Life After Recorder 6
16th May 2017, Bedford

Meeting notes

Present

Wolfgang Ritter (Hampshire BIC), Lorna Shaw (Essex WT), Steve Whitbread (Northamptonshire BRC), Jackie Ullyet and Jennie Mitchell (Bedfordshire and Luton BRMC), Phil Ricketts (Cambridgeshire and Peterborough ERC), John van Breda (Biodiverse IT), Ian Carle (Hertfordshire ERC), Fran Smith (Lincolnshire ERC), Sue Timms (Leicestershire and Rutland ERC), Roy Tapping (Cofnod), Martin Horlock and Sam Neal (Norfolk BIS), Andy Foy (Andy Foy Consulting), Moustafa Eweda (Cumbria BDC), Neil Fletcher (Buckinghamshire and Milton Keynes ERC), Agni Arampoglou and Mariya Tarnavska (Warwickshire BRC), Ian Egerton (Devon BRC), Tom Hunt (ALERC).

Summary of actions

- Roy Tapping to provide a diagram of the ORCA data structure
- ALERC to coordinate a requirements analysis for future LERC database systems.
- Requirements analysis to include possible funding models.

Notes from presentations

Sue Timms – Leicestershire and Rutland Environmental Records Centre (LRERC)

A decision was made as an LERC to take the "great leap" and move away from Recorder 6. LRERC is part of a county council (Leicestershire) and this as a critical factor in making the decision.

Sue is the county ecologist and took over the running of the LRERC database in 2008 when Darwyn Sumner left. Kirsty Gamble took over the day to day running of the LERC. Recorder 6 support was provided by Sally Rankin.

Between 2012 and 2015, cuts to local authority funding started to bite. There were also problems receiving support from the councils own ICT people, following a review. For example, there were problems transferring to Windows 7. These issues were compounded by the fact that Sally, John van Breda and Mike Weideli were hard to get hold of to provide support.

The current situation is that Recorder 6 *does* work on the new networked council IT systems, but it is at the bottom of the pecking order in terms of the council ICT department and unsupported. LRERC therefore needs to outsource its database quickly.

Initially exeGesIS hosted Recorder for LRERC.

However, having initially been inspired by Cofnod's demonstration of its eMapper system, the question was posed whether Cofnod's whole system could be used to replace Recorder 6 entirely. The more LRERC thought about it, the more it appeared to be a "no-brainer" to use a system specifically designed for LERCs. A five year contract has now been signed.

Graham Walley has subsequently retired from LRERC and is not being replaced and Sue doesn't have the technical background to run LERC without some degree of support. Support is built into the contract with Cofnod.

Issues with Recorder 6

"Complexity leads to human error". "Don't think I'm competent to use it [Recorder 6] now". There is confusion with the taxonomic dictionaries. There are data exchange and measurement problems (e.g. importing errors from other people's Recorder exports). The mapping function is not integrated and spatial searching is lengthy and difficult and caused business continuity problems when an officer was away. MapInfo had to be used instead.

The conclusion was that Recorder 6 simply wasn't suitable for LERCs. There was a need for a "Recorder Light". This should not be considered "Recorder bashing". It is understood how it is good particularly for individual recorders.

In 2011 LRERC started again with its data. It moved data into a new Recorder 6 copy. This was incredibly time consuming. LRERC started writing and enforcing data standards, but there were still database errors however. There have been further checks since passing data to Cofnod.

There have been hoops to jump through to get data to Cofnod. This has been painful, but probably worthwhile. Support for this from the council's own ICT people has happened quickly and the budget has not been a problem. An Information Security Risk Assessment had to be completed and Cofnod had to be "signed off". This includes an SSL certificate. Procurement exemption has also been necessary and this had to be signed off by the Chief Officer. A legal contract was drawn up, and after some work, this was reduced to twenty pages. It includes licensing. The purchase order was also required. Finding and agreeing the budget was the easiest part.

Questions, answers and comments

Martin Horlock – How much were the Recorder 6 problems actually a skills deficit within the local authority?
Sue Timms – More a familiarity deficit. Key people had been lost. New people couldn't pick it up from scratch, although never said why.
Martin – If there was no second option, would skills have been the answer?
Sue – No, because the skills couldn't be embedded within the local authority. Instead we would have gone with exeGesIS. We would recommend this to others who don't want to use Cofnod. This is still Recorder though, and we have had enough of it.

Phil Ricketts – Very interesting. This highlights the issue that historically the problem at some records centres in the early development phase was that the emphasis was more on getting in as much data as possible rather than on processing it in a consistent manner. The complexities of Recorder may have added to inconsistencies where the staff or volunteers entering data were not experienced users of it.

Neil Fletcher – Not a Recorder 6 user [at Buckinghamshire and Milton Keynes ERC] but MapMate has similar problems. Its future is unclear and it does not fit easily into a local authority (corporate) IT infrastructure.
How big is your database?
Sue – 500k when I started. One million now.

Agni Arampoglou – Most issues are the same in our county council [Warwickshire]. We are not able to charge for products, only for staff time [Cofnod's ORCA system offers specifically priced products to customers]. How does that sit with the new system?
Sue – We have added in a charge for data processing time, e.g. verification etc. Our fees are based on the area of search, not on the time taken to do the search. We have a legal opinion that this is fine. But we are still worried about a challenge.

Wolfgang Ritter – We are running MapMate and Recorder. MapMate reached capacity so we had to split the database across two machines. This is not preferable to Recorder. But for Recorder 6, we have to negotiate with the local authority IT department to get updates installed. Often this is a different person each time, but it does work eventually.

Mark Wills – This will depend on individual councils.

Ian Carle – It works better in Hertfordshire now the LERC is hosted by the Wildlife Trust.

Roy Tapping – Cofnod

Cofnod was established in 2005. They reviewed both Recorder 6 and MapMate and concluded what LRERC have concluded, e.g. Recorder 6 was too complex and didn't meet their requirements. I key part of this is that "we manage species records for people and it's the people we need to interact with", and so a suitable contacts database was required, as was spatial searching.

Cofnod's database is based on MS SQL Server, which was free with a server purchase. Over time, Cofnod have been both worried and pleased. The system has been designed and able to fulfil a list of consider. Tim [Cofnod systems officer] spends time unpicking Recorder to get the best bits.

How have things changed? There are now thousands of contacts in the contacts database from hundreds of organisations and thousands of enquiries etc. We "have been a service provider for ten years".

Therefore, the contact with LRERC wasn't daunting because Cofnod is used to service delivery.

The Cofnod database is currently at 2.8 million records and should be at 3 million in a couple of months. Data searches are now produced using eMapper in seconds, and have had to get over the notion of charging for hours and delivering in seconds. The consultants are happy with the service, and any member of staff can run the search process. eMapper has added functionality, e.g. can data can be downloaded in three different formats?

There is a data input system. Validation and verification uses Record Cleaner rules. Cofnod has its own online recording system. The Cofnod Administration System (CAS) is a customer relationship management system and also stores information on datasets. Data requests come through the website, whilst staff import and manage the data. This frees up staff time to do outreach work.

Coming soon – making the customised systems generic, under a single system called ORCA (v2). This is an additional benefit of carrying out the work with LRERC. The old ORCA (as used by NEYEDC) should originally have been made online so it could be developed and supported by a community.

For LRERC, there will be a first deployment in May 2017, and most of the development will be completed by September. Therefore, by the autumn, Cofnod could be in a position to provide ORCA to LERCs.

Metadata will be to Gemini standard. Data imports will be via spreadsheet. There will be online data requests and the user selects one of several packages. There is a move away from time based searches to area based searches.

Cofnod use Sage for accounting, but this only holds the bare minimum required for compliance for a company limited by guarantee. ORCA retains everything else, including logging and timing of enquiries etc. and can help monitoring business targets.

Business model – LERC dedicated tools for LERC users. A LERC led community of users.
How it works – ORCA is hosted on a dedicated server with leased line and "government spec." firewall.

The income from supplying LRERC will help fund an assistant for Tim, and Cofnod are looking at recruiting soon.

The cost is uncertain. LRERC money is helping with development. The proposed costs for LERCs are:

- £1-1.5k for data transfer
- LERCs need to contribute their own time learning the system and importing e.g. contacts, but this should come quite quickly.
- Annual licence fee if £2.5k
- Any new features or customisation have to be paid for separately.

How can this be paid for? Efficiency, better customer service and passing the cost on.

Questions, answers and comments.

Sam Neal – Do consultants run the enquiries or you?
Roy Tapping – We do. Unlike the website proposed by LERC, Cofnod still run their data searches themselves. This allows the requester to be checked and ensures the invoice to go to the right person etc.
Sam – How easy is it [ORCA] for LERC staff to use?
Roy – The contacts database is straight forward. Datasets are the most complicated, with "versions" and "modules". Once you get your head around this it is not that hard. Youtube videos will be produced for the basics.
Sue – So far this has been good and simple, but LRERC are yet to reach the hardest bits. This will be the datasets management side.
Roy – The database side is really simple, and you don't even need to know any SQL to query it.
Sam – Support. How do we deal with the threat of leaving? And what about Cofnod's capacity?
Roy – Not an unresolved issue. In this respect, Cofnod are moving from away from the LERC role, to that of a software company. They will need to retain their team and also add support through recruitment. LRERC are "taking a bit of a risk" but anyone adopting something for the first time is taking a risk. But what other guarantees can Cofnod give.

Ian Egerton – Has friends who work in IT and they have big compatibility problems between each other's coding practices.
Roy – Tim does do a good job of commenting on code and documenting it. At Cofnod, things are always delivered in chunks to make sure they work.

Agni – Would WaBRC data be on the Cofnod server?
Roy – Yes. Cofnod now have a 100Mb dedicated lease line.
Agni – But who manages the data? Will this change data sharing agreements, as local recorders are still owners of records?
Roy – Would this put people off?
Agni – No, but it is something to be aware of.
Roy – Backup and security procedures are in place.
Neil – Servers are increasingly outsourced anyway.
Jackie Ullyett – Who runs the backups?
Roy – We do. Several backups are in different places, including offsite.

Steve Whitbread – Can the system allow for subscription as well as one off searches?

Roy – No, only one off searches at the moment, but open for discussion on this. At the moment however, the focus is on getting the system set up as it is.

Steve – If everyone signed up, could it do cross boundary searches?

Roy – Yes.

Steve – If a single unified was formed, this could allow data exchange for species interest groups.

Roy – Yes. There would need to be discussion outside ALERC, and we have started to talk to the BTO.

Steve – How much do you want to keep control of the system, e.g. could an ALERC consortium but it?

Roy – Yes it could do. A good discussion to have. But unsure how to charge, e.g. if it does take off, then where is the investment going?

Steve – Any local authorities accessing data via this system?

Roy – No, and they won't be.

Agni – Can county recorders access data online?

Roy – They use the Online Recording system. But this is currently outside ORCA. But it can be brought in the future, but not in the first stage.

Agni – Can you reproduce Recorder 6 queries in this system?

Roy – Not a Recorder 6 person, but it should be possible. The data can be queried in many ways.

Moustafa – Species designations. Do you refer to the JNCC list or make your own list?

Roy – Dave Slade provides a "cleaned up" designation list for all the Welsh LERCs.

Moustafa – Species names can be challenging.

Roy – My understanding is that Dave's list uses the preferred name.

Action: Roy to provide a diagram of the ORCA data structure.

Moustafa – Is there flexibility of format for export? E.g. in NBN exchange format?

Roy – Yes, but the NBN exchange format has changed.

Moustafa – Does the system take other data e.g. sites?

Roy – Yes, but without editing functionality, so boundaries need to be managed in a GIS and uploaded.

John van Breda – Biodiverse IT

John has been a Recorder 6 developer and currently works a lot with BRC. This presentation will discuss Indicia as a replacement for Recorder 6.

Indicia is a tool kit. It is not a one to one match for Recorder 6. Some parts of Recorder 6 are missing from the tool kit because people have not needed them so far. These may also be the parts of Recorder 6 that LERCs don't use so much.

One key point – using Indicia doesn't mean that data automatically goes to the NBN Atlas. It only hosts data on the BRC servers if needed.

Data model – This is simpler for Indicia than Recorder. It uses PostgreSQL, which is open source and has excellent support. This allows for use of PostGIS which has lots of spatial functionality. In terms of what can or can't be done regarding Recorder 6, the remaining functions can probably be simulated.

Features – For an example, see Pantheon which is built entirely on Indicia. There is no report wizard, but it should be possible to reproduce all the filters and queries that Recorder 6 has, so long as the necessary data has been imported. The data importer can be slower because it processes data in bite-sized chunks so as not to impede the BRC servers for other users. There is a library of Indicia apps available, and the one for mobile phones is on GitHub.

Infrastructure – Nothing has to be installed locally. Centralising and sharing support can reduce costs. Servers have to be PostgreSQL compatible however. There are workarounds for implementations where lots of people are sharing a server.

Support – Further development is in the BRC plans, and everything is open source.

Questions, answers and comments.

Ian Egerton – ERCCIS (LERC for Cornwall) use ORKS (an Indicia implementation) and don't think they need Recorder 6 as a result.
John van Breda – Worked with ERCCIS for a number of years. They have recently upgraded to the latest Drupal version [Drupal is the content management system on which Indicia is developed]. They can now pump data to their rented server. They can share this data with their partners.
Ian – This has been a big investment, and might therefore not be practical for other LERCs. Would the developments made for ORKS be reusable for others and therefore save money?
John – Yes. Some features wouldn't have to be changed again.

Agni – How easy is it to transfer existing records?
John – There are two ways to do it, by "synch" to an Indicia app that packages data into CSVs, or you can do your own CSVs. A million records can be done overnight.

Roy – Reporting. What examples are there of what you can already do?
John – Occurrences, sites, taxonomy etc. A big list of filters is built in. There are built in reports for summary data.
Moustafa – How can reports be created without a wizard?
John – Like in iRecord, filters can be selected and saved. These can be created and shared with recorders.

Agni – What is the sample heirachy?
John – This is similar to Recorder 6. You can add as many level as you want, so the Recorder 6 hierarchy can be recreated if necessary.

Moustafa – It doesn't appear good for site managing and planning, but what can it do?
John – Without much effort it can produce lists with a site boundary. It can capture habitat and biotype data through dropdowns. Site metadata ad management plan data has not been built in.
Moustafa – Can it query via site boundaries?
John – Yes. Upload a shape file and filter against it. It can also use WMS and WFS.
Moustafa – Could it be hosted on our own server?
John – Currently it's BRC hosted, but theoretically there could be an ALERC server.
Moustafa – Can it grant different levels of access to different people?
John – Yes.
Moustafa – Even based on location, e.g. for districts?
John – Yes.

Andy Foy – Is there an option to access BRC data?
John – Yes. The simplest option is to have downloads.
Andy – Can it synch?
John – Yes. It can use RESTful API. The API is needed to access the BRC server.

Moustafa – Is there a rough idea of cost?
John – Haven't yet produced a system that is exactly what LERCs need, but a similar system to what has been described might cost £600. Maybe for a fully functional website it would be £600 to

£2000. It gets expensive when code has to be written. But it is all open source, so you can install and set up yourselves.

Lorna Shaw – EWT have done this using the basic template website. Development is still restricted by their own time commitments.

Steve – How much did ORKS cost?

John – £10k for last year's upgrade work, but this required lots of new code because of the upgrade from Drupal 7 to 8. They also have had tools created for them to send data to their own warehouse, plus tools to allow granular access for different groups.

Ian – When you factor in Martin's [ERCCIS data manager] time, it probably doubles the cost.

John – There was lots of data upload work from Martin.

Steve – Planning, sourcing money for setup and executing an action plan, but after this is there a need for Indicia specialists within ALERC?

John – Yes, because then you don't need to contact me for support.

Mark Wills – However frequent are Drupal upgrades?

John – One a month and sometimes there are security advisories. These are very seldom critical. Most are minor upgrades. Drupal 7 to 8 was a big one, but Drupal 9 should be a much smaller upgrade.

Moustafa – What about Wordpress?

John – Have demonstrated Indicia on Wordpress, but there are more limitations?

Andy – Web hosting costs, are these more with PostGIS etc?

John – Most free hosts don't support PostGIS, but AcuGIS, whch ERCCIS use, does. The front end does not need this, only the back end host does.

Lorna – This is what EWT do.

Steve – Is it possible to incorporate satellite and LIDAR data?

John – You mean as raster data? This wouldn't be stored this in the database, but would put in GeoServer and publish as web mapping.

Ian Carle – Hertfordshire Environmental Records Centre

Reporting on work carried out in the East of England, and building on the points made by Jackie's points from the ALERC conference.

Wish list for any future system

Database – Retaining functionality but simplification. Customisability. Ability to interact with other things, e.g. the NBN Atlas. Beyond the database, there needs to be added features and functionality.

What next? – This meeting has happened. There is a need for something new and will work together.

Questions, answers and comments.

Ian Carle – We have different LERCs and different setups with different needs, but do we need different solutions in parallel? Maybe we can draw up an ALERC wish list.

Martin – Need to be realistic about resource implications.

Roy – Cofnod are different, but also pretty much the same.

Martin – The fact that there is this meeting shows similarity.

Andy – Won't get one solution for all. Even between the centres I support in the southeast, things are very different.

John – When JNCC support does eventually end, what does that mean? The risk is not necessarily the little bit of funding that was supplied to support Recorder 6.

Andy – Why are we tied to JNCC?

Tom Hunt – No, it's just that a JNCC supported Recorder 6 is the status quo.

Wolfgang – Can ALERC respond to whatever JNCC says, i.e. uncouple members from the JNCC.

Ian C – There is no need to panic.

Andy – Could a simple costing model be put to JNCC?

Sue – Are there people who favour Recorder? *Several people said that they were.*

Ian E – ALERC wouldn't push a solution that its members didn't want, but might help some LERCs transition, but would try to assist LERCs that needed longer for a transition, this might include further support of Recorder during that time if needed.

Steve – There are questions about improving services to clients etc. but we need to get off Recorder to do this.

Roy – There are four LERC fundamentals; a place to share data, do bulk imports, a mechanism for ad hoc records and more homogenous reporting including costing.

John – If starting from scratch, a requirements analysis would be asked for, ranking the requirements and finding out which ones are mandatory.

Action: ALERC to coordinate a requirements analysis.

Sue – This should include what IT expertise are to hand.

Phil – What would ALERC do if JNCC turned off Recorder support?

Martin – They can't really, as ALERC members can continue the support themselves.

Action: Requirements analysis to include possible funding models. Would LERCs be prepared to pay an annual subscription fee?

Roy – There has to be some sort of agreement that we do something collaboratively.

Jennie Mitchel – Can a working group be formed?

Martin – Yes. Can we ask Jennie to be a member?

Jennie – Yes.