p>Cuilcagh - Anierin Uplands SAC is located approximately 3.8km south-east of the proposed afforestation site and are buffered by a variety of habitats. Although the sites are</p>

European Sites and distance from proposed development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie and www.daera-ni.gov.uk on the 24/06/2020	Conservation Objectives	Likely Zone of Impact Determination
	<ul style="list-style-type: none"> ➤ Alpine and Boreal heaths [4060] ➤ Species-rich Nardus grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe) [6230] ➤ Blanket bogs (* if active bog) [7130] ➤ Transition mires and quaking bogs [7140] ➤ Petrifying springs with tufa formation (<i>Cratoneurion</i>) [7220] ➤ Siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i>) [8110] ➤ Siliceous rocky slopes with chasmophytic vegetation [8220] ➤ <i>Hamatocaulis vernicosus</i> (Slender Green Feather-moss) [6216] 		<p>located within the same hydrological catchment, no hydrological connectivity exists between the proposed development and the European designated site. Impacts on all of the listed QI habitats and species can be ruled out due to the distance from the proposed small scale afforestation and the absence of a complete source-pathway-receptor chain for impact.</p> <p>No pathway for significant effect was identified and the site is not within the Likely Zone of Impact.</p>
<p>Corratirrim SAC (000979)</p> <p>Distance: 4.1km</p>	<ul style="list-style-type: none"> ➤ Limestone pavements [8240] 	<p>Detailed conservation objectives for this site (Version 1, April 2019) were reviewed as part of the assessment and are available at www.npws.ie</p>	<p>There will be no direct effects as the project footprint is located entirely outside the designated site.</p> <p>There is no connectivity between this European site designated for terrestrial habitats and the proposed afforestation works</p>

European Sites and distance from proposed development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie and www.daera-ni.gov.uk on the 24/06/2020	Conservation Objectives	Likely Zone of Impact Determination
			<p>in a separate hydrological sub-catchment. No pathway for indirect effects was identified.</p> <p>No pathway for significant effect was identified and the site is not within the Likely Zone of Impact.</p>
<p>Cuilcagh Mountain SAC [UK0016603]</p> <p>Distance: 5.0km</p>	<ul style="list-style-type: none"> ➤ Natural dystrophic lakes and ponds ➤ Northern Atlantic wet heath with <i>Erica tetralix</i> ➤ European dry heaths ➤ Alpine and Boreal heath ➤ Siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Caleopsietalia ladani</i>) ➤ Siliceous rocky slopes with chasmophytic vegetation 	<p>Detailed conservation objectives for this site (Version 2.1, October 2017) were reviewed as part of the assessment and are available at www.daera-ni.gov.uk</p>	<p>There will be no direct effects as the project footprint is located entirely outside the designated site.</p> <p>Cuilcagh Mountain SAC is located approximately 5km east of the proposed afforestation site and is buffered by a variety of habitats. Although the sites are located within the same hydrological catchment, no hydrological connectivity exists between the proposed development and the European designated site. Impacts on all of the listed QI habitats and species can be ruled out due to the distance from the proposed small scale works area and the absence of a complete source-pathway-receptor chain for impact.</p>

European Sites and distance from proposed development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie and www.daera-ni.gov.uk on the 24/06/2020	Conservation Objectives	Likely Zone of Impact Determination
			<p>No pathway for significant effect was identified and the site is not within the Likely Zone of Impact.</p>
<p>Lough Gill SAC (001976)</p> <p>Distance: 12.5km</p>	<ul style="list-style-type: none"> ➤ Natural eutrophic lakes with <i>Magnopotamion</i> or <i>Hydrocharition</i> - type vegetation [3150] ➤ Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites) [6210] ➤ Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0] ➤ Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>) [91E0]* ➤ <i>Austropotamobius pallipes</i> (White-clawed Crayfish) [1092] ➤ <i>Petromyzon marinus</i> (Sea Lamprey) [1095] ➤ <i>Lampetra planeri</i> (Brook Lamprey) [1096] ➤ <i>Lampetra fluviatilis</i> (River Lamprey) [1099] ➤ <i>Salmo salar</i> (Salmon) [1106] 	<p>This site has the generic conservation objective:</p> <p><i>‘To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected.’</i></p> <p>(NPWS Generic version 7.0, 2020)</p>	<p>There will be no direct effects as the project footprint is located entirely outside the designated site.</p> <p>There is no hydrological connectivity between the site and the European Designated Site. The SAC is located in a separate surface water catchment to the proposed small-scale replacement development. Therefore, no pathway for indirect effects was identified.</p> <p>No pathway for significant effect was identified and the site is not within the Likely Zone of Impact.</p>

European Sites and distance from proposed development	Qualify Interests/Special Conservation Interests for which the European site has been designated (Sourced from NPWS online Conservation Objectives, www.npws.ie and www.daera-ni.gov.uk on the 24/06/2020	Conservation Objectives	Likely Zone of Impact Determination
	<ul style="list-style-type: none"> ➤ <i>Lutra lutra</i> (Otter) [1355] 		
<p>West Fermanagh Scarplands SAC [UK0030300]</p> <p>Distance: 12.5km</p>	<ul style="list-style-type: none"> ➤ Molinia meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>) ➤ Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>) ➤ <i>Tilio-Acerion</i> forests of slopes, screes and ravines ➤ Alkaline Fens ➤ Natural eutrophic lakes with <i>Magnopotamion</i> or <i>Hydrocharition</i> – type vegetation ➤ Blanket bog (active only) ➤ Northern Atlantic wet heath with <i>Erica tetralix</i> ➤ Petrifying springs with tufa formation (<i>Cratoneuron</i>) 	<p>Detailed conservation objectives for this site (Version 2, December 2014) were reviewed as part of the assessment and are available at www.daera-ni.gov.uk</p>	<p>There will be no direct effects as the project footprint is located entirely outside the designated site.</p> <p>This European site is located in a separate hydrological catchment to the proposed small scale afforestation works. No pathway for indirect effects was identified.</p> <p>No pathway for significant effect was identified and the site is not within the Likely Zone of Impact.</p>
Special Protection Area (SPA)			
There are no SPA's within 15km of the replacement site			

3.2 **European Sites with the Potential to be Significantly Affected by the Proposed Development**

No European Sites will be affected by the proposed replacement replacement lands.

3.3 **Likely Cumulative Impact of the Proposed Works on European Sites, in-combination with other plans and projects**

The potential for the proposed development to contribute to a cumulative effect on European Sites was considered. The online planning system for Cavan County Council was consulted on the 24/06/2020.

Additional projects identified in the vicinity of the replacement forestry lands at Stranamart around the townland of Gubaveeny and Grellagh in the last 5 years include.

- Permission demolish existing derelict two storey dwelling house and outbuilding; construct proposed new two storey dwelling house, single storey domestic garage, wastewater treatment unit and percolation area, construct new entrance and all associated site works. Significant further information and revised plans have been received (Planning Ref.: 1778) – Finalised Application Decision: Conditional,
- Permission to (1) Construct an agricultural slatted shed to incorporate slatted area, external feed passage and underground slurry storage tank and (2) Complete all associated and ancillary site works (Planning Ref.: 2100) - Finalised Application Decision: Conditional.

4. ARTICLE 6(3) APPROPRIATE ASSESSMENT SCREENING STATEMENT AND CONCLUSIONS

The findings of this Screening Assessment are presented following the European Commission's Assessment of Plans and Projects Significantly affecting Natura 2000 Sites: Methodological Guidance on the provisions of Article 6(3) and 6(4) of the Habitats Directive 92/43/EEC (EC, 2001) and Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (EC, 2018) as well as the Department of the Environment's Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities (DoEHLG, 2010).

4.1 Data Collected to Carry Out Assessment

In preparation of the report, the following sources were used to gather information:

- Review of NPWS Site Synopses, Conservation Objectives for the European Sites
- Review of 2019, 2013 and 2007 EU Habitats Directive (Article 17) Reports.
- Review of online web-mappers: National Parks and Wildlife Service (NPWS), EPA, Water Framework Directive (WFD)
- Review of OS maps and aerial photographs of the site of the proposed project.
- Review of other plans and projects within the area.

4.2 Concluding Statement

It is concluded beyond reasonable scientific doubt, in view of best scientific knowledge, on the basis of objective information and in light of the conservation objectives of the relevant European sites, that the proposed replacement land, individually or in combination with other plans and projects, will not have a significant effect on any European Site.

The proposed afforestation has Technical Approval from the Forest Service and will be undertaken accordingly. This approval is conditional to all associated works being undertaken in accordance with Forest Service requirements. The impacts associated with this afforestation have been classified overall as a neutral impact. As such, when considered in combination with the other land uses in the area, and considering that the forestry guidelines are designed to minimise and prevent impacts to habitats that are outside the site, cumulative impacts on sensitive ecological receptors are not anticipated.

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APPENDIX 2

**APPROPRIATE ASSESSMENT
SCREENING REPORT –
BRACKLOON, CO. ROSCOMMON**

Article 6 (3) Appropriate Assessment Screening Report

Assessment of Forestry Replacement Lands for Croagh Wind Farm at Brackloon, Co. Roscommon





DOCUMENT DETAILS

Client: **Coillte Teoranta**

Project Title: **Assessment of Forestry Replacement Lands for Croagh Wind Farm at Brackloon, Co. Roscommon**

Project Number: **180511**

Document Title: **Appropriate Assessment Screening Report**

Document File Name: **AASR F -2020.07.06 -180511**

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Rev	Status	Date	Author(s)	Approved By
01	Draft	24/06/2020	CS/DMN	PR
02	Final	07/07/2020	CS/DMN	PR

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1. INTRODUCTION

1.1 Background

MKO has been appointed to provide the information necessary to allow the competent authority to conduct an Article 6(3) Screening for Appropriate Assessment of the proposed replacement area in the townland of Brackloon in Co. Roscommon.

Screening for Appropriate Assessment is required under Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the Habitats Directive). Where it cannot be excluded that a project or plan, either alone or in combination with other projects or plans, would have a significant effect on a European Site then same shall be subject to an appropriate assessment of its implications for the site in view of the site's conservation objectives. The current project is not directly connected with, or necessary for, the management of any European Site consequently the project has been subject to the Appropriate Assessment Screening process.

The assessment in this report is based on a site visit in October 2019 and a desk study was undertaken in 2020. It specifically assesses the potential for the proposed replacement lands to result in significant effects on European sites in the absence of any best practice, mitigation or preventative measures.

This Appropriate Assessment Screening Report has been prepared in accordance with the European Commission's Assessment of Plans and Projects Significantly affecting Natura 2000 Sites: *Methodological Guidance on the provisions of Article 6(3) and 6(4) of the Habitats Directive 92/43/EEC* (EC, 2001) and *Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC* (EC, 2018) as well as the Department of the Environment's Appropriate Assessment of Plans and Projects in Ireland - *Guidance for Planning Authorities* (DoEHLG, 2010).

In addition to the guidelines referenced above, the following relevant documents were also considered in the preparation of this report:

1. *Council of the European Commission (1992) Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora. Official Journal of the European Communities. Series L 20, pp. 7-49.*
2. *EC (2000) Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg.*
3. *EC (2007) Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence. Opinion of the commission.*
4. *EC (2013) Interpretation Manual of European Union Habitats. Version EUR 28. European Commission.*

1.2 Appropriate Assessment

1.2.1 Screening for Appropriate Assessment

The Habitats Directive (Council Directive 92/43/EEC) is implemented in Ireland by the European Communities (Birds & Natural Habitats) Regulations 2011 (S.I. No.477/2011), the European Communities (Birds & Natural Habitats) (Amendment) Regulations 2015 (S.I. No. 355/2015), and the Planning and Development Acts 2000-2015, as amended. The requirement for AA is set out in Article 6 of the Habitats Directive.

In summary, Article 6(3) of the Directive requires an Appropriate Assessment to be undertaken where there is a possibility of the proposed project – either individually or in combination with other plans and projects – having an effect on a European site (i.e. a Special Area of Conservation (SAC) or a Special Protection Area (SPA)). The AA focuses on the implications that the proposed project may have in the context of the rationale behind why an area was designated for protection. Article 6(3) continues by stating that statutory approval can only be granted if the assessment has shown that there will be no adverse effects on the integrity of the European site. In cases where the integrity of a site may be impacted, then the requirements of Article 6(4) apply.

Therefore, potential impacts on European sites must be considered by the relevant public authority listed under the European Communities (Birds & Natural Habitats) Regulations, 2011 (S.I. No.477/2011). The Competent Authority's determination as to whether an Appropriate Assessment is required must be made on the basis of objective information and should be recorded. The Competent Authority may request information to be supplied to enable it to carry out screening.

Consultants or project proponents may provide for the competent authority, the information necessary for them to determine whether an Appropriate Assessment is required and provide advice to assist them in the Article 6(3) Appropriate Assessment Screening decision.

Where it cannot be excluded beyond reasonable scientific doubt at the Screening stage, that a proposed plan or project, individually or in combination with other plans and projects, would have a significant effect on the conservation objectives of a European site, an Appropriate Assessment is required.

Where An Appropriate Assessment is required, the Competent Authority may require the applicant to prepare a Natura Impact Statement.

The term Natura Impact Statement (NIS) is defined in legislation. An NIS, where required, should present the data, information and analysis necessary to reach a definitive determination as to 1) the implications of the plan or project, alone or in combination with other plans and projects, for a European site in view of its conservation objectives, and 2) whether there will be adverse effects on the integrity of a European site. The NIS should be underpinned by best scientific knowledge, objective information and by the precautionary principle.

Statement of Authority

The site was visited by John Hynes (B. Sc., M.Sc., MCIEEM) on the 14th of October 2019. John has over 9 years professional ecological consultancy and management experience. This report has been prepared by Claire Stephens (B.Sc. Env.) and David McNicholas (B.Sc., M.Sc., MCIEEM) of MKO. Claire is an experienced ecologist with over 2 years' professional ecological consultancy experience. David has over 9 years' professional ecological consultancy experience and is a full member of the Chartered Institute of Ecology and Environmental Management. This report has been reviewed by Pat Roberts (B.Sc., MCIEEM) who has over 15 years' experience in ecological assessment and management.

2. DESCRIPTION OF THE PROPOSED REPLACEMENT LANDS

2.1 Site Location

The replacement area is located within the townland of Brackloon, Shankill, Co. Roscommon (Grid Reference: E 178657 N 288747). The replacement site is located approximately 3.7km east of the village of Bellanagare and 8km west of the town of Elphin. The site is accessed off an unnamed local road which bounds the site to the east. A site location map is provided in Figure 2.1.

2.2 Characteristics of the Proposed Replacement Lands

2.2.1 Description of the project

This report provides a description of the proposed replacement land and an assessment of the potential impacts including cumulative impacts associated with afforestation at Brackloon, Co. Roscommon

Construction of the proposed Croagh Wind Farm will require felling of 54.2 hectares of forestry. The site of 7.2ha at Brackloon, Co. Roscommon was identified as a potential forestry replacement area.

2.3 Description of the Baseline Ecological Environment

Assessing the impacts of any project and associated activities requires an understanding of the ecological baseline conditions prior to and at the time of the project proceeding. Ecological Baseline conditions are those existing in the absence of proposed activities (CIEEM 2018).

A multidisciplinary walkover survey was conducted on the on the 14th of October 2019 by John Hynes of MKO. The ecological survey was undertaken outside the optimal time of year to undertake a habitat and flora survey (Smith et. al 2011) however all habitats were readily identifiable at the time of the visit. A dedicated invasive species survey was also undertaken during the site visit. During the survey, the site was searched for species listed on the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations (S.I. 477 of 2011).

The site is largely dominated by an *improved agricultural grassland/wet grassland (GA1/GS4)* mosaic with field boundaries demarcated by *hedgerows(WL1)* (Plate 2.1). This grassland habitat is extensively dominated by rushes (*Juncus* spp.). Other species recorded include cock's-foot (*Dactylus glomerata*), perennial ryegrass (*Lolium perenne*), spear thistle (*Cirsium vulgare*), flag iris (*Iris pseudacorus*), ivy (*Hedera helix*) and bramble (*Rubus fruticosus* agg.). The *hedgerows (WL1)* are dominated by willow (*Salix* spp.), hawthorn (*Crataegus monogyna*) and bramble.

A stream categorised as *eroding/upland river (FW1)*, (Plate 2.2) runs adjacent along the southern boundary of the site, flowing in a north westerly direction and discharging to the Owennaforesha River, approximately 2.3km downstream of the site.

No habitats which correspond to those that are listed in Annex I of the EU Habitats Directive were identified during the site visit.

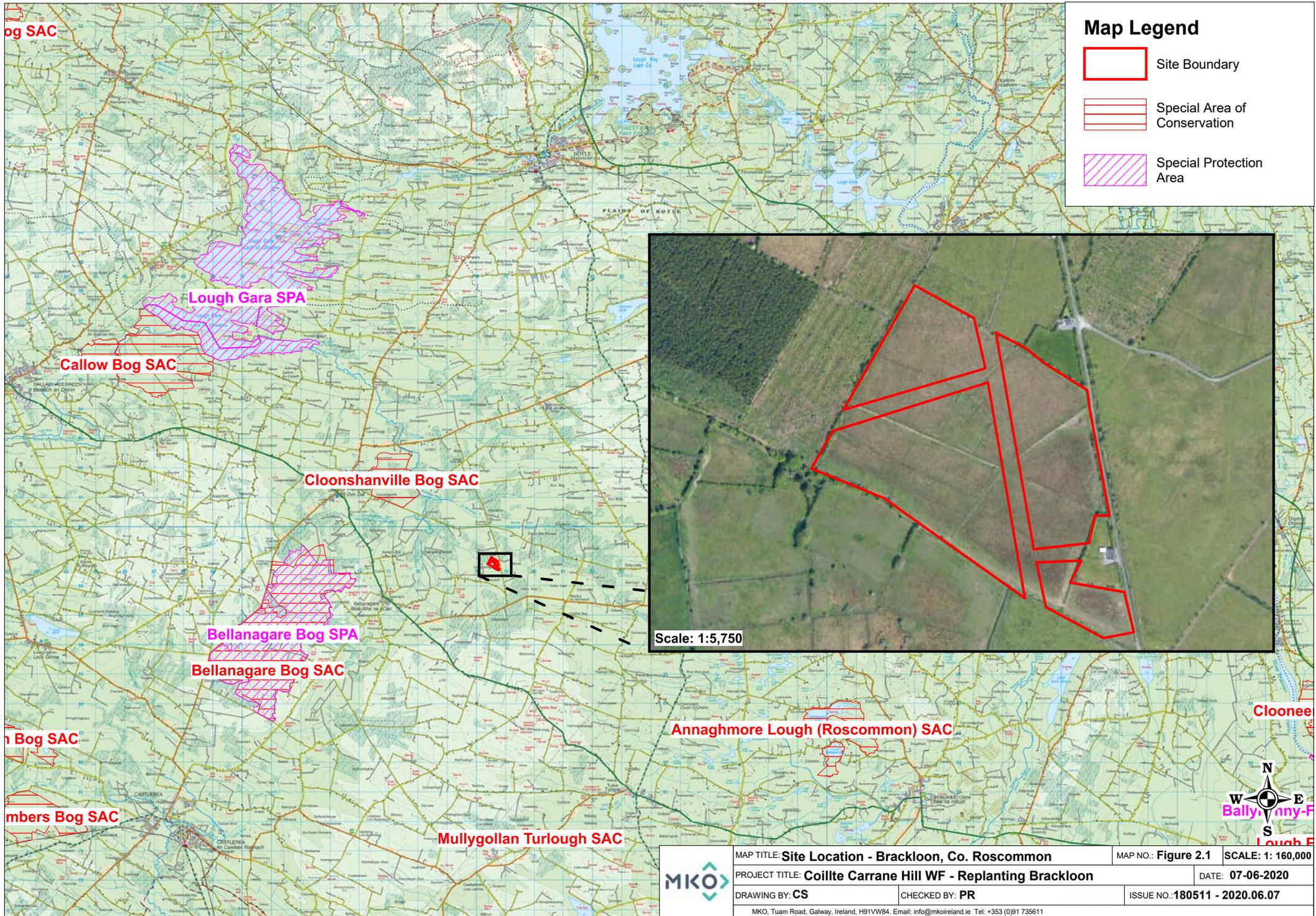




Plate 2.1 Improved agricultural grassland/wet grassland (GAI/GS4) mosaic with field boundaries demarcated by hedgerows (WL1)



Plate 2.2 Stream categorised as eroding/upland river (FW1) adjacent along the southern boundary of the site