

**REGULATORY**  
**GUIDANCE:**

**GEOHERMAL HEAT IN**  
**SCOTLAND**

**Scottish Government**  
**Directorate of Energy and Climate Change**

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# Regulatory Guidance: Geothermal Heat in Scotland

## Introduction

1. This guidance document outlines the regulatory framework for exploring and exploiting Scotland's geothermal resource. It provides a point of reference for those considering undertaking an onshore geothermal project in Scotland but is not intended to be a comprehensive list of all relevant legislation. It highlights the key primary and secondary legislation specific or relevant to projects involving the exploration and extraction of geothermal heat from the ground. It also provides links to further reading.
2. Contact with the relevant regulatory authorities is recommended from an early stage of planning in order to understand the processes, timescales and potential costs associated with the relevant permission/consent/approval systems. Pre-application discussions, however, do not obviate the need for independent legal advice being sought in respect of the potential application of the legislation in specific circumstances.

## Geothermal heat explained

3. Geothermal energy is the natural heat that exists within our planet. The Scottish Government is targeting 3 geological settings within Scotland for exploration in respect of their geothermal potential:

### **Minewater**

- Water is held naturally in rocks as groundwater and flows continuously into active mineworkings, requiring them to be pumped out. However, when mining ceases the pumping ceases and the abandoned mineworkings become flooded. Mines can extend to relatively deep levels so, in some cases, abandoned mineworkings can provide easy access to warm water. This warm minewater can be accessed by means of a borehole, and the heat can then be made available for space heating or domestic hot water heating.

### **Hot sedimentary aquifers**

- Aquifers are bodies of permeable rock that can conduct significant quantities of groundwater. The largest and most conductive of these generally occur in sedimentary strata, and those that are deep enough to hold warm or hot water can be classed as Hot Sedimentary Aquifers (HSA). The hot water can be accessed and abstracted from the aquifer by means of a borehole and the heat can then be made available for space heating or domestic hot water heating.

### **Hot dry and hot wet rocks**

- Crystalline rocks at several kilometres depth can be hot enough to generate electricity. Such rocks usually lack open fractures and consequently have very low permeability. They are therefore essentially dry, hence they are known as Hot Dry Rock (HDR) resources. Some granite intrusions generate

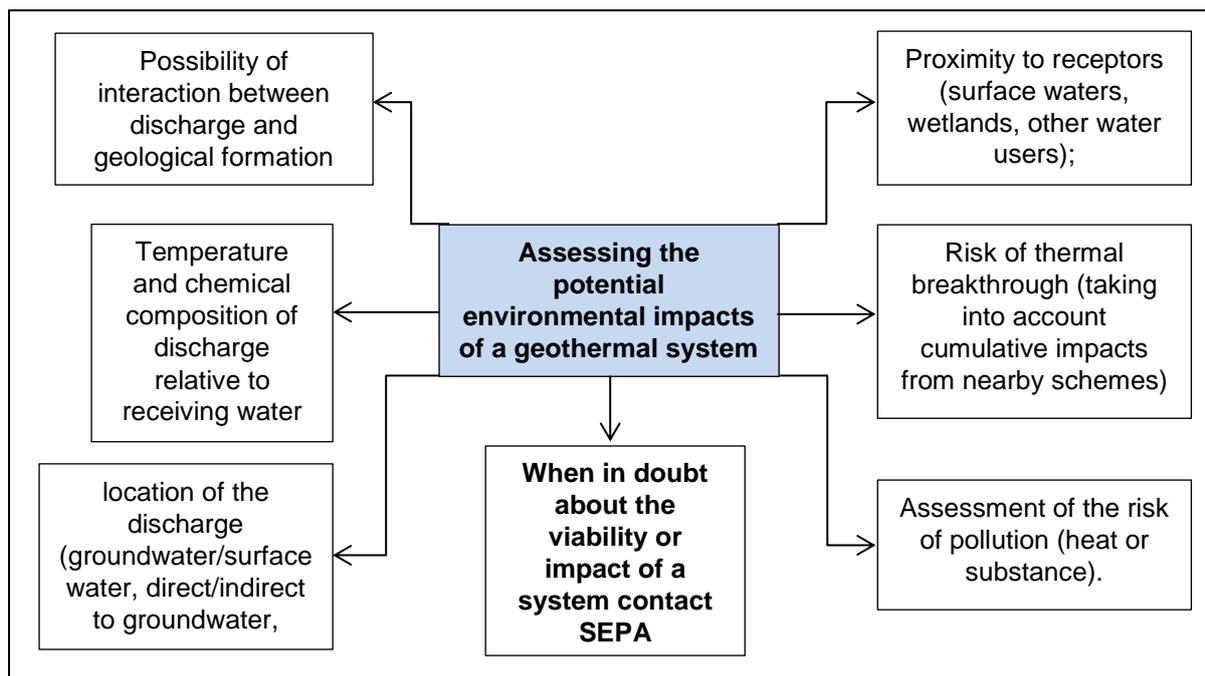
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their own heat, so they can be hotter than other rocks at the same depth and therefore are popular HDR targets. Exploiting HDR resources typically relies on creating an Engineered Geothermal System (EGS), in which a network of open fractures is created to hydraulically connect boreholes drilled some distance apart into a hot rock zone. Cold water injected into the open fractures through one borehole passes through the fractures, and the resulting superheated water or steam is then extracted through another borehole. The thermal energy stored in the water can be converted into electricity at the surface in various ways.

- Some crystalline rocks are naturally permeable; these can contain significant amounts of hot water and are sometimes known as Hot Wet Rock (HWR) resources. Being naturally permeable the water can be abstracted by means of a borehole and an EGS is not required.
- In the case of both hot dry rocks and hot wet rocks, following the extraction of the heat, the water can be re-injected at the site, maintaining the level of the groundwater available for future abstraction.

### Possible Environmental Impacts

4. A number of potential direct and indirect environmental impacts have been identified as being associated with geothermal heat exploration and production.



### Regulation of geothermal operations

5. There are a number of public bodies involved in the regulation and control of activities which may be undertaken during the exploration and exploitation of geothermal heat:

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- The Scottish Environmental Protection Agency (SEPA) regulates activities that may cause pollution or that pose another risk to the environment. In respect of geothermal SEPA regulates abstractions from and discharges of pollutants to the water environment, including those associated with geothermal energy, through the Water Environment (Controlled Activities) (Scotland) Regulations 2011. For more information, refer to SEPA's guidance document for activities related to geothermal energy ([link at Annex](#)).
- The Planning Authority is responsible for granting planning permission for works associated with borehole construction and wellhead development. As part of a planning application, an Environmental Impact Assessment may be required to be undertaken.
- Any activity which intersects, disturbs or enters coal seams requires prior written authorisation from the Coal Authority. A Minewater Heat Recovery Access Agreement must be sought in respect of any geothermal operations involving minewater.
- Health and Safety Executive (HSE) inspectors will take a risk-based approach to the drilling of boreholes for geothermal exploitation. The broad framework of the Health and Safety at Work etc Act 1974, which applies to all workplaces will be utilised in assessing geothermal developments.

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The Town and Country Planning (Scotland) Act 1997, as amended

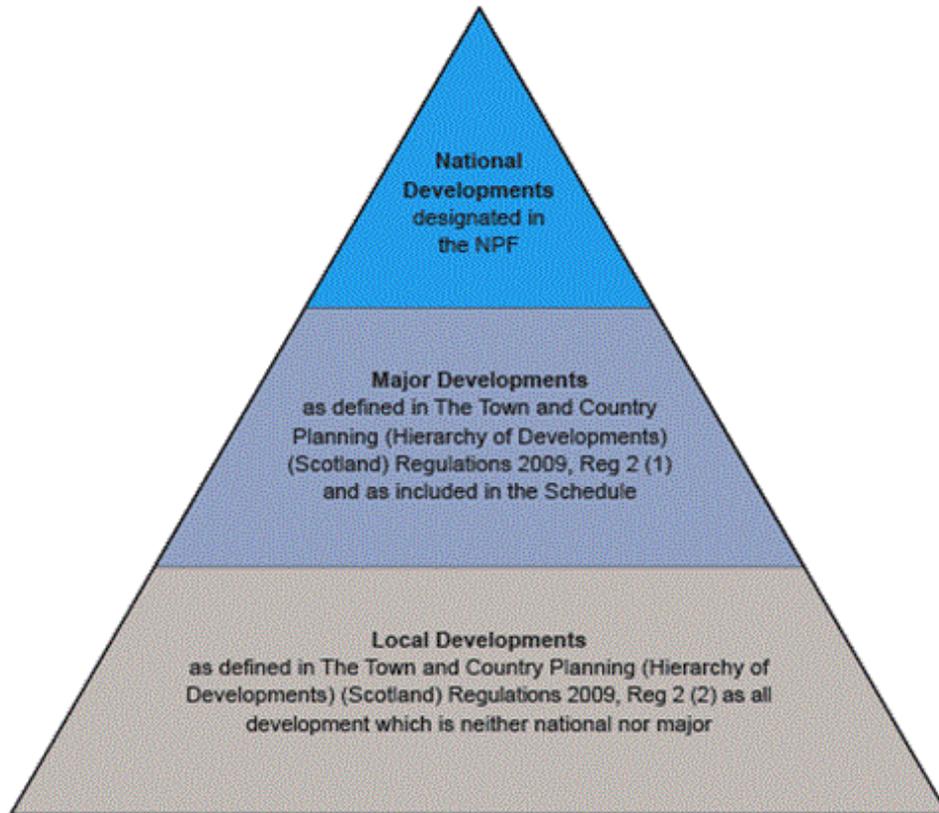
The Town and Country Planning (Development Planning) (Scotland) Regulations 2008, as amended

The Town and Country Planning (Hierarchy of Developments) (Scotland) Regulations 2009

The Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2013, as amended

6. The planning system is used to make decisions about future development, and the use of land in Scotland's towns, cities and countryside. The planning system exists to regulate the use and development of land and buildings by granting or refusing planning permission. Decisions about planning applications are based on the development plan for each area, which is prepared by the relevant planning authority.
7. Planning permission from the relevant planning authority is required for any new development. "Development" includes any building, engineering, mining or other operations in, on, over or under land. It also includes material changes in the use of buildings and land.
8. For the purposes of planning applications, developments are categorised as local, major or national. The different types allow planning authorities to treat developments in a way which is suited to their size, complexity and the issues likely to arise.
  - Local developments include changes to individual houses and smaller developments for new housing and retail.
  - Major developments include developments of 50 or more homes, certain waste, water, transport and energy-related developments, and larger retail developments.
  - National developments are mainly large public works.
9. National and major developments are identified in the National Planning Framework and the Town and Country Planning (Hierarchy of Developments) (Scotland) Regulations 2009 respectively.

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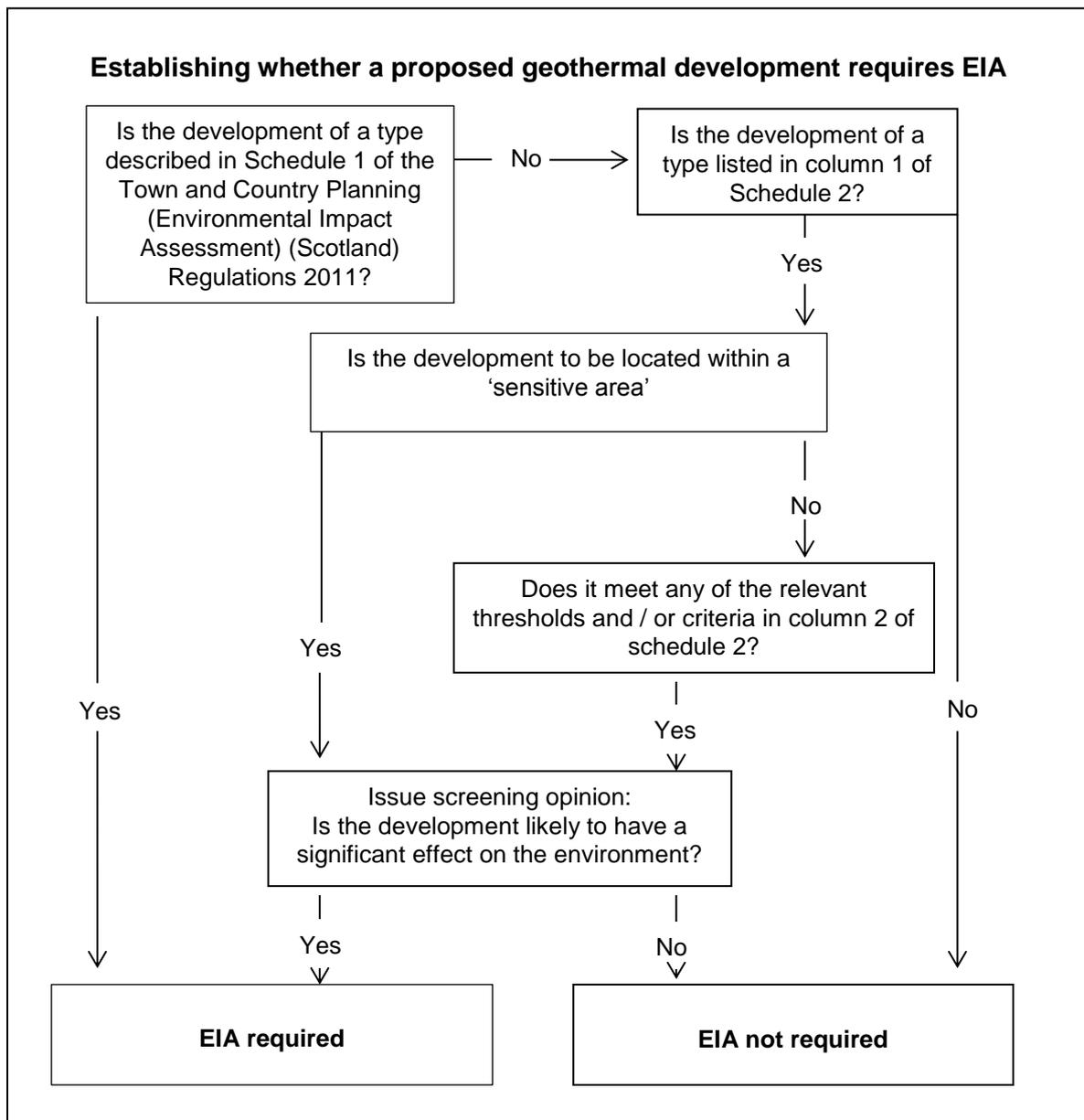


10. **All** planning applications must contain a description of the development, a site address or location and details of who is applying for the planning permission. The following will also be required by the planning authority:
- drawings and plans;
  - a certificate showing the site owners and any agricultural tenants, and whether they have been notified that an application has been made; and
  - the planning application fee.
11. The size of the planning application fee will depend on the type of development. A further charge may apply where the application requires the publication of a notice in a newspaper.
12. Depending on the scale and/or area of the development, and the nature of the application, a 'design and access statement' or a 'design statement' may also be required, setting out how the design of the proposal has been considered.
13. The planning authority has up to 4 months to determine applications for planning permission for national developments and major developments and up to 2 months to determine planning permission for local developments (this is extended to 4 months if an Environmental Impact Assessment is required (more information in next section)). If an applicant for planning permission does not agree with a planning authority's decision to refuse consent or does not agree with a condition attached to the grant of planning permission, they can ask for either a local review or appeal of the decision. A local review or appeal can also be sought if the planning authority does not make a decision within the 2 months

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for local developments and 4 months for major and national developments, or any extended period agreed to in writing by the applicant and the planning authority.

14. Local reviews apply where applications for local development are delegated to an officer for decision. In all other cases a right of appeal to Scottish Ministers applies. Local reviews or appeals must be requested within 3 months from the date of the decision or, in relation to reviews and appeals where a decision has not been made, within 3 months of the end of the statutory period or any agreed extended period.
15. Some developments need a specialist report, for example on retail, transport or noise. Whether a specialist assessment is needed will depend on the type of development and its location. An application may also need an Environmental Impact Assessment, where there is likely to be a significant effect on the environment.



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16. If the proposal is for a **major or national development**, a **pre-application consultation (PAC)** with the community will also be required. This includes sending details of the proposal to the planning authority and to every community council any part of whose area is within or adjoins the land on which the proposed development is situated (this may include community councils in a neighbouring planning authority). PAC also involves consulting the wider community using at least one locally advertised public event. The objective of PAC is for communities to be better informed about major and national development proposals and to have an opportunity to contribute their views before a formal planning application is submitted to the planning authority. However, it does not take away the need for, and right of, individuals and communities to express formal views to the planning authority during the planning application process itself. A screening process is available whereby prospective applicants can seek the planning authority's view on whether their proposal is a national development or a major development and therefore requires PAC.
17. **Notification of Initiation of Development:** A person who intends to start development that has been granted planning permission (including planning permission in principle) must, once they have decided the date they will start work, inform the planning authority of that date as soon as is practicable and before starting work. There is no minimum period of notice.
18. In addition to providing the date on which development is expected to commence, the applicant is required to submit other information specified in the Development Management Regulations which may be useful to the planning authority, including:
- The full name and address of the person intending to carry out the development;
  - The full name and address of the landowner if they are a different person;
  - The full name and address of any site agent appointed in respect of the development; and
  - The date of issue and the reference number of the planning permission.
19. Some developments require an on-site notice while a development is being carried out.
20. **Notification of completion of development:** A person who completes a development for which planning permission (including planning permission in principle) has been given must, as soon as practicable after doing so, give notice of completion to the planning authority.

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### Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2011

### The Town and Country Planning (Miscellaneous Amendments) Scotland Regulations 2015

21. An Environmental Impact Assessment (EIA) is mandatory for projects identified in Schedule 1 of the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2011 and may be required for projects identified in Schedule 2. Some geothermal projects may be relevant to Schedule 1 of the Regulations, such as large scale or more complex projects which have groundwater abstraction or recharge schemes where the annual volume of water abstracted or recharged is equivalent to or exceeds 10 million cubic metres.

22. Deep geothermal projects are referred to in Schedule 2 of the Regulations

Description of the Development	Applicable thresholds and criteria
<b>2. Extractive Industry</b>	
(d) Deep drillings, in particular —	(i) in relation to any type of drilling, the area of the works exceeds 1 hectare; or
(i) Geothermal drilling;	(ii) in relation to geothermal drilling and drilling for the storage of nuclear waste material, the drilling is within 100 metres of any controlled waters.
(ii) Drilling for the storage of nuclear waste material;	
(iii) Drilling for water supplies;	
- with the exception of drillings for investigating the stability of the soil.	
<b>3. Energy industry</b>	
(a) Industrial installations for the production of electricity, steam and hot water (unless included in Schedule 1);	The area of the development exceeds 0.5 hectare.

23. Where an EIA is required, the developer needs to compile detailed information about the likely significant environmental effects of a development. The information finally compiled by the developer is known as an 'Environmental Statement' (ES). The ES (and the application to which it relates) must then be publicised.

24. Certain designated sites are defined in regulation 2(1) as 'sensitive areas' and the thresholds/criteria outlined in the second column of Schedule 2 do not apply there. All developments of a type listed in Schedule 2 to be located in such areas must be screened for the need for EIA. These 'sensitive areas' include: Sites of Special Scientific Interest, land subject to Nature Conservation Orders, International Conservation Orders, National Scenic Areas, World Heritage Sites, Scheduled Monuments and National Parks. Special considerations apply to all of these sensitive areas.

25. The applicant is responsible for preparing an ES. There is no statutory provision as to the form of an ES and it may consist of one or more documents, but must consist of a single accessible compilation. The emphasis of the document is on

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the main or significant environmental effects to which a development is likely to give rise. A number of aspects of the environment may be significantly affected by a project, including human beings; flora; fauna; soil; water; air; climate; landscape; material assets, including architectural and archaeological heritage; and the interaction between any of the foregoing. Consideration should also be given to the likely significant effects resulting from use of natural resources, the emission of pollutants, the creation of nuisances and the elimination of waste.

26. Public bodies must make environmental information available to any person who requests it. Once a developer has given the planning authority notice in writing that he intends to submit an ES, the authority must inform the consultation bodies and remind them of their obligation to make available, if requested, any relevant information in their possession.
27. The consultation bodies are: any adjoining planning authority, where the development is likely to affect land in their area, Scottish Natural Heritage, Scottish Water, the Scottish Environment Protection Agency, Historic Environment Scotland and any other bodies designated by statutory provision as having specific environmental responsibilities.
28. Planning authorities will often possess useful local and specialised information. It will normally be helpful to an applicant when preparing an ES to obtain information from the consultation bodies.
29. Before making a planning application, a developer may ask the planning authority for their formal opinion on the information to be supplied in the ES. This is known as a 'Scoping Opinion'. The planning authority must adopt a scoping opinion within 5 weeks of receiving a request, where the planning authority fails to do so, the developer may apply to Scottish Ministers for a scoping direction. Scottish Ministers must make a scoping direction within 5 weeks from the date of receipt of a request, or such longer period as they may reasonably require.
30. The planning authority must consult the consultation bodies on the ES. The applicant must provide one copy of the statement for each of the consultation bodies, and also supply a copy of the statement for Scottish Ministers. The applicant may either send a copy of the statement direct to the bodies concerned, or may send copies of the statement to the planning authority for onward transmission. The planning authority should determine the planning application within 4 months from the date of receipt of the statement, instead of the normal 2 months from the receipt of the planning application.

### The Conservation (Natural Habitats, &c.) Regulations 1994, as amended

31. Development likely to have a significant effect on Natura 2000 sites (including Special Protection Areas, Special Areas of Conservation, and Ramsar sites) will be subject to an appropriate assessment. Qualifying interests of a Natura 2000 site may not be confined to the boundary of a designated site. Where an assessment is unable to conclude that a development will not adversely affect the integrity of the site, development will only be permitted where there are no alternative solutions, and there are imperative reasons of overriding public

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interest. These can be of a social or economic nature except where the site has been designated for a European priority habitat or species. Consent can only be issued in such cases where the reasons for overriding public interest relate to human health, public safety, beneficial consequences of primary importance for the environment or other reasons subject to the opinion of the European Commission (via Scottish Ministers).

### Minewater Heat Recovery Access Agreements

32. Those wishing to gain access to abandoned coal mine workings for the purpose of extracting heat from minewater require the permission of the owner of the coal mine workings. In most cases, the owner will be the Coal Authority.
33. The Authority grants two types of Minewater Heat Recovery Access Agreement, namely:
  - An Access Agreement relating to Minewater heat Recovery at a single site, with a maximum agreement area of 500 hectares, where all other rights are in place or applied for; or
  - An Access Agreement relating to a larger area, with a maximum size of 2,000 hectares, where the intention is to evaluate the potential for project(s). This type of 'blanket' Access Agreement covers the overall area with Supplemental Agreements required for each borehole site within this overall area.
34. An application for a Minewater Heat Recovery Access Agreement may be made to the Coal Authority at any time. The Coal Authority will consider the implications of an application for a Minewater Heat Recovery Access Agreement on existing and future coal mining and the potential for coal bed methane exploitation.
35. Where the Minewater Heat Recovery application falls outside an area of coal being, or proposed to be, used for coal-mining operations then the Authority will normally provide access to Minewater Heat Recovery operators subject to the authority reserving the right to protect any coal mining prospects in the area.
36. All applications for new Minewater Heat Recovery Access Agreements will be publicised by the Authority on its website and in an industry wide newsletter, in order that other coal mining operators are given an opportunity to express any interests in the area concerned.
37. In most circumstances a period of 30 days from the publication of an application will be allowed for an expression of interest and a further 30 days for the submission of alternative applications. The applicant will be kept fully informed of any expressions of interest. Where no expressions of interest are received, the authority will then consider the Minewater Heat Recovery application as soon as is reasonably practicable. If an application is refused, the applicant will be contacted in writing by the authority with a statement outlining reasons for refusal. The applicant can then request in writing, within 28 days of receiving the statement, a review of the refusal.

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38. **Interaction Agreements:** Interaction comprises, broadly, the effects on one operation of another operation entering the coal. Those effects include the flows of water and effects on the structural integrity of workings, seams and surface. The Interaction Agreement provides a framework to facilitate arrangements between relevant parties. An applicant who has not already done so will be required to become a party to any relevant interaction agreement before being granted a Minewater Heat Recovery Access agreement.

### Health and Safety at Work etc Act 1974

39. There are no regulations specific to the drilling of an onshore borehole for the purposes of exploring and exploiting the geothermal resource. Existing regulations apply only to operators who are appointed by the owner in relation to a borehole site (the PEDL licence holder), and geothermal wells are not licenced by PEDL. Applying the broad framework of the Health and Safety at Work etc Act 1974 (HSW Act), which applies to all workplaces, HSE inspectors will take a risk-based approach to the drilling of boreholes for geothermal exploitation. Inspectors will ascribe the principles of specific regulations, standards and guidance as representing relevant good practice through which the operator as dutyholder can demonstrate compliance with the HSW Act.
40. This approach will involve ensuring that operators drilling boreholes use the Borehole Sites and Operations Regulations 1995 and The Offshore Installations and Wells (Design and Construction, etc) Regulations 1996 as the basis for their approach to managing and controlling the risks associated with the drilling of boreholes. HSE has a team of specialist engineers who scrutinise well and borehole construction both on and offshore, this would include boreholes drilled for geothermal energy.
41. The general duties in these regulations that address good risk management will be enforceable under the HSW act but the adoption of specific requirements such as notification, the production of a health and safety document, weekly well reports and the appointment of an independent well examiner are not. HSE will encourage operators to adopt these duties voluntarily, and will assess and keep this approach under review.
42. Just as with boreholes drilled for hydrocarbons, these HSE inspectors will expect operators of geothermal projects to maintain a life cycle approach to the management of the well. That means ensuring that a well is designed, modified, commissioned, constructed, equipped, operated, maintained, suspended and abandoned so that risks from it are as low as reasonably practicable.
43. HSE will continue to work closely and collaboratively with other departments and regulators with responsibilities in this area, such as SEPA, in the same way as HSE does with the Environment Agency in England.

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### The Borehole Sites and Operations Regulations 1995

44. The Borehole Sites and Operations Regulations 1995 (BSOR) apply to boreholes which are 30 metres deep or more inside a mining area and covers those associated with any activity other than petroleum or mining.
45. The drilling of boreholes to a depth of 30 metres or more within a mining area must be notified to the HSE within 30 days of commencing drilling. Dutyholders should consult with knowledgeable bodies and authorities, such as the Coal Authority and the British Geological Survey, mineral owners, mine owners, the owners of other underground structures, facilities or boreholes and other sources of relevant information which will allow them to assess the effect which a borehole operation is likely to have on other persons.
46. The operator of a borehole site should ensure constant site supervision by a competent person able to maintain the safety of the well. Operators have a duty to co-ordinate their work and their safety measures with those of other employers and self-employed persons on site.
47. Borehole operations must be planned and organised from the outset with health and safety in mind. It is the operator's duty to ensure that operations do not commence until a health and safety document has been prepared. The document should be appropriate to the hazards of the operation to which it applies.
48. The health and safety document must demonstrate that the risks to employees at the borehole site have been determined and assessed and that adequate measures will be taken to safeguard their health and safety. The health and safety document must also, where appropriate, include plans suitable for the particular site and operations carried out there. Good coordination of the work of contractors is essential for safe working. Borehole sites during drilling and workover operations particularly, become compact areas of high activity. The co-ordination of work at the site is aimed at planning, organising and controlling the programme of work and the contributions made by various contractors so that they may be conducted with minimum risk to health and safety.
49. Local factors should be considered, such as the proximity of highways, rights of way, buildings, housing, woodland, crops and any other matters which may affect the safety of the site. Where necessary the relevant authorities should be consulted. Sites should be located and be of suitable size and layout to allow hazards to be confined within the site boundaries. Consideration should be given to the need for site security in order to minimize hazards from and to persons other than those authorised to be on the site. The area of land given to a site should allow adequate space for suitable siting of equipment.
50. Emergency services should be informed of the location of borehole sites, access routes from public roads and the nature of the operations and circumstances which they may be called upon to attend. Provision should be made for suitable rendezvous and forward control points with sufficient suitable parking space for emergency vehicles close to the site.

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51. The health and safety document should be kept up to date. It should be reviewed if any relevant changes occur to the site or operations carried out there. Operators have a duty to ensure that the health and safety document is made available to each employer who has employees at work on the site.
52. Operators must ensure that all workplaces on a borehole site are designed, constructed, erected and maintained in provision of sufficient stability and protection employees and to withstand anticipated environmental forces on site.

### Management of Health and Safety at Work Regulations 1999

53. Regulation 10 of the Management of Health and Safety at Work Regulations 1999 which is specific to borehole operations, requires employers to provide employees with health surveillance. Employers must begin health surveillance on employees newly assigned to borehole operations prior to deploying them to that work.

### Water (Scotland) Act 1980

54. Anyone proposing to sink a well or borehole for the purpose of searching for, or abstracting, water must notify the British Geological Survey (one of the Natural Environment Research Council's research centres), in writing and before drilling commences, of the intention, if the depth will be greater than 15m. In addition, a journal must be kept of the progress of the work including measurements of the strata passed through and all the levels at which water is struck and subsequently rests. On completion or abandonment of the work, the journal must be sent to the British Geological Survey along with details of any test made before completion or abandonment, specifying the flow of water and, where practicable, the water levels during the test and thereafter until the water returned to its natural level.

### The Offshore Installations and Wells (Design and Construction, etc) Regulations 1996

55. The Offshore Installations and Wells (Design and Construction, etc) Regulations 1996 (DCR) are concerned with the safety of wells both onshore and offshore. The well operator must ensure the safe condition of a well at all stages in its life. In the pre-design stage the well-operator is required to take all appropriate steps to obtain predictions of the sub-surface environment to be experienced within. As far as is reasonably practicable all potential hazards and circumstances likely to lead to unsafe well conditions should be identified by the well operator. In the post-design stage the well operator should ensure sufficient measure is taken of well conditions and sub-surface properties.
56. The design and construction of the well should account for the health and safety of those tasked with suspending or abandoning it and for the continued integrity of the well after its suspension and/or abandonment. This will prevent unplanned escapes of fluids from its reservoir. Many elements of suspension and abandonment can only be decided at the time of suspension or abandonment

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when actual well conditions can be fully assessed. Elements which can be considered at the time of well design and during drilling will, however, have an important bearing on the effectiveness of the subsequent suspension and/or abandonment.

57. The well-operator shall ensure that all materials used in the construction and any subsequent modifications to the well are suitable for purpose. This is to ensure any risks to people are as low as is reasonably practicable.
58. The well-operator is required to report certain information regularly to HSE at such intervals as may be agreed between the operator and the authority, or failing agreement, at intervals of one week calculated from operation commencement. The information to be provided includes start and end dates, the setting of casings and the depth achieved.
59. Co-operation is required between the well-operator, the installation operator/owner and other relevant contractors to ensure that their management systems and operating procedures are sufficiently integrated to provide a safe system of work.
60. The installation duty holder or well-operator (where the well is being worked on other than from an installation) must ensure that all staff are capable of carrying out the tasks that have been allocated to them by ensuring that they receive appropriate training.

### Provision and Use of Work Equipment Regulations 1998

61. The Provision and Use of Work Equipment Regulations 1998 (PUWER) cover workplaces where the HSW Act applies. PUWER also applies in common parts of shared buildings and temporary places of work. Generally, any equipment which is used by an employee at work, including any provided by the employee, is covered.
62. It must be ensured that equipment is suitable for use, and for the purpose and conditions in which it is to be used. The equipment must also be maintained in a safe condition for use so that people's health and safety is not at risk.

### Requirement for Owner's Consent

63. In Scotland, anyone wishing to carry out geothermal drilling operations and/or install a district heating network supplied by a nearby geothermal resource might have to pass through land belonging to a number of owners. In order to pass through the land, they must obtain the landowner's permission to do so. Operators must negotiate these rights of access with every landowner living above the site(s) of proposed underground drilling.

**REFERENCE MATERIAL**

SEPA's requirements for activities related to geothermal energy (January 2017)  
<http://www.sepa.org.uk/media/219751/sepa-s-requirements-for-activities-related-to-geothermal-energy.pdf>

The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) <http://www.sepa.org.uk/regulations/water/>

Scottish National Planning Framework 3  
<http://www.gov.scot/Publications/2014/06/3539/downloads>

A Guide to the Planning System in Scotland  
<http://www.gov.scot/Resource/Doc/1070/0119912.pdf>

The Town and Country Planning (Hierarchy of Developments) (Scotland) Regulations 2009 Planning Circular 5/2009  
<http://www.gov.scot/Resource/Doc/278390/0083657.pdf>

The Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2013 Planning Circular 3/2013 .  
<http://www.gov.scot/Publications/2013/12/9882/0>

The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2011 – Guidance  
<http://www.gov.scot/Publications/2011/06/01084419/0>

Conservation (Natural Habitats, &c.) Regulations 1994, as amended – guidance  
<http://www.snh.gov.uk/protecting-scotlands-nature/protected-areas/international-designations/natura-sites/>

Natura sites and the Habitats Regulations - How to consider proposals affecting Special Areas of Conservation and Special Protection Areas in Scotland  
<http://www.snh.gov.uk/publications-data-and-research/publications/search-the-catalogue/publication-detail/?id=1364>

The Coal Authority and their licensing applications  
<https://www.gov.uk/guidance/get-a-licence-for-coal-mining>.  
Minewater Heat Recovery Agreements  
[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/361711/Minewater\\_heat\\_recovery\\_-\\_guidance\\_notes.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/361711/Minewater_heat_recovery_-_guidance_notes.pdf)

Health and Safety at Work etc. Act 1974 HSE guidance  
<http://www.hse.gov.uk/legislation/hswa.htm>

The Borehole Sites and Operations Regulations 1995 HSE guidance  
<http://www.hse.gov.uk/pubns/priced/l72.pdf>

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The Offshore Installations and Wells (Design and Construction, etc) Regulations  
1996 HSE guidance

<http://www.hse.gov.uk/pubns/priced/l84.pdf>

The Provision and use of Work Equipment Regulations 1998 HSE guidance

<http://www.hse.gov.uk/work-equipment-machinery/puwer.htm>

Management of Health and Safety at Work regulations 1999

<http://www.hse.gov.uk/pubns/hsc13.pdf>

The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013

<http://www.hse.gov.uk/pubns/indg453.pdf>

Water (Scotland) Act 1980

<https://www.bgs.ac.uk/downloads/start.cfm?id=2057>