

Workshop 5

Synthesis of information from developer-funded investigation to create new historical narratives

2nd November 2017

Facilitated by Chris Gosden

Draft proposed actions, summary of issues discussed, and notes

V2 for website consultation 08/02/2018

Jan Wills

Draft proposed actions

	Topic (<i>cf</i> summary below)	Proposed actions	Possible owners
1	The nature of synthesis	<ul style="list-style-type: none"> Define more clearly what we as a sector mean by synthesis 	All
2	The structure of the profession	<ul style="list-style-type: none"> Use regional structures (see 5 below) to promote cross-sector contacts 	All
3	Standards	<ul style="list-style-type: none"> Review existing professional standards and guidance, in particular for: fieldwork, grey literature reports, digital archiving, and develop a programme of revision and enhancement Develop and promote standard approved terminologies, methodologies and variables for use in recording, analysis and reporting of all archaeological material Increase availability of training to encourage compliance with standards and guidance Review HER recording standards and implement to improve data quality 	<p>CIfA</p> <p>HE, CIfA, specialist groups</p> <p>CIfA, HE</p> <p>ALGAO, CIfA</p>
4	Access	<ul style="list-style-type: none"> Improve access to HER data by: <ul style="list-style-type: none"> Clearing Oasis backlogs of unvalidated reports Assessing and addressing other 	<p>ALGAO</p> <p>ALGAO, HE</p>

		<p>HER backlogs</p> <ul style="list-style-type: none"> ○ Promoting sector buy in to HIAS • Set timescales for submission of reports, in ClfA standards and in WSIs, and enforce • Set standards or approved specifications for the redefined digital archive (<i>cf</i> 3 above, and link to Workshop 6), and timeframe for access • Database of contracts in progress 	<p>HE</p> <p>ClfA</p> <p>ClfA, ADS</p> <p>FAME</p>
5	Research-focused investigation	<ul style="list-style-type: none"> • Regional research frameworks: accelerate completion of next generation of RRFs and plan to regularly review and update • Engage all parts of the sector in RRFs work including academic, curatorial, contractors, consultants, local societies • Incorporate RRFs into Oasis • Investigate potential to develop cross sector 'regional hubs' out of RRF communities as a focus for ongoing collaboration, potentially linked with museums, archives, HERs and advice functions • Promote research-led and reflexive approach to archaeological investigation • Pump-prime other period syntheses projects (<i>cf</i> Roman Rural Settlement) • Enable the write up of key backlog sites through competitively tendered projects 	<p>HE</p> <p>HE, with sector partners</p> <p>HE</p> <p>HE with sector partners</p> <p>ClfA, ALGAO, FAME, HE</p> <p>HE</p> <p>HE</p>
6	Curatorial capacity	<p>(More fully discussed in Workshops 3 and 4, and addressed by the actions recommended from those workshops)</p> <ul style="list-style-type: none"> • Promote curator engagement with sector initiatives such as RRFs, and other opportunities for cross-sector working 	<p>ALGAO, HE</p>
7	Developer attitudes	<ul style="list-style-type: none"> • Continue to promote the value of archaeology and the public benefit delivered by archaeological projects 	<p>All</p>
8	Articulating value and public benefit	<ul style="list-style-type: none"> • Review work undertaken across historic environment to date and consider funded project to address issues identified 	<p>ClfA, HE</p>

9	Self regulation	<ul style="list-style-type: none">• See 3, 4 6 above	
10	The planning system	<ul style="list-style-type: none">• Explore the potential to develop a more strategic approach to large scale development, incorporating pre- and post-development synthesis, and utilising the HAZ programme or a modified version	HE, ALGAO
11	Funding	<ul style="list-style-type: none">• Produce guidance to online funding opportunities	FAME

Summary of main issues discussed

1. The nature of synthesis

The nature of synthesis – what it is and what it is not – was discussed throughout the day. Synthesis brings together multiple data sets, enables patterns to be identified, and leads to the construction of new narratives that can engage the public as well as justify funding. It should not just be the province of academics, although practice in the profession and its legislative and policy context can make it difficult for others to engage.

2. The structure of the profession

The current structure of the profession - fragmentation and the existence of academic/contractor/curator silos – and the project-by-project funding model can militate against collaboration to produce synthesis. Some of the most productive projects have been collaborations between eg commercial companies and universities (eg the Roman Rural Settlement Project), but resource pressures and the commercial environment may militate against building partnerships.

3. Standards

The need for better, more rigorous standards or specifications - across professional practice - was a strong theme during the workshop but particularly relevant to the workshop theme: in data recording and data structure; in standardisation of terms and recorded variables; in grey literature (where even basic locational information is frequently incorrect); and in the structure and inter-relationship of the archive/grey literature/publication from a single project. Better standards or more detailed, shared specifications are necessary to enable inter-site comparison and to facilitate synthesis. Standards and quality issues apply also to the data in HERs; data structures in HERs, and backlogs resulting from lack of resources for updating can frustrate easy access to information. Standards is an issue that the profession ought to be able to address; it's about culture and ethos as well as standards creation and enforcement.

4. Facilitating access to information

Data should be available on line in appropriate formats (*cf* 3 above) not just PDFs, to enable comparison and synthesis. Data from investigations and the grey literature report should be made available within a reasonable length of time after the completion of the project to facilitate synthesis.

It would be useful to have a better understanding of what online information is being used and by whom.

5. Research-focused investigation

Regional Research Frameworks, and national thematic and period frameworks, are very useful but need to be updated regularly, especially where there is a high level of development and consequent archaeological investigation and where they can therefore become out of date quickly. They need to be used more actively and consistently in framing research questions in project designs and WSIs, that are then reviewed regularly during and at the end of each project. Could this process be

integrated into the development of Oasis? There needs to be wide participation in the next round of RRFs.

6. Curatorial capacity

A lack of curatorial input can hamper the creation of appropriate research-orientated projects incorporating synthesis, and the adoption of a reflexive approach to maximise value and public benefit. Research objectives need to be set early in the development management process in WSIs; the latter can constrain, and work against innovation. Discussion, collaboration, negotiation is essential as a project develops.

Curatorial resources have diminished and curators are under pressure. The level of resource varies across the country, and there can be inconsistency in curatorial practice; where there are adequate numbers of staff the curator/contractor relationship can work well. The difficulties in addressing the local authority capacity issue were acknowledged, but there was some support for examining alternative models such as regional structures.

7. Developer attitudes

Developers are frequently portrayed by archaeologists as not interested in research, meaning or synthesis, or in wider public benefit, and only in dealing with the archaeology as quickly and cheaply as possible, although there are exceptions. There seem to be tensions between creating research-driven archaeological projects delivering public benefit (which is what planning policy intends), and the pressures of time and money. Contracts are still generally awarded on the basis of price, not design (*cf* Southport). 'The ideal is the informed, research driven, developer-funded intervention that delivers new knowledge'.

8. Articulating value and public benefit

We need to articulate the value of archaeology and the public benefit it delivers, including its relevance to other societal and environmental issues eg well-being, place and identity, climate change. We should involve the public more, but the community may have different views on what is important and what needs to be recorded.

9. Self regulation

More self-regulation was considered as a response to diminishing local authority curatorial capacity but there was no enthusiasm for this, rather for improved regulation and standards and strong knowledgeable curatorial input.

10. The planning system

Most archaeological investigation is a consequence of proposed development, and the planning process is therefore extremely important. The specification of archaeological work – what can be required, and who is responsible for decision-making – was discussed. How is it possible to achieve synthesis across multiple projects? Some examples were identified of projects where synthesis across several sites, following excavation, had been specified in the WSI. A more strategic approach to the development of large areas was considered eg large infrastructure projects, extensive housing allocations, new settlements. Could existing knowledge be synthesised as part of initial desk-based work on large areas of proposed development, leading to an overarching research-led framework WSI covering many individual developments, that also required synthesis at the end of the

development project? Such an approach might be possible in conjunction with Local Plan creation and decisions on Permission in Principle. An initial input of public funding might be necessary, and the possible role for Heritage Action Zones (or a derivative of them) here was suggested.

11. Funding

The difficulty of funding synthesis was discussed. Models from North America, and funding initiatives in England such as the Aggregates Levy, were considered. The importance of Historic England funding to pump prime and to develop projects that might then be suitable for other funding sources was stressed. Multiple funding partners may be necessary for larger projects.

Workshop notes

Morning session

Workshop session 1

Introductory thoughts – Chris Gosden, workshop facilitator

Archaeology is in trouble: we need to justify what we do and what is spent on archaeology. Synthesis can shift public perceptions, generate new narratives and justify funding. Two things about synthesis:

- Where the data come from/how they're stored. Data have character (from a particular region, created by different humans, and 'affordances' ie why the data show up in different areas). There is data 'housekeeping' to do.
- Pattern recognition: where is stuff? EngLaid identified 900,000 'things', and in this there is pattern eg the distinctive Roman Rural Settlement central belt pattern. This provides a framework for analysis.

Synthesis is not to be conflated with research. Research is about asking questions eg the nature of the MBA.

Data are relevant only to the questions we are asking. Synthesis is a step on the way to research. There is fragmentation in archaeology and a need for more collaboration across the sector – it's not just the academics who make sense of it all – in all aspects of archaeology but especially in making sense of what we have. We need new ways of working together: input from the HERs (who know their local patch well), HE (the only national body), the commercial world and universities etc is all needed for different expertise and insights.

Each workshop table was asked to tackle Question 1 plus one other

Table A Facilitator: Anwen Cooper

Q1 What questions are we asking of the data? How is this moderated in the planning process?

Q2 In current excavations, are we collecting the right data to enable the full range of these questions to be answered?

Environmental archaeology for example requires specific data; this is not easy but a good example was from the RRS.

There are no general standards for the sector.

We start with an inherited body of knowledge. Research frameworks are good but too general, but we can use them as a starting point. We start with research questions but always at different scales – lots of different questions for various reasons. There should be an acceptable baseline.

There are a series of drivers to address specialist questions and we therefore collect data in different ways.

There is collaboration in the east of England because of links between the universities, contactors and local authorities but this is not always possible because of resource pressures.

Narratives: we need to be able to find the data easily, it's not all about stories.

The information available online tends to be for the smaller sites.

What is the acceptable form of making data available?

RRS found the post-excavation assessment reports very useful.

Basic information should be available online. The data are as important as the interpretation made at the time. The data are being collected but not being recorded very well eg in HERs

For long-term projects synthesis needs to have a cut-off point and 5-10 years for dissemination.

In Ireland (island of) there is a licensing system to ensure publication.

How is it moderated in the planning process? Patchily. Can part of the project specification include research?

Should we be seeking to empower county archaeologists to be involved more in directing research?

Things move at different speeds in different parts of the country. Where there is a lot going on the research questions need to be reviewed more frequently. Should HE have a wider role?

RRFs are now moving to wiki to become scaleable and dynamic.

Database standards are important to enable comparison of datasets.

We need to know how datasets are being used – and how archives are being used – can ADS look at this? Do certain types of data have more use than others? Eg RRS project has high level of long usage.

In Scotland national research frameworks are now being developed regionally to feed into development management and to make use of expertise in units and amongst academics.

Table B Facilitator: David Knight

Q1 What questions are we asking of the data? How is this moderated in the planning process?

Q3 How are we assembling the data to ensure that we are comparing like with like? How are we organising the primary data to allow the greatest access for those wishing to synthesise it?

How to interrogate HERs is a common problem. London has an online HER digital platform – but funding it is problematical.

What questions are we asking of the data?

RRFs exist in hard copy in the E Midlands and a wiki version is coming. The east of England and the NW are also in preparation. Requesting units and consultants to input information into the wiki versions once sites are completed and the results are known, ie how the work has addressed RRFs agenda topics and objectives, would be useful. RRFs are not fully used in grey literature reports.

RRFs are a tool but not an end in themselves. Some areas eg Kent/SE England don't have RRFs.

National specifications are needed for consistency.

Curatorial input is required. There is a lack of curatorial input in some areas ie briefs are not generated from curators but by consultants and contractors and so the research objectives may be weak. Need to set objectives in development management.

Contractors are rarely able to undertake synthesis beyond the regional/local level and developers would not pay for national synthesis. NB Not all developers are equal – some may start a project and default on the funding.

In the east Midlands research questions are often posed at the end of the project since the synthesis can't always be done.

Keeping questions in RRFs dynamic is the key.

National frameworks of material culture or thematic/period frameworks are also important and should be used.

Reporting must refer back to the RRF objectives and questions at the end of the project and discuss their relevance.

Something simple could be done with the Oasis form – drop down menus to see whether each of the areas proposed for investigation were looked at and the objectives met. Herald may be addressing this issue.

What questions are we asking of the data? 'What's here', 'what depth', 'what is it?' (ie characterisation). These questions are inconsistently asked and answered around the country.

HE excavations index: the character of investigations is different eg trenching v test pitting v survey v excavation in different parts of the country. The data are different around the country as a result ie pressure of local circumstances.

Q3

Digital type series, eg Worcestershire, are good. The London one needs revamping since it's been dormant since the 1980s. There aren't enough resources to maintain them. The issues are the creation of the type series, maintaining them, funding them. The terminology varies a lot around the country – need to improve the consistency. FISH terms are useful – but do people use them? There are regional disparities in the levels of information available.

Accessibility of HE funded projects: migration to HERs not always possible.

Digital data platforms with open access. Show subsets of information in database – what is useful in these data for display in museums etc, research projects (specify topics), discard strategy, imported v home produced ceramics.

Comparability of datasets is an issue.

Volume of context is important but so is character of context, as what may be found in a midden is quite different to what is found in an old land surface soil, or a pit fill.

Story maps v archive report? Frere: need to record what we destroy. Use digital databases consistently to put the raw data in and use grey literature and other reports to discuss and produce the narrative.

Use in London of no 1 Poultry as a model for the Roman period and other sites in London, and used at Bloomberg as the model for comparative work.

Centralised authority to create a series of terms used by everybody including researchers, PAS, detectorists, community groups, contractors, specialists. Everyone needs to buy into this.

Table C Facilitator: Carenza Lewis

Q1 What questions are we asking of the data? How is this moderated in the planning process?

Q4 How are we ensuring that the distinction between data and interpretation is clear for others using the information?

What is the value of this whole exercise? Its been attempted before. The issues are: resources, location of the expertise. There is a fundamental problem with the way that archaeology is done. We need to do more than think about data standards, and think about the questions behind the WSIs.

Division between the data collectors and the data analysers, which has been institutionalised in archaeology since the 1980s – this is a bad model.

What are the questions? ‘What’s there?’, ‘what can we find out?’, what’s new?, ‘what does it mean?’, ‘how does it relate to what is known?’

WSIs can constrain what is done, can be difficult to change direction, difficult to accommodate serendipity, iteration.

The planning process:

Developers want to know what is the public benefit, they get the ‘what’s there?’ question, but the ‘what does it mean?’ question is more difficult. ‘Why does it matter?’ is the question that developers want answered.

The ideal is the informed, research driven, developer-funded intervention that delivers new knowledge (concern about framing the debate as contractors as collectors, others as interpreters, but that’s not the case or the ideal). People on the ground need to do the interpretation.

Yes, we **are** recovering the right data

Developers are not interested in meaning and significance, their aim is the detoxification of the archaeology from the site. Nine out of ten developers are not interested in wider public benefit. The community may have a different agenda and therefore different questions eg ‘how important is it?’

Local planning advisers should be protecting archaeology but this role is compromised by the politics of development. Enforcement is an issue – there is presumption in favour of development.

Q4 We can’t and shouldn’t distinguish between data and interpretation. Empirical observation v ‘higher order’ interpretation; what are the definitions of ‘data’ and ‘interpretation’?

Table D Facilitator: Roger Thomas

Q1 What questions are we asking of the data? How is this moderated in the planning process?

Q5 How do we ensure synthesis informs subsequent investigations? What might this mean for backlogs?

Q1

Arguably we are asking two sets of questions: one about value and significance, one about process ie time, money. This can be characterised as being academic versus commercial questions.

We should be asking both sets of questions, and never the process questions without the value/significance questions.

When questioning the HER, there is often too much (uncategorised?) data.

And yet it is not possible to describe easily the issue of significance, because significance depends on the question.

We are still operating the ‘preservation by record’ principles, based on the strengths in PPPGs 15 and 16 and PPS5 (which are less strong in NPPF). There is so much archaeology going on, is this still valid?

We arguably have a moral obligation to record what we are destroying.

How is it moderated in the planning process?

By putting the onus (and too much pressure) on local authorities, who may have small teams and limited access to resources and experience in the material/period etc in question) to form the deciding judgement.

Decision making often has to be very rapid.

So, because we are human, we worry that we may miss something and tend to be cautious, and ask for more...

A problem is that we are so locked in, in the sector, to dealing with individual and separate planning decisions.

If developers do early assessment they have better chance of getting their scheme into the local plan.

Q5

Fragmentation of data is now the main problem.

The solution is at the local plan stage to require synthesis in order to inform and create better judgements

Arguably, you could introduce a national precept requiring overview and synthesis for large scale projects - but in turn ensure it applies to all projects.

It could be required that data is submitted in certain form/standard.

Arguably, more developer spend up front enables better targeted further work - nonetheless this is a big ask.

Need to capture also the expertise and understanding built sometimes over many years. This is not a quick fix - it needs ongoing input.

All of this spells much more spend, up front (which speaks to the fundamental purpose of archaeology in society)!!! Unless the value of archaeological work to society is recognised by all parties, then up front spend will be constrained and decisions more menial.

The challenge is to demonstrate and prove how synthesis up front (a) saves money (so do an update on a much expanded Hey and Lacey!) and (b) delivers more empowering educational output.

(One obstacle may be the hindrances to collaboration between commercial archaeology companies but this may be overcome through academic-commercial collaboration)

(It is a form of PX Assessment at earlier steps in the process (and potentially at every pivotal decision making step)).

Major infrastructure schemes are an issue - specifically because they are moderated outside the main planning framework.

What might this [synthesis] mean for backlogs?

More synthesis - up front, at each pivotal decision making step and as part of final disseminated output - should eventually mean avoiding backlogs.

Better synthesis, usefully made accessible, should open up the archives for all sorts of wonderful future new knowledge projects, funded by BitCoin...

Plenary session 1 – report back from workshop session 1

Table A Q 1 + Q2

Many questions are asked of archaeological data, and the data can't answer all of them.

The development management/curatorial role is very important, should it be bolstered? Curatorial capacity is quite patchy, in some areas it works well, in others it doesn't. Its important to make sure the right questions are being asked.

RRFs – do they help? There are different tempos in different regions eg things are changing rapidly in the east and therefore RRFs need to be updated often, less so for example in the northwest.

The role of academics: it works well informally, involvement happens according to established relationships with individuals. People consult when they need to.

Are we collecting the right data? We can't ever ask all of the possible questions. In some cases the right data aren't being collected – we need better standards. Often significance is not recognised at the discovery stage, and then it's problematic to analyse and reported on fully later – it will be useful to collect the data in a more systematic way, so they could be more comparable.

RRS: recommendations for baseline data standards. In some cases the right data are being collected but they are very difficult to access.

Table B Q1 + Q3

RRFs: east Midlands are trying to create questions that can be monitored against. The research questions need to be adhered to throughout the project.

Consistency and standardisation of terminology needed.

We are often not comparing like with like eg different terms (eg in ceramics) for the same material, different recording methods.

HERs: issues of data standards, accessibility and resources

Table C Q1 + Q4

'What's there?' is the basic question, 'What's new?', 'what does it mean?'

WSIs can constrain and it can be difficult to accommodate change.

Developers aren't interested in meaning, just what's there. Nine out of ten developers aren't interested in archaeology, just in clearing the site.

The community may also have different interests.

LPAs: changes in the planning system – no enforcement.

You can't distinguish between data and interpretation, questions of truth and knowledge etc

Table D Q1 + Q5

The planning process: questions of value and significance (for archaeologists), cost and time (for developers).

HERs: much of the knowledge may be in the staff rather than the system.

Are we still in preservation by record mode? Data v synthesis = preservation by record mode. Some information will not be relevant to us now but may be in the future.

Lots of archaeological work is taking place in certain areas and not in others.

Should there be a levy? In certain areas maybe do less archaeology in future and more synthesis.

Less on site, more resources in preparation and in post-site interpretation.

Summary at end of morning session: Chris Gosden

There are philosophical and political questions.

On data: there should be a basic level of recording and consistency of terms and recorded variables.

Politics: archaeologists are interested in value, developers in time and money.

What is public benefit? Eg we may want to dig less, but the community might disagree.

Process issues: WSIs, setting up a project, recording ie a mechanical process, but a lot of people are doing it thoughtfully, and its rare to see things done poorly or mechanistically.

A lot of recording is repetitive and the information may not be used.

HE could help to record the personal knowledge of curators and contractors in an area.

There are very different speeds and scope of development in different areas, and therefore RRFs can be updated at different paces.

Afternoon session

After lunch discussion

Discussion of curatorial input: hands off/hands on. The different approaches and levels of input can be confusing for developers; there is a lack of consistency. In Cambridgeshire there is quite an iterative approach which can be helpful to developers. It's all dependent on the capacity in curatorial services.

It was suggested that contactors were being pushed towards more self-regulation as a consequence of diminishing LA capacity, but there was no enthusiasm for this and it was not thought to be workable. We need better standards.

In summary, two issues in the above: local authority capacity, and standards. Surely we the sector can fix the standards issue ourselves?

The LA issue is more difficult since the problem is driven by bigger issues and politics, but surely we need to start working on different possible models? Regional hubs?

There was some support for the regional model to be explored.

In the following sessions we need to think about change: to think about synthesis of archaeological investigations to create new narratives. How can we make a system where creators and users can access and develop a platform and storage to share all that material?

Workshop session 2**Table A**

Q6 Who should pay for synthesis? Is there room for an escrow model, where a percentage of the funding for every dig goes into a common fund? Should it be left to chance and circumstance, or does it need a formal programme?

Q10 How would we know things have changed for the better?

N American parallels eg philanthropic funding of synthesis, creative mitigation (offsetting), ploughing money back into the industry

Aggregates Levy Fund – this worked well and produced synthesis such as Thames through Time. Is this a good model?

Money for synthesis needs to be ring-fenced. Problem of current political climate, and probably couldn't justify additional costs.

Issues of scale – developers might not pay for wider synthesis. For wider synthesis funds can be sought from grant giving bodies eg Leverhulme.

The updating of syntheses might not be as exciting as the original synthesis, and would the original funders pay for this?

The origin of the RRS project was two pilot projects funded by HE which helped to build the case to get the wider funding. So for the broader synthesis there is a role for HE in pump priming.

The question of public benefit – making it relevant, contributing to development. Synthesis needs to be practical and useful. *Dynamic Coast: Scotland's coastal change assessment* – a good example of archaeology relevant to government agenda

Do more thoughtful big picture things.

Synthesis is actually happening all the time.

Could PhD projects be used more for this?

Do we need a national agency to say where we need the synthesis? Some one needs to do the pilot work to enable the funding case to be built.

More synthesis, more predictive modelling.

Developer tax? Like France, where the money goes to a central department? Probably not.

All funding models are vulnerable. It's difficult to have a formal model. Could HE do more big picture stuff? We are competing against other topics for funding. HE funding model v ACE model.

How will we know if things have changed for the better?

- New stories, recording changed and improved...you can find the data eg C14 dates
- Better engagement between academics, HERs and Museums
- More integration of our processes and museum archives
- The information you are interested in as a researcher is in the HER

Table B

Q7 Are there different candidates for funding and undertaking synthesis at different scales?

Q10 How would we know when things have changed for the better?

'Scale' ranges from international to parish. 'Candidates' = types of projects as well as researchers.

Level of synthesis driven by scale of the project eg Historic Landscape Characterisation vs St John's Clerkenwell project

Projects:

- PCRG: British prehistoric pottery types v European
- Landscape areas eg Forest of Dean: funders could be AHRC, Leverhulme, HLF, ERC
- Crane Valley Park in London: Wildlife Trust and archaeology partnership
- Legacy projects eg A14 – will see refinement of synthesis and also display/public benefit
- Battersea Channel project in London – regeneration and geoarchaeology: curator has required single deposit model so that a collaborative approach amongst contractors will occur, paid for by different developers

- Oxford Temple project: university + community
- Demonstrate relevance of projects, especially environmental, linking to climate change, social conditions, health and population studies
- LEP funding (business and local government): have to demonstrate community engagement and benefit and direct link with development landscape
- Academic: University of Nottingham collaboration between University, City, County, HE and developers in community project
- HS2 HERDS: 'must engage with community' mandate. Steering group of mentors approach
- RRS collaboration between Cotswold and Reading University

Organisations:

- Vagaries of different funding bodies. Impact needs to be demonstrated to make projects attractive to fund. National research projects (EngLaid and RRS) work in this way.
- Circulation of research staff into the field. A rotation of staff between commercial and academic spheres to enrich and advance research objectives and opportunities
- Train new specialists to fill areas of under-capacity
- Philanthropy eg Bloomberg, Hewlett Packard
- HE
- Government agencies eg Highways England
- National Trust
- National Parks: designed around outreach eg New Forest crowd sourced survey work, mapping the park using the public and new technology
- HLF funded community work: CITIZAN mapping the coastal zone
- Science foundations eg for forensics, genetics eg Wellcome Institute
- Developers especially consortia. Synthesis of groups of sites, funded by developers should be possible, and could be written into WSIs. It's easier on large projects since they are already synthesis projects. On a multi contractor site in London there was developer funding for synthesis. It's easier on groups of big sites that are all developed over a short period of time.
- AHRC, Leverhulme, ERC, HLF
- Academics but must demonstrate relevance including to wider agendas such as climate change, soil, health and wellbeing. There is limited capacity in British Universities to do research in the UK. Collaboration is very important: universities + contractors, universities + communities

Table C

Q8. What new technological approaches might assist synthesis

Q10 How would we know when things have changed for the better?

PDFs as a main archive form are problematical and unhelpful at present. Archiving interpretative reports as PDFs is not helpful, needs to be tabulated data. Natural language processing will improve the accessibility of PDFs but not resolve 100%. 60-80% confidence in some examples of data mining of PDFs.

What's needed is database-type standardisation of information but this raises the question of what standards?

Technology can assist:

- By structuring material to make it accessible
- Facilitating assimilation of new material
- Facilitating creation of synthesis and narratives

Visualisation technology will provide starting points for new enquiry and identifying gaps. Will help to justify synthesis because will be popular and stimulate virtuous circle of demand and supply.

AI – could computers ever write archaeological reports? Yes – but it might not make great reading. They could add/generate infographics.

RRS and Englaidd undertook very time-consuming data mining – technology can speed this up.

3D scanning and printing: remote reproduction supported by multi-variate analysis, also enhanced availability to researchers.

Public benefit – how to take synthesis forward for the public – what new technologies are available for this?

Crowd sourcing as possible route for public synthesis, and this can become a stimulus to developing new understanding and new technologies.

Increasing computing power and capacity for using the public's computer down time.

Landscape characterisation – technology can help understand what we've got and what to do with it.

How will we know if things have changed for the better?

We wouldn't have to keep meeting like this.

Students and members of the public using the data and archives more.

Better understanding of who's using data and archives and for what purpose, and how usable they are finding them to be.

Role for amenity and period societies in undertaking and disseminating synthesis.

Table D

Q9 How can standards and guidance help?

Q10 How would we know when things have changed for the better?

Synthesis at DBA and evaluation stages is most important.

How important is the synthesis issue relative to all the other issues that these workshops have addressed - and future ones might address?

If we could fix one thing what would it be? I would fix the perception of archaeology by the developer and public. I'd do that by working backwards from public benefit, and thus identify where the greatest value to society lies in archaeology (and influence therefore what we should do differently). Is it wellbeing? Sense of place and identity? Higher education learning? Social engagement? Tourism and employment? Force multiplier for development and regeneration?

In the current regime (as part of the planning process) regulation needs to be stronger. (Self regulation not a good idea; there is much anecdotal evidence that standards are not always complied with).

So Standards and Guidance provide [national] unifying principles...on which a [national? UK wide?] standardised approach is based (and as set out in guidance)... which regulation enforces. Standards provide a reinforcement for eg Planning Officers in defending a judgement or decision: standards set

out why archaeology is important. Culture and ethos are important as well as well as formal standards.

Grey literature is not fit for purpose, and the relationship between grey literature and publication is not always clear.

We proposed an essential fix: There should be a standard requirement to provide data eg standard grid reference, issued by curators. The HER is now often more accessible. Vital to link up HER and archives (QED regional hubs /aka regional research centres).

Action: go back to the proposals and actions on regional centres, in Southport.

Question of procurement in archaeology by design competition rather than competitive tender as currently framed. Would be wonderful. An ideal. But how to ensure intelligent procurement?

Other actions:

Action: liaise with other sectors (MOD? Utilities? Natural environment?) to see if there are data standards and methods of cross referencing and signposting, that archaeology could adopt.

Action: reference Alice's work to ensure that grey literature and catalogued archive material are interpreted, cross-referenced (One cannot rely on journal articles).

How will we know if things have changed for the better?

...when the only workshop we are invited to is about the update to the standard!

Action suggestion:

Take 10 evaluation projects in 10 HAZs which include synthesis pre-determination, and prove whether better evaluation produces better results, and better knowledge creation. (Build into the CIFA evidence base of case studies). By collaborative consortium (university + commercial)

Action suggestion:

Prepare a regional synthesis per HAZ

Report back pm

Table A

There is a mosaic of funding sources, and all are vulnerable, so we need to be flexible and adaptable. There's room for an Escrow model, the Aggregates Levy was very useful in bringing things to publication.

Developers – can they pay? Yes, on a small scale. It would be very difficult to have a national tax.

We need to present ourselves better and make our outputs more relevant to wider issues eg climate change, social issues.

HE has a very important pump-priming role

Change?

If the synthesis story (eg of the Roman period) is different in 10 years time.

If research work fed back in to HERs.

Better feedback to the public, including up to date information and displays in museums.

More collaborative research.

Table B

There are different scales of synthesis, from the local to the international.

Organisations funding synthesis include developers (for big sites synthesis is easy), LEPs, academic sources, Leverhulme, Europe (!), HLF, universities are more interested because of public engagement requirements, Historic England. Collaboration is needed.

Change?

Wider participation in the next round of RRFs.

Increased availability of online resources.

Table C

PDFs as archives are problematical except for tables. Natural language processes may help.

Technology can help structure data.

Visualisation approach to identify gaps.

AI: Computers could write archaeological reports, eg to generate infographics, but they probably wouldn't be very good at it.

3D printing will be useful.

Crowd sourcing work to synthesise.

Change?

A larger number of people using datasets and archives, and an understanding of what purposes they are using the data for.

Table D

Not much support for self-regulation.

The standards we have have not always been adhered to.

We need standard requirements for basic data like accurate grid references.

Regional hubs should be explored.

Procurement by design competition.

Sort out the relationship between grey literature and publication.

Change?

When we have another workshop in 5 years and we discuss different issues.

General points

Who does the synthesis? It shouldn't just be academics, but it's difficult for others to have the resources to write.

We need more predictive modelling and testing of the models created.

Amenity societies that publish – they need to be a part of the discussion.

After tea**Plenary session**

Discussion of major development areas and synthesis: can these not be tackled via the strategic planning system? Synthesis + strategy into Local Plan, WSI framework to include synthesis at end. Can HAZs be the vehicle?

Each table was asked to identify two priorities for action, together with the relevant organisations to implement, and the timescale:

What	who	timescale
Table A		
Pump-prime other period syntheses	HE	5yrs
Case studies of development-led synthesis	CIfA	1yr
Table B		
RRFs built into Oasis	ADS	3yrs
Encourage/enforce digital dataset archiving	CIfA + ALGAO, HE, FAME	3yrs
Table C		
Standards/guidance/training to produce consistent report structures	CIfA	1yr
Improve Oasis and clear backlog of unvalidated reports – ie those not validated after 3 mths	ALGAO/ADS	3yr
Standards and Guidance for fieldwork and reporting - revision	CIfA	2yrs
Table D		
Improve grey literature standards (location, finds, illustrations)	CIfA, HE, ALGAO	1.5 yrs
Database of contracts (to replace AIP)	FAME	3yrs
All		
Pathways to funding: an information resource on funding opportunities	HE, UAUK?	3yrs
Pilot projects in Heritage Action Zones	HE	?
Application of proof of concept in synthesis	Universities, HE (IRO), PhD?	1yr

Other ideas: Table B:

Write up key backlog sites through competitively tendered projects – HE

Improve grey literature reports

Conclusions - Chris Gosden

Reference was made to the very different situation in north America. Can we do less excavation and get developers to pay for more synthesis?

Summary

1. Process of **doing** archaeology: we need better processes, we need to use data better
2. Narrative and understanding to tell stories. Get together with the public and involve them in the process. This is politically important.
3. 'We've created an amazing record of the history of this country...'