

SCOTTISH ENVIRONMENT PROTECTION AGENCY	Identifier: LUPS-GU27
<p style="text-align: center;">Land Use Planning System SEPA Guidance Note LUPS-GU27</p> <p>Use of Trees Cleared to Facilitate Development on Afforested Land - Joint Guidance from SEPA, SNH and FCS</p>	Page no: 1 of 6
	Issue No: Version 1
	Issue date: 9 April 2014
	Originator within SEPA: Jim Mackay
	Authorised within SEPA by: Alan Farquhar; Operations Area Managers Group; Ecology Management team

1. Introduction and background

- 1.1 This is joint guidance from the Scottish Environment Protection Agency (SEPA), Scottish Natural Heritage (SNH) and Forestry Commission Scotland (FCS) on use of trees cleared to facilitate development on afforested land. It complements advice from SEPA within its "Management of forestry waste" WST-G-027 version 2 (July 2013). Whilst this guidance has been developed in response to increasing numbers of wind farm proposals on afforested land, it applies to other forms of development on afforested land as well. The guidance within this note will be subsumed within more comprehensive good practice guidance as revised and this note itself withdrawn.
- 1.2 This guidance note does not apply to conventional forestry activities because no land use change is involved and there are special exclusions under the EU Waste Framework Directive 2008 applicable to forestry. It does not apply to materials which are considered legally as waste and hence are controlled through Waste Management Regulations, either directly or through exemption paragraphs. The "Management of forestry waste" guidance applies in this situation.
- 1.3 The trees on sites to which this guidance note relates range from mature plantations to immature or poor plantations grown in conditions not conducive to good timber development. Normal forestry practice after tree felling is to remove the trees from the site, but to leave the 'lop and top' (branches, needles etc.), whilst keeping streams and buffer areas clear of felled material, in order to provide nutrients for the next tree crop, a reason which does not apply when trees are felled for development.
- 1.4 Currently, removal of trees from some wind farm sites is perceived as problematic by some developers due to several issues including:
- a) access constraints, particularly prior to wind farm infrastructure being developed
 - b) unsuitability of the trees for marketing as timber, the traditional first choice for felled trees
 - c) the contractors involved in such projects possibly lacking experience in exploitation of woodland as timber resource
 - d) time constraints for organising marketing of felled trees
 - e) damage to site in extracting timber from vulnerable sites
 - f) lack of mature biomass markets local to development sites making it difficult for reuse of material for biomass options to be identified
- 1.5 Some developers therefore seek management approaches that allow the felled trees to remain on site. Depending on their proposed use materials produced as a result of development may be defined as waste and waste management licensing requirements may apply. In such situations SEPA's "Management of forestry waste" should be referred to.
- 1.6 Our preference is for forest materials to be used for economic and environmental benefits and not to be disposed of as waste. We consider that best practice for dealing with forest

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materials at development sites is for the following supporting key information to be provided, prior to determination of the planning application, Section 36 application or similar consent. It would be best practice to submit this information in a stand-alone section of an Environmental Statement (ES) where a development requires Environmental Impact Assessment (EIA) or as a supporting plan where no EIA is required.

- a) professional forester input to quantify the likely volumes, markets and economic uses of trees to be exported from the site
- b) developer commitment to employ a professional forester (preferably the same one used to provide advice on the ES submission) to implement and maximise the removal of timber and forest residue on site.
- c) quantify the likely volumes of material for which no economic off-site use can be found
- d) identify if there are valid uses on site for material for which no economic off-site use can be found, using professional ecological consultant input where ecological uses are proposed, and using professional water quality expertise when material is to be retained on site. Boundaries of areas proposed for such uses should be set out on plans, and information on depth and size of material to be used for such uses provided within the ES or supporting documentation where EIA does not apply.

1.7 The agencies will use the guidance below in reviewing the information identified above, and if satisfied will request the determining authority to require the development to be carried out in accordance with the document containing the above information. The agencies will take a proportionate approach to consideration of specific cases.

1.8 If, post-consent, further investigations by the professional felling contractor show that there is a use for additional material, off-site or on-site, that has not been identified within the ES or supporting plan where no EIA is required, then the developer should liaise with the planning authority in consultation with the agencies to agree a variation. It would be expected that uses for such material would be investigated, discussed and agreed with the determining authority and consultees prior to determination. Nevertheless it is recognised that a valid alternative use might emerge later. This recognition should not be taken as an invitation to revisit approaches already agreed pre-determination but should instead genuinely reflect some new opportunity.

2. Trees as a Resource

2.1 In the context of waste minimisation, all trees to be felled to support development such as wind farms should be considered as a resource.

2.2 As a general rule, any timber of diameter greater than 7 cm, bark included, should be considered as merchantable timber, and hence will be harvested and extracted from the site for uses such as sawn timber, or small round wood (pulp, chipboard, biomass and firewood). Evidence should be presented in the ES (or supporting information where no ES is required) of the measures taken to establish that markets for all forestry material, including tree material of less than 7 cm diameter, have been explored, utilising professional forestry expertise.

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- 2.3 Where there are difficulties in transportation or concerns regarding market saturation, consideration should be given to phased felling, storage of felled trees on site or initial keyholing to facilitate construction (i.e. where localised areas of trees around turbine locations are removed to facilitate construction progress across a site). This will allow a steady delivery to market once local road infrastructure has been improved (as is often required to facilitate wind farm development). The impacts of options for timber extraction and reuse on other interests (e.g. protected species, sensitive habitats, water courses, archaeology, landscape and visual) should also be considered to ensure that addressing one issue does not create another. Appropriate advice should be sought from the relevant consultants and organisations.
- 2.4 Site conditions may make it less straightforward to remove trees without causing excessive damage to the soil and compromising the ability of the habitat to recover. Such sites will normally be very wet sites where there is good potential to restore a bog habitat; trees growing on such sites will normally be of poor quality with stunted growth. The advice of a professional forester should be sought about the options for harvesting timber in such conditions whilst avoiding excessive ground and other environmental disturbance, and a case made out within the ES or supporting documentation where EIA is not required.

3. Use of forestry material from felled trees on site

- 3.1 In the restoration of peat bogs and/or wetland habitats, the felling of trees is necessary to reduce their drying influence. This will normally be combined with hydrological restoration such as the damming of drains. Some tree materials may also be used to support this habitat restoration, for example the inclusion of small amounts of brash in re-wetted ditches to provide a scaffold for *Sphagnum* growth. However, the amount of tree material that can be used in such a manner on a site must be fit for purpose and must not result in harm to the environment through, for example, nutrient enrichment.
- 3.2 The addition of a very limited amount of mulched tree material over existing bare areas and in furrows to help retain moisture in the upper layer of soil (which would encourage the establishment of appropriate bog/wetland plant species) may be acceptable at some sites. However this is only effective when used in combination with other measures (such as damming) and is acceptable only where the advice in Section 4 below is addressed. Similarly, limited amount of mulched tree material may be suitable to insulate against frost heave and reduce surface erosion from rain or surface water flows and wind. In each case, it will be essential for the management plan to specify a) the depth and b) the nature of material intended for such use, as well as c) boundaries of proposed locations, supported by d) information on current condition which requires the deployment of such material.
- 3.3 The advice below is designed to assist developers present sufficient evidence in support of a proposal to use forestry materials for ecological benefit, or to demonstrate why there may be a need for material to remain on site for other essential purposes (such as for use in brash mats or as a base material for floating road construction).
- 3.4 Not all potential uses can be anticipated. Other uses will be considered on a site by site basis, and it is advised that these are discussed with the determining authority and consultees prior to detailed proposals being worked up. Useful tests to consider are: Can it be demonstrated that if forestry material were not to be used for the purpose intended, then other material would have to be imported to the site to achieve that purpose? Is the use

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environmentally acceptable and sustainable for the long term? The case for such an alternative potential use needs to be provided in the ES or supporting document.

3.5. Treatment of land for ecological improvement using forestry material

3.5.1 Where forestry material is intended to be used to support restoration, then a site-specific, long-term management plan for the area to receive the material must be produced. This must demonstrate how the habitat being restored will directly benefit long term from the use of this material and how the area will be monitored and managed accordingly. This plan is best incorporated within either a Habitat Management Plan or a site-specific ecological management plan. A planning condition or legal agreement with relevant landowners requiring the implementation of the management plan may be requested to be imposed by the determining authority.

3.5.2 As part of the EIA process or pre-application engagement, there should be early engagement with SEPA and SNH to confirm that the restoration targets are appropriate and achievable in conjunction with the application of forest material to land. 'Appropriate' means of genuine ecological value e.g. maximising biodiversity value whilst protecting soils and carbon stores. If incorrect assumptions are made, then the planning process may be delayed due to proposals for use of forestry material being rejected.

4. Categories and uses of forest materials

4.1 Chipped material (mulch)

4.1.1 As a rule of thumb, it is considered that:

- a) Where existing ground cover vegetation is present in the form of the target vegetation (i.e. the vegetation type that restoration is aiming to achieve), the spreading of chipped material is not acceptable.
- b) Where existing ground cover vegetation is present in a form other than the target vegetation type, we expect the applicant to justify how the application of forest material to these areas would facilitate or improve the restoration of the site as a whole.
- c) Where there is no existing vegetation or only sparse ground cover, it may be appropriate to apply mulch as described below, along with other measures, to help create the physical requirements to encourage the regeneration of blanket bog (or wetland) habitats. Such mulch should be:
 - i) spread in a thin layer to allow the surface of the mulch layer to retain moisture in the surface of the soil (where appropriate for the restoration habitat type being aimed for), but avoiding smothering of the *in situ* seed bank. For example, the mulch layer should not form a dense or continuous cover that would prevent light from reaching the soil layer (see following section).
 - ii) of random particle size between 5 and 30 cm length. The decomposition rate of forest residue increases when material is reduced in size. This brings with it an increased risk of nutrient leaching and therefore potential problems with reaching the target restoration habitat, as well as potential pollution of watercourses.

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iii) spread so as to allow a minimum of 25% light penetration to the ground surface (i.e. avoiding a dense or complete cover of mulch). This allows regeneration from the seeds present in the soil and prevents smothering of any existing plants.

4.2 Brash (e.g. branches, 'lop and top')

4.2.1 Depending upon site conditions, brash may be an essential element of an effective harvesting system. Where brash mats are proposed, this should be justified within the management plan along with details of site conditions, sensitive receptors and any proposed mitigation. It is sometimes preferable for brash mats to be removed from the site as, for example, a brash layer could allow undesirable seedling regeneration. Where brash mats are to remain on site, the management plan will need to identify active management measures to remove seedlings and prevent the restored area from reverting to a non-target habitat. It is accepted that a small amount of brash will become embedded in the ground through normal vehicle movements during forestry activities. It is not expected that such embedded material will be removed, as this would cause excessive ground disruption.

4.3 Tree stumps

4.3.1 In general, it is recommended that trees are harvested as close to the ground as possible and that stumps are left in situ. There may be situations where it can be justified that the movement or treatment of stumps can be used to improve the restoration of the site. In such situations such movement or treatment may be supported (e.g. it may be necessary to grind stumps down to ground level to aid management towards the restoration of the site). In certain circumstances there are significant risks to the environment, and thus to sustainable forest management, caused by stump and root harvesting and more information is available in the Forestry Commission Research Note '[Environmental effects of stump and root harvesting](#)'.

4.4 Furrows and Drains

4.4.1 Blocking of linear features (deep furrows and drains) may be required to restore the water table close to the surface of the soil. The requirement for raising of the water table will be determined by the vegetation restoration aims of the site-specific ecological management plan. In some situations it may be appropriate to use forest material in addition to traditional drain blocking methods (such as peat dams or pile dams) to increase the speed with which active peat forming species are able to colonise these linear features. Where the use of forestry material in deep furrows or drainage ditches is justified, the use of larger material (not brash or fine chipped material) to provide long term physical support to peat forming plants and to minimise the risk of nutrient leaching into the water environment may be appropriate. However it is important that this occurs at the same time as damming, and that consideration is given to other sensitivities at each site, to ensure that the use of brash to fill drains does not cause other issues (e.g. nutrient enrichment, creating nest sites for raptors).

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5. Further research

- 5.1 SEPA, SNH and FCS are supportive of new experimental techniques, and would be pleased to work with the industry in designing long term monitoring for developers to implement on sites where uses of forestry material have been agreed.
- 5.2 We also encourage individual developers to provide us with details of their site specific draft felling proposals and, where materials are to be used on site, site-specific ecological management plan or Habitat Management Plan for the area to receive this material, at as early a stage in the planning process as possible, so that an agreed approach can be identified prior to submission. Some site assessment and investigations are likely to be required to inform such proposals and plans.

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