Northern Ireland Assembly

Research and Information Service
Briefing Note

Aidan Stennett

Ordnance Survey 'open data'

1   Background

In evidence to the Enterprise, Trade and Investment Committee (05 June 2014) the System Operator for Northern Ireland (SONI) commented on the issue of renewable developers seeking access to Northern Ireland Electricity's geographical information system. Specifically, SONI were asked:

> *A lot of the developers — Simple Power being one — come here and say that, if NIE allowed developers to access its geographical information system (GIS), it would greatly assist them in targeting areas where they could connect to the grid at the most productive cost. Why is it such a closed shop? What is your opinion on access to that information? Why is NIE so guarded with that information when we have seen throughout the world, particularly in GB, that that information is accessible?[1]*

To which they replied:

> *As part of the process of the transition of the role from NIE to SONI, one of the areas of interest to us, as the group responsible for planning, was to get access to the maps and information that you refer to. NIE is happy to share*

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[1] Official Report Committee for Enterprise, Trade and Investment, Electricity Policy Review Part III - Grid Connections: SONI and EirGrid (05 June 2014) http://www.niassembly.gov.uk/Assembly-Business/Official-Report/Committee-Minutes-of-Evidence/Session-2013-2014/June-2014/Electricity-Policy-Review-Part-III---Grid-Connections-SONI-and-EirGrid/

the information with us as a licensed entity, but Ordnance Survey is not. We have to submit to Ordnance Survey and get a licence or copyright permission for all Ordnance Survey-based maps in Northern Ireland, which, I understand, involves a significant sum. NIE's topographical network information is overlaid on Ordnance Survey maps. So there is and has been a copyright issue about NIE giving out Ordnance Survey information to third parties. It is almost as simple as that. We will have to incur an upfront cost in the region of a quarter of a million pounds and ongoing copyright fees.[2]

From this statement it is evident that the issue arises from Ordnance Survey rather than NIE. The purpose of this paper is to understand why this cost occurs in Northern Ireland (NI), but not in Great Britain (GB). The availability of mapping data in other regions is also examined.

2   'Open data' Ordnance Survey in GB and NI

Before outlining how two Ordnance Survey copyright regimes developed within the UK, it is worthwhile to note that Ordnance Survey GB and Ordnance Survey NI have operated as separate entities since 1922.[3]

A second point of note is that Ordnance Survey NI itself became part of Land and Property Services Northern Ireland (LPs), an internal branch of the Department of Finance and Personnel, in 2008.[4] In GB, Ordnance Survey is an independent non-ministerial government department with Executive Agency status. It is accountable to parliament through the Secretary of State for Business, Innovation and Skills.[5]

Since 2010 Ordnance Survey GB has offered a range of products free of charge under its OS Open Data Licence. The licence allows users to:

- Copy, distribute and transmit the data;
- Adapt the data; and
- Exploit the data commercially, whether by sub-licencing it, combining it with other data, or including it in their own product or application.

Users must acknowledge Ordnance Survey in their use of the data sources.[6] The products available through this licence are:

- Boundary-line vector maps, which show electoral and administrative boundaries;

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[2] *Ibid*

[3] Ordnance Survey *Timeline of our history* (accessed 13 August 2014)
    http://www.ordnancesurvey.co.uk/about/overview/timeline.html

[4] Northern Ireland Direct *Ordnance Survey NI and Land & Property Services* (accessed 13 August 2014)
    http://www.nidirect.gov.uk/index/information-and-services/property-and-housing/your-neighbourhood-roads-and-streets/ordnance-survey-of-northern-ireland/about-osni/ordnance-survey-ni-and-lps.htm

[5] Ordnance Survey *Governance at Ordnance Survey* (accessed 13 August 2014)
    http://www.ordnancesurvey.co.uk/about/governance/index.html

[6] http://www.ordnancesurvey.co.uk/business-and-government/licensing/using-creating-data-with-os-products/os-opendata.html

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- Code-point Open, which maps all of the current postcodes in GB;
- 1:50 000 Scale Gazetteer, which maps 250,000 place names and areas of interest in GB;
- OS Vector Map District, which allows users to overlay their own information onto customisable map backgrounds;
- OS Streetview, which provides a street level map;
- 1:250 000 Scale Raster, which provides a large-scale regional map;
- OS Terrain 50, which maps regional terrain;
- Strategi, which maps the road network;
- Meridian 2, which provide customisable digital maps;
- OS Locator, which is a searchable gazeteer of road names;
- Miniscale, a smaller-scale national map; and
- Land-Form PANORAMA, which enables environmental analysis.[7]

It is important to point out that this list only represents a small portion of the products Ordnance Survey GB offer. A much wider range of products is available at cost which is dependent on the product type, licence type and usage needs.[8]

By contrast LPS does not offer an Open Data Licence that can be exploited for commercial purposes. The Northern Ireland Mapping Agreement (NIMA)[9], however, enables all Northern Ireland Civil Service Departments, Agencies, Non Departmental Public Bodies, and Local Councils to access 17 Ordnance Survey NI products. Northern Ireland Government Departments pay a charge to LPS for NIMA on behalf of each and all of the bodies which fall under their remit.[10]

Commercial entities wishing to use Ordnance Survey data are required to purchase it. The cost depends upon the specific product required, which will in turn depend upon a company's specific needs (a full break down of product cost for 2014/15 is available the on NI Direct, please see footnote 11 for link[11]). For illustrative purposes table 1 provides indicative cost for NI customers of data sources that are available through Open Licence arrangements in GB. Please note: the table lists the closest corresponding product, rather than an exact match; as such the results are only intended to be illustrative.

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[7] http://www.ordnancesurvey.co.uk/business-and-government/products/opendata-products-grid.html
[8] A full pricing breakdown is available http://www.ordnancesurvey.co.uk/docs/ordnance-survey-business-portfolio-price-list.pdf
[9] A similar agreement is in operation in GB through the Public Sector Mapping Agreement
[10] NISRA *Crown Copyright* (accessed 21 August 2014) http://www.nisra.gov.uk/home/crowncopyright.asp.htm
[11] Ordnance Survey Pricing list http://www.nidirect.gov.uk/index/information-and-services/property-and-housing/your-neighbourhood-roads-and-streets/ordnance-survey-of-northern-ireland/product-range/price-lists.htm

Table 1: Indicative cost to NI user products equivalent Open Data Licence Products in GB

Product	Nearest Equivalent NI Product and Price
Boundary-line vector maps	50k vector DEAs, County, LGD, Wards, Euro Regional Map, PCs, Townlands, Water **Total £1325.50** (available as separate products in NI)
Code-point Open	Central Postcode Directory - **£250**
1:50 000 Scale Gazetteer	OSNI 1:50,000 Scale Gazetteer text - **£424.70**
OS Vector Map District	50k raster, 50k vector transport and water - **£2,029**
OS Streetview	OSNI Street map - full NI £495.00, per council area **£60.40**
1:250 000 Scale Raster	OSNI 1:250,000 scale - **£62.90**
OS Terrain 50	OSNI 50m Digital Terrain Model - full coverage **£2,052.50**, per 20km2 tile **£76.10**
Strategi (250k vector)	OSNI **1:50k (more detailed than 250k)** Transport **£774.20**, settlements **£32.30**, vegetation £32.30 **Total: £838.80**
Meridian 2	1:50K vector settlements **£32.30**, water **£209.70**, transport **£774.20**, NI outline **£53.80 Total: £1070**
OS Locator	(Place name not a road name gazetteer like OS Locator) OSNI 1:50,000 Scale Gazetteer text - **£424.70**
Miniscale	1:1mill raster **£21**
Land-Form PANORAMA	OSNI 50m Digital Terrain Model - full coverage **£2,052.50**, per 20km2 tile **£76.10**

Source: Land and Property Services and Ordnance Survey GB

3   The development of open data in GB

In November 2009 the then Prime Minister, Gordon Brown, announced a consultation on the future operating model of Ordnance Survey GB. The consultation proposed that a range of data sets would be made free at the point of use. The consultation was part of the Government's Making Public Data Public agenda, which sought to:

- Increase the transparency of government;
- Empower citizens by giving them access to accurate information relating to public services; and
- Create social and economic value within the framework of the Digital Britain agenda.[12]

The Open Data Licence went live on 1 April 2010. Whilst the data made available as part of the Open Data Licence is free at the point of use it is *'funded as a result of a commercial agreement between Central government and Ordnance Survey, for the licence for OS OpenData and for its on-going maintenance'.[13]*

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[12] Communities and Local Government *Policy options for geographic information from Ordnance Survey – Consultation, Government Response* (March 2010) http://www.nationalarchives.gov.uk/documents/government-response-os-consultation.pdf

[13] Ordnance Survey *OS Open Data FAQs* (accessed 14 August 2014) http://www.ordnancesurvey.co.uk/business-and-government/help-and-support/os-opendata.html

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During a presentation of an *Ordnance Survey review of OS OpenData costs and benefits* at a January 2014 Advisory Panel on Public Sector Information[14], it was estimated that:

> *Few jobs had been created as a result of the release of Open Data although one user had built a 5-employee enterprise. Ordnance Survey had estimated the increase in GDP consequent on Open Data as £13 to £28m per annum, compared to a cost of £20m. The greatest benefit was internal business efficiencies for users. Extra taxation income was estimated at £2.9 to £6.1m. But these figures took no account of consumer surplus.[15]*

It was noted in the same presentation that beyond data falling under the open licence *'Ordnance Survey retains a high cost, high value, high margin model for its remaining data'.[16]*

4 Why not Northern Ireland?

As outlined above, while Ordnance Survey GB has offered data free at the point of use since April 2010 to commercial users, no similar offering exists in Northern Ireland. This is due to the two organisations being separate entities and the fact that a similar package of funding made available to Ordnance Survey GB was not made available to their counterparts in NI.

A 2012 report on Land and Property Services by the National Archives Office of Public Sector Information found that:

> *While LPS continues to license its core mapping products diligently there are two areas in which more could be done to maximise the reuse of LPS data. First, by giving consideration to the release of some small and mid-scale mapping data without charge. Second, by more fully exploring the potential for licencing data from other LPS sectors, land registration being an example.*
>
> *In respect of mapping data, more freely available data would not only be of benefit as far as commercial stimulus and citizen re-use in Northern Ireland is concerned, but there would be significant synergies available through combining the data with equivalent data for Great Britain.*

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[14] The Advisory Panel on Public Sector Information is a Non-Departmental Public Body of the Ministry of Justice. It provides advice to Minsters and to the Director of the Office of Public Sector Information and the Controller of Her Majesty's Stationary Office. As part of its role it reviews the Public Sector Information Regulations.

[15] Advisory Panel on Public Sector Information *What is the value of open data?* (28 January 2014) http://www.nationalarchives.gov.uk/documents/meetings/20140128-appsi-what-is-the-value-of-open-data.pdf

[16] *Ibid*

With the limited exception of a free town names gazetteer, LPS has a long standing policy of charging for data on a cost recovery basis and following the "user pays" principle.

LPS has put this question to its Minister and, in the absence of an equivalent funding package to that which was put in place to support Ordnance Survey's open data initiative, it continues to receive support for this stance.[17]

Developers Simple Power, who were referenced by SONI in their original statement, and SSE Airtricity, who have previously briefed the Committee in respect to the Electricity Review, were contacted to comment on the implications of the different situations in Northern Ireland and GB. Simple Power commented:

Having the same level of datasets that are freely available to the business sector in GB also made available to businesses in NI would be extremely beneficial.

All of the products listed [in table 1] *would be extremely useful for input into GIS and assist with our decision making as a business.[18]*

SSE Airtricity commented:

The fact is that in Ireland, both North and South, we are largely disadvantaged with the lack of free data available for use on our projects. There is an online resource that can be used however I would be unable to produce any maps without establishing a particular license for such.

…Ordnance Survey in Ireland was previously one entity, the availability of data in NI is more consistent with that of ROI rather than GB. This means that effectively we do not have any access to any data for free.[19]

5   Open map data in other Countries

The Open Data Index 2013, compiled by the Open Knowledge Foundation, provides a comparison of open data policies in 70 countries based on community surveys. With regards to open mapping data the survey focussed on the availability of National Map (at a resolution of 1:250,000 or better) and whether this map exists in digital form, publically available, is free of charge, online, machine readable, available in bulk, open licenced and up to date. Eleven countries, including the UK, scored 100% on this measure. [20] The table that follows provides a brief overview of mapping data available

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[17] National Archives Office of Public Sector Information *Fair Trader Scheme Report – Land & Property Services, Northern Ireland* (March 2012) http://www.nationalarchives.gov.uk/documents/information-management/lps-ifts-report.pdf

[18] Email from Simple Power 29 September 2014

[19] Email from SSE Airtricity 18 November 2014

[20] The Open Data Index 2013 *Full Country Index National Map* (accessed 21 August 2014) https://index.okfn.org/country/dataset/map

in the remaining ten countries. All information is sourced from the specific country's Ordnance Survey equivalent.

It's noteworthy that the Republic of Ireland scored 55% on this measure, largely because the national map is not available for free. Ordnance Survey Ireland does not operate an open data licence.[21]

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[21] Ordnance Survey Ireland *Copyright* (accessed August 2014) http://www.osi.ie/Services/Copyright.aspx

Table 2: Open geospatial data in ten leading countries

Country	Agency	Licence	Details
Australia	Geoscience Australia	Creative Commons 3.0 Australia	The default position for copyright on public sector information in Australia is a creative commons licence. This allows user to share and adapt the public information for any purpose, including commercial gain, so long as the information is attributed to owner. Geoscience Australia states *'Save for the content on this website supplied by third parties, the Geoscience Australia logo, the Commonwealth Coat of Arms, and any material protected by a trade mark, Geoscience Australia has applied the Creative Commons Attribution 3.0 Australia licence'.* (http://www.ga.gov.au/copyright)
Austria	Geoland.at	Creative Commons 3.0 Austria	Austria offers 286 'shape' files under its open data licence; this allows commercial use (http://www.data.gv.at/). In addition, Geoland is a portal which provides *'open and simple, Austria-wide access to geospatial data and services of the Austrian Provinces for a variety of purposes'.* (http://www.data.gv.at/)
Finland	National Land Survey	National Land Survey open data licence	The National Land Survey (NLS) made its topographic datasets available for private and commercial purpose on 1 May 2012. *'The open data products can be used without compensation and with extensive and permanent rights of use.'* (http://www.maanmittauslaitos.fi/en/opendata) (Full list http://www.maanmittauslaitos.fi/en/opendata/list-of-the-digital-data-products-to-be-opened)
New Zealand	Land Information New Zealand	Creative Commons 3.0 New Zealand	Over 40 authoritative Land Information New Zealand (LINZ) land and sea datasets are available for free from the LINZ Data Service. (Full List http://www.linz.govt.nz/about-linz/LINZ-data-service/dataset-information) The information was made available with an explict aim of encouraging economic growth by encouraging commercial entities to make use of the data. (http://www.linz.govt.nz/about-linz/linz-data-service/about-lds/faqs)
United States	U.S Geological Survey	Creative Commons 3.0 United States	U.S. Federal data available through Data.gov is offered free and without restriction. This includes a range of geospatial data. The availability of such data is part of the wider Project Open Data (http://project-open-data.github.io/policy-memo/)
Iceland	National Land Survey Iceland	Act on Information and Act on Surveying and Base Mapping	Since January 2013 all digital NLSI data has been freely available to the public and the commercial sector. This includes geographical data (full list http://www.lmi.is/en/stafraen-gogn/)
Denmark	Danish Geodata Agency	Law on Geodatastyrelsen	Since 1 January 2013 a significant amount of data is freely available for private and commericial use. This includes: basic map data; current topographic maps; geographical names; Landinddelinger; DHM - Denmark Elevation Model; Cadastral Data; Historical maps – geo-referenced Historic map - not geo-referenced; maps to print; and Geonøglerm. (http://eng.gst.dk/) (full list http://eng.gst.dk/media/gst/2364689/Openpublicgeodataoverview1.pdf)

Country	Agency	Licence	Details
Norway	Kartverket	Creative Commons 4.0 international	The Authority provides free access to a variety of geospatial data sets and illustrative maps. This includes Data Setta in the national map base; Administrative boundaries; Road data with addresses; Digital terrain models; and Stadnamn Data. (http://www.kartverket.no/Kart/Gratis-kartdata/Gratis-kartdata-fra-kartverket/)
Netherlands	Land Registry	Creative Commons	A set of geographical data under the heading 'Key Register Topography' is freely available. The use includes commercial purposes. (http://www.kadaster.nl/web/Themas/Registraties/brt.htm)
Canada	Geobase	Open Government Licence	At a national level the geobase portal, an online portal from which data can be download, including: administrative boundaries; Canadian Geodetic Network; Geographical names; elevation data; land cover; hydro network; power Line network; I railway network; road network and satellite imagery. (http://www.geobase.ca/geobase/en/data/index.html)