

A review – current utilisation of environmental information to inform Local Development Plan preparation and delivery

A review

Based on in-depth learning from a Knowledge Exchange Fellowship in Scotland, and wider validation work with all Local Development Plan (LDP) teams and the Key Agencies in Scotland



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Version date

28/06/2018

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Bibliographical Reference:

BGS. 2018. Current environmental information used to inform Local Development Plan preparation and delivery, External Briefing Report, British Geological Survey, OR/18/040, pp 12.

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External Briefing Report– Output from the NERC Innovation Funding Programme, and KE Fellowship *NE/N005368/1 – New collaboration and evidences in planning policy: transforming our future places and people together.*

The rationale behind the review

The purpose of this review was focused to understanding what spatial environmental information are currently used by planning authorities in Scotland to guide high-level spatial planning approaches in the preparation of Local Development Plans (LDP).

Within this:

- What proportion of environmental information currently used is internal authority information, as opposed to the external information produced by BGS and the key government agencies in Scotland?
- How do planning authorities currently access information?
- What new approaches are required to improve the accessibility of environmental information to LDP preparation?

The use of environmental research and information to inform planning policy is essential for governments to be able to develop, and deliver, new spatial approaches to delivering key priorities for our future places: to be able deliver 50,000 homes by 2021 alongside better places^[1]; to develop the infrastructure approaches required to reduce carbon emissions by 90 per cent by 2050^[2], whilst at the same time developing high quality places and vibrant economies; and to increase the resilience of Scotland's communities to environmental change^[3,4,5].

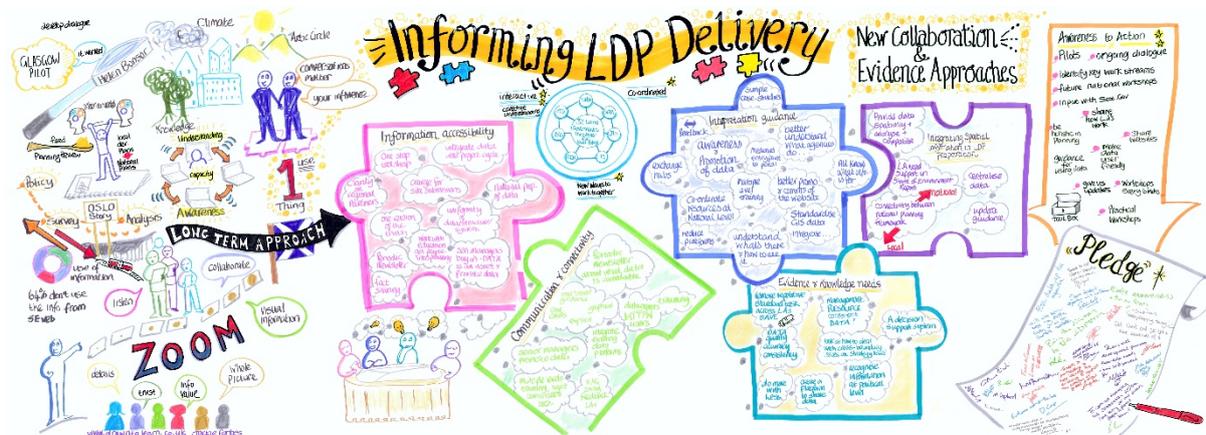
Local Development Plans are the key spatial policies which will help deliver Scotland's Energy strategy^[3], Climate Change Plan^[4], Economic Strategy and National Programme^[5] over the next 10 years. Ensuring existing available evidence is utilised effectively to inform Scotland's LDPs is, therefore, vitally important to the realisation of Scotland's future people and places.

However, there is increasing realisation from all parties that existing pieces of key national environmental evidence which could help inform early understanding of land supply attributes, development costs, risk and opportunities, are not utilised effectively, if at all, within the preparation of many LDPs^[6]. This is despite information having been developed specifically to help inform these processes (e.g. BGS groundwater resource and vulnerability maps^[7]), and significant past investment by individual organisations, the Rural Affairs, Food and Environment (RAFE) digital group, and Scottish Government to make information freely available from centralised web services^[8,9].

The Planning (Scotland) Bill (2017)^[10] and Scottish Governments position paper 'People, Places, and Planning', call that we find new ways to collaborate in planning to consolidate and improve evidence processes, and recognises the importance of earlier use of evidence in Local Development Plans (LDPs) to realise new multi-faceted approaches for the delivery of our future places^[11].

The review was part of an in-depth three year Knowledge Exchange (KE) Fellowship led by BGS in Scotland focused on developing better understanding across key organisations as to how environmental information can be used more effectively to inform early spatial planning approaches and policies in LDP preparation. For example, what environmental information, and analytical pathways, are most appropriate and pertinent to informing earlier understanding of Housing Land Supply (HLS) attributes – this being seen as a key evidence gap required to inform LDP site allocations and knowledge of risks and opportunities, in advance of call for sites, and detailed site investigation information^[12-15].

Approach



National charrettes 2016-18 identified consistent barriers and disconnects in information connectivity and priority actions (Image: LDP workshop, May 2018)

Three main approaches were taken to undertake this review –

1) In-depth learning with one LDP team over 12 months – reviewing current evidence processes to develop an in depth understanding of:

- what information is currently used;
- How this information is used and combined within evidence pathways (e.g. application and combining of risk ranks);
- And how environmental information is currently accessed and stored.

This period of in-depth learning with Glasgow City Council also enabled new exploratory analytical pathways to be piloted and better understand, to demonstrate the potential value of environmental information to informing early LDP spatial planning policies, with more effective information pathways [16].

2) National consultation with all planning authorities in Scotland, including the two national parks.

Key questions within the consultation were designed to contextualise the in-depth learning developed from the work with a single LDP. Critically, to identify the connection of information between Strategic Environmental Assessment (SEA) and the preparation of LDP spatial approaches nationally, as well as with Call for Sites stages; to understand what information are currently used; and how environmental information are currently accessed.

Efforts were taken to ensure a range of roles within LDP preparation input to each planning authority's response in the consultation – including Heads of Planning, SEA officers, LDP planning policy, and GIS planning officers within each authority.

3) National charrettes with LDP teams in Scotland, discussing: (i) current challenges and barriers to the accessibility and capacity to utilise environmental information effectively in LDP preparation; and (ii) recommendations and priority actions for improving connectivity and impact of information pathways.

Collectively, these approaches enabled in-depth understanding to be developed of the current utilisation of environmental evidence within LDP preparation, and the national context.

The review was led by BGS in Scotland, with the involvement and input from all the environmental Key Agencies¹ in Scotland.

¹ Scottish Environment Protection Agency, Scottish Natural Heritage, Forestry Commission Scotland, Historic Environment Scotland

Findings

The results of the review show strong disparity in awareness and use of environmental information across the planning process in Scotland.

Critically, there is very limited awareness of existing environmental evidence in the early stages of planning in LDP preparation – Figure 1. Awareness and use of available information is comparatively much higher in later delivery stages, during site-scale construction design and project masterplanning.

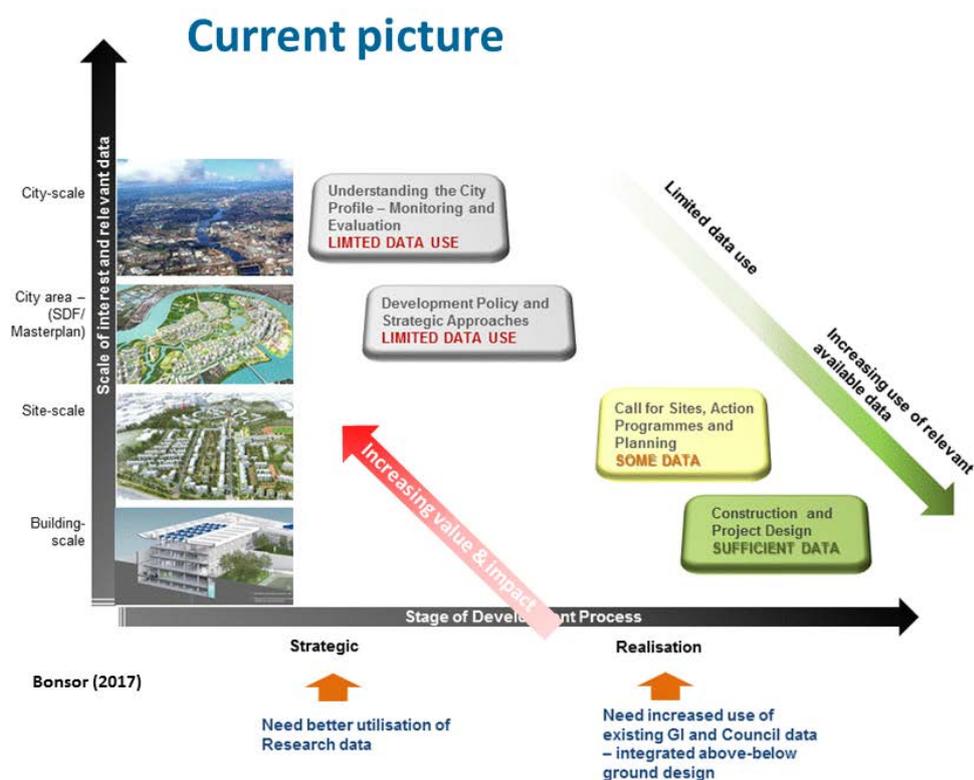


Figure 1 – A schematic illustration of the different levels of use, and impact, of environmental information to different stages of the planning process [17].

On average, any one piece of available environmental information published by key agencies, BGS, or similar bodies is not used by a third of LDPs [6] – either in preparation of the plan or within SEAs. Figure 2.

Up to 43% of LDPs do not use any geoscience information (e.g. groundwater flood susceptibility) **to inform LDP approaches**, despite some BGS geoscience information being freely available to LDPs to inform LDP approaches, as part of a Scottish Government-BGS licence arrangement (which operates in a similar way to the One Scotland Mapping Agreement (OSMA)).

The Strategic Environmental Assessment (SEA) process is widely found to be disconnected from LDP preparation, rather than being an additive and integral part of the evidence used to inform early strategic policies of LDPs, such as land use designations [6].

In-depth learning from a Knowledge Exchange Fellowship and national engagement indicates:

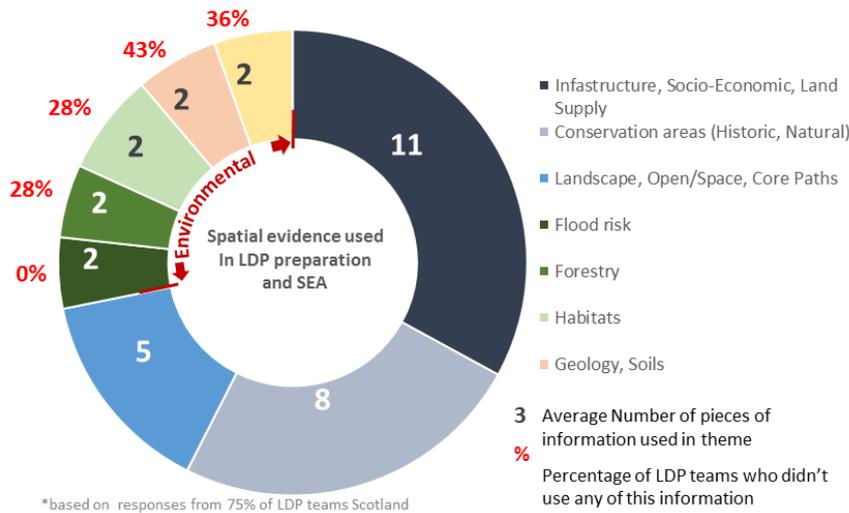
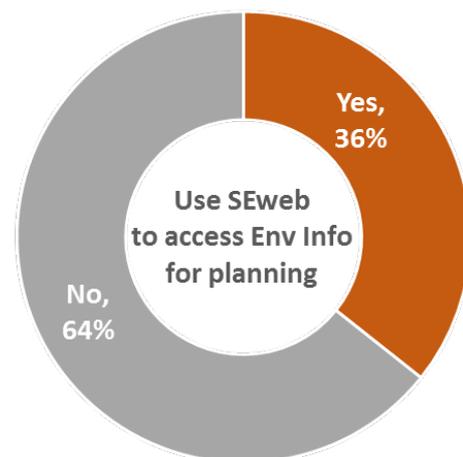


Figure 2 – Plot illustrating: (i) the average number of pieces of environmental information used to understand environmental aspects in LDP preparation [denoted by the internal numbers]; and, (ii) the percentage of LDPs who do not use any pieces of environmental information within each theme [noted by red percentages].

Information relating to the natural environment is one of the weakest information portfolios utilised within LDP preparation, in comparison to infrastructure, conservation and landscape information suites – Figure 3. LDP teams report far greater confidence and awareness in utilising information about infrastructure, conservation and landscape, compared to natural environmental information.

There is limited awareness and utilisation of existing web services to access information – over 60% of LDP teams do not utilise Scotland Environment web (SEweb) to access information from the Key Agencies or BGS to inform LDP preparation, despite the significant investment by the agencies to develop SEWeb to increase information accessibility. Of the LDP teams who did use SEweb, only one used it to access multiple pieces of environmental information.



Standard information widely used to inform LDP policy and SEA
– not all by any one LDP team

Used once:
SNH Peatlands info
BGS superficial geology
Heat map

*Very limited awareness of:
Evidence under OSMA agreement –
e.g. BGS groundwater*

Draft *based on 70% Lgov response Bonsor (2018)

Infrastructure, Socio-economic, Land Supply	
Census data + projections	Council land and property (int)
VDL	Scottish Gas Network + Electricity Network buffers
IBS	SIMD
Greenbelt	Drainage/sewerage infrastructure (int)
Housing market areas	Main transport corridors and accessibility
Conservation (Historic, Natural)	
Inventory of Historic Battlefields	World heritage sites
Ancient Monuments	SSSI
Listed Buildings	National Nature reserves
Wild Land areas	Sites for nature conservation/protection (int)
Wildlife sites (int)	Archaeological remains
Landscape, Open/Green space, Core paths	
OS greenspaces dataset 2017	Wind Turbine Landscape capacity
Core path network (int/ext)	Land Cover map 2007
Gardens and Designed Landscapes	Special Landscape areas
Landscape character Assessment areas (LCA)	National Parks
Green network and open spaces	National Scenic areas
Country parks	
Flood Risk	
	SEPA Flood risk
Forestry	
	Ancient and Important Woodlands
	National Forest Inventory
	Native woodland survey (int)
Habitats	
	Wetlands
	CSGN integrated habitat network
Geology, Soils	
	Land capability for Agriculture
Air/Noise quality	
	Air quality management areas (Int AQMAs)
	Local background concentrations (int)
	Noise management areas (Int)

Figure 3 – The typical pieces and types of information utilised by planning authorities to inform understanding of different environmental aspects. (Note: both internal and external information to planning authorities are included).

All of these disconnects reflect:

- The widespread disconnection of roles –between: science and research providers in BGS and the KAG, and with key users in Local Authorities; and, between SEA and LDP roles in planning authorities.
- The significant gaps in understanding within both users and providers of what are the really pertinent pieces and types of environmental evidence to help inform LDP preparation.
- Disparity in awareness of existing information between organisations
- The need for much stronger and collective collaboration approaches and partnerships between the Key Agencies, BGS and multiple planning authority roles

Next steps

In order for government to be able to develop, and deliver, new spatial approaches to deliver key priorities for our future places – we need to ensure that existing relevant available evidence can be used effectively to inform early strategic planning approaches.

There is a need for next steps to:

- 1) Develop an improved collegiate understanding of what are the pertinent pieces and types of environmental evidence to help inform LDP preparation
- 2) Improve the connectivity and accessibility of information across roles and organisations, so that it can be used to strengthen placemaking in Scotland. This includes specific actions around capacity building, and user-based guidance for information.
- 3) Initiate and build a culture change in interaction between Planning Teams, BGS and the KAG – developing a coordinated, interactive collaboration and dialogue.

In response to these key learning points **a new sub-group of the Key Agency Group (KAG) Scotland** is now being led by BGS – entitled '**understanding of environmental evidence**'.

The overall strategic aim and vision of this sub-group is to:

- To build improved accessibility and connectivity of environmental evidence to inform LDP preparation and strengthen placemaking in Scotland
- To develop mutual understanding of the required analytical pathways and communication of information for planning policy
- To initiate and build a culture change in interaction between LAs and KAG

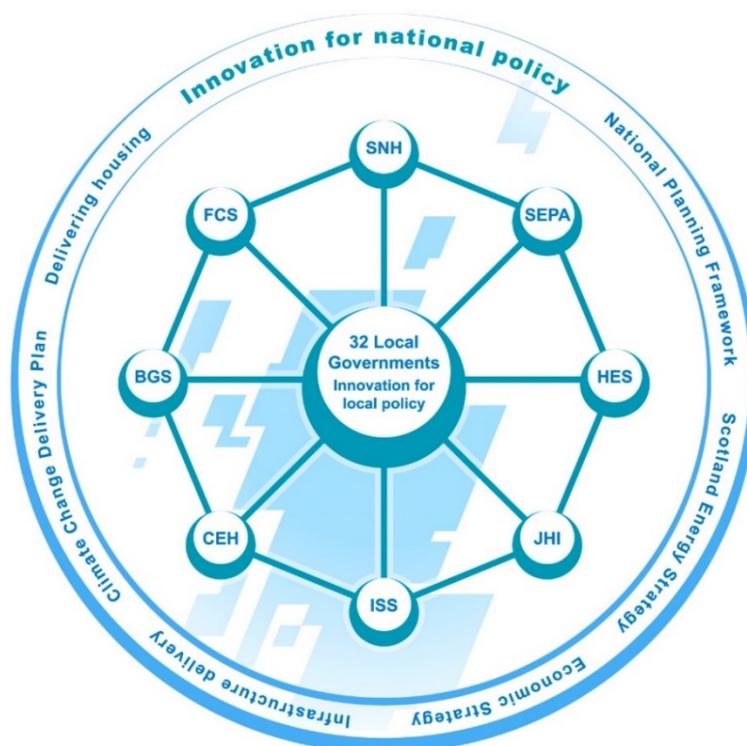


Figure 4 – A new coordinated, collective dialogue and collaboration approach is now being led by a Key Agency sub-group in Scotland, chaired by BGS, with local and national planning teams.

New evidence approaches can have significant additive value to LDP preparation and spatial policies – realising risk and opportunities for delivery earlier, and enabling proactive public-private sector approaches

Earlier understanding of likely potential issues and opportunities, helps inform and unlock political and economic challenges, and strengthens the capacity of LDPs to deliver high quality future places, understand investment approaches, and realise public-private sector innovation ^[16].

New collaboration

Establishing useful and replicable analytical pathways and tools, requires a new collective working between the key spatial information providers (Key Agencies, BGS, CEH, JHI, Marine Scotland and Scottish Government) and with all LDP teams – Figure 4.

Understanding what information are relevant to the questions being asked in LDP preparation is complex and requires new collegiate learning between LDP teams and information providers.

Learning will be developed through in-depth pilots with up to six differing LDP teams, and wider input and validation from all 32 local authorities.

Early exploratory pilots led under a BGS Knowledge Fellowship have highlighted that this learning process will require significant time and the connection of multiple policy and technical roles ^[16].

A 10 month vision

By spring 2019 the group will have identified an approach to achieve a targeted and relevant suite of environmental information to LDP preparation; and, approaches for increasing the connectivity of this information – testing, for example, an improved SEweb data catalogue and planning portal interface, and linking these with much greater effect to Scottish Government digital transformation work.

Supporting Scottish Government Digital Planning Strategy and new development planning processes

The KAG sub-group will work closely with the Scottish Government to ensure the learning helps support meaningful digital transformation in planning (Digital Planning Strategy 2018), and new planning processes which will be implemented from the Planning (Scotland) Bill 2018.

References

- [1] Scottish Government. 2017. Draft Planning Delivery Advice: Housing and Infrastructure, Scottish Government, November 2017, pp 78.
- [2] Scottish Government. 2017. Scotland's Energy Strategy: The future of energy in Scotland, Scottish Government, December 2017, pp 89.
- [3] Scottish Government. 2009. Scotlands Climate Change Delivery Plan: Meeting Scotland's statutory climate change targets, Scottish Government, June 2009, pp 56.
- [4] Scottish Government. 2018. The Scottish Government's Climate Change Plan, Third Report on Proposals and Policies 2018-2032 (RPP3), February 2018, pp 222.
- [5] Scottish Government. 2017. A Nation with Ambition: Programme for Scotland, Scottish Government, pp 124.
- [6] Bonsor. 2017. Current spatial environmental information used in LDP preparation and SEA, Briefing Note of Key Agency sub-group, Key Agencies Group Scotland, pp 4.
- [7] British Geological Survey (BGS) Hydrogeological Maps of Scotland (2015) – accessed from: <http://www.bgs.ac.uk/products/hydrogeology/HydrogeologicalMapsScotland.html>
- [8] Scotland Environment web (SEweb): <https://www.environment.gov.scot>
- [9] Scottish Spatial Data Infrastructure Metadata Portal (SSDI): <https://www.spatialdata.gov.scot>
- [10] Planning (Scotland) Bill 2017. *This Scottish Government Bill was introduced by the Cabinet Secretary for Communities, Social Security and Equalities, Angela Constance MSP, on 4 December 2017. The Bill is currently at Stage 1.*
- [11] Scottish Government. 2017. People, places, planning: Position statement, Planning and Architecture Division, Scottish Government, June 2017, pp 18.
- [12] Glasgow City Council. 2011. Main Issues Report of the Local Development Plan for Glasgow. Glasgow City Council, pp129.
- [13] Glasgow City Council. 2016. City Development Plan - Background Paper 2: Sustainable Spatial Strategy. Glasgow City Council, pp20.
- [14] Glasgow City Council. 2016. City Development Plan - Background Paper 10: Meeting Housing Needs. Glasgow City Council, pp20.
- [15] Glasgow City Council. 2016. City Development Plan - Background Paper 12: Delivering Development. Glasgow City Council, pp7.
- [16] BGS and GCC. 2018. Understanding what environmental evidence may be useful to informing Local Development Plan preparation and delivery, Confidential Briefing Report to Scottish Government (Confidential) British Geological Survey (BGS) and Glasgow City Council (GCC), pp 9.

[17] Bonsor. 2017. NERC Briefing note: integrating BGS subsurface environmental research and data to city development processes and policy: key learning outcomes. Nottingham, UK, British Geological Survey, OR/17/005, pp35. <http://nora.nerc.ac.uk/id/eprint/517033/>