

**ENVIRONMENTAL IMPACT ASSESSMENT (FORESTRY) (ENGLAND AND WALES)  
REGULATIONS 1999**

**STATEMENT OF THE REASONS FOR THE FORESTRY  
COMMISSION'S DECISION TO GRANT CONSENT**

**1. Location and Owner**

Bradfield Woodlands are located within the eastern fringes of the Peak District National Park, 10 kilometres west of Sheffield and are owned and managed by the Fitzwilliam (Wentworth) Estates.

**2. Legislative Background**

**2.1** The Environmental Impact Assessment (Forestry) (England and Wales) Regulations 1999 (referred to subsequently as the Regulations) prohibit the carrying out of any work or operations in relation to a project which is a "relevant project" (as defined) unless consent has been obtained from the Forestry Commissioners or, on appeal, the appropriate Authority (the Secretary of State for Environment, Food and Rural Affairs in England).

**2.2** Regulation 3 defines a "relevant project" as one of four types of forestry project:

- Afforestation;
- Deforestation;
- Forest Roads; or
- Forest Quarries;

which does not constitute development included within the scope of the Town and Country Planning EIA Regulations but which is likely to have substantial effects on the environment.

**3. History of the Proposals**

**3.1** On 7 January 2003, Fitzwilliam (Wentworth) Estates (the proposer) formally sought an opinion from the Forestry Commission on their proposals to remove 160 hectares of mature conifers and mixed broad-leaved forest from the Strines reservoir water catchment and to use the land to recreate moorland to be managed as a grouse moor. The Forestry Commission, having gathered further information and having discussed the proposals with local interests and other agencies, decided on the 31 January 2003, that the proposals constituted a relevant project and that due to the significant impacts on the environment, consent was required under the Regulations.

**3.2** In order to clarify the issues to be addressed by the Environmental Statement, the proposer convened a scoping meeting, involving stakeholders, on 16 April 2003 at the Bradfield Parish Rooms, Lower Bradfield. Minutes of the meeting, prepared by the proposer, plus copies of written comments from the Peak District National Park Authority; Sheffield City Council; Ramblers Association; South Yorkshire Forest Partnership and the Council for the Protection of Rural England were received on 19 May 2003 by the Forestry Commission. The issues identified during the scoping process to be addressed in the Environmental Statement included the potential impacts on flora, fauna, soil, water quality, landscape, archaeology and community issues, including highway impact. Confirmation of the issues to be addressed was agreed by the Forestry Commission with the proposer on the 20 May 2003.

**3.3** On the 18 December 2003, the Forestry Commission received a felling licence application and supporting Environmental Statement for the proposals. The Forestry Commission informed the proposer on the 2 March 2004 that the Environmental Statement was not acceptable. This was due to a lack of objectivity in some statements, a lack of supporting evidence for claims about environmental impacts, and insufficient consideration of landscape impacts. Following informal discussions with the Commission, which included options to reconsider the scale of the total area to be felled and the timing between felling phases, the proposals were reduced slightly to 153 hectares of deforestation and the landscape design implications were reconsidered and greater emphasis placed on buffering watercourses. A revised Environmental Statement was received on the 6 April 2005 and following further minor revisions was formally accepted for detailed consideration by the Forestry Commission on the 3 June 2005.

**3.4** In agreement with the proposers formal consultation commenced on the 30 September 2005, ending on the 28 October 2005. Consultees included English Nature, Peak District National Park Authority, English Heritage, Environment Agency, Royal Society for the Protection of Birds and the Department for Environment, Food and Rural Affairs. At the same time, public notices were also placed in the Yorkshire Post and the Peak Times newspapers and the Bradfield Village Newsletter. In addition, the proposers held a public consultation workshop on the 18 October 2005 at the Bradfield Parish Rooms. A total of seventeen written responses were received by the Forestry Commission, four from statutory bodies and other Government Agencies, eight from local authorities, organisations and groups and five from members of the public.

**3.5** Six respondents indicated that the proposals were partly or wholly unacceptable. Four respondents identified significant concerns with the proposals that they felt were not adequately addressed by the Environmental Statement and which could lead to significant negative impacts. Seven respondents were supportive of the proposals.

**3.6** In reaching a decision on those proposals, the Forestry Commission had regard to the views and additional information submitted by all respondents. Of the seven key areas of potential impact identified during the scoping and consultation process, the Forestry Commission considered that landscape design, archaeology and community issues were adequately addressed by the proposals as supported by the Environmental Statement. However analysis of the proposals and the information received from consultees led the Forestry Commission to conclude that there were four issues of significance; flora, fauna, soil and water.

**3.7** The Forestry Commission acknowledged the desire of the owner to recreate moorland. However, the basis for this being of benefit to the ecological value of the locality was not supported by the available evidence. The option to reduce the total area to be felled to mitigate against adverse impacts on fauna was declined by the proposer. Therefore, in consideration of the evidence, the Forestry Commission concluded that the proposals were unacceptable primarily due to the significant negative impact on fauna under schedule 4 (a) of the Regulations.

**3.8** The Forestry Commission was also mindful that the scale of deforestation proposed in proximity upstream of a public drinking water reservoir, coupled with Yorkshire Water's objection to the proposals, would require further research and clarification to successfully mitigate against the identified negative impacts on water quality.

**3.9** Following the refusal of consent, informal discussions were instigated by the proposer at a meeting with the Forestry Commission on the 24 April 2006 where substantially reduced proposals were outlined. On 13 February 2007, the proposer formally sought an opinion from the Forestry Commission on their proposals to remove 69 hectares of mature conifers and mixed broad-leaved forest from the Strines reservoir water catchment and to use the land to recreate moorland to be managed as a grouse moor. The Forestry Commission, having gathered further information and having discussed the proposals with local interests and other agencies, decided on the 19 February 2007, that the proposals once again constituted a relevant project and that due to the significant impacts on the environment, consent was required again under the Regulations.

**3.10** The issues identified during the scoping process for the original proposals were considered still relevant for the revised proposals. Therefore the Forestry Commission following agreement with statutory consultees agreed with the proposer that a formal scoping stage was not necessary for the revised proposals. On the 19 February 2007, the Forestry Commission received an Environmental Statement for the proposals and following further minor revisions was formally accepted by the Forestry Commission on the 27 February 2007 for detailed consideration.

**3.11** In agreement with the proposers, formal consultation commenced on the 9 March 2007, ending on the 5 April 2007. Consultees included Natural England, Peak District National Park Authority, English Heritage, Environment Agency and the Royal Society for the Protection of Birds. At the same time, public notices were also placed in the Yorkshire Post and the Peak Times newspapers.

#### **4. Summary of consultation responses**

**4.1** A total of eight written responses were received by the Forestry Commission, two from statutory bodies, four from local authorities, organisations and groups and two from members of the public.

**4.2** **The Ramblers Association** and **one member** of the **public** were fully supportive of the proposals. **Natural England** supported approval of the proposals subject to some minor amendments/clarification to the restoration works. Whilst welcoming the new proposals, the **Peak District National Park Authority** and **the Royal Society for the Protection of Birds** still had strong ecological concerns which they considered had yet to be addressed and once again questioned the evidence presented in the environmental statement to support the proposals that the biodiversity gains would outweigh the biodiversity losses. In addition, concerns were raised again by **the South Yorkshire Forest Partnership** on biodiversity grounds. **Yorkshire Water** whilst not supporting the proposals were not objecting to the revised proposals. There was one objection to the proposals from **one member** of the **public** on the loss of the woodland in relation to climate change and the sustainable use of renewable resources.

#### **5. Explanation of the Forestry Commission's decision and the conditions attached**

**5.1** The Environmental Impact Assessment Regulations require the competent authority (in the case of afforestation, deforestation, forest roads or forest quarries this is the regulatory arm of the Forestry Commission) to consider the impacts of the proposals on:

- i. human beings, fauna and flora;
- ii. soil, water, air, climate and the landscape;
- iii. material assets and the cultural heritage; and
- iv. the interaction between the factors mentioned in i. to iii. above

**5.2** The following paragraphs outline:

- the conditions which are attached to the approval;
- the main reasons and considerations on which the decision is based; and
- a description, where necessary, of the main measures to avoid, reduce and, if possible, offset the major adverse effects of the project.

### 5.3 National Policy Context Relating to Bradfield Woodlands

**5.3.1 Climate Change - The UK Programme** (2006) sets out the Government's commitments both at international and domestic levels to meet the challenge of climate change. The agriculture and forestry sector contributes 7 per cent of UK greenhouse gas emissions. The major issue for this sector is in tackling direct emissions of nitrous oxide and methane emissions, rather than carbon dioxide emissions.

**5.3.2** The Government's approach to sustainable forestry is underpinned by the **UK Forestry Standard** (2<sup>nd</sup> edition, 2004). The Standard provides the benchmark for judging the performance of the UK forestry sector. It defines criteria and indicators that enable progress in delivering sustainable forest management to be assessed. The Standard includes a series of Practice Notes which help to identify acceptable options for forest and woodland management and the siting of new woodlands.

**5.3.3** The Government's priorities for forestry in England are outlined in **the Strategy for England's Trees, Woods and Forests** (2007). In consideration of the benefits that forestry provides to land and the natural environment the latter states *"To create, expand and maintain a network of sustainably managed trees, woods and forests that are resilient to climate change and make a full contribution to protecting and enhancing our woodland habitats and associated species and facilitating their resilience and adaptation to climate change; safeguarding, enhancing and celebrating the characteristic elements of rural and urban landscapes and their cultural and historic values; and maximising the full range of ecosystem services provided by trees, woods and forests, including the protection of soil and water resources now and in the future, as needs change"*. (page 23).

**5.3.4** Forests and woodlands can provide a rich and diverse habitat for wildlife, much of which benefits from the varied conditions associated with normal management activity. Some species and habitats require special consideration however, and these include those associated with open ground and water. In areas where open ground habitat is rare, it can sometimes be successfully restored by clearance of plantations. Restoration of these habitats may form part of the **UK Biodiversity Action Plan** (1995, page 21).

**5.3.5** The **Biodiversity Strategy for England** (Working with the Grain of Nature, DEFRA, 2002) includes the stated aim of protecting biodiversity-rich woodland from external threats, from industry and surrounding land uses (page 50). However, it also recommends that appropriate opportunities to re-create or restore open-ground habitats, such as heath and moorland, by the removal of largely coniferous plantations that were established on them in previous decades are considered (page 51).

**5.3.6** Under Section 40 of the **Natural Environment and Rural Communities Act (2006)** it is the duty of the Forestry Commission in carrying out its functions, to have regard, so far as is consistent with the proper exercise of those functions, to conserve biological diversity.

**5.3.7** The **Biodiversity Action Plan for the Peak District (2001)** – “A Living Landscape” under section 6.4.6, under “Objectives and Targets” for Heather Moorland states “take opportunities to create moorland with its mosaic of constituent habitats, particularly the recreation of upland heath on former sites”. The target, “by 2010, create or recreate 100ha of upland heathland, with particular emphasis on reducing fragmentation of existing heathland”. The Peak District Biodiversity Action Plan Mid-Term Review (2001 – 2007) conducted during the spring of 2007 reported that 120 ha of heather moorland had been recreated. The target has subsequently been increased to 500 ha of heather moorland creation by 2010.

#### **5.4 Analysis of proposals in relation to above policies**

**5.4.1** In terms of climate change, the overall trend in England is still one of afforestation, with deforestation of around 1,000 hectares a year more than compensated for by new woodland creation at a rate of around 4,500 hectares a year. The deforestation figure includes some 500–1,000 hectares a year, that is restored to priority open habitat. The majority of these are mature conifer woodlands that would have been felled anyway in a conventional rotation. The current balance of woodland removal and creation is adequate to ensure that we do not diminish the existing carbon sink. If a crop is felled at commercial maturity, the timber used rather than being felled to waste and the residues dealt with according to best practice, with minimal soil disturbance, the greenhouse gas emissions associated with the policy can be relatively small, amounting to the difference in long term carbon stocks between heathland and woodland. However, if the rate of deforestation for open habitat restoration increases, steps will need to be taken to ensure the carbon sink is not reduced, however this does not provide a *prime face* case that priority open habitat creation should not proceed.

**5.4.2** The proposals for Bradfield Woodlands outline the conversion of 69 hectares of conifer and broad-leaved woodland located on the eastern fringes of the Peak District National Park to a semi-natural mosaic of dry dwarf shrub heathland, wet heath and mire communities which are priorities outlined in the UK Biodiversity Action Plan (1995), Biodiversity Strategy for England (2002) and Biodiversity Action Plan for the Peak District (2001). However Bradfield Forest is thought to have been in existence as a woodland site for at least two centuries as stated in the Environmental Statement, and is not a recent plantation established on open moorland. Consultation responses on the current and the original proposals have highlighted the significant biodiversity interest of this area of woodland. Future management should seek to maintain and enhance this interest. The Forestry Commission consider that the current proposal now strikes an appropriate balance between

that interest and the expansion of heather moorland. However removal of further woodland in this locality is likely to be undesirable.

### **5.5 Time constraints on approval:**

In accordance with Regulation 18 approval is subject to the following conditions:

*Condition (a)* The work must be started between the 05 October 2007 and 04 October 2012;  
and

*Condition (b)* No work shall be carried out after 04 October 2017.

### **5.6 Area approved for Deforestation:**

**The application is approved subject to the following conditions;**

*Condition (c)* Deforestation (69 ha) will be carried out only on the areas and in the sequence as outlined in the Environmental Statement and detailed in method statements to be agreed before felling and restoration operations proceed.

*Condition (d)* The deforested areas shall be maintained as a mosaic of dry dwarf shrub heath, wet heath, mire communities and new native woodland buffering the watercourses.

*Condition (e)* The retained areas of woodland (136 ha) will be managed in accordance with good forestry practice as outlined in the UK Forestry Standard and published Forestry Commission best practice guidelines. A management plan (following the Forestry Commission's Woodland Planning Grant template) will be prepared by the proposer before commencement of felling operations detailing how the retained woodland including the new native woodland buffering the watercourses will be managed, recognising the importance of the woodland for biodiversity especially breeding birds and in particular nightjar.

### **5.7 Impacts on human beings**

**5.7.1 Population :** The proposals have the potential to affect the water quality of a public drinking water supply. Please see "*Impacts on Soil and Water*" (para 5.9) .

**5.7.2 Highways :** The following impacts have been identified in conjunction with the proposed felling phase of the project:

- (i) felling adjacent to the public footpath which runs along Foulstone Road;
- (ii) limited use of Foulstone Road for timber extraction, including possible use of a skyline as an alternative to extraction through the sensitive areas of Brogging Moss and Fox Hole Carr, to avoid unnecessary ground disturbance;

- (iii) temporary closure of the discretionary footpath which runs parallel to Mortimer Road;
- (iv) an increase in the number of lorry loads per month using public highways for the duration of felling, and possibly longer if chipped wood is cured on site before being removed for disposal. This may include some weekend working.

**The application is approved subject to the following conditions;**

*Condition (f)* The route to extract timber from the felling area will be along Mortimer Road to the A57 to the south, and the haulage route and ancillary matters will be discussed with the local Highway Authority before felling commences.

*Condition (g)* Warning notices will be used whilst felling is in progress within the felling area on either side of the stone wall bordering the Foulstone road.

*Condition (h)* The local community will be informed of the likely period of felling and timber extraction, along with provision of information boards in Foulstone car park.

## **5.8 Impacts on fauna and flora**

**5.8.1** The flora and fauna of Bradfield Forest indicates long-standing woodland. Using the measure of bird species diversity assessed against the Joint Nature Conservation Committee of Great Britain Sites of Special Scientific Interest (SSSI) criteria (1989), the woodland has a significant assemblage of breeding birds scoring well above the threshold for SSSI selection. In contrast, the numbers of birds likely to be found after deforestation would be well below the threshold for SSSI selection on the recreated moorland.

**5.8.2** The consultation response from English Nature (the Government's statutory adviser on Nature Conservation) on the original proposals stated that the basis for the proposals being of benefit to biodiversity was not adequately supported by the evidence. English Nature concluded their response by stating that the proposals, if consented, would have a large negative impact on the current significant biodiversity interest of the site as woodland (including Schedule 1 birds and biodiversity target species). The proposed change in land use would only result in a moderate positive impact on the existing interest of the adjacent land, designated for national and international features. It was English Nature's view that; *"On balance given the national and regional priorities it is the opinion of English Nature that the greatest benefit to biodiversity (habitats and species) at this location would be to retain as much woodland as possible and to seek to transform this to a native character woodland chiefly NVC community W16b (oak-birch-wavy hair grass (bilberry–buckler fern sub-community)), by continuing the current continuous-cover approach whilst accelerating the removal of poor plantations and introducing plantings of native species in selected areas."*

**5.8.3** Similar views were expressed by the Royal Society for the Protection of Birds who also cited the SSSI selection criteria and provided their own assessment as to the score the woodland would achieve, having consulted with bird surveyors who had visited the site. The RSPB considered the woodland to be of extraordinary importance for woodland birds and that its removal would be detrimental to all bird species listed in the SSSI threshold list.

**5.8.4** The proposers have now reduced the total area of woodland to be removed from two thirds (contained in the original proposals) to one third offering significant mitigation against adverse impacts on fauna and flora.

**5.8.5** Strong ecological concerns were raised again during consultation on the current proposals by the Peak District National Park Authority and the RSPB however there was appreciation expressed that the revised proposals for felling had been significantly reduced by the proposer. In recognition that significant concerns were raised once again during consultation on the fauna interest, which was identified as the primary reason for refusing consent for the original proposals, the Forestry Commission sought further formal advice from Natural England during June/July 2007 on a number of issues.

**5.8.6** Clarification was sought on the potential impact of the proposals on specific important bird species and whether there would be sufficient habitat remaining to support viable populations. Also views were sought on appropriate management for the retained woodland and whether further deforestation would be acceptable or desirable given the recognised significant biodiversity interest of the woodland.

**5.8.7** On the 20 July 2007 Natural England responded formally to further clarify their position particularly in relation to the existing woodland biodiversity interest and also to offer advice on appropriate management for certain key bird species. A number of conditions were recommended including avoiding felling and restoration activities during the bird nesting season. In summing up, Natural England stated that the importance of this area of woodland for biodiversity especially breeding birds has been highlighted and that future management should seek to maintain and enhance this interest. In this respect Natural England consider that the current proposal strikes an appropriate balance between that interest and the expansion of heather moorland, a Peak District Biodiversity Action Plan target. However they added that if the current proposal was approved the removal of further woodland in this locality is unlikely to be acceptable.

**The application is approved subject to the following conditions;**

*Condition (i)* Best practice guidance for forest managers (*Forests and Birds: A guide to managing forests for rare birds, 1997*) to ensure that they meet the legal and conservation requirements for important bird species must be closely followed during felling and restoration. In particular no felling shall take place during the bird nesting season 01 January

to 31 July inclusive, except where it can be shown that a survey by an appropriately qualified person (to be agreed with the FC) reveals no breeding by crossbill in which case works may continue until 01 March.

*Condition (j)* Restoration works will not be undertaken on cleared areas between 01 May and 30 September unless agreed with the Forestry Commission.

*Condition (k)*: Existing ground vegetation conforming to heathland type found during tree removal will be retained as part of the restoration programme. Existing native broadleaves within the watercourse buffers will be retained as part of the restoration programme.

*Condition (l)*: Following completion of each subsequent felling phase, method statements detailing restoration measures based on site conditions will be agreed. Subsequent felling licences will not be considered until evidence of successful restoration measures has been seen on site.

## **5.9 Impacts on soil and water**

**5.9.1** The potential impact on soil and water quality in the Strines Reservoir catchment area is an important consideration which was not adequately addressed in the original Environmental Statement. The majority of the respondents, including several who were broadly supportive of the proposals, identified issues around water runoff, soil erosion and impacts on water supply as outstanding areas of concern. This was reinforced by the responses from the Environment Agency and Yorkshire Water who raised significant concerns over water quality. Their concerns related to the scale of deforestation proposed over a short time scale (three-quarters of a 200-hectare forest removed in three years), and the subsequent impact of grouse moor management activities.

**5.9.2** Yorkshire Water objected to the proposed change in land use and particularly to the proposal to burn heather on rotation in such close proximity upstream of the Strines Reservoir. Heather burning, Yorkshire Water stated, has been shown through recent research to result in increased water discolouration, which, in this location, would have direct impact on a public water supply. They also had major concerns over sediments entering the reservoirs resulting in excessive turbidity, which may not be treatable, resulting in significant water yield loss.

**5.9.3** The Forestry Commission considered that the scale of deforestation proposed in proximity upstream of a public drinking water reservoir, coupled with Yorkshire Water's objection to the proposals, would require further research and clarification to successfully mitigate against the identified negative impacts on water quality.

**5.9.4** The water quality concerns raised following consultation on the original proposals have now been addressed in the revised proposals due to close collaboration between Yorkshire Water and proposer's consultants. Yorkshire Water whilst not supporting the proposals are no longer objecting to the proposals.

**The application is approved subject to the following conditions;**

*Condition (m)* Method statements detailing how trees are to be felled and removed including location of extraction routes, treatment of brash and mitigation measures to avoid water pollution will be agreed before the issue of each subsequent felling licence.

*Condition (n)* Harvesting operations will be carried out in accordance with best practice as outlined in the UK Forestry Standard and published FC best practice guidelines with particular reference to minimising impacts on the water quality of the Strines Reservoir. The impact of felling on soils will be closely monitored. Felling will temporarily cease if significant erosion problems, and concurrent water quality problems, become apparent. During the felling and restoration phases of the project, water quality in the receiving streams will be monitored by an appropriately qualified person. Daily measurements of turbidity will be taken at appropriate locations downstream of the project area, and these locations will continue to be monitored into the restoration phase of the project on a monthly basis. In addition, visual checks will be made to look for hydrocarbon pollution. From the on-site turbidity readings, the values will be converted to suspended solids levels and these will have a 30mg/l "action level". Should this level be breached on any one recording or should there be oils recorded, then the following protocol will be implemented;

- a check made on the sediment management facilities upstream of the sampling point, should any of these facilities be identified as not performing to specification, remedial measures will be taken;
- visible oils at the sampling location would lead to an immediate cessation of felling/restoration until the source was found and rectified;
- on-site oil mopping measures will be available and deployed if the levels of oils were significant; and,
- sampling Site 2 (see Environmental Statement VOL II, *fig 2.5*) would be checked for turbidity and oils, to determine the extent of any polluted discharge.

Monthly samples will also be taken at Site 2 to measure water colour, pH, iron, nitrate and suspended sediments. All records from daily and monthly sampling will be regularly reviewed by a competent environmental scientist, who will, as necessary, recommend appropriate modifications to the water quality management systems. Copies of all records will be forwarded to the Forestry Commission on a monthly basis.

### **5.10 Impacts on air quality**

A number of options have been proposed for treatment of brash arising from felling, these include chip and removal from site for offsite composting; left in situ as windrows; burnt on site or a combination of the above. National policy (UK Forestry Standard & Climate Change Programme) states that burning of brash should be avoided in order to minimise emissions of methane and nitrous oxide.

**The application is approved subject to the following condition;**

*Condition (o)* Brash will be removed from site, mulched or windrowed. Burning of brash on site is not acceptable under any circumstances.

### **5.11 Impacts on climate**

To ensure that climate change mitigation objectives are covered in any Environmental Impact Assessment requires identification of how the greenhouse gas emissions associated with changing land use will be minimised, including options to mitigate those emissions. The Government's revised Climate Change Programme requires the assessment of the greenhouse balance of all policies and actions. In this respect, the evidence indicates that where open habitat restoration proceeds, all efforts should be made to minimise greenhouse gas emissions, including the following:

- Harvest at commercial maturity
- Optimise timber use, including harvesting residues as woodfuel, where appropriate
- Do not burn harvesting residues
- Minimise soil disturbance; do not destump

The Forestry Commission considers that efforts to minimise greenhouse gas emissions have been incorporated into the current proposals and conditions of approval.

### **5.12 Impacts on landscape and visual environment**

There will be short term impacts as the project is implemented, however the Forestry Commission considers that its primary guidance on landscape design principles has been followed and that in the long term a satisfactory balance between open and afforested land has been achieved.

### **5.13 Impacts on material assets**

There appear to be no negative impacts on material assets such as residential neighbouring properties. However there is a possible risk that that the material assets of Yorkshire Water

in terms of infrastructure and equipment to provide a public drinking water supply could be threatened by the occurrence(s) of extreme weather events coupled with implementation of this project. Yorkshire Water have been fully engaged in the drawing up of mitigation measures contained in the revised proposals to reduce potential impacts on water quality. However in order to cater for unforeseen impacts which seriously threaten water treatment facilities, permission for felling and restoration will be granted in stages.

**The application is approved subject to the following condition;**

*Condition (p)* Felling licences will be required for each felling coupe and will be issued sequentially. If conditions are not adhered to on each phase, further licences may be withheld. Licence applications will be considered on the basis of the published standards and guidance on good forestry practice in force at the time of each individual application,

**5.14 Impacts on cultural heritage (Archaeology)**

**5.14.1** An archaeological survey of the study area was undertaken during June 2003, and the detailed methodology and results of the survey are presented as a supplementary report to the main Environmental Statement (Volume III). A new archaeology report was not commissioned for the revised ES as the original report detailed the archaeological receptors within the study area.

**5.14.2** In summary, the survey recorded a total of 45 archaeological features (referred to as monuments in the supplementary report), or groups of features of local importance within the study area comprising ditch systems, holloways, stone walls, bridges, quarry areas or pits, a cave and an inscribed stone. These appear to represent predominantly post-medieval activity, with some features, such as the holloways, possibly originating in the medieval period. No evidence of prehistoric activity was encountered, and no features of national archaeological importance were recorded. Of the 45 features recorded, five of these within the revised proposed felling area were highlighted as being at potential risk of accidental damage or destruction from forestry operations.

**The application is approved subject to the following condition;**

*Condition (q)* The following archaeological features will be identified and marked appropriately prior to any potentially damaging operations taking place and all operatives made aware of their existence and the mitigation measures required for each feature listed;

- Feature 3: An isolated drainage ditch, with evidence of some previous damage from vehicle movement. Care will be taken to avoid any further damage by vehicle movement during felling and restoration;

- Feature 4: A possible Holloway, approximately 124m in length (this may actually be a forestry extraction track). Care will be taken to avoid any further damage from vehicle movement during felling and restoration;
- Feature 5: A modern wooden bridge and track in a poor state of repair, which is in possible danger of collapse. This feature will be avoided or repaired as appropriate;
- Feature 10: An extensive drainage ditch system in the central area of Brogging Moss (a wet flush area with *Sphagnum*, over deep peats), the full extent of which may not have been fully recorded due to the density of the conifer plantation. Particular care will be taken to avoid un-necessary disturbance to the drainage system and deep peat soils in this area, which is also desirable to safeguard its ecological interest and to minimise adverse impacts on water quality;
- Feature 12: An isolated drainage ditch approximately 49m in length, indicating that small-scale drainage may have been undertaken. Care will be taken to avoid damage by vehicle movement during felling.

### **5.15 Interaction between these factors**

Deforestation v Climate Change, discussed in *para* 5.4.

The majority of the felling and restoration is proposed to take place each year during March to September over a three-year period to reduce water runoff, soil erosion and impacts on water supply. There is a conflict over this timing and consideration of the bird-breeding season. However the mitigation measures proposed in the Environmental Statement follow Forestry Commission guidelines to ensure that forest managers meet the legal and conservation requirements for important bird species. To meet the conditions of approval, it is highly likely that felling and restoration will have to take place over a longer period than originally proposed.

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