



CAIRT

Issue 26
January 2015

Newsletter of the Scottish Maps Forum

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SCOTTISH MAPS FORUM

The Forum was initiated by the National Library of Scotland in 2002:

- ♦ To encourage multi-disciplinary map use, study and research, particularly relating to Scottish maps and mapmakers
- ♦ To disseminate information on Scottish maps and map collections
- ♦ To record information on maps and mapmaking, particularly in a Scottish context
- ♦ To liaise with other groups and individuals with map related interests
- ♦ To build on, and to continue, the work of Project Pont

CAIRT

The newsletter is issued twice a year. "Cairt" is Gaelic & 17th century Scots for map. For further information, or to be added to the mailing list, please contact:

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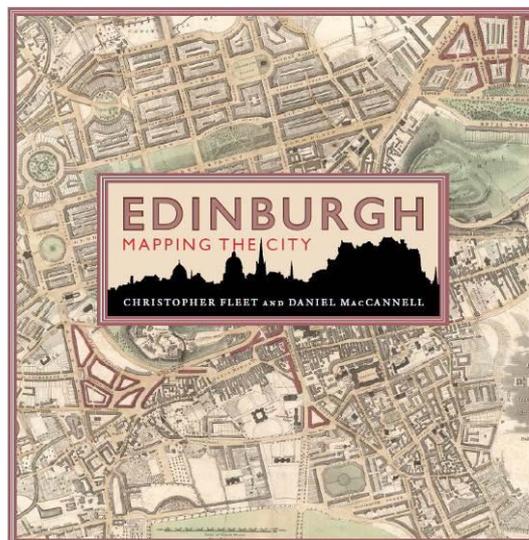
ISSN 1477-4186 © 2015 NLS
Editor: C. Fleet Technical Ed: J. Parkerson

Edinburgh: Mapping the City

This lavishly illustrated new book uses historic maps to provide insights into the history of Edinburgh over the past five centuries. The focus is on 71 main maps, dating from around 1530 to the present day, that have been selected for the particular stories they reveal about Edinburgh's history. Whilst some of these maps are well-known, many others have not appeared before in print, and the extended captions try to explain something of why they look as they do by looking at the background, content and context to each of them.

The selection of maps also promotes the special accomplishments of the people who made them, especially those who lived and worked in the city. A number of leading surveyors lived in Edinburgh, which was also the centre of national cartographic initiatives such as the Roy Military Survey (1747-55), John Thomson's *Atlas of Scotland* (1832), and Bartholomew's *Survey Atlas of Scotland* (1895 and 1912). From the eighteenth century onwards, the city also grew to become a major centre of expertise in engraving, and as this expanded to include printing in the nineteenth century, Edinburgh map publishers such as W. & A.K. Johnston and Bartholomew became justly famous all over the world.

All cities are unique and special, but some would seem to have a greater claim than others on the hearts and minds of visitors and their own inhabitants, and Edinburgh is one of these cities. It is also a city of contrasts, not just in terms of its famous Old and New Towns, but also as a place of danger, disease, destitution, and injustice amid splendour, beauty, and achievement. Maps capture these themes and contrasts in a very direct and revealing manner.



Edinburgh: Mapping the City by Christopher Fleet and Daniel MacCannell

303 pages.
Published by Birlinn, in association with the National Library of Scotland: 2014

Hardback (25x24cm):
£30.00
ISBN:
9781780272450

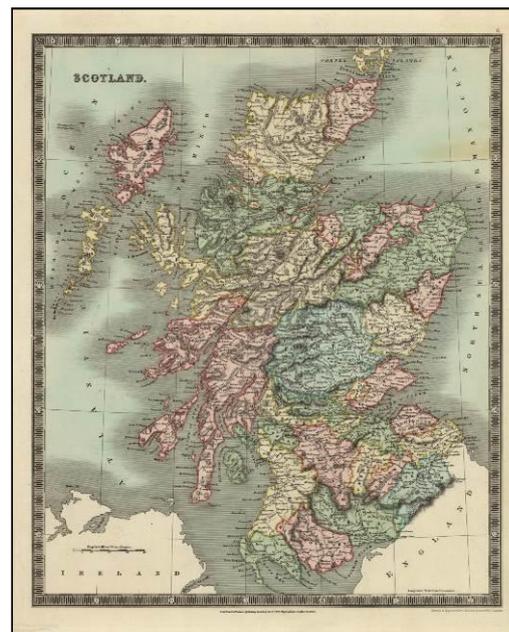
New website additions

Early maps of Scotland and Edinburgh, 1639-1936

We have added a further 120 early maps of Scotland and of Edinburgh to our website. This includes the main set of maps of Scotland from the NLS Marischal Collection, named after George Keith, 10th Earl Marischal of Scotland (1692/3-1778). They were collected by supporters of the Jacobite cause from exile in France in the 18th and 19th centuries, and acquired by the Library in 1977. The new additions also include a number of detailed maps of Edinburgh in the 19th century, particularly showing the feuing of land, planning new roads and buildings, and infrastructure developments.

- Maps of Scotland: <http://maps.nls.uk/scotland/index.html>
- Maps of Edinburgh: <http://maps.nls.uk/towns/index.html#edinburgh-environs>

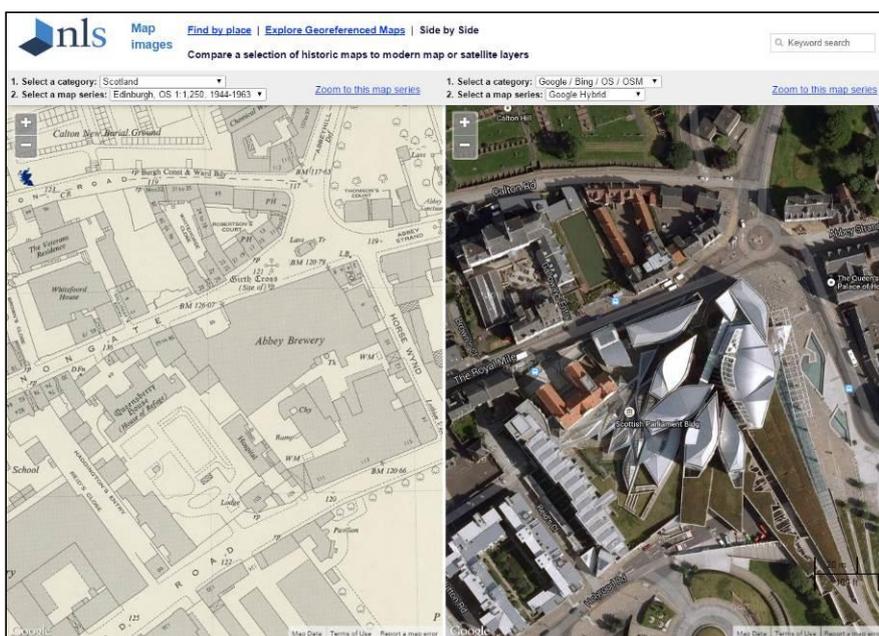
Right: John Dower's *Scotland*, printed within his *A New General Atlas of the World* (1831 and later editions).



Ordnance Survey, National Grid maps (1:1,250/1:2,500) 1940s-1960s

We have recently begun a large project to make available more detailed, out-of-copyright post-War maps of Great Britain. This includes the earliest editions of Ordnance Survey National Grid maps covering the Edinburgh environs (1940s-1960s), to assist the MESH Edinburgh Atlas project (750 sheets). As the vast majority of our map digitisation work is externally funded, further progress is now focusing on the south-east of England, with 7,676 sheets so far available covering central London and the TQ 100 km National Grid Square. All these sheets are georeferenced too, so they can be viewed on top of or alongside modern map and satellite layers in our *Explore Georeferenced Maps* and *Side by Side* viewers.

Toward the end of the Second World War, Ordnance Survey prioritised the mapping of urban areas on new National Grid sheet lines, and at the detailed 1:1,250 scale for urban areas with a population of over 20,000 people. As well as being the earliest OS maps to show house numbers – so useful for family and local history – these maps also show nearly all permanent features of over 1 square metre in size, with excellent detail of commercial and residential buildings, railway stations, docks, factories and parks.



We have also included 1:2,500 / 25 inch to the mile scale mapping, covering all other more settled areas. This layer will expand geographically over the next few years as we continue to scan more OS National Grid post-War mapping.

Ordnance Survey National Grid maps, 1940s-1960s: <http://maps.nls.uk/os/national-grid/index.html>

Left: Comparing National Grid 1:1,250 mapping from 1951 of Holyrood (left) with a present-day Google Hybrid layer (right) in our Side by Side viewer

Other news

New, improved... Georeferenced Map Viewers

We now have over 94,000 maps online and 600 georeferenced layers, and to help find them, our drop-down lists of clickable indexes in the *Find by Place* viewer, and of georeferenced overlays in the *Explore Georeferenced Maps* viewer, change to reflect just those covering the area you are looking at.

We have also simplified the URL in the viewers from the previous lengthy `layers=B0000000TFFFFFFF...` into a simple `layers=id` form, making it easy to save or send URLs of a specific place, zoom level and map layer just by copying the current URL.

Finally, we have improved the ability to toggle between the three viewers (*Find*, *Explore* and *Side by Side*), keeping the same area and map layer on screen, through new links between them in their headers.

- Find by Place: <http://maps.nls.uk/geo/find/>
- Explore Georeferenced Maps: <http://maps.nls.uk/geo/explore/>
- Side by Side viewer: <http://maps.nls.uk/geo/explore/sidebyside.cfm>

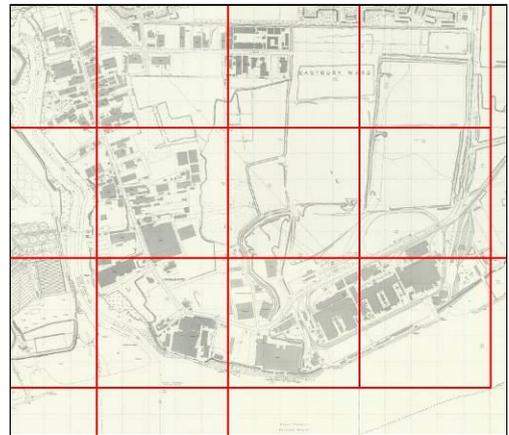
New service - supplying georeferenced images of OS in-copyright maps

In 2013, NLS became an Ordnance Survey Licensed Partner, allowing us to supply digital and paper copies of Ordnance Survey in-copyright maps - those published within the last fifty years. This service is continuing to grow, and in September we introduced a new service - we can now supply georeferenced images of these in-copyright maps too. Georeferencing aligns the original map image with its real-world coordinates so that it can be displayed in the right place within geographic software.

There is more information about the new service at:

<http://www.nls.uk/collections/maps/services/reprographics/os-licence#georef>

... and there is more information too about the in-copyright maps at: <http://www.nls.uk/collections/maps/services/reprographics/os-licence/map-series>



Did you know... you can also view sheetlines and map references for all modern 1:10,000 and more detailed, larger scale maps for the United Kingdom in our **OS map records viewer** at <http://maps.nls.uk/geo/records/>. For Scotland, this also includes dates of all published sheets of 1:2,500 and 1:1,250 mapping too.

Refurbishment of National Library of Scotland Building on Causewayside, Edinburgh

If you've passed the National Library of Scotland's Causewayside Building recently, you will have seen scaffolding and hoardings going up around the building. This is to allow refurbishment work on the external fabric of the building to take place. The first phase of this work will cover the Salisbury Place end of the building, and will last until March 2016.

During this time the Maps Reading Room will remain open as usual - and the public entrance will continue to be at 159 Causewayside. Due to the way the building was originally constructed, we are fortunate that these building works will be on a physically separate area of the building. We therefore expect that there will be little or no disruption in the Maps Reading Room. We hope you will continue to visit us over the next year.



TELEPHONE NUMBER CHANGES

The main NLS Maps Reading Room telephone number has had to be changed. The new number is **0131 623 4660**. Other map staff numbers are due to change soon – contact details can be checked at <http://www.nls.uk/contact/staff-and-departments>.



Abraham Ortelius' miniature maps of Scotland... and the Italian Pirates

The publication of *Theatrum Orbis Terrarum* by Abraham Ortelius in 1570 was the first

commercial endeavour to produce a compilation of maps of the known world. It was extremely popular and was eventually published in over 40 editions¹. It was also extremely costly to produce and this expense was passed on to the purchaser, making it the most expensive book of the 16th century. There were many who could not afford it but who wanted access to the maps. In 1577, Philip Galle produced a compilation of smaller maps in a book originally called *Spiegel der Werelt*, with maps based on the larger Ortelius maps of the *Theatrum Orbis Terrarum*. In subsequent years, Galle expanded what is often referred to as the *Epitome*, so that by the end of the 16th century it included more than 50 maps. Galle was a close associate of Ortelius and it can be assumed that the *Epitome* was published with his approval and support. The original Galle map of Scotland is the top map in Figure 1.

Although published in relatively large numbers, even these miniature maps of the Renaissance world were insufficient to satisfy the demand and, in 1598, Pietro Marchetti published a compilation of maps in Brescia, originally called *Il Theatro del Mondo*. In the 16th and 17th centuries there was no copyright law though individual mapmakers were frequently given the Privilege from a patron, often the monarch, to chart and print maps. Marchetti had no such authority and simply pirated the maps, the 16th century equivalent of music pirating today. The Marchetti engraved plates were close copies of those in the 1593 Italian edition of Galle's *Epitome*. By then Galle had produced a second series of copper plates, England and Ireland had been re-engraved but the Galle plate for Scotland was unchanged and would remain so until three-quarters through the print run of the Galle Latin edition of 1601². Thus the Scotland map is a fairly close copy of the original Galle map, though his unknown engraver used block lettering instead of script for the title and the border of the map was much simpler. These variations make it easy to distinguish the two maps. The Marchetti map is the middle map in Figure 1. Marchetti's original book had the maps embedded in text in quarto sheets, as the original Galle book had been. The map was reprinted in 1599, again in Brescia and, this time, on quarto sheets with text underneath in the *Relationi universali di Giovanni Botero*.



Figure 1 (top, middle, bottom)

Miniature maps of Scotland. The top map is the original Philip Galle map of 1577. The middle map is the 1598 Italian pirated map of Pietro Marchetti. The bottom map is the 1623 Italian pirated map of Giovanni Doglioni (Private Collection). All these maps are less than 4 x 5 inches in extent.

Marchetti's plates were used again over the next 67 years; firstly by an unknown publisher in 1608 and later by Giovanni Turrini in Venice in 1655 and by Scipion Banca in 1667³. In these later editions, as in the later editions of the original Galle atlas, the maps were printed on individual pages (octavo), with the relevant text on the page opposite. It is worth noting that these maps were printed long after the last edition of the Galle maps in 1602.

The most intriguing, and by far the rarest, of the Italian pirated maps are those published in 1623 in Venice by Giacomo Sarzina. The maps are in a book written by Giovanni Doglioni called *Anfiteatro di Europa, In cui si ha la descrizione del Mondo Celeste et Elementare, perquanto spetta alla Cosmographia*. Geoffrey King, in his excellent book *Miniature Antique Maps*³, suggests that these maps could have been copied from the 1602 Italian edition of Galle *Epitome*. However, it is the map of Scotland that suggests this may be unlikely. In 1601, the map of Scotland in the Galle *Epitome* had been substituted by a map simply called Scotia. The map of Scotland in the Doglioni book is a very close copy of the first Galle map of 1577; in fact it is a much closer copy than the Marchetti map and thus more difficult to distinguish it from the Galle original. It is the bottom map in Figure 1. Although the title is also in script, the easiest way to identify the Doglioni map is the lack of the two ships to the right of the map. There are 34 maps in the Doglioni book including one of the known world. During the printing of many copies of the book, the world map was erroneously printed upside down, so the map was reprinted and then glued, right-side up to cover up the mistake (Figure 2). The Doglioni book was never republished and so the maps are extraordinarily rare; there are no copies currently in the National Library of Scotland or the British Library. According to COPAC, the only library copy in the UK is at Kings College London, although a copy of the book can be found in Google Books.



Figure 2. Miniature map of the World. This is the first map in *Anfiteatro di Europa* by Giovanni Doglioni, published in 1623. It shows how the map was wrongly printed upside-down and the extra map that was included to be stuck over it.

The Galle plates were never used after 1602 as two new, authorised copies of the Ortelius maps were engraved in the Netherlands. The first were originally used in *Caert-Thresoor* by Barent Langenes, published in Middelburg in 1598 and then in various later compilations until the *Tabularum geographicarum contractarum* by Peter Bertius in 1609³. The map of Scotland was engraved by Pieter van den Keere. The second were initially in *Epitome theatri orbis terrarum* published by Jan Keerbergen in Antwerp in 1601 and then used in various editions until 1612³. The map of Scotland was engraved by Ambrose and Ferdinand Arsenius. But even these were relatively short lived, as from 1616 onwards, new miniature maps based on the Mercator maps of 1595 and later were used. In the case of Scotland, as with many of the maps, the new fashion was introduced placing north, rather than west, at the top of the map, a convention that is still used. This was one of the reasons that made the Italian pirated maps appear increasingly anachronistic and they disappeared at the end of the 17th century⁴.

Sebastian Amyes

Sebastian Amyes is Professor Emeritus (Medical Microbiology), University of Edinburgh and has a keen interest in early maps of Scotland

1. *Ortelius Atlas Maps. An illustrated Guide*. Marcel van den Broecke. 2nd edition. 't Goy-Houten: HES & de Graaf, 2011.
2. *Koeman's Atlantes Neerlandici*. New ed., vol. III; compiled by Peter van der Krogt. 't Goy-Houten: HES & de Graaf, 2003.
3. *Miniature Antique Maps*. Geoffrey King. 2nd edition. Wallingford: Tooley Adams, 2003.
4. Descriptions of the Ortelius, Galle and Marchetti maps, but not the Doglioni, are listed in the *Early Maps of Scotland*, vol. 1. Edinburgh: RSGS, 1973.

Using historic georeferenced maps in Archaeology - FCS *Picture this!* exhibition

This innovative terrain model of Wallace's House promontory fort by Rubicon Heritage successfully blends the old with the new, draping an OS 25 inch first edition map of 1857 across a detailed terrain model (**right**). It helps illustrate the fort's impressive defensive position and retains the aesthetic impact of the original attractive OS survey from over 150 years previously.

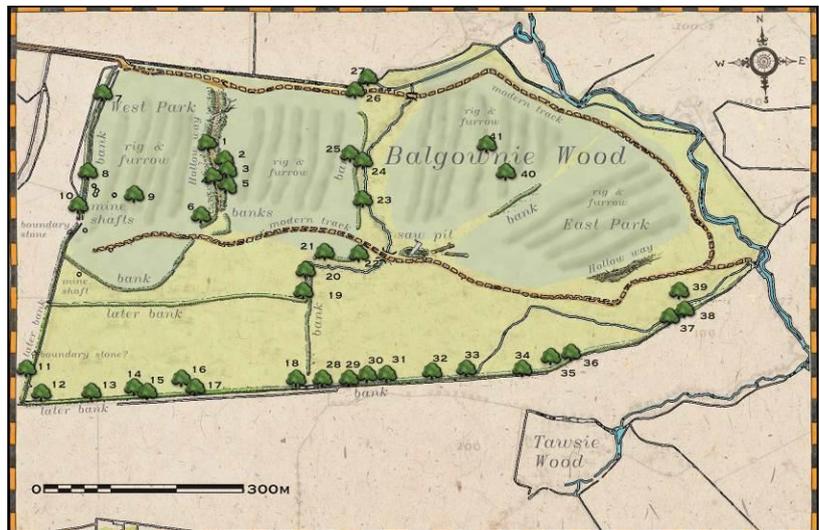


Archaeology is a very visual activity and almost always involves photography, measured survey techniques and informed illustration. The Forestry Commission Scotland's *Picture this!* exhibition highlights

a number of recent archaeological measured surveys on Scotland's national forest estate. The common thread is of innovative new survey techniques combined with an aesthetic illustrative methodology. Aerial and terrestrial laser scanning, rectified photography, terrain modelling and low altitude aerial photography combine with archive images, historic mapping and traditional topographic survey to create exciting new angles from which to appreciate the past.

Good archaeological illustration helps to consolidate understanding by encouraging the active participation of the audience. It supports effective archaeological analysis and can greatly enhance the historic environment record. From sub-millimetre accuracy through stone-by-stone recording to landscape-scale terrain modelling, contemporary archaeological measured surveys let their pictures tell the story.

The detailed historic woodland survey of Balgownie Wood in Fife revealed many ancient trees and a relict medieval field system surviving within a modern conifer plantation (**right**). The locations of the historic trees were mapped (by David Connolly and Dendrochronicle) in a manner that is both functional and aesthetic, retaining echoes of the very first depiction of Balgownie Wood by William Roy in 1747-55.



Forestry Commission Scotland is committed to undertaking conservation management, condition monitoring and archaeological recording at our significant historic

assets; and to helping to develop, share and promote best-practice historic environment conservation management. We are proud to support the Scottish Historic Environment Strategy and the emerging Scottish Archaeology Strategy; and often seek to contribute to the Scottish Archaeological Research Framework.

**Matt Ritchie, Archaeologist
Forestry Commission Scotland**

The FCS 'Picture this' exhibition is available online at:

<http://scotland.forestry.gov.uk/supporting/strategy-policy-guidance/historic-environment>.

Recent publications relating to Scottish cartography

- Douglas G. Lockhart, 'Villages in the mind: Unbuilt projects in North East Scotland', *Scottish Local History* 88 (2014), 20-3.
- Douglas G. Lockhart, 'Hopeman, Moray: Houses, harbours and holidays', *Scottish Local History* 89 (2014), 30-8.

Douglas has been researching and writing about planned villages in Scotland for many years, and these two recent papers both contain original plans from private collections.

- Brian Robson, 'John Wood 1: the Undervalued Cartographer', *The Cartographic Journal* 51(3) (2014), 257-273.
- Brian Robson, 'John Wood 2: Planning and Paying for His Town Plans', *The Cartographic Journal* 51(3) (2014), 274-286.

These two detailed and thoroughly-researched papers on John Wood (1782-1847) throw new light on the life and work of this prolific cartographer, identifying some 150 plans of towns by him across Great Britain (35 more than the Hyde/Moir tally of the 1970s-80s). Wood of course had strong links to Scotland; his wife was from Cargill, north of Perth, they settled in Morningside from 1813, and he often utilised Edinburgh engravers and printers for many of his plans. Wood also surveyed an impressive total of 57 Scottish towns, many of which are the earliest detailed plans of them, and occasionally he included proposals too – for example, his unique manuscript plan for the future development of Stornoway ca. 1820-1 (right).



All of John Wood's maps of Scotland, as well as texts from his *Descriptive account of the principal towns in Scotland* (1828) can be viewed at: <http://maps.nls.uk/mapmakers/wood.html>

We are also pleased to draw attention to Dr Joe Rock's **Richard Cooper senior (1701-64) website** at: <https://sites.google.com/site/richardcooperengraver/> - by far the most comprehensive resource available on all aspects of Richard Cooper's life and work. Amongst other things, Cooper established the Edinburgh School of St Luke in 1729 (the first academy of artists in Scotland), he built a theatre on his land in the Canongate, and he taught a generation of artists including the engraver Sir Robert Strange, and the engraver and eventual owner of the *Encyclopaedia Britannica*, Andrew Bell. Cooper also engraved a wide range of significant maps of Scotland from 1730-1749, including county maps based on surveys by Adair and Edgar, marine charts, maps of roads, the map of Forest of Mamlorn boundary dispute, and town plans of Leith and Peterhead.



A Map of West Lothian survey'd by Mr. J. Adair (engraved by Richard Cooper, 1737)

Cairt Competition - two copies of *Edinburgh: Mapping the City to be won.*

To win a copy, please tell us the modern street names for 'Caledonia', 'Anglia', and 'Hibernia' Streets in Edinburgh, which were named to commemorate Ireland's incorporation into the United Kingdom in 1801.

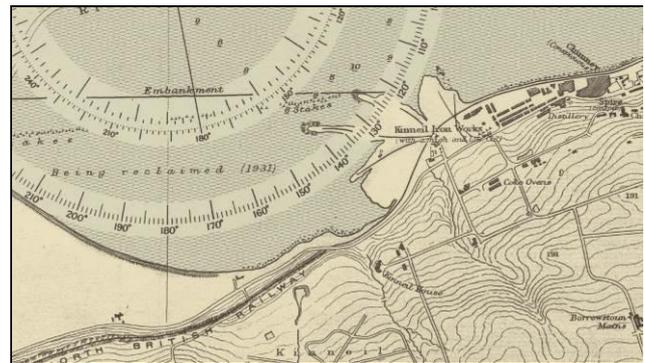
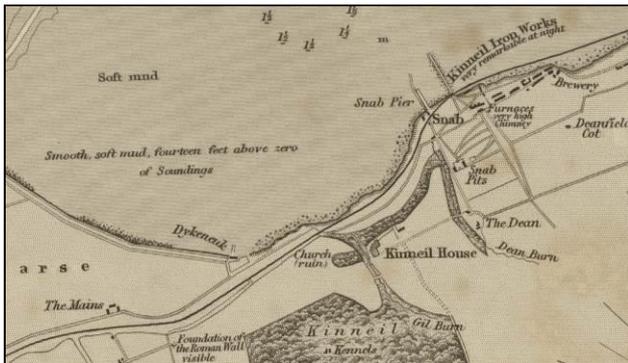
Please send or e-mail your answers, marked *Cairt Competition*, to maps@nls.uk or to the address on the front cover by 31 March 2015. The winners will be picked randomly from the winning entries and informed by 15 April 2015.

Congratulations to David Orr and Tony Simpson, who each won a copy of Tom Pow's *Concerning the Atlas of Scotland And Other Poems* from last issue's competition.

Focus on... Admiralty charts and coastline change

In December we added 200 georeferenced Admiralty charts of Scottish waters to our website, dating from the 1800s to the 1960s. Admiralty Charts show many coastal features in good detail, and are also useful in pre-dating the work of Ordnance Survey for many northern counties. For many of Scotland's busier estuaries and ports, there are also regular revisions of charts coming through to the present day - often more than for OS maps, and at different dates. Through georeferencing, the charts can now be easily compared to present day satellite imagery and maps, as well as to each other, with excellent potential for viewing change over time.

This can be well illustrated for the Forth estuary, first surveyed for the Admiralty by George Thomas in 1815. Thomas was appointed Head Maritime Surveyor for Home Waters in 1810, and went on to survey much of the east coast of Scotland, as well as Orkney and Shetland over the next 30 years. His son Fred was trained by him and Fred continued his father's work, appropriately returning to resurvey the Forth in 1860 (**below left**). Like his father, Fred Thomas included a mass of detail of the estuary, including information about quarrying, salmon cruives, antiquities such as the Antonine Wall, as well as descriptive notes. Off Torryburn can be found "oozey sand, hard enough to drive a cart over", while Kenneil Iron Works is "very remarkable at night".



Above: Details from Admiralty Chart 114c – 1860 (left) and 1952 (right)

Below left: Detail from Ordnance Survey Air Photo Mosaic (sheet NS98SE), 1950

Below right: Same area on present day Google satellite image

When compared to other maps, they show how extensively the Forth shoreline has changed over time, with reclamation primarily for agricultural purposes before the 19th century, and industrial purposes thereafter. The Roy Military Survey (1752-55) shows a much wider estuary with greater indentation of the Forth, as well as what look to be sea walls in places. Comparing Roy to 19th century maps allows schemes such as the canalisation of the mouth of the Carron from the



1760s to be easily seen, with the docks at Grangemouth eventually extending over a mile out from the shore. Just to the east, we can also see the reclamation of the foreshore by Kinneil from the 1920s (see **above**). This was one of the Forth Conservancy Board's first projects, driven by local geologist and landowner Henry Cadell, utilising slag from Kinneil Colliery to reclaim a large area behind a rebuilt sea dyke from the 1770s.

Further down the Forth reclamation took place as well for military reasons, particularly around Rosyth, with the construction of the naval dockyard from 1909-1916, eventually extending over 1,100 acres. Meanwhile within the last thirty years, the northern shoreline between Kincardine and Culross has advanced over a mile into the Forth particularly due to ash from the Kincardine and Longannet power stations. Preston Island, two-thirds of a mile out to sea off Culross on the chart of 1860, is an island no more.

These and other georeferenced Admiralty Charts can be viewed at:

<http://maps.nls.uk/geo/explore/#zoom=11&lat=56.06341&lon=-3.6673&layers=101942633>

We are very grateful to David Rumsey for supporting the scanning and georeferencing of these charts, and we hope to put all our holdings of out-of-copyright Scottish Admiralty Charts online within the next few months.

See also T.C. Smout. & M. Stewart's *The Firth of Forth : an environmental history* (Edinburgh: Birlinn, 2012) for excellent further information on these and other Forth reclamation projects over time.