

To: Infrastructure, Land and Environment Policy Board

On: 24 March 2021

Report by: Director of Communities and Housing Services

**Heading: Scottish Government Consultation: Protecting Scotland's
Groundwater from Pollution**

1. Summary

- 1.1 The Scottish Government, in conjunction with the Scottish Environment Protection Agency (SEPA) are consulting on proposals to improve how groundwater in Scotland is protected. Proposals include 1) revising environmental standards for substances within groundwater, 2) revising the list of groundwater hazardous substances which must be prevented from entering groundwater and 3) making some changes to land contamination legislation.
- 1.2 At the same time SEPA is also consulting on revisions to their guidance documents on 'Land Contamination and Impacts on the Water Environment' and 'Assigning Groundwater Assessment Criteria for Pollutant Inputs'. Both of these documents are referred to within the Scottish Government consultation and are to be considered in conjunction with this as they are all intrinsically linked. The two SEPA consultation documents are of a technical nature and relevant Officers will submit responses to these directly.
- 1.3 The consultation document can be viewed at <https://consultation.sepa.org.uk/circular-economy/78f28f61/> and a proposed response to this is included for the approval of members of the Board as Appendix 1 to this report.
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2. Recommendations

- 2.1 It is recommended that the Board:
- (i) note the consultation on Protecting Scotland's Groundwater from Pollution along with the requirement to respond by 31 March 2021; and

- (ii) approve the proposed response included as Appendix 1 to this report as the Council's consultation response.
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3. Background

- 3.1 Groundwater refers to all water which is below the surface of the ground and it is vital to the economy and the natural environment. Groundwater feeds rivers, lochs, estuaries, wetlands and provides a valuable and important source of water for public and private water supplies. It also supports a number of industries, including whisky production, mineral water and agricultural irrigation.
- 3.2 There are existing legislative controls and operational standards in place to protect groundwaters. These are regulated primarily by SEPA with the purpose of protecting this natural resource. The consultation is seeking views on proposals to introduce water quality standards which have a better environmental basis, are transparent and fair.

Proposed technical changes to risk assessment

- 3.3 Standards for substances in groundwater are used to assist the assessment of whether inputs have (or are likely) to compromise the groundwater resource, or significantly impact on a surface ecosystem or existing water supply. These standards will also inform decisions on whether groundwater contamination is so serious or widespread that it is causing or likely to cause an entire groundwater body to be classified as poor status.
- 3.4 The standards will be used by local authorities and SEPA to determine if remediation of land contamination is necessary when planning consent is being sought to redevelop land. They are also relevant where contamination is being addressed through the Council's statutory Contaminated Land duties under Part IIA of the Environmental Protection Act 1990.
- 3.5 The proposals introduce significant changes to the process of assessing risks to the water environment. The changes are likely to have time and cost implications for developers and their environmental consultants as well as the potential to impede the timeous discharge of associated planning conditions e.g. where an assessment has not been carried out in accordance with the revised guidance.
- 3.6 The proposed changes relate to how a) groundwaters with a resource value are identified; b) how a judgement is made that a meaningful amount of groundwater has been impacted; and c) the way that contaminants already in the groundwater are considered when assessing if the standard will be met. It is the intention that the Scottish Government will formalise this through Directions to SEPA.

- 3.7 The consultation also proposes revising the list of 'groundwater hazardous substances' which must be prevented from entering groundwater. The methodology for determining if a substance is hazardous has been updated by the UK expert group, the Joint Agencies Groundwater Directive Advisory Group and the Scottish Government proposes to adopt these revised standards.
- 3.8 The proposals could have implications for the remediation of land as additional works may be required to ensure any hazardous substance does not enter the water environment, taking into account the technical and financial feasibility of achieving these standards. However, the consultation states that whilst these proposed standards may trigger further assessment of the remediation required, they are unlikely to have a major impact on the levels of remediation undertaken.

Proposed changes to decision making and record keeping

- 3.9 Historic land contamination is most commonly addressed through the planning regime. Where a change of use is proposed (e.g from previously industrial land to housing) contamination may need to be addressed to ensure the site is made suitable for the new use. Residual contamination may remain on such sites if it is technically infeasible or disproportionately costly to carry out sufficient remediation to meet the groundwater standards existing at that time. SEPA can grant exemptions from the requirement to meet groundwater standards on that basis.
- 3.10 Currently, there is no requirement to maintain a register of those sites where SEPA has judged it to be technically or financially infeasible to meet the water environment standards (sites with residual contamination). the consultation proposes that a register of all such sites ('sites with residual contamination') is kept, and that this will apply to future sites but not retrospectively. There are a number of suggested benefits in keeping this register but little explanation of how it might be used in future. There are concerns that such a register could create blight for any sites held on it and leave landowners exposed to uncertain future liability e.g. should SEPA require further remediation at a future date if for example technology to address this improves. There may also be an incorrect perception that any site on the register is a problem, which is not the case – every site on the register will have been through a process of regulatory assessment and scrutiny, resulting in agreement from SEPA that no further work is required. Sites which have been redeveloped through this process will be suitable for their intended use.
- 3.11 One of the proposed benefits of keeping the register would rely on the existence of a list of all sites in Scotland which have been remediated to date. However, this is not the case and there has never been any suggestion or requirement for such a list to be developed or maintained.

Part IIA of EPA 1990 - Changes to how 'special sites' are identified and regulated

- 3.12 Part IIA of the Environmental Protection Act 1990 provides a legal definition of Contaminated Land as “any land which contains substances in, on or under the land that is causing significant harm, or a presents a significant possibility of significant harm; or where there is significant pollution, or a significant possibility of significant pollution of the water environment” This legal definition is important as it differentiates such land from land affected by contamination which is not significant enough to meet the statutory test for ‘Contaminated Land’.
- 3.13 Local authorities have a statutory duty to investigate their areas from time to time and determine if any land may be Contaminated Land using a risk-based approach. However, in practice most land remediation takes place as sites are redeveloped through the planning process. This avoids the need for the local authority to enforce (and in some circumstances pay for) the remediation.
- 3.14 Once determined, some ‘Contaminated Land’ sites, (those with specific former uses and/or specific types of contamination) are considered to be ‘special sites’. Whilst there is still a requirement for the local authority to investigate and determine these as ‘Contaminated Land’ in the first instance, the later regulation of such sites (e.g. the securing any required remediation) rests with SEPA.
- 3.15 The consultation proposes to amend how land that SEPA considers could be a special site is notified to the local authority.
- 3.16 At present, where SEPA holds information that an already identified Contaminated Land site fits the criteria for a ‘special site’ it can inform the local authority. The local authority is then required to determine whether the land should be designated as a special site, with regulatory responsibility being passed to SEPA.
- 3.17 The proposed approach will allow SEPA to inform the local authority where it holds information that a site which has NOT YET been identified as Contaminated Land may fit the criteria for a special site. The Local Authority will then be required to determine if the land should be designated as Contaminated Land and a special site.
- 3.18 This amendment is subtle but could have significant implications for local authorities e.g. if the local authority is obliged to carry out investigation works to identify if the site should be designated first as Contaminated Land and then as a special site, on timescales imposed by SEPA, rather than in line with our own prioritisation framework. Although the regulation of special sites will pass to SEPA once identified as a special site, it will still be the responsibility of the local authority to investigate and determine the site under the Part IIA regime as Contaminated Land in the first instance, which could have significant implications in terms of finance and staff resources.

- 3.19 Specialist Contaminated Land Officers have considered the proposals within the consultation document and overall the proposed response attached as Appendix 1 is broadly supportive of the proposed changes to the guidance and legislation and suggests that these are likely to have a positive impact on protecting Scotland's groundwater. However, the consultation response suggests that greater clarity and detail is required on some elements and in some areas it is suggested that aspects of the proposals may not deliver the benefits that are being sought and could create a significant amount of additional work for local authorities and in particular, developers if not amended in the final guidance and legislation.
- 3.20 The consultation response is also recommending that training is provided by SEPA on the requirements of the updated legislation particularly for those responsible for redevelopment of land and their consultants, to ensure the additional guidance is fully understood as it is adopted by industry.
- 3.21 The final comments relate to legislative amendments and a proposal to establish and maintain a register of remediated sites with residual contamination, along with the potential impact of both of these proposals on aspects of regulatory enforcement work currently the responsibility of the Council. The proposed response suggests that there is a requirement for more clarity and greater detail on these proposals to provide an understanding of the benefits the proposed new arrangements will deliver. It is the view of specialist officers that there are already good and pragmatic arrangements in place with regards to holding and sharing information and without clarity on the wider purpose of proposed changes, there is the potential for significant additional burdens to be placed on Council regulators and on developers.

Implications of the Report

1. **Financial** – None
2. **HR & Organisational Development** – None
3. **Community/Council Planning** – None
4. **Legal** – None
5. **Property/Assets** – None
6. **Information Technology** – None
7. **Equality & Human Rights-**
 - (a) The Recommendations contained within this report have been assessed in relation to their impact on equalities and human rights. No negative impacts on equality groups or potential for infringement of individuals' human rights have been identified arising from the recommendations contained in the report. If required following implementation, the actual impact of the recommendations and the mitigating actions will be reviewed and monitored, and the results of the assessment will be published on the Council's website.

8. **Health & Safety** – None
 9. **Procurement** - None
 10. **Risk** – None
 11. **Privacy Impact**– None
 12. **COSLA Policy Position**– None
 13. **Climate Risk** – None
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List of Background Papers - None

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Proposed Council Response to Scottish Government Consultation

Pollution standards

1. Do you agree with the criteria we proposed to use to assess whether groundwater has future resource potential?

In general, yes.

The proposed changes appear reasonable. Saline groundwater near the coast and groundwater at significant depth (>400m below ground) and under the sea is unlikely to be suitable for any future use, so excluding it from consideration in risk assessments seems sensible.

We would suggest that the guidance could also allow for consideration to be given to the specific geological and hydrogeological conditions that prevail in different areas of Scotland - for example, groundwater quality in the Central Belt can be of such poor quality due to historic activities (e.g. mining, heavy industry), that it is highly unlikely to ever be used as a drinking water source. In other parts of Scotland, which have been less affected by the legacy of historic industry, groundwater is of much better quality and therefore is much more likely to be used as a resource, either at present or at some point in future.

Requiring present-day risk assessments (and potentially remediation) on individual sites to consider the theoretical future use of groundwater in the same way across Scotland could be seen as over-protective in some instances –the guidance should allow for additional pragmatic exclusions on a site-specific basis, where appropriately justified.

2. Do you agree that the standards to assess pollution of future groundwater should be based on an area of impacted groundwater rather than the current distance based approach?

The benefit of standardising the degree of impact on groundwater by looking at it on an area basis, rather than just considering distance from the source is acknowledged. However, this will require a more complex risk assessment to be undertaken, which may have practical implications for the Council as well as consultants/developers.

The proposed methodology requires an improved understanding of the site conditions (e.g. the geometry of any contaminant plume, flow direction, calculation of annual average concentrations over several monitoring events etc) and a more detailed understanding of the hydrogeological setting than is currently seen in risk assessments.

The amount of data that will need to be gathered during the site investigation will be increased – to ensure consultants/developers are aware of the requirements and factor them into their investigation design, it would be helpful for SEPA to provide training/awareness raising opportunities for the industry.

There appears to be an implicit assumption within the revised guidance from SEPA that brownfield sites generally pose a high risk to the water environment. This is not the case, in our experience – while our standard practice is to use planning conditions to require a site investigation and risk assessment on any brownfield development site, significant groundwater impacts are identified very rarely.

We note there are proposals to allow current activities regulated by SEPA to be classified as ‘low hazard’ and therefore not likely to risk breaching standards – in such instances, there would be no requirement for a site-specific risk assessment to be undertaken. The criteria that SEPA will consider to determine the likelihood of risk to the water environment include things such as the soil thickness onsite, the soil type, the depth to groundwater and the proximity to current water abstractions and surface waters – this is all information that is routinely collected during the site investigation stage.

We would suggest that this ‘screening out’ process could equally be applied to identification of low risk developments on brownfield sites. This would reduce the requirement for complex assessments (and potentially cost-benefit analyses) to be undertaken on sites with only minor issues that do not warrant such detailed consideration.

3. Do you agree that we should take into account any existing contamination present in the groundwater when making an assessment of pollution?

Yes – however, this will require additional sampling to confirm the concentrations already present in groundwater both onsite and upgradient. It could be impractical to gather this information in some circumstances (e.g. if the area surrounding the site is not owned/accessible to the development team).

This is additional data that is not commonly gathered in site investigations at present – to ensure developers and environmental consultants are aware that they should be incorporating these requirements into their work packages, it would be helpful for SEPA to provide training/awareness raising opportunities for the industry.

Groundwater status standards

4. Do you agree that the trigger for determining that a groundwater body is considered to be at poor status should be based on a 20ha plume of hazardous substances rather than a 200ha plume of any contaminants?

Yes, considering that the groundwater flowing under an area of 20ha could be enough to supply a small town, this still appears to be a significant degree of pollution.

We note that this 20ha trigger will apply to hazardous substances only – however, we understand that non-hazardous substances should continue to be considered across the groundwater body as a whole. We suggest this is made clearer in the guidance – otherwise, the requirement could be misunderstood with non-hazardous substances being excluded from consideration altogether.

5. Do you agree that when assessing if a groundwater body is at poor status we should only consider impacts on nationally important groundwater dependent wetlands?

Yes, this seems reasonable.

Hazardous substance standards

6. Do you agree that we should update our list of hazardous substances in line with the JAGDAG recommendations?

The Joint Agencies Groundwater Directive Advisory Group (JAGDAG) has published methodology for determining which substances are ‘hazardous’ which we understand to be based on the intrinsic properties of the substances themselves (e.g. their toxicity, persistence and tendency to bioaccumulate).

It would seem difficult to justify divergence from this UK wide approach, and we are not aware of any compelling reason for doing so.

We do, however, note that some commonly encountered pollutants including arsenic, lead and chromium VI are now classed as hazardous which weren’t previously – this may cause difficulties on some sites due to the requirement for them to now be prevented from entering groundwater, which is a more protective standard than previously applied. However, we note that exclusions on the basis of disproportionate cost could be applied to limit the remediation required as a result.

As a general comment, guidance from SEPA/SG on how to carry out cost/benefit analysis would be beneficial, as this is not something we understand to be done routinely in industry at present.

7. Do you agree that we should introduce standards for hazardous substances which identify the point at which there is a risk of groundwater deterioration, in order to ensure consistency and certainty?

Yes, a degree of certainty and consistency in the assessment is welcome. We understand that the standards referred to are ‘threshold standards’ - as a general comment, there is a lot of new terminology in the proposed guidance that we suggest should be clearly explained/defined within the guidance documents.

JAGDAG has derived values for the purpose of determining whether deterioration is likely to occur, based on a consistent methodology – it makes sense to use these (where available) rather than values that are based on the technical capacity of laboratories (e.g. limit of detection) which 1) may vary (and actually get more stringent with time as analytical methods improve) and 2) have no direct relevance to actual or theoretical risk.

8. Do you agree that our proposed hazardous substances standards should be based on drinking water standards and surface water environmental standards?

In general, yes – we assume this question relates to ‘hazardous substance *input* standards’, and have responded on that basis.

We note that standards are only based on environmental quality standards for groundwater within 50m of a surface water feature, which seems sensible. Further than 50m from a surface water feature, the standards are based on drinking water standards.

9. Do you agree that issues of taste and odour should be taken into account in determining hazardous substance standards, in order to protect the future use of groundwater?

The proposed inclusion of taste and odour criteria is new – we note that these standards are all significantly lower than the existing standards (or there currently are no standards for some of the substances) so this is a more conservative standard than is currently in place.

While we accept that having a bad taste or odour could affect/limit the use of the water, it is important to note that breaching these standards would **not** imply any health risk to users of the water. For consideration of future resource potential in particular, this could be considered overly protective, particularly in situations/geographical locations where groundwater is already of such poor quality as to make it unsuitable for future use.

The use of taste and odour criteria could lead to unnecessary remediation in certain circumstances. We would welcome any possibility for exclusions from the requirement to meet such stringent criteria where it can be fully justified on a site-specific basis.

Changes and clarifications to our approach to land contamination and the water environment

10. Do you agree with our proposal to keep a record of any residual land contamination, where an exemption from the relevant groundwater standards has been applied to remedial work? How do you think this should be done, via legislation or by partnership working?

The purpose of the register is unclear, so it is difficult to provide a fully considered response. We would have some reservations about the practicalities and principles underpinning the proposal, and would welcome clarification on the scope, format and purpose of the register in due course. We have offered some thoughts below, based on our initial understanding.

It isn't clear what degree of 'residual contamination' would warrant inclusion on the register e.g. would it only be sites where remediation of groundwater has been undertaken but didn't reach the required standards, or would small sites with minor exceedances of standards where remediation was not undertaken also qualify?

Local authorities hold records of all sites that have been remediated through the planning process, and also where voluntary remediation has been reported to us – in those rare cases where remediation of significant groundwater pollution has taken place, and/or there was any debate about the standards that can/should be achieved, it is likely that SEPA specialists will have been consulted by the local authority officers as part of their normal working practice. These sites will therefore already be known to SEPA.

We note that one of the suggested benefits of the register is that *"it should help (20 in combination with a list of all sites that have been remediated) to identify how much brownfield land in Scotland is being remediated and made ready for use"*.

The assumption that a list of remediated sites exists is incorrect – in Renfrewshire, we hold detailed planning records and we have internal GIS layers and filing systems that are continually updated when new information is submitted to us. This allows us to quickly identify relevant information on a site by site basis. However, we do not hold a list of all sites that have been remediated, and we do not consider that such a list would offer any significant benefit to our working practices in terms of how we deliver vital public services. Compiling such a list would not be a priority for Renfrewshire Council.

Local authorities have different IT systems and data management processes and are likely to hold information in a variety of formats - it may not be straightforward to extract the information SEPA requires to compile such a register for Scotland.

While there are a number of suggested benefits to keeping such a register, there is little explanation of how it might be used in future. We would have concerns that such a register could create blight for any sites held on it and leave landowners exposed to uncertain future liability e.g. should SEPA require further remediation at a future date if technology improves. Unless the register's purpose is clearly communicated and understood, there may also be an incorrect perception that any site on the register is/has a problem, which is not the case – every site on the register will have been through a process of regulatory assessment and scrutiny,

resulting in agreement from SEPA that no further work is required. Sites which have been redeveloped through this process will have been determined to be suitable for their intended use.

We are satisfied that information sharing can continue through close partnership working between local authority and SEPA officers, rather than through a formal register. The benefits of the proposed register have not been shown to outweigh the potential negative impacts and increased administrative burden on local authorities. That being the case, if this proposal is adopted we suggest that responsibility for establishing and maintaining it should rest with SEPA as the principal user.

11. Do you agree we should raise the bar at which significant pollution is considered to occur in relation to the future groundwater resource?

Yes, this appears reasonable.

12. Do you agree that we should change the criteria for defining “Special Sites” from one impacting on a Devonian or Permian aquifer to one that is causing a water body to be less than good status or is posing a risk of deterioration in status?

Yes, this appears reasonable.

Additional comment on 7.4 ‘Identification of “Special Sites” (note there is no specific consultation question on this proposal)

The proposed amendment to legislation is subtle, and we note it is expected to only be used in exceptional cases – however, it could have significant implications for local authorities, and we would welcome further clarification.

At face value, this proposal appears to circumvent the prioritisation process followed by local authorities as lead regulator under Part IIA which requires us to prioritise sites on the basis of potential risk to **all** statutory receptors, not just the water environment.

It is not clear from the consultation whether the information provided by SEPA will be sufficient to allow determination of the site as Contaminated Land then, as a special site. If not, this could have significant resource implications for the local authority if, for example, additional investigations are required before the site can be determined. The process of identifying and notifying appropriate persons can also be extremely complex and must be completed prior to determination, which would add additional burden to a local authority in such cases.

We are also mindful that if any site is determined to be Contaminated Land, it is possible that some/all of it would not be accepted by SEPA as a special site – this could then leave the local authority with regulatory responsibility for some/all of the site.

The driver for this proposed change is not clear – under the current legislation, SEPA (or any other party) can present information about any site to the local authority for consideration at any time. From a local authority perspective, continued close partnership working with SEPA would appear preferable to legislative change.

However, if legislative changes are being considered, we would suggest that amendments granting additional powers/duties to SEPA to investigate and determine potential special sites might be a more efficient way of meeting the stated aim of ensuring that *“sites having the greatest impact on the water environment are passed to SEPA quickly and efficiently for remedy”*. We would also suggest that SEPA should have a duty/responsibility to identify appropriate persons prior to approaching the local authority seeking determination to avoid placing additional burdens on local authority resources.