

Submission from Greener UK to the Secondary Legislation Scrutiny Committee on the draft Environmental Permitting (England and Wales) (Amendment) (England) Regulations 2023 and response by the Department for Environment, Food and Rural Affairs (Defra)

This statutory instrument relates to an issue of high and current public interest – groundwater quality – and therefore merits close scrutiny by the Committee and during the forthcoming parliamentary debates.

The proposed widening of the definitions of “pollutant” and “pollution” to include matters such as heat, biological entities and micro-organisms is welcome, as this will increase the range of pollutants that can be controlled in the groundwater environment. However, there are some uncertainties regarding the potential environmental impact of some of the proposed new exemptions from environmental permits.

For example, the government is proposing to add new activities to Schedule 3 of the Regulations exempting them from the requirement to obtain an environmental permit for the deposit of controlled waste in England. These activities include the installation of closed-loop ground source heating and cooling systems, provided this activity meets certain criteria.

There is insufficient detail in the draft explanatory memorandum to demonstrate that the criteria for this exemption are sufficient to avoid adverse impacts on protected sites or ancient woodland.

Questions for Defra

Q1: Considering the potential impact that significant changes in ground temperature could have on natural habitats:

- a. What is the rationale for the proposed exemption criteria for closed-loop ground source heating and cooling systems, and
- b. What assurance can the department provide that these will avoid harmful impacts on protected sites and ancient woodland?

Defra's response: Currently there is no environmental regulation of closed loop ground source heating and cooling systems at all. The reinstatement of heat as a pollutant for groundwater will mean that such systems would become regulatable activities. Open loop ground source heating and cooling systems are already subject to regulation as they involve abstracting and discharging water and the heat aspect is considered as part of these applications. We appreciate that a closed loop system will have a smaller impact on the surrounding ground as it is not removing and reinjecting heated and cooled water. However, to protect sensitive groundwater receptors such as wetlands we have sought to ensure that only those systems that are proposed in close proximity to such receptors require direct regulatory controls via an environmental permit from the Environment Agency (EA).

Systems that are outside the designated sensitive areas will continue as now, not to need environmental permits. We consider this a proportionate regulatory approach balancing environmental protection against unnecessary regulatory burden and cost on householders and other potential users of closed loop ground source heating and cooling systems.

It has been determined that it would be overly bureaucratic, and costly to require all users of closed loop systems to be regulated via permitting as there is no evidence to show that the majority have any discernible impact on the environment. However, where systems are close to sensitive receptors, we feel more direct regulation should be required. The criteria have been set based on current experience and understanding on groundwater protection. There is limited scientific research on the impact of heat from closed loop systems, but work is on-going in this area to better understand that potential impact. The

criteria are likely to be precautionary but until better and more recent research data exists, it considered to be a sensible and reasonable approach to protecting sensitive environmental features. Only sites that fall outside the designated sensitive areas will be exempt from the requirement of a permit, anything inside the area will require a permit.

Systems that are within the sensitive areas close to protected sites and ancient woodlands will require an environmental permit from the EA. For new bespoke permit applications within the restricted distance of a protected site and ancient woodland, the EA will assess for any habitats or species that could be at risk from the application and carry out further investigation and assessment as part of the application determination process. We also consult with Natural England or other relevant Statutory Nature Conservation bodies where an activity (closed loop system) could affect or cause damage to a protected site. Any environmental permit granted will also contain conditions requiring compliance checks to ensure the activity is not causing harm to a receptor including protected sites and ancient woodlands.

Q2: Why is no limit specified in the exemption criteria on the amount of heat that can be discharged from a closed-loop ground source heating and cooling system, given that the 2023 Regulations now identify heat as a pollutant, and the existing exemption criteria for open-loop ground source heating and cooling systems contain restrictions on the maximum temperature of the water that can be discharged from the system (Schedule 3, Part 3, para 5 (2)(b) of the 2016 Regulations)?

Defra's response: There is more data available for open loop systems as these have always been subject to permits and licenses, so it was appropriate to set limits for these. As there is a lack of evidence for closed loop systems it is not possible to set temperature limits on the heat generated from these systems, so an alternative method was needed to protect sensitive receptors. Therefore, distance from the receptor was chosen as a sensible alternative.

Q3: What consultation was undertaken with relevant bodies (such as Natural England) on the potential impact of the new groundwater activity exemptions on protected sites and ancient woodland?

Defra's response: Defra held a public consultation from 29 September 2021 to 22 December 2021 to seek views on the amendments. In addition, targeted emails were sent direct to consultees from whom comments were particularly sought, Natural England and Greener UK were both part of that targeted communication. No specific comments were returned from either organisation. 264 consultation responses were received and have all been considered when producing the consultation response which was published on GOV.UK on 22nd March 2023.¹

As mentioned above, the amendments are creating new permitting requirements for closed loop ground source heat systems that do not currently exist to ensure protected sites and ancient woodlands can be protected.

12 & 18 April 2023

¹ Department for Environment, Food and Rural Affairs, [Consultation outcome: Groundwater and surface water discharge activities](#), 22 March 2023.