Maplines
THE MAGAZINE OF THE BRITISH CARTOGRAPHIC SOCIETY

SPRING 2017

Historic Mapping and much more

www.cartography.org.uk

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From the Editors

U p and down the country, the small buds of new growth are starting to emerge from a long winter sleep. I walk along the river in Bedford to see the swans dancing and impressing each other, flambouyantly turning and dipping their heads. Welcome to another packed edition of Cartographic news, articles and what’s on at the Society. What are we all up to? Finding maps up chimneys? Making maps for 2019! Creating puzzles for families to pour over! It is you, the reader, that helps us form Maplines, so please send in any articles you would like to be featured – it may just give your Favourite Map or mapping that you are doing that would be interesting to all of us. We all work in different sectors and it’s great to hear what’s going on! Look out for the BCS Corporate, Education and Member columns – opening up the Cartographic Community. Contact us at Maplines.editors@gmail.com

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Adrian Webb takes us through an exhibition of maps representing Somerset.

Dr Alex Kent, BCS President

W hat inspired you to be a cartographer? Or to make maps? Perhaps the film ‘Lion’ recently, which traces the story of a young boy in India who mistakenly boards a train and manages to end up being transported thousands of miles away from his home village; first to the other side of India and then to the arms of adoptive parents in Tasmania. After several years living under Saroo (or Sheru, which is his real name) is told about a new program called ‘Google Earth’ by a university class mate and he uses it to embark on a virtual – and ultimately a real – journey back to the village he has been trying to find all his life. The visual sequence that combines the movement of Saroo’s mouse pointer as it pans across an increasingly familiar landscape with the memory of himself as a child running through it is particularly clever, and the whole scene is wrought with emotion that is almost tangible. We cannot fail to be drawn into Saroo’s journey and share in his elation of discovering his home.

All too often, cartography is perceived as a dry technical subject that offers little scope for creativity, imagination or passion. Perhaps cartographers too feel we are rarely given the opportunity to put our personality into the design of our maps. Perhaps we believe that such freedom only belongs to the realm of the artist. But as cartographers we belong. As the saying goes: ‘If you want to go fast, go alone. If you want to go far, go together’. This is even more important today, when people want instant maps and expect instant cartography.

Together, we can play an important role in bringing together all who enjoy maps, from those who are actively engaged in mapping for specific purposes or groups to those who simply ‘love maps’. Of course, any Society has to do more than simply ‘exist’ for its members; we need to stay in tune with our members’ requirements while fostering a sense of community to which we belong. As the saying goes: ‘If you want to go fast, go alone. If you want to go far, go together’. This is even more important today, when people want instant maps and expect instant cartography.

Thanks to the 96 members who took the time to complete our Members’ Survey (a response rate of well above 10%, which is very encouraging), we have been able to get a better insight into what you value by belonging to the Society and how we can improve. Analysing the responses reveals that the whole range of benefits that we currently offer is widely appreciated, and our publications are especially highly regarded. Indeed, I would like to congratulate Louisa, Alice and all the Maplines team, as this benefit of membership was rated most highly (only narrowly beating the Journal). They are clearly producing an excellent magazine that continues to go from strength to strength. But we cannot rest on our laurels, and help with editing is still needed (please contact Martin Lubikowski if you would like to join the Maplines team – his details are listed above).

Member columns – opening up the Cartographic Society, so if you have an idea for starting a new one, don’t keep it to yourself!

Before I close, I want to draw your attention to the recent launch of the Corporate Members’ Directory and the Map Curators’ Toolbox on our website (just visit the Corporate Members and the SIG pages). Both are excellent examples of how we are promoting maps and mapping and I am very thankful to Shona Frost, Alan Grimwade, Clare Gordon and Anne Taylor for their hard work in making these superb resources available. Remember that you are always welcome to get in touch and you can reach me via email (alexander.kent@canterbury.ac.uk), by letter (School of Human and Life Sciences, Canterbury Christ Church University, North Holmes Road, Canterbury, Kent, CT1 1QU), or ‘get on the blower’ and dial 01227 782324. Onward and upward!

Dr Alex Kent, BCS President

A Message from the President

One aspect of the Members’ Survey which caught my attention was that of those who belong to a SIG. Membership of our Special Interest Groups (SIGs). Some members stated that belonging to a SIG was their main motivation for joining the Society, while others wanted to know what a SIG was and how they could sign up. So, in response to this, we have revised our SIG webpage and made it much easier to join a group (www.cartography.org.uk/about/our-special-interest-groups). Remember that you can also propose a new SIG to serve those who are actively engaged in cartography within the Society, so if you have an idea for starting a new one, don’t keep it to yourself!

What has Restless Earth been up to? Alice Gadney fills us in.
Below: Claire Thomson painstakingly piecing the map back together.

The Chimney Map

D elegates who attended the BCS Map Curators’ Group workshop in Edinburgh last September were privileged to see the premier of a short film about the conservation of the Chimney Map. The film illustrated a talk by conservator Claire Thomson, whose painstaking work at the National Library of Scotland, has brought the large wall map back from the brink of oblivion. The images of the ball of rags that was the map drew exclamations from the horrified audience, followed quickly by gasps of amazement at Claire’s patience and skill.

A longer film, including more about the background of the map and its possible historical significance was released in November by film-maker Trina McKenzie of “Written in Film”. Both films are available to view online: www.youtube.com/watch?v=8g6bn3xGBWY & www.youtube.com/watch?v=Wox.lpAYh2pg

The map was recovered during renovation on a house in Aberdeenshire, and was destined for the skip before someone had second thoughts and it was gifted to the National Library. It was in a very poor condition, encrusted with dirt, and severely damaged in places after being attacked by vermin and insects.

It arrived at the Library rolled up in a plastic bag. Once removed, it looked like a bundle of rags and had to be handled extremely carefully as fragments of the map fell off like confetti every time it was moved. On closer examination, it became clear that the canvas backing on the map had survived better than much of the paper itself which had disintegrated in a number of places. The ball shape of the scrunched-up map gave rise to its nickname of “the Chimney Map”, as it was supposed to have been used as a draught excluder.

The large, antique map of the world depicted in two hemispheres, was revealed to be a late 17th century wall map produced by the Dutch engraver Gerard Valk, entitled Nova Totius Terarum Orbis Tabula. Although a common design, there are only two other known copies of this eight sheet map. The map is surrounded by images of mounted men, town views and Dutch churches, as a frame. Perhaps only two-thirds of the map survived, with large amounts of the paper frame missing. It was only after Rotterdam Maritime Museum kindly shared images of their version of the map that some of the surrounding details could be identified.

The work to clean and restore the map proved to be one of the most complex yet undertaken by the Library’s conservation department. It involved a variety of specialist treatments which covered five key stages:

- Opening and flattening the map
- Separating it into its original eight sections
- Removing the linen backing
- Dry cleaning and washing the paper
- Re-assembling the cleaned sections onto a new paper lining

‘Once the map was unfurled I was able to assess its condition, which I must admit filled me with dread,’ said Claire Thomson, book and paper conservator at the Library, who worked on the project. ‘Much of the paper had been lost, and the remainder was hard and brittle in places and soft and thin in others. We needed to stabilise it to prevent any further deterioration, make it robust and easier to handle to get to a point where it could be studied by researchers.’

Those researchers include a small group of history students at the University of Edinburgh who will use it as the focus of a week-long study project, looking at the map in more detail.

The conservation of the Chimney Map is an important achievement, and Claire Thomson is to be congratulated on her skills and efforts.

My Favourite Map

I first came across the Hawkhurst map during a TO S C A (The Oxford Seminars in Cartography) Field Trip run by Nick Millea, (Map Librarian at the Bodleian) to the Christ Church Library in February 2009.

Now, back in the Bodleian, Nick has pointed me towards a book by David H Fletcher entitled, ‘The Emergence of Estate Maps, Christ Church, Oxford, 1600-1840’ published by Clarendon Press in 1995. In 1733 a very elaborate version of the Hawkhurst map was produced with several cartouches which emphasised the bountifulness of the College lands.

Later in 1822 Frederick Young made a map of Hawkhurst in accordance with the wishes of the Dean and Chapter. Surveying for this map was done in 1818/19 and the cost for this work and the making of a fair plan of the 6382 acres was 1 penny per acre. The total cost for the project was £375 but the Dean and Chapter would only pay Frederick Young just half - a mere £187.90. What a way to treat a cartographer. You wait until I see the Dean next Sunday!

The Hawkhurst map is amazing, in my view, for its depiction of the woods which are a wonderful example of cartographic art. The tree symbolology includes the colours you would expect to see during a whole year on a deciduous tree with the leaves going from green to yellow to brownish.

So, I wondered if this tree symbolology could be produced automatically using GIS and I asked Aileen Buckley, a cartographer who works for Esri Inc in Redlands, if she could do this. I suspect it’s impossible to produce the beautiful hand drawn trees automatically but Aileen did manage a representation in the spirit of the depiction showing multi-coloured bands of trees. I wonder if anyone would like to take this up as it might be a good way to differentiate between evergreen and deciduous woodland.

By Peter Jolly

Above: Map of Hawkhurst, a village and civil parish in the borough of Tunbridge Wells in Kent.

Favourite Map

Below: The bundle of rags the map arrived in.

Below: Claire Thomson painstakingly piecing the map back together.
An Exhibition of Somerset Maps and Charts

200 people came through the doors over the next few hours from all over the county, including a few from further afield. We thought we might attract about 100, if we were lucky, who might be interested in the International Year of the Map exhibition (supported by the United Nations).

Part of the reason for the large number of visitors was due to the advertising: of particular note was the interview I was asked to give with BBC Somerset’s Charlie Taylor. This was a piece of luck as Charlie is a map enthusiast. He also has a girlfriend who speaks Russian and was able to talk about a Russian map of Wellington that was on display. Numerous plugs for the event subsequently were given out on the day on the BBC, which must have stirred a few souls into action.

Three generations of one family came from Bristol to see the maps and charts. Fortunately some blank maps and crayons were available for the youngest visitor, two-year-old Rosie, to colour in. According to her mum this kept her busy for quite a while.

Some sixty maps and charts dating back to 1568 were put on display, utilising every available table space in the hall. To align with the recently published Ordinance Survey, the earliest of which depicted a small area of north Somerset. The most recent map on exhibition came from the U.S.R. and depicted the area to the east of Wellington, part of the Cold War era mapping of Somerset.

Two treasures from SANHS library were carefully looked after by David Bromwich. David brought Strachy’s maps of the county from 1736 and a complete set of Day and Masters’ survey of Somerset from 1782, both of which proved to be very popular. The rest of the maps were very kindly loaned from private collections, for which the Society is extremely grateful to their owners.

Maps and charts of all shapes and sizes, and from many countries, were poured over by visitors. Two visitors even brought their own copies of Saxton’s map of Somerset to compare against the one on display. It was fascinating to see three versions together for the first time, from which it was possible to see which one was the earliest state. Some of the maps and charts originated from the Netherlands, Ireland, Germany and France. One of the most obscure items on display was a map printed in Germany of the south west of England that was based on the Ordnance Survey. It was intended to be used for a German invasion of Britain. However, the map was never used, thankfully, and when it was discovered in France by the Allies they turned it over and printed a new map on the other side. The map that was printed on the reverse was to be used for the invasion of Denmark.

As a result of the event there have been over half a dozen expressions of interest for the exhibition to visit different parts of the county. Unfortunately it is not possible to accommodate all of these requests. However, plans are underway to see if a roadshow of Somerset maps and charts can be put in place. If any of the associated societies are interested in hosting such an event please can they contact me on aj.webb@virgin.net

I wish to thank Emma Down, Margaret Webb, Chris Jessop, Peter Jessop, Ian Coleby, David Bromwich, Hilary Marshall, Christine King, Joe King, John Page, Ken Atherton, Robin Cloke, Richard and Diane Chariton for giving up so much time on the day and/or lending maps from their collection. They all helped make the event a massive success. One lady from Bishops Hull was heard to say that because of the variety of maps on display she will never look at a map in the same light again!

By Dr Adrian Webb

Special note of thanks
The authors of Somerset Mapped would like to record a special note of thanks to Dr Robert Dunning and Lady Gass for their exceptionally generous support of this publication. Without their contributions, the book would not have been published.

Left: The authors of Somerset Mapped signing a copy of SANHS’ latest occasional publication. The survey in the foreground was originally drawn by Captain Mathew. White RN in 1825 and was lent for the exhibition by the United Kingdom Hydrographic Office (photograph by Rose Mitchell)

Right: Three versions of Saxton’s map of Somerset seen together for the first time (photograph by Suzy Webb)
Membership

Thank you to all members who have renewed their membership for 2017. The membership year runs from 1st January to 31st December each year. Members who have not renewed as of 30th March will have their membership cancelled and access to the members site declined. If you have forgotten to renew and would like to do so, please use one of the following methods:

• Through the website: www.cartography.org.uk
• Personal Cheque made payable to The British Cartographic Society, please write your membership number on the back.
• Bank standing order.
• Debit/Credit card details sent with your returned renewal form.

We can then reinstate you using your same membership number.

New Members

The Society has the pleasure of welcoming the following new members to the BCS:

UK Members
Neil Moloney, Kristel Engel
Anna Feigenbaum, Bruna Almeida
Ben Caile, Michael Percino
Holly Price, Fred Ralston
Javier Garcia, Reema Mannah
James Ferne, James Ward
Harriet Phillips, Ryan Teggin
Mark Booth, Nathan Smith
Mr Cunningham, Ellen May
Benjamin Nichols, Omar Fayed,
Gregory Da Rios, John Wilson,
Stuart Giff, Chris Miller,
Manno Franca, Nicholas Dykes,
Steve Chilton, Peter Lovick,
William Ray, Marcin Raczka

Associate Members
Julia Hames, Rebecca Lord,
Thomas Forgan, Paul Olufayo,
Flora Hardie, Dominique Rene,
John Davies, Natalie McWilliams,
Vincent Searle

Overseas Member
John Isles

Educational Members
Kirkbie Kendal School

Bushy Park School

Carshalton Boys Sports College
St. Paul's Girls' School
Christs Hospital School

Corporate Members
Brainwave Technologies Limited
Silver7 Mapping Ltd

In other British Cartographic Society news:

Plans are well under way for the BCS-SOC Conference 2017 at The Redworth Hall Hotel, County Durham, 5th – 7th September. We are pleased to announce The Map Curators’ Group Workshop will also be held at the hotel.

As always, we are reachable by telephone and email Monday to Thursday 9:00am – 5:30pm and Friday until 5:00pm. We are happy to help members with any issues or queries they may have related to the society.

Email: admin@cartography.org.uk
Phone: 01223 894 870

Linda Baron and Ryan Harrow,
BCS Administration Team.

BCS Admin Report

Events

April
• 18-21 Apr GISRUK, University of Manchester
• 20-21 Apr GA Conference, University of Surrey, Guildford
• 20-22 Apr Alice Gadney Speaking “BCS Restless Earth” GA Conference, University of Surrey
• 25 Apr BCS Committee and Council meetings

May
• 16 May Esri UK Annual Conference QE 11 Centre,

London
• 25 May 16:30 TOSCA Geology and WW11, Edward Rose (Royal Holloway) Weston Library

June
• 27 June BCS Committee and Council meetings

July
• 2-6 July Cambridge Conference

September
• MCG Meeting
• 5-7 Sep BCS SoC Conference
• 19 Sep BCS Committee and Council meetings

October
• Lecture to PGCE students at Nottingham University
• 11-15 Oct Frankfurt Book Fair

November
• BCS AGM and Annual Lecture
• 15-16 Nov GeoConnect

Do you have any Corporate News?

Please email maplines.editors@gmail.com to be included in the next edition of Maplines.
The Nine Lives of John Ogilby

Book Review

Cromwell and the Restoration.

He went on to work in Dublin for Thomas Wentworth, Earl of Stafford, taught his children, became Master of the Revels in Dublin and founded the New Theatre there. All was going well until the Irish Rebellion of 1641 where he lost everything and nearly his life whilst serving as a soldier in Dublin Castle.

He set off home, for England, but was shipwrecked and he arrived home penniless and without a patron. Finding his way on foot to Cambridge, he learnt Latin from kindly scholars who had been impressed by his industry. He then ventured to translate Virgil into English verse which brought him a considerable sum of money. This success encouraged him to learn Greek.

He returned to London in 1650, got married and started a lucrative publishing business. He was a man who had the knack of making good contacts and with the fall of the Commonwealth, his many Royalist contacts brought him to the attention of Charles II. He was commissioned to help with the arrangements for the King’s coronation in composing speeches and songs and choreographing the event. As a result of this he was again appointed Master of the Revels in Dublin.

He returned to London again in 1665 and continued with his publishing business. This was destroyed in the Great Fire of 1666 but he carried on, rebuilt and set up a printing press in Whitefriars, London.

In 1674 he was appointed ‘His Majesty’s Cosmographer and Geographer Printer’. In 1675 he published the Britannia Atlas which was to set the standard for road maps that followed. This, however, is where his secret life came to bear on his work. Alan Ereira makes the case that the maps in Britannia had a dual purpose, the underlying one being to facilitate a Catholic takeover of the kingdom. This has also been proposed by Terry Jones in a 2008 television series.

After the maps publication, Ogilby died in 1676 and is buried at St Whitefriars, London.

Ogilby’s life is one of adventure, brilliance, disaster and resurrection to succeed again. Underlying all of this is an enigmatic secret life that even now is hard to fully reveal. Alan Ereira’s narrative is fast moving and intriguing. It takes the reader through one of the most exciting periods of English history and shines a light on some of the lesser known events and characters of that time.

If you want a good read and are a fan of English history, this is a good book to choose.

By Martin Lubikowski

There is plenty going on in the world of maps at the moment, some articles which caught our eyes this quarter include:

- An interesting map which demonstrates what each country excels at:
  - Source: www.informationisbeautiful.net/visualizations/because-every-country-is-the-best-at-something/

- A look at how the U.S. Air Force produced mapping during the Cold War – this article discusses data gathering and output at this politically sensitive time.
  - Source: http://news.national geographic.com/2017/01/air-force-world-maps-cold-war/

- The Map Room have produced an interesting blog which shows maps produced by children who grew up to become figureheads in the world of cartography. Particularly the map of Wales (below) by Erik Steiner, at age 10, who went on to become Co-Director of the Spatial History Project at Stanford University!
  - Source: www.maproomblog.com/2017/02/the-maps-cartographers-made-as-kids/

- Martijn van Exel’s OSM Then and Now compares OpenStreetMap as it was in October 2007 with how it is today, with aslider to change how much you see of one or the other.

By M artijn van Exel's OSM Then and Now compares OpenStreetMap as it was in October 2007 with how it is today, with a slider to change how much you see of one or the other.

In the image below, the left side is from 2007 and the right now, it is interesting to see how much content has been added. See the link at https://mvexel.github.io/thenandnow/

- Corporate Report

The BCS has an exciting programme for 2017. We have introduced some fresh ideas for the conference later this year and you will have already received information on the sponsorship packages available. Take advantage of the opportunities to promote your business and be sure to join us in Durham for a great networking opportunity and to keep up-to-date with the latest developments in our industry.

Along with many Corporate Members the BCS will be attending or exhibiting at numerous events in the coming months including the London Book Fair, the Geographical Association Conference, the ESRI UK Annual Conference and GeoBusiness. I hope to see you there. The Restless Earth programme continues to grow and is always looking for volunteers. If you can help in anyway please let me know and I will pass on your details.

Make sure you are taking full advantage of your membership. The Maplines editors are always on the lookout for corporate news, new products, and business opportunities and please check your entry in the Corporate Members directory on the website is up-to-date; it only takes a few minutes.

By Alan Grimwade, BCS Corporate Liaison Officer alangrimwade@cosmographics.co.uk

Visiting the BCS website at www.cartography.org.uk

Visit the BCS website at www.cartography.org.uk

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One of A-Z’s biggest challenges is keeping our maps up to date. Maps need to be an accurate representation of the real world but, as we know, change is the only constant. Some changes are very obvious like a new bypass or housing estate or hospital. However, there are many smaller changes happening all around that need to be reflected in A-Z maps, such as small housing developments and changing directions of one-way streets. Sometimes the physical landscape doesn’t even change, just a name or a traffic restriction. A-Z has to identify these constant changes and update our maps accordingly.

How are Geographers’ A-Z Map Company data updated?

Our biggest single source is the national mapping agency, Ordnance Survey (OS). The OS is a government agency that is tasked with surveying and mapping Great Britain at various levels of detail. Their most detailed data, OS MasterMap, forms the backbone of many of A-Z’s products. OS employs several hundred surveyors to capture the precise locations and names of features. The aerial and foot surveys are part of OS’s own change intelligence processes. They aim to capture major new schemes before they are even open to the public, whereas minor landscape changes like the reshaping of a wood are only picked up when an area is checked in their continuous revision cycle. The updated OS database is sent to A-Z so changes can be identified and recorded in our own mapping database. However, we can’t just rely on this source to make sure our maps are accurate and up-to-date. We work with a wide range of other public and private sources to identify important changes and embellish upon the basis of A-Z mapping. Helpfully, local authorities and government departments give access to plans, so we can see how an area will change before the work is even completed. Important sources include Borough and County Councils, the Highways Agency, the Department for Transport, the NHS, and the London Fire Brigade. Many organisations provide this information freely, but sometimes we need to buy commercial datasets, as with speed cameras and petrol station locations.

Occasionally it is hard to know the exact status of a development scheme, and we need to go out and check exactly what has been built and where. This “ground research” (a recent example included the London Olympic Park) makes a pleasant change for map makers who otherwise spend most of their time sitting at a desk!

Updating the Maps

Our mapping is updated whenever a new edition is published for that area. Skilled cartographers have the job of interpreting the change information and making changes to the map. This human involvement is essential, and A-Z’s maps wouldn’t be as clear and trustworthy without a careful process of checks. A map is a simplified picture of reality, and the cartographer has to try to show the real-world situation as clearly as possible.

Finally, some updates also need to be reflected in the important index. In the early days of A-Z, this was a laborious process involving huge numbers of index cards. Thankfully, it is now stored in a database and the extraction of a publication index is automated. A-Z products cover all of Great Britain at various scales. The London area gets closest to constant revision due to the rate of change and the number of publications we publish for the city. Some people may not realise that all map producers need to take this kind of structured approach in updating their maps.

The New A-Z

At the end of all this work, it is a delight to provide a data update or send a new A-Z edition off to be printed. By showing accurate, up-to-date information in the famously clear A-Z mapping style, we hope your new A-Z data will remain a reliable companion for many years to come!

By Simon Kettle, New Business Development Manager

A-Z Maps Data update: Glos., Warks., Oxon., and Worcs

Throughout the year A-Z Maps works to keep our map data updated — you can see how this is done on the earlier blog How are A-Z Maps Updated. We are proud to announce the latest updates for South Central England including Northamptonshire, Gloucestershire, Warwickshire, Oxfordshire, and Worcestershire. The latest mapping is available digitally right now. This update contains new and updated Points of Interest, Schools, Gyms, Sports centres and other street and road changes and thoroughfare restrictions. If you would like further information on how to get hold of the digital data please contact us via www.azdigital.co.uk
US Election Results

In the Summer 2016 Maplines, I described the Electoral College and made a prediction regarding the U.S. Presidential campaign: "the odds are against the orange prince becoming president." Democrats would take states in the Northeast, Midwest, and West Coast, leaving Republicans with not enough votes in the West and South (see figure 1). Of course, I was wrong, and Donald Trump won on November 8. Election night results were compelling and sublimely surreal as media maps turned increasingly red (the Republican Party colour), causing a geopolitical earthquake — or “Trump Quake”.

A Brexit Feeling

On November 7, 2016, Trump referred to Election Day at a large rally in Raleigh, North Carolina, by saying, “It’s going to be a very historic day... I think it’s going to be Brexit, plus, plus, plus.” He was right! Like Brexit, this was a rejection election, where the power of the political elites was rejected, and expert media analysis was proved wrong. The election highlighted anti-globalization and anti-immigration feelings, and reflected a surge of right-wing nationalism.

The Midwest Turns to Trump

Like the British Midlands, the U.S. Midwest formed the nation’s industrial core. Pent-up resentment became evident in old and declining manufacturing cities. Trump’s raucous rallies tapped into a deep animosity felt by millions of American workers who felt they were losing their jobs and economic security to globalization and immigration. Even the consummate showman, Donald Trump and his “Make America Great Again” campaign captured the hopes and needs of these disaffected people.

Figure 2 shows the fruits of Trump’s Midwest appeal. A Republican presidential candidate had not won Pennsylvania (Pa.) and Michigan (Mich.) since 1988, nor Wisconsin (Wis.) since 1984. Trump garnered enough votes in these states, along with the big swing states of Ohio and Florida to win the election. Why did Clinton lose these states? Essentially, 2016 became a change election, and Trump became the change candidate. A few specifics on Trump’s triumph:

- National vote: Trump won the official electoral vote (304 to 227), but Hillary Clinton got the popular vote (65.8 million to 62.9 million). This is only the second time since 1888 that the popular vote winner was defeated.
- Florida: Trump’s 4.6 million votes beat Clinton’s 4.5 million votes, winning by 112,000 votes and receiving 48.6% of the votes. He greatly increased the Republican margin of victory in the 22 mostly rural and blue-collar counties in central and northern Florida. Trump’s part-time residence, Mar-a-Lago, may become the winter White House.
- Pennsylvania: Clinton lost the state by 49,000 votes, with each candidate getting 2.9 million votes. Some 100,000 voters failed to turn out in the Philadelphia area, a Democratic stronghold, and Clinton lost the usually Democratic cities of Erie and Wilkes-Barre.
- Michigan: This was Trump’s narrowest victory, winning by 10,704 votes; both candidates got 2.2 million votes and 47% of the vote. Analysts indicate that the Clinton campaign took Michigan for granted, and there was a decline in Democratic turnout. Trump generated enthusiasm by visiting the state 7 times in the final weeks.

Trump’s team used electoral geography to win. Both campaigns faced adversity, but troubles lingered for Clinton, whereas Trump dispatched controversies quickly, often with media bashing. Trump’s election is part of a predictable cycle where an “outsider” from the opposite party wins the White House. Outsider Democrat Bill Clinton defeated Republican President George H.W. Bush in 1992, next, outsider Republican George W. Bush bested Democratic Vice President Al Gore in 2000; then first term Democratic Senator Barack Obama won against veteran Republican Senator John McCain in 2008. In electing their President, Americans seem to vote for those who are largely untested in the ways of Washington, DC.

By David B. Miller, Geopolitics Instructor, Northern Virginia Community College

A-Z Map Puzzle

The 1000 piece London A-Z Map Jigsaw Puzzle takes a puzzle and map fans on a challenging, but fun, journey around central London. This is the first puzzle based on official A-Z maps presenting the iconic street data on recognisable tourist spots and historical locations across central London. Discover all the back streets and walkways as you piece together this central section of the historic city and travel from Kings Cross to Battersea Park and Maida Vale to Bethnal Green.

Specifications
RRP: £14.95 Size: 350 x 225 x 35 mm (13.8 x 8.9 x 1.4 inches)
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Members’ Bulletin

Are you receiving the BCS Members’ Bulletin? This monthly round-up from the BCS will keep you in touch with the latest cartographic news and events from around the world. Please contact the BCS Administration Office to add/update your email address to the mailing list.

Below: Figure 1 - Prediction of the summer 2016 election.

Above: Figure 2 - Results of the summer 2016 election.
BRICMICS: promoting and preserving our map collections

BRICMICS is the British and Irish Committee on Map Information and Cataloguing Systems, a group of institutions and professional societies, together with major producers of cartographic products, involved with the preservation and dissemination of cartographic heritage within the British Isles. Current membership is drawn from each of the six legal deposit libraries, the British, Northern Irish, and Scottish national archives, geographical societies and museums with map collections, professional bodies for public libraries and archives, national mapping agencies, the Ministry of Defence, and commercial map producers. BRICMICS is also happy to consider applications for new corresponding Members, who do not attend meetings but are kept informed with all relevant paperwork.

What are we?

BRICMICS strives to foster:

a) Information exchange – providing an opportunity for members to exchange information about activities within their institution or organisations and for other members to query and discuss those activities.
b) Consultation – providing an opportunity for map producers and map collections to consult together on matters of mutual interest.
c) Expertise – being seen as the expert body for matters relating to cartographic collections and map curatorialship in the British Isles, providing a formal professional focus for curators and producers and a source of expertise and helpful advice for other professionals working with maps.
d) Lobbying – providing an opportunity to lobby government, advocating for map collections and related issues, and informing and influencing decision makers.
e) Areas of interest:
   a. Matters relating to the acquisition, cataloguing, access, storage and conservation of cartographic materials.
   b. Digital mapping: born digital and digitised paper mapping as well as digital preservation and data integrity.
   c. Legal issues, e.g. copyright legislation, legal deposit regulations, etc.
   d. Closure of map collections and dispersal of paper mapping.
   e. Evaluation of map collections.
   f. Training opportunities for people working with map collections.
   g. Promotion of collections through exhibitions, lectures, publications, internet access, etc.

Where are we?

We hold meetings twice a year; a Spring meeting, usually in May and an Autumn meeting, usually in November. The Spring meeting is peripatetic, held in a different part of the country each year. In 2017, BRICMICS will convene at National Records of Scotland in Edinburgh. The Autumn meeting has traditionally been held at the British Library. Anywhere possible meetings are arranged so as to take advantage of any relevant events or activities happening at or near to the meeting venue, e.g. conferences, symposia, lectures, or exhibitions.

We like to see a tangible end product after each BRICMICS meeting... something we can deliver to the outside world which showcases how maps and map collections are relevant, important, and influential. After all, our map collections are full of good news stories, and we need to share this with those others working with maps, and crucially those who are not, but are likely to be interested.

The current holders of official portfolios within BRICMICS are:

- Chair: Nick Millea (Bodleian Library)
- Deputy Chair: Jane Brown (National Records of Scotland)
- Secretary: Phil Hatfield (British Library)

Our website can be found at: www.cartography.org.uk/about/special-interest-groups/mcbricmics/

By Nick Millea

Professor Philip Christopher Coggins
March 1947 - February 2017

Chris Coggins joined the Geology and Geography team at Luton in September 1972. He came from the University of Wales, Swansea, with a first class honours degree in Geography and a training in secondary school teaching. He had been researching for his doctorate on The Mineral Cycle - exploration, development, production and post-production. Although he was a Welsh Valley Man, these were metal ores rather than coal. At Luton the focus of his work was the B.Sc. Geography and the Luton Diploma in Geographical Techniques.

That course was an experiment to test the public's ability to understand methods used by geographers in a Higher National Diploma level course supported by student grants where needed over three years with the middle year spent gaining full time work experience. This required students to achieve a good level of skill before being placed with an employer. Thanks in part to the rigour which Chris insisted on, students approached their course, thorough, accurate and well presented work. There are many who have owed their careers in planning, hydrology, off-shore sediment surveys, and mapping to his insistence that only ‘right’ was good enough.

Whilst not a cartographer himself, he could produce maps, diagrams and graphs as well as text of high quality. His career began when overhead projector illustrations were produced by pen on acetate and, at Luton closed as the computer ‘stick’ was being drawn up on screen or a disk made.

Dr. Coggins moved to Sheffield in 1996 to be Reader and subsequently Professor in Waste Management, a career change which resulted from surveys of the use of Civic Amenity Sites and of Drop-off sites at supermarkets and car parks for domestic wastes and for recyclables and reusable bottles, clothing, footwear, and paper. In 1983 as part of the Field Methods Unit in the first year, questionnaire surveys were done on Thursday and Sunday in mid-March at the Luton, Eaton Green Road Civic Amenity Site to find who used it, whence they came, and what they brought. With the students involved, he devised the survey, organised the teams to cover the opening hours 08:00 – 20:00, and the processing of the results. It was in writing up this that he became aware of a National lack of knowledge.

He obtained a contract with the College for a Research Project on Civic Amenity Sites which meant he withdrew from some teaching to manage that. The project attracted research students and involved him in lecturing to the Royal Geographical Society, The International Geographical Union, active membership of the Chartered Institute of Wastes Management, and membership of Parliamentary Committees. However the academic climate at Luton did not foster that type of work, hence the move to Sheffield.

In all this he was supported by Sue, his wife, another Swansea geographer who taught at Luton Sixth Form College. Sue was diagnosed with a rare cancer which caused Chris to leave his full time post at Sheffield and become visiting Professor there and Southampton University. Sue sadly died a few years ago. He continued his lecturing when invited and working with the Parliamentary Committee and other organisations. Chris Coggins death has been a shock to his many friends. He may have been a small man, but his impact was great, he will be missed.

By David Cooper

“Chris Coggins was a key part of the team that ran the Diploma in Geographical Techniques course which started at Luton College of Technology, now part of the University of Bedfordshire, along with David Cooper his chief author. Many cartographers who emerged onto the work scene in the 70s, 80s and 90s would have studied under him. He was a well respected and liked teacher of our craft” - Martin Lubkowski.
Restless Earth Report

2016-17

The past several months have been busy so far, with 15 schools visited – some excellent mapping being created – a new updated presentation and information on Cartography has really boosted the quality of maps already!

Due to new changes in the UK Exam Boards – the “Cartographic Skills” element (part of Geography GCSE Geographic Skills) makes up to 12% of the Key Geographic Skill! Us professionals can help the children boost their knowledge and ultimately their grade!

New for 2017

“Project Harrop” – A new Restless Earth Scenario based on the Floods of 2009 in Cumbria. Royal School of Military Survey’s Maj Chris Underhill and WO Jase Harrop have been instrumental in guiding me and putting together the scenario, with five tasks all based around the Geographic and Cartographic Skills requirements in the curriculum and UK Exam Boards. From the comprehensive folder of information given to me by WO Jase Harrop, I have been able to contact the relevant Education departments at the Ordnance Survey and British Geological Survey to help bring the exercise to life.

After a short introduction by me, WO Harrop took the floor to describe how he was drafted up to Cumbria during these floods and what tasks the team had to do to help the relevant agencies and emergency services. The students were captivated! So were the teachers and helpers!

The 5 tasks involved: plotting on to the acetate overlay the main features of the area: towns, roads, water courses, then to measure how far the diversions were, in a 2km x 2km grid square getting as many features from the map as possible and seeing what impacts the Floods would have and finally feeding back this information to Maj Chris Underhill. Yes - standing up in front of the whole 60 students, teachers and volunteers!

The workshop is for 2 hours and a final judging takes place to find a Winner and a Commendation. The winning group each get a World Map supplied by Global Mapping.

Comments from Fiona Derbyshire, Head of Geography at KKS:

• Army presenters were great and the link to the actual event really carried weight.
• Great to have tasks in booklet - plenty of scope to stretch the top end.
• Pupils really pleased with prizes.
• Loved all the adult support - many commented on it.

Volunteers are always needed and your expertise in the cartographic field is much appreciated. More information is on the website for the Volunteers to download. I will be needing you again this year, but also as a presenting role! If you have any questions about volunteering – please don’t hesitate to contact me. There is a letter which can be downloaded from the website or emailed to you to present to your employer, highlighting the benefits and structure of the day.

Volunteering for Restless Earth Workshop is part of the AGI Chartered Geographer (GIS) Accreditation scheme getting 4 CPD points.

Corporate Members can use the day as a Corporate Responsibility or Voluntary / Charity Day. It is not just a team building exercise for the children – I often feel our volunteers are a team with our own strengths and expertise to help in the workshop. And it’s great to meet the BCS Members and see what you all do!

If you feel your company could support Restless Earth – please contact me at the address below and I would be more than happy to discuss!

Please see the website for dates – they are coming in thick and fast!

By Alice Gadney, Alice is the Restless Earth Coordinator for the British Cartographic Society. She organises school visits and the volunteers and helps run the workshops. Promotion of the workshop is done through networking and word of mouth by the schools!

Contact Details
info@silver7mappings.co.uk
admin@cartography.org.uk

Educational Members
http://www.cartography.org.uk/members/education-schools/

Restless Earth

Events
http://www.cartography.org.uk/product-category/events/

Left: Alice Gadney helping the students complete the task.

Below: Volunteers presenting and helping out at the school.

Right: A selection of the final maps produced by the students.

Visit the BCS website at www.cartography.org.uk
Visit the BCS website at www.cartography.org.uk

Restless Earth

Spring 2017 / Maplines • 19
Cholera, Maps and Henry Acland

Thematic mapping really began to flourish in the nineteenth century. A number of famous maps were produced which illustrated statistical information in map form. In Ireland, Henry D. Harness produced maps of population density and traffic flow in Ireland; in France, Charles Dupin produced what may be the earliest choropleth map, depicting illiteracy by department, and Charles Minard drew his famous map-diagram of the successive losses of Napoleon’s army on its Russian campaign.

In the UK, some of the earlier examples of thematic mapping were those which attempted to show the distribution of disease. The incidence of illness and disease often has a spatial component — where a disease is found is important, especially if it is contagious — and so mapping it may be one way of analysing the pattern of disease. In the twenty-first century, we are of course very familiar with the ways in which common diseases are transmitted, but 150 years ago, it was far from obvious why some diseases spread so quickly, and why others did not.

Cholera was a case in point. In the nineteenth century, there were a number of well-documented outbreaks of the disease throughout the country. Its cause, was, however, not known and many theories abounded about why it spread. Although it was known to be associated with poor districts and the squalid living conditions found there, it was thought that cholera was an airborne disease, a ‘miasma’ or bad smell which could be transmitted through the air once one person had it. But how did that first person catch it? Theories included that it was related to elevation above sea level, or to different atmospheric conditions, including air pressure, humidity, and the incidence of thunder without the simultaneous observation of lightning! It was strongly felt that cholera was more likely among those drinking alcohol, and a pamphlet of 1832 from the Oxford Board of Health, addressed to ‘All Drunkards and Revellers’, stated that ‘those had been the greatest sufferers from Cholera who had been in the habit of indulging most freely in Spirituous Liquors, and that the habits of life should be regular and temperate.’

In Oxford, there were outbreaks of cholera in 1832 when there were 40 deaths, in 1849 when there were 121 cases and 64 deaths, and then in 1854 when there were outbreaks all over the country, including a large one in London. In Oxford, the outbreak occurred whilst Henry Acland (1815–1900) was Regius Professor of Medicine at the university. Acland was appointed consulting physician to Oxford city’s Board of Health, and became closely involved with managing the outbreak which started on the 6th August 1854 and continued until the end of October in that year. It claimed 317 victims, of whom 129 died.

Acland directed that the city’s physicians should record a range of statistical data about the victims, including their place of residence and their occupation. He published, in 1856, a Memoir on the Cholera at Oxford in the year 1854, with considerations suggested by the epidemic. The work included a number of coloured maps of the outbreak, of which the largest and most important was the Map of Oxford... showing the localities in which cholera or choleraic diarrhoea occurred in 1854, and cholera in 1832 & 1849.

Acland was not the first man to map Cholera. In 1833, Dr Robert Baker wrote a report to the Leeds Board of Health about the outbreak of cholera in the previous year, and a map of the incidence was included in Edwin Chadwick’s Report on the Sanitary Conditions of the Labouring Population of Great Britain published in 1842.

Acland was not the first man to map Cholera. In 1833, Dr Robert Baker wrote a report to the Leeds Board of Health about the outbreak of cholera in the previous year, and a map of the incidence was included in Edwin Chadwick’s Report on the Sanitary Conditions of the Labouring Population of Great Britain published in 1842.

In the same year (1833), Dr Henry Gaultier prefaced his book On the Origin and Progress of the Malignant Cholera in Manchester with five small maps showing the location of cholera in a number of areas around the city. In Gateshead in 1845, a dot map of cases of cholera was produced against a detailed topographic background.

By far the best known map of cholera is that produced by Dr John Snow of the outbreak of cholera in Soho, London in 1854. Snow was a physician working in central London when the cholera broke out in the summer of 1854. Snow is rightly remembered as important both to cartography as a pioneer of thematic mapping and to practitioners of public health as a pioneer of epidemiology. Snow specifically hypothesised that cholera was a water-borne disease, and plotted on a base topographic map the locations of cholera victims in Soho, as well as the locations of the pumps supplying its citizens with water. His map clearly shows clusters of cholera, including one around the pump in Broad Street.

The story goes that he persuaded the parish authorities to remove the handle from the pump and the number of cases of the disease immediately dropped. In fact, the cases had already begun to decline, but Snow’s theory that cholera was transmitted through polluted water eventually proved to be correct.

Acland’s map was different in a number of respects. The amount of information shown on the map was significantly greater than on Gaultier’s or Chadwick’s or Snow’s. Acland showed (in black dots) the outbreaks of 1854, but in blue (using two different symbols) he showed the places where the disease had occurred in 1832 and 1849. He also went to considerable lengths to differentiate between ‘clean’ rivers and streams and those that were polluted, also indicating the points of contamination into the watercourses. The large green areas shown on the map, including the very poor parishes of St Ebbe’s and St Aldate’s, were those classed as ‘undrained’, meaning having inadequate provision of sewerage. He denoted, with red circles, the places which had been specifically recommended for improved drainage and sanitation by a commission set up after earlier outbreaks of the disease.

Of note on the map are the contour lines, ‘every five feet below the summit at Carfax’. Carfax is the highest point of a generally very flat city in the Thames valley, and it is in fact very hard to produce a contour map of the city centre. What is perhaps puzzling is the value given to Carfax, namely 49.64 feet, since it is not apparent what height datum this relates to. The inclusion of contours relates more to Acland’s search for a correlation between geographical factors (including elevation) and cholera than does to the obvious link with drainage.

If Chadwick’s map was an earlier use of colour (blue and red dots, different symbols) he showed the places where the disease had occurred in 1832 and 1849. He also went to considerable lengths to differentiate between ‘clean’ rivers and streams and those that were polluted, also indicating the points of contamination into the watercourses. The large green areas shown on the map, including the very poor parishes of St Ebbe’s and St Aldate’s, were those classed as ‘undrained’, meaning having inadequate provision of sewerage. He denoted, with red circles, the places which had been specifically recommended for improved drainage and sanitation by a commission set up after earlier outbreaks of the disease.
and a dark brown wash). Acland’s map, and the advantage and a dark brown wash, Acland also mapped the whole contiguous settlement of the city rather just a part of it, and tried in the map to relate the outbreaks of cholera across the whole area to its geography. In this he was surely deliberately using mapping as an analytical tool, rather than as a means of illustration.

Ackland is not as well remembered for his pioneering map as Snow is for his, but he deserves recognition for what he achieved. Ackland was convinced that there was a correlation between water quality and cholera, but unlike Snow he did not specifically state that cholera was a waterborne disease. He noted that the county gaol in Oxford Castle had a high incidence of disease (31 cases) but the city gaol on Gloucester Green (which had a different water supply) had none, but did not go on to draw the distinct conclusion that we now know to be right.

In spite of the warning given in 1832, Maplines readers may like to know that John Snow is commemorated in the John Snow pub in Broadwick Street, Soho opposite to the site of the water pump which appears in reproduction there. Acland (or strictly his wife) was commemorated in a hospital in Oxford.

By Giles Darke

Outline below, some of the most common survey methods are briefly discussed.

Aerial Survey

Commonly performed using a small light aircraft which is flown at a good height to capture a large amount of area (square kilometres at a time), at a resolution of mere centimetres. A camera and GPS/GNSS is mounted on the aircraft and strips of imagery are recorded. The imagery is often overlapped and recorded in stereo so that a Digital Surface Model (DSM) can be extracted as well, working with data in this manner is known as photogrammetry.

This method is now being used by the hobbyist and crisis zones with the use of drones or Unmanned Autonomous Vehicles (UAVs) as data can be rapidly captured.

Once processed, the output data is commonly provided as georeference image files. As well as a DSM, a Digital Terrain (bare earth) Model, DTM, is created too - these can be supplied in a multitude of formats depending on the capture method and software used.

LiDAR, Laserscan & Sonar

Light Detection and Ranging (LiDAR) and Laser Scanners are point cloud capture systems. Whereas LiDAR calculates the distance of each beam which bounces back, a laser scanner sends the beams in phases and so that more can be captured, the only downside is that the beam distances are shorter.

The LiDAR and Laser Scanning systems are extremely easy to use and can be easily mobilised, which solutions available for drones, aircraft and even handheld systems.

LiDAR and Laser Scanners are used by a huge range of industries from applications for autonomous cars through to BIM due to the high accuracy of the data. Although the data can be large when captured, each point can store attribution, RGB colour values amongst some information. These systems are commonly used on land with multibeam and single beam echo sounder systems being their offshore counterparts (sound works better in water).

Data is captured in a point cloud format, commonly .las for LiDAR and .mbes for multibeam - quite often the data is structured in a .xyz format.

Land Surveying

Using a Theodolite, RTK and tape measure, it is what we expect survey to be. People in yellow jackets out digitising information about a geospatial capture system. Although we might have some of the most sophisticated equipment ever available to us, this is still the best way to get detailed information about an area. Data is captured geospatially as points, lines and polygons which can be accurate down to less than a centimetre and ready to be consumed by a GIS or CAD format.

Other ways we get 3D data

Much of the other 3D data we use is derived from the raw survey data. For example, 3D meshes, like we see in Google Earth and in many video games, are mostly derived from georeferenced imagery and processed in software like Pix4D. Using aerial imagery we can employ photogrammetry to extract 3D vector polygons, like buildings and trees.

The fact is that we can extract whole cities in accurate 3D to an incredible level of detail but, until recently, we (the geospatial community) have not had the tools to use it.

To use three dimensional data, GIS users have been forced to create workarounds to perform analysis as there are very few truly 3D GIS on the market. Instead, much of the data is converted to 2D in the form of weighted rasters or Z enabled vector data, many of which have to be converted and transformed, each time losing a little accuracy.

In the next part, we’ll have a look at how we convert and use these 3D formats in our common GIS.

By Nicholas Duggan, FRGS Cgeom (GIS)
UKCC

The ICA executive met recently in Budapest for three days of wide ranging discussions on a range of topics, including future organisation of the Association, publication policy and membership. We received a report on the Washington International Cartographic Conference coming up this July. As anticipated, all seems to be very well organised. There has been a very large response to the call for papers, so it looks likely to be a very packed programme with high quality presentations.

There will be an additional General Assembly this year in Washington. Normally these are held every four years, but can be held more frequently if there are particular issues to address. The main focus of this GA will be some minor, but significant changes to the Statutes & Bi-laws of the Association. The key change is to how voting occurs at the GA. For most issues a simple majority of votes is all that is required, often a show of hands by those members present, but for changes to the Statutes, currently 50% of members must vote in favour. Although such changes are circulated three months in advance to members and they may opt to vote either by correspondence or in person at the GA, at recent assemblies the number of actual votes cast has barely exceeded this requirement, so changes supported by the vast majority of active member nations have been blocked by a very small number of votes against. The proposal is that in future changes to Statutes will be based on a majority of those voting, either in person at a GA, or by correspondence. Discussions were also had about moving to an electronic voting system or including on-line participation in the GA.

The UK Cartography Committee will meet in May to discuss the proposals and decide how the UK should vote.

There is also ongoing discussion about how best to deal with proceedings of ICA conferences and other meetings. It has been agreed we will move to an electronic system with fully refereed papers forming one series and papers based on reviewed abstracts forming a separate series. This will ensure consistency of and long term access to proceedings, not just for ICCs, but other activities such as commission workshops.

Closer to home, the UK contribution to the International Map Exhibition at ICC2017 has been compiled. Notification from the organisers was misdirected so arrived on my desk a bit late, so I am very grateful to those who responded at short notice. We have ended up with some very interesting contributions and I am sure we will continue our high profile at the exhibition. This really is an excellent opportunity for cartographers to display their wares to an informed and knowledgeable audience and I would encourage anyone producing interesting maps to contribute next time. The call for the Tokyo exhibition will go out early in 2019. Most contributions tend to be large maps, which often means juggling things to fit, and not all can be included, but this always leaves space that could be taken up by smaller contributions, so I would particularly encourage smaller maps to be submitted.

ICA and the UN Sustainability Goals

One major ICA initiative, led by president Menno-Jan Kraak has been to compile a series of posters illustrating how cartography can contribute to the UN’s Sustainable Development Goals www.un.org/sustainabledevelopment. These 17 goals tackle such issues as Hunger and Food Security; Education; Clean Water & Sanitation; etc. At the workshop with ICA Commission chairs in November 2015, Menno-Jan set the commissions the task of developing posters to illustrate to UN officials and delegates that cartography had a major role to play in supporting and managing these development goals. The idea was that commissions would focus on how their particular area of expertise in cartography could contribute to one or more of the development goals. This has resulted in a series of 19 A0 posters, one for each goal plus an introductory overview and a summary. Menno-Jan created a template for the posters; draft posters were then produced by collaboration between the commissions, and brought into an overall style by cartographers at the ITC. The posters were first displayed the UN headquarters in New York in summer 2016 at a meeting of the UN Group of Experts on Geographic Information Management (UNGGIM). Some issues did emerge, such as the depiction of international boundaries, which is always controversial. The current task is to update the posters, increase consistency (and accuracy in some places).

A catalogue describing the posters and their creation has been produced (see illustration) and the posters themselves can be downloaded from http://icaci.org/maps-and-sustainable-development-goals. New, updated versions of the poster should be available in May in time for them to be displayed at the AGILE conference in The Netherlands and again at the ICC in Washington in July.

By David Forrest, Chair, UKCC