

Consultation Response: Levelling up and Regeneration Bill – amendments to the NPPF (England)

Key Documents:

Consultation document: <https://www.gov.uk/government/consultations/levelling-up-and-regeneration-bill-reforms-to-national-planning-policy/levelling-up-and-regeneration-bill-reforms-to-national-planning-policy#scope-of-consultation>

Proposed revised text to the National Planning Policy Framework (England):

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1126647/NPPF_July_2021_-_showing_proposed_changes.pdf

Other resources:

Planning practise guidance notes: <https://www.gov.uk/government/collections/planning-practice-guidance>

Area: Urban development

Q14 What, if any, additional policy or guidance could the department provide which could help support authorities plan for more homes in urban areas where the uplift applies?

Response

Within urban areas, and particularly densely developed urban centres, effective use of subsurface space is critical to ensure sustainable development. This is particularly necessary to support densification of habitation due to additional requirements for subsurface transportation and utility infrastructure, and the development of deep basements and foundations associated with taller buildings. Subsurface planning is therefore necessary to reduce risk in subsurface construction, avoid space utilisation conflicts, and to maintain and enhance surface space utility for green infrastructure.

Examples of critical intersections for subsurface planning include:

- subsurface space utilisation conflicts, particularly between building foundations and basements and buried transportation and utility infrastructure;
- expansion of ground source heating systems whilst protecting groundwater and managing heat extraction;
- opportunities for exploiting mine water heat whilst mitigating ground instability in former mining areas;
- groundwater extraction, and localised construction dewatering, whilst mitigating surface subsidence;
- local effect of Sustainable Urban Drainage Schemes (SuDS) affecting groundwater recharge and quality;
- sterilisation of subsurface resources (e.g. aggregate and mineral resources) due to surface development.

Geological data, information and knowledge are specifically required to be integrated into both surface and subsurface planning to reduce the cost, risk and time scale of developments, which are often significantly delayed and over budget due to unforeseen ground conditions. Better understanding of the potential ground risk and benefits at the planning stage would reduce the risk, cost and timescale of developments throughout the supply chain, and ensure these are more resilient to future climate change.

The NPPF and associated guidance do not adequately address ground risks and resources at the development plan stage (both local and neighbourhood plans). Additional planning policies and guidance should be provided for local authorities on the need and methods for evaluating ground

risk to surface and subsurface development, and of the potential availability of geological resources, so that these can be integrated into development plans.

Suggested amendments and additions to existing policy for addressing ground risk and subsurface resources include:

- Ensuring reference to ground risks and resources is included in the NPPF chapters on rationale for sustainable development (2), plan-making (3) and decision-making (4) to highlight that consideration of these factors is essential for delivering sustainable development and climate change mitigation and adaptation.
- Including subsurface planning within the NPPF and providing subsurface planning guidance to enable planners to consider subsurface contexts in the development of Local Plans and understand the relationship of subsurface planning to other planning considerations.
- Greater reference within NPPF and associated guidance could be made to making use of existing sources of subsurface data and information, and specifically those held by the British Geological Survey for shallow geohazards, resources and ground properties.

Examples of how geological data and information can be provided to specifically support urban planning were produced by the British Geological Survey in the 1980s and 1990s for over 50 UK urban areas, many with a significant industrial legacy. These reports provide comprehensive information on the geological resources of the area, including minerals and aggregates, groundwater, sites amenable to waste disposal, geoheritage, and soils, as well as information on ground conditions and geohazards.

Underpinning these reports are a range of datasets that provide information about ground conditions, geological hazards and resources. These include geological maps ([BGS Geology](#)), the [National Geotechnical Properties Database](#), geochemical data sets for soils and stream sediments ([G-BASE](#)), ground stability/ shallow geohazard susceptibility maps ([GeoSure](#)), a suite of maps of engineering properties and considerations ([BGS Civils](#)), maps highlighting potential for Sustainable Drainage Systems ([BGS Infiltration SuDS](#)), and a [Brownfield Risk Calculator](#) that integrates a range of these datasets to better inform local authorities and developers of the potential risk and cost of redevelopment on specific brownfield sites.

Area: Placemaking

Q33 Do you agree with making changes to emphasise the role of beauty and placemaking in strategic policies and to further encourage well-designed and beautiful development?

Consultation document Ch 6, para 5

Response

The proposed changes to the NPPF and related planning guidance to emphasise the role of beauty in placemaking have the potential to enhance regional geodiversity, connect communities to their environment and economic heritage, and support the development of local industry.

The geodiversity of an area, particularly the landforms, rocks and natural processes, determine the character of our environment, and influence a range of aspects of the design and development of our built environment – including movement, nature, built form, identity, public space and resources¹. Understanding of a region's geodiversity, therefore supports the delivery of beautiful places that work with the landscape. Combining planning for green-infrastructure with recognition and protection of geoheritage, which may include both natural and anthropogenic sites, may also provide multiple-benefits for biodiversity, health and sense of place. Geodiversity

surveys and audits, conducted by the British Geological Survey, or regional geoconservation groups², can provide assessment of local and regional geodiversity and geoheritage sites to inform plan making and planning decisions, help to direct investment in green infrastructure³, and encourage community engagement.

Building stone is an important characteristic of urban and rural built environments in England, with locally accessible stone and other building materials (such as brick clay) associated with regional styles and types of buildings in both urban and rural contexts. Ensuring access to building stone for conservation of heritage assets is already recognised within the current NPPF (paragraph 214), but delivery of beautiful new places may require access to additional stone resources for new developments. Proposed changes to the NPPF to enhance beauty in place-making may therefore increase demand for local stone.

The British Geological Survey provides information and advice in relation to building stone resources including [Mineral Planning Factsheets](#) and the [UK Minerals Yearbook](#) to support land-use and mineral planning. Increased demand for mineral resources may provide wider benefits including opportunities for skilled employment and improved environmental sustainability by reducing reliance on imported stone. The economic benefits may also help support the Levelling-Up agenda by supporting and developing UK industry across the country (link to Q54). However, minerals can only be worked where they occur, therefore transport of resources is required. Under the Levelling Up and Regeneration Bill, the Duty to Cooperate will be replaced with an alignment policy test (Consultation document, Chapter 4, para 15). As a result of the need to transport of minerals from areas of supply to other areas of demand (for example crushed rock aggregates by rail from the South West to London) it is important that the alignment policy test does not only apply to neighbouring authorities.

Area: Environment and climate change

Q40 Do you have any views on how planning policy could support climate change adaptation further, specifically through the use of nature-based solutions that provide multi-functional benefits?

Response

Rising temperatures, growing seasonal variability in rainfall, and increasingly intense heat and rainfall events are leading to increased susceptibility of our infrastructure and built environments to a range of natural ground hazards, including landslides, shrink-swell clay, soluble and compressible rocks, running sand, as well as groundwater flooding and coastal erosion. Ensuring appropriate consideration of the geosystem within the planning process can help us effectively mitigate ground hazards and support wider adaptation measures to alleviate wider climate-related risks such as surface-water flooding, overheating and ground instability.

The range of areas in which geological considerations may play an important role in underpinning our adaptive responses is broad. The following response focuses on key areas that highlight the potential for enhancing policy to achieve effective and sustainable solutions for climate adaptation. Specific areas addressed in this response are drainage and groundwater and ground hazards – discussed below. General recommendations for enhancing policy in this area are:

- **Ensuring knowledge of geological conditions and processes is consulted at early stages of the planning process** – e.g. in the development of Local Development Plans. This will

ensure that intersecting requirements such as development of green and blue-infrastructure and application of SuDS schemes, can maximise benefits and minimise risks.

- **Providing additional planning guidance on assessment of multiple-benefits, with inclusion of subsurface systems and available resources.** Planning for sustainable and effective nature-based solutions will require planners to assess how interactions between the geosystem, biodiversity, and hydrological system can be harnessed to deliver a range of benefits. Guidance on where to access resources and how to conduct integrated assessments is needed to ensure this can be effectively achieved.
- **Ensure that planning policy and associated assessment processes (such as Climate Change Risk Assessments) consider cumulative impacts of adaptation measures, not just individual sites.** The dynamic elements of geological systems, such as movements of water, heat and material (through erosion) mean that interventions in one area may affect other areas. A regional perspective is therefore critical for assessing the effectiveness and sustainability of nature-based 'geosystem' solutions.
- **Ensuring the systematic capture of records of planning and development decisions to enable ongoing evaluation of benefits and risks from development.** Access to reliable information on subsurface infrastructure (e.g. pipes, basements), SuDS, green- and blue-infrastructure and other measures is critical for evaluating the effectiveness and sustainability of these measures for climate change adaptation. Initiatives such as the National Asset Register are improving the capture of information, and provisions within planning policy would ensure wider capture of relevant information.

Drainage and groundwater

Sustainable Urban Drainage Schemes (SuDS) are important for managing surface water and mitigating risk of surface water flooding. They can also provide multiple benefits through associations with green- and blue-infrastructure and habitats for improving biodiversity. Implementation of SuDS is therefore an important adaptation measure to mitigate effects of increased rainfall and higher rainfall intensity resulting from climate change. However, knowledge of ground conditions is important in planning for SuDS schemes to ensure that increasing infiltration does not have detrimental effects such as increased risk of groundwater flooding, reduction in water quality or ground instability. Climate change may also alter the affect the benefits and risks involved in implementation of infiltration SuDS.

Access to appropriate geological information is therefore critical for ensuring the effectiveness of Sustainable Urban Drainage Schemes as an adaptation measure. In densely populated areas, the impact of SuDS needs to be considered at the regional scale due to cumulative effects on the groundwater system. Improvements in the recording of the location and type of these schemes is therefore critical to enable effective assessment of benefits and risks.

Specific recommendations:

- The current NPPF provisions refer to adoption of SuDS for major developments “unless there is clear evidence this would be inappropriate”. The planning practise guidance for “Flooding and coastal change” identifies risk of pollution of potable groundwater bodies as situations where SuDS may be inappropriate but does not highlight potential for increased risk of groundwater flooding or effects on ground stability (Paragraph 056, Reference ID 7-056-20220825).

- Addition of the British Geological Survey as a potential source of expertise, advice and information in relation to infiltration, groundwater systems, groundwater flooding and SuDS – Planning Practise Guidance, “Flooding and coastal change”, Paragraph 057, Reference ID 7-057-20220825.
- In relation to risks of groundwater flooding and SuDS, clarification that plans should consider cumulative impact of schemes rather than individual sites (cf. section 4.2 ‘Planning’ in the National Adaptation Plan). This may also be evaluated as part of climate change risk assessments and sustainability appraisals for Local Plans.
- Provide Planning Practise Guidance on the evaluation of multiple-benefits approaches to highlight the interacting roles of, and potential for co-design of, SuDS, green- and blue-infrastructure, and biodiversity schemes, in delivering sustainable nature-based solutions and climate adaptation.

Ground conditions and geohazards

Projected changes in rainfall patterns and extremes in temperature are expected to increase susceptibility to a range of ground hazards. The cost of mitigation of subsidence arising from shrink-swell clays, landslides and coastal erosion alone is estimated at more than £1 billion and is expected to increase significantly over the next 30 years due to climate change.

There is need for further research to assess the (cost-)effectiveness of nature-based solutions to mitigate slope failures, but a range of evidence indicates that preserving vegetation on slopes may reduce the risk of shallow landslides. There is currently very limited research to assess the potential benefits for green and blue-infrastructure, and associated nature-based solutions, for mitigating shrink-swell hazard. Given the potential risk to the UK economy this would be a valuable area of future research.

Specific recommendations:

- Include reference to ground stability alongside other implications of climate change identified in paragraph 153 of the current NPPF
- Update Land Stability Guidance to highlight that land stability risk assessments should include consideration of future climate projections (Paragraph 008, Reference ID: 45-008-20140306).

Q45 Do you agree with the proposed timeline for finalising local plans, minerals and waste plans and spatial development strategies being prepared under the current system? If no, what alternative timeline would you propose?

Response

It is important that local authorities have up-to-date local plans, minerals and waste plans etc. in place and that they are underpinned by authoritative data and information, therefore, setting a deadline for finalisation of plans is a positive approach. However, the deadline proposed is ambitious given the time required for plans to be compiled and the necessary consultation to take place.

Response

To ensure sustainable development, and to address the challenges of climate change mitigation and adaptation, future National Development Management Policies should ensure that specific and clear policies are included for the consideration of ground conditions and geological processes, and the natural and anthropogenic (human-made) hazards/risks (e.g. landslides, shrink-swell clays, karst, etc.) and resources/benefits (e.g. geodiversity, groundwater, ground source heat, drainage, etc.) associated with these. This is clearly within the scope of the proposed National Development Management Policies as:

- Ground conditions and geological processes are issues that apply across all of England for all types of development (though the specific nature of these will vary from place to place depending on both the geology and the built environment).
- The NPPF already includes policies addressing natural hazards, ground conditions, land instability, pollution, mineral resources, geodiversity, deep geothermal heat and heat pumps (proposed).
- There are still several existing gaps within national planning policy that fail to adequately address ground conditions within the plan-making and planning application process – e.g: subsurface planning; buried infrastructure; ground-source heat pumps; the role of geodiversity and geosystem services in heritage, place-making and green infrastructure; making better use of existing ground data and information; and obligations for sharing and storing ground data and information.
- Ensuring sustainable use of ground resources, and mitigating the effects of weather-driven geohazards, would contribute to addressing new national priorities for decarbonisation, climate change adaptation and urban densification.

While there is specific reference to Minerals and Waste Plans, conserving heritage assets, areas at risk of flooding within Chapter 10 of the consultation document (National Development Management Policies), no specific mention is currently made of other ground hazards and resources: it is important that these are not overlooked if and when a transition occurs from NPPF to NDMPs for guiding the formulation of development plans and the assessment of planning applications.

National Development Management Policies would provide an excellent opportunity to address the inconsistent and fragmented approach to how ground conditions, and their associated hazards/risk resources/benefits, are currently dealt with in the National Planning Policy Framework, e.g.:

- Other than flood risk, coastal change and minerals and energy, reference to ground hazards/risk and resources/benefits is absent from earlier sections on the rationale for sustainable development (2), plan-making (3) and decision-making (4)
- Chapter 8 (Prompting healthy and safe communities) refers to anticipating natural hazards but doesn't expand on what these could be. In the context of ground hazards these are myriad and thus could do with further guidance (which is also currently lacking in planning practice guidance documents).
- Chapter 14 (Meeting the challenge of climate change, flooding and coastal change) does not specially refer ground hazards, and also to the risk that weather-driven geohazards (such as landslides, shrink-swell, and karst) will be exacerbated by climate change. It also doesn't address the potential for the ground to provide sustainable drainage solutions, heat and energy storage.
- Chapter 15 (Conserving and enhancing the natural environment); ground hazards/risk (land instability) is predominantly addressed in this chapter, due to association with contaminated land and pollution. Given limited treatment of opportunities and risks

related to ground conditions / hazards in earlier chapters, the emphasis in this chapter on hazards arising from ground conditions rather than the risks to our geodiversity and geosystem services as fundamental parts of our natural environment is incongruous.

- Chapter 16 (Conserving and enhancing the historic environment) alludes to a role of geology (geodiversity) in a footnote 75, and reference to landscape as a type of heritage asset but does not specifically refer to the role of geodiversity or geosystem services in conservation and enhancing the historic environment.
- Chapter 17 (Facilitating the sustainable use of minerals) does not address other ground resources such as underground space, drainage, heat, groundwater etc.

Area: Levelling up

Q54 How do you think that the framework could better support development that will drive economic growth and productivity in every part of the country, in support of the Levelling Up agenda?

Response

Suggested amendments to the NPPF and associated planning guidance related to subsurface planning and mitigation of ground risks to development as proposed in response to Q14 are particularly relevant for delivering the Levelling-Up agenda.

Regional socio-economic disparities are linked in part to long-term legacies of historic industry and mineral extraction associated with the distribution of geological resources. Many northern and midlands cities are associated with regions that were formerly mined and quarried for coal, iron-stone and other minerals. Geological factors also underpin regional differences in the productivity of agricultural land contributing to historic regional differences in health and wealth.

Mitigation of ground hazards and public health risks arising from the legacy of coal and non-coal mining and industrial contamination pose challenges, particularly with respect to risk and cost, for development and regeneration in many of the areas prioritised in the Levelling-Up agenda. Key challenges include ground stability, soil and groundwater contamination, and risks to development associated with mine gases. However, former mines and quarries can also provide new opportunities for sustainable development and climate change mitigation, particularly in relation to mine water heat extraction and waste disposal.

Reducing the costs and risks of sustainable development and harnessing opportunities for climate change adaptation and mitigation are critical for delivering the Levelling Up agenda.

As per the response to Q14 - policy provisions within the NPPF to recognise and ensure adequate evaluation of ground risks and the inclusion of subsurface planning are needed to address challenges of higher development costs in many of the Levelling-Up target areas and identify opportunities related to energy and waste management in these regions.

The British Geological Survey provides information resources that may be relevant for informing planning and development in formerly mined areas including maps and datasets of historic non-coal mining and quarries (BritPits). The Survey is also at the forefront of innovation and research in mine-water heat extraction, through the development and management of a network of UK Geoenergy Observatories, with facilities in Cheshire, Glasgow and Cardiff.

Area: [Brownfield land](#)

Q55 Do you think that the government could go further in national policy, to increase development on brownfield land within city and town centres, with a view to facilitating gentle densification of our urban cores?

Response

The redevelopment of brownfield land is crucial for creating sustainable urban places. The current NPPF definition of brownfield/ previously developed land (PDL) is self-limiting, excluding minerals and waste sites for example as they are regulated under different regimes. However, post-industrial and closed facilities may no longer be regulated under their former use and fall out with the current NPPF definition. Widening the scope of the definition would help bring a wider number of sites into DLUHC's and Local Planning Authorities (LPA's) view for the range of uses (residential, commercial, public realm etc.) important in creating sustainable urban spaces. BGS recommend extending the definition of brownfields/ PDL. A more encompassing definition provides the basis for better measuring of capacity and monitoring of delivery towards housing and sustainable development goals.

The current system for monitoring the extent of brownfield sites is rate-limiting under the current The Town and Country Planning (Brownfield Land Register) Regulations 2017. This is because they represent a fraction of the potentially available and developable brownfield in England. The Brownfield Land Register (BLR) digital records are point data based on a sub-set of the Strategic Housing Land Availability Assessments (SHLAAs). SHLAAs are invariably based on polygons rather than points, the latter being less useful for reuse in research or other applications than the former. Moreover, they have been formally assessed by the LPA for deliverability and availability. Other potential end uses are not considered but are important components of gentle densification of urban areas, which relies on mixed uses to create sustainable places to live and work. BGS recommends increasing the scope of the BLR regulations to include a wider range of potential land uses and ensuring that attributed polygons are made available for reuse by DLUHC and other stakeholders. A more accurate record of potentially developable and deliverable brownfield sites for a range of land uses will help central Government and LPAs plan transparent development pipelines better. This in turn would provide an inventory against which to measure, monitor and manage potential net gain from remediation and would help provide more targeted deliverables.

Soil and groundwater contamination and land stability hazards in urban areas are commonly considered constraints to development by regulators (LPAs, Environment Agency, UK Health Security Agency), developers, investors, Government (local, regional and national) and other stakeholders. This is because long term exposure to chemical contamination can present human health and environmental risks and land stability hazards present risks to property, infrastructure and human health. Where these risks are considered unacceptable based on existing or new land uses, risk management and remediation can be costly and, in some cases, cost prohibitive. Rather than viewing contaminated soils as a constraint and a risk, the remediation of contamination should be considered by Government as a vehicle for achieving sustainable development and place-making. Soil, land and groundwater are natural capital assets linked directly to the provision of ecosystem services such as carbon storage, attenuation of surface water run-off, and supporting ecologically diverse habitats along with associated benefits and values. There are also indirect benefits associated with quality urban soils including being a key component of providing recreation and accessibility to green space, with the associated physical and mental health benefits of being connected to such areas.

A step-change is required to move from considering contamination and geotechnical risks as a constraint to an opportunity to create sustainable places to live and work. BGS suggest some of the key actions are required to help make this happen:

1. Acknowledge brownfields as a system of systems challenge, characterising and quantifying causal links to between soils, place making and sustainable development.
2. Create a shared digital evidence base of the extent of potentially contaminated soils and brownfield land – the current Brownfield Land Registers are focused only on potential housing sites and are inherently limited in scope and scale. Rethinking a common approach at a Local Authority scale for a range of land uses.
3. Acknowledge the links between contaminated soils as a natural capital asset and the environment, social, economic benefits that can accrue from them when remediated and bought back into beneficial use.
4. Make provisions in the planning system for the use of innovative land use data-driven digital models and tools to measure, monitor and manage the benefits that accrue from healthy urban soils.