

Developments on Peat and Off-Site Uses of Waste Peat

Background

Peat is a body of sedimentary material, usually dark brown or black in colour, comprising the partially decomposed remains of plants and organic matter that is preserved in anaerobic conditions within an essentially waterlogged environment.

There are two principal types of peat:

1. The upper (acrotelm) layer which is quite fibrous and contains plant roots etc. Acrotelmic peat is relatively dry and has some tensile strength.
2. The lower (catotelm) layers are highly amorphous, with very high water content and tend to have very low tensile strength. The structure of catotelmic peat tends to disrupt completely on excavation and handling.

Peatlands hold large stocks of poorly protected carbon and excavation of peat will result in large carbon losses from the excavated peat and also the areas affected by drainage. Minimising peat excavation will reduce these potential carbon losses and consequently reduce the carbon payback period associated with developments on peat¹.

In the majority of cases excavated peat will be regarded as waste in law and regulatory controls will apply to its storage, treatment, recovery and/or disposal.



SEPA has a supportive, considered and consistent approach on waste management issues and endeavours to communicate these to operators at the earliest possible stage of any development proposal. The aim of this guidance is to set out the hierarchy of management options in relation to excavated peat.

The recommended management options for developments on peat are:

Peat Management Hierarchy	Use	Restrictions/ limitations
Prevent Creation of Waste Peat	Minimise peat excavation and disturbance to prevent the unnecessary production of waste peat using a Peat Management Plan.	
Use on site Use off-site for peatland restoration	Use of peat on-site in construction or reinstatement e.g. restoration of hardstanding areas, borrow pits, road verges, peatland restoration etc. or off-site to restore peatland areas.	Depends on the physical nature of the peat. Use of unsuitable material and/or excessive quantities (i.e. more than needed) will be regarded as disposal and will require an environmental authorisation. Off-site use will require an environmental authorisation.

¹ Further guidance on the carbon impacts associated with developments on peat is being developed by SEPA. Scottish Government Guidance is available at <http://www.scotland.gov.uk/Publications/2008/06/25114657/0>

Recycling/Recovery	Where peat cannot be used on site or off site for peatland restoration it may be spread on land for agricultural benefit, recycled through blending with other materials to form a soil substitute or used in other relevant works.	Will require a waste management licence or registration as an exempt activity and compliance with the legal requirements.
Disposal	Only after all other options have been explored and discounted.	Liquid peat cannot be landfilled without pre-treatment.

Waste from developments on peatland

Waste peat is likely to be generated by construction developments on peatland and the following guidance is intended to help ensure a consistent approach to the management of such material.

Developers are strongly advised to approach their local SEPA office at the earliest appropriate time in the planning stages of the development to ensure that all the activities that may have waste management implications are clearly identified. This will allow SEPA to identify any regulatory implications of the proposed activities which will consequently allow the developer and their contractors to tailor their planning and designs to accommodate any regulatory requirements.

Is the excavated peat waste?

In SEPA's opinion excavated peat is likely to be regarded as waste.

Excavated peat will be waste if it is discarded or the holder intends to or is required to discard it. Unless the waste peat is certain to be used for construction purposes in its natural state on the site from where it is excavated, it will be subject to regulatory control.

However decisions on whether a particular substance, object or material is waste must be considered on a case by case basis; the answer will depend on the circumstances of the proposed development including the nature of the materials and the ways in which they are proposed to be treated, used and/or disposed of. Further guidance on the definition of waste process can be found in the SEPA guidance documents 'Is it Waste?'² and 'The supplementary guidance to "Is it waste"'³ which are available for download from www.sepa.org.uk.

Prevention

The best management option for waste peat is to prevent its production.

This can be done through the use of forward planning, comprehensive on-site investigations and the use of Peat Management Plans or site waste management plans (SWMP)⁴ and assessment of alternative construction methods e.g. piling. The early considered use of these techniques will allow developers to prevent/minimise the production of waste peat (and other wastes) associated with the development.

On-site use

Developers should prioritise the use of excavated peat on-site in the first instance. These activities should minimise carbon loss and maximise ecological benefit. There are a number of on-site activities which may involve the use of peat in construction or reinstatement e.g. restoration of hardstanding areas, borrow pits, road verges, peatland restoration etc. Any developer wishing to use any excavated peat material on the site should contact their local SEPA office to discuss the proposed activities. In considering any proposed activities involving the use of excavated peat on-site SEPA will assess whether the activity involves recovery or disposal of waste and advise on the appropriate regulatory requirements.

It is important to note that the potential use of peat, especially catotelmic peat, for construction or restoration is limited due to its physical characteristics. Generally speaking, acrotelmic peat may be suitable for use in various activities associated with the development that produced it, whereas there are very few opportunities to use catotelmic peat (generally peat below approximately 1m depth) in its excavated state due to its physical characteristics.

The fact that excavated peat can potentially be used within the site boundary is not sufficient in itself to say that it is not subject to regulatory control. Only where certain specific criteria are met will the proposed activity not be subject to waste regulatory controls. SEPA will require sufficient evidence from the developer

² http://www.sepa.org.uk/media/154077/is_it_waste.pdf

³ http://www.sepa.org.uk/media/154090/isitwaste_supplementary.pdf

⁴ http://www.netregs.gov.uk/media/1114/swmp_simple_guide.pdf

to prove the use is genuine and not a waste disposal operation, e.g. evidence on the suitability of the peat and evidence that the quantity to be used matches, not exceeds, the requirement for the proposed use.

Catotelmic peat generally has a high water content, approximately 90%, and very low tensile strength. Therefore in most cases, excavated catotelmic peat is unlikely to be suitable for any use on a construction site and will need to be taken off-site for recovery or disposal. However, each case must be determined on its merits.

Off site options: Uses of peat & recycling/recovery/treatment

After on-site uses have been exhausted, excavated waste peat may be suitable for use off-site. SEPA will expect intended off-site uses of excavated peat to be identified in the peat management plan, including estimated volumes for each use, destination, final intended outcome and justification of suitability of the peat material and the need for the specified quantities of peat material. The use of waste peat off-site, including for peatland restoration, will require the appropriate level of environmental authorisation.

SEPA's preferred off-site use of excavated peat is for peatland restoration projects. Such uses will require an appropriate environmental authorisation. In order to determine whether there is a risk of environmental harm a site by site assessment of each restoration project will be made. The assessment will determine whether the type of peat is suitable for the purpose, that the amounts proposed do not exceed the amounts needed to complete the project and that the management methods are suitable.

There are a number of uses of excavated waste peat that are supported by the waste regulations. Waste peat will be controlled under the Environmental Protection Act 1990 and the Waste Management Licensing (Scotland) Regulations 2011 (the WMLR). Some activities involving the use of waste are exempt from the requirement for a waste management licence if they meet the requirements detailed in Regulation 17 of the WMLR and are registered with SEPA. The type and quantity of waste must be managed without endangering human health and without using processes and methods which could harm the environment. Although an activity may be registered with SEPA as exempt from waste management licensing, it is still subject to statutory controls to prevent environmental pollution and harm to human health. Full details can be found on the SEPA website⁵.

Exemptions from waste management licensing only apply to particular waste streams used under defined conditions. Wastes are listed according to their code in the European Waste Catalogue (EWC). This list does not contain a specific entry for peat so, for the purpose of the WMLR, SEPA considers waste peat to fall under the EWC code 17 05 04 which relates to construction and demolition wastes- soil, stones and dredging spoil- soil and stones not containing dangerous substances.

The table below outlines the main exempt activities that allow the use of waste peat falling under the EWC code 17 05 04 and the main restrictions applicable to each activity.

WMLR Exemption Paragraph	Activity	Restrictions
7(2)	Spreading on land for ecological improvement	Only on non-agricultural land such as landscaped areas, verges, recreation grounds
9(1)(b)	Spreading on land subject to man-made development including quarry restoration	There must be benefit to agriculture or ecological improvement. Quantities used should not exceed amounts required to deliver agricultural benefit or ecological improvement (up to a maximum 2m depth of waste).
13	Manufacture of soil substitutes using wastes from construction, demolition, tunnelling or excavation. Treatment of waste soil to be spread under a para 7 or 9.	Total amount treated per day must not exceed 100 tonnes. The use of manufactured soils will require a paragraph 7 or 9 exemption to be registered with SEPA.
19	Use of waste for relevant work (including	Use must be genuine, e.g. peat must suitable

⁵ <http://www.sepa.org.uk/regulations/waste/activities-exempt-from-waste-management-licensing/>
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	construction, improvement or maintenance of roads or recreational facilities)	for use and quantities used justified
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All of the above activities must be registered with SEPA at least 21 days before the activity begins. Registrations relating to waste peat will only be effected if the physical nature of the peat is suitable for that use and the use is lawful, including a legitimate need for the activity and the use of the appropriate tonnage of peat to deliver benefit to agriculture or ecological improvement.

Other uses of waste peat may require a waste management licence. Proposals to carry out any off site use/recycling/recovery/treatment activity should be discussed with the local SEPA team prior to the activity commencing, to ensure that any relevant authorisations are in place before the activity commences.

Storage

Well managed temporary storage of excavated waste peat at the excavation site will not require authorisation from SEPA. However, care must be taken to ensure that peat storage does not cause environmental pollution. For example, highly organic materials such as peat can have a devastating impact on watercourses if they wash off from storage areas. It is also important to use the peat as soon as possible after excavation (to minimise the exposure of the peat to the air) and to maintain moisture conditions in the peat to keep carbon losses to a minimum. If the excavated peat is stockpiled with no certainty of use or becomes unsuitable for use for any reason it will be classed as waste and an authorisation will be required.

The storage of waste peat off-site will require a waste management licence unless it is an exempt activity.

If waste peat is stored on or off site, prior to treatment or recovery, for more than three years (or where storage prior to disposal is for more than one year) then this is likely to constitute a landfill and a Pollution Prevention and Control permit will be required.

Disposal

Disposal of peat, particularly catotelmic peat, can lead to a number of issues due to its very low tensile strength and high water content e.g.

- It is likely to have a very low load bearing capacity, making it a hazard to people or animals walking on it;
- Slides or movement are highly likely and can be caused by heavy rainfall;
- Potential for contaminated run-off.

Peat arising and requiring management as a waste within a development will require characterisation and consideration of its condition upon excavation. The propensity of the waste peat to flow will be a key characteristic in determining whether it can be landfilled i.e. if it is classified as a liquid it cannot be landfilled without some form of pre-treatment.

Where landfill on-site is identified as the preferred option for the disposal of waste peat it will be necessary to obtain a Pollution Prevention and Control permit⁶ from SEPA prior to the commencement of any landfill operations on-site. In such cases the operator should contact their local SEPA office to discuss their proposals.



This guidance applies only in Scotland. The terms of this guidance may be subject to periodic review and may be changed or withdrawn in light of technological developments, regulatory or legislative changes, future government guidance or experience of its use. SEPA reserves its discretion to depart from the position outlined in this guidance and to take appropriate action to avoid any risk of pollution or harm to human health or the environment.⁷

Further information

SEPA, Scottish Natural Heritage, Forestry Commission Scotland and the onshore wind industry have worked together to produce [Good practice during wind farm construction](#)⁸. This document provides guidance to

⁶ Detailed information on landfill and PPC permitting can be found at http://www.sepa.org.uk/waste/waste_regulation/landfill.aspx

⁷ <http://www.sepa.org.uk/media/219244/enforcement-policy.pdf>

⁸ <http://www.snh.gov.uk/docs/A1168678.pdf>

prospective windfarm operators, planning authorities and other interested parties on pollution prevention, nature conservation, landscape, hydrological and related issues. Also, SEPA and the onshore wind industry have worked together to produce [Guidance on the assessment of peat volumes, reuse of excavated peat and minimisation of waste](#)⁹. Although aimed at windfarms, the principles in both these documents apply to all developments on peat.

⁹ <https://www.scottishrenewables.com/publications/guidance-assessment-peat-volumes-reuse-excavated/>
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