

Steve Reed  
Secretary of State for Environment, Food and Rural Affairs  
Nobel House, 17 Smith Square  
London SW1P 3JR

9 September 2024

Dear Mr Reed

### **Groundwater Poses Serious Hidden Flood Risk and an Urgent Review is Needed**

Congratulations on your recent appointment! We wish you every success in your new role.

GeoSmart is a flood risk data and analytics consultancy and a leading specialist advisor on assessment and management of flood risk in the UK.

We have written to your predecessors (most recently to Therese Coffey, see attached), to raise significant concerns regarding the current approach to flood risk regulation in respect of groundwater. Unfortunately, the issues we raised<sup>1</sup> were not addressed and the situation has deteriorated in the light of changing climate.

### **Omission of Groundwater Flooding From National Risk Register**

Groundwater flooding is one of the most significant natural hazards in the UK. It causes [long-term damage](#) to properties, infrastructure and the environment. These events are very predictable, as we [saw last winter](#). We attach a briefing note to present the fuller picture.

We are writing now to ***raise the alarm over the serious omission of groundwater from the National Risk Register as well as from effective flood risk regulation***. With climate change increasing the risk further, ***the UK risks sleepwalking into disaster*** if your Government fails to recognise the growing risk of groundwater flooding as one of the UK's foremost natural dangers.

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<sup>1</sup> ESI Groundwater Flooding Note: Technical review by Environment Agency published December 2016 (created in discussion with experts from the Environment Agency, the British Geological Survey and the Flood Forecasting Centre)

We believe overlooking groundwater's role in flooding has **serious implications including:**

- 1 **The lack of a complete flood risk assessment for the UK, jeopardising your Government's plans to achieve significant economic growth, support business and enable development** (including achieving a housing target of 1.5 million new homes over this Parliament).
- 2 Climate change is probably doubling flood risk this generation. However, missing the role of groundwater in flooding **leaves existing and new property and infrastructure at even more significant risk.**
- 3 **Groundwater flooding impacts property and communities every year but it is also a primary cause of low probability, high consequence events on a national scale.** This carries the risk that the new Government could be caught out failing to anticipate catastrophic flooding events in the same way the previous Government was caught out over lack of preparedness for a pandemic.

### **Current Regulations Prevent Effective Risk Management**

We believe that the role of groundwater in flooding has been seriously overlooked and the root cause of the issue is the Flood and Water Management Act (2010).

The Act inappropriately assigns groundwater flood risk management jurisdiction to Local Authorities on the basis that it is 'Local Flooding.' However, groundwater is a catchment process integral to river flow and is not 'Local Flooding.'

The Local Authorities are unable to effectively manage the risk because they have an administrative jurisdiction, not a catchment or national jurisdiction.

One consequence of the lack of appropriate focus is an incorrect but widely held view that groundwater is a tiny part of the flood problem. In fact a rivers-centric approach has **left a million homes off the national estimate.**

GeoSmart's national [flood risk assessment](#) shows that the risk of flooding is of particular concern in relation to typical brownfield sites (of relevance to 'Grey Belt' development plans), where flood risk is 50% higher than the average for homes. Such sites are twice as likely to suffer disproportionately greater damage resulting from groundwater flooding. These location-specific issues are vital considerations in your Government's ambitious development plans.

We would like to emphasise **that effective flood risk management can be achieved** and these problems are due to regulatory structure, not technical challenge.

We believe there is a good opportunity now to build on the findings of the Pitt Review<sup>2</sup> and enable a more appropriate risk management strategy to be set out. Currently this is prevented by the division of regulatory responsibilities and the funding streams that follow these.

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<sup>2</sup> Pitt, M. 2008. Lessons learned from the 2007 floods. Defra/CLG, UK

Whilst changes to statute will require more time, we recommend an urgent review of these issues as the basis for a fresh direction and funding approach. This should include consideration of a larger role for the Environment Agency and sister organisations as our catchment regulators with relevant expertise.

We'd be happy to advise further on this urgent matter and offer our assistance **towards a more appropriate flood risk management strategy in the near future.**

Please let me know if it may be possible to arrange a meeting to discuss.

Yours sincerely



Mark Fermor  
Director

cc  
Julia Buckley MP for Shrewsbury  
Professor Piers Forster, Interim Chair, Climate Change Committee  
Caroline Douglass, Executive Director, Environment Agency Flood and Coastal Erosion Risk Management

Encl.

Briefing note for Defra on the role of groundwater in flooding  
ESI Groundwater Flooding Note: Technical review by Environment Agency published December 2016  
Letter to Therese Coffey dated 1 December 2016