AGENDA ITEM 5

APPENDIX 5

NON-STATUTORY GUIDANCE: POLICY 7 RENEWABLE ENERGY

PLANNING

Cairngorms National Park
Local Development Plan 2021
Non-statutory guidance: Policy 7 – Renewable Energy

Contents

How to use this guidance

This non-statutory guidance supports the Cairngorms National Park Local Development Plan 2020 and applies to all planning applications within the Cairngorms National Park that incorporate renewable energy systems. The Local Development Plan is available via https://cairngorms.co.uk/planning-development/local-development-plan-2020/ and should be read alongside this guidance.

The guidance deals only with renewable energy proposals that require planning permission. In some circumstances, when added to existing domestic buildings or their garden ground some renewable energy systems are covered by permitted development rights and would not require planning permission. However the rules around what is and is not permitted development are complex - information on which renewable energy systems have domestic permitted development rights can be found on the Scottish Government website via https://www.gov.scot/publications/guidance-householder-permitted-development-rights-9781780456836/pages/8/.

This guidance should be used to during the preparation and assessment of planning applications that include renewable energy systems that are not covered by permitted development rights, to ensure that the requirements of Policy 7 are met.

Introduction and context

Policy 7 of the Local Development Plan 2020 (overleaf) provides the framework for how consideration of renewable energy systems should be incorporated into development proposals. A range of renewable energy systems are identified in the policy and this guidance. They should not be viewed as an exhaustive list however, as new technologies may emerge during the lifetime of the Local Development Plan.

The policy applies to all developments that incorporate renewable energy systems that are not covered by permitted development rights. For example, new housing developments incorporating air source heat pumps as part of the development, as well as those that are solely concerned with energy production such as hydro-electricity or energy from waste developments.

All development proposals must demonstrate how they have avoided adverse impacts on landscape, community, natural and cultural heritage interests that make up the special qualities of the Park. The following sections of this guidance provide advice on what needs to be considered for different types of renewable energy system and provides links to other useful sources of information.

Local Development Plan 2020
Policy 7 – Renewable Energy

7.1 All renewable energy developments

Proposals for renewable energy generation will be considered favourably where:

a) they contribute positively to the minimisation of climate change;

b) they complement the sustainability credentials of the development;

c) they conserve and enhance the special qualities of the Park, including wildness;

d) they include appropriate means of access and traffic management, including appropriate arrangements for construction areas and compounds;

e) they adequately minimise all cumulative effects; and

f) they adequately minimise detrimental impacts on local air quality, particularly for proposals including combustion plants such as biomass.

Planning conditions and/or financial bonds will be used where appropriate to secure decommissioning and site restoration.

7.2 Hydropower

In addition, all hydropower proposals must have no detrimental impact on:

a) the water environment;

b) the recreational use of the water environment;

c) peat and soil along the length of the scheme; and

d) the passage of migratory fish.

7.3 Wind energy

In addition, all wind energy proposals must adequately minimise:

a) all noise impacts from the development;

b) all shadow flicker caused as a result of the development; and

c) the impact of the development on all aviation interests.

Large-scale commercial wind turbines[1] are not compatible with the landscape character or special landscape qualities of the National Park and will not be supported.

7.4 Biomass

In addition, all biomass proposals must include sufficient storage capacity to minimise the need for delivery of the fuel to the site.

7.5 Energy from waste

In addition, all waste energy proposals must:

a) ensure they maximise the energy produced, distributing the energy within the locality of the development; and

b) minimise the impact of transporting the waste material to and within the site.

7.6 Heat networks

The development of heat networks will be encouraged. Masterplans/development briefs for major developments should consider the feasibility of meeting heating requirements through a low carbon district heating scheme.

[1] Defined as more than one turbine and more than 30m in height

Considerations for all renewable energy proposals

Appropriately scaled[1] and sited renewable energy systems that do not conflict with the special qualities of the Park are encouraged. They have an important role to play in decreasing carbon emissions from energy production, and so reducing the contribution of the Park to climate change.

All renewable energy proposals should follow the mitigation hierarchy (figure 1) from the outset. This should enable schemes to be designed to avoid, minimise or mitigate adverse effects on natural, cultural, community and landscape features and interests.

Some renewable energy schemes may fall within the criteria that require detailed Environmental Impact Assessment (EIA) and consents or licenses, as well as planning permission.

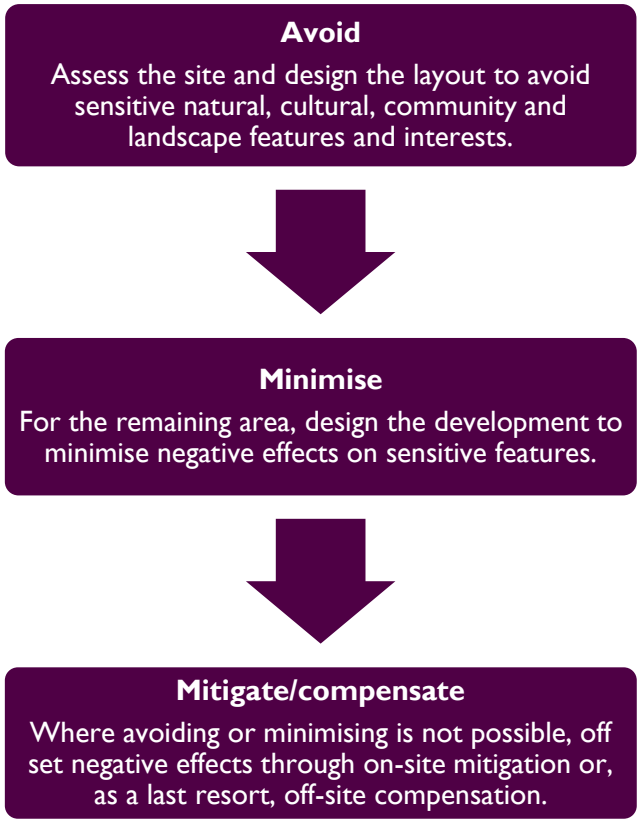

Figure 1: mitigation hierarchy

More information about EIA can be found on the NatureScot[2] website via https://www.nature.scot/professional-advice/planning-and-development/environmental-assessment/environmental-impact-assessment.

In addition to using this guidance, cross reference to other Local Development Plan policies and their supplementary guidance (where present) will be required to ensure that relevant issues are considered. For example, Policy 3 design and placemaking, Policy 4 natural heritage, Policy 5 landscape and Policy 9 cultural heritage may apply. Depending on the purpose of the renewables proposal, Policy 2 supporting economic growth may also be relevant.

[1] As stated in Policy 7, large scale commercial wind energy developments are not compatible with the landscape character or special landscape qualities of the Park. Large scale is defined in the Policy as more than one turbine and more than 30m in height.

[2] formerly known as Scottish Natural Heritage

Considerations for stand-alone renewable energy developments

Stand-alone developments are those with the sole function of generating energy, such as hydro-electricity schemes, energy from waste or biomass. Because of their comparative size and the infrastructure needed to support them, these are more likely to require greater consideration to avoid adverse impacts on landscape, natural heritage and community interests that make up the special qualities of the Park.

Larger renewable energy schemes such as hydro-electricity, energy from waste and biomass can result in increases in traffic during construction and operation of the scheme. An assessment of the potential impacts caused by changes to traffic movements and numbers, as well as a traffic management plan detailing measures taken to avoid, minimise or mitigate adverse impacts may be necessary to support planning applications.

Early engagement with the relevant roads authority is strongly recommended where changes to traffic movements and numbers is likely.

In addition to traffic considerations, the following sections of the guidance provide pointers for what else should be considered for different types of energy production scheme.

Hydro-electricity

Hydro-electric schemes can involve significant ground excavation during construction, combined with the installation of above and below ground infrastructure such as pipes and tracks (as shown in figure 2). Without careful siting, design, construction and restoration measures, this can result in adverse impacts on landscape, habitats, hydrology and species. A range of assessments should be carried out to inform hydro-electricity proposals so that they can be designed to avoid, minimise or mitigate adverse impacts in accordance with the mitigation hierarchy (figure 1).

Figure 2 –hydro-electricity construction site

Details of the assessments carried out and how they have been used to inform the design and layout of hydro-electricity schemes should be submitted with planning applications as supporting information.

Assessments should include consideration of impacts during construction and operation of the proposed scheme, as well as whether there could be cumulative effects with other development (existing and proposed).

The level of assessment will vary depending in the sensitivities of the proposed development site and surrounding area. Some schemes may require formal detailed Environmental Impact Assessment, while others may only require some of the assessments listed below. Early engagement with the relevant planning authority is therefore strongly recommended so that the level of assessment can be agreed at the earliest stage.

The types of assessment that may be required include (but are not limited to):

- Landscape and visual impact assessment (LVIA), to assess effects on landscape character and visual effects, as well as areas important for landscape interests such as National Scenic Areas and Wild Land Areas.

- Habitats and species, particularly those reliant on the water environment such as fish, otter and lower plants associated with damp habitats, as well as terrestrial habitats and species that may be affected by the scheme during construction and operation.

- Water environment, such as changes to water levels and flow rates, as well as impacts on private water supplies and other hydro-electricity schemes in the same catchment.

- Noise, particularly impacts on nearby properties and communities. Early engagement with the environmental health service of the relevant planning authority is encouraged to ensure that relevant assessments are carried out and the necessary information submitted with planning applications.

- Soils, both direct effects such as excavation, as well as indirect effects through changes in hydrology affecting habitats that protect or create soils, particularly carbon rich soils such as peat and peatland habitats that rely on high ground water levels.

- Recreation, both informal and organised use of the watercourse (figure 3) and surrounding land at the proposed development site, as well as up and downstream effects.

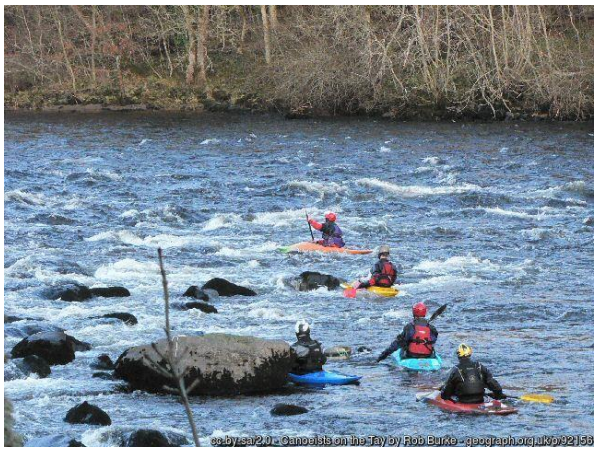

Figure 3 –kayakers on the River Tay

NatureScot and SEPA provide guidance and information that can be used to inform assessments as well as the design and location of hydro-electricity schemes, available via https://www.nature.scot/professional-advice/planning-and-development/advice-planners-and-developers/renewable-energy-development/hydroelectric-power and https://www.sepa.org.uk/regulations/water/hydropower/.

The Landscape Institute provide advice on LVIA, available via https://www.landscapeinstitute.org/technical-resource/landscape-visual-impact-assessment/. NatureScot provide information about National Scenic Areas via https://www.nature.scot/professional-advice/safeguarding-protected-areas-and-species/protected-areas/national-designations/national-scenic-areas/national-scenic-areas.

Advice for Wild Land Area assessments can be found via https://www.nature.scot/professional-advice/landscape/landscape-policy-and-guidance/assessing-impacts-wild-land-areas-draft-guidance.

Energy from waste

There are no significant sources of waste within the Park, so energy from waste plants would require significant transport of waste from outwith the Park to fuel them.

The Park is therefore not considered to be appropriate for large-scale energy from waste plants due to the traffic movements this would generate. However, energy from waste schemes that make use of a local source of waste and where the energy/heat being produced is used in the locality of the energy plant may be appropriate. They must be located to avoid having adverse effects from/on traffic, noise, odour, water and air quality from energy production, delivery and storage of waste.

SEPA provide advice and information in relation to energy from waste schemes, available via https://www.sepa.org.uk/regulations/waste/energy-from-waste/. Early engagement with SEPA and the environmental health service of the relevant planning authority is encouraged to ensure that relevant assessments are carried out and the necessary information submitted with planning applications. For example, energy from waste proposals will require to be accompanied by an air quality assessment.

Considerations for renewable energy incorporated into other development

Smaller scale renewable energy systems are usually part of wider development proposals, such as solar panels, biomass boilers, ground or air source heat pumps incorporated into proposals for a new housing development. The following sections of the guidance provide pointers for what needs to be considered for different types of small scale energy production incorporated into other development proposals.

Additional advice and information can be found on the NatureScot website via https://www.nature.scot/professional-advice/planning-and-development/advice-planners-and-developers/renewable-energy-development/micro-renewables.

Heat networks

Heat networks can involve significant ground excavation during construction, combined with the installation of above and below ground infrastructure such as pipes and buildings to house heat production/management systems. However heat networks are usually part of wider development, for example district heating schemes for new housing proposals. The impacts of installing a heat network can therefore be reduced by careful integration into the wider construction programme, so that repeat working of areas of land can be avoided.

The main issues that may arise from heat network proposals are related to impacts on soils and water during construction, and noise affecting neighbours during construction and operation.

Depending on the fuel source used, traffic may also be a consideration. An assessment of the potential impacts caused by changes to traffic movements and numbers, as well as a traffic management plan detailing measures taken to avoid, minimise or mitigate adverse impacts may be necessary to support planning applications where fuel needs to be regularly delivered to site.

Early engagement with the relevant roads authority is strongly recommended where changes to traffic movements and numbers is likely.

SEPA provide advice and information in relation to energy from heat networks that may be useful, available via https://www.sepa.org.uk/environment/land/planning/advice-for-developers/.

Wind energy

Appropriately sited wind energy development in the Park of one turbine under 30 metres in height to blade tip may be compatible with the special qualities of the Park. Wind energy may take the form of a free standing wind turbine in garden ground or farmland (figure 4), or a turbine mounted on a building.

The first consideration for either type of wind turbine is whether there is sufficient wind speed and whether the wind flow is unimpeded. Trees and buildings can cause turbulence that can affect the performance, so careful turbine siting is required to ensure it will be viable.

Figure 4 – free standing small scale turbine

The Energy Saving Trust provide advice on how to find out about wind speed and choosing a site, available via https://energysavingtrust.org.uk/renewable-energy/electricity/wind-turbines.

If a suitable location is available in relation to wind speed and flow, then assessment of potential impacts on a range of interests may be required so that the mitigation hierarchy (figure 1) can be used.

The types of assessment that may be required include (but are not limited to):

- Landscape and visual impact assessment (LVIA), to assess visual effects and effects on landscape character, as well as on areas important for landscape interests such as National Scenic Areas and Wild Land Areas.

- Habitats and species, particularly those that may be affected by the scheme during construction and operation. For example, sensitive habitats may be damaged during installation of the base for free-standing wind turbines and burial of electricity cables, either directly through ground excavation or indirectly through changes in hydrology. In addition, bats and some species of birds make use of buildings to roost and nest, so are at risk from collision with the moving blades of building mounted wind turbines, resulting in mortality. Bats, and all wild bird species while nesting, are legally protected[3]. This means that they must not be disturbed or otherwise harmed. Bats and other bird species are also at risk of collision from free-standing wind turbines. Because the Park is home to rare and/or sensitive species and habitats, surveys carried out by appropriately experienced (and licensed where required) ecological surveyors may be required to inform development proposals.

  More information about natural heritage interests (including protected species and licensing requirements) can be found in Policy 4 of the Local Development Plan and accompanying Natural Heritage supplementary guidance ***link to be added once published***

- Soils, both direct effects such as excavation, as well as indirect effects through changes in hydrology affecting habitats that protect or create soils, particularly carbon rich soils such as peat and peatland habitats that rely on high ground water levels.

- Water environment, where significant ground excavation or crossing of water courses is required to bury electricity cables, this may disrupt ground water movement supporting sensitive habitats and species, allow sediment to pollute water courses and/or affect private water supplies in the vicinity.

- Noise, particularly impacts on nearby properties and communities. Early engagement with the environmental health service of the relevant planning authority is encouraged to ensure that the necessary assessments are carried out and the required information submitted with planning applications.

[3] Detail on which species are legally protected, actions that can be offenses and the species licensing process: https://www.nature.scot/professional-advice/planning-and-development/planning-and-development-advice/planning-and-development-protected-species

- Shadow flicker, caused by the sun passing behind the turbine blades in certain conditions causing a flickering effect in neighbouring properties. This can usually be avoided through appropriate siting of more than 11 rotor diameters distance between the turbine and the nearest occupied building[4]. Free-standing wind turbines may require specific assessment to ensure it will not be a problem at distances less than 11 rotor diameters.

Details of the assessments carried out and how they have been used to inform the siting of the wind turbine should be submitted with planning applications as supporting information. Assessments should include consideration of impacts during construction and operation of the proposed scheme, as well as whether there could be cumulative effects with other development (existing and proposed).

The level of assessment will vary depending on the sensitivities of the proposed development site and surrounding area. Some wind turbine proposals may require formal detailed Environmental Impact Assessment (EIA), while others may only require some of the assessments listed above. Early engagement with the relevant planning authority is therefore strongly recommended so that the level of assessment can be agreed at the earliest stage.

NatureScot provide advice for wind energy proposals of different scales. Those most relevant to wind energy development in the Park are available via https://www.nature.scot/assessing-impact-small-scale-wind-energy-proposals-natural-heritage and https://www.nature.scot/professional-advice/planning-and-development/advice-planners-and-developers/renewable-energy-development/micro-renewables.

Biomass

The type and source of biomass material is an important factor when considering if biomass is an appropriate means of energy production for a given location. This is because one of the main benefits of energy from biomass is that it should be carbon neutral.

However, if sources of biomass in the locality are limited, the supply of biomass can involve significant transportation distances, sometimes from overseas. Where this involves transportation powered by fossil fuels, it increases carbon emissions and negates the benefit of biomass.

Biomass energy schemes that are able to make use of local sources of biomass

[4] In line with the Highland Council Onshore Wind Energy Supplementary Guidance (2016) https://www.highland.gov.uk/directory_record/712079/onshore_wind_energy, which used the findings in the Department of Energy and Climate Change report https://webarchive.nationalarchives.gov.uk/20110405153950/http://www.decc.gov.uk/en/content/cms/what_we_do/uk_supply/energy_mix/renewable/planning/on_off_wind/shadow_flicker/shadow_flicker.aspx

(figure 5) and can demonstrate a long term supply are more likely to be appropriate in the Park. Biomass energy should be located to avoid having adverse effects from/on traffic, noise, odour, water and air quality from energy production, delivery and storage of biomass.

Figure 5 –felled trees at Ellan Wood, Carrbridge

NatureScot and SEPA provide advice and information in relation to energy from biomass, available via https://www.nature.scot/professional-advice/planning-and-development/advice-planners-and-developers/renewable-energy-development/micro-renewables and https://www.sepa.org.uk/environment/energy/renewable/#bio.

Solar power (heat and electricity)

Solar photovoltaic panels that generate electricity, and thermal panels that produce heat tend to be mounted on buildings and so have limited potential for negative impacts. However, as buildings are used by bats and some species of birds to roost and nest, they are at risk from disturbance during installation and maintenance of solar panels. Bats, and all wild bird species while nesting, are legally protected[5] so must not be disturbed or otherwise harmed. Therefore, consideration (and where necessary a survey) by a suitably experienced and licensed ecological surveyor may be necessary to ensure that disturbance will not occur.

If mounted on the ground, the potential for effects tends to increase with the scale of the array of panels. For example commercial solar farms will have greater effects due to their size when compared to small domestic scale array (figure 6).

Figure 6 – example of ground mounted domestic scale solar panels (far left)

Assessment for the potential for impacts on the following may be required:

- Landscape and visual impact assessment (LVIA), to assess visual effects (particularly from glare from the sun reflecting off the panels) and effects on landscape character, as well

[5] Details on which species are legally protected, actions that can be offenses and the species licensing process https://www.nature.scot/professional-advice/planning-and-development/planning-and-development-advice/planning-and-development-protected-species

as on areas important for landscape interests such as NSAs and WLAs.

- Habitats and species, particularly those that may be affected by construction and maintenance. For example, sensitive habitats may be damaged during installation of the base for free-standing solar panels and burial of electricity cables, either directly through ground excavation or indirectly through changes in hydrology. Other habitats may also be damaged that are important for sensitive species. Because the Park is home to rare and/or sensitive species and habitats, surveys carried out by appropriately experienced (and licensed where required) ecological surveyors may be required to inform development proposals. More information can be found in Policy 4 of the Local Development Plan and accompanying Natural Heritage supplementary guidance ***link to be added once published***
- Soils, may be affected directly through excavation, as well as indirectly through changes in hydrology affecting habitats that protect or create soils, particularly carbon rich soils such as peat and peatland habitats that rely on high ground water levels.
- Water environment, as where significant ground excavation or crossing of water courses is required to bury electricity cables, this may disrupt ground water movement supporting sensitive habitats and species, allow sediment to pollute water courses and/or affect private water supplies in the vicinity.

The level of assessment will vary depending in the sensitivities of the proposed development site and surrounding area.

Most domestic scale solar panels mounted on buildings will require minimal assessment. However larger ground mounted solar array proposals may require formal detailed Environmental Impact Assessment, while others may only require some of the assessments listed above.

Early engagement with the relevant planning authority is therefore strongly recommended for proposals in sensitive locations and those that are ground mounted, so that the level of assessment can be agreed at the earliest stage.

NatureScot provide advice for solar energy proposals available via https://www.nature.scot/professional-advice/planning-and-development/planning-and-development-advice/renewable-energy/solar-energy.

Heat pumps (air, ground, water)

Heat pumps extract heat from an external source, using a system like a reverse fridge (figure 7). They require electricity to run the heat exchange system.

Air and ground source heat pumps are usually attached to or located close to the building they are supplying.

Systems should be located to ensure that they do not cause noise issues for neighbouring properties during operation, or impact on any areas protected for natural, geological or cultural heritage interests.

As ground source heat pumps require ground excavations to install the heat loop, an assessment of the potential effects on soils, water, habitats and species may be required.

The considerations for potential effects on soils, water, habitats and species are the same as for *Solar power (heat and electricity)*.

The impacts of installing a ground source heat pump as part of a wider development such as a new housing development can be reduced by carefully integration into the wider construction programme, so that repeat working of areas of land can be avoided.

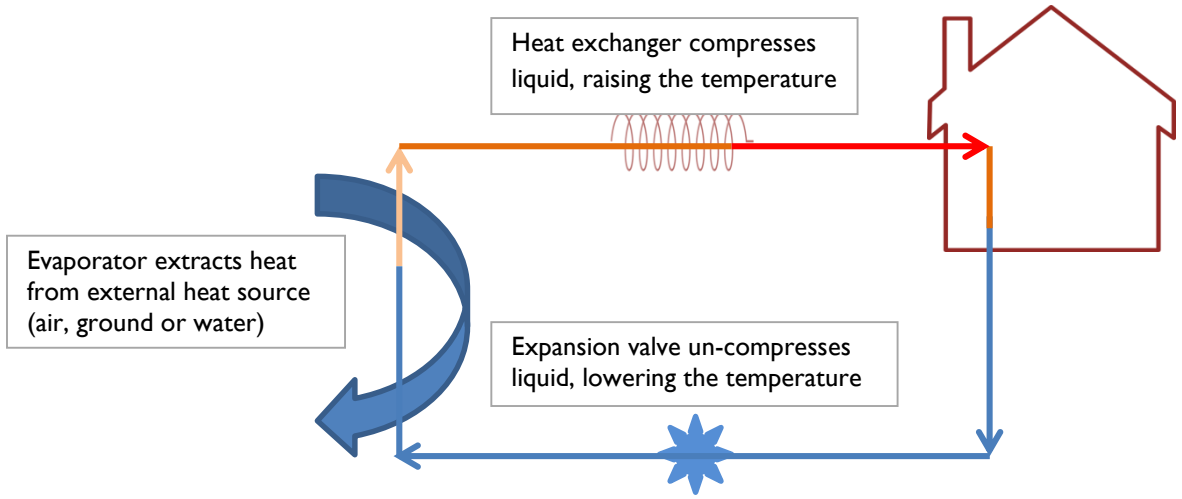

Figure 7 – indicative heat pump system

The Energy Saving Trust provides information about other considerations for air and ground source heat pumps, https://energysavingtrust.org.uk/renewable-energy/heat/ground-source-heat-pumps and https://energysavingtrust.org.uk/renewable-energy/heat/air-source-heat-pumps.

NETREGS and SEPA provide advice on ground source heat pumps via https://www.netregs.org.uk/environmental-topics/carbon-reduction-and-efficiency/generate-renewable-energy/geothermal-energy-and-ground-source-heat-pumps/ and https://www.sepa.org.uk/media/219751/sepa-s-requirements-for-activities-related-to-geothermal-energy.pdf.

Water source heat pumps draw heat from water rather than the air or ground, which is converted to heat energy in a land-based conversion system, before the water is returned to the water source. Pipes will be required running from the water to/from the heat exchanger, and between the exchanger and the building making use of the heat energy.

In this respect the potential impacts from excavations are similar to those identified above for ground source heat pumps.

However, as water requires to be abstracted from and then returned to the water course, particular attention will be required as to potential impacts on the water environment and the habitats and species that rely on it.

There are a number of water related areas protected for nature conservation in the Park, with many watercourses connected to them requiring the same level of assessment to ensure that impacts do not affect the protected area up or downstream of the proposed development.

SEPA provide advice on the regulations around abstraction, available via https://www.sepa.org.uk/regulations/water/abstractions/.

NatureScot provide information about protected areas available via https://www.nature.scot/professional-advice/planning-and-development/advice-planners-and-developers/planning-and-development-protected-areas.

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This document is available in large print on request. Please contact the Cairngorms National Park Authority on 01479 873535. It is also available to view at www.cairngorms.co.uk

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