VOLUME 2

1 INTRODUCTION

1 Introduction

1.1 This Environmental Impact Assessment (EIA) Report is prepared in support of an application made by Par Forestry IV LP (the applicant), for EIA Consent under The Forestry (Environmental Impact Assessment) (Scotland) Regulations 2017 for afforestation and new forest road works at Glen Dye Moor, Aberdeenshire.

1.2 This EIA Report (EIAR) presents information on the identification and assessment of potentially significant environmental effects of the proposed afforestation project. Further details of the statutory requirements for EIA are set out in Chapter 2 Approach to EIA.

1.3 This chapter provides an overview of the policy context, the site context, application details, the applicant details, and the project team.

1.4 POLICY CONTEXT

1.4.1 The Scottish Government's policy on New Woodland Creation is guided by the Scotland's Forestry Strategy 2019–2029, which emphasises sustainable forest management to deliver economic, environmental, and social benefits. A key objective of this strategy is to expand Scotland's forest and woodland area, recognising that appropriate woodland creation can enrich habitats, enhance landscapes, sequester carbon, and support rural economies. To achieve these goals, the strategy sets clear targets for woodland expansion, aiming to increase forest cover to 21% of Scotland's land area by 2032.

1.4.2 To support these targets, the Scottish Government offers financial incentives through the Forestry Grant Scheme, encouraging landowners to establish new woodlands. This scheme provides initial planting payments, annual maintenance payments for up to five years, and capital grants for necessary infrastructure like fencing and tree protection. The government's approach ensures that new woodlands are thoughtfully integrated into rural businesses, maximising economic and environmental benefits while contributing to climate change mitigation and biodiversity enhancement.

1.5 SITE CONTEXT

1.5.1 The proposed afforestation site, Glen Dye Moor, is located 40km southwest of Aberdeen, 14km southwest of Banchory and 18km northwest of Laurencekirk. The location and extent of the forestry project can be seen on Map 1, Location Map as well as Map 2, Proposals Overview Map. Glen Dye Moor spans over 6,300 hectares (15,700 acres) encircling the hills of Badymicks, Edendocher and Clachnaben. It is entirely within Aberdeenshire Council.

1.5.2 A full site description can be found in Chapter 3 Site Description.

1.6 APPLICATION DETAILS

1.6.1 The objectives of the application are:

- To establish new mixed woodlands.
- To provide benefits to communities.
- To protect and enhance biodiversity.
- To combat climate change through carbon sequestration.
- To produce high quality sustainable timber products.

1.6.2 To achieve the above objectives, the application proposes:

- The afforestation project extends to 2,750 net hectares, which is divided as outlined below;
- 690 net hectares of new native woodland establishment through natural regeneration.
- 1,420 net hectares of new native woodland (Native Scots Pine, Upland Birch and Montane scrub) establishment through new planting, including ground cultivation and tree planting, along with associated maintenance.
- 640 net hectares of new productive woodland establishment of Scots pine, Sitka spruce and a minor component of other conifer species, through new planting. This will include ground cultivation and tree planting, along with associated maintenance.
- Utilisation of new and existing deer fencing will protect new woodland establishment. The total length of fencing is 45,700m including almost 11,000m of existing deer fence that will be renewed. The fencing will include the installation of gates to maintain and enhance recreational access. Grouse droppers will also be installed where required to reduce risk of bird collisions.
- New forest roading (2,240m).
- Deer management, including the preparation of a deer management plan.

1.7 THE APPLICANT

1.7.1 The applicant is Par Forestry IV LP.

1.7.2 Par Forestry IV LP is managed by Edinburgh based alternative asset manager Par Equity.

1.7.3 The sole investor in this vehicle is Aviva Investors. Aviva Investors is the global asset management business of Aviva plc.

1.7.4 The project is being designed, implemented and managed by Scottish Woodlands Ltd.

1.8 THE PROJECT TEAM

1.8.1 This EIA Report has been compiled by Scottish Woodlands Ltd. Scottish Woodlands used a range of external and internal consultants to provide consultation advice, specialist assessment and input as required by The Forestry (Environmental Impact Assessment) (Scotland) Regulations 2017. Table 1.1 provides details of these specialists, alongside details of their relevant professional expertise.

1.8.2 The EIA process was managed by Megan Parker of Scottish Woodlands Ltd. Megan Parker (BSc For, MSc Ecol, MICFor) is a Senior Forest Planner with over 15 years of experience in sustainable long-term forest planning, new woodland creation planning and responsible environmental forest management. She holds two professional forestry qualifications, and a MSc in Ecology and Environmental Sustainability. Megan has a range of forestry experience from both the UK and the USA. She is a professional member of The Institute of Chartered Foresters.

1.8.3 All chapters have been authored and compiled by Senior Forest Planner Megan Parker and North Region Director Neil Crookston of Scottish Woodlands. Neil Crookston (BSc For (Hons), MICFor) was the company's North Region Director with over 18 years of experience in forest management throughout Central and North Scotland. He has wide experience in woodland creation, grant advice and forest planning for both traditional estates and investment properties.

1.8.4 Where specialists have been engaged, they have also reviewed and inputted into the relevant chapters and confirmed that they are content with the findings of the report. This is noted in Table 1.1. Additional appendices found in Volume 3 include individual notes on authors within each Appendix.

1.8.5 The EIA Report has been subject to peer review by Land Use Consulting (LUC), an independent environmental and planning consultancy with extensive experience in delivering EIA projects across Scotland. LUC has maintained the Institute of Environmental Management and Assessment (IEMA) Quality Mark since its inception in 2010, demonstrating commitment to EIA quality and best practice, and won the RTPI Planning Consultancy of the Year Award in 2019 and 2022. The peer review has been undertaken to provide overarching advice on structure and content of the EIA Report and to review compliance of the EIA Report with the requirements of The Forestry (Environmental Impact Assessment) (Scotland) Regulations 2017.

1.8.6 The authors of appendices and reports within Volume 2 are detailed within the individual documents.

Table 1.1 List of Specialist Contributors

Volume 2 Section	Title	Organisation Responsible	Expertise/Qualifications
Chapter 5 Alternatives Assessment (in relation to deer fencing/herbivore management) Chapter 13 Deer	Tom Chetwynd	Chetwynd Rural	Tom Chetwynd is a rural consultant with over 25 years' experience working in rural land management sector. Tom is experienced in the development of deer management plans and land management strategies. He is also the deer management consultant for Glen Dye Estate, giving him a strong local perspective.
Chapter 7 Golden Eagle	Dr Alan Fielding	NatureScot advisor, member of the Raptors	Alan Fielding is a Golden Eagle expert with more than 20 years of experience in eagle research in Scotland. He has had a significant contribution to the

	BSc (Hons) MSc PhD FHEA FLS	and Forestry Joint Working Group	understanding and conservation of Golden Eagles, and other raptors, through extensive research, advisory roles, and publications.
Chapter 8 Merlin	Graham Rebecca PhD BSc Environmental Biology (Env Biol)	Northeast Scotland Raptor Study Group	Graham Rebecca is a Conservation Scientist with over 40 years of experience, specialising in the avian ecology of Ring Ouzel, Hen Harrier and Merlin in East Scotland. He has been monitoring Merlin nests in Glen Dye since 1980. His publications have enhanced the understanding of bird conservation and ecology in the region.
Chapter 9 Curlew	Karen Cunningham BSc Zoo, MSc Env	RSPB Scotland	Karen Cunningham is a Senior Conservation Officer with over 20 years of experience working in eastern Scotland.
Chapter 9 Curlew	Hywel Maggs	RSPB Scotland	Hywel Maggs is a Senior Conservation Officer with over 20 years of experience in avian conservation in the Northeast of Scotland. He has been involved in projects to enhance habitats for Curlew and Corn Bunting and has played a key role in the re-colonisation of Eurasian Cranes in Scotland.
Chapter 11 Black Grouse	Stuart Wilkie BSc Ecol Sci (Hons For) FICFor, CEnv	Scottish Woodlands	Stuart Wilkie was the company's Environment and Certification Manager with over 40 years of experience in forest management across Scotland. He was responsible for overseeing the company's Environmental Management Systems, Forest Certification and Chain of Custody. He was also part of the UK Woodland Assurance Standard (UKWAS) Steering Group.
Chapter 12 Large Heath Butterfly	Patrick Cook BSc (Nat Scie)	Butterfly Conservation Scotland	Patrick Cook is an ecologist with more than 7 years of experience working with terrestrial invertebrates in the UK. He is conducting research on the Large Heath Butterfly and developing strategies to support both the butterfly's conservation and peatland restoration in Scotland. He has a particular interest in butterflies, moths, woodland management, and restoration ecology.
	Amauta Halvorsen BSc Bio, MSc Bio Sci	Scottish Woodlands	Amauta Halvorsen is an Ecologist, currently working as the Assistant Environmental Manager in the North Region of Scotland. She conducts pre-operational surveys for forest operations and provides environmental support to forest and harvesting managers.
Chapter 14 Recreation	Peter West BSc Geo (Hons) MSc Lan Eco	Scottish Woodlands	Peter West is a Senior Forest Manager with more than 7 years of experience in the North of Scotland. He has extensive experience in managing forestry operations, grant applications, woodland creation, and forest planning combined with developing strategies to

			incorporate and manage public and recreational use of clients estates.
Chapter 15 Landscape	Sam Oxley BSc (Hons), Ma, CMLI	LUC	Sam Oxley is the company's Landscape Planning and Management Director with over 25 years of experience in landscape design, landscape planning and landscape management across the UK. She provides landscape advice for projects at every stage, from initial concept to completion, including detailed landscape designs, design guides for planning applications, and landscape and environmental management plans.

2 APPROACH TO EIA

2 Approach to the Environmental Impact Assessment (EIA)

2.1 Environmental Impact Assessment (EIA) is a statutory process of compiling, evaluating and presenting predicted significant environmental impacts of a proposed development.

2.2 Under The Forestry (Environment Impact Assessment) (Scotland) Regulations 2017, referred to as the EIA Regulations, an EIA is required for forestry projects that are likely to have significant environmental effects and therefore require the consent of the Scottish Ministers.

2.3 The application for EIA consent is made to Scottish Forestry, the Scottish Government agency responsible for administering the regulations on behalf of the Scottish Ministers.

2.4 The results of the EIA are set out in this EIA Report. The EIA process is outlined below.

2.5 THE EIA PROCESS

2.5.1 Screening

Schedule 1 of The Forestry (Environment Impact Assessment) (Scotland) Regulations 2017 sets out the relevant "thresholds for the identification of projects likely to have significant effects on the environment" for which EIA may be required. This includes thresholds for projects in 'sensitive areas' and for projects 'outside sensitive areas', noting that Schedule 1, 2. (2) states that "there is no threshold in relation to forestry projects … in a sensitive area". 'Sensitive areas' include Special Areas of Conservation (SACs) and as the River Dee SAC is located partly within the proposal boundary, it is considered that it is within a 'sensitive area'. For projects outside sensitive areas, consideration should be given to the requirement for EIA where proposals for afforestation exceed 20 ha.

Given the extent of the proposals and potential sensitivities, including in relation to the SAC, the proposed project was 'screened' to determine whether it should be considered an "EIA Forestry Project" under The Forestry (Environment Impact Assessment) (Scotland) Regulations 2017. This included initial consultation with relevant statutory bodies and stakeholders, including Nature Scot, SEPA, the local authority, and community groups. No formal EIA Screening Opinion was adopted by the Scottish Ministers, and Scottish Forestry advised moving to an application for EIA consent and making a formal request for a Scoping Opinion.

2.5.2 Scoping

A request for an EIA Scoping Opinion was made to Scottish Forestry on 6th January 2025, following extensive discussions throughout 2023 and 2024, and a scoping meeting held on the 11th December 2024. The EIA Scoping Report identified the key environmental issues requiring detailed assessment and established the methodology for data collection. Further consultation was undertaken with consultation bodies to determine likely significant impacts, such as those on designated sites or protected species. This process culminated in the receipt of a Scoping Opinion from Scottish Forestry on 11th February 2025 which specified the environmental issues to be addressed in the EIA Report (see Appendix 2.4 Scoping Opinion for the Proposed Glen Dye Moor Woodland Creation EIA Forestry Project). At this stage the following specific issues were determined to not be in scope, but to be addressed through UKFS and published guidance and included in the EIA Report project description (Chapter 4 Table 4.1); Local Nature Conservation Site, Priority plants, Archaeology, Soils and ground cultivation, Peatland, Ground water dependant terrestrial ecosystems, Water and Wildfire.

2.5.3 Baseline Data Collection

To inform the assessment, baseline data was collected. Surveys and studies were compiled to document the current environmental conditions of the site, including habitats, species, and land uses. The process also considered potential future changes to the site in the absence of the proposed development, as required in Schedule 3 part 3 of The Forestry (Environmental Impact Assessment) (Scotland) Regulations 2017, providing a thorough understanding of the environmental context. This data collection, and ongoing consultation, informed the final design of the proposals, which are subject to assessment in this EIA Report.

2.5.4 Impact Assessment

The impact assessment stage evaluated the interactions between the proposed development and both existing and predicted site conditions. Direct, indirect, cumulative, short-term, and long-term impacts were examined to determine whether they were beneficial or adverse. During this stage, project designs were iteratively modified to reduce negative impacts and enhance positive outcomes.

2.5.5 Mitigation and Residual Impacts

Throughout the design and assessment process, mitigation measures were developed to avoid or reduce adverse effects, and any remaining impacts, known as residual impacts, were identified and evaluated. This ensured that all potential environmental consequences were thoroughly considered.

2.5.6 Consultation

Throughout the process, consultation played a crucial role. Stakeholders—including authorities, community groups, and specialists—were engaged at various stages to provide input, refine assessments, and ensure transparency. Their feedback informed both the assessment process and the development of mitigation strategies.

2.5.7 EIA Report

The results of the assessment were compiled into this EIA Report, which presents the baseline data, predicted impacts, proposed mitigation measures, and residual effects. The report is structured to provide clear, evidence-based information, enabling decision-makers to evaluate the project's environmental implications comprehensively.

2.5.8 Outcomes of the EIA Process

The EIA process ensures that potential environmental risks are identified early, stakeholders are engaged meaningfully, and the proposed development is designed to minimise adverse impacts while enhancing positive effects. This approach is intended to support informed and sustainable decision-making.

2.6 EIA SCREENING AND SCOPING

2.6.1 Screening Opinion requests were made to Scottish Forestry, acting on behalf of the Scottish Ministers. EIA Screening Opinion requests were made on the 3rd of March 2023, 17th October 2023, 31st January 2024, 11th March 2024 and 30th August 2024. Consultation with a wide range of stakeholders was undertaken as part of the due diligence and EIA screening processes. The Consultation Summary can be found in Appendix 2.1 EIA Screening Opinion Request - Glen Dye Moor Consultation Summary. No formal EIA Screening Opinion was adopted by the Scottish Ministers, and Scottish Forestry advised moving to an application for EIA consent and making a formal request for a Scoping Opinion.

2.6.2 A Scoping meeting was held between the applicant, Scottish Forestry, consultation bodies, and identified stakeholders on the 11th of December 2024. A request for a Scoping Opinion was submitted to Scottish Forestry, acting on behalf of the Scottish Ministers, on the 6th of January 2025. The Scoping Report can be found in Appendix 2.2 Glen Dye Moor Woodland Creation EIA Scoping Report including a note of the meeting, was submitted to Scottish Forestry as part of this request. The Scoping Report was also circulated to those who attended the Scoping meeting, with their feedback being passed to Scottish Forestry (see Appendix 2.3 Glen Dye Moor Woodland Creation EIA Scoping Report Consultation Approval Record). Scottish Forestry produced a Scoping Opinion (see Appendix 2.4 Scoping Opinion for the Proposed Glen Dye Moor Woodland Creation EIA Forestry Project) on the 11th of February 2025.

2.6.3 As part of Scottish Forestry's Scoping Opinion (Appendix 2.4 Scoping Opinion for the Proposed Glen Dye Moor Woodland Creation EIA Forestry Project), a number of items were raised which were not found to be significant effects however were noted as 'Specific issues to be addressed through UKFS and published guidance and included in EIA Report project description'. For ease of review these are cross referenced in Table 4.1 below noting locations within the EIA Report where information can be found addressing these points.

Table 4.1 Other Specific Issues

Specific Issues identified in the Scoping Opinion which do not require assessment and are addressed in the design of the scheme	Location(s) of further information
Feughside Local Nature Conservation Site (LNCS)	Chapter 3, 3.15.3; and Chapter 4, 4.4.12.1
Priority Plants	Chapter 3, 3.13.2; and EIA Report Constraints Map
Archaeology	Chapter 3, 3.19; and Appendix 3.3; Appendix 2.6; Chapter 5; as well as Appendix 5.13
Soils and Cultivation	Chapter 3, 3.8.2; and Chapter 4, 4.3; Appendix 4.2; Soil Sensitivity Map; Proposed Cultivation Map
Peatland	Chapter 3, 3.17, 3.8.4; Appendix 3.5
Groundwater Dependant Terrestrial Ecosystems (GWDTEs)	Chapter 3, 3.13; Appendix 3.1; Appendix 4.1; Appendix 4.3
Hydrology and Water (including Drinking Water Protected Area)	DWPA covered in Chapter 3 rather than in this chapter – see comment on the text below
Wildfire	Chapter 4, 4.15; Appendix 4.4

2.7 PREDICTION AND EVALUATION OF IMPACTS

2.7.1 Appendix 2.5 Significance Criteria outlines the overarching assessment method used in this EIA Report. To determine the significance of an impact, an assessment combines the sensitivity of the affected receptor with the magnitude of change to arrive at the level of effect significance:

Sensitivity *is understood as the sensitivity of the environmental receptor to change, including its capacity to accommodate the changes the forestry project may bring about.*

Magnitude *considers the characteristics of the change (timing, scale, size, and duration of the impact) which could affect the target receptor as a result of the proposed forestry project.*

Effects *can be indirect, cumulative, short-term, long-term, beneficial or adverse, and are identified as being either significant or not significant in the context of the EIA Regulations.*

2.7.2 Chapters 6 through 15 of the EIA Report detail the prediction and evaluation of potential impacts on topics as agreed through consultation and the 'Scoping Opinion', informed by the findings of the surveys, best practice assessment methodologies and professional judgement. The relevant detailed assessment methodologies for each topic are set out in the relevant chapter and accompanying appendices.

2.7.3 Chapter 16 summarises the significant effects identified for each topic and integrates all studied impacts, considering both direct and indirect effects, as well as the interactions between them. This comprehensive approach ensures a full determination of the 'net effect' of the forestry project, including both positive and negative environmental consequences.

2.7.4 Appendix 2.6 Mitigations Schedule for Glen Dye Moor New Woodland Creation outlines the key site-specific mitigation measures developed in response to consultation feedback, site surveys, and statutory review.

2.8 LOCATION OF INFORMATION IN EIA REPORT

2.8.1 The EIA has been undertaken in line with the requirements of the EIA Regulations. Part 1 Regulation 6. (3) of the EIA Regulations sets out the information that must be included in the EIA Report, summarised in the table 2.1 below. This also identifies where the corresponding information can be found in the EIA Report.

Table 2.1 Location of Information in EIA Report

Information required by EIA Regulations (Regulation 6. (3)	Relevant Chapter of EIA Report
(a) a description of the EIA forestry project comprising information on the site, design, size and other relevant features of the project	Volume 2, Chapter 3 – Site Description Volume 2, Chapter 4 – Scheme Proposal
(b) a description of the significant effects of the EIA forestry project on the environment	Volume 2, Chapter 16 – Summary of Significant Effects and Volume 4, Appendix 2.5 Significance Criteria
(c) a description of the features of the EIA forestry project and any measures envisaged to avoid, prevent or reduce and, if possible, offset significant adverse effects on the environment	Volume 2, Chapters 6 to 15 and Volume 4, Appendix 2.6 Mitigations Schedule

(d) a description of the reasonable alternatives studied by the applicant, which are relevant to the EIA forestry project and its specific characteristics, and an indication of the main reasons for the option chosen, considering the effects of the EIA forestry project on the environment	Volume 2, Chapter 5 Alternatives Analysis
(e) a non-technical summary of the information referred to in sub-paragraphs (a) to (d)	Volume 1 – Non-Technical Summary
(f) any other information specified in schedule 3 relevant to the specific characteristics of the EIA forestry project or of the type of EIA forestry project in question and to the environmental features likely to be affected	Volumes 3 to 4 including Maps, Visualisations, Technical Appendices and Surveys

2.9 PUBLICITY OF EIA REPORT

2.9.1 Upon submission and registration of this EIA Report, notice of the proposed application will be published on Scottish Forestry's website, in the Edinburgh Gazette and in a local newspaper (Press and Journal).

2.9.2 The notice shall include –

- Description of the application and the EIA forestry project;
- Statement that the EIA forestry project is subject to an Environmental Impact Assessment;
- Statement on where and when the report is available for inspection free of charge;
- Statement on how copies of the EIA Report may be obtained, and the cost of the report;
- Statement on how and by what date representations about the EIA forestry project must be made (within 30 days of the date of the notice);
- Details on the public consultation including how further additional information will be shared, and how representations on that information can be made; and
- Statement that Scottish Forestry may decide either to grant consent subject to the mandatory conditions required by The Forestry (Environment Impact Assessment) (Scotland) Regulations 2017 or subject to such further conditions as they see fit or refuse consent.

2.9.3 A copy of the EIA Report will be made available on Scottish Forestry's website and a hard copy will be available to view at Scottish Forestry, Grampian Conservancy, Portsoy Road, Huntly, AB54 4SJ.

2.10 COPIES OF EIA REPORT

2.10.1 Copies of the EIA Report and attached documents (subject to confidentiality) can be purchased from Scottish Woodlands Ltd for £1,000 for a paper hard copy, or £30 for a USB memory stick copy. A copy of the non-technical summary can be provided via email free of charge.

Contact:
Scottish Woodlands Ltd
Speyside Business Centre
8 West Street
Fochabers
IV32 7DJ
Email: fochabersenquiries@scottishwoodlands.co.uk
Tel: 01343 821338

3 SITE DESCRIPTION

3. Site Description

Chapter information references:

3. Site Description

3.1 INTRODUCTION

3.1.1 This chapter presents a site characterisation, documenting the current environmental and physical conditions as well as local community context to establish a baseline for subsequent analysis. Detailed survey results, including ecological and ornithological surveys, are summarised, with full reports and data sets located in the appendices, as referenced.

3.2 LOCATION

3.2.1 Glen Dye Moor is located 14km southwest of Banchory near the edge of the Grampian Mountains in Aberdeenshire. Totalling 6,356ha, extending east from the summit of Mount Battock, the site includes the hills of Badymicks, Edendocher and Clachanben. The main access is located at Spittal Bridge, grid reference NO647844 where there is small carp park for public use. Central project grid reference is NO592858 (easting and northing 359284, 785829) with the nearest post code being AB31 6PJ. The project sits within Aberdeenshire Council local authority and Scottish Forestry's Grampian Conservancy. See the Location Map for further details.

3.2.2 To the north, south and west of the property are long-established grouse moors managed by private estate owners. There are large areas of productive forestry to the north and east of the proposal area, including Glen Dye Estate, the Durris complex and Fetteresso Forest. There is a proposed windfarm to the southwest with construction planned in the near future.

3.3 OWNERSHIP

3.3.1 Glen Dye Moor is owned by an investment vehicle, Par Forestry IV L.P. (the applicant), which is managed by Edinburgh based alternative asset manager Par Equity. Par Equity has been actively involved in woodland investment for over 10 years. Glen Dye Moor was purchased by the applicant in late 2021.

3.3.2 The sole investor in this vehicle is Aviva Investors. Aviva Investors is the global asset management business of Aviva plc. Aviva Investors is committed to achieving net zero in its Real Assets division by 2040 through investment in low-carbon solutions, decarbonising existing assets in its portfolio, as well as carbon insetting through afforestation and peatland restoration.

3.3.3 The project is being designed, implemented and managed by Scottish Woodlands Ltd. Scottish Woodlands is one of the largest forest management companies in the UK.

3.3.4 All sporting rights are retained by the owner.

3.3.5 There are two small areas of degraded peatland, approximately 25 hectares in total, that are subject to a management agreement as part of the neighbouring windfarm consent. It is anticipated the degraded peatland in these areas will be restored. This management agreement complements the restoration activities being carried out on Glen Dye Moor by the applicant.

3.4 LAND USE

3.4.1 Glen Dye Moor has been utilised for centuries as a deer forest and grouse moor. Until recently, it was part of the Fasque Estate, famously owned by the Gladstone family, including William Gladstone, who served as Prime Minister four times.

3.4.2 Historically, Glen Dye Moor formed part of a larger hill unit managed for grouse shooting and deer stalking. During the 1970s and 1980s, it was operated as an extensive deer ranch/farm. The hill was deer-fenced and supported a population of approximately 6,000 red deer. In the 1990s, following a shift in management objectives, the deer population was significantly reduced, and property was leased to a sporting tenant focusing on grouse moor management.

3.4.3 As normal on grouse moors, controlled burning has been conducted to maintain a mosaic of heather habitats suitable for red grouse. Sheep grazing had been introduced to reduce tick populations, which can negatively impact red grouse chick survival. Despite its long history of grouse shooting and intensive management, the grouse population had declined, leading to the introduction of a partridge shoot to supplement sporting opportunities. There is no longer a commercial shoot on Glen Dye Moor.

3.4.4 A red deer population remains on the moor, and it has been used for commercial deer stalking. Deer numbers fluctuate seasonally and are monitored during annual deer counts. Red deer and roe deer are present within the project area at levels which are limiting restoration efforts. Details on current conditions relating to deer can be found within Appendix 3.4a Deer Management Plan and an assessment of impacts on deer is provided in Chapter 13 of the EIA Report.

3.4.5 Since the applicant's purchase, there have been no sporting activities, employees, or livestock on the moor. Currently, the land remains open moorland. Peatland Restoration work began in 2023 and is planned to continue to restore as much of the degraded peatlands throughout the property as is feasible. Deer management is ongoing to control deer numbers following cessation of sporting interests.

3.4.6 The neighbouring properties to the north (Finzean and Ballogie Estates), west (Millden Estate), and southwest (Glen Dye Estate hill ground) are managed for sporting purposes (grouse shooting and deer stalking). To the east, Glen Dye Estate contains commercial forestry, which forms part of a larger contiguous forest complex. Glen Dye Estate has an approved Forestry Grant Scheme Woodland Improvement Grant funded Deer Management Plan and a Sustainable Management of Forests Reducing Deer Impact funding contract (Ref 21FGS556523) which was approved 13 July 2021. There is also an approved Forestry Grant Scheme Woodland Improvement Grant funded forest plan (Ref 17FGS20797), approved in 2019 and expires in 2029. To the southeast Glensauch Farm, an upland livestock farm, with a particular focus on climate-positive farming research. There are two Forestry Grant Scheme funded woodland creations to the south, one near Hound Hillock (Ref 21FGS56804) from 2021 for diverse conifer and conifer planting, and another scheme (Ref 20FGS55023) from 2020 for conifer, native Scots pine and native broadleaves. A new wind farm development (Glen Dye Wind Farm) has been consented to the southwest of the proposal area, neighbouring property. Neighbouring estates are shown on Figure 3 East Grampians Deer Count Map within the Deer Management Plan (~~A~~ppendix 3.4a).

3.4.7 Whilst there are no core paths on the property the site is well used for recreational purposes by foot, bike and horse. The existing track networks between the Water of Dye and Clachnaben are particularly popular. The Mountain Bothies Association has a long-term lease for half of the Charr Bothy, the other half remains in private use by the owner. Other recreational interests include a long-distance rifle range which is used by local sporting groups on request.

3.5 EMPLOYMENT

3.5.1 Prior to the current ownership, a license was in place for sheep grazing on the hill to act as a "tick mop." This license was renewed annually and provided supplementary income to an existing farming business. However, the license was not in place when the applicant purchased the property.

3.5.2 It is believed that two staff members were previously employed to manage the moor. However, at the time the site was marketed and sold, there were no employees.

3.5.3 There is no residential property at Glen Dye Moor.

3.5.4 Scottish Woodlands Ltd opened a new office in the local town of Banchory. This need arose when the applicant purchased Glen Dye Moor. This office supports 5 staff members. Whilst they are not all engaged on the Glen Dye Moor project, the project currently supports at least one full time member of management staff and when this site is operational this will increase significantly.

3.5.5 There are currently deer managers culling deer on a contract basis. This is creating an employment opportunity.

3.5.6 On the site at present there have been 2 phases of peatland restoration completed, with a 3rd ongoing and 4th and 5th with approved funding from Peatland Action. A further 3 phases are planned. This opportunity creates employment onsite for peatland restoration operatives, surveyors and supervisors.

3.5.7 To address shortages in trained operators, part of the phase 2 peatland restoration was tendered to include contractors with no previous experience in the restoration field. This provided a mentored opportunity to bring new businesses into the peatland restoration sector.

3.5.8 The applicant has funded a 5-week forestry operative new entrants' course, to reduce barriers to forestry businesses employing new entrants into the sector. This course is equipping candidates with core qualifications as well as an introduction to forestry and employment opportunities. Seven candidates have completed the course so far.

3.5.9 The applicant has part funded a PhD student from the University of Stirling to provide a baseline and ongoing water quality monitoring for the Water of Dye. The objective being to measure the impact of woodland establishment and peatland restoration across the catchment.

3.6 PUBLIC ROADS

3.6.1 The property is accessed via the B974 Fettercairn to Banchory road, locally known as the Cairn O' Mount Road, and the minor public road from the B974 to Whitestone via Greendams. These roads are not shown on the Timber Transport Forums Agreed Route Map for Timber Transport though timber haulage does occur. Therefore, it is assumed that they are Consultation Routes. Consultation will be required with the local authority prior to any timber haulage taking place. This will be in 2045 at the earliest.

3.7 LOCAL FORESTRY STRATEGY

3.7.1 The site falls in the Aberdeenshire Council local authority area. Aberdeenshire Council has published a woodland strategy - Aberdeenshire Forestry and Woodland Strategy (Planning advice PA2023-01) (Sept 2023).

3.7.2 The Strategy has a vision that:- 'The forestry and woodlands of the Aberdeenshire Local Development Plan area are resilient to the effects of climate change, protect and enhance the environment and local culture, benefit and support the local and national economy and are valued and enjoyed by people, both residents and visitors.'

3.7.3 Woodlands currently cover 18.7% of the Council area, which is in line the Scottish average, though is below the Scottish Forestry Strategy target of 25% woodland cover by 2050. The strategy does not set its own target for increasing woodland cover, but maps preferred, potential, sensitive and unsuitable areas for woodland creation. These categorisations are outlined below:-

3.7.3.1 Preferred - no significant constraints/significant opportunities for woodland creation at a high-level analysis.

3.7.3.2 Potential – as above, except land classed as LCA 3.2.

3.7.3.3 Sensitive - areas with significant constraints, such as prime agricultural land, or protected sites.

3.7.3.4 Unsuitable - carbon rich soils where planting is not suitable

3.7.4 At Glen Dye Moor, the area within the Feughside Local Nature Conservation Site is within the 'sensitive' zone for woodland expansion, the remaining lower ground is within the 'preferred' zone. The high ground (where afforestation is not proposed) is within the 'unsuitable' zone.

3.7.5 The Strategy identifies ten aims and has four themes outlining the key issues and opportunities.

3.7.6 A note of the relevant themes and opportunities for action in relation to this proposal are set out in the table below, together with information on how the proposals will realise these opportunities:

Theme 1 - Climate Change & Tree Health: Aid trees and woodlands' resilience to the negative effects of climate change and tree disease. Promote trees and woodlands as a means to aid Scotland in mitigating and adapting to climate change.	
Opportunities for Action	**Delivery**
To increase resilience, a greater diversity of tree species and management practice is required.	The woodland design at Glen Dye Moor will include a range of tree species and planting designs suited to the location to provide both species and visual diversity. The majority of the new woodland is native broadleaves and native Scots pine suited to the location. There is a proportion of productive woodlands, which is predominately Scots pine

	and Sitka spruce. This scheme exceeds the diversity standards set in the UK Forestry Standard (5th edition).
New woodland creation, as well as appropriate management of existing woodland, should be promoted as a means of off-setting carbon dioxide emissions.	The scheme at Glen Dye Moor is on a large scale and will contribute to carbon capture targets set by the Scottish Government.
New woodland creation should avoid peat rich soils and, where appropriate, removal of historic plantings on bogs and other peat rich habitats should be explored.	A peat depth survey has been undertaken, and peat rich soils (peat depth >50cm) will be avoided.

Theme 2 - Timber & Business Development: Support expansion of Aberdeenshire's woodland coverage in line with Scottish Government targets Promote and support the forestry industry.	
Opportunities for Action	**Delivery**
The expansion of woodland in the region is strongly encouraged with a focus on multi-functionality – delivering wood products along with environmental and social benefits.	The woodland design incorporates productive and native woodlands to deliver multiple economic, environmental and social benefits.
To maximise the benefits of new woodland the strategy emphasises the need for site-based decision making and consultation.	Community engagement has been undertaken throughout the application process. This has included use of a dedicated website, public drop-in sessions, letters, site visits and attendance at meetings, such as the local Community Council. Follow up discussions have taken place as needed to clarify and inform the scheme design.
Agricultural classes 1.2 & 3.1 should not be planted with new woodland. Planting on class 3.2 land should be carefully considered to ensure overall benefit.	The majority of the site is on land classed as 5.1 for agriculture, or poorer. There is a small proportion of planting proposed on 4.1 and 4.2 land. There is no planting proposed on land classes 1, 2, 3.1 or 3.2.
Promote and support the forest industry.	The scheme creates new employment opportunities through the establishment, maintenance and restructuring stages of the woodland development. Whilst the productive woodland is the smaller proportion of the site, it still compromises a large area and will generate future timber opportunities to benefit local timber markets. Outreach opportunities, such as the new forestry operatives' course, are actively being pursued to enhance the wider forestry sector.

Theme 3 - Communities, Development, Access and Health Strongly protect and enhance trees and woodlands in the planning and construction of build development. Promote and support woodland's role in providing opportunities for community development and recreational access.	
Opportunities for Action	**Delivery**
Responsible public access to woodlands should be maintained and encouraged.	Fence design ensures that there are access points on all known access/egress routes, as well as addressing any current obstacles to access. Enhanced car parking is proposed at Spittal Bridge. Volunteer

	days have already taken place, and future events will be facilitated to maintain the footpaths to Clachnaben. The lease of Charr Bothy to Mountain Bothies Association has been extended to provide greater continuity. Additional recreational opportunity will be created through the extension of forest roads.
Partnership working with a range of sectors less engaged in woodlands, such as health and education, should be strongly encouraged.	The applicant is an active funder of Prosper's Stemovators Climate Smarter initiative in 15 local schools for an initial 3-year project. This project funds 16 practical lessons covering topics of renewable energy, sustainable water, forestry and smart technology.

Theme 4 - Environment, Landscape and Historic Assets: Promote woodland creation and management practice which protects and enhances environmental quality and biodiversity. Promote woodland creation and management practice which protects and enhances landscape and historic assets.	
Opportunities for Action	**Delivery**
Important open ground habitats, such as wetlands and semi-natural grasslands should be protected from inappropriate tree planting.	The new woodland creation forms part of a wider nature conservation project, including peatland restoration. A habitat survey has been undertaken as part of the site investigation works. Open ground habitats, such as blanket bog, are being protected through this proposal.
Riparian woodlands are important and have benefits which cut across all themes. Existing woodlands should be protected and opportunities for new riparian woodlands should be encouraged and supported where appropriate.	This new woodland proposal creates new riparian woodland through planting new native woodland and natural regeneration.
Woodland planting using species suited to the local environmental conditions and climate, e.g. locally native species, should be strongly encouraged.	Suitable tree planting species have been selected based on local site conditions and ecological site classification. Native seed zones will be used where available for native woodland creation.
Woodland creation and management should not increase, and where possible, reduce, diffuse pollution impacts on the water environment. Positive management includes blocking inappropriate drainage and restoring bogs.	A wider part of this project includes extensive peatland restoration on degraded peatland areas (unsuitable for afforestation). Diffuse pollution planning is incorporated into the design and operational delivery. Such as use of optimal cultivation in line with best practice and no new drainage.
Woodland planting and management plans should be designed to conserve nationally and internationally protected habitats and species and improve habitat networks.	A full ecological survey and consultation with relevant stakeholders has been undertaken to inform the design to protect and conserve protected habitats and species. The River Dee SAC will be enhanced through new riparian woodland.
Woodland planting and management should protect and enhance historic assets including scheduled ancient monuments, gardens and designed landscapes and battlefields.	Cultural heritage has been identified as an important aspect of this new woodland creation proposal. An archaeological survey (Appendix 3.3 Archaeological Survey) and consultation with relevant stakeholders, including the local authority, has been undertaken to inform the design to protect and enhance cultural assets where possible. It has been included in this EIA Report to demonstrate that this project is protecting the cultural heritage on site.

Woodland planting and management should be appropriate to landscape setting. Landscape Character Assessments and other relevant datasets can help to inform this.	Landscape has been identified as an important aspect of this new woodland creation proposal. It has been included in this EIA Report to demonstrate its appropriateness to landscape setting. This includes an LVIA.

3.8 GEOLOGY, SOILS AND LAND CAPABILITY FOR AGRICULTURE AND FORESTRY

3.8.1 *Geology*

3.8.1.1 The underlying bedrock throughout the project area is described by the British Geological Survey as mainly non-porphyritic granite (Mount Battock Pluton). This is igneous bedrock formed between 433.4 and 393.3 million years ago during the Silurian and Devonian periods. There are some distinctive granite tors, Clachnaben being the most prominent, that is described as Clachnaben Granite (also of the mount Battock Pluton) an igneous bedrock with intrusions of silica-rich magma. Along Glen Dye sits a further bedrock formation described as the Water of Dye Granit, again of the same mount Battock Pluton. Superficial deposits of Till-Diamicton are formed in cold periods with Ice Age glaciers scouring the landscape and depositing moraines of till with outwash sand and gravel from post glacial meltwaters. There are also extensive superficial deposits of peat within the property boundary formed up to 3 million years ago in the Quaternary Period from accumulations of plant remains in anaerobic conditions.

3.8.2 *Soils*

3.8.2.1 A peat depth survey for the full site was produced in October 2022 by Dr Andy McMullen, Botanaeco. The full survey can be found in Appendix 3.1. Habitats Peat and Protected Species. Supplementary soil survey work was carried out by Scottish Woodlands to ground truth and refine the peat depth survey and the National Soil Map of Scotland from soil pits and field survey. The full soil assesment including peat depth can be found in the GDM EIA Appendix 3.7 Soil Sensitivity Map.

3.8.2.2 The granite bedrock produces a coarse-grained and free draining mineral soil component. This free draining mineral component coupled with cold and wet climate leads to extensive formation of podzolic soils due to eluviation. In addition soils are typically acidic. These factors in combination lead to the development of peaty layers, and peaty O-Horizons of varying depths are found on the majority soils on GDM. There are areas of more neutral soil found in some of the flushes, and these are detailed in Appendix 4.3 Water Environment Assessment Summary

3.8.2.3 The below table gives summary data for soil types found at Glen Dye Moor, of which the majority are either Peaty Podzols or Blanket/Deep Peat. It is sorted to show soils with the lowest core altitudinal range first. As can be seen Peaty Gleys and Alluvial soils occupy the glen bottoms and lower slopes around the Water of Avon and Water of Dy watercourses. Peaty Gleys are found in areas of surface waterlogging. On the moderate and free draining slopes above soils transition to Mineral Podzols with reduced O-Horizons. As slopes ease and altitude increases above 300m soils start to develop greater peat depth and tend more towards Peaty Podzols before transitioning to Blanket Peat on the hill tops. There are areas of Ranker and Skeletal soil along ridgelines and around peaks. These have developed due to a combination of altitudinal limits and erosion. Peaty Podzols and Blanket/Deep Peat constitute the majority of soils.

Soil Type	Mean Peat Depth (cm)	Area (ha)	Altitude Range (m)	Core Altitude Range (m)
Alluvial Soils	21	136	120 - 335	192-280
Peaty Gleys	29	86	156 - 349	207-277
Mineral Podzols	18	542	132 - 445	204-318
Peaty Podzols	27	1495	216-749	278-498
Blanket Peat (<50cm)	40	1108	242 - 412	338-486
Deep Peat (>50cm)	100	2751	237 - 709	388-530
Immature/Skeletal Soils	n/a	212	282 – 778	418-620

3.8.2.4 Mean peat depth, arrived at by interpolation between probed points, is shown in the table above. Interpolated peat depth and soil type is shown on Appendix 03.8 Soil Type and Peat Depth Map. This details how peat depth varies between and within soil types. There are minor components of Deep Peat found in all other soils types at GDM. These were identified during peat probing, and the probing points are shown on Appendix 03.7 Soil Sensitivity Map. It was found that discrete, small pockets of deep peat have formed with depths >50cm. However, these are isolated an unmappable (<0.25ha). There are further details in 3.8.2.5.

3.8.2.5 Peat depth across Glen Dye Moor is shown on Appendix 3.6 Peat Depth Map and identifies peat more than 50cm as deep peat, which is unsuitable for afforestation. Areas of unmappable deep peat (less than 0.25ha) have been identified within the planting area. 138 points were probed which showed discrete pockets of peat depth >50cm. Additional probing around these points showed the area of deep peat did not extend to an area of greater than 0.25ha, hence these have been classed as unmappable as per Scottish Forestry Guidance (Rural Payments, Forestry Grant Scheme Guidance, 6th October 2025), Worst case scenario is these areas extend to 0.25ha, or 34.5ha total, which is less than 1.7% of the total plantable area. As per Scottish Forestry guidance areas smaller than 0.25 hectares (unmappable) will, where practicable, be identified on the ground and care will be taken when preparing the site to ensure these areas are not disturbed and remain unplanted. As these areas represent a small proportion of the planting area (less than 10 per cent), they have been included, within mapped planting areas. However, they will not be planted, and the stocking densities will be adjusted accordingly in surrounding areas.

3.8.2.6 *As agreed through the EIA Scoping process, potential effects on soils and peat have been scoped out of detailed assessment.*

3.8.3 *Land Capability for Agriculture*

3.8.3.1 The James Hutton Institute has developed land capability maps for agriculture. These maps show their assessment of the capacity of land to produce food. All of the UK is described at a scale of 1:250k, with more detailed 1:50k scale mapping available across parts of the country. At Glen Dye Moor, land capability is available in 1:50k scale to the area to the east of the latitudinal line of NO60 (Ordnance Survey), and only available in 1:250k scale to the west of this latitudinal line.

3.8.3.2 On the more fertile lower elevations, the land capability is generally 5.2 and 5.3 (capable of use as improved grassland). The land capability transitions into 6.2 and 6.3 (capable of use as rough grazing) on less fertile areas as you move up the slope and in less fertile areas. The hill tops are classified as 7 –

land of very limited agricultural value. Proportions of land category within the project area are shown in Table 3.1.

Table 3.1 showing proportion of land capability grades within the total project area based on a 5km buffer area of the project boundary, based on JHI 250k Land Capability for Agriculture Mapping

Land Capability for Agriculture		Proportion of land category within project area
Grade 1	Capable of producing very wide range of crops.	0%
Grade 2	Capable of producing wide range of crops.	0%
Grades 3.1/3.2	Capable of producing high/average yields of narrow range of crops.	0%
Grades 4.1/4.2	Capable of producing narrow range of crops, primarily grassland.	0%
Grades 5.1-5.3	Capable of use as improved grassland.	9%
Grades 6.1-6.3	Capable of use as rough grazing's.	27%
Grade 7	Very limited agricultural use.	19%
	Land outside of Glen Dye Moor boundary within 5km buffer area	45%

3.8.3.3 The Report of the Woodland Expansion Advisory Group (WEAG) recommends that the focus of woodland expansion should be away from prime agricultural land (land classification grades 1, 2 and 3.1). The report acknowledges that grazing land has significant potential for the creation of high quality and high value woodlands. However, it should be achieved in ways that seek to avoid adverse impacts on local patterns of agriculture.

3.8.3.4 At Glen Dye Moor, none of the land is prime agricultural land. As such, potential effects on agriculture and prime agricultural land are scoped out of detailed assessment and are not considered further.

3.9 LAND AND CAPABILITY FOR FORESTRY

3.9.1 The James Hutton Institute has developed land capability maps for forestry across the UK at a scale of 1:250K. These maps show their assessment of the capacity of land to grow trees.

3.9.2 The lower lying land to the east and within the glens associated with the Water of Aven and Dye are dominated by Forestry Classes F4 (Land with moderate flexibility for the growth and management of tree crops), F5 (Land with limited flexibility for the growth and management of tree crops) and F6 (Land with very limited flexibility for the growth and management of tree crops), with the land capability declining with altitude. The upland peat areas and hilltops are dominated by F7 (Land unsuitable for producing tree crops).

3.9.3 There are large areas of commercial forestry to the north and east of the proposal area, including Glen Dye Estate, the Durris complex and Fetteresso Forest. These woodlands are at a similar topography and elevation to the proposal site. There a are several coniferous species present, including Sitka spruce, Norway spruce, larch sp. and Scots pine.

3.10 TOPOGRAPHY

3.10.1 The property lies between 130m in the northeast along the Water of Aven and 778m above sea level in the west at the summit of Mount Battock.

3.10.2 The site topography is very varied with two main glens, the Water of Aven and Water of Dye running west – east. The Water of Aven in the north follows a steeply incised gully for much of the length of the boundary, giving way in both the west and east to more accessible terrain. The Water of Dye forms the base of the more accessible Glen Dye with gently sloping sides and more accessible flanks.

3.10.3 Between these glens there is a high ridge, followed by a road and tracks between Mount Battock (778m) and the prominent peak of Clachnaben (679m).

3.10.4 To the south of Glen Dye the land rises to the peaks of Meluncart (525m), Whitelaws 507m) and Cairn o' Mount (455m).

3.10.5 The aspect of the site is complex with north and south facing slopes dominating the main glens which run east to west.

3.10.6 Glen Dye Moor was flown by piloted aircraft on 29th May 2023 and 30th May 2023, conditions were cloud free and late spring snow had melted providing good visibility of the ground, flight elevation was about 4,500ft. It captured around 3,300 photographs at 10cm resolution with approximately 60% overlap between flight lines. From this imagery a photogrammetry layer was produced as an orthorectified cloud optimised Geo TIFF, it was also processed into a digital elevation model at 20cm resolution.

3.11 HYDROLOGY

3.11.1 There is an estimated 122 kilometres of watercourses within the property boundary. The Water of Dye flows eastwards where it joins the Water of Feugh and eventually meets with the River Dee, which is designated as a Special Area of Conservation, and assessed in detail in Chapter 6 of the EIA Report. Multiple small burns contribute to the Water of Dye, the most notable tributary being the Water of Charr which flows north to join the Water of Dye at the Charr Bothy. To the north of the moor, the Water of Aven acts as the property boundary and takes on multiple small tributaries as it flows eastwards to join the Water of Feugh. The catchment of the Water of Feugh, including the Dye, Aven and all their tributaries is within the district of the Dee District Salmon Fishery Board.

3.11.2 The classified watercourses are all in good-high current condition based on the SEPA Water Classification scoring, which describes by how much their condition or status differs from near natural conditions. Using biological quality elements, hydrology, morphology, and assessment of invasive non-native species (INNS). Similarly, ground water quality in the Clachnaben water body is classified by SEPA as 'Good'.

3.11.3 Glen Dye Moor is entirely within the Scottish Water River Dee Drinking Water Protection Area. Current data relating to watercourse condition and pressures are summarised in Table 3.2.

3.11.4 As agreed through the consultation and EIA Scoping process, a detailed chapter on effects on hydrology has not been included in the EIA Report.

Table 3.2 All watercourses which fall within the proposal, with their current condition and pressure based on data from the SEPA Water Classification Hub

Watercourse	Current Condition	Current Pressure
Water of Dye (lower catchment)	Good	No negative pressures
Water of Dye/Spital Burn	High	No negative pressures
Water of Dye/Water of Charr	Good	No negative pressures
Water of Feugh/Burn of Greendams	Moderate (recently downgraded from Good)	Morphological alterations – Forestry intensive use (cultivation/planting to bank).
Water of Aven/ Feugh (upper catchment)	High	No negative pressures

3.12 CLIMATE

3.12.1 Mean annual temperature for East Scotland is low compared to the UK average at 6°C over the higher ground in the Grampians. Annual rainfall is around 992mm per year. Rainfall is generally well distributed with the wettest months in autumn and early winter. With snow expected for around 20 days during the winter months.

3.12.2 It is anticipated that due to the effects of climate change, we will see warmer, wetter winters and hotter, drier summers along with an increase in the frequency and intensity of extremes.

3.12.3 In forestry, exposure or wind hazard that trees will be exposed to is expressed as a DAMS (Detailed Aspect Method of Scoring) score. A score of 3 -12 is sheltered, 12 – 16 moderately exposed, 16-19 highly exposed, 19-22, severely exposed, and 22+ is too exposed for commercial forestry. At Glen Dye Moor the lower slopes, where woodland is proposed, has a score between 10 and 15 (sheltered to moderately exposed), rising to 23 on the higher more exposed tops, where forestry is not proposed.

3.13 ECOLOGY

3.13.1 An ecological survey for the full site was produced in October 2022 by Dr Andy McMullen, Botanaeco. The full survey can be found in Appendix 3.1. Habitats Peat and Protected Species. Heathland is extensive and over the summits especially, there is extensive blanket bog habitat. The blanket bog is highly degraded by erosion that has now stabilised. Low ground around Charr Bothy in the south has been improved & used as pasture. Otherwise, the site has a history of use as a deer forest and as a grouse moor. A brief survey summary of the Habitats, Peat and Protected Species survey is detailed below.

3.13.2 Heath is the most extensive habitat across Glen Dye Moor where it accounts for 3,317 ha (52 % relative cover). There is 2,617 ha of blanket bog and related mosaics across Glen Dye Moor. An additional 7 ha (0.1 %) is associated with areas from which the blanket bog habitat and its peat have been eroded. Woodland (including plantation) is located on the eastern boundary beyond which plantation is extensive. Otherwise, within Glen Dye Moor, there are scattered, minor areas of broadleaved woodland as well as small groups of, or singleton, trees. In total, there is 129 ha (2 %) cover of acid grassland. Flush & swamp account for a total of 112 ha (2 %) and standing water includes an additional 0.8 ha (<0.1 %). Two areas of scree total 2 ha (<0.1 %) and bare ground is associated with 17 ha (0.3 %) track surface across the site.

3.13.3 Ancient Woodlands are recorded on the Ancient Woodland Inventory within the proposal area however the first edition OS maps (1800s) display two very small patches of conifer trees near Charr Bothy which have retained some ancient woodland (Long Established of Plantation Origin) features including intact ground flora and soil profiles.

3.13.4 Locally notable plant species include interrupted clubmoss that is widely scattered across the heath and an assemblage of distinctive peatland species associated with the M17a-M19a blanket bog transition.

3.13.5 Three hundred & sixty-six biological records sourced from NESBReC provide records of 17 designated &/or listed species of conservation importance.

3.13.6 Protected species surveys confirmed a moderate level of localised Otter activity, and marginal badger activity across the site. Bat, pine martin, red squirrel, water vole & wild cat habitat suitability is generally low.

3.13.7 Peatland Condition Assessment identifies that 67 % (1,756 ha) of the peatland is impacted by erosion and that 56 ha (2 %) remains in near-natural condition.

3.13.8 Deep peat is extensive throughout the south & west, and it has a store of around 14 million tonnes of CO2 equivalent across the site.

3.13.9 The conservation importance of the extensive blanket bog & heath habitats is Regional. The other habitats are of Local to Site importance.

3.13.10 GWDTE (Ground Water Dependant Terrestrial Ecosystems) of low to locally moderate species-richness are concentrated in the east. The underlying geology is Late Silurian to Early Devonian, igneous intrusion which is known to have "'small amounts of groundwater in [the] near surface weathered zone and secondary fractures' and 'rare springs'". The areas of GWDTE were assessed in relation to their potential groundwater dependency. GWDTE which were classified as having moderate and high groundwater dependency have been identified and are mapped in Appendix 4.3 Glen Dye Moor Water Environment Assessment Summary.

3.13.11 Through early-stage due diligence work, additional ecological interests were identified. Botanical Society of Britain and Ireland (BSBI) provided detailed information on occurrences of rare and scarce plant species in and around Glen Dye Moor. A list of species can be viewed in Appendix 2.2 (Glen Dye Moor Woodland Creation EIA Scoping Report) section 4.8 (Priority Flora), with additional plant species also provided from the BSBI database which have been included in proposal considerations. Glen Dye Moor EIA Constraints Map shows the location of these species.

3.13.12 Butterfly Conservation Scotland also provided information relating to long term monitoring of moths and butterflies within the project area. The Large Heath butterfly was found to be present locally though survey routes were limited following a repeat transect. This results in what appears to be an isolated population of Large Heath butterfly not typical of the wider area. A detailed assessment of effects on Large Heath butterfly has been undertaken and is presented in Chapter 12 of the EIA Report.

3.13.13 The local deer population is also noted within this section though full details can be found with Appendix 3.4 Deer Management Plan. Both red deer and roe deer are present on site, following surveys in 2021 the estimated average red deer density on site was around 5-6 deer per square kilometre but uncertainty remains around this average figure given the deer management unit extends across neighbouring properties where densities were higher (recorded at densities over 100 per square kilometre during previous helicopter counts carried out by NatureScot), and deer freely roam between sites. Deer are likely to have a higher pressure periodically than the average recorded density. This fluctuating deer density is reflected in habitat conditions on site where natural regeneration is browsed to a degree that it fails to successfully establish.

3.13.14 With the exception of the River Dee SAC (assessed in Chapter 6), Large Heath butterfly (assessed in Chapter 12) and deer (assessed in Chapter 13) detailed assessment chapters have not been undertaken for other ecological receptors, as agreed through the Scoping and consultation process. However, full details of the habitat and protected species surveys undertaken are provided in Appendix 3.1: Habitats Peat and Protected Species.

3.14 ORNITHOLOGY

3.14.1 A Breeding Bird Survey for the full site was produced in November 2022 by Wildlife Consulting. The full survey can be found in Appendix 3.2. Breeding Bird Survey Report.

3.14.2 This survey includes a Breeding Bird Survey, Black Grouse Survey and a Breeding Raptor Survey.

3.14.3 Appendix 3.2 (Breeding Bird Survey Report) Table 4-2 (Breeding Bird Survey Results) summaries the breeding bird survey. In total 49 species of bird were confirmed as breeding within the survey area. This included various red-listed species – cuckoo, lapwing, curlew, skylark, house martin, mistle thrush, ring ouzel, whinchat and lesser redpoll.

3.14.4 Black grouse were recorded lekking at 11 locations within the survey area. Lek sizes varied between single bird leks to a peak of 24 males at the largest lek. An additional lek was identified in 2025 during ongoing survey works.

3.14.5 The breeding raptor survey identified golden eagle, goshawk, short-eared owl and merlin. Other raptors such as red kite and buzzard were also observed.

3.14.6 The EIA Report includes detailed assessment chapters for golden eagle (Chapter 7), merlin (Chapter 8), curlew (Chapter 9), other waders (Chapter 10), and black grouse (Chapter 11).

3.15 DESIGNATIONS

3.15.1 *River Dee SAC*

3.15.1.1 SAC designation refers to Special Areas of Conservation, which are protected areas established under the EU's Habitats Directive to conserve specific habitats and species of European interest.

3.15.1.2 The Water of Aven, The Water of Dye and Burn of Greendams all form part of the wider River Dee Special Area of Conservation. The River Dee SAC has 3 qualifying species - freshwater pearl mussel, Atlantic salmon and otter.

3.15.1.3 A key conservation priority relevant to the Glen Dye Moor Woodland Creation Project of the River Dee SAC is the enhancement of riparian woodlands. This is predominately to favour Atlantic salmon, shielding them from high water temperatures and by providing nutrient inputs and invertebrates as food.

3.15.1.4 Additional detail of this SAC including a location map and conservation advice package can be found within Appendix 6.2 (River Dee SAC Map) and Appendix 6.3 (River Dee SAC Conservation Advice Package).

3.15.1.5 Chapter 6 of the EIA Report provides a detailed assessment of the potential effects on the River Dee SAC.

3.15.2 *Feughside Local Nature Conservation Site (LNCS)*

3.15.2.1 LNCS are non-statutory designations given by local authorities to areas of locally important nature and landscapes.

3.15.2.2 Part of the proposal sits on the Feughside LNCS. Feughside LNCS is an extensive area of geomorphological interest representing the best part of a more extensive fluvioglacial complex. Clachnaben is a good example of a granitic tor. Locally rare plants in pine woodland and mire are also noted as special characteristics of this LNCS. The site is currently undergoing review by Aberdeenshire Council for extension; this will likely cover an additional part of the proposal area

3.15.2.3 As agreed through the consultation and EIA Scoping process, a detailed chapter on effects on Feughside LNCS has not been included in the EIA Report.

3.15.3 *River Dee Drinking Water Protection Area*

3.15.3.1 As noted above, Glen Dye Moor is entirely within The River Dee Drinking Water Protection Area.

3.16 OTHER DESIGNATIONS

3.16.1 There are no Sites of Special Scientific Interest (SSSI) within 5km of the proposal area.

3.16.2 There are no Special Protection Areas (SPA) within the proposal area. The Cairngorms Massif SPA is nearby (3km northwest of the property), potentially within an ecologically significant distance. This SPA is designated for golden eagle (aquila chrysaetos) breeding. Negative pressures include 'Proactive on-site management', and the latest published condition was 'Favourable Maintained' as of 13 July 2015.

3.16.3 Cairngorm National Park is 5km Northwest of the property.

3.16.4 There are no other national, regional or local designations within the proposal area.

3.17 PEATLAND RESTORATION

3.17.1 Within the overall project area there are significant areas (more than 1,800ha) of peatland that is currently classified as being degraded and therefore has the potential for restoration. This degradation is caused by several factors including drainage, burning and over-grazing.

3.17.2 The degraded peatland areas are excluded from the afforestation proposals, and peatland restoration does not fall within The Forestry (Environmental Impact Assessment) (Scotland) Regulations 2017. As part of the wider project objectives, restoration is being undertaken, via NatureScot's Peatland Action programme, on degraded peatland to avoid carbon loss, improve water runoff mitigation, improve water quality as well as enhancing habitat for many different species. In conjunction with afforestation this should have a positive impact on biodiversity.

3.17.3 Peatland restoration is subject to approval. This forms an appraisal in relation to regulation 48 of the Conservation (Natural Habitats &c.) Regulations 1994 as amended (Habitats Regulations Appraisal); along with the requirement to apply for Prior Notification and Prior Approval with the local authority.

3.17.4 As of September 2025, two phases of Peatland restoration have been completed, putting over 370ha on the 'road to recovery' and under validation with the Peatland Code. This summer, a multi-phase restoration project application covering >550ha over 3 phases was approved for grant funding by Peatland Action. Work started on Phase 3 in mid-September with the aim to complete the phase by the end of the year. Phases 4 & 5 are scheduled for 2026 & 2027 respectively. A further multiphase application for phases 6,7 & 8 covering an additional area of >500ha will be submitted to Peatland Action in September 2026 and additional phases (9 and beyond) will address the remainder of the site. These ambitious targets will be subject to regulatory approval and grant funding.

3.17.5 Peatland restoration has significant biodiversity benefits at Glen Dye Moor. This includes increasing available habitat for specialist species such as Large Heath Butterfly. It also increases the abundance of insects such as cranefly, which provides a vital food source for black grouse, curlew, snipe, lapwing, golden plover and dunlin.

3.17.6 At Glen Dye Moor, Peatland Restoration is expected to benefit two qualifying features of the River Dee SAC, freshwater pearl mussels and Atlantic salmon, through improving water quality, reducing peak water flow and reducing surface water runoff. It is not directly connected to management of otter. Peatland Restoration has a positive impact on the Drinking Water Protection Area, through improving water quality, reducing peak water flow and reducing surface runoff. It will also create and maintain habitat for a range of species, such as large heath butterfly, black grouse and wading birds such as curlew.

3.17.7 There is no new woodland creation, either by planting or natural regeneration, on areas of peatland restoration and as agreed through the consultation and EIA Scoping process, a detailed chapter on effects on peatlands has not been included in the EIA Report

3.18 LANDSCAPE

3.18.1 Landform within the site is dominated by smooth rounded hills. Rivers run up steep sided glens with only limited sinuosity as most are confined to relatively straight routes. Vegetation follows landforms with bracken and grasslands following the valley floors transitioning to heaths which run up to summits. Some variation in this pattern is visible due to previous decades of muir burning. Neighbouring conifer forests have sharp edges though some are more irregular when viewed from a distance. Some geometric elements remain in the adjacent forests and a small rectangular shelterbelt remains within the property. There are no discernible settlement patterns though historic farmsteads along the River Dye are noted with sequences of enclosures on flat to gently sloping ground at the base of hills. Hill tracks remain a dominant feature with long curving paths up and down hillsides and along ridges.

3.18.2 It is a large-scale landscape in general due to the level of openness. On lower slopes with more diversity this begins to shrink to a moderate scale with watercourses, tracks and vegetation patterns pulling this into a small scale at the lowest elevations.

3.18.3 Historic muir burning patterns are still visible in areas of heath creating a broken and diverse vegetation pattern on the hillsides, this will naturally fade over time into a uniform wash of seasonal colour changes. Riverside and tracks with occasional ponds, buildings, and ruins increase the diversity at lower elevations.

3.18.4 Clachnaben is an iconic landform and has been used for navigation at a significant scale both from the air and by land. The setting and visibility of this granitic tor is locally important.

3.18.5 Glen Dye Moor is not within a National Scenic Area, Area of Outstanding Natural Beauty, National/Regional/County Park or on The Register of Gardens & Designed Landscapes.

3.18.6 The area is entirely covered by the local Aberdeenshire Special Landscape Area of Clachnaben and Forest of Birse. An excerpt from the local designation statement notes that, “This SLA is in the south west of Aberdeenshire, taking in part of the upland Mounth. The Forest of Birse is one of the wildest parts of Aberdeenshire outside the National Park, while Clachnaben is a prominent landmark for miles around. Designation of the western part of the Mounth recognises the scenic qualities created by the strong rolling relief and distinctive hill profiles. The relative lack of habitation and high wildness qualities, as well as the naturalness resulting from extensive areas of heather moorland are also seen in this area. The relationship with the adjacent Cairngorms National Park supports designation of this SLA. Woodland management and further woodland creation in locations found to be suitable for such, is encouraged in this area.”

3.18.7 The proposal falls within the Summits and Plateaux – Aberdeenshire Landscape Character Type 29 as described within SNH National Landscape Character Assessment 2019.

3.18.8 A detailed assessment of effects on landscape and visual amenity is provided in Chapter 15 and a full Landscape Visual Impact Assessment is included within Volume 3.

3.19 CULTURAL HERITAGE

3.19.1 An archaeological survey for the full site was produced in June 2022 by Guard Archaeology. The full survey can be found in Appendix 3.3. Archaeological Survey

3.19.2 *A summary of findings of the report can be seen below.*

3.19.2.1 The archaeological assessment found that there are 17 known cultural heritage sites within the proposal area that could potentially be directly affected by the proposals. These are two hut circles, two aircraft wreck sites, a well, seven townships with and without associated rig and furrow, two parish boundary markers, a military road and the locations of finds of a prehistoric stone axe head and an arrowhead. All of these are of local or lesser cultural heritage significance (i.e. not scheduled).

3.19.2.2 A further nine cultural heritage sites, including one nationally significant Scheduled Monument (Cairn o'Mount, cairns, SM4968) and one regionally significant category B Listed Building (Spitalburn Bridge over Spital Burn), are located within 100m of the proposal area.

3.19.2.3 Six previously unrecorded cultural heritage sites of lesser cultural heritage significance were located during the walkover survey. These are a stone structure, a boundary marker, two wooden structures, a ruined sheep pen and a longhouse.

3.19.2.4 These findings support the understanding that this site was used for subsistence farming over many centuries. There remain some evidence of peat cutting in two locations as well as areas where sheilings were purported to be found (Airy Muir) through evidence of these was revealed during survey work. Additional records were also supplied by Aberdeenshire Council and are included within constraints data.

3.19.3 As agreed through the consultation and EIA Scoping process, a detailed chapter on effects on cultural heritage has not been included in the EIA Report.

3.20 RECREATION

3.20.1 Glen Dye Moor is widely used by recreational users such as hillwalkers, cyclists, horse riders, and for winter sports. A wide range of user types enjoy Glen Dye Moor for various reasons including physical activity as well as skills practice and general wellbeing.

3.20.2 There is a small car park at Spittal Bridge which is well used by visitors to Glen Dye Moor.

3.20.3 Charr Bothy is an important feature of Glen Dye Moor and highly valued by the local community for public use. A long-term lease is in place with the Mountain Bothy Association which will guarantee access and existing public use to the bothy.

3.20.4 Access across the moor on foot has taken place for many decades, leaving behind a network of paths and faint tracks. There are two formal, mapped (online walking blogs) paths, to Charr Bothy and up to the summit of Clachnaben.

3.20.5 A rifle range is also present on site which is made available to local sporting groups on request.

3.20.6 A detailed assessment of effects on recreation is provided in Chapter 14.

3.21 MATERIAL ASSETS

3.21.1 The property has an extensive road network to meet the needs of the previous shooting and other activity. Roads are maintained but only for 4-wheel drive access. They are vulnerable to washouts in periods of heavy rain.

3.21.2 The Charr Bothy is located halfway up Glen Dye sitting at grid reference NO161831. Part of this property is used and maintained by the Mountain Bothies Association and is leased to them on a long-term basis. In addition, there is a lunch hut (Leggies Bothy) and 2 small storage sheds on the property. A private rifle range located at NO608827 is also present but not in regular use.

3.21.3 There is a redundant water reservoir and large ductile water pipe on site. These are decommissioned Scottish Water assets and are no longer part of public drinking water supply.

4 SCHEME PROPOSALS

4 Scheme Proposals

Chapter information references:

4.1 INTRODUCTION

4.1.1 Glen Dye Moor New Woodland Creation is a forestry project as defined under The Forestry (Environmental Impact Assessment) (Scotland) Regulations 2017 for afforestation and new forest road works at Glen Dye Moor, Aberdeenshire. Specifically, this includes the proposals within List 4.1 below.

List 4.1 Short List of Proposals
Cultivation
Planting
Natural Regeneration
Fence Line Construction
Forestry Track Construction
Deer Management
Maintenance (of Planting, Fences, and Tracks)

4.1.2 These cover the areas included in Chapter 1 Section 1.6.1 included in summary below for reference:

- The afforestation project amounts to 2,750 net hectares, which is divided as outlined below;
- Approximately 690 net hectares of new native woodland establishment through natural regeneration.
- Approximately 1,420 net hectares of new native woodland (Native Scots pine, upland birch and montane scrub) establishment through new planting, including ground cultivation and tree planting, along with associated maintenance.
- Approximately 640 net hectares of new productive woodland establishment of Scots pine, Sitka spruce and a minor component of other conifer species, through new planting. This will include ground cultivation and tree planting, along with associated maintenance.
- Utilisation of new and existing deer fencing will protect new woodland establishment. The total length of fencing is approximately 45,700m including almost 11,000m of existing deer fence that will be renewed. The fencing will include the installation of gates to maintain and enhance recreational access. Grouse droppers will also be installed where required to reduce risk of bird collisions.
- New forest roading (approximately 2,240m), including associated water course crossings, drainage and sourcing of materials.
- Deer management, including the preparation of a deer management plan (see Appendix 3.4 Deer Management Plan).

4.1.3 The proposals outlined above will be delivered utilising a variety of operational techniques. These are included within List 4.2 'Detailed List of Operations Included in Proposals' and List 4.3 'Works Required to Conduct Operations' shown below. The sensitivity and potential impact of these operations and techniques to individual receptors have been assessed within Chapters 5 to 16.

List 4.2 Detailed list of Operations Included in Proposals

- **Cultivation,** all methods of machine and hand implemented cultivation including
  - invert mounding
  - scarification
  - screefing
  - and including fuel/oil storage and maintenance
  - note that no drainage is proposed
- **Planting,** physical planting of trees including
  - hand planting
  - application of fertilisers
- **Natural Regeneration,** natural seeding and establishment of trees with no ground disturbance and no vegetation management
- **Maintenance of Planted Trees,** ensuring successful establishment of trees over the first five years post planting
  - Weeding by hand, by machine, or with pesticides
  - Planting replacement trees (beating-up)
- **Establishment of Planted Trees (long-term),** successful growth of tree through successional stages
- **Fence Line Construction,** including
  - the erecting of new deer fences,
  - upgrading of existing fences to deer fences,
  - replacement of deteriorating deer fences with new deer fences
  - marking of deer fences to protect against bird strike
  - decommissioning of some redundant fences,
  - and maintenance of fences over a minimum 10**-year** period
- **Forestry Track Construction,** including
  - new forestry track formation and surfacing
  - maintenance of existing tracks
- **Deer Management,** including
  - compensatory culling prior to fence erecting
  - management culling within fenced enclosure to achieve a target density of 2.5 deer per square kilometre
- **Cumulative Impacts,** including
  - neighbouring wind farm
  - transboundary impacts where proposals may impact features outside the project boundary

List 4.3 Works Required to Conduct Operations

Construction/Implementation Phase:

- Delivery and layout of equipment/machinery/materials
- Construction/installation of infrastructure (fences and tracks) using machinery and by hand
- Cultivation using machinery and by hand
- Planting of trees by hand
- Culling of deer, compensatory culling

Maintenance Phase

• Delivery and layout of equipment/machinery/materials • Beating up (planting of trees to replace losses) • Weeding by hand or using machinery • Application of pesticides • Application of fertilisers • Repairs to fencing by hand or using machinery • Repairs to tracks using machinery • Management culling of deer to reach target density
Establishment Phase
• Monitoring of successful establishment of planted trees and natural regeneration, on foot and/or through use of equipment (e.g. drones) • Monitoring areas of designed open ground, on foot and/or through use of equipment (e.g. drones) • Monitoring of deer including management culling as required • Monitoring and removal of tree protection when redundant

4.1.4 Throughout this EIA Report details of the specific operations and methodologies will be described and explained. For each activity, a number of embedded mitigations may be referred to, which are assumed to be in place for the purposes of the assessment. These mitigations are part of standard best practice and are codified within Practice Guides which are referred to within subsequent chapters. A full list of embedded mitigations is included in Appendix 2.6 Mitigations Schedule. These are designed to ensure compliance with current requirements, regulations and good practice and reduce risk to the environment.

Table 4.1 Other Specific Issues

Specific Issues identified in the Scoping Opinion which do not require assessment and are addressed in the design of the scheme	Location(s) of further information
Feughside Local Nature Conservation Site (LNCS)	Volume 2 Chapter 3, 3.15.3; and Chapter 4, 4.4.12.1
Priority Plants	Volume 2 Chapter 3, 3.13.2; and Volume 3 EIA Report Constraints Map (Map 8)
Archaeology	Volume 2 Chapter 3, 3.19; and Volume 4 Appendix 3.3; Appendix 2.6; Volume 2 Chapter 5; as well as Volume 4 Appendix 5.13; and Volume 3 EIA Report Constraints Map (Map 8)
Soils and Cultivation	Volume 2 Chapter 3, 3.8.2; and Chapter 4, 4.3; Volume 4 Appendix 4.2; Appendix 3.7 Soil Sensitivity Map; Volume 3 Proposed Cultivation Map (Map 7)
Peatland	Volume 2 Chapter 3, 3.17, 3.8.4; Volume 4 Appendix 3.5

Groundwater Dependant Terrestrial Ecosystems (GWDTEs) Water (including Drinking Water Protected Area)	Volume 2 Chapter 3, 3.13; Volume 4 Appendix 3.1; Appendix 4.1; Appendix 4.3; and Volume 3 EIA Report Constraints Map (Map 8)
Hydrology and Water (including Drinking Water Protected Area)	Volume 2 Chapter 2 2.6.3 Table 4.1, Chapter 3 3.11, 3.15.3, 3.17.6, Chapter 4 4.12, Chapter 6 6.5.7, 6.6.6.
Wildfire	Volume 2 Chapter 4, 4.15; Volume 4 Appendix 4.4

4.2 DELIVERY TIMINGS

4.2.1 As noted in List 4.3 'Works Required to Conduct Operations', works are divided into three distinct phases: a construction and implementation phase, a maintenance phase and finally an establishment phase. The delivery of the construction and implementation phase will be spread across three to five years. Once each phase of construction and implementation is complete, they will move directly into the maintenance phase.

4.2.2 Afforestation, the establishment of a new woodland, will achieve a single age class if implemented in less than a ten-year period as it is common practice within the forest industry to define age classes by ten-year periods. The Glen Dye Moor New Woodland Creation will create a new single age woodland once implementation is completed. However, species mixes, growth rates, stocking densities and differing site types will combine to create structural diversity in the short to medium term (10 to 20 years). Where natural regeneration occurs, this will add to the naturalisation of the woodland structure.

4.2.3 Due to the scale of the afforestation project, the site has been planned for a three-to-five-year construction/implementation phase followed by a five-to-ten-year maintenance phase. The establishment phase is the long-term development of the woodlands and is achieved when the forest reaches maturity.

4.2.4 Planting cohorts are divided into three groups (one third of the afforestation total sits within each cohort) with an aim of delivering these in three consecutive years. Cohort 1, planned for 2025/2026 pending approval, is greater than 50% native species while cohort 2, planned for 2026/2027, is greater than 50% productive species balancing any risk of delayed implementation resulting in an inappropriate woodland mosaic being created. Cohort 3, planned for 2027/2028 contains only a small amount of productive planting. Natural regeneration is expected to begin once deer fencing is erected, which is planned for the first year immediately following approval of the scheme. Areas identified for natural regeneration are expected to deliver minimum stocking densities of 400 trees per hectare within 5 years.

4.3 CULTIVATION

4.3.1 The aim of the cultivation is to provide a suitable planting location for tree establishment and growth while minimising soil and hydrological impacts, along with providing a degree of weed suppression. Cultivation will help to reduce weed competition for nutrients and moisture, mix soil to improve fertility during early establishment of trees, reduce or break a deep soil pan or induration, and create a drained planting position (only during the early establishment of trees).

4.3.2 Cultivation techniques will follow current best practice and will aim to utilise lower impact options. Cultivation techniques will follow Scottish Forestry 'Cultivation for upland productive woodland creation sites Applicants Guidance' and comply with UK Forestry Standard and guidelines on water and soils.

4.3.3 All activities will adhere to specified mitigation measures and follow best practice guidelines as shown in GDM EIA Appendix 2.6 Mitigations Schedule.

4.3.4 Table 1 of Scottish Forestry 'Cultivation for upland productive woodland creation sites Applicants Guidance' has been used to identify areas where cultivation is inappropriate at Glen Dye in line with the Soil Sensitivity Map (Appendix 3.7) which highlights soil types and conditions present.

4.3.5 Cultivation techniques proposed at Glen Dye Moor include shallow disc scarifying, inverted mounding, and areas of no cultivation with options for screefing where conditions are found which restrict machine access. These are shown on Map 7 Proposed Cultivation.

4.3.6 For planting of productive conifers, on freely draining and podzolic soils, disc scarification will be the preferred methodology. This is to achieve a minimum 2,500 trees per hectare. Breaks in cultivation will be left at a maximum of 70m on gentle slopes (<10% slope), and a maximum of 40m on moderate slopes (10-30% slopes). No new drains will be installed.

4.3.7 Disc scarification will not be used on organo-mineral soils, with a peat depth of over 10cm or within any UKFS watercourse buffer areas or on steep slopes (>30% slope). Where disc scarification cannot be utilised, excavator invert mounding will be used. In line with best practice, cultivation will be limited to invert mounding and screefing within watercourse buffer areas. No new drains will be installed.

4.3.8 Invert mounding will be utilised for native planting where practicable. This is to achieve a minimum 1,600 trees per hectare. There is no recommended mitigation specific to this technique within the guidance.

4.3.9 Where practicable rank heather will be cut, using a tractor mounted flail or similar, prior to cultivation. Where this is not practicable cultivation is likely to be being carried out using manual methods.

4.3.10 On steeper slopes, or near sensitive sites, where excavator mounding cannot be utilised or is not practicable, screefing will be used to remove the vegetation layer.

4.3.11 No cultivation will be carried out in areas designated for natural regeneration or where peat soils are more than a depth of 50cm (as informed by the peat depth survey), which complies with the FC Forestry and Peatland Habitats Guidance Note (2000).

4.4 PLANTING & NATURAL REGENERATION

4.4.1 Afforestation will be achieved at Glen Dye Moor through a combination of planting trees and natural regeneration. The Report Proposals Overview Map illustrates the afforestation design indicating areas planned for natural regeneration and for planting.

4.4.2 As noted in Chapter 1 (1.6.2), one third of the proposals will be composed of productive species while the remaining two thirds of the area will be native woodland types including areas of natural regeneration. Species choice has been informed by site conditions determined by existing vegetation, climate, soil moisture and soil nutrients. Forestry Commission's Ecological Site Classification Decision Support System (ESC) has also been used to aid species choice. Appendix 4.2 Glen Dye Moor Species ESC Analysis includes detailed ESC analysis. Areas of natural regeneration are located within 200m of existing remnant seed sources or are showing evidence of current regeneration.

4.4.3 The range of native woodland species chosen is based on the National Vegetation Classification woodland types that are appropriate to the site and found within the local area.

4.4.4 Productive conifer species have been chosen to ensure suitable yield and performance from the site as informed by ESC and will consist of Scots pine and Sitka spruce within various mixtures. A small area (less than 1ha) will include additional Douglas-fir and Norway spruce, to enhance biodiversity along with Scots pine and Sitka spruce which are reflected within the adjoining woodland at Glen Dye Estate.

4.4.5 The diverse range of woodland types planned for the Glen Dye Moor to create varying habitats are included below:

4.4.6 Native Scots Pine & Broadleaves W18:

4.4.6.1 A mixture of native Scots pine, birch and rowan at a stocking density of 1600 trees/ha (2.5m average spacing between trees). This composition aims to re-create native pinewood habitat known as W18 Scots pine woodland with heather in the National Vegetation Classification (NVC).

4.4.7 Upland Birch Mixture W4:

4.4.7.1 A mixture of mostly downy birch, willow and alder (where suitable) at a stocking density of 1600 trees/ha (2.5m average spacing between trees). This composition aims to re-create W4 Downy birch with purple moor grass (NVC). Due to the site location, Scots pine will feature as an element of this composition. Other minor species will also be included such as aspen, hazel and rowan where appropriate to the NVC.

4.4.8 Semi-Open Canopy Upland Birch (W4):

4.4.8.1 An important species composition which will act as an ecotone throughout the site. A native woodland and shrub mix planted at a variable density incorporating open gaps within the canopy while meeting the average stocking density required by funding contracts. This semi-open canopy of sporadic planting will average 1600 trees/ha while creating open canopy characteristics, which many species benefit from. Gaps will be irregular and variable to ensure open aspects are present while denser areas of planted trees will be tightly spaced to achieve the required average planting density while promoting habitat variation meant to enable birds such as merlin and owl to hunt within gaps.

4.4.9 Montane Scrub: Partly approximates W20 but includes other types

4.4.9.1 This higher altitude native woodland type will compose a willow scrub mixture in line with guidance produced by the Mountain Woodland Project (https://www.msag.org.uk/best-practice-guides.html) The Mountain Woodland Action Group (MWAG) resources include best practice guides on species selection, planting, protection, and monitoring. As the name suggests, montane scrub tends to be short in stature either because that is the growth form of a particular plant or because the colder and often windier, less hospitable climate at and above the area's treeline has stunted tree growth. Montane scrub includes, but does not solely refer to, dwarf species; most montane scrub is usually taller than the surrounding vegetation, but climate has restricted its growth in some way. Planting density will be low with a minimum stocking density of 500 trees per hectare at a variable spacing (achieved at year 5 on the planted area). Montane scrub includes the montane willows but also common tree species that can grow at high elevations. Mostly these are Scots pine (Pinus sylvestris), downy birch (Betula pubescens,), and rowan (Sorbus aucuparia). Other specialist species include dwarf birch (Betula nana) and high-altitude populations of both upright and prostrate juniper (Juniperus communis).

4.4.10 Mixed Conifer:

4.4.10.1 Stocking density of approximately 2500-2700 trees/ha (2-1.9m average spacing between trees) producing high-quality timber for various timber markets and accelerated carbon sequestration. These will be mixed species blocks with a primary species suited to site. There are three main types of productive woodland, areas of 100% Scots pine, areas of Scots pine with a minor component of Sitka spruce and areas of Sitka spruce with a minor component of Scots pine. Future seeding risk has been taken into account and Sitka spruce has been avoided in areas where sensitive sites such as large heath butterfly are present.

4.4.11 Natural Regeneration:

4.4.11.1 These areas are expected to regenerate from existing seed sources. Final density and location are difficult to predict but should result in a 'natural' appearance with variable complexity and age classes.

4.4.12 Integral Open Habitat:

4.4.12.1 Within each of these woodland types noted above, corridors and glades of open habitat is integrated in and around the afforested areas. These areas are designed as open habitat, where planting would otherwise be possible, to provide additional habitat diversity and maintain open-ness around specific constraints such as archaeology or the Feughside Local Conservation Site. This integral open habitat also increases areas of woodland edge, providing a significant extent of ecotones throughout the project area.

4.4.12.2 In total approximately 3044 ha of woodland creation, including integrated open habitat, is proposed in the types noted below, resulting in a property wide change from current woodland cover of 0.4% (27ha) to a woodland cover of 43% (2750ha), with 77% (2108ha) of this being native, semi-open, or montane in nature.

4.4.13 Woodland types are as shown below.

Woodland type	Main species	Area (ha)	% of scheme
New native (W18)	Scots pine, birch, rowan	280	9%
New native (W4)	Downy birch, willow, alder	770	25%
New native (semi-open W4)	Downy birch, willow, alder	309	10%
New native (montane scrub)	Varied by site	62	2%
New productive	Scots pine, Sitka spruce, other conifers	642	21%
New native (natural regeneration)	n/a	687	23%
Designed Open Ground	n/a	294	10%
Total new woodland (ha)		**3044**	**100%**

4.4.14 All stock will be either bare rooted, or cell grown depending on availability. Conifers will be 30-50cm and broadleaves 30-50cm. Plants will be manually planted. Broadleaves will be sourced from seed zone 202 or 203 where possible as Glen Dye sits against the boundary between these zones. Should this not be possible the closest seed zone sources will be used in consultation with Scottish Forestry.

4.4.15 A micro-fertiliser, where a 10g spot fertiliser is directly placed within the planting notch, may be applied at time of planting. This will not be used adjacent to watercourses or on ground water dependant ecosystems (GWDTE) and associated buffers as defined in The UK Forestry Standard. A record of all fertiliser used will be maintained. The use of a spot fertiliser allows a targeted approach to help improve fertility around the tree in the early stage of establishment. This helps to achieve quicker establishment, reducing overall input requirements, such as the use of pesticides. As the effect is only short lived, this does not alter the overall long-term nutrient status of the site.

4.4.16 Appendix 4.3 Glen Dye Moor Water Environment Assessment Summary provides further information on the afforestation proposal in relation to the water environment. This illustrates the design influences around riparian areas and GWDTE. No productive conifer planting will take place within a 20m buffer of any GWDTE whether low, medium or high dependency. A buffer of wet woodland (mainly scrub willow with other species such as downy birch) will be planted at variable density stocking rates to create transition between denser planting (native or productive) and the GWDTE where shown on the species map.

4.4.17 At present there is tree cover along nearly 5% of the total length of watercourses within the project area. This proposal will increase this native riparian tree cover to 54%. A key conservation priority of the River Dee SAC is the enhancement of riparian woodlands. The project increases the riparian woodland cover within the project area by over 10 times.

4.4.18 Riparian woodland will be created along watercourses consisting of willow, alder, birch, aspen and hazel. These riparian woodlands will vary in width depending on landform and will be around 10-30m wide. This will create approximately 241 hectares of riparian woodland.

4.5 FENCING & TREE PROTECTION

4.5.1 Deer fencing is an essential element for successful establishment of woodland at Glen Dye Moor. Alternatives in fencing design and location were considered and can be found in Chapter 5 Alternatives Assessment. Location and setting of proposed deer fencing can be found on the following Maps: Proposed Fencing North, South and West, which also illustrates 2km black grouse lek buffers within which fence marking will occur

4.5.2 The project area will be surrounded with a perimeter deer fence to protect the new woodland creation areas from deer, and in particular Red deer though Roe deer are also present on site. Small areas will remain outside the fence due to the specific alignment of the fence. The existing deer fence along the eastern side of the scheme area on the boundary with Glen Dye Estate woodlands will be maintained, with replacement or repairs as required to ensure the fence will provide protection over the full establishment phase. The existing deer fence on the northern boundary is not in a serviceable condition and will be replaced. Elsewhere new fencing will be erected.

4.5.3 Specific fencing design elements and considerations:

- Deer fencing will be erected in line with the standards within Forestry Commission's Technical Guide 2 'Forest Fencing'.

- No hexagonal rabbit netting will be fitted to the fence.

- Access appropriate to requirements of vehicular and non-vehicular passage will be provided at strategic points. Non-vehicular access points will consist of self-closing 1.5m multi-user gates. These will be accessible by pedestrians, equestrians and cyclists. These are shown on the Proposed Fencing North, South and West maps. Signage will be erected at regular intervals along the fence to indicate the nearest access point.

- Water gates will be installed where the fence crosses water courses and features such as ditches. For narrow channels with only light occasional flow this will consist of fixed wooden railings. For minor watercourses (0-2m wide) this will consist of a hinged wooden water gate. For larger crossings, a more substantial structure is required. This will consist of suspended droppers that fit the profile of the watercourse and rise and fall with water levels. These will be suspended from a length of wire cable, or a rigid pole.

- There is a known black grouse population on Glen Dye Moor. Fences within 2km of a black grouse lekking site will be marked to minimise fence collisions. Forestry Commission's Technical Note 19 'Fence marking to reduce grouse collisions' will be followed, with reference to Tables 1 and 2 within the technical note. This will consist of individual 0.9m wooden 'pales,' fitted diagonally at 1m spacing. Additional fence post strutting will be required in exposed areas to help maintain fence strength.

- Badger gates will be strategically placed where known badger setts and foraging paths are located to allow for continued access along the eastern property boundary.

- A diffuse pollution control plan will be prepared by the Forest Works Manager (Appendix 4.6) and provided to site operatives prior to any fencing operations.

- There will be no machine tracking in areas identified as sensitive for archaeology or large heath butterfly. Operations will be timed to avoid certain constraints, such as breeding seasons for golden eagle and black grouse. All known hazards and constraints will be identified to site operatives.

4.5.4 There is a minor component of native broadleaves proposed outside of the fenced perimeter. This is to push planting closer to watercourses where the desired fence line does not reach; and to reduce the impact of the fence on the landscape through planting in front of the fence in places along the B974. Broadleaves outside of the deer fence will be protected in 1.2m tree shelters with a supporting wooden stake. Where available and economic to use, biodegradable shelters will be preferred, with a waste removal plan for when they become redundant. (see 4.15.6)

4.5.5 Existing fencing within the property, which is considered redundant, as well as fencing which will become redundant over the life of proposals will be planned for removal. Redundant fencing will be dealt with as per the Deer Fencing Removal and Redundancy Strategy, see section 4.15.5 below. This includes the fence to be replaced on the northern boundary of the scheme. In addition, the fenced enclosure on the east side of Netty Hill (centre grid reference NO640850) will be removed. This involves removing approximately 360m of stock fencing. The fence surrounding the abandoned water reservoir (NO620834) will be retained along with any march (legal boundary) fencing unless being replaced through the construction of the deer fence. See 4.15 Waste and Redundant Materials section below.

4.5.6 There is a stock fence in Glen Dye, to the north of the Water of Dye. This fencing is in stock proof condition and will be maintained as to provide potential future management options, such as use of stock on open ground. This fence will be considered redundant when it is no longer stock proof.

4.6 FORESTRY TRACK CONSTRUCTION, ROADING

4.6.1 New forest tracks are proposed in 3 locations (See Map: New Forest Tracks). These new tracks are designed to complement the existing track network to provide access for forest management through the establishment and maintenance phases, and to facilitate future timber extraction where current track networks are too steep or have an insufficient turning radius to allow for HGV access. The roading specification can be found in Appendix 4.5 Glen Dye Road Specification Addendum.

4.6.2 Track locations have been designed to minimise environmental impacts, this is reflected in Chapter 5 Alternatives Assessment. The proposed new tracks avoid crossing any watercourses. There is a small length of new track in close proximity of a GWTDE where it comes off the existing track. This could not be avoided to maintain the correct gradient of the forest track. Where the new track crosses a footpath, accessible ramps on and off the track will be created to maintain free access for all users. There is one minor footpath where this occurs. There are also a number of stone dykes present which will require crossing. The Aberdeenshire Council Archaeology Department has provided advice and recommendations on appropriate measures and Guard Archaeology Ltd has provided support to consider the development of a public benefit project during the construction of this track to include a potential archaeological dig, community historic environment event, or professional development opportunities or training events for archaeologists.

4.6.3 New tracks will have a running surface of 3.4m. The track formation will be constructed with material won on site where this is of sufficient quality. This will be sourced from the road cutting in the first instance, with stone being imported to site where there is insufficient fill available. The running surface will mostly consist of stone imported to the site from local quarries due to the lack of suitable material on site. No new quarries or borrow pits are planned.

4.6.4 T shaped ‘turn-rounds’ will be formed at the end of the new track sections. A passing place will be formed on the longest of the new track sections informed to a degree by sightlines along the road.

4.6.5 Where additional protection from water damage is required, a roadside ditch will be formed on the top side of the track. Roadside ditches will not directly discharge into any existing roadside drains or watercourses. Ditches will discharge over a buffer area so that any suspended sediment can be filtered out before surface water reaches a watercourse or existing drain.

4.6.6 To minimise the amount of water diverted along the track side ditch, culverts will be provided at all low points along track sections and at a sufficient frequency to relieve the trackside ditch of excessive water (relief culverts). This also helps to minimise disruption to hydrological flow across the site. Relief culverts will be at least 300mm twin wall plastic pipes.

4.6.7 Maintenance of the existing tracks and the new tracks will be required throughout the life of these structures. Track maintenance will consist of filling potholes, re-shaping the running surface, cleaning of roadside ditches and culverts. This would include replacement of collapsed culverts. As well as routine inspection, bridges will receive a principal inspection every six years and a general inspection every two years and be repaired and replaced as recommended. Opportunities throughout the track maintenance operations will be undertaken to correct any previous design deficiencies. This includes ensuring drains are disconnected from water courses and increasing the frequency of relief culverts if required. During the establishment of the woodland, if any roadside drains are connected to watercourses, the opportunity will be taken whilst plant is on site and these will be disconnected.

4.6.8 In advance of any track works, permission will be sought where required which may include permitted development consent, planning permission, or Controlled Activities Regulations licences.

4.7 CAR PARK

4.7.1 There is an informal space adjacent to the Water of Dye along the access track from the B974 near Spittal Bridge (OSGR NO647844). This area, referred to as the Spital Carpark, is utilised for car parking and is always available to the public to use. This car park is unpaved and is made up of compacted stone. The total area is approximately 300m2. Based on the current layout and an average parking space of 2.5m x 5m, the current space would facilitate 11 cars, allowing for access/egress. However, given the lack of a designated parking layout, the total capacity is variable depending on how vehicles are parked and the potential number of cars able to park is greater than 11.

4.7.2 As part of the development of the scheme it is proposed to enhance the parking provision to a total area of approximately 600m2. This car park would continue to be made up of an unpaved surface but would be enhanced to increase the total area available for parking and to improve the surface water drainage.

4.7.3 Improvements will be made to water management, improving the current situation through disconnecting the drainage system from the Water of Dye, and discharging surface water over a greater soak away area prior to entering the watercourse.

4.7.4 Based on an average parking space of 2.5m x 5m, this would facilitate 24 cars, allowing for access/egress. However, given the lack of a designated parking layout, the total capacity is variable depending on how vehicles are parked and the potential number of cars able to park would be greater than 24.

4.7.5 The upgrade of the car park does not fall within scope of The Forestry (Environmental Impact Assessment) (Scotland) Regulations 2017 and is subject to approval from the local authority, it is unable to be consented through this EIA process. Details are provided to show the overall context only. Planning consent will be sought from the relevant planning authority, Aberdeenshire Council and final design and layout will be contingent on their approval.

4.8 DEER MANAGEMENT

4.8.1 Effective deer management is critical for the successful establishment of new woodland at Glen Dye Moor, ensuring that young trees can develop without excessive browsing pressure. Given the property's transition from a driven grouse moor to a mixed woodland and peatland restoration project, controlling deer populations is essential to achieving these land use objectives. The property supports both Red and Roe deer, with densities fluctuating due to open-range dynamics and deer movements across porous boundary fences. The Glen Dye Moor Deer Management Plan (Appendix 3.4) provides a structured approach to managing these populations while allowing for woodland regeneration.

4.8.2 The primary objective is to reduce deer numbers to a sustainable level that minimises damage to newly planted and regenerating trees. A strategic reduction cull will be undertaken in Year 1 to bring Red and Roe deer densities to a target of approximately 1-2 deer/km², ensuring successful woodland establishment. To complement this, new boundary fencing, fence repairs and upgrades will be implemented to limit incursions, particularly from red deer migrating into the area. Ongoing herbivore impact assessments, including Woodland Herbivore Impact Assessments and thermal drone surveys, will be conducted to monitor deer distribution and adjust management strategies.

4.8.3 Deer control will be carried out by trained and certified contractors, utilising best practices and legal authorisations. The focus will be on maintaining deer numbers at a level that prevents excessive browsing while ensuring compliance with welfare and environmental regulations.

4.9 MAINTENANCE

4.9.1 Management inspections will be undertaken throughout the maintenance phase. This will identify the maintenance operations required at the appropriate times.

4.9.2 After the initial establishment operations, on-going maintenance operations will include replacing any failed trees (beating up), spot weeding with herbicide to control weeds (including noxious weeds as defined in the "Weeds Act 1959), shelter maintenance and fertilising.

4.9.3 Beating up requirements will be informed by surveys to assess current stocking densities and any inhibitors to tree establishment. Beating up will take place in the first few seasons after planting.

4.9.4 Effective weed control is essential for the successful establishment of trees. An integrated pest management approach will be adopted. Manual or mechanical weeding will be used if deemed appropriate to the nature of the weed problem (e.g. bracken whipping). The use of herbicides will be limited to a spot treatment around each tree to limit the quantity of herbicide used. If invasive species such as gorse and bracken become problematic, a broader area of treatment will be required. Given the current vegetation and fertility of the site, it is expected that weeding requirements will be localised, and a targeted approach will be used. Please see Use of Pesticides section in 4.11.1.

4.9.5 Remedial fertilising to address nutritional deficiency, will only be carried out where this is required to achieve successful establishment. Prior to any remedial fertiliser being applied, an assessment will be carried out. This will be to eliminate any alternative causes of poor growth, such as climatic conditions or pests/diseases. Unless it is clear from site inspection, foliar analysis will also be carried out at a suitable laboratory to determine the nature of the deficiency, along with the correct product and rate of application.

4.9.6 Fences will be inspected and maintained to ensure that they are in an operative condition. Inspection frequency will depend on the time of year and the weather conditions. Fence inspections would be carried out after periods of extreme weather events such as high winds or heavy snow when there is a greater risk of damage to the fence.

4.9.7 Tree shelter maintenance will consist of inspections to check for damage and to ensure that shelters are upright and securely fixed. Damaged or ineffective shelters will be straightened, repaired or replaced to maintain their protective function.

4.9.8 Tree shelters will be removed when the trees are fully established (unless biodegradable materials are used). This is expected to be at around year 10.

4.10 MONITORING

4.10.1 Monitoring during all phases of proposals is an important aspect to ensuring success through the early identification of arising issues as well as identifying long term trends and confirming achievement of objectives. Appendix 2.6 Mitigations Schedule includes as section on monitoring (F4) as mitigations for operations as does Chapter 9 Impacts to Curlew and Chapter 12 Impacts to Large Heath Butterfly. The points noted below cover most of the monitoring planned as part of these proposals though additional monitoring is expected to occur in relation to other projects within the ownership including research and biodiversity net gain works. Appendix 4.1 2040 Vision includes the ownership wide strategy for monitoring of objectives and goals, although this covers all projects being carried out on site, it also covers the monitoring proposed as part of this forestry project. Specific items from the 2040 vision which relate to proposals are noted below.

- Operational Inspections
- Property Inspections
- Forest Certification Monitoring
- Breeding Bird Survey
- Ecological Survey
- Wildlife Management Recording

4.10.2 Additional specific monitoring within the Mitigations Schedule includes:

4.10.2.1 Annual Herbivore Impact Assessment (following standard HIA methodologies)

4.10.2.2 Annual establishment surveys ('beat-up' surveys noting survival of planted trees and natural regeneration density),

4.10.2.3 Recording of annual management culls,

4.10.2.4 Monitoring of the natural regeneration of trees in areas of designed open ground such as around archaeological sites, within GWDTEs, around breeding bird territories, or large heath butterfly colonies will be recorded during site visits for annual stocking density assessments in adjacent areas and will include a 10-year reconciliation review. Where any non-native regeneration is found to be occurring it will be scheduled for removal on a maximum of a five-year cycle. Reconciliation will be carried out by the land manager and designed open ground will be cleared where this is found to be in breach of the FGS funding contract or where it is compromising the integrity of a known sensitivity.

4.10.2.5 Specific monitoring for curlew is included within Glen Dye Moor EIA Appendix 9.1 Curlew Assessment Summary: this notes long term monitoring to inform research gaps around impacts from native woodland and natural regeneration to populations of curlew.

4.10.2.6 Specific monitoring for the large heath butterfly is included within Glen Dye Moor EIA Appendix 12.1 Large Heath Butterfly Assessment Summary; this notes long-term monitoring done at regular intervals to identify and address threats related to tree seeding.

4.11 ADDITIONAL PROPOSAL CONSIDERATIONS AND DESIGN FEATURES

4.11.1 Use of Pesticides

4.11.1.1 At Glen Dye Moor all pesticide applications will be carried out in accordance with Scottish Woodlands IMS 6.06 - Pesticide Manual

4.11.1.2 The use of pesticides will be determined using an integrated pest management approach with the aim of minimising the use of pesticides at Glen Dye Moor. Along with the general low fertility for rapid growing vegetation and the use of heather swiping and cultivation, a blanket approach to pesticide use will not be required and all applications will be targeted. However, it is recognised that vegetation will compete for resources with growing trees and that there will be a requirement to carry out some herbicide treatment to aid establishment during the maintenance period.

4.11.1.3 Pesticide use will be confined to areas where there are clear management benefits.

4.11.1.4 The key considerations around the decision to use pesticides are as follows:

- *Pesticide recommendations will be based on field observations, taking into account environmental considerations.*
- *Pesticide application contracts will be supervised by trained staff.*
- *Contract documentation is clear and consistent and specify Health, Safety and Environmental requirements. This includes a CoSHH assessment for any product used.*
- *Pesticide purchase, transfer and application will ensure that the correct product arrives on site and is applied.*
- *Application will be carried out by competent contractors holding the relevant training and qualifications. A pollution spill kit, specific for use with pesticides, will be available on site at all times.*
- *Pesticide Application Records will be fully completed, properly and timeously checked and recorded.*

4.11.1.5 The use of pesticides is tightly regulated to minimise impacts on human health and the environment. At Glen Dye Moor pesticides shall only be used where they are required to secure tree establishment or to control invasive species or pest problems. Only products approved for

use in UK Forestry will be used, in conjunction with their label, or 'off label' (EAMU), approvals. Throughout the lifespan of the woodland, the management of the site shall aim to minimise or eliminate pesticide usage, taking into account considerations of cost (economic, social and environmental), and the cyclical nature of woodland management operations. At all times, the safety of people and the environment will be our priority. Applications made for the sake of tidiness shall not be considered acceptable.

4.11.1.6 No helicopter aerial application of herbicides to control bracken will be carried out. No overall application (100% cover) of herbicide will be carried out for the purposes of vegetation control to aid tree establishment, with treatment being restricted to a targeted spot around trees. Only where invasive species such as gorse and bracken become problematic will a broader swath width be required but this will be confined to localised areas of treatment. The potential future use of drones will be kept under review where their use presents a viable alternative and is capable of achieving the objective of localised treatment.

4.11.1.7 Trees will not be pre-treated with a pesticide product (for example – pre-treated with insecticide to protect against pine weevil) immediately prior to planting.

4.11.1.8 Treatment of other vegetation, such as noxious weeds (thistles, ragwort etc as defined by the Weeds Act 1959), may also be required in line with legal requirements and good land management practices.

4.11.1.9 In Scotland, it is an offence to carry out, or to cause or permit others to carry out, any controlled activity unless that controlled activity is authorised and carried out in accordance with that authorisation. When carrying out forestry operations, legal obligations are defined under the Water Environment and Water Services (Scotland) Act 2003, the Water Environment (Controlled Activities) (Scotland) Regulations 2005, the Water Environment (diffuse Pollution) (Scotland) Regulations 2008, and other relevant legislation. Authorisation is given under the Water Environment (Controlled Activities) (Scotland) Regulations 2005 (as amended) subject to General Binding Rules for specific activities, including the storage and application of pesticide.

4.11.1.10. GBR 23 is a key part of the regulations in Scotland aimed at ensuring the safe and responsible use of pesticides, particularly in relation to water resources. GBR 23, revised as of January 1, 2018, primarily focuses on the storage and application of plant protection products (PPPs) in Scotland. Key aspects include responsible storage, safe application practices, and the need for proper training and precautions to protect human health and the environment.

4.11.1.11 GBR23 Rules will apply and be adhered to for all types of applications at Glen Dye Moor.

4.11.1.12 Additional rules for forestry.

4.11.1.13 The use of pesticides in forestry is much less frequent than in agriculture, generally only once per year and only during the establishment phase and applications are mostly highly targeted to reduce the quantities of pesticides used and retain as much of the surrounding vegetation as possible. Nevertheless, buffer zones used in forestry, are typically 10 to 20 times the width considered acceptable for agricultural applications as outlined below.

4.11.1.14 Minimum buffer widths from forest edge to the watercourse/body or abstraction point.

4.11.1.15 10 m along permanent watercourses with a channel less than 2 m wide. (Narrower widths of buffer area may be allowable along minor watercourses with a channel less than 1 m wide, while wider buffer zones may be considered necessary especially on steep ground.)

4.11.1.16 20 m along watercourses with a channel more than 2 m wide and along the edge of lakes, reservoirs, large ponds and wetlands.

4.11.1.17 50 m around abstraction points for public or private water supply, such as springs, wells, boreholes and surface water intakes.

4.11.1.18 The width of buffer zones may also vary with the type of pesticide used, its mobility and persistence in the soil (see product label).

4.11.1.19 Pesticide applications will be planned with careful attention given to buffer zones, pesticide storage facilities, weather and ground conditions, and the risk to water supplies; contingency plans will be in place in case of a spillage. No storage of pesticides or empty pesticide containers will be allowed on site overnight.

4.11.2 Use of ATVs, Plant and Machinery for cultivation, layout of plants and materials, and recovery of waste and deer carcases.

4.11.2.1 Where practicable the use of ground-based machinery for lay out and recovery work will be preferred over aerial methods. Helicopters will only be used where operationally necessary and when all wildlife constraints can be adequately accommodated within the flight pattern.

4.11.2.2 Major watercourses >2m wide will be crossed only using the permanent structures at the existing crossing points.

4.11.2.3 As far as practicable access for ATVs, plant and machinery tracking to and from the site will avoid the need to cross minor watercourses. However, it will remain an operational necessity to cross some watercourse to access all parts of the site. Where crossing a minor watercourse <2m wide is necessary it will be done in accordance with GDM EIA Appendix 4.6 Overarching Diffuse Pollution Control Plan.

4.11.2.4 Flushes and GWDTE will be avoided and ATV, Plant and Machinery use will be planned to navigate around these areas using harder less vulnerable ground as per GDM EIA Appendix 4.6 Overarching Diffuse Pollution Control Plan.

4.11.2.5 Glen Dye Moor is well provided with existing access routes, both 4WD roads and ATV tracks offer extensive options for ATV use which reduces the need for off-road or off-track work. Existing roads and tracks will be used whenever practicable.

4.11.2.6 In line with the embedded mitigations tracking of ATVs, plant and machinery will be planned to avoid sensitive areas both permanent and temporal. Permanent sensitive areas include sensitive plant communities, GWDTE, deep peat etc. Buffers around sensitive wildlife sites, nests etc may be temporal both in size and in seasonal terms. Work instructions for each operation requiring ATV or plant and machinery use will specify where they may not travel.

4.11.2.7 Generally, machinery used for ground preparation will only be required to track into an area once, so repeated tracking over the same ground is limited. For ATVs required to lay out plants,

planting materials, and fencing, or to recover operational waste and deer carcasses some more frequent off-track use to the same area is inevitable. ATVs will follow firm ground as far as practicable and repeated use of the same route will be avoided to limit any deterioration to ground conditions. In poor weather ATV use may halted until the ground conditions improve.

4.12 DRINKING WATER PROTECTION AREA

4.12.1 Glen Dye Moor is within a Scottish Water Drinking Water Protection Area. (see also Chapter 3 3.11 Hydrology) In addition to compliance with UKFS, Scottish Water's 'Annex 1: Precautions to protect drinking water and Scottish Water assets during forestry activities' should be followed. In particular section 11, that recognises that forests can assist with protection of water quality. However, there can also be large scale impacts, this includes pollution risks from pesticides. It states that any potential pollution risk which could affect water quality should be considered, and mitigation measures must be implemented to prevent deterioration in water quality and pollution incidents.

4.12.2 The approach to pesticide management in this section will be followed at Glen Dye Moor to fulfil this obligation regarding the Drinking Water Protection Area.

4.12.3 The mitigation of diffuse pollution is described Appendix 4.6 Overarching Diffuse Pollution Control Plan Annex 1

4.13 WILDLIFE

4.13.1 The Forest Works Manager, assisted where required by a member of the Scottish Woodlands Environment Team or relevant expert, will undertake a pre-operational wildlife survey prior to any operations. These surveys will identify the presence or absence of protected species and their locations. This will enable species protection plans to be prepared and any relevant licences to be obtained.

4.14 RECREATION

4.14.1 Glen Dye Moor is a popular area for recreational users.

4.14.2 Recreational impact is specifically discussed in Chapter 14 Impacts on Recreation and Access of this EIA Report as well as Appendix 14.1 Recreational Addendum.

4.14.3 Recreational proposals include the use of all-user gates in any fencing crossing recreational routes and maintenance of existing routes. In addition, there will be new signage at key areas to help guide people along the main access routes. Threshold signage will also be installed at the main access points to Glen dye Moor.

4.14.4 A long-term lease to the Mountain Bothies Association for Charr bothy has been put in place to safeguard this facility in the future. Access to the long-distance rifle range has been maintained.

4.15 WASTE AND REDUNDANT MATERIALS MANAGEMENT

4.15.1 The definition of waste is wide and includes redundant tree shelters, plant bags, pesticide containers, redundant fencing, redundant site signage and fly tipping/littering.

4.15.2 Waste generated from site activities (controlled waste), such as plant bags, fencing and pesticide containers, will be removed from site as part of normal operations. Waste will be removed via a licenced waste carrier to a licenced waste handling facility. Depending on the scale of the activity and waste produced, this may include the use of a skip on site. Pesticide containers must be triple rinsed before being classed as controlled waste. Waste Transfer Notes will be received and retained on file.

4.15.3 If any special Waste, such as tyres, oil filters, contaminated materials, is generated from the servicing of or repairs to machinery it will be transported in line with The Special Waste Regulations 1996, including the use of a special waste consignment note.

4.15.4 Since the applicant's purchase of Glen Dye Moor in 2021 there has been no significant levels of fly tipping or littering. There has only been one incident since the purchase of the area where fly tipping has occurred requiring removal. Regular monitoring is carried out over the property; this includes monitoring for fly tipping and littering. This monitoring is recorded on a management inspection form. If fly-tipping/littering is present, this will be managed via a licenced waste carrier.

4.15.5 Deer fencing is essential for the successful establishment of this large-scale native and productive woodland, providing critical protection to young trees from browsing damage during their most vulnerable stage. The long-term plan for the removal or managed redundancy of this fencing is dependent on several key factors.

4.15.6 The primary trigger for considering the removal of sections of deer fencing will be when the majority of the trees have reached a size where they are no longer susceptible to significant browsing damage, this includes those areas identified for natural regeneration. This is generally when the leaders of the majority of trees have grown beyond the reach of deer (typically >1.5-2 meters). Due to the diverse mix of native and productive species with varying growth rates across the site, this will not be a single event. Phased removal of the fencing, aligned with the variable growth and establishment rates of different woodland blocks, is anticipated.

4.15.7 The long-term retention or removal of the fence will be subject to a continuous monitoring and review process. Given that deer pressures from neighbouring landholding are not able to be predicted and that government policy on deer control and fencing grants can evolve, a fixed timeline for complete removal is not appropriate.

4.15.8 The decision-making process will be informed by:

- Annual monitoring of tree growth and survival rates.
- Assessment of deer impacts both within the fenced area (should any breaches occur) and in the surrounding landscape.
- Changes in local deer population dynamics and management efforts on adjacent land.
- Evolution of Scottish Government policy and guidance relating to deer management and habitat impact assessments.

4.15.9 This adaptive management approach ensures that the significant investment in establishing this woodland is protected while allowing for the future possibility of a more integrated, open landscape once the forest is robustly established. The fencing will only be made redundant when there is high confidence that its removal will not compromise the long-term objectives of the woodland creation scheme.

4.15.10 Tree shelters will be considered redundant once the protected tree is established and the shelter no longer serves a useful purpose. This is considered when the trees are around 1.75-2.0m tall and will be assessed and recorded on management inspection forms. Once the shelters are no longer serving a useful purpose they will be removed and disposed of via a licenced waste carrier. Disposal will aim to achieve recycling of recovered materials in the first instance.

4.16 WILDFIRE

4.16.1 The Glen Dye Moor Wildfire Management Plan can be found in Appendix 4.4. This plan details the strategy for reducing the risk of wildfire and the response to wildfire events. Wildfire is not within the scope of this EIA report.

4.16.2 Although muir burning is no longer practiced within the land holding, Glen Dye Moor remains at a high risk of wildfire occurrence. This is due to the frequent visitor usage including overnight recreational camping, vegetation types and conditions present, reduction of grazing impacts, and neighbouring land uses. Glen Dye Moor is set within a remote rural area making reporting of wildfire critical to ensuring responses can be organised and rapidly delivered.

4.16.3 Fire occurrence is thought to be greatest in March and April, though across Scotland most fires occur between November and May inclusive. (Gagkas, 2023).

4.16.4 Fire risk will change over time as Glen Dye Moor undergoes land use changes, and restoration works, with the greatest changes expected within the first ten years of operations (2023 to 2033). Risk will remain at an overall high level until new woodland creation has reached canopy closure, and peatland restoration areas have rewetted. Once habitat change has occurred, risk is expected to change to moderate risk over the longer term.

4.16.5 Measures to prevent, reduce, and control wildfires are noted:

- Prevention of wildfires
  - reducing fire setting by visitors through posting of ‘no fires’ signs
  - wildfire information posted on notice boards

- Reducing risk and impact
  - Maintenance of firebreaks along the existing road network
  - peatland restoration which will raise the water table and increase fuel moisture during period of drought
  - New woodland creation creating shaded fuel breaks, understory vegetation reduction
  - Management of deer density to ensure low levels of grazing are maintained, not eliminating all grazing

- Responding to and controlling wildfire
  - Emergency contacts and agreed response strategy
  - Placement of beaters, sufficient stocking of beaters and/or other fire control equipment
  - Ongoing engagement with neighbouring land managers
  - Road maintenance/maintaining access year-round where conditions allow
  - Helicopter call-out and other contracted crew response
  - Liaison with neighbouring properties on their muirburn activities, in accordance with the Muirburn Code.
  - Maintaining resource lists and contact details with South Grampian Wildfire Group

5 SITE SELECTION AND ALTERNATIVES

5 Alternatives Analysis

5.1 This Chapter reviews the alternative proposals considered as part of the Environmental Impact Assessment as required by Regulation 6(3)(d) and Schedule 3 of The Forestry (Environmental Impact Assessment) (Scotland) Regulations 2017 which detail the Information for inclusion in EIARs. This includes a description of the "reasonable alternatives" (for example in terms of forestry project design, technology, location, size and scale) studied by the applicant, which are relevant to the proposed forestry project and its specific characteristics, and an indication of the main reasons for selecting the chosen option. It should be noted that the EIA Regulations, whilst requiring "a comparison of the environmental effects" of the "reasonable alternatives" studied (Schedule 3), there is no requirement for a detailed assessment of alternatives to be undertaken. The approach to the consideration of alternatives presented below reflects good practice guidance and complies with the requirements of The Forestry (Environmental Impact Assessment) (Scotland) Regulations 2017.

5.2 For the purposes of this chapter, alternatives are described as 'other proposals' which have been considered 'reasonable' which differ in design, location, size, scale, or specification, to those listed in Chapter 4 Scheme Proposal, and List 4.2 Detailed List of Operations Included in Proposals.

5.3 It is important to note that afforestation projects require a holistic approach, considering a wide range of interconnected factors. Alternatives to individual components, such as fencing or ground cultivation, may not be directly substitutable. Each element must be evaluated within the context of the overall proposal. Selecting optimal elements independently may not yield a practicable or effective project outcome.

5.4 LIST OF ALTERNATIVES

5.4.1 The alternatives considered include the following, within several of which a number of options are discussed below:

- No Action (i.e. the 'do nothing' scenario)
- Preferred Alternative
- Alternative Cultivation Techniques
- Alternative Species Choice and Design
- Alternative Roading Design and Location
- Alternative Fencing Design and Location

5.4.2 Description of Alternatives

5.4.2.1 For each of the listed alternatives, a brief description is provided along with appended maps detailing the location and description of environmental receptors.

5.4.3 No Action

5.4.3.1 This is the 'no action' or 'do nothing' alternative. In this case, the proposals are not carried out and baseline conditions are expected to continue. No afforestation, roading, fencing or deer management would be carried out under this alternative.

5.4.3.2 Appendix Maps 5.2.1 and 5.2.2 'Alternative No Action', illustrates the baseline conditions present on site along with environmental receptors.

5.4.3.3 Projecting baseline conditions on site would be linked to climate change projections indicating a trend towards warmer and wetter conditions. Future baseline scenarios, without the implementation of the forestry project, suggest an increase in average annual temperatures, potentially leading to shifts in species composition and increased vulnerability to heat stress in existing flora. The Climate projections for Scotland published by Adaptation Scotland in 2021 noted that winter temperatures in the region are projected to increase by 1.0°C to 1.5°C by 2050, and between 1.1°C and 2.7°C by 2080, under low emission scenarios. Under high emission scenarios, these increases are projected to be even more pronounced, with winter temperature increases of 1.5°C to 3.2°C by 2050, and 0.6°C to 4.9°C by 2080. Rainfall patterns will also shift, with winters becoming wetter and an increasing proportion of rainfall coming from heavy rainfall events, which are expected to increase in intensity in both winter and summer. This could exacerbate soil erosion and increase the risk of flooding, particularly in lower-lying areas. Milder winters may reduce the duration and extent of snow cover, affecting local hydrology and the timing of seasonal ecological processes. Degraded conditions identified within Appendix 3.1 Habitats Peat and Protected Species, particularly around the eroded blanket bogs, and Breeding Bird Survey Report (Appendix 3.2) noting population decline of many bird species such as Waders, lack resilience and could be anticipated to continue or be exacerbated.

5.4.4 Preferred Alternative

5.4.4.1 This is the preferred alternative upon which the proposals are based. This alternative includes all the proposals listed in Chapter 4, Scheme Proposal. Proposed species design can be found on the Proposals Overview Map, proposed roading design can be found on the New Forest Tracks Map. and proposed fence design can be found on Proposed Fencing North, South, and West Maps

5.4.4.2 The EIA Constraints Map illustrates the proposals along with environmental receptors.

5.4.4.3 Full details of the site conditions and proposal descriptions are included in Chapters 3 'Site Description' and Chapter 4 'Scheme Proposal'. This section will not expand further on the preferred alternative as the remaining EIA Report covers this alternative in detail.

5.4.5 Alternative Cultivation Techniques

5.4.5.1 This alternative considers alternative cultivation techniques to those proposed. Alternatives focus on the soil sensitivity review, see Appendix 3.7 and compares the cultivation techniques which are proposed, against alternative techniques which would also be appropriate to achieve site objectives.

5.4.5.2 Appendix Maps 5.3 and 5.4. 'Alternatives Assessment – Alternative Cultivation Techniques', illustrates the alternatives along with environmental receptors.

5.4.5.3 List of alternative cultivation techniques considered reasonable:

Alternative Cultivation Techniques: Inverted Mounding across the whole site	Areas of planting would be cultivated using inverted mounding on all planted areas. See Appendix Map 5.3 for details.
Alternative Cultivation Techniques: Scarifying / Chemical Screefing Natural Regeneration Areas	This technique was considered to control existing vegetation in unplanted areas which are planned to naturally regenerate. See Appendix Map 5.4 for details.

5.4.5.4 Some alternative cultivation techniques were not considered reasonable including 'no cultivation' as well as techniques which were more intensive than the proposed techniques according to the Cultivation for Upland Productive Woodland Creation Sites Applicant's Guidance. Avoiding all cultivation (no cultivation) was not considered reasonable as this would not secure establishment of trees within a timely manner due to competing vegetation.

5.4.6 Alternative Species Choice and Design

5.4.6.1 This considers alternative species choice and designs to those proposed. It focuses on reasonable alternative designs and species which would still meet some site objectives along with a brief explanation as to why some alternatives were not considered reasonable and were not included in the analysis.

5.4.6.2 List of alternative designs and species considered reasonable:

Alternative Species Choice and Design: Conifer Mixtures Adjusted	This design was considered to maximise the opportunity for timber production however remained within the site objectives of no more than one third of the afforestation being productive. Areas of mixed conifers are composed of a much higher percentage of Sitka spruce than proposals, with all conifer areas including 70% Sitka spruce mixtures. See Appendix Map 5.5 for more details.
Alternative Species Choice and Design: Broadleaf Densities Adjusted	This design was considered to maximise the opportunity for native planting however remained within the site objectives of two thirds of the afforestation being for conservation. Areas of broadleaf woodlands were consistently at minimum stocking density of 1600 trees per hectare with no variable spacing or semi-open canopy. This alternative would not include any semi-open canopy Upland birch which is currently planned within the proposals, instead planting full canopy closure Upland birch. See Appendix Map 5.6 for more details.

Alternative Species Choice and Design: Maximum Constraint Buffers	This design applies buffers, setbacks and conservation measures to limit afforestation to a highly cautious degree, generally resulting in areas of designed open ground above 40%. This alternative represents the 'most conservative' design in terms of constraint management as well as producing the least amount of new woodland. See Appendix Map 5.7.1 showing all constraints and their relevant setbacks, buffers, or conservation measures as well as Appendix Map 5.7.2 showing the resulting woodland design.

5.4.6.3 Some alternative designs and species were not considered reasonable and not included for analysis. This included 100% native Scots pine planting with no productive woodland creation. This design would have established woodland with no timber producing intentions. It was not possible to achieve long-term objectives relating to carbon sequestration, nor regional socio-economic benefits, through exclusive native woodland creation. This is due to both the need for rapid carbon sequestration as well as a desire for long-term economic activity on site contributing to the local economy and regional forest industry. Absence of future financial returns from productive forestry also limits ability to implement long-term conservation objectives. Similarly, another alternative which was not considered reasonable was 100% productive timber planting. This design would have established woodland with no native woodland types. Only productive species would have been planted. It was not possible to achieve the broadest range of long-term environmental benefits through exclusive productive timber planting. This is due to the extensive riparian resources currently on site which are in a degraded state and would require native tree cover to improve conditions as well as extensive breeding bird populations which would not benefit from exclusive planting of closed tree canopy at uniform productive spacing. The last alternative which was not considered for analysis was 100% natural regeneration. This design would have established woodland using only natural regeneration with no planting of trees. It was not possible to achieve long-term objectives relating to carbon sequestration, regional socio-economic benefits, nor maximising environmental benefits. This is due to the limited seed sources currently available on site. Not all species are present on site and/or in appropriate locations to provide seeds. Woodland creation would have been dependant on the species present on site and would not reflect the target woodland types to achieve environmental benefits desired.

5.4.7 Alternative Roading Design and Location

5.4.7.1 This alternative considers alternative roading designs and locations to those proposed. Alternatives focus on reasonable alternative designs and locations which would still meet site objectives along with a brief explanation as to why some alternatives were not considered reasonable and were not included in the analysis.

5.4.7.2 List of alternative roading designs and locations considered reasonable:

Alternative Roading Design and Location: Township Track, Tracks located around Water of Dye between the main carpark at Spital Bridge and Charr Bothy	These alternative road locations and designs were considered as alternatives to the proposed route at this location to provide access for timber haulage and remained within the site objectives of producing a productive timber crop. See Appendix Map 5.9 showing all proposed and alternative road locations.
Alternative Roading Design and Location: Greendams Track and Spittal Track extension	These alternative road locations and designs were considered as alternatives to the proposed routes to provide access for timber haulage and remained within the site objectives of producing a productive timber crop. See Appendix Map 5.9 showing all proposed and alternative road locations.

5.4.7.3 Another alternative was not considered reasonable and not included for further assessment. This was the 'No New Track' alternative which would have used only existing tracks on site. This design would have established areas of productive woodland with no access. It was not possible to achieve long-term objectives relating to one third of the planting being productive forestry. This is predominantly due to production forestry requiring access to plant, maintain, and harvest the crop.

5.4.8 Alternative Deer Fencing Design, Location and Herbivore Management

5.4.8.1 This alternative considers alternative deer fence designs and locations to those proposed, it focuses on reasonable alternative designs and locations which would still meet site objectives along with a brief explanation as to why some alternatives were not considered reasonable and were not included in the analysis.

5.4.8.2 It is widely recognised and published that in order to achieve successful woodland establishment, deer densities need to be sustained at 2 – 5 deer per sq. km. The last NatureScot red deer count in 2022 showed deer on Glen Dye Moor (both the applicant's land and hill land belonging to Glen Dye Estate) at 6 deer per sq. km. This figure can be further broken down to show that the applicant's ownership has approximately 2 deer per sq. km and the Glen Dye Estate hill land having in excess of 11 deer per sq. km. Overall, the density in the East Grampians open range was 11 deer per sq. km.

5.4.8.3 The majority of red deer on the applicant's ownership are transient which creates a challenge to meaningful population reduction. The applicant is committed to the outcomes within the Deer Management Plan (appendix 3.4). The preferred and alternative fence designs/herbivore management require deer management and culling (including inside fence enclosures where there is break in etc) to achieve the desired outcome of tree establishment. Any fencing requires inspection and maintenance, along with removal or replacement at the end of the functional lifespan.

5.4.8.4 List of alternative fencing designs and locations considered reasonable:

Alternative Fence Design and Location: Perimeter March Fence	This alternative design was considered to provide protection for growing trees from deer. The fence in this alternative runs the full ownership boundary except for where the march is a watercourse, in which case the fence is brought to the burnside. See Appendix Map 5.10 for more details.
Alternative Fence Design and Location: Multiple Enclosures	This alternative design was considered to provide protection for growing trees from deer. Individual areas of planting are protected with multiple enclosures. See Appendix Map 5.11 for more details.
Alternative Fence Design and Location: Strategic Fencing	This design was considered to provide protection for growing trees from deer. New deer fencing is placed strategically to divert or deflect deer from the afforestation area enabling control of animals to a suitable degree. See Appendix Map 5.12 for more details.
Alternative: No new deer fencing and collaborative deer management or individual tree guards.	This option would involve securing afforestation without the use of deer fencing, relying instead on deer culling alone, with support from neighbouring properties to manage deer to the appropriate density required (2.5 deer per sq. km) for tree establishment. Existing deer fences within neighbouring properties would remain, enhanced with grouse droppers where necessary. Alternatively, this option could utilise individual tree protection. Collaborative deer management has been successful across multiple ownerships in landscape scale projects. A strong example is Cairngorms Connect, where multiple large ownerships share the same deer management objectives.

5.5 ALTERNATIVES ASSESSMENT

5.5.1 The following Table 5.1 Alternatives Assessment lists the alternatives along with the environmental receptors which are present, notes on the analysis are included for context as well as statement on the findings.

Table 5.1 Alternatives Assessment

Alternative	Environmental Receptors & Map Annotation Notes	Analysis Notes	Comparison Findings
No Action	River Dee SAC, golden eagle, merlin, curlew, waders, black grouse, large heath butterfly, deer, recreation, and landscape would all be present and subject to impact from this alternative.	This is a continuation of baseline conditions considering climate change. Conditions which are currently declining or degrading such as eroding peatland or declining wader populations, would continue.	Although a 'no action' alternative is feasible and would not result in any substantial direct environmental impacts, it would fail to meet any site objectives as well as having indirect environmental impacts. No environmental, social or economic benefits would be achieved under this scenario.
Preferred Alternative	River Dee SAC, golden eagle, merlin, curlew, waders, black grouse, large heath butterfly, deer, recreation and landscape would all be present and subject to impact from this alternative.	Further in-depth details are included in Chapters 6 to 15 on specific topics. In general, this alternative would result in both positive and negative impacts but provide an overall net biodiversity gain as discussed in Chapter 16.	This alternative results in an outcome that meets all site objectives and is a feasible alternative. It would produce some environmental impacts, though these are mitigated, as well as resulting in environmental, social and economic benefits.
Alternative Cultivation Techniques: Inverted Mounding	River Dee SAC is located less than 50m from areas of inverted mounding, inverted mounding poses a low risk to the SAC if following standard riparian buffer guidance within UKFS and following 'Know the Rules' guidance produced by the	Inverted mounding as noted within the 'Cultivation for Upland Productive Woodland Creation Sites - Applicant's Guidance' would have a lesser impact than proposed techniques in terms of carbon losses. There is only a slightly lesser risk from inverted mounding compared to proposed cultivation techniques in terms of increases to	This alternative is feasible though economically the most expensive option to implement. It would result in a reduced carbon loss (5% disturbed topsoil versus 21% disturbed topsoil) when compared to the preferred alternative. It would meet site objectives and deliver similar environmental social and economic benefits.

	Forestry & Water Scotland Initiative. All merlin [redacted] mounding ([redacted] this poses a risk of disturbance during operations if carried out within the breeding season though avoidable if following published safe working distances.	peak flows, erosion, and flooding (this is mainly due to avoidance of steep ground for proposed techniques). There is no difference between proposals and this alternative in terms of disturbance to protected species.	
Alternative Cultivation Techniques: Scarifying or Chemical Screefing Natural Regeneration Areas	River Dee SAC is located immediately adjacent to areas which would be scarified or screefed in this alterative. [redacted] merlin [redacted] scarified or screefed.	This alternative technique would result in operations occurring within the SAC boundary, introducing a marginal risk of erosion or pollution. Additional risk of disturbance to protected species would occur under this alternative including merlin.	This alternative is feasible though it would result in a higher risk of environmental impacts in the event of accidents or spillage. It would deliver outcomes for natural regeneration at a faster rate than the preferred alternative. It would meet all site objectives and deliver similar environmental benefits.
Alternative Species Choice and Design: Conifer Mixtures adjusted	River Dee SAC would be impacted long-term as additional Sitka spruce densities would be planted less than 50m from the SAC resulting in additional seed production. Golden eagles [redacted] away from this changed conifer mixture which would result in a slow spread into foraging	This alternative would increase risk of seeding into the SAC, eagle foraging ground, and ground nesting bird territories over a long-term period. For black grouse it would be less of an impact than species which favour open habitats such as curlew.	This alternative is feasible and would meet all site objectives. It would deliver a higher carbon sequestration outcome. Environmental impacts would not be seen over the short term however long-term outcomes would carry substantial additional environmental risk and would result in additional operational interventions in future to control seed spread.

	areas over a long-term period. There are [redacted] curlew [redacted] of this change to Sitka stocking. [redacted] Four territories of waders are located [redacted] of this conifer mixtures. A single black grouse [redacted] from conifer mixtures. All merlin [redacted]. This poses a risk of disturbance during operations if carried out within the breeding season though avoidable if following published safe working distances.		
Alternative Species Choice and Design: Broadleaf Densities Adjusted	River Dee SAC is located within this alternative density area as riparian woodland. Golden eagles are [redacted] of this alternative change in broadleaf density. All merlin territories would have this	This alternative would alter riparian woodland canopy resulting in an even canopy rather than a semi-open canopy. This would be less beneficial to the River Dee SAC as the shading effect would be greater and more uniform. Recommendations for planting around merlin, curlew, waders and black grouse would also be	This alternative would result in lesser environmental benefits than the preferred alternative though it is feasible and would meet site objectives. There is increased environmental impacts for some species such as curlew and merlin.

	alternative change to broadleaf density [redacted]. [redacted] curlew [redacted] would have full density broadleaf planting [redacted]. Five other wader [redacted] of this change to broadleaf planting. A single black grouse [redacted] of this change to broadleaf planting densities. Large heath butterfly would not be affected by this alternative as they are more than 700m distant. Landscape sensitives are also present and likely affected by this change in density.	affected as the variable diverse native woodland canopy which would include gaps, and open glades would instead be even uniform canopy with no gaps. This would be more detrimental to these bird species than a semi-open canopy. Landscape is likely to be affected by this alternative as some transitional areas which were appearing as 'feathered' transitional areas will now be even canopy.	
Alternative Species Choice and Design: Buffers Maximised	River Dee SAC would be within 20m of this alternative design. Golden eagle areas would be [redacted] this alternative design planting, though most planting would be [redacted] Merlin within this alternative would not	Although this buffer would see all planting set back to, or beyond, recommended buffers, this would also include avoidance of riparian planting and woodland types which would otherwise be beneficial to some species. Many of the benefits from proposals would not be realised under this option and opportunities would be missed relating to habitat diversity and	This alternative is not feasible, would not meet site objectives and would not realise environmental benefits when compared to the preferred alternative. Lack of feasibility is mainly due to the high cost of implementing this fragmented design resulting in low planting figures while also requiring the same deer protection measures as other alternatives.

	have any planting within [redacted]. More than 150m of open ground would be provided for large heath butterfly though most planting would be greater than 450m away. This alternative would result in small fragments of woodland creating a landscape impact and would be removed from a final design.	resilience. Some species such as merlin, curlew and waders would benefit while others such as black grouse and the River Dee SAC would not see such a degree of benefit.	
Alternative Roading Design and Location: Township track location changes	A detailed analysis was carried out for these environmental receptors and included within Appendix 5.13 Alternative Roads Assessment.	Alternative Location A would have a significant impact on a GWDTE, a minor impact on a watercourse with a new bridging culvert, and an additional ongoing minor impact for a [redacted] through future timber haulage. This alternative would not significantly impact curlew breeding territories, or the SAC. Alternative Location B is not suitable for timber haulage due to an unavoidable steep gradient. This alternative would have a minor impact on archaeology through removal of two sections of stone dyke and a cairn, and no significant impact to the	This alternative was feasible though it would not achieve objectives around future timber haulage. Environmental impacts for some receptors were higher than the preferred alternative (impacts to breeding birds and GWDTEs) while others were lower (such as impact to archaeology). Benefits around research into the historic environment would not be realised with this alternative.

		SAC and curlew breeding territories.	
Alternative Roading Design and Location: Including Greendams Track and extending Spittal track	River Dee SAC would be located 421m downstream from a new permanent crossing location under the Greendams alternatives. For the extended Spital track alternative a crossing point would run through the River Dee SAC. Golden eagles are [redacted] from the nearest alternative road location.	These alternatives would result in construction of three permanent watercourse crossing points within or near the River Dee SAC resulting in additional risk of diffuse pollution.	This alternative was feasible and would meet all site objectives. Environmental impacts were found to be high for the River Dee SAC when compared to the preferred alternative.
Alternative Fencing Design and Location: Perimeter March Fence	A comparison of fencing benefits is provided in Appendix 5.14 Fencing Design and Location - Alternatives Assessment Analysis. The perimeter fence alternative was found to have a slightly beneficial average impact score. Within this alternative, 22.1km of new fencing would be [redacted] black grouse [redacted]. Known tracks, paths and walking routes intersect the alternative fence resulting in around	This alternative would result in new fencing constructed within areas of black grouse strike risk as well as running at a 90-degree angle to the main summit of Mount Battock and sitting on the skyline. All areas of recreational access use would be provided access infrastructure. Due to the large scale of fencing, deer entrapment is likely.	This alternative would result in some landscape impacts but is feasible and meets overall site objectives. It would have an added benefit of defining property boundaries. There is only minimal difference between this option and the preferred alternative.

	63 access structures being installed. Mount Battock, a landscape sensitivity, would be crossed by this alternative at a 90-degree angle.		
Alternative Fencing Design and Location: Multiple Enclosures	A comparison of fencing benefits is provided in Appendix 5.14 Fencing Design and Location - Alternatives Assessment Analysis. The multiple enclosures alternative was found to have a slightly adverse average impact score. Within this alternative 146.7km of fencing would be [redacted] black grouse [redacted]. Known tracks, paths and walking routes intersect the alternative fence resulting in around 150 access structures being installed. This would also result in 2 additional gates being installed on the main path to Clachnaben assuming a circular route taking in Mount Shade as well. Multiple frequent fence lines would be visible from main long distance	This alternative would result in multiple enclosures funnelling deer through corridors between resulting in erosion and ground damage. The additional amount of fencing required would pose an enhanced risk to black grouse by increasing the areas of fencing where bird strike could occur. Recreational and landscape impacts would result from the increased density and amount of fencing both visually and as barriers to access. Multiple enclosures would slow the rate of planting down as this would involve extensive labour and time to erect. The advantage of this approach is that it would only target woodland establishment areas, leaving a larger area open for higher deer densities, if this was the objective.	This alternative is not feasible, mainly owing to high quantity of deer fence and related costs, and would result in notable time, environmental and social impacts. It would not meet all site objectives.

	viewpoints including Cairn o' Mount, Mount Battock and Clachnaben. Due to multiple enclosure, deer funnelling and entrapment would occur resulting in concentrated movements of deer between enclosures.		
Alternative Fencing Design and Location: Strategic Fencing	A comparison of fencing benefits is provided in Appendix 5.14 Fencing Design and Location - Alternatives Assessment Analysis. The strategic fencing alternative was found to have an adverse outcome due to five of the seven assessed impacts being negative in nature. Within this alternative 17.9km of fencing would be [redacted] black grouse [redacted]. Known tracks, paths and walking routes intersect the alternative fence resulting in around 51 access structures being installed. Location of strategic fences placed at areas where deer pressure is high would result in long lengths of fencing at	Bird strike risk would remain across much of the strategic deer fence location. Access points to ensure unrestricted recreational access would also be required in at least 51 locations. The largest concern with this strategic fencing is its location on the landscape resulting in regular entrapment risk to deer as they could move around the strategic fence to the west. The advantage of this approach is that it would reduce capital expenditure	This alternative would not be feasible and carries a high risk over the lifetime of the project in terms of not meeting objectives. It would result in environmental impacts related to animal welfare. This alternative fails to realise benefits for wider habitat improvements which would be achieved in tandem with the preferred alternative. For this alternative there is an additional discussion around deer management. The target deer density for Glen Dye Moor, encompassing all habitat projects out with the afforestation project, is approximately 2.5 deer per square kilometres. While strategic fencing would assist in achieving this, it presents significant challenges. Resource Demands: Maintaining effective control would necessitate daily checks across the entire 6,300-hectare area to address deer entering through fence openings.

	awkward locations within the landform resulting in welfare and entrapment issues with deer during periods of inclement weather. Areas of landscape sensitive would still require strategic fencing and landscape impacts would occur though Mount Battock would remain unfenced in this alternative.		Knowledge Requirements: Optimal fence placement relies on detailed knowledge of deer movement patterns, typically acquired through extensive long-term monitoring. Species-Specific Limitations: Strategic fencing is primarily designed for red deer, which exhibit predictable movement. The local roe deer population would require separate, comprehensive control measures as fencing would offer minimal protection against their recolonisation.
Alternative Fencing Design and Location: No new fences	A comparison of fencing benefits is provided in Appendix 5.14 Fencing Design and Location - Alternatives Assessment Analysis. This option was found to be the most adverse due to the high risk to successful establishment of the scheme from deer pressure. With this alternative the loss of black grouse to fence strikes would be reduced. The existing deer march fence would remain between Glen Dye Estate woodlands and Fiznean Estates to allow the neighbours to continue their land	Glen Dye Moor would become a vacuum drawing in deer from surrounding estates. Control of roe deer would be difficult due to the bed and breakfast effect. Long-term cooperation, ultimately with a legal obligation, with high intensity deer management across the neighbouring estates is required for a period of 20 years plus. This requires adjacent landowners to carry out control to meet the applicants objectives of 2.5 deer per sq. km., rather than their own. Many neighbouring estates rely on income from mixed sporting activities, including deer stalking, and do not share the same objectives regarding deer population reduction. The economic reliance of these	This alternative would not be feasible and carries a high risk over the lifetime of the project in terms of not meeting objectives or delivery of associated public benefits. This alternative also fails to realise benefits for wider habitat improvements which could be achieved in tandem with the preferred alternative. For this alternative there is an additional discussion around deer management. The target deer density for Glen Dye Moor, encompassing all habitat projects out with the afforestation project, is approximately 2.5 deer per square kilometre. Resource Demands: Maintaining effective control would necessitate a significant input to control deer over a prolonged period with full co-operation of neighbours. This leaves the scheme vulnerable to changing circumstances of

	management objectives. Impacts on public access from deer fencing would be reduced under this alternative. The capital cost of fencing would be removed, with costs occurring annually with deer culling.	landowners on maintaining higher deer densities (>5 deer/km2) than are sustainable for tree establishment makes securing a long-term agreement both difficult and over the long term unrealistic. The use of tree shelters to protect newly planted trees, was ruled out due to the scale of the project. Given the vast number of trees being planted across the scheme, the industrial supply chain could not meet the demand for shelters, particularly as there is a preference for non-plastic materials. Even if supply were adequate, the maintenance requirements associated with managing such a large number of tree shelters would be extensive, adding considerable long-term costs and would be economically unviable Furthermore, the widespread use of tree shelters would create significant visual impacts, altering viewsheds across the landscape and diminishing the natural aesthetic of the area.	neighbours. This includes change of ownership, change in objective or change in circumstances (financial, death, etc). Any potential future statutory powers for NatureScot over deer management through the proposed Natural Environment (Scotland) Bill are still going through the Scottish Parliament. Therefore, these are subject to change. In any case they will not provide enough power to protect woodland establishment, nor any grant or carbon commitments, within the timeframe of this project and are likely to be subject to legal challenges before coming into effect with any landscape given the lack of clarity over the wording of the proposed legislation.

5.6 ALTERNATIVES OUTCOME SUMMARY

5.6.1 No Action

5.6.1.1 *The 'No Action' alternative, while avoiding direct environmental impacts associated with project implementation, was rejected due to its failure to address existing site degradation and its inability to deliver any environmental, social, or economic benefits. Specifically, baseline conditions, including degraded blanket bogs and declining populations of key bird species such as waders, as detailed in Appendix 3.1 Habitats Peat and Protected Species and Appendix 3.2 Breeding Bird Survey Report, are projected to worsen under climate change scenarios. As outlined by Adaptation Scotland (2021), the region faces significant increases in temperature and altered rainfall patterns, leading to increased vulnerability of existing flora and fauna, exacerbated soil erosion, and heightened flood risk. These projected changes, combined with the lack of proactive management, would result in continued decline of sensitive habitats and species, including those within the River Dee SAC, and negatively impact golden eagle, merlin, curlew, waders, black grouse, large heath butterfly, deer, recreation and landscape. Therefore, the 'No Action' alternative was deemed unsuitable as it would perpetuate existing environmental challenges and fail to capitalise on opportunities for ecological enhancement and climate resilience.*

5.6.2 Preferred Alternative

5.6.2.1 *Following a comprehensive environmental impact assessment, the 'Preferred Alternative' has been selected as the optimal course of action. This decision is based on a thorough evaluation of the proposals detailed in Chapter 4, Scheme Proposal, and visualised in the Proposals Overview Map, Proposed Cultivation Map, Proposed Fencing North, South, and West Maps, and New Forest Tracks Map, and further illustrated in the Constraints Map. While recognizing impacts on sensitive environmental receptors, including the River Dee SAC, golden eagle, merlin, curlew, waders, black grouse, large heath butterfly, deer, recreation and landscape, as detailed in Chapters 6 to 15, this alternative offers a balanced outcome. Crucially, as discussed in Chapter 16, it delivers an overall net biodiversity gain. This, coupled with its feasibility and ability to meet all site objectives, alongside environmental, social, and economic benefits, justifies its selection. Although environmental impacts are identified, the majority are effectively mitigated. Therefore, the 'Preferred Alternative' is deemed the most suitable option, reflecting a carefully considered balance between development and environmental stewardship.*

5.6.3 Alternative Cultivation Techniques

5.6.3.1 *While alternative cultivation techniques, including inverted mounding across the whole site, scarifying/chemical screefing of natural regeneration areas, were considered, they were ultimately not selected due to a combination of environmental risk, economic factors, and alignment with site objectives; inverted mounding, while offering a potential reduction in carbon loss, was the most economically expensive option and posed a significant disturbance risk to nearby merlin territories though this did not differ from the preferred alternative disturbance risk, and scarifying/chemical screefing presented a higher risk of environmental impacts, particularly to the River Dee SAC, due to potential diffuse pollution and operations within its boundary, along with increased disturbance to multiple merlin territories; ultimately, the preferred cultivation techniques were chosen because they effectively balance environmental considerations, economic feasibility, and the achievement of site objectives, whereas the alternative techniques,*

while potentially offering some benefits, presented unacceptable levels of environmental risk or undue economic burden that led to their exclusion.

5.6.4 Alternative Species Choice and Design

5.6.4.1 Alternative species choices and designs were considered to ensure the proposed afforestation project met site objectives while minimizing environmental impact. These included 'Conifer Mixtures Adjusted,' 'Broadleaf Densities Adjusted,' and 'Maximum Constraint Buffers.' However, certain alternatives were deemed unreasonable and excluded from detailed analysis. Specifically, a 100% native Scots pine planting design was rejected because it would fail to achieve long-term carbon sequestration goals and generate regional socio-economic benefits. The absence of timber production would limit future economic activity and hinder the funding of long-term conservation objectives. Similarly, a 100% productive planting design was excluded as it would not deliver necessary environmental benefits. The site's degraded riparian resources and some breeding bird populations would benefit from native tree cover and varied canopy structures, which a solely productive planting would not provide. Furthermore, a 100% natural regeneration design was deemed unsuitable due to limited existing seed sources. This approach would not guarantee the establishment of target woodland types necessary for achieving desired environmental benefits, nor would it meet carbon sequestration or socio-economic objectives.

5.6.4.2 The 'Maximum Constraint Buffers' alternative, while adhering to buffer guidelines, was not selected as it resulted in highly fragmented woodland, leading to significant landscape impacts and reduced habitat diversity. This approach would miss substantial opportunities for habitat improvement and resilience and would not meet site objectives. Moreover, the high cost of implementing this fragmented design, coupled with low planting figures and the continued need for deer protection, rendered it economically unfeasible. The 'Conifer Mixtures Adjusted' alternative, while increasing carbon sequestration, presented unacceptable long-term environmental risks, particularly regarding seed spread into the River Dee SAC and sensitive bird territories as well as other priority flora and fauna impacts. The 'Broadleaf Densities Adjusted' alternative, while feasible, would have resulted in a uniform canopy that does not optimise riparian habitats and some sensitive bird species, reducing overall environmental benefits compared to the preferred design. Therefore, these excluded alternatives were not pursued due to their failure to meet site objectives, unacceptable environmental risks, limited environmental benefits, or economic infeasibility. The selected design balances environmental considerations, socio-economic benefits, and practical implementation.

5.6.5 Alternative roading design and location

5.6.5.1 Several alternative roading designs and locations were considered to ensure the project met its objectives, particularly concerning timber production. These alternatives included adjustments to the Township Track, and the inclusion of the Greendams Track with an extension to the Spittal Track.

5.6.5.2 Township Track Alternatives: Alternative Location A was deemed unsuitable due to its significant impact on a Groundwater Dependent Terrestrial Ecosystem (GWDTE) and potential minor impacts on a watercourse and [redacted]*. Alternative Location B, while having less impact on certain environmental receptors, was rejected due to an unavoidable steep gradient rendering it unsuitable for timber haulage, a key project objective. Additionally, it would have*

impacted archaeological features. Greendams and Spittal Track Alternatives: These alternatives were not pursued due to the high risk of diffuse pollution to the River Dee Special Area of Conservation (SAC). The necessity for three permanent watercourse crossing points within or near the SAC posed an unacceptable environmental risk, significantly exceeding the potential impacts of the preferred alternative. 'No New Track' Alternative: This alternative was not considered reasonable because it would have prevented the achievement of the project's timber production objectives. The lack of access would have made planting, maintenance, and harvesting impossible.

5.6.5.3 *In summary, alternatives were not chosen due to either an inability to meet the projects timber haulage objectives, or because of a higher negative environmental impact than the chosen route. Specifically impacts to the River Dee SAC, and GWDTEs were the main reasons for rejection.*

5.6.6 Alternative fencing design and location

5.6.6.1 *Alternative fencing designs and locations were considered, including no additional deer fences, to protect the afforestation project from deer, including a Perimeter March Fence, Multiple Enclosures, and Strategic Fencing. However, these alternatives were ultimately not selected due to a range of environmental, economic, social, and logistical concerns.*

5.6.6.2 ***Perimeter March Fence**: Approximately 45km of fencing required. While feasible and meeting site objectives, the impact of this alternative was not deemed acceptable due to the close proximity of the fence to black grouse leks (22.1km of new fencing would be located within 2km of black grouse leks) and the increased bird strike potential. Its 90-degree crossing of Mount Battock also raised landscape sensitivity concerns.*

5.6.6.3 ***Multiple Enclosures:** this alternative was deemed infeasible due to the excessive length of fencing required (approximately 176km), leading to significantly higher costs and environmental impacts. This design would have resulted in substantial bird strike risks, visual intrusion from numerous fence lines, and deer funnelling and entrapment, causing ground damage and erosion. Targeted fencing enclosures would mean lost opportunity for further native woodland recruitment into areas which may be suitable for trees but aren't being planted or proposed for regeneration. Furthermore, the sheer number of access structures required posed a significant logistical and financial burden.*

5.6.6.4 ***Strategic Fencing alternative:** while reducing the overall fencing length (approximately 21km), this alternative presented substantial animal welfare risks. The placement of fences in awkward yet unavoidable locations would increase deer entrapment, particularly during inclement weather. Furthermore, this option would not achieve the wider habitat improvements possible with other alternatives. The need for intensive, daily checks across a vast area, coupled with the requirement for detailed deer movement knowledge and the inability to effectively control roe deer populations, rendered this alternative impractical.*

5.6.6.5 ***No Fence Alternative**: This was dismissed due to the impracticality of relying solely on tree shelters for such a large-scale project and the limitations of the deer control options. If only the new native was protected this would require 2.1 million shelters and approximately 650 tonnes of plastic. The industrial supply chain could not meet the demand for non-plastic shelters, and*

the maintenance requirements and costs would be overwhelming. Collaborative deer management with neighbouring landowners was also deemed unfeasible due to conflicting land management objectives and the lack of long-term guarantees. Until landscape scale deer control is enforced by government policy the ability to effectively reduce and maintain deer populations at below 3 deer per square kilometre is not feasible on this scale of landholding. The lack of enforceable control on neighbouring landholdings, and the transient nature of red deer herds, means even with heavy culling on Glen Dye Moor the deer population cannot be managed at a level where large-scale woodland establishment can be undertaken with an acceptable risk profile. There have been recent examples in Scotland where deer have been controlled to a level allowing native woodlands to be established, at scale, without deer fencing; however, this is on landholdings of 20,000 plus hectares and has taken more than 15 years to reduce populations. Given this project is to be delivered under the Scottish Forestry, Forestry Grant Scheme, the necessary outcomes will not be delivered if no fencing is erected.

5.6.6.6 *Preferred Alternative: This alternative is detailed in Chapter 4, Scheme Proposal and proposed fence design can be found on Proposed Fencing North, South, and West Maps. This was selected as the preferred alternative based on its ability to balance site objectives with minimal environmental and social impacts, while also being logistically and economically feasible.*

5.7 SELECTED ALTERNATIVE

5.7.1 Alternatives considered in this chapter were compared and reviewed in order to make determinations as to whether they represent reasonable alternatives which could be chosen for inclusion within the proposals.

5.7.2 The preferred alternative is the chosen alternative and represents the ‘proposals’ as discussed in Chapter 4 Scheme Proposal. This alternative results in meeting site objectives to the greatest degree while balancing impacts to environmental receptors and was carried forward into the environmental impact assessment.

5.7.3 This preferred alternative represents an iterative process of development and design. It incorporates a variety of embedded design features, referred to as embedded mitigations within Chapters 6 to 15, which are aimed at reducing impacts to the greatest degree feasible while also incorporating opportunities to enhance or maintain sensitive environmental features. Most alternatives were considered at various stages and evaluated through this development and design process over a two-year period. Although all alternatives are compared within this chapter, most represent the iterative process carried out as part of good practice in designing new woodland creation in Scotland.

6 IMPACTS ON RIVER DEE SAC AND QUALIFYING FEATURES

6 Impacts to River Dee SAC and Qualifying Features

List of Appendices Referenced in this Chapter

Appendix 6.1 River Dee SAC Assessment Summary

Appendix 6.2 River Dee SAC Map

Appendix 6.3 River Dee SAC Conservation Advice Package

Appendix 4.3 Glen Dye Moor Water Environment Assessment Summary

Appendix 3.1 Habitats, Peat & Protected Species

Appendix 2.5 Significance Criteria

Appendix 2.2 Glen Dye Moor Woodland Creation EIA Scoping Report

Appendix 2.4 Scoping Opinion for the Proposed Glen Dye Moor Woodland Creation EIA Forestry Project

List of Tables/Figures Referenced in this Chapter

Table 6.1 Likely Impacts and Methods of Assessment for River Dee SAC

Table 6.2 Conditions of River Dee SAC Qualifying Features

Table 6.3 Operations Impacting River Dee SAC

Table 6.4 River Dee SAC Summary Table of Significance

Table 6.5 Significance Matrix

Table 6.6 Diagram of Beneficial and Adverse Impacts

List of Other Documents and Publications Referenced in this Chapter

Wildlife and Countryside Act 1981 (as amended)

Conservation of Habitats and Species Regulations 2017 (as amended)

Conservation (Natural Habitats &c.) Regulations 1994 (as amended)

UKFS Practice Guide: Creating and managing riparian woodlands, 2024, Forest Research

UKFS Practice Guide: Designing and managing forests and woodlands to reduce flood risk, 2022, Forest Research

Cultivation for Upland Productive Woodland Creation Sites - Applicant's Guidance, 2021, Scottish Forestry

UKFS Practice Guide: Managing Forest operations to protect the water environment, 2019, Forest Research

6.1 CHAPTER SUMMARY

6.1.1 The River Dee SAC is an extensive designated site for qualifying features including freshwater pearl mussels (*Margaritifera margaritifera)*, Atlantic Salmon (*Salmo salar)*, and Otter (*Lutra lutra)*. A portion of the River Dee SAC falls within the project boundary and will be impacted by operations including cultivation, planting, natural regeneration, fencing construction, forestry track construction and related maintenance and establishment. Freshwater pearl mussel beds are not present on site though taking a precautionary approach and planning for future colonisation, they are assumed to be present on site for the purposes of this assessment. There is not known breeding population of Otters, though baseline surveys confirmed occasional presence on site. Salmon are confirmed present by the River Dee Salmon Fishery Board. Embedded mitigation including Diffuse Pollution Planning, operational buffer areas and afforestation species design reduce negative impacts and produce measurable benefits to the SAC. Principally through the increase in riparian woodland the assessment found that the proposals will help to achieve the River Dee SAC Objectives; to maintain or restore the population and distribution of and habitats important to the qualifying features (freshwater pearl mussels, Atlantic salmon and otter) (see Appendix 6.3) as well as meeting or exceeding UKFS Practice Guidance. Main benefits of the proposals to the River Dee SAC revolve around the creation of substantial areas of new riparian woodland aiding in alleviating high-water temperatures and improving resilience to climate change. These beneficial and adverse factors combine and the impact on the River Dee SAC will therefore be 'not significant' in the context of the EIA regulations.

6.2 INTRODUCTION

6.2.1 This chapter of the Glen Dye Moor New Woodland Creation Environmental Impact Assessment Report (EIAR) considers the potential impacts of proposals on River Dee SAC and its qualifying features and assesses the likely severity of those impacts.

6.2.2 The River Dee SAC has the following qualifying features: freshwater pearl mussels (*Margaritifera margaritifera)*, Atlantic salmon (*Salmo salar)*, and otter (*Lutra lutra)*.

6.2.3 In relation to the EIA Regulations 5 (3), River Dee SAC and its qualifying features are considered to be a 'Biodiversity' factor and will be added to other biodiversity factors for a final determination of significance in Chapter 16 Summary of Significant Effects.

6.2.4 This Chapter is supported by Appendix 6.1 River Dee SAC Assessment Summary.

6.2.5 In relation to the River Dee SAC, this is designated under the Conservation of Habitats and Species Regulations 2017 (as amended) in England and Wales and to a limited extent in Scotland (reserved matters), and the Conservation (Natural Habitats &c.) Regulations 1994 (as amended) in Scotland. These regulations require establishment of a network of important high-quality conservation sites that will make a significant contribution to conserving the habitats and species identified in Annexes I and II, respectively, of European Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora, known as the Habitats Directive.

6.2.6 This assessment will be based on River Dee SAC having national importance as a statutory designated site and following EIA Scoping consultation feedback from NatureScot, as recorded within Appendix 2.2 Glen Dye Moor Woodland Creation EIA Scoping Report.

6.3 SCOPING CONSULTATION AND SCOPE OF ASSESSMENT

6.3.1 This section outlines the methodology for assessing the likely significant effects on qualifying features of the River Dee SAC from the proposals.

6.3.2 The Glen Dye Moor Woodland Creation EIA Scoping Report (see Appendix 2.2) was submitted to Scottish Forestry Grampian Conservancy in January 2025 following a scoping meeting with consultation bodies agreed with Scottish Forestry. The Scoping Report set out the overall approach to assessment and allowed for the refinement of the proposals over the course of the assessment.

6.3.3 Scottish Forestry produced a Scoping Opinion (see Appendix 2.4 Scoping Opinion for the Proposed Glen Dye Moor Woodland Creation EIA Forestry Project) on the 11th February 2025, confirming the inclusion of the River Dee SAC and Qualifying Interests, identifying likely significant effects to assess along with suggested methodology. These are listed in Table 6.1 Likely Impacts and Methods of Assessment for River Dee SAC.

Table 6.1 Likely Impacts and Methods of Assessment for River Dee SAC

Likely Impact	Method of Assessment
Habitat Modification: Creation of riparian woodland resulting in shading, nutrient and organic material input, bankside stabilisation of watercourses. This includes improvement of breeding habitats.	Proposals measured against recommendations within the following guidance: River Dee SAC Conservation Advice Package (Appendix 6.3) and Conservation Objectives UKFS Practice Guide: Creating and Managing Riparian Woodlands UKFS Practice Guide: Designing and Managing Forests and Woodlands to Reduce Flood Risk UKFS Practice Guide: Managing Forest Operations to Protect the Water Environment
Breeding Site Damage or Disturbance: During operations, works that result in direct damage or disturbance of the active breeding sites and resting places of protected species, and spawning beds, or other structures or locations critical to populations of other priority species, should be avoided and mitigated.	Assessment of proposals against recommendations within the River Dee SAC Conservation Advice Package (Appendix 6.3) and the Conservation Objectives for its Qualifying Interests
Hydrological Change: Changes to local water tables or changes to peak flow runoff due to afforestation and road construction. This includes natural floodwater abatement effects and water temperature changes with reduced solar exposure.	Comparison with predictions indicated through the Marine Scotland River Temperature Mapping, Scotland River Temperature Monitoring Network (SRTMN), to demonstrate the significance of the benefits the riparian planting would have for lowering river temperatures. Proposals measured against recommendations within the following guidance:

	River Dee SAC Conservation Advice Package (Appendix 6.3) and Conservation Objectives UKFS Practice Guide: Creating and Managing Riparian Woodlands UKFS Practice Guide: Designing and Managing Forests and Woodlands to Reduce Flood Risk UKFS Practice Guide: Managing Forest Operations to Protect the Water Environment
Diffuse and Point-Source Pollution: Resulting from operational spills of oil, fuel, or other chemicals, as well as sediment run-off following soil disturbance through cultivation, road construction and quarrying.	Proposals measured against recommendations within the following guidance: UKFS Practice Guide: Creating and Managing Riparian Woodlands UKFS Practice Guide: Designing and Managing Forests and Woodlands to Reduce Flood Risk UKFS Practice Guide: Managing Forest Operations to Protect the Water Environment Cultivation for Upland Productive Woodland Creation Sites – Applicants Guidance

6.4 BASELINE

6.4.1 The Study Area is defined as areas within the project boundary falling within 250m of the SAC boundary and extends 500m upstream from tributaries to the River Dee SAC within the project Boundary. The River Dee SAC and project boundaries are as shown on Appendix 6.2 River Dee SAC Map

6.4.2 Data Sources used to inform the assessment include correspondence with NatureScot and the Dee District Salmon Fishery Board, information found on NatureScot Site Link, records from the National Biodiversity Network Atlas and Local Biological recording centres as well as site surveys.

6.4.3 NatureScot Condition Assessments as stated on Site Link are included in Table 6.2 Conditions of River Dee SAC Qualifying Features

Table 6.2 Conditions of River Dee SAC Qualifying Features

Qualifying Feature	Condition	Latest Assessment
Freshwater pearl mussels (*Margaritifera margaritifera)*	Unfavourable Declining	24 Jul 2014
Atlantic salmon (*Salmo salar)*	Favourable Maintained	21 Jul 2011
Otter (*Lutra lutra)*	Favourable Declining	6 Oct 2012

6.4.4 Surveys for key faunal species protected by nature conservation designations &/or listings were undertaken within the site in 2022 by Wildlife Consulting Ltd. This included otters. Watercourses within the site and a 250m buffer were surveyed for otter field signs which confirmed a moderate level of localised otter activity as recorded in Appendix 3.1 Habitats, Peat & Protected Species.

6.4.5 Baseline findings suggest that freshwater pearl mussels are not currently present within the study area. Following advice from NatureScot and Scottish Forestry a conservative approach will be taken in terms of impact analysis and freshwater pearl mussels will be assumed present for the assessment.

6.4.6 Otter activity is recorded in the form of spraints and feeding station/remains of a salmon. The concentration of a small number of spraints across small areas and time spans suggests that the site is used periodically by roaming otters but that there is no resident population. This result reflects the low habitat suitability along the minor watercourses draining the site and their limited supply of fish. Potential for otters will be higher in spring/early summer, when there are ground-nesting birds & amphibians to supplement the foraging potential. The aging of some of the spraints supports this supposition (as well as the appearance of feathers and probable amphibian bones from spraints dating approximately to this time).

6.4.7 Information provided by the Dee District Salmon Fishery Board confirms presence of salmon within the study area. Following advice from NatureScot and Scottish Forestry a conservative approach will be taken in terms of impact analysis and salmon will be assumed present in all designated watercourses within the study area.

6.4.8 Currently, riparian woodland is limited on site with only 5% of watercourses being currently wooded as discussed within Appendix 4.3 Glen Dye Moor Water Environment Assessment Summary which was completed in July 2024.

6.4.9 Habitats in and around the River Dee SAC study area were surveyed in 2022 and included in Appendix 3.1 Habitats, Peat & Protected Species. Areas in and around the SAC include predominantly grassland mire mosaics with some other mosaic areas including heath and bracken. Some improvement of grassland has been undertaken in and around Charr bothy and the historic townships where grazing took place. Following removal of livestock from the site grass swards are noted as becoming tall while other areas are showing signs of bracken encroachment. Dry heath will encroach in ungrazed areas over time.

6.4.10 Peatland restoration is being carried out on site, though this does not form part of the proposals. Areas of restored peat are expected to improve in habitat quality and risk of erosion is expected to be reversed. Peatland restoration within the project area is expected to deliver positive outcomes for the River Dee SAC through re-establishment of hydrological function. By restoring and maintaining areas of deep peat as open ground within an otherwise afforested landscape, peatland restoration will help to offset potential habitat change and contribute to broader, landscape-scale conservation objectives for the River Dee SAC.

6.4.11 Future baseline can be reasonably predicted as continued qualifying features condition statements of declining for otter and freshwater pearl mussels and maintained for salmon in line with what is recorded at a national level given local/regional data is unavailable. In terms of habitat conditions locally, habitats are succeeding following removal of livestock, associated with removal of sporting activities from the area. This local change is projected to result in reduced areas of grassland which can be expected to transition to heathland over time taking on a rank nature. Areas of completed peatland restoration will continue to improve through raising of the water table and related vegetation recovery.

6.5 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

6.5.1 The significance of effects is determined by a combination of the identified sensitivity of River Dee SAC with the estimated magnitude of change and considering embedded mitigation (See Section 6.5.3). These findings are carried forward into Chapter 16 Summary of Significant Effects to make a final determination on Biodiversity as a likely significant effect in the context of the EIA Regulations.

6.5.2 Proposals listed in Table 6.3 Operations Impacting River Dee SAC, represent the operations which would result in the listed likely impact (from Table 6.1) and are subject to assessment. Additional details relating to operations and works can be found in Chapter 4 List 4.2 Detailed List of Operations Included in proposals and List 4.3 Works required to conduct operations. For each operation the related likely impact is noted and specified for the specific operations anticipated, for example planting could cause disturbance but machinery would not be used so the disturbance would be based on hand implemented work.

Table 6.3 Operations Impacting River Dee SAC

Additional details of Operations can be found in List 4.2 Detailed List of Operations Included in proposals

Operation	Related Likely impact
Cultivation	Breeding Site Damage or Disturbance: During operations, works that result in direct damage or disturbance of the active breeding sites and resting places of protected species, and spawning beds, or other structures or locations critical to populations of other priority species, will be avoided and mitigated. This would most commonly be associated with mechanical cultivation of planting positions within critical distances of active otter breeding holts or active resting places. Diffuse and Point-Source Pollution: Resulting from operational spills of oil, fuel, or other chemicals, as well as potential sediment run-off following soil disturbance through cultivation, road construction and quarrying. This would most commonly be a result of machine activity as part of cultivation works resulting in surface water flows channelling down machine tracks leading to watercourses. No drains are proposed, drainage is not considered a likely source.
Planting	Breeding Site Damage or Disturbance: During operations, works that result in direct damage or disturbance of known active breeding sites and resting places of protected species, and spawning beds, or other structures or locations critical to populations of other priority species, will be avoided and mitigated. This would result from disturbance of otters by planting crews walking and hand planting trees within critical distances of active otter holts or resting places.
Natural Regeneration	Habitat Modification: Creation of riparian woodland resulting in shading, nutrient and organic material input, bankside stabilisation of watercourses. This will include improvement of breeding habitats. This would result from seeding of trees beginning to establish over a short and medium timescale at variable densities from nearby existing seed sources. Hydrological Change: Changes to local water tables or changes to peak flow runoff due to afforestation and road construction. This will include natural floodwater abatement effects and water temperature changes with reduced solar exposure. This would result from seeding of trees beginning to establish, increasing

	throughfall disruption of rain and increases in evapotranspiration resulting in localised groundwater draw. In flood plains this will result from the slowing of floodwaters once trees are established.
Maintenance of Planted Trees	Breeding Site Damage or Disturbance: During operations, works that result in direct damage or disturbance of known active breeding sites and resting places of protected species, and spawning beds, or other structures or locations critical to populations of other priority species, will be avoided and mitigated. This would result from crew activity disturbing active otter sites during maintenance of planted trees. Risk of siltation to salmon spawning beds during the Oct–May spawning season, and minor sediment disturbance to mussel habitats from weeding or foot traffic near watercourses. Diffuse and Point-Source Pollution: Resulting from operational spills of oil, fuel, or other chemicals. This would result from Potential herbicide or fertiliser runoff from maintenance activities (e.g., weeding, spraying) near the Water of Dye, risking water quality impacts to mussel and salmon habitats.
Establishment of Planted Trees	Habitat Modification: Creation of riparian woodland resulting in shading, nutrient and organic material input, bankside stabilisation of watercourses. This will include improvement of breeding habitats. This would result from transition of upland grazing/grouse moor to riparian woodland resulting in shading, nutrient inputs, and bank stabilization, enhancing breeding habitats for salmon and mussels. Longer term provision of dead wood in water course creating eddies and shelter for salmon. Hydrological Change: Changes to local water tables or changes to peak flow runoff due to afforestation. This will include natural floodwater abatement effects and water temperature changes with reduced solar exposure. This would result from trees successfully establishing and causing reduced runoff and water temperature from woodland establishment, with potential short-term erosion on former grazing land. Breeding Site Damage or Disturbance: During operations, works that result in direct damage or disturbance of known active breeding sites and resting places of protected species, and spawning beds, or other structures or locations critical to populations of other priority species, will be avoided and mitigated. This would result from disturbance to otter holts and salmon spawning beds from monitoring visits and inspections. Removal of livestock reduces manure runoff, improving water quality, while increased nutrification from leaf fall will boost food webs but risks algal growth.
Fence Line Construction	Breeding Site Damage or Disturbance: During operations, works that result in direct damage or disturbance of known active breeding sites and resting places of protected species, and spawning beds, or other structures or locations critical to populations of other priority species, will be avoided and mitigated. This would result from disturbance to otter holts and salmon spawning beds from machinery and crew activity within critical distances, especially during Oct–May spawning or otter breeding season (Feb-Jun).

	Diffuse and Point-Source Pollution: Resulting from operational spills of oil, fuel, or other chemicals, as well as potential sediment run-off following soil disturbance. This would result from soil disturbance during construction of fencing across the site, including sections near the Water of Dye, risking water quality for mussels and salmon. Minor chemical runoff possible from timber treatment. Material lay out and material movements will result in ground disturbance and possible runoff.
Forestry Track Construction	Breeding Site Damage or Disturbance: During operations, works that result in direct damage or disturbance of known active breeding sites and resting places of protected species, and spawning beds, or other structures or locations critical to populations of other priority species, will be avoided and mitigated. This is unlikely to occur as new tracks are located away from watercourses and do not include any watercourse crossings however for completeness of review, this would be associated with potential disturbance to otter holts and resting places from machinery and crew activity especially if overlapping otter breeding season or cub-rearing, risking mating or cub survival near the Dye Water. Salmon spawning beds (Oct–May) and mussel habitats face risks from vibration and silt. Diffuse and Point-Source Pollution: Resulting from operational spills of oil, fuel, or other chemicals, as well as potential sediment run-off following soil disturbance through road construction and quarrying. This would result from runoff and fuel/oil spills from forestry track construction across the site, including sections near or crossing the main water courses risking water quality for mussels and salmon during operations.
Deer management	Breeding site disturbance: Disturbance to otter holts and resting places from shooting or tracking especially if overlapping otter breeding season or cub-rearing, risking mating or cub survival. Minor risk to salmon spawning beds (Oct–May) and mussel habitats from foot traffic. Habitat modification: Enhanced woodland growth from reduced deer browsing, stabilising banks, but potential changes to prey dynamics and open habitat loss.
Cumulative impacts	No cumulative impacts have been identified.

6.5.3 Embedded Mitigation

6.5.3.1 A number of embedded mitigations are included within proposals. These mitigations form a fundamental part of the proposals. Proposals would not be considered without implementation of these mitigations and are therefore assessed as an integral part of the proposals. These are included in Appendix 2.6 Mitigations Schedule and noted below for reference with additional commentary for the SAC and its qualifying features:

- *A01 - No New Drains: No new drainage channels will be installed during cultivation or other operations. This prevents hydrological disruption to the River Dee SAC, avoiding increased peak flows or sediment inputs that could degrade Atlantic salmon spawning gravels and freshwater pearl mussel habitats in the Water of Dye, 2 km upstream of the SAC boundary.*

6.5.3.2 A03 - Diffuse Pollution Control Plan: A site-specific Operational Diffuse Pollution Control Plan will be prepared before operations commence, following Scottish Woodlands protocols for wet

weather working and erosion control. An overarching plan will identify SAC sensitivities (e.g., salmon and mussel water quality needs), reducing sediment and chemical runoff risks to the Water of Dye and downstream SAC.

- *A04 - Watercourse Buffers for Cultivation: No mechanical cultivation will occur within 5m of small watercourses (<1m wide), 10m of medium watercourses (1–2m wide), or 20m of large watercourses (>2m wide), such as the Water of Dye. This minimises sediment disturbance, protecting salmon spawning beds and pearl mussel habitats from siltation during forestry works.*

- *A06 - SAC Boundary Mapping: All constraints maps will display the River Dee SAC boundary where present, ensuring operators avoid impacts to its qualifying features (salmon, mussels, otters) during cultivation near the Water of Dye catchment.*

- *A07 - Biosecurity Practices: Good biosecurity practices will be enforced for all machinery and equipment, reducing risks of chemical spills (e.g., fuel, oil) that could pollute SAC watercourses. Industry standards will be referenced in operator contracts, safeguarding water quality for salmon and mussels.*

- *A09 - Operational Timing Restrictions: Operations will be timed to avoid sensitive breeding seasons for SAC species, with specific safe working distances adjusted annually based on site surveys. For otters, a 200m buffer will apply to natal holts and 30m for other holts and resting places; for salmon, works near spawning beds will be avoided where feasible during Oct–May, protecting the SAC's ecological integrity.*

- *A17 - Pre-Operational Wildlife Surveys: Pre-operational surveys will identify active otter holts, potential salmon spawning beds, and potential pearl mussel habitats along the Water of Dye and other SAC tributaries. This ensures works avoid direct damage or disturbance, with findings integrated into operational planning.*

- *B01 - Riparian Native Planting: Native species planting and natural regeneration (where seed sources exist) will be prioritised around riparian areas suited to site conditions, enhancing shading, reducing summer water temperatures, and recruiting deadwood. This benefits salmon spawning and otter cover while stabilising banks for pearl mussels.*

- *B03 - Watercourse Afforestation: Approximately 60,000m of watercourses, over 50% of those currently unwooded on site, will be afforested with riparian species via planting and natural regeneration. Shown on the Species Map, this strengthens SAC habitats along the Water of Dye, supporting salmon and otters.*

6.5.3.3 B04 - No Conifer Planting in Buffers: No commercial conifers will be planted within 20m of watercourses or groundwater-dependent terrestrial ecosystems (GWDTEs), reducing nutrient and sediment runoff risks to salmon and pearl mussel habitats in the SAC. This includes all low, moderate and high dependency GWDTEs within and out with the SAC area,

- *B06 - SAC-Specific Woodland Creation: Bankside native woodland creation and natural regeneration will be encouraged near the River Dee SAC through a deer reduction program. This enhances otter resting sites and stabilises SAC tributaries, indirectly benefiting salmon and mussels.*

- *B07 - Expanded Watercourse Buffers: Standard minimum protection buffers from watercourses will be expanded where this improves protection of site sensitivities. Standard buffers are 10m-20m,*

expanded up to an additional 50m where suited to conditions. Along tributaries to the Burn of Greendams, a minimum buffer greater than the standard will be provided from conifer planting.

- *B08 - Riparian Woodland Composition: Riparian woodlands will be planted with Willow (40%), Alder (25%), Birch (25%), and other species (e.g., Aspen, Hazel, 10%) where proposed. This composition, designed with patchy gaps, improves bank stability and water quality for the SAC's qualifying features.*

- *C02 - Fence Line Agreement with NatureScot: The final micro-siting of the fence line within 500m of the SAC is to be agreed with NatureScot, ensuring minimal disturbance to otter holts and water quality impacts to salmon and mussel habitats.*

- *C03 - Reduced Watergates: Fences will minimise watergates to the greatest extent practicable, reducing sediment disturbance risks at crossings near the Water of Dye, protecting SAC water quality.*

- *D02 - Access Track Pollution Strategies: New access tracks will avoid deep peat and include pre-operational diffuse pollution strategies, plus management mitigations during works, to prevent organic compounds and sediment from reaching SAC surface waters like the Water of Dye.*

6.5.4 For each impact identified in the Scoping Opinion (Appendix 2.4), the following findings in terms of predicted outcomes are noted. References are made to appendices where relevant for further details.

6.5.5 **Habitat Modification**: Per Appendix 6.1 River Dee SAC Summary of Assessment, the proposals will include creation of floodplain woodland and riparian woodland, highlighted as a priority for the SAC, and aid in meeting SAC Objectives 2a, 2b, and 2c as well as 2d for freshwater pearl mussels.

6.5.5.1 Objective 2c focuses on maintaining otter habitat quality and prey availability within the SAC, requiring high water quality, natural flows, and scrub/prey habitats. The proposals enhance these and include pollution controls (5–20m buffers), riparian planting (60,000m) and natural regeneration provide dense scrub, tree roots, and salmonid prey, enhancing holt sites and foraging (e.g., riffles, wetlands). There will be no barriers to ensure access to ponds/ditches for otter.

6.5.5.2 2c also targets maintaining salmon habitat extent, structure, and function within the SAC, avoiding siltation, ensuring gravel beds (16–256mm), shade, and Good Ecological Status (GES) standards. The proposals enhance habitat with riparian woodland adding woody debris, shade, and cover along the Water of Dye, reducing thermal stress (critical at >23°C). Siltation is prevented by buffers, pollution controls, and no drains, supporting fry (water <20cm) and parr (15–40cm) habitats. Biosecurity minimises Invasive Non-Native Species (INNS) risks. In addition to habitat for otter and salmon.

6.5.5.3 2c also targets the restoration of freshwater pearl mussel habitats within the River Dee Special Area of Conservation (SAC) by focusing on the structural and functional aspects of their environment. This involves restoring the distribution and extent of suitable habitats, characterised by abundant gravel beds and appropriate levels of fine organic particles, while ensuring a minimum of "good" watercourse morphology status with high water quality and stable flow regimes. Mitigation of key vulnerabilities, such as nutrient enrichment and fine sediment deposition, is addressed through the continuation of existing restoration efforts within the SAC, including the enhancement of native riparian woodland and peatland restoration. These actions aim to improve water quality, stabilise river flow, and reduce flood and drought impacts. The proposals outline a substantial expansion of riparian woodland cover from less than 5% to over

40%, which is projected to optimise fine organic particle levels. The change to habitat is at a moderate scale but positive and not significant.

6.5.6 **Breeding Site Damage or Disturbance**: In line with Table 6.3 Operations Impacting River Dee SAC some operations risk damage or disturbance to qualifying features. No otter holts were found during ecological surveys however risk remains should otters become more active in the area. Embedded mitigations relating to pre-commencement surveys and safe working distances ensure appropriate planning for operations which is also in line with UKFS Practice Guidance. Operations risk temporary disturbance to qualifying features, and minor risk of siltation to salmon spawning beds during Oct–May. Pre-commencement surveys, operational planning, and timing restrictions are aimed at preventing displacement or loss and no operations are proposed within watercourses as part of the forestry project. Pearl mussel habitats (assumed present) are safeguarded by a minimum 20m buffers as per UKFS standards. These measures in addition to other embedded mitigations align with SAC Objectives 2a and 2b.

6.5.7 **Hydrological Change**: Appendix 6.1 River Dee SAC Assessment Summary and Appendix 2.5 Significance Criteria identify the sensitivity of hydrological change of the River Dee SAC as High and the magnitude of change is Minor. Reduced runoff from regenerating trees lowers flows, risking mussel stress (SAC Objective 2c—natural flow rates), but no drains are proposed and buffers (up to 50m for some conifer areas) will mitigate this to some degree as well as minimising risk of erosion to salmon beds (SAC Objective 2c—GES hydrology). Appendix 6.3 River Dee SAC Conservation Advice Package prioritises sustainable flows, landscape scale native woodland creation in combination with other activities carried out on the site (peatland restoration) will improve currently degraded conditions further up the watershed aiming to achieve this objective. Floodplain woodland will also have flood abatement benefits noted for salmon and mussels. Monitoring is embedded into proposals to track impact and identify need for remedial works at an early stage.

6.5.8 **Diffuse and Point-Source Pollution**: Cultivation, maintenance of planted trees, fence construction and track construction are proposed and introduce a risk of both point source and diffuse pollution. Sediment and fuel spills from these operations risk water quality in the SAC (SAC Objectives 2c, 2d—<0.005 mg/L phosphorus, BOD <1 mg/L), however a Diffuse Pollution Management Strategy and biosecurity protocols with 5–20m buffers around the River Dee SAC follow guidance and reduce risk of threshold exceedance for salmon or mussels. The Conservation Advice Package (Appendix 6.3) flags siltation risks to spawning, which are addressed by embedded mitigations and project design with an aim to help achieve all SAC Objectives. Operational impacts are temporary and localised during active operations and won't result in medium- or long-term impacts.

6.6 RESIDUAL EFFECTS AND ADDITIONAL MITIGATION

6.6.1 There are residual significant effects identified for the River Dee SAC as noted in Table 6.4 below.

Table 6.4 River Dee SAC Summary Table of Significance

Impact	Sensitivity	Magnitude	Significance
Habitat Modification	**High**	**Minor**	**Moderate**

Breeding Site Damage or Disturbance	**High**	**Negligible**	**Minor**
Hydrological Change	**High**	**Minor**	**Moderate**
Diffuse and Point Source Pollution	**High**	**Negligible**	**Minor**

6.6.2 The above residual significant effect findings are plotted against the assessment tool found in Appendix 2.5 to illustrate levels of residual effect in Table 6.5 below.

Table 6.5 Significance Matrix

⇩ ***Sensitivity***	***Magnitude***			
	Major	*Moderate*	*Minor*	*Negligible*
High	*Major*	*Major*	***Moderate***	***Minor***
Medium	*Moderate*	*Moderate*	*Minor*	*Minor*
Low	*Minor*	*Minor*	*Negligible*	*Negligible*
Neutral	*Minor*	*Negligible*	*Negligible*	*Negligible*

6.6.3 The environmental factors assessed in this chapter related to the River Dee SAC (a biodiversity factor) which should be considered in context to other impacts to identify interactions among and between various environmental factors. This will allow for a comprehensive final assessment of impacts on a) population and human health, b) biodiversity, c) land, soil, water, air, and climate, and d) material assets, cultural heritage, and the landscape, in accordance with the Scoping Opinion.

6.6.4 Effects can be indirect, cumulative, short-term, long-term, beneficial or adverse, and are identified as being either significant or not significant in the context of the EIA Regulations. This comprehensive approach ensures a full determination of the 'net effect' of the forestry project, including both positive and negative environmental consequences.

6.6.5 The worst-case scenario of a major diffuse pollution event during cultivation or road construction leading to significant loss of freshwater pearl mussels, redds, salmonid fry and smolts is considered unlikely due to the mitigation measures outlined in GDM EIA Appendix 2.6 Mitigations Schedule.

6.6.6 Interactions with effects of peatland restoration are beneficial. Peatland restoration as described in the Baseline section of this chapter will be carried out across a large-scale area and result in improvement to catchment hydrology, regulation of peak flow regimes, flooding regulation, water quality. This restoration effect offsets the hydrological change impacts from the proposal to some degree.

6.6.7 Though not part of these proposals, Instream projects currently being conducted by Stirling University within the project area will significantly improve resilience of the Water of Dye thus buffering negative impacts from the proposals. Research into the development of riparian woodland will fill knowledge gaps around relationships between hydro morphology and vegetation development.

6.6.8 Main benefits of the proposals to the River Dee SAC revolve around the creation of substantial areas, 66,000 linear meters of new riparian woodland aiding in alleviating high-water temperatures and improving resilience to climate change.

6.6.9 Creation of floodplain woodlands buffers heavy rainfall flows, reducing damaging flood impacts and creating more sustainable steady flows during droughts.

6.6.10 To aid in illustrating the balance between adverse and beneficial impacts, Table 6.6, which is derived from Appendix 2.5, is included below highlighting the residual effects and mitigations assessed in this chapter.

Table 6.6 Diagram of Beneficial and Adverse Impacts

Beneficial				***Neutral***					***Adverse***
Greater			***Less***		***Less***				***Greater***
	A, E, H	**F, G**		**C**		**B**	**D**		

The ‘net impact’ is determined for River Dee SAC having four assessed impacts resulting from habitat modification, breeding site damage or disturbance, hydrological change and diffuse and point source pollution taken in context of interactions with other factors both direct and indirect, cumulative, short-term or long-term, beneficial or adverse

A, Impact from landscape scale **habitat modification** found to be beneficial to a greater degree

B, Impact from **breeding site damage** or disturbance found to be neutral

C, Impact from **hydrological change** found to be neutral

D, Impact from **diffuse and point source pollution** found to be neutral

E, Interacting benefit from extensive **peatland restoration**

F, Interacting benefit from **floodplain** woodland creation

G, Interacting benefit of increased **riparian woodland cover at the catchment scale**

H, interacting benefit of I**nstream works, and monitoring** of riparian woodland creation carried out by Stirling University within the Water of Dye.

The 'net effect' for River Dee SAC was found to be near neutral trending toward beneficial.

6.7 SUMMARY OF EFFECTS

6.7.1 Consideration of the net effect to River Dee SAC takes into account the beneficial effects of floodplain and riparian woodland creation to SAC objectives, together with the neutral/adverse impacts to breeding sites, hydrological change and pollution. These considerations result in a net effect which is near neutral but trending toward positive to the River Dee SAC. This outcome should be considered in the context of the receptor's **national** importance.

6.7.2 Impact to the River Dee SAC from the proposals are found to be **not significant** in the context of the EIA regulations.

7 IMPACTS ON GOLDEN EAGLES
CONFIDENTIAL

7 Impacts on Golden Eagles

List of Appendices Referenced in this Chapter

Appendix 7.1 GET Model Assessment of Golden Eagle

Appendix 7.2 Disturbance Analysis for Golden Eagle and Merlin

Appendix 7.3 Prey Habitat Change Assessment

Appendix 3.1 Habitats, Peat and Protected Species

Appendix 3.2 Breeding Bird Survey Report

Appendix 2.2 Glen Dye Moor Woodland Creation EIA Scoping Report

Appendix 2.4 Scoping Opinion for the Proposed Glen Dye Moor Woodland Creation EIA Forestry Project

Appendix 2.5 Significance Criteria

Appendix 2.6 Mitigations Schedule

List of Tables/Figures Referenced in this Chapter

Table 7.1 Likely Impacts and Methods of Assessment for Golden Eagles

Table 7.2 Operations Impacting Golden Eagles

Table 7.5 Golden Eagles Summary Table of Significance

Table 7.6 Significance Matrix

Table 7.7 Diagram of Beneficial and Adverse Impacts

List of Other Documents and Publications Referenced in this Chapter

Wildlife and Countryside Act 1981 (as amended)

GET Model: Fielding, A.H., Haworth, P.F., Anderson, D., Benn, S., Dennis, R., Weston, E. and Whitfield, D.P. (2020), A simple topographical model to predict Golden Eagle Aquila chrysaetos space use during dispersal. Ibis, 162: 400-415. https://doi.org/10.1111/ibi.12718

Fielding et al. (2024) The Characteristics and Variation of the Golden Eagle Aquila chrysaetos Home Range. Available at https://doi.org/10.3390/d16090523

Haworth P F, Fielding A H. Review of Potential Food in relation to the South Scotland Golden Eagle Reinforcement Project. 2017. Haworth Conservation

7.1 CHAPTER SUMMARY

7.1.1 [redacted] golden eagle [redacted]. [redacted] however, for the purposes of this EIAR, a conservative approach has been taken of [redacted]. Eagles are also assumed to use the site for foraging. Analysis of likely important habitat for a theoretical range holding pair using a worst-case-scenario approach resulted in a less than 10% loss of foraging range. Due to lack of accessible geotagging data, [redacted] cannot be used to refine this assumed worst-case impact. Remaining project areas will see likely benefits to golden eagle prey habitats and increased nesting opportunities in the medium to long term. Operational restrictions including avoidance of dense conifer planting [redacted], along with limiting operational disturbance to safe working distances [redacted], are embedded into proposals. These beneficial and adverse factors combine and the impact on golden eagles will therefore be 'not significant' in the context of the EIA regulations.

7.2 INTRODUCTION

7.2.1 This chapter of the Glen Dye Moor New Woodland Creation Environmental Impact Assessment Report (EIAR) considers the potential impacts of proposals on golden eagles (A*quila chrysaetos*) and assesses the likely severity of those impacts.

7.2.2 In relation to the EIA Regulations 5 (3), golden eagles are considered to be a Biodiversity factor and will be added to other biodiversity factors for a final determination in Chapter 16 Summary of Significant Effects.

7.2.3 This Chapter is supported by Appendix 7.1. GET Model Assessment of Golden Eagle by Alan Fielding BSc (Hons) MSc PhD FLS FHEA , and also Appendix 7.2 Disturbance Analysis for Golden Eagle and Merlin and Appendix 7.3 Prey Habitat Change Assessment.

7.2.4 Golden eagles (*Aquila chrysaetos*) are protected under the Wildlife and Countryside Act 1981 as Schedule 1A and A1 species. This affords them a higher level of protection than other wild birds. All wild bird species are protected under the Wildlife & Countryside Act, which makes it an offence to intentionally or recklessly kill, injure or take a wild bird; take, damage, destroy or interfere with a nest of any wild bird whilst it is in use or being built; obstruct or prevent any wild bird from using its nest; or, take or destroy an egg of any wild bird; disturb any wild bird listed in Schedule 1 whilst it is building a nest or is in, on, or near a nest containing eggs or young, or whilst lekking; disturb the dependent young of any wild bird listed in Schedule 1. Those species listed in Schedules A1 and 1A receive additional protection which makes it an offence to intentionally or recklessly: at any time take, damage, destroy or interfere with any nest habitually used by any wild bird included in Schedule A1; and at any time harass any wild bird included in Schedule 1A.

7.2.5 This assessment is undertaken on the basis that golden eagles are of **regional importance** due to the scale of range area involved and referenced within Appendix 7.1 GET Model Assessment of Golden Eagle. Identifying the area covered by the proposal as of national importance to golden eagles is not thought appropriate due to the local range not forming an integral part of the Cairngorms Massif Special Protection Area population located 3km to the northwest of the project area as indicated by Wildlife Consulting Ltd (WLC) within Section 1.1 of Appendix 3.2 Breeding Bird Survey Report. (i.e. [redacted])

7.3 SCOPING CONSULTATION AND SCOPE OF ASSESSMENT

7.3.1 This section outlines the scoping consultation process and the resulting methodology for assessing the likely impacts on golden eagles.

7.3.2 The Glen Dye Moor Woodland Creation EIA Scoping Report (Appendix 2.2 Glen Dye Moor Woodland Creation EIA Scoping Report) was submitted to Scottish Forestry Grampian Conservancy in January 2025 following a scoping meeting with consultation bodies agreed with Scottish Forestry. The Scoping Report set out the overall approach to assessment and allowed for the refinement of the Proposals over the course of the assessment.

7.3.3 Scottish Forestry produced a Scoping Opinion (Appendix 2.4 Scoping Opinion for the Proposed Glen Dye Moor Woodland Creation EIA Forestry Project) on the 11th February 2025, confirming the inclusion of golden eagles and identifying likely significant effects to assess along with suggested methodology. These are listed in Table 7.1 Likely Impacts and Methods of Assessment for Golden Eagles.

Table 7.1 Likely Impacts and Methods of Assessment for Golden Eagles

Likely Impact	Method of Assessment
Disturbance: Noise and visibility of operations within a critical distance of active breeding sites. Also considering projected changes to recreational use and risk of disturbance to golden eagles.	Evaluate where proposals deviate from forestry guidelines (as noted within Appendix 7.2 Disturbance Analysis for Golden Eagle and Merlin) around sensitive areas based on site survey findings.
Prey Species Habitat Change: Semi-open woodland and montane scrub woodland creation will change the habitat for prey species. Native woodland creation at a density of canopy closure resulting in potential changes to prey species numbers, with an additional potential impact of new nesting and roosting locations for golden eagles.	Review of habitat changes within the proposal compared to current research and understanding of impacts to species abundance.
Loss of Foraging Ground: Areas shown as having a high probability of use in the Golden Eagle Topographical (GET) model are lost following establishment of dense conifer plantation.	Identify the assumed [redacted] using current research estimates for northeast Scotland of 8,871ha ± (6,267ha) (Fielding et al, 2024). Determine the total area of 'open' 6+ GET total area, this excludes all existing closed canopy forest and 500m buffer from turbines. Consider other factors such as constrained territories, prey abundance, positive impacts from land use change or habitat diversification. Quantify project in terms of closed canopy woodland proposed, this will exclude low density, semi-open canopy, natural regeneration, native upland birch at 1600 trees per hectare,

	and native pine woodland mixed with broadleaves as these woodland types are considered suitable eagle habitat. From this a total loss estimate can be assumed and resulting % loss compared against current standards of what is 'significant'. Determine cumulative impacts on golden eagles arising from the proposed project and Glen Dye Windfarm.
Cumulative Impacts: Impacts from the Glen Dye Windfarm on neighbouring land compounding impacts associated with Glen Dye Moor New Woodland Creation.	Cumulative impacts have been analysed as part of 'Loss of Foraging Ground' above due to the type and nature of impacts associated with windfarms being based on the same loss models as Glen Dye Moor Woodland Creation proposals.

7.4 BASELINE

7.4.1 A Breeding Raptor Survey (Appendix 3.2 Breeding Birds Survey Report) carried out between April and July 2022 noted [redacted] project boundary as well as overflying observed during field surveys. This confirms presence of the species [redacted]

7.4.2 Satellite tagging data for the golden eagles [redacted] was not available for review, so an assumed worse-case scenario approach was taken. As noted within Appendix 7.1 GET Model Assessment of Golden Eagle, a worst-case scenario is that all of the planted areas are within a single occupied theoretical range of 6,700 ha of 'open' golden eagle habitat of GET 6 or better. This is an exceptionally unlikely scenario but considered to ensure robust assessment.

7.4.3 A theoretical range in this area would be constrained by the extensive area of dense forest to the east of the project boundary. It is also noted that the current low pair density in the region may indicate that use of a theoretical range of 6,700ha may be applying an artificial constraint.

7.4.4 Total area of GET 6+ in the project area which is classed as 'open' is 5,337.5ha. This suggests that the project area currently encompasses approximately 70-80% of the theoretical golden eagle range requirements for open habitat with a GET of 6 or greater.

7.4.5 The current areas of 'open' golden eagle habitat are made up of predominantly heath, blanket bog and related mosaics. Details of these habitat types can be found in Appendix 3.1 Habitats, Peat and Protected Species. The blanket bog is highly degraded by erosion that has now stabilised although bare peat and areas of active erosion persist. A legacy of management by grazing and intensive muirburn has resulted in the formation of species-poor, uneven vegetation dominated by heather in the dry heath, or the same, deergrass and/or purple moor-grass in the wet heath.

7.4.6 Sporting activities and muir burning activities ceased on site in 2022. This has resulted in a changing dynamic of predators, prey and habitat development. Although there is no current trend data from which to establish a baseline, it can be assumed that heath and blanket bog habitats in burned areas are currently undergoing succession and that predator-prey communities are currently undergoing cyclic changes.

7.4.7 There is sufficient habitat and proximity to the Scottish mainland population (Fielding et al., 2024) [Fielding, A.H.; Anderson, D.; Barlow, C.; Benn, S.; Reid, R.; Tingay, R.; Weston, E.D.; Whitfield, D.P. 2024. Golden Eagle Populations, Movements, and Landscape Barriers: Insights from Scotland. Diversity, 16, 195. https://doi.org/10.3390/d16040195] to support use of the site by dispersing golden eagles. Locally, habitats are currently succeeding following removal of livestock, associated with sporting activities from the area. This local change is projected to result in reduced areas of grassland which can be expected to transition to heathland over time and all heathland on site is assumed to be taking on a rank nature

7.4.8 The neighbouring Glen Dye Windfarm EIA baseline survey identified [redacted] the Site which was monitored [redacted] in 2016. Golden eagle flight activity recorded during baseline survey comprised a total 50 flights, the majority of which occurred during the 2015 [redacted] Habitat loss, displacement (both during construction phase and operational phase) and risk of mortality from collision were all assessed as low magnitude with a non-significant effect at the regional NHZ population level.

7.5 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

7.5.1 The significance of effect is determined by a combination of the identified sensitivity of golden eagles with the estimated magnitude of change and taking into account embedded mitigation (See Section 7.5.4). These findings are carried forward into Chapter 16 Summary of Significant Effects to make a final determination on Biodiversity as a likely significant effect in the context of the EIA Regulations.

7.5.2 Dr Alan Fielding, Golden Eagle expert in Scotland, has carried out the assessment of significant effects relating to Loss of Foraging Ground and Cumulative Effects (Appendix 7.1 GET Model Assessment of Golden Eagle) as well as contributing to assessments of Disturbance and Prey Species Habitat Change.

7.5.3 Proposals listed in Table 7.2 Operations Impacting Golden Eagles, represent the operations which would result in the listed likely impact and are subject to assessment. Additional details relating to operations and works can be found in List 4.2 Detailed List of Operations Included in Proposals and List 4.3 Works Required to Conduct Operations. For each operation the related likely impact is noted for each method used. For example cultivation could cause disturbance through both mechanical and hand preparation methods. Planting would only cause disturbance based on hand implemented work, as machinery would not be used.

Table 7.2 Operations Impacting Golden Eagles

Additional details of Operations can be found in List 4.2 Detailed List of Operations Included in Proposals

Operation	Specific impacts related to operations
Cultivation	Disturbance Machinery and hand implemented work producing noise or visibility to [redacted] golden eagle [redacted]. This would be a result of excavators carrying out cultivation works for planting and to a lesser extent, hand mounding or screefing.
Planting	Disturbance Hand implemented work being visible to [redacted] golden eagle [redacted] This would be a result of planters walking the site and planting trees at prepared planting positions.
Natural Regeneration	Prey Species Habitat Change Native woodland creation at a density of canopy closure resulting in potential changes to prey species numbers, with an additional potential impact of new nesting and roosting locations for eagles. This would result from seeding of trees beginning to establish over a short and medium timescale at variable densities. Loss of Foraging Ground Areas shown as having a high probability of use in the Golden Eagle Topographical (GET) model are lost following establishment of dense conifer plantation. ***This was not found to be a likely impact as no dense conifer plantation is expected to result from Natural***

	Regeneration however it is included in the analysis found within Appendix 7.1 GET Model Assessment of Golden Eagle.
Maintenance of Planted Trees	Disturbance Machinery and hand implemented work producing noise or visibility to [redacted] golden eagle [redacted]. This would result from replacement planting of trees by hand (beating-up), carrying out spraying, weeding or fertilising operations mainly by hand though possibly with machinery and equipment.
Establishment of Planted Trees	Prey Species Habitat Change Semi-open woodland and montane scrub woodland creation will change the habitat for prey species. Native woodland creation at a density of canopy closure resulting in potential changes to prey species numbers, with an additional potential impact of new nesting and roosting locations for eagles. This would result from the long-term growth of trees as per the proposal design. Loss of Foraging Ground Areas shown as having a high probability of use in the Golden Eagle Topographical (GET) model are lost following establishment of dense conifer plantation.
Fence line Construction	Disturbance Machinery and hand implemented work producing noise or visibility to [redacted] golden eagle [redacted]. This would result from the erecting, upgrading, replacement or removal of fencing using machinery and equipment as well as layout and construction work by hand including maintenance of fences and repair works over a longer-term period.
Forestry Track Construction	Disturbance Machinery and hand implemented work producing noise or visibility to [redacted] golden eagle [redacted]. This will not result from proposals as no new forestry track construction will be carried out within [redacted]. No further assessment is required.
Deer Management	Disturbance Hand implemented work producing noise or visibility to [redacted] Golden Eagle [redacted].
Cumulative Impacts – Neighbouring Glen Dye Windfarm	Loss of Foraging Ground Areas shown as having a high probability of use in the Golden Eagle Topographical (GET) model are assumed to have been lost within 500m of turbines due to neighbouring consented windfarm.

7.5.4 Embedded Mitigation

7.5.4.1 *A number of embedded mitigations are included within proposals. These mitigations form a fundamental part of the proposals. Proposals would not be considered without implementation of these mitigations and are therefore assessed as an integral part of the proposals. These are included in Appendix 2.6 Mitigations Schedule and noted below for reference.*

- *It should be noted that some mitigation for golden eagles has multiple benefits for other important species. The reverse is also the case. Integrated mitigation for multiple species is designed into the proposal.*

- *B23 Corridors of open ground are proposed as shown on the 'Constraints Map Wildlife Confidential', these have been targeted along areas with high likelihood of predicted golden eagle usage. Low density and variable density woodland of native species is proposed across approximately 71% of the planting area (equivalent to around one third of the enclosed area). These design features are aimed at improving prey community diversity and abundance while also ensuring foraging flight corridors are preserved with good lines of sight. [redacted], low density planting will be carried out to complement existing tree cover already present. This planting will mimic what would naturally occur over time in the absence of herbivore pressure.*

- *B09 Integrated open ground networks within curlew and merlin [redacted] territories, key merlin [redacted] will include open corridors and the overall area enclosed within the perimeter fence will limit planting to no more than 60% of the total area.*

- *B12 Species design complements black grouse habitat needs including connected open corridors and mixed density woodland comprised of varying woodland types. Native woodland mosaics proposed will benefit black grouse and Peatland Restoration (proposed under a separate project) will improve habitat.*

- *B14 Planting of montane willow scrub woodlands at high elevations in low density.*

- *B17 Planting density of W18 and W4 areas is adjusted to be variable with semi-open to open canopy around curlew and merlin [redacted] 300-500m [redacted]).*

- *B19 Prey habitat enhancement will result from planting of low-density woodland, montane scrub, and semi-open variable canopy native woodlands, supporting a sustained prey community for raptors including golden eagles. Approximately 20% open habitat will be retained through linked corridors suitable for hunting/foraging by raptors.*

- *B18 A c. 1km disturbance buffer area around sensitive Schedule 1A/A1 bird sites has been mapped to ensure operations are planned to avoid potential disturbance during the breeding season Feb-Aug. Within 500m of known sensitive sites, an open canopy is planned to compliment exiting native woodland cover present, this will mimic the native woodlands which would naturally occur in this location if herbivore pressures were absent. This is demonstrated on the Species Map.*

7.5.5 For each impact identified in the Scoping Opinion (Appendix 2.4), the following findings in terms of predicted outcomes are noted. References are made to appendices where relevant for further details.

7.5.6 **Disturbance**: In line with the assessment found within Appendix 7.2 Disturbance Analysis for Golden Eagle and Merlin and Appendix 2.5 Significance Criteria, the sensitivity of golden eagle to disturbance is identified as **Medium** The Magnitude of change is **Minor** due to the eagles potentially being present during operations resulting in their vulnerability to disturbance during the operational period. The effect on golden eagle due to disturbance will be mitigated through adherence to the forestry guidance note 32 designed to comply with the Wildlife and Countryside Act 1981 and Wild Deer Best Practice Guidance, as well as embedded mitigations with key mitigations being pre-operational surveys to identify activity levels and operational timing restrictions within safe working distances. It is also noted that no operations are proposed which would constitute an offense against the Wildlife and Countryside Act 1981 and that eagles are protected from disturbance by law.

7.5.7 **Prey Species Habitat Change**: In line with the assessment found within Appendix 7.3. Prey Habitat Change Assessment and Appendix 2.5 Significance Criteria, the Sensitivity of golden eagle to prey species habitat change is identified as **Medium** due to the expected improved prey abundance resulting from creation of significant areas of woodland edge habitat shown to increase biodiversity and species abundance. The Magnitude of change is considered to be moderate due to the proposals directly affecting habitat change covering 43% of the site.

7.5.8 **Loss of Foraging Ground**: In line with the assessment found within Appendix 7.1 GET Model Assessment of Golden Eagle and Appendix 2.5 Significance Criteria, the Sensitivity of golden eagle to loss of foraging ground is identified as **Medium** as golden eagles are tolerant of the proposed change subject to design and mitigation. The Magnitude of change is considered to be **Moderate** which is determined based on there being some loss in extent of the resource but not affecting the integrity over a significant area. This is due to the proposals affecting a less than significant area of foraging range and taking into account cumulative range impacts from neighbouring windfarm. The key findings from Appendix 7.1 GET Model Assessment of Golden Eagle is "it is unlikely that the proposed planting will have a significant negative impact on [redacted]" and "it is unlikely that the proposed planting will have a significant negative impact on the extent of good eagle habitat currently available to dispersing golden eagles."

7.5.9 **Cumulative impact**: The cumulative impact of the windfarm is embedded in the assessment and analysis for Loss of Foraging Ground. The loss of foraging ground created by the proposed Glendye wind farm is taken as having already happened as shown in figure 1 of GDM EIA Appendix 7.1 GET Model Assessment of Golden Eagle.

7.6 RESIDUAL EFFECTS AND ADDITIONAL MITIGATION

7.6.1 There are residual effects identified for golden eagles as shown in Table 7.5 below.

Table 7.5 Golden Eagles Summary Table of Significance

Impact	Sensitivity	Magnitude	Significance
Disturbance	Medium	Minor	*Minor*

Prey Species Habitat Change	Medium	Moderate	Moderate
Loss of Foraging Ground	Medium	Moderate	Moderate

7.6.2 The above residual effect findings are plotted against the assessment tool found in Appendix 2.5 to illustrate levels of residual effect in Table 7.6 below.

Table 7.6 Significance Matrix

	Magnitude			
Sensitivity	*Major*	*Moderate*	*Minor*	*Negligible*
High	*Major*	*Major*	*Moderate*	*Minor*
Medium	*Moderate*	***Moderate***	***Minor***	*Minor*
Low	*Minor*	*Minor*	*Negligible*	*Negligible*
Neutral	*Minor*	*Negligible*	*Negligible*	*Negligible*

7.6.3 The environmental factors assessed in this chapter related to golden eagles (a biodiversity factor) will be integrated with other relevant findings in Chapter 16. This will allow for a comprehensive final assessment of impacts on: a) population and human health, b) biodiversity, c) land, soil, water, air, and climate, and d) material assets, cultural heritage, and the landscape, in accordance with the Scoping Opinion

7.6.4 Effects can be indirect, cumulative, short-term, long-term, beneficial or adverse, and are identified as being either significant or not significant in the context of the EIA Regulations. This comprehensive approach ensures a full determination of the 'net effect' of the forestry project, including both positive and negative environmental consequences.

7.6.5 Interactions with benefits from extensive native broadleaf woodland and scrub growth in the medium to long term are considered. Although it is difficult to quantify the magnitude of these benefits there will be some including additional prey resulting from improved conditions and, in the long term, increased nesting opportunities within the native pine woodland.

7.6.6 Recent land use changes from 2021 noted within the Baseline section are resulting in beneficial effects of reduced disturbance from muirburn and sporting activities within the northern half of the proposal area.

7.6.7 To aid in illustrating the balance between adverse and beneficial impacts, Table 7.7, which is derived from Appendix 2.5, is included below highlighting the residual effects and mitigations assessed in this chapter.

Table 7.7 Diagram of Beneficial and Adverse Impacts

Beneficial			***Neutral***					***Adverse***
Greater		***Less***			***Less***			***Greater***
	E		**A, D**			**C, B**		

The 'net impact' is determined for golden eagles from the assessed impacts resulting from prey species habitat change, disturbance, and loss of foraging ground taken in context of interactions with other factors both direct and indirect, cumulative, short-term or long-term, beneficial or adverse including:

A, Impact from **prey species habitat change** found to be neutral trending to positive

B, Impact from **disturbance** found to be adverse to a lesser degree

C, Impact from **loss of foraging ground** found to be slightly adverse

D, Interacting benefit from **long-term increases of nesting opportunities**

E, Interacting benefit from sustained large scale **land use changes**

The 'net effect' for golden eagles was found to be neutral trending toward beneficial with some uncertainty about outcomes

7.7 SUMMARY OF EFFECTS

7.7.1 Consideration of the net effect to golden eagles takes into account the significant adverse loss of foraging ground, and the significant beneficial changes to prey species habitat, and balances that against the minor adverse impact from disturbance, the slightly beneficial increases in nesting opportunity, and the beneficial changes to land use since 2021 across a significant area. These considerations result in a net effect which is neutral but beneficial to a lesser degree. This outcome should be considered in the context of the receptor's **regional** importance.

7.7.2 The effect of proposals on Golden Eagle will therefore be **not significant** in the context of the EIA regulations.

8 IMPACTS ON MERLIN

8 Impacts on Merlin

List of Appendices Referenced in this Chapter

Appendix 8.1 Merlin (*Falco columbarius*) Assessment Summary

Appendix 7.2 Disturbance Analysis for Golden Eagle and Merlin

Appendix 3.1. Habitats, Peat and Protected Species

Appendix 3.2. Breeding Bird Survey Report

Appendix 2.2 Glen Dye Moor Woodland Creation EIA Scoping Report

Appendix 2.4 Scoping Opinion for the proposed Glen Dye Moor Woodland Creation EIA Forestry Project

Appendix 2.5 Significance Criteria

Appendix 2.6 Mitigations Schedule

List of Tables/Figures Referenced in this Chapter

Table 8.1 Likely Impacts and Methods of Assessment for Merlin

Table 8.2 Operations Impacting Merlin

Table 8.3 Merlin Summary Table of Significance

Table 8.5 Significance Matrix

Table 8.6 Diagram of Beneficial and Adverse Impacts

List of Documents and publications referenced in this chapter

Wildlife and Countryside Act 1981 (as amended)

Rebecca G., Cosnette B., Steele L., Duncan A., Pout A. & Ruthven G. (2022). Occupancy and productivity at Merlin breeding areas in North-east Scotland in relation to land use: implications for conservation management. British Birds. Vol.115 121-180

Wilson, M. W., Austin, G. E., Gillings S. and Wernham, C. V. (2015). Natural Heritage Zone Bird Population Estimates. SWBSG Commissioned report number SWBSG_1504. pp72. Available from:www.swbsg.org

8.1 CHAPTER SUMMARY

8.1.1 Merlin populations in the region have been studied for multiple decades producing strong evidence to support [redacted] at Glen Dye Moor. This includes [redacted], as [redacted] occupancy fluctuates year on year. Dr Graham Rebecca, merlin expert in Scotland, has identified [redacted]. On average [redacted] within the study area though as a precautionary approach, all [redacted] considered in terms of impact. From this, alternative afforestation species designs were evaluated to determine levels of likely displacement or loss for [redacted]. [redacted]. Levels of significance were then considered for the local population taking into account recommendations published by Dr Graham Rebecca listing guidelines for retaining breeding merlin within commercial afforestation schemes. Embedded mitigations of timing restrictions and safe working distances [redacted] were considered. Potential benefits to merlin resulting from proposals were also taken into account including possible increase in numbers and diversity of prey. These beneficial and adverse factors combine and the impact on Merlin will therefore be 'not significant' in the context of the EIA regulations.

8.2 INTRODUCTION

8.2.1 This chapter of the Glen Dye Moor New Woodland Creation Environmental Impact Assessment Report (EIAR) considers the potential impacts of proposals on merlin (*Falco columbarius*) and assesses the likely severity of those impacts.

8.2.2 In relation to the EIA Regulations 5 (3), merlin is considered to be a 'Biodiversity' factor and will be added to other biodiversity factors for a final determination of significance in Chapter 16 Summary of Significant Effects.

8.2.3 This Chapter is supported by Appendix 8.1 Merlin (*Falco columbarius*) Assessment Summary.

8.2.4 Merlin (*Falco columbarius*) are protected under the Wildlife and Countryside Act 1981 as a Schedule 1 species. This affords them the highest level of protection. All wild bird species are protected under the Wildlife & Countryside Act, which makes it an offence to intentionally or recklessly; kill, injure or take a wild bird; take, damage, destroy or interfere with a nest of any wild bird whilst it is in use or being built; obstruct or prevent any wild bird from using its nest; or, take or destroy an egg of any wild bird; disturb any wild bird listed on Schedule 1 whilst it is building a nest or is in, on, or near a nest containing eggs or young, or whilst lekking; disturb the dependent young of any wild bird listed on Schedule 1.

8.2.5 This assessment will be based on the **regional** importance of merlin following EIA Scoping consultation feedback from NatureScot and Dr Graham Rebecca, merlin specialist, as recorded within Appendix 2.2 Glen Dye Moor Woodland Creation EIA Scoping Report due to the [redacted] involved and referenced within Appendix 8.1 Merlin (*Falco columbarius*) Assessment Summary.

8.3 SCOPING CONSULTATION AND SCOPE OF ASSESSMENT

8.3.1 This section outlines the scoping consultation process and the resulting methodology for assessing the likely significant effects on merlin.

8.3.2 The Glen Dye Moor Woodland Creation EIA Scoping Report (Appendix 2.2 Glen Dye Moor Woodland Creation EIA Scoping Report) was submitted to Scottish Forestry Grampian Conservancy in January 2025. The Scoping Report set out the overall approach to assessment and allowed for the refinement of the Proposals over the course of the assessment.

8.3.3 Scottish Forestry produced a Scoping Opinion (Appendix 2.4 Scoping Opinion for the Proposed Glen Dye Moor Woodland Creation EIA Forestry Project) on the 11th February 2025, confirming the inclusion of merlin and identifying likely significant effects to assess along with suggested methodology. These are listed in Table 8.1 Likely Impacts and Methods of Assessment for Merlin.

Table 8.1 Likely Impacts and Methods of Assessment for Merlin

Likely Impact	Method of Assessment
Disturbance: Noise and visibility of operations within a critical distance of active breeding sites. Also considering projected changes to recreational use and risk of disturbance to merlin.	Evaluate where proposals deviate from forestry guidelines around sensitive areas based on site survey findings.
Loss of Breeding sites: Afforestation resulting in unsuitable habitat types for breeding/nesting and feeding.	Review of species design by Dr Graham Rebecca to assess likely outcomes expected based on long term study findings of merlin breeding success and territory loss from afforestation in eastern Scotland. Specifically, proposed species design will be reviewed against published recommendations from Dr Graham Rebecca to determine the level of alignment.
Cumulative Impacts: Impacts from the Glen Dye Windfarm on neighbouring land compounding impacts associated with Glen Dye Moor New Woodland Creation.	Cumulative impacts will be analysed in a similar way to 'Loss of Breeding Sites' above and will take into account predicted loss of merlin territory arising from the windfarm development, and the impacts of the afforestation project on any agreed off-site mitigation for the windfarm development.

8.4 BASELINE

8.4.1 A Breeding Raptor Survey carried out between April and July 2022 noted that [redacted] (See Appendix 3.2 Breeding Bird Survey Report). This confirms presence of the species [redacted].

8.4.2 [redacted]

8.4.3 At a regional level, the latest SRMS Report from 2019 shows that 37 out of 98 home ranges, showed signs of occupancy in the Northeast Scotland region and out of 28 pairs monitored in 2019, 79 young were fledged. This would indicate that the regional population is relatively high in comparison to NHZ figures. Though, it is noted that Natural Heritage Zone (NHZ) data for the North East Glens published by SWBSG (Wilson 2015) estimated a regional population of 4 breeding pairs. As this is substantially lower than number of breeding pairs confirmed by Dr Graham Rebecca in his research, this NHZ population figure is not being used for a regional comparison, and it is acknowledged that there is uncertainty regarding regional numbers.

8.4.4 The current habitats [redacted] made up of predominantly wet and dry heath, blanket bog and related mosaics. Details of these habitat types can be found in Appendix 3.1 Habitats, Peat and Protected Species. The blanket bog is highly degraded by erosion that has now stabilised although bare peat and areas of active erosion persist. A legacy of management by grazing and intensive muirburn has resulted in the formation of species-poor, uneven vegetation dominated by heather in the dry heath, or the same, deergrass and/or purple moor-grass in the wet heath.

8.4.5 Sporting activities and muir burning activities ceased on site in 2022. This has resulted in a changing dynamic of predators, prey and habitat development. Although there is no current trend data from which to establish a baseline, it can be assumed that heath and blanket bog habitats in burned areas are currently progressing through successional stages and that predator-prey communities are currently undergoing cyclic changes. These changes could have either a positive effect e.g. with an increase in potential prey, and/or a negative impact with an increase in ground predators such as red fox and stoats

8.4.6 Future baseline conditions related to population numbers are uncertain as there have been periods of population stability as well as decline seen in trend analysis. Locally, habitats are currently undergoing ecological succession following removal of livestock, associated with removal of sporting activities from the area. This local change is projected to result in reduced areas of grassland which can be expected to transition to heathland over time taking on a rank nature thought to be suitable for merlin.

8.4.7 The neighbouring Glen Dye Windfarm EIA baseline survey found that there were [redacted]. It notes that there is only [redacted] and disturbance [redacted] would only affect a limited number of birds. The Glen Dye Windfarm EIA does also state that there is a risk of a legislative offence in the event that birds are disturbed from their nest during the breeding season. The construction phase disturbances will be temporary in nature and phased over small areas of the site as works progress and as such potential disturbances would be highly localised. The impact of the windfarm on displacement during construction and operational stage was of Low magnitude and non-significant and collision risk mortality was all considered to be Negligible magnitude and Non-Significant, at the Regional level.

8.5 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

8.5.1 The significance of effect is determined by a combination of the identified sensitivity of merlin with the estimated magnitude of change and taking into account embedded mitigation (See Section 8.5.4). These findings are carried forward into Chapter 16 Summary of Significant Effects to make a final determination on Biodiversity as a likely significant effect in the context of the EIA Regulations.

8.5.2 Dr Graham Rebecca, merlin expert in Scotland, has reviewed this assessment of significant effects relating to Loss of Foraging Ground and Cumulative Effects as well as contributing to assessments of Disturbance and Prey Species Habitat Change.

8.5.3 Proposals listed in Table 8.2 Operations Impacting Merlin, represent the operations which would result in the listed likely impact and are subject to assessment. Additional details relating to operations and works can be found in List 4.2 Detailed List of Operations Included in Proposals and List 4.3 Works Required to Conduct Operations. For each operations the related likely impact is noted and specified for the specific operations anticipated, for example planting could cause disturbance but machinery would not be used so the disturbance would be based on hand implemented work.

Table 8.2 Operations Impacting Merlin

Additional details of Operations can be found in List 4.2 Detailed List of Operations Included in Proposals

Operation	Related Likely impact
Cultivation	Disturbance Machinery and hand implemented work producing noise or visibility to [redacted] merlin [redacted]. This would be a result of excavators carrying out cultivation works for planting and to a lesser extent, hand mounding or screefing.
Planting	Disturbance Hand implemented work being visible to [redacted] merlin [redacted] This would be a result of planters walking the site and planting trees at prepared planting positions.
Natural Regeneration	Loss of Breeding sites

	Regeneration resulting in unsuitable habitat types for breeding/nesting. This would result from seeding of trees beginning to establish over a short and medium timescale at variable densities from nearby existing seed sources.
Maintenance of Planted Trees	Disturbance Machinery and hand implemented work producing noise or visibility to [redacted] merlin [redacted]. This would result from replacement planting of trees by hand (beating-up), carrying out spraying, weeding or fertilising operations normally by hand though possibly with machinery and equipment.
Establishment of Planted Trees	Loss of Breeding sites Afforestation and changes in land management resulting in unsuitable habitat types for breeding/nesting. This would result from the long-term growth of trees as per the proposal design.
Fence Line Construction	Disturbance Machinery and hand implemented work producing noise or visibility to [redacted] merlin [redacted]. This would result from the erecting, upgrading, replacement or removal of fencing using machinery and equipment as well as layout and construction work by hand including maintenance of fences and repair works over a longer-term period.
Forestry Track Construction	Disturbance Machinery and hand implemented work producing noise or visibility to [redacted] merlin [redacted]. This would result from the construction, upgrading, or repairs of tracks using machinery and equipment as well as delivery and layout of materials.
Deer Management	Disturbance Hand implemented work producing noise or visibility to [redacted] merlin [redacted]. This would result from shooting, ATV usage and carcass recovery activities.
Cumulative Impacts – Neighbouring Glen Dye Windfarm	Loss of Breeding sites Afforestation and changes in land management resulting in unsuitable habitat types for breeding/nesting. This would result from any displacement or losses as stated within the Glen Dye Windfarm EIA which would result in merlin shifting onto the Glen Dye Moor proposal area, or any losses predicted by the Glen Dye Windfarm EIA from within the Glen Dye Moor proposal areas.

8.5.4 *Embedded Mitigation*

8.5.4.1 *A number of embedded mitigations are included within proposals. These mitigations form a fundamental part of the proposals. Proposals would not be considered without implementation of these mitigations and are therefore assessed as an integral part of the proposals. These are included in Appendix 2.6 Mitigations Schedule and noted below for reference:*

- *A09 Operational timing restrictions during breeding seasons specific to each species and breeding site, safe working distances during breeding/lekking/nesting periods will be in line with current good practice, breeding seasons and general safe working distances for merlin are site specific but generally accepted as April to August with a safe working distance of 300-500m from active nests.*

- *B09 Integrated open ground networks within curlew and merlin [redacted] territories, key merlin [redacted] will include open corridors, and the overall area enclosed within the perimeter fence will limit planting to no more than 60% of the total area.*

- *B16 Caledonian pinewood (W18) and Upland birch (W4) species will be planted around [redacted] [redacted] (300-500m as suited to topography) as shown on the Species Map*

- *B17 Planting density of W18 and W4 areas is adjusted to be variable with semi-open to open canopy around curlew and merlin [redacted] 300-500m [redacted])*

- *E03 The information board at Spital Car Park will be used to provide information and guidance on wildlife.*

- *F4 Monitoring- Social, Environmental and Socio-economic monitoring is planned to deliver long term 2040 vision for the landowner. Details of monitoring will be found in a separate monitoring framework document however key woodland creation specific monitoring will include annual herbivore Impact Assessment (following standard HIA methodologies), annual establishment surveys ('beat-up' surveys noting survival of planted trees and natural regeneration density), recording of annual management culls, monitoring of areas designed as open ground such as around archaeological sites or within GWDTEs, and breeding bird surveys to determine how breeding territories change as habitats change. Monitoring areas of designed open ground such as around archaeological sites or within GWDTEs, will include informal recording during site visits for annual stocking density assessments, and will include a 10-year reconciliation review where any unplanned seeding is found to be occurring will be scheduled for removal. Reconciliation will be carried out by the land manager and designed open ground will be cleared where this is found to be in breach of the FGS funding contract or where it is compromising the integrity of a known sensitivity.*

8.5.5 For each impact identified in the Scoping Opinion, the following findings in terms of predicted outcomes are noted. References are made to appendices where relevant for further details.

8.5.6 **Disturbance:** In line with the assessment found within Appendix 7.2 Disturbance Analysis for Golden Eagle and Merlin and Appendix 2.5 Significance Criteria, Sensitivity of Merlin to disturbance is identified as **Medium** and the magnitude of change is **Minor**. This is due to the proposed woodland creation project, including cultivation, planting, maintenance, and deer management, being unlikely to result in significant disturbance to merlin, provided that all activities adhere to specified mitigation measures and follow best practice guidelines. These measures include conducting pre-operational surveys, implementing appropriate timing restrictions during the breeding season of April to August, maintaining safe working distances [redacted] 300-500m, and avoiding the creation of new recreational paths or signage that could attract attention to sensitive areas. These measures are in place to ensure compliance with the Wildlife and Countryside Act 1981. As merlin is a Schedule 1 bird it is an offense to intentionally or recklessly kill, injure, or take a wild bird, or to take, damage, or destroy its nest or eggs as well as disturb a bird while it is building a nest or is in, on, or near a nest containing eggs or young. The proposals at Glen Dye Moor also take into account guidance from Scottish Forestry, specifically FCS Guidance Note 32, which provides advice on planning operations around birds in Scottish forests.

8.5.7 **Loss of Breeding Sites**: In line with the assessment found in Appendix 8.1 Merlin Assessment Summary and Appendix 2.5 Significance Criteria, Sensitivity of merlin to loss of breeding sites is identified as **Medium** and Magnitude is **Moderate**. This is due to proposed mitigations, including species design generally aligning with published recommendations from Dr Graham Rebecca, are estimated to limit loss to a single [redacted] with three [redacted] displaced to alternative suitable habitats and remaining [redacted] being unaffected. The project proposes a diverse woodland mosaic, implementing habitat design features such as riparian planting, semi-open canopy woodlands, and unplanted plateau habitats, aiming to maintain prey availability and nesting sites, with 54% of territory land remaining open. Though there is uncertainty around long term outcomes, the worst-case scenario of loss and displacement noted here will account for knowledge gaps and embedded monitoring will assess long-term impacts and inform future afforestation schemes.

8.5.8 **Cumulative Impact**: Displacement was noted within the GDM windfarm as localised temporary displacement [redacted] during the construction phase (21 months) if works were carried out during the breeding season. Displacement was not noted as a likely outcome during the longer operation phase. As such, this is thought to be a short-term impact and would not result in potential cumulative impact to [redacted] Glen Dye Moor. Embedded mitigation includes liaison with wind farm developer so that disturbance, if required, would not overlap in time to avoid cumulative disturbance. No further assessment was required.

8.6 RESIDUAL EFFECTS

8.6.1 There are residual effects requiring mitigation identified for merlin as noted in Table 8.3 below.

Table 8.3 Merlin Summary Table of Significance

Impact	Sensitivity	Magnitude	Significance
Disturbance	Medium	Minor	Minor
Loss of Breeding Sites	Medium	Moderate	Moderate

Cumulative Impact	**Medium**	**Negligible**	**Minor**

8.6.2 The above residual effect findings are plotted against the assessment tool (Appendix 2.5) to illustrate levels of residual effect in Table 8.4 below.

Table 8.4 Significance Matrix

⇩ ***Sensitivity***	***Magnitude***			
	Major	*Moderate*	*Minor*	*Negligible*
High	*Major*	*Major*	*Moderate*	*Minor*
Medium	*Moderate*	***Moderate***	***Minor***	***Minor***
Low	*Minor*	*Minor*	*Negligible*	*Negligible*
Neutral	*Minor*	*Negligible*	*Negligible*	*Negligible*

8.6.3 The environmental factors assessed in this chapter related to merlin (a biodiversity factor) which should be considered in context to other impacts to identify interactions among and between various environmental factors. This will allow for a comprehensive final assessment of impacts on a) population and human health, b) biodiversity, c) land, soil, water, air, and climate, and d) material assets, cultural heritage, and the landscape, in accordance with the Scoping Opinion.

8.6.4 Effects can be indirect, cumulative, short-term, long-term, beneficial or adverse, and are identified as being either significant or not significant in the context of the EIA Regulations. This comprehensive approach ensures a full determination of the 'net effect' of the forestry project, including both positive and negative environmental consequences.

8.6.5 Impact from disturbance will be managed through adherence to the mitigation strategies outlined in 8.5.6 and is considered to be of low impact. The cumulative impact of the adjacent wind farm, with the localised temporary displacement of a single pair during the construction phase (assuming worst case scenario with works taking place during the breeding season) is regarded as a short term impact and the resulting cumulative effect on the Glen Dye Moor proposal is negligible.

8.6.6 Interactions with effects of habitat change in non- afforested areas (amounting to approximately 57% of the whole site) are considered to be beneficial. The removal of sheep and sporting activity as described in the Baseline section of this chapter is likely to improve habitats, rank heather and heathland areas, suited to merlin across a significant area. This ecological succession over time offsets the loss of breeding sites to some degree.

8.6.7 There is also expected to be an interaction with the numbers and diversity of prey species increasing in the medium-term following changes in land use, cessation of muir burning, reduced sporting activities and increased deer management.

8.6.8 Adopting researched best practice mitigations for Merlin and monitoring outcomes will also have a positive effect in filling knowledge gaps as there is uncertainty surrounding how merlin populations respond to native woodland creation. The establishment of open, riparian zones of approximately 100m either side of rivers and tributaries, including scattering of small copses and broadleaved trees such as alder, birch, rowan and willow to attract passerines (recommendation 3 Glen Dye Moor Merlin Assessment Summary (Appendix 8)), has been adopted around [redacted] This design, which partially meets recommendation 3, helps to offset the loss of the single [redacted] and displacement of three [redacted]

8.6.9 The establishment of a 200m unplanted area adjacent to crags that were considered important to merlin for nesting (recommendation 4 Glen Dye Moor Merlin Assessment Summary (Appendix 8)) has been partially adopted in the woodland creation design. In general crags remain unplanted though often planting occurs nearby and less than 200m from the crags themselves. Steep ground is not suitable for dense planting and most of these areas are utilising semi-open native planting or natural regeneration.

8.6.10 To aid in illustrating the balance between adverse and beneficial impacts, Table 8.5, which is derived from Appendix 2.5, is included below highlighting the residual effects and mitigations assessed in this chapter.

Table 8.5 Diagram of Beneficial and Adverse Impacts

Beneficial				***Neutral***				***Adverse***
Greater			***Less***		***Less***			***Greater***
		E	**D**	**C**		**A**	**B**	

The 'net impact' is determined for merlin having three assessed impacts resulting from disturbance, loss of breeding sites and cumulative impact taken in context of interactions with other factors both direct and indirect, cumulative, short-term or long-term, beneficial or adverse.

A, Impact from **disturbance** found to be adverse to a lesser degree

B, Impact from **loss of breeding sites** found to be adverse to a greater degree

C, Impact from **cumulative impact** found to be neutral

D, Interacting benefit from **adoption of researched Merlin best practice proposals** and **monitoring** to understand applicability and fill knowledge gaps

E, Interactions with increases in number and diversity of prey species

The 'net impact' was found to be ***adverse to a lesser degree.***

8.7 SUMMARY OF EFFECTS

8.7.1 Consideration of the net effect to merlin takes account of the loss of a single [redacted] and the displacement of three [redacted], and balances that against the improvements to breeding sites from habitat enhancement and scheme design, and the neutral impacts from the neighbouring windfarm and slightly adverse effect from disturbance. These considerations result in a net effect which is adverse to a lesser degree. This outcome should be considered in the context of the receptor's **regional** importance.

8.7.2 Impact to merlin from the proposals are found to be **'not significant'** in the context of the EIA regulations.

9 IMPACTS ON CURLEW

9 Impacts on Curlew

List of Appendices Referenced in this Chapter

Appendix 9.1 Curlew Assessment Summary

Appendix 3.1 Habitats, Peat and Protected Species

Appendix 3.2 Breeding Bird Survey Report

Appendix 2.2 Glen Dye Moor Woodland Creation EIA Scoping Report

Appendix 2.4 Scoping Opinion for the proposed Glen Dye Moor Woodland Creation EIA Forestry Project

Appendix 2.5 Significance Criteria

Appendix 2.6 Mitigations Schedule

List of Tables/Figures Referenced in this Chapter

Table 9.1 Impacts and Methods of Assessment for curlew

Table 9.2 Operations Impacting curlew

Table 9.3 Curlew Summary Table of Significance

Table 9.4 Significance Matrix

Table 9.5 Diagram of Beneficial and Adverse Impacts

List of Other Documents and Publications Referenced in this Chapter

Wildlife and Countryside Act 1981 (as amended)

Scottish Forestry (2021). Woodland Creation and Curlew. Scottish Forestry, Edinburgh. https://forestry.gov.scot/publications/1039/woodland-creation-and-curlew

RSPB Scotland (2019). Curlew conservation and new woodland in Scotland - essential steps for forest managers. RSPB Scotland, Edinburgh. https://www.rspb.org.uk/globalassets/downloads/documents/conservation-projects/curlew-recovery-programme/curlew-and-new-woodland-good-practice.pdf

9.1 CHAPTER SUMMARY

9.1.1 There were 14 territories of breeding curlew on site in 2022, giving an overall density of less than 1 pair per sq. km. There was one area within the site of a denser occupancy near Charr Bothy and the rifle range. This dense area is considered an 'important' group following current guidance from Scottish Forestry and RSPB as it is more than 5 pairs per sq. km. Analysis of habitat impacts from afforestation were evaluated with RSPB and the design evolved during the due diligence and EIA screening stages to reduce potential impacts. Current proposals were found to likely result in an estimated three pairs being lost and three pairs being displaced to alternative areas under a best-case scenario across the whole of the proposal area. When stratifying the 'important' group of curlew near Charr bothy, under a best case scenario, it is estimated that two pairs would be lost and one pair displaced to an alternative area or potentially lost. The reason for this being a 'best case scenario' is that due to lack of research it is difficult to determine how curlew will respond as the forest develops. Without any additional mitigations and assuming a worst-case scenario, there is very likely to be three territories lost, and a high degree of uncertainty on whether the remaining five territories will move to a more suitable habitat or whether they will also be lost. RSPB guidance (RSPB Scotland 2019, 'Curlew conservation and new woodland in Scotland - essential steps for forest managers') and correspondence suggest that a loss of five pairs of nesting curlew is potentially threatening to a curlew population, however, the overall biodiversity benefits of the scheme should be taken into account during any assessment and not considered in isolation. Cumulative effects related to the neighbouring Glen Dye windfarm are negligible and effects from peatland restoration ongoing within the property are thought to be beneficial to curlew by increasing suitability of alternative habitat areas where displacement may be predicted. These beneficial and adverse factors combine and the impact on curlew will therefore be 'not significant' in the context of the EIA regulations.

9.2 INTRODUCTION

9.2.1 This chapter of the Glen Dye Moor New Woodland Creation EIA Report (EIAR) considers the potential impacts of proposals on curlew (*Numenius arquata*) and assesses the likely severity of those impacts.

9.2.2 In relation to the EIA Regulations 5 (3), curlew are considered to be a 'Biodiversity' factor and will be added to other biodiversity factors for a final determination in Chapter 16 Summary of Significant Effects

9.2.3 This Chapter is supported by Appendix 9.1 Curlew Assessment Summary.

9.2.4 Curlew (*Numenius arquata*) are protected under the Wildlife and Countryside Act 1981 (as amended), they are not a scheduled bird under this Act and not provided any special protections beyond those noted here. All wild bird species are protected under the Wildlife & Countryside Act, which makes it an offence to intentionally or recklessly; kill, injure or take a wild bird; take, damage, destroy or interfere with a nest of any wild bird whilst it is in use or being built; obstruct or prevent any wild bird from using its nest; or, take or destroy an egg of any wild bird.

9.2.5 This assessment will be based on curlew having **national importance** following EIA Scoping consultation feedback from NatureScot and RSPB, as recorded within appendix 2.2 Scoping Report, which is informed heavily by population declines at a national level and not related to statutory designation or protection. However, the number of territories represents a very small proportion of the estimated North East Glens Natural Heritage Zone (NHZ) population of 2,815 pairs.

9.3 SCOPING CONSULTATION AND SCOPE OF ASSESSMENT

9.3.1 This section outlines the scoping consultation process and the resulting methodology for assessing the likely impacts on curlew.

9.3.2 The Glen Dye Moor Woodland Creation EIA Scoping Report (Appendix 2.2 Glen Dye Moor Woodland Creation EIA Scoping Report) was submitted to Scottish Forestry Grampian Conservancy in January 2025 following a scoping meeting with consultation bodies agreed with Scottish Forestry. The Scoping Report set out the overall approach to assessment and allowed for the refinement of the Proposals over the course of the assessment.

9.3.3 Scottish Forestry produced a Scoping Opinion (Appendix 2.4 Scoping Opinion for the Proposed Glen Dye Moor Woodland Creation EIA Forestry Project) on the 11th February 2025, confirming the inclusion of curlew and identifying likely significant effects to assess along with suggested methodology. These are listed in Table 9.1 Likely Impacts and Methods of Assessment for Curlew.

Table 9.1 Likely Impacts and Methods of Assessment for Curlew

Likely Impact	Method of Assessment
Disturbance: Noise and visibility of operations within a critical distance of active breeding sites. Also considering projected changes to recreational use and risk of disturbance to curlew.	Evaluate where proposals deviate from forestry guidelines around sensitive areas based on site survey findings.
Loss of Breeding Sites: Afforestation and changes in land management resulting in unsuitable habitat types for breeding/nesting.	Based on breeding bird survey findings (Appendix 3.2), and through discussions with RSPB, compare estimated losses against guidance (Appendix 9.1 Curlew Assessment Summary).
Cumulative Impacts: Impacts from the Glen Dye Windfarm on neighbouring land compounding impacts associated with Glen Dye Moor New Woodland Creation. Impacts from peatland restoration works being carried out on site are also considered, though these do not form part of the proposals.	Cumulative impacts will be analysed to identify displacement likelihood documented in the Glen Dye Windfarm EIA and quantify the combined outcomes with those identified above in the 'Loss of Breeding Sites' to determine a level of likely significance. Anticipated impacts from peatland restoration work being carried out on site will also be considered when determining overall impact on curlew.

9.4 BASELINE

9.4.1 A Breeding Bird Survey carried out between April and July 2022 noting 14 territories within the survey area (see Appendix 3.2 Breeding Bird Survey Report). This confirms presence of the species and can also identify an area of concentrated breeding near Charr Bothy which is greater than 5 pairs per square kilometre density. North East Scotland Biological Records Centre (NESBReC) also provided historical breeding records of breeding waders including curlew within the site between 2000-2010.

9.4.2 The curlew is a United Kingdom Biodiversity Framework (UKBF) priority species and is red-listed due to moderate long-term historical population decline in the UK, including a severe decline over the last 25 years. The UK breeding population was estimated at 105,000 pairs, with an estimate of 58,800 pairs in Scotland. The British Trust for Ornithology's (BTO) Breeding Bird Survey indicates that the decline has been most severe in Scotland. At the regional level, current data is not available for the Northeast Glens or the Cairngorms Massif Natural Heritage Zones (NHZ). The most recent (2015) data for North East Glens NHZ estimates 2,815 pairs. The BTO Breeding Bird Survey map indicates that the area is a stronghold for the species with relatively high population density. Based on the national breeding population, the regional population is therefore likely to number several thousand pairs, but due to historical and recent declines, is considered to be in unfavourable conservation status.

9.4.3 The current areas of open habitat are made up of predominantly heath, blanket bog and related mosaics. Details of these habitat types can be found in Appendix 3.1 Habitats, Peat & Protected Species. The blanket bog is highly degraded by erosion that has now stabilised although bare peat and areas of active erosion persist. A legacy of management by grazing & intensive muirburn has resulted in the formation of species-poor, uneven vegetation dominated by heather in the dry heath, or the same, deergrass &/or purple moor-grass in the wet heath.

9.4.4 Sporting activities and muir burning activities ceased on site in 2022. This has resulted in a changing dynamic of habitat development. Although there is no current trend data from which to establish a baseline, it can be assumed that heath and blanket bog habitats in burned areas are currently undergoing succession

9.4.5 Peatland restoration is being carried out on site by the owners of Glen Dye Moor at a significant scale, though this does not form part of the afforestation proposals. Areas of restored peat are expected to improve in habitat quality and risk of erosion is expected to be reversed. Peatland restoration within the project area is expected to deliver positive outcomes for curlew by enhancing the availability and quality of suitable breeding habitat. Restored peatlands support open, wet, and structurally diverse conditions favoured by curlew for nesting and foraging. The re-establishment of hydrological function, reduction in drainage, and suppression of scrub or tree encroachment can improve invertebrate abundance and soil moisture regimes, both of which are beneficial for chick survival. By restoring and maintaining areas of deep peat as open ground within an otherwise afforested landscape, peatland restoration may help to offset potential habitat displacement and contribute to broader, landscape-scale conservation objectives for wading bird species. These restoration areas may therefore support the persistence of curlew territories within the wider project boundary.

9.4.6 The neighbouring Glen Dye Windfarm EIA baseline survey found that there were 17 territory locations recorded within the windfarm site. It concluded that this represents a very small proportion of the estimated NHZ population and as such would be considered of local importance within the windfarm EIA. The impact of the windfarm on displacement during construction, displacement during operation and collision risk mortality was all considered to be Negligible magnitude and Non Significant at the Regional NHZ population level.

9.4.7 Future baseline can be reasonably predicted as continued declines within the curlew population in line with what is recorded at a national level given regional data is unavailable, and locally, habitats are currently succeeding following removal of livestock, associated with removal of sporting activities from the area. This local change is projected to result in reduced areas of grassland which can be expected to transition to heathland over time taking on a rank nature thought to be unsuitable for curlew. Areas of completed peatland restoration will be expected to continue to improve through raising of the water table and related vegetation recovery.

9.5 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

9.5.1 The significance of effect is determined by a combination of the identified sensitivity of curlew with the estimated magnitude of change and taking into account embedded mitigation (See Section 9.5.6). These findings are carried forward into Chapter 16 Summary of Significant Effects to make a final determination on Biodiversity as a likely significant effect in the context of the EIA Regulations.

9.5.2 RSPB representative Karen Cunningham has been involved in design development of the proposals since 2023 and has reviewed woodland design against factors related to curlew. Determination of impacts to curlew have been made in consultation with the RSPB. The RSPB's assessment is that there is likely to be a loss of curlew pairs and potential displacement overall and predictions are a best-case scenario as this is based on only one year of surveys and the location of those pairs at the time of survey. Due to a current lack of research, it is difficult to accurately predict the impact on curlew and other waders to tree planting and regeneration. The worst-case scenario from the first design was that up to 11 pairs could be lost based on the survey data from 2022 as during the surveys no curlew were found within 500m of woodland. Through consultation with the RSPB an updated design left more open ground and although uncertainty remained, a worst-case scenario from this design is that six pairs of curlew will be lost. The best-case scenario however would be that these six pairs may potentially relocate to a suitable alternative habitat.

9.5.3 Proposals listed in Table 9.2 Operations impacting Curlew, represent the operations which would result in the listed likely impact and are subject to assessment. Additional details relating to operations and works can be found in Chapter 4 Scheme Proposals List 4.2 Detailed List of Operations Included in Proposals and List 4.3 Works Required to Conduct Operations. For each operation the related likely impact is noted and specified for the specific operations anticipated, for example planting could cause disturbance but machinery would not be used so the disturbance would be based on hand implemented work.

9.5.4 There is limited research available on the impact of deer fencing on curlew, with no evidence available to use to quantify the impact of deer fencing. There is also no guidance available to inform fence design decisions specifically around curlew.

9.5.5 During consultation with the RSPB (meeting 18th September 2023) they stated that they do not have a position on predator control as the impact is unknown. Due to this unknown impact and consultation input, predator control has not been explored further.

Table 9.2 Operations Impacting Curlew

Additional details of Operations can be found in Chapter 4 List 4.2 Detailed List of Operations Included in Proposals

Operation	Specific impacts related to operations

Cultivation	Disturbance Machinery and hand implemented work producing noise or visibility to active curlew sites during critical breeding periods and within critical distances. This would be a result of excavators carrying out cultivation works for planting and to a lesser extent, hand mounding or screefing.
Planting	Disturbance Hand implemented work being visible to active curlew sites during critical breeding periods and within critical distances. This would be a result of planters walking the site and planting trees at prepared planting positions.
Natural Regeneration	Loss of Breeding Sites Regeneration resulting in unsuitable habitat types for breeding/nesting. This would result from seeding of trees beginning to establish over a short and medium timescale at variable densities from nearby existing seed sources.
Maintenance of Planted Trees	Disturbance Machinery and hand implemented work producing noise or visibility to active curlew sites during critical breeding periods and within critical distances. This would result from replacement planting of trees by hand (beating-up), carrying out spraying, weeding, or fertilising operations mainly by hand though possibly with machinery and equipment.
Establishment of Planted Trees	Loss of Breeding Sites Afforestation and changes in land management resulting in unsuitable habitat types for breeding/nesting. This would result from the long-term growth of trees as per the proposal design.
Fence Line Construction	Disturbance Machinery and hand implemented work producing noise or visibility to active curlew sites during critical breeding periods and within critical distances. This would result from the erecting, upgrading, replacement or removal of fencing using machinery and equipment as well as layout and construction work by hand including maintenance of fences and repair works over a longer-term period.
Forestry Track Construction	Disturbance Machinery and hand implemented work producing noise or visibility to active curlew sites during critical breeding periods and within critical distances. This would result from the construction, upgrading, or repairs of tracks using machinery and equipment as well as delivery and layout of materials.
Deer Management	Disturbance

	Hand implemented work producing noise or visibility to active curlew sites during critical breeding periods and within critical distances. This would result from shooting, ATV usage and carcass recovery activities.
Cumulative Impacts – Neighbouring Glen Dye Windfarm **- Peatland Restoration**	<u>Loss of Breeding Sites</u> Afforestation and changes in land management resulting in unsuitable habitat types for breeding/nesting. This would result from any displacement or losses as stated within the Glen Dye Windfarm EIA which would result in curlew shifting onto the Glen Dye Moor proposal area, or any losses predicted by the Glen Dye Windfarm EIA from the Glen Dye Moor proposal areas. It would also result in changes to habitat as peatland restoration occurs and habitat recovery takes place over the medium to long term period.

9.5.6 Embedded Mitigation

9.5.7 A number of embedded mitigations are included within proposals. These mitigations form a fundamental part of the proposals. Proposals would not be considered without implementation of these mitigations and are therefore assessed as an integral part of the proposals. These are included in Appendix 2.6 Mitigations Schedule and noted below for reference:

- *A09 Operational timing restrictions during breeding seasons: Specific to each species and breeding site, safe working distances during breeding/lekking/nesting periods will be in line with current good practice, breeding seasons and general safe working distances are noted below but will be adjusted based on site specific settings. For curlew the breeding season is considered to be April to July and a safe working distance would be 200-300m from an active nest.*

- *A10 On sensitive habitats, if planting is proposed, cultivation will be carried out using low intensity methods. This is illustrated in the Soil Sensitivity Map and the Cultivation Map. Cultivation methods chosen for planting will be guided by the 'Cultivation of Upland Woodland Creation Sites – Applicants Guide' to ensure methods chosen to represent the lowest feasible impact reducing risk of carbon loss.*

- *A13 pre-operational wildlife surveys will be carried out to identify active sites in advance of operations.*

- *B09 Integrated open ground networks within curlew and merlin [redacted], key curlew breeding territories will include open corridors and the overall area enclosed within the perimeter fence will limit planting to no more than 60% of the total area.*

- *B10 In areas with dense curlew breeding, site specific guidance found in Appendix 9.1 Curlew Assessment Summary, as agreed with RSPB, will be followed along with current guidance note 'Woodland Creation and Curlew' produced by Scottish Forestry. Every territory was individually reviewed and the designed woodland will be planted as shown on the species map. Opportunities to maximize open corridors to the greatest extent feasible are taken as per the species map. Alternative habitats within areas of degraded peat are proposed for restoration as a separate project proposal. Areas of low-density native planting are proposed in targeted locations around active territories. Vegetation management, where feasible will be implanted around the rifle range area. Less than five active territories are planned for planting with no alternative habitat available.*

- *B16 Caledonian pinewood (W18) and Upland birch (W4) species will be planted around breeding bird territories (300-500m as suited to topography) as shown on the Species Map*

- *B17 Planting density of W18 and W4 areas is adjusted to be variable with semi-open to open canopy around curlew and merlin [redacted] 300-500m [redacted])*

- *B20 A Wildfire Management Plan will incorporate species design elements to reduce risk of fire. This will include non-wooded corridors, maintaining low grazing pressure within the fenced enclosure, creating defensible spaces around structures, and similar measures. Key findings of the Wildfire Management Plan will be added to the Glen Dye Moor website.*

- *C15 Compensatory deer cull. Additional management culls to compensate for loss of foraging ground, total cull figures as agreed with NatureScot. A Deer Management Plan covers the property; target cull levels are agreed with NatureScot. Deer levels within the enclosure will be managed toward a target of 2.5 deer per square kilometre. Low level of deer browsing will continue within the fence which will aid in managing habitat for ground nesting birds and reducing wildfire risk (overaccumulation of fuels) while still allowing for natural regeneration.*

- *E03 The information board at Spittal Car Park will be used to provide information and guidance on wildlife.*

- *F4 Monitoring- Social, Environmental and Socio-economic monitoring is planned to deliver long term 2040 vision for the landowner. Details of monitoring will be found in a separate monitoring framework document however key woodland creation specific monitoring will include annual Herbivore Impact Assessment (following standard HIA methodologies), annual establishment surveys ('beat-up' surveys noting survival of planted trees and natural regeneration density), recording of annual management culls, monitoring of areas designed as open ground such as around archaeological sites or within GWDTEs, and breeding bird surveys to determine how breeding territories change as habitats change. Monitoring areas of designed open ground such as around archaeological sites or within GWDTEs, will include informal recording during site visits for annual stocking density assessments, and will include a 10-year reconciliation review where any unplanned seeding is found to be occurring will be scheduled for removal. Reconciliation will be carried out by the land manager and designed open ground will be cleared where this is found to be in breach of the FGS funding contract or where it is compromising the integrity of a known sensitivity.*

9.5.8 For each impact identified in the Scoping Opinion, the following findings in terms of predicted outcomes are noted. References are made to appendices where relevant for further details.

9.5.9 **Disturbance**: In line with the assessment found within Appendix 9.1 Curlew Assessment Summary, Tables 9.3 and 9.4 as well as Appendix 2.5. Sensitivity of curlew to disturbance is identified as Low and the Magnitude of change is Minor. This is due to implementation of timing restrictions to avoid the breeding season around active sites, which typically runs from April to July. Secondly, safe working distances will be enforced. The specific distance will vary depending on the species and breeding site, but a general safe working distance for curlew is 200-300m. These distances may be adjusted based on site-specific conditions and will be reviewed annually. These measures are in place to ensure compliance with the Wildlife and Countryside Act 1981, which protects all wild birds in Scotland. It is an offense to intentionally or recklessly kill, injure, or take a wild bird, or to take, damage, or destroy its nest or eggs. The proposals at Glen Dye Moor also take into account guidance from Scottish Forestry, specifically FCS Guidance Note 32, which provides advice on planning operations around birds in Scottish forests. The effect of disturbance on curlew is assessed as negligible and not significant in the context of the EIA Regulations.

9.5.10 **Loss of Breeding Sites**: In line with the assessment found within Appendix 9.1 Curlew Assessment Summary, Tables 9.3 and 9.4 as well as Appendix 2.5. Sensitivity of curlew to loss of breeding sites is identified as Medium and the Magnitude of change is Moderate. This is due to the best-case scenario, including the cluster of dense curlew territories around Charr bothy, is reasonably predicted to result in the loss of at least three but with a worse case scenario of six curlew territories. Potentially many of the territories will move to open areas away from the woodland edge but this is unpredictable due to lack of current research. Within the whole scheme, suitable alternative habitat is available for the population levels currently seen and as restoration activities within peatland areas continue, areas of alternative open habitat will improve in condition and quality. There is future habitat potential for the population to expand should the current ongoing trend of decline be reversed. A lack of research exists on the impact of tree planting and natural regeneration on curlew and other waders. A robust monitoring programme would allow for the impacts of large-scale land use change to be monitored and in turn help inform future woodland creation proposals. The effect of loss of breeding sites on curlew is assessed as moderate and therefore significant in the context of the EIA Regulations.

9.5.11 **Cumulative Impact**: In line with the assessment found within Appendix 9.1 Curlew Assessment Summary, Tables 9.3 and 9.4 as well as Appendix 2.5. Significance Criteria, Sensitivity is identified as Low and Magnitude of change is Moderate. This is due to the assessment of cumulative impacts, including the existing Glen Dye Windfarm approval and ongoing peatland restoration, suggesting that the overall long-term effect on curlew populations is likely to be neutral due to the substantial habitat improvements from peatland restoration, which outweigh the temporary and minimal minor displacement caused by the windfarm. The cumulative impact on curlew is therefore assessed as minor and not significant in the context of the EIA Regulations.

9.6 RESIDUAL EFFECTS AND ADDITIONAL MITIGATION

9.6.1 There are residual significant effects identified for curlew as noted in Table 9.3 below.

Table 9.3 Curlew Summary Table of Significance

Impact	Sensitivity	Magnitude	Significance
Disturbance	Low	Minor	Negligible
Loss of Breeding Sites	Medium	Moderate	Moderate
Cumulative impact	Low	Moderate	Minor

9.6.2 Assuming a worst-case scenario, 'loss of breeding sites' is found to be significant, predominantly due to a knowledge gap which limits analysis and necessitates conservative impact assumptions. Embedded and additional mitigations relating to monitoring will look to fill gaps of knowledge and uncertainty around curlew in relation to afforestation of differing types of native woodlands and natural regeneration of native tree species. This will further mitigate the impact on curlew for future projects.

9.6.3 The above residual effect findings are plotted against the assessment tool found in Appendix 2.5 to illustrate levels of residual effect in Table 9.4 below.

Table 9.4 Significance Matrix

⇩ *Sensitivity*	*Magnitude*			
	Major	*Moderate*	*Minor*	*Negligible*
High	*Major*	*Major*	*Moderate*	*Minor*
Medium	*Moderate*	***Moderate***	*Minor*	*Minor*
Low	*Minor*	***Minor***	***Negligible***	*Negligible*

Neutral	*Minor*			

9.6.4 The environmental factors assessed in this chapter related to curlew (a biodiversity factor) which should be considered in context to other impacts to identify interactions among and between various environmental factors. This will allow for a comprehensive final assessment of impacts on: a) population and human health, b) biodiversity, c) land, soil, water, air, and climate, and d) material assets, cultural heritage, and the landscape, in accordance with the Scoping Opinion.

9.6.5 Effects can be indirect, cumulative, short-term, long-term, beneficial or adverse, and are identified as being either significant or not significant in the context of the EIA Regulations. This comprehensive approach ensures a full determination of the 'net effect' of the forestry project, including both positive and negative environmental consequences.

9.6.6 Interactions with effects of peatland restoration are thought to be beneficial. Peatland restoration as described in the Baseline section of this chapter will be carried out across a large-scale area and result in increases in available curlew breeding sites. This restoration effect offsets the loss of breeding sites to some degree

9.6.7 The scale of non-afforested land (amounting to approximately 57% of the site) is significant and is considered to beneficial to a lesser degree.

9.6.8 To aid in illustrating the balance between adverse and beneficial impacts, Table 9.5, which is derived from Appendix 2.5, is included below highlighting the residual effects and mitigations assessed in this chapter.

Table 9.5 Diagram of Beneficial and Adverse Impacts

Beneficial				***Neutral***				***Adverse***
Greater			***Less***		***Less***			***Greater***
	E	**D**	**F**		**B C**		**A**	

The 'net impact' is determined for curlew from three assessed impacts resulting from disturbance, loss of breeding sites, and cumulative effect, taken in context of interactions with other factors both direct and indirect, cumulative, short-term or long-term, beneficial or adverse.

A, Impact from **loss of breeding sites** found to be adverse to a greater degree

B, Impact from **disturbance** found to be neutral but slightly adverse

C, Impact from **cumulative effect** found to be neutral but slightly adverse

D, Mitigation of **long-term monitoring** found to be beneficial

E, Interacting benefit from **peatland restoration**

F, Interacting benefit from the scale of retained open land (not afforested)

The ‘net effect’ for curlew was found to be near neutral with some uncertainty about outcomes

9.7 SUMMARY OF EFFECTS

9.7.1 Consideration of the net effect to curlew takes into account the significant loss of breeding sites, and balances that against the beneficial long-term monitoring to address uncertainty around native woodland effects, the interactions with improvements to breeding sites from peatland restoration over a significant area, and the temporary adverse cumulative impacts from the neighbouring windfarm, and temporary adverse effect from disturbance. This outcome should be considered in the context of the receptor’s **national** importance.

9.7.2 Impact to curlew from the proposals are found to be **not significant** in the context of the EIA regulations.

10 IMPACTS ON WADERS (LAPWING, GOLDEN PLOVER, OYSTERCATCHER, COMMON SANDPIPER AND SNIPE)

10 Impacts on Waders (Lapwing; golden plover; oystercatcher; common sandpiper and snipe)

List of Appendices Referenced in this Chapter

Appendix 10.1 Other Waders Assessment Summary

Appendix 3.2 Breeding Bird Survey Report

Appendix 3.1 Habitats, Peat & Protected Species

Appendix 2.2 Glen Dye Moor Woodland Creation EIA Scoping Report

Appendix 2.4 Scoping Opinion for the Proposed Glen Dye Moor Woodland Creation EIA Project

Appendix 2.5 Significance Criteria

Appendix 2.6 Mitigations Schedule

List of Tables/Figures Referenced in this Chapter

Table 10.1 Likely Impacts and Methods of Assessment for Waders

Table 10.2 Operations Impacting Waders

Table 10.3 Summary Table of Significance

Table 10.4 Significance Matrix

Table 10.5 Diagram of Beneficial and Adverse Impacts

List of Other Documents and Publications Referenced in this Chapter

Wildlife and Countryside Act 1981 (as amended)

FCS Guidance Note 32: Forest operations and birds in Scottish forests, November 2006, published by Forestry Commission Scotland

Sheldon, R., Bolton, M., Gillings, S. & Wilson, A. (2004).Conservation Management of Lapwing *Vanellus vanellus* on Lowland Arable Farmland in the UK. British Ornithologists' Union, Ibis, 146 (Suppl. 2), 41–49

Finney, S.K., Pearce-Higgins, J.W. & Yalden, D.W. (2005) The effect of recreational disturbance on an upland breeding bird, the golden plover *Pluvialis apricaria*. *Biological Conservation* 121: 53–63.

Liker, A. & Szekely, T. (1997) The impact of grazing and road use on hatching success of Lapwings (*Vanellus vanellus*). *Acta Zoologica Academiae Scientiarum Hungaricae* 43: 85–92.

10.1 CHAPTER SUMMARY

10.1.1 The survey area provides habitat for a variety of wader species, including lapwing (*Vanellus vanellus*), golden plover (Pluvialis apricaria), oystercatcher (*Haematopus ostralegus*), common sandpiper (*Actitis hypoleucos*) and snipe (*Gallinago gallinago*). Breeding territories were recorded as follows: two for lapwing, twelve pairs for golden plover, three for oystercatcher, six for common sandpiper, and twenty for snipe. An assessment was conducted to evaluate potential impacts from proposed forest project activities, encompassing cultivation, planting, natural regeneration, maintenance of planted trees, fence and track construction, deer management, and cumulative impacts alongside the approved Glen Dye windfarm. Embedded mitigation measures, such as safe working distances, timing restrictions around active breeding sites, and habitat design that retains areas of open ground, were determined to reduce potential risks to waders such that they will not be significant. Protection is further ensured through compliance with the Wildlife and Countryside Act 1981. These beneficial and adverse factors combine and the impact on waders will therefore be 'not significant' in the context of the EIA regulations.

10.2 INTRODUCTION

10.2.1 This chapter of the Glen Dye Moor New Woodland Creation Environmental Impact Assessment Report (EIAR) considers the potential impacts of proposals on waders including lapwing (*Vanellus vanellus*), golden plover (Pluvialis apricaria), oystercatcher (*Haematopus ostralegus*), common sandpiper (*Actitis hypoleucos*) and snipe (*Gallinago gallinago*) and assesses the likely severity of those impacts.

10.2.2 In relation to the EIA Regulations 5 (3), waders are considered to be a 'Biodiversity' factor and will be added to other biodiversity factors for a final determination of significance in Chapter 16 Summary of Significant Impacts

10.2.3 This Chapter is supported by Appendix 10.1 Other Waders Assessment Summary.

10.2.4 All waders are protected under the Wildlife and Countryside Act 1981 (as amended), they are not a scheduled bird under this Act and not provided any special protections beyond those noted here. All wild bird species are protected under the Wildlife & Countryside Act, which makes it an offence to intentionally or recklessly; kill, injure or take a wild bird; take, damage, destroy or interfere with a nest of any wild bird whilst it is in use or being built; obstruct or prevent any wild bird from using its nest; or, take or destroy an egg of any wild bird.

10.2.5 This assessment will be based on waders having local importance following EIA Scoping consultation feedback from NatureScot and RSPB, as recorded within Appendix 2.2 Scoping Report.

10.3 SCOPING CONSULTATION AND SCOPE OF ASSESSMENT

10.3.1 This section outlines the scoping consultation process and the resulting methodology for assessing the likely impacts on waders.

10.3.2 The Glen Dye Moor Woodland Creation EIA Scoping Report was submitted to Scottish Forestry Grampian Conservancy in January 2025 following a scoping meeting with consultation bodies agreed with Scottish Forestry. The Scoping Report set out the overall approach to assessment and allowed for the refinement of the Proposals over the course of the assessment.

10.3.3 Scottish Forestry produced a Scoping Opinion on the 11th February 2025, confirming the inclusion of waders and identifying likely significant effects to assess along with suggested methodology. These are listed in Table 10.1 Impacts and Methods of Assessment for waders.

Table 10.1 Likely Impacts and Methods of Assessment for Waders

Likely Impact	Method of Assessment
Disturbance: Noise and visibility of operations within a critical distance of active breeding sites. Also considering projected changes to recreational use and risk of disturbance to waders.	Evaluate where proposals deviate from forestry guidelines around sensitive areas based on site survey findings.
Loss of Breeding Sites: Afforestation resulting in unsuitable habitat types for breeding/nesting. This should consider the impact of deer fencing on this species including the short to medium-term impact on ground vegetation.	Based on breeding bird survey findings (appendix 3.2), compare habitat recommendations against proposal design.
Cumulative Impacts: Impacts from the Glen Dye Windfarm on neighbouring land compounding impacts associated with Glen Dye Moor New Woodland Creation.	Cumulative impacts will be analysed to identify displacement likelihood documented in the Glen Dye Windfarm EIA and quantify the combined outcomes with those identified above in the 'Loss of Breeding Sites' to determine a level of likely significance.

10.4 BASELINE

10.4.1 A Breeding Bird Survey carried out between April and July 2022 noting two territories of lapwing, 12 pairs of golden plover, three territories of oystercatcher, six territories of common sandpiper and 20 territories of snipe within the survey area (see Appendix 3.2 and Map 8 Constraints). NESBREC also provided historical records of breeding waders including golden plover, lapwing, and snipe within the site between 2000-2010 and observational records of these species from 2019 and also 2015 (lapwing only).

10.4.2 The Glen Dye Windfarm EIA report included observations of 10 glover plover territories during moorland breeding bird survey in 2015, all of which were located within 500m of the site boundary.

10.4.3 Lapwing is a UKBF priority species and is red-listed due to severe long-term historical population decline in the UK, including a severe decline over the last 25 years. The UK breeding population was estimated at 154,000 pairs according to data held by the British trust for Ornithology. Despite their UK population trend, recent surveys in Scotland suggest that numbers of breeding lapwing on 'farmed' land are relatively stable. Repeat surveys between 1992 and 1993 (O'Brien 1996) and 1997/1998/2000 (O'Brien et al. 2002) recorded a non-significant population decline of 8 %. The Scottish population has been recently estimated at about 87,000 pairs (Sheldon 2004) . At the regional level, data is not available for the North East Glens or the Cairngorms Massif Natural Heritage Zones (NHZs). The BTO Breeding Bird Survey map produced by the British Trust for Ornithology indicates that the area supports a high population density for this species. Based on the national breeding population, the regional population is therefore likely to number > 500 pairs, but due to historical and recent declines, is considered to be in unfavourable conservation status.

10.4.4 Golden plover is an Annex 1 listed, UKBAP priority species and is green-listed due to a relatively stable population in the UK. The Scottish breeding population has been recently estimated at about 15,000 pairs according to data held by the British Trust for Ornithology. The most recently published North East Glens NHZ population estimate comprises 659 pairs. The BTO Breeding Bird Survey map indicates that the area supports moderate population density for this species. Based on the national breeding population, the regional population is therefore likely to number approximately 2,000 pairs.

10.4.5 Oystercatcher is amber listed due to its population decline since 1995 (21% as per BTO data) although the species has expanded its distribution nationally over that same time period. The UK breeding population was estimated at 96,000 pairs with over 305,000 birds present during the winter. At the regional level, data is not available for the North East Glens or the Cairngorms Massif NHZs. The BTO Breeding Bird Survey map indicates that the area supports moderate population density for this species.

10.4.6 Common sandpiper is amber-listed due to its population decline since 1995 (25% as per BTO data). The UK breeding population was estimated at 13,000 pairs with over 52,000 birds present during the winter. At the regional level, data are not available for the North East Glens or the Cairngorms Massif NHZs.

10.4.7 The snipe is amber listed because it is listed as a species of European Conservation Concern. The UK breeding population was estimated at 59,300 pairs with over 100,000 birds present during the winter. The trend in the upland and moorland strongholds of the species is not fully known, but the BTO Breeding Atlas (1988-91) documented range loss widely in Wales, Northern Ireland and Scotland. However, the BTO Breeding Bird Survey indicates that the breeding population has increased in Scotland in recent years. At the regional level, data is not available for the Cairngorms Massif NHZ. The BTO Breeding Bird Survey map indicates that the Cairngorms Massif is not a stronghold for the species, therefore based on the national breeding population, the regional population is likely to number up to 2,000 pairs. As the population has increased in Scotland and nationally in recent years, the regional population is considered likely to be in favourable conservation status.

10.4.8 All wader species noted are distributed across the project area with golden plover generally observed at higher elevations though below the main open plateaux. Lapwing and oystercatcher generally occupy the low glen area along the Water of Dye, snipe were also recorded along these lower glens though also notably present in greater numbers to the southeastern quarter of the project area where peatland restoration occurred in 2023 and 2024.

10.4.9 Habitats in these areas are made up of predominantly heath, blanket bog/mire and related mosaics with some areas of grassland mosaics. Each species of wader is associated with differing habitat compositions throughout the project area. Golden plover and oystercatcher were observed almost exclusively in areas identified as heath and mire mosaics, snipe was similar though associated with wetter mire mosaics in heath, blanket bog and grassland, lapwing occupy very diverse mosaics of grassland and heath, while common sandpiper lacked a strong association with any habitat types but is known to favour riparian zones. Details of these habitat types can be found in Appendix 3.1 Habitats, Peat & Protected Species.

10.4.10 Sporting activities and muir burning activities ceased on site in 2022. This has resulted in a changing dynamic of habitat development. Although there is no current trend data from which to establish a baseline, it can be assumed that heath and blanket bog habitats in burned areas are currently undergoing succession. Blanket bog for example is highly degraded by erosion that has now stabilised although bare peat and areas of active erosion persist. This legacy of management by grazing & intensive muirburn has resulted in the formation of species-poor, uneven vegetation dominated by heather in the dry heath, or the same, deergrass &/or purple moor-grass in the wet heath.

10.4.11 Peatland restoration is being carried out on site, though this does not form part of the proposals. Areas of restored peat are expected to improve in habitat quality and risk of erosion is expected to be reversed. Peatland restoration within the project area is expected to deliver positive outcomes for waders by enhancing the availability and quality of suitable breeding habitat across a significant area. Restored peatlands support open, wet, and structurally diverse conditions favoured by some wader species for nesting and foraging. The re-establishment of hydrological function, reduction in drainage, and suppression of scrub or tree encroachment can improve invertebrate abundance and soil moisture regimes, both of which are beneficial for chick survival. By restoring and maintaining areas of deep peat as open ground within an otherwise afforested landscape, peatland restoration may help to offset potential habitat displacement and contribute to broader, landscape-scale conservation objectives for wading bird species. These restoration areas may therefore support the persistence of wader territories within the wider project boundary.

10.4.12 Future baseline projections are subject to uncertainty due to variable population trends among wader species. In the absence of regional data, it is assumed that national trends will persist. Habitat baseline projections are based on current successional trajectories following livestock and sporting activity cessation. This local shift is expected to decrease grassland extent, with a corresponding increase in rank heathland over time. Completed peatland restoration sites are projected to exhibit continued improvement through water table elevation and subsequent vegetation recovery.

10.5 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

10.5.1 The significance of effect is determined by a combination of the identified sensitivity of waders with the estimated magnitude of change and taking into account embedded mitigation (See Section 10.5.3). These findings are carried forward into Chapter 16 Summary of Significant Effects to make a final determination on Biodiversity as a likely significant effect in the context of the EIA Regulations.

10.5.2 Proposals listed in Table 10.2 Operations impacting waders, represent the operations which would result in the listed likely impact and are subject to assessment. Additional details relating to operations and works can be found in Chapter 4 Scheme Proposals. For each operations the related likely impact is noted and specified for the specific operations anticipated, for example planting could cause disturbance but machinery would not be used so the disturbance would be based on hand implemented work.

Table 10.2 Operations Impacting Waders

Additional details of Operations can be found in Chapter 4 List 4.2 Detailed List of Operations Included in Chapter 4 Scheme Proposals

Operation	Specific impacts related to operations
Cultivation	Disturbance Machinery and hand implemented work producing noise or visibility to active wader sites during critical breeding periods and within critical distances. This would be a result of excavators carrying out cultivation works for planting and to a lesser extent, hand mounding or screefing.
Planting	Disturbance Hand implemented work being visible to active wader sites during critical breeding periods and within critical distances. This would be a result of planters walking the site and planting trees at prepared planting positions.
Natural regeneration	Loss of Breeding Sites Regeneration resulting in unsuitable habitat types for breeding/nesting. This would result from seeding of trees beginning to establish over a short and medium timescale at variable densities from nearby existing seed sources.
Maintenance of planted trees	Disturbance Machinery and hand implemented work producing noise or visibility to active wader sites during critical breeding periods and within critical distances. This would result from replacement planting of trees by hand (beating-up), carrying out spraying, weeding, or fertilising operations mainly by hand though possibly with machinery and equipment.
Establishment of planted trees	Loss of Breeding Sites Afforestation and changes in land management resulting in unsuitable habitat types for breeding/nesting. This would result from the long term growth of trees as per the proposal design.
Fence line construction	Disturbance

	Machinery and hand implemented work producing noise or visibility to active wader sites during critical breeding periods and within critical distances. This would result from the erecting, upgrading, replacement or removal of fencing using machinery and equipment and well as layout and construction work by hand including maintenance of fences and repair works over a longer-term period.
Forestry track construction	Disturbance Machinery and hand implemented work producing noise or visibility to active wader sites during critical breeding periods and within critical distances. This would result from the construction, upgrading, or repairs of tracks using machinery and equipment as well as delivery and layout of materials.
Deer management	Disturbance Hand implemented work producing noise or visibility to active wader sites during critical breeding periods and within critical distances. This would result from shooting, ATV usage and carcass recovery activities.
Cumulative impacts – Neighbouring Glen Dye windfarm	Loss of Breeding Sites Afforestation and changes in land management resulting in unsuitable habitat types for breeding/nesting. This would result from any displacement or losses as stated within the Glen Dye windfarm EIA which would result in waders shifting territories onto the Glen Dye Moor proposal area, or any losses predicted by the Glen Dye windfarm EIA on the Glen Dye Moor proposal areas. It would also result in changes to habitat as peatland restoration occurs and habitat recovery takes place over the medium to long term period.

10.5.3 Embedded Mitigation

10.5.3.1 *A number of embedded mitigations are included within proposals. These mitigations form a fundamental part of the proposals. Proposals would not be considered without implementation of these mitigations and are therefore assessed as an integral part of the proposals. These are included in Appendix 2.6 Mitigations Schedule and noted below for reference:*

- *A09 Operational timing restrictions during breeding seasons: Specific to each species and breeding site, safe working distances during breeding/lekking/nesting periods will be in line with current good practice, breeding seasons and general safe working distances are noted below but will be adjusted based on site specific settings.*
- *A10 On sensitive habitats, if planting is proposed, cultivation will be carried out using low intensity methods. This is illustrated in the Soil Sensitivity Map and the Cultivation Map. Cultivation methods chosen for planting will be guided by the 'Cultivation of Upland Woodland Creation Sites – Applicants Guide' to ensure methods chosen to represent the lowest feasible impact reducing risk of carbon loss.*
- *A13 Pre-operational wildlife surveys will be carried out to identify active sites in advance of operations.*

- *C15 Compensatory deer cull. Additional management culls to compensate for loss of foraging ground, total cull figures as agreed with NatureScot. A Deer Management Plan covers the property, target cull levels are agreed with NatureScot. Deer levels within the enclosure will be managed toward a target of 2.5 deer per square kilometre. Low level of deer browsing will continue within the fence which will aid in managing habitat for ground nesting birds and reducing wildfire risk (overaccumulation of fuels) while still allowing for natural regeneration.*

- *E03 The information board at Spittal Car Park will be used to provide information and guidance on wildlife.*

- *F4 Monitoring - Social, Environmental and Socio-economic monitoring is planned to deliver long term 2040 vision for the landowner. Details of monitoring will be found in a separate monitoring framework document however key woodland creation specific monitoring will include annual Herbivore Impact Assessment (following standard HIA methodologies), annual establishment surveys ('beat-up' surveys noting survival of planted trees and natural regeneration density), recording of annual management culls, monitoring of areas designed as open ground such as around archaeological sites or within GWDTEs, and breeding bird surveys to determine how breeding territories change as habitats change. Monitoring areas of designed open ground such as around archaeological sites or within GWDTEs, will include informal recording during site visits for annual stocking density assessments, and will include a 10-year reconciliation review where any unplanned seeding is found to be occurring will be scheduled for removal. Reconciliation will be carried out by the land manager and designed open ground will be cleared where this is found to be in breach of the FGS funding contract or where it is compromising the integrity of a known sensitivity.*

10.5.4 For each impact identified in the Scoping Opinion, the following findings in terms of predicted outcomes are noted. References are made to appendices where relevant for further details.

10.5.5 **Disturbance:** In line with the assessment found within Appendix 10.1 Other Waders Assessment Summary, as well as Appendix 2.5 Significance Criteria, disturbance impacts on waders are assessed as not significant. Construction and afforestation at Glen Dye Moor poses a potential disturbance risk to breeding waders (lapwing, snipe, golden plover, and oystercatcher) during their breeding seasons. Specifically, this includes proposals to carry out ground cultivation, planting of trees by hand, maintenance activities such as pesticide application or weeding, construction of roads and fences, as well as deer control works which all may occur within identified breeding sites of these species. Embedded into the proposals is planning to carry out pre-commencement surveys, which will take place for operations which may pose a risk to waders, to identify active breeding sites during operations and appropriately plan for safe working distances based on site conditions at the time of operations. Species-specific safe working distances, ranging from 50-500m, will be enforced to reduce disturbance from machinery and human activity, with adjustments based on site monitoring. Compliance with the Wildlife and Countryside Act 1981 will be ensured, noting that it is an offense to intentionally or recklessly kill, injure, or take a wild bird, or to take, damage, or destroy its nest or eggs. The proposals at Glen Dye Moor also take into account guidance from Scottish Forestry, specifically FCS Guidance Note 32 'Forest operations and birds in Scottish forests', which provides advice on planning operations around birds. The sensitivity of waders to disturbance is considered to be **Low** as these species are generally tolerant of the activities proposed. The magnitude of change is **Minor** as the operations are temporary during the construction stages of the proposals. A number of embedded mitigation measures are assumed to be in place which will minimise the disturbance from the proposed activities as detailed above.

10.5.6 **Loss of Breeding Sites**: In line with the assessment found within Appendix 10.1 Other Waders Assessment Summary, and Appendix 3.2 Breeding Bird Survey, as well as Appendix 2.5 Significance Criteria, impacts relating to loss of breeding sites for waders are assessed as not significant. Recommendations within Section 5.10 of the breeding bird survey findings suggested that oystercatcher, common sandpiper and snipe do not tend to show strong avoidance to breeding near woodland areas and that regional populations of these species are unlikely to be adversely affected by the woodland creation project. It also noted that sufficient suitable habitat will remain to maintain the local snipe population and that should low numbers of snipe be locally displaced from the site, they can be readily accommodated in the local area. Golden plover however favours open habitats and tend to avoid nesting near woodland, though it was noted that one golden plover pair recorded within the survey report was located within 260m of the neighbouring Glen Dye Estate mature commercial plantation. The retention of open areas of land as part of the woodland creation project, would minimise effects on golden plover at the site. A similar retention of open ground for lapwing was recommended. Woodland design was compared against these recommendations, visible in Appendix 10.1 Figures 1 to 8, and shows how the woodland design has been developed to accommodate, enhance and protect available nesting habitat for these species. Where there is a potential for displacement, other suitable nesting habitat is nearby and can be easily accessed by these species. With these design features in place the effect of loss of breeding sites on waders is anticipated to be minor. Sensitivity of waders to proposals is assessed as **Low**, reflecting species tolerance to partial habitat change with mitigation, and the Magnitude of change is **Moderate**, due to measurable habitat reduction over 43% of the site without affecting regional population integrity. Lapwing and golden plover, reliant on open vistas (Sheldon et al., 2004; Finney et al., 2005), face the greatest risk, though retained open areas mitigate this. Snipe may benefit from wetter restored peatlands outside the proposals. A number of embedded mitigation measures are assumed to be in place which will minimise the disturbance from the proposed activities as detailed above

10.5.7 **Cumulative Impact**: In line with the assessment methodology found within Appendix 10.1 Other Waders Assessment Summary and Appendix 2.5 Significance Criteria and taking into account the neighbouring Glen Dye windfarm EIA Report findings, the sensitivity of waders namely lapwing (*Vanellus vanellus),* snipe (*Gallinago gallinago*), golden plover (*Pluvialis apricaria*), and oystercatcher (Haematopus ostralegus)—to cumulative impact is identified as negligible with a **Neutral** sensitivity, and the magnitude is assessed as **Minor**. This evaluation stems from a review of cumulative effects, incorporating the existing Glen Dye windfarm approval alongside the proposed afforestation and forest road projects at Glen Dye Moor. The Glen Dye Windfarm EIA suggests minimal displacement of waders, rated as Low and Not Significant at the regional NHZ level, implying negligible overlap with Glen Dye Moor's 43% woodland expansion. Golden plover, according to the Glen Dye windfarm EIA Report, notes displacement during construction phase as temporary with available alternative habitats. This is identified as low magnitude and non-significant. The operational stage of works for the windfarm assumed a 40% loss of golden plover based on studies though there was conflicting evidence, and it was assumed a loss of up to four breeding pairs with alternative habitat available for displacement. All other wader species were considered of local importance and not detailed within the windfarm assessment.

10.6 RESIDUAL EFFECTS AND ADDITIONAL MITIGATION

10.6.1 There are no residual effects identified for waders, and no additional mitigation is required as noted in Table 10.3 below.

Table 10.3 Other Waders Summary Table of Significance

Impact	Sensitivity	Magnitude	Significance
Disturbance	Low	Minor	Negligible
Loss of Breeding Sites	Low	Moderate	Minor
Cumulative impact	Neutral	Minor	Negligible

10.6.2 The above residual effect findings are plotted against the assessment tool found in Appendix 2.5 to illustrate levels of residual effect in Table 10.4 below.

Table 10.4 Significance Matrix

	Magnitude			

⇩ Sensitivity	Major	Moderate	Minor	Negligible
High	Major	Major	Moderate	Minor
Medium	Moderate	Moderate	Minor	Minor
Low	Minor	**Minor**	**Negligible**	Negligible
Neutral	Minor	Negligible	**Negligible**	Negligible

10.6.3 The environmental factors assessed in this chapter related to waders (a biodiversity factor) which should be considered in context to other impacts to identify interactions among and between various environmental factors. This will allow for a comprehensive final assessment of impacts on a) population and human health, b) biodiversity, c) land, soil, water, air, and climate, and d) material assets, cultural heritage, and the landscape, in accordance with the Scoping Opinion

10.6.4 Effects can be indirect, cumulative, short-term, long-term, beneficial or adverse, and are identified as being either significant or not significant in the context of the EIA Regulations. This comprehensive approach ensures a full determination of the 'net effect' of the forestry project, including both positive and negative environmental consequences

10.6.5 Interactions with effects of peatland restoration are thought to be beneficial. Peatland restoration as described in the Baseline section of this chapter will be carried out across a large-scale area and result in increases in available wader breeding sites.

10.6.6 The scale of non-afforested land (amounting to approximately 57% of the site) is extensive and is considered to beneficial to a lesser degree.

10.6.7 To aid in illustrating the balance between adverse and beneficial impacts, Table 10.5, which is derived from Appendix 2.5, is included below highlighting the residual effects and mitigations assessed in this chapter.

Table 10.5 Diagram of Beneficial and Adverse Impacts

Beneficial				***Neutral***					***Adverse***
Greater			***Less***		***Less***				***Greater***
	D		**E**	**C**	**A**	**B**			

The ‘net impact’ is determined for Waders having three assessed impacts resulting from disturbance, loss of breeding sites and cumulative impacts taken in context of interactions with other factors both direct and indirect, cumulative, short-term or long-term, beneficial or adverse.

A, Impact from disturbance is found to be adverse to a lesser degree

B, Impact from loss of breeding sites is found to be adverse to a lesser/moderate degree

C, Impact from cumulative impact is found to be neutral

D, Interacting benefit from peatland restoration

E, Combined benefit from the scale of retained open land (not afforested)

The 'net effect' for Waders was found to be near neutral

10.7 SUMMARY OF EFFECTS

10.7.1 Consideration of the net effect to waders —specifically lapwing (*Vanellus vanellus*), snipe (*Gallinago gallinago*), golden plover (*Pluvialis apricaria*), oystercatcher (*Haematopus ostralegus*), and common sandpiper (*Actitis hypoleucos*) takes into account the temporary nature of disturbance and minor impacts to habitat reduction during road construction and afforestation, mitigated by timing restrictions and retained open areas, notably for species like common sandpiper near watercourses and golden plover in open moorland. There will also be positive effects through long-term habitat enhancements from peatland restoration, designed open ground within the woodland and reduced pressure from grazing, benefiting snipe and oystercatcher in wet areas. This outcome should be considered in the context of the receptor's **local** importance.

10.7.2 Impact to waders from the proposals are found to be **not significant** in the context of the EIA regulations.

11 IMPACTS ON BLACK GROUSE

11 Impacts on Black Grouse (*Lyrurus Tetrix*)

List of Appendices Referenced in this Chapter

Appendix 11.1 Black Grouse (*Lyrurus Tetrix*) Assessment Summary

Appendix 3.2 Breeding Bird Survey Report

Appendix 3.1 Habitats, Peat and Protected Species

Appendix 2.2 Glen Dye Moor Woodland Creation EIA Scoping Report

Appendix 2.4 Scoping Opinion for the Proposed Glen Dye Moor Woodland Creation EIA Forestry Project

Appendix 2.5 Significance Criteria

Appendix 2.6 Mitigations Schedule

List of Tables/Figures Referenced in this Chapter

Table 11.1 Likely Impacts and Methods of Assessment for Black Grouse

Table 11.2 Operations impacting Black Grouse

Table 11.3 Black Grouse Summary Table of Significance

Table 11.4 Significance Matrix

Table 11.5 Diagram of Beneficial and Adverse Impacts

List of Other Documents and Publications Referenced in this Chapter

Wildlife and Countryside Act 1981 (as amended)

11.1 CHAPTER SUMMARY

11.1.1 There is a black grouse population within the study area, all 11 leks identified during site surveys are considered in terms of impact. From this, alternative afforestation species designs were evaluated to determine levels of likely displacement or loss for each of the 11 lek sites, disturbance during forest operations and the potential for fence strikes on new and existing fences. Levels of significance were then considered for the local population taking into account embedded mitigations including woodland design, timing restrictions and safe working distances during active critical breeding and lekking periods as well as fence marking to reduce collision risk. Cumulative impacts caused by the neighbouring windfarm proposal were also considered, though these were found to be negligible. Potential benefits to black grouse resulting from proposals were also taken into account as was habitat improvement through the creation of mosaic habitat types suitable to black grouse and the management of deer numbers to ensure habitats are not degraded through overgrazing. These beneficial and adverse factors combine and the impact on black grouse will therefore be 'not significant' in the context of the EIA regulations.

11.1.2 One additional (12th) lek site has been identified during site visits in 2025. This was occupied by a single male. In robust black grouse populations single male lek sites are usually occupied inexperienced males without an established lek. As such, the development of this lek site is not considered to indicate a change in black grouse population levels since the baseline survey carried out in 2022. As such, EIA assessment can be based on the initial 2022 survey. Any new lek sites will be considered in all subsequent design and operational planning work.

11.2 INTRODUCTION

11.2.1 This chapter of the Glen Dye Moor New Woodland Creation Environmental Impact Assessment Report (EIAR) identifies black grouse (L*yrurus tetrix*) and assesses the likely severity of those impacts.

11.2.2 In relation to the EIA Regulations 5 (3), black grouse are considered to be a 'Biodiversity' factor and will be added to other biodiversity factors for a final determination of significance in Chapter 16 Summary of Significant Effects.

11.2.3 This chapter is supported by Appendix 11.1 Black Grouse (*Lyrurus tetrix*) Assessment Summary.

11.2.4 Black grouse (L*yrurus tetrix*) are protected under the Game Acts Schedule 2, part 1, between 11th December and 19th August but can be legally shot outside this period. However, a voluntary ban on shooting has been in place for many years. Black grouse are classified in the UK as a Red List species under the Birds of Conservation Concern review and as a Priority Species in the UK Biodiversity Action Plan. They are also protected under the Wildlife and Countryside Act 1981 (as amended), they are not a scheduled bird under this Act and not provided any special protections beyond those noted here. All wild bird species are protected under the Wildlife & Countryside Act, which makes it an offence to intentionally or recklessly; kill, injure or take a wild bird; take, damage, destroy or interfere with a nest of any wild bird whilst it is in use or being built; obstruct or prevent any wild bird from using its nest; or, take or destroy an egg of any wild bird.

11.2.5 This assessment is undertaken on the basis that black grouse are of **regional importance.** However, data at a regional level is limited as discussed within Appendix 11.1 Black Grouse (*Lyrurus Tetrix*) Assessment Summary.

11.3 SCOPING CONSULTATION AND SCOPE OF ASSESSMENT

11.3.1 This section outlines the scope and methodology for assessing the likely significant effects on black grouse.

11.3.2 The Scoping Report (Appendix 2.2 Glen Dye Moor Woodland Creation EIA Scoping Report) was submitted to Scottish Forestry Grampian Conservancy in January 2025. The Scoping Report set out the overall approach to assessment and allowed for the refinement of the Proposals over the course of the assessment.

11.3.3 Scottish Forestry produced a Scoping Opinion (Appendix 2.4 Scoping Opinion for the Proposed Glen Dye Moor Woodland Creation EIA Forestry Project) on the 11th February 2025, confirming the inclusion of black grouse and identifying likely significant effects to assess along with suggested methodology. These are listed in Table 11.1 Likely Impacts and Methods of Assessment for Black Grouse.

Table 11.1 Likely Impacts and Methods of Assessment for Black Grouse

Likely Impact	Method of Assessment
Disturbance: Noise and visibility of operations within a critical distance of active breeding sites.	Evaluate where proposals deviate from forestry guidelines around sensitive areas based on site survey findings.
Loss of Breeding sites: Afforestation resulting in unsuitable habitat types for lekking/breeding/nesting and feeding.	Evaluate the impact of planting on or close to identified lekking, breeding and nesting sites.
Fence Strikes Deer fence presents physical barrier and hazard to black grouse.	Review of fence marking for black grouse.
Cumulative Impacts: Neighbouring windfarm approval may have effects on Black Grouse or other displacement related issues which should be considered.	Cumulative impacts will be analysed and will take into account predicted loss of black grouse habitat, if any, arising from the windfarm development, and the impacts of the afforestation project on any agreed off-site mitigation for the windfarm development.

11.4 BASELINE

11.4.1 Breeding Bird Survey carried out between April and July 2022 noted 11 lekking sites and a total of 47 black grouse males within the site in 2022 (See Appendix 3.2 Breeding Bird Survey Report). This confirms presence of the species as a breeding population.

11.4.2 The current habitats within lekking sites are made up of predominantly heath, blanket bog and related mosaics. Details of these habitat types can be found in Appendix 3.1. Habitats, Peat and Protected Species. The blanket bog is highly degraded by erosion that has now stabilised although bare peat and areas of active erosion persist. A legacy of management by grazing & intensive muirburn has resulted in the formation of species-poor, uneven vegetation dominated by heather in the dry heath, or the same, deergrass &/or purple moor-grass in the wet heath.

11.4.3 Sporting activities and muir burning activities ceased on site in 2022. This has resulted in a changing dynamic of habitat development. Although there is no current trend data from which to establish a baseline, it can be assumed that heath and blanket bog habitats in burned areas are currently undergoing succession.

11.4.4 The neighbouring Glen Dye Windfarm EIA baseline survey found that there were a total of 25 separate lekking sites supporting a peak combined total of 100-142 males recorded within 1.5km of the site during baseline surveys between 2012 and 2018, with an overall suggested upwards trend in the total number of males over the course of the surveys. The peak combined total of lekking males, comprising 142 birds represented 66% of the most recently published Northeast Glens NHZ population estimate and lek sites were in large located beyond the Site boundary. Five lek sites, including one main lek site, are located within 500m of turbine locations and whilst operational displacement may occur and may be permanent, this was not considered to result in losses of local breeding male abundances. The construction phase disturbances will be temporary in nature and phased over small areas of the site as works progress and as such potential disturbances would be highly localised. The impact of the windfarm on displacement during construction and operational stage was of Low magnitude and non-significant and collision risk mortality was also considered to be Negligible magnitude and Non-Significant, at the Regional level.

11.5 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

11.5.1 The significance of effect is determined by a combination of the identified sensitivity of black grouse with the estimated magnitude of change, and taking into account embedded mitigations (See Section11.5.3). These findings are carried forward into Chapter 16 Summary of Significant Effects to make a final determination on Biodiversity as a likely significant effect in the context of the EIA Regulations.

11.5.2 Proposals listed in Table 11.2 Operations Impacting Black Grouse, represent the operations which would result in the listed likely impact and are subject to assessment. Additional details relating to operations and works can be found in Chapter 4 List 4.2 Detailed List of Operations Included in Proposals and List 4.3 Works Required to Conduct Operations. For each operation the related likely impact is noted and specified for the specific operations anticipated, for example planting could cause disturbance but machinery would not be used so the disturbance would be based on hand implemented work.

Table 11.2 Operations impacting Black Grouse

Additional details of Operations can be found in List 4.2 Detailed List of Operations Included in Proposals

Operation	Related Likely impact

Cultivation	Disturbance Machinery and hand implemented work producing noise or visibility to active black grouse sites during critical breeding periods and within critical distances. This would be a result of excavators carrying out cultivation works for planting and to a lesser extent, hand mounding or screefing.
Planting	Disturbance Hand implemented work being visible to active black grouse lekking sites during critical breeding periods and within critical distances. This would be a result of planters walking the site and planting trees at prepared planting positions.
Natural Regeneration	Loss of Breeding sites: Afforestation resulting in unsuitable habitat types for breeding/nesting and feeding. This would result from seeding of trees beginning to establish over a short and medium timescale at variable densities from nearby existing seed sources.
Maintenance of Planted Trees	Disturbance Machinery and hand implemented work producing noise or visibility to active black grouse sites during critical breeding periods and within critical distances. This would result from replacement planting of trees by hand (beating-up), carrying out vegetation control, fertilising or other general maintenance operations mainly by hand though possibly with machinery and equipment.
Establishment of Planted Trees	Loss of Breeding sites: Afforestation resulting in unsuitable habitat types for breeding/nesting and feeding. This would result from the long-term growth of trees as per the proposal design.
Fence Line Repair and Replacement	Disturbance Machinery and hand implemented work producing noise or visibility to active black grouse sites during critical breeding periods and within critical distances. This would result from the erecting, upgrading, replacement or removal of fencing using machinery and equipment as well as layout and construction work by hand including maintenance of fences and repair works over a longer-term period. Fence Strike Deer fence presents physical barrier and hazard to black grouse through collision with the fence structure. This would result following completion of fencing and last for the life of the fence line. There is currently

	approximately 10km of unmarked deer fencing within 2km of identified black grouse leks.
Forestry Track Construction	Disturbance Machinery and hand implemented work producing noise or visibility to active black grouse sites during critical breeding periods and within critical distances. This would result from the construction, upgrading or repairs of tracks using machinery and equipment as well as delivery and layout of materials.
Deer Management	Disturbance Work producing noise or visibility to active black grouse sites during critical breeding periods and within critical distances. This would result from shooting, ATV usage and carcass recovery activities.
Cumulative Impacts – Neighbouring Glen Dye Windfarm	Loss of Breeding sites: Afforestation resulting in unsuitable habitat types for breeding/nesting and feeding and compounded by the displacement of neighbouring black grouse onto the project area. This would result from any displacement or losses as stated within the Glen Dye windfarm EIA which would result in black grouse shifting onto the Glen Dye Moor proposal area, or any losses predicted by the Glen Dye windfarm EIA from the Glen Dye Moor proposal areas.

11.5.3 *Embedded Mitigation*

11.5.3.1 A number of embedded mitigations are included within proposals. These mitigations form a fundamental part of the proposals. Proposals would not be considered without implementation of these mitigations and are therefore assessed as an integral part of the proposals. These are included in Appendix 2.6 Mitigations Schedule and noted below for reference:

- *A09 Operational timing restrictions during breeding seasons. Specific to each species and breeding site, safe working distances during breeding/lekking/nesting periods will be in line with current good practice, breeding seasons and general safe working distances are noted below but will be adjusted based on site specific settings.*
- *A17 Pre-operational wildlife surveys will be carried out to identify active sites in advance of operations.*
- *A13 No cultivation will occur within areas planned as designed open ground around archaeological features. This is shown within the detailed Species Maps.*
- *B12 Species design complements black grouse habitat needs including connected open corridors and mixed density woodland comprised of varying woodland types. Native woodland mosaics proposed will benefit black grouse and peatland restoration (proposed under a separate project) will improve habitat.*
- *B16 Caledonian pinewood (W18) and Upland birch (W4) species will be planted around breeding bird territories (300-500m as suited to topography) identified within the breeding bird survey report.*

- *B48 Open ground around ground nesting bird territories identified in the breeding bird survey report will be provided a degree of connectivity to ensure suitable unhindered access to suitable alternative habitat or to foraging/feeding areas.*

- *C14 Fence marking. Fences will be marked within 2km of mapped black grouse leks.*

- *E03 The information board at Spittal Car Park will be used to provide information and guidance on wildlife.*

- *F4 Monitoring- Social, Environmental and Socio-economic monitoring is planned to deliver long term 2040 vision for the landowner. Details of monitoring will be found in a separate monitoring framework document however key woodland creation specific monitoring will include, monitoring of areas designed as open ground such as around archaeological sites or within GWDTEs, and breeding bird surveys to determine how breeding territories change as habitats change. Monitoring areas of designed open ground such as around archaeological sites, within GWDTEs, around breeding bird territories, or large heath butterfly colonies will include informal recording during site visits for annual stocking density assessments, and will include a 10-year reconciliation review where any unplanned seeding is found to be occurring will be scheduled for removal. Reconciliation will be carried out by the land manager and designed open ground will be cleared where this is found to be in breach of the FGS funding contract or where it is compromising the integrity of a known sensitivity.*

11.5.4 For each impact identified in the Scoping Opinion, the following findings in terms of predicted outcomes are noted. References are made to appendices where relevant for further details.

11.5.5 **Disturbance**: In line with the assessment found within Appendix 11.1 Black Grouse (Lyrurus Tetrix) Assessment Summary, and Appendix 2.5 Significance Criteria, the sensitivity of black grouse to disturbance is identified as **Low** and the magnitude of change is **Minor**. The Low sensitivity is due to the receptor being tolerant of the proposed change subject to appropriate design and mitigation. This is due to the timing restrictions and operational safe working distances included in mitigation and based on there being no new signage leading visitors toward dense black grouse lekking areas. The magnitude of change is determined as being minor due to there being limited periods of disturbance associated with times of the day when leks are active and this being generally outside normal working hours (e.g. early morning).

11.5.6 **Loss of Breeding Sites**: In line with the assessment found within Appendix 11.1 Black Grouse (Lyrurus Tetrix) Assessment Summary, and Appendix 2.5. Significance Criteria, Sensitivity of black grouse to loss of breeding sites is identified as **Medium** and the Magnitude is **Moderate**. The proposals are likely to result "in an improvement of the integrity or resilience of the receptor across all or most of the site though may not improve overall condition rating of the receptor. The improvement will persist throughout the proposal lifespan and possibly beyond." This is due to the expected improved food availability and shelter resulting from creation of significant areas of woodland edge habitat known to increase habitat suitability for black grouse. The detailed assessment in Appendix 11.1 finds that there will be "some extent of resource but not affecting the integrity over a significant area." This is due to the proposals directly affecting habitat change covering 43% of the site. The effect of loss of lekking and breeding sites on black grouse will therefore be negligible overall, but with potential for positive effects to arise due to increased habitat suitability for breeding.

11.5.7 **Fence Strikes**: In line with the assessment found in Appendix 11.1. Black Grouse (Lyrurus Tetrix) Assessment Summary, and Appendix 2.5. Significance Criteria, Sensitivity is identified as **Low** and Magnitude is **Minor**. Fences will be marked within 2km of mapped black grouse leks in accordance with FC Technical Note Fence Marking to Reduce Grouse Collisions. Fence marking can reduce fence strikes in black grouse by around 90%. Existing unmarked deer fences and all new fences within 2km of identified leks will be marked. The reduction in strikes on existing unmarked fences outweighs the potential number of strikes on new fences resulting in an anticipated fall in black grouse losses to fence strikes. There will however remain a low probability of a small number of fatal fence strikes. During fence inspections the locations of strikes will be recorded to identify any sections where there may be repeated strikes. Additional marking or relocation of the fence line may then be considered. The proposals include approximately 29km of fencing within 2km of mapped lekking sites. With the appropriate marking, fence strike sensitivity is deemed to be Low Adverse as determined by the receptor being tolerant of the proposed change subject to design and mitigation. This is due to the mitigation (fence marking) being typically 90% effective.

11.5.8 **Cumulative impact**: The Glendye windfarm EIA noted that displacement of black grouse would be temporary during the construction phase and operational displacement was considered to be low and non-significant. From this it is determined that there are no displacements which would be expected onto the Glen Dye Moor proposal area and no cumulative impact is anticipated.

11.6 RESIDUAL EFFECTS AND ADDITIONAL MITIGATION

11.6.1 There are residual significant effects identified for black grouse as noted in Table 11.3 below.

Table 11.3 Black Grouse Summary Table of Significance

Impact	Sensitivity	Magnitude	Significance
Disturbance	Low	Minor	Negligible
Loss of Breeding Sites	Medium	Moderate	Moderate
Fence Strikes	Low	Minor	Negligible
Cumulative Impacts – Glen Dye Windfarm	Neutral	Minor	Negligible

11.6.2 The above residual effect findings are plotted against the assessment tool found in Appendix 2.5 to illustrate levels of residual effect in Table 11.4 below.

Table 11.4 Significance Matrix

⇩ ***Sensitivity***	***Magnitude***			
	Major	*Moderate*	*Minor*	*Negligible*
High	*Major*	*Major*	*Moderate*	*Minor*
Medium	*Moderate*	*Moderate*	*Minor*	*Minor*
Low	*Minor*	*Minor*	*Negligible*	*Negligible*
Neutral	*Minor*	*Negligible*	*Negligible*	*Negligible*

11.6.3 The environmental factors assessed in this chapter related to black grouse (a biodiversity factor) which should be considered in context to other impacts to identify interactions among and between various environmental factors. This will allow for a comprehensive final assessment of impacts on: a) population and human health, b) biodiversity, c) land, soil, water, air, and climate, and d) material assets, cultural heritage, and the landscape, in accordance with the Scoping Opinion.

11.6.4 Effects can be indirect, cumulative, short-term, long-term, beneficial or adverse, and are identified as being either significant or not significant in the context of the EIA Regulations. This comprehensive approach ensures a full determination of the 'net effect' of the forestry project, including both positive and negative environmental consequences.

11.6.5 The loss of breeding sites is found to be significant although this is anticipated to be a positive impact as the proposals are likely to result in an improvement of the integrity or resilience of black grouse across all or most of the site.

11.6.6 No cumulative impacts resulting from the adjacent wind farm development are anticipated.

11.6.7 Interactions with the effects of habitat enhancement over the site are considered to be beneficial. The condition of habitats around lekking sites is described in the Baseline section of this chapter, and due to the expected improved food availability and shelter resulting from creation of significant areas of woodland edge habitat the proposals are likely to increase habitat suitability for black grouse.

11.6.8 Regular monitoring through routine fence inspections will inform an adaptive management approach whereby repeated frequency of bird strikes are recorded, and may include additional marking or fence realignment

11.6.9 To aid in illustrating the balance between adverse and beneficial impacts, Table 11.5, which is derived from Appendix 2.5, in included below highlighting the residual effects and mitigations assessed in this chapter.

Table 11.5 Diagram of Beneficial and Adverse Impacts

Beneficial				***Neutral***				***Adverse***
Greater		***Less***			***Less***			***Greater***
		B, E	**F**	**A, D**	**C**			

The ‘net impact’ is determined for Black Grouse having four assessed impacts resulting from disturbance, loss of breeding sites, fence strike impact and cumulative impacts taken in context of interactions with other factors both direct and indirect, cumulative, short-term or long-term, beneficial or adverse.

A, Impact from disturbance is found to be neutral

B, Impact from loss of breeding sites is found to be beneficial to a moderate degree

C, Impact from predicted fence strikes is found to be adverse to a lesser degree

D, Impact from cumulative impact is found to be neutral

E, Impacts from habitat enhancement are found to be beneficial to a moderate degree

F, Impacts resulting from routine monitoring and inspection of fences is found to be beneficial to a lesser degree

The ‘net effect’ for Black Grouse was found to be beneficial to a moderate degree.

11.7 SUMMARY OF EFFECTS

11.7.1 Consideration of the net effect to black grouse takes into account the negligible impact from fence strikes, disturbance and cumulative impacts from the neighbouring wind farm, and balances these against the beneficial long term habitat enhancement and increased suitability for black grouse across an extensive area. This outcome should be considered in the context of the receptor’s **regional** importance.

11.7.2 Impact to black grouse from the proposals are found to be **‘not significant’** in the context of the EIA regulations.

12 IMPACTS ON LARGE HEATH BUTTERFLY

12 Impacts to Large Heath Butterfly

List of Appendices Referenced in this Chapter:

Appendix 12.1 Glen Dye Moor Large Heath Butterfly Assessment.

Appendix 3.1 Habitats, Peat & Protected Species

Appendix 2.2 Glen Dye Moor Woodland Creation EIA Scoping Report

Appendix 2.4 Scoping Opinion for the Proposed Glen Dye Moor Woodland Creation EIA Forestry Project

Appendix 2.5 Significance Criteria

List of Tables/Figures Referenced in this Chapter:

Table 12.1 Likely Impacts and Methods of Assessment for Large Heath Butterfly

Table 12.2 Operations impacting Large Heath Butterfly

Table 12.3 Large Heath Butterfly Summary Table of Significance

Table 12.4 Significance matrix

Table 12.5 Diagram of Beneficial and Adverse Impacts

List of other Documents and Publications Referenced in Chapter:

BCS Factsheet: Large Heath Butterfly https://butterfly-conservation.org/sites/default/files/large-heath-psf.pdf

12.1 CHAPTER SUMMARY

12.1.1 A Large Heath butterfly colony has been identified in two grid squares, NO6183 and NO6184, within the Glen Dye Moor project boundary. Due to the restricted monitoring coverage of the species, the full distribution of the colony remains unknown and there is currently no additional information available regarding the regional Large Heath populations in the surrounding areas, although one other record exists from NO5487 on iRecord from June 2, 2025. The prime habitat for Large Heath consists of peatland and wet heath, with a specific combination of Hare's-tail Cottongrass and Cross-leaved Heath, providing food for both caterpillars and adults. This specific habitat is excluded from this planting proposal by default, due to its poor ecological suitability for planting. Where the habitat changes into drier heather, planting is proposed in areas that are hydrologically disconnected from the edge of ideal Large Heath habitat, with 50m being the minimum setback for dense conifer plantation. Planting tree species such as willow and dwarf birch are proposed to create transitional areas with varying height and density to buffer the known colony from mixed conifer planting. Afforestation can lead to fragmentation of Large Heath butterfly habitats and population isolation. By ensuring suitable habitats are connected through open corridors, the dispersal of the known colony can be supported. Corridors will be maintained between peatland areas, extending west from the known colony along south-facing hillsides toward Mount Battock. Tree seeding presents a threat to Large Heath butterfly habitats by potentially altering their characteristics and microclimate and potentially causing habitat fragmentation. Therefore, long-term monitoring is proposed to identify and address any threats associated with tree seeding. Additional surveying to assess the extent and distribution of the known colony is also proposed. Operational restrictions, including limitations on machine movements and timing of operations, are incorporated into the proposals to avoid the egg-laying period from June to August within the colony areas. No mitigations were found to be necessary related to recreation use. For the purposes of this EIA Report (EIAR), a conservative approach has been taken by assuming the presence of a larger and more widespread colony. These beneficial and adverse factors combine and the impact on Large Heath butterfly will therefore be ‘not significant’ in the context of the EIA Regulations.

12.2 INTRODUCTION

12.2.1 This chapter of the Glen Dye Moor New Woodland Creation EIAR considers the potential impacts of proposals on Large Heath butterfly (C*oenonympha tullia*) and assesses the likely severity of those impacts.

12.2.2 In relation to the EIA Regulations 5 (3), Large Heath butterfly are considered to be a ‘Biodiversity’ factor and will be added to other biodiversity factors for a final determination of significance in Chapter 16 Summary of Significant Effects.

12.2.3 This Chapter is supported by Appendix 12.1 Glen Dye Moor Large Heath Butterfly Assessment.

12.2.4 The Large Heath butterfly is afforded several conservation statuses, including being part of the Scottish Biodiversity List, listed as Vulnerable on the IUCN UK Red List, as well as being Protected under Schedule 5 of the 1981 Wildlife and Countryside Act. The butterfly is also a European Red Listed species and Endangered on the global IUCN Red List.

12.2.5 This assessment will be based on Large Heath butterfly having **regional importance** following EIA Scoping consultation feedback as recorded within Appendix 2.2 Scoping Report as well as consultation with Butterfly Conservation Scotland which included a joint site visit in 2024.

12.3 SCOPING CONSULTATION AND SCOPE OF ASSESSMENT

12.3.1 This section outlines the scope and methodology for assessing the likely significant effects on Large Heath butterfly.

12.3.2 The Glen Dye Moor Woodland Creation EIA Scoping Report was submitted to Scottish Forestry Grampian Conservancy in January 2025. The Scoping Report set out the overall approach to assessment and allowed for the refinement of the Proposals over the course of the assessment

12.3.3 Scottish Forestry produced a Scoping Opinion on the 11th of February 2025, confirming the inclusion of Large Heath butterfly and identifying likely significant effects to assess along with suggested methodology. These are listed in Table 12.1 Impacts and Methods of Assessment for Large Heath Butterfly.

Table 12.1 Likely Impacts and Methods of Assessment for Large Heath Butterfly

Likely Impact	Method of Assessment
Tree Seeding: Spread of tree species into Large Heath butterfly habitats over time	Evaluating afforestation species design and risk of seed spread. Evaluating monitoring proposals to identify future conditions.
Habitat Change: Changes to local water tables due to afforestation and road construction resulting in drying and habitat changes.	Analysis of suitable Large Heath butterfly habitats as identified in the Glen Dye Moor: Habitats, Peat and Protected Species (2022) and Butterfly Conservation Scotland (BCS) national survey data 2018 – 2022. Assess impacts and mitigation against BCS Factsheet: Large Heath Butterfly Available at https://butterfly-conservation.org/sites/default/files/large-heath-psf.pdf
Isolation: Afforestation resulting in enclosure of the colony, limiting future dispersion to suitable habitats.	Evaluating afforestation species design and risk of enclosure from suitable habitats.
Disruption/Damage: Resulting from machine movements through occupied suitable habitat. Also considering projected changes to recreational use and risk of disturbance.	Evaluate where proposals deviate from forestry guidelines around sensitive areas based on site survey findings.

12.4 BASELINE

12.4.1 Baseline surveys for habitats and species were carried out at Glen Dye Moor, and three of the four surveys were conducted during the Large Heath season (June to July) in 2022 by Dr Andy McMullen of Botanaeco. No sightings of Large Heath butterfly were recorded during field surveys however record checks with the North-East Scotland Biological Records Centre (NESBReC) indicated fourteen records for Large Heath butterfly come from the slope & summit immediately north of Charr Bothy. This survey did not note Large Heath butterfly at a level of conservation importance.

12.4.2 At Glen Dye Moor, a Large Heath butterfly colony has been identified in two grid squares, NO6183 and NO6184, within the project boundary. The Large Heath butterfly records were gathered as part of the Wider Countryside Butterfly Survey (WCBS) between 2013-2022, which forms part of the UK Butterfly Monitoring Scheme (UKBMS). Survey methods are to follow UKMBS procedures, data from this survey work was provided by Butterfly Conservation Scotland in 2024.

12.4.3 The current habitats within colony areas are made up of predominantly M19 *Calluna vulgaris-Eriophorum vaginatum* blanket mire, M17a *Scirpus cespitosus-Eriophorum vaginatum* (deergrass – hare's-tail bog-cotton) blanket mire, M19a heather – hare's-tail bog-cotton blanket mire, cross-leafed heath sub-community, H12a *Calluna vulgaris-Vaccinium myrtillus* heath, *Calluna vulgaris* sub-community, and related mosaics. Details of these habitat types can be found in Appendix 3.1 Habitats, Peat & Protected Species. M19a blanket bog vegetation is the most widespread form of this habitat across the site. It extends across slopes of all angles and is associated with various levels of erosion. Comparison with the M17a-M19a mosaic suggests that the M19a vegetation, and its dominance of heather & hare's-tail bog-cotton, is a consequence of disturbance to the peat mass through erosion and secondarily, drainage of the peat (through the eroded gullies, rather than excavated drains). Muirburn & grazing are also likely to have had an impact; and areas of muirburn are still apparent across the M19a vegetation.

12.4.4 Muir burning activities ceased on site in 2022. This has resulted in a changing dynamic of habitat development. Although there is no current trend data from which to establish a baseline, it can be assumed that heath and blanket bog habitats in burned areas are currently undergoing successional change.

12.4.5 Future baseline can be reasonably predicted in terms of habitat and butterfly numbers. There is a cautious assumption that the colony of Large Heath butterfly is more widely distributed than currently mapped, and through targeted survey and monitoring, a better picture of current status and population trends can be drawn locally. According to the UK Butterfly Monitoring Scheme Large Heath butterfly was recorded in 2023 as having a 124% increase from the previous year representing the best year on record for this species, and in 2024 Large Heath was recorded having an 84% increase from the previous year and a ten-year trend was noted of 69%. They are also among the short list of species showing the greatest population increases since 1976 across the UK of 250% according to UKBMS Annual Report 2022. This national trend can reasonably be expected to continue. Habitats on which Large Heath butterfly depend, as stated previously, are currently undergoing successional change locally following land use changes related to an end of sporting activities on the property. Peatland restoration is also currently occurring on site likely resulting in an improving condition for wetland areas with heather mosaics. Future peatland restoration work is also being planned and, whilst research is lacking in this area, can reasonably be expected to continue in the future which will greatly improve resilience of this habitat type to effects of climate change.

12.5 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

12.5.1 The significance of effect is determined by a combination of the identified sensitivity of Large Heath butterfly with the estimated magnitude of change and taking into account embedded mitigation (See Section 12.5.4). These findings are carried forward into Chapter 16 Summary of Significant Effects to make a final determination on Biodiversity as a likely significant effect in the context of the EIA Regulations.

12.5.2 Patrick Cook, representative for Butterfly Conservation Scotland, has reviewed this assessment and has contributed to embedded mitigations included within the proposals.

12.5.3 Proposals listed in Table 12.2 Operations impacting Large Heath Butterfly, represent the operations which would result in the listed likely impact and are subject to assessment. Additional details relating to operations and works can be found in Chapter 4 List 4.2 Detailed List of Operations Included in proposals and List 4.3 Works required to conduct Operations. For each operations the related likely impact is noted and specified for the specific operations anticipated, for example planting could cause disturbance but machinery would not be used so the disturbance would be based on hand implemented work.

Table 12.2 Operations impacting Large Heath Butterfly

Additional details of Operations can be found in List 4.2 Detailed List of Operations Included in proposals

Operation	Related Likely impact
Cultivation	**Disruption/Damage:** Resulting from machine movements through occupied suitable habitat. This would most commonly be a result of excavators carrying out cultivation works for planting and traversing through the areas of the Large Heath butterfly colony during the critical periods between egg laying and emergence.
Planting	No related impact. Planters are not expected to have any impact on Large Heath butterfly colonies due to location of planting activities being outside the core habitats. No further assessment is necessary for planting.
Natural regeneration	**Tree Seeding:** Spread of tree species into open ground over time. This would from seeding of trees beginning to establish over a short and medium timescale at variable densities from nearby existing seed sources resulting in changes to habitats used by Large Heath butterfly. **Habitat Change:** Changes to local water tables due to afforestation resulting in drying and habitat changes. This would result from regeneration in close proximity to colony sites changing characterises such as water tables humidity and light conditions. **Isolation:** Afforestation resulting in enclosure of the colony, limiting future dispersion to suitable habitats. This would result from seeding of trees beginning to establish over a short and medium timescale at variable densities from nearby existing seed

	sources which may cut off dispersion of Large Heath butterflies to other suitable areas.
Maintenance of planted trees	No related impact. Hand works relating to weeding, application of pesticides or replacement of trees are not expected to have any impact on Large Heath butterfly colonies due to locations of planting being outside the known habitat. There are no proposals for pesticides application or fertilisation to occur outside of planted areas. No further assessment is required.
Establishment of planted trees	**Tree Seeding:** Spread of tree species into open ground over time. This would result from seeding of trees beginning to establish over a long timescale from trees being planted within this proposal. Periods of impact for future seeding of newly planted trees will vary based on species planting but may occur between 5 and 20 years from planting. **Habitat Change:** Changes to local water tables due to afforestation resulting in drying and habitat changes. This would result from planting in close proximity to colony sites. **Isolation:** Afforestation resulting in enclosure of the colony, limiting future dispersion to suitable habitats. This would result from successful growth of planted trees between the known colony location and neighbouring suitable habitats.
Fence line construction	No related impact. Fence locations are greater than 1km distant from the Large Heath butterfly colony area. No further assessment is required.
Forestry track construction	No related impact. Track construction locations are greater than 750m downhill from the Large Heath butterfly colony area. No further assessment work is required.
Deer management	No related impact. Deer management, due to the nature of the work involving shooting and extraction of carcasses over short periods of time with a transient nature, is unlikely to result in damage to the colony. No further assessment is required.

12.5.4 Embedded Mitigations

12.5.4.1 *A number of embedded mitigations are included within proposals. These mitigations form a fundamental part of the proposals. Proposals would not be considered without implementation of these mitigations and are therefore assessed as an integral part of the proposals. These are included in Appendix 2.6 Mitigations Schedule and noted below for reference:*

- *B47 Open corridors to be maintained between peatland areas west of the known Large Heath butterfly colony. Planting tree species like willow (Salix sp.) and dwarf birch (Betula nana) is proposed to create transitional areas between Large Heath butterfly habitats and the new woodland creation. Additionally, surveying to assess the extent and distribution of the known Large Heath butterfly colony, to be carried out by Butterfly Conservation Scotland (BCS) and environmental manager at Scottish woodlands is suggested. A 50m buffer setback between Large Heath butterfly habitat and dense conifer plantation to be implemented.*

- *A18 Machine movements around the known Large Heath butterfly colony should be kept to tracks and roads as much as possible at all times of year. No operations will be carried out between June to August in and around the colony, as this is a sensitive period for the Large Heath butterfly.*

- *F4 Preventing trees to establish in Large Heath butterfly habitats. Long-term monitoring done at regular intervals to identify and address threats by tree removal related to tree seeding is proposed.*

12.5.5 For each impact identified in the Scoping Opinion, the following findings in terms of predicted outcomes are noted. References are made to appendices where relevant for further details.

12.5.6 **Tree Seeding**: In line with the assessment found within Appendix 12.1 Glen Dye Moor Large Heath Butterfly Assessment, Tables 12.3 and 12.4 as well as Appendix 2.5. Significance Criteria, Sensitivity is identified as **Low** and the Magnitude of change is **Moderate**. This is due to the potential threat presented by tree seeding, altering the characteristics and microclimate of Large Heath butterfly habitat, as well as being monitored long-term to identify and address any threats associated with tree seeding. Additional surveying to assess the extent and distribution of the known colony is also proposed. The potential source of conifer seed in the areas of the colonies is planted Scots pine, which will be less suitable in the wetter Large Heath butterfly habitat.

12.5.7 **Habitat Change**: In line with the assessment found within Appendix 12.1 Glen Dye Moor Large Heath Butterfly Assessment, Tables 12.3 and 12.4 as well as Appendix 2.5. Significance Criteria, Sensitivity is identified as **Low** and Magnitude is **Moderate**. This is due to the prime habitat for Large Heath butterfly being excluded from the planting proposal by default. Where habitat changes to drier heather, planting is proposed in areas that are hydrologically disconnected from the edge of ideal Large Heath butterfly habitat, with 50m being the minimum setback for dense conifer plantation.

12.5.8 **Isolation**: In line with the assessment found within Appendix 12.1 Glen Dye Moor Large Heath Butterfly Assessment, Tables 12.3 and 12.4 as well as Appendix 2.5. Significance Criteria, Sensitivity is identified as **Low** and Magnitude is **Minor**. There will be no adverse effect associated with isolation as mosaic planting design will ensure suitable habitats maintain connectivity through open corridors. Corridors will be maintained between peatland areas, extending west from the known colony along south-facing hillsides toward Mount Battock.

12.5.9 **Disruption/Damage**: In line with the assessment found within Appendix 12.1 Glen Dye Moor Large Heath Butterfly Assessment, Tables 12.3 and 12.4 as well as Appendix 2.5 Significance Criteria, Sensitivity is identified as **Low** and Magnitude is **Moderate**. Machine movements around the known Large Heath colonies will be restricted and operations will be avoided between June to August, as this is a sensitive period for the Large Heath butterfly.

12.6 RESIDUAL EFFECTS

12.6.1 There are no significant residual effects identified for Large Heath butterfly as noted in Table 12.3 below.

Table 12.3 Large Heath Butterfly Summary Table of Significance			
Impact	**Sensitivity**	**Magnitude**	**Significance**
Tree Seeding	Low	Moderate	Minor
Habitat Change	Low	Moderate	Minor
Isolation	Low	Minor	Negligible
Disruption/Damage	Low	Moderate	Minor

12.6.2 The above residual effect findings are plotted against the assessment tool found in Appendix 2.5 to illustrate levels of residual effect in Table 12.4 below.

Table 12.4 Significance Matrix

⇩ ***Sensitivity***	***Magnitude***			
	Major	*Moderate*	*Minor*	*Negligible*
High	*Major*	*Major*	*Moderate*	*Minor*
Medium	*Moderate*	*Moderate*	*Minor*	*Minor*
Low	*Minor*	***Minor***	***Negligible***	*Negligible*
Neutral	*Minor*	*Negligible*	*Negligible*	*Negligible*

12.6.3 The environmental factors assessed in this chapter related to the Large Heath butterfly (a biodiversity factor) which should be considered in context to other impacts to identify interactions among and between various environmental factors. This will allow for a comprehensive final assessment of impacts on a) population and human health, b) biodiversity, c) land, soil, water, air, and climate, and d) material assets, cultural heritage, and the landscape, in accordance with the Scoping Opinion.

12.6.4 Effects can be indirect, cumulative, short-term, long-term, beneficial or adverse, and are identified as being either significant or not significant in the context of the EIA Regulations. This comprehensive approach ensures a full determination of the 'net effect' of the forestry project, including both positive and negative environmental consequences

12.6.5 Tree seeding, habitat change, and disruption/damage are found to be significant in terms of magnitude due to the unknown extent of the population, thus taking a precautionary approach and assuming that there is potential for presence of Large Heath butterfly elsewhere away from the known colony location

12.6.6 Long term monitoring and additional surveying to assess the extent and distribution of the known colony is proposed. This will inform an adaptive management approach regarding the potential impact of natural regeneration.

12.6.7 Interactions with effects of wider habitat change and peatland restoration are thought to be directly beneficial. Habitat enhancement and peatland restoration as described in the Baseline section of this chapter will be carried out across a large-scale area and result in increases in available habitat for Large Heath butterfly

12.6.8 The scale of non-afforested land (amounting to approximately 57% of the site) is extensive, providing potential for species dispersal.

12.6.9 To aid in illustrating the balance between adverse and beneficial impacts, Table 12.5, which is derived from Appendix 2.5, is included below highlighting the residual effects and mitigations assessed in this chapter.

Table 12.5 Diagram of Beneficial and Adverse Impacts

Beneficial				***Neutral***					***Adverse***
Greater			***Less***		***Less***				***Greater***
	E	**F**	**G, C**	**D, E, B**	**A**				

The ‘net impact’ is determined for Large Heath butterfly having four assessed impacts resulting from tree seeding, habitat change, isolation and disruption/damage taken in context of interactions with other factors both direct and indirect, cumulative, short-term or long-term, beneficial or adverse.

A, Impact from tree seeding is found to be near neutral but adverse to a lesser degree

B, Impact from habitat change is found to be neutral

C, Impact from isolation in relation to habitat condition and dispersion of the colony was found to be negligible and subject to improvement of condition therefore resulting in a beneficial outcome

D, Impact from disruption/damage impact is found to be neutral

E, Interaction with wider habitat enhancement and peat land restoration are found to be neutral.

F, Interacting benefits from long term monitoring

G, Combined benefit from the scale of open habitats (not afforested)

The 'net effect' for Large Heath butterfly was found to be neutral

12.7 SUMMARY OF EFFECTS

12.7.1 Consideration of the net effect to Large Heath butterfly takes into account the unknown extent of the species across the site, and balances that against the positive impacts of habitat change resulting from the proposals and peatland restoration, sensitive design through incorporating connectivity across the site and opportunities for future wider dispersal and monitoring. This outcome should be considered in the context of the receptor's **regional** importance.

12.7.2 Impact to Large Heath butterfly from the proposals are found to be **not significant** in the context of the EIA Regulations.

13 IMPACTS ON DEER

13 Impacts on Deer

List of Appendices Referenced in this Chapter

Appendix 3.4 Deer Management Plan

Appendix 2.2 Scoping Report

Appendix 2.4 Scoping Opinion for the Proposed Glen Dye Moor Woodland Creation EIA Project

Appendix 2.5 Significance Criteria

Appendix 2.6 Mitigations Schedule

List of Tables/Figures Referenced in this Chapter

13.1 CHAPTER SUMMARY

13.1.1 The potential for a significant effect on deer as a result of the proposals was identified in the Scoping Opinion. Red deer and roe deer are present on site with seasonal emigration/immigration onto neighbouring land occurring regularly. Red deer are not resident year-round within the Project Area and are generally only found at low densities (2.3 deer/km² - NatureScot- March 2022). The population for the immediate open range (unfenced land) is at a higher density (6.1 deer/km² - NatureScot - March 2022) and these deer are migratory according to seasons, disturbance, etc. The density on some open range properties adjoining the project area are sometimes found at high densities (16.4 deer/km² - NatureScot - March 2022) and at levels which are resulting in degradation of habitat conditions within the project area, on a seasonal basis, suggesting a potential issue with carrying capacity. Proposals to erect a new fenced enclosure of approximately 6,000ha will result in the deer population becoming excluded from large foraging/feeding areas as well as movements to and from low lying winter shelter, although this can be readily mitigated through considered and collaborative deer management planning. Compensatory cull levels and management culling within the enclosure are embedded into the proposal to reduce risk of animal welfare concerns for the population of deer. These have been determined and based on consultation with NatureScot. Preparation of a full Deer Management Plan ensures the management of deer on site follows current legislation and best practice including planning, implementation and monitoring. These beneficial and adverse factors combine and the impact on deer will therefore be 'not significant' in the context of the EIA regulations.

13.2 INTRODUCTION

13.2.1 This chapter of the Glen Dye Moor New Woodland Creation Environmental Impact Assessment Report (EIAR) considers the potential impacts of proposals on deer and assesses the likely severity of those impacts.

13.2.2 In relation to the EIA Regulations 5 (3), deer are considered to be a 'Biodiversity' factor and will be added to other biodiversity factors for a final determination of significance in Chapter 16 Summary of Significant Effects

13.2.3 This Chapter is supported by Appendix 3.4 Deer Management Plan.

13.2.4 To avoid confusion, this chapter addresses the potential environmental impacts of the forestry project on the deer population itself, rather than the proposed deer management activities described in Chapter 4. The Scoping Opinion (Appendix 2.4) from Scottish Forestry identified 'Deer Management' as a likely significant effect. However, for the purposes of this assessment, we are focusing specifically on how the proposed development (including fencing and management culling) will impact the local deer population. Therefore, this chapter is titled 'Impacts on Deer' and assesses the direct effects on the animals. It's important to note that some impacts initially identified under 'Deer Management' in the Scoping Opinion, such as effects on recreation or landscape, are addressed in their respective chapters (e.g., Chapter 14 Impacts on Recreation and Access, Chapter 15 Impacts on Landscape). Table 13.1 clarifies which impacts are assessed here and which are addressed elsewhere. This approach ensures a clear distinction between the proposed deer management practices (the 'proposals') and the impacts of the project on the deer population (the 'receptor').

13.2.5 This assessment will be based on deer having **local** importance following EIA Scoping consultation feedback as recorded within appendix 2.2 Scoping Report.

13.3 SCOPING CONSULTATION AND SCOPE OF ASSESSMENT

13.3.1 This section outlines the scoping consultation process and the resulting methodology for assessing the likely impacts on deer.

13.3.2 The Glen Dye Moor Woodland Creation EIA Scoping Report was submitted to Scottish Forestry Grampian Conservancy in January 2025 following a scoping meeting with consultation bodies agreed with Scottish Forestry. The Scoping Report set out the overall approach to assessment and allowed for the refinement of the Proposals over the course of the assessment.

13.3.3 Scottish Forestry produced a Scoping Opinion on the 11th February 2025, confirming the inclusion of deer and identifying likely significant effects to assess along with suggested methodology. These are listed in Table 13.1 Impacts and Methods of Assessment for deer.

Table 13.1 Likely Impacts and Methods of Assessment for deer

Likely Impact	Method of Assessment
Habitat loss: New fencing will exclude deer from foraging areas.	Deer Management Plan identifies compensatory cull levels required and is agreed with NatureScot.

Entrapment: Deer will remain resident within the enclosure	Deer Management Plan identifies target deer densities within the enclosure to ensure habitats continue to receive low browsing levels and do not result in animal welfare issues related to lack of foraging/feeding.
Change to immigration/emigration: Changes to local deer dispersion to and from neighbouring properties.	Deer Management Plan includes an assessment of neighbouring ownerships and their management objectives, current deer numbers, migrations routes and relative immigration, which is largely guided by existing, extensive deer fence lines within the landscape.
Habitat change: Lowering of browsing pressure impacting sensitive habitats and species.	Deer Management Plan includes discussions on Herbivore Impact Assessments and monitoring.
Recreational access: Deer fence will impede recreational access across the site**.**	The Scoping Opinion raised this likely significant effect from afforestation, fencing and roading on deer. As it related to an impact on the recreation, it is addressed within Chapter 14 Impacts to Recreation and Access. No further assessment is required within this chapter relating to Recreational Access.
Bird strike: Deer fence will be a physical barrier and hazard for birds.	The Scoping Opinion raised this likely significant effect from afforestation, fencing and roading on deer. As it related to an impact on the birds, it is addressed within Chapter 11 Impacts to Black Grouse. No further assessment is required within this chapter relating to Bird Strike.
Visual impact: Deer fence will have visual impact at scale and impact setting of scheduled monuments.	The Scoping Opinion raised this likely significant effect from afforestation, fencing and roading on deer. As it related to an impact on the landscape, it is addressed within Chapter 15 Impacts to Landscape. No further assessment is required within this chapter relating to Visual Impact.
Redundant materials: New fence line will render existing fencing materials redundant and a hazard for wildlife, recreational users and potential wildfire.	The Scoping Opinion raised this likely significant effect from afforestation, fencing and roading on deer. As this relates to management of waste and redundant materials on site, this is addressed fully within Chapter 4 Scheme Proposals under the waste and redundant materials section. This effect is not viewed as a likely significant effect to deer alone and is addressed as a whole scheme approach to all sensitivities. No further assessment is required within this chapter relating to Redundant Materials.
Breaches of deer fencing: Deer fence is liable to breaches due to snow conditions and poor maintenance.	The Scoping Opinion raised this likely significant effect from afforestation, fencing and roading on deer. Following consideration of this impact, it was chosen to address this under the 'Entrapment' impact noted above. Reasoning behind this is due to the result of breaches to deer fences being the entrapment of deer within the enclosure.

	This is addressed under Entrapment above.
Disturbance: Layout of materials for any deer fence could cause disturbance to golden eagle, black grouse, ground-nesting birds, archaeology and LNCS.	The Scoping Opinion raised this likely significant effect from afforestation, fencing and roading on deer. As it related to an impact on other receptors, it is addressed within relevant chapters for golden eagles, black grouse, curlew, and waders. Layout of materials causing disturbance to archaeology and the Local Nature Conservation Site was thought to be not significant given they have not been included within the Scoping Opinion as having a likely significant effect and are not assessed further. No further assessment is required within this chapter relating to Disturbance.

13.4 BASELINE

13.4.1 The following information is taken from Appendix 3.4 Deer Management Plan, including the Glen Dye Moor Deer Management Plan in support of woodland Creation and Peatland Restoration Schemes and its supporting appendices. Appendix 3.4 c is the Deer Management Plan summarised within Scottish Forestry's deer management plan template.

13.4.2 Given the predominance of grouse moor management within the wider area, Glen Dye Moor falls out with any formally constituted deer management group area although the property falls within what is recognised as the East Grampians deer range. South Deeside and North Angus Deer Management Group is located to the west of Glen Dye Moor and Birse Parish Deer Management Group area is located immediately to the north. These two deer management units are covered by written deer management plans which have been formally adopted by their members and are generally reviewed on a five yearly cycle. Glen Dye Moor falls out with either of these two deer management plans and there is currently no written or adopted deer management plan in place for the property or the neighbouring properties immediately to the west, south and east. Glen Dye Estate to the east of the site has a publicly funded deer management plan in place and funding to support deer control. The boundary between Glen Dye Estate and Glen Dye Moor is deer fenced.

13.4.3 Glen Dye Moor is largely deer fenced against neighbouring properties, including Finzean to the north, Ballogie to the north-west, Millden (part stock-fenced only) and Colmeallie to the west, Fettercairn and Fasque to the south and Glendye to the east. However, given the age of the fencing much of it is currently porous to deer and deer movements are frequent across all boundaries. A small section of Glen Dye Moor lies to the east of the B974 public road and is therefore out with the main fenced area of hill land located to the west of this road.

13.4.4 Glen Dye Moor forms part of a wider open range available to red deer (*Cervus elaphus*) and roe deer (*Capreolus capreolus*), however sika deer (*Cervus nippon*) are not currently present in the area. Given the open range aspect, Glen Dye Moor is periodically counted as part of the NatureScot aerial deer count programme undertaken across South Deeside and North Angus Deer Management Group (DMG) and the deer numbers observed on the property are included along with the wider count figures for the DMG. Actual number and sex of deer occupying certain locations throughout the year will vary considerably. The south-east sections of the range, within which Glen Dye Moor is located returned densities of 5 – 6 deer/km².

13.4.5 Since the purchase of the property in 2021, deer culling has been undertaken to maintain current population levels and the detailed count information for Glen Dye Moor, which forms part of the Deer Management Unit identified as Glendye (Hill Ground) including its immediate neighbours as recorded by NatureScot in March 2022. This area of 8,726 hectares included 120 stags, 329 hinds, 86 calves, at a total of 535 deer at a density of 6.1 deer per square kilometre.

13.4.6 This figure is further refined to the Glen Dye Moor area which shows that March 2022 deer count for Glen Dye Moor returned a density of 2.3 deer/km² (146 red deer) whereas Glendye Estate returned a density of 16.4 deer/km² (389 red deer). The boundary between Glen Dye Moor and the area of Glendye Estate to the south-west is unfenced and recognition should be given to the total count of 535 deer and the density of 6.1 deer/km² for the Glendye (Hill Ground) area overall. It has been identified through the NatureScot aerial count and both thermal counts undertaken since that the deer tend to prefer holding on Glendye Estate land to the south-west of Glen Dye Moor rather than Glen Dye Moor itself, although they are free to move between the two properties at any time.

13.4.7 The location, general topography, aspect and existing vegetation cover of the property provides a range of sheltered and sunny locations in all but the most severe winter weather, making it the ideal habitat for red deer. In addition, the steeper sided watercourse and burns with thicker vegetation cover provide an ideal habitat for Roe deer.

13.4.8 Sporting activities and muir burning activities ceased on site in 2022. This has resulted in a changing dynamic of habitat development. Although there is no current trend data from which to establish a baseline, it can be assumed that heath and blanket bog habitats in burned areas are currently undergoing successional change. Deer are currently being managed and therefore the population will be remaining steady.

13.4.9 Peatland restoration is being carried out on site, though this does not form part of the proposals. Areas of restored peat will improve in habitat quality and risk of erosion is expected to be reversed.

13.4.10 Future baseline can be reasonably predicted as continued increases in the deer population in line with removal of sporting activities from the area.

13.5 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

13.5.1 The significance of effect is determined by a combination of the identified sensitivity of deer with the estimated magnitude of change and considering embedded mitigation (See Section 13.5.4). These findings are carried forward into Chapter 16 Summary of Significant Effects to make a final determination on Biodiversity as a likely significant effect in the context of the EIA Regulations.

13.5.2 Tom Chetwynd of Chetwynd Rural was commissioned to prepare a Deer Management Plan and carry out assessment of deer for the project area to inform this Chapter of the EIA.

13.5.3 Deer management actions will safeguard public safety, food safety and deer welfare through use of appropriate qualified controllers, CPD and adherence to best practice guidelines. See Appendix 3.4 Deer Management Plan (appendix 4.1 of the DMP) for further information.

13.5.4 The fencing operations, including layout, pollution control planning and redundant materials can be found in section 4.5 of Chapter 4. Fences will be inspected and maintained to ensure that they are in an operative condition. Inspection frequency will depend on the time of year and the weather conditions. Fence inspections would be carried out after periods of extreme weather events such as high winds or heavy snow when there is a greater risk of damage to the fence (Chapter 4 Section 4.9.6).

13.5.5 Proposals listed in Table 13.2 Operations impacting deer, represent the operations which would result in the listed likely impact and are subject to assessment. Additional details relating to operations and works can be found in List 4.2 Detailed List of Operations Included in proposals and List 4.3 Works required to conduct operations. For each operation the related impact is noted and specified for the specific operations anticipated, for example planting could cause disturbance but machinery would not be used so the disturbance would be based on hand implemented work.

Table 13.2 Operations impacting deer

Additional details of Operations can be found in List 4.2 Detailed List of Operations Included in proposals

Operation	Specific impacts related to operations
Cultivation	No impact expected to deer as a result of cultivation given deer become quickly habituated to these operations No further assessment is required.

Planting	No impact expected to deer as a result of planting given deer become quickly habituated to these operations. No further assessment is required.
Natural regeneration	No impact expected to deer as a result of Natural Regeneration given deer currently exist within semi-wooded habitats. No further assessment is required.
Maintenance of planted trees	No impact expected to deer as a result of maintenance of planted trees given deer become quickly habituated to these operations. No further assessment is required.
Establishment of planted trees	No impact expected to deer as a result of establishment of planted trees given deer currently exist within semi-wooded habitats. No further assessment is required.
Fence line construction	<u>Habitat loss:</u> New fencing will exclude deer from foraging areas or areas of winter refuge. This would impact deer located outside of fenced areas by no longer having access to foraging areas following completion of construction. <u>Entrapment:</u> Deer will remain resident within the enclosure. This would result from deer located inside of fenced areas no longer having access to the wider landscape following completion of construction, entrapment is commonly associated with welfare concerns for deer. At 6,000 hectares the fenced area will be sufficient scale for a managed population to exist without welfare concerns. <u>Change to immigration/emigration:</u> Changes to local deer dispersion to and from neighbouring properties. This would result following completion of construction as deer are restricted from moving across marches which are currently not deer fenced. However, given the existing, extensive deer fencing layout with the landscape, deer movements are already impeded. <u>Habitat change</u>: Lowering of browsing pressure impacting sensitive habitats and species. This would result from completion of construction in combination with Deer Management proposals which would alter vegetation growth through reduced herbivore impact. Although there is reference to sensitive habitats

	and species, all habitats would be altered, and assessment should focus on the impact to deer within the fenced area.
Forestry track construction	No impact expected to deer as a result of new track works as deer become quickly habituated to these operations. No further assessment is required.
Deer management	Habitat change: Lowering of browsing pressure impacting sensitive habitats and species. This would result from completion of construction of enclosures in combination with Deer Management proposals which would alter vegetation growth through reduced herbivore impact. Although there is reference to sensitive habitats and species, all habitats would be altered, and assessment should focus on the impact to deer within the fenced area.

13.5.6 Embedded Mitigation

13.5.6.1 *A number of embedded mitigations are included within proposals. These mitigations form a fundamental part of the proposals. Proposals would not be considered without implementation of these mitigations and are therefore assessed as an integral part of the proposals. These are included in Appendix 2.6 Mitigations Schedule and noted below for reference:*

- *C09 Fences are set back from the Cairn o'Mount road at variable distances, ranging from 14m set-back at the nearest to 70m set-back at the farthest. This is in line with the 'Joint Agency Agreement on Deer Fencing'. A second fenced enclosure on the east side of the public road has been removed from proposals due to risk of deer vehicle collisions within the corridor.*

- *C15 Compensatory deer cull. Additional management culls to compensate for loss of foraging ground, total cull figures as discussed with NatureScot. A Deer Management Plan covers the property, target cull levels are agreed with NatureScot. Deer levels within the enclosure will be managed toward a target of 2.5 deer per square kilometre. Low level of deer browsing will continue within the fence which will aid in managing habitat for ground nesting birds and reducing wildfire risk (overaccumulation of fuels) while still allowing for natural regeneration.*

13.5.7 For each impact identified in the Scoping Opinion listed in table 13.1 for further assessment, the following findings in terms of predicted outcomes are noted. References are made to appendices where relevant for further details.

13.5.8 **Habitat loss:** In line with Appendix 3.4 Deer Management Plan, impacts on deer from habitat loss will be negligible. This is a result of the compensatory cull levels which have been discussed with NatureScot in advance of erecting the new fence lines. This compensatory cull will lower deer population levels to a figure which can be supported by the remaining foraging areas out with Glen Dye Moor thus avoiding animal welfare issues which would otherwise be experienced by the population following removal of substantial foraging areas. Baseline information on current deer levels, their movements across neighbouring properties and the division of deer ranges all helped to identify appropriate compensatory cull levels in consultation with NatureScot. Resulting from this the sensitivity of deer to proposals is thought to be **neutral** as there will be no measurable positive or negative change to deer and the magnitude of that change will be **minor** owing to the cull levels ensuring deer attributes, vulnerability or features remain broadly unaltered.

13.5.9 **Entrapment:** In line with Appendix 3.4 Deer Management Plan, impacts on deer from entrapment will be negligible at the scale of 6,000 hectares enclosed. This is due to the ongoing monitoring proposed within the Deer Management Plan, particularly related to Appendix 3.4 Table 4 references 2 and 4 noting that there will be focused control of incoming red deer within the Deer Management Unit prior to completion of fences and to ensure, as well as during years 1 to 5, that fences remain deer proof and any incursions are dealt with as soon as possible. It is also included in Appendix 3.4 item 8.0, "It is essential that early communication is held with the sporting tenant of Glendye Estate to enable collaborative deer management to be undertaken across Glendye (Hill Ground) at an early stage in the plan. It is essential to avoid an enclosed, island population forming in this area following erection of a new fence and to avoid any associated risks to deer welfare with new fencing." Item 6.0 of this Plan also acknowledges that risk assessment for deer will include, "red deer break-ins through holes in fences and gates left open as well from walk-overs across fence lines in heavy snow conditions." Protections proposal within the Plan under item 7.0 highlights the need to monitor fence conditions noting, "Fence lines will also be inspected immediately following heavy snowfalls and freezing temperatures, both to check for signs of incursion, and for signs of snow / ice damage." This also includes inspections of gates, watergates and any other signs of incursion. This suggests that the proposals will not have a negative or positive change to deer. Sensitivity to entrapment is **neutral** and the magnitude of change will be **minor** given the reduction of risk of entrapment through good practices**.**

13.5.10 Change to immigration/emigration: In line with Appendix 3.4 Deer Management Plan, impacts on deer from changes to immigration/emigration are likely to be negligible. This is due in large part to the compensatory cull planned and the overall setting within the Deer Management Unit being spread over multiple ownerships as well as the current levels of deer fencing in and around the project area which already restrict emigration/immigration to some degree. It is noted in the Plan within Appendix 3.4 Table 6 identifying a risk of net emigration resulting from decreased culling pressure on red deer from unfenced neighbouring estates. Table 4 of the Plan also recognises that implementation of deer management in years 2 to 5 will see, "Completion of a strategic deer fence around the DMU will minimise immigration of deer into site from Year 2 onwards." The strategic deer fence referred to is the perimeter deer fence to protect the afforestation project. Given the control measures planned in the Deer Management Plan it is likely that proposals will make no measurable positive or negative change to deer. Sensitivity is neutral and the magnitude of change is Minor.

13.5.11 **Habitat change:** Lowering of browsing pressure impacting sensitive habitats and species. Impacts to deer from changes in habitat, resulting from lowering the browsing pressure on sensitive habitats, are likely to be marginally positive for deer. As noted within the Welfare Policy of Appendix 3.4 Deer Management Plan there is an aim of, "Ensuring that the natural habitat supports good welfare through the provision of adequate habitat and shelter." Through restoration efforts across the project area focusing on woodland creation, increasing of tree cover as well as peatland restoration works being carried out separately, habitat conditions and amounts of shelter are expected to increase substantially. For deer managed within the 6,000ha enclosure, habitats will improve and there is likely to be improved animal conditions within this area taking into account the management cull levels are maintained for deer within the enclosure. For this reason, sensitivity of deer to habitat change is low while magnitude of change will be minor.

13.6 RESIDUAL EFFECTS AND ADDITIONAL MITIGATION

13.6.1 There are no residual significant effects identified for deer as noted in Table 13.3, and no additional mitigation is required.

Table 13.3 Deer Summary Table of Significance

Impact	Sensitivity	Magnitude	Significance
Habitat Loss	Neutral	Minor	Negligible
Entrapment	Neutral	Minor	Negligible
Change to immigration/ emigration	Neutral	Minor	Negligible
Habitat Change	Low	Minor	Negligible

13.6.2 The above residual significant effect findings are plotted against the assessment tool found in Appendix 2.5 to illustrate levels of residual effect in Table 13.4 below.

Table 13.4 Significance Matrix

⇩ ***Sensitivity***	***Magnitude***			
	Major	*Moderate*	*Minor*	*Negligible*
High	*Major*	*Major*	*Moderate*	*Minor*
Medium	*Moderate*	*Moderate*	*Minor*	*Minor*
Low	*Minor*	*Minor*	***Negligible***	*Negligible*

Neutral	*Minor*	*Negligible*	***Negligible***	*Negligible*

13.6.3 The environmental factors assessed in this chapter related to deer (a biodiversity factor) which should be considered in context to other impacts to identify interactions among and between various environmental factors. This will allow for a comprehensive final assessment of impacts on a) population and human health, b) biodiversity, c) land, soil, water, air, and climate, and d) material assets, cultural heritage, and the landscape, in accordance with the Scoping Opinion

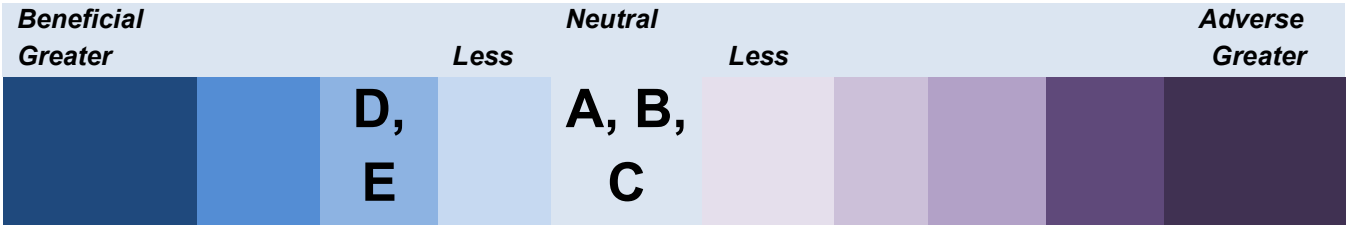
13.6.4 Effects can be indirect, cumulative, short-term, long-term, beneficial or adverse, and are identified as being either significant or not significant in the context of the EIA Regulations. This comprehensive approach ensures a full determination of the 'net effect' of the forestry project, including both positive and negative environmental consequences.

13.6.5 Increased tree cover delivered through the proposed woodland creation as well as peatland restoration works being carried out separately over a significant area, will improve habitat conditions and amounts of shelter which is considered to have a positive benefit to deer.

13.6.6 The scale of the proposal, encompassing approximately 6,300ha within the deer fenced enclosure, will ensure that any resident deer will have access to a wide variety of habitats and aspects in which to seek shelter.

13.6.7 To aid in illustrating the balance between adverse and beneficial impacts, Table 12.5, which is derived from Appendix 2.5, is included below highlighting the residual effects and mitigations assessed in this chapter.

Table 13.5 Diagram of Beneficial and Adverse Impacts



The ‘net impact’ is determined for Deer having four assessed impacts resulting from habitat loss, entrapment, changes to immigration/emigration and habitat change taken in context of interactions with other factors both direct and indirect, cumulative, short-term or long-term, beneficial or adverse.

A, Impact from habitat loss is found to be neutral

B, Impact from entrapment is found to be neutral

C, Impact from change to immigration/emigration is found to be neutral

D, Impact from habitat change is found to be moderately beneficial

E, Interaction benefits due to the scale of the proposal

The ‘net effect’ for Deer was found to be neutral

13.7 SUMMARY OF EFFECTS

13.7.1 Consideration of the net effect to deer takes into account the proposed compensatory deer cull and implementation of a strategic deer management plan that has been agreed with NatureScot to ensure that deer numbers within the enclosure are managed at an appropriate level. This outcome should be considered in the context of the receptor’s **local** importance.

13.7.2 The effect of proposals on deer will be negligible and ‘**not significant**’ in the context of the EIA regulations.

14 IMPACTS ON RECREATION AND ACCESS

14 Impacts on Recreation and Access

List of Appendices Referenced in this Chapter

Appendix 2.1 Glen Dye Moor Consultation Summary

Appendix 14.1 Recreational Addendum

Appendix 2.2 Glen Dye Moor Woodland Creation EIA Scoping Report

Appendix 2.4 Scoping Opinion for the Proposed Glen Dye Moor Woodland Creation EIA Project

Appendix 2.5 Significance Criteria

Appendix 2.6 Mitigations schedule

List of Tables/Figures Referenced in this Chapter

Table 14.1 Likely Impacts and Methods of Assessment for Recreation

Table 14.2 Operations impacting Recreation

Table 14.3 Recreation Summary Table of Significance

Table 14.4 Significance Matrix

Table 14.5 Diagram of Beneficial and Adverse Impacts

List of Other Documents and Publications Referenced in this Chapter

Land Reform (Scotland) Act 2003

The Health and Safety at Work Act 1974

Equalities Act 2010

Forestry Commission Scotland (2013) Practice Note: managing woodland access and forest operations in Scotland. https://www.forestresearch.gov.uk/publications/managing-woodland-access-and-forest-operations-in-scotland/

Scottish Natural Heritage (2000) Car Parks in the Countryside: a practical guide to planning, design and construction. Natural Countryside Management. https://www.outdooraccess-scotland.scot/access-management-guidance/path-management. Accessed at : https://digital.nls.uk/pubs/e-monographs/2020/216650099.23.pdf

Scottish Outdoor Access Code https://www.outdooraccess-scotland.scot/

14.1 CHAPTER SUMMARY

14.1.1 Glen Dye Moor is a popular area for many different recreational users. The applicant welcomes and encourages such activity and actively work with a range of stakeholders to facilitate access. Potential impacts on Recreation have been considered against the relevant regulatory frameworks. The key concerns that were identified in the scoping process include physical barriers to access, loss of access due to physical damage, and new or improved access. New deer fencing may restrict movement, but mitigation measures such as multi-user gates, and clear signage minimise adverse effects. Potential damage to trails from machinery operations is also considered, with planned track repairs and low-impact techniques reducing risks. Although no proposals are expected to increase usage of the site above current levels, positive impacts beyond the present level of access provision are identified such as track improvements, new signage, and enhanced accessibility for recreational users. These beneficial and adverse factors combine and the impact on recreation and access will therefore be 'not significant' in the context of the EIA regulations.

14.2 INTRODUCTION

14.2.1 This chapter of the Glen Dye Moor New Woodland Creation Environmental Impact Assessment Report (EIAR) considers the potential impacts of proposals on Recreation and Access and assesses the likely severity of those impacts.

14.2.2 In relation to the EIA Regulations 5 (3), Recreation and Access is considered to be a 'Population and Human Health' factor and will be added to any other 'Population and Human Health' factors for a final determination of significance in Chapter 16 Summary of Significant Effects

14.2.3 This Chapter is supported by Appendix 14.1 Recreational Addendum Map.

14.2.4 The Land Reform (Scotland) Act 2003 creates a statutory framework for the provision and management of access in Scotland. This legislation enables people to pursue recreational, educational and certain commercial use of the countryside, provided they do so responsibly, and covers a range of non-motorised activities such as walking, cycling and horse riding. Responsibilities for land managers and recreational users are set out in the Scottish Outdoor Access Code. The Health and Safety at Work Act 1974 places a duty on land managers to conduct activities so that public is not exposed to risks caused by their operations.

14.2.5 This assessment will be based on Recreation and Access having **local importance** following EIA Scoping consultation feedback, as recorded within Appendix 2.2 Scoping Report. The site does not site within a nationally designated area such as a National Park, and there are no core paths within the site contained within Aberdeenshire Core Paths Plan.

14.3 SCOPING CONSULTATION AND SCOPE OF ASSESSMENT

14.3.1 This section outlines the scoping consultation process and the resulting methodology for assessing the likely impacts on Recreation and Access.

14.3.2 The Glen Dye Moor Woodland Creation EIA Scoping Report was submitted to Scottish Forestry Grampian Conservancy in January 2025 following a scoping meeting with consultation bodies agreed with Scottish Forestry. The Scoping Report set out the overall approach to assessment and allowed for the refinement of the Proposals over the course of the assessment.

14.3.3 Scottish Forestry produced a Scoping Opinion on the 11th February 2025, confirming the inclusion of Recreation and Access and identifying likely significant effects to assess along with suggested methodology. These are listed in Table 14.1 Impacts and Methods of Assessment for Recreation.

Table 14.1 Likely Impacts and Methods of Assessment for Recreation

Likely Impact	Method of Assessment
Physical barriers to access: New deer fencing creating physical barriers to all, or certain groups (e.g. horse access) of users at access points onto site.	The Proposal design for non-motorised access is measured against requirements of Land Reform (Scotland) Act 2003 and UK Forestry Standard (UKFS). Additionally, potential conflicts with the Equalities Act 2010 and Forestry Commission Scotland (2013) Practice Note: Managing Woodland Access and Forest Operations in Scotland are considered. The EIA will assess whether forestry activities comply with access rights while addressing safety, environmental concerns, and inclusivity. *Land Reform (Scotland) Act 2003*: This legislation establishes public rights of responsible access to land. The EIA will assess whether forestry activities create unjustified obstructions to public access and whether reasonable alternative routes are provided. *UKFS*: This standard promotes responsible woodland management, ensuring access is maintained or improved where possible. The EIA will assess compliance by considering the design of forestry infrastructure (e.g., gates, paths, and signage) to facilitate access while balancing environmental and operational needs. *Equalities Act 2010*: This Act requires public access to be non-discriminatory. The EIA will assess whether forestry operations create access barriers, and if they disproportionately affect people with limited mobility. *Forestry Commission Scotland (2013) Practice Note*: This guidance highlights the need to balance safe forest operations with public access. Potential conflicts may arise when temporary restrictions limit access. The EIA will assess whether such restrictions are necessary, proportionate, and communicated effectively to the public.
Loss of access through physical damage: Trails and paths being lost through direct planting of trees, or trails and paths being physically damaged through operations. This may include loss through lack of maintenance to infrastructure.	The EIA will evaluate how forestry activities might cause physical damage (e.g., erosion, waterlogging, or track deterioration) that could reduce public access to recreation. This assessment will be based on the following: *Land Reform (Scotland) Act 2003*: Establishes public rights of responsible access to land. The EIA will assess whether forestry operations damage key access routes making them impassable or unsafe.

	UKFS: Requires forestry activities to maintain or enhance public access where possible. The EIA will assess whether operations comply with best practices for infrastructure protection (e.g., using low-impact machinery, avoiding work in wet conditions, and repairing damaged paths) and if alternative access routes are provided if primary paths are temporarily affected. Overall, the EIA will determine if proposals minimise physical damage to access routes, comply with legal access rights, and align with responsible woodland management standards.
New or improved access: Positive effects due to the removal of existing barriers, improvement of facilities and creation of new roads.	The EIA will evaluate how the proposal creates new or improved public access while ensuring compliance with: *Land Reform (Scotland) Act 2003*: Guarantees public rights of responsible access to land. The EIA will assess whether new access routes align with these rights, ensuring they are open, safe, and usable for a wide range of users. It will consider whether improvements (e.g., new paths, bridges, or signage) enhance accessibility while balancing environmental and land management concerns. *UKFS*: Encourages sustainable woodland management that enhances public access where appropriate. The EIA will assess whether new or improved access routes comply with UKFS principles, including; Minimising environmental impact (e.g., avoiding sensitive habitats, preventing erosion); Providing durable infrastructure (e.g., accessible gates); Integrating access with forest management (e.g., safe routes around active operations). Overall, the EIA will determine whether new or improved access supports responsible public use, aligns with legal rights, and meets sustainable forestry management standards.
Disturbance/damage: Increased recreational use resulting in disturbance of breeding birds and damage to priority habitats and sensitive areas.	To avoid confusion, items raised within the Scoping Opinion under Recreation and Access which relate to other receptors such as impacts to curlew, black grouse, eagles, other waders, designated sites or landscape are dealt with in their relevant chapters. This effect is assessed separately in Chapter 7 Impacts on Golden Eagles, Chapter 8 Impacts on Merlin, Chapter 9 Impacts on Curlew, Chapter 10 Impacts on Other Waders, Chapter 11 Impacts on Black Grouse, Chapter 12 Impacts on Large Heath Butterfly, and Chapter 15 Impacts on Landscape. It will therefore not be considered further in relation to the impacts on Recreation in this chapter.
Increased waste and litter:	This was raised within the Scoping Opinion as a likely significant effect from afforestation, fencing and roading. For the purposes of

	this assessment, and to avoid confusion, increased waste and litter is identified a likely impact from recreational increases on site rather than an impact to the receptor 'Recreation and Access'. As such it is addressed within Chapter 4 Scheme Proposals under the Waste and Redundant Materials Management section 4.10.20. As per the Scottish Outdoor Access Code, Responsible use by the public includes Taking away litter. If a litter problem were to arise this would be raised with the local authority. This will therefore not be considered further in relation to the impacts on Recreation in this chapter.
Increased risks of traffic accidents and vehicle collisions: Arising from insufficient car parking provision.	As part of the proposals, improved car park provision will be provided, the design of which will follow "The process of car park design" found in SNH (NatureScot) guide *Car parks in the Countryside: a practical guide to planning design and construction*. Aberdeenshire Council planning framework requirements will be met in terms of design and joining to the public road. There is a requirement for this to undergo sperate assessment by the local authority under their Planning Application process and will be screened under The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017. This would be assessed by the local authority and will therefore not be considered further in relation to the impacts on Recreation and Access in this Chapter.

14.4 BASELINE

14.4.1 Due diligence consultation took place in 2022, 2023 and 2024, a summary of which can be found within Appendix 2.1 Consultation Summary. These engagement exercises identified current use types, user groups, and use sensitives. This has included drop in events, on site meetings with interested parties and consultation with The Outdoor Access Trust for Scotland. The current proposals, including gate locations, are available on the site website, with stakeholders being directed to the website as part of the EIA process for the up to date proposals.

14.4.2 Known uses of Glen Dye Moor include; Hillwalking/Mountaineering, climbing, running, cycling, horse riding, skiing, kayaking and fishing. Interest groups using the site include; North-east Mountain trust, Duke of Edinburgh, Scouts, North Scotland Gundog association, Mountain Bothy Association and the local Rifle club. Further details can be found in Appendix 14.1 Recreational Addendum.

14.4.3 Charr Bothy, partially under long-term lease by Mountain Bothies Association, is open to the public and there is a local rifle range available to community groups by request. A car park is provided at the main entrance near Spittal Bridge.

14.4.4 It was identified that Clachnaben and Charr Bothy were the most visited areas within Glen Dye Moor. Clachnaben is a well-known and popular hill in Aberdeenshire due to its prominent granite tor on the summit, good viewpoints and relative ease of access.

14.4.5 One reference to a slope near Clachnaben being good for downhill skiing when conditions are suitable was brought up at a drop in event. There are no further records on downhill skiing and it has not been brought up further through the consultation and engagement process. Given the location, altitude and overall winter snow conditions, the impact of the afforestation is unlikely to cause significant effect to downhill skiing.

14.4.6 The existing carpark at Glen Dye Moor (near Spittal Bridge) is heavily used during summer months along with a nearby Glen Dye carpark, set within Glen Dye Estate (separate ownership), locally known as the Quarry Carpark. The existing carpark at Glen Dye Moor, known as the Spital carpark, currently hosts some overflow use from the Quarry carpark which is often overrun during busy summer months. However, the most popular and shortest route to the summit of Clachnaben is from the Quarry carpark and this carpark will continue to be the main parking that visitors will likely use. It was raised that once full, users of the Quarry carpark often park on the road interfering with traffic flow and creating hazards. During engagement and consultation exercises it became clear that there was confusion over the ownership and responsibility of the Quarry carpark. For clarification, Glen Dye Moor projects do not include the Quarry carpark and there is no ownership, conditioning, or burdens associated with this as part of Glen Dye Moor. Spital carpark is set approximately 207m from the Public Road and is accessed by a single lane forestry track. This carpark has become overgrown with Bracken and full use of the carpark footprint is not currently available. Planning application with Aberdeenshire Council is under development to maintain and improve the existing carpark. Approval will be separate to this EIA Report and screening for work relating to the carpark will be dealt with under a sperate application with Aberdeenshire Council (See section 4.7 Car Park in Chapter 4 for further information). This will help to increase and improve capacity for safe parking. It will provide visitors an alternative to parking on the public road when the Glen Dye Car Park is at capacity.

14.4.7 A desktop analysis of Aberdeenshire Council core path network and OS mapping was carried out to identify recreational locations and types. This was further supplemented by use of Strava heatmap data between 2023 and 2024 to identify usage not captured otherwise. No core paths or right of ways are present within the project area. A Map showing desire lines, waymarked paths and unmarked paths was included within a recreational review conducted in 2023 and updated in 2024, this can be found in Appendix 14.1. Recreational Addendum.

14.4.8 Whilst there are currently no recorded rights of way, Glen Dye Moor is a popular area for recreational users such as hillwalkers, cyclists and horse riders. To qualify as a right of way, a route must meet all the following conditions; it must join two public places (e.g., public roads or other rights of way); it must follow a more or less defined route; it must have been used, openly and peaceably, by the general public, as a matter of right (not merely with the permission of the landowner); and it must have been used without substantial interruption for at least 20 years.

14.4.9 The main path up to Clachnaben has been voluntarily maintained by local outdoor access groups and a volunteer work party took place in 2024 with the support of Glen Dye Moor landowners. It is expected that this ongoing local involvement in maintaining the main path will continue.

14.4.10 Other main usage routes follow existing 4x4 tracks which are maintained by the landowner. Vehicular access to Glen Dye Moor is restricted with gated access from the Spital carpark. Groups wishing to access Glen Dye Moor by vehicle for specific authorised events are provided access by request.

14.4.11 Third party access is also permitted to neighbouring landowners and sporting lease holders with some deeded rights of access. Request for access from survey groups have also been permitted such as River Dee Fishery Trust and local Raptor Study Groups.

14.4.12 The popular access points to Glen Dye Moor at Spital and on the Clachnaben Hill path involve passing through 'kissing gates'. There are several access points onto Glen Dye Moor through existing deer fencing. In one location an existing footpath has been blocked. At other locations the current access is through full vehicle gates or utilising stiles. Some of the identified desire lines involve climbing existing fence structures.

14.4.13 Specific ongoing consultation will continue with the following groups:

14.4.13.1 Mountain Bothies Associate in line with the long-term lease agreement.

14.4.13.2 Outdoor Access Trust in line with continuing volunteer days for trail maintenance

14.4.13.3 Aberdeenshire Council Access Officer, as and when access issues or opportunities arise

14.4.13.4 Finzean and Feughside Community Council, as part of community participation by the landowner

14.5 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

14.5.1 The significance of effect is determined by a combination of the identified sensitivity of Recreation and Access with the estimated magnitude of change and taking into account embedded mitigation (See Section 14.5.3). These findings are carried forward into Chapter 16 Summary of Significant Effects to make a final determination on 'Population and Human Health' as a likely significant effect in the context of the EIA Regulations.

14.5.2 Proposals listed in Table 14.2 Operations impacting Recreation, represent the operations which would result in the listed likely impact and are subject to assessment. Additional details relating to operations and works can be found in List 4.2 Detailed List of Operations Included in Proposals and List 4.3 Works Required to Conduct Operations. For each operations the related likely impact is noted and specified for the specific operations anticipated, for example planting could cause disturbance but machinery would not be used so the disturbance would be based on hand implemented work.

Table 14.2 Operations impacting Recreation

Additional details of Operations can be found in List 4.2 Detailed List of Operations Included in proposals

Operation	Specific impacts related to operations
Cultivation	**Loss of access through physical damage:** Trails and paths being lost through direct planting of trees, or trails and paths being physically damaged through operations. This may include loss through lack of maintenance to infrastructure. This would result from machinery such as excavators, tractors or ATVs damaging access routes by repeated use in poor weather conditions, leading to deterioration of tracks or paths.
Planting	No related impact. Planters will not have any impact on Recreation due to the mobile and transient nature of hand planting activities and there will be no direct planting of trees on paths or trails. No further assessment is necessary.
Maintenance of planted trees	No related impact. Maintenance of planted trees will not have any impact on Recreation due to the mobile and transient nature of maintenance work. No further assessment is necessary.
Fence line construction	**Physical barriers to access:** New deer fencing creating physical barriers to all, or certain groups (e.g. horse access) of users at access points onto site. This would result from new deer fences (min 1.8m height) introducing physical barriers that would prevent passage along existing access routes and could also result from inappropriate access structure types such as stiles or kissing gates being placed in locations which limit types of existing users. **Loss of access through physical damage:** Trails and paths being lost through direct planting of trees, or trails and paths being physically damaged through operations. This includes loss through lack of maintenance to infrastructure. This would result from machinery such as excavators, tractors or ATVs damaging access routes by repeated use in poor weather conditions, leading to deterioration of tracks or paths. This would occur during both the construction stage of new fencing as well as the longer-term maintenance stage. **New or improved access:** Positive effects due to the removal of existing barriers, improvement of facilities and creation of new roads. This would result from clearance of redundant fence lines, installation of new or improved gates in areas which

	are currently restricted (see 14.4.12) as well as the introduction of new signage to improve existing users access to the site and direct them to access points and gate locations.
Forestry track construction	**<u>Loss of access through physical damage:</u>** Trails and paths being lost through direct planting of trees, or trails and paths being physically damaged through operations. This includes loss through lack of maintenance to infrastructure. This would result from machinery such as excavators, tractors or ATVs damaging access routes by repeated use in poor weather conditions, leading to deterioration of tracks or paths. **<u>New or improved access:</u>** Positive effects due to the removal of existing barriers, improvement of facilities and creation of new roads. This would result from additional tracks being built which would create improved access to popular sites such as Clachnaben or Charr Bothy as well as improvements to routes for different users, such as new tracks bypassing steep gradients.
Deer management	No related impact. Deer management, due to the nature of the work involving shooting and extraction of carcasses over short periods of time with a transient nature, it is unlikely to impact Recreation. No further assessment is required.

14.5.3 Embedded Mitigation

14.5.3.1 *A number of embedded mitigations are included within proposals. These mitigations form a fundamental part of the proposals. Proposals would not be considered without implementation of these mitigations and are therefore assessed as an integral part of the proposals. These are included in Appendix 2.6 Mitigations Schedule and noted below for reference:*

- *B45 Organised 'Community Planting Days' will be planned once implementation begins, these will be advertised on glendyemoor.com, individuals and groups asked to be kept updated on progress will be informed directly and notices will also be placed on entryway noticeboards.*
- *B46 Woodland planting will be set back from formal access routes to ensure they do not encroach on paths. Views at key locations have also been considered in the design and will be left open to ensure long views to landmarks are maintained.*
- *C04 Design of all new fences will comply with the Outdoor Access Code and non-vehicular gates will conform to advice from the British Horse Society 'Advice on Gate Installation on Routes Used with Horses'.*
- *C05 Gates will be installed at every mapped access point suitable for walkers, cyclist and horse riders.*

- *C06 Gates (minimum ATV suitable but tractor access where required) at every non-roaded access point for land management purposes including stalking tenant access and wildfire response to/from neighbouring land.*

- *C08 Additional signage will be placed on fence lines where desire lines may result in users encountering fences without sight of gates (example: 'gate 400m east').*

- *C09 Fences are set back from the Cairn o'Mount road at variable distances, ranging from 14m set-back at the nearest to 70m set-back at the farthest. This is in line with the 'Joint Agency Agreement on Deer Fencing'. A second fenced enclosure on the east side of the public road has been removed from proposals due to risk of deer vehicle collisions within the corridor.*

- *D14 Car park at Spittal Bridge will be improved to ensure sustainable use for public parking, including drainage grading to mitigate flooding impacts. Toilets will be added to the site; final design will be compliant with and subject to current planning requirements.*

- *E07 Maps will be posted at main entrances identifying all gate locations and popular access routes, highlighting loops.*

- *E08 Additional signage will be placed on fences where desire lines may result in users encountering fences without sight of gates ('gate 400m east). Locations will be based on known desire lines, winter site usage trends, and distances from access points.*

- *E09 New signage will be erected at main entrances informing users of waymarked routes. Waymarking will also be refreshed along main routes and junctions. Signage will be installed along fence lines (high enough to be visible during winter) to direct cross-country users to infrastructure.*

- *E10 The main entrance boards will be maintained and used to post updates about the site and advise users about safe access.*

- *E11 Fires will be discouraged using informative signs and the fire risk/hazard will be posted at main entrance boards.*

- *E12 Interpretive signs will be placed at key points such as the historic township location to provide information on the site to increase visitor awareness of special features. This will include signage about breeding bird sensitivity.*

- *E13 Way marker posts will be placed to assist with navigation on popular routes.*

- *E14 Challenging routes which do not have constructed paths will be purposefully left without way markers to ensure a sense of remoteness and wildness is maintained.*

- *E15 Due to the nature of woodland establishment works there is no requirement for extensive exclusion zones from machinery for long durations of time. Therefore, during operations, formal paths will not be closed, and signs or other instructions will be put in place to ensure safe access is maintained. Temporary local diversions may be implemented should track works be required.*

- *E16 The main path to Clachnaben will be maintained. The Outdoor Access Trust (OATs) will be involved in path maintenance and the Northeast Mountain Trust will be encouraged to continue*

volunteering as path stewards to ensure long term sustainable community benefits are achieved within these organisations.

- *F1 Charr Bothy. Half of the bothy is private while the half is public. The public side of the building has been confirmed in a long-term lease with the Mountain Bothy Associate in 2022 who held their 2023 AGM at the bothy.*
- *F2 Rifle Range. The existing rifle range at Glen Dye Moor will be maintained and available for groups where feasible*

14.5.4 For each impact identified in the Scoping Opinion, the following findings of predicted outcomes are noted. References are made to appendices where relevant for further details.

14.5.5 **Physical barriers to access**: In line with the assessment found within Appendix 14.1, Tables 14.3 and 14.4 as well as Appendix 2.5. Significance Criteria, Sensitivity is identified as Low, and the Magnitude of change is considered to be Minor. Existing fences which will be replaced with new fencing have gates and access structures in place currently which users are familiar with. The erection of new deer fencing introduces potential physical barriers to recreation users, particularly walkers, cyclists, and horse riders, by restricting access at certain points. However, upgrades to some access structures will be carried out improving access where currently stiles or fences without gates limit access. The proposal has been designed to comply with the Land Reform (Scotland) Act 2003, UKFS and the Equalities Act 2010, ensuring that access is not unjustifiably obstructed. Strava heatmap data (see Appendix 14.1 Recreational Addendum Summary & Map) has been used to inform the design. Key mitigations include installing gates at all mapped access points for various user groups and implementing clear signage to direct users to the nearest crossing points. Deer fencing will also be set back from public roads to minimize disruption, and updated maps and community engagement initiatives will help ensure continued accessibility. Where stiles are installed, these will be for site management purposes only, and will not be sited at public access points.

14.5.6 **Loss of access through physical damage**: In line with the assessment found within Appendix 14.1, Tables 14.3 and 14.4 as well as Appendix 2.5. Significance Criteria, Sensitivity is identified as **Low**, and the Magnitude of change is considered to be **Moderate**. There is potential for track deterioration from forestry operations and loss of track from planting over. However, the proposal has been designed to comply with the Land Reform (Scotland) Act 2003 and UKFS ensuring that access is not damaged or lost. Strava heatmap data (see Appendix 14.1 Recreational Addendum Summary & Map) has been used to inform the design. Embedded mitigations such as avoiding work during wet conditions, repairing damaged routes, and maintaining key pathways, help reduce the impact of potential damage. Planting, by design, is set back from formal access routes to ensure they do not encroach.

14.5.7 **New or improved access**: In line with the assessment found within Appendix 14.1, Tables 14.3 and 14.4 as well as Appendix 2.5. Significance Criteria, Sensitivity is identified as **Low** and Magnitude of change is considered to be **Moderate** with a number of benefits anticipated through proposed enhancements, such as upgrades to existing paths, improved signage, and better access infrastructure, including gates. These changes are expected to facilitate current recreational use through ensuring accessibility for walkers, cyclists, and horse riders. Embedded mitigations, such as maintaining key routes and integrating access improvements with responsible woodland management, further support positive recreational outcomes.

14.6 RESIDUAL EFFECTS AND ADDITIONAL MITIGATION

14.6.1 There are no residual effects identified for Recreation and Access as noted in Table 14.3 below and no additional mitigation is required.

Table 14.3 Recreation Summary Table of Significance

Impact	Sensitivity	Magnitude	Significance
Physical barriers to access	Low	Minor	Negligible
Loss of access through physical damage	Low	Moderate	Minor
New or improved access	Low	Moderate	Minor

14.6.2 The above residual effect findings are plotted against the assessment tool found in Appendix 2.5 to illustrate levels of residual effect in Table 14.4 below.

Table 14.4 Significance Matrix

⇩ ***Sensitivity***	***Magnitude***			
	Major	*Moderate*	*Minor*	*Negligible*
High	*Major*	*Major*	*Moderate*	*Minor*
Medium	*Moderate*	*Moderate*	*Minor*	*Minor*
Low	*Minor*	***Minor***	***Negligible***	*Negligible*
Neutral	*Minor*	*Negligible*	*Negligible*	*Negligible*

14.6.3 The environmental factors assessed in this chapter related to recreation and access (a population and human health factor) which should be considered in context to other impacts to identify interactions among and between various environmental factors. This will allow for a comprehensive final assessment of impacts on a) population and human health, b) biodiversity, c) land, soil, water, air, and climate, and d) material assets, cultural heritage, and the landscape, in accordance with the Scoping Opinion

14.6.4 Effects can be indirect, cumulative, short-term, long-term, beneficial or adverse, and are identified as being either significant or not significant in the context of the EIA Regulations. This comprehensive approach ensures a full determination of the 'net effect' of the forestry project, including both positive and negative environmental consequences.

14.6.5 Longer term impacts associated with predicted increases in the frequency and severity of storm events may lead to greater occurrence of damage to tracks and infrastructure.

14.6.6 There are significant positive opportunities to engage with the public, interest groups and the local community both during the delivery phase of the project and longer term to demonstrate the benefits that landscape scale management can bring, including social, economic and environmental ecosystem services.

14.6.7 To aid in illustrating the balance between adverse and beneficial impacts, Table 14.5, which is derived from Appendix 2.5, is included below highlighting the residual effects and mitigations assessed in this chapter.

Table 14.5 Diagram of Beneficial and Adverse Impacts

Beneficial			***Neutral***						***Adverse***
Greater		***Less***		***Less***					***Greater***
	D	**A, C**	**F**	**B**	**E**				

The ‘net impact’ is determined for Recreation and Access having three assessed impacts resulting from physical barriers to access, loss of access through physical damage and new or improved access taken in context of interactions with other factors both direct and indirect, cumulative, short-term or long-term, beneficial or adverse.

A, Impact from physical barriers to access whilst considered adverse to a lesser degree in the short term are also considered to be beneficial to a greater degree as new access provision will enhance public access including the provision of clear signage and fence design set back from tracks and public roads. The impact is thus found to be beneficial to a moderate degree

B, Impact to access from physical damage to track network is found to be neutral

C, Impact from new or improved access is found to be beneficial to a moderate degree.

D, Interactions derived from the long-term benefits delivered through the proposals for example, educational opportunities and community engagement are found to be beneficial to a greater degree.

E, Impacts of damage to tracks caused by increased frequency of storm events is found to be adverse to a lesser degree.

F, Improved parking, whilst covered by other regulatory consent and not included within the EIA determination, will bring positive benefit to recreational users and is found to be beneficial to a lesser degree.

The 'net effect' for Access was found to be beneficial to a moderate degree.

14.7 SUMMARY OF EFFECTS

14.7.1 Consideration of the net effect to access and recreation takes into account the short-term scheme delivery impacts and balances these against the positive impacts that the proposals will provide. In addition to the more tangible improvements to access that will be delivered through the provision of access tracks, well signed and designed gates and upgrade to existing access routes, the proposals will provide wider educational and community involvement benefits. This outcome should be considered in the context of the receptor's **local** importance.

14.7.2 Impacts on Recreation and Access from the proposals are found to be **not significant** in the context of the EIA Regulations.

15 IMPACTS ON LANDSCAPE (INCLUDING CLACHNABEN & FOREST OF BIRSE SPECIAL LANDSCAPE AREA (SLA))

15 Impacts on Landscape (including Clachnaben & Forest of Birse Special Landscape Area (SLA))

15.1 INTRODUCTION

15.1.1 This chapter of the Glen Dye Moor New Woodland Creation Environmental Impact Assessment Report (EIAR) considers the potential impacts of proposals on landscape and assesses the likely severity of those impacts.

15.1.2 In relation to the EIA Regulations 5 (3), landscape is considered to be a 'Material Assets, Cultural Heritage, and the Landscape' factor and will be added to other landscape factors for a final determination of significance in Chapter 16 Summary of Significant Effects.

15.1.3 This chapter is supported by Volume 3 Visualisations.

15.1.4 This assessment will be based on Landscape having Regional importance following EIA Scoping consultation feedback, as recorded within Appendix 2.2 Scoping Report.

15.2 SCOPING CONSULTATION AND SCOPE OF ASSESSMENT

15.2.1 This section outlines the scoping consultation process and the resulting methodology for assessing the likely impacts on Landscape.

15.2.2 The Glen Dye Moor Woodland Creation EIA Scoping Report was submitted to Scottish Forestry Grampian Conservancy in January 2025 following a scoping meeting with consultation bodies agreed with Scottish Forestry. The Scoping Report set out the overall approach to assessment and allowed for the refinement of the Proposals over the course of the assessment.

15.2.3 Scottish Forestry produced a Scoping Opinion on the 11th February 2025, confirming the inclusion of Landscape and identifying likely significant effects to assess along with suggested methodology. As detailed below:

- *The assessment includes a Landscape and Visual Impact Assessment (LVIA) which is informed by the Guidelines for Landscape and Visual Impact Assessment (GLVIA3) and Notes and Clarifications on Aspects of Guidelines for Landscape and Visual Impact Assessment Third edition (GLVIA3).*
- *The LVIA considers potential effects upon the landscape resource, including relevant designated landscapes (i.e. Forest of Birse SLA) and non-designated landscape character. Effects on the landscape may occur within the site, but there is also potential to impact upon landscapes beyond the site boundary (i.e. indirect effects). The LVIA considers potential effects on all landscape receptors within the study area which extends approximately 3.5 km from the site boundary. The LVIA also considers how the proposal may impact the visual amenity of the area, as experienced by people. Receptor groups include residents, road users and recreational visitors.*
- *The LVIA is also supported by photographs and visualisations, showing the existing view (baseline), short-term change (e.g. Year 5) and long-term change (e.g. Year 25). The following viewpoints are included:*
    - *Old Military Road (approx. NO 639 933);*
    - *Peter Hill (approx. NO 577 885);*
    - *Airy Muir (approx. NO 604 874);*
    - *Mount Shade (approx. NO 626 870);*
    - *Clachnaben (approx. NO 615 865);*
    - *Glen Dye Lodge (approx. NO 644 863);*
    - *Charr Bothy (approx. NO 615 831);*

- *Cairn o'Mount (approx. NO 648 806);*
- *Mount Battock (approx. NO 550 845);*
- *Track above Burn of Baddymicks (approx. NO 584 836);*
- *Sandy Hill (approx. NO 593 859); and,*
- *B974 (approx. NO 650 837).*

- *Visualisations are presented alongside baseline photographs, aligned with them and at the same scale, to aid comparison.*

15.3 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

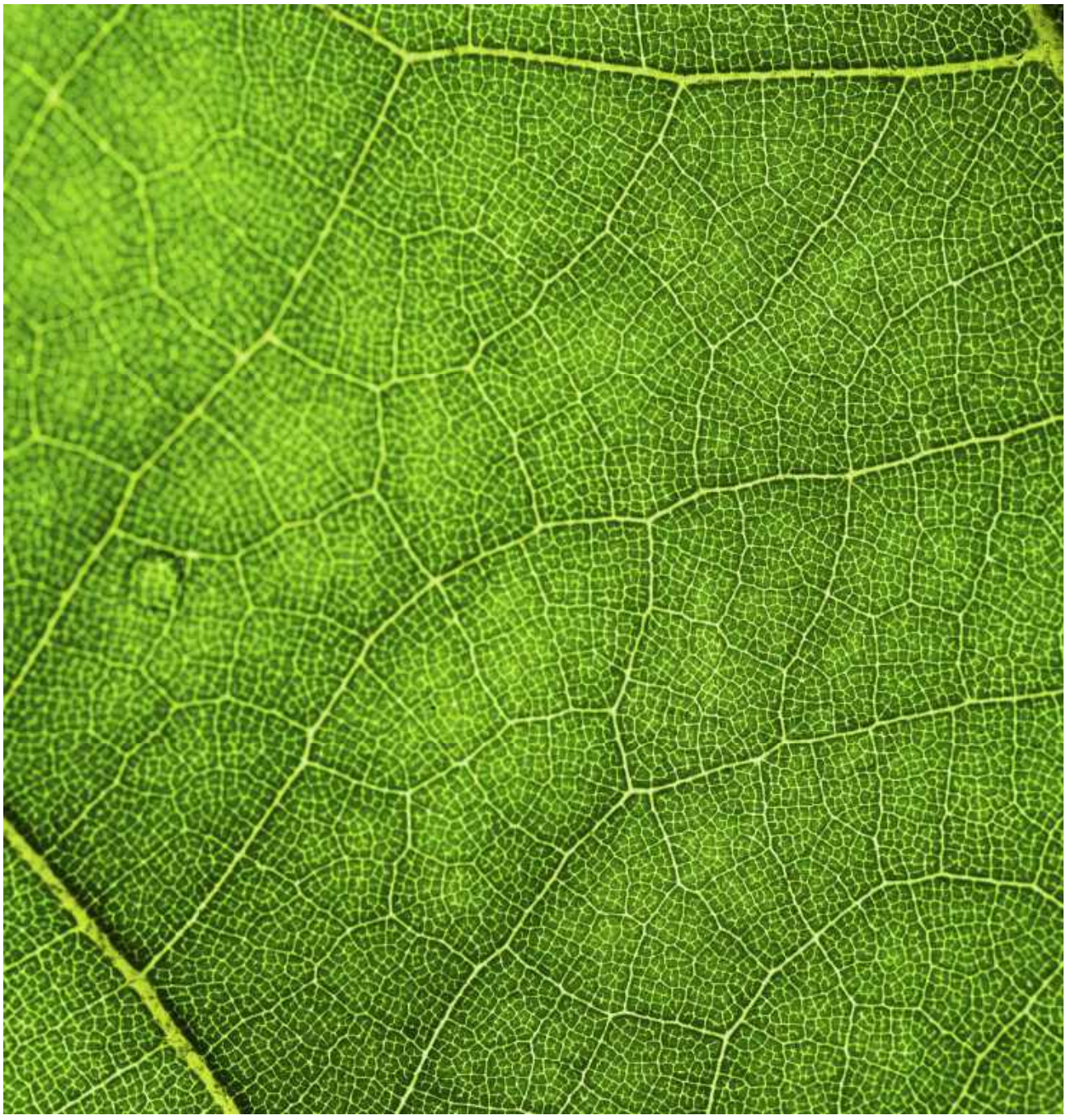
15.3.1 The assessment was carried out by Land Use Consulting and is included in full on the following pages with Visualisations found in Volume 3.

This Page is intentionally left blank for the LUC LVIA text. More pages to follow as needed.

Scottish Woodlands

Glen Dye Moor New Woodland Creation LVIA

Report
Prepared by LUC
September 2025



Scottish Woodlands

Glen Dye Moor New Woodland Creation
LVIA

Version	Status	Prepared	Checked	Approved	Date
1.	Report	P. Main	S. Oxley	S. Oxley	12.09.2025

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Strategic Planning & Assessment
Development Planning
Urban Design & Masterplanning
Environmental Impact Assessment
Landscape Planning & Assessment
Landscape Management
Ecology
Historic Environment
GIS & Visualisation
Transport & Movement Planning
Arboriculture

Contents

Chapter 1
Landscape and Visual Amenity

Introduction

1.1 This chapter contains the landscape and visual impact assessment (LVIA), the key objective of which is to identify, describe, and assess the likely significant landscape and visual effects of the new woodland creation at Glen Dye Moor (herein referred to as the proposed woodland creation). The proposed woodland creation comprises the following proposals:

- Approximately 690 net hectares (ha) of new native woodland establishment through natural regeneration.
- Approximately 1,420 net ha of new native woodland (Native Scots Pine, Upland Birch and Montane scrub) establishment through new planting, including ground cultivation and tree planting, along with associated maintenance.
- Approximately 640 net ha of new productive woodland establishment of Scots Pine, Sitka Spruce and a minor component of other conifer species, through new planting. This would include ground cultivation and tree planting, along with associated maintenance.
- Utilisation of new and existing deer fencing to protect new woodland establishment. The total length of fencing is approximately 45,700m including almost 11,000m of existing deer fence that would be retained. The fencing would include the installation of gates to maintain and enhance recreational access. Grouse droppers would also be installed where required to reduce risk of bird collisions.
- New forest roading (approximately 2,240m).
- Deer management, including the preparation of a deer management plan.

1.2 Specifically, this chapter considers the potential effects of the proposed woodland creation on:

- landscape character and resources, including effects upon the physical elements, character and/or qualities of the landscape; and
- visual amenity, including effects upon potential receptors (people) caused by change to the appearance of the landscape.

1.3 Landscape character and resources are considered to be of importance in their own right and are valued regardless of whether they are seen by people. Effects on views and visual amenity as perceived by people are clearly distinguished from, although closely linked to, effects on landscape character and resources. Landscape and visual impact assessments are therefore separate albeit linked processes.

1.4 The assessment methodology for the landscape and visual impact assessment (LVIA) was developed in accordance with the *Guidelines for Landscape and Visual Impact Assessment* (Version 3, 2013) (GLVIA3) and is detailed in **Appendix 1: Methodology**. The assessment was undertaken by a team including Chartered Landscape Architects (Chartered Members of the Landscape Institute (CMLI)) and visualisation experts at LUC who have extensive experience in the assessment of landscape and visual effects.

1.5 This chapter is supported by **Figures 1-18**. Accompanying visualisations are illustrated as **Figures 7-18** and have been prepared in accordance with the methodology set out in **Appendix 1: Methodology**.

1.6 This chapter should be read alongside the **Glen Dye Moor: New Woodland Creation Environmental Impact Assessment (EIA) Report** and **Appendix 1: Methodology**.

Scope of the Assessment

Effects Assessed in Full

1.7 The following effects are assessed in full:

- Effects on the physical landscape of the Application Site ('the Site');
- Effects on landscape character of the Study Area;
- Effects on receptors at representative viewpoints;
- Effects on the Special Landscape Area (SLA) of Clachnaben and Forest of Birse, within which the Site is situated.

Effects Scoped Out

1.8 On the basis of the desk based and survey work undertaken, the professional judgement of the assessment team, experience from other relevant projects and policy guidance or standards, the following topic areas were scoped out of the assessment:

- Effects on visual receptors, landscape character, and designated landscapes beyond a 3.5km radius from the Site, where it is judged that potential significant effects are unlikely to occur; and
- Effects on residential visual amenity, given the nature of the proposed woodland creation is not judged likely to experience significant visual effects.

Guidance and Data Sources

1.9 In summary, this LVIA was carried out in accordance with, and with reference to the information and principles contained below.

Assessment Guidance

- Landscape Institute and the Institute of Environmental Assessment (2013) Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (GLVIA3)[1];
- SNH (2018) A Handbook on Environmental Impact Assessment, Appendix 2: Landscape and Visual Impact Assessment, Version 5[2];
- Landscape Institute Advice Note 06/19 Visual Representation of Development Proposals[3].

Landscape Character

- NatureScot (2019) Scottish Landscape Character Types Map and Descriptions[4].

Designated Areas

- NatureScot and Historic Environment Scotland (2020) Guidance on Designating Local Landscape Areas[5]; and
- Aberdeenshire Council (2016) Aberdeenshire Local Landscape Designation Review.[6]

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[1] The Landscape Institute and Institute of Environmental Management and Assessment. (2013). Guidelines for Landscape and Visual Impact Assessment - 3rd Edition (GLVIA3). Spon.
[2] Scottish Natural Heritage (2018) A Handbook on Environmental Impact Assessment, Appendix 2: Landscape and Visual Impact Assessment, Version 5
[3] Landscape Institute Technical Guidance Note 06/19 Visual Representation of Development Proposals
[4] NatureScot (2019) Scottish Landscape Character Types Map and Descriptions, Landscape Character Types (LCTs), SNH
[5] NatureScot and Historic Environment Scotland (2020) Guidance on Designating Local Landscape Areas
[6] Aberdeenshire Council (2016) Aberdeenshire Local Landscape Designation Review

Consultation

1.10 The scope of the Landscape and Visual Impact Assessment was informed by a scoping response and discussed and agreed with Scottish Forestry. This included agreement on the location of assessment viewpoints, and the approach to be taken to preparation of the visualisations.

Study Area

1.11 The Study Area encompasses all of the site and an area of 3.5km radius extending all around it. It is shown on **Figure 1: Study Area**.

Field Survey

1.12 Field survey work was carried out in August 2025 and records were made in the form of field notes and photographs. Field survey work included visits to the site and viewpoints to consider potential effects on landscape character and views.

Assessment Methodology

1.13 The LVIA methodology was prepared in accordance with the principles contained within GLVIA3 and is described in detail in **Appendix 1: Methodology**. This should be referred to whilst reviewing the assessment in order to gain a clear understanding of how findings of significance were informed.

Existing Conditions – Landscape Baseline

Introduction

1.14 The Site is described in **Chapter 3**. This section describes the Site with a focus on the landscape and visual baseline, including current landscape character and designations.

The Site and Study Area

1.15 The Site is an area of undulating upland that is smooth and rolling, with rounded hill summits dissected by glens and some steep gullies. Much of the southern half of the Site falls within the upper reaches of the Water of Dye catchment. The northern extents encompass the upper reaches of the Water of Aven catchment. Both are part of the larger Water of Dee catchment.

1.16 The watershed that separates these two catchments is made up of a ridge of hills that runs south-west to north-east and includes the Corbett named as Mount Battock (778m above ordnance datum (AOD)), as well as smaller summits such as Hill of Badymicks (576m AOD), Mount Shade (507m AOD), and Clachnaben (589m AOD). The latter is a landmark, owing to the distinctive granite tor on its summit which commands a familiar presence throughout the wider landscape.

1.17 The high point of the Site is 778m AOD, at the summit of Mount Battock, and the low point is 125m AOD within the gully of the Water of Aven in the north-east of the Site.

1.18 The landcover of the Site is mostly made up of heather moorland, which contributes to its character of expansive openness. There is some broadleaf riparian woodland in lower areas. The eastern part of the Study Area encompasses the westerly extents of an expansive area of plantation forest.

Landscape Character

1.19 NatureScot has published a digital map-based landscape character assessment (LCA) for Scotland. The whole of Scotland is divided into discrete areas called landscape character types (LCTs). The LCTs what fall within the Study Area can be seen in **Figure 2: Landscape Character Types**. The Site is situated within LCT 29: Summits and Plateaux – Aberdeenshire, the host LCT, the key characteristics of which include:

- "*An expansive upland plateau with a smooth rolling landform and rounded hill summits. Landform is more complex along the Highland Boundary Fault.*
- *Foreground to the Cairngorm massif and Cairngorms National Park.*
- *Backdrop in views from the north from Lower Deeside and the fringes of Aberdeen city.*
- *Extensive central and western ridges covered with expansive heather and grass moorland.*
- *Regionally prominent hills.*
- *Coniferous forested lower hills, particularly extensive in the north-east. Wind farm development also present in this area.*
- *A patchwork of green pasture extends high into narrow valleys on the fringes of these uplands.*
- *Unexpected pockets of farmland and isolated farms and estate buildings associated lower ground in part of the core of these uplands.*
- *Derelict grey stone cottages are occasional features amidst open moorland.*
- *Numerous old routeways popular with walkers and these, and the B974 Cairn o' Mount road, offer commanding views to the Howe of Mearns and the coast, and to Deeside.*
- *Wild character experienced in the less modified central and western parts of this landscape.*
- *Dramatic juxtaposition of the steep scarp slopes of these rugged uplands with the expansive low-lying farmed and settled Howe of the Mearns*."[7]

1.20 In the northern extents of the study area, approximately 0.6km north-east of the site, is LCT 33: Broad Wooded Valley with Estates, the key characteristics of which include:

- "*A large-scale valley landform in which the valley sides generally consist of undulating slopes and hills and the valley floors are flat.*
- *Richly wooded landscape often providing a strong sense of enclosure, particularly on lower slopes.*
- *Sparkling shingly rivers follow the valley floors: wide, with occasional islands in the Dee, tributaries meander in narrower glens.*
- *Range of settlements from a small town and villages, mostly on the north banks of the rivers, to groups of houses, estates, steadings and individual dwellings.*
- *Frequent estates with fine buildings, grand gateways and stone boundary walls.*
- *Main road corridor.*
- *Grand castles hotels and houses given an impression of a well-settled, prosperous and traditional character.*
- *Views along the strath and out to the surrounding uplands giving a sense of scale.*
- *Great diversity of trees and rich understorey form a landscape of colourful foliage and dappled light; striking colours in autumn.*
- *Westwards the landscape assumes a more Highland character;*
- *Focus for a range of recreational activities*."[8]

1.21 The most westerly perimeter of the Site borders the boundary line between the local authority area of Aberdeenshire Council and that of Angus Council. The boundary line at this point is determined by a ridge of

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[7] NatureScot (2019) SNH National Landscape Character Assessment – Landscape Character Type 29: Summits and Plateaux – Aberdeenshire [online] available at: https://www.nature.scot/sites/default/files/LCA/LCT%20029%20-%20Summits%20and%20Plateaux%20-%20Aberdeenshire%20-%20Final%20pdf.pdf.

[8] NatureScot (2019) SNH National Landscape Character Assessment – Landscape Character Type 33: Broad Wooded Valley With Estates [online] available at: https://www.nature.scot/sites/default/files/LCA/LCT%20033%20-%20Broad%20Wooded%20Valley%20with%20Estates%20-%20Final%20pdf.pdf.

hills that extend from Hill of Cammie to Hill of Fingray via Mount Battock. The boundary line between the two council areas is the same as that which separates LCT 29: Summits and Plateaux – Aberdeenshire from LCT 376: Summits and Plateaux – Tayside. The westerly extents of the Study Area are within LCT 376. The ridge of hills (Hill of Cammie - Hill of Fingray) would screen the proposed woodland creation from receptors south-west of the ridge. As such, it is considered that the proposed woodland creation would have no perceptible effects on LCT 376. Consequently, it has been scoped out of this assessment.

1.22 Similarly, the south-western extents of the study area contain LCT 371: Mid Upland Glens. The proposed woodland creation would have no perceptible effects on this LCT as the ridge of hills (Hill of Cammie to Hill of Fingray via Mount Battock) would provide screening from this direction.

Designated Landscapes

1.23 The Site is not situated within any nationally designated landscapes, such as a National Scenic Area. However, almost the entirety of the Site is situated within a locally designated landscape: Clachnaben and Forest of Birse Special Landscape Area (SLA). Please refer to **Figure 4: Special Landscape Areas** to view the SLAs within the Study Area. This SLA extends from the ridge of the Mounth (which is the southern perimeter of the Site) north-westwards to the valley of Water of Feugh. The special qualities of this SLA include:

- "*Strong, rolling relief of the upland landscape, including highly distinctive hill profiles the most recognisable of which is the crag of Clachnaben.*
- *High wildness qualities including a virtual absence of habitation, limited access, extensive open moorland and rugged terrain.*
- *Uninterrupted natural landcover of heather moorland across most of the area, with forestry on fringes.*
- *Forest of Birse includes a range of habitat types, including the community-owned Commonty Pinewoods, which are being positively managed* … [and are] *an important habitat for bird life.*
- *A widely visible landscape, forming the backdrop to Deeside to the north, and with the landmark of Clachnaben seen from miles around.*
- *The long minor road into Ballochan ends at the remote Forest of Birse Kirk, with historic links over The Fungle, an ancient way linking Deeside with Glen Tarf.*
- *Expansive area which continues seamlessly westwards into the Glen Tanar Forest area in the Cairngorms National Park.*
- *Clachnaben is a popular hill summit, with views across the whole of this landscape and beyond. Remote Mount Battock is the most easterly of the Corbetts (hills over 2500 feet), and there are several hill ascents accessible from Ballochan*."[9]

1.24 The southern extents of the Study Area are situated within the Braes of the Mearns SLA, the special qualities of which include:

- "*Strong contrast between the distinctive flat Howe and the dramatic ridge of the Mounth to the north.*
- *Clear expression of the Highland Boundary Fault, where Highland and Lowland Scotland meet.*
- *Intact farmed landscape of the Howe of the Mearns, with a strong structure of beech woodland and avenues along the foot of the slopes.*
- *Highly visible ridge viewed from across the landscape to the south east, including from the A90, which defines the Howe of the Mearns.*
- *Cairn o' Mount scenic viewpoint, a popular stopping place on the hill road with views across the Howe.*
- *The intimate wooded glen of Strathfinella provides access into the hills for walkers and mountain bikers.*

[9] Aberdeenshire Council (2016) Aberdeenshire Local Landscape Designation Review [online] available at: https://www.aberdeenshire.gov.uk/media/16263/local-landscape-designations-review-report.pdf.

- *Wooded estate landscapes distinguish this part of the Howe of the Mearns from the more open farmland to the south, and include The Burn, Fasque, and Drumtochty Castle.*
- *Well known literary associations of the Howe of the Mearns including the work of Lewis Grassic Gibbon, with scenes from the recent film version shot in Fettercairn.*"[10]

Existing Conditions – Visual Baseline

Introduction

1.25 This section describes the visual amenity of the Site and identifies visual receptors (people) that would be affected by changes to views due to the proposed woodland creation. This section also introduces the viewpoints that are used to assess effects on receptors, including reasons for their selection.

1.26 The Site and surrounding area are popular for recreation for those walking, cycling, riding, and partaking in winter sports. Mount Battock and Clachnaben are popular hill summits. Recreational users also include those of Charr bothy. Other receptors include road users of the B974 (Cairn o' Mount Road). There are no residential properties within the Site; although, within the Study Area there are scattered properties along the B974 (Cairn o' Mount Road), such as those around Glendye Lodge and Greendams to the east and north-east of the Site.

1.27 In summary, visual receptors include:

- Recreational receptors (hillwalkers, cyclists, horse riders, etc);
- Residential receptors;
- Road users.

1.28 The viewpoints used to assess the visual effects are listed in **Table 1.1** below and their locations are shown on **Figure 5: Viewpoints**.

[10] Aberdeenshire Council (2016) Aberdeenshire Local Landscape Designation Review [online] available at: https://www.aberdeenshire.gov.uk/media/16263/local-landscape-designations-review-report.pdf.

Table 1.1 Viewpoint Locations

No.	Location	Reason for Selection	Grid Reference (NGR)	Approx. Distance (km)[11]
1	Old Military Road	Represents road users and people in the general vicinity of the Old Military Road	363971, 793010	3.3 km
2	Peter Hill	Represents hill walkers in the vicinity of this local hill summit	357754, 788502	0.7 km
3	Airy Muir	Represents hill walkers in the vicinity of this local hill summit	362658, 787094	< 0 km
4	Mount Shade	Represents hill walkers in the vicinity of this local hill summit	362658, 787094	< 0 km
5	Clachnaben	Represents recreational visitors / hill walkers to the popular local hill summit (579m AOD)	361560, 786488	< 0 km
6	Glendye Lodge	Represents recreational visitors / walkers / estate workers in this general vicinity	364269, 786323	0.7 km
7	Charr Bothy	Represents recreational visitors / hill walkers visiting the MBA bothy at the foot of Charr Craig	364977, 783840	< 0 km
8	Cairn o' Mount	Summit (455m AOD) of B974 road over the Mounth, representing views experienced by visitors to the cairns and road users passing over the summit of the Cairn o' Mount Road	364848, 780675	< 0 km
9	B974	Represents views experienced by road users on the Cairn o' Mount Road	364977, 783840	< 0 km
10	Track above Burn of Badymicks	Represents walkers and estate workers in this area	358520, 783602	< 0 km
11	Sandy Hill	Represents hill walkers in the vicinity of this local hill summit	359339, 785898	< 0 km
12	Mount Battock	Represents recreational visitors / hill walkers to the popular local Corbett Hill summit (778m AOD)	364977, 783840	< 0 km

[11] Distance between viewpoint and the Site boundary.

Potential Landscape and Visual Effects

1.29 This section provides an overview of the elements of the proposed woodland creation that are likely to result in landscape and visual effects. Construction and operational effects are considered separately.

1.30 Elements of the proposed woodland creation that are likely to result in landscape and visual effects include:

- Approximately 1,420 net ha of new native woodland and 640 net ha of new productive woodland;
- New deer fencing;
- New forest tracks; and
- Natural regeneration.

Sources of Effects during the Construction / Implementation Phase

1.31 The construction / implementation phase has been planned to be staggered, so it extends across three-to-five years. During this time there would be potential short term landscape and visual effects arising from the following:

- Construction of new tracks by machinery and by hand and maintenance of existing tracks;
- Delivery and layout of equipment, machinery, and materials;
- Construction of fencing by machinery and by hand;
- Ground preparation using machinery and by hand: invert mounding, scarification, and hand screefing (collectively referred to as “ground preparation” herein);
- Planting of trees by hand.

1.32 No new quarries or borrow pits are planned.

Sources of Effects during the Maintenance Phase

1.33 In the five-to-ten year maintenance phase following the construction / implementation phase, there would be short to medium term landscape and visual effects arising from the following:

- The ongoing presence of disturbed earth from earlier ground preparation;
- The visible presence of recently constructed tracks;
- The visible presence of recently constructed deer fencing (deer fencing would have grouse droppers where fencing runs within 2km of Black Grouse leks);
- The visible presence of tree shelters in a small number of areas;
- Areas of slowly establishing planted woodland, including the faster growing coniferous species in areas of productive timber growing, and the associated rides that separate each coup in these areas.

1.34 Within the five-to-ten year maintenance phase, there would be periodic landscape and visual effects arising from the following maintenance activities:

- Delivery and layout of equipment, machinery, and materials;
- Repairs to fencing by machinery and by hand and repairs to tracks by machinery;
- Increased human activity relating to the management of the area including deer culling; and
- Tree maintenance that would take place in the first five years post-planting:
  - Application of fertilisers, if used;
  - beating-up (planting of trees to replace losses); and

- weeding by hand, by machine, or through the use of pesticides.

Sources of Effects during the Establishment Phase

1.35 Following the five-to-ten-year maintenance phase, the slowly maturing woodland would be a visible presence. However, effects would not generally be considered to be adverse. Rather, the mosaic of maturing woodland in the Site and Study Area would make a positive **(beneficial)** contribution to landscape character and views.

1.36 Monitoring during the establishment phase on foot or by drone may bring about periodic landscape and visual effects due to increased activity in the Site. At other times there would be little or no activity on site, until it is considered to be appropriate to remove the fencing, which may be considered after around 20-40 years.

Mitigation Measures

1.37 Mitigation measures would be implemented as part of good construction practice or have been embedded into the scheme proposals described in **Chapter 4**. Embedded mitigation measures have been considered in the design, construction / implementation and establishment phases.

Design

- The new woodland has been designed as a naturalistic mosaic, including large areas of native species, some commercial coniferous forest plantation, linking to existing areas of forestry, and large areas of open ground and peatland, which would not be planted, but where natural regeneration would be promoted.
- The areas to be left open would extend across the high ground and upland, enabling the landform to be seen, and to respect landmarks like Clachnaben and associated views across the landscape.
- Planting would be staggered so as to assist in creating a more natural looking appearance.

Construction / Implementation Phase

- No new quarries or borrow pits would be created for the construction of tracks;
- Materials and machinery would be stored tidily and machinery would not be left in place for longer than required for construction purposes, to minimise its impact in views;
- On completion of construction / implementation, all remaining construction materials and equipment would be removed from the site, and any disturbed areas surrounding the site and including temporary storage areas would be restored.

Maintenance and Establishment Phase

- Following implementation, human activities across the Site would be minimal, and would be confined to periods of activity associated with the repair of fences and tracks, replanting of any failed areas, and removal of plant shelters.

Appraisal of Effects on Landscape Receptors

1.38 This section describes the potential effects on the landscape of the Site, landscape character, and designated landscapes which would result from the proposed woodland creation at three points in time:

- at the beginning of the construction / implementation phase (referred to as Year 1 herein);
- five years post-planting, at a point in time following the construction / implementation phase (referred to as Year 5 herein); and
- twenty-five years post-planting, during the establishment phase (referred to as Year 25 herein).

Landscape Fabric of the Site

1.39 The baseline condition of the Site and its constituent elements is described in **Chapter 3** and **paragraphs 1.15-1.28** of this Chapter.

Sensitivity

1.40 The susceptibility of the Site to accommodate the proposed woodland creation is considered to be **medium**. Elements of the Site that indicate greater susceptibility are the landmark hills and their distinctive skylines that are highly visible and exert an important influence on landscape character throughout the wider landscape. The Site forms an important part of the view from the sensitive viewpoints of Clachnaben and Mount Battock. The simple landscape pattern of heather moorland indicates a medium susceptibility. The previous land use of the Site indicates reduced susceptibility. While the Site is relatively remote and within an area considered one of the wildest parts of Aberdeenshire, the pattern of past moorland management represents the intensive management practices of driven grouse moors, and associated network of bulldozed tracks, and consequently perceptions of remoteness and wildness are limited in this regard, indicating reduced susceptibility. Habitat creation via new woodland would more readily contribute to perceptions of naturalness than driven grouse moors and associated track infrastructure and management practices.

1.41 The value of the Site is considered to be **high** owing to its location within the Clachnaben and Forest of Birse SLA and its popularity for recreation.

1.42 Considering both susceptibility to the proposals, and the value of the area, overall, the sensitivity of the Site is considered to be **medium**.

Year 1

1.43 At Year 1, direct landscape effects upon the Site would be brought about by the newly constructed deer fencing with grouse droppers, and tracks. The new tracks would contrast against the surrounding landscape pattern. Construction / implementation activities that would bring about landscape effects include ground preparation, the planting of trees, and the presence and movement of equipment, machinery, and materials. Ground preparation would result in disturbed earth. The scale of change would be **small** and the geographic extent **medium**. The effects would be **short-term** and **partially reversible**. Overall, the magnitude of effect would be **low**, given the works would be phased. Taking into consideration the medium sensitivity of the Site, the level of landscape effects at Year 1 is judged to be **minor (not significant)**.

Year 5

1.44 At Year 5, young trees would cover the valley sides of Glen Dye and the southern slopes of the gully of the Water of Aven. Young trees would ascend the gullies leading to higher elevations and cover the slopes of hills. These trees would be small and seen amongst the moorland and not easily perceived at this stage. The tree shelters on any plants that are outside the deer fenced areas would introduce a new colour to the Site that would contrast with that of the surrounding landscape pattern. Ground disturbed during the construction / implementation phase would have largely regenerated. Maintenance activities would bring about periodic landscape effects, such as the presence and movement of machinery and increased human activity involved in tree maintenance. The scale of change and geographic extent would both be **medium**. The effects would be **medium-term** and **partially reversible**. The magnitude of change would be **medium**. Taking into consideration the medium sensitivity of the Site, the level of landscape effects at Year 5 is judged to be **moderate (significant)**, by which time these effects would largely be positive **(beneficial),** given the removal of grazing pressure across large areas.

Year 25

1.45 At Year 25, mixed woodland would extend up the valley sides of Glen Dye and the southern slopes of the gully of the Water of Aven. Swathes of woodland would ascend gullies and extend up the slopes of hills. At higher elevations, the swathes of woodland would become smaller in scale. The conifer plantation to the east of the Site would extend westwards into the Site and adjoin the mixed woodland. Any areas of tree

shelters would have been removed and the visible presence of tracks would be becoming increasingly filtered and screened by the maturing woodland. It is possible that the deer fencing would have been removed by Year 25 as it is planned to come down between years 20-40 depending on the growth of the montane scrub and progress of the planned natural regeneration. If it still in place at Year 25, it would be less perceptible than at Year 1 as it would be backclothed by maturing woodland and the timber would be well weathered. Occasional monitoring activities on foot or by drone would bring about periodic landscape effects due to increased activity. Overall, the woodland would look more naturalistic, as compared to Year 5. It is likely that the woodland would appear to increasingly blend in with the surrounding landscape as it matures, particularly as natural regeneration enables trees of varying heights to grow, providing a more naturalistic edge to the woodland.

1.46 Compared to the baseline, the new woodland would bring about a change in landscape character from a windswept heather upland to a wooded landscape with a sense of enclosure on the lower slopes within the gullies and Glen Dye. The landscape pattern would shift from the simple pattern of heather moorland to a more complex pattern reflecting the mosaic of different vegetation types, with more diverse colours and textures, resulting from the varying foliage at different elevations.

1.47 Compared to the baseline, the scale of change would be **large** and geographic extent would be **medium**. The effects would be **long-term** and permanent (not irreversible, but unlikely to be reversed, so referred to as partly reversible from here onwards). The magnitude of change would be **high**. Taking into consideration the medium sensitivity, the level of landscape effect at Year 25 is considered to be **major (significant)**, with much of this (all areas of native woodland and natural regeneration) being considered positive (**beneficial**). The areas of plantation conifers are likely to be perceived as a more negative **(adverse)** or **neutral** change in some places.

Landscape Character

1.48 The following assesses the predicted landscape effects of the proposed woodland creation on landscape character, specifically on the LCT 29: Summits and Plateaux – Aberdeenshire and LCT 33: Broad Wooded Valley with Estates.

LCT 29: Summits and Plateaux – Aberdeenshire

1.49 Baseline information for LCT 29: Summits and Plateaux – Aberdeenshire is described in **paragraph 1.29**.

Sensitivity

1.50 The susceptibility of LCT 29 to the proposed woodland creation is **high**. Characteristics that indicate reduced susceptibility include the LCT's large scale and the fact that the upland ridges are in places in poor condition, with bulldozed tracks, peat erosion and bare areas being present. However, while much of the landform of LCT 29 is fairly simple – being made up of smooth, rounded hills – indicating reduced susceptibility, there are areas of complexity and distinctiveness – namely the Highland Boundary Fault zone, Clachnaben, and Mount Battock – which indicates greater susceptibility. The hills are visible landmarks and exert a strong influence on landscape character. Another element of the LCT that indicates greater susceptibility is the perceptual "*wild, remote, and windswept character*"[12] of the hills, as this windswept quality is associated with treeless landscapes of smooth heather moorland. Furthermore, the fairly simple landscape pattern of the LCT indicates greater susceptibility – the pattern of the plateau being made up of heather moorland. Large swathes of the plateau foothills are covered in conifer plantations.

1.51 The value of the LCT is **high** as it contains much of Clachnaben and Forest of Birse SLA and Braes of the Mearns SLA. It also contains areas of ancient woodland and the northern extents of Fasque House Garden and Designed Landscape (GDL). The LCT includes a Core Path: the Fungle, an ancient way linking

[12] NatureScot (2019) SNH National Landscape Character Assessment – Landscape Character Type 29: Summits and Plateaux – Aberdeenshire [online] available at: https://www.nature.scot/sites/default/files/LCA/LCT%20029%20-%20Summits%20and%20Plateaux%20-%20Aberdeenshire%20-%20Final%20pdf.pdf.

Deeside with Glen Tarf. The Fungle passes through the north-western extents of the Study Area between near Auchnashinn (395m) and near Mudlee Bracks (688m) – please see **Figure 3: Core Paths**.

1.52 Overall, the sensitivity of the LCT is considered to be **high**.

Year 1

1.53 At Year 1, direct landscape effects on the LCT would be brought about by the newly constructed deer fencing with grouse droppers, and tracks, as described above. The new tracks would contrast with the surrounding landscape pattern. Construction / implementation activities that would bring about landscape effects include ground preparation, the phased planting of trees, and the presence and movement of equipment, machinery, and materials. Ground preparation would result in disturbed earth. Commercial forestry has a widespread presence within this LCT, and restocking regimes are a commonplace activity. Therefore, while these changes would give rise to landscape effects locally, they are not so far removed from processes already taking place within this LCT. The scale of change would be **small** and the geographic extent **medium**, defined as the area of the Site and extending up to 1.5km to the north and north-west. The effects would be **short-term** and **partially reversible** (new woodland could be felled but this is unlikely). Overall, the magnitude of effect would be **low** in the context of the wider LCT. Taking into consideration the medium sensitivity of the Site, and the wider high sensitivity of the LCT, the level of landscape effects at Year 1 is judged to be **minor (not significant)** across the Site and extending up to 1.5km to the north and north-west, reducing to **barely perceptible (not significant)** across the wider LCT beyond this.

Year 5

1.54 At Year 5, young trees would extend up the valley sides of Glen Dye and the southern slopes of the gully of the Water of Aven. Young trees would ascend the gullies leading to higher elevations, and extend over the slopes of nearby hills. These trees would be small and seen amongst the moorland, and would not be easily perceived at this stage. The tree shelters on any plants that are outside the deer fenced areas would introduce a new colour that would contrast with that of the surrounding landscape pattern. Ground disturbed during the construction / implementation phase would have largely regenerated. Maintenance activities would bring about periodic landscape effects, such as the presence and movement of machinery and increased human activity involved in tree maintenance. However, commercial forestry is a large presence within this LCT and restocking regimes are a commonplace activity. Therefore, while these changes would give rise to landscape effects, they are not so far removed from processes already taking place within this LCT. The scale of change would be **medium** and geographic extent would be **medium**, defined as the area of the Site and extending up to 1.5km to the north and north-west. The effects would be **medium-term** and **partially reversible** (trees could be felled but this is unlikely in areas of native woodland). The magnitude of change would be **medium**. Taking into consideration the medium sensitivity of the Site, and the high sensitivity of the LCT, the level of landscape effects at Year 5 is judged to be **moderate (significant)** at the Site and extending up to 1.5km to the north and north-west, reducing to **minor (not significant)** beyond this, and within the context of the wider LCT. By this time, the effects would largely be positive **(beneficial)**, as the removal of grazing pressure allows widespread regeneration.

Year 25

1.55 At Year 25, mixed woodland would extend up the valley sides of Glen Dye and the southern slopes of the gully of the Water of Aven. Swathes of woodland would ascend gullies and extend across the slopes of hills. At higher elevations, the swathes of woodland would become smaller in scale. The conifer plantation to the east of the Site would extend westward into the site and adjoin the mixed woodland. Tree shelters would have been removed and the visible presence of tracks would be becoming increasingly filtered and screened by the maturing woodland. It is possible that the deer fencing would have been removed by Year 25, as it is planned to come down between years 20-40 depending on the growth of the montane scrub and success of natural regeneration. If it still present at Year 25, it would be less perceptible than at Year 1 as it would be backclothed by maturing woodland and the timber would be well weathered. Occasional monitoring activities on foot or by drone would bring about periodic landscape effects due to increased activity. The woodland would look more naturalistic, compared its appearance at Year 5. Similarly, it is likely that the woodland

would appear to blend in with the surrounding landscape as it matures, particularly as natural regeneration would enable trees of varying heights to grow, providing more a more naturalistic edge to the woodland.

1.56 The new woodland would increase the woodland and forest cover of the LCT, changing areas of windswept heather upland to a wooded or forested landscape. The landscape pattern would shift from the simple pattern of heather moorland to a more complex pattern of varied vegetation, shadow and texture. The scale of change would be **large** and geographic extent would be **medium**, defined as the area of the Site and extending up to 1.5km to the north and north-west, across part of the LCT. The effects would be **long-term**. Though **partly reversible,** it is unlikely that the native woodland would be felled in practice. The magnitude of change would be **high**. Taking into consideration the medium sensitivity of the Site and the high sensitivity of the LCT, the level of landscape effects at Year 25 is considered to be **major (significant)** at the Site and extending up to 1.5km to the north and north-west, reducing to **minor (not significant)** beyond 3.5km. Many effects (all areas of native woodland and natural regeneration) are likely to be considered positive **(beneficial)**. The areas of plantation conifers are likely to be perceived as a more negative **(adverse)** or **neutral** change in some places.

LCT 33: Broad Wooded Valley with Estates

1.1 Baseline information for LCT 33: Broad Wooded Valley with Estates is described in **paragraph 1.20**.

Sensitivity

A.1 The susceptibility of LCT 33 to the proposed woodland creation is **low**. Primarily because one of the key characteristics of the LCT is the fact that it is a "*richly wooded landscape*,"[13] indicating reduced susceptibility. Similarly, the perceptual aspects of this landscape – "*rich colours and shadows where contained views are drawn to details of woodland*" – are characterised by woodland, indicating reduced susceptibility. Other characteristics that indicate reduced susceptibility include the simple valley landform. While characteristics that indicate greater susceptibility include the distinctive hill profiles of the Mounth, such as that of Clachnaben, that contain the valley. Higher susceptibility is indicated by its intervisibility with the sensitive landscape of the Clachnaben and Forest of Birse SLA; in particular: the relationship between the wooded lowland valley and the heather moorland of the uplands.

1.2 The value of the LCT is **high** as it contains much of the Dee Valley SLA as well as Conservation Areas (Kincardine O'Neil and Aboyne), Crathes Castle GDL, and much ancient woodland. The LCT also contains the National Cycle Network (NCN) route 195 and several Core Paths.

1.3 Overall, the sensitivity of the LCT is considered to be **medium**.

Year 1

1.4 At Year 1, indirect landscape effects on the LCT would be brought about by the visible presence of newly constructed deer fencing. Construction / implementation activities that would bring about landscape effects include the visible presence of ground preparation, the planting of trees, and the presence and movement of equipment, machinery, and materials. Ground preparation would result in disturbed earth. The scale of change would be **small** and the geographic extent **small**, defined as the area extending up to 1.5km from the Site to the north-west. The effects would be **short-term** and **partially reversible**. Overall, the magnitude of effect would be **low**. Taking into consideration the medium sensitivity of the LCT, the level of landscape effects at Year 1 is judged to be **minor (not significant)** up to 1.5km north-west from the Site.

Year 5

1.5 At Year 5, young trees would cover much of Mount Shade, Airy Muir, Meikle Strathvella, the catchment of Burn of Greendams, and the southern slopes of the gully of the Water of Aven. These trees would be small and, seen amongst the moorland, so not easily perceived. Ground disturbed during the construction /

[13] NatureScot (2019) SNH National Landscape Character Assessment – Landscape Character Type 33: Broad Wooded Valley With Estates [online] available at: https://www.nature.scot/sites/default/files/LCA/LCT%20033%20-%20Broad%20Wooded%20Valley%20with%20Estates%20-%20Final%20pdf.pdf.

implementation phase would have regenerated. Maintenance activities would bring about periodic landscape effects, such as the presence and movement of machinery and increased human activity involved in tree maintenance. The scale of change would be **medium** and geographic extent would be **small**, defined as the area extending up to 1.5km from the Site to the north-west. The effects would be **medium-term** and **partially reversible**. The magnitude of change would be **medium**. Taking into consideration the medium sensitivity of the LCT, the level of landscape effects at Year 5, is judged to be **moderate (significant)** up to 1.5km north-west from the Site, reducing to **minor (not significant)** beyond this. By this time, effects would largely be positive **(beneficial).**

Year 25

1.6 At Year 25, mixed woodland would extend across much of Mount Shade, Airy Muir, Meikle Strathvella, the catchment of Burn of Greendams, and the southern slopes of the gully of the Water of Aven. At higher elevations, the swathes of woodland would become smaller in scale. The new woodland would be perceived as a continuation and diversification of the conifer stands located to the north-east of the Site. By Year 25, it is possible that the deer fencing would have been removed as it is planned to come down between years 20-40 depending on the growth of the montane scrub and success of the natural regeneration. If it still present at Year 25, it would be less perceptible than at Year 1 as it would be backclothed by maturing woodland and the timber would be well weathered. Occasional monitoring activities on foot or by drone would bring about periodic landscape effects, due to increased activity. The woodland would look more naturalistic as compared at Year 5. It is likely that the woodland would appear to blend in with the surrounding landscape as it matures, particularly as natural regeneration would enable trees of varying heights to grow, providing a more naturalistic edge to the woodland.

1.57 The new woodland would add to the forest cover present in the LCT. The main change would be the alteration of character from windswept heather upland to a partly wooded landscape. The scale of change would be **large** and geographic extent would be **small**, defined as the area extending up to 1.5km from the Site to the north-west. The effects would be long-term. The magnitude of change would be **high**. Taking into consideration the medium sensitivity, the level of landscape effects at Year 25 is considered to be **major (significant)** up to 1.5km from the Site to the north-west, reducing to **minor (not significant)** beyond 3.5km, and across the wider LCT. Many effects (all areas of native woodland and natural regeneration) are likely to be considered positive **(beneficial).** The areas of plantation conifers are likely to be perceived as a more negative **(adverse)** or **neutral** change in some places.

Appraisal of Effects on Visual Receptors

1.58 This section considers how the proposed woodland creation would alter views at Years 1, 5, and 25.

Representative Viewpoints

1.59 Table *1.2*-Table *1.12* describe the baseline view and its sensitivity from each of the representative viewpoints across the Site. Each table considers visual effects arising at Years 1, 5, and 25. Accompanying annotated photomontages for each viewpoint are provided in **Figures 7-18**. **Figure 6: Proposed Woodland** shows the locations of proposed planting groups across the Site.

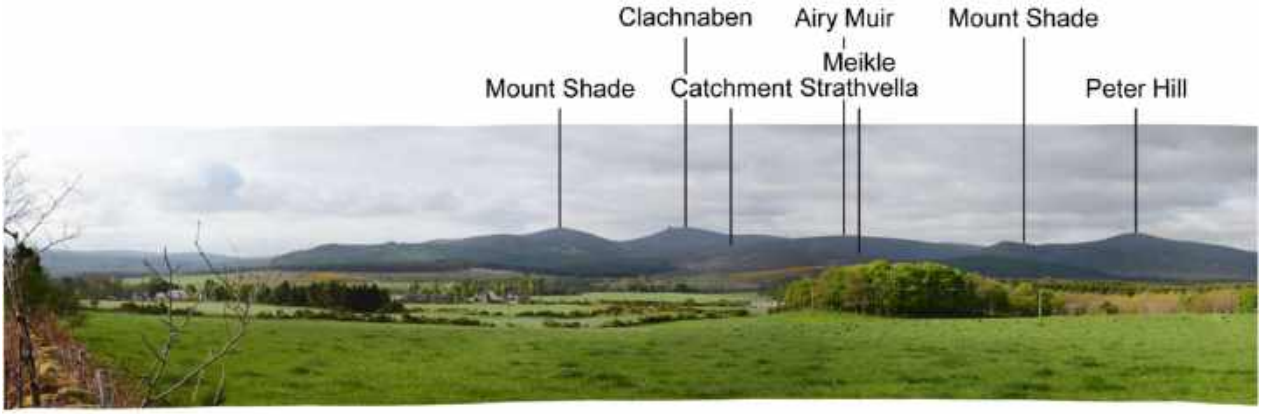
Table 1.2 Viewpoint 1: Old Military Road

Viewpoint 1: Old Military Road			
Grid Reference (NGR)	363971, 793010	**Figure Number**	Figures 7a-c – Viewpoint 1: Old Military Road

Viewpoint 1: Old Military Road			
Landscape Type	LCT 33: Broad Wooded Valley With Estates	**Designated Landscape or Wild Land Area**	N/A
Direction of View	South-west	**Distance (km)**	3.3 km

Location, description of existing view, and potential receptors:

This viewpoint is located approximately 3.3km from the site, by Old Military Road in Tillygarmond within the valley of the Water of Feugh. This viewpoint is representative of road users, including cyclists accessing the B974 (Cairn o' Mount Road), and recreational receptors within the valley.



From Viewpoint 1, views to the south-west look out across the gently undulating valley floor, which is contained in the far distance by the rolling upland plateau of the Mounth. Mount Shade, Clachnaben, Airy Muir, and Peter Hill make up most of the skyline. The distinctive tor of Clachnaben is visible and the tip of Mount Battock can be seen in the far distance. Meikle Strathvella (287m AOD) is a small hill seen in front of Airy Muir. The catchment of Burn of Greendams is seen descending from Mount Shade, Clachnaben, and Airy Muir.

The smoothness of the upland landform is emphasised by its closely cropped heather moorland. The landscape pattern of the upland plateau is simple and can make it appear as a dark mass. Conifer stands can be seen on the lower slopes, which also contribute to this simple landscape pattern. The geometric shapes of the stands contrast with the more sinuous and gentle curves of the landform.

Sensitivity:

Road users are considered to be of lower susceptibility as they move through the landscape at pace. However, the road is also popular for cyclists accessing the B974 (Cairn o' Mount Road) and who are considered to be of higher susceptibility. Also, those holidaying in and walking through the valley are recreational receptors who are also considered to be of higher susceptibility. Therefore, the susceptibility is judged to be **high**.

Viewpoint 11 is not a promoted viewpoint; however, it is located less than 1km from SLA 8: Dee Valley, which partially covers the valley of the Water of Feugh. Furthermore, the valley is popular for recreation and there are caravan parks and guest houses in the area. Therefore, the value of the view is judged to be **medium**.

Taking account of the judgements of susceptibility and value, overall sensitivity is judged to be **medium**.

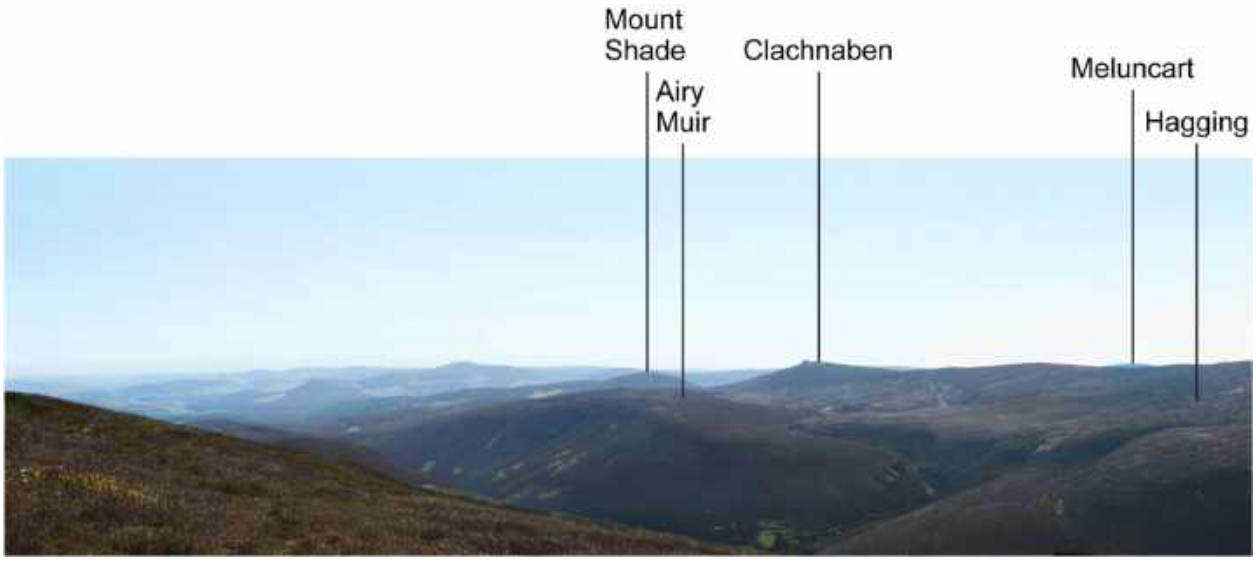
Year 1:

At Year 1, during construction / implementation, activity would be seen in longer distance views. New deer fencing would be seen on the slopes of Mount Shade; although, it is likely this would not be perceptible due to the intervening distance and screening from the existing conifer stands. The ground around newly planted trees would look disturbed as a result of ground preparation, but it is likely that this would not be visible owing to the intervening distance. The movement of machinery and people may be seen in the distance, upon Mount Shade and Airy Muir, as the ground is prepared and trees are planted. The scale of change would be **small** at this stage, given the activity and changes to the ground would not be very

Viewpoint 1: Old Military Road
perceptible at distance, and the geographic extent of the work would be **large**. The effects are judged to be short-term and partially reversible. Overall, the magnitude of change is judged to be **low**. Taking into consideration the medium sensitivity and low magnitude of change, the level of visual effects at Year 1 is judged to be **minor (not significant)**.
Year 5: At Year 5, young trees would be seen across much of Mount Shade, Airy Muir, and Meikle Strathvella, and would be seen ascending the catchment of Burn of Greendams. These trees would be small and, seen amongst the moorland, not so easily perceived at this stage. Ground disturbed during the construction / implementation phase would have largely regenerated. As the new deer fencing would prevent grazing, the heather would grow longer, as would other moorland plants such as grasses. Maintenance activities would bring about periodic visual effects due to the presence and movement of people and machinery involved in tree maintenance. The scale of change would be **small** as visual effects would not be so easily perceived owing to the intervening distance. The geographic extent of the change would be **large**. The effects are judged to be medium-term and partially reversible. Overall, the magnitude of change is judged to be **low**. Taking into consideration the medium sensitivity and low magnitude of change, the level of visual effects at Year 5 is judged to be **minor (not significant)**.
Year 25: At Year 25, mixed woodland would be seen across much of Mount Shade, Airy Muir, and Meikle Strathvella. Woodland would be seen ascending the catchment of Burn of Greendams and continuing on to the higher slopes of Clachnaben. The woodland would be perceived as a change in landscape colour and texture, and the underlying landform would still be perceived beneath the woodland. In the case of Airy Muir, the woodland would accentuate the landform: the change in landscape pattern would pick it out from the surrounding dark mass of the plateau. Natural regeneration within the fenced areas would appear to blend the woodland into the surrounding landscape. The woodland would be perceived as a continuation of the existing conifer stands. By Year 25, it is possible that the deer fencing would have been removed as it is planned to come down between years 20-40 depending on the growth of the montane scrub and natural regeneration. If it is still present at Year 25, it would be less perceptible than at Year 1 as it would be backclothed by maturing woodland and the timber would be well weathered. Overall, the landscape would look more naturalistic than at Year 5. Occasional monitoring activities on foot or by drone would bring about periodic visual effects due to increased activity. The scale of change would be **medium** and geographic extent would be **large**. The effects are judged to be long-term and partly reversible. Overall, the magnitude of change is judged to be **medium**. Taking into consideration the medium sensitivity and medium magnitude of change, the level of visual effect at Year 25 is judged to be **moderate (significant)**.

Table 1.3 Viewpoint 2: Peter Hill

Viewpoint 2: Peter Hill			
Grid Reference (NGR)	357754, 788502	**Figure Number**	Figures 8a-f – Viewpoint 2: Peter Hill
Landscape Type	LCT 29: Summits and Plateaux – Aberdeenshire	**Designated Landscape or Wild Land Area**	SLA 9: Clachnaben and Forest of Birse
Direction of View	South-west to south-east	**Distance (km)**	0.7 km
Location, description of existing view, and potential receptors:			

Viewpoint 2: Peter Hill
The viewpoint is located just south-west of the summit of Peter Hill (617m AOD), which is approximately 0.7km north-west of the site. This viewpoint represents views experienced by receptors ascending Peter Hill. Views to the south-east take in Airy Muir (486m AOD), which is seen on the other side of the deep gully of the Water of Aven. Beyond Airy Muir are Mount Shade, Clachnaben and the ridge that spans between the latter and Mount Shade. Other hills can be seen in the far distance, such as Meluncart which can be glimpsed beyond the ridge.    Views to the south-west take in Mount Battock and Cock Hill.    In longer distance, views to the north-east and east, the conifer stands of the Forest of Birse can be seen. In closer views, the heather moorland landscape pattern is simple and draws the eye along the smooth rolling landform of the hills. The exception to this smoothness is the severe peat hagging and erosion that can be seen along the ridge between Clachnaben and Mount Battock, where deep gullies are forming as the peat erodes, and further bare ground is exposed.
Sensitivity: Recreational receptors, such as hillwalkers ascending Peter Hill, are considered to be of higher susceptibility. The susceptibility, therefore, is judged to be **high**. While this viewpoint is not promoted, it is located within the Clachnaben and Forest of Birse SLA. Therefore, the value of the view is judged to be **high**. Taking account of the judgements of susceptibility and value, overall sensitivity is judged to be **high**.
Year 1:

Viewpoint 2: Peter Hill
At Year 1, during construction / implementation, activity would be seen in middle distance views. New deer fencing would be seen on the slopes of Mount Shade and new deer fencing with grouse droppers would be seen on the slopes of Mount Battock. Although, at these distances it is likely the new deer fencing would not be so easily perceived. The ground around newly planted trees would look disturbed as a result of ground preparation. The movement of machinery and people would be seen upon Airy Muir and the slopes of Mount Shade and the ridge. The scale of change would be **medium** at this stage given the changes to the ground would be seen at relatively closer distances. The geographic extent of the work would be **medium**. The effects are judged to be short-term and partially reversible. Overall, the magnitude of change is judged to be **low**. Taking into consideration the high sensitivity and low magnitude of change, the level of visual effects at Year 1 is judged to be **minor (not significant)**.
Year 5: At Year 5, young trees would be seen ascending the southern bank of the deep gully of the Water Aven. The young trees would be seen to extend up the slopes, across much of Airy Muir, Mount Shade, Cock Hill, and the ridge. Some young trees growing via natural regeneration would be seen ascending the gully and within the catchment of the Leggie. These trees would be small and, seen amongst the moorland, would not be so easily perceived at this stage. Ground disturbed during the construction / implementation phase would have largely regenerated. As the new deer fencing would prevent grazing, the heather would grow longer, as would other moorland plants such as grasses and heathland scrub. Maintenance activities would bring about periodic visual effects due to the presence and movement of people and machinery involved in tree maintenance. The scale of change would be **medium** and geographic extent would be **large**. The effects are judged to be medium-term and partially reversible. Overall, the magnitude of change is judged to be **medium**. Taking into consideration the high sensitivity and medium magnitude of change, the level of visual effect at Year 5 is judged to be **moderate (significant)**, by which time the effect would largely be positive **(beneficial).**
Year 25: At Year 25, mixed woodland would be seen ascending the southern bank of the deep gully of the Water Aven. Swathes of woodland would be seen to extend up the slopes, covering much of Airy Muir and the slopes of Mount Shade. Woodland and montane scrub would be seen upon Cock Hill and the ridge between it and Mount Shade. Trees growing via natural regeneration would be seen ascending the gully and within the catchment of the Leggie. The underlying landform would still be perceivable beneath the woodland and, in the case of the Leggie, would be further emphasised. The new woodland would appear to extend from the existing conifer stands of the Forest of Birse. The natural regeneration within the fenced areas would appear to blend the new woodland into the surrounding landscape. The scars and hagging caused by erosion, which is seen across the landscape, would have reduced somewhat as the peatland vegetation restores over time. By Year 25, it is possible that the deer fencing would have been removed as it is planned to come down between years 20-40 depending on the growth of the montane scrub and natural regeneration. If it is still present at Year 25, it would be less perceptible than at Year 1, as it would be backclothed by maturing woodland and the timber would be well weathered. Overall, the landscape would look more naturalistic than it did at Year 5. Occasional monitoring activities on foot or by drone would bring about periodic visual effects due to increased activity. The scale of change and geographic extent would both be **large**. The effects are judged to be long-term and partly reversible. Overall, the magnitude of change is judged to be **high**. Taking into consideration the high sensitivity and high magnitude of change, the level of visual effect at Year 25 is judged to be **major (significant)**, by which time this effect would largely be positive **(beneficial).**

Table 1.4 Viewpoint 3: Airy Muir

Viewpoint 3: Airy Muir			
Grid Reference (NGR)	362658, 787094	**Figure Number**	Figures 9a-l – Viewpoint 3: Airy Muir
Landscape Type	LCT 29: Summits and Plateaux – Aberdeenshire	**Designated Landscape or Wild Land Area**	SLA 9: Clachnaben and Forest of Birse
Direction of View	360°	**Distance (km)**	< 0 km

Location, description of existing view, and potential receptors:

This viewpoint is located at the summit of Airy Muir, which is a hill located approximately 1.5 km north-west of Clachnaben. This viewpoint is representative of recreational receptors accessing Airy Muir.

From Viewpoint 3, views to the north-east are contained within close distances by the rolling landform. Views to the south-east look out onto Mount Shade and Clachnaben in the middle distance. Mount Battock is seen in the far distance in views to the south-west. Peter Hill is seen in the middle distance in views to the north-west. The smoothness of the landform is emphasised by the vegetation of heather moorland that grows low to the ground and has a simple pattern.

Viewpoint 3: Airy Muir

Sensitivity:

Recreational receptors are considered to be of higher susceptibility. The susceptibility is judged to be **high**.

The viewpoint is located within the Clachnaben and Forest of Birse SLA. Therefore, the value of the view is judged to be **high**.

Taking account of the judgements of susceptibility and value, overall sensitivity is judged to be **high**.

Year 1:

At Year 1, during construction / implementation, activity would be seen in close-to-longer distance views. The ground around newly planted trees would look disturbed as a result of ground preparation. The movement of machinery and people would be seen around Airy Muir and upon the slopes of Mount Shade, Clachnaben, and along the ridge between Clachnaben and Mount Battock as the ground is prepared and trees are planted. The scale of change would be **medium** at this stage as the ground preparation would be seen in close proximity. The geographic extent of the work would be **large**. The effects are judged to be short-term and partially reversible. Overall, the magnitude of change is judged to be **medium**.

Taking into consideration the high sensitivity and medium magnitude of change, the level of visual effects at Year 1 is judged to be **moderate (significant)**.

Year 5:

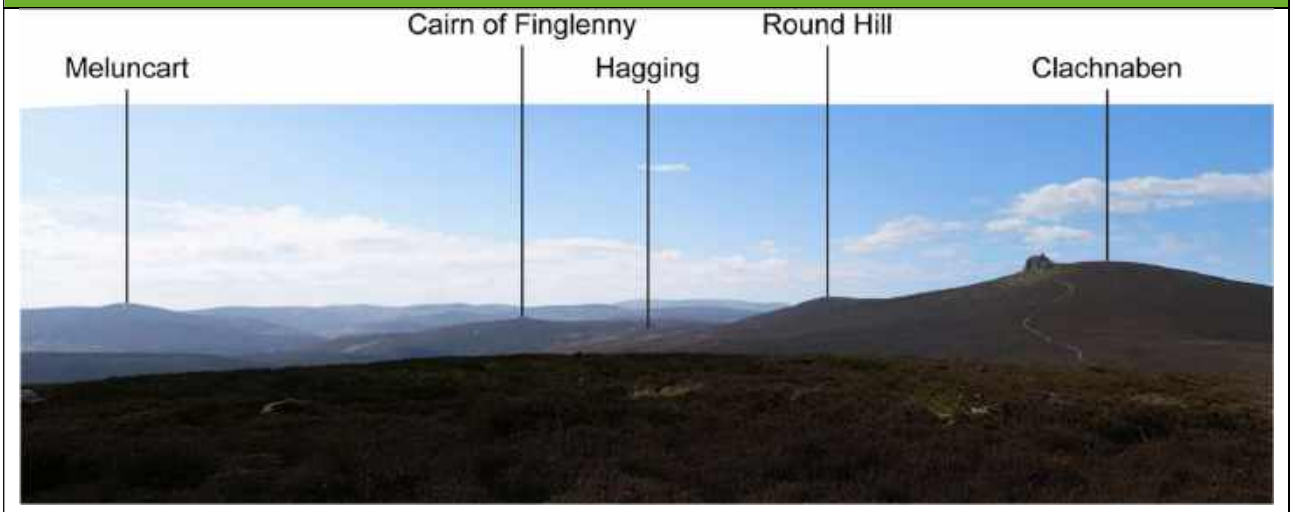
At Year 5, young trees would be seen around Airy Muir and upon the slopes of Mount Shade, Clachnaben and the ridge. These trees would be small and, seen amongst the moorland, would not be easily perceived at this stage. Ground disturbed during the construction / implementation phase would have largely regenerated. As the new deer fencing would prevent grazing, the heather would grow longer, as

Viewpoint 3: Airy Muir
would other moorland plants such as grasses and heathland scrub. Maintenance activities would bring about periodic visual effects due to the presence and movement of people and machinery involved in tree maintenance. The scale of change would be **medium** and geographic extent would be **large**. The effects are judged to be medium-term and partially reversible. Overall, the magnitude of change is judged to be **medium**. Taking into consideration the high sensitivity and medium magnitude of change, the level of visual effects at Year 5 is judged to be **moderate (significant)**, by which time this effect would largely be positive **(beneficial),** associated with regeneration withing the fenced areas.
Year 25: At Year 25, mixed trees would be seen nearby in views to the east, south-east, south, south-west, west, and north-west. The trees would contain views; although, views would be more open in north-westerly views towards Peter Hill and in north-easterly views where there is less tree planting. Mount Shade, Clachnaben, the ridge, and Mount Battock would be screened from view by the new woodland. The new trees would introduce vertical elements to the smooth, rolling landform. Natural regeneration within the fenced areas would appear to blend the woodland into the surrounding landscape. Overall, the landscape would look more naturalistic than it did at Year 5. Occasional monitoring activities on foot or by drone would bring about periodic visual effects due to increased activity. The scale of change and geographic extent would both be **large**. The effects are judged to be long-term and partly reversible. Overall, the magnitude of change is judged to be **high**. Taking into consideration the high sensitivity and high magnitude of change, the level of visual effect is predicted to be **major (significant)**. By Year 25, this effect would largely be positive **(beneficial),** associated with areas of regeneration and native woodland. The change in land use would add diversity to views experienced from here.

Table 1.5 Viewpoint 4: Mount Shade

Viewpoint 4: Mount Shade			
Grid Reference (NGR)	362658, 787094	**Figure Number**	Figures 10a-l – Viewpoint 4: Mount Shade
Landscape Type	LCT 29: Summits and Plateaux – Aberdeenshire	**Designated Landscape or Wild Land Area**	SLA 9: Clachnaben and Forest of Birse
Direction of View	360°	**Distance (km)**	< 0 km
Location, description of existing view, and potential receptors: This viewpoint is located at the summit of Mount Shade, which is located approximately 1.3km north-east of Clachnaben. The viewpoint represents recreational receptors accessing Mount Shade as part of an alternative route to Clachnaben. From Viewpoint 4, views to the south-west look out onto Clachnaben in the midground with its tor being clearly visible against the sky. Beyond Clachnaben is Round Hill (526m AOD) and Cairn of Finglenny; Meluncart can be seen further south. The heather moorland is closely cropped and the landscape pattern is simple and accentuates the smooth, rolling landform. There is visible erosion on the slopes of Cairn of Finglenny, due to the presence of gulleys in the peat.			

Viewpoint 4: Mount Shade



Sensitivity:

Recreational receptors are considered to be of higher susceptibility. The susceptibility is judged to be **high**.

The viewpoint is located within the Clachnaben and Forest of Birse SLA. Therefore, the value of the view is judged to be **high**.

Taking account of the judgements of susceptibility and value, overall sensitivity is judged to be **high**.

Year 1:

At Year 1, during construction / implementation, activity would be seen in middle-to-longer distance views. New fencing with grouse droppers would be seen along the B974 and wrapping around Meluncart. However, at these distances the new deer fencing would not be so easily perceived. The ground around newly planted trees would look disturbed as a result of ground preparation. The movement of machinery and people would be seen upon and around Mount Shade, Airy Muir, Hill of Duclash, Kircram, Round Hill, Cairn of Finglenny, and Meluncart as the ground is prepared and trees are planted. The scale of change would be **small** at this stage, given the activity and changes to the ground would not be very perceptible at distance, and the geographic extent of the work would be **large**. The effects are judged to be short-term and partially reversible. Overall, the magnitude of change is judged to be **low**.

Taking into consideration the high sensitivity and low magnitude of change, the level of visual effects at Year 1 is judged to be **minor (not significant)**.

Year 5:

At Year 5, young trees would be seen upon and around Mount Shade, Airy Muir, Hill of Duclash, Kircram, Round Hill, Cairn of Finglenny, and Meluncart. These trees would be small and, seen amongst the moorland, would not be easily perceived at this stage. Ground disturbed during the construction / implementation phase would have largely regenerated. As the new deer fencing would prevent grazing, the heather would grow longer, as would other moorland plants such as grasses and heathland scrub. Maintenance activities would bring about periodic visual effects due to the presence and movement of people and machinery involved in tree maintenance. The scale of change would be **small,** as the changes would not be easily perceived owing the intervening distances. The geographic extent would be **large**. The effects are judged to be medium-term and partially reversible. Overall, the magnitude of change is judged to be **low**.

Taking into consideration the high sensitivity and low magnitude of change, the level of visual effects at Year 5 is judged to be **minor (significant)**.

Year 25:

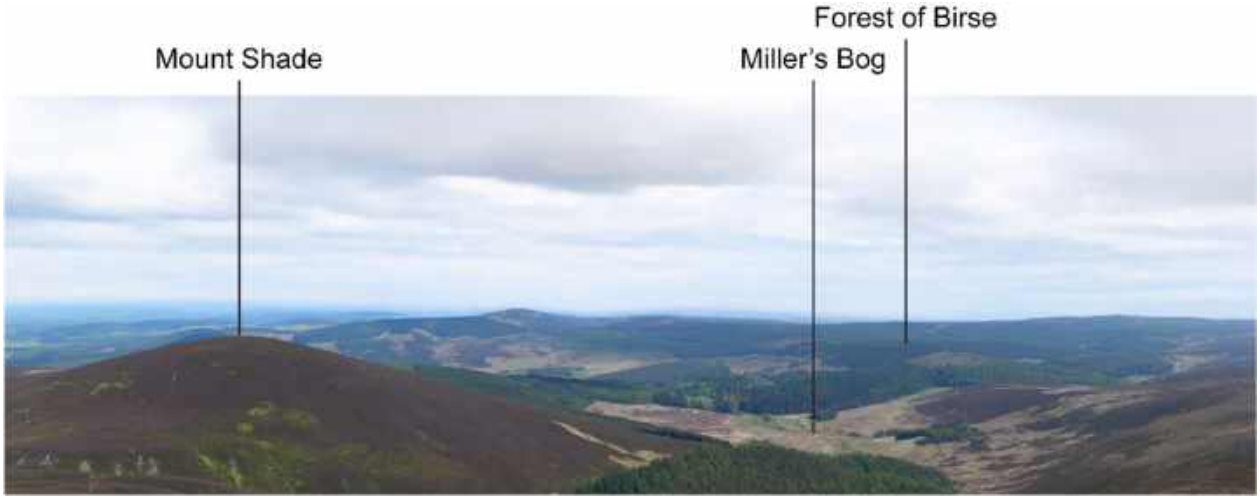
At Year 25, mixed woodland would be seen upon and around Mount Shade, Airy Muir, Hill of Duclash, Kircram, Round Hill, Cairn of Finglenny, and Meluncart. The underlying landform would still be perceived beneath the woodland. Seen at greater distances, the woodland would be perceived as a change in

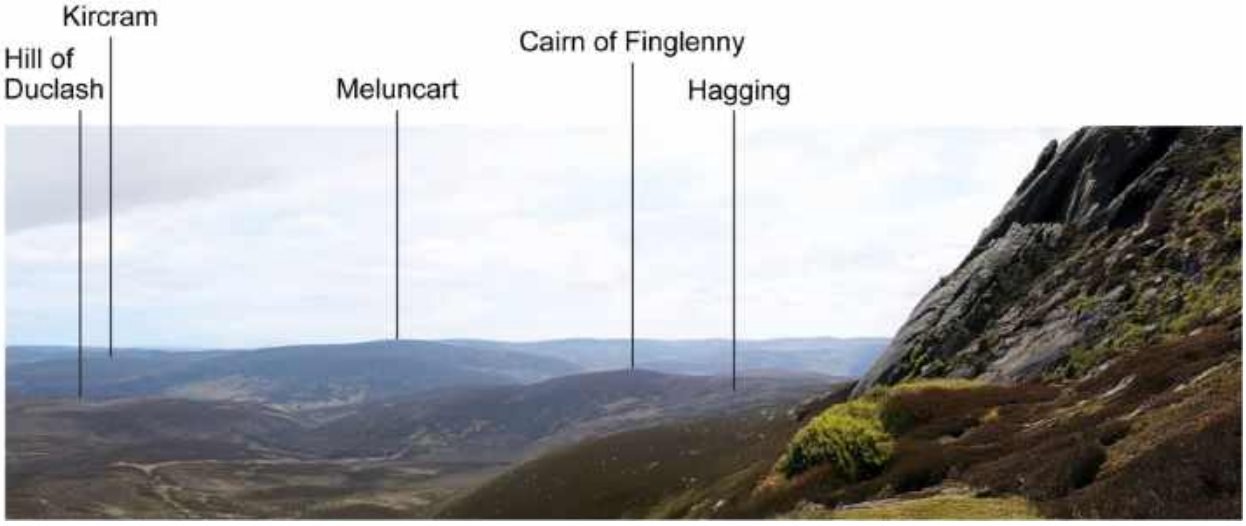
Viewpoint 4: Mount Shade
landscape colour and texture. In views to the north-west, north, and north-east, east, and south-east the new woodland would look like a continuation of the existing conifer stands. Natural regeneration within the fenced areas would appear to blend the woodland into the surrounding landscape. The eroded scars across the landscape, and associated peat hagging, would have reduced somewhat as the peatland vegetation restores over time. By Year 25, it is possible that the deer fencing would have been removed as it is planned to come down between years 20-40 depending on the growth of the montane scrub and natural regeneration. If it is still present at Year 25, it would be less perceptible than at Year 1 as it would be backclothed by maturing woodland and the wood would have weathered. Overall, the landscape would look more naturalistic than at Year 5. Occasional monitoring activities on foot or by drone would bring about periodic visual effects due to increased activity. The scale of change would be **medium** and the geographic extent **large**. The effects are judged to be long-term and partly reversible. Overall, the magnitude of change is judged to be **medium**. Taking into consideration the high sensitivity and medium magnitude of change, the level of visual effect at Year 25 is judged to be **moderate (significant)**, by which time this effect would largely be positive **(beneficial).**

Table 1.6 Viewpoint 5: Clachnaben

Viewpoint 5: Clachnaben			
Grid Reference (NGR)	361560, 786488	**Figure Number**	Figure: 11a-i – Viewpoint 5: Clachnaben
Landscape Type	LCT 29: Summits and Plateaux – Aberdeenshire	**Designated Landscape or Wild Land Area**	SLA 9: Clachnaben and Forest of Birse
Direction of View	North-west to south-west	**Distance (km)**	< 0 km
Location, description of existing view, and potential receptors: This viewpoint is located at the summit of Clachnaben, which is a prominent landmark seen from miles around, owing to the distinctive tor by its summit. Due to this, Clachnaben is a popular summit from which panoramic views are enjoyed. This viewpoint is representative of recreational receptors accessing Clachnaben and nearby hills. From Viewpoint 5, views to the north-east look out onto Meikle Strathvella and Mount Shade in the midground, beyond which are the conifer plantations of the Forest of Birse. In the far distance to the south-east is Kircram and Meluncart and nearer is Cairn of Finglenny to the south.			

Viewpoint 5: Clachnaben





The heather moorland is closely cropped and the landscape pattern is simple and accentuates the smooth, rolling landform. There are gulleys on the slopes of Cairn of Finglenny due to peat erosion.

Sensitivity:

Recreational receptors are considered to be of higher susceptibility. The susceptibility is judged to be **high**.

Viewpoint 5: Clachnaben
The viewpoint is located within the Clachnaben and Forest of Birse SLA. Therefore, the value of the view is judged to be **high**. Taking account of the judgements of susceptibility and value, overall sensitivity is judged to be **high**.
Year 1: At Year 1, during construction / implementation, activity would be seen in middle-to-longer distance views. New deer fencing with grouse droppers would be seen encircling Miller's Bog; although, at this distance it is likely to not be so easily perceivable. The ground around newly planted trees would look disturbed as a result of ground preparation. As the ground is prepared and trees are planted, movement of machinery and people would be seen upon Meikle Strathvella, Mount Shade, Hill of Duclash, Kircram, Meluncart, and Cairn of Finglenny. The scale of change would be **small** at this stage, given the changes to the ground would not be very perceptible at distance, and the geographic extent of the work would be **large**. The effects are judged to be short-term and partially reversible. Overall, the magnitude of change is judged to be **low**. Taking into consideration the high sensitivity and low magnitude of change, the level of visual effects at Year 1 is judged to be **minor (not significant)**.
Year 5: At Year 5, young trees would be seen across the slopes of Meikle Strathvella, Mount Shade, Hill of Duclash, and Cairn of Finglenny and would be seen extending over much of Meluncart and Kircram. Young trees would also be seen ascending the catchment of the Burn of Waterhead. These trees would be small and, seen amongst the moorland, would not be so easily perceived at this stage. Ground disturbed during the construction / implementation phase would have largely regenerated. As the new deer fencing would prevent grazing, the heather would grow longer, as would other moorland plants such as grasses. Maintenance activities would bring about periodic visual effects due to the presence and movement of people and machinery involved in tree maintenance. The scale of change would be **medium** and geographic extent would be **large**. The effects are judged to be medium-term and partially reversible. Overall, the magnitude of change is judged to be **medium**. Taking into consideration the high sensitivity and medium magnitude of change, the level of visual effects at Year 5 is judged to be **moderate (significant)**, by which time this effect would largely be positive **(beneficial).**
Year 25: At Year 25, mixed woodland would be seen across the slopes of Meikle Strathvella, Mount Shade, Hill of Duclash, and Cairn of Finglenny, and would be seen extending over much of Meluncart and Kircram. Mixed native broadleaves would also be seen ascending the catchment of Burn of Waterhead. The underlying landform would still be perceived beneath the woodland. Natural regeneration within the fenced areas would appear to blend the woodland into the surrounding landscape. In views to the east, the new woodland would be perceived as a continuation of the Forest of Birse. By Year 25, it is possible that the deer fencing would have been removed as it is planned to come down between years 20-40 depending on the growth of the montane scrub and success of natural regeneration. If it is still present at Year 25, it would be less perceptible than at Year 1 as it would be backclothed by maturing woodland, and the timber would be well weathered. Overall, the landscape would look more naturalistic than it did at Year 5. Occasional monitoring activities on foot or by drone would bring about periodic visual effects due to increased activity. The scale of change in views to the north-west and east would be **medium**, as the new woodland would seem like a continuation of the Forest of Birse. The scale of change in views to the south-east, south, and south-west would be **large**, owing to the more considerable change from windswept heather moorland to mixed woodland. The geographic extent would be **large**. The effects are judged to be long-term and partly reversible. Overall, the magnitude of change is judged to be **high**. Taking into consideration the high sensitivity and high magnitude of change, the level of visual effect at Year 25 is judged to be **major (significant)**, by which time this effect would largely be positive **(beneficial),** given the extent of native woodland seen.

Table 1.7 Viewpoint 6: Glen Dye Lodge

Viewpoint 6: Glen Dye Lodge			
Grid Reference (NGR)	364269, 786323	**Figure Number**	Figures 12a-f – Viewpoint 6: Glen Dye Lodge
Landscape Type	LCT 29: Summits and Plateaux – Aberdeenshire	**Designated Landscape or Wild Land Area**	SLA 9: Clachnaben and Forest of Birse
Direction of View	North-west to south-east	**Distance (km)**	0.7 km

Location, description of existing view, and potential receptors:

This viewpoint is located by the western gate of Glen Dye Lodge. The gate opens onto a track which runs north-south and comprises part of the route walkers typically take to climb Clachnaben. This viewpoint is representative of recreational receptors accessing Clachnaben and those holidaying within Glen Dye estate. The viewpoint is located approximately 1.2km to the north-east of the site.

From Viewpoint 6, views north-west look across a large, open basin called Miller's Bog, which is bound by the rising slopes of Mount Shade, Clachnaben, Hill of Duclash, and Netty Hill, which form the skyline. The tor of Clachnaben is clearly visibly against the sky. On the lower slopes of Mount Shade, Hill of Duclash, and Netty Hill, are conifer stands. The landform is smooth and rolling and the landscape pattern is simple and determined by elevation: the heather moorland of the hills, the blocks of conifer plantation on the lower slopes, and the bog of the basin. In the foreground a contemporary art installation can be seen. This is a temporary installation commissioned by Glen Dye Cabins and Cottages.

Viewpoint 6: Glen Dye Lodge
Sensitivity: Recreational receptors are considered to be of higher susceptibility. The susceptibility is judged to be **high**. The viewpoint is not promoted but lies within the Clachnaben and Forest of Birse SLA. Therefore, the value of the view is judged to be **high**. Taking account of the judgements of susceptibility and value, overall sensitivity is judged to be **high**.
Year 1: At Year 1, during construction / implementation, activity would be seen in longer distance views to the north-west. New deer fencing with grouse droppers would be seen encircling the Bog but would not be easily perceptible owing the intervening distance. The ground around newly planted trees would look disturbed as a result of ground preparation but, again, this would not be easily perceivable owing to the intervening distance. The movement of machinery and people would be seen upon the slopes of Mount Shade, Clachnaben, Hill of Duclash, and Netty Hill as the ground is prepared and trees are planted. The scale of change would be **small** at this stage, given the changes to the ground would not be very perceptible at distance, and the geographic extent of the work would be **large**. The effects are judged to be short-term and partially reversible. Overall, the magnitude of change is judged to be **low**. Taking into consideration the high sensitivity and low magnitude of change, the level of visual effects at Year 1 is judged to be **minor (not significant)**.
Year 5: At Year 5, young trees would be seen extending across much of Mount Shade, Clachnaben, Hill of Duclash, and Netty Hill. These trees would be small and seen amongst the moorland, and not so easily perceived at this stage. Ground disturbed during the construction / implementation phase would have regenerated. As the new deer fencing would prevent grazing, the heather on the slopes of Mount Shade, Clachnaben, Hill of Duclash, and Netty Hill would grow longer, as would other moorland plants such as grasses. Maintenance activities would bring about periodic visual effects due to the presence and movement of people and machinery involved in tree maintenance. The scale of change would be **medium** and geographic extent would be **large**. The effects are judged to be medium-term and partially reversible. Overall, the magnitude of change is judged to be **medium**. Taking into consideration the high sensitivity and medium magnitude of change, the level of visual effect at Year 5 is judged to be **moderate (significant)**.
Year 25: At Year 25, conifers would be seen to extend further up the slopes of Mount Shade, Hill of Duclash, and Netty Hill. Mixed woodland would be seen on the slopes of Clachnaben and Hill of Duclash. Beneath the conifers, the underlying landform of Mount Shade would be less perceptible than at present. By Year 25, it is possible that the deer fencing would have been removed as it is planned to come down between years 20-40 depending on the growth of the montane scrub and success of the natural regeneration. If it is still present at Year 25, it would be less perceptible than at Year 1 as it would be backclothed by maturing woodland, and the timber would have weathered. Overall, the landscape would look more naturalistic than it did at Year 5; although, the shapes of the conifer stands would appear somewhat geometric. Occasional monitoring activities on foot or by drone would bring about periodic visual effects due to increased activity. The scale of change would **medium** and geographic extent **large**. The effects are judged to be long-term and partly reversible. Overall, the magnitude of change is judged to be **medium**. Taking into consideration the high sensitivity and high magnitude of change, the level of visual effect at Year 25 is judged to be **moderate (significant)**.

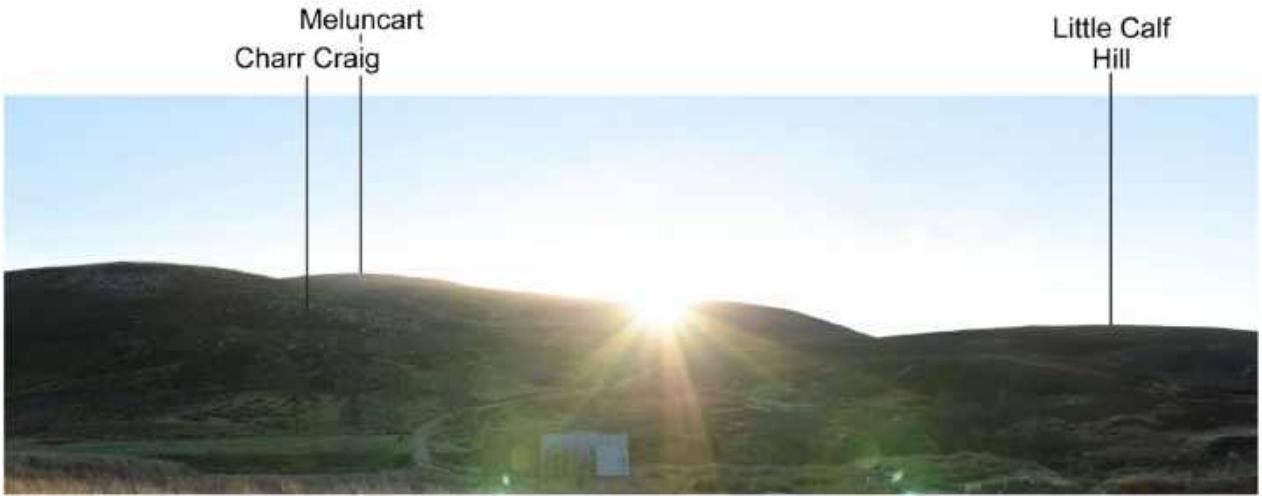
Table 1.8 Viewpoint 7: Charr Bothy

Viewpoint 7: Charr Bothy			
Grid Reference (NGR)	364977, 783840	**Figure Number**	Figures 13a-l – Viewpoint 7: Charr Bothy
Landscape Type	LCT 29: Summits and Plateaux – Aberdeenshire	**Designated Landscape or Wild Land Area**	SLA 9: Clachnaben and Forest of Birse
Direction of View	360°	**Distance (km)**	< 0 km

Location, description of existing view, and potential receptors:

This viewpoint is located by Charr Bothy, a bothy managed by the Mountain Bothy Association and located by the Water of Dye. Charr Bothy is highly valued – along with Clachnaben it is the most visited place within Glen Dye Moor. This viewpoint is representative of recreational receptors visiting the Bothy and walking through Glen Dye.

From this viewpoint, views are mostly contained to close-to-middle distances, contained by the valley sides of Glen Dye. Views north-east take in Charr Bothy at a close distance. Views south-east look out onto Charr Criag in the middle distance, beyond which is Meluncart. Views south-east look out onto Little Calf Hill, Meikle Calf Hill (391m AOD), and Wolf Hill (418m AOD). Views to the north-west look up onto Hen Hill (443m AOD).



Viewpoint 7: Charr Bothy

Sensitivity:

Recreational receptors are considered to be of higher susceptibility. The susceptibility is judged to be **high**.

The viewpoint is located within the Clachnaben and Forest of Birse SLA and therefore the value of the view is judged to be **high**.

Taking account of the judgements of susceptibility and value, overall sensitivity is judged to be **high**.

Year 1:

At Year 1, during construction / implementation, activity would be seen in close-to-longer distance views. New deer fencing with grouse droppers would be seen bounding Little Calf Hill. The ground around newly planted trees would look disturbed as a result of ground preparation. The movement of machinery and people would be seen upon Charr Craig, Meluncart, and Hen Hill as well as along the Glen floor and sides as the ground is prepared and trees are planted. The scale of change would be **medium** at this stage given the changes to the ground would be seen from close distances. The geographic extent of the work would be **large**. The effects are judged to be short-term and partially reversible. Overall, the magnitude of change is judged to be **medium**.

Taking into consideration the high sensitivity and medium magnitude of change, the level of visual effect at Year 1 is judged to be **moderate (significant)**.

Year 5:

At Year 5, young trees would be seen upon Charr Craig, Meluncart, and Hen Hill as well as along the glen floor and sides. These trees would be small and seen amongst the moorland, and not so easily perceived at this stage. Ground disturbed during the construction / implementation phase would have regenerated.

Viewpoint 7: Charr Bothy
As the new deer fencing would prevent grazing, the heather would grow longer, as would other moorland plants such as grasses. Maintenance activities would bring about periodic visual effects due to the presence and movement of people and machinery involved in tree maintenance. The scale of change would be **medium** and geographic extent would be **large**. The effects are judged to be medium-term and partially reversible. Overall, the magnitude of change is judged to be **medium**. Taking into consideration the high sensitivity and medium magnitude of change, the level of visual effects at Year 5 is judged to be **moderate (significant)**. At this stage, the effects would be largely positive **(beneficial),** associated with regeneration across fenced areas.
Year 25: At Year 25, woodland would be seen upon Charr Craig, Meluncart, and Hen Hill as well as along the glen floor and sides. Conifers would be seen covering Charr Craig, Hen Hill and much of Meluncart, while mixed woodland and broadleaves would be seen at lower elevations along the glen. In views to the south-east towards Meluncart, the shape of the conifer stands would appear more geometric. The valley sides of Glen Dye create a sense of enclosure and the new woodland would amplify this. In views to the north-east along the glen, to south-east towards Meluncart, the underlying landform would be perceived beneath the woodland. In views to the south-west, west, and north-west underlying landform would be less perceptible than at present, as the trees would be seen at closer distances, containing views. Seen at closer distances, individual trees would introduce vertical elements to the smooth, rounded landform. Natural regeneration within the fenced areas would appear to blend the new woodland into the surrounding landscape. It is possible that the deer fencing would have been removed by Year 25, as it is planned to come down between years 20-40 depending on the growth of the montane scrub and natural regeneration. If it is still present at Year 25, it would be less perceptible than at Year 1 as it would be backclothed by maturing woodland and the timber would be well weathered. Overall, the landscape would look more naturalistic than at Year 5. Occasional monitoring activities on foot or by drone would bring about periodic visual effects due to increased activity. The scale of change and geographic extent would both be **large**. The effects are judged to be long-term and partly reversible. Overall, the magnitude of change is judged to be **high**. Taking into consideration the high sensitivity and high magnitude of change, the level of visual effects at Year 25 is judged to be **major (significant)**. These would be perceived as a mixture of positive **(beneficial)** (associated with the natural regeneration and native woodland), and more negative **(adverse),** or **neutral**, associated with areas of conifer plantation.

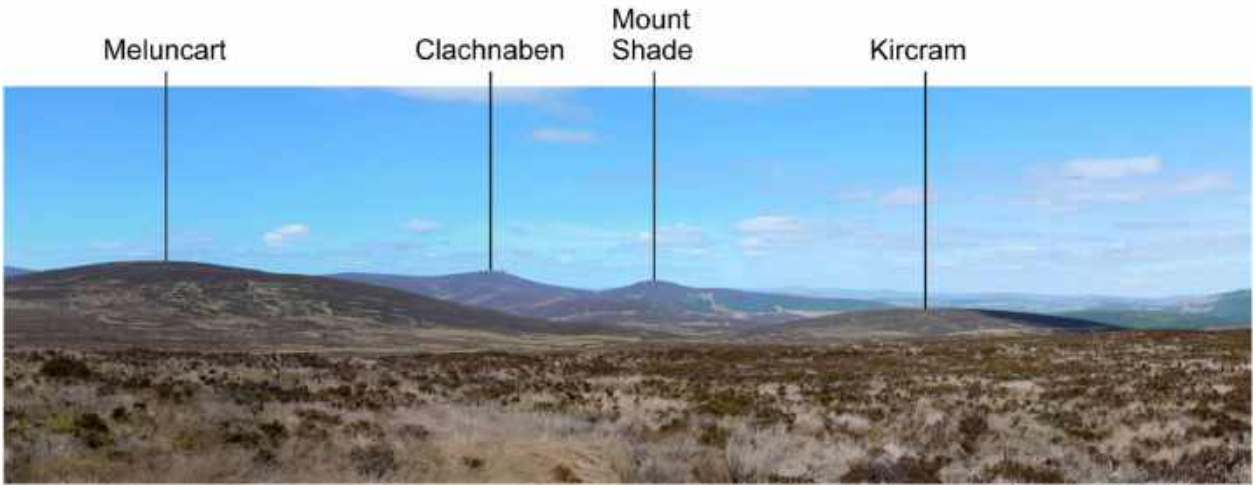
Table 1.9 Viewpoint 8: Cairn o' Mount

Viewpoint 8: Cairn o' Mount			
Grid Reference (NGR)	364848, 780675	**Figure Number**	Figures 14a-f – Viewpoint 8: Cairn o' Mount
Landscape Type	LCT 29: Summits and Plateaux – Aberdeenshire	**Designated Landscape or Wild Land Area**	SLA 10: Braes of the Mearns / SLA 9: Clachnaben and Forest of Birse
Direction of View	North-west	**Distance (km)**	< 0 km
Location, description of existing view, and potential receptors: This viewpoint is located by the summit of Cairn o' Mount (455m AOD) over which the B974 (Cairn o' Mount Road) passes. This road ascends from the flat Howe of the Mearns and climbs over the steep ridge of the Mounth. The Mounth marks the line of the Highland Boundary Fault zone, where upland Scotland meets the lowlands. Located by the summit of Cairn o' Mount are two prehistoric cairns that give the hill its name and which are Scheduled Monuments. Below the cairns is a promoted viewpoint, which is an easily			

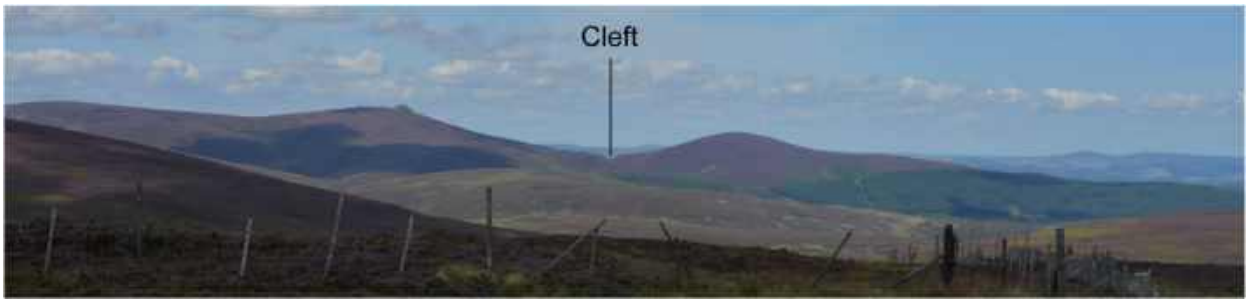
Viewpoint 8: Cairn o' Mount

accessible and popular resting point valued for its panoramic views across the Howe. This viewpoint is representative of recreational receptors visiting the larger cairn and road users passing the ridge.

From Viewpoint 8, views look north-west and take in the smooth rolling hills of the upland plateau. The smaller, smoother hills of Meluncart (525m AOD) and Kircram (405m AOD) are in the foreground to the north-west with Whitelaws to the south-west; while the larger hills of Mount Battock, Clachnaben, and Mount Shade make up the ridge that forms much of the skyline. The distinctive tor of Clachnaben is visible.



Between Clachnaben and Mount Shade is a ridge with a visible cleft.



The smoothness of the landform is emphasised by the vegetation of heather moorland that grows low to the ground and has a simple pattern. Conifer stands on the slopes of Mount Shade also contribute to this simple landscape pattern. The geometric shapes of the stand contrast with the more sinuous and gentle curves of the landform.

Viewpoint 8: Cairn o' Mount
In northerly views, more hills can be seen in the far distance, including those of Corrennie Moor, such as Benaquhallie.
Sensitivity: While generally road users are considered to be of lower susceptibility, as they move through the landscape at pace, road users of the Cairn o' Mount road are considered to be of higher susceptibility as this road is appreciated for its scenic qualities. The road is also popular for cyclists, who are considered to be of higher susceptibility. Those who stop to rest, picnic, and visit the cairn are recreational receptors, which are considered to be of higher susceptibility. The susceptibility is judged to be **high**. The cairns are Scheduled Monuments and the viewpoint of Cairn o' Mount is promoted and a recognised stopping point located within the Braes of the Mearns SLA and at the edge of the Clachnaben and Forest of Birse SLA. Therefore, the value of the view is judged to be **high**. Taking account of the judgements of susceptibility and value, overall sensitivity is judged to be **high**.
Year 1: At Year 1, during construction / implementation, activity would be seen in middle-to-longer distance views. Lengths of new deer fencing would be seen in the middle distance crossing Whitelaws. The ground around newly planted trees would look disturbed as a result of ground preparation. The movement of machinery and people would be seen upon Meluncart and Kircram as the ground is prepared, and trees are planted. This activity would be seen continuing into the distance towards and up to the summits of Clachnaben and Mount Shade. The scale of change would be **small** at this stage, given the changes to the ground would not be very perceptible at distance, and the geographic extent of the work would be **large**. The effects are judged to be short-term and partially reversible. Overall, the magnitude of change is judged to be **low**. Taking into consideration the high sensitivity and low magnitude of change, the level of visual effects at Year 1 is judged to be **minor (not significant)**.
Year 5: At Year 5, young trees would be seen extending across much of Meluncart and Kircram and continuing across to the upper slopes of Clachnaben and Mount Shade. These trees would be small and seen amongst the moorland, and not so easily perceived at this stage. The tree shelters on any plants that are outside the deer fenced areas (such as on the south-western slopes of Kircram) would introduce a new colour to the view which would contrast with the surrounding landscape pattern. Ground disturbed during the construction / implementation phase would have largely regenerated. As the new deer fencing would prevent grazing, the heather would grow longer, as would other moorland plants such as grasses. Maintenance activities would bring about periodic visual effects due to the presence and movement of people and machinery involved in tree maintenance. The scale of change would be **medium** and geographic extent would be **large**. The effects are judged to be medium-term and partially reversible. Overall, the magnitude of change is judged to be **medium**. Taking into consideration the high sensitivity and medium magnitude of change, the level of visual effects at Year 5 is judged to be **moderate (significant)**, by which time this effect would largely be positive **(beneficial),** associated with regeneration withing the fenced areas.
Year 25: At Year 25, mixed woodland would be seen across the tops of much of Meluncart and Kircram. Swathes of woodland would be seen continuing towards the upper slopes of Clachnaben and Mount Shade. The underlying landform would be perceived beneath the woodland. The cleft within the ridge that separates Clachnaben and Mount Shade would be somewhat less perceptible than at present. In longer views towards Clachnaben and Mount Shade, the woodland would be perceived as a change in landscape colour and texture. At closer distances, across Meluncart and Kircram, individual trees would be more easily discernible and the woodland would introduce vertical elements to the smooth, rounded hills. Natural regeneration within the fenced areas would appear to blend the woodland into the surrounding landscape.

Viewpoint 8: Cairn o' Mount
By Year 25 any tree shelters outside the fenced area would have been removed. It is possible that the deer fencing would have been removed by Year 25, as it is planned to come down between years 20-40 depending on the growth of the montane scrub and natural regeneration. If it is still present at Year 25, it would be less perceptible than at Year 1 as it would be backclothed by maturing woodland and the timber would be well weathered. Overall, the landscape would look more naturalistic than it did at Year 5. Occasional monitoring activities on foot or by drone would bring about periodic visual effects due to increased activity. The scale of change and geographic extent would both be **large**. The effects are judged to be long-term and partly reversible. Overall, the magnitude of change is judged to be **high**. Taking into consideration the high sensitivity and high magnitude of change, the level of visual effect is judged to be **major (significant)**. However, this effect would largely be positive **(beneficial),** associated with areas of regeneration and native woodland, and more negative **(adverse)** or **neutral** in areas of coniferous plantation. The change in land use would add diversity to views experienced from here.

Table 1.10 Viewpoint 9: B974

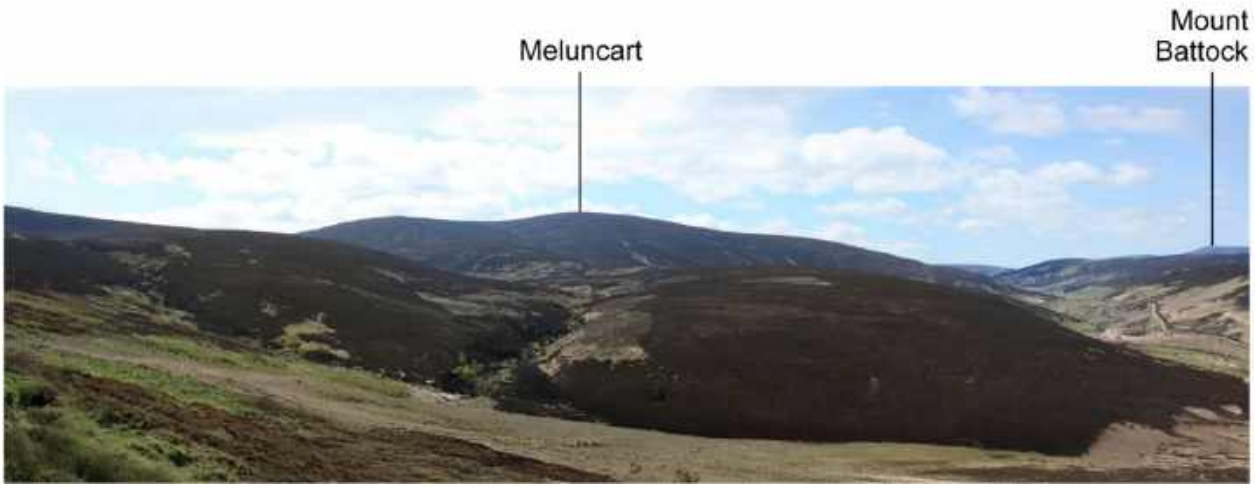
Viewpoint 9: B974			
Grid Reference (NGR)	364977, 783840	**Figure Number**	Figures 15a-f – Viewpoint 9: B974
Landscape Type	LCT 29: Summits and Plateaux – Aberdeenshire	**Designated Landscape or Wild Land Area**	SLA 9: Clachnaben and Forest of Birse
Direction of View	North to south-west	**Distance (km)**	< 0 km

Location, description of existing view, and potential receptors:

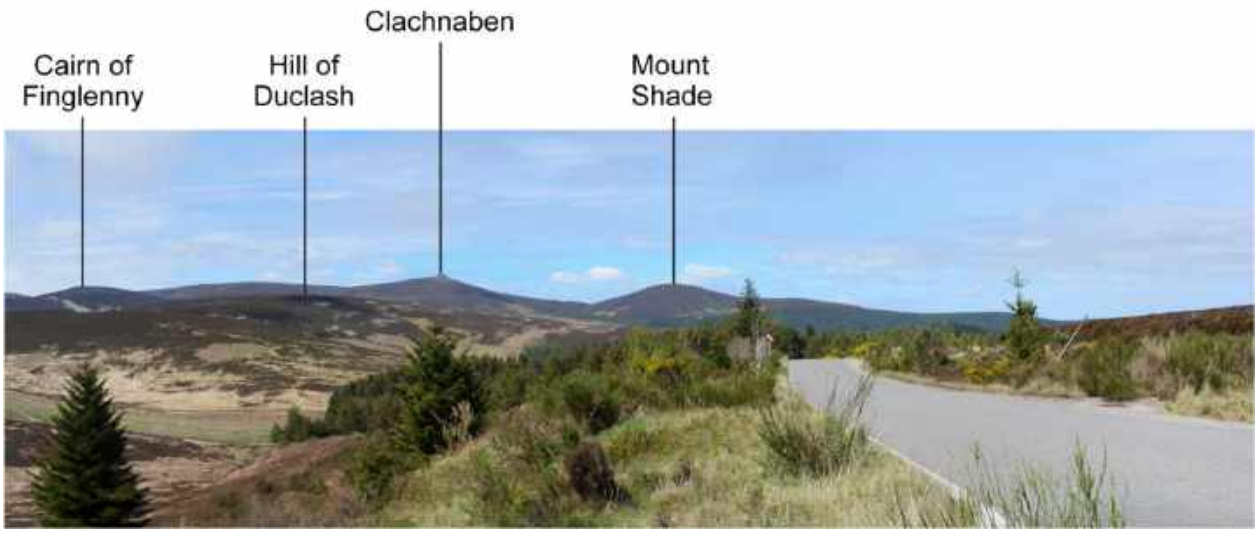
The viewpoint is located at a small layby on the western side of the B974 (Cairn o' Mount Road), west of Shiel Hill, and represents views experienced by receptors travelling along the road and those stopping at the layby. The site is located immediately to the north-west. Views to the north-west take in Clachnaben, Mount Shade, and the smaller hill of Cairn of Finglenny (469m AOD) which make up the skyline. In the midground is the Hill of Duclash (382m AOD) and in the far distance is Mount Battock. Views to the south-west take in Meluncart.

The B974 (Cairn o' Mount Road) is seen continuing to the north-west along the slopes of Shiel Hill, which are forested with conifer plantation. In the distance in views to the north-west, conifer plantation can be seen on the south-eastern slopes of Mount Shade.

The landform is smooth and rolling. The recognisable tor at the top of Clachnaben and the cleft on the ridge between Clachnaben and Mount Shade are visible from this viewpoint.



Viewpoint 9: B974



Sensitivity:

While generally road users are considered to be of lower susceptibility as they move through the landscape at pace, road users of the Cairn o' Mount road are considered to be of higher susceptibility as this road is appreciated for its scenic qualities. The road is also popular for cyclists, who are considered to be of higher susceptibility. Those who stop to rest, picnic, and visit the area are recreational receptors, which are considered to be of higher susceptibility. The susceptibility is judged to be **high**.

While this viewpoint is not promoted, it is located within the Clachnaben and Forest of Birse SLA. Therefore, the value of the view is judged to be **high**.

Taking account of the judgements of susceptibility and value, overall sensitivity is judged to be **high**.

Year 1:

At Year 1, during construction / implementation, activity would be seen in middle-to-longer distance views. New deer fencing, with grouse droppers, would be seen in the foreground. The ground around newly planted trees would look disturbed as a result of ground preparation. In the midground, the movement of machinery and people would be seen upon Cairn of Finglenny and Hill of Duclash as the ground is prepared and trees are planted. This activity would be seen continuing into the distance towards and up to the summits of Clachnaben and Mount Shade. The scale of change would be **small** at this stage, given the changes to the ground would not be very perceptible from this distance, and the geographic extent of the work would be **large**. The effects are judged to be short-term and partially reversible. Overall, the magnitude of change is judged to be **low**.

Taking into consideration the high sensitivity and low magnitude of change, the level of visual effects at Year 1 is judged to be **minor (not significant)**.

Year 5:

At Year 5, young trees would be seen across much of Cairn of Finglenny and Hill of Duclash and continuing across to the upper slopes of Clachnaben and Mount Shade. These trees would be small and seen amongst the moorland, and not so easily perceived at this stage. Ground disturbed during the construction / implementation phase would have regenerated. As the new deer fencing would prevent grazing, the heather would grow longer, as would other moorland plants such as grasses. Maintenance activities would bring about periodic visual effects due to the presence and movement of people and machinery involved in tree maintenance. The scale of change would be **medium** and geographic extent would be **large**. The effects are judged to be medium-term and partially reversible. Overall, the magnitude of change is judged to be **medium**.

Taking into consideration the high sensitivity and medium magnitude of change, the level of visual effects at Year 5 is judged to be **moderate (significant)**, by which time this effect would largely be positive **(beneficial),** associated with regeneration within the fenced area.

Viewpoint 9: B974
Year 25: At Year 25, mixed woodland would be seen across much of Cairn of Finglenny and Hill of Duclash. Swathes of woodland would be seen continuing towards the upper slopes of Clachnaben and Mount Shade. The underlying landform would be perceivable beneath the woodland. The on the ridge between Clachnaben and Mount Shade would be less perceptible than at present. The woodland existing at Year 1 on the slopes of Shiel Hill would partially screen the new woodland, which would also be seen to blend in with the existing woodland. Natural regeneration within the fenced areas would appear to blend the new woodland into the surrounding landscape. By Year 25, it is possible that the deer fencing would have been removed as it is planned to come down between years 20-40 depending on the growth of the montane scrub and natural regeneration. If it is still present at Year 25, it would be less perceptible than at Year 1 as it would be backclothed by maturing woodland and the timber would be well weathered. Overall, the landscape would look more naturalistic than it did at Year 5. Occasional monitoring activities on foot or by drone would bring about periodic visual effects due to increased activity. The scale of change and geographic extent would both be **large**. The effects are judged to be long-term and partly reversible. Overall, the magnitude of change is judged to be **high**. Taking into consideration the high sensitivity and high magnitude of change, the level of visual effect at Year 25 is judged to be **major (significant)**, by which time this effect would largely be positive **(beneficial).**

Table 1.11 Viewpoint 10: Track above Burn of Badymicks

Viewpoint 10: Track above Burn of Badymicks			
Grid Reference (NGR)	358520, 783602	**Figure Number**	Figures 16a-f – Viewpoint 10: Track above Burn of Baddymicks
Landscape Type	LCT 29: Summits and Plateaux – Aberdeenshire	**Designated Landscape or Wild Land Area**	SLA 9: Clachnaben and Forest of Birse
Direction of View	South-west to north-east	**Distance (km)**	< 0 km
Location, description of existing view, and potential receptors: This viewpoint is located on a track that runs along the Burn of Badymicks that flows into the Water of Dye. The track connects the ridge between Mount Battock and Clachnaben with Glen Dye. This viewpoint is representative of recreational receptors walking between the ridge and Glen Dye, such as those hill walking, cycling, and visiting Charr Bothy. From this viewpoint, views to the north-west, north, and north-east look out onto gently undulating heather moorland. Small hills make up the skyline. Lochnawean Hill (583m AOD) can be seen to the north-west, Hill of Badymicks (575m AOD) to the north, and Cairn of Edendocher (541m AOD) to the north-east. The landscape pattern is simple, being made up of low growing heather moorland, and accentuates the smooth, rolling relief of the landform.			

Viewpoint 10: Track above Burn of Badymicks

Sensitivity:

The recreational receptors are considered to be of higher susceptibility. The susceptibility is judged to be **high**.

The viewpoint is located within the Clachnaben and Forest of Birse SLA. Therefore, the value of the view is judged to be **high**.

Taking account of the judgements of susceptibility and value, overall sensitivity is judged to be **high**.

Year 1:

At Year 1, during construction / implementation, activity would be seen in close-to-longer distance views. New deer fencing would be seen crossing Hill of Saughs. The ground around newly planted trees would look disturbed as a result of ground preparation. The movement of machinery and people would be seen at close distances as the ground is prepared and trees are planted; this activity would be seen continuing into the distance across the hills. People and vehicles would also be travelling along the tracks. The scale of change would be **medium** at this stage as the changes to the ground would be more perceptible such proximity. The geographic extent of the work would be **large**. The effects are judged to be short-term and partially reversible. Overall, the magnitude of change is judged to be **medium**.

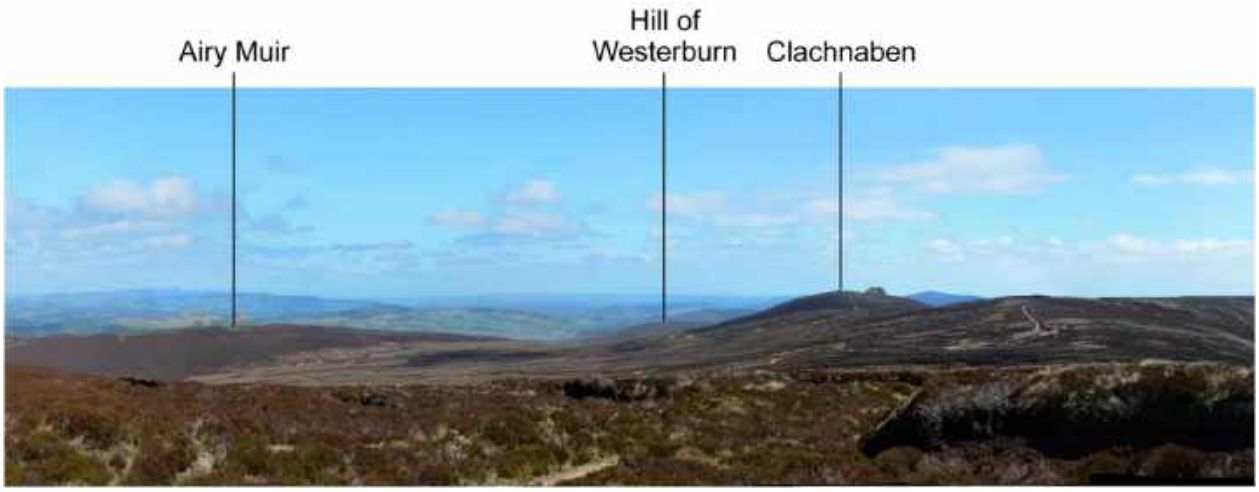
Taking into consideration the high sensitivity and medium magnitude of change, the level of visual effects at Year 1 is judged to be **moderate (significant)**.

Year 5:

Viewpoint 10: Track above Burn of Badymicks
At Year 5, young trees would be seen at close-to-longer distances in large swathes on the ground that rises towards the ridge between Mount Battock and Clachnaben as well as Lochnawean Hill. These trees would be small and seen amongst the moorland, and not so easily perceived at this stage. Ground disturbed during the construction / implementation phase would have regenerated. As the new deer fencing would prevent grazing, the heather would grow longer, as would other moorland plants such as grasses. Maintenance activities would bring about periodic visual effects due to the presence and movement of people and machinery involved in tree maintenance. The scale of change would be **medium** and geographic extent would be **large**. The effects are judged to be medium-term and partially reversible. Overall, the magnitude of change is judged to be **medium**. Taking into consideration the high sensitivity and medium magnitude of change, the level of visual effects at Year 5 is judged to be **moderate (significant)**, by which time this effect would largely be positive **(beneficial).**
Year 25: At Year 25, mixed woodland would be seen at close-to-longer distances in large swathes on the ground that rises towards the ridge between Mount Battock and Clachnaben as well as the slopes of Lochnawean Hill. Seen at close distances in views to the north-west, north, and north-east, trees would be observed naturally regenerating. Trees seen at close distances would contain views to close distances, where currently views are more long ranging. Consequently, trees would partially filter views of the skyline. The sight of individual trees in the foreground and swathes of woodland in the background may enable distances to be more easily perceived, where currently the simplicity of the landscape pattern belies its scale, but at the same time it would help soften the current sometimes abrupt transition and strong contrast, making the landscape look more natural. By Year 25, it is possible that the deer fencing would have been removed as it is planned to come down between years 20-40 depending on the growth of the montane scrub and natural regeneration. If it is still present at Year 25, it would be less perceptible than at Year 1 as it would be backclothed by maturing woodland and the timber would be well weathered. Overall, the landscape would look more naturalistic than at Year 5. Occasional monitoring activities on foot or by drone would bring about periodic visual effects due to increased activity. The scale of change and geographic extent would both be **large**. The effects are judged to be long-term and partly reversible. Overall, the magnitude of change is judged to be **high**. Taking into consideration the high sensitivity and high magnitude of change, the level of visual effects at Year 25 is judged to be **major (significant)**, by which time this effect would largely be positive **(beneficial),** associated with new areas of native woodland and regeneration within the fenced area.

Table 1.12 Viewpoint 11: Sandy Hill

Viewpoint 11: Sandy Hill			
Grid Reference (NGR)	359339, 785898	**Figure Number**	Figures 17a-l – Viewpoint 11: Sandy Hill
Landscape Type	LCT 29: Summits and Plateaux – Aberdeenshire	**Designated Landscape or Wild Land Area**	SLA 9: Clachnaben and Forest of Birse
Direction of View	360°	**Distance (km)**	< 0 km
Location, description of existing view, and potential receptors: This viewpoint is located by the summit of Sandy Hill, which is one of the summits along the ridge between Clachnaben and Mount Battock. This viewpoint is representative of recreational receptors accessing Mount Battock via Clachnaben. From this viewpoint, views north-east looks out onto Clachnaben, Hill of Westerburn, and Airy Muir in the midground – the tor of Clachnaben is visible against the sky. Views to the south and south-west are			

Viewpoint 11: Sandy Hill
mostly contained to close distances by the rolling landform; although, Mount Battock is visible in the far distance to the south-west and Meluncart to the south-east. Far distant rolling hills make up much of the skyline along with Clachnaben.      The simple landscape pattern of closely cropped heather moorland accentuates the smoothness of the landform.
Sensitivity: Recreational receptors are considered to be of higher susceptibility. The susceptibility is judged to be **high**. The viewpoint is located within the Clachnaben and Forest of Birse SLA. Therefore, the value of the view is judged to be **high**. Taking account of the judgements of susceptibility and value, overall sensitivity is judged to be **high**.
Year 1: At Year 1, during construction / implementation, activity would be seen in middle-to-longer distance views. The ground around newly planted trees would look disturbed as a result of ground preparation. As the ground is prepared and trees are planted, movement of machinery and people would be seen upon Airy Muir, Hill of Westerburn, Meluncart, and along the ridge between Mount Battock and Clachnaben. The scale of change would be **small** at this stage, given the changes to the ground would not be very perceptible at distance, and the geographic extent of the work would be **large**. The effects are judged to be short-term and partially reversible. Overall, the magnitude of change is judged to be **low**. Taking into consideration the high sensitivity and low magnitude of change, the level of visual effects at Year 1 is judged to be **minor (not significant)**.
Year 5: At Year 5, young trees would be seen extending across much of Airy Muir, Hill of Westerburn, and Meluncart. These trees would be small and, seen amongst the moorland, not so easily perceived at this stage. Ground disturbed during the construction / implementation phase would have largely regenerated. As the new deer fencing would prevent grazing, the heather would grow longer, as would other moorland plants such as grasses. Maintenance activities would bring about periodic visual effects due to the presence and movement of people and machinery involved in tree maintenance. The scale of change would be **small** and geographic extent would be **large**. The effects are judged to be medium-term and partially reversible. Overall, the magnitude of change is judged to be **low**. Taking into consideration the high sensitivity and low magnitude of change, the level of visual effects at Year 5 is judged to be **minor (not significant)**.
Year 25:

Viewpoint 11: Sandy Hill
At Year 25, mixed woodland would be seen across much of Airy Muir, Hill of Westerburn, and Meluncart. The underlying landform would be perceived beneath the woodland. The sight of woodland in the midground may enable distances to be more easily perceived, where currently the simplicity of the landscape belies its scale. Natural regeneration within the fenced areas would appear to help blend the woodland into the surrounding landscape, and soften the strong contrast between open moorland and forested areas. Overall, the landscape would look more naturalistic than it did at Year 5. Occasional monitoring activities on foot or by drone would bring about periodic visual effects due to increased activity. The scale of change would be **medium** and geographic extent **large**. The effects are judged to be long-term and partly reversible. Overall, the magnitude of change is judged to be **medium**. Taking into consideration the high sensitivity and medium magnitude of change, the level of visual effects at Year 25 is judged to be **moderate (significant)**, by which time this effect would largely be positive **(beneficial).**

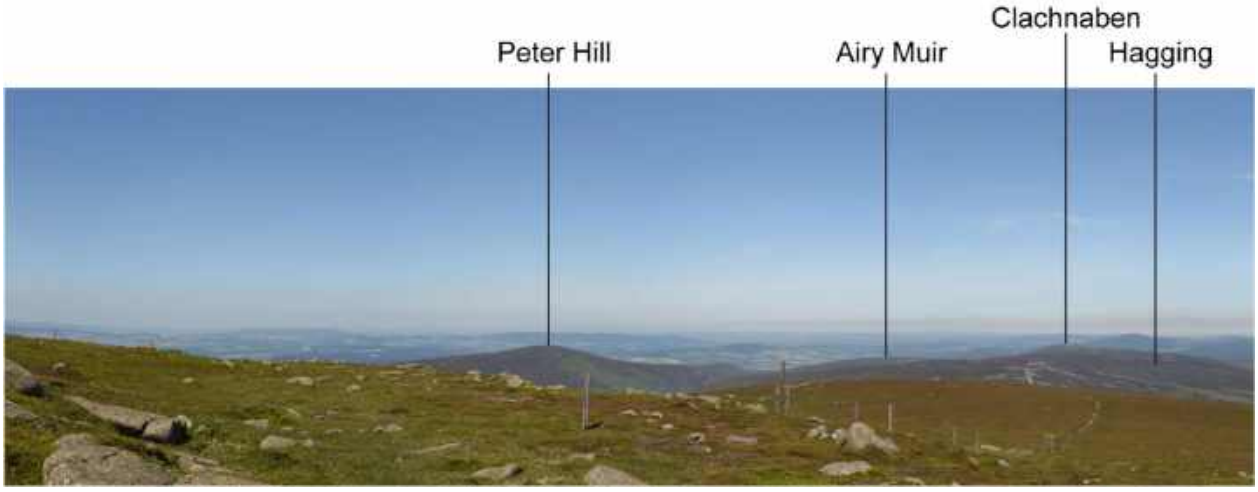
Table 1.13 Viewpoint 12: Mount Battock

Viewpoint 12: Mount Battock			
Grid Reference (NGR)	364977, 783840	**Figure Number**	Figures 18a-f – Viewpoint 12: Mount Battock
Landscape Type	LCT 29: Summits and Plateaux – Aberdeenshire	**Designated Landscape or Wild Land Area**	SLA 9: Clachnaben and Forest of Birse
Direction of View	North-west to south-east	**Distance (km)**	< 0 km

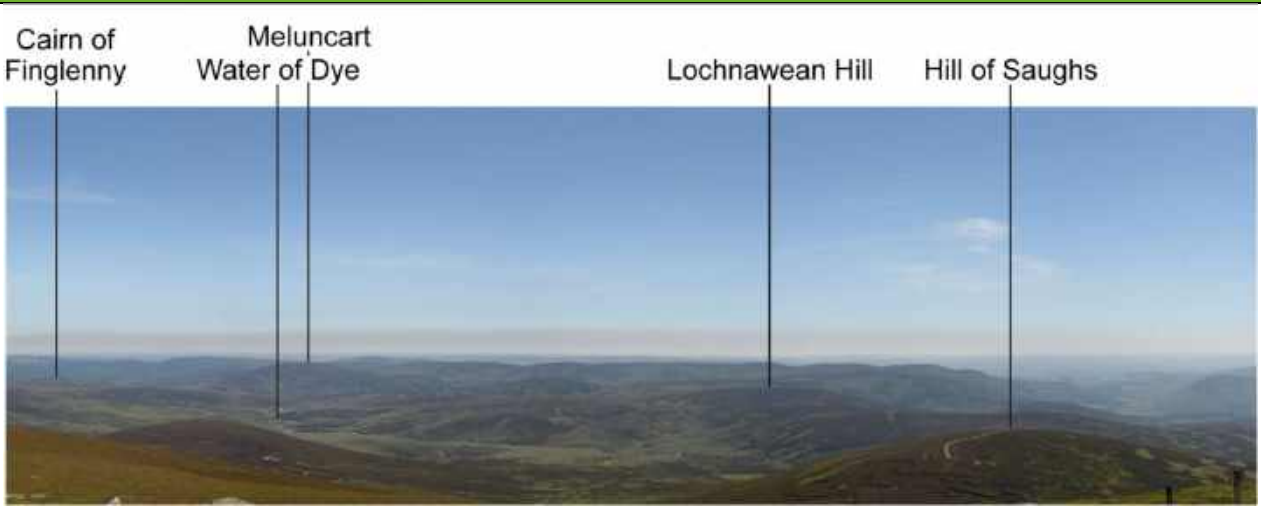
Location, description of existing view, and potential receptors:

This viewpoint is located by the summit of Mount Battock, which is the most easterly Corbett and a popular summit. It is the highest point of the expansive Mounth plateau. This viewpoint is representative of recreational receptors (hillwalkers).

From this viewpoint, views look across to Peter Hill, Airy Muir, and Clachnaben in the north-west, beyond which can be seen the valley of the Water of Feugh and lower lying farmland. In views to the south-east are Cairn of Finglenny, Meluncart, Lochnawean Hill, and Hill of Saughs (656m AOD) which are seen amongst the smooth rolling landform of the Mounth. Peat hagging can be seen on Lochnawean Hill and the slopes of the ridge between Mount Battock and Clachnaben. The upper reaches of the Water of Dye catchment can be seen to the south-east.



Viewpoint 12: Mount Battock



Sensitivity:

Recreational receptors are considered to be of higher susceptibility. The susceptibility is judged to be **high**.

The viewpoint is located on the edge of the Clachnaben and Forest of Birse SLA; therefore, the value of the view is judged to be **high**.

Taking account of the judgements of susceptibility and value, overall sensitivity is judged to be **high**.

Year 1:

At Year 1, during construction / implementation, activity would be seen in long distance views. New deer fencing with grouse droppers would be seen along the Water of Dye; although, seen from this distance it would not be so easily perceivable. The ground around newly planted trees would look disturbed as a result of ground preparation. As the ground is prepared and trees are planted, the movement of machinery and people would be seen upon Meluncart, Airy Muir, along the upper reaches of Water of Dye catchment, the slopes of Cairn of Finglenny, between Hill of Saughs and Lochnawean Hill, and on the ridge between Mount Battock and Clachnaben. The scale of change would be **small** at this stage, given the changes to the ground would not be very perceptible at distance, and the geographic extent of the work would be **large**. The effects are judged to be short-term and partially reversible. Overall, the magnitude of change is judged to be **low**.

Taking into consideration the high sensitivity and low magnitude of change, the level of visual effects at Year 1 is judged to be **minor (not significant)**.

Year 5:

At Year 5, young trees would be seen across much of Meluncart, Airy Muir, along the upper reaches of Water of Dye catchment, the slopes of Cairn of Finglenny, between Hill of Saughs and Lochnawean Hill, and on the ridge between Mount Battock and Clachnaben. These trees would be small and, seen amongst the moorland, so would not be so easily perceived at this stage. Ground disturbed during the construction / implementation phase would have largely regenerated. As the new deer fencing would prevent grazing, the heather would grow longer, as would other moorland plants such as grasses. Maintenance activities would bring about periodic visual effects due to the presence and movement of people and machinery involved in tree maintenance. The scale of change would be **small** and geographic extent would be **large**. The effects are judged to be medium-term and partially reversible. Overall, the magnitude of change is judged to be **low**.

Taking into consideration the high sensitivity and low magnitude of change, the level of visual effects at Year 5 is judged to be **minor (not significant)**.

Year 25:

At Year 25, mixed woodland would be seen upon Meluncart, Airy Muir, along the upper reaches of Water of Dye catchment, the slopes of Cairn of Finglenny, between Hill of Saughs and Lochnawean Hill, and on

Viewpoint 12: Mount Battock
the ridge between Mount Battock and Clachnaben. The new woodland would be seen in long distance views. At this distance, it would be perceived as a change in landscape colour and texture. The underlying landform would still be perceptible. Natural regeneration within the fenced areas would appear to blend the woodland into the surrounding landscape. By Year 25, it is possible that the deer fencing would have been removed as it is planned to come down between years 20-40 depending on the growth of the montane scrub and natural regeneration. If it is still present at Year 25, it would be less perceptible than at Year 1 as it would be backclothed by maturing woodland and the timber would be well weathered. Overall, the landscape would look more naturalistic than at Year 5. Occasional monitoring activities on foot or by drone would bring about periodic visual effects due to increased activity. The scale of change would be **small** and geographic extent would be **large**. The effects are judged to be long-term and partly reversible. Overall, the magnitude of change is judged to be **low**. Taking into consideration the high sensitivity and low magnitude of change, the level of visual effects at Year 25 is judged to be **minor (not significant)**.

Cumulative Effects

1.60 Nearby developments that would give rise to cumulative landscape and visual effects include Glendye Wind Farm, which is to be built approximately 4 km south-west of the Site centre. There are proposed ecological enhancements that would be carried out as part of the development of the wind farm, including peat restoration. These in combination with the habitat creation and restoration of the Glen Dye Moor New Woodland Creation would help reduce the effects of the consented wind farm development, filtering and softening views of lower level infrastructure (tracks etc.) and enhancing the landscape structure and framework around it. Other proposed developments are more distant from the Site and would not have a significant interaction with the proposed woodland creation project.

Appraisal of Effects on Clachnaben and Forest of Birse SLA

1.61 The proposed woodland creation is located within the Clachnaben and Forest of Birse SLA. The following section provides an assessment of the effects of the proposed woodland creation on the special qualities of the SLA, which are set out in the Aberdeenshire Local Landscape Designation Review and listed in **paragraph 1.23**.

1.62 One of the most important characteristics of the SLA is its "*high wildness qualities including a virtual absence of habitation, limited access, extensive open moorland and rugged terrain*."[14] The extensive open moorland is a contributing element to this wildness characteristic and the proposed woodland creation would alter this, replacing heather moorland with swathes of mixed woodland, over time. The new woodland would not negatively (adversely) affect the character of wildness but may help enhance it. Currently, perceptions of wildness are limited by manmade influences across the landscape, such as the eroded track network, pattern of moorland management, peat erosion, and the closely-cropped state of the heather moorland, due to grazing. As the peat is restored and the Site becomes more biodiverse over time, the SLA's perception of wildness would be enhanced. The process of natural regeneration would further integrate the new woodland into the surrounding landscape, making it appear more naturalistic over time.

1.63 The qualities of expansiveness and openness contributed to by the heather moorland ("*extensive open moorland*" or "*uninterrupted natural landcover of heather moorland*") would be somewhat altered by the

[14] Aberdeenshire Council (2016) Aberdeenshire Local Landscape Designation Review [online] available at: https://www.aberdeenshire.gov.uk/media/16263/local-landscape-designations-review-report.pdf.

proposed woodland creation.[15] This is owing to the sense of enclosure that the new woodland would provide at close-to-middle distances (see **Figure 16: Viewpoint 10: Track above Burn of Baddymicks**). In the short-to-medium term before the woodland matures, the heather moorland would benefit from the proposed deer fencing, which would allow the heather, as well as other moorland plants such as grasses, to grow longer, thus enhancing the SLA's character. Areas of peatland would remain open, and the peat hagging and eroded areas would improve in appearance over time as peatland vegetation restores, and a natural vegetation cover returns.

1.64 The proposed woodland creation would enhance habitats. One of the SLA's special qualities is the "*range of habitat types*" within the Forest of Birse and the proposed woodland creation would positively (beneficially) contribute to this. One of the habitat types of the SLA is "*the community-owned Commonty Pinewoods, which are being positively managed* … [and are] *an important habitat for bird life*."[16] The new woodland would extend part of the existing woodland found within the SLA, such as that found closer to the valley of Water of Feugh.

1.65 A further important characteristic of the SLA is the "*strong, rolling relief of the upland landscape, including highly distinctive hill profiles the most recognisable of which is the crag of Clachnaben*."[17] On the ridge between Clachnaben and Mount Shade is a visible cleft. At Year 25, the cleft is expected to be somewhat less perceptible than at present (see **Figure 14: Viewpoint 8: Cairn o' Mount**).

1.66 Overall, the new woodland would not be seen to alter the shape and scale of the underlying landform and would in places accentuate it. For example, at Year 25 the sight of individual trees in the foreground and swathes of woodland in the background would enhance the contrast, and texture of the landscape (see **Figure 16: Viewpoint 10: Track above Burn of Baddymicks**). Also, when seen from the valley of Water of Feugh at Year 25, it may be possible to more easily discern individual hills than at present, when currently the hills are often perceived as a dark mass owing to the simplicity of the heather moorland pattern (see **Figure 7: Viewpoint 1: Old Military Road**). This in turn may strengthen one of the SLA's special qualities, which is its visibility: "*a widely visible landscape, forming the backdrop to Deeside to the north, and with the landmark of Clachnaben seen from miles around*."[18]

1.67 Those special qualities not discussed above would remain unchanged by the proposed woodland creation.

1.68 In summary, while it is predicted that significant landscape and visual effects would arise from the proposed woodland creation, these are not judged to compromise the integrity of the SLA, and would serve to enhance it. While the perception of openness and expansiveness would be altered by the new woodland, the perception of wildness would not. Furthermore, the new woodland would not obscure the underlying landform of the SLA, and may help in places accentuate it, through providing contrast.

Summary of Effects

1.69 This section provides a summary of effects at Years 1, 5, and 25.

1.70 Table 1.14 Summary of Landscape and Visual Effects provides a summary of the landscape and visual effects which would arise from the proposed woodland creation at Years 1, 5, and 25 as presented in this LVIA ("viewpoint" is referred to as "VP").

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[15] Aberdeenshire Council (2016) Aberdeenshire Local Landscape Designation Review [online] available at: https://www.aberdeenshire.gov.uk/media/16263/local-landscape-designations-review-report.pdf.
[16] Aberdeenshire Council (2016) Aberdeenshire Local Landscape Designation Review [online] available at: https://www.aberdeenshire.gov.uk/media/16263/local-landscape-designations-review-report.pdf.
[17] Aberdeenshire Council (2016) Aberdeenshire Local Landscape Designation Review [online] available at: https://www.aberdeenshire.gov.uk/media/16263/local-landscape-designations-review-report.pdf.
[18] Aberdeenshire Council (2016) Aberdeenshire Local Landscape Designation Review [online] available at: https://www.aberdeenshire.gov.uk/media/16263/local-landscape-designations-review-report.pdf.

Table 1.14 Summary of Landscape and Visual Effects

Receptor	Sensitivity	Year 1	Year 5	Year 25
Landscape Receptors				
Landscape Fabric of the Site	Medium	Minor	Moderate	Major
LCT 29: Summits and Plateaux – Aberdeenshire	High	Minor	Moderate	Major
LCT 33: Broad Wooded Valley With Estates	Medium	Minor	Moderate	Major
Visual Receptors				
VP 1: Old Military Road	Medium	Minor	Minor	Moderate
VP 2: Peter Hill	High	Minor	Moderate	Major
VP 3: Airy Muir	High	Moderate	Moderate	Major
VP 4: Mount Shade	High	Minor	Minor	Moderate
VP 5: Clachnaben	High	Minor	Moderate	Major
VP 6: Glen Dye Lodge	High	Minor	Moderate	Moderate
VP 7: Charr Bothy	High	Moderate	Moderate	Major
VP 8: Cairn o' Mount	High	Minor	Moderate	Major
VP 9: Mount Battock	High	Minor	Minor	Minor
VP 10: Track above Burn of Badymicks	High	Moderate	Moderate	Major
VP 11: Sandy Hill	High	Minor	Minor	Moderate
VP 12: B974	High	Minor	Moderate	Major

Summary and Conclusions

1.71 The LVIA has assessed the potential effects on landscape and visual receptors of the proposed woodland creation, taking into account embedded mitigation. As such, effects at Years 5 and 25 are residual.

Summary of Effects

Effects on Landscape Character

1.72 At Year 1, localised **minor (not significant)** effects at the Site and within approximately 1.5km to the north and north-west are predicted across the host LCT (29: Summits and Plateaux – Aberdeenshire). Similarly, localised **minor (not significant)** effects are predicted within the adjacent LCT (33: Broad Wooded Valley With Estates) up to 1.5km north-west from the Site. Effects on both LCTs would increase to **moderate (significant)** at Year 5, by which time this effect would largely be positive **(beneficial),** reducing to **minor (not significant)** beyond 1.5km. At Year 25, effects on both LCTs increase to **major (significant)** up to

1.5km from the Site, reducing to **minor (not significant)** beyond 3.5km, with the effects associated with areas of natural regeneration and native woodland being considered positive **(beneficial),** and those associated with areas of conifer plantation being more negative **(adverse),** or **neutral**.

1.73 The landscape character would change from that of windswept, closely-cropped heather moorland to woodland. This change would affect the Site and up to 3.5km to the north and north-west. Whilst considerable, the change would relate to the landscape characteristics found within the wider area, such as the richly wooded valley of the River Dee and the conifer stands of the Forest of Birse. The new woodland would introduce characteristics found within these nearby valleys (LCT 33: Broad Wooded Valley with Estates). For example, a "*strong sense of enclosure*" and "*great diversity of trees and rich understorey* [that] *form a landscape of colourful foliage and dappled light; striking colours in autumn*."[19] The new woodland would not affect the landscape's wild character, but should enhance it, as the manmade pattern of heather moorland management fades, peat is restored, and the biodiversity, texture and colour of the landscape diversifies.

Effects on Views

1.74 In general, the level of visibility of the proposed new woodland would increase over time. For example, from most viewpoints visual effects at Year 1 would be **minor**, arising primarily from new deer fencing (many lengths of which would have grouse droppers), disturbed earth from ground preparation, and the movement of machinery and people as trees are planted. Visual effects would increase to **moderate** by Year 5, by which time the effects would largely be positive **(beneficial),** as views would the take in regenerating areas within the fence, the young trees within a heathery mosaic, as well as the occasional maintenance activities. In the short-term, the project would improve the existing landscape character of heather moorland as the fencing would prevent grazing, allowing the heather and other moorland plants to grow and enhancing perceptions of wildness. The young trees would be small and, seen amongst the moorland, and would not be so easily perceived at this stage. By Year 25, visual effects would tend to increase again to **major**, and be seen as being positive **(beneficial)** in most views, as new woodland and areas if natural regeneration would be in seen in place of the existing sweeping, smooth moorland. While the level of visual effects would increase over time, the new woodland would also become more naturalistic in appearance over time, as natural regeneration occurring alongside the planted areas would appear to increasingly blend the new woodland into the landscape.

1.75 At Year 25, **major,** and frequently positive **(beneficial)** visual effects would be experienced up to around 1km from the Site (see Viewpoint 2: Peter Hill and Viewpoint 6: Glen Dye Lodge) and it is likely that visual effects would reduce with distance to **minor (not significant)** beyond 3.5km. In many views the new woodland would look like a continuation of or an extension of the existing woodland (see **Figure 8: Viewpoint 2: Peter Hill**; **Figure 11: Viewpoint 5: Clachnaben**; **Figure 12: Viewpoint 6: Glen Dye Lodge Gate**; and **Figure 15: Viewpoint 9: B974**). In other views, the new woodland would be seen occupying a previously treeless and windswept landscape (see **Figure 16: Viewpoint 10: Track above Burn of Baddymicks**).

1.76 The new woodland may in some ways enable distances to be more easily perceived, where currently the simplicity of the landscape pattern belies its scale, but it would also help soften the edges of existing coniferous plantations, and make the transition seem more natural looking. In most views, the underlying landform would still be perceived beneath the new woodland and in some cases may be accentuated (see **Figure 7: Viewpoint 1: Old Military Road**). The cleft in the ridge between Clachnaben and Mount Shade is expected to be slightly less perceptible at Year 25 than at present (see **Figure 14: Viewpoint 8: Cairn o' Mount**).

1.77 The most perceptible changes in views would be experienced from the tracks that pass through the new woodland at lower elevations. From here the new woodland would be seen at close proximity and would

[19] NatureScot (2019) SNH National Landscape Character Assessment – Landscape Character Type 33: Broad Wooded Valley With Estates [online] available at: https://www.nature.scot/sites/default/files/LCA/LCT%20033%20-%20Broad%20Wooded%20Valley%20with%20Estates%20-%20Final%20pdf.pdf.

often contain views to close distances, providing a sense of enclosure where currently there is a sense of expansive openness (see **Figure 16: Viewpoint 10: Track above Burn of Baddymicks**).

1.78 Changes associated with the presence of coniferous plantations are likely to be seen as more negative **(adverse),** or **neutral**, whereas those associated with the presence of native woodland and areas of natural regeneration would be seen as positive **(beneficial).**

Effects on Clachnaben and Forest of Birse SLA

1.79 One of the most important characteristics of the SLA is its distinctive landform, which would not be altered by the new woodland. The new woodland is likely to accentuate the landform in places and create visual depth. However, detail such as the apparent cleft on the ridge between Mount Shade would be somewhat less perceptible at Year 25 than at present.

1.80 The qualities of openness and expansiveness characteristic of the heather moorland would be somewhat altered in character by the new woodland, but the change would generally be seen as beneficial across areas of native planting and regeneration.[20] This would be due to the increasing sense of enclosure created by the maturing woodland. In the short-to-medium term, the moorland – which is one of the features contributing to the SLA's sense of wildness – would be improved, as the deer fencing would allow the heather and other moorland plants to grow higher, rather than being close cropped (see **Figure 1.1** below for an illustrative photograph of how an upland landscape can regenerate following construction of deer fencing).

Figure 1.1 Landscape regeneration owing to deer fencing

1.81 Areas of degraded peatland would not be planted but would be allowed to regenerate naturally. Currently, there is severe peat erosion on parts of the Site (see **Figure 1.2** below – the pole in the photograph helps to illustrate the depth of the peat). These areas of peatland would remain open, and, though natural regeneration of vegetation across them, would appear more naturalistic over time. Avoiding planting across these areas would help in maintaining the SLA qualities of openness, whilst enhancing those of wildness.

[20] Aberdeenshire Council (2016) Aberdeenshire Local Landscape Designation Review [online] available at: https://www.aberdeenshire.gov.uk/media/16263/local-landscape-designations-review-report.pdf.

Figure 1.2 Peat erosion at the Site

1.82 Overall, it is predicted that significant visual and landscape effects would arise from the proposed woodland creation, but that these would generally serve to enhance rather than to compromise the integrity of the SLA.

Conclusion

1.83 In summary, landscape and visual effects arising from the proposed woodland creation would result in a considerable change in character at the Site and surroundings. However, the direction of effect would frequently be positive **(beneficial),** as the new native woodland and areas of regeneration would fit with the landscape character of the wider area, soften the transition into commercial forested areas, and make a positive **(beneficial)** contribution to landscape and visual amenity.

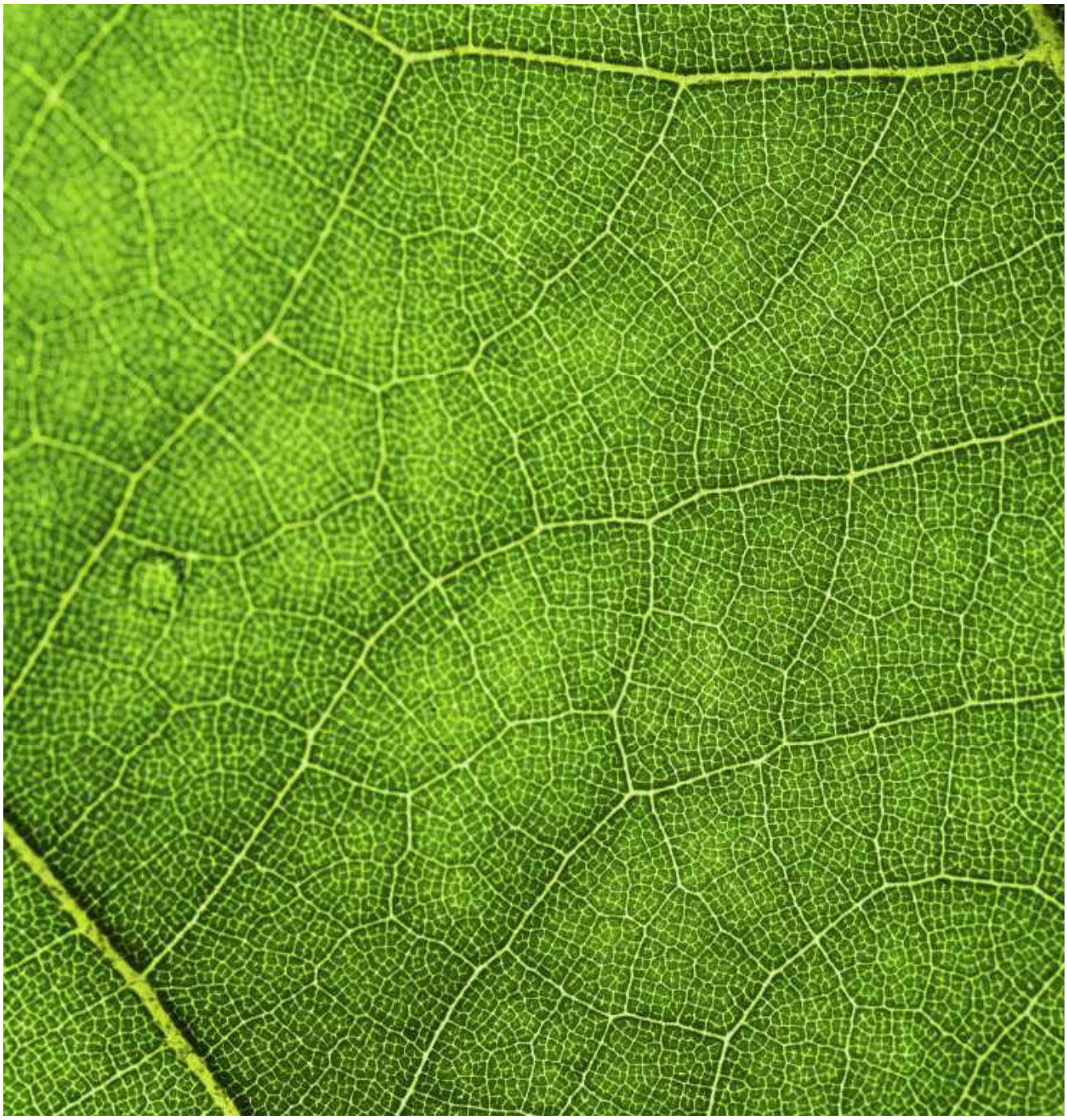
1.84 While any development within the SLA has the potential for adverse effects, it is recognised that sensitively designed new woodland would not detract from the SLA's most valued characteristics, and that the native woodland and areas of regeneration would generally help considerably in enhancing them.

Scottish Woodlands

Glen Dye Moor New Woodland Creation

Appendix 1: Methodology

Draft report
Prepared by LUC
September 2025



Scottish Woodlands

Glen Dye Moor New Woodland Creation
Appendix 1: Methodology

Version	Status	Prepared	Checked	Approved	Date
1.	Draft	P. Main	S. Oxley	S. Oxley	12.09.2025

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Landscape Management
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Transport & Movement Planning
Arboriculture

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LVIA Methodology

Introduction

1.1 This appendix sets out the methodology used for Glen Dye Moor New Woodland Creation (hereafter referred to as 'the Proposed Development') Landscape and Visual Impact Assessment (LVIA) contained in **Chapter 15**.

1.2 The methodology for the production of accompanying visualisations was based on current good practice guidance as set out by NatureScot (2017) and the Landscape Institute (2019). Detailed information about the approach to taking viewpoint photography, and visualisation production is provided below.

1.3 Landscape and visual assessments are separate, although linked, processes. LVIA therefore considers the likely effects of a Proposed Development on:

- landscape as a resource in its own right (caused by changes to the constituent elements of the landscape, its specific aesthetic or perceptual qualities and the character of the landscape); and
- views and visual amenity as experienced by people (caused by changes in the appearance of the landscape).

1.4 The 'primary' LVIA deals with landscape and visual effects separately against the current baseline. It is followed by an assessment of cumulative landscape and visual effects, which considers the effects against potential future baseline scenarios, where relevant.

Guidance

1.5 This methodology was developed by Chartered Landscape Architects (Chartered Members of the Landscape Institute (CMLI)) at Land Use Consultants Ltd (LUC), who have extensive experience in the assessment of landscape and visual effects arising from various developments.

1.6 The methodology was developed primarily in accordance with the principles contained within the Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (GLVIA3) (2013) and associated clarification notes (2024).

Scope of Assessment

1.7 LVIA considers physical changes to the landscape as well as changes in landscape character. It also considers changes to areas designated for their scenic or landscape qualities, and the visual impacts of a proposed development, informed by an assessment undertaken from representative viewpoints, and as perceived by people living in and around settlements, and seen from routes though the landscape.

1.8 All potentially significant landscape and visual effects (including cumulative effects) are examined, including those relating to construction, operation and, where relevant, decommissioning.

1.9 Where it is judged that significant effects are unlikely to occur, the assessment of likely effects on some receptors is 'scoped out'.

Assessment Methodology

Study Area

1.10 The study area for LVIA is determined by the nature and scale of the development proposed and the nature of the study area (e.g. complex topography or extensive tree cover leading to visually enclosed areas may limit the extent of likely significant effects). A 45 km radius study, in line with NatureScot guidance (2017), was defined for this assessment. Where likely significant effects are anticipated to be more localised, the assessment focusses on smaller study areas within 45 km as appropriate.

Methodological Overview

1.11 The key steps in the methodology for assessing landscape and visual effects are as follows:

- The study area is defined, and the area over which the development will potentially be visible is established through the creation of an initial ZTV plan [1].
- The landscape of the study area is analysed, and landscape receptors identified, informed by desk and field-survey.
- The visual baseline is recorded in terms of the different receptors (groups of people) who may experience views of the development (informed by the initial ZTV) and the nature of their existing views and visual amenity.
- Potential assessment viewpoints are selected, as advocated by GLVIA3, to represent a range of different receptors and views, in consultation with statutory consultees:
  - "***Representative viewpoint**s, selected to represent the experience of different types of visual receptor, where larger numbers of viewpoints cannot all be included individually and where the significant effects are unlikely to differ – for example, certain points may be chosen to represent the views of users of particular public footpaths and bridleways;*
  - ***Specific viewpoints**, chosen because they are key and sometimes promoted viewpoints within the landscape, including, for example, specific local visitor attractions, viewpoints in areas of particularly noteworthy visual and/or recreational amenity such as landscapes with statutory landscape designations, or viewpoints with particular cultural landscape associations; and*
  - ***Illustrative viewpoints**, chosen specifically to demonstrate a particular effect or specific issues, which might, for example, be the restricted visibility at certain locations*." (GLVIA3, Para 6.19, Page 109).
- Likely significant effects on both the landscape as a resource and visual receptors are identified.
- The level (and significance) of landscape and visual effects are judged with reference to the nature of the receptor (commonly described as the sensitivity of the receptor), which considers both susceptibility and value, and the nature of the effect (commonly described as the magnitude of change), which considers a combination of judgements including scale, geographical extent, duration and reversibility.

Direction of Effects

1.12 As required by the EIA Regulations (2017), the assessment identifies the direction of effect as either being beneficial, adverse (also referred to as positive or negative) or neutral.

1.13 The direction of landscape, visual and cumulative effects (beneficial, adverse or neutral) is determined in relation to the degree to which the proposal fits with the existing landscape character or views, and the contribution to the landscape or views that the proposed development makes, even if it is in contrast to the existing character of the landscape or views.

[1] A bare ground ZTV indicates areas from where a development is theoretically visible, but does not account for screening from vegetation and/or buildings

1.14 With regard to the creation of new woodland an assessment is required to take an objective approach. Landscape and visual effects relating to large-scale new woodland creation are generally assumed to include those which are positive (beneficial – i.e. when associated with native species), and others which may be considered negative, or neutral (i.e. when considering coniferous plantations, using non-native species).

Method for Assessing Landscape Effects

1.15 As outlined in GLVIA3 "*An assessment of landscape effects deals with the effects of change and development on landscape as a resource*" (GLVIA3, Para 5.1, Page 70). Changes may affect the elements that make up the landscape, the aesthetic and perceptual aspects of the landscape and its distinctive character.

1.16 An assessment of landscape effects requires consideration of the nature of landscape receptors (sensitivity of the receptor) and the nature of the effect on those receptors (magnitude of change). GLVIA3 states that the nature of landscape receptors should be assessed in terms of the susceptibility of the receptor to the type of change proposed, and the value attached to the receptor. The nature of the effect on each landscape receptor should be assessed in terms of scale of effect, geographical extent, duration and reversibility.

1.17 These aspects are considered together to form a judgement regarding the overall significance of landscape effects (GLVIA3, Figure 5.1 Page 71). The following sections set out the methodology used to evaluate sensitivity and magnitude.

Significance of Landscape Effects

1.18 The introduction of a development could affect the elements which make up the landscape, the aesthetic or perceptual aspects of the landscape or its distinctive character.

1.19 Landscape receptors are the constituent elements of the landscape, its specific aesthetic or perceptual qualities and the character of the landscape in different areas (GLVIA3, Para. 3.21, Page 36).

1.20 The sensitivity of landscape receptors should be assessed in terms of the susceptibility of the receptor to the type of change or development proposed, and the value attached to the landscape. The magnitude of change should be assessed in terms of the scale, geographical extent, duration and reversibility of the effect.

1.21 These aspects are considered together to form a judgement regarding the overall significance of landscape effect (GLVIA3, Figure 5.1 Page 71). The following sections set out the methodology used to evaluate sensitivity and magnitude.

Sensitivity of Landscape Receptors

1.22 The sensitivity of a landscape receptor to change is defined as **high**, **medium** or **low** (or graduations between) and is based on weighing up professional judgements regarding susceptibility and value, as set out in the table below.

Table 1.1 Sensitivity of Landscape Receptors

	Higher		Lower
Susceptibility	Attributes that make up the character of the landscape offer very limited opportunities for the accommodation of change without key characteristics being fundamentally altered by new woodland creation, leading to a different landscape character.	↔	Attributes that make up the character of the landscape are resilient to being changed by new woodland creation.

	Higher		Lower
Value	Landscapes with high scenic quality, high conservation interest, recreational value, important cultural associations or a high degree of rarity.	↔	Landscape of poor condition and intactness, limited aesthetic qualities, or of character that is widespread.

1.23 There may be a complex relationship between the value attached to a landscape and the susceptibility of the landscape to a specific change. Therefore, the rationale for judgements on the sensitivity of landscape receptors needs to be clearly set out for each receptor. Further information on the criteria is provided below. It should be noted that whilst landscape designations at an international or national level are likely to be accorded the highest value, it does not necessarily follow that such landscapes all have a high susceptibility to all types of change, and conversely, undesignated landscapes may also have high value and susceptibility to change (GLVIA3, Page 90).

Susceptibility of Landscape Receptors

1.24 Susceptibility is defined by GLVIA3 as "*the ability of the landscape receptor (whether it be the overall character or quality/condition of a particular type or area, or an individual element and/or feature, or a particular aesthetic and perceptual aspect) to accommodate the proposed development without undue consequences for the maintenance of the baseline situation and/or the achievement of landscape planning policies and strategies*" (GLVIA3 paragraph 5.40).

1.25 A series of criteria are used to evaluate the susceptibility of Landscape Character Types (LCT) [2] to new woodland creation as set out in the table below. These criteria or aspects are drawn from a range of published sources, GLVIA3.

Table 1.2 Landscape Susceptibility Criteria

	Aspects Indicating Reduced Susceptibility to Proposed Development		Aspects Indicating Greater Susceptibility to Proposed Development
Scale	Large scale	↔	Small scale
Landform	Absence of strong topographical variety, featureless, convex or flat	↔	Presence of strong topographical variety or distinctive landform features
Landscape pattern and complexity	Complex Rugged and irregular	↔	Simple Regular or uniform
Settlement and man-made influence	Presence of contemporary structures e.g. utility, infrastructure or industrial elements	↔	Absence of modern development
Skylines	Non-prominent /screened skylines	↔	Distinctive skylines Skylines that are highly visible over large areas or exert a large

[2] Scottish Landscape Character Types Map and Descriptions | NatureScot

	Aspects Indicating Reduced Susceptibility to Proposed Development		Aspects Indicating Greater Susceptibility to Proposed Development
			influence on landscape character Skylines with important historic or other landmarks
Inter-visibility with adjacent landscapes	Little inter-visibility with adjacent sensitive landscapes or viewpoints	↔	Strong inter-visibility with sensitive landscapes Forms an important part of a view from sensitive viewpoints
Perceptual aspects	Close to landscapes of woodland / wooded characteristics	↔	Antilogous to landscapes of woodland / wooded characteristics

1.26 Desk-based research and fieldwork undertaken across the study area helps to inform the evaluation of susceptibility.

1.27 Landscape susceptibility is described as being high, medium or low.

Value of Landscape Receptors

1.28 The European Landscape Convention advocates that all landscape is of value, whether it is the subject of defined landscape designation or not, "*The landscape is important as a component of the environment and of people's surroundings in both town and country and whether it is ordinary landscape or outstanding landscape*" (Explanatory Report to the European Landscape Convention, Page 6). The value of a landscape receptor is recognised as being a key contributing factor to the sensitivity of landscape receptors.

1.29 The value of landscape receptors is determined with reference to:

- review of relevant designations and the level of policy importance that they signify (such as landscapes designated at international, national or local level); and/or
- application of criteria that indicate value (such as scenic quality, rarity, recreational value, representativeness, conservation interests, perceptual aspects and artistic associations) as described in GLVIA3, paragraphs 5.44-5.47; and/or
- aspects relating to landscape character and "*the value of individual contributors to landscape character, especially the key characteristics, which may include individual elements of the landscape, particular landscape features, notable aesthetic, perceptual or experiential qualities, and combinations of these contributors*." (GLVIA3, Para 5.44, Page 89).

1.30 Internationally and nationally designated landscapes would generally indicate landscape of higher value whereas those without formal designation (such as a widespread or common landscape type without high scenic quality) are likely to be of lower value, bearing in mind that all landscapes are valued at some level (2012). There is however variation across both designated and undesignated areas, and so judgements regarding value are also informed by fieldwork.

1.31 Landscape value is described as being high, medium or low.

Magnitude of Landscape Change

1.32 The overall judgement of magnitude of landscape change is based on combining professional judgements on scale, geographical extent, duration and reversibility. Further information on the criteria is provided below.

Scale of Change

1.33 For landscape elements/features this depends on the extent of existing landscape elements that would be lost or changed, the proportion of the total extent that this represents, and the contribution of that element to the character of the landscape.

1.34 In terms of landscape character, this reflects the degree to which the character of the landscape would change as a result of removal or addition of landscape components, and how the changes would affect key characteristics.

1.35 The scale of the change is described as being large, medium, small, or barely perceptible.

Geographical Extent

1.36 The geographical extent over which the landscape change would arise is described as being large (scale of the landscape character type, or widespread, affecting several landscape types or character areas), medium (more immediate surroundings) or small (site level or more localised).

Duration

1.37 GLVIA3 states that "*Duration can usually be simply judged on a scale such as short term, medium term or long term*" (GLVIA3, Page 91). For the purposes of the assessment, duration is often determined in relation to the phases of the Proposed Development, as follows:

- Short-term effects are those that occur during construction, and may extend into the early part of the operational phase, e.g. construction activities, generally lasting 0-5 years;
- Medium-term effects are those that occur during part of the operational phase, generally lasting 5-10 years; and
- Long-term effects are those which occur throughout the operational phase (in this instance the lifetime of the project), or are permanent effects which continue after the operational phase, generally lasting over 10 years.

1.38 Duration is also a relevant consideration for effects which are intermittent.

Reversibility

1.39 In accordance with the principles contained within GLVIA3, reversibility is reported as reversible, partially reversible or irreversible (i.e. permanent), and is related to whether the change can be reversed at the end of the phase of development under consideration (i.e. at the end of construction or at the end of the operational lifespan of the development).

1.40 Judgements on the magnitude of landscape change are recorded as **high**, **medium**, **low** or **barely perceptible** (or graduations between) and are guided by the table below:

Table 1.3 Magnitude of Landscape Change

	Higher		Lower
Scale	Extensive loss of landscape features and/or elements, and/or change in, or loss of key landscape characteristics, and/or creation of new key	↔	Limited loss of landscape features and/or elements, and/or change in or loss of some secondary landscape characteristics

	Higher		Lower
	landscape characteristics		
Geographical Extent	Change in landscape features and/or character extending considerably beyond the immediate site and potentially affecting multiple landscape character types/areas	↔	Change in landscape features and/or character contained within or local to the immediate site and affecting only a small part of the landscape character type/area
Duration	Changes experienced for a longer period e.g. 10 years or more	↔	Changes experienced for a shorter period e.g. up to 5 years
Reversibility	Continuous	↔	Intermittent or occasional

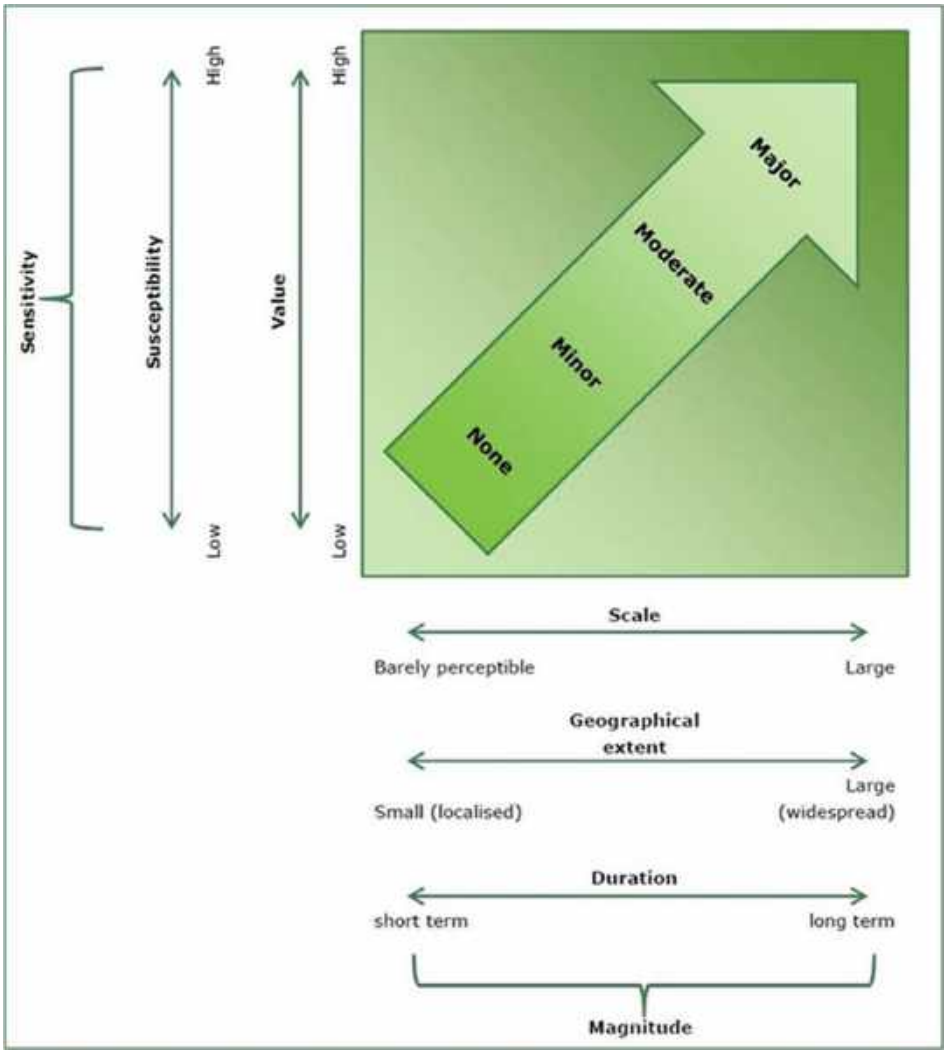
Judging Levels of Landscape Effect and Significance

1.41 The final step in the assessment requires the judgements of sensitivity and magnitude of change to be combined to make an informed professional assessment on the significance of each landscape effect (GLVIA3, Figure 5.1, Page 71).

1.42 Consideration of the relative importance of each aspect is made to feed into the overall decision. Levels of effect are identified as **negligible**, **minor**, **moderate** or **major** where moderate and major effects are considered significant in the context of the EIA Regulations.

1.43 This determination requires the application of professional judgement and experience to take on board the many different variables which need to be considered, and which are given different weight according to site-specific and location-specific considerations in every instance. Judgements are made on a case-by-case basis, guided by the principles set out in Diagram 1 below. A numerical scoring or rigid matrix-type approach, where the level of effect would be defined simply based on the level of sensitivity (nature of receptor) combined with the magnitude of change (nature of effect), is not adopted. As such, the conclusion on the level of effect is not always the same.

Diagram 1 Judging Levels of Effect – Landscape or Visual (including cumulative)



Method for Assessing Visual Effects

Significance of Visual Effects

1.44 As outlined in GLVIA3 "*An assessment of visual effects deals with the effects of change and development on views available to people and their visual amenity*" (GLVIA3, Para 6.1, Page 98). Changes in views may be experienced by people at different locations within the study area including from static locations (normally assessed using representative viewpoints) and whilst moving through the landscape (normally referred to as sequential views, e.g. from roads and walking routes).

1.45 Visual receptors are individuals or groups of people who may be affected by changes in views and visual amenity. They are usually grouped by their occupation or activity (e.g. residents, motorists, recreational users) and the extent to which their attention is focused on the view (GLVIA3, Paras. 6.31-6.32, Page 113).

1.46 GLVIA3 states that the sensitivity of visual receptors should be assessed in terms of the susceptibility of the receptor to change in views and/or visual amenity and the value attached to particular views. The magnitude of change should be assessed in terms of the scale, geographical extent, duration and reversibility.

1.47 These aspects are considered together, to form a judgement regarding the overall significance of visual effect (GLVIA3, Figure 6.1, Page 99). The following sections set out the methodology used to evaluate sensitivity and magnitude.

Sensitivity of Visual Receptor

1.48 The sensitivity of a visual receptor to change is defined as **high**, **medium** or **low** (or graduations between) and is based on weighing up professional judgements regarding susceptibility and value, and each of their component considerations, as set out in the table below.

Table 1.4 Sensitivity of Visual Receptors

	Higher		Lower
Susceptibility	Viewers whose attention or interest is focused on their surroundings, including communities/individual residential receptors/people engaged in outdoor recreation/ visitors to heritage assets or other attractions where views of surrounding area an important contributor.	↔	People whose attention is not on their surroundings (and where setting is not important to the quality of working life) such as commuters/people engaged in outdoor sports/people at their place of work.
Value	Views may be recorded in management plans, guide books, and/or which are likely to be experienced by large numbers of people.	↔	Views which are not documented or promoted.

1.49 The sensitivity of visual receptors may involve a complex relationship between their susceptibility to change and the value attached to a view. Therefore, the rationale for judgements of sensitivity is clearly set out for each receptor in relation to both its susceptibility (to the type of change proposed) and the value of the view. Further information on the criteria is provided below.

Susceptibility of Visual Receptor

1.50 The susceptibility of visual receptors to changes in views/visual amenity is a function of the occupation or activity of people experiencing the view and the extent to which their attention is focused on views (GLVIA3, para 6.32). This is recorded as high, medium or low, and is informed by the table below.

Table 1.5 Susceptibility of Visual Receptors

High	Medium	Low
People whose attention or interest is focussed on their surroundings, including: ■ Communities where views contribute to the landscape setting enjoyed by residents; ■ Visitors to heritage assets or other attractions where views of surroundings are an important contributor to experience; and/or ■ Visitors to formal or promoted stopping places	■ People engaged in outdoor recreation (including users of cycle routes, footpaths and public rights of way whose interest is likely to be partially focused on the landscape); ■ People travelling in vehicles on scenic routes and tourist routes, where attention is focused on the surrounding landscape, but is transitory; and/or ■ People at their place of work whose attention is focused	■ People travelling more rapidly on more major roads, rail or transport routes (not recognised as scenic routes); ■ People engaged in outdoor sport or recreation which does not involve or depend upon appreciation of views of the landscape; and/or ■ People at their place of work whose attention is not on their surroundings (and where setting is not

High	Medium	Low
on scenic or tourist routes and at key hill summits.	on the surroundings and where setting is important to the quality of working life.	important to the quality of working life).

Value of View or Visual Amenity

1.51 GLVIA3 also requires evaluation of the value attached to the view or visual amenity and relates this to planning designations and cultural associations (GLVIA3, Para. 6.37, Page 114).

1.52 Recognition of the value of a view is determined with reference to:

- planning designations specific to views;
- whether it is recorded as important in relation to designated landscapes (such as views specifically mentioned in the special qualities of a National Scenic Area);
- whether it is recorded as important in relation to heritage assets (such as designed views recorded in citations of Gardens and Designed Landscapes (GDL) or views recorded as of importance in Conservation Area Appraisals); and
- the value attached to views by visitors, for example through appearances in guidebooks or on tourist maps, provision of facilities for their enjoyment and references to them in literature and art.

1.53 A designated viewpoint or scenic route advertised on maps and in tourist information, or which is a significant destination in its own right, such as a Munro/Corbett summit, is likely to indicate a view of higher value. High value views may also be recognised in relation to the special qualities of a designated landscape or heritage asset, or may be a view which is familiar from photographs or paintings.

1.54 Views experienced from viewpoints or routes not recognised formally or advertised in tourist information, or which are not provided with interpretation or, in some cases, formal access, are likely to be of lower value.

1.55 Judgements on the value of views or visual amenity are recorded as high, medium or low.

Magnitude of Visual Change

1.56 The overall judgement of magnitude of visual change (nature of visual effect) is based on weighing up professional judgements on scale, geographical extent, duration and reversibility. Further information on the criteria is provided below.

Scale

1.57 The scale of a visual change depends on:

- the scale of the change in the view with respect to the loss or addition of features in the view and changes in its composition, including the proportion of the view occupied by the Proposed Development;
- the degree of contrast or integration of any new features or changes in the landscape with the existing or remaining landscape elements and characteristics in terms of form, scale and mass, line, height, colour and texture; and
- the nature of the view of the Proposed Development, in terms of the relative amount of time over which it will be experienced and whether views will be full, partial or glimpses.

1.58 All changes are assumed to be during winter, representing a 'maximum case effect' or 'worst case effect' scenario with minimal screening by vegetation and deciduous trees. Note that wireframes and ZTVs prepared to illustrate potential visual effects are calculated on the basis of bare ground and therefore demonstrate the maximum extent of visibility possible, in the absence of buildings or vegetation. Where forestry is present, consideration is given to felling regimes if levels of screening by forestry are likely to change notably during the lifetime of the Proposed Development.

1.59 In this assessment scale of visual change is described as being large, medium, small or barely perceptible.

Geographical Extent

1.60 The geographical extent of a visual change records the extent of the area over which the changes will be visible e.g. whether this is a unique viewpoint from where the Proposed Development can be glimpsed, or whether it represents a large area from which similar views are gained. Geographical extent is described as being large, medium or small.

Duration

1.61 The duration of visual effects is reported as short-term, medium-term or long-term, as defined for the duration of landscape effects (see above).

1.62 Duration is also a relevant consideration for effects which are intermittent.

Reversibility

1.63 Reversibility is reported as irreversible (i.e. permanent), partially reversible or reversible, and is related to whether the visual change can be reversed at the end of the phase of development under consideration (i.e. at the end of construction or at the end of the operational lifespan of the development). Operational visual effects are generally considered to be partially reversible.

1.64 Judgements on the magnitude of visual change are recorded as **high**, **medium**, **low** or **barely perceptible** (or graduations between) guided by the table below.

Table 1.6 Magnitude of Visual Receptor Change

	Higher		Lower
Scale	A large visual change resulting from the Proposed Development is the most notable aspect of the view, perhaps as a result of the development being in close proximity, or because a substantial part of the view is affected, or because the development introduces a new focal point and/or provides contrast with the existing view and/or changes the scenic qualities of the view.	↔	A small or some visual change resulting from the Proposed Development as a minor or generally unnoticed aspect of the view, perhaps as a result of the development being in the distance, or because only a small part of the view is affected, and/or because the development does not introduce a new focal point or is in contrast with the existing view and/ does not change the scenic qualities of the view.
Geographical Extent	The assessment location is clearly representative of similar visual changes over an extensive geographic area.	↔	The assessment location clearly represents a small geographic area.
Duration	Visual change experienced over a	↔	Visual change experienced over a

	Higher		Lower
	longer period, e.g. 10 years or more. Continuous longer periods of time when travelling along a linear route.		short period e.g. up to 5 years. Intermittent or occasional Shorter periods of time when travelling along a linear route.
Reversibility	A permanent visual change which is not reversible or only partially reversible following decommissioning of the Proposed Development.	↔	A temporary visual change which is largely reversible following the completion of construction, or decommissioning, of the Proposed Development.

Judging the Level of Visual Effect and Significance

1.65 As for landscape effects, the final step in the assessment requires the judgements of sensitivity of visual receptor and magnitude of visual change to be combined to make an informed professional assessment on the significance of each visual effect.

1.66 This determination requires the application of professional judgement and experience to take on board the many different variables which need to be considered, and which are given different weight according to site-specific and location-specific considerations in every instance. Judgements are made on a case-by-case basis, guided by the same principles as set out in Diagram 1 above.

1.67 Consideration of the relative importance of each aspect is made to feed into the overall decision. Levels of visual effect are identified as negligible, minor, moderate or major where moderate and major visual effects are considered significant in the context of the EIA Regulations. A numerical scoring or rigid matrix-type approach, where the level of effect would be defined simply based on the level of sensitivity (nature of receptor) combined with the magnitude of change (nature of effect), is not adopted. As such, the conclusion on the level of effect is not always the same.

Cumulative Landscape and Visual Impact Assessment

1.68 The aim of a cumulative assessment within a LVIA is to describe and assess the ways in which the Proposed Development may give rise to additional landscape and visual effects when considered together with other existing, consented, or proposed developments. The assessment therefore considers how the introduction of the new woodland could interact with other schemes, resulting in combined, successive, or sequential effects on landscape character or views.

1.69 For the LVIA, the baseline includes all existing developments that are present in the landscape at the time of the assessment. However, the cumulative assessment considers the potential future situation in which other developments that are consented or proposed may also be present. Only those schemes considered likely to give rise to landscape or visual effects are included.

1.70 As with the primary LVIA, the significance of cumulative effects is determined by combining judgements about the sensitivity of the receptor with the magnitude of cumulative change. Magnitude reflects the additional influence of the Proposed Development when considered in the context of other developments, judged according to scale, geographic extent, duration, and reversibility.

1.71 The emphasis remains on the Proposed Development itself and whether, through its interaction with other projects, it would give rise to significant additional effects on landscape character, views, or designated landscapes.

Viewpoint Photography

1.72 The baseline photography for the assessment viewpoints was taken in accordance with guidance from NatureScot (2017). The focal lengths used are in accordance with recommendations contained in guidance and are stated on the figures. Photography was captured between winter 2021 and spring 2025, using a Nikon D750 full frame digital SLR camera, with a fixed 50 mm focal length lens. The methodology for photography is in accordance with guidance from NatureScot.

1.73 A tripod with vertical and horizontal spirit levels was used to provide stability and to ensure a level set of adjoining images. A panoramic head was used to ensure the camera rotated about the no-parallax point of the lens in order to eliminate parallax errors between the successive images and enable accurate stitching of the images. The camera was moved through increments of 24 degrees and rotated through a full 360˚ (degrees) at most viewpoint. Fifteen photographs are taken for each 360˚ view.

1.74 The location of each viewpoint was recorded (GPS grid reference, location map and photograph of the tripod) in accordance with NatureScot and Landscape Institute guidance (2019).

1.75 Weather conditions and visibility were considered an important aspect of the field visits for the photography. Where possible, visits were planned around clear days with good visibility. Viewpoint locations were visited at times of day to ensure, as far as possible, that the sun lit the scene from behind, or to one side of the photographer.

Photography Stitching, Wirelines and Photomontages

1.76 Photography stitching software (PTGui© 12.27) was used to stitch together the adjoining images to form panoramic images in cylindrical projection. A selection of identical control points was created within each of the adjoining frames to increase the level of accuracy when stitching the photography.

1.77 The software package Prospect Map Maker 3 (known as Prospect hereafter) was used to create both the model block views (year 5 and year 25 scenarios) and the year 25 rendered views. Prospect software is designed to help woodland designers visualise woodland proposals, specifically in Scotland, England and Wales.

1.78 The proposed planting was split into sub-compartments and imported into Prospect in shapefile format. Attribution in relation to species, height, tree spacing (density) and growth rates was assigned to each sub-compartment. A list of the tree species recognised by Prospect can be found in the **Table 1.7** below.

Table 1.7 Tree codes recognised in Prospect

SS	Sitka spruce	HOL	Holly species	XWL	other willows
SP	Scots pine	SLI	Small-leaved lime	CAT	Atlas cedar
CP	Corsican pine	CLI	Common lime	LCD	Cedar of Lebanon
LP	Lodgepole pine	LLI	Large-leaved lime	XCD	other Cedar
NS	Norway spruce	LI	Lime	LC	Lawsons cypress
EL	European larch	FM	Field maple	LEC	Leyland cypress
JL	Japanese larch	AMA	Big leaf maple	ESF	European silver fir
DF	Douglas fir	NOM	Norway maple	RF	Red (pacific silver) fir
WH	Western hemlock	SY	Sycamore	BMF	Bornmullers fir
RC	Western red cedar	ASA	Silver maple	GKF	Grecian fir
GF	Grand Fir	RAN	Raoul/rauli	NMF	Nordmann fir
NF	Noble fir	RON	Roble	XF	other firs (Abies)
OK	Oak (robur/petraea)	NPU	Lenga	XL	other larches
BE	Beech	XNO	other Nothofagus	HL	Hybrid larch
BI	Birch (downy/silver)	QAL	White oak	XC	other conifers
PO	Hybrid poplar	ROK	Red oak	MC	Mixed conifers
IAR	Italian alder	QCE	Turkey oak	PAR	Armand's pine
CAR	Common alder	QFR	Hungarian oak	PAY	Mexican white pine
GAR	Grey alder	QIL	Holm oak	PBR	Calabrian pine
RAR	Red alder	SOK	Sessile oak	PEL	Slash pine
AR	Alder	QPU	Downy oak	PKO	Korean pine
VAR	Green alder	QPY	Pyrenean oak	PMO	Western white pine
FAM	White ash	POK	Pedunculate/common oak	BIP	Bishop pine
FAN	Narrow-leafed ash	XOK	other oak spp	AUP	Austrian pine
AH	Ash	XB	other broadleaves	MCP	Macedonian pine
FPE	Red ash	MB	Mixed broadleaves	MAP	Maritime pine
FOR	Oriental beech	XPL	Plane spp	PDP	Ponderosa pine
BPA	Paper-bark birch	LPL	London plane	RAP	Monterey pine
SBI	Silver birch	WPO	White poplar	XP	other pines
PBI	Downy birch	GPO	Grey poplar	WEP	Weymouth pine
XBI	other birches	BPO	Black poplar	PTA	Loblolly pine
HBM	Hornbeam	XPO	other poplar spp	MOP	Mountain pine
BOX	Box	ASP	Aspen	PWA	Bhutan pine
WCH	Wild cherry/gean	HAW	Hawthorn species	PYU	Yunnan pine
BCH	Bird cherry	CAP	Crab apple	JCR	Japanese cedar
PSP	Blackthorn	WHI	Whitebeam	RSQ	Coast redwood
XCH	other cherry spp	ROW	Rowan	WSQ	Wellingtonia
HCH	Horse chestnut	WST	Wild service tree	OMS	Serbian spruce
SC	Sweet chestnut	TUL	Tulip tree	ORS	Oriental spruce
SEM	Smooth-leaved elm	COV	Shagbark hickory	XS	other spruces
WEM	Wych elm	JNI	Black walnut	YEW	Yew
EEM	English elm	JRE	Common walnut	NMB	Native mixed broadleaves
EM	Elm	XWA	other walnut	XNB	Other native broadleaves
EGU	Cider gum	WWL	White willow	OPEN	Open ground
ENI	Shining gum	GWL	Goat willow	CLEAR	Clear felled
XEU	other Eucalyptus	SCI	Grey willow		
HAZ	Hazel	CWL	Crack willow		

1.79 Prospect uses OS Terrain 50 Digital Terrain Model (DTM) data which provided a detailed and reliable representation of the topography. The 3D surface was draped with OS OpenMap raster mapping.

1.80 Microsited viewpoint co-ordinates, appropriate field of view (in degrees) and view directions were input into the model. Viewer height was set to 1.5m above ground level. Multiple 90 degree, cylindrically projected, renders were exported for each viewpoint in .jpeg format.

1.81 The exported renders were imported into Adobe Photoshop© where they were aligned and composited with the baseline photography. Parts of the Proposed Development which were located behind foreground elements in the photograph were masked (removed) where they were located behind foreground elements that appeared in the original photograph to create the photomontage.

Presentation of Photomontages

1.82 Adobe InDesign© software was used to present the figures. The dimensions for each image (printed height and field of view) are in accordance with NatureScot requirements. Photography information and viewing instructions are provided on each page where relevant.

- The elongated A3 width format pages presented for each viewpoint are set out as follows:
  - The first A3 page contains two map insets; the first being an OS 1:60,000 scale map showing the viewpoint location ,the direction of view of the 90˚ baseline photography and proposed planting species groups are also shown. The second being an aerial image at 1:5,000 scale show he viewpoint location and the direction of view of the 90˚ baseline photography.
  - The following pages contains 90˚ baseline photography and 3D block/model views at Years 5 and 25. These are shown in cylindrical projection and presented on an A1 width page.
  - The subsequent pages contain a 90˚ rendered view at Year 25. These images are shown in cylindrical projection and presented on an A1 width page.

Chapter 2
References

The Landscape Institute and Institute of Environmental Management and Assessment (2013) Guidelines for Landscape and Visual Impact Assessment, 3rd Edition, Routledge.

The Landscape Institute (2024) Notes and Clarifications on aspects of the 3rd Edition Guidelines on Landscape and Visual Impact Assessment (GLVIA3) LITGN-2024-01.

The Landscape Institute (2019) TGN 06/19 Visual Representation of development proposals and associated Technical Information Notes: Visualisation of development.

The Landscape Institute (2021) TGN 02-21: Assessing landscape value outside national designations.

NatureScot (2025) Special Landscape Qualities – Guidance on Assessing Effects.

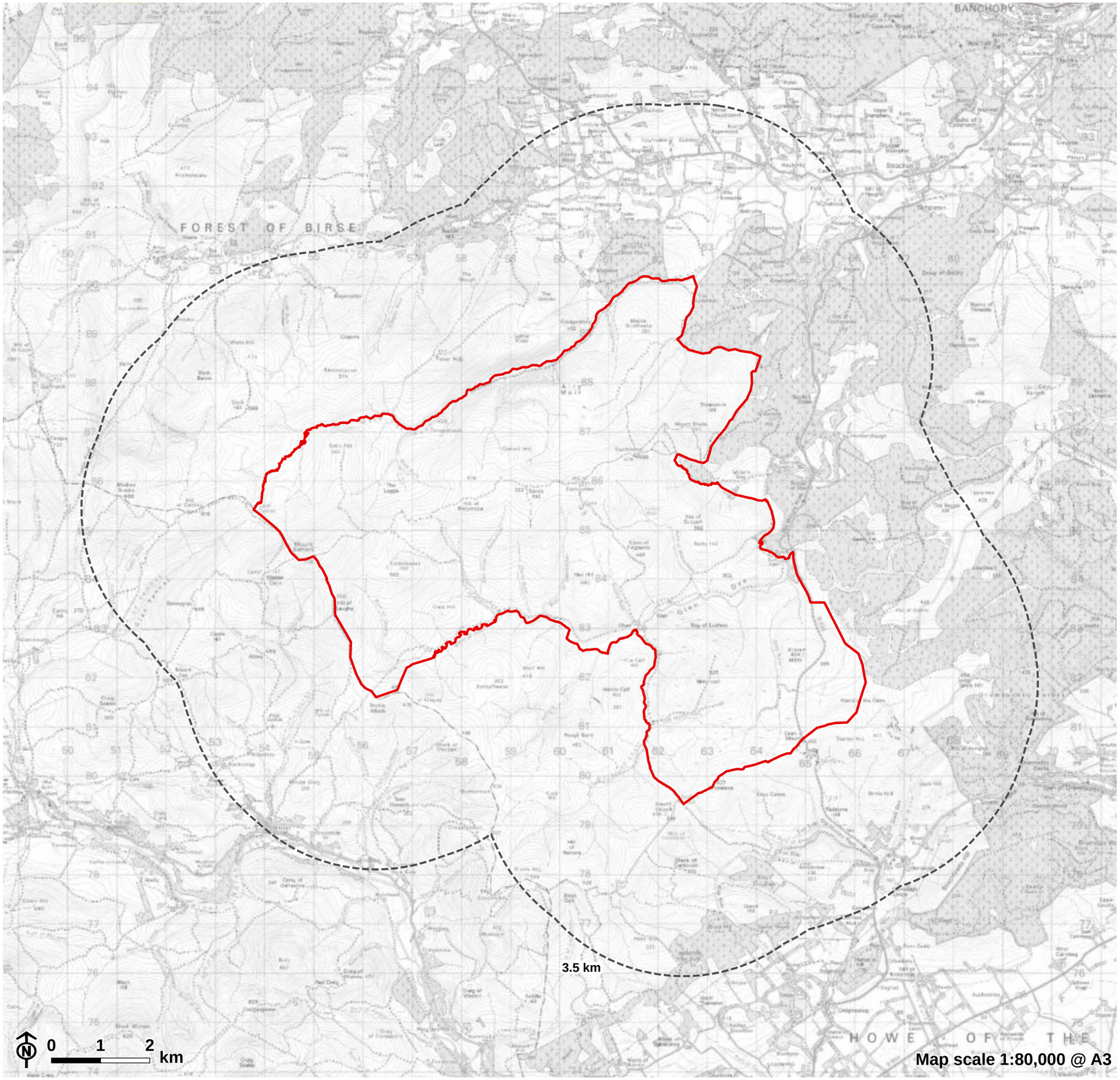
Contents

Figures and Visualisations

Glen Dye New Woodland Creation
Scottish Woodland

LUC

Figure 1: Study area

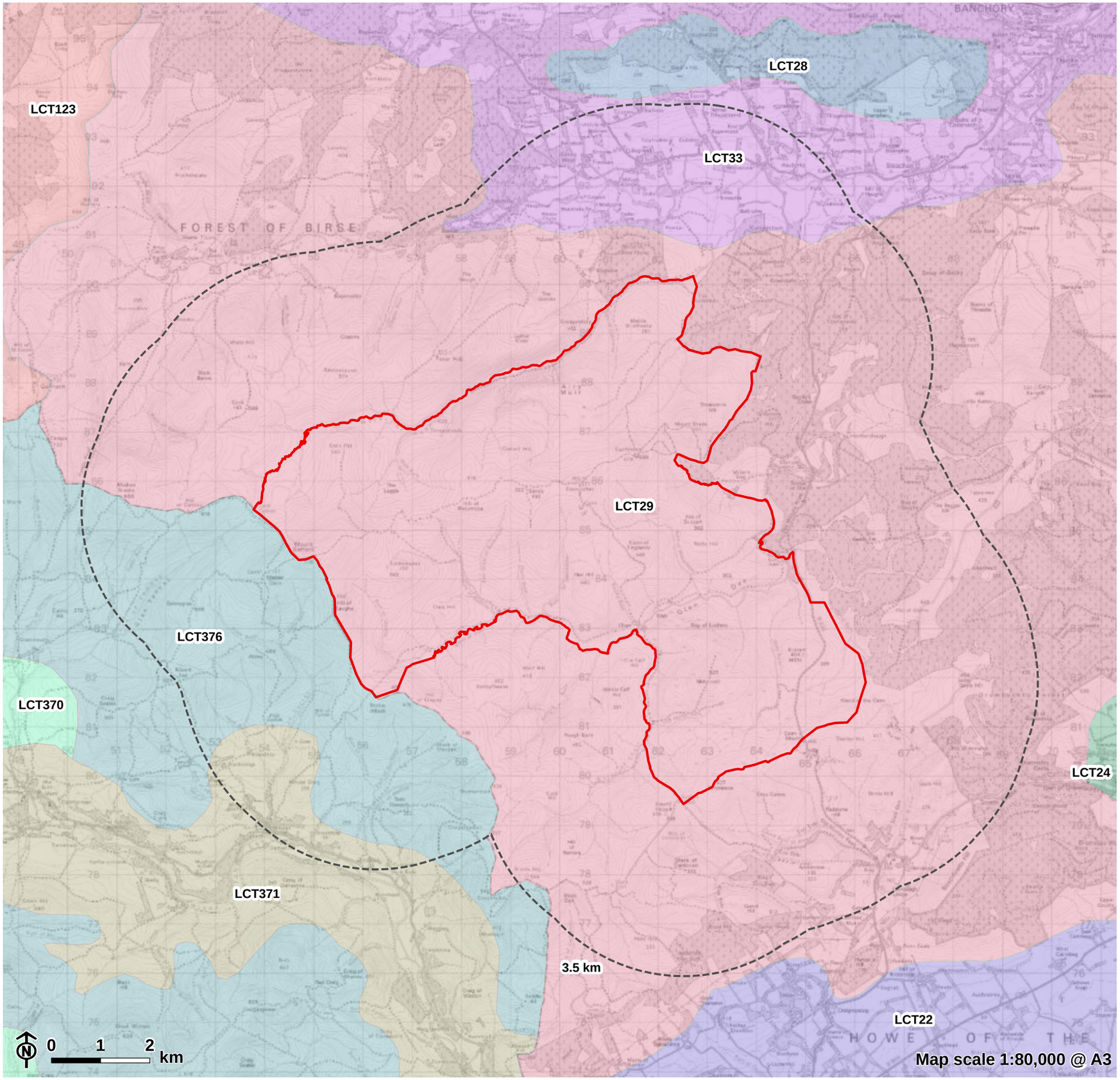


Site boundary
3.5 km study area

Glen Dye New Woodland Creation
Scottish Woodland

LUC

Figure 2: Landscape character types



Site boundary
3.5 km study area

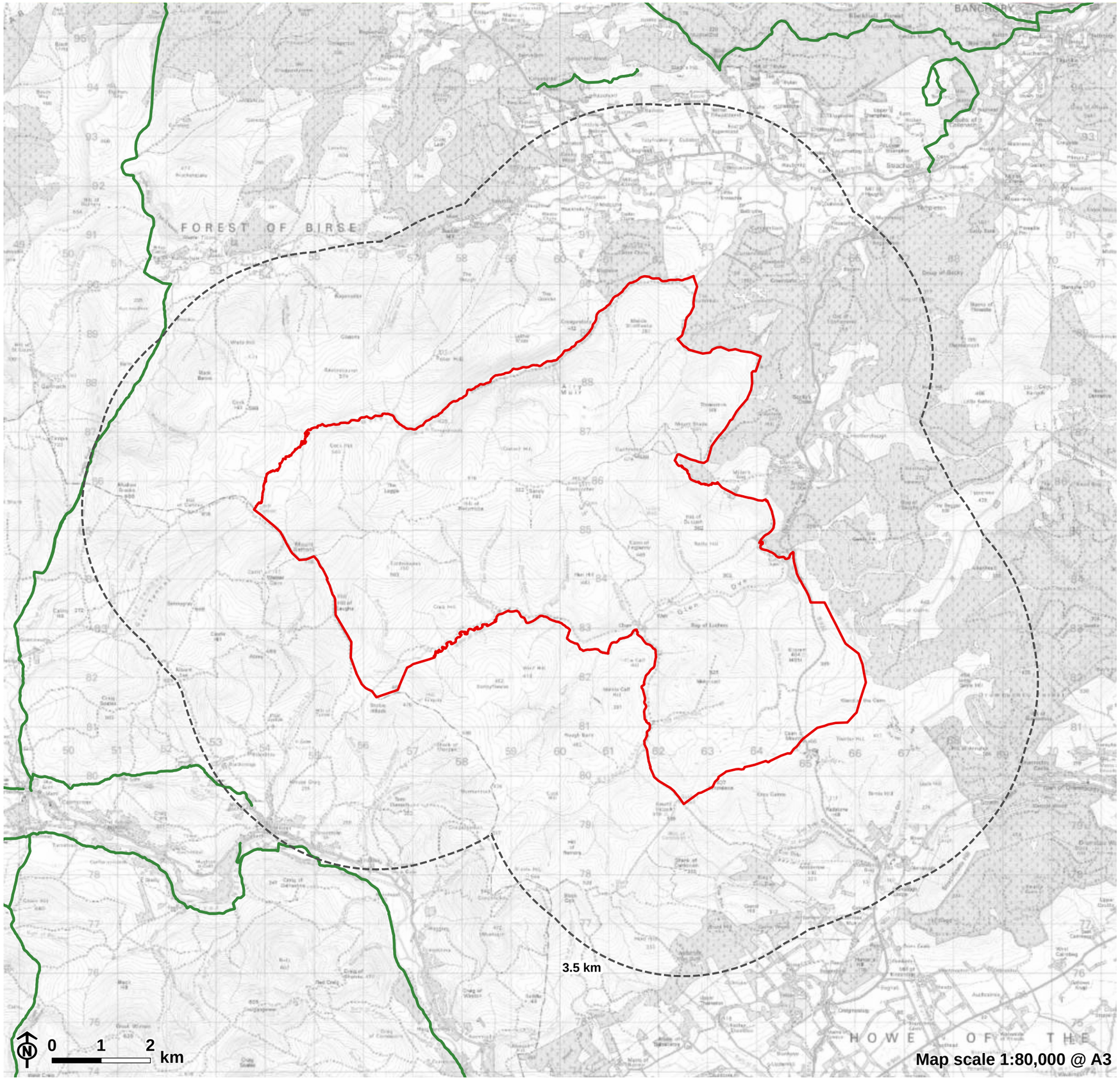
Landscape Character Assessment

- 123: Smooth Rounded Hills - Cairngorms
- 129: Broad Glen with Estates
- 22: Broad Valley Lowlands - Aberdeenshire
- 24: Coastal Farmed Ridges and Hills - Aberdeenshire
- 28: Outlying Hills & Ridges
- 29: Summits and Plateaux - Aberdeenshire
- 33: Broad Wooded Valley with Estates
- 370: Upper Upland Glens
- 371: Mid Upland Glens
- 376: Summits and Plateaux - Tayside

Glen Dye New Woodland Creation
Scottish Woodland

LUC

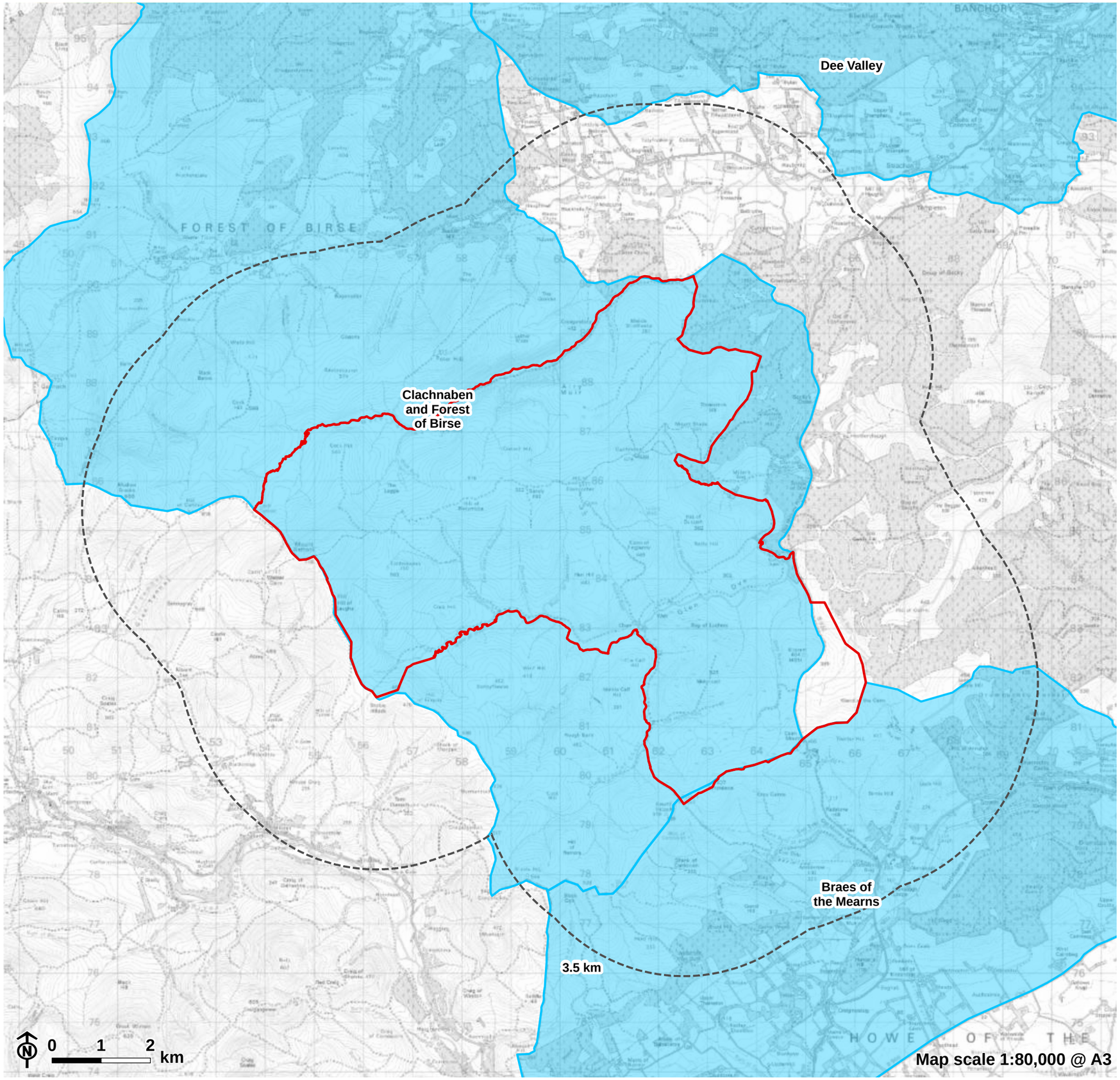
Figure 3: Core paths



Glen Dye New Woodland Creation
Scottish Woodland

LUC

Figure 4: Special landscape areas



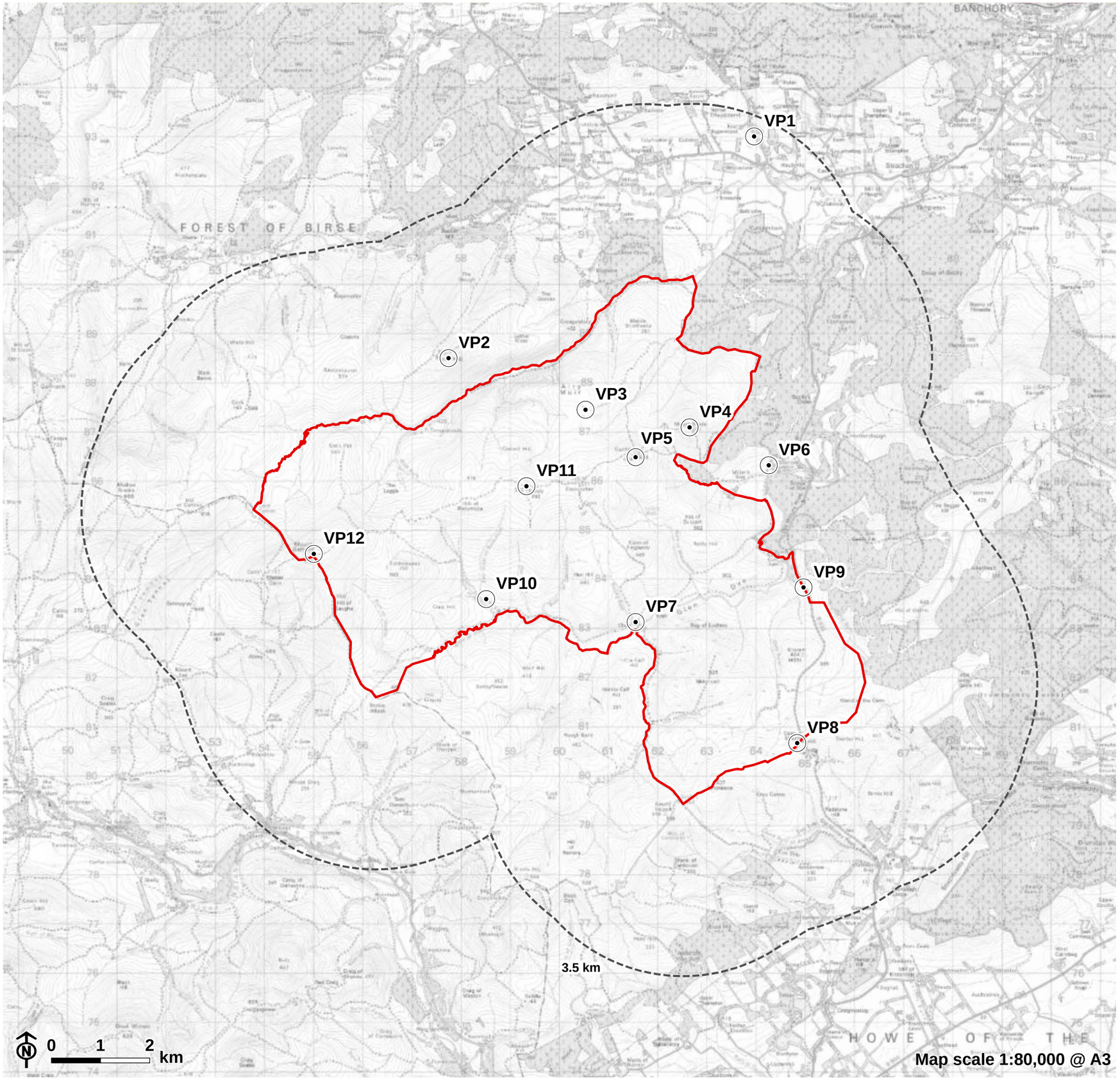
Site boundary
3.5 km study area
Local landsape area

Map scale 1:80,000 @ A3

Glen Dye New Woodland Creation
Scottish Woodland

LUC

Figure 5: Viewpoints



- Site boundary
- 3.5 km study area
- Viewpoint
  - 1: Old Military Road
  - 2: Peter Hill
  - 3: Airy Muir
  - 4: Mount Shade
  - 5: Clachnaben
  - 6: Glen Dye Lodge
  - 7: Charr Bothy
  - 8: Cairn o'Mount
  - 9: B974
  - 10: Track above Burn of Baddymicks
  - 11: Sandy Hill
  - 12: Mount Battock

Map scale 1:80,000 @ A3

Glen Dye New Woodland Creation
Scottish Woodland

LUC

Figure 6: Proposed woodland

Site boundary

Proposed woodland (by species type)

- Mixed native broadleaves
- Mixed native pine and broadleaves
- Semi-open mixed native broadleaves
- Mixed productive conifer
- Native low density
- Existing woodland
- Natural regeneration

0 1 2 km

Map scale 1:45,000 @ A3

16 SUMMARY OF SIGNIFICANT EFFECTS

16 Summary of Significant Effects

16.1 INTRODUCTION

16.1.1 This chapter presents a summary of the significant environmental effects identified during the Environmental Impact Assessment (EIA) process for the proposed woodland creation project on Glen Dye Moor.

16.1.2 The EIA process has assessed the potential impacts of the project on various environmental factors, including biodiversity, landscape, and population and human health as detailed in Chapter 2 Approach to EIA and detailed in Table 16.1 below. The assessment has followed established guidelines and best practice in accordance with the Scoping Opinion (Appendix 2.4) under Regulation 15 of The Forestry (Environmental Impact Assessment) (Scotland) Regulations 2017 ("the EIA Regulations").

16.1.3 This Chapter summarises the significant effects identified for each topic and integrates all studied impacts, considering both direct and indirect effects, as well as the interactions between them. This comprehensive approach ensures a full determination of the 'net effect' of the forestry project, including both positive and negative environmental outcomes.

16.1.4 More detail on how significance is assessed can be found in Appendix 2.5 Significance Criteria. For the purposes of this assessment, significant effects rated as Moderate and above are considered significant in the context of the EIA Regulations. Adverse or beneficial effects as well as interactions with other factors are noted where relevant.

16.1.5 As outlined in Chapter 2 and demonstrated in chapters 6 through 15 of this report, the assessments identify the sensitivity of receptors and the magnitude of change likely to occur as a result of the proposals. The assessments have been undertaken in line with the Scoping Opinion (Appendix 2.4 Scoping Opinion for the Proposed Glen Dye Moor Woodland Creation EIA Forestry Project). For each Chapter, the receptors assessed in detail fall into one of the 'environmental factors' to which it relates as shown in Table 16.1 Summary of Environmental Factors and Receptors. This allows each issue raised in the Scoping Opinion to be grouped into similar environmental factors to make an overall determination of significance of effect.

Table 16.1Summary of Environmental Factors and Receptors

Identified Environmental Factors Requiring Consideration as detailed in the EIA Regulations	Identified Receptors Requiring Assessment
Population and Human Health	• Impacts on Recreation and Access
Biodiversity ***(Species and habitats protected under Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora M21 and Directive 2009/147/EC of the European Parliament***	• River Dee SAC • Golden Eagle • Merlin • Curlew • Other Waders • Black Grouse • Large Heath Butterfly • Deer

and of the Council on the conservation of wild birds M22)	
Land, soil, water, air, and climate	• No detailed assessment required as agreed through Scoping.
Material assets, cultural heritage, and the landscape	• Landscape

16.1.6 Appropriate mitigation and monitoring strategies are included in the proposals to reduce, offset or mitigate adverse impacts. This assessment confirms that these are acceptable and that no further mitigation or monitoring is required over and above this. The assessment also highlights areas where beneficial environmental effects are anticipated.

16.1.7 This summary provides a concise overview of the project's environmental effects, confirming the overall environmental effect from the proposed forestry project is not significant, and that there is likely to be a net beneficial effect when all factors, including embedded mitigation for long term monitoring to fill knowledge gaps, are considered in a holistic manner.

16.2 OVERVIEW OF KEY RECEPTORS AND POTENTIAL IMPACTS

16.2.1 From the EIA scoping opinion (Appendix 2.4 Scoping Opinion for the Proposed Glen Dye Moor Woodland Creation EIA Forestry Project) ten key receptors were identified that could potentially be affected by the proposals, these were grouped into three main environmental factors as noted above and in Table 16.1 Summary of Environmental Factors and Receptors.

16.2.2 For each of these receptors the main potential impacts resulting from the proposals were identified and used to structure the individual, and overarching, impact assessments. Table 16.2: Summary of Specific Impacts sets out, by receptor, each of the impacts that have been assessed and the experts that informed and input to these assessments. Background detail on the expert contributors can be found in Table 1.1 List of Project Contributors in EIA Report Chapter 1: Introduction.

Table 16.2 Summary of Specific Impacts

Receptor	Potential Impacts from Scoping Opinion	Supporting expert opinion
River Dee SAC (Chapter 6)	• Habitat modification • Breeding site damage or disturbance • Hydrological change • Diffuse and point source pollution	(Appendix 3.1) Glen Dye Moor: Habitats, Peat & Protected Species – Dr Andy McMullen (Botanaeco) (Appendix 6.1) Glen Dye Moor Assessment Summary for the River Dee SAC and its Qualifying Features - Neil White BSc For MICFor & Megan Parker BSc For, MSc Ecol, MICFor (Scottish Woodlands Ltd)
Golden Eagles (Chapter 7)	• Disturbance • Prey species and habitat change • Loss of foraging ground	(Appendix 3.2) WLC 22001 – Glendye Woodland Creation Project, Breeding Bird Survey Report - Wildlife Consulting Ltd (Appendix 7.1) Glendye Woodland Proposal – An analysis of potential planting areas using the GET Model – Dr Alan Fielding BSc (Hons) MSc PhD FLS FHEA (Appendix 7.2) Disturbance Analysis for Golden Eagle & Merlin - SWL Internal expertise (Appendix 7.3) Prey Habitat Change

		Analysis – Megan Parker BSc For, MSc Ecol, MICFor (Scottish Woodlands Ltd)
Merlin (Chapter 8)	• Disturbance • Loss of breeding sites	(Appendix 3.2) WLC 22001 – Glendye Woodland Creation Project, Breeding Bird Survey Report - Wildlife Consulting Ltd (Appendix 8.1) Glen Dye Moor Merlin (Falco columbarius) Assessment Summary – Scottish Woodlands Ltd with input from ornithologist Dr Graham Rebecca
Curlews (Chapter 9)	• Disturbance • Loss of breeding sites	(Appendix 3.2)– Glendye Woodland Creation Project, Breeding Bird Survey Report - Wildlife Consulting Ltd (Appendix 9.1) Glen Dye Moor Curlew Assessment Summary – Megan Parker, BSc For, MSc Ecol, MICFor (Scottish Woodlands Ltd) with the support and input from Karen Cunningham (RSPB)
Other Waders (Chapter 10)	• Disturbance • Loss of breeding sites	(Appendix 3.2) Glendye Woodland Creation Project, Breeding Bird Survey Report - Wildlife Consulting Ltd (Appendix 10.1) Other Waders Assessment Summary - Neil White BSc For MICFor & Megan Parker BSc For, MSc Ecol, MICFor (Scottish Woodlands Ltd)
Black Grouse (Chapter 11)	• Disturbance • Loss of breeding sites • Fence strikes	(Appendix 3.2) Glendye Woodland Creation Project, Breeding Bird Survey Report - Wildlife Consulting Ltd (Appendix 11.1) Black Grouse (Lyrurus tetrix) Assessment Summary - Stuart Wilkie BSc Ecol Sci (Hons For), FICFor, CEnv & Megan Parker BSc For, MSc Ecol, MICFor (Scottish Woodlands Ltd)
Large Heath Butterfly (Chapter 12)	• Tree seeding • Habitat change • Isolation • Disruption/Damage	(Appendix 3.1) Glen Dye Moor: Habitats, Peat & Protected Species – Dr Andy McMullen (Botanaeco) (Appendix 12.1) Glen Dye Moor Large Heath Butterfly (Coenonympha Tullia) Assessment Summary - Amauta Halvorsen BSc Bio, MSc Bio Sci (Scottish Woodlands Ltd)
Deer (Chapter 13)	• Disturbance • Loss of breeding sites	(Appendix 3.4) Glen Dye Moor Aberdeenshire Deer Management Plan in support of Woodland Creation and Peatland Restoration Schemes - Chetwynd Rural
Recreation (Chapter 14)	• Physical barriers to access • Loss of access through physical damage • New or improved access	(Appendix14.1) Glen Dye Moor Recreational Addendum and map - (Scottish Woodlands Ltd)
Landscape (Chapter 15)	• Effects on Landscape (physical and character) • Visual amenity	LVIA – Land Use Consulting

16.3 DETAILED ANALYSIS OF SIGNIFICANT EFFECTS

16.3.1 Volume 2 Chapters 6-15 provide an in-depth assessment of the effect of the proposals on each of the receptors identified in the EIA Scoping Opinion (Appendix 2.4 Scoping Opinion) by Scottish Forestry. They clearly set out the potential impacts on each receptor, an assessment of effects and a judgement on level of significance (based on parameters detailed in Appendix 2.5 Significance Criteria, and assuming that good practice and standard forestry management and mitigation measures are in place), detail any proposed additional mitigation, and summarise the residual effects after the additional mitigation has been adopted, if required.

16.3.2 Each environmental factor and associated key receptor are summarised in Table 16.3: Summary of Assessment Findings. The Table is designed to illustrate the compilation of individual impacts into residual effects which are then combined with mitigations, monitoring, or other interacting factors which result in a receptor level finding. Receptors within the same environmental Factor are grouped for context. Within the Table colours are used to indicate beneficial, neutral or adverse outcomes and bold lettering identified elements which have potential to be significant if not appropriately mitigated. This allows an overall impact determination to be derived, supporting the finding that the overall impact of the project is not significant in the context of the EIA Regulations and has the potential to deliver environmental benefits in the long term.

Table 16.3 Summary of Assessment Findings

ENVIRONMENTAL FACTOR/ Receptor	Impact	Sensitivity	Magnitude	Residual Effect *	Interactions and Additional Considerations	Receptor level significance**	Environmental factor level significance ***
BIODIVERSITY							
River Dee SAC *National Importance*	Habitat Modification	High	Minor	**Moderate**	Impact from habitat modification found to be beneficial to a greater degree	**Not Significant**	**Biodiversity is found to be Not Significant in the context of the EIA Regulations**
	Breeding Site Damage or Disturbance	High	Negligible	Minor	Impact from breeding site damage or disturbance found to be neutral to adverse		
	Hydrological Change	High	Minor	**Moderate**	Impact from hydrological change found to be neutral		
	Diffuse and Point Source Pollution	High	Negligible	Minor	Impact from diffuse and point source pollution found to be neutral		
					Interacting benefit from extensive peatland restoration		
					Interacting benefit from floodplain woodland creation		
					Interacting benefit of increased riparian woodland cover across the wider catchment		
					Interacting benefit of Instream works, and monitoring of riparian woodland creation carried out by Stirling University within the Water of Dye		
Golden Eagle *Regional Importance*	Disturbance	Medium	Minor	Minor	Impact from disturbance found to be adverse to a lesser degree	**Not Significant**	
	Prey Species Habitat Change	Medium	Moderate	**Moderate**	Impact from prey species habitat change found to be neutral trending to positive		
	Loss of Foraging Ground	Medium	Moderate	**Moderate**	Impact from loss of foraging ground found to be slightly adverse		
					Interacting benefit from long-term increases of nesting opportunities		
					Interacting benefit from sustained large scale land use changes		
Merlin *Regional Importance*	Disturbance	Medium	Minor	Minor	Impact from disturbance found to be adverse to a lesser degree	**Not Significant**	
	Loss of Breeding Sites	Medium	Moderate	**Moderate**	Impact from loss of breeding sites found to be adverse to a greater degree		
	Cumulative Impact	Medium	Negligible	Minor	Impact from cumulative impact found to be neutral		
					Interacting benefit from adoption of researched Merlin best practice proposals and monitoring to understand applicability and fill knowledge gaps		
					Interactions with increases in number and diversity of prey species		
Curlew *National Importance*	Disturbance	Low	Minor	Negligible	Impact from disturbance found to be neutral but slightly adverse	**Not Significant**	
	Loss of Breeding Sites	Medium	Moderate	**Moderate**	Impact from loss of breeding sites found to be adverse to a greater degree		
	Cumulative impact	Low	Moderate	Minor	Impact from cumulative effect found to be neutral but slightly adverse		
					Mitigation of long-term monitoring found to be beneficial		
					Interacting benefit from peatland restoration		
Other waders *Local Importance*	Disturbance	Low	Minor	Negligible	Impact from disturbance is found to be adverse to a lesser degree	**Not Significant**	
	Loss of Breeding Sites	Low	Moderate	Minor	Impact from loss of breeding sites is found to be adverse to a lesser/moderate degree		
	Cumulative impact	Neutral	Minor	Negligible	Impact from cumulative impact is found to be neutral		
					Interacting benefit from peatland restoration		
					Combined benefit from the scale of retained open land (not afforested)		
Black Grouse *Regional Importance*	Disturbance	Low	Minor	Negligible	Impact from disturbance is found to be neutral	**Not Significant**	
	Loss of Breeding Sites	Medium	Moderate	Moderate	Impact from loss of breeding sites is found to be beneficial to a moderate degree		
	Fence Strikes	Low	Minor	Negligible	Impact from actual fence strikes is found to be adverse to a lesser degree		
	Cumulative Impacts – Glen Dye Windfarm	Neutral	Minor	Negligible	Impact from cumulative impact is found to be neutral		
					Impacts from habitat enhancement are found to be beneficial to a moderate degree		
					Impacts resulting from routine monitoring and inspection of fences is found to be beneficial to a lesser degree		
Large Heath Butterfly *Regional Importance*	Tree Seeding	Low	Moderate	Minor	Impact from tree seeding is found to be near neutral but adverse to a lesser degree	**Not Significant**	
	Habitat Change	Low	Moderate	Minor	Impact from habitat change is found to be neutral		
	Isolation	Low	Minor	Negligible	Impact from isolation is found to be beneficial to a moderate degree		
	Disruption/ Damage	Low	Moderate	Minor	Impact from disruption/damage impact is found to be neutral		
					Interaction with wider habitat enhancement and peat land restoration are found to be neutral		
					Impacts attributed to Interacting benefits from long term monitoring are found to be beneficial to a moderate degree		
					Mitigation due to combined benefit from the scale of open habitats (not afforested)		
Deer *Local Importance*	Habitat Loss	Neutral	Minor	Negligible	Impact from habitat loss is found to be neutral	**Not Significant**	
	Entrapment	Neutral	Minor	Negligible	Impact from entrapment is found to be neutral		
	Change to immigration/ emigration	Neutral	Minor	Negligible	Impact from change to immigration/emigration is found to be neutral		
	Habitat Change	Low	Minor	Negligible	Impact from habitat change is found to be moderately beneficial		
					Interacting benefits due to the scale of the proposal		

* Residual effects which are beneficial to the receptor are shown as green text, those which are adverse are shown as red text, neutral effects are displayed as black text, bold items indicate potential significance if left unmitigated and not considered in context of other interactions. **Receptor Level significance takes into account the combined outcome of adverse, beneficial, cumulative and combined effects to determine a final significance outcomes for each receptor. ***The Environmental Factor level outcomes combines all receptor outcomes within each factor.

Table 16.3 Summary of Assessment Findings (Continued)

ENVIRONMENTAL FACTOR/ Receptor	Impact	Sensitivity	Magnitude	Residual Effect *	Interactions and Additional Considerations	Receptor level significance**	Environmental factor level significance ***
POPULATION and HUMAN HEALTH							
Access and Recreation *Local Importance*	Physical barriers to access	Low	Minor	Negligible	Impact from physical barriers to access whilst considered adverse to a lesser degree in the short term are also considered to be beneficial to a greater degree as new access provision will enhance public access including the provision of clear signage and fence design set back from tracks and public roads. The impact is thus found to be beneficial to a moderate degree	**Not Significant**	**Population and Human Health is found to be Not Significant in the context of the EIA Regulations**
	Loss of access through physical damage	Low	Moderate	Minor	Impact to access from physical damage to track network is found to be adverse to a lesser degree		
	New or improved access	Low	Moderate	Minor	Impact from new or improved access is found to be beneficial to a moderate degree Impact Interactions derived from the long-term benefits delivered through the proposals for example, educational opportunities and community engagement are found to be beneficial to a greater degree Impacts of damage to tracks caused by increased frequency of storm events is found to be adverse to a lesser degree Improved parking, whilst covered by other regulatory consent and not included within the EIA determination, will bring positive benefit to recreational users and is found to be beneficial to a lesser degree		
LANDSCAPE							
Landscape *Regional Importance*	Landscape and visual effects arising from the proposed woodland creation will result in a considerable change in character at the Site and surroundings. However, the direction of effect will largely be positive, as the new native woodland and areas of regeneration will fit with the landscape character of the wider area, soften the transition into commercial forested areas, and make a positive contribution to landscape and visual amenity. The assessment reflects a significant beneficial impact associated within native woodland, and the potential for effects to be considered adverse or neutral in areas where coniferous planation is proposed, in line with the LVIA. While any forestry project within the SLA has the potential for adverse effects, it is recognised that sensitively designed new woodland would not detract from the SLA's most valued characteristics, and that the native woodland and areas of regeneration will generally help in enhancing them.					**Not Significant**	**Material Assets, Cultural Heritage, and the Landscape is found to be Not Significant in the context of the EIA Regulations**

* Residual effects which are beneficial to the receptor are shown as green text, those which are adverse are shown as red text, neutral effects are displayed as black text, bold items indicate potential significance if left unmitigated and not considered in context of other interactions. **Receptor Level significance takes into account the combined outcome of adverse, beneficial, cumulative and combined effects to determine a final significance outcomes for each receptor. ***The Environmental Factor level outcomes combines all receptor outcomes within each factor.

16.4 CUMULATIVE EFFECTS

16.4.1 Potential cumulative impacts resulting from the adjacent wind farm proposals, on-site peatland restoration and access and recreational use were reviewed, including interactions with and between habitat modification, impact on prey species, disturbance, loss of breeding sites, hydrological changes, and population displacement. Where these interactions are assessed, they are sufficiently mitigated through integrated project design measures. In the case of peatland restoration, there is a beneficial impact and whilst outside the scope of the EIA determination, the scale of habitat restoration is a significant contributing factor in consideration of the significance of impact.

16.5 ONGOING MONITORING AND MANAGEMENT

16.5.1 A number of mitigation measures are embedded within the project design to minimise environmental risks and enhance positive outcomes. These specific embedded mitigations are detailed in Appendix 2.6 Mitigations Schedule for Glen Dye Moor New Woodland Creation.

16.5.2 Additional monitoring objectives have been included for curlew and large heath butterfly, to allow the actual impact to be monitored. Not only will this be relevant to Glen Dye Moor it will also help inform good practice when projects of comparable size and scale are being delivered in the future. Further detail on these enhanced monitoring protocols can be found in Chapter 4, Section 4.10 Monitoring, Appendix 9.1 Curlew Assessment Summary and Appendix 12.1 Large Heath Butterfly Assessment Summary.

16.5.3 Given the scale of potential impacts, no additional mitigation or monitoring beyond those integrated into the project design, and noted above, are considered necessary. More detail on proposed monitoring and management for each receptor can be found in section 4.10 of Chapter 4 of the EIA Report, and in each of the receptor specific chapters (Chapters 6-15).

16.6 GLEN DYE MOOR WOODLAND CREATION EIA OUTCOMES

16.6.1 In line with the Scottish Forestry EIA Scoping Opinion (Appendix 2.4 Scoping Opinion for the Proposed Glen Dye Moor Woodland Creation EIA Forestry Project) the potential impact on three environmental factors, through specific impacts on ten different receptors, has been assessed in detail, as set out in the relevant EIA report chapters (Chapters 6-15). The individual potential receptor impacts have been collated to provide an overall impact on the three key environmental factors. Table 16.4, below, pulls all these individual receptor assessments into an overall summary and assessment conclusion.

Table 16.4 Assessment outcomes by Environmental Factor

Environmental Factors	Results of Assessment
Population and Human Health	The effect of proposals on Population and Human Health were found to be not significant in the context of the EIA regulations.
Biodiversity	The effect of proposals on Biodiversity were found to be not significant in the context of the EIA regulations.
Land, Soil, Water, Air, and Climate	No issues identified at EIA Scoping
Material Assets, Cultural Heritage, and the Landscape	The effect of proposals on Material Assets, Cultural Heritage, and the Landscape were found to be not significant in the context of the EIA regulations.

16.6.2 **Biodiversity**: Potential impacts on biodiversity, including the River Dee SAC, golden eagles, merlin, curlew, black grouse, waders, large heath butterfly and deer are assessed at the scale of the wider environmental factor of biodiversity as not significant in the context of the EIA Regulations. Mitigation measures are integrated into the proposals to reduce environmental risks and protect biodiversity integrity.

16.6.3 **Land, Soil, Water, Air, and Climate**: No issues were identified within the Scoping Opinion as having a likely significant effect from proposals on any specific issues. The project design incorporates best practices for soil conservation and watercourse protection, ensuring any risk is appropriately mitigated.

16.6.4 **Material Assets, Cultural Heritage, and the Landscape:** Landscape and visual effects arising from the proposed woodland creation will result in a considerable change in character at the Site and surroundings. However, the direction of effect will largely be positive, as the new native woodland and areas of regeneration will fit with the landscape character of the wider area, soften the transition into commercial forested areas, and make a positive contribution to landscape and visual amenity. While any forestry project within the SLA has the potential for adverse effects, it is recognised that sensitively designed new woodland would not detract from the SLA's most valued characteristics, and that the assessment reflects a significant beneficial impact associated within native woodland, and the potential for effects to be considered adverse or neutral in areas where coniferous plantation is proposed.

16.6.5 **Population and Human Health**: The project will provide positive contributions to the local recreational interests including access, and visitor awareness of the site. Any potential impacts are assessed to be not significant in the context of the EIA Regulations.

16.6.6 The EIA for the proposed Glen Dye Moor woodland creation project has thoroughly examined potential environmental effects across key issues, as detailed in the preceding chapters. This process has been supported and underwritten by the input of several expert contributors, as noted in Table 1.1 of Chapter 1: Introduction, and referencing a wide range of studies and good practice guidance. The assessment demonstrates that, with the proposed mitigation and monitoring measures embedded in the project design, there are no significant adverse environmental impacts anticipated and that overall, the project impact is not significant in the context of the EIA Regulations with the potential for positive effects in the long term.