

Perth and Kinross LDP3 2027 - Evidence Report

TOPIC PAPER NO. 006: SOILS

July 2024



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1 Introduction

- 1.1 This topic paper sets out the key information relating to **soils** which will be covered by the Perth and Kinross Local Development Plan 3, as required under the provisions of Section 16B of the Act¹. It will, alongside a range of other topic papers, contribute towards the preparation of the Council’s Evidence Report, which is programmed to be submitted to the Scottish Government’s Planning and Environmental Appeals Division in Autumn 2024 for the ‘Gatecheck’ process.
- 1.2 The purpose of an Evidence Report is to provide the local authority’s interpretation of the evidence it has gathered and the likely implications of that evidence for the preparation of the LDP. The Report will provide a summary of what the evidence means for the plan, rather than contain all the detail of evidence collected.

Relevant Policies

- 1.3 This topic is covered by the following policies in National Planning Framework 4 (NPF4): Policy 5 (Soils).

Legal and National Policy Requirements / Expectations

- 1.4 In line with the requirements of the Act, this paper will provide important background information for the Plan area regarding the:

- Principal physical and environmental characteristics of the district in relation to **soils**

- 1.5 Under NPF4 Policy 5, LDPs are expected to:

- protect locally, regionally, nationally, and internationally valued soils, including land of lesser quality that is culturally or locally important for primary use.

- 1.6 This topic paper also provides information relating to the policy subject of soils as contained in the ‘Local Development Planning Guidance’ (2023, p.43). This includes information relating to the NPF4 Policy Advice & considerations referenced in the Evidence Report Guidance for the soils policy topic (NPF4 Policy 5).

- 1.7 Specifically, the Guidance (p. 112) sets out that:

“The spatial strategy should take a strategic approach to managing the soils within the plan area. Soils are vital living ecosystems in their own right, which also underpin biodiversity across all the ecosystem services upon which people depend. Maintaining and improving soil health is a key outcome for Scotland’s Biodiversity Strategy, for nature, people, and our economy. Peatland and carbon-rich soils in addition hold the potential to play a critical role in helping to achieve the net zero target by 2045, through sequestering and storing carbon, whilst peatland restoration can help Scotland's people and nature adapt to the impacts of climate change through, for example, helping to control flooding and bringing increased resilience to drought to

¹ The Town and Country Planning (Scotland) Act 1997, as amended by the Planning (Scotland) Act 2019

peatland ecosystems. More broadly, soils are one of our most valuable assets and are critical to ambitions for Scotland to be a global leader in sustainable and regenerative agriculture.

The process for allocating land for development can therefore be informed by the location of valued soils that are to be maintained, protected and/or enhanced and restored. In assigning value, consideration may be made to the wider benefits that soils offer to sustainable land-use. Benefits include carbon sequestration, natural flood alleviation, blue-green infrastructure and supporting biodiversity and nature networks.”

- 1.8 This information will help to provide an overview of evidence relating to soils within the Perth and Kinross Council (PKC) area, setting the context within which LDP3 should be prepared.
- 1.9 To inform this topic paper, a range of datasets and information sources have been reviewed, and where relevant, analysed. A breakdown of the datasets/information sources included are noted in Appendix 1.

2 Information Analysis on Soils

Policy Context

- 2.1 The Scottish Government’s [Scottish Soil Framework \(2009\)](#) sets out a review of the pressures on, and the opportunities for, our soils. The Framework sets out a vision that soils are a finite, non-renewable resource that should be managed for sustainable development, and

that they are important for climate change mitigation and adaptation.

- 2.2 The [State of Scotland’s Soil Report \(2011\)](#) follows on from the Scottish Soil Framework (2009) including further evidential insight on the functions of soils, as well as on the nature and relative importance of the threats to soil quality. Seven threats to soil functions are identified:
 - Loss of organic matter
 - Sealing
 - Contamination
 - Change in soil biodiversity
 - Erosion and landslides
 - Compaction
 - Emerging issues
- 2.3 The [Soil Monitoring Action Plan \(2012\)](#) has been set up to support the development of efficient and coordinated soil monitoring across Scotland. Part of the remit of the Scottish Government’s Scottish Environment, Food and Agriculture Research Institutions (SEFARI) programme – through [‘Healthy soils for a green recovery’](#) – is to provide expert research and insights into the role of Scottish soils, the benefits that they provide, as well as identifying and developing strategies to mitigate soil degradation and loss, and enhance soil health.
- 2.4 [Scotland’s Biodiversity Strategy and Delivery Plan \(2022\)](#) sets out the Scottish Government’s ambition for Scotland to be Nature Positive

by 2030, and to have restored and regenerated biodiversity across the country by 2045. The Strategy states that soil health will be improved by tackling loss of organic carbon, erosion, compaction, and the impacts of grazing, air pollution and climate change, and will function as a nature-based solution to flooding, erosion, and biodiversity loss. Soils and species indicators also point to ecosystem health improvements and reveal which drivers are working positively or negatively across habitats and areas.

2.5 The Soils Topic Paper links to the following priorities from the Perth and Kinross Council [Corporate Plan \(2022-2027\)](#):

- Developing a resilient, stronger and greener economy
- Tackling climate change and supporting sustainable places
- Working in partnership with communities

There is a particular need for the Spatial Strategy of the next LDP to take in to account the following key actions contained in the Corporate Plan linked directly to the policy topic of soils:

- To conserve and enhance the biodiversity of our natural environment
- To adopt to and mitigate the impact of climate change on the way we operate
- Support investment in rural areas
- Invest in innovative green power and smart technology solutions to reduce reliance on electricity from the national

grid and create opportunities for business growth and regeneration

Data sets and sources: how they are relevant and implications for Proposed Plan

2.6 The following section sets out the evidence which is needed so that the Proposed Plan can address the issues raised in the Act and NPF4.

Soil Characteristics

2.7 A [National Soil Map of Scotland](#) and a [Soil Map of Scotland \(Partial Cover\)](#) have been prepared to provide an overview of the location and characteristics of the main soil types across Scotland. The PKC area is covered by the National Map (250K scale) and partially covered by the updated Soil Map (25K scale).

2.8 The [Habitat Map of Scotland](#) has been prepared – combining eight individual layers – to provide a national repository of land use and habitat data.

2.9 The information contained in these maps provide a useful baseline to understand the ‘Principal physical and environmental characteristics of the district in relation to **soils**’ as required by the Act. This information can support both the development of the Spatial Strategy in terms of soil and related land use/habitat type as well as the assessment of development proposals against relevant policies including NPF4 Policy 5.

Carbon Rich Soils, Peatland and Priority Peatland Habitat

2.10 NPF4 Glossary (p.145, 154) includes specific definitions of carbon rich soils, peatland, and priority peatland habitats.

2.11 NatureScot (formerly Scottish Natural Heritage) has prepared a [Carbon & Peatland Map \(2016\)](#) which shows the distribution of carbon and peatland classes across the whole of Scotland. It gives a value to indicate the likely presence of carbon-rich soils, deep peat, and priority peatland habitat for each individually mapped area, at a coarse scale. The types of peat shown on the map are carbon-rich soils, deep peat, and priority peatland habitat. The map categorises the presence of carbon and peatland in various classes. On the map, the top two classes (1 and 2) are taken together to identify the nationally important resource:

- Class 1: Nationally important carbon-rich soils, deep peat, and priority peatland habitat; and areas likely to be of high conservation value.
- Class 2: Nationally important carbon-rich soils deep peat and priority peatland habitat; and areas of potentially high conservation value and restoration potential.

2.12 As well as the nationally important resource, Class 3 and Class 5 soils The project has included peat depth data across various sites identifying depths of between 0-10+ metres, as well as the lack of peat present. The peat depth information has been gathered on

upland sites. also fall within the meaning of carbon rich soils and peatland:

- Class 3: Dominant vegetation cover is not priority peatland habitat but is associated with wet and acidic type. Occasional peatland habitats can be found. Most soils are carbon-rich soils, with some areas of deep peat.
- Class 5: Soil information takes precedence over vegetation data. No peatland habitat recorded. May also include areas of bare soil. Soils are carbon-rich and deep peat.

2.13 NPF4 Policy 5 refers, and has policy/spatial implications in relation to, carbon rich soils and peatland. This dataset will help direct the Plan's spatial strategy away from the area's most important soils, and help identify areas for safeguarding from inappropriate development, as well as locations for potential restoration projects. It will also directly inform the implementation of NPF4 Policy 5 in the decision-making process.

2.14 To support the Evidence Report, Appendices 2-3 includes maps showing the location/extent of Class 1, 2, 3 and 5 soils across the PKC area.

2.15 Across the PKC area, only a small number of settlements are located adjacent or in close proximity to Class 1, 2, 3, and 5 soils. Rannoch Station has an area of Class 2 soils in the surrounding area of land. The settlement of Crook of Devon, in Kinross-shire, has a small area of Class 1 soils to the south of the village. There are no settlements located adjacent, or in close proximity, to Class 3 soils. There are 5

settlements that are located adjacent, or in close proximity, to Class 5 soils: Crook of Devon, Greenacres, Powmill, Rannoch Station, and Scotlandwell. In particular, Crook of Devon, Greenacres and Scotlandwell intersect with areas of Class 5 soils.

- 2.16 Apart from small pockets of peaty deposits in lowland areas, Class 1, 2, 3 and 5 soils are typically located in upland areas, as demonstrated in Appendix 2. This may have implications for renewable energy and other developments typically located in these areas.
- 2.17 NatureScot have provided [guidance](#) on the consideration of carbon rich soils, peatland, and priority peatland habitat. This guidance notes that “developments on peat will always require a recent peat and vegetation survey to confirm the quality and distribution of peatland across the whole development area.” It is noted that the Carbon and Peatland 2016 map should be used as a tool for identifying likely locations where these surveys will be required during the decision-making process.

Carbon Sequestration: PKC Study (2021)

- 2.18 In 2021, PKC commissioned James Hutton Institute (JHI) to prepare a study in to Carbon Sequestration across the PKC area. The study considered a range of relevant areas of research, including:
- Estimates of Soil Carbon Stocks in PKC area
 - Carbon Stocks and emissions from Peatland
 - Recommendations across a range of land-based initiatives to support carbon sequestration

- 2.19 The research report provides a baseline estimate of soil carbon stocks in PKC area with recommendations to support agricultural land use practices to store as much carbon as possible.
- 2.20 The research report also provides an estimate of carbon stocks and emissions from peatland with recommendations to support actions around protecting existing, and restoring previous, peatlands.
- 2.21 The report also includes a range of wider recommendations e.g. establishing an agricultural advisory group, to support net zero pathways through more sustainable land use practices.
- 2.22 The study provides a research resource to support PKC’s wider net zero initiatives. The study can help to guide the development of the Plan’s spatial strategy, through highlighting existing sources of GHG sequestration and storage, and identifying new opportunities. The study outputs could also be used to support site specific proposals around peatland restoration and other land-based practices such as woodland creation, linked to Topic Paper 007 (Forestry, Woodland, and Trees).

Peatland Action Sites (2013-2022)

- 2.23 The [Peatland Action \(peat depth\) map](#) provides peat depth point data for sites surveyed as part of Peatland Action Project between 2013-2022.
- 2.24 As noted above the presence of peaty soils/peatland is an important planning consideration included as part of the NPF4. This dataset will help direct the Plan’s spatial strategy away from the

area’s most important soils, and help identify areas for safeguarding from inappropriate development, as well as locations for potential restoration projects. The surveyed peat depth information could potentially be used to inform the assessment of development proposals and associated survey requirements.

Summary analysis of evidence – carbon rich soils / peatland

The spatial strategy – and selection/assessment of sites – for the next LDP will be informed by existing data on carbon rich soils, peatland, and priority peatland habitat (Class 1,2,3,5 soils). Further information – available through the JHI Carbon Sequestration Study (2021) and Peatland Action Site data (2013-2022) – will also potentially help to inform the development of the Spatial Strategy as well as to support the decision-making process for relevant proposals, where gathered site survey information is available.

Land Capability for Agriculture

2.25 NPF4 (p. 154) defines prime agricultural land as:

- land is that identified as being Class 1, 2 or 3.1 in the land capability classification for agriculture developed by Macaulay Land Use Research Institute (now the James Hutton Institute).

2.26 The [Land capability for agriculture map \(partial cover\)](#) shows the distribution of the different land classes across virtually all of Scotland’s cultivated agricultural land and adjacent uplands.

2.27 Land in classes 1, 2 and 3.1 is often referred to as **prime agricultural land** and is capable of being used to produce a wide range of crops.

2.28 This dataset will inform the Plan’s Spatial Strategy and assessment/selection of sites. It will also directly inform the implementation of NPF4 Policy 5 in the decision-making process. To support the Evidence Report, Appendices 4-5 includes maps showing the location/extent of prime agricultural land across the PKC area.

2.29 There is no land within the PKC area that is identified as Class 1 prime agricultural land. Typically, areas of land identified as Class 2 or 3.1 are found within lowland areas where environmental, topographic and soil conditions are more favourable for growing arable crops. In the PKC area, prime agricultural land is predominantly found within the Strathearn, Strathtay, Strathmore, Almond & Earn, Carse and Kinross-shire areas. There is some limited prime agricultural land located in and around the lowland areas of river valleys associated with the Tay and Tummel rivers, however typically prime agricultural land isn’t found in upland areas.

2.30 The following settlements are adjacent, and/or in close proximity, to Class 2 and/or Class 3.1 prime agricultural land:

<ul style="list-style-type: none"> • Aberargie • Abernethy • Aberuthven • Alyth • Ardlar • Auchterarder • Balado 	<ul style="list-style-type: none"> • Guildtown • gWest • Hattonburn • Inchture • Invergowrie • Kettins • Kinfauns
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<ul style="list-style-type: none"> • Balbeggie • Baledgarno • Ballinluig • Balnaguard • Bankfoot • Birnam • Blackford • Blairgowrie/Ratray • Bridge of Earn • Burrelton/Woodside • Caputh • Carsie • Clathymore • Cleish • Cottown/Chapelhill • Coupar Angus • Crieff • Croftinloan/Donavoured/East Haugh/Ballyoukan • Drunzie • Dunkeld • Dunning • Errol • Errol Airfield/Grange • Forgandenny • Forteviot • Fowlis Wester • Glenlomond • Greenacres 	<ul style="list-style-type: none"> • Kinnaird • Kinnesswood • Kinross/Milnathort • Kinrossie • Logierait • Longforgran • Luncarty • Maryburgh • Meigle • Meikleour • Methven • Murthly/Gellyburn • Muthill • New Alyth • Oudenarde • Perth • Perth Airport • Pitlochry • Powmill • Rait • Scone • Scotlandwell • Spittalfield • St David's • St Madoes/Glencarse • Stanley • Tibbermore • Wester Balgeddie • Wolfhill
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Summary analysis of evidence – land capability for agriculture

The spatial strategy – and selection/assessment of sites – for the next LDP will be informed by existing data on prime agricultural land (Class 1,2,3.1 soils).

Risks – Compaction, Sealing, Erosion and Runoff

- 2.31 Various [risk maps](#) have been prepared to show areas of soil at risk including maps of risks from: topsoil and subsoil compaction; sealing; erosion; and run-off.
- 2.32 NPF4 Policy 5 seeks to ensure development proposals protect soil from damage including from sealing, erosion, and/or compaction. These issues may influence site specific developer requirements/considerations including for development allocations as well as the assessment of development proposals against NPF4 Policy 5.

Land of Lesser Quality that is Culturally and Locally Important for Primary Use

- 2.33 Under NPF4 Policy 5, LDPs are expected to protect locally, regionally, nationally, and internationally valued soils, including “land of lesser quality that is culturally or locally important for primary use”.
- 2.34 NPF4 (p. 154) identifies that the value of “land of lesser quality that is culturally or locally important for primary use (i.e. for example food production, flood management, water catchment management and carbon storage)” should be recognised in decision-making. In line with NPF4 Policy 5 third policy outcome this to ensure that “soils are healthy and provide essential ecosystem services for nature, people and our economy”. This is consistent with the approach set out in the Scottish Government’s

Land Use Strategy (2021-2026) and Biodiversity Strategy (2022), where the benefits of soils in supporting a range of important ecosystem services is recognised.

- 2.35 Whilst NPF4 Glossary (p. 154) provides a description, there is no nationally consistent classification of what constitutes “land of lesser quality that is culturally or locally important for primary use”. In the revised draft NPF4 explanatory report (p.214-215) reference is made to establishing ‘valued soils’ through the protected area network and other existing mapped data sources.
- 2.36 Appendix 1 includes data sources considered to relate to the land uses listed in the NPF4 Glossary for “land of lesser quality...”. However, it is important to note that these data sources may not distinguish whether these are for primary use. Ecosystem service benefits derived from the land uses may be secondary, rather than as the primary use.
- 2.37 It is also important to note that NPF4 seeks to identify where this new classification of land is “culturally or locally important”. There are no existing mapped data sources that currently identifies land within the classification of “culturally or locally important” in a comprehensive way. The role of stakeholders will be important to identify any relevant data sources that could be used to support the consideration of this matter in LDP3.
- 2.38 Consideration is given below to potential evidence sources that may fall within this classification of land.

Culturally valued land/soils

- 2.39 There are 9 sites in the PKC area identified in the Historic Environment Scotland [CANMORE record](#) where these are classified under ‘agricultural cropmark’ with cultural interest. Further consideration of sites of historical interest/significance is included in the Topic Paper 008 on Historic Assets.

Food Production

- 2.40 In addition to prime agricultural land which includes land most favourable for a wide range of crops, PKC has identified known [local community growing initiatives](#) including allotments and orchards. The Topic Paper 021 on Blue and Green Infrastructure will consider the wider planning considerations of community growing initiatives including links to the Open Space Strategy.

Flood Management and Water Catchment Management

- 2.41 Wetlands form an important natural habitat type that supports sustainable flood and water catchment management. [The Scotland Wetland Inventory](#) details the relevant wetland habitat types that support this ecosystem service function. In addition to flood management and water catchment management, wetlands perform a range of functions with associated benefits including carbon storage, water purification and providing important habitat for a wide range of species of plants and animals.
- 2.42 Currently wetlands identified in the Scottish Wetland Inventory are not assigned a local ‘value’ in terms of their soil-related properties.

Many wetland sites are protected under national and international legislation including RAMSAR sites and are considered in further detail in Topic Paper 005 Biodiversity & Natural Places.

- 2.43 [Natural Flood Management maps](#) have been prepared by SEPA as required by the Flood Risk Management (Scotland) Act. These maps identify opportunities for supporting a range of actions to aid in natural flood management including: run off reduction; floodplain storage; sediment management; estuarine surge attenuation; and wave energy dissipation. These maps form an important part of the national strategy to support natural flood management by identifying opportunities where these actions could be maximised. The condition of soils is one of a range of important environmental conditions that will influence how any natural flood management strategies and/or initiatives is taken forward, however it is important to note that these maps identify opportunity areas and do not identify where land is being primarily used for these specific purposes. The Topic Paper 023 on Flood Risk and Water Management will consider any wider relevant planning implications.
- 2.44 Flood protection schemes in the PKC area may include natural flood management measures including land specifically identified for these purposes. This will be monitored ahead of the Proposed Plan preparation, with further detail included in the Topic Paper 023 Flood Risk and Water Management.

Carbon Storage

- 2.45 Further details around carbon rich soils, peatland and carbon sequestration are considered in detail above.
- 2.46 [Land Capability for Forestry](#) mapping identifies land that is potentially capable for future forestry that would support carbon sequestration activity. Topic Paper 007 on Forestry, Woodland and Trees considers this evidence further.
- 2.47 There could be privately owned sites where land is being used to support carbon offsetting activities. These potential sites could be associated with energy and other upland related developments and/or landscape scale restoration initiatives, providing a range of benefits alongside carbon sequestration. This will be monitored as part of the Proposed Plan preparation.

Summary analysis of evidence – land of lesser quality

A range of datasets and information sources have been considered for this new classification of ‘lesser’ land for the next LDP. There is currently no land identified specifically for this primary purpose. Stakeholder views will help to inform how this issue will be considered for the Evidence Report, and potentially for the preparation of the Proposed Plan.

Stakeholder Engagement

2.48 We would welcome views from stakeholders on the soils evidence to be used to support preparing the Proposed Plan. In particular we would welcome views on:

- The evidence base, and whether there is other evidence that should be considered when preparing the Proposed Plan
- The information analysis, and the implications for the Proposed Plan

- Evidence and information in relation to the new classification of “lesser land that is culturally or locally important for primary use”.

Appendix 1: Summary Table: Links to Evidence Gathered and Analysed

Act or NPF	Requirement or Expectation	Dataset or source	Relevance of evidence and why it is required to inform the Proposed Plan (what it tells us and / or how we will use it?)	Gaps or uncertainties in data	Included?
Section 15(5) NPF4 Policy 5	The principal physical and environmental characteristics of the district in relation to soils. LDPs should protect locally, regionally, nationally, and internationally valued soils, including land of lesser quality that is culturally or locally important for primary use.	National Soil Map of Scotland Soil map of Scotland (partial cover) Scotland's soils (environment.gov.scot) Habitat Map of Scotland Scotland's environment web	The information contained in these maps provide a useful baseline to understand the 'Principal physical and environmental characteristics of the district in relation to soils' as required by the Act. This information can support both the development of the Spatial Strategy in terms of soil and related land use/habitat type as well as the assessment of development proposals against relevant policy including NPF4 Policy 5.	Habitat Map – wherever possible the Habitat Map uses the best available data. No guarantee that data supplied is accurate, complete, or up to date and data contains overlaps.	Yes.
Local Development Planning Guidance (2023)	The Evidence Report can reference the likely soil assets in the area, including peatland and carbon-rich soils.	Carbon and peatland 2016 map Scotland's soils (environment.gov.scot) James Hutton Institute (JHI) - PKC Carbon Sequestration Study (2021)	The Carbon and Peatland map was created by Scottish Natural Heritage (now NatureScot) and based on James Hutton Institute data providing a consolidated spatial dataset. The dataset combines historical soil information, at the 1:25 000 scale where available, and 1:250 000 scale elsewhere, with land cover from 1988 data. The map also shows areas of carbon-rich soil, deep peat, and priority peatland habitat. This dataset will help direct the Plan's spatial strategy away from the area's most important soils, and help identify areas for safeguarding from inappropriate development, as well as locations for potential restoration projects. It will also directly inform the implementation of NPF4 Policy 5 in the decision-making process.	Requires detailed site survey(s) to confirm presence of soil types.	Yes. TP001 and TP004 also refer.
		James Hutton Institute (JHI) - PKC Carbon Sequestration Study (2021)	PKC commissioned James Hutton Institute (JHI) to prepare a study in to Carbon Sequestration across the PKC area. The study considered a range of relevant areas of research, including: <ul style="list-style-type: none"> • Estimates of Soil Carbon Stocks in PKC area • Carbon Stocks and emissions from Peatland 	JHI noted in project report some uncertainty in the data defining peatland, its status, and lack of robust data on monitoring of	Yes. TP004 and TP007 also refer.

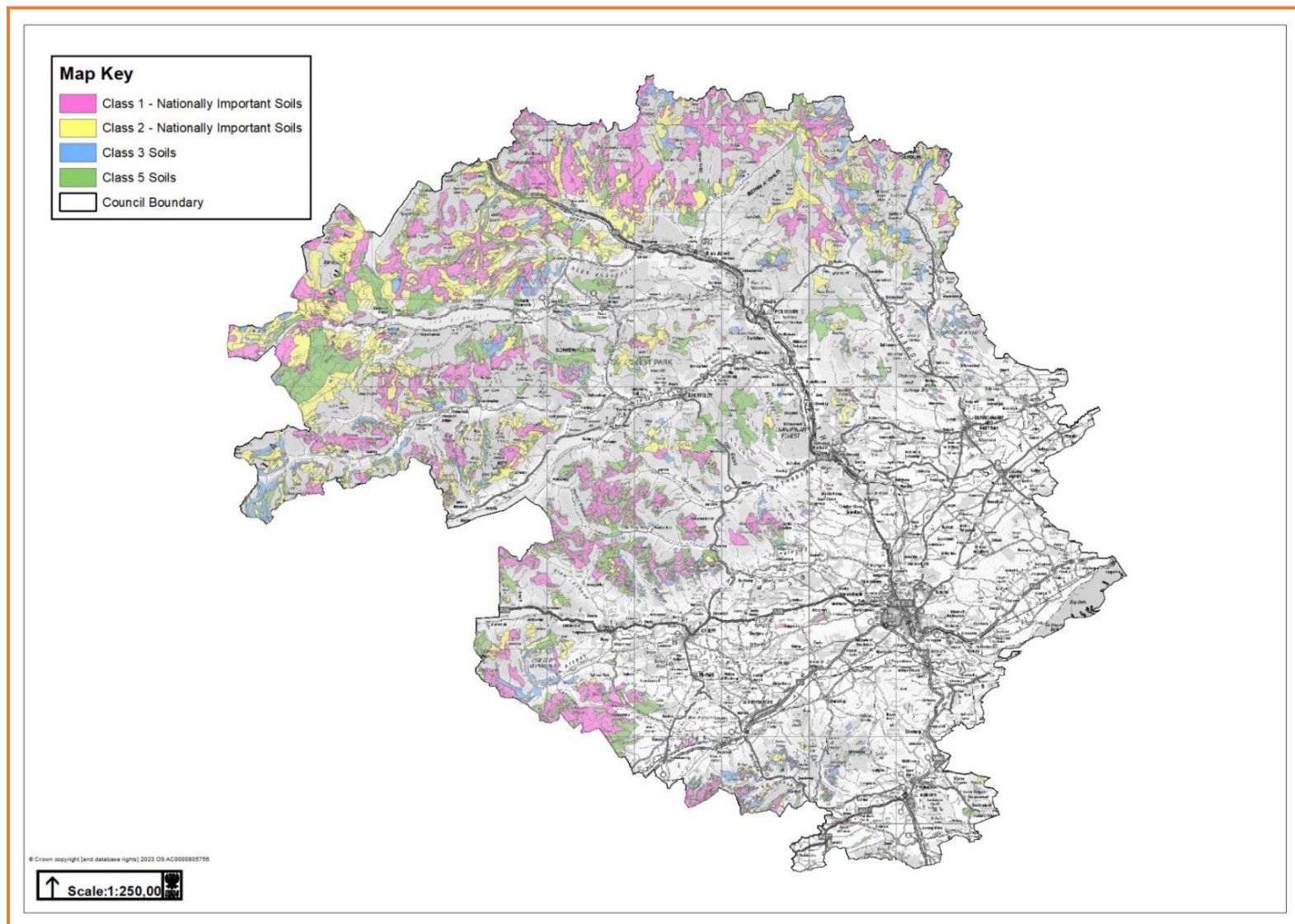
Act or NPF	Requirement or Expectation	Dataset or source	Relevance of evidence and why it is required to inform the Proposed Plan (what it tells us and / or how we will use it?)	Gaps or uncertainties in data	Included?
			<ul style="list-style-type: none"> Recommendations across a range of land-based initiatives to support carbon sequestration <p>The study provides a research resource to support PKC’s wider net zero initiatives. The study can help to guide the development of the Plan’s spatial strategy, through highlighting existing sources of GHG sequestration and storage, and identifying new opportunities. The study outputs could also be used to support site specific proposals around peatland restoration and other land-based practices such as woodland creation.</p>	<p>peatland restoration sites make estimates of timescales for the restoration of these sites inappropriate at present.</p> <p>There are potential issues with the assumptions in the report that conifer woodland is best for carbon capture.</p> <p>No data available on technological sinks and stores.</p>	
		Peatland Action - peat depth Scotland's soils (environment.gov.scot)	<p>Peatland Action Sites (Peat Depth Surveys) – Point data: Scottish Natural Heritage (SNH) (now NatureScot) has prepared a consolidated spatial dataset of peat depth measurement collected across Scotland. The information was collected during peat depth surveys conducted as part of various assessments carried out on sites that formed part of the Peatland ACTION project (2012-2019).</p> <p>The peat depth information has been gathered on upland sites. This dataset will help direct the Plan’s spatial strategy away from the area’s most important soils, and help identify areas for safeguarding from inappropriate development, as well as locations for potential restoration projects. The surveyed peat depth information could potentially be used to inform the assessment of development proposals and associated survey requirements.</p>	<p>No data on condition currently available for Peatland ACTION sites.</p>	<p>Yes. TP004 also refers.</p>

Act or NPF	Requirement or Expectation	Dataset or source	Relevance of evidence and why it is required to inform the Proposed Plan (what it tells us and / or how we will use it?)	Gaps or uncertainties in data	Included?
		Land capability for agriculture map (partial cover)	<p>The map shows the distribution of the different land classes across virtually all of Scotland’s cultivated agricultural land and adjacent uplands. Land in classes 1, 2 and 3.1 is often referred to as prime agricultural land and is capable of being used to produce a wide range of crops.</p> <p>This dataset will inform the Plan’s Spatial Strategy and assessment/selection of sites. It will also directly inform the implementation of NPF4 Policy 5 in the decision-making process.</p>	<p>At the detailed application stage, requires detailed site survey(s) to confirm presence of soil condition/types.</p>	<p>Yes.</p>
		Soil risk maps Map of subsoil compaction risk (partial cover) Map of topsoil compaction risk (partial cover) Map of soil erosion risk (partial cover) Map of runoff risk (partial cover)	<p>Risk maps show areas of soil at risk of erosion, runoff, leaching and both topsoil and subsoil compaction, based on the inherent properties of the soil and the landscape.</p> <p>The soil risk maps could potentially be used to influence site specific developer requirements / considerations included for development allocations as well as the assessment of development proposals against NPF4 Policy 5.</p>	<p>N/A</p>	<p>Yes.</p>
<p>NPF4 Policy 5</p>	<p>LDPs should protect locally, regionally, nationally, and internationally valued soils, including land of lesser quality</p>	<p>As noted in the main text above, there is no nationally consistent classification of what constitutes “land of lesser quality that is culturally or locally important for primary use”. In the revised draft NPF4 explanatory report (p.214-215) reference is made to establishing ‘valued soils’ through the protected area network and other existing mapped data sources. The below data sources are included for reference at this stage including for stakeholder input.</p>		<p>There are no existing datasets captured at the national level that directly covers “land of lesser quality that is culturally or locally important for primary use”.</p>	<p>N/A</p>

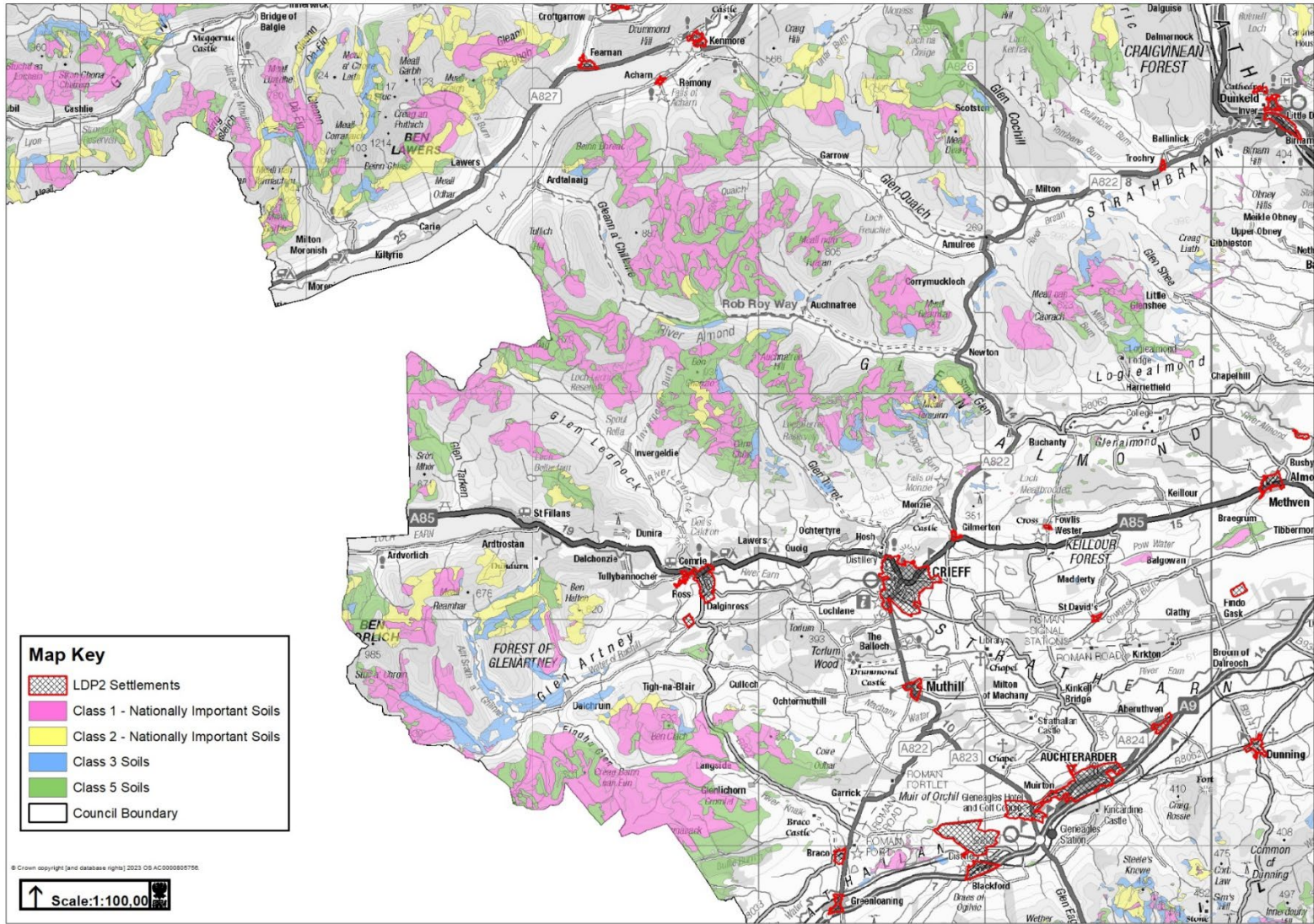
Act or NPF	Requirement or Expectation	Dataset or source	Relevance of evidence and why it is required to inform the Proposed Plan (what it tells us and / or how we will use it?)	Gaps or uncertainties in data	Included?
	that is culturally or locally important for primary use.	Historic Environment Scotland CANMORE record on 'agricultural cropmark' sites – Perth & Kinross Council	<p>These CANMORE sites are identified for their historic/cultural interest in relation to previous agricultural use. The sites are considered to be of primary relevance in the Historic Assets and Places Topic Paper (008) rather than under soils.</p>	<p>Sites only included where areas have been surveyed/identified through fieldwork.</p>	<p>Summary included. TP008 (Historic Assets) refers further in relation to historic assets.</p>
PKC mapped local community growing initiatives		<p>Food production is one of the listed land uses that falls within the meaning of “land of lesser quality” classification. PKC has mapped existing community allotments, orchards and growing initiatives and projects.</p> <p>This dataset has been considered in the context of “land of lesser quality that is culturally or locally important for primary use” (NPF4 Policy 5) and has wider considerations such as Open Space and Blue/green infrastructure. It is important to note that no existing assessment has been made to assign “cultural or local” importance to these sites in the context of this new classification of soils/land.</p>	<p>N/A</p>	<p>Summary included. TP0021 (Blue and Green Infrastructure) refers further. Inclusion TBC following consultation on topic paper.</p>	
Wetlands Scotland's environment web Natural Flood Management maps		<p>The Scotland Wetland Inventory details the relevant wetland habitat types that support a range of ecosystem services including water catchment management. Wetlands are described in the Scottish wetland typology and vary in type across Scotland and PKC area.</p> <p>Natural Flood Management maps have been prepared by SEPA as required by the Flood Risk Management (Scotland) Act. These maps identify opportunities for supporting a range of actions to aid in natural flood management including: run off reduction; floodplain storage; sediment management; estuarine surge attenuation; and wave energy dissipation.</p>	<p>Wetland Inventory data only included where areas have been surveyed. Areas not yet surveyed are left blank and may contain wetlands.</p>	<p>Summary included. TP004 (Biodiversity and Natural Places) and TP023 (Flood Risk and Water Management) refer further. Inclusion TBC</p>	

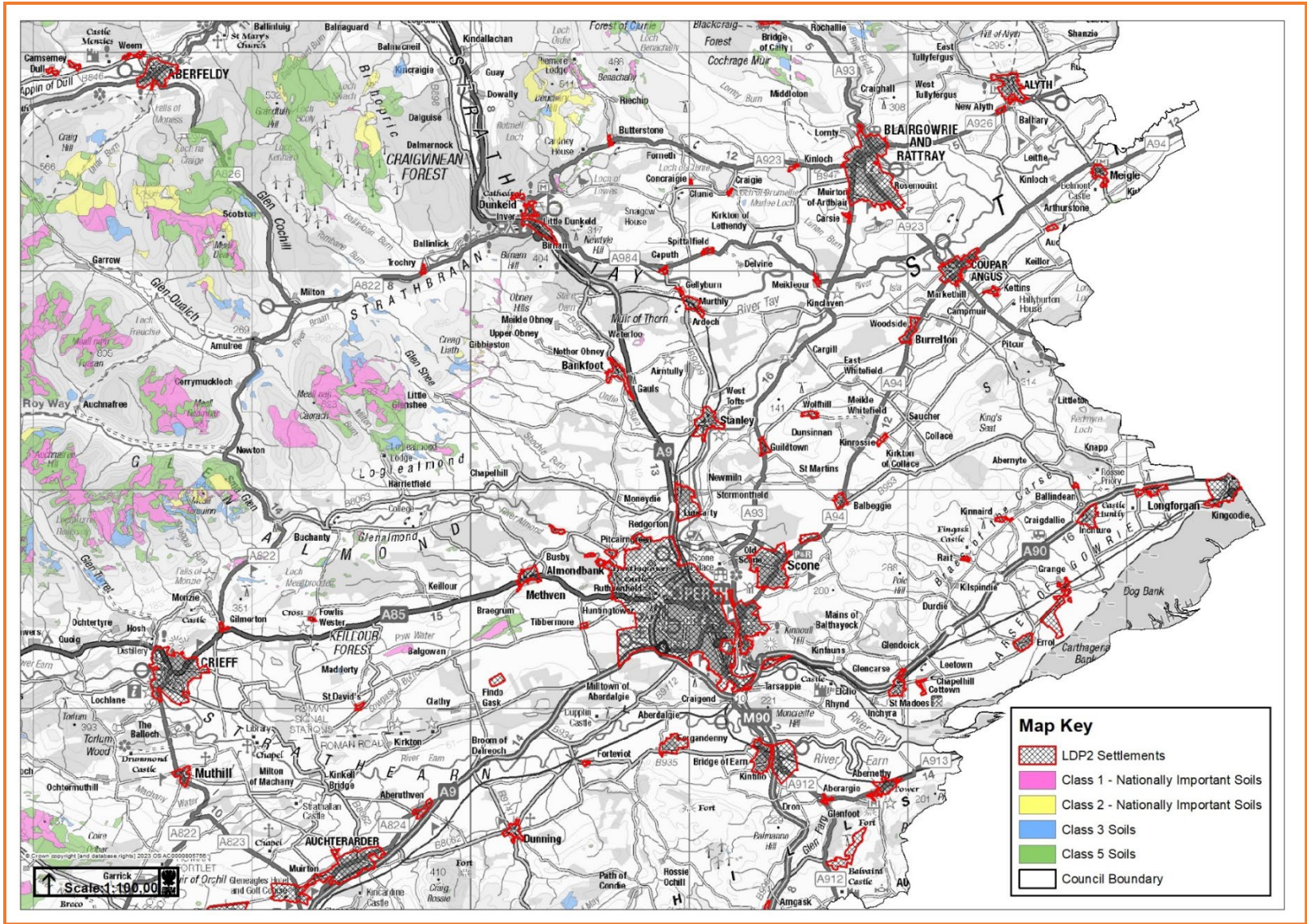
Act or NPF	Requirement or Expectation	Dataset or source	Relevance of evidence and why it is required to inform the Proposed Plan (what it tells us and / or how we will use it?)	Gaps or uncertainties in data	Included?
			<p>These datasets have been considered in the context of “land of lesser quality that is culturally or locally important for primary use” (NPF4 Policy 5) and have wider considerations such as Biodiversity, Natural Places, Blue/green infrastructure, and Flood Risk/Water Management. It is important to note that no existing assessment has been made to assign “cultural or local” importance to these sites in the context of this new classification of soils/land.</p> <p>It is important to note the Natural Flood Management maps identify opportunity areas and do not identify where land is being primarily used for these specific purposes. Local Flood Risk Management Plans, prepared by local authorities, will take the NFM measures set out in the Flood Risk Management Strategies and detail how they will be funded and implemented. This is covered in more detail in TP023 (Flood Risk and Water Management).</p>		<p>following consultation on topic paper.</p>
		<p>Land Capability for Forestry</p>	<p>Land Capability for Forestry mapping identifies land that is potentially capable for future forestry that would include supporting carbon sequestration activity.</p> <p>This dataset has been considered in the context of “land of lesser quality that is culturally or locally important for primary use” (NPF4 Policy 5) however it is considered to be of primary relevance to Topic Paper 007 on Forestry, Woodland, and Trees in terms of opportunities for tree and woodland planting.</p> <p>It is important to note this dataset identifies opportunities for potential future tree and woodland planting; it doesn’t identify land that is already being used for this purpose as its primary use.</p>		<p>Summary included. TP007 (Forestry, Woodland, and Trees) refers further.</p>

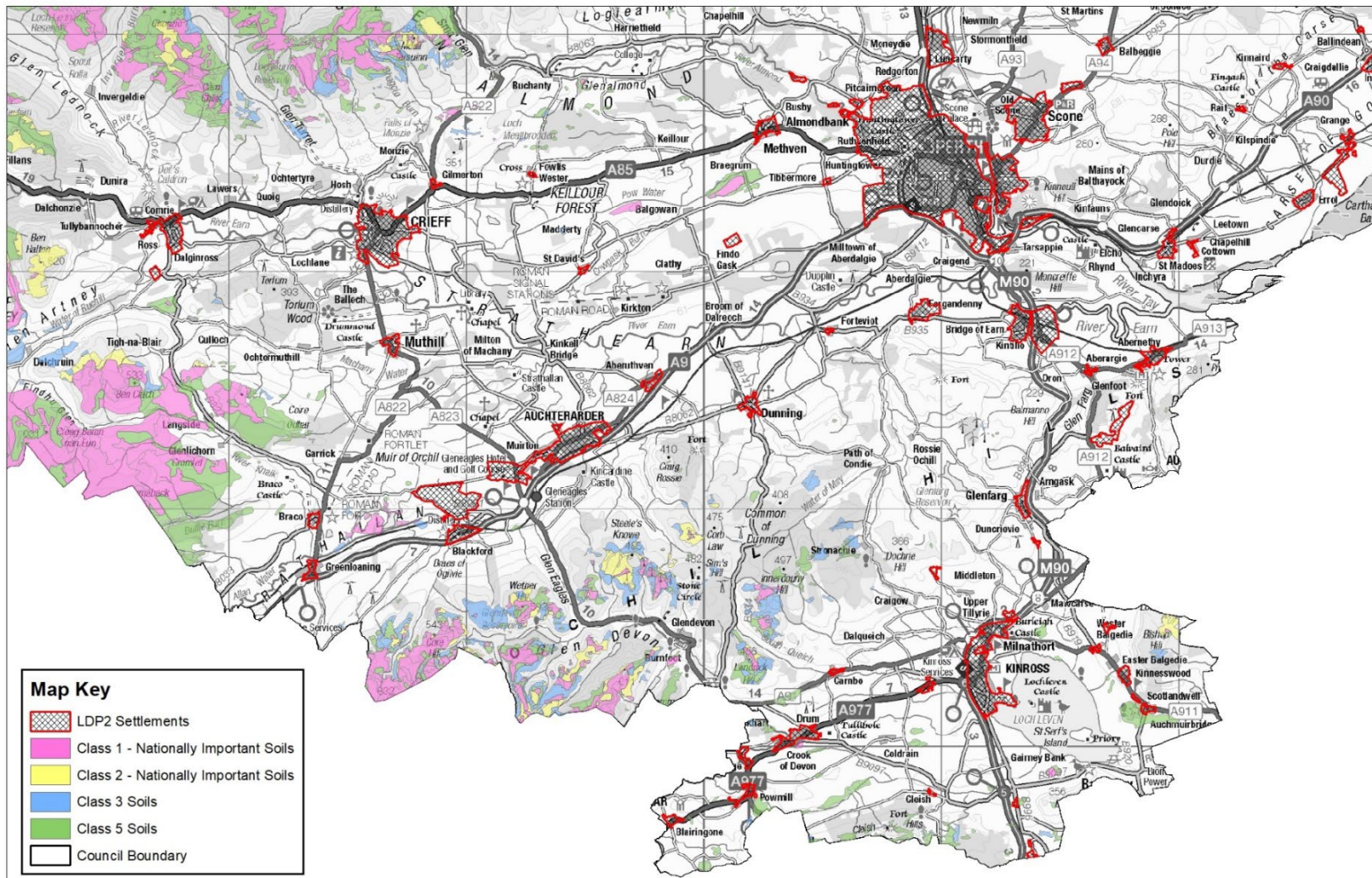
Appendix 2: Carbon Rich Soils/Peatland/Priority Peatland Habitat (Class 1, 2, 3 and 5 soils) across PKC area - Overview²









² James Hutton Institute 1:25,000 and 1:250,000 scale soil data and Land Cover Scotland 1988. Used with the permission of The James Hutton Institute. All rights reserved.







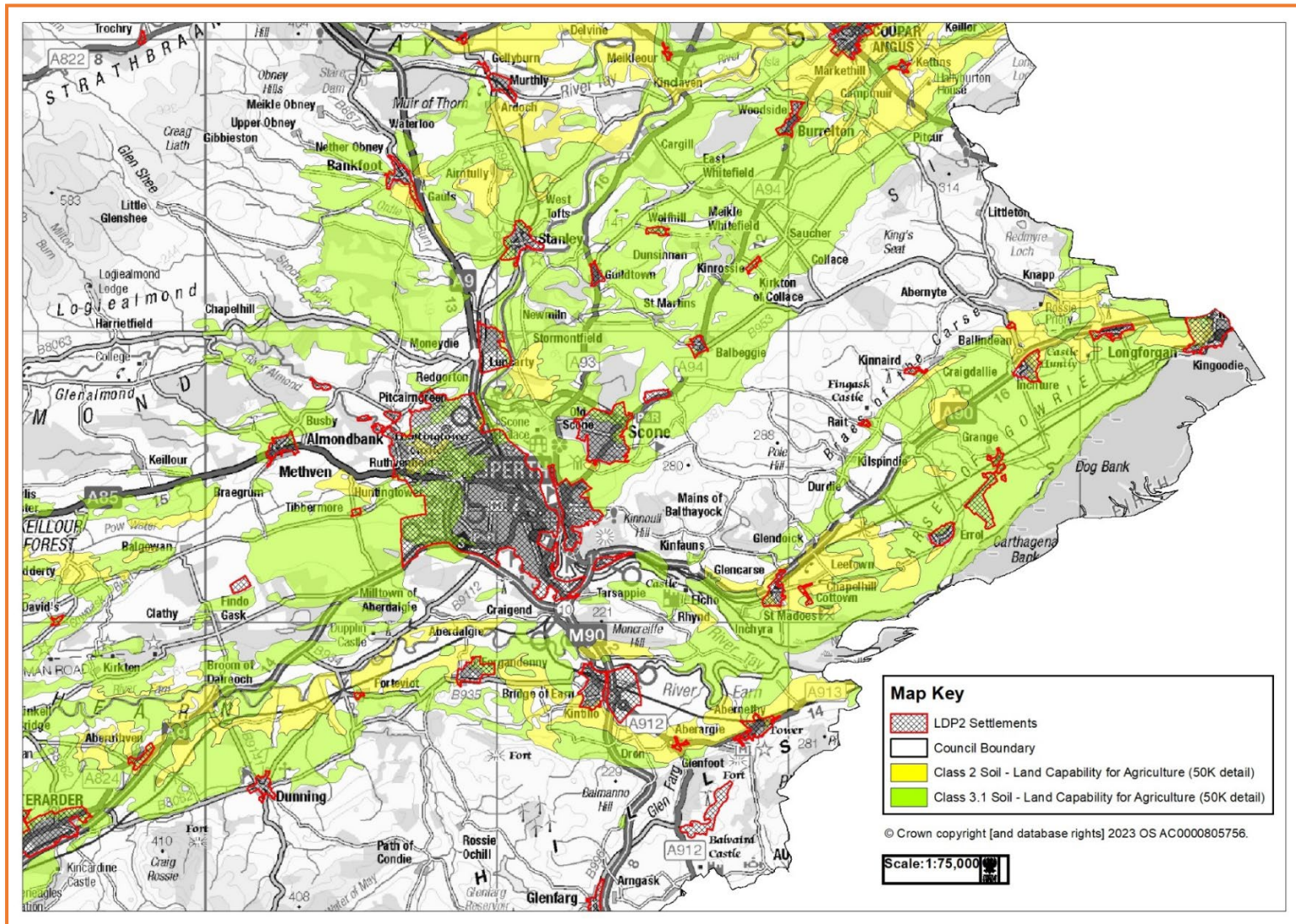
Map Key

-  LDP2 Settlements
-  Class 1 - Nationally Important Soils
-  Class 2 - Nationally Important Soils
-  Class 3 Soils
-  Class 5 Soils
-  Council Boundary

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↑ Scale: 1:100,000

Appendix 4: Prime Agricultural Land (Class 2 and 3.1 soils) across PKC area – Detailed Area Maps⁵



⁵ Soil Survey of Scotland Staff (1984-87). Land Capability for Agriculture maps of Scotland at a scale of 1:50 000. Macaulay Institute for Soil Research, Aberdeen. DOI: 10.5281/zenodo.6322760¹

