Additional Information - Outline Habitat Management and Enhancement Plan

Scoop Hill Community Wind Farm

May 2023

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community windpower

Starling Learning

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Community Windpower Ltd

Godscroft House,
Frodsham
Cheshire
WA6 6XU

Tel: +44 (0)1928 734544
Fax: +44 (0)1928 734790

www.communitywindpower.co.uk

Starling Learning

22 Braehead
Lochwinnoch
Renfrewshire PA12 4AS
Tel: 01505 843849
starlinglearning@hotmail.co.uk

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Contents

Figures

Appendices

1 Introduction

1.1 Project Overview

1.1.1 CWL Energy Ltd has applied for Section 36 (S36) consent for Scoop Hill Community Wind Farm within the Southern Uplands, situated to the south of the town of Moffat in Dumfries and Galloway.

1.1.2 The proposed wind farm has been surveyed over a number of years from 2017 to 2022. A wide range of ecological and ornithological surveys have been carried out and an Environmental Impact Assessment completed, with mitigation measures proposed to ensure residual effects are minimal.

1.2 Objectives of the Habitat Management and Enhancement Plan (HMEP)

1.2.1 This Outline Habitat Management and Enhancement Plan (OHMEP) has been prepared by Starling Learning on behalf of the Applicant and will be submitted as part of the Additional Information (AI) submission. This version has been updated to incorporate substantial design changes initiated during post submission consultation with NatureScot which included meetings and their consultation response dated 21 July 2021.

1.2.2 This OHMEP has been guided by the various ecological surveys carried out by Starling Learning and is intended to build on the information contained within the Environmental Impact Assessment Report (EIAR). It is also guided by the UK Post-2010 Biodiversity Framework, the Scottish Biodiversity List, the Dumfries and Galloway Local Biodiversity Action Plan (LBAP), and the Dumfries and Galloway Local Development Plan 2 (LDP2) 2019, NatureScot guidance 'What to consider and include in Habitat Management Plans' and National Planning Framework 4 (NPF4), Policy 3: Biodiversity. It has also been updated to include information contained within the Scottish Biodiversity Strategy to 2045[1] and NatureScot's Developing with Nature Guidance[2].

1.2.3 In keeping with the above guidance, actions within the OHMEP will aim to:

1. Accelerate restoration and regeneration;
2. Expand and connect protected areas and improve their condition;
3. Support nature-friendly forestry;
4. Recover and protect vulnerable and important species; and
5. Provide the investment needed to support nature recovery.

1.2.4 The OHMEP also proposes enhancement measures to mitigate any potential adverse impacts of the development on the ecology and nature conservation interests of the site along with possible opportunities for net gain. It also includes projects to enhance local biodiversity with community involvement contributing to additional biodiversity net gain. This will primarily involve the protection of habitats and species, mitigation and the creation

[1] file:///C:/Users/Owner/Documents/scottish-biodiversity-strategy-2045-tackling-nature-emergency-scotland.pdf

[2] https://www.nature.scot/doc/developing-nature-guidance

and enhancement of habitats to diversify and improve biodiversity and conditions of the existing habitats on site.

1.2.5 Since the original EIAR was submitted in 2020 the Scottish Government have adopted the Fourth National Planning Framework (NPF4). Within this document is Policy 3: Biodiversity. The intent of the policy is to protect biodiversity, reverse biodiversity loss, deliver positive effects from development and strengthen nature networks and the outcome of this policy is that biodiversity will be enhanced and better connected through strengthened nature networks and nature based solutions.

1.2.6 It should be noted that Policy 3 itself does not provide any guidance on how 'significant enhancements' will be measured and assessed, simply referring to "best practice assessment methods".

1.2.7 The Explanatory Report, issued alongside the Revised Draft NPF4 document states: "*The Scottish Government have commissioned research to explore options for developing a biodiversity metric or other tool, specifically for use in Scotland. This work is at early stages, we will work with NatureScot on a programme of engagement with stakeholders as this work progresses*".

1.2.8 Therefore, exactly how enhancement is to be measured in the longer-term is to be the subject of further guidance, but timescale for the production of this is at present unclear. The Scottish Government also issued a draft Biodiversity Strategy in December 2022 however it does not contain national biodiversity targets – these are to be prepared on a statutory basis later in 2023 and will be subject to a Bill in Parliament.

1.2.9 Notwithstanding the lack of policy guidance at the present time, in terms of environmental benefit, the Applicant proposes biodiversity enhancements that support both long-established national and local policy, and the emerging requirements of NPF4.

1.2.10 This OHMEP applies a mitigation hierarchy:

- First, avoid - by removing the impact at the outset wherever feasible;
- Second, minimise – by reducing the impacts that are unavoidable;
- Third, restore – by repairing and enhancing damaged habitats and disturbed species; and
- Fourth, offset – by creating new habitat, preferably on-site but can be off-site, to compensate for any residual impact that remains.

1.2.11 This OHMEP includes the following key aspects:

- Details of protected habitats and species;
- Details of appropriate compensatory habitat creations;
- Protection of species and habitats;
- Suggested timings of the provision of proposals; and
- A programme of monitoring and reporting on the success of mitigation measures.

1.2.12 This HMEP should be considered to be an Outline HMEP. It is proposed that this is a working document which will evolve following planning permission and discussions between the developers, the landowners, the ECoW and organisations with responsibility for and an

interest in key wildlife species such as the Biodiversity Officer at the Local Authority, NatureScot and the RSPB. A Habitat Management Group (HMG) will be set up which will develop and co-ordinate an effective and workable plan for the site with all measures agreed by the members of the HMG.

1.3 Background

1.3.1 Starling Learning has a comprehensive understanding of the ecological and ornithological conditions on site, following several years of survey work.

1.3.2 An Extended Phase 1 Habitat Survey, in accordance with the Joint Nature Conservation Committee (JNCC) methodology 2005, was also conducted and included searches for scarce or rare plants, assisted by the use of aerial photography.

1.3.3 An NVC survey was also carried out by Starling Learning in 2018 to 2020 which identified Groundwater Dependant Terrestrial Ecosystems (GWDTEs).

1.3.4 Ornithological surveys of various sections of the Scoop Hill development area were carried out by Starling Learning from 2017 to 2020.

1.3.5 Protected species surveys were also carried out by Starling Learning. Bats, badger, otter, red squirrel, pine marten and common lizard were recorded within the survey area and measures are incorporated to protect these species and to improve their habitats.

1.3.6 An Electrofishing survey was carried out during summer 2018 by the River Annan District Salmon Fishery Board.

1.3.7 These surveys revealed a number of significant habitats and species of conservation value that have the potential to be affected by the construction of a wind farm.

1.3.8 Following the consultation response from NatureScot (July 2021), and further discussions in 2022, this OHMEP has been updated accordingly to incorporate their advice and recommendations.

2 Aims and Broad Objectives of the HMEP

2.1.1 The main aims and objectives are to:

- Examine ways to minimise disturbance and possible problems for key species;
- Examine how the ecological value of the site may be improved by changes in land management; and
- Increase and enhance overall biodiversity through management targeted at specific species.

2.2 Aim 1: To protect and enhance significant habitats

2.2.1 An Ecological Clerk of Works (ECoW) will be employed to ensure compliance with planning regulations and ensure protection of habitats and wildlife. The ECoW post will commence prior to the construction of the wind farm and will continue for the duration of the construction phase, during operation of the turbines and for the decommissioning phase, and will include the following:

- Ensuring the implementation of the HMEP;
- Visits to the site during key periods such as track setting out and turbine installation;
- Micro-siting of turbines within the requested 100 m to avoid key habitats or possible disturbance to wildlife;
- Ensuring that the work is completed without contravening the Wildlife and Countryside Act and generally monitoring the Habitat and Species Protection Plan;
- Progress will be reported on a regular basis to the HMG which will include Community Windpower, Dumfries and Galloway Council, the Landowners, NatureScot, and RSPB with any suggested alterations required being agreed by these bodies;
- Planning officers will be invited to site to check implementation of the works;
- Liaising at all stages with CWL and the landowners; and
- Ensuring post-construction monitoring takes place.

2.2.2 The habitats of significant conservation value and GWDTEs have generally been avoided, and where this is not possible, mitigation measures will be put in place. Good practice will be followed at all times in order to avoid pollution and damage to habitats.

2.3 Aim 2: To protect bird species and enhance bird habitats

2.3.1 Care will be taken to avoid disturbing all nesting birds. Special care will be taken to avoid disturbing any potential breeding Annex 1 species including osprey and black grouse.

Positive management will also improve the site, or off-site where possible, for various species including black grouse.

2.4 Aim 3: To protect and to enhance the site for mammal species, in particular otter, badger, red squirrel, pine marten and bat species

2.4.1 The site has localised otter activity, and in these areas, they will be protected and enhancements will be made to their environment. It is the aim that the HMEP will lead to increased use of the site within the currently used areas and possibly also to expand the range of this species within the site.

2.4.2 Bats were recorded foraging in generally low numbers. Attracting bats to the area is not advisable due to the risk of collision with the turbines. However, the HMEP aims to increase the number of bats using the lower farmland areas and villages by increasing the scope for feeding and roosting. Turbines will also be located at a suitable distance from forest edges to reduce the risk of collision.

2.4.3 The area has a high badger population; setts will be protected, and it is intended to improve an area of the site for this species by providing improved areas for foraging.

2.5 Aim 4: To enhance the site for other species of conservation concern including common toad and common lizard

2.5.1 Measures will be put in place to protect reptiles and amphibians and enhance habitats for them.

2.6 Aim 5: To protect watercourses and enhance water quality for freshwater invertebrates and fish

2.6.1 The information gained from the series of electrofishing surveys will be used to inform the Construction Environmental Management Plan (CEMP) (which will be submitted prior to construction beginning onsite) on appropriate mitigation to be employed throughout the construction phase of the wind farm.

2.6.2 Robust measures will be put in place to protect the water environment.

2.6.3 Riparian planting at the headwaters and along sections of various watercourses will enhance water quality.

2.7 Aim 6: Education and Community Involvement

2.7.1 To contribute to the Dumfries and Galloway Local Biodiversity Action Plans.

2.7.2 To work with school children and the local community to increase their awareness and appreciation of local wildlife.

2.7.3 To provide work experience for local college students looking to gain experience of working in the ecological and environmental management sectors.

3 NatureScot Response

3.1.1 NatureScot provided a consultation response to the Energy Consents Unit regarding Scoop Hill Community Wind Farm on 21st July 2021. Staring Learning has reviewed this response in full and the comments of NatureScot in relation to the OHMEP and other associated elements are summarised below in Table 1 alongside the reply from Staring Learning.

Table 1: NatureScot comments on OHMEP with Starling Learning response

NatureScot Comments	Starling Learning Response
The nearest turbine will be 400m from the Dryfe Water SSSI, a micro siting allowance will reduce this to 300m. However, given the proposed separation distance, we do not consider that the feature of the Dryfe Water SSSI will be affected by these proposals.	The ECoW and appointed civil contractor will ensure that the Dryfe Water SSSI is protected at all times. In addition, turbine 54 has been removed from the site, thus the separation distance to the nearest turbine (T51) has been increased to 525 metres, prior to any micro-siting.
NatureScot questioned the suitability of improving the 100ha of bog habitat.	All bog restoration work will be agreed in advance with NatureScot ensuring only worthwhile bog habitat is restored. This is discussed further in Section 4.1.14-4.1.16
Creation of basin mire in borrow pits does not compensate for loss of blanket bog.	This action was not intended as part of the blanket bog compensation, but to create useful habitat in the borrow pits once work is completed. See Section 4.1.17 for more information
Advise against the planting of ash or juniper due to concerns regarding Ash Die-back disease and	Ash and juniper, along with Dawn Redwood, have been removed from the planting plans. These will be

juniper phytophthora spreading to wild juniper from nursey stock. Also advise that Dawn Redwood is not native to Scotland, so please remove from proposed planting list.	replaced with increased amounts of the other proposed tree species. See Section 4.1.19.
Recommend the consideration of feathering the turbine blades at low wind speeds, as this standard mitigation measure reduces the risk of bat casualties at no cost to the operator.	This is an operational wind farm mitigation measure, unrelated to the HMEP, but is discussed in the EIAR/ AI.
Buffer for disturbance of otters should be 200m if breeding holt, reduced to 100m depending on the nature of the disturbance.	Changed to 200m. See Section 5.3.33.
Badger setts require a 30m buffer, 100m for pile driving and blasting	Badger survey will be carried out pre-construction and buffers put in place as required. A licence will be applied for if necessary. See Section 5.3.41.
Protected species are mobile and the situation can change over time. No evidence of water vole was found, but the situation can change over time.	Surveys will be carried out for all protected species prior to construction including water voles. If changes in their status is found, suitable mitigation will be put in place and NatureScot licences applied for if required. See Section 5.3.38.
With regard to migratory salmonids and water courses, all works should be carried out in line with the mitigation detailed in Section 15: Schedule of Mitigation of the EIAR, and also carried out in accordance with SEPA's Pollution Prevention Guidelines.	SEPA's Pollution Prevention Guidelines will be followed. See Section 5.3.39.
Mitigation to offset loss of suitable Golden Eagle home range habitats should be incorporated. Do not support habitat enhancement measures proposed within the wind farm site boundary which could draw golden eagles into the site. It is recommended that mitigation measures undergo significant revisions and agreed with South Scotland Golden Eagle Project (SSGEP), RSPB and NatureScot prior to implementation of any construction work.	In relation to Golden Eagle, there has been substantial mitigation by design which is detailed further in Section 7: Ornithology of the AI. Following detailed correspondence with NatureScot, as well as working with a golden eagle expert, a large reduction in the number of turbines located on open ground has been agreed. Section 5.1.17 discusses this further, along with Section 7: Ornithology.
NatureScot advises that a Bird Protection Plan (BPP) should be written for osprey to protect the osprey nest throughout any construction activities and ongoing use of the track.	A BPP for osprey will be written and agreed with NatureScot prior to any construction commencing. See Section 5.2.20.
NatureScot questioned the number of Black Grouse leks identified and included a recommendation for a buffer.	In relation to Black Grouse, there has been substantial mitigation by design which is detailed further in Section 7: Ornithology of the AI. This has resulted in a

It is recommended that turbines are 500m from black grouse leks.	large reduction in the number of turbines located on open ground. There are only two lek locations within the footprint of the development. The lek to the far north of the site will not be affected. Following redesign of the wind farm layout, the lek to the west of the site will also be unaffected. The other two locations were places where black grouse were recorded feeding or flying, but they are not leks. These can be seen in the Confidential Annex in Figure 5. The OHMEP will continue to include riparian woodland planting, fence marking and heather management to benefit black grouse, with the commitment to swipe rather than burning, as supported by NatureScot.

4 Habitat Protection and Enhancement

4.1.1 This section describes measures which will be taken to protect habitats during and after construction. It also then proposes a number of measures designed to enhance habitats.

4.1.2 The locations for all infrastructure including turbine bases, tracks, borrow pits (including the re-sited borrow pits (N6, N7 & N8), site storage areas and temporary construction compounds have already been chosen to avoid and reduce impacts on the most important habitats and avoiding GWDTEs. The direct impact of the development will be mitigated further by alterations through micro-siting to various turbine locations and the route taken by the access track.

4.1.3 The Construction and Environmental Management Plan (CEMP) will include a constraints map detailing all GWDTEs. These will also be included in the SEPA Construction Site Licence with details on avoidance or measures to greatly reduce negative impacts. Prior to construction, the footprint of the wind farm will be walked by the ECoW with the site engineer and the GWDTEs identified with discussions regarding whether any amendments are required. These will be discussed with SEPA and any amendments made to the Construction Site Licence accordingly.

4.1.4 Robust surface water management measures including suitably sized attenuation ponds in groups of three at each location, silt traps and silt nets will be put in place following good practice and these will be overseen by and agreed with the ECoW. All locations of the pollution prevention measures will be detailed in the SEPA Construction Site Licence.

4.1.5 Construction phase potential impacts resulting from pollution by fuels, oil, servicing chemicals and leaching from cement will be avoided by the adoption of best working practices, choice of the most appropriate cement mix and design of servicing areas.

4.1.6 During construction, the working area will be kept to a minimum to avoid unnecessary peripheral habitat disturbance and the accumulation of unnecessary amounts of loose material that might be washed away during periods of heavy rain.

4.1.7 Good practice will be followed to design an effective drainage system to allow proper distribution of water to down slope areas. Where cut tracks are used these will have cross pipes inserted at suitable intervals to spread out the supply of water.

4.1.8 The outflow from cross drains will be carefully designed to vent diffusely, close to the ground, and will be positioned to avoid areas with silty or saturated soil.

4.1.9 Wherever necessary, floating tracks will be used to traverse mire habitats and where peat depth is 0.5m or deeper, thus allowing water to pass underneath the track, or through its lower layers.

4.1.10 Where flush habitat has to be crossed, an additional lower layer design will be used with perforated pipes spaced over the width of the flush and set within a matrix of open graded free draining material wrapped in separator geotextile.

4.1.11 Regular inspections will be made to check whether the drainage systems remain operating as intended. This should ensure a proper supply of water for sensitive communities.

4.1.12 Best practice will be employed during and after deep excavations for turbines and borrow pits. Settling ponds will be used to store excess water accumulating in the excavation areas. Clean filtered water from the settling ponds will be released in appropriate areas, maintaining water supply to downslope wetland communities.

4.1.13 Turves with vegetation representative of the site from excavation work will be stored for use in dressing the disturbed edges around the infrastructure. This will prevent the erosion of loose soil and colonisation by undesirable plant species. The turves will be stored separately from the peat and topsoil.

4.1.14 Habitat enhancement at Scoop Hill Community Wind Farm will aim to improve the condition of the upland habitat mire complex. The habitats have been subject to much drainage and grazing for many years. Much of the blanket bog in the area has been slowly converted to poorer quality dry modified bog. The dry modified bog has been identified as having the potential for recovery and would respond to a programme of grip-blocking and a potential reduction in grazing pressure. There is some peat hagging which will continue to deteriorate over time; this too will benefit greatly from bog enhancement measures. This will consist of grip blocking, pool excavation and re-sculpting of some of the peat hags.

4.1.15 Areas of blanket bog that will be considered by the HMG include Milne Height, and the open spaces in the eastern conifer plantation (Silton Forest). The rest of the blanket bog is quite close in composition to heath: heavily dominated by heather, with little cottongrass, and limited Sphagnum suggesting poor blanket bog, on probably quite thin peat.

4.1.16 AI Figure 1 highlights examples of areas where bog enhancement may be possible. The full extent of bog enhancement will be agreed with the NatureScot and the rest of the HMG prior to any work commencing. Approximately 100ha of potentially suitable habitat has been identified. Some of this is more suitable than other areas and this will be carried out where it is considered viable and worthwhile. A separate peat restoration plan will be written and agreed with NatureScot.

4.1.17 Where the topography is suitable there is potential for increasing the value of the mire habitats by creating the conditions for basin mire during the restoration of borrow pits. Few examples of basin mire are currently found in the study area and the former borrow pits provide an ideal opportunity to increase the number.

4.1.18 Habitat enhancement will also include the establishment of cleuch riparian woodland. At present, very little broadleaved woodland exists at the site. The biodiversity of the site would be improved for many species including badger, black grouse, and songbird populations and would enrich the available habitat. Care will be taken to plant so that other bird species such as curlew will not be displaced. It will also avoid encouraging bats into the areas with turbines. Areas will be selected carefully in order not to encourage grey squirrels into the conifer forest areas. The full extent of the riparian planting will be agreed with the HMG but will cover a minimum of 5 ha.

4.1.19 Upland cleuch woodland planting will include a mixture of upland birchwoods, and upland montane-scrub communities. Species will include downy birch, some silver birch, rowan, aspen, hawthorn, blackthorn and downy willow. In lower reaches there will be some native broad-leaved planting of climax species such as sessile oak, and wych elm. Some examples of areas where cleuch planting may take place are shown on AI Figure 1.

4.1.20 One main area is the Wamphray Water and some of its tributaries in the Laverhay area. This would join up existing areas of woodland. A second potential area is the Staffenbigging Burn, another tributary of the Wamphray Water linking to woodland along the Kirk Burn. A third is a steep cleugh containing the Brunstone Burn to the south of Brock Hill. However, final planting areas will be agreed by the HMG.

5 Species Protection and Specific Habitat Enhancement

5.1 Expand and Connect Protected Habitats

5.1.1 In line with NPF4, broadleaved planting will take place to the north of the Dryfe Water SSSI with riparian woodland planting taking place to the north of the reserve following the Dryfe Water. In keeping with existing woodland species, planting will include a Hazel (*Corylus avellana*) understorey with Downy Birch (*Betula pubescens*), Sessile Oak (*Quercus petraea*) and Wych Elm (*Ulmus glabra*) with some areas of Hawthorn (*Crataegus monogyna*) scrub and as a component of the woodland understorey.

5.1.2 If NatureScot and the landowner are in agreement, acorns and other seeds can be gathered from the SSSI and grown on for planting in the areas adjacent to the existing SSSI. AI Figure 2 shows the proposed area for planting of the acorns and seeds, which down the line could help to expand the SSSI area.

5.1.3 Some ground flora planting will also be in keeping with the existing SSSI and will include Dog's Mercury *(Mercurialis perennis),* Primrose *(Primula vulgaris*) and Wood Sorrel (*Oxalis acetosella*).

5.2 Birds

5.2.1 This section outlines measures that will be taken to protect species during and after the construction of the wind farm. It then describes various proposals to enhance the site for birds and protected species.

5.2.2 Any disturbance to nesting birds will be avoided, by ensuring that all ground clearance will be undertaken outside the bird breeding season (from March to August inclusive) on the moorland. Key-hole felling will also take place out with the breeding season. Should any ground clearance or felling work be required during the breeding season this will be kept to an absolute minimum and a nest check survey will be carried out by a competent ornithologist, prior to any works. NatureScot have requested a Species Protection Plan for Common Crossbill. This species is a Schedule 1 species and nests very early in the season (can start as early as December). This is very much dependent on the cone crop and this will be written nearer to the time of felling so that suitable mature conifer stands can be identified and felled at the correct time (September to November).

5.2.3 The ECoW will ensure that measures are put in place should nests be discovered to ensure no further disturbance to nesting birds. For example, the area with the nest will be avoided until after the birds have fledged, and this will be monitored by the ECoW. Buffer zones will be set up round the nest, the size of which will be determined by the bird species.

5.2.4 Displacement to breeding birds will mainly be temporary and outside the breeding season. Improvements suggested within the HMEP will ensure any permanent displacement is avoided and thus is insignificant.

5.2.5 The turbines, access tracks and ancillary structures will avoid habitats of bird significance as far as possible. Any micro-siting will be agreed with the ECoW.

<u>Black Grouse</u>

5.2.6 It is expected that no lek will be disturbed by the wind farm.

5.2.7 Survey work for black grouse will take place prior to construction. If a lek is found within 750m of the development, discussions will take place with NatureScot. Measures will be put in place if necessary, including a buffer zone and no work will take place within 750m during April and May before 9 am to avoid disturbance at the most sensitive lekking period.

5.2.8 If it is found that a lek site is likely to be disturbed, an artificial lek site will be constructed (as carried out successfully at CWL's Sanquhar Wind Farm in Dumfries & Galloway). This will consist of the following:

- An area over 500m from turbines, near to existing lek, with open views;
- The area will be ploughed and sown with a grass mixture palatable to sheep in order that it is grazed short;
- Grit put down regularly;
- Area monitored to see if the black grouse use this new lek site.

5.2.9 Black Grouse will benefit from the riparian planting as the species mix will include birch, hawthorn and willow and other tree species that will attract them. Any fencing will have coloured markers in order to avoid collision by black grouse following Forestry Commission guidance '*Fence marking to reduce grouse collision'* [3]*.* Fencing will be removed once the trees are established (approximately 5 years).

5.2.10 Planting will take place with small areas of open broadleaved woodland/scrub in suitable locations such as Stots Cleugh around Broadfield/Glengap Burn, near the locations of the confirmed lek. Open woodland is a significant part of the habitat requirements of black grouse. The maturing woodland will also support mountain hare.

5.2.11 Heather management will take place on the Broken Back and Craig Fell area to ensure a range of heights for feeding, nesting and cover, by swiping rather than burning. General areas of dense heather are shown in AI Figure 1. Areas will be swiped in a rotational fashion, with 0.1ha being swiped each year, outwith the bird breeding season.

Goshawk

5.2.12 Pre-construction surveys will identify any goshawk nests and no work will take place within 1km of the nest during the breeding season. The nest will be monitored by the ECoW who will liaise directly with the Scottish Raptor Study Group.

5.2.13 There are very few areas left within the site after recent commercial felling that are suitable for goshawk nests and there is the possibility it may not have another nest for some years. Discussions will take place with forest managers to agree an area where trees can be left to mature past the felling age, in order that they may be used by goshawk in the future.

Barn Owl

5.2.14 As additional enhancement for barn owls, nestboxes will be erected at two locations which are a minimum of 2km from the turbines.

5.2.15 Also, a barn owl tower will also be erected. The Gillesbie area would be suitable where the habitats are relatively open. An area of long grass will be maintained around this structure with piles of turfs nearby which are attractive to Field Voles thus providing a source of food for the owls.

5.2.16 Examples of Barn Owl towers are shown below.

[3] Trout R. Kortland K. 2012. Fence marking to avoid grouse collision. Forestry Commission

Barn Owl tower examples

Golden Eagle

5.2.17 The wind farm layout has been redesigned with turbines removed from the main foraging grounds for golden eagle to the northwest and west of the site.

Osprey

5.2.18 If the access route option over the River Annan is utilised, steps will be taken to ensure that osprey, while building their nest or while on or near a nest containing their eggs or young, will not be disturbed.

5.2.19 An artificial osprey nest will be constructed along the River Annan, near to the existing nest but at a further distance from the construction site.

5.2.20 If the osprey decides to nest in the original nest, a Bird Protection Plan will be agreed with NatureScot. This will include ensuring a suitable buffer is in place, confirm that no ground clearance will take place until after fledging and no-one on foot will go within 750m of the nest. It will be possible to drive past the nest at a closer distance.

Other Species

5.2.21 Golden plover have the potential to be displaced in winter during construction. These will be carefully monitored by the ECoW, their roost locations noted, and attempts made to minimise disturbance.

5.2.22 A Species Protection Plan will include common crossbill, see Section 5.2.2

Further Enhancements for the Bird Population

5.2.23 There will be a number of benefits to the bird population in the form of nestboxes and habitat enhancement, as outlined below.

5.2.24 A variety of other nestboxes will be erected at adjacent farms and maintained for the duration of the wind farm, including kestrel.

5.2.25 Heather will be allowed to grow long on the slopes in areas identified to the northwest but with a suitable buffer from the turbines. Many of these slopes identified look ideal for hen harrier but none were recorded breeding. Merlin were also recorded in this area, and the long heather would provide nest sites for this species too.

5.2.26 Habitat enhancement for blanket bog will improve the site for breeding waders including curlew, as outlined in section 4 of this OHMEP. To the west of Brock Hill there are wet rushy areas, so two wader scrapes will be dug and maintained in this area.

5.3 Protected Species

Bats

5.3.1 To minimise the potential for disturbance to bats during the construction process, ground clearance along the woodland edge will be undertaken in winter or early spring when bats are less likely to be active. If construction works are undertaken during the active season for bats, construction activities will be limited to daylight hours and no work is undertaken at dawn or dusk near to preferred foraging areas for bats. This would limit the potential for disturbance to bats by avoiding the need for night-time lighting on the construction site, which could deter foraging around the site. It would also attract moths to the lights encouraging bats to feed around them.

5.3.2 To minimise the potential for collision, turbines will be placed a minimum distance of 50 m from the tip of the blade to the forest edge.

5.3.3 Further enhancements for bats at the site are outlined below.

5.3.4 Broad-leaved tree planting within the cleughs away from turbine locations will enhance foraging opportunities. Bat boxes will be erected in suitable locations such as at farms and farmhouses and in woodland distant from the turbines.

5.3.5 Bat boxes and a bat tower could be erected in suitable locations such as at farmhouses and in woodland distant from the turbines and at Dyke Farm Nature Reserve and the Community Nature Reserve (both in Moffat). This will include a long-term maternity roost facility.

5.3.6 Some mitigation work will be carried out to enhance the habitat for bats with a view to keeping them away from the turbine ridges. Bats were recorded very frequently in the areas below the wind farm such as Leithenhall. Tree planting will take place along the watercourses with insect attracting nectar plants such as ivy, red campion, foxglove and honeysuckle (see Section 4 for more information). Small ponds will be dug adjacent to woodland and planted with native wildflowers providing an additional attraction for insects

Otters

5.3.7 A pre-construction survey for otters will also be carried out to determine the current status of otters on the site at that time and ensure that, if there has been any recent change in otter activity around the site, any necessary mitigation measures which have been proposed, can be implemented.

5.3.8 The ECoW, in liaison with the construction engineers, will ensure the location of the access tracks and structures are more than 30m from holts or lie-ups (200m for a breeding holt,

reduced to 100m depending on the nature of the works, topography and natural screening), and a strict precautionary method of working will be set in place by the ECoW. This may necessitate an application for a European Protected Species Licence (EPSL) from NatureScot prior to any works being carried out. However, it may also be possible to avoid any potential for disturbance to otters by careful timing of the works and sensitive working methods, depending on the proximity of the holt/lie up to the works, and thereby avoiding the need for a licence.

5.3.9 Watercourse crossings have been identified in the Hydrology assessment (Section 10 of the EIAR and updated in the AI). Should the access tracks need to be altered, any culverts or bridges will be designed with sufficient headroom to allow passage by otters along watercourses, including during spate conditions, and to maintain water quality and flow. This may necessitate the inclusion of ledges and diversionary fences to facilitate movement; however, the specific design will be agreed with SEPA/NatureScot prior to construction.

5.3.10 Any scrub woodland or other dense vegetation, beside watercourses, will be retained to provide suitable cover for lie-up areas and facilitate the movement of otters through the site. Site contractors will be informed of any sensitive areas to ensure no accidental disturbance to holts or resting places.

5.3.11 If culverts or piping are to be stored on site, these will be capped to avoid entrapment of otters inside. In addition, any excavations over 0.5m deep, such as turbine bases or borrow pits, will be covered over at night or ramped on one side to enable otters (and other animals) to escape if they fall in. Temporary fencing will also be installed around these excavations to avoid animals falling in.

5.3.12 Strict pollution prevention measures will be implemented to ensure no impacts on water quality, which could have indirect impacts on the otter population. These will include standard good practice measures to control silt levels, oil and fuel spills. Water monitoring will be carried out.

Water Voles

5.3.13 No water voles were recorded however there is suitable habitat present. Therefore, water vole activity surveys will be included in conjunction with the pre-construction otter surveys.

Fish

5.3.14 Robust surface water management measures will be put in place following SEPA's Pollution Prevention Guidelines and overseen by the ECoW. Water quality monitoring will take place. All infrastructure will be located a minimum of 50 m from any watercourse. Culverts and bridges will be designed to allow fish passage at all times and their construction agreed with the ECoW, SEPA and the River Annan District Salmon Fishery Board (RADSFB).

5.3.15 Any in-stream construction procedures will be discussed with SEPA and the RADSFB prior to works commencing.

Badgers

5.3.16 A 30m buffer zone will be implemented around any badger setts to avoid any potential disturbance during the construction process. A pre-construction survey will be undertaken across the site to check on existing sett locations and to search for any newly excavated

badger setts or any not located during the original survey, which could be impacted by the construction. Disturbance will be avoided during the breeding season (1st December to 30th June) by the implementation of buffer zones of 100 m around each known sett. These buffer zones of 30m from all sett entrances, and 100m for blasting and pile driving works, will be set up by the ECoW on site who will monitor badger use of the site during construction, to further assess the disturbance impacts associated with construction and advise construction workers if any changes are necessary. Setts within 100 m of a borrow pit will require a license from NatureScot and excavation of the borrow pit will not take place during the breeding period between December and June. Exclusion of badgers from setts will not be considered unless it is absolutely necessary.

5.3.17 Further enhancements for badgers are outlined below.

5.3.18 Sources of seasonal food will be planted e.g. gean, elder, apple and plum. This will take place near to existing setts in the Gillesbie area.

5.3.19 As badgers are often forced to move their setts around conifer plantations as areas are felled, two artificial badger setts will be created within woodland planting areas, subject to landowner permission, and these will be planted with blackthorn and hawthorn scrub to protect them. Gean, apple and plum will be planted nearby.

5.3.20 The ECoW will also liaise with forestry managers to inform them of the location of all known badger setts.

Red Squirrels

5.3.21 A pre-construction survey will take place where all key-hole felling is to take place to check for dreys. To reduce the impact on breeding squirrels, all felling will take place outwith the breeding season of March to August inclusive. No broad-leaved tree planting will take place within the forest as this may attract grey squirrels.

Reptiles

5.3.22 During spring and summer, the site will be checked for reptiles immediately prior to each stage of the work, and then it may be necessary to translocate reptiles from the development area. Although, the only reptile recorded was common lizards and very few of them were recorded.

5.3.23 Carrying out ground clearance out with spring and summer months will minimise disturbance to reptiles. However, there is the possibility of disturbing hibernating reptiles. Any suitable hibernaculums that require to be removed for construction purposes, such as stone walls, will be de-constructed in July (post breeding and prior to hibernation). This will be overseen by the ECoW.

5.3.24 Enhancements for reptiles will involve the construction of two new hibernaculums on site. An example is shown in Appendix 1.

Amphibians

5.3.25 As with reptiles, avoiding ground clearance in spring and summer will minimise disturbance to amphibians. Strict pollution measures during construction will also minimise the risk of pollution to wet areas and ponds.

5.3.26 Habitat enhancement for amphibians will also take place including the creation of wildlife friendly attenuation ponds for construction which will be left on site following completion of construction. It will be ensured these have shallow sides and will be suitable for use by amphibians.

Invertebrates

5.3.27 A *Pollinator corridor* will be included along the edges of some of the woodland planting. This will include plant species to attract moths and other night-time insects in order to enhance food supply for bats. This will only take place in areas well distant from turbines.

All protected species

5.3.28 If pre-construction surveys of protected species find their status has changed, suitable mitigation will be put in place, and a NatureScot licence applied for if required.

6 Schools and Community Benefits

6.1.1 This section outlines a number of proposals that will enhance the biodiversity of the area while including the community in the activities and promoting appreciation of the local wildlife.

6.1.2 Students from Scotland's Rural College (SRUC) Barony Campus on the *Rural Skills* course will be offered the chance to assist with various conservation tasks relevant to their course, some examples include:

- Tree planting; and
- Students invited to accompany ecologists on to the site to learn about and assist with post construction monitoring as part of the rural species identification and habitats.

6.1.3 The participating students will be provided with a certificate outlining the skills learnt, thus helping them with future employment opportunities.

6.1.4 Tree planting will be assisted by various community groups including volunteers, Scottish Wildlife Trust (SWT) members, forestry students, long term unemployed, and refugee groups.

6.1.5 Local schools (such as Moffat, Beattock, Johnstonebridge and Hutton and Applegarth Primaries) will each be offered a workshop focusing on planting for birds, butterflies and bees and other biodiversity features of their school playgrounds. Plants and assistance with planting will be provided by the Applicant. The local secondary schools (Moffat Academy) will be offered a day of biodiversity recording to assist with their Eco School programme.

6.1.6 The secondary schools will also be offered opportunities for work experience, taking part in ecological surveys in their local area and within the wind farm.

6.1.7 Dumfries House has a Science Technology Engineering and Maths (STEM) Centre. Training courses on ecology will be offered to teachers as part of their on-going 'In Service' training for teachers in STEM using Starling Learning environmental education section. Discussions have been had with Dumfries House and they feel ecology and biology topics have been

lacking in their education programme and Starling Learning and the Applicant could help to improve this.

6.1.8 A series of short training courses will be made available to unemployed people in the Moffat, Boreland, Johnstonebridge area. This will involve learning about and developing various skills including:

- Tree growing and planting;
- Growing and planting of wild flowers;
- Nestbox and Batbox construction;
- Wildlife gardening;
- Basic ecological surveys;
- Ponds for wildlife; and
- Hedgerow planting.

6.1.9 The participants will be provided with a certificate outlining the skills learnt, helping them with future employment opportunities.

6.1.10 Workshops will be offered to surrounding communities including Moffat and Boreland for individuals and families to take part in various activities including building nestboxes and bat boxes and wildlife gardening. There will be workshops that will include activities for physical and mental well being.

6.1.11 In conjunction with local primary schools, bird feeding stations will be set up in a number of care homes including Bankfoot House. Pupils will help set up a bird table, feeding station and identification chart and will assist the residents with feeding the birds and bird identification.

7 Implementation

7.1 Habitat Management

7.1.1 The majority of the work will be organised by the Applicant, in conjunction with the landowners. Although ecological contractors will be employed to actually carry out the various aspects of the conservation and habitat management.

7.1.2 As outlined above there is a variety of habitat management that is being proposed as part of this proposed development. Some examples of habitat management include careful monitoring onsite by the ECoW during the construction period, maintaining buffer zones around certain species where necessary and providing new habitats to mitigate against any potential habitat loss.

7.1.3 The HMG will be set up giving organisations an input into the HMEP. This will be organised by the Applicant's ecologist/ECoW with various bodies invited to participate (e.g. Biodiversity Officer, RSPB, NatureScot, Scottish Raptor Study Group). It is envisaged that the HMEP will be an evolving document with any alterations to be discussed and agreed with the HMG prior to implementation.

7.1.4 Following agreement of the HMG, work will commence within three months of generation. An approximate timetable is given in Appendix 2.

7.2 Habitat Enhancement

7.2.1 As outlined in the paragraphs above there is a significant amount of enhancement proposed as part of this OHMEP. All enhancement measures will be discussed and agreed with the HMG and will form part of the final HMEP.

7.2.2 Habitat enhancement for birds includes the following:

- A variety of nest boxes will be erected at adjacent farms and maintained for the lifetime of the wind farm. For example, as outlined in paragraph 5.2.14 there will be enhancement through the erection of Barn Owl nestboxes erected at two locations, which will be a minimum of 2km from the proposed.

- Heather will be allowed to grow long on the slopes in areas identified to the northwest of the proposed development. Many of the slopes, which are a suitable buffer from the turbines, are suitable for Hen Harrier and Merlin and the long heather would help improve this suitable habitat and would provide nest sites for the species too.

- For breeding wader, including the curlew there will be habitat enhancement for the blanket bog. Alongside this two wader scrapes will be dug and maintained to the west of Brock Hill.

7.2.3 Habitat enhancement for bats includes the following:

- Bat boxes and towers will be erected at suitable locations such as local farmhouses and in woodland distant from the turbines. This would also include a long-term maternity roost facility.

- Some mitigation work will be undertaken to enhance the habitat for bats with a view to keeping them away from the turbine ridges. Tree planting will take place along watercourses with insect attracting nectar plants and small ponds will be dug adjacent to woodland and planted with native wildflowers, providing additional attraction for insects.

7.2.4 Habitat enhancement for Badgers includes the following:

- Sources of seasonal food will be planted e.g. gean, elder, apple and plum.

- Two artificial badge setts will be created within woodland planting areas and these will be planted with blackthorn and hawthorn scrub for protection.

7.2.5 Other habitat enhancement includes the following:

- The construction of two new hibernaculum's on site, examples of this are shown in Appendix 1, will benefit reptiles.

- The creation of wildlife friendly attenuation ponds for construction which will be left on site following completion of construction, these will have shallow sites to make sure they are suitable for amphibians.

- A Pollinator corridor will be included along the edges of some of the woodland planting. This will include plant species to attract moths and other night-time insects in order to enhance food supply for bats.

- If NatureScot and the landowner are in agreement, acorns and other seeds can be gathered from the SSSI and grown on for planting in the areas adjacent to the existing SSSI.

7.3 Monitoring and Reporting

7.3.1 An ECoW will be appointed to monitor the progress of the HMEP and to ensure the Species Protection Plan is implemented. The ECoW role will also include responsibility for advising on any practical ecological issues that may arise and, where necessary, make recommendations on where changes to the HMEP may be required.

7.3.2 Protected bird species will be monitored every year before and during construction.

7.3.3 Pre-construction surveys will be carried out close to the commencement of the construction of the wind farm, which will check on existing setts, holts or other protected structures, as well as identifying any new locations or activities.

7.4 Post-Construction Monitoring

7.4.1 Post-construction monitoring will be undertaken to assess the status of habitats, birds and protected species within the wind farm site and also in the various areas where mitigation has taken place. If necessary, a prescription of measures would be put in place in order to reduce any negative impacts associated with the wind farm.

7.4.2 Various target bird species including golden eagle, black grouse, goshawk and waders will be monitored during construction, one year following the completion of the works and again when operational at a level agreed with NatureScot and again during decommissioning. A report will be submitted to the above bodies in the HMG regarding their status. The status will be discussed, and should management need to be changed, discussions will take place and the management plan revised accordingly.

7.4.3 For mammals, there will be surveys in years one and three of the operational phase which will monitor their status and progress. This will be done again on a level agreed with NatureScot and again during decommissioning. Amendments to habitat management will be made if deemed necessary and in agreement with the HMG.

7.4.4 Follow up surveys of fish will be repeated, during construction and following completion of construction activities. Thus, an assessment of overall impacts can be made on the fish community now known to exist in the vicinity of the Scoop Hill Wind Farm.

7.4.5 Surveys of amphibians and invertebrates using the attenuation ponds will take place in year one and year five following construction.

7.4.6 Habitats will be monitored following HMEP enhancements. This will include monitoring of tree planting with beating up where necessary and enhancement of the bog.

7.4.7 Reports will be produced after each year of monitoring and shall be made available to the members of the HMG for review.

Appendix 1. Two common lizard hibernacula

A 50cm base will be dug out and lined with sand and gravel. The hole will be filled with rocks and logs and brash piled on top. This will create nooks and crannies for common lizards. Soil and turf from the excavation will be piled on top for insulation. Gaps will be left for reptiles to enter and leave.

The hibernaculum would be constructed using local materials

Appendix 2. Timetable

Prescription Summary	Prior to construction	During construction	Following construction	Regularly
ECoW in place, discussing construction with contractors	✓	✓	✓	✓
Habitat and species protection	✓	✓	✓	✓
HMG meeting		Groups invited to meeting prior to habitat management commencing		✓
Riparian Woodland			Commence planting within 1 year of completion of construction	
Beating up of trees			One year and five years later	
Nestboxes and bat boxes erected			Commence within 1 year of completion of construction	Replace if necessary
Bog enhancement		Areas agreed for bog enhancement	Will commence within 1 year following construction	
Barn Owl tower		✓		
Hibernacula for reptiles			Within 1 year following construction	
Nestboxes and bat boxes for local properties		✓		
Ponds for amphibians		✓	Maintained post construction	
School and community work			Commence immediately following construction	
Assessment of HMEP				✓
Monitoring	✓	✓	✓	✓

374 Scoop Hill

Legend

- Site Boundary
- Wind Turbine (180m to Tip)
- Wind Turbine (200m to Tip)
- Wind Turbine (225m to Tip)
- Wind Turbine (250m to Tip)
- Permanent Met Mast
- Access Tracks
- Site Entrance
- Exisiting Access Tracks to be Upgraded
- Substation & Control Room
- Substation & Control Room Construction Compound
- Temporary Construction Compound
- Borrow Pit
- Existing Quarries or Borrow Pit
- Borrow Pit Area of Search
- Potential Riparian Planting Areas
- Potential Bog Enhancement Areas
- Potential Areas for Wader Scrapes

Notes: This plan shows indictive habitat management areas. The locations for habitat management will be agreed with the habitat management group prior to construction starting onsite.
Revisions: N/A

0 500 1,000 2,000 m

Scale: 1:55,000 @ A3

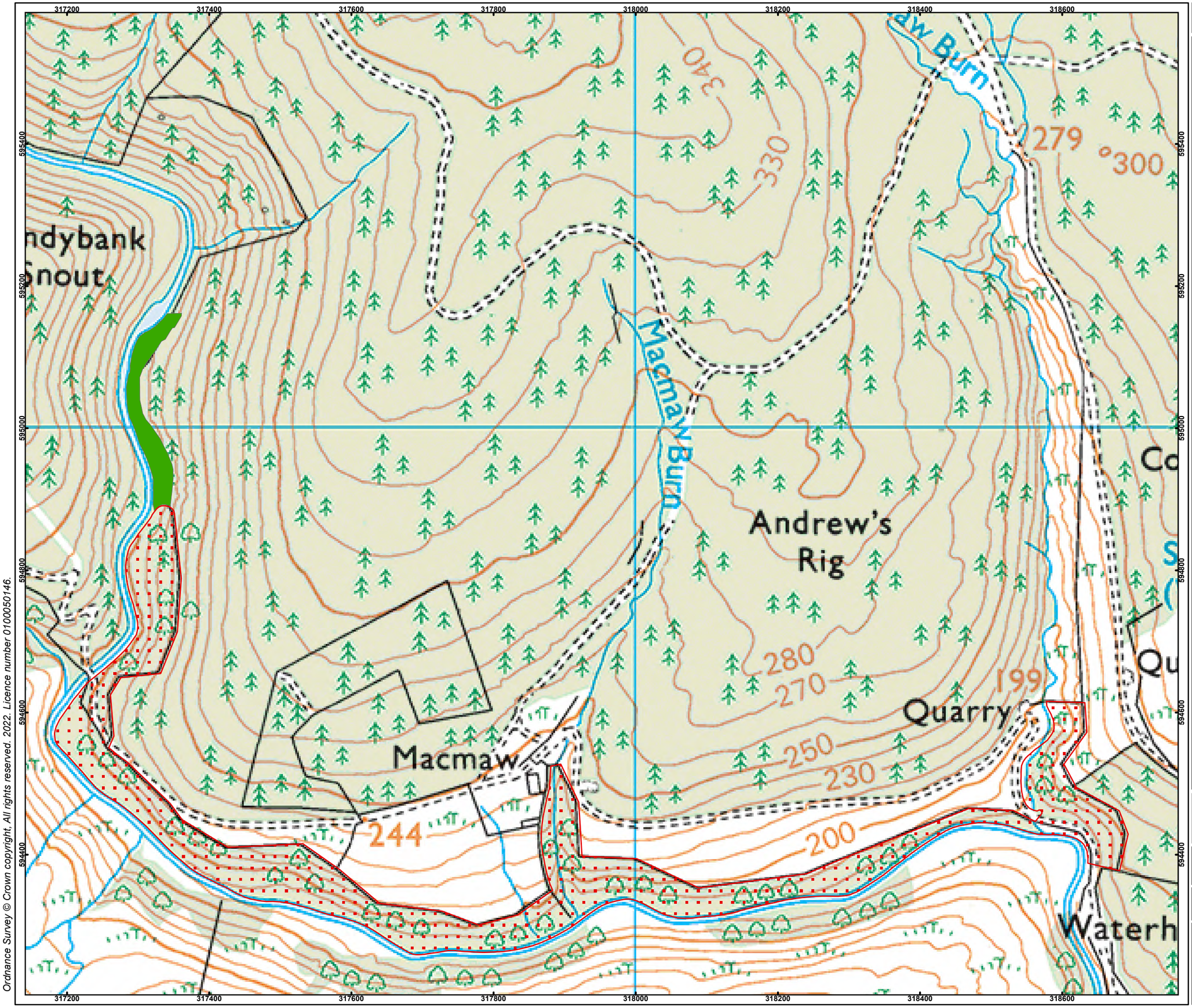
N

AI Figure 1 - HMEP

Date: 31/03/2023 Ref: 374-221125-7693-A

Produced: RE Reviewed: DW Approved: GC

community windpower
Godscroft Lane
Frodsham - WA6 6XU
t: 01928 734544 f: 01928 734790
e: info@communitywindpower.co.uk w: www.communitywindpower.co.uk



374 Scoop Hill

Legend

- SSSI - Dryfe Water
- Proposed Riparian Planting

Notes: N/A
Revisions: N/A

0 50 100 200 m

Scale: 1:5,000 @ A3

N

AI Figure 2 - Proposed Riparian Planting

Date: 30/03/2023 Ref: 374-230227-7734-A

Produced: BK Reviewed: RE Approved: GC

community windpower
Godscroft Lane
Frodsham - WA6 6XU
t: 01928 734544 f: 01928 734790
e: info@communitywindpower.co.uk w: www.communitywindpower.co.uk