

SCOTTISH ENVIRONMENT PROTECTION AGENCY	Identifier: LUPS-GU4
Land Use Planning System SEPA Guidance Note 4	Page no: 1 of 28
	Issue No: 9
	Issue date: 11/09/2017
Planning guidance on on-shore windfarm developments	

1. Purpose and scope

- 1.1 SEPA engages with the land use planning system to enable good development and protect the environment. The purpose of this note is to provide guidance on the approach that we should take when dealing with onshore windfarms through development plan and development management consultations. The guidance in relation to peat and wetlands is applicable to all *development*. This guidance demonstrates commitment to our public body duties under the Climate Change (Scotland) Act 2009 by providing clear guidance for renewable energy development within Scotland.
- 1.2 SEPA, SNH, FCS and the windfarm industry have worked together to produce [Good practice during wind farm construction](#). The document provides guidance to prospective windfarm operators, planning authorities and other interested parties on pollution prevention, nature conservation, landscape, hydrological and related issues. SEPA and the windfarm industry have worked together to produce [Guidance on the assessment of peat volumes, reuse of excavated peat and minimisation of waste](#).

2. SEPA's role in windfarm developments and planning

- 2.1 We are consulted on windfarm developments in accordance with LUPS-GU9 [Advice on how and when to consult SEPA](#). We are also consulted by planning authorities on development plans which contain policies and supplementary guidance on windfarms.
- 2.2 For windfarms which fall below our 10MW threshold for consultation and are not subject to Environmental Impact Assessment (EIA), planning authorities and developers will be encouraged to refer to our [Standing advice for planning authorities on small scale local developments](#).
- 2.3 The Scottish Government will consult us on proposals which will generate 50 MW or more under Section 36 of the Electricity Act 1989. In such cases we should respond directly to the Scottish Government but copy the response to the appropriate planning authority for information purposes. For the avoidance of doubt planning applications and applications under the Electricity Act 1989 are both referred to as development management within this guidance note.
- 2.4 An important role within all these consultations is to advise on the environmental acceptability of the proposals in relation to our interests, within a planning context.

3. Development plans and windfarms

- 3.1 Development plans should include a spatial approach for windfarms, in accordance with paragraph 189 of the [SPP](#). This should take the form of both spatial policies and areas of search where relevant. It is important to ensure this issue has been addressed within the Main Issues Report and the Proposed Plan stages. As a key agency we play an important role in preparation of the main issues report and proposed plan, so the need for a policy covering windfarms

SCOTTISH ENVIRONMENT PROTECTION AGENCY	Identifier: LUPS-GU4
Land Use Planning System SEPA Guidance Note 4	Page no: 2 of 28
	Issue No: 9
	Issue date: 11/09/2017
Planning guidance on on-shore windfarm developments	

should be made clear from the outset.

3.2 For strategic development plans we would expect the spatial strategy to highlight where the planning authority wishes to see windfarm developments located. We would also expect the principal topics to include renewable energy issues including windfarm developments. For all local development plans, including those supported by a strategic development plan, we would expect a specific renewable energy policy which assists developers in identifying suitable locations for windfarms. Some planning authorities look to develop specific supplementary guidance on windfarm developments, including areas of search for windfarm locations. Further guidance on areas of search is contained within [LUPS GU11 Guidance on SEPA engagement with the development plan process](#).

3.3 Where planning authorities are developing policy it is important that it includes a presumption against development which will have a significant detrimental impact on sensitive receptors. A policy on windfarms may sit within a general renewable energy policy in the plan or as a stand alone windfarm policy. Whichever is proposed we would seek policies in the Plan to ensure that windfarm proposals are supported where they can demonstrate that they will not have an unacceptable impact on, and gives due regard to:

- carbon balance;
- soils and peatlands;
- the water environment;
- flood risk; and
- forestry and any tree material cleared to facilitate development

Insofar as they relate to our interests. This will give developers clear upfront guidance on issues relevant to us so they can factor this into their site choice. We would also expect that the identification of areas potentially suitable for wind farm development (either in the development plan or supplementary planning guidance) are informed by the above factors where appropriate. Supporting text for the development plan policy could usefully include references to the further guidance listed at the end of this guidance note as it may help developers when developing their windfarm proposals.

3.4 We should also assist planning authorities in producing supplementary guidance on renewables to ensure that our interests, as listed in the above policy, are fully covered. For example "water environment" refers to a number of factors such as wetlands, surface waters and groundwater. Supplementary guidance therefore has an important role in fully addressing these issues in detail.

3.5 Where planning authorities prepare supplementary guidance, it is important that it includes a presumption against development which will have a significant detrimental impact on sensitive receptors listed in the above policy in section 3.3. Supplementary guidance should also highlight the need for the factors listed in Table 1 to be considered and detailed with any application. This will give developers clear upfront guidance on issues relevant to us so they can factor this into their site choice.

SCOTTISH ENVIRONMENT PROTECTION AGENCY	Identifier: LUPS-GU4
Land Use Planning System SEPA Guidance Note 4 Planning guidance on on-shore windfarm developments	Page no: 3 of 28
	Issue No: 9
	Issue date: 11/09/2017

3.6 However, if the planning authority does not propose a renewable energy policy or supplementary guidance which encompasses the above principles, we should make representations (**object**) clearly detailing the reasons for our representations and what modifications are required in order to remove our objection. It is important to set this information out clearly to provide helpful information to the planning authority.

4. Development management and windfarms

4.1 It is most effective if we comment on windfarm proposals early in the planning application process, during pre-application discussions and EIA scoping. This will allow the location and layout of windfarms to be considered when proposals are at their most fluid and changes will result in least expense to the developer.

4.2 A standard template for windfarm screening and scopings is available within the Planning Casework System which should be used and modified to take account of site specific factors and ensure our response is relevant to the site.

4.3 **Screening.** When we receive a screening consultation for a windfarm it is important that we assess the proposed location to identify if we need to advise if, with regards to our interests, the proposal will have significant impact and hence require EIA or if it is sufficient to submit information in support of an application without need for EIA. See Section 8.3 of our LUPS-GU1 [SEPA's role in development management and similar consultations](#) for general advice on screening. Appendix 1 lists the site specific characteristics for windfarms we should consider when determining if EIA is required. For example, if the proposal will be close to a number of watercourses and could result in significant impact on the water environment and peatlands (both factors listed in Appendix 1) it is likely we will advise that the proposal requires EIA. If the proposal is likely to generate significant quantities of displaced peat or tree material, it is likely we will advise that the proposal will require EIA. Where it is determined that EIA is required for reasons not relating to our interests, our statutory consultee responsibilities still require us to have input at later stages. However this is addressed in a proportionate manner within 4.7.

4.4 If we are requested for a view as to whether an EIA is required or not on development below MW, and our advice is that, so far as our interests are considered, an EIA is not required, then we should advise that if we are consulted at a later EIA stage on this development, we will respond with standing advice found within the appendix to [Standing Advice for Small Scale Development](#).

4.5 **Scoping.** Where EIA is required, planning authorities will normally consult us (in order to issue a scoping opinion) on the issues we wish to see addressed within the Environmental Statement (ES). The types of information required in an ES are already laid out in the EIA regulations, but our response should provide greater detail about the environmental considerations to be included. Further guidance on scoping can be found in section 8.4 of our LUPS-GU1 [SEPA's role in development management and similar consultations](#). The windfarm scoping template provides a basis for our scoping response but it should be tailored if there are site specific issues. The standard scoping requests that only key issues

SCOTTISH ENVIRONMENT PROTECTION AGENCY	Identifier: LUPS-GU4
Land Use Planning System SEPA Guidance Note 4	Page no: 4 of 28
	Issue No: 9
	Issue date: 11/09/2017
Planning guidance on on-shore windfarm developments	

are assessed within the ES and that other issues should be scoped out of detailed consideration. For example, we may not know if peat is present on the site and therefore the applicant may be able to scope out peat issues if no peat is present on the site. Where the applicant is able to scope out an issue they need to set out the rationale for this within the ES. Appendix 1 provides a checklist of issues that are detailed within the scoping template.

- 4.6 The standard scoping response stresses the need for detailed assessment of peat arisings as much surplus peat may need to be considered as waste requiring regulatory controls. This should also be raised at any pre-application meetings. Experience indicates that this issue up to now has not been adequately addressed in some windfarm applications. Such assessment of peat arisings will necessitate detailed investigation of peat depth (to full depth, and within afforested areas) on site in accordance with the SEPA [Regulatory Position Statement – Developments on Peat](#) and further detailed guidance on development on peatland as set out in Appendix 1 below. We will also require detail on how the applicant intends to manage the displaced peat. This must be in line with guidance on acceptable ways to manage displaced peat, contained within this guidance and other documents linked to below in section 5.1. A similar emerging issue relates to tree material, and hence this is again dealt with in detail in Appendix 1.
- 4.7 If it has been determined that formal Environmental Impact Assessment is required for a small scale wind turbine development (below 10MW) in relation to issues not within SEPA’s remit, such as landscape, we should respond to this with our standing advice. This can be found within the appendix to [Standing Advice for Small Scale Development](#). Unless the Planning Authority has identified, using our consultation criteria, that there is an issue where our specialist input is required, then our Standing Advice will suffice.
- 4.8 **Application stage.** We should assess applications and their supporting information, including ESs where appropriate, against the factors and issues listed in Appendix 1. We should thereafter follow our procedures set out within LUPS-GU1 [SEPA’s role in development management and similar consultations](#). If we responded that a development below 10MW did not require an ES, in so far as it relates to our remit, we will respond with standing advice, as outlined in paragraph 4.4 and 4.7.

Procedures agreed with the Scottish Government for Section 36 applications

- 4.9 The Scottish Government will consult us on proposals which will generate 50 MW or more under Section 36 of the Electricity Act 1989. Extensions to existing windfarms which will bring its generating capacity to 50 MW or more are also determined under the Electricity Act 1989. Electricity Act permission gives deemed planning permission. In such cases we should respond directly to the Scottish Government but copy the response to the appropriate planning authority for information purposes. The Electricity Act has its own set of EIA Regulations (The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000) (as amended). We have agreed with Scottish Government

SCOTTISH ENVIRONMENT PROTECTION AGENCY	Identifier: LUPS-GU4
Land Use Planning System SEPA Guidance Note 4	Page no: 5 of 28
	Issue No: 9
	Issue date: 11/09/2017
Planning guidance on on-shore windfarm developments	

specific arrangements with regards to processes involving Section 36 windfarm applications and these are outlined in (a) and (b) below.

a. Consentability

4.10 For windfarms which require Section 36 consent, a procedure is currently in place to provide the Scottish Government with an indication of the consentability of a proposal in relation to the potential impact on the water environment. Consentability is described on a scale of 1 to 4:

- Category 1 – proposal accords with WFD objectives - ‘capable’ of being authorised.
- Category 2 – initial advice; proposal is not ‘capable’ of being authorised under CAR but SEPA would be prepared to review that advice if applicant modifies the proposals to accord with WFD objectives.
- Category 3 - initial advice: proposal conflicts with WFD objectives and cannot be modified to allow WFD objectives to be met - not ‘capable’ of being authorised. SEPA however prepared to review its advice if proposal (once applied for under CAR) qualifies for derogation.
- Category 4 - proposal is not ‘capable’ of being authorised under CAR.

b. Carbon assessment verification

4.11 We have also agreed with the Scottish Government that we will audit carbon assessments submitted after 1 April 2011 with Section 36 wind farm applications that utilise the revised version of the carbon calculator as set out on the Scottish Government website at [Wind Farms and Carbon](#). We will not audit carbon assessments based upon the earlier versions of the calculator. The purpose of the audit is to verify the carbon assessment calculations submitted by the applicant. It is not to provide a view on the findings of the assessment and would not therefore lead to an objection.

5. Sources of further guidance

5.1 There is a wide range of policy and guidance on windfarms available:

- a) [Scottish Planning Policy](#), includes a section on renewable energy (paragraphs 182 – 195) including wind farm specific guidance (paragraphs 187 – 191).
- b) PAN 45 Renewable Energy Technologies and Annex 2 Spatial Frameworks and Supplementary Planning Guidance for Wind Farms has been replaced with web based renewables advice which will be regularly updated. The first tranche of this advice includes guidance on [Onshore wind turbines](#) and [Process for preparing spatial frameworks for wind](#).
- c) [Planning Circular 3 – 2011 : The Town and Country Planning \(Environmental Impact Assessment\) \(Scotland\) Regulations 2011](#)
- d) Scottish Government guidance [Wind Farms and Carbon Savings on](#)

SCOTTISH ENVIRONMENT PROTECTION AGENCY	Identifier: LUPS-GU4
<p style="text-align: center;">Land Use Planning System SEPA Guidance Note 4</p> <p>Planning guidance on on-shore windfarm developments</p>	Page no: 6 of 28
	Issue No: 9
	Issue date: 11/09/2017

Peatlands

- e) SEPA [Interim Position Statement on Planning, Energy and Climate Change](#)
- f) SEPA, SNH, FCS and Scottish Renewables [Good Practice During Windfarm Construction](#)
- g) SEPA [Regulatory Position Statement – Developments on Peat](#)
- h) SEPA [Management of Forestry Waste](#) (2013) SEPA Guidance WST-G-027
- i) Scottish Renewables and SEPA (2012) *Guidance on the Assessment of Peat Volumes, Reuse of Excavated Peat and Minimisation of Waste*
www.scottishrenewables.com/publications/guidance-assessment-peat-volumes-reuse-excavated/
- j) SNH, SEPA, Scottish Government and The James Hutton Institute (2011) *Developments on Peatland: Site Surveys and Best Practice* www.scotland.gov.uk/Resource/Doc/917/0120462.pdf
- k) SNH (2010) *Post-construction management of wind farms on clear-felled forestry sites: reducing the collision risk for hen harrier, merlin and short-eared owl from Special Protection Areas*
<http://www.snh.gov.uk/docs/C274013.pdf>
- l) SEPA, SNH and FCS joint guidance on [Use of Trees Cleared to Facilitate Development on Afforested Land](#) SEPA Guidance Note LUPS-GU27

SCOTTISH ENVIRONMENT PROTECTION AGENCY	Identifier: LUPS-GU4
<p style="text-align: center;">Land Use Planning System SEPA Guidance Note 4</p> <p style="text-align: center;">Planning advice on windfarm developments</p>	Page no: 7 of 28
	Issue No: Version 8
	Issue date: 30 August 2017
	Originator: Katherine Lakeman
	Authorised by: Alan Farquhar

Appendix 1: Windfarm assessment checklist

Guidance on the issues we should assess is given in Table 1 below. You should consult all the relevant internal consultees on these issues in accordance with the checklist in section 9 of [LUPS GU14 Guidance for internal consultees on how to respond to Planning Service consultations \(and for planners on how and when to consult\)](#) e.g. for wetlands you should consult ecology, for displaced peat, the local Operations team. Recommended text for scoping, conditions and objections for these issues can be found within [LUPS-GU12 Guidance and templates for standard wording](#). Further guidance on the issues can be found in SEPA's [Regulatory Position Statement – Developments on Peat, Good Practice During Windfarm Construction](#) and [Guidance on the assessment of peat volumes, reuse of excavated peat and minimisation of waste](#) and these should be referred to in line with our standard templates. In summary, the issues to consider are:

- Location of built elements in relation to sensitive receptors (usually watercourses, wetlands and deep peat);
- Verification of carbon assessment calculations (Section 36 only, and this will apply only to carbon assessments that utilise the revised version of the carbon calculator as set out on the Scottish Government website at <http://www.scotland.gov.uk/Topics/Business-Industry/Energy/Energy-sources/19185/17852-1/CSavings>);
- Demonstration of the minimisation of the disturbance of peat, reuse proposals for displaced peat and if required, disposal proposals;
- Use of any tree material cleared to facilitate development;
- If applicable, impacts upon Groundwater Dependant Terrestrial Ecosystems;
- The pollution prevention principles to be adopted during the construction stage of development of the proposed site including permanent and temporary foul and surface water drainage, oil and chemical storage, working in adverse weather conditions and environmental management;
- Buffers to sensitive receptors such as peatlands, wetlands, watercourses, lochs and water supplies (private and public);
- Hydrology and drainage including abstractions, impoundments and watercourse engineering including crossings;
- Borrow pits including location and operation;
- Restoration principles;
- If applicable, interactions with authorised processes.

SCOTTISH ENVIRONMENT PROTECTION AGENCY	Identifier: LUPS-GU4
<p style="text-align: center;">Land Use Planning System SEPA Guidance Note 4</p> <p style="text-align: center;">Planning advice on windfarm developments</p>	Page no: 8 of 28
	Issue No: Version 8
	Issue date: 30 August 2017
	Originator: Katherine Lakeman
	Authorised by: Alan Farquhar

Table 1: Windfarm checklist for development management

Issues to consider in relation to windfarm consultations	
Screening, scoping and pre-application consultations	Planning application and Environmental Statement consultations
1. Location of built elements	
<p>Each application should contain site layout plans which illustrate the location of all built elements, including access roads, turbines, crane hardstanding, borrow pits, construction compound, welfare facilities, oil storage, cabling and substation so that we can assess their location in relation to the following sensitive receptors:</p> <ul style="list-style-type: none"> • Peatlands • Watercourses • Lochs • Groundwater Dependant Terrestrial Ecosystems • Water supplies (public and private) • Groundwater (please see Appendix 2 for our guidelines for Groundwater Unit staff and ecologists when assessing the impacts of windfarms on groundwater and associated receptors) • Coastal waters <p>Built elements should avoid these sensitive receptors to minimise pollution risks. SEPA's Regulatory Method Statement (WAT-RM-30) on water feature survey requirements provides useful information for assessing the impacts upon existing water supplies.</p>	<p>The submitted site layout plans should be sent to appropriate internal consultees to assess if suitable buffers and pollution prevention measures are proposed.</p> <p>Where suitable minimum buffer zones are proposed we should secure this by way of a condition, to ensure micro-siting does not reduce the level of protection proposed. If they are not suitable, then they should be increased or other protective measures considered. The buffer should take into account ground cover, waterlogging and slope. Appropriate mitigation and pollution measures should be secured by an environmental management plan condition.</p> <p><u>Where there is likely to be significant detrimental impact we should object</u> seeking either improvements to the proposed mitigation measures or modifications to the layout of the development.</p>

SCOTTISH ENVIRONMENT PROTECTION AGENCY	Identifier: LUPS-GU4
<p style="text-align: center;">Land Use Planning System SEPA Guidance Note 4</p> <p style="text-align: center;">Planning advice on windfarm developments</p>	Page no: 9 of 28
	Issue No: Version 8
	Issue date: 30 August 2017
	Originator: Katherine Lakeman
	Authorised by: Alan Farquhar

These factors are described in more detail below.	
2. Carbon balance	
<p>Applicants should be referred to our Regulatory Position Statement – Developments on Peat and Good practice during windfarm construction and Guidance on the Assessment of Peat Volumes, Reuse of Excavated Peat and Minimisation of Waste. The good practice document includes recommendations for development on peat and carbon savings (sections 1.5, 1.6, 2.6 and 2.7).</p> <p><u>Section 36 applications</u></p> <p>We have agreed with the Scottish Government to audit carbon assessments for Section 36 wind farm applications that utilise the revised version of the carbon calculator as set out on the Scottish Government website at www.scotland.gov.uk/Topics/Business-Industry/Energy/Energy-sources/19185/17852-1/CSavings. We will not audit carbon assessments based on earlier versions of the calculator. The carbon assessment should provide a payback figure for the whole development. A separate assessment should not be undertaken for different aspects of the development in isolation (e.g. borrow pits) even if they are subject to a different application. Separate applications for different aspects of the development should be strongly discouraged. The applicant will be encouraged to include a section within the ES which demonstrates how layout and mitigation measures have been designed to minimise the payback period.</p> <p><u>Non-Section 36 applications</u></p> <p>Planning applications for windfarms do not have to submit a carbon assessment but some applicants may choose to do so and this should be encouraged if the proposals affect peatlands. This would be in line with paragraph 133 of SPP.</p>	<p><u>Section 36 applications</u></p> <p>The Carbon Team will audit carbon assessments submitted with new applications for Section 36 wind farms as set out on the left.</p> <p>We will not object on the grounds of an inadequate carbon assessment as our role here is purely to verify the assessment for the Energy Consents Unit. This does not, however, prejudice our ability to object on the grounds of potentially unacceptable impacts on hydrology, peat stability or the generation and management of displaced peat as covered in Section 3 below.</p> <p><u>Non-Section 36 applications</u></p> <p>Any carbon assessments submitted with a non-section 36 windfarm application will have to be verified by the planning authority.</p> <p>We would, however, expect that the application includes a detailed peat management scheme (where sites affect peat) setting out preventative/mitigation measures to avoid significant drying or oxidation of peat through, for example, the construction of access tracks, drainage channels, cable trenches, or the storage and re-use of excavated peat should be secured by way of a planning condition to ensure that the carbon balance benefits of the scheme are maximised. These should conform with our interests outlined in Section 3 below. A peat management plan can provide some of the information regarding storage and re-use of excavated peat, and an example of good practice is included in Annex 3.</p>
3. Disruption to wetlands especially groundwater dependant terrestrial ecosystems (GWDTEs)	
If there are wetlands or peatland systems present, the ES or planning submission	The submitted information should be sent to ecology who can assess if impacts

SCOTTISH ENVIRONMENT PROTECTION AGENCY	Identifier: LUPS-GU4
<p style="text-align: center;">Land Use Planning System SEPA Guidance Note 4</p> <p>Planning advice on windfarm developments</p>	Page no: 10 of 28
	Issue No: Version 8
	Issue date: 30 August 2017
	Originator: Katherine Lakeman
	Authorised by: Alan Farquhar

<p>should demonstrate how the layout and design of the proposal, including any associated borrow pits, hard standing and roads, avoid impact on such areas.</p> <p>A Phase 1 habitat survey should be carried out for the whole site and the guidance A Functional Wetland Typology for Scotland should be used to help identify all wetland areas. National Vegetation Classification should be completed for any wetlands identified. Results of these findings should be submitted, including a map with all the proposed infrastructure overlain on the vegetation maps to clearly show which areas will be impacted and avoided. Groundwater dependent terrestrial ecosystems, which are types of wetland, are specifically protected under the Water Framework Directive. The results of the National Vegetation Classification survey and Appendix 2 below should be used to identify if wetlands are GWDTEs.</p> <p>If any GWDTEs are located within a radius of (i) 100 m from roads, tracks and trenches or (ii) 250 m from borrow pits and foundations the likely impact of these features will require further assessment. This assessment should be carried out whether or not the features in (i) and (ii) occur within or outwith the site boundary in order that the full impacts on the proposals are assessed. The results of this assessment and proposed mitigation measures should be included in the ES.</p> <p>The route or location of roads, tracks or trenches within 100 m, or borrow pits or foundations within 250 m, of GWDTEs identified in Appendix 2 should be reconsidered. Further detailed studies will be required if infrastructure remains within the buffer zones of these ecosystems.</p> <p>For areas where avoidance is impossible, details of how impacts upon GWDTEs are minimised and mitigated should be provided within the ES or planning submission. In particular, impacts that should be considered include those from drainage, pollution and waste management. This should include preventative/mitigation measures to avoid significant drying or oxidation of peat through, for example, the construction of access tracks, dewatering, excavations, drainage channels, cable trenches, or the storage and re-use of excavated peat. Detailed information on waste management is required as detailed below. Any mitigation proposals should also be detailed within the Environmental Management Plan, as detailed below.</p>	<p>upon Groundwater Dependand Terrestrial Ecosystems (GWDTEs) have been fully assessed and if suitable mitigation measures are proposed.</p> <p>Appropriate mitigation and pollution prevention measures should be secured by way of a planning condition requiring the submission of an environmental management plan and associated construction method statements.</p> <p>Proposals for the future management of GWDTEs, including any proposals for wetland restoration or creation should be ensured by way of a planning condition requiring a Habitat Management Plan.</p> <p><u>Where there is likely to be significant adverse impact we should object</u> seeking either improvements to the proposed mitigation measures or modifications to the layout of the development.</p>
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SCOTTISH ENVIRONMENT PROTECTION AGENCY	Identifier: LUPS-GU4
<p style="text-align: center;">Land Use Planning System SEPA Guidance Note 4</p> <p style="text-align: center;">Planning advice on windfarm developments</p>	Page no: 11 of 28
	Issue No: Version 8
	Issue date: 30 August 2017
	Originator: Katherine Lakeman
	Authorised by: Alan Farquhar

4. Disturbance and re-use of excavated peat

Where the proposed infrastructure will impact upon peatlands, a detailed map of peat depths (this must be to full depth) should be submitted. The peat depth survey should cover all areas where development is proposed and include details of the basic peatland characteristics identifying the acrotelmic and catotelmic layers.

It is essential that the scope for minimising the extraction of peat is explored and alternative options identified that minimise risk in terms of carbon release, human health and environmental impact. Early discussion of proposals with us is essential, and an overall approach of minimisation of peatland disruption should be adopted. By adopting an approach of minimising disruption to peatland, the volume of excavated peat can be minimised. The generation of surplus or displaced peat is a difficult area which needs to be addressed from the outset given the limited scope for re-use. We will expect the ES or planning submission to provide detail of the likely volumes of peat that will be disturbed, what can be successfully reuse on site (and how and where) and whether disposal of peat is required. An example peat management plan is included in Annex 3.

There are important waste management implications of measures to deal with displaced peat as set out within our Regulatory Position Statement – Developments on Peat. Landscaping with displaced peat (or soil) may not be of ecological benefit and consequently a waste management exemption may not apply. We consider disposal of significant depth of peat as being landfilled waste, and this may not be consentable under our regulatory regimes We will object to the re-use of peat not in accordance the Scottish Renewables guidance

Where it is proposed to reuse some excavated peat within borrow pits or bunding then details of the proposals, including depth of peat and how the hydrology of the peat will be maintained, should be outlined in the ES or planning submission.

- a) A detailed map of peat depths (this must be to full depth) with all the built elements overlain so it can clearly be seen how the development avoids areas of deep peat. The peat depth survey should include

Excess peat material (that cannot be re-used, or is not identified for re-use in an acceptable manner) that is generated during construction activities on peatlands may be considered to be waste and is managed through waste licensing. Where there are proposals for the re-use or disposal of surplus peat this information should be sent to the local Operations team to assess if the material is suitable for use and if the proposals are likely to be consentable under Waste Management Licensing (Scotland) Regulations 2011.

The following issues should also be considered:

Have peatlands been avoided wherever possible? If not have different construction methods such as piling or floating roads been considered? Have peat depths been assessed to their full depth along all the infrastructure routes? Have the volumes of acrotelmic and catotelmic peat been quantified and suitable re-use options identified? Have appropriate mitigation and pollution prevention measures been set out which will minimise significant adverse impacts?

Appropriate mitigation and pollution prevention measures should be secured by way of a planning condition requiring the submission of a construction method statement. Proposals for the management of displaced peat should be submitted as part of any planning application, with the agreed means of managing the displaced peat secured by way of a planning condition. An example peat management plan is provided in Annex 3.

Where there is likely to be significant adverse impacts or the proposals for re-use are unlikely to be consentable we should **object** seeking either improvements to the proposed mitigation measures or modifications to the layout of the development. In such circumstances we should also point out that rectifying these issues would have the benefit of reducing the carbon payback for the development.

Acceptable methods of managing displaced peat

SCOTTISH ENVIRONMENT PROTECTION AGENCY	Identifier: LUPS-GU4
<p style="text-align: center;">Land Use Planning System SEPA Guidance Note 4</p> <p style="text-align: center;">Planning advice on windfarm developments</p>	Page no: 12 of 28
	Issue No: Version 8
	Issue date: 30 August 2017
	Originator: Katherine Lakeman
	Authorised by: Alan Farquhar

details of the basic peatland characteristics, including a break down of acrotelmic, catotelmic and amorphous peat. This information is often already required as part of any peat slide risk assessment.

- b) A map showing where any temporary peat storage areas will be located and how these storage areas along with any associated access roads avoid any watercourses, groundwater dependant terrestrial ecosystems or other sensitive areas
- c) A table showing where surplus or displaced peat will be generated and its area, width and depth. This should also show the quantity of catotelmic peat and acrotelmic peat.
- d) Details of how the storage areas will be constructed, calculations demonstrating the need for these storage areas, how thick the peat will be stored, what types of peat will be stored and the peat maintained fit for re-use should be submitted. This information may also be of interest to geotechnical engineers assessing the peat stability proposals. Please note that any soils or peat stored for greater than 3 years prior to treatment or recovery period or where storage prior to disposal is for more than 1 year will require a permit under The Landfill (Scotland) Regulations 2003.
- e) A table showing the principles of where and how much catotelmic peat will be re-used including details of area, width and thickness;
- f) A table showing the principles of where and how much acrotelmic peat will be re-used including details of area, width and thickness;

We would expect all these proposals to be in accordance with [Guidance on the Assessment of Peat Volumes, Reuse of Excavated Peat and Minimisation of Waste](#) and our [Regulatory Position Statement – Developments on Peat](#).

Further guidance can be found in Scottish Renewables [Guidance on the](#)

Experience with previous windfarm proposals and discussions with other Key Agencies has enabled us to identify what we consider to be acceptable methods of managing displaced peat. Examples of good practice can be found on p55 of Scottish Government Report. Recent examples of what has been successful elsewhere include:

- Displacement of peat during development stages rather than removal;
- Re-use/restoration of peat cuttings elsewhere on site
- Requirement for thick turves to be cut to ensure good root system to limit the disturbance to the vegetation and maintain the integrity of the soil
- Rough, not bladed, track edges
- Side casting and quick reinstatement of cable ways

What to avoid/what is not acceptable

We will object to the re-use of peat that is not in accordance the Scottish Renewables guidance.

If information outlined in points a-f have been requested but have not been submitted in the ES, we will object under the grounds of lack of information until information has been submitted.

SCOTTISH ENVIRONMENT PROTECTION AGENCY	Identifier: LUPS-GU4
<p style="text-align: center;">Land Use Planning System SEPA Guidance Note 4</p> <p style="text-align: center;">Planning advice on windfarm developments</p>	Page no: 13 of 28
	Issue No: Version 8
	Issue date: 30 August 2017
	Originator: Katherine Lakeman
	Authorised by: Alan Farquhar

<p>Assessment of Peat Volumes, Reuse of Excavated Peat and Minimisation of Waste, our Regulatory Position Statement – Developments on Peat, Good practice during windfarm construction and our page on surplus peat management. This includes reference to guidance Developments on Peatland: Site Surveys and Best Practice</p>	
<p>5. Forest removal and management of tree material cleared to facilitate development</p>	
<p>Where it is proposed to fell significant quantities of trees in order to accommodate a proposal, then consideration of how any tree material cleared to facilitate development will be utilised must be undertaken within the ES. Our preference is for forest materials to be used for economic and environmental benefits and not to be disposed of as waste. Joint Guidance (LUPS GU27) from SEPA, SNH and FCS on the Use of Trees Cleared to Facilitate Development on Afforested Land provides detailed guidance on this matter.</p> <p>Sometimes turbines can be key-holed into the forest rather than the forest being clear-felled specifically to facilitate development. We support this approach wherever possible as large scale felling can result in a peak release of nutrients which can affect local water quality. We may, however, be supportive of clear felling in cases where planting took place on deep peat and it is proposed through a Habitat Management Plan to reinstate peat-forming habitats. This should be specifically referenced in the ES.</p> <p>The ES should include information which explains how any proposals that include felling to waste, where the waste generated by the process will be managed by techniques such as chipping, mulching or spreading, comply with SEPA’s “Management of Forestry Waste” Guidance document WST-G-027 and with the joint SEPA, SNH and FCS guidance on the Use of Trees Cleared to Facilitate Development on Afforested Land LUPS GU27. LUPS GU27 includes common principles for considering the use of forest material / waste wood on peatland sites for restoration projects. The draft principles within it which should apply and be included in the ES</p>	<p>If the Environmental Statement includes proposals to fell significant quantities of trees and leave some of the material on site, then the following information should be submitted by the applicant:</p> <ol style="list-style-type: none"> a) A map demarcating what felling techniques will be employed for each forest coupe; b) Photographs of each coupe which adequately demonstrate the general timber condition; c) A table of approximate volumes of timber which will be removed from site and volumes that will be re-used on site; d) A plan showing how and where any forestry materials will be re-used for ecological benefit within that coupe and must be supported by a Habitat Management Plan. Further guidance on this can be found in Use of Trees Cleared to Facilitate Development on Afforested Land – Joint Guidance from SEPA, SNH and FCS. <p>If forestry material is to be re-used on site then the local Ecology and Operations team should be consulted and specifically asked:</p> <p>Ecology - Will the proposals result in ecological benefit in terms of the objectives of the Habitat Management Plan?</p> <p>OPS - Provided Ecology confirm that the proposals are for a genuine ecological</p>

SCOTTISH ENVIRONMENT PROTECTION AGENCY	Identifier: LUPS-GU4
<p style="text-align: center;">Land Use Planning System SEPA Guidance Note 4</p> <p style="text-align: center;">Planning advice on windfarm developments</p>	Page no: 14 of 28
	Issue No: Version 8
	Issue date: 30 August 2017
	Originator: Katherine Lakeman
	Authorised by: Alan Farquhar

<p>Note that if there are likely to be significant amounts of surplus forestry material without a clear use or clear requirement on site, and if scope for an exemption under waste management is unclear, then <u>we may need to object</u> to an application due to our inability to advise on consentability under our regulatory regime and hence it is essential that these issues are addressed at an early stage. SEPA document WAN021 for information on what management activities are exempt from requiring a waste management licence. Where the ecological benefit proposed by the fell to waste activity does not relate to improvement of peatland habitats, then the expected environmental benefit must be set out and justified in the ES.</p> <p>SNH Information Note on “Post-construction management of wind farms on clear-felled forestry sites” provides further advice on this topic.</p>	<p>benefit, do they accord with the requirements of The Waste Management Licensing (Scotland) Regulations 2011 (WML)?</p>
<p>6. Existing groundwater abstractions</p>	
<p>Roads, foundations and other construction works associated with large scale developments can disrupt groundwater flow and impact on groundwater abstractions. The construction of these features also removes the natural protection that soil and subsoil provides to the underlying groundwater making nearby groundwater abstractions more vulnerable to contamination from spills and leaks from vehicles and equipment. To address this risk a list of groundwater abstractions both within and outwith the site boundary, within a radius of i)100 m from roads, tracks and trenches and ii) 250 m from borrow pits and foundations) should be provided.</p> <p>This assessment will only protect the groundwater component of the supply. It is not SEPA’s role to protect surface run-off that may directly supply the abstraction or enter it due to poor construction. Advice on the protection of these components of the supply should be sought from the local authority. SEPA can’t protect supplies where the source of the water is unknown.</p> <p>If groundwater abstractions are identified within the 100 m radius of roads, tracks and trenches or 250 m radius from borrow pits and foundations, then either the applicant should ensure that the route or location of engineering operations avoid</p>	<p>The submitted information should be sent to hydrogeology who can assess if impacts upon existing groundwater abstractions have been fully assessed and if suitable mitigation measures are proposed.</p> <p>Appropriate mitigation and pollution prevention measures should be secured by way of a planning condition requiring the submission of an environmental management plan and associated construction method statements.</p> <p>Where there is likely to be significant adverse impact we should object seeking either improvements to the proposed mitigation measures or modifications to the layout of the development.</p>

SCOTTISH ENVIRONMENT PROTECTION AGENCY	Identifier: LUPS-GU4
<p style="text-align: center;">Land Use Planning System SEPA Guidance Note 4</p> <p style="text-align: center;">Planning advice on windfarm developments</p>	Page no: 15 of 28
	Issue No: Version 8
	Issue date: 30 August 2017
	Originator: Katherine Lakeman
	Authorised by: Alan Farquhar

<p>this buffer area or further information and investigations will be required to show that impacts on abstractions are acceptable. Further details can be found in Appendix 2 below.</p>	
<p>7. Pollution Prevention and environmental management</p>	
<p>The principles of the proposed pollution prevention measures and environmental management of the site should be considered during the preparation of the application. These outline principles for the construction, operation and decommissioning of the site should be submitted with the application, preferably in the form of a draft Environmental Management Plan.</p> <p>All potential pollution risks associated with the proposals should be identified along with preventative measures and mitigation. This information is necessary for us to assess the environmental impact of the proposals prior to determination. Guidance on what should be included can be found on our website.</p>	<p>This information should be sent to the local Operations team who can assess if all of the potential pollution risks have been identified and if suitable mitigation measures are proposed.</p> <p>Appropriate site specific mitigation and pollution prevention measures should be secured by way of a planning condition requiring the submission of a finalised site specific environmental management plan.</p> <p>Where there is likely to be significant adverse impact we should object seeking either improvements to the proposed mitigation measures or modifications to the layout of the development.</p>
<p>8. Engineering activities in the water environment</p>	
<p>Developments should be designed to avoid engineering activities, such as culverts, in the water environment.</p> <p>Any proposed water abstractions for concrete batching or welfare facilities should also be detailed. The site layout should clearly illustrate the location of any proposed works.</p> <p>Where engineering activities in the water environment are proposed the following information should be submitted:</p> <ul style="list-style-type: none"> • A site survey of existing water features; • map showing the location of all proposed engineering activities; 	<p>The submitted information should be sent to the local Operations team who can assess if the proposals are likely to be consentable under CAR, if all the potential significant impacts have been identified and if suitable mitigation of adverse impacts is proposed.</p> <p>Proposals for best practice designs, such as bridging solutions which do not affect the bed and banks of a watercourse, should be secured by way of a planning condition. A condition should also be used to ensure flood risk is adequately considered in the detailed design of any crossing structures.</p> <p>Appropriate mitigation and pollution prevention measures should be secured by way of a planning condition requiring the submission of an environmental</p>

SCOTTISH ENVIRONMENT PROTECTION AGENCY	Identifier: LUPS-GU4
Land Use Planning System SEPA Guidance Note 4 Planning advice on windfarm developments	Page no: 16 of 28
	Issue No: Version 8
	Issue date: 30 August 2017
	Originator: Katherine Lakeman
	Authorised by: Alan Farquhar

<ul style="list-style-type: none"> • systematic table detailing the justification for each activity along with proposed mitigation; • an indication of the proposed design (e.g. bridge, bottomless culvert, arched culvert); • photo of each affected waterbody including its dimensions design <p>Where flooding may be an issue a flood risk assessment should also be submitted.</p>	<p>management plan and associated construction method statements.</p> <p>Where there is likely to be significant detrimental impact we should object seeking either improvements to the proposed mitigation measures or modifications to the design or layout of the development.</p>
9. Proposed water abstractions	
<p>Where water abstraction is proposed we request that the ES, or planning submission, details if a public or private source will be used. If a private source is to be used the information below should be included:</p> <ul style="list-style-type: none"> ▪ Source e.g. ground water or surface water; ▪ Location e.g. grid reference and description of site; ▪ Volume e.g. quantity of water to be extracted; ▪ Timing of abstraction e.g. will there be a continuous abstraction; ▪ Nature of abstraction e.g. sump or impoundment; ▪ Proposed operating regime e.g. details of abstraction limits and hands off flow; ▪ Survey of existing water environment including any existing water features; ▪ Impacts of the proposed abstraction upon the surrounding water environment. <p>If other development projects are present or proposed within the same water catchment then we advise that the applicant considers whether the cumulative impact upon the water environment needs to be assessed. The ES or planning submission should also contain a justification for the approach taken</p>	<p>If a water abstraction is proposed this information should be sent to the local Operations team so that they can assess whether it is likely to be consentable under The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (CAR)</p>
10. Borrow pits	

SCOTTISH ENVIRONMENT PROTECTION AGENCY	Identifier: LUPS-GU4
<p style="text-align: center;">Land Use Planning System SEPA Guidance Note 4</p> <p style="text-align: center;">Planning advice on windfarm developments</p>	Page no: 17 of 28
	Issue No: Version 8
	Issue date: 30 August 2017
	Originator: Katherine Lakeman
	Authorised by: Alan Farquhar

<p>Detailed investigations in relation to the need for and impact of such facilities should be contained in the ES or planning submission. Where borrow pits are proposed, information should be provided regarding their location, size and nature. In particular, details of the proposed depth of the excavation compared to the actual topography and water table should be submitted. In addition details of the proposed restoration profile, proposed drainage and settlement traps, turf and overburden removal and storage for reinstatement should be submitted.</p> <p>The impact of such facilities (including dust, blasting and impact on water) should be appraised as part of the overall impact of the scheme. Information should cover, in relation to water; at least the information set out in Planning Advice Note PAN 50 Controlling the Environmental Effects of Surface Mineral Workings (Paragraph 53). In relation to groundwater, information (Paragraph 52 of PAN 50) only needs to be provided where there is an abstraction or groundwater dependent terrestrial ecosystem within 250 m of the borrow pit. Additional information on groundwater is provided above.</p>	<p>Where borrow pits are proposed, this information should be sent to both the local Operations team and hydrogeology to assess the impacts upon groundwater and whether suitable pollution prevention measures are proposed.</p> <p>Appropriate mitigation and pollution measures should be included in the Environmental Statement (ES) and secured within an Environmental Management Plan condition.</p> <p>We should object to cases where insufficient information regarding the impact of borrow pits is included within the ES. Where there is likely to be significant detrimental impact we should object seeking either improvements to the proposed mitigation measures or modifications to the design or layout of the development.</p>
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SCOTTISH ENVIRONMENT PROTECTION AGENCY	Identifier:	LUPS-GU4
Land Use Planning System SEPA Guidance Note 4 Planning advice on windfarm developments	Page no:	18 of 28
	Issue No:	Version 8
	Issue date:	30 August 2017
	Originator:	Katherine Lakeman
	Authorised by:	Alan Farquhar

Appendix 2: Guidelines for Groundwater Unit staff and ecologists when assessing the impacts of windfarms on groundwater and associated receptors

1. Groundwater issues associated with windfarms

- 1.1 Windfarms generally do not pose a major risk to groundwater provided that they are constructed in line with pollution prevention best practice. However, the following environmental impacts are possible:
- Foundations, borrow pits and linear infrastructure such as roads, tracks and trenches can disrupt groundwater flow. Their construction also removes the protective layers of soil and subsoil making the groundwater below more vulnerable to pollution from leaks or spills from vehicles or equipment used to construct them. If carried out in close proximity to groundwater abstractions and Groundwater Dependant Terrestrial Ecosystems (GWDTE) the construction of these activities can have adverse impacts on these receptors. Such impacts will vary depending on the scale and location of the development.
 - Dewatering of below-ground works may change the quantity of groundwater supplying nearby abstractions and GWDTEs. Such de-watering is controlled via The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (CAR). Sufficient information is required in relation to this to allow SEPA to advise the determining authority of the likelihood of an authorisation being granted (show-stoppers only) in line with [LUPS GU15 Planning guidance in relation to SEPA-regulated sites and processes](#). This is not discussed further in this appendix.
 - Discharge of contaminated groundwater/surface water may cause physical or chemical contamination. Such discharges are controlled via CAR - and therefore sufficient information is required in relation to this to allow SEPA to advise the determining authority of the likelihood of an authorisation being granted (show-stoppers only) in line with [LUPS GU15 Planning guidance in relation to SEPA-regulated sites and processes](#). This is not discussed further in this appendix.

2. Information that applicants should submit

- 2.1. In order to assess the above issues we require the information set out below to be submitted by applicants in support of their planning applications. Where an application requires environmental impact assessment (EIA) we will be consulted at screening or scoping stages or we may be consulted by an applicant at pre-application stage.
- 2.2. The planning response should detail what information is required in support of the planning application in accordance with section 7 of [LUPS GU14 Guidance for internal consultees on how to respond to Planning Service consultations \(and for planners on how and when to consult\)](#).
- 2.3 At the screening, scoping or pre-application stage, little detailed information is available, though the site location, access options and the nature of the development are typically provided. We have developed a standard windfarm

SCOTTISH ENVIRONMENT PROTECTION AGENCY	Identifier: LUPS-GU4
Land Use Planning System SEPA Guidance Note 4 Planning advice on windfarm developments	Page no: 19 of 28
	Issue No: Version 8
	Issue date: 30 August 2017
	Originator: Katherine Lakeman
	Authorised by: Alan Farquhar

scoping response which is generally applicable to these consultations without the need for specific input from a SEPA hydrogeologist.

- 2.4 The standard windfarm scoping response states that the Environmental Statement (ES) or planning submission should identify groundwater abstractions sources and all GWDTEs within a radius of 100 m from roads, tracks and trenches and within 250 m from borrow pits and foundations and, if necessary, should include areas outwith the site boundary. For GWDTEs, these are recommended screening distances. The screening distance should be informed by the likely risk of the proposed development causing significant damage to a GWDTE through changes in groundwater flows. As such, a smaller survey area may be appropriate, but a smaller distance needs to be justified in the ES, and would be best discussed with us before submission. This includes wetlands within designated sites e.g. Sites of Special Scientific Interest (SSSIs), Special Protected Areas (SPAs), Special Areas of Conservation (SACs)). Details on how this should be done are stated in sections 4 and 5 below. Details of what should be done once these sensitive receptors are identified are included in section 6. This assessment will only protect the groundwater component of abstractions. It is not SEPA's role to protect surface run-off that may directly supply the abstraction or enter it due to poor construction. Advice on the protection of these components of the supply should be sought from the local authority.

3. How to identify GWDTEs

- 3.1 SEPA holds a list of GWDTEs within all designated sites (SSSIs, SPAs and SACs). However, there may be non-designated wetlands (that may include GWDTEs) outwith these areas which can be identified following the procedure in 3.2.
- 3.2 To identify non-designated GWDTEs a habitat survey (Phase 1) is required for all sites. The developer should use [‘SNIFFER \(2009\) WFD95 – A Functional Wetland Typology for Scotland’](#) to help identify wetland areas with Phase 1 habitat survey. A National Vegetation Classification (NVC) survey will also be required for wetland areas identified on the site. This survey should include the area where the development (i.e. foundations, tracks, trenches, borrow pits and hard standing) could cause a risk to the water supply of the GWDTE. Where the recommended screening distances (see 2.4) are not used, we require the developer to justify clearly, based upon risk to disruption of water supply to a GWDTE, why another screening distance is used.
- 3.3 A list of NVC communities that are dependent on groundwater is included in table 2. Wetlands containing these communities should be considered to be GWDTEs unless further information can be provided to demonstrate this is not the case. The location and extent of all identified wetlands and potential GWDTEs in relation to infrastructure must be provided on an appropriate map (NVC survey map with infrastructure overlain). This will assist with the clear identification of the site specific issues to be addressed.
- 3.4 SEPA recognises that many of the NVC communities on the list are common habitat types across Scotland and so are frequently encountered in planning applications. Also, some of the NVC communities may be considered GWDTEs only in certain hydrogeological settings. As a general guide only, NVC

SCOTTISH ENVIRONMENT PROTECTION AGENCY	Identifier: LUPS-GU4
Land Use Planning System SEPA Guidance Note 4 Planning advice on windfarm developments	Page no: 20 of 28
	Issue No: Version 8
	Issue date: 30 August 2017
	Originator: Katherine Lakeman
	Authorised by: Alan Farquhar

communities which may have limited dependency on groundwater in certain settings are marked in yellow and with an asterisk on the list below. NVC communities that are likely to be considered sensitive GWDTEs in certain hydrogeological settings are marked in red on the list below.

- 3.5 Information must be provided in the ES to demonstrate the likely groundwater dependency of the GWDTEs and likely sensitivity to changes in water supply to the GWDTE that are caused by the proposed works. Where sufficient information is provided in the ES to demonstrate that the GWDTEs have a limited dependency on groundwater and an outline of appropriate mitigation measures is provided, SEPA may request a planning condition to ensure implementation of this mitigation. Where the developer chooses to re-locate infrastructure to eliminate risk to GWDTE, SEPA may request a planning condition to ensure this.

Table 2. NVC communities, which if present, indicate that a wetland is likely to be either highly groundwater dependent (marked as red) or moderately groundwater dependent (marked as yellow and with an asterisk) depending on the hydrogeological setting. (The table is modified from 'UKTAG list of NVC communities and associated groundwater dependency scores (2008)' which contains a full list for all NVCs and UK groundwater dependency scores.)

NVC Community	NVC Community Name
M5	<i>Carex rostrata</i> - <i>Sphagnum squarrosum</i> mire
M6	<i>Carex echinata</i> - <i>Sphagnum recurvum</i> mire
M7	<i>Carex curta</i> - <i>Sphagnum russowii</i> mire
M8	<i>Carex rostrata</i> - <i>Sphagnum warnstorffii</i> mire
M9	<i>Carex rostrata</i> - <i>Calliergon cuspidatum</i> / <i>C.giganteum</i> mire
M10	<i>Carex dioica</i> - <i>Pinguicula vulgaris</i> mire
M11	<i>Carex demissa</i> - <i>Saxifraga aizoides</i> mire
M12	<i>Carex saxatilis</i> mire
M13	<i>Schoenus nigricans</i> - <i>Juncus subnodulosus</i> mire
M14	<i>Schoenus nigricans</i> - <i>Narthecium ossifragum</i>
M15 *	<i>Scirpus cespitosus</i> - <i>Erica tetralix</i> wet heath
M16	<i>Erica tetralix</i> - <i>Sphagnum compactum</i> wet heath
M21	<i>Narthecium ossifragum</i> - <i>Sphagnum papillosum</i> valley mire

SCOTTISH ENVIRONMENT PROTECTION AGENCY	Identifier: LUPS-GU4
Land Use Planning System SEPA Guidance Note 4 Planning advice on windfarm developments	Page no: 21 of 28
	Issue No: Version 8
	Issue date: 30 August 2017
	Originator: Katherine Lakeman
	Authorised by: Alan Farquhar

NVC Community	NVC Community Name
M22	<i>Juncus subnodulosus</i> - <i>Cirsium palustre</i> fen meadow
M23	<i>Juncus effusus/acutiflorus</i> - <i>Galium palustre</i> rush-pasture
M24	<i>Molinia caeruleae</i> - <i>Cirsium dissectum</i> fen meadow
M25 *	<i>Molinia caerulea</i> - <i>Potentilla erecta</i> mire
M26 *	<i>Molinia caerulea</i> - <i>Crepis paludosa</i> mire
M27 *	<i>Filipendula ulmaria</i> - <i>Angelica sylvestris</i> mire
M28 *	<i>Iris Pseudacorus</i> - <i>Filipendula ulmaria</i> mire
M29	<i>Hypericum elodes</i> - <i>Potamogeton polygonifolius</i> soakway
M30 *	<i>Hydrocotylo</i> – <i>Baldellion</i>
M31	<i>Anthelia julacea</i> - <i>Sphagnum auriculatum</i> spring
M32	<i>Philonotis fontana</i> - <i>Saxifraga stellaris</i> spring
M33	<i>Pohlia wahlenbergii</i> var. <i>glacialis</i> spring
M34	<i>Carex demissa</i> - <i>Koenigia islandica</i> flush
M35	<i>Ranunculus omiophyllus</i> - <i>Montia fontana</i> rill
M36	Lowland springs and streambanks of shaded situations
M37	<i>Cratoneuron commutatum</i> springs
M38	<i>Cratoneuron commutatum</i> springs
S2 *	<i>Cladium mariscus</i> swamp and sedge beds
S3 *	<i>Carex paniculata</i> sedge swamp
S7 *	<i>Carex acutiformis</i> swamp
S11	<i>Carex vesicaria</i> swamp
S24	<i>Phragmites australis</i> - <i>Peucedanum palustre</i> tall-herb fen
S25 *	<i>Phragmites australis</i> - <i>Eupatorium cannabinum</i> tall-herb fen
S27 *	<i>Carex rostrata</i> - <i>Potentilla palustris</i> tall-herb fen

SCOTTISH ENVIRONMENT PROTECTION AGENCY	Identifier: LUPS-GU4
Land Use Planning System SEPA Guidance Note 4 Planning advice on windfarm developments	Page no: 22 of 28
	Issue No: Version 8
	Issue date: 30 August 2017
	Originator: Katherine Lakeman
	Authorised by: Alan Farquhar

NVC Community	NVC Community Name
MG4 *	<i>Alopecurus pratensis</i> - <i>Sanguisorba officinalis</i>
MG8 *	<i>Cynosurus cristatus</i> - <i>Caltha palustris</i> lowland neutral grassland
MG9 *	<i>Holcus lanatus</i> - <i>Deschampsia cespitosa</i> grassland
MG10 *	<i>Holcus lanatus</i> - <i>Juncus effusus</i> rush-pasture
MG11 *	Inland wet grassland, <i>Festuca rubra</i> - <i>Agrostis stolonifera</i> - <i>Potentilla anserina</i> grassland
W1 *	<i>Salix cinerea</i> - <i>Galium palustre</i> woodland
W2 *	<i>Salix cinerea</i> - <i>Betula pubescens</i> - <i>Phragmites australis</i> woodland
W3 *	<i>Salix pentandra</i> - <i>Carex rostrata</i> woodland
W4	<i>Betula pubescens</i> - <i>Molinia caerulea</i> woodland
W5 *	<i>Alnus glutinosa</i> - <i>Carex paniculata</i> woodland
W6 *	<i>Alnus glutinosa</i> - <i>Urtica dioica</i> woodland
W7	Residual alluvial forests (<i>Alnus glutinoso-incanae</i>)
W20	<i>Salix lapponum</i> – <i>Luzula sylvatica</i> scrub
CG10	<i>Festuca ovina</i> – <i>Agrostis capillaris</i> – <i>Thymus praecox</i> grassland (when not on limestone)
CG11	<i>Festuca ovina</i> - <i>Agrostis capillaris</i> - <i>Alchemilla alpina</i> grassland (when not on limestone)
CG12	<i>Festuca ovina</i> – <i>Alchemilla alpina</i> – <i>Silene acaulis</i> dwarf-herb community
U6 *	<i>Juncus squarrosus</i> - <i>Festuca ovina</i> grassland
U15	<i>Saxifraga aizoides</i> – <i>Alchemilla glabra</i>
U16	<i>Luzula sylvatica</i> – <i>Vaccinium myrtillus</i> tall herb community
U17	<i>Luzula sylvatica</i> – <i>Geum rivale</i> tall herb community
SD13	<i>Salix repens</i> - <i>Bryum pseudotriquetrum</i> dune-slack community

SCOTTISH ENVIRONMENT PROTECTION AGENCY	Identifier: LUPS-GU4
Land Use Planning System SEPA Guidance Note 4 Planning advice on windfarm developments	Page no: 23 of 28
	Issue No: Version 8
	Issue date: 30 August 2017
	Originator: Katherine Lakeman
	Authorised by: Alan Farquhar

NVC Community	NVC Community Name
SD14	<i>Salix repens</i> - <i>Campyllum stellatum</i> dune-slack community
SD15	<i>Salix repens</i> - <i>Calliargon cuspidatum</i> dune-slack community
SD16	<i>Salix repens</i> - <i>Holcus Lanatus</i> dune slack community
SD17	<i>Potentilla anserina</i> - <i>Carex nigra</i> dune-slack community

4. How to identify groundwater abstractions

- 4.1 Information on all groundwater abstractions should be obtained by a site walk-over in conjunction with information from the local community, SEPA and local authorities. This will include both public and private water supplies.
- 4.2 Private Water Supplies (PWS) are generally small abstractions of less than 10 m³/d sourced from boreholes, spring or wells and used to supply water to houses. PWS of < 10 m³/d are covered by CAR General Binding Rule 2 (GBR 2) and therefore an application for authorisation is not required to be made to SEPA. Details of private supplies can be obtained from Local Authorities and the [Drinking Water Quality Regulator](#) webpage. SEPA holds a record of groundwater abstractions of greater than 10 m³/d which are not covered by a General Binding Rule.
- 4.3 The following information for each water supply source should be submitted:
- Source location (including National Grid co-ordinates)
 - Source type
 - Abstraction rate
 - Number of people served, or similar characteristics for industrial supplies (e.g. number of cows watered). This should also include points of use located beyond the survey radius if the abstraction source lies within the zone.
- 4.4 For wells and boreholes the abstraction rate should be provided for each supply based either on direct measurements or estimated by type and intensity of usage (e.g. no. of people served). In the absence of an abstraction rate the maximum abstraction rate for small sources, namely 10 m³/d, should be used. For springs the application should provide an estimate of the spring yield and the abstraction rate from the spring. Complex water supplies collecting water from different spring sources should be investigated and discharge rates detailed.

5. Information that should be submitted where sensitive GWDTEs or groundwater abstractions are identified

- 5.1 If groundwater abstractions or sensitive GWDTEs (see section 3.3 and list of NVC communities) are identified i) within 100 m from roads, tracks and trenches or ii) within 250 m from borrow pits and foundations (or other appropriate screening

SCOTTISH ENVIRONMENT PROTECTION AGENCY	Identifier: LUPS-GU4
<p style="text-align: center;">Land Use Planning System SEPA Guidance Note 4</p> <p style="text-align: center;">Planning advice on windfarm developments</p>	Page no: 24 of 28
	Issue No: Version 8
	Issue date: 30 August 2017
	Originator: Katherine Lakeman
	Authorised by: Alan Farquhar

distance for GWDTEs), the applicant needs to detail how these sensitive receptors will be protected.

- 5.2 Two options need to be considered: Preferably the precautionary approach to route or locate engineering operations avoiding this buffer area. Alternatively, further information and investigations will be required where operations are proposed closer to the receptor. In the latter case we will not object on risk to groundwater where the applicant can provide one of the following:

For groundwater abstractions, a quantitative hydrogeological assessment to demonstrate that the risk to groundwater abstractions are not significant. This should be carried out by establishing the size of the Zone of Contribution feeding groundwater to the water supply and identifies the proportion of flow that will be reduced as a consequence of any construction or the impact that the activities will have on the quality of the water supply. This will need to be accompanied by a risk assessment that identifies if this reduction in flow or water level is significant. This will need to take account of the impact of the reduction in flow on the level of water in the supply as compared with the pump or outflow level.

For sensitive GWDTEs, a qualitative assessment to demonstrate that the risks to GWDTEs are not significant. This should be carried out by developing a conceptual model of the zone of contribution of groundwater supplying the wetland and identifies the likely proportion of flow that will be reduced as a consequence of any construction. This will need to be accompanied by a risk assessment that identifies if this reduction in flow or water level will cause significant damage to the GWDTE.

where the impact is on a water supply, a demonstration that the applicant has agreed with the owner of the abstraction to provide an alternative supply.

6. How SEPA will assess the submitted information

- 6.1 The EIA process should address all SEPA requests that were made during the scoping stage, as well as proposing appropriate mitigating measures where risks are identified. SEPA will object to an application if the information requested at the scoping stage is not provided, unless the ES provides a sound reason for scoping the issue out (such as change of layout avoiding an issue).
- 6.2 We will comment on the quantitative assessment and any mitigating measures for any abstraction or GWDTEs lying within the high risk zones identified in Sections 3 and 4 above. We will not comment on any modifications to water supplies or on the provision of alternative supplies, the acceptance of which can be agreed only between the applicant and the supply owner. This assessment will only protect the groundwater component of abstractions. It is not SEPA's role to protect surface run-off that may directly supply the abstraction or enter it due to poor construction. Advice on the protection of these components of the supply should be sought from the local authority
- 6.3 SEPA will generally have no objection to dewatering an excavation at a construction site if in compliance with GBR 2 and GBR 15 (see The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (CAR) – A

SCOTTISH ENVIRONMENT PROTECTION AGENCY	Identifier:	LUPS-GU4
<p style="text-align: center;">Land Use Planning System SEPA Guidance Note 4</p> <p style="text-align: center;">Planning advice on windfarm developments</p>	Page no:	25 of 28
	Issue No:	Version 8
	Issue date:	30 August 2017
	Originator:	Katherine Lakeman
	Authorised by:	Alan Farquhar

Practical Guide). An application to abstract groundwater in greater quantities or of longer duration than that permitted by GBR 2 (10 m³/day) or GBR 15 must be made to SEPA.

- 6.4 Impacts related to GWDTE habitats should be referred to ecology. The Groundwater Unit will provide advice to the wetland ecologist as if required.

7. Further guidance and legislation

- 7.1 The following guidance and legislation will assist applicants in submitting the above information.

[Water Environment \(Controlled Activities\) \(Scotland\) Regulations 2011.](#)

Environmental Impact Assessment Directive ([DIRECTIVE 2011/92/EU](#))

SNIFFER (2009) A Functional Wetland Typology for Scotland UKTAG (2008) List of NVC communities and associated groundwater dependency scores.

[Forests and Water Guidelines - Fifth Edition, 2011, Forestry Commission](#)

[Scottish Planning Policy \(SPP\)](#)

[Planning Advice Note 58: Environmental Impact Assessment](#)

[Electricity Works \(EIA Scotland\) Regulations 2000 \(as amended\)](#)

[The Water Environment \(Controlled Activities\) \(Scotland\) Regulations 2011 \(CAR\) – A Practical Guide](#)

[The delimitation of capture zones around small sources – T Keating, M.J. Packman, A. Peacock – 1998, The Geological Society](#)

[Manual on treatment of small water supply system – P.J Jackson – 2001, Department of the Environment, Transport and the Regions](#)

Groundwater protection zones – Manual of standard zone delineation methodologies – 1996, Environment Agency and BGS

[Scottish Government Planning Advice on Renewable Energy](#)

[SEPA WAT-SG-25 Good practice River Crossing](#)

[SEPA WAT-SG-26 Good practice Sediment Management](#)

[SEPA WAT-RM-11 Licensing groundwater abstractions including dewatering](#)

[SEPA WAT-SG-12 General Binding Rules for Surface Water Drainage Systems](#)

SCOTTISH ENVIRONMENT PROTECTION AGENCY	Identifier: LUPS-GU4
<p align="center">Land Use Planning System SEPA Guidance Note 4</p> <p align="center">Planning advice on windfarm developments</p>	Page no: 26 of 28
	Issue No: Version 8
	Issue date: 30 August 2017
	Originator: Katherine Lakeman
	Authorised by: Alan Farquhar

Appendix 3: Example Material Volume table

Material Volumes (all quantities

	Fill						Excavate				Material For "Disposal"		
	Rock			Glacial Till	Acrotelm Peat	Catotelm Peat	Acrotelm Peat	Catotelm Peat	Glacial Till	Weathered rock	Acrotelm Peat	Catotelm Peat	Glacial Till
	Processed	Bulk	Weathered rock										
Tracks													
Existing Upgrade													
Excavated													
Floating													
Hardstandings													
H/S ancilliary areas													
Turbine Bases													
Borrow Pit													
Concrete Aggregate													
Cable Sand (rock dust)													
Control Building Hardstanding													
Total	0	0	0	0	0	0	0	0	0	0	0	0	0

Assumptions

SCOTTISH ENVIRONMENT PROTECTION AGENCY	Identifier: LUPS-GU4
<p align="center">Land Use Planning System SEPA Guidance Note 4</p> <p align="center">Planning advice on windfarm developments</p>	Page no: 27 of 28
	Issue No: Version 8
	Issue date: 30 August 2017
	Originator: Katherine Lakeman
	Authorised by: Alan Farquhar

Example Peat Management Plan.

		Month																					
		1	2	3	4	5	6	7	8	9	10	11											
Activity	Peat Type	Acr o	Cat o	A cr o	Cat o	A cr o	Cat o	Acr o	Cat o	Acr o	Cat o	Acr o	Cat o	Acr o	Cat o	Acr o	Cat o	Acr o	Cat o	Acr o	Cat o		
		All volumes in m ³																					
Excavations																							
Borrow Pit																							
Tracks																							
Upgrade Existing																							
Excavated Tracks																							
Floating Hardstanding																							
H/S ancillary areas																							
WTG Bases																							
Control Building																							
Monthly Peat Excavated		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Cumulative excavated				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		

SCOTTISH ENVIRONMENT PROTECTION AGENCY	Identifier: LUPS-GU4
<p style="text-align: center;">Land Use Planning System SEPA Guidance Note 4</p> <p style="text-align: center;">Planning advice on windfarm developments</p>	Page no: 28 of 28
	Issue No: Version 8
	Issue date: 30 August 2017
	Originator: Katherine Lakeman
	Authorised by: Alan Farquhar

Fill																						
Borrow Pit																						
Tracks																						
Upgrade Existing																						
Excavated Tracks																						
Floating Hardstanding																						
H/S ancillary areas																						
WTG Bases																						
Control Building																						
Monthly Peat Reinstated	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cumulative Reinstated			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Surplus/Storage			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Combined total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0