

Development on Peatland Guidance – Waste

Objective

This document is written as internal guidance for SEPA staff engaged in the consideration of planning applications involving developments on peat or in regulating on-site activities involving peat. The aim is to provide you with a clear understanding of the waste issues for developments on peatlands, such as windfarms or hydro schemes and to ensure consistency in the application of SEPA's regulatory position on this matter, which can be found here - http://www.sepa.org.uk/waste/waste_regulation/idoc.ashx?docid=0999acc5-4c77-4e75-a6fc-0bf582e6d115&version=-1 and is referred to in this document as the 'peat position statement'.

This document is primarily concerned with the waste aspects of developments on peat. Separate guidance concerning other impacts including carbon impacts of such developments will be issued in due course through the Renewable Energy Task Group (RETG) – contact: [DL-Renewable Energy Task Team](#).

This guidance will give advice on the hierarchy of options available to developers for the management of waste peat i.e. minimisation, re-use, recycling, recovery and disposal. This is a particularly problematic area as unlike other materials involved in construction projects, the waste management options in terms of recycling a recovery for waste peat are currently fairly limited. However, this is a fast developing area with new options under investigation and development. SEPA will maintain close links with a number of industry groups involved in this area and this guidance will be updated when SEPA become aware of such methods.

Issues

Peat is particularly sensitive material that varies in physical characteristics depending on a number of factors including management, location, climate and land forms. Peatlands will often support many habitats and species of flora and fauna that are unique to Scotland and will have national and international significance in terms of natural heritage. Properly managed peat will act as a carbon-sink, sequestering carbon annually. This important climate change function will be lost if the peat is disturbed or inappropriately managed. Peat is also very reactive to changes in drainage and will often lose its physical structure and stability when it is excavated making it unsuitable for most uses. Taken as a whole these considerations require that the primary consideration for construction activities on peat is that as far as is reasonably practical the disturbance and disruption is kept to an absolute minimum.

Waste Framework

Article 4 of the Revised Waste Framework Directive - which will be transposed into national legislation by December 2010 - introduces the waste hierarchy which is to be applied 'as a priority order in waste prevention and management legislation and policy'.

The waste hierarchy is as follows;

- a) Prevention;
- b) Preparing for re-use;
- c) Recycling;
- d) Other recovery e.g. energy recovery;
- e) Disposal;

'in order to take into account the general environmental protection principles of precaution and sustainability, technical feasibility and economic viability, protection of resources as well as the overall environmental, human health, economic and social impacts.'

National Legislation

The main legislation relevant to waste management activities involving waste peat is:

- Environmental Protection Act 1990 (as amended)
- Landfill (Scotland) Regulations 2003 (as amended)
- The Waste Management Licensing (Scotland) Regulations 1994 (as amended)

Is it Waste?

Guidance on making a determination as to whether excavated peat is waste or not can be found in SEPA's existing general guidance documents – 'Is it Waste?' and the associated supplementary guidance (http://stir-ser-net01/cms/waste_policy/index.asp?id=5517). SEPA has also issued the peat position statement which contains guidance on determining whether excavated peat is waste.

Where peat does not have a genuine, identified and legitimate re-use is it likely that the peat will be classified as a waste material

As identified in the regulatory position statement there are two principle types of peat – acrotelmic (upper layer) and catotelmic (lower layer). It is important to note that the re-use potential of peat, especially catotelmic peat is limited due to its physical characteristics.

Generally speaking, the acrotelmic peat may be suitable for re-use in various activities associated with the development that produced it, whereas the catotelmic peat (i.e. peat below approximately 1m depth) has very few re-use opportunities in its excavated state due to its physical characteristics.

Catotelmic peat generally has high water content, approximately 90%, and very low tensile strength. Therefore, in most cases, catotelmic peat is likely to be a waste as will be unlikely to be suitable for any legitimate use. However, as noted in the guidance mentioned above, each case must be determined on its individual circumstances.

Given these facts, it is extremely important to ensure such activities are assessed at the earliest possible opportunity – normally the planning application stage. Therefore it is essential that all planning applications involving developments on peat are assessed by waste officers in the local team in conjunction with this guidance and SEPA's regulatory position i.e. the peat position statement.

Planning

SEPA's role in the modernised planning system is to help enable good development in the right place and of the right design and quality, having regards to national planning policy so that the environment is suitably protected and enhanced.

Normally, the first time SEPA will become aware of proposals for construction developments on peatland will be at the planning application stage. We encourage pre-application engagement and are a statutory consultee where Environmental Impact Assessment (EIA) is required. In order for the reformed planning system to work effectively, it is important for applicants to provide key information to speed the planning process. The following information is essential as a minimum to allow SEPA to adequately consider proposals based on peatland:

- Details of all construction developments locations and associated infrastructure along with options that have been considered to minimise the amount of peat excavated. Key to this will be detailed peat profiling to full depth of peat including depths, cross sections and physical properties. Currently, many applications contain no peat profiling or very limited survey information e.g. limited depth information due to the use of short probes resulting in large numbers of samples being identified as '>' the probe length rather than the depth being correctly identified.
- Quantification of the amount of peat likely to be excavated at each location and the proposed uses/destination for all the excavated peat including details of construction methods. Information should be provided on any proposed re-use activities to allow SEPA to determine if these should be classified as waste activities and what regulatory requirements may be associated with the proposals e.g. exemptions, permits etc.
- Details of all proposed waste activities ideally contained in a submitted Site Waste Management Plans (SWMP). It should be noted that SWMP's are not a legislative requirement in Scotland and cannot be required from developers; however staff should stress during any consultations the benefits of this type of document.

It is important to be aware of the terminology used in planning applications relating to developments on peat. It is common to refer to 'surplus', 'excess' or 'unsuitable' peat rather than identify it as a waste. In most instances, the use of these terms is a good indicator that the peat is a waste although this needs to be confirmed through full assessment of the specific application using the 'is it Waste?' guidance identified earlier in this document.

Planning Assessment

Waste management issues at sites located on peatland should be examined and addressed in the following order:

Prevention

Preventing the disturbance and excavation of peat as a result of on-site construction activities may be managed in a number of ways including-

- Look to siting developments on areas where there is little or no peat (this has other significant advantages as far as constructing foundations, roads, avoidance of landslips). There needs to be clear justification why this is not possible.
- Ensure that comprehensive site surveys are carried out (Scottish Government is preparing guidance on this, but in the interim use BS 5930 "the code of practice for site investigations").

- If peat is present at the development site – use ‘micrositing’ (a commonly used term for examining the site area and positioning structures and roads etc to avoid areas of peat, or into areas where peat depth is minimal).
- Employ construction techniques which minimise peat disturbance or removal e.g. piling techniques for turbine bases, floating roads etc.

Re-use

Once the amount of peat that must be excavated to allow construction to proceed has been minimised, the next step will be to identify any re-use (and associated preparation for re-use) for the excavated peat. SEPA should be consulted on any proposed re-use activities to determine whether these should be classified as waste activities and what regulatory requirements are associated with the proposals e.g. exemptions, permits etc.

The primary re-use of peat tends to be for restoration work around constructed structures, hardstanding areas and roads. However, this restoration appears to be limited to the re-use of the upper layer of the excavated peat, often referred to as peat turves.

The use of peat turves (and suitable excavated peat i.e. most acrotelmic peat) for finishing track edges, turbine bases and other disturbance from infrastructure will generally not fall under waste management controls as the peat turves will not be classified as waste in these circumstances. However, if there are any concerns over the quantities of peat, the areas involved for such re-use or the proposed re-use activity e.g. disposal described in some other way, then further details should be sought at the planning application stage.

In certain circumstances, it may be the case that particular on-site reuse and recovery activities require a greater level of management and control and in these circumstances a paragraph 9 exemption may be considered the most appropriate means of securing this. Where in any doubt about whether benefit or ecological improvement associated with the re-use of **waste peat** has been adequately demonstrated, the advice of the Waste Unit within National Operations should be sought before requiring the use of a paragraph 9 exemption. Examples of where such an approach may be taken include;

- Waste peat may be used to block drainage ditches as part of any restoration proposals for raising water tables to restore blanket or raised bog. This must be in accordance with existing guidance and advice from SNH. This is likely to require additional measures such as dams to prevent erosion of the peat material. It is important to note that not all excavated peat will be suitable for this use especially if it has high water content and is highly amorphous. It will be very difficult to transport this material. More fibrous peat is suitable for ditch blocking and peat turves should be used to bind the surface.
- Waste peat may be suitable for use to cover the base of borrow pits once quarrying has ceased. The developer must demonstrate that the use of waste peat will have an ecological benefit e.g. that the aim is to create or restore a habitat and show that it will not cause risk of harm to human health. A waste exemption may be applicable but each proposal has to be assessed individually, taking into account the type of waste peat being used and its suitability for that use. Other factors to be considered should include the

depth of waste peat proposed and the stability and safety of the restored area.

Waste peat should not be re-used for the following purposes as they are not legitimate re-use activities;

- To create unjustified or excessive 'shoulders' on floating road verges or cut tracks. Peat should only be used in these instances to finish off the edges of tracks where construction has damaged the surface and peat turves should be used where possible. There is no ecological benefit to be gained from using excavated waste peat to create shoulders on floating roads or cut tracks. The material will be unstable and at increased risk of drying out or causing runoff problems. It also smothers existing vegetation and prevents natural re-growth of bog vegetation adjacent to tracks.
- By spreading across existing vegetation or recently felled areas of woodland (including conifer plantation), or on land adjacent to tracks. There is no ecological benefit to be gained from spreading peat across existing peatland for the same reasons as those outlined above.
- To fill borrow pits (unless carried out under a PPC permit, see disposal section below for further information).
- Long term storage of waste peat. The material will be unstable and at risk of drying out or causing runoff problems. Storing waste peat on a site will also damage existing vegetation and prevent natural re-growth of peatland (or other) habitat. Storage of waste peat whether in the short, medium or long term for future legitimate re-use will require a WML as a minimum and potentially a PPC Permit.

Where there is no justified requirement or demonstrated need for peat to be re-used or where the peat is unsuitable for the intended use it is likely to be classified as a waste and any activity involving it classed as a disposal activity.

Treatment prior to re-use

Beyond re-use of waste peat, there may be options for recovery or treatment of the waste peat. Treatment activities conducted on the waste peat e.g. by dewatering to reduce volume and increase mechanical characteristics or handling properties are potentially licensable by SEPA under waste management licensing legislation or an exemption.

Currently there are limited options available for treatment of waste peat prior to re-use and these consist of:

- Horticultural use – peat can be used as a fertiliser. However, to make the peat suitable for this use normally requires drying/dewatering prior to the peat being milled. As the peat requires treatment to make it fit for purpose it will be classed as a waste material.
- Use of peat as fuel - either commercially or domestically. Generally speaking this option is limited to peat turves, which are normally fully re-used using the techniques described above.
- Stabilisation of waste peat – involves the mixing of waste peat with a slag/cement binder to produce a concrete like material for construction

purposes. There are a number of environmental disadvantages to this option e.g. leaching potential.

- Dewatering – can be carried out by a number of different processes i.e. mechanical filtration, pressure filtration, thermal processes etc. At present this option is not considered viable by developers due the increased environmental risks and costs associated with dewatering processes e.g. requirement for additional plant and site infrastructure, increased risk of pollution due to use of chemicals, production of additional wastes i.e. supernatant liquor.

In each of the above options the activities would be classed as waste management activities and would require a permit or exemption from SEPA prior to their commencement. It should be noted that this is not an exhaustive list and other technologies and treatment processes are currently under development by a number of industry groups.

Disposal

Where all of the above options are exhausted, the only remaining option may be disposal. Any intention by a developer to dispose of waste peat e.g. into an on-site borrow-pit, will require a PPC Landfill Permit. **It is common in planning applications for developers to refer to this option as ‘restoration’ of borrow pits.**

Given the typical character of waste peat (mainly catotelmic in nature) and its low tensile strength and high water content, if the waste peat is determined to be a ‘liquid waste’ then it cannot legally be landfilled and SEPA could not issue a PPC Permit.

Another disposal option available to developers is disposal of waste peat at a commercial, permitted landfill off-site. However, there are a number of financial disincentives associated with this alternative, i.e. landfill tax, transport costs etc. Also, the issue identified above regarding liquid waste is not negated by this option.

As such, developments on peatland should therefore seek to minimise waste production since waste recovery options are limited and waste disposal options both on and, off-site may not be legally possible given their potential for adverse effects on the environment and/or human health.

Transitional Arrangements

There are a number of scenarios that can be envisaged for cases which are already in the planning system (transitional cases) for which we must have clear, developed advice and a consistent approach. The scenarios are:

1. Developments that have gained planning consent and have been completed and are operational.
2. Developments that have gained planning consent and are under construction.
3. Developments that have gained planning consent but construction has yet to commence.
4. Developments that have submitted an application for planning consent but no determination has been made.
5. Proposed developments that have not yet submitted an application for planning consent (but may be in pre-application discussions with planning authorities).

Looking at each of these scenarios in turn:

1. Existing site - Any existing developments should not be pursued for failure to comply with the developments on peat position statement. However any expansion or further works undertaken in peat at these developments would be expected to be fully compliant with the principles set out in the peat position statement and this guidance.
2. Site currently under construction (works started) – SEPA should allow the development to proceed as per the planning consent but meet with the developer or their contractors, at the earliest opportunity, to see what can be done to bring the construction procedures into line with the peat position statement and this guidance where possible. Due to the site specific aspects of this scenario each case would have to be determined on an individual basis bearing in mind the principles set out in the position and this guidance.
3. Planning granted but construction not started – SEPA should meet the developer at the earliest opportunity and make them aware of the peat position statement and assess any waste management impacts it may have on their proposed development. SEPA would expect that the developer fully comply with the principles of the peat position statement and this guidance during construction.
4. Planning application awaiting determination – SEPA should ensure that comments are raised during the consultation phase with planning authorities, highlighting the peat position statement. SEPA would expect that the developer fully comply with the principles of the peat position statement and this guidance during construction.
5. Proposed developments at pre-application stage – SEPA should ensure that local planners are aware of the peat position statement regarding developments on peat in relation to waste management. Any developers in pre-application discussions should be made aware of the peat position statement and advised to contact SEPA to discuss any possible waste issues. SEPA would expect that the developer fully comply with the principles of the peat position statement and this guidance during construction.