

THREESTONE BURN FOREST
ANNEX TO ENVIRONMENTAL STATEMENT



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INTRODUCTION

At the original scoping meeting for the Threestoneburn (TSB) Environmental Impact Assessment (EIA) held in April 2007 the following issues were raised either by those attending or invitees who had sent a written response to the invitation (See Appendix 16 of the TSB Environmental Statement).

- Access routes to site for timber haulage
- Traffic impact and disturbance
- Red squirrel conservation
- Breeding birds
- Botanical interest of site
- Landscaping effect of proposals
- Future public access provision
- Restoration methodology
- Deer management
- Archaeology

The scoping meeting was minuted and copies of the minutes were circulated to all attendees and invitees who could not attend.

After the scoping meeting minutes were circulated to all attendees, the Forestry Commission then wrote to all of the people who had originally been asked to consult to give them a further opportunity to raise issues of concern that could be addressed in the ES.

This solicited additional responses from the RSPB, Natural England, Environment Agency and the Forestry Commission themselves.

The following additional issues which had not been raised at the scoping meeting were identified to be addressed in the ES :

- Carbon sequestration
- Hydrological Impact of Proposals
- Timber marketing implications
- Schedule I bird conservation measures
- Emergency planning provision

At this stage it was agreed that the items raised at the scoping meeting as well as those listed above would be the main points of concern to be addressed by the ES.

Subsequently after the ES was submitted and had been on the public register for 8 weeks consultation additional information was requested on the following four major item :

- Biodiversity
- Red squirrel conservation
- Access to forest
- Landscape

This annex document should be read in conjunction with the original ES document and the accompanying appendices as there are many cross references. However as a stand alone document it does contain significant new information, clarifying points of enquiry and hopefully addressing the concerns of the consultees. The additional appendices and maps at the end of this document contain expert reports and information that should be read in conjunction with the text.

The main difference to the new proposals, compared to those previously is the time scale involved. Within the original proposal the plan was to deforest the area over a period of 36 months. This was a very ambitious target and although theoretically possible it would have presented marketing problems and possibly cause disruption on the access routes. It is now proposed to undertake the work over 12 years. This will significantly reduce the effect of the proposals on everything from red squirrels to local residents.

During the public consultation phase several statutory consultees requested additional information on biodiversity, such as Natural England (NE) and the Northumberland Wildlife Trust (NWT). The NWT also had concerns about the loss of habitat for Red squirrels (**Ref Appendices 7 in ES**). Ingram Parish council and local residents expressed concerns regarding the stated preferred access route (**Ref section 12 of ES Traffic & Transport**).

NE also expressed concerns regarding the thoroughness of the landscape appraisal (**Ref Appendix 9 in ES**).

ADDITIONAL INFORMATION REQUESTS

The items where additional information was requested are identified below in sections 5 - Geology, Hydrology, Soils & Drainage, 6 – Ecology & Nature Conservation, 8 – Red squirrels, 9 – Social & Economic Issues, 10- Landscape and 12 Traffic & Transport. The reference numbers for these sections are cross referenced to the relevant sections of the original ES document.

5. Geology, Hydrology, Soils & Drainage - Hydrology (Ref Appendix 21 in original ES document)

5.2.5 Hydrology & 5.2.6 Water Quality

Mr Wright who owns Threestoneburn House raised concerns regarding flood risk to his property and the safe guarding of his water supply. After meetings with Ian Robinson

(SWL) and discussions with Ian Hall (Lilburn Estates) Mr Wright was assured that all forestry practices undertaken within the forest would follow Arboricultural and Forestry Advisory Group guidance and best practice. The longer timescale and more gradual restoration process will reduce the impact on the hydrology and negate any adverse effects on the property.

Although the private water supply is not within the forest boundary a 100m buffer zone will be established where machinery usage will be restricted and no subsequent mulching or drainage will be carried out.

6. Ecology & Nature Conservation

6.3.2 Mammals - Badgers

The mammal survey undertaken as part of the ES (**Appendix 5**) indicated that protected species such as otters and bats were present within the woodland. It was however generally accepted that the ES addressed the issue of disturbance to these species and that by adhering to best practice and working with buffer zones that the impacts would be mitigated.

No evidence of badgers was found in the mammal survey but the NWT (**Ref. Annex Appendix I**) commented that they had historical reports of badger setts within the forest. A specialist badger survey was commissioned to look at all of the open space within the forest and the surrounding land within 1 km, focusing on the old sites.

During this survey which took place in late March 2009 (**See Annex Appendix II**) no evidence of badgers were seen within the forest nor within a 1km radius. All of the old sites showed no sign of usage other than by rabbits. The nearest occupied sett is thought to be located 2.5 km to the east, in Middleton Dene. The report speculates that the absence could be caused by the changing habitat over the last 20 years, with dense conifer plantation and heather moorland replacing overgrazed pasture, both habitats less suitable for badgers. During the course of the proposed felling additional survey work will be carried out to ensure that any unknown setts within the property are not subjected to disturbance and all guidelines will be followed. Machine operators will be instructed to report any possible signs of badger activity.

6.3.3 Reptiles & Amphibians - Melanistic adders

Two species of reptile and three amphibians were found during the original survey work on the site carried out in spring 2007 (**Ref Appendix 6**). All were found in the riparian zones or areas of open space that as long as best practice is observed would be unaffected by the operational activities. The use of buffer zones will provide adequate mitigation and the habitat will be enhanced by the felling, allowing range expansion.

During the consultation period the NWT raised the issue of records of melanistic adders being recorded in the locality (**Ref Annex Appendix I**). Melanistic means “dark skin pigmentation” and is a naturally occurring feature within a small proportion of the adder population, it is not a different species. During the original survey no melanistic adders were seen and although during the badger survey 3 female adders were seen, they were of the “normal” colour pattern. Since they are exactly the same species then it is safe to

assume that their habitat will be enhanced by the proposed deforestation, as described in Appendix 6, as long as buffer zones are placed around the open areas where they currently occur, so that disturbance is minimized.

6.3.4 Invertebrates

The original ES did not take into account the impact on the invertebrate population of the proposals. However after taking expert advice (Environmental consultant John Steele and Newcastle University Biology Dept) it appears that the effects will be minimal. Most of the invertebrate life is to be found in the riparian zones and the large areas of existing open space. Since these areas are to be off limits to machinery and largely consist of designated buffer zones this will minimize any adverse impacts on the invertebrate life to be found on the property. In the longer term the habitat restoration of blanket bog and enhancement of riparian zones by native broadleaf tree planting will improve the habitat for invertebrates as well as other wildlife.

6.4.4 Enhancement Measures - Habitat Restoration & Management

See Revised Habitat Management Plan (HMP) – **Annex Appendix V** for details on area of blanket bog to be restored, methodology to be employed and future monitoring regime to be employed.

Habitat restoration

The Revised HMP describes how the conversion from predominantly conifer woodland to a mosaic of blanket bog, heath-land, grass-land and native woodland will occur. This process will take place gradually over 12 years lessening the disturbance to the existing wildlife inhabiting the site. As areas are felled and saleable produce removed they will be re-instated to the various natural vegetation types. Blanket bog will be re-wetted by the technique of raising the water table by the insertion of plastic dams. Where ground conditions permit the brash will be removed. Heath-land areas will be restored by brash removal and stump mulching to encourage heather re-growth. The native woodland will be replanted (See accompanying map) primarily in the riparian zones within 1 year of felling to ensure that habitat quickly develops for mammals such as the red squirrel. Planting of important food species such as hazel will be undertaken before any felling takes place to speed up this process of habitat enhancement (**Ref Annex Appendix II**). By the time the last of the conifers have been felled the process of vegetation recovery should be well underway over most of the site. No firm decisions will be made on the future grazing and burning regimes until this process is completed. In the longer term the estate aspires that they are invited to manage the area under a Higher Level Stewardship (HLS) Agreement. The land to the North of the forest, at Langleeford is currently in a Countryside Stewardship Scheme. This scheme expires at the end of 2009 and the estate have been invited to enter it into HLS. The estate will sign an outline

Memorandum of Understanding (MOU) with the NNPA regarding the habitat restoration and the aspiration of HLS entry in the future.

In the future a light grazing regime and periodical burning will important facets of the management regime. Following best practice guidance burning will be restricted to the heath-land areas and will not be undertaken on the blanket bog areas (Moorburn Code of Practice).

Native tree planting

It is now proposed to plant 107 Ha of native trees and shrubs within the previous forest boundary. These will mainly be situated in the main riparian zone of the Threestoneburn, heading as far up Hedgehope Hill as the 450m contour line. There will also be a large section of native woodland planting in the South-east portion of the forest, with small “stepping stone” planting in between to aid red squirrel migration. Although this replanting will mainly consist of Native broadleaves and shrubs conforming to the appropriate NVC Woodland type classifications, a higher proportion than usual of hazel will be included, in addition to 5% Scots pine to provide a food source for red squirrels. This woodland is designed to provide long-term habitat for red squirrels and as such will include a large number of woody shrubs. Hazel will form a minimum of 15% of the total woodland cover with pure groups planted among the other species. An additional hazel element will be planted as an under-storey beneath the other species so that 30% of the total trees planted will be hazel.

The Scots pine will be planted in small groups (20-30 trees) amongst the broadleaf groups so that in the longer term a reliable food source for the red squirrels develops.

The species proportions to be planted will be as follows;

- Sessile oak 5 %
- Ash 10 %
- Silver birch 15 %
- Downy birch 15 %
- Common alder 10 %
- Goat willow 10 %
- Grey willow 5 %
- Rowan 5 %
- Scots pine 5 %
- Woody shrubs 20 %

Woody shrubs proportion to include 75% hazel, 5% juniper, 5% Dog rose, 10% hawthorn & 5% dwarf birch. All trees and shrubs will be protected by tree shelters.

This replanting will be phased over the course of the felling programme and will take place the year after each respective coupe is felled, see map in **Appendix V** for details.

Additional planting

Out with the old forest boundary Lilburn Estates are proposing to plant an additional 51.5 ha, including an area of native woodland, amounting to 37 ha at Kirknewton Torrs. Most of this planting will be designed for Black grouse habitat enhancement (**See ES Appendix 15** for additional information of Black grouse in the area).

The planting will be based on the relevant NVC classifications but will include the following species in approximate proportions.

- Sessile oak	10 %
- Silver birch	20 %
- Downy birch	15 %
- Rowan	15 %
- Common alder	15 %
- Goat willow	10 %
- Hawthorn	5 %
- Hazel	5 %
- Juniper	5 %

The proposed new planting area at Newton Torrs will comprise of 2 types of planting. The larger area comprising 27 will be enclosed by a goat/deer proof fence. This will be planted using native broadleaves and juniper at variable spacing but averaging 1400 trees per ha, with upto 80% open space. The additional area of 10ha will not be fenced. It will be planted as woodland pasture with individual trees and small groups of trees protected from browsing animals by individual protection. The trees will be widely spaced to achieve approximately 20% ground cover. This area which contains gorse scrub has been identified as important habitat for the feral goats by research commissioned by the National park Authority.

The total area of initial planting proposed by Lilburn estate amounts to 158.5 ha, greatly increasing the proportion of native tree planting within the Northern area of the Northumberland National Park.

These new areas will be fenced to exclude livestock, and where required feral goats. Fence marking to reduce risk of bird strike will also be implemented.

Within the original ES document it was stated that the estate have committed to identify additional areas of replacement planting to compensate for the deforestation of Threestoneburn Forest. In **Appendix 13 – Carbon** it was proposed to plant an area of approximately 267 ha of predominantly of conifer woodland.

As well as planting the 158.5 ha already identified above the estate will make a commitment to plant an additional area amounting to ca. 170 ha, which will include a significant proportion of productive conifers for carbon sequestration. This area equates to the approximate area of Threestoneburn forest which would have been replanted as part of a “normal” forest restructuring exercise, with the blanket bog being excluded from the replanting proposals. The eventual replacement planting may consist of a number of separate blocks that will be identified over the first 5 years of the plan period.

8. Red Squirrel Conservation

The Red squirrel surveys carried out previously revealed that red squirrels are present in the forest in modest numbers. The ES (**Ref Section 8 & Appendix 7**) stated that they would be adversely affected by the proposals, losing 568 ha of habitat and that it was not possible to fully mitigate against this. It would however be possible to design the phasing of the felling to avoid squirrels becoming isolated in small pockets and leave the felling of the North-east corner of the forest to last, as this area has the best connectivity to the nearest suitable habitat. An escape corridor could be created by additional tree planting and supplementary feeding to allow the squirrels to migrate to suitable habitat to the east.

During the statutory consultation period several organizations such as NWT, NE and NNPA expressed concern that it was not possible to do more to lessen the impact of the proposals on Red squirrels and to increase the mitigation measures.

Dr Peter Lurz, from Newcastle University was asked to carry additional population modeling to see what could be done (**Ref Annex Appendix III**).

It had already been recommended that the felling being phased over a longer time period to reduce the impact on the squirrels. Under the new proposals approximately 85% of the forest would be felled over 10 years, beginning in 2010, with the balance, situated in the NE corner being felled afterwards. In the meantime to ensure that an alternative food source was available, shrubs such as hazel and hawthorn would be planted in the open areas within the riparian zones, beginning in 2010. As areas are felled, they will be replanted where applicable (See replanting proposals map) so that the squirrels have an alternative food source as the areas of conifer is reduced. Hazel will be planted as an under-storey in mixture with the other native species to provide a developing food source. Native Hazel provides nuts in 8-9 years, but some commercial varieties can seed after 4-5 years. (See accompanying map in **Annex Appendix 6** Red squirrel conservation). A small proportion of these varieties, such as Kentish Cob will be included to speed up the process. The report also suggests sighting nest boxes for the squirrels as although by Year 12 the replanted habitat could support a population of 20 red squirrels the trees would not be tall enough to provide nest sites. A small proportion of Scots pine will form part of the restocking proposals to provide an additional food source in the longer term.

Another vitally important part of the long-term conservation effort on the area will be Grey squirrel control. Lilburn estates game keepers already trap and shoot Greys and this activity will be intensified, especially in the riparian zones to the east of Threestoneburn, the likely routes whereby the Greys will attempt to colonise the area.

Grey squirrel control will be a long term commitment but the estate realizes this and has the resources and experience to undertake the level of control required through trapping and shooting. Records will be kept of the numbers and sex of any animals killed and these details will be included in an annual report. Although grey squirrels will be controlled over all of the estate, emphasis will be placed on the areas adjacent to the forest, such as Middleton Dean and Langleeford as these are the most likely migration routes into the forest area.

Over the proposed felling period annual monitoring of the Red squirrel population will take place to see how the animals are affected by the felling and replacement planting. This monitoring will be supervised by Newcastle University (Dr Lurz) and will include hair-tube transects and bait station surveys. It will be important to monitor for the occurrence of grey squirrels in the locality in conjunction with the red squirrel monitoring. An annual report will be presented to the Forestry Commission showing the findings of the monitoring. The monitoring programme will be reviewed every year to see if any modifications are required and to enable success to be measured.

9. Social & Economic Issues

9.4 Public Access Provision & Recreation - British Horse Society

Mrs Susan Rogers, representing the British Horse Society (BHS) attended the NNPA meeting held in Wooler on 20th November 2008. She subsequently wrote to the FC on 11th February identifying her concerns. Ian Robinson contacted Mrs Rogers and went to meet her on 25th March 2008. The BHS main concern is road safety of horse riders meeting large vehicles on narrow country lanes. It was agreed that this could largely be addressed by the provision of escape routes into neighbouring fields at critical points (see map in Appendix VI). It was also explained that the revised timetable of the works would significantly reduce disturbance to all local user groups. Additional mitigation works would involve the provision of a permitted route to the north of the forest linking existing bridleways and avoiding an area with unsuitable soil and vegetation.

10. Landscape Appraisal

Within the original ES submission there was a section on the impacts on the landscape of the proposals (**Section 10 & Appendix 9**). Natural England commented that although they agreed with the findings of the landscape appraisal they required more background information on the landscape character and designations of the area.

Elizabeth McIntosh (Forest Design Services) was commissioned to undertake this additional work and the findings can be seen in **Annex Appendix IV**.

This report covers the visual impact of the proposed deforestation, replanting and quarrying and road building.

Due to the isolated position of the forest it is not prominent in the landscape due to landform and vegetation patterns. It is felt that the proposals will remove an unnatural looking forest and replace it with a new woodland that is more in character with other woodlands in the vicinity.

12. Traffic & Transport

12.3 Alternative Proposals

Within the ES (**Ref section 12**) the 3 alternative access routes for removing timber from the forest were identified and the relative merits of each were discussed. The ES stated that the preferred route was Alternative 1 via Reaveley, Brandon and onto the A697.

During the consultation period and at the NNPA Committee meeting held in Wooler on 20th November 2008 there was concern expressed by the NNPA members and Ingram parish council regarding the choice of this preferred option and the disruption that would be caused to local residents and visitors. The FC therefore asked us to look again at the 3 alternative routes.

12.3.1 Alternative 1

This route leads from the forest to the County road at Calder. It then goes right and heads south via Reaveley Greens, Reaveley and Brandon farms before joining the A697 at Brandon Whitehouse.

From the junction of the forest track and county road at Calder it is 500m to the site of the former sand and gravel quarry at Roddam Bog. From this point the minor county road has been improved by widening and the creation of passing places. The 500m before the old quarry does require some minor improvements to facilitate lorries negotiating the tight junction and it would be possible to re-instate a former by-pass where lorry traffic could run on a track for 100m at the former quarry thus avoiding a narrow section of road. Discussions have been held with the neighbouring land owner Lord Vinson of Roddam concerning these improvements and he is in favour of this route.

12.3.2 Alternative 2

This route leads from the forest to Calder and accesses the A697 via Roddam. Although this track appears to be very narrow, it is physically possible to travel this route in a lorry. It has however never been subject to any widening, unlike Alternative 1 and there is no current provision for passing places. Lord Vinson of Roddam is not in favour of this route and has written to Northumbria Highways outlining his concerns (**Ref Annex Appendix I**).

12.3.3 Alternative 3

This possible route was highlighted at the scoping meeting. There is an access track leading from South Middleton on land owned by Lilburn estates running in a south-western direction towards the forest. The first mile of this track could, with a moderate amount of upgrading be negotiable by lorry, but the next 3/4 mile is no more than a narrow 4 wheel drive vehicle track. The track goes to within 400m of the forest boundary before turning away to the north in the direction of Langlee in the Harthope valley.

A considerable amount of work would be required to enable this track to link up with the forest road network. This would involve upgrading 1 mile of hill track, constructing 3/4 mile of new track and building a further 1 mile of new road within the forest and linking the 2 together by building a further 400m of new

road through undisturbed ground that is part of the Cheviot SSSI. There are also several archaeological sites in this locality that could be affected by the road construction, (See **Annex Appendix VII** for photographs of the existing track and identifying the archaeological features).

12.4 Additional investigation

At the request of the FC, Ian Robinson from Scottish Woodlands Ltd (SWL) contacted Mr J Walton, the Highways Control Manager from Northumberland County Council regarding the councils preferred option. A meeting was held on the 27th March at the Highways office in Alnwick. Present were Ian Robinson (SWL) and Michael Armstrong and Dave Cherrie (Highways). They had received a letter from the FC in December 2008 asking for there views (Copy in Annex Appendix VII), which they had not replied to. This letter stated that the working period of the felling would be 36 months. Once they were informed that the working period was now to be 12 years and that the number of lorries per week would average ca. 10, they readily agreed that as long as this revised timescale was adhered to they were happy to agree to the route to the A697 via Reaveley and Brandon being the preferred option.

To help minimize disturbance to local residents and visitors it is proposed to instigate the following actions;

- Work to take place over minimum 12 year timescale, reducing the average number of lorries per week from 40 to 10.
- Access track widening, construct 3 lorry passing places and upgrade 2 cattle grids and 2 stream crossings. (Improvements agreed with neighbouring landowners and permission to be sought from National Park Authority and Environment Agency).
- Calder to former sand quarry site, re-alignment of corner so vehicles can negotiate it more easily.
- Instigation of a voluntary speed restrictions on route via the 3 farms. This would involve the imposition of a 30 mph speed restriction **within the contract** for the haulage works whereby any haulier found to be in breach of contract would be banned from the site for a set period of time. This could be monitored by the estate and main contractor. With local residents being able to report “speeding” offenders. Appropriate signage would be erected after consultation with the County Councils Highways Dept.
- Setting up of a local liaison group (NNPA & Parish council) to inform local residents of the timing of operations to keep people informed and minimize disturbance
- Road safety measures to be implemented to make sure that horse riders using the council road have clear sight lines and escape points off road if large vehicles are passing them (See map in **Annex appendix VI**).

12.5 Summary & Conclusions

The traffic and transport assessment has involved identifying the various alternative routes by which the timber from the forest can be extracted. Once the preferred route was identified and the reasons for choosing this route explained the mitigation measures that can be utilised to help minimise the adverse effects of this choice are stated. Overall we believe that `Alternative 1` is still the best option.

SUMMARY

The issues identified for inclusion in the ES are summarized in section 14.1 of that original document. The four main issues and the points that the FC required additional information on are detailed above. It has largely been possible to address the outstanding issues regarding red squirrel conservation, access and hydrological impacts by extending the period over which it is intended to carry out the works from 36 months to 12 years. The additional information regarding Bio-diversity is addressed by the Badger survey and revised HMP, although the exact management prescription of the site post deforestation will be decided once the natural vegetation becomes re-established and in conjunction with the Consultation Panel to be convened to give expert advice and guidance. The concerns regarding Landscape are hopefully addressed by the amended appraisal which considers the replacement planting as well as the felling proposals.

Although Lilburn Estates have already identified 158.5 ha of replacement planting they are committed to planting a further area amounting to 170 ha +. It is unlikely that this will be planted on land already owned by the estate, but that rather the land will be purchased and planted.

CONCLUSIONS

The conclusion of this Annex to the Threestoneburn Forest ES is that that in the main it can be seen that there are significant environmental benefits arising from the proposed deforestation at Threestoneburn and that appropriate mitigation and enhancement can be put in place to safeguard against detrimental effects.

Red squirrels are the major species that are potentially detrimentally affected by the proposals, however it is now felt that it is possible to significantly mitigate against this by long-term habitat improvement.

The proposals will increase the bio-diversity on the site and contribute towards the achievement local and national action plan targets, regarding the following species and habitats;

Habitat Action Plans (HAPS)

- Blanket Bog
- Rivers & Streams
- Heather Moorland
- Native Woodland

Species Action Plans (SAPS)

- Otters
- Black grouse
- Upland waders
- Bats
- Water voles

The proposed longer timescale of the works will mitigate against undue disruption to local residents and visitors and the landscape will be enhanced by the conifer felling and replacement planting using native woodland.

Appendices –

- I Scopees letters
- II Badger survey
- III Red squirrel survival survey
- IV Landscape appraisal/assessment
- V Revised habitat management plan (HMP)
- VI Bridleway diversions
- VII Access routes

Maps –

- Replacement planting
- Felling programme (12 years)