Section C – Management Proposals

C.1 – Silvicultural Practices

The following section summarises our approach to land management and how it relates to the vision and objectives detailed in Sections A and B above using the site information contained in the appendices.

C.2 Woodland Management Prescriptions

These woodland management prescriptions state explicitly how we will manage the LMP forested area over the coming two five year phases. The proposals in this section are detailed in Appendix 16 - Coupe Summary Tables. All forest operations will be undertaken in compliance with UKFS, UKWAS and industry best practice guidance.

C.2.1 Felling

Parts of Caithness LMP area (e.g. Braehour and Toftgun) have seen significant clearfelling, beyond the restructuring objectives set in previous Forest Design Plans (FDPs). This is primarily due to forest health issues *(Dothistroma Needle Blight)* and wind damage but has also been undertaken by renewable energy developers (e.g. Toftgun, Achairn and Stroupster). It has also allowed us to accelerate the peatland restoration programme. The forests within the LMP area are producing timber of considerably variable quality: from biomass and wood fuel on deep peat soils to good quality softwood timber products at Rumster where mineral soils are more prevalent. There is potential to produce hardwood timber products and the success of this will be determined by early and ongoing management interventions such as pruning. The majority of clearfell over the next ten years will be driven by an attempt to accelerate restructuring, maximise timber recovery on sites affected by wind damage and DNB and to achieve the effective landscape scale peatland restoration necessary to address climate and ecological breakdown. Maximising production will be balanced with the need to protect the soils and hydrology on sensitive sites. Clearfell will be undertaken using harvester – forwarder systems on a standing sales basis.

North Region will continue to work with customers and contractors to improve fibre recovery and in some areas may use direct production and low ground pressure machinery to achieve this aim. This is most likely to apply to sites proposed for peatland restoration.

Felling area will generally exceed restocking area within any five year period due to the practice of fallow and the inclusion of peatland restoration and higher levels of internal open space through restructuring.

C.2.2 Thinning

Opportunities to thin the crop across the Caithness LMP area are limited by soil conditions and climate. Currently there are no plans to undertake thinning of first rotation productive conifer areas. The young conifer coupes at Sibster and Dale will be monitored with a view to undertaking first thinning and if this is likely to fall into the final year of the LMP this will be detailed at the Mid Term Review (2026). Management of broadleaves will largely include formative pruning and no thinning is anticipated within the first two phases of this LMP.

During the restructuring transition to riparian woodland it is anticipated that thinning of non-native natural regeneration will be required. This material will be felled to recycle to improve nutrient availability for broadleaf plantings.

C.2.3 Low Impact Silvicultural Systems

Silvicultural management systems designed to produce timber without clearfelling are variously referred to as low impact silvicultural systems (LISS), continuous cover forestry (CCF) or alternative to clearfell (ATC). These systems are widely practised across Continental Europe and Scandinavia where soils and climate allow regular thinning and can involve the retention of widely spaced seed trees. Conversion of older conifer forests is problematic in an oceanic climate because the risk of catastrophic windblow is high and there is limited age class diversity to provide a more resilient forest structure.

Given the soils (the majority of the area is either deep peat or a peaty surface-water gley), exposure (DAMS scores across majority of the LMP area ranging from 14 to 20) and species composition (mostly LP and SS/LP mix), managing any areas under LISS is not feasible across the Caithness LMP area. However opportunities may develop in the more recent productive broadleaf coupes such as those at Sibster, as the forest develops a more complex structure over subsequent rotations. This may be negatively impacted by the increased storm events forecast in climate change predictions.

C.2.4 Minimum Intervention, Long Term Retentions and Natural Reserves

We propose to convert 55.4 Ha of Natural Reserve at Rumster Forest where we will take management action to restore bog and grow productive conifers. Long Term Retention coupes are detailed on Map 9 - Management Coupes. These are coupes that will be retained beyond their predicted felling year. In this LMP area this will primarily be native woodland retained for shelter at Sibster and Achnamoine. Minimum Intervention coupes comprise Riparian Woodland at most blocks. Very little management will be undertaken in these coupes beyond removal of conifer regeneration and some enrichment planting for species diversity.

C.2.5 Restocking and Natural Regeneration

Outwith the substantial areas of blanket bog the forests across the LMP area are capable of growing timber crops of varied quality, from biomass to construction timber. Due to ongoing native woodland restoration and the extent of deep peat suitable for priority habitat restoration, the area available for producing softwood will be significantly reduced, allowing creation of native and riparian woodland and an increase in open habitat area at a landscape scale. In general, this broadleaf woodland will be concentrated in both current and newly created riparian zones and in native woodland zones, however broadleaved species will be encouraged throughout the entire forest, by retaining regeneration and establishing new seed sources by planting.

A zoning system has been used to identify future habitat zones in Map 12a – Future Habitat Zones. The prescriptions that accompany this zoning system are detailed in Appendix 6 – LMP Presentation of Future Habitats.

All native woodland establishment will be designed and delivered within the current FLS guidelines (Rodwell & Paterson, 1994). Planting operations will be aimed at encouraging a suitable National Vegetation Classification (NVC) woodland type appropriate to the soils and indicator vegetation encountered on site. This will be identified subsequent to harvesting operations and will comply with FLS fallow policy. While it is important to acknowledge that climate change may have a significant effect on species choice in the long term and that the concept of 'nativeness' in a Scottish context may have to be revised, within this plan period any adaptation is likely to be restricted to sourcing plants with a more southerly (up to 5 degrees of latitude) provenance.

Creation of riparian woodland will increase internal open space, fragmenting productive blocks, increasing forest edge habitat and allowing a windfirm network of permanent habitat corridors to develop. This in turn will allow for greater age class diversity in future rotations by providing a 'framework' within which reduced coupe sizes can be managed.
Current climate change predictions under all climate change scenarios indicate that freshwater biota may become threatened by increases in summer temperatures.
River flows are likely to alter following increased precipitation. Salmonids in particular are susceptible to temperature changes (Broadmeadow, 2002). In addition soil erosion may be exacerbated by increased flood and drought cycles.
The increase in dappled shade and soil stability provided by broadleaf riparian woodland will help to protect river ecosystems from the temperature fluctuations predicted to result from climate change.

Planting will be undertaken in compliance with UKFS Guidelines (2017), within the footprint of existing forests (where conifers were planted right to the banks of watercourses and subsequently felled). Native broadleaves will be planted where previous crops were kept away from watercourses, to introduce a site-appropriate seed source and establish riparian woodland, with the projected future canopy cover at 60%. We will plant trees in groups on suitable ground, avoiding low lying, waterlogged and deep peat areas. Timing will depend on restocking of adjacent coupes, between 2021 and 2031 largely, although this may be accelerated if resources allow.

In making decisions about future habitats we are conscious that it is the duty of every public body and office-holder, in exercising any functions, to further the conservation of biodiversity so far as is consistent with the proper exercise of those functions, as stated in the Nature Conservation (Scotland) Act 2004.

Restocking in productive areas will aim to maximise the productive capacity of the forest, the brief guidelines below will be followed to ensure adequate restocking:

- To obtain maximum benefits from restructuring, contiguous restocking areas will not be less than 3 Ha per individual shape or exceed 50 ha unless forest health issues, open habitat restoration feasibility or windblow dictate otherwise.

- Restock coupes adjacent to the forest road network should be restocked to within 5 metres of the forest road for at least 30% of the coupe frontage for future access to facilitate soil protection.

- Non – productive broadleaf elements within productive coupes will be located where they will be of greatest benefit; along drainage channels, adjacent to open ground, other broadleaf woodland or around archaeological features to enhance the setting.

The LMP proposal seeks approval for restocking of areas felled prior to plan approval, species enhancement operations and those coupes felled within the 1st 5 years from the date of approval. The 5 year fallow period generally means that all coupes felled in the 2nd phase of the plan are being restocked outside the approved plan period. In order to secure approval for the restocking of coupes felled in the 2nd 5 year phase of the plan if a shorter fallow period is applied, the proposed areas of 2nd phase restock are also shown on Map 11a - Planned Management Coupes and Map 12c Future Habitat Planned Coupes.

The Confederation of Forest Industries Ltd (Confor) have been consulted during the scoping period of the plan revision. Where those consulted have responded this is recorded in Appendix I – External Consultation Record.

The extended fallow periods (generally up to five years) that are required prior to restocking to allow pine weevil populations to abate, have the negative effect of compounding nutrient deficit because nutrient released from decaying leaf litter will largely have been flushed from site by year five. Therefore it is anticipated that post planting applications of fertiliser may be required on the upper margins of the forest and remedial applications may be required in some crops in line with industry best practice (Taylor, 1991). However appropriate choice of silvicultural mixtures and well-timed heather control will be preferred to fertiliser and the Region is investigating how best to establish second rotations on nutrient poor sites. Broadleaf species will be incorporated within silvicultural mixtures to improve soil function and encourage the field layer to develop. In sufficient sized groups it is anticipated that these will survive into following rotations, helping to maintain the biomass of mycorrhiza on site. In more intimate mixtures it is anticipated that they will be shaded out and die, providing valuable deadwood and helping to build carbon rich forest soils.

The overall area of productive conifer woodland will be reduced during the life of the plan through the removal of plantation from riparian and peatland restoration sites and by increasing the proportion of broadleaved trees in productive conifer areas. Although that may seem to be a negative outcome in fact most of the bog restoration sites yielded very low volumes so this is not a cause for concern. Ultimately what we believe will emerge from this restructuring is a healthier and more resilient forest albeit within a much more extensive framework of open habitat and native woodland.

C.2.6 New Planting and Natural Colonisation

No new planting is proposed by this LMP. Natural colonisation of restored open habitats by non-native species will be managed by hand pulling and fell to recycle.

C.2.7 Planned Woodland Removal

Considerable woodland removal is proposed by this LMP and this is detailed in Maps 12 a – c - Future Habitats, Map 5b – Peatland Extent, Map 12d – Open Habitat Restoration Coupes and Appendix 16 – Coupe Summary Tables. Woodland removal is proposed solely to facilitate the restoration of priority habitat blanket bog and in that regard does not require compensatory planting. However in 2020 the Scottish Government Climate Change Policy Update made the commitment that each hectare of forest to bog restoration undertaken on the NFL would be replaced by a hectare of woodland in a more appropriate location. Details

have yet to be published on how this will be achieved so this LMP does not propose the locations of this replacement woodland creation, but notes the commitment. Woodland removal is further detailed in Appendix 14 – Environmental Impact Assessment Determination Request (Deforestation).

C.2.8 Recreation and Visitor Zone Management

The forests of the East Caithness area are popular with many local residents. There has also been an increase in non-local visitors in recent years, in particular due to the popular NC500 route. The area is becoming better known and its popularity is expected to continue with the current trends for campervans and "staycations". The majority of visitors come to this area for outdoor activities and its natural beauty. FLS forests contribute to this through both formal and informal recreation provision.

The FLS forests in this area host a number of core paths including the Blingery Forest path, the Camster Forest path and the Rumster Forest path network. The formal recreation facilities at Rumster Forest have now been decommissioned, but visitors still enjoy the forest under SOAC.

There are also a number of long distance routes through this area, sections of which pass through FLS forests. The most popular of these is the John o' Groats trail.

This area has two forests with formal promoted recreation facilities, Sibster Forest and Newtonhill Woods (further details below).

<u>Sibster Forest</u>

Sibster Forest is a young planted broadleaf woodland. It has two way marked trails, car park and a picnic area. It is 6 miles from Thurso and is popular with locals for exercise, dog walking and horse riding. It is notable for being one of our easiest forests to reach by train, with a short footpath link to Georgemass Junction station 5 mins walk from the forest.

<u>Newtonhill Woods</u>

Newtonhill Wood was planted to replace an existing community wood (not on FLS ground) that had to be closed. It has a very active community group, the Friends of Newtonhill Woodland. Input from this group adds very significantly to the value of this site.

The community were proactively involved in the creation of this woodland and received renewable energy grants to install natural play, build a pond dipping platform and create a dedicated dog walking area. Alongside this are the FLS facilities of car park, paths and picnic

area. Newtonhill Wood is less than two miles from the centre of Wick. It is easily accessible and well used by locals.

We hope to maintain our current recreation infrastructure, but there are currently no plans to expand the recreation offer in this area. We will continue to facilitate community led projects (such as the proposed Halkirk link path) and appropriate leases (such as the proposed Rumster outdoor centre) when approached.

C.2.9 Renewable Energy Developments

As described in detail in Section 1, Caithness has the best wind resource in Scotland. Currently the fully operational windfarms on the NFL are at Stroupster (416.55 Ha), Toftgun/Burn of Whilk (373.41 Ha) and Achairn/Camster I (339.39 Ha). Halsary Windfarm (830.76 Ha) became operational in 2021.
Two further windfarm developments are the subject of current planning applications; Achairn/Camster II (803.4 Ha) and Golticlay (450 Ha) and decisions on these are expected during 2022.

C.2.10 Protection, Fencing and Deer Management

Braehour and Dale woodlands lie within the Northern deer management group (NDMG) area albeit on the extreme Eastern boundary of the group. Information on the DMG and the deer management plan (DMP) objectives can be found on the Association of Deer Management Groups (ADMG) website. The remainder of the forest blocks do not fall within a DMG. Further detail is provided in Map 16 – Deer Management.

The objective of FLS deer management is to have a healthy deer population within an improved and sustainable landscape of native habitats and productive forestry and we acknowledge that native deer species are a vital component of the natural environment. Red and roe deer which are present within the plan area, are our only large, wild, free-roaming native herbivores. When the deer population is in balance with the habitat they have a positive role to play in the local ecosystem. Non-native Sika deer are also present. The deer holding capacity of any habitat is dictated by the quality of that habitat. Deer are essentially a woodland species and benefit most from this preferred habitat. In order to meet the vision for restoring and improving native habitats and establishing commercial conifer and broadleaf crops on the National Forests and Land in the Caithness LMP area, current experience indicates that deer populations need to be managed at a population of approximately 5 deer per 100 Ha. At this density improvements in both the habitats and deer health (body weight, high fecundity and low winter mortality) will be measurable.

Because of the geographical spread of the LMP area and the varying deer density's within, protection methods may differ in that the type of fencing (deer/stock) required will have to be considered on an individual forest basis. We will maintain the remaining deer fences protecting the young broadleaf plantings at Dale and Sibster until we are satisfied that their removal will not compromise crop quality.

Where appropriate FLS will work collaboratively with neighbours to explore strategic fencing options, in particular around restored open habitats and where road traffic accidents may be an issue (e.g. Halsary Forest).

Herbivory by rabbits, voles and hares is not unusual at new plantings on former agricultural ground and levels of damage will continue to be monitored. The use of raptor perches to encourage predation on voles will continue.

C.2.11 Management of Tree Health

Dothistroma needle blight has caused much deterioration of crops across the Caithness LMP area but harvesting is now catching up with the last of the affected coupes. Phytopthera has not yet reached Caithness NFL to our knowledge. Annual monitoring of Lodgepole pine crops is being undertaken, principally for Dothistroma, but also assessing Pine beauty moth and Pine sawfly damage. Although Green spruce aphid is endemic severe damage detrimental to growth only appears to occur on a four or five year cycle. Climate change is likely to increase the range and severity of tree health problems, so ensuring that future rotations are resilient and that coupes are of mixed species are key to our management approach. Chalara is present in ash in Sibster and will be managed over the first phase by replacement trees.

C.3 Management of Infrastructure

The following text outlines our approach to creating and maintaining access across the LMP area. Further information can be viewed spatially on Map 11b – Planned Roads and is detailed in Appendix 15 Environmental Impact Assessment – Roads and Quarries.

C.3.1 Forest Roads, Bridges and Haulage Routes

In general the LMP area has a good network of main haulage routes, however the wider access network is sparse and roading development has largely been in response to immediate need related to diseased or windblown crops of Lodgepole pine. Other development of infrastructure has been in relation to renewable energy developments. To progress felling of scheduled peatland restoration coupes extensions to the road network

are needed in Braehour, Golticlay, Rowens and Achairn. It may be possible to recover much of this material after peatland restoration operations are completed and that will be assessed at that point. At Sibster and Dale and Rumster Forest small spur roads, turning points and loading facilities may be required to facilitate thinning and maintenance operations and some are proposed in this LMP. The position will be reviewed at MTR in 2026.

C.3.2 Quarries

No further quarries are proposed at this stage.

C.4 Management of the Environment and Open Land

The following paragraphs outline our management of open land, deadwood and other environmental issues.

C.4.1 Historic Environment

The forests and land within the Caithness LMP are rich in both scheduled and unscheduled archaeological features. In general, the majority of the unscheduled monuments relate to previous settlement and agricultural land use e.g. farmsteads and sheep fanks. The Highland Historic Environment Record has been consulted during the preparation of this plan. Following FLS Historic Environment Planning Guidance, this Land Management Plan describes and considers the historic environment relevant to the plan area.
The Archaeology Record Table for this plan is at Appendix 7 – Historic Environment Features and includes details of all relevant scheduled monuments and their most recent monitoring. These important historic environment features are surveyed, mapped and monitored to ensure and demonstrate FLS compliance with the UK Forestry Standard and UKWAS.
The monitoring is undertaken at five year intervals synchronised with the LMP review and revision cycle. Further information on the management of the historic environment in the former North Highland FD is available in the Forest District Monument Management Plan. A copy can be provided on request.

In general, all significant archaeological sites are protected and managed following Forestry & Archaeology Guidelines (FC 2017), the FLS policy document Scotland's Woodlands and the Historic Environment (FCS 2008) and the supporting FLS Historic Environment Planning Guidelines (available from the FLS Archaeologist). Management coupes, access roads and fence lines are surveyed by Region staff prior to any work being undertaken in order to ensure that upstanding historic environment features can be marked and avoided. At restocking, work prescriptions remove relevant historic environment features from ground disturbing operations and replanting. Opportunities to enhance the setting of important

sites are considered on a case-by-case basis (such as the views to and from a designated site).

Any recent archaeological surveys that have been undertaken on behalf of FLS have been incorporated into our spatial GIS database - and any new archaeological surveys required (in unimproved upland areas for example, or areas within which the archaeological record is unusually rich) will be undertaken to the standards laid out in FLS Historic Environment Planning Guidelines. This will ensure that undiscovered historic environment features are mapped and recorded prior to forestry establishment and management operations - and will ensure the continued comprehensive protection of the known archaeological resource. There are seven scheduled monuments within the Caithness LMP area. It is common when planning forest operations to discover new sites of archaeological interest.

All sites are subject to rigorous pre-operations planning and inspection and staff will refer to the guidance of Ritchie and Wordsworth (2010) when completing pre-operations surveys. Advice will be sought from the FLS archaeologist on the significance of new sites and Highland Council and Historic Environment Scotland consulted as appropriate.

C.4.2 Habitats and Biodiversity

The proposals within this LMP are designed to stop further biodiversity decline and restore priority habitats. Appendix 9 – Key Habitats and Appendix 10 Key Species provide details of the specific habitats and species likely to be affected by the proposals in the LMP. Appendix 8 – Ancient Woodland Record provides details of known ancient woodland sites. Appendix 12 contains the ten year designated site plan and Appendix 13 contains the Habitats Regulations Assessments for Natura sites likely to be affected by our proposals.
Map 13 – Deadwood Ecological Potential shows where we intend to concentrate any creation of deadwood habitat, using a high, medium and low scenario approach. Deadwood is a vital element of the forest ecosystem, positively affecting biodiversity, carbon storage, soil nutrient cycling, energy flows, hydrological processes and natural regeneration. Consequently, retention of deadwood is a mandatory element of UKFS sustainable forest management. Guidance on quantities required is not specific but an average of 20m3/Ha has long been acknowledged as a minimum industry standard.

Deadwood also plays a vital role in the functioning of river ecosystems. Managing riparian woodland under a Minimum Intervention regime in future will encourage a high proportion of deadwood over time, helping to retain water and sediments, trapping and facilitating the breakdown of organic matter into food for aquatic invertebrates, diversifying channels by

creating pools, falls and riffles and improving physical habitat structure for fish and invertebrates.

Managing Deadwood in Forests and Woodlands – A Practice Guide (Humphrey and Bailey, 2012) and the FLS internal guidance document written and reviewed by the FLS Species Ecologist on proportions and types of deadwood, will be used to guide decisions on the spatial distribution and quantities of retained deadwood. The position and type of deadwood required will be directed by the Environment team in coupe workplans and agreed pre-commencement on harvesting operations. Achievement will be reviewed at each coupe 75% meeting.

C.4.3 Open Habitat Management

We recognise the valuable ecosystem services that are provided by open land and in particular active ombrotrophic mire systems such as blanket bog. The benefits include carbon and methane storage, water quality improvement, reduced flooding risks and increased biodiversity. The risks to peatland from forestry are well documented but what is perhaps less well understood is the role that low intensity woodland may have on carbon capture and storage. However given the body of evidence available to demonstrate the detrimental effects of forest establishment on blanket bog our proposals are designed to comply with the Scottish Government's Environmental Strategy (2020) which states that "*where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing cost effective measures to prevent environmental degradation*". Adopting this precautionary approach and in full recognition of the global significance of Caithness and Sutherland's peatlands our proposals for peatland restoration are ambitious and significant.

Caithness LMP contains significant areas of afforested deep peat, exposed and located at the outer fringes of forest blocks and throughout many coupes. Those areas tend to produce slow growing trees (mainly Lodgepole pine, but also Lodgepole/Sitka mix) of poor quality, often suffering from *Dothistroma Needle Blight* (DNB) infection.
These areas are also capable of being restored to priority habitat, thereby improving the hydrological function of neighbouring designated mires and restoring the full extent of the blanket mire systems.

Future management decisions regarding these areas are based on current UKFS requirements, Scottish Government's Policies on Control of Woodland Removal, The Environment Strategy, The Scottish Biodiversity Strategy, The Peatland Strategy, Scotland's Soil Strategy and the recently published FLS Practice Guide 'Deciding future management

options for afforested deep peatland' aswell as evidence presented in the JHI Publication Wise Choices for Peatland (2013). Additionally our proposals are guided by Scottish Forestry's Guidance to Forest Managers Preparing Forest Plans Within the Caithness and Sutherland Peatlands SAC/SPA 2015.

Together these policies create an overwhelming legislative momentum to restore the valuable peatlands of Caithness and Sutherland. Consequently, where deep peat coupes have the potential to be restored and thereby contribute significantly to biodiversity and the hydrological function of adjacent peatland sites, and there is a good chance of restoration being successful, we will undertake works to smooth ground profile, block drains and furrows and remove regenerating non-native species, so that priority open habitat can be restored.

Additionally the low yield classes recorded for timber crops on these mires (see Map 7 – Yield Class) were achieved with the 'advantages' of late twentieth century silvicultural practices. These included intensive drainage regimes and generous fertiliser applications and cannot be repeated for subsequent crops using the resources available today.
The extent of the overplanted peatland areas across the LMP area can be viewed spatially in Map 5b – Peatland Extent**.** These data represent peat depth measurements undertaken at 100m centres or thereby across most of the forested blocks and very effectively demonstrate the continuity of the blanket bog systems at a landscape scale. Where crop condition (E.G. windblow) has prevented full survey we will return after clearfell to confirm that the peripheral measurements correspond with the entire coupe and that interpolation maps represent the actual soil depths.

On more fragmented areas of deep peat, where restoration will be less effective due to the level of damage caused by modification during the previous rotation and where we can't expect even a moderate rate of tree growth if restocked with conifers at commercial density, we will aim to promote wet woodland of native character.

Map(s) 12d demonstrate where we propose woodland removal and we have stratified these proposals into the three types detailed in Scottish Forestry Guidance "Deciding Future Management Options for Afforested Deep Peatland" and the supplementary document "Guidance to Forest Managers Preparing Forest Plans within the Caithness and Sutherland Peatlands SAC/SPA". We have proposed our restoration polygons based on the following criteria, divided into one of three classes:

'SPA Woodland Removal" polygons are the 100m and (up to) 800m buffers of woodland removal associated with the C&S SPA notified features Dunlin and Golden plover. In most cases these polygons also carry a 'presumption to restore' because they are hydrologically connected to existing active blanket bog and/or the designated site. We have consulted widely on this woodland removal and have been advised by NatureScot, RSPB and our Species Ecologist that they cannot be reduced further on the grounds of topography or other factors. This was confirmed and agreed at a site meeting of stakeholders in Spring 2022. These areas also contain some organo-mineral and mineral soil complexes which will create heathland habitats associated with blanket bog. These drier areas would be suitable for native woodland creation or regeneration but we have been advised that is not desirable at this time by NatureScot and RSPB.

'Presumption to Restore' polygons are currently defined as follows:

- Likely to negatively impact on habitats designated as qualifying features in the UK Biodiversity Action Plan (UKBAP), or on Natura sites, Ramsar sites, Sites of Special Scientific Interest (SSSIs) or National Nature Reserves (NNRs);
- Sites or parts of sites where restocking is likely to adversely affect the functional connectivity (especially hydrology) of an adjacent Annex 1 peatland habitat (as defined in the EU Habitats Directive), or a habitat associated with one (priority habitats);
- Sites where deforestation would prevent the significant net release of greenhouse gases (Scenario A peat type). These are peat types that are known to be edaphically unsuited for growing plantation trees.

'Assessed Sites' polygons fall outwith presumption to restore or SPA buffer areas but are deep peats between 50cm and 500cm and deeper which cannot sustain tree growth and where we do not anticipate being able to achieve future yield classes detailed in the guidance for the reasons outlined above (climate, soil nutrient/moisture regimes, underlying geology, disease resilience, wind resistance). These are deep peats with sufficient hydrological function for restoration to be viable. These are referred to in the guidance as 'Scenario B' peat types.
Other open areas (including priority open and archaeological features and their protective buffers) will be maintained, using grazing where appropriate, to prevent natural regeneration of trees. Smaller scale open habitat features, associated with the woodland habitat types described above, with buildings and with solid geology has not been mapped.

The management of open land is detailed in section Appendix 6 – LMP Presentation of Future Habitats and is visualised in Map 12 a-c – Future Habitats, Map 5b – Peatland Extent and Maps 12d – Open Habitat Restoration Coupes.

C.4.4 Invasive Species

It is recognised that invasive non-native species (INNS) can have impacts on the condition of areas protected under the Habitats Directive for species or habitats important at a European scale and those nationally important for biodiversity. They are recognised as a significant risk to the water environment in the (2nd) River Basin Management Plan for the Scotland River Basin District (2015 – 2027) and in the North Highland area management plan.

It is proposed that links will continue to be made with existing projects such as the biosecurity plans which are being produced by the Rivers and Fisheries Trusts Scotland to prevent any unforeseen downstream effects from our operations. Invasive plants (*Rhododendron ponticum*) have been recorded sporadically. There are no other records of INNS on the NFL within the plan area, however routine survey work will continue throughout the plan period and any occurrence dealt with, complying fully with best practice guidance. Work programmes are currently being delivered to reduce rhododendron (*Rhododendron ponticum*) and will continue during the coming plan period. Similarly American mink (*Neovison vison*) will continue to be the focus of monitoring and necessary, rigorous control. Across sites designated for mire restoration non-native conifers will also be rigorously controlled to ensure open habitats are maintained.

C.4.5 Grazing, Agriculture and Adjacent Land Use

A small agricultural holding was purchased at Achnamoine, near Spittal during the last plan period for inclusion in the Starter Farm Project which aimed to provide an opportunity for new entrants to agriculture with a viable unit to start building their farming experience.

The existing lease is due to end on 31st March 2028. The future of the starter farm beyond 2028 will be considered fully during a strategic review. This review will ensure the views of the wider regional team are taken into account. For the starter farm to be retained and re-let it would need to have demonstrated itself as a truly viable unit for FLS in terms of returns on investment over the long term, or be offering our core business some form of key strategic advantage via retention.

A full landscape appraisal is detailed in Section D – Landscape Analysis. A variety of land uses are noted across the landscape adjacent to the LMP area.

Forests and woodlands are scarce across the landscape and are a reducing feature due to peatland restoration activity. However some small areas of privately owned woodland do feature around Halsary, Braehour, Rumster and Toftgun, generally conifer assumed to be for timber production.

Tourism is an important industry to the Caithness economy and this has increased considerably with the growth around the NC500 route promotion, bringing benefits and challenges. Archaeological sites such as the Camster Cairns and the Yarrows Trail are frequently visited.

Agriculture also remains an important industry with both arable and stock farms around the better land. Equestrian landholdings also feature.

Land managed primarily for conservation is increasing from just the well-established sites like Munsary Peatlands and Broubster Leans to considerable areas of forest to blanket bog restoration.

Renewable energy wind farms are now a significant land use, contributing large amounts of electricity to the grid. Again, these developments have brought both benefits and some challenges.