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ScotLIS 3 – a critical tool for Scotland

Scotland's land information service: what is it and why it matters

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About the Author



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Introduction

Information about land is vital. It is used by businesses, policy-makers, academics and others every day. As the climate crisis intensifies, there is even more need for better, more timely, more comprehensive and more accessible information about land.

Such information is varied and ranges from information on land ownership to valuation, from energy efficiency ratings to building types and from vegetation cover to hydrology and flood risks.

All of this information exists in some form and some of it is relatively accessible. However, much of this information is not easily available and virtually none of it is made available in an integrated form. This means that the effort to source the information, to collate it and to analyse it is time-consuming, costly and, in some cases, impossible.

Two attempts have been made to establish Scotland's Land Information Service (ScotLIS). The first was in the 1990s when organisations led by the Royal Institution of Chartered Surveyors (RICS) attempted to establish a land information system for the UK to pull together information on land ownership, valuation, land use and other features of land. The project did not succeed in its ambitions. The second attempt, by Unifi Scotland (www.unifiscotland.com), was initiated in 2015 but is still not implemented.

This paper outlines the background to ScotLIS, the case for a refreshed approach, and the key issues that need to be addressed to deliver the outcomes. The paper sets out the case for completing the implementation of ScotLIS as recommended by the Keeper of the Registers of Scotland in July 2015 (referred to in this paper as the 2015 Report).¹

1 A Digital Land and Property Information Service for Scotland. Report to the Deputy First Minister. July 2015. [Online](#)

What is a national land information system?

Land Information Systems are legal and policy frameworks that govern the capture, storage, dissemination, interoperability, use and governance of a wide range of information about land including its tenure, ownership, use, status, value, history and physical condition. Most countries have a great deal of land information but few have successfully implemented a National Land Information System.

International institutions have been active in encouraging and supporting improvements in land administration in order to facilitate good governance of land, sustainable public finance, reducing land degradation and, increasingly, mitigation and adaptation in relation to climate change. Most relevant is the UN-GGIM Integrated Geospatial Information Framework (IGIF).² The World Bank has published an implementation methodology for the IGIF.³

A national land information system enables the systematic and integrated collection and dissemination of land information for businesses, the public, government and its agencies and academics. It is an important element of land governance and vital to the efficiency of business and professions.

2 United Nations Committee of Experts on Global Geospatial Information Management [Online](#)

3 World Bank Group Integrated Geospatial Information Framework (IGIF) Country-level Implementation: Templates and Tools. [Online](#)

ScotLIS

ScotLIS 1 was promoted by RICS in the late 1990s as a pilot project to evaluate the potential to integrate different sources of land information. Contributors to the pilot included Glasgow City Council, the Coal Authority and the British Geological Survey.

The initiative did not make any significant headway beyond the pilot. In part, with the imminent establishment of the Scottish Parliament, government had other priorities and there was an anticipation that the initiative might be picked up through the Land Reform Policy Group deliberations and subsequent government policy.

In 2007, Unifi Scotland was established to promote and develop a land and property information system. Partners include the Registers of Scotland, RICS and the Law Society of Scotland



ScotLIS 2

In March 2015, Unifi Scotland organised a conference at which John Swinney MSP, the Deputy First Minister in the Scottish Government, announced his commitment to Scotland having an easy-to-use and affordable system for accessing a wide range of information about land and property in Scotland – a “one-stop digital database for land and information services”. A taskforce, headed by the Keeper of the Registers of Scotland, was established and it published its report to the Deputy First Minister in July 2015.⁴

There is no Parliamentary or Scottish Government record of the report having been accepted but a report in the Journal of the Law Society of Scotland claimed that “Deputy First Minister John Swinney has endorsed a recommendation that will give Scotland a comprehensive land and property information service.”⁵

This 2015 Report is worth reading. It makes recommendations about how ScotLIS will be developed and financed. It proposes a “first wave offering” built on supporting land and property transactions and suggests examples of datasets that should be included.⁶ The list provided is extensive ranging from landownership to planning, mains water and utilities, rights of way, insolvencies, energy performance certificates and radon risks. The plan was to launch this first wave of ScotLIS in October 2017 to coincide with the 400th anniversary of the establishment of the Register of Sasines in 1617.⁷

Registers of Scotland did launch ScotLIS successfully in October 2017 but it included only data derived from the Land Register. None of the other data sources proposed for the first wave were available and this remains the situation today. The taskforce ended its work when the service was launched.

ScotLIS is a successful service for those wishing access to the Land Register but as yet it provides no access to other land registers held by the Keeper of the Registers of Scotland – for example the Crofting Register, the Register of Community interests in Land, or the Register of Persons Holding a Controlled Interest in Land. These additional registers are all capable of being searched but through facilities outside ScotLIS.

ScotLIS has thus taken an important first step in acting as an effective portal for searching the Land Register. However, progress on completing the remaining elements of the first wave stalled and have not been delivered. This is not the fault of the Registers of Scotland or indeed of any of the other organisations represented on the taskforce. In a roundtable discussion that informed this paper, there was a consensus among participants that there has been a failure of political leadership, in particular to establish the governance framework necessary to deliver the ambitions set out in 2015.

4 A Digital Land and Property Information Service for Scotland. Report to the Deputy First Minister. July 2015. [Online](#)

5 Journal of the Law Society of Scotland 16 November 2015.

6 See Annex D of 2015 Report.

7 A summary of the proposals can be read in this Law Society of Scotland article. [Online](#)

Existing land information

Scotland has a considerable amount of land and property information. Some of the key data, online resources and institutions holding this data are listed in Appendix 1. The key issues with this data are as follows.

1. Some data is unavailable beyond a restricted group of users. The most prominent example of this is a wide range of datasets including Forestry and Woodland Strategies, Gritting Routes, GP Practices and Cycling Networks that form part of the Spatial Hub administered by the Improvement Service but to which access is restricted to Public Sector Geospatial Agreement (PGSA) members.⁸ All of this information has been collected and aggregated at public expense.
2. Some data is available to all but only via a web interface designed by the data holder. The raw data is not available for use by anyone outside the organisation. The Valuation Roll held by the Scottish Assessors is a good example of such a restricted dataset.⁹
3. Some data is held but not in an easily accessible format. For example, the Register of Persons Holding a Controlled Interest in Land is not searchable by a map and is not integrated with other land and property information held by the same organisation.¹⁰
4. Some data is held but in an inconsistent and unreliable manner. For example, the sale of a crofting common grazing in Argyll which is agreed between the landowner and shareholders has been delayed for two years because of inadequate records documenting the identity of every shareholder.
5. Some data is simply not available at all, for example, the location and extent of land held under agricultural tenancies or data on the construction and condition of the built environment.

Notwithstanding the above, much more data is now available than was the case ten years ago. Some of the best examples (beyond ScotLIS) include:

- PASTMAP <https://pastmap.org.uk/map>
- SEPA <https://www.sepa.org.uk/environment/environmental-data/>
- Scottish environment data <https://map.environment.gov.scot/sewebmap/>

These datasets and others outlined in Annex D of the 2015 report are the datasets that should be incorporated into ScotLIS but as yet are not. There appear to be no current plans to do so.

The overarching improvement needed is to construct a portal where all the land and property information can be examined for any particular site and downloaded for analysis via one single online portal.

⁸ See <https://data.spatialhub.scot/dataset/>

⁹ See <https://www.saa.gov.uk/>

¹⁰ See <https://rci.ros.gov.uk/>

Practical benefits and opportunities

The availability and licence conditions on the use and re-use of public data have been steadily improving. Since 2015, Scottish public data has been open by default but, as was observed in a recent paper on the topic, progress remains slow with, for example, over half of Scottish Councils making no open data provision.¹¹ In a report published by the David Hume Institute in 2022, the author observed that *“despite the benefits demonstrated by those leading the way in open data, Scotland is moving at a glacial pace and the gap with other countries is widening”*.¹² The same report concluded that over 95% of the data is still locked up and that it could be worth over £2 billion annually to Scotland’s GDP. These conclusions cover all public sector data not only that relating to land and property.

Open data is a prerequisite for any land and property information system. The benefits of such a system were outlined in the 2015 Report which highlighted in Annex E the Norwegian experience of constructing a one-stop portal for information on land and property.

The key benefits of a fully functioning ScotLIS system were outlined in the 2015 Report in summary as follows:

“ The purpose of ScotLIS is to enable users to access, quickly and easily, information about any piece of land or property in Scotland through a single, online enquiry point. This will make for easier access to key information for the citizen, support smarter conveyancing, and provide better access to important information to support policy and other decision-making, while improving accountability and transparency and creating wider social and economic benefits through innovative use of data. ”

The 2015 report was accepted by Scottish Ministers but its proposals have not yet been implemented.

11 See Ian Watt (2022) *What is Open Data and Why Does it Matter?* [Online](#)

12 *ibid*

Challenges of building ScotLIS

There are undoubtedly challenges in delivering the recommendations of the 2015 Report.

One challenge is putting in place the appropriate governance framework with appropriate political leadership to make it happen. This appears to have been the key failing in the delivery of the stated ambitions for ScotLIS.

Another challenge is ensuring that the data to be collated can be used for purposes other than that for which it is collected. There may be some legislative changes needed but these are believed to be modest.

A further challenge is how to structure the governance of ScotLIS. Should it be public sector led or private sector led? Fundamentally, it does not much matter so long as the objectives are clear and there is clear accountability to the wider public.

There is also the technical challenge of collating data in a modern format for integration into ScotLIS. That is a challenge that has been successfully met in many other systems of land administration.

Finally, there is a financial challenge in both paying for the development of ScotLIS and in ongoing administration. No estimates of costs are provided in the 2015 paper but this is probably the least of the challenges. It is in the interests of the public sector to be collecting and maintaining datasets in as efficient a manner as possible. The technical means exist to integrate this into a one-stop portal and charging regimes for data can still be implemented. For the consumer, it is not the fees to obtain data that cause frustration so much as the time and associated expense of doing so.

Delivery

Both the private and public sectors have a key role in delivery of ScotLIS. The public sector holds much of the information and the private sector is a key user of such information as well as delivering much of the technical infrastructure.

Previous attempts to deliver ScotLIS have not succeeded in achieving their goals. The key explanation for this, as explained above, appears to be a governance issue and a reliance on one public sector body to deliver a system that required commitment from many other public sector bodies. No political effort was made to rectify this situation and the private sector is left where it was before with fragmented, incomplete and inaccessible information about land and property.

How ScotLIS is delivered is a secondary issue to ensuring that it is developed in the first place and has a sound governance framework. A private sector delivery model is an option but cannot be developed without the commitment of the public sector to the project. The public sector is the holder of much of the land information and has a key role in unlocking it for wider public use.

Although it is beyond the scope of this paper to set out a detailed delivery model, the following principles are suggested as being vital to success:

1. There needs to be a firm agreement and commitment to deliver ScotLIS by Scottish Government and the wider public sector. Ministers have a key leadership role here.
2. Necessary policy and legislative changes to permit the development of ScotLIS need to be agreed in principle.
3. Agreed protocols on data, access, technical design and data use need to be developed.
4. There needs to be a suitable governance framework in order to direct and monitor development of ScotLIS with agreed timescales, milestones and final delivery.
5. Any necessary finance needs to be in place.



Timeline for implementation

Despite the failure of ScotLIS to deliver its goals from 2015 to 2017, much of the architecture of a one-stop portal for land and property information is already built with a variety of technical solutions developed by various parts of Government to publish their data. ScotLIS has delivered a successful portal for the Land Register and is popular with the public.

Technical challenges for ScotLIS completion remain, most notably the fact that, as currently constructed, ScotLIS is owned by Registers of Scotland and designed for its own data. Incorporating new data will present new challenges but there is no evidence that there are insurmountable obstacles. Given the international experience, advances in data processing and mapping technologies, the original two year timeframe for ScotLIS completion (2015-2017) remains achievable. A ScotLIS 3 could be in place by the end of 2025.



Appendix 1: Data, Institutions and Sources

Key data

- Land tenure (ownership, crofting and agricultural tenancies, Crown land, Common Good land etc.)
- Environment (designations, pollution, flood data, historic sites and buildings, biodiversity)
- Energy (energy efficiency, energy generation)
- Building information (construction dates, materials, state of repair)
- Vegetation cover and soils
- Emerging data (e.g. carbon credits)

Institutions

- British Geological Survey
- Coal Authority
- Crofting Commission
- Energy Saving Trust
- Forestry and Land Scotland
- Historic Environment Scotland
- James Hutton Institute (vegetation cover and soils)
- Local Authorities
- NatureScot (previously known as Scottish Natural Heritage)
- Registers of Scotland
- SEPA – Scottish Environmental Protection Agency
- Scottish Assessors
- Scottish Ministers

Online sources

- Spatial Hub (Improvement Service) <https://data.spatialhub.scot/dataset/>
- Historic Environment Scotland (CANMORE) <https://canmore.org.uk>
- Historic Environment Scotland (PASTMAP) <https://pastmap.org.uk>
- Registers of Scotland (ScotLIS) <https://scotlis.ros.gov.uk>
- Registers of Scotland (other registers) <https://www.ros.gov.uk/our-registers>
- SEPA (data) <https://www.sepa.org.uk/environment/environmental-data>
- SEPA Scotland's Environment <https://www.environment.gov.scot>
- Scottish Assessors (SAA) <https://www.saa.gov.uk>



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