

A report on mapping in the Land Register in Scotland

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Foreword

The Scottish Law Commission recently reported on the law on Land Registration in Scotland. The report included a draft Bill. Registers of Scotland consulted on the proposals in the report in autumn 2010 and the responses to the consultation have inspired us to review existing practices in a number of areas in advance of any new legislation being enacted.

One of the proposals of the Scottish Law Commissioners is that there should be a statutory map, known as the Cadastral Map, constituting the totality of registered geospatial data in Scotland. In many ways, this statutory map would be a continuation of the index map that Registers of Scotland has built up since 1981 on an administrative basis to ensure compliance with the provisions of the Land Registration (Scotland) Act 1979.

One issue we have become increasingly aware of in administering the existing index mapping system is that sometimes the extent of the land that is legally conveyed to a person does not exactly match the extent of the land that they subsequently occupy. This can arise for a number of reasons, not least because many General Register of Sasines titles to land were conveyed on the basis of historic maps. While such issues are not necessarily picked up when considering land rights on a title sheet, they are brought into sharp focus when viewing them on a map.

This short report reflects work done in 2011 by Registers of Scotland to review the question of registration of mapping on the Land Register.



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Introduction

Vision

The vision for Land Registration Mapping is to have a full and complete map of title to land for the whole of Scotland, depicting all registerable interests and containing no gaps or overlaps. This undertaking is influenced by continued developments in both the mapping environment and registration. This will involve continuous revision and improvement of RoS' processes in line with our partners.

Introduction

With the passage and implementation of the Land Registration (Scotland) Act 1979, the Keeper of the Registers of Scotland was bound to create and maintain a public register of interests in land known as the Land Register. The Land Register is a map-based register where rights of interest in land are registered by the making up and maintenance of title sheets in relation to those interests. Amongst other things, a title sheet must include a textual description of the land to which the interest relates and the extent of the interest based on the Ordnance Survey Map.

The Keeper of the Registers, through the Registers of Scotland, has relied on the Ordnance Survey Map for the purpose of registration for 30 years. In the vast majority of cases this system has met the needs of the customer in providing accurate titles to interests in land that people can secure lending against.

It is recognised that the advancement of new surveying technologies in recent years allows for a significant improvement in the positional accuracy of all types of survey plans and boundaries. This has many positive benefits in the registration process with most applications being completed satisfactorily. However, it is recognised that in a small number of cases this can lead to issues of compatibility and integration for the purpose of registration with current Ordnance Survey mapping resulting in a significant impact to the individuals concerned. These issues often revolve around the scale-related

positional accuracy of mountain and moorland mapping when attempting to reconcile deed plans produced using modern surveying methods.

This report, produced by the Registers of Scotland and supported by Ordnance Survey, the Royal Institution of Chartered Surveyors and the Law Society of Scotland, seeks to set out an agreement on the future nature of mapping that will be acceptable for registration in the Land Register. Within this report:

- Part 1 provides detail on the issues around mapping in the Land Register; and
- Part 2 sets out the Registers of Scotland policy.

Part 1: Issues of mapping in the Land Register

The General Register of Sasines

1. In property law, a real right in property can be created or transferred only in relation to that which can be specifically identified. A conveyancing deed must therefore describe the land it conveys sufficiently to identify it. There is no requirement, in terms of property law, for such a deed to contain or refer to a plan.

2. When the Register of Sasines was introduced in 1617, there was similarly no compulsion for deeds to contain plans and this remains the case. The Register of Sasines is a register of deeds only. For a deed recorded in the Register of Sasines to operate as a valid conveyance it must, among other things, sufficiently describe the property being conveyed. The descriptions used in such deeds are varied and include:
 - surveyor certified plans drawn to scale;
 - plans drawn to scale by persons other than surveyors;
 - plans based on traditional units of measurement i.e. imperial or old Scots units of measurement;
 - plans adopting boundaries on an historic version of an Ordnance Survey Map, County Series or other map;
 - boundary descriptions based on physical features (such as rivers or walls);
 - boundary descriptions based on historic map features;
 - descriptions prescribing the extent of the property (e.g. 4 acres in the parish of X);
 - so-called 'floating shape' plans (which show the shape of the land but not the exact location);
 - vague descriptions (e.g. land in the parish of Y); and
 - a combination of types of description.

The Land Register

3. The Land Register was established following the enactment of the Land Registration (Scotland) Act 1979. It gives the Keeper the power to reject applications where the description of the land is not sufficient to identify it on the Ordnance Survey map. These reforms introduced a statutory foundation for the identification of legal title on plans, and from there, the Registers of Scotland began to map all land registered titles in Scotland.
4. In building up the Land Register map under the 1979 Act, Registers of Scotland have accepted Sasines descriptions of various kinds. The test used for acceptance for registration has been whether the description of the title allows mapping on the Ordnance Survey map. In most cases, the Sasine descriptions and/or plans have been sufficient to be referenced to the Ordnance Survey map.
5. When the Sasine description or plan is seen as insufficient to allow identification on the Ordnance Map, the Keeper will accept a new plan drawn up to represent the extent described in the Sasine titles. The Keeper must be satisfied that the extent on the plan accurately represents the habile extent as described in prior deeds before affording full indemnity.
6. Currently, around 55% of titles are mapped on the land register index map, covering around 20% of land mass. It is expected that the pace of registration will quicken if legislation based on proposals from the Scottish Law Commission are adopted, as the triggers for these “first registrations” will increase in number.

The Ordnance Survey map

7. Ordnance Survey produces both paper and digital mapping of Great Britain for professional, business, leisure, administrative and educational use. Ordnance Survey began mapping in 1791. Ordnance Survey digital mapping was initially created through the manual digitisation of its conventional large scale national mapping archive. Current Ordnance Survey digital mapping therefore has some legacy characteristics of the three basic mapping scales:
 - urban areas 1:1,250,
 - rural areas 1:2,500, and
 - mountain and moorland areas 1:10,000.
8. The nature of the landscape has largely determined the basic scale of survey and the amount of data required to be collected to represent the natural and man-made landscape features. As with all mapping, Ordnance Survey mapping is representative. At 1:1,250 and 1:2,500 scales, this representation is generally seen as sufficient for the purposes of Land Registration. However, at 1:10,000 scale the effect of map generalisation (to ensure at-scale map clarity) may distort features and feature relationships, impacting upon suitability for registration purposes.
9. Ordnance Survey continually maintains the currency of its map data. Major change (e.g. new buildings and roads) is mapped within six months of 'on the ground' completion. In addition, the map as it applies to Scotland is completely updated on a five-year cycle (20% per year). There are two main methods of map update: on-site surveys often using GNSS¹ technology and surveys from high-resolution aerial digital photography. Both methods can potentially deliver absolute positional

¹ Global Navigation Satellite System

accuracy² of around +/- 0.1m although, in the case of aerial surveys, the actual positional accuracy delivered is largely determined by the flying height.

10. Registers of Scotland currently receives weekly digital updates of Ordnance Survey mapping incorporating improvement to the absolute accuracy or the specification of the detail, including textual information, of the map. These updates are compared against previous map versions held by the Keeper and an analysis of the impact on existing titles is made. Where an updated map impacts on an existing registration, the Keeper will refresh the Title Plan to reflect the new map detail. However, it must be emphasised that the change to the Title Plan should not impact on any registered legal extent. At this time, Registers of Scotland requires to process a number of these digital updates and currently has a structured program to complete the outstanding workload and align the registration map base with the latest Ordnance Survey updates.

11. In urban and rural areas, the existing map data is generally accurate to tolerances of +/- 0.4m and +/- 1.1m respectively (and much more accurate if modern survey technologies have been used). This level of positional accuracy is considered to be sufficient for the purpose of registering rights in land generally and boundaries of properties in particular.

12. However, in mountain and moorland areas, the existing map data is generally accurate to a tolerance of +/- 4.0 metres. Registers of Scotland are of the view that:

- where the accuracy of the mapping, in areas of rural-type character, falls outwith rural mapping tolerances, or

² absolute positional accuracy is the position of features in relation to the Ordnance Survey National Grid

- where the scale of mapping inhibits the required depiction of features and feature relationships e.g. housing and associated details

then the mapping is insufficient for the purpose of land registration and Registers of Scotland would requisition, and pay for, a re-survey of the area.

13. Ordnance Survey has traditionally managed the interface between areas mapped to different tolerances and specifications by using a tapering method. That is, where the scale of the map changes (e.g. from 1:2,500 to 1:10,000), the joins are made to match by, for example, gradually narrowing or widening the representation of roads and rivers. This approach presents no systemic problems from a registration perspective

14. Ordnance Survey is progressively improving the overall currency, accuracy and consistency of its mapping and in doing so is engaging closely with stakeholders, including Registers of Scotland, to ensure their data capture programmes meets their customers' needs. In particular, there is a programme to remove much of the generalisation from 1:10,000 mapping and to upgrade pockets of urban-type landscapes in 1:10,000 areas to urban specifications.

Registers of Scotland Index map

15. Since the beginning of the Land Register in 1981, the Keeper has had a statutory obligation to include in a title sheet a description of the land based on the Ordnance Survey map. The title plan is a visual representation of legal extent of title and it shows the extent of the property, rights and burdens by coloured edging and tints.

16. Although the Keeper has no duty to do so, Registers of Scotland also maintains an Index Map based on the Ordnance Survey map, which identifies the legal extent of all the registered titles in Scotland.

17. It is conceded that some registered properties may not be of the absolute positional accuracy standard that the latest surveying technology can deliver. However, such property extents are likely to be sufficiently accurate, relative to their neighbours. On a day-to-day basis, this will not usually cause a practical difficulty. Also, as the technology used by Ordnance Survey has developed, the absolute accuracy of Ordnance Surveying mapping update is, in turn, improving.

18. In the mountain and moorland areas of Scotland, the prevailing scale of Ordnance Survey mapping is 1:10,000 (with a positional accuracy tolerance of +/- 4 metres). This is largely proportionate to the level of detail present in the landscape. However, there are individual and small groups of properties that are located in the mountain and moorland landscape that have the same requirements for registration purposes as properties in the urban environment. It is these properties that require re-survey using modern technology.

Creating a title plan

19. In determining the legal extent for the purposes of the title plan and index map, a number of factors must be taken into account. The principal factors are:

- the legal extent of the person's title;
- the legal extent of any neighbouring property, if registered in the Land Register;
- the prevailing scale of the Ordnance Survey map in the area;
- the plan submitted by the person's surveyor if applicable; and
- other relevant documentation submitted in support of the application.

20. The title plans of neighbouring properties cannot be allowed to overlap on the index map if a fully indemnified title is to be issued. (as two persons cannot exclusively own the same land). Therefore, the

creation of any title plan must take into account not only the legal extent of the property in question, but also the legal extent of the boundaries of neighbouring properties, if registered in the Land Register.

21. Where (in the circumstances discussed above), Registers of Scotland consider the prevailing base mapping insufficiently detailed to allow a property to be depicted on the index map, Ordnance Survey can be commissioned to re-survey and update the area before the land is registered on the Land Register.

22. Registers of Scotland accepts plans drawn to a larger scale than the scale of the Ordnance Survey map both from deeds recorded in the Sasine Register and newly prepared plans. (However, any newly prepared plans will only be taken into account if warranted for the purposes of registration.) If these maps accord with the legal extent of the property, registration will proceed. The Keeper, if legally required, will make reference to detail outwith Ordnance Survey specifications. Such plans whilst accepted as accurate may include some high specification detail not reflected on a title plan.

Consequences of inaccuracies³ in the Register in regard to mapping

23. The expansion of the Land Register has resulted in many applications for registration falling within areas where the base map is a scale of 1:10,000. As RoS developed experience in dealing with these applications, the need for more accurate and detailed mapping in remote areas was recognised and shaped policy development in this area. In the early years of development of the Land Register, the

³ The term inaccuracy in relation to the Land Register has been judicially defined in *Brookfield Developments Limited v. The Keeper of the Registers of Scotland* as to be "construed widely so as to include any incorrect or erroneous entry in or omission from the register"³

limited experience and low incidence of such applications may explain limited working practices, which in turn may have created inaccuracies in the Land Register. Registers of Scotland recognise that any inaccuracy in the Land Register can have significant consequences for the titleholder(s).

24. Under the Land Registration (Scotland) Act 1979, where an inaccuracy is identified and no proprietor is in possession of land which a rectification would adversely affect, Registers of Scotland can rectify the title plan of the property concerned. This system was proposed to be adjusted by the Scottish Law Commission. The proposals suggested retaining the principle of rectification of inaccuracy, but suggested adjusting the cases in which rectification would be allowed. Suffice to say that rectification would not be allowed in many cases because home-owners have obtained a real right to the land set out in their title plan.

25. There are current policies and case law in place on how (and when) the Keeper can rectify an inaccuracy that exists within the current system. Where a surveyor produces a survey to a large scale that accurately reflects the legal extent of their client's property, it can be argued that the plan should be capable of being registered in its most accurate form in the Land Register. However, the Keeper must consider whether, by accepting a larger scale plan than is currently required, she can be liable to create an inaccuracy when considering an existing adjoining Land Register registered title involving a smaller-scale plan. While such a plan can, in theory, be attached to the Land Register and warranted, the fundamental objective of creating a cadastral map that guarantees all titles is to have a complete and coherent picture with no gaps or overlaps. Therefore, a consistent approach is taken to illustrate legal entitlement to land. It is broadly accepted that currently the Ordnance Map is the most appropriate base for this. As such, any information detailed in plans submitted for registration will be referenced to the Ordnance Map

26. Therefore, the knock-on effect of accepting such plans and conveying real rights on registration would be enormous. The effect would be to create a confusing picture of legal title on the cadastral map allowing the creation of competing titles and gaps in title all over the country. The usurped titles that currently have real rights to land would lead to widespread litigation and indemnity claims against the Keeper. Such a solution would, in all likelihood, have significant resource implications for Registers of Scotland.

Part 2: Policy

27. The analysis of the matters in Part 1 has led Registers of Scotland to conclude that the current approach to mapping is fit for purpose. However, there may be things that can be done to improve current processes.

Customers

28. In reviewing current mapping use, Registers of Scotland have concluded that there is no compelling case that the current practice causes customers undue difficulty. Where there are issues and some errors, remedies (rectification or compensation) are available. Indeed, the cost implications for customers in the current system are low. It would be for a customer to determine whether to take any necessary steps to rectify any conveyancing errors highlighted as a result of registration.

Ordnance Survey

29. In relation to Ordnance Survey, where Registers of Scotland consider the mapping in any part of Scotland mapped at 1:10,000 to be inadequate for the purpose of modern land registration, they should

continue the policy of commissioning a re-survey of the land from Ordnance Survey before processing the application.

30. It is for Registers of Scotland to determine what criteria is to be applied when deciding to commission a resurvey by the Ordnance Survey of a property which is on land mapped at 1:10,000 scale. The principles are that:

- the property must be part of the built environment;
- there must be an insufficient level of detail and/or accuracy in the current mapping; and
- the insufficiency must be of a nature that more detailed and/or larger scale mapping would resolve (as opposed to boundary issues caused by errors in conveyancing etc.).

31. Following the Ordnance Survey's updating of the Ordnance Survey Map in such an area, Registers of Scotland are generally confident that any subsequent registration in that area will be sufficiently detailed for the purpose of land registration.

32. It should be noted that as Ordnance Survey proceeds with the mountain and moorland improvement programme (described in Part 1), as agreed with major stakeholders including Registers of Scotland, there will be a reduction in the number of *ad hoc* resurvey requests.

Registers of Scotland

33. For property in Scotland not affected by the issue raised above, the current map scales when considered with the improvement processes being undertaken by Ordnance Survey are sufficient for the purposes of land registration. Registers of Scotland should continue to use them.

34. When areas are updated on the Ordnance Survey map (in line with their procedures outlined above or otherwise), Registers of Scotland have the power to update the register (which includes the map) to include the updated Ordnance Map detail. This is a power the Keeper should use carefully to ensure the most up-to-date version of the map is in use for a given property. At no time does Registers of Scotland have the power to amend the legal extent to cohere with updated map detail if that updated detail is a consequence of real-world change
35. In processing all applications for registration, the Keeper must always be satisfied that it is clear what is being registered on the map accords with the legal extent of the subjects as described in the Title Sheet (or, on First Registration, what is being transferred from the Register of Sasines).

Solicitors

36. Registers of Scotland is a registration body. It is not an arbiter of legal rights. Registers of Scotland staff must be able to rely on advice and information from solicitors and surveyors, who are the experts in the field, when making such registration decisions.
37. To this end, solicitors and surveyors should, in the course of submitting an application for First Registration (where applicable) or Transfer of Part Registration, continue to draw up and submit a plan which accords with the legal extent of the property. It continues to be incumbent on Solicitors to satisfy themselves that such a deed plan matches with the legal extent of the property.
38. Solicitors should also be aware in this regard that the Land Registration Bill proposed by the Scottish Law Commission contains a new duty of reasonable care on solicitors not to submit applications that will induce the Keeper to make the register inaccurate. If this is enacted, solicitors may become liable to the Keeper for the cost of corrective

conveyancing, rectifications, and compensation under warrant where the Keeper has been misled.

39. Solicitors should continue to use the Registers of Scotland Title Investigation Service if they are unsure about the extent of legal extent.

Surveyors

40. The Registers of Scotland deed plan criteria should be reviewed and put on a statutory footing within rules made by Scottish Ministers under the forthcoming Land Registration Bill. The Royal Institution of Chartered Surveyors should be closely consulted in this review.

41. A topic for discussion in the review should be whether the plan submitted with an application for registration should be based on the scale of the most up-to-date version of the Ordnance Survey map. This may increase efficiency of, and reduced error associated with, registration.

42. Another topic for review is whether supplementary plans mapped to a larger scale than 1:1,250 should be capable of registration and, if so, what status they should have. It may be appropriate for these plans to be held on the archive record which, under the forthcoming Bill, would formally be part of the Land Register.