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# Costing Models for the Transfer of Archaeological Archives

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# Summary

This document has been produced as the final report for the Historic England (HE) funded project, ‘9108 Costing Models for the Transfer of Archaeological Archives’. The principle aim of the project is to inform the development of a charging system for the deposition of archaeological archives that is fair, proportionate, and easily understood, and calculated. The purpose of the document is to outline the results of the study, providing background information, cost model options and consultation results, and to outline the recommendations of the project team.

## Contributors

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# Executive Summary

This document has been produced as the final report for the Historic England (HE) funded project, '*9108 Costing Models for the Transfer of Archaeological Archives'*. The principle aim of the project is to inform the development of a charging system for the deposition of archaeological archives that is fair, proportionate and easily understood, and calculated. This work will contribute to the strategic response to the specific recommendations in the Mendoza Review of Museums that addressed this issue (2017). It follows previous work delivered by the same team, the HE and Arts Council England *Options for Sustainable Archaeological Archives* project, which recommended the creation of a National Collection of Archaeological Archives underpinned by a robust and sustainable costing model (see Carroll et al 2021).

The success of development-led archaeology since the early 1990s led to a major increase in the quantity of archaeological material in museum stores across the country and many museums are becoming unable to accept new finds. The 21st Century Challenges in Archaeology project reported that new repositories were needed at a national or regional scale (Wills, 2018). The problem itself was further quantified in 2021 with additional sector research finding that 23% of archive material created through development was undepositable at that time (Carroll et al 2021, 13). The national solution proposed within the same project emphasised the need to maximise public benefit from development, providing capacity, enhancing existing provision and supporting a significant shift in how archives are perceived, accessed and used. An important factor in any solution to the current archives crisis is the development of a sustainable funding source to cover the cost of archaeological archives, which supports the ongoing management, conservation and access to existing and future collections.

The current project has reviewed options for a sustainable cost model. In doing so, project results include new data about the current cost of archives deposition, and provides new cross-sector consultation around cost model options for the transfer of archaeological archives. Cost analysis investigated details of over 250 projects provided by contracting archaeological organisations from across England. This revealed wide variation in the implementation of current deposition costs across the country, as well as significant disproportionality depending on the size and type of projects. A review of national, regional and collection-based cost models currently used confirmed that, where a charge structure is in place, a box charge is predominantly used. All case study responders emphasised that the model did not cover the full cost of archiving, collections care or provision of access. Options designed to sustainably support a national approach therefore needed to consider different models as well as variations in implementation.

 

A key aim of the project was to collect sector feedback to understand issues around implementation of different approaches to cost models. To facilitate this discussion, five cost models were developed which formed the basis of consultation with key audiences. This comprised a series of rapid SWOT assessment workshops delivered with archaeological project managers, consultants, planning archaeologists and HER officers, and museum professionals. The consultation exercise provided valuable feedback from different actors within the archaeological project process, providing insight into how practitioners respond to the models set out. Importantly, the project team were able to draw key themes from the consultation which have been consolidated into four central tenets able to guide the development of a sustainable approach to archaeological archives.

These are that a sustainable cost model should guarantee public benefit through the long-term preservation, management and access to archaeological archives, and;

- Must reflect the overall impact of development on archaeological work, and enhance the public benefit of cultural heritage through curation, dissemination and access of archaeological archives.
- Will be based on a proportional fee which is identified, ring-fenced and secured during project delivery.
- Will make sufficient contribution to generate a sustainable model for curation and access, including the skills needed to facilitate this.
- Will support the existing public repository network and potential increases in capacity and access to archaeological archives in England.

In addition to defining an approach to developing cost models, the project team also provides recommendations for future work around the development of a national and sustainable approach to archaeological archives. It is the view of this team, that standardised fees across all development projects should be the ambition of any new cost model. This approach cements the link between the impact of development on archaeology, and the vital role and contribution of the proposed national collection and the existing museums network, irrespective of the nature of the volume of archive created. Comprehensive consultation with the museums sector is needed as soon as more information around proposals is available, recognising the difficulty for museum professionals to meaningfully engage with and consider fully the impact of the proposals without key details of options available. Finally, discussions should extend to all potential users of the proposed national collection, including funders, depositors and audiences, as well as exploration of interfaces with relevant projects and initiatives.

# 1 Cost Model Options – project and approach

## 1.1. Project background

1.1.1. The success of development-led archaeology since the early 1990s has led to a major increase in the quantity of archaeological material in museum stores across the country and many museums are becoming unable to accept new finds. This project is the latest in a series of research and consolidation projects looking at the issue of archaeological archives and commencing with the Society of Museum Archaeologists *Archaeological Archives and Museums 2012* project (Edwards 2013). The *21st Century Challenges in Archaeology* project reported sector wide consensus that new repositories for archaeological archives were needed at a national or regional scale (Wills 2018, 10) and identified a series of tasks and outcomes that needed to be addressed to 'solve the archives problem.' The following initiatives have since addressed various aspects of the archaeological archiving challenge:

- CIfA Selection Toolkit (Chartered Institute for Archaeologists 2019)
- Guide to managing digital archives by Dig Ventures (DigVentures 2019 - current)
- Survey of Fees for the Transfer of Archaeological Archives in England (Vincent 2019)
- CIfA Toolkit for Specialist Reporting (Chartered Institute for Archaeologists 2020)
- SMA Standards and Guidance in the Care of Archaeology Collections (Boyle and Rawden 2020)
- CIfA project to develop an agreed definition for 'Negative Site Archives' (Paul 2021)
- Arts Council England / Historic England project looking into Options for Sustainable Archaeological Archives (Carroll et al 2021)

1.1.2. Most recently, the *Options for Sustainable Archaeological Archives* (OSAA 2020) project (commissioned by Historic England and Arts Council England) aimed to understand how the museum and wider archaeological sector can be best supported to ensure a sustainable model for providing future capacity for archaeological archives (Carroll et al, 2021). The report recommended the creation of a national collection of archaeological archives underpinned by a robust and sustainable costing model. The delivery of the current project (HE 9108) provides an options appraisal of costing models for the transfer of archaeological archives.

## 1.2. Beyond capacity – previous recommendations

1.2.1. Research delivered as part of the OSAA 2020 project suggested that, to create the desired sustainable future for archaeological archives, an ambitious and robust response must look beyond capacity and encompass both accessibility and benefit. Significantly, the results of the project concluded that focusing the issue around storage and undepositable archive material would not create a sustainable and long term solution. Within a few years, any facility designed to relieve one challenge will be overwhelmed, estimating that challenges across the museum sector may mean that the storage intended to be available for 30 years, will be at capacity within five years (Carroll et al 2021, Section 4.1). The project recommendations were framed around the ambition of the Future for Archaeological Archives Programme (FAAP) to create a sustainable future for archaeological archives, looking beyond capacity and encompassing the wider question of accessibility and benefit. The concept of the national collection was therefore defined as:

> *A national, sustainable archaeological archive which guarantees public benefit through being discoverable and accessible, facilitating new stories of our shared past through the continuing use and reuse of resources created by archaeological processes, equally accessible to researchers, educators, curators and the public and providing a seamless interface between data, archive materials, organisations and communities.*

1.2.2. Of key relevance to the current project, the OSAA project estimated a capital build for a national collection at between £48m and £65m, with a need to establish a sustainable funding source able to raise between £1.8m and £5.2m per annum. The model by which a fair and sustainable revenue stream could be achieved is the subject of the current project. Previous work examining the charging regimes in use for deposition in archaeological archives (Vincent 2019), concluded that significant differences were seen across the country in the way that collecting organisations set charges and use income derived from charging. In addition, and from the perspective of sustainability, the author found that no collecting organisation covered all storage costs for archaeological archives through charging deposition fees and that there was a general lack of understanding and consensus about what elements of archaeological archive care fees are aiming to cover (*ibid)*. The current project builds on this work to better understand the issues around the existing charging regimes for archives transfer, from perspectives of both archive creators and repositories.

1.2.3. To support development of example options of potential cost models able to support a sustainable approach to archaeological archives, this project has examined key questions around charging structures currently used for archaeological archives and the current cost of archive deposition to contracting organisations for deposition of archaeological archives (Sections 3 and 4). The creation and profiling of five cost models options (Section 5) has been used to explore implementation of each, working

with those in planning and contracting roles, as well as other sector audiences, to undertake a SWOT analysis of different cost models (Section 6).

## 1.3. Development led archaeology in England

1.3.1. Prior to outlining the current project aims, a summary of how development led archaeology is structured in England provides some context for the research, consultation, results and recommendations from this investigation. Importantly, an understanding of the existing planning framework and size of the sector provides a background to cost model optioneering and SWOT analysis (Sector 6).

1.3.2. Most archaeological work undertaken across the UK happens within the planning system and how archaeology is delivered within development led projects is driven by national planning legislation, which differs within each of the UKs four nations: England, Scotland, Wales and Northern Ireland. Each of the four countries have a planning system that is 'plan-led', with national and local planning policy providing a framework which underpins the balance between development and protection in the public interest (see Winter 2016). In terms of sector size, an estimated 72% of UK archaeologists are employed within the UK commercial archaeology sector (n=4,800), which was valued at £268 million in 2022 (State of the Archaeology Market 2022; Aitchison 2023). The overwhelming source of funding during the same period was realised through private sector clients (93%), with most of the work delivered within transport (39%), residential development (32%) and commercial markets 11%) (ibid, Table 19). During 2022, the overwhelming majority of development led work is estimated to have been delivered within England (with an indicative value of commercially led work delivered at £234 million (*ibid*).

1.3.3. The existing policy and planning framework, England's National Planning Policy Framework, provides the ecosystem within which public benefit can be derived from development led archaeological projects. The position of archives within this ecosystem is undervalued and often buried as a technical requirement to be delivered when a project is completed – this has led to chronic underfunding and under resourcing of archaeological archives, and a misunderstanding of the value of material created during an archaeological project. The ambition of creating a national collection, in terms of the recommendation from the OSAA report outlined above (Section 1.2) is to embed a sustainable process for archives which not only creates space for the collected archaeological material, but facilitates access to it and promotes use through both the existing museum network and a centralised store.

1.3.4. Such a concept may seem ambitious and could be perceived as hard to enact without a firmer platform embedded within legislative frameworks. However, successful advocacy from the sector to include HERs in the Levelling-up and Regeneration Bill is encouraging – as is language included within a new policy position for energy infrastructure which states that 'the applicant is encouraged… to prepare proposals

which can make a positive contribution to the historic environment' and includes 'the development of archive capacity which could deliver significant public benefits' (DESNZ, Draft National Policy Statements for energy infrastructure, November 2023, para 5.9.13).

# 2. Project aims and method

## 2.1. Aims and objectives

2.1.1. The principal aim of the project has been to inform the development of a charging system for the deposition of archaeological archives that is fair, proportionate, easily understood, and calculated. The outcomes of the project include collation of information about the differing charging regimes used in England; investigation of options for methodologies which could be employed, case studies testing the feasibility of those regimes based on real-world examples and sector consultation feedback on each model.

2.1.2. The principal objectives, as outlined in the Project Brief (HE 2022) were to:

- Collect information on charging policies that are not based on a cost per stored unit (e.g. a bulk find box) and set that alongside the existing survey report into deposition fees to provide an overview of potential charging mechanisms.
- Test the feasibility of different methods through the creation of artificial ‘case studies’ based on existing projects for which a charge has already been calculated and paid, based on a charge per stored unit.
- Consult with a variety of practitioners across the sector to gain feedback on the range of different charging models identified during data collection.
- Produce a communication plan in consultation with HE.
- Produce a report that summarises the results of both the research and the consultation and makes recommendations for developing a national charging policy.

## 2.2. Method

2.2.1. To achieve these objectives, the project was delivered across five key workstreams (see Project Design, Paul and Forster 2022), comprising;

- Communication and engagement strategy
- Collecting information on alterative charging structures
- Feasibility Case studies
- Sector consultation
- Report and recommendations

2.2.2. The project was delivered over 13 months from November 2022 to December 2023. A separate Communications plan was submitted to the Project Steering group in November 2022 (Forster and Paul 2022) and highlight reports have been submitted

throughout. This report summarises the results of the data collection (Workstream B), feasibility case studies (Workstream C), sector consultation (Workstream D) and provides recommendations for developing a national charging policy for the transfer of archaeological archives (Workstream E).

# 3. Existing charging structures

3.1.1. In order to inform the development of a charging system for archaeological archives that is fair, proportionate and easily understood, the project team sought information from existing archive repositories to include as Case Studies. As a launching point for data collection, a questionnaire was sent to selected institutions agreed with the Project Steering Group, to allow comparison of current cost models utilised across the UK and Europe (see Appendix 1).

3.1.2. The aim of the questionnaire was to better understand how repositories and stores cover the costs of archaeological archives, and plan for future costs. The questions were intended to be answered quickly by the responder, but space was provided for additional information as necessary. The initial data captured by the team was expanded and clarified through follow up interviews where appropriate.

## 3.2. County level charging structures

3.2.1. Archaeological archive storage and management at a county level exists for Northamptonshire, Cambridgeshire and Suffolk.

### Northamptonshire

3.2.2. The Northamptonshire Archaeological Resource Centre (the ARC) is run and partially funded by North Northamptonshire Council (NNC), but also collects for West Northamptonshire Council (WNC). An Inter Authority Agreement between the two councils outlines the terms of service, stipulating that WNC provide a 53% (£76K) contribution towards the running costs of the ARC per-year. The percentage split was based on number of people living in WNC (53%) to NNC (47%) at the time of unitary, however this may change in the future as a result of the large housing developments currently taking pace within North Northamptonshire.

3.2.3. Historically North Northamptonshire has more archaeological sites and therefore theoretically more boxes of archives and West Northamptonshire did raise splitting of the costs in this manner. While the data is not there to support this model yet, West Northamptonshire may want to move to that model in the future.

3.2.4. The ARC currently charges for deposition at £120 per box + VAT, while archives created between 2014 and 2020 are charged at £20 per box, and archives generated pre 2014 carry no deposition charge. The £20 per box for 2014-2020 archives was based upon HE’s box grant scheme which units were asked to use as a guide on the funding they should put aside for future archive deposition prior to the ARC opening. Before this date, there was no requirement for units to put money aside in briefs from the planning archaeologists. Any money raised through deposition fees is earmarked to be spent on resourcing (e.g., box purchasing) to deal with the substantial collection care issues that the archive has inherited.

3.2.5. The ARC is on the site of the Chester House Estate, a heritage attraction with substantial commercial revenue streams (Wedding, conferencing, café etc) that is run for NNC. The site is designed to break even with any profits being spent on heritage related areas including the ARC. Goals are set for the commercial team who have to reach a set threshold every year to cover all costs. The café covers around 50-60% of all the income generated by the estate. However, it is free to come and walk around all the grounds and look in the shops so local people don't have to spend money to enjoy Chester House and engage with heritage, including the ARC. It is anticipated that The Chester House estate will be cost neutral in 3 years (original proposal was 5 years), therefore it is seen as a massive success and other parts of NN and WN (as well as other councils such as Peterborough City Council) are looking at the model to see if it can be replicated.

3.2.6. The ARC is defined as publicly accessible and therefore cannot charge for researcher or community access. They do charge for school visits, or for exceptional requests, for example, if a university researcher requests access to 200 boxes of animal bone, the ARC would charge to get the archive ready to access.

3.2.7. It is estimated that are about 1500-2000 boxes to be deposited at the ARC from community-led excavations, however there is currently no money available to support their deposition. Community groups are prolific in Northamptonshire and the cost of storing the resultant archives has so far not been tackled.

3.2.8. The ARC is considering offering an archiving service; small units may want to simply send everything to the ARC and pay a small fee (plus the box deposition fee) for the staff at the ARC to prepare it. To further support funding, the organisation also activity pursues grant applications. For example, the ARC staff are utilizing a local funding source (communities benefit capitol) to build a stone store on site and add more shelving at the ARC which has the public benefit of increasing storage.

## Cambridgeshire

3.2.9. Cambridgeshire Historic Environment Team manage their archaeological archive through a combination of remote storage at DeepStore (a commercial storage facility within the salt mines in Cheshire) and a converted bunker beneath the former County Council offices in Cambridge. The decision to manage archaeological archives in this manner was based solely on the business case established by the Historic Environment Team (CHET). The tendering process (for storage provision) was weighted towards quality of care, though the financial cost of the re-archiving project and subsequent long-term care was also a consideration. DeepStore provided the most economically advantageous solution to the local authority and delivered the storage and access standards required by CHET. DeepStore however was only suitable for the storage of stable (bulk) finds and documentary archives, the unstable or fragile finds are housed at the council's converted bunker beneath the former County Council offices in Cambridge.

3.2.10. The on-going storage costs are largely covered by the box deposition fee of £100 per box which is applicable to archives stored at both DeepStore and the council offices. CHET also utilises a tiered box deposition cost based on the fieldwork commencement date:

| Tiers | Charge per box | Minimum charge per archive |
|---|---|---|
| Projects where fieldwork commenced before 1st January 2014 | By negotiation with CHET | |
| Projects where fieldwork commenced before 1st January 2014 and 31st March 2019 | £75 | £50 |
| Projects where fieldwork commenced before 1st April 2019 and 31st March 2020 | £80 | £50 |
| Projects where fieldwork commenced after 1st April 2020 | £100 | £50 |

3.2.11. The box charge has two elements: a handling/admin charge to accession the archive of £30, and a 'deposit' charge of £70 to pay for storage based on an estimate of the handling/admin involved in depositing an archive, and an assumption of 25-30 years storage based on the DeepStore storage contract. For very small archives (less than one box), a £50 charge per archive exists to cover their long-term storage. The box deposition charge covers around 75% of the overall CHET costs, specifically it does not cover the staffing costs of running the archives function as this it's included on the wider HER management.

3.2.12. CHET also offer an archive preparation service for the local amateur groups and small contracting units. These costs are covered by CCC for the local groups and the contracting unit if the archives came from a planning-led intervention.

## Suffolk

3.2.13. Suffolk County Council Archaeology Service (SCCAS) has been collecting archaeological archives for the whole county of Suffolk since 1974 and is the only archive repository currently collecting archaeological archives in Suffolk. SCCAS have charged for archive deposition since 2010 and the fee has been increased periodically every few years. A new deposition structure (invoicing for deposition at Assessment Stage) was introduced on 1st of April 2022 along with a tiered box charge system. The changes were implemented with the full support of the planning archaeologist. The finds and paper elements of backlog archives will be charged at the box fee accurate at the time of excavation:

| Tier | Cost per box |
|---|---|
| Before 1st January 2010 | by negotiation |
| 1st January 2010 – 31st December 2014 | £30 |
| 1st January 2015– 31st December 2017 | £40 |
| 1st January 2018 – 31st March 2022 | £50 |
| After 1st April 2022 | £80 |
| Additional boxes outside of 5% buffer | £100 |

3.2.14. Charges are designed to cover the administration costs associated with deposition, as well as a contribution towards the long-term storage of the archive in SCCAS stores.

3.2.15. The new charging structure (invoicing of deposition fees at Assessment Stage) was introduced following consultation with all commercial units who regularly work in Suffolk, several large developers and infrastructure projects, the district planning authorities and HE, in an attempt to tackle the issues around projects not depositing archives. The consultation concluded that it was generally felt that the archaeological companies liked having the option to pass the archiving cost on to the developers as a 'requirement of SCC'. It is a one-off charge and the developer can pay SCC directly rather than as part of the archaeological project cost. Contractors and developers are made aware this is separate to the post-excavation costs of preparing the archive.

3.2.16. The SCC deposition fees process is initiated through an online form requesting a deposition to the SCCAS archive team. The SCCAS team then liaise with the applicant and an invoice is sent out based on the box estimate provided in the online form. The development management archaeologists and planners do not sign off any archaeological conditions (which get signed off at Assessment Stage once there is proof of funding for analysis stages) until the archive charge has also been invoiced for by SCCAS. Recording systems are in place so this can be checked by all involved.

3.2.17. Although the Archaeology Service team cannot see if the invoice is outstanding, the SCC finance team would chase unpaid invoices and so far, all have been paid. Sometimes an invoice is paid directly by the developer, sometimes the archaeological company pays the fee and invoices the developer; that is for the company and developer to decide between them. So far from April 2022 onwards, 40 sites have been invoiced for (as of February 2023), all at the Assessment stage, totalling 305 boxes and £14,560. However, this is not a typical year as the SCCAS have been closed for depositions so have not collected income from backlog archives (pre-April 2022) that are payable at point of deposition. Separately, the SCCAS team negotiated the deposition fees for a large archive from a NSIP project with the developers up front (including an amount for digital deposition with ADS), this has been invoiced.

3.2.18. Project paperwork stipulates that the archive has to be deposited within 5 years. SCCAS has an archive deposition timetable and running spreadsheet of depositions and, if the proposed deposition date passes or they do not hear from the contractor, SCCAS would get in touch. However, SCCAS do not anticipate that units will not want to deposit; if the fee have already been paid, it is thought that they probably want to

get it out of their storage. There have been a couple of instances in the past where SCCAS have needed to undertake additional work on an archive such as conservation or re-packaging. They have offered to send the archive back or invoice for this work, but in general the contractor has paid rather than have it sent back to them.

## 3.3. Region level charging structures

3.3.1. There is only one example which is close to a regional solution involving archaeological archives currently employed within England: English Heritage operate four ‘hub’ stores and a number of smaller satellite stores. English Heritage are given a budget every year that covers non-discretionary costs such as salary and national insurance contributions, and discretionary costs which is split up and spread across the regional teams to cover project work. An operating budget (£180,000 last year) managed by the Head Collections Curator covers one off cost, for example a new forklift truck, plan chests, or paying for specialist advice to assist with disposals.

3.3.2. English Heritage do not charge for archive deposition nor commission a large volume of work. The EH stores only take in archives from their own sites, assessing storage requirements as new projects are commissioned. In this way they are proactive, rather than re-active and have much more control over archaeological archive storage.

3.3.3. It is not considered possible to separate the costs of storing and curation of archaeological archives from the rest of the collections management activities. While one large collections team works across all the English Heritage sites, the Head Collections Curator does not consider current staffing levels adequate for the size of the collection and reports that a huge backlog in digitisation of records exists. Additionally, English Heritage curator roles are geographical rather than period or material types, and staff do not keep time sheets as activities are responsive to the needs of the business. Therefore, it is difficult to desegregate the time and resources specifically needed for archaeological archives.

## 3.4. National level charging structures: UK and Ireland

3.4.1. Archaeological archives administered at a National Level in Ireland and the UK nations Scotland and Northern Ireland are currently not subject to an archive deposition charge, whilst Wales introduced a box deposition fee in April 2020. A discussion of the methodological approaches to the deposition and curation of archaeological archives in Ireland, Wales, Scotland and Northern Ireland can be found in the Options for Sustainable Archaeological Archives Report (Carroll et al, 2022). Digital archives are currently administered at a National level in England by the Archaeology Data Service through several funding streams and has been included as an additional case study in order to inform the potential cost model options (below).

## National Museum of Ireland

3.4.2. Under current Irish legislation, the National Museum of Ireland is obliged to take archaeological archives into its care and is not able to charge for deposition. The NMI is nearly entirely financed by the Irish government which each year allocates a budget to the national museums (the NMI staff are therefore public servants). Other income streams such as the onsite café and shop do provide a very small amount of revenue, but an insignificant amount in relation to the day-to-day museum running costs. The NMI is also issued with a discretionary pot of money to reward individuals for handing in objects (not for those excavated under licence). The reward is not obligatory and is more of a token gesture, thought to encourages people to report finds.

3.4.3. The care and storage of archaeological archives is not separated from the rest of the collections; no-one questions the need to collect them or how much it costs to store them; they are simply part of the national collection and thought of in that manner. Therefore, it is not possible to establish how much it costs to store and manage archaeological archives or what portion of the NMI budget is for that purpose.

3.4.4. In 2022, the NMI took 81 boxes of excavation material from 43 sites excavated under licence into their SWORDS store, as well as 304 objects found individually, deposited by members of the public or excavated during field work. At present, the store has enough expansion space for the next 10 years at least. However, there is an awareness that space will run out and that planning for a new store takes time. Therefore, staff are currently trying to estimate potential expansion needs for the next 30 years, and the next 60 years, as part of our project to develop a new storage campus. As part of the proposal, staff have to stipulate the rates of acquisition. It is estimated that most collections will increase by 25% from their current level over the next 60 years, however is though the rate of acquisition for archaeology will be much higher. Archaeology is considered the biggest reason behind the need for more space; the NMI can say no to other acquisitions, but due to Irish legislation, they cannot say no to archaeology. The figures are compounded by the knowledge that there is a huge backlog of sites that will need to be deposited, however units have the same issues with running out of money before the PX is completed that is reported elsewhere in the UK.

## Museum Wales

3.4.5. From 1st April 2020, all museums in Wales charge £100 + VAT per standard unit for archaeological archive deposition (to be reviewed every 5 years). A unit is defined as a small finds box, a bulk finds box, a large unboxed object, a documentary archive box or a roll of documents/drawings. The charges will not be applied retrospectively for projects that have already commenced.

3.4.6. The box deposition fee of £100 per unit was reached through consultation between the National Panel for Archaeological Archives in Wales and the wider museum and archaeology community: The fee was roughly based on calculations from the Newport

Ship Centre which estimated a total cost recovery of £183.39per box over 50 years (figure includes build recovery costs, rental and staff costs, and annual inflation of 5%). The Welsh Government was keen that the new box deposition fee was in line with the market average and it was felt that people seemed comfortable with £100 per unit, and newly released standards (such as the Gloucestershire standards in 2017) were used to benchmark the fee and define archive units etc.

3.4.7. Overall, the decision was made not to include future access or on-going curation into the box deposition fee, as this was considered part of the museum's role. The box deposition fee in Wales therefore covers storage costs only.

3.4.8. The box deposition fee would come into the team specific budget, specifically for the purchase of materials and while none has come in yet (as of February 2023) they are expecting income from the new structure later in the financial year. The National Museum however is not relying on these potential deposition fees to cover any of their running costs as the History and Archaeology Collections Management Unit's funding is allocated departmentally from Welsh Government funding. For other museums in Wales, funding comes from local government, or for independent museums other sources such as fund raising and grants (plus some from local councils).

3.4.9. Currently no-one in Wales is relying on box deposition fees as a means of income, however, once the process is fully embedded in a few years' time, this may change. The requirement for a box deposition fee is written into briefs, but there has been a lot of turnover of staff across the Welsh museums and it is not clear that everyone is aware that they can charge for archive deposition.

3.4.10. The Royal Commission takes paper and digital (currently the only digital repository for Wales) and does not currently charge for deposition, though they have reserved the right to introduce a charge for digital. There are also a lot of museums that only take physical archives in which instance the paperwork would go to RCAHMW or to a local Records Office, who do not charge.

## Scotland

3.4.11. With the exception of ecofacts-only assemblages, all archaeological assemblages in Scotland are subject to the Treasure Trove process. Under this system, anything recovered from Scottish soil is considered crown property regardless of the age or material type (documentary archives are not included in this process). Currently all archaeological archive provision is funded by the government (either local or national) and there is considered to be a shortfall in resources and a large backlog in archive deposition, therefore the introduction of a 'processing fee' is currently being considered.

3.4.12. In 2020 a feasibility study considered the introduction of a 'processing fee' by museums for developer-led archaeology (Mann and Robertson, 2020) and outlined

the intention behind the introduction of a 'processing fee' for archaeological assemblage deposition in Scotland as fourfold:

> *"The first is to embed an understanding amongst the sector that the post-excavation journey of an assemblage does not end at the point of allocation under Treasure Trove (and that funding needs to make provision for preparing and depositing archaeological archives). The second is to ensure that museum staff time spent on receiving and accessioning an assemblage is recognised and treated in the same manner as the rest of the professional handling of the archaeological archive up to that point. The third is taking a step towards reducing the financial burden (as defined in 5.1) placed upon museums through the generation of archaeological material in processes that they have generally not input into. The fourth is to allow quicker access to information and finds for everyone, ensuring greater public benefit from the work which generated them."*

3.4.13. A 'Museums Working Group' workshop was held in March 2020 with representatives from Museums Galleries Scotland, Historic Environment Scotland, National Museum Scotland, Association of Local Government Archaeological Officers Scotland, Treasure Trove Unit, and ten museums from throughout Scotland to discuss issues around the scale and nature of a 'processing fee'. Consideration was given as to what specifically such a fee should or should not cover, with agreement being reached on the following:

- Included in the fee:
  - Museum staff time for accessioning and adding to catalogue
  - Materials for any packaging replacements
  - Making the assemblage accessible for the future
- Excluded from the fee:
  - Museum building costs
  - Shelving and other infrastructure costs for storing the assemblage
  - Photographing of all or part of the assemblage
  - Basic conservation, cleaning, and packaging as defined within the guidance (created as part of this project) for the deposition of archaeological assemblages in Scotland

3.4.14. Further consideration including how the processing fee could be introduced through the development management process can be found in the '*Implementation of a 'Processing Fee' by Museums within developer-led archaeology for accessioning the physical element of archaeological archives in Scotland'* report (Mann and Robertson, 2020).

## Northern Ireland

3.4.15. The new store located just outside Ballymena has been completed and most of the artefactual material has now been moved from the disparate stores. The budget for the temporary store, transport and materials was covered by Northern Ireland government. The NI Historic Environment Team are working with CIfA to build deposition, selection and human remains standards specific to NI, with the aim of improving access to research through standardisation.

3.4.16. In January 2019 the excavation licence in NI was revised to include the production of archives to deposition ready standards, however there is currently no charge associated with the deposition of archaeological archives. The Historic Environment Team NI are awaiting the findings of this current Options Appraisal project before discussing the introduction of a charging structure.

## Archaeology Data Service (ADS)

3.4.17. The ADS provides a mixed portfolio of research and development projects and deposit services and its funding reflects this. In the last reporting year (1st Aug 2021 to 31st July 2022) the ADS had an income of £1,248,698. Of that 1.2 million, 29.2%- about £364,619.82 (pre-VAT) was for commercial archives (for the ADS this includes standard academic archives, infrastructure archives, as well as standard commercial ADS-easy type archives). All the other income was from UK and EU research project funding, HE funding, technical development infrastructure funding (UKRI) and a few big research project archives where the ADS undertake the archiving as project partners. The table below outlines the percentages of income for the last reporting year for the ADS.

Table 1. ADS Funding sources 2021-2122

| 2021-22 (Aug to July) | % |
|---|---|
| UKRI infrastructure funding (uk gov) | 31.7 |
| UK research funding (uk gov) | 10.7 |
| EU research funding | 17.9 |
| Commercial depositor charges – mainly development led work | 29.2 |
| Infrastructure funding – oasis – Historic England (uk gov) | 4.9 |
| Infrastructure funding – oasis – Historic Environment Scotland (uk gov) | 1.9 |
| Other services – Internet Archaeology | 3.8 |

3.4.18. The ADS accepts new collection throughout the year (677 in 2021-22) for which a one-off charge is levied for deposition. Research funding is costed differently based upon individual funding body requirements and university costing systems. The one-off charge is based on:

- a ‘per file’ basis with these charges varying depending on the complexity of the file.
- a ‘Start Up’ fee – a different cost dependent upon the type of service used (i.e. submissions have a lower ‘Start Up’ fee to non-ADS-easy deposits which reflects the time saving to ADS for using the online interface. Library deposits again have a different set up fee to ADS-easy and non-ADS-easy deposits).
- a storage cost based on a per GB fee.
- and a day rate for any services provided outside of the normal service such as ‘special interface development’.

3.4.19. The current charging policy was introduced in 2009 and is reviewed annually. Minor amendments to the fee structures have been made but the core policy remains the same (https://archaeologydataservice.ac.uk/about/policies/charging-policy/). The funding raised through this charging model is used to resource archivist staffing and support the endowment/preservation fund. The central tenets of the current ADS Depositor Charging Policy are:

- ADS online resources will be freely accessible.
- A one-off payment collected at the time of deposit will be used to safeguard the long-term future of the digital data.
- Archiving should be seen as part of the project publication process and planned from outset and recovered from the funding body.

3.4.20. The ADS Depositor Charging Policy is based on five elements of work:

- Management and Administration (covered in set fee).
- Ingest (covered by set fee).
- Curation (covered by file costs).
- Dissemination (covered in set fee or additional day rates).
- Storage and refreshment (covered in storage cost).

3.4.21. Payment is normally invoiced on release of the digital archive and during the same financial period that raised £364k through commercial archive deposition, the ADS released 399 digital archives. Therefore, the 364k could be interpreted as representing 399 archives. However, a small handful of those archives will be part of larger projects that are not included in that commercial finance figure (likely less than 10). More impactfully, the income the ADS receives one year doesn’t necessarily

equate to the work done in that year as payment is primarily taken at the end of the process which could go on for many months.

3.4.22. One of the original remits of the ADS was to provide archiving services to university-based AHRB (later AHRC) projects free of charge. This rapidly expanded to include NERC, the British Academy, Leverhulme Trust, and Society of Antiquaries of London, among others. In addition, from an early stage the ADS began to receive external project-level funding and build partnerships from a variety of other organisations, such as Historic England (formerly English Heritage, and previously RCHME) to provide archiving services for national datasets. In addition to the funding through AHRB the ADS also developed a charging policy, levying a one-off charge on the data depositor, but making data open and freely available at the point of use. The charging policy mirrored one that was already familiar to archaeologists in the museum sector, whereby a 'box charge' was generally levied when archaeological contractors deposited physical archives in museums.

3.4.23. The specifics of this depositor costing policy were calculated by looking at the times taken to carry out set processes on specific files, the staffing required for specific ingest and management activities as well as general ADS running costs such as external storage provision and university overhead fees.

3.4.24. This independent and self-funding income stream proved invaluable when, in March 2007, the AHRC decided to withdraw funding from the AHDS and thus ADS, proposing that institutional repositories in university libraries should take responsibility for the preservation of research data generated by academic researchers. However, in recognition of the special case of the primary nature of data derived from excavation, the complex variety of data formats in archaeology, and the capacity of the ADS to generate income using its charging policy model, the AHRC agreed to award the ADS 5-year transitional funding from 2008-13 to allow it to become self-sufficient. The combination of transitional funding and the success of the business model meant that the ADS was able to continue its support for the archaeology sector, with a mixed portfolio of research and development projects and deposit charges. However, in 2020 the AHRC, through UKRI infrastructure funding, has begun to re-establish core funding for the ADS which is not directly tied to a specific archive deposit or research project as part of their investment in key UK research infrastructures.

3.4.25. Although the depositor charging model has successfully allowed ADS to continue to run during the period between 2013 and 2020 when the ADS received no core funding from a major funding body, it did result in ADS being unable to invest in internal infrastructure development. The costing model originally developed covered 'costs' but no profit/investment therefore by 2020 when ADS began to receive some core infrastructure funding from UKRI this was immediately invested in development of the ADS systems through new developer staffing and consultancy. Going forward

 

the infrastructure funding they hope to receive annually from the UKRI will be used to provide training to depositors, to build and maintain our systems and on a much smaller scale archive data from funded research grants.

## 3.5. European national charging structures

3.5.1. A request for information on European charging structures was put out through the European Archaeological Council and responses were received from the Institute of Archaeology of the Czech Academy of Sciences in Prague, the Hungarian National Museum in Budapest, the Swedish National Heritage Board and the Department of Cultural Heritage in Lithuania. While further potential responses were followed up, these four remain the only institutions to respond to the questionnaire.

### Institute of Archaeology of the Czech Academy of Sciences in Prague

3.5.2. The Institute of Archaeology of the Czech Academy of Sciences in Prague houses the Archaeological Information System of the Czech Republic. The archive accepts only documentary material (in digital form), while material archives are deposited with the regional museums. Their role as an archive is statutory, in therefore they do not charge for deposition. It is considered more sustainable and transparent for the repository and the depositor to fund the archive as a public service and not to fragment funding between hundreds of data providers.

> *"The organisational and infrastructural framework of archaeological archiving should be based on stable services. Their funding should be predictable and sustainable, regardless of the economic cycle and other important factors that affect field activities and, consequently, the quantity of material accessioned."*
>
> *"Given the overall lack of funding in archaeology and the public interest in preserving archaeological material, we consider a direct public funding model to be the most sustainable and motivating for data providers."*
>
> *David Novak, Head of the Department of Information Sources and Landscape Archaeology (includes the archive)*

### Hungarian National Museum, Budapest

3.5.3. The Hungarian National Museum in Budapest is funded by central government and does not charge for the deposition of archaeological achieves. Some additional funding is acquired through charging for research archives.

### Swedish National Heritage Board

3.5.4. The Swedish National Heritage Board is funded by central government and accepts only material from governmentally funded projects (with a few exceptions). There is therefore no deposition charge nor a plan to implement one.

### Department of Cultural Heritage, Lithuania

3.5.5. The Department of Cultural Heritage in Lithuania is funded by central government and accepts archaeological research reports which it passes to the Archive of the Lithuanian Institute of History and the Lithuanian State Modern Archives for storage. The process has been in place for over 30 years but was specifically legislated for in the 3rd decade of the 21st Century.

## 3.6. Existing charging structures summary

3.6.1. Archaeological archive storage and management at a county level exists for Northamptonshire, Cambridgeshire and Suffolk. The Northamptonshire Archaeological Resource Centre (the ARC) is on the site of the Chester House Estate, a heritage attraction with substantial commercial revenue streams and is run and partially funded by North Northamptonshire Council (NNC), but also collects for West Northamptonshire Council (WNC). Cambridgeshire Historic Environment Team (CHET) manage their archaeological archive through a combination of remote storage at DeepStore (a commercial storage facility within the salt mines in Cheshire) and a converted bunker beneath the former County Council offices in Cambridge. Suffolk County Council Archaeology Service (SCCAS) has been collecting archaeological archives for the whole county of Suffolk since 1974 and is the only archive repository currently collecting archaeological archives in Suffolk.

3.6.2. All three county structures employ a tiered box fee charging structure accurate at the time of excavation. The ARC currently charges for deposition at £120 per box + VAT, while archives created between 2014 and 2020 are charged at £20 per box, and archives generated pre 2014 carry no deposition charge. The current CHET box deposition fee of £100 per box is applicable to archives stored at both DeepStore and the council offices, but the service also utilises a tiered box deposition cost based on the fieldwork commencement date. SCCAS have charged for archive deposition since 2010 and the fee has been increased periodically every few years until the new deposition structure (invoicing for deposition at Assessment Stage) was introduced on 1st of April 2022 along with a £80 per box fee and tiered box charge system.

3.6.3. Archaeological archives are administered at a National Level in Ireland and the UK nations Scotland, Northern Ireland and Wales. Care and storage of archaeological archives at the National Museum of Ireland is not separated from the rest of the collections, therefore, it is not possible to establish what portion of the NMI budget is for that purpose. In Scotland, all archaeological archive provision is funded by the government (either local or national), yet there is considered to be a shortfall in resources and a large backlog in archive deposition and therefore the introduction of a ‘processing fee’ is currently being considered.

3.6.4. Funding for the Welsh National Museum is allocated departmentally from Welsh Government funding. Other museums in Wales receive local government funding, and

independent museums rely on other sources such as fund raising and grants. In 2020, Museums Wales introduced a standardised deposition charge £100 +VAT across all of their sites. Prior to 2020 there was no deposition fee for archaeological archives in Wales and the charges will not be applied retrospectively for projects that commenced prior to this date. Archaeological archives I Northern Ireland are currently housed in a temporary store located just outside Ballymena; the budget for the store, transport and materials was covered by Northern Ireland government. There is currently no charge associated with the deposition of archaeological archives in NI, though discussions around the introduction of a fee in the future are ongoing.

3.6.5. Digital archives are currently administered at a National level in England by the Archaeology Data Service (ADS). In the last reporting year (1st Aug 2021 to 31st July 2022) 29.2% of ADS's income came from for commercial archives- standard academic archives, infrastructure archives, plus standard commercial ADS-easy type archives. All the other income was from UK and EU research project funding, HE funding and technical development infrastructure funding (UKRI). The business costing model originally developed for ADS covered 'costs' but no profit/investment, therefore prior to 2020 (when ADS received core infrastructure funding from UKRI, they were unable to invest in internal infrastructure development. Ongoing UKRI funding will be used to provide training to depositors, support research grants and build and maintain the ADS systems.

3.6.6. Information about European charging structures was collected from the Institute of Archaeology of the Czech Academy of Sciences in Prague, the Hungarian National Museum in Budapest, the Swedish National Heritage Board and the Department of Cultural Heritage in Lithuania. In all four cases, the collection and curation of archaeological archives is funded by central government and does not charge for archive deposition.

# 4. The cost of archive deposition in England

## 4.1. Cost of deposition – data collection methodology

4.1.1. To better understand how much the archaeological sector is currently spending on archive deposition, the project team asked commercial organisations to help build a dataset which was realistic and reflective of regional variation, as well as representing different types and sizes of projects. The objective of the dataset is to understand the % of total archaeological project costs that are spent on archive deposition fees, and subsequently provide multiple examples to test the new cost model proposals against.

4.1.2. Commercial organisations across England were sent a simple data collection sheet (see Appendix 2) that included a couple of general questions on archive costs per annum, and then asked for basic information for each project provided. As a rare opportunity to look at full deposition costs, the team also included questions referring to the digital archive component of the preserved archaeological archive for comparison (see Table 2).

4.1.3. There was some initial reticence to provide cost data, but with assurances around confidentiality a large dataset has been compiled. In some instances, the organisation chose not to provide overall project costs, citing commercial sensitivities of doing so. Overall, a significant volume of data was collected comprising 257 individual projects covering nine regions of England, with contract size varying from £1,200 to £3.5 million (Figure 4.1). Deposition cost data for physical archives was received from 151 individual projects, and 108 with a digital archive. Of those, 158 projects included data about both physical and digital archives (see Figure 4.1).

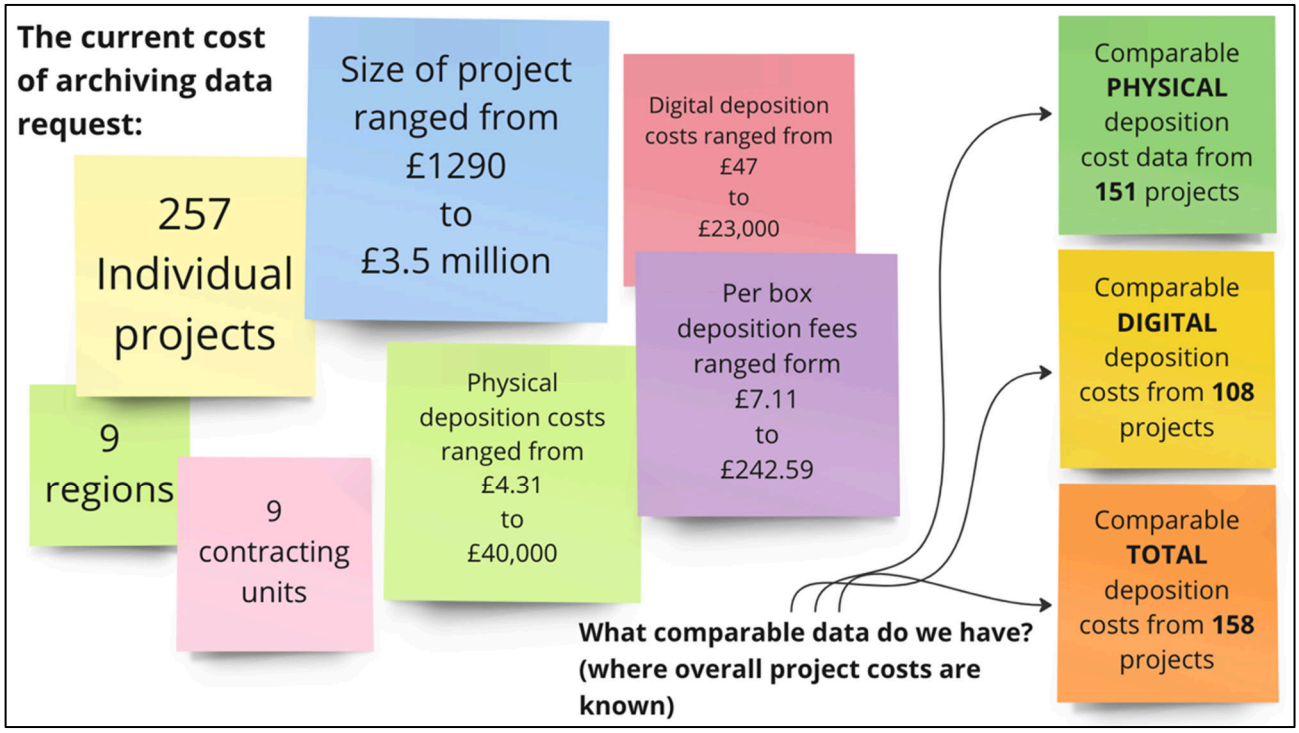


Figure 4-1. Response to the Current Cost of Archiving data request: Image depicts volume of data acquired form commercial organisations (summarised in Section 4.2)

## 4.2. Limitations of the data

4.2.1. It must be acknowledged that while this is the first time that data linked to archive deposition fees for development-led projects has been collected, there are limitations to how far the data can be manipulated and interpreted. Notwithstanding, the depth of information provided, as well as the range of projects, geographic location and contracting organisations taking part, means the data provided is substantial and representative. Data was collected for 257 individual projects, from nine regions across England and ranged in size from £1290 to £3.5 million. Physical deposition costs ranged from £4.31 to £40,000, with per archive box fees ranging from £7.11 to £242.59, and digital deposition costs from £47 to £23,000.

4.2.2. The large majority of the projects were initiated between 2005 and 2021, while the depositions for the large part took place in 2022 (Fig 4.2). Many of the projects were therefore initiated before the completion of the Dig Digital resources and inclusion of digital deposition and data management plan requirements in the CifA standards. Digital deposition costs would therefore not have been included within the original project tender, nor the digital archives been deposited in the manner that they would have been with more recently initiated projects. Additionally, in recent years large numbers of museums and repositories across the country have increased their box deposition fees, and many of the projects included in this dataset may have been initiated prior to these increases.

4.2.3. While the dataset covers nine regions within England, some are better represented than others, and it is clear from the average cost per deposited archive box, the

dataset does not accurately represent deposition fees as they currently stand in 2023. However, this being the first time this information has been collected, the dataset probably represents the best understanding we have about the current cost of archive deposition within England.

4.2.4. Where the overall project costs were provided, comparable data was available for the following numbers of projects:

- Comparable PHYSICAL deposition cost data from 151 projects
- Comparable DIGITAL deposition costs from 108 projects
- Comparable TOTAL deposition costs from 158 projects

4.2.5. These numbers vary slightly as some projects are digital only and some are physical only, even where today they would have had a digital component. Where the TOTAL deposition costs are known, this could represent where both physical and digital have been deposited, or could represent a physical only or a digital only deposition.

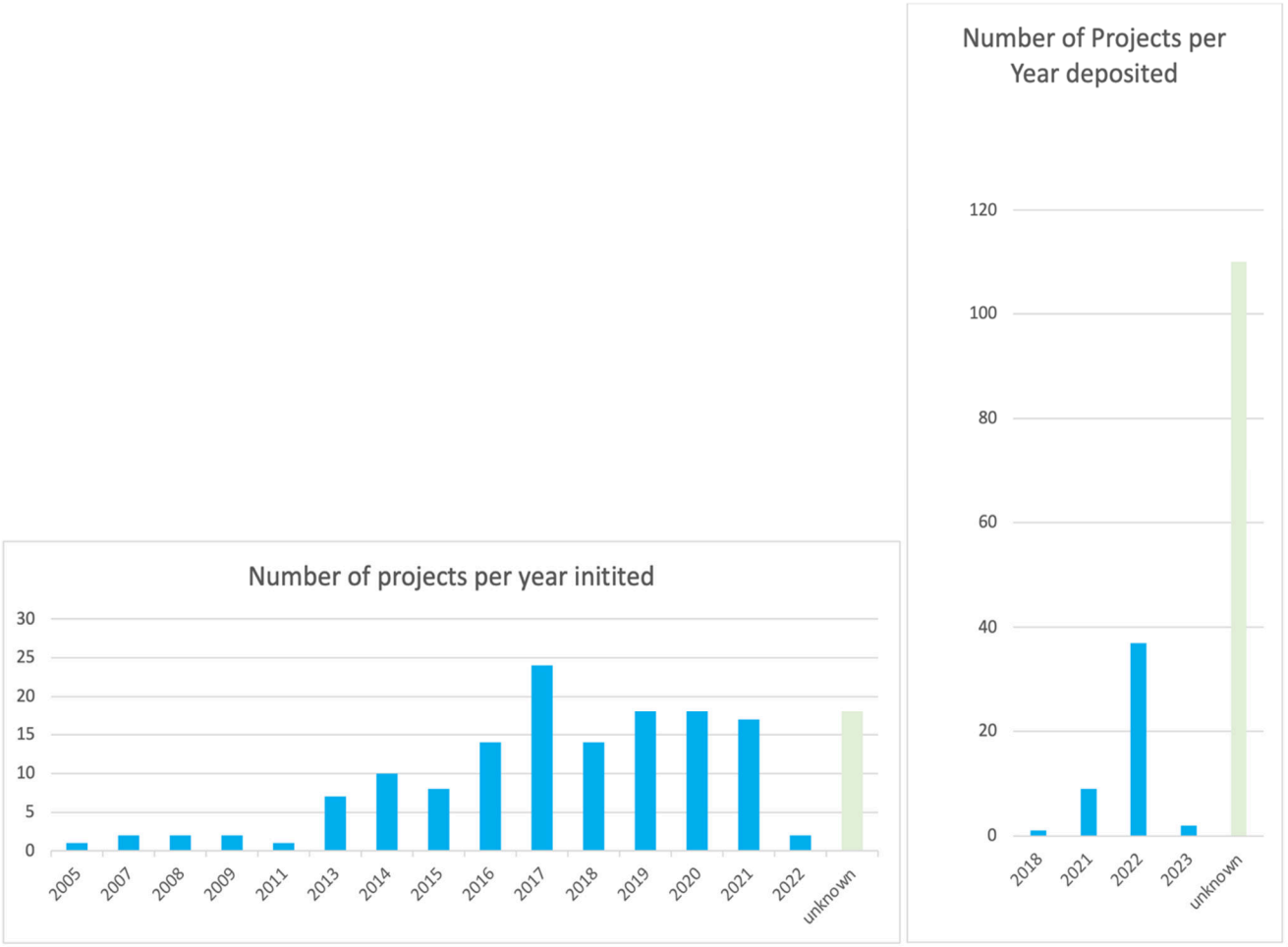


Figure 4-2. Number of projects initiated per year, and number of projects deposited per year within the dataset (discussed in Section 4.2)

## 4.3. How much do commercial units spend on archive deposition annually?

4.3.1. In order to estimate the % of annual turnover being spent on archive deposition, we asked commercial units to provide data on how much they spent on archive deposition in 2021 and 2022. Based on the data provided by six organisations, it is estimated that commercial archaeology units are spending between 0.01% and 0.28% on PHYSICAL archiving, 0.01% and 0.15% on DIGITAL archiving, OR between 0.01% to 0.43% on ALL archiving. The most one of these commercial units was spending on archive deposition as a % of annual turnover was less than 0.5%.

4.3.2. This figure can be contrasted against the average deposition costs cost as a percentage of the overall project costs which ranges from 1.77% for physical deposition, 2.76% for digital deposition up to 3.58% for total archiving costs (Fig 4.3).

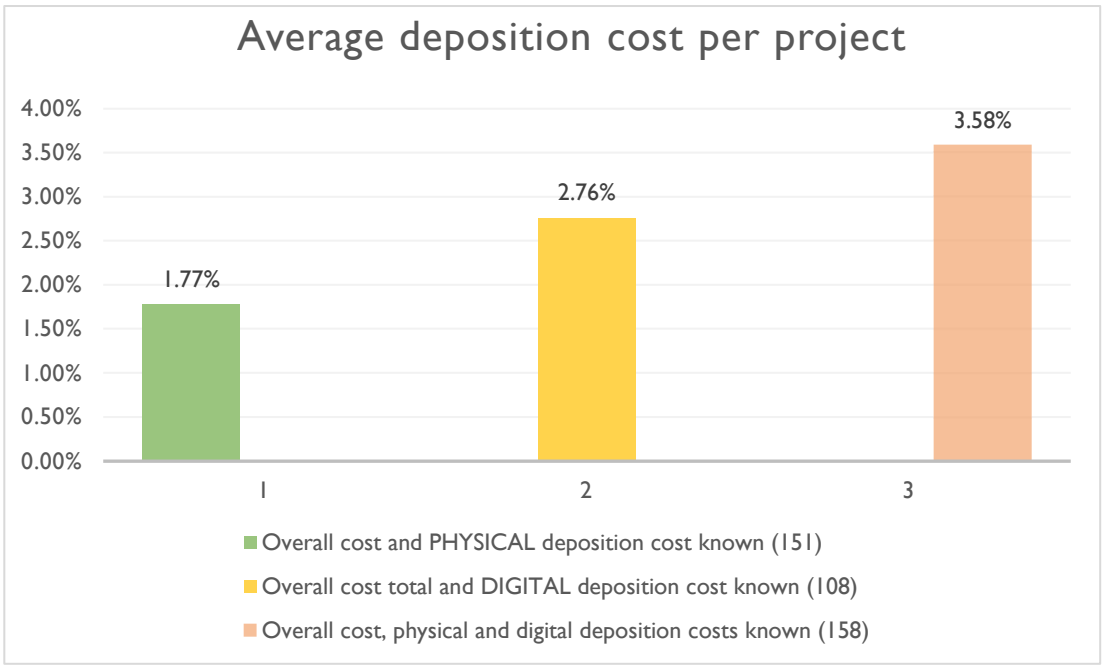


Figure 4-3. Average deposition costs per project- straight average across all data collected (summarised in Section 4.3)

## 4.4. Variation in Regional deposition costs

4.4.1. To understand deposition costs as a percentage of the overall project budget, the deposition data was divided by region. Some regions were better represented than other and unfortunately no overall project costs were provided for sites within London and the East of England, and therefore it was not possible to include them in the calculations. The regional deposition costs are presented in two ways in the figures below. Note that average physical deposition costs are shown in green, the average digital costs are shown in yellow, and the total deposition costs are shown in orange.

- Figures 4.4 shows the deposition cost as a % of the overall project costs as an average for all known projects in that region.
- Figure 4.5 shows the deposition cost as a % of the overall project costs, per project and an average of those percentages.

4.4.2. When the data is presented ‘per project’, the amount spent on archiving as a % of the overall project costs is significantly higher (1.88-4.20% for total deposition costs) than when the figures for the whole region are calculated together (1.33-2.8% for total deposition costs). When looking at the regional data it appears that the discrepancy between the two charts may result from the variation in the types and sizes of the projects within the data set for each region.

- The ‘per project’ percentages indicate that in all but one region, more is spent on digital archiving that physical archiving.
- In Yorkshire and Humber, physical deposition costs are double that of digital deposition, while in the North East, digital deposition costs more than three time that of physical deposition.
- Total archiving costs are highest in the East Midlands, and lowest in the North West.

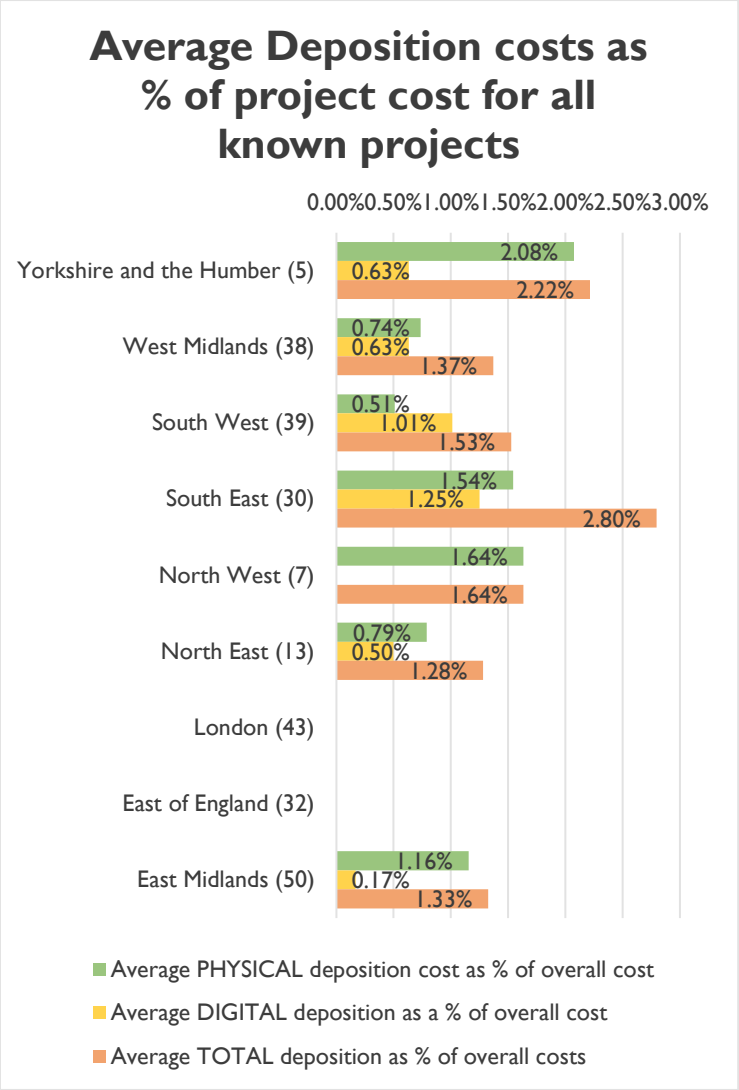


Figure 4-4. Average deposition cost as a % of project costs for all projects (summarised in Section 4.4).

Note: no overall project costs were provided for sites within London and the East of England, and therefore could not be include them in the calculations.

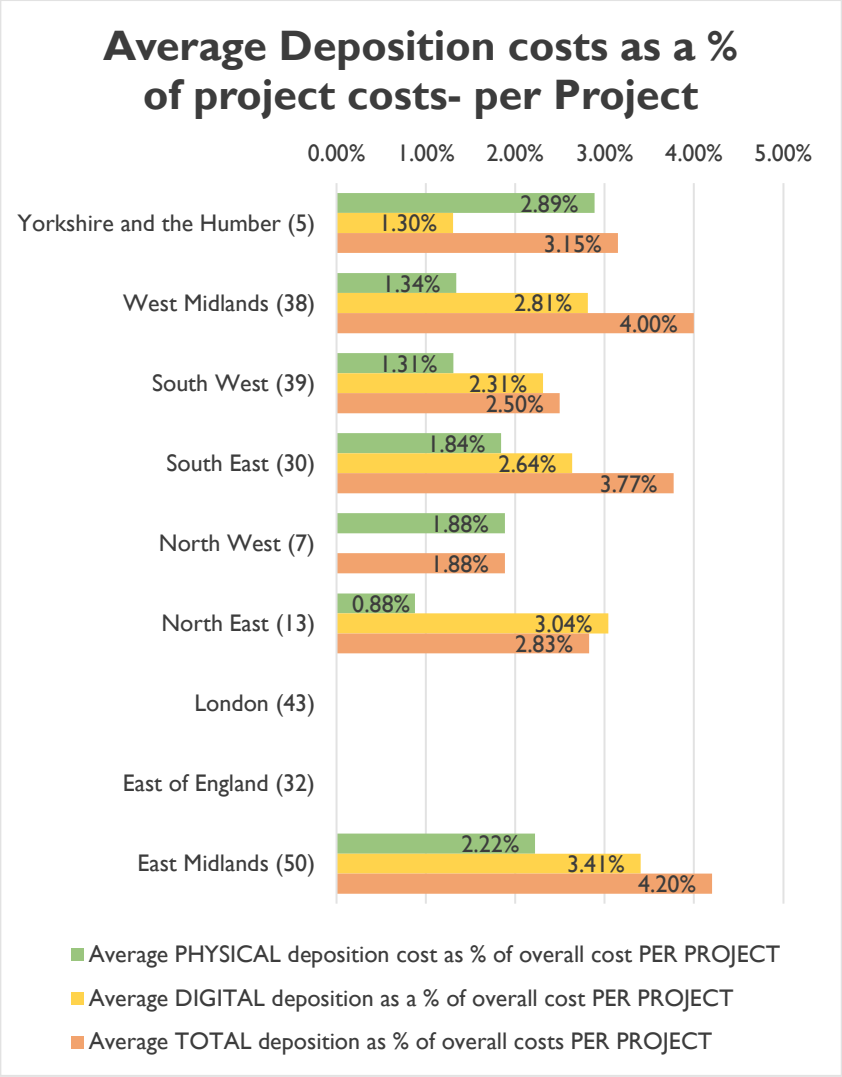


Figure 4-5. Average deposition costs as a % of overall project costs, per project (summarised in Section 4.4)

Note: no overall project costs were provided for sites within London and the East of England, and therefore could not be include them in the calculations.

## 4.5. Deposition costs by size of project

4.5.1. A clearer picture of the current cost of archive deposition emerges when the dataset is divided by the size of the project. Four general categories were devised based on the overall project costs; smaller projects with overall costs of £0 - £10,000 (89 projects), medium sized projects ranging from £10,000 - £100,000 (54 projects), large projects with costs of £100,000 - £1m (12 projects) and a couple of exceptionally large projects with price tags of £1m+ (2 projects). The data is presented in two ways:

a) The average deposition cost as a % of the overall project costs for all projects in each group (Fig 4.6)

b) The average deposition cost as a % of the overall project costs per project (Fig 4.7).

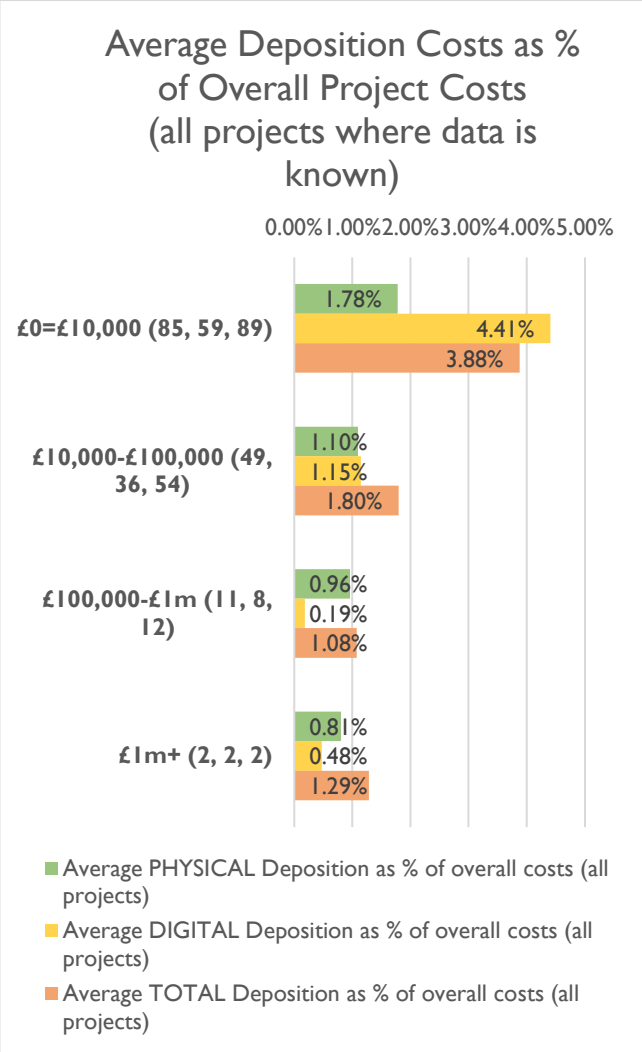


Figure 4-6. Average deposition cost per size of project- using all data (summarised in Section 4.5). Note: figures in parentheses indicate the number of projects per size category

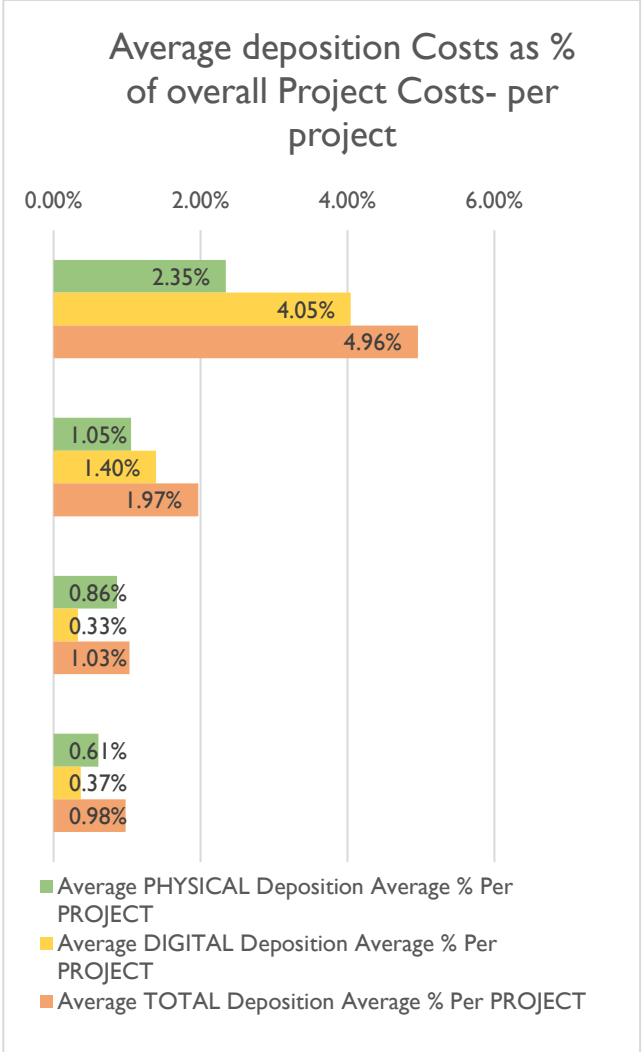


Figure 4-7 Average deposition costs by size of project, per project (summarised in Section 4.5).

4.5.2. Calculating the averages in these ways has brought the results much closer together indicating that sorting the projects by the size of the overall projects costs is a better representation of the current cost of archiving as a % of overall project costs. Therefore, the data collected from contracting organisations indicates that:

- significantly more is spent on the long-term care and curation of material and digital records produced during smaller projects, than on medium and larger projects (as a % of the overall project costs).
- for smaller projects (up to £10k), around double is spent on digital archiving compared to physical archiving.
- for larger projects (£100k+), double is spent on depositing physical archives compared to digital archives.
- proportionally, double the amount is spent on archiving smaller projects (up to £10k) than medium sized projects (£10k - £100k), e.g. as a % of the overall project costs.
- four to five times more is spent on archiving smaller projects (up to £10k) than larger project (£100k+), e.g. as a % of the overall project costs.
- The costs of depositing digital and physical archives for medium projects (£10k - £100k) are much closer together.

4.5.3. Therefore, a large discrepancy is evident between what the sector is paying for (and by extension what developers pay towards) the long-term care and curation of archival material from smaller sites, compared to larger sites. Where deposition cost % is weighted by number of projects in each size category, an overall average deposition cost as a % project cost is established (Fig 4.8), giving a ‘best guess’ for what the sector is currently spending on archiving:

- 1.78% of overall project costs is currently spent on physical deposition
- 2.78% of overall project costs is currently spent on digital deposition
- 3.56% of overall project costs is currently spent on total archive deposition

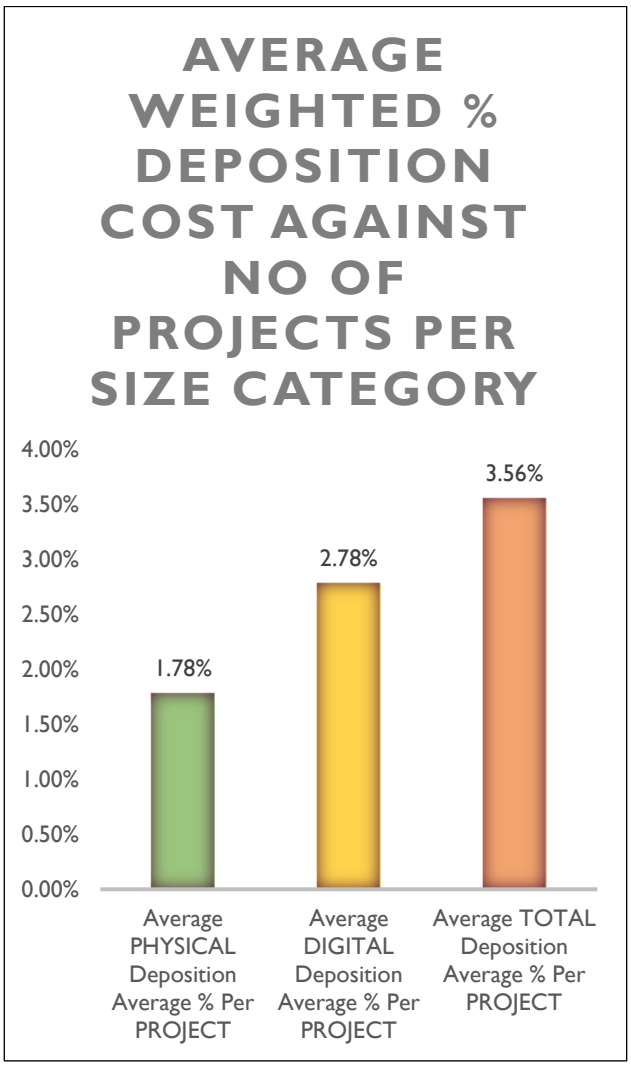


Figure 4-8 Average weighted % deposition costs against no. of projects per size category (summarised in Section 4.5) Variance in box deposition fees

## 4.6. Variance in box deposition fees

4.6.1. Per box deposition fees represented within the data ranged from £26.16 in the North East, to £132.79in London with an average of £63.11 (Fig 4.9).

4.6.2. The data therefore suggests that commercial units are generally not depositing at the per box deposition rates stipulated in the most current museum/repository standards (which averages at £108- see below). It is likely that this is because many of the projects were initiated prior to the museums raising their deposition fees and as a sector we are depositing older project archives and therefore still paying at older rates. The box fees calculations also highlight that the data is not balanced in relation to regional representation; i.e. for the Yorkshire and Humber region, either no projects data for Renaissance Yorkshire (where deposition fees are over £300 per box) was provided, or archives are still being deposited at much older rates.

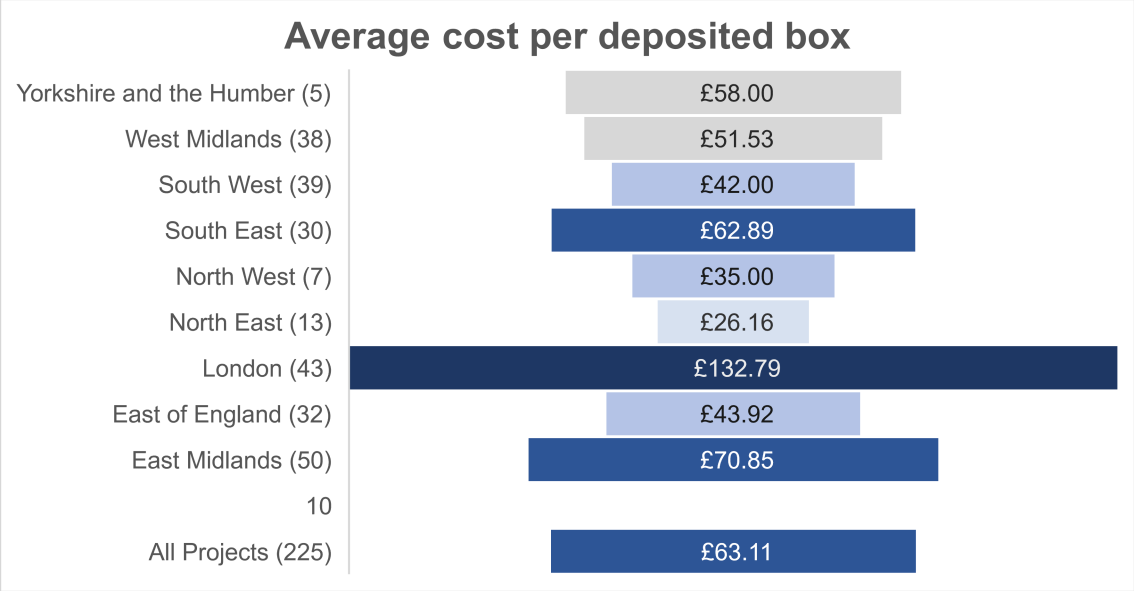


Figure 4-9. Average cost per deposited box by region (summarised in Section 4.6)

4.6.3. Feedback received during a workshop hosted at the 2023 CIfA Annual Conference and during the consultation workshops (see Section 6) highlighted that, even where box deposition fees match across areas or counties, the volume of archival material that a box can contain varies greatly and this has a significant impact on the overall cost of archive deposition.

## 4.7. Understanding cost by volume

4.7.1. Utilising current and available deposition standards, it is possible to establish the number of archive boxes that can fit into $1m^3$ of storage space for each museum or repository (Fig 4.10), and therefore establish a current deposition cost to transfer $1m^3$ of archive material into the museums or repositories listed (see Fig 4.11). This revealed that:

- The average number of boxes included in $1m^3$ is 49.3.
- The range in deposition fees for $1m^3$ of archives between museums/repositories is significant: in Warwickshire Museum contractors/developers would be paying £1,069, while for Renaissance Yorkshire museums, the cost would be £16,000.
- The average cost per $1m^3$ is £5,344.
- Therefore, the current average deposition cost per box (based on the average cost per $1m^3$ and average number of boxes per $1m^3$) is £108.4

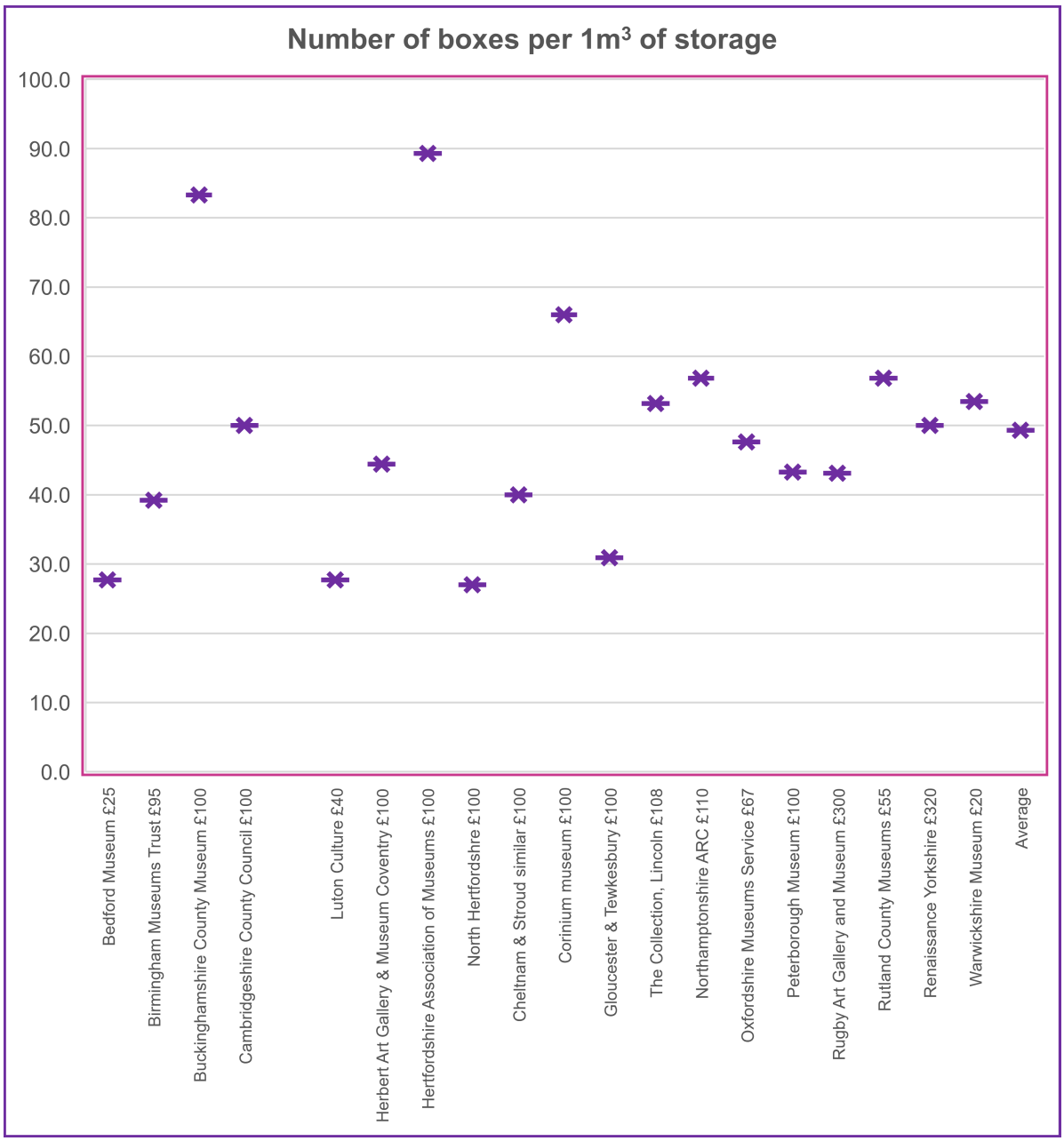


Figure 4-10. Number of boxes per 1m$^3$ from available current deposition standards (discussed in Section 4.7)

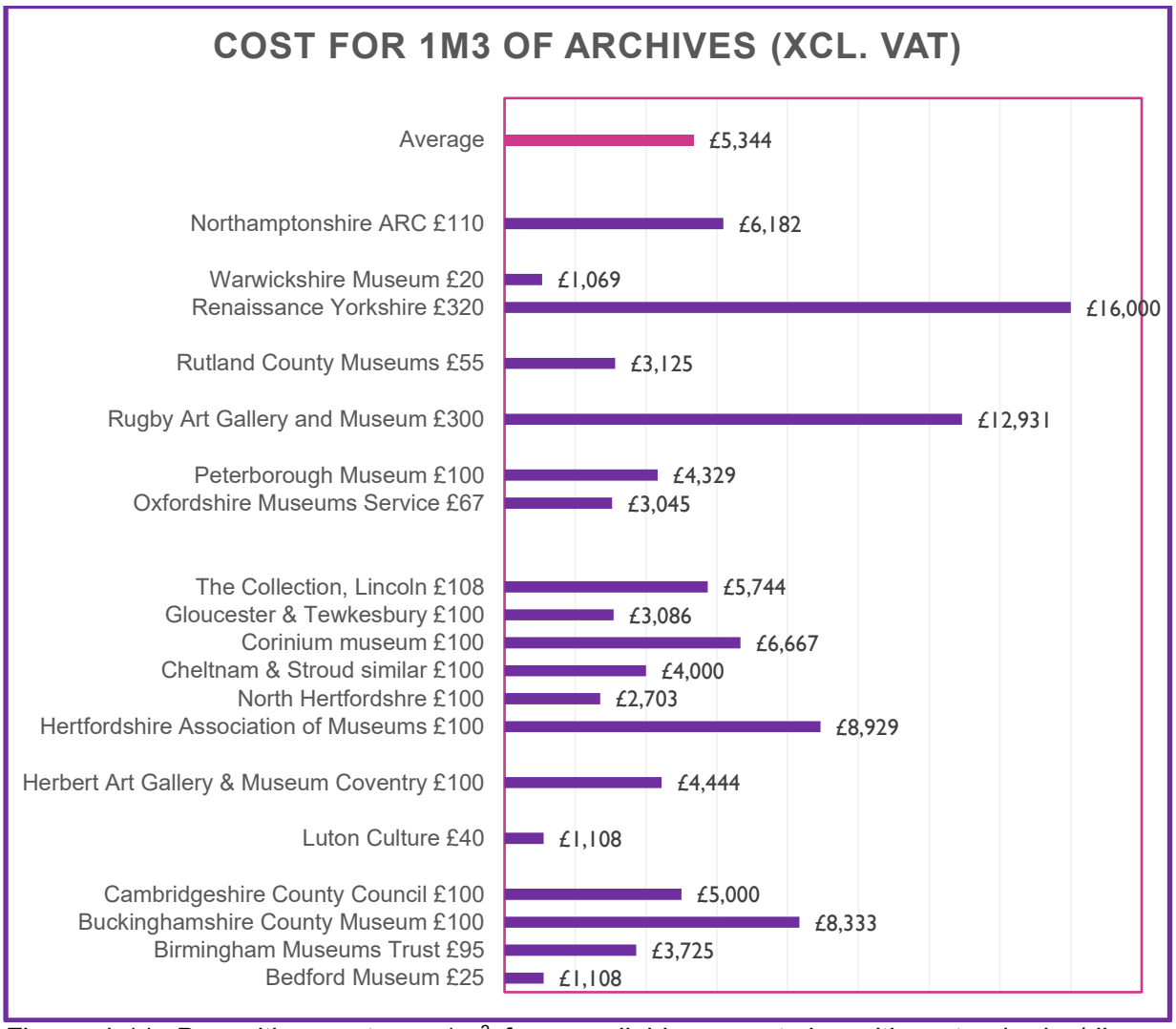


Figure 4-11. Deposition cost per 1m$^3$ from available current deposition standards (discussed in Section 4.7) What happens if we were to pay for archive deposition at current archiving rates?

4.7.2. All the average % deposition costs presented in Sections 4.4 and 4.5 are based on the dataset provided by participating units, including projects initiated over a 16-year period, which are not necessarily reflective of current archive deposition costs.

4.7.3. The project team wanted to understand how the data was affected if current deposition rates were applied on archive transfer and the % of costs if these were built in to the tendering process for the projects included in the data set. Therefore, for all the projects in the dataset where the total deposition cost and the overall project cost was provided, the data was manipulated in the following ways:

a) The box deposition fee was changed to £100 across the board.

b) A £230 ADS easy fee was added to all projects where no digital costs had been paid, or where under £100 had been paid for digital deposition.

c) The addition costs for both physical and digital deposition were added to the overall project costs (where necessary) as if the projects had been tendered with these fees in mind.

4.7.4. The manipulated dataset indicates what the projects in the dataset would potentially pay for archive deposition as a % of the overall project cost, if the fees were charged at current archiving rates (Fig 4.12). There are several caveats to these figures as they are based on the current archiving system (multiple repositories with varied archiving requirements) and the introduction of recent processes such as the CIfA Selection toolkit and DigDigital guidance which will affect the type and volume of material deposited in the future.

- Small projects (up to 10K) would cost 9.82% of the overall project costs to deposit at current archiving rates
- Medium sized project (10k – 100k) could cost 3.6% of the overall project costs to deposit at current archiving rates
- Large projects (100K+) would cost between 1.45% and 1.82% of the overall project costs at current archiving rates
- The weighted average deposition costs as a % of overall costs at current archiving rates is 6.87%. This includes a weighted average for PHYSICAL archives of 3.36% per project, and for DIGITAL archives of 3.51%.

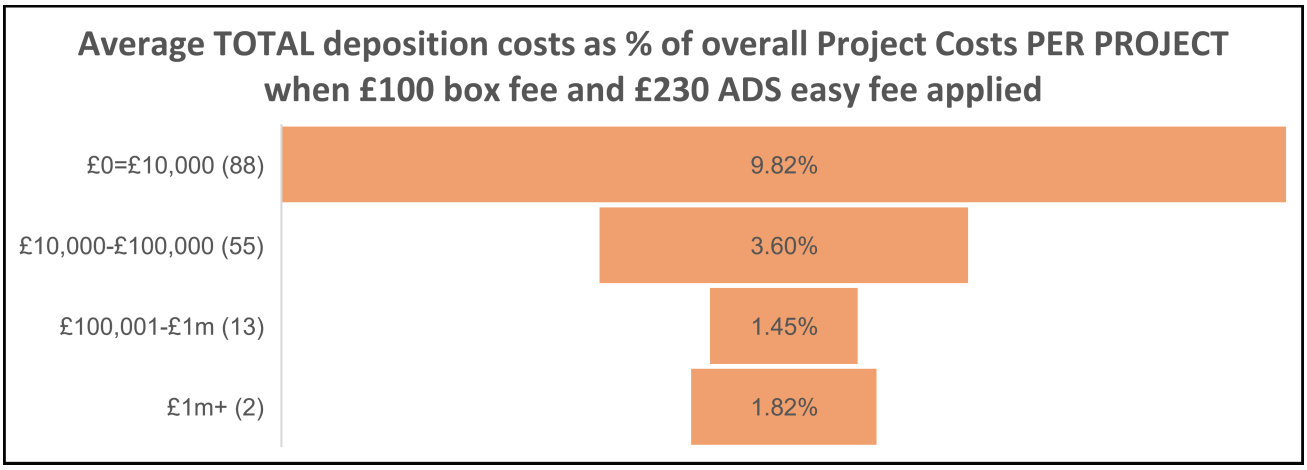


Figure 4-12. Average total deposition costs as a % of overall project costs per project when £100 box fee and £230 ADS east fee applied to all projects (summarised in Section 4.8)

4.7.5. Data obtained from six contracting organisations (including the largest in the country) who responded to the data request (Section 4.3) indicated that as a sector less than 0.5% of annual turnover is currently being spent on archive deposition in England.

4.7.6. Balancing 0.5% of annual turnover against the weighted average deposition cost 6.87% of overall project costs at current archiving rates, suggests commercial archaeology is only paying out 7% towards the true cost of archaeological archive deposition and curation. However, given these figures are based on data from just six contractors, and that not all turnover related to developer led work (93% of turnover is from income generated commercially in 2022 – see Section 7.1), it is possible that that percentage may be higher.

4.7.7. Therefore, the current system whereby the cost of archive transfer and curation is paid at the end of a project, in some cases many years after the initial field work has taken place, based on box deposition fees set at an individual museum or repository level, is NOT a sustainable model to cover the ongoing cost of archaeological archive deposition and curation from developer led projects.

## 4.8. Current cost of deposition – summary observations

- Smaller projects (under £10k) cost twice as much to deposit as medium sized projects (£10k-£100k) as a % of overall project costs.
- It costs 4-5 times more to deposit smaller projects (up to £10k) than larger projects (£100k+) as a % of overall project costs.
- The largest projects are proportionally the cheapest to deposit.
- Currently digital deposition costs are significantly higher than physical deposition costs as a % of overall project costs.
- Had the projects included in the dataset been charged current archive deposition fees (£108.4 + ADS), the average cost would equate to a combined 6.87% of the overall project costs. This figure is made up of a weighted average for PHYSICAL archives of 3.36% per project, and for DIGITAL archives of 3.51%.
- Overall, the commercial archaeology sector is currently paying less than 10% towards the cost of archaeological archive deposition based on current box deposition fees.

# 5. Cost model options

## 5.1. Background data

5.1.1. An understanding of the value and make-up of the UK's and, more specifically, England's archaeological sector is necessary to provide context for the cost model options outlined below. Specifically, the data presented in this section is used to provide an estimated revenue for each cost model provided in the following sections.

5.1.2. Recent data published as part of the Profiling the Profession series (Landward Research) and the State of the Market reports (FAME / Landward Research), combined with figures provided by CIfA, ADS and OASIS, create a comprehensive picture of the size, value and character of the market and the potential archive. In addition, previous projects focused on archaeological archives have also gathered details around the size of physical archaeological archives, including indicative numbers for future archive need, undepositable or homeless archives, and potential

increase due to museum closures. A full discussion of the storage and capacity needs for England's national archaeological archive is provided in Carroll et al 2021, Section 3 – Addressing the Storage Crisis.

5.1.3. The State of the Market series of reports provides a comprehensive review of market characteristics based on annual sector-based survey undertaken by Landward Research for FAME. The results provide moment in time diagnostics of the sector, facilitating a deep dive into value, size and make-up which can be tracked from year to year (see Table 5.1). Less wide ranging but equally useful in the context of this report are the numbers of records collected through the OASIS platform via the Archaeology Data Service (see Table 5.2). This simple tally of projects initiated each year, gives an indication of how the values suggested from the State of the Market series could break down into projects. Interesting, where the State of the Market reports suggest a steady growth in the size of the sector in terms of value, employees and turnover, OASIS records show a steadier consistency in the number of projects initiated, as well as a decrease year on year from those indicating an archive will be produced. This latter trend could result from a change in the system, as OASIS IV migrated to the OASIS V platform, and some projects were more clearly identified. ADS suggest the 2022 figures are the most typical reflection of the sector, where 87% of the records created are linked to planning (Evans pers comm).

5.1.4. Additional data has been provided by CIfA, giving an indication of broad turnover of CIfA Registered organisations and providing a sense of the overall make-up of the contracting organisations working within the sector (Table 5.3).

5.1.5. Finally, key figures relating to archives were gathered during the Options for Sustainable Archaeological Archives project (Carroll et al 2021) and are include in Table 5.4.

5.1.6. Key characteristics from 2020, 2021 and 2022 are that;

- The estimated total sector value for England in 2020 was £190m, increasing to £224m in 2021 and £251m in 2022.
- Indicative value of England's commercial archaeology (derived from source of income by sector) in 2020 was £171m (90% of total), increasing to £209m (93% of total) in 2021 and £234m (93% of total) in 2022.
- The total number of OASIS records in 2020 was 7789 (6329 from planning), down to 7671 in 2021 (5858 from planning) and 7856 in 2022 (6886 from planning). In 2022, 87% of OASIS records were derived from planning.
- Projects which indicate they would produce a physical archive numbered 2260 in 2020, 1886 in 2021 and 1505 in 2022; those indicating a digital archive numbered 5135 in 2020, 4269 in 2021 and 2848 in 2022.

- Between 2020 and 2022, an average (median) of 25% projects initiated would produce a physical archive (reduced to 22% to take account of planning-led projects) and 42% a digital archive (37% from planning).

Table 2. Archaeology in the UK – market characteristics and value

| ID | Characteristic | UK 2020 | UK 2021 | UK 2022 |
|---|---|---|---|---|
| A | Respondent organisations | 70 | 41 | 35 |
| B | FTE Archaeologists | 6300 | 6625 | 6703 |
| C | LPA Archaeologists | 375 | 375 | 353 |
| D | Development led | 4375 | 4700 | 4800 |
| E | Av turnover per member of staff | £51,187 | £52,528 | £55,878 |
| F | Sector value (estimated) | £224,000,000 | £247,000,000 | £268,000,000 |
| G | Contracting Organisations value (estimated from % development led employees) | £155,555,556 | £175,230,189 | £191,914,068 |
| H | Contracting Orgs value x market sector from development | £140,000,000 | £162,964,075 | £178,480,084 |
| I | Aggregate profit / surplus | 6.30% | 7.10% | 7.00% |
| J | Total turnover (cohort) | £117,541,684 | £89,100,904 | £159,233,033 |
| K | Total turnover (from development led fees / cohort) | £81,626,169 | £82,863,841 | £148,086,721 |
| L | Proportion development led / % commercial employees | 69% | 71% | 72% |
| M | Market sectors – commercial (see below) | 90% | 93% | 93% |
| N | Turnover tracked by geographic source (HQs) / England | 85% | 91% | 94% |
| O | England / sector value (estimated) | £190,400,000 | £224,770,000 | £251,920,000 |
| P | England / indicative value of commercial market | £171,360,000 | £209,036,100 | £234,285,600 |

Data from State of the Archaeological Market, FAME and Landward Research, 2020 (SM20), 2021 (SM21) and 2022 (SM22).

*Source data for characteristics: A – Results, p8, SM22; B – Table 11 SM22; C – Table 11 SM22; D – Table 11 SM22; E – Table 15 SM22; F – Table 15 SM22; G – Derived from Table 11 SM22; H – Table 17 SM22; I – Table 12 SM22 / SM21, Table 9 SM20; J – Derived from Table 19 SM22; K – Derived from Table 11 SM22; L – Table 19 SM22; M – Table 13 SM22; N – Derived from Table 13 SM22; O – Derived from Table 19 SM22.*

Table 3. OASIS Records for England

| Year | All records | Planning only | % records linked to planning | Physical archive records | % of TOTAL | Estimate from planning % | Digital archive records | Estimate from planning % |
|---|---|---|---|---|---|---|---|---|
| 2020 | 7789 | 6329 | 81% | 2260 | 29% | 1836 | 5135 | 4172 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 2021 | 7671 | 5858 | 76% | 1886 | 25% | 1440 | 4269 | 3260 |
| 2022 | 7856 | 6886 | 88% | 1505 | 19% | 1319 | 2848 | 2496 |

Data provided by Archaeology Data Service 05/04/2023.

Numbers represent individual records created using the OASIS system and that comprise minimum baseline of information including event details, location, and HER reviewer added.

NOTE: It should be noted that these figures (Table 3) are those where a Level 1 user (inputter) has filled in the appropriate fields for physical archives and may therefore be under-reported where the project profile is incomplete or not updated on completion of relevant project stages.

Table 4. CIfA Registered Organisations (n=82) grouped by turnover

| Turnover | Number of ROs | % of ROs |
|---|---|---|
| £5,000,000 | 10 | 12% |
| £3,000,001 - £5,000,000 | 3 | 4% |
| £1,500,001 - £3,000,000 | 15 | 18% |
| £1,000,001 - £1,500,000 | 11 | 13% |
| £700,001 - £1,000,000 | 9 | 11% |
| £400,001 - £700,000 | 8 | 10% |
| £250,001 - £400,000 | 7 | 9% |
| £100,001 - £250,000 | 12 | 15% |
| £50,001 - £100,000 | 2 | 2% |
| Less than £50,000 | 5 | 6% |

*Data provided by CIfA 29/03/2023.*

Table 5. Annual archive accrual and volume (England)

| | |
|---|---|
| Estimated archaeological archive holdings within contracting units | 4,957 m3 |
| Estimated archaeological archive holdings within contracting units considered undepositable<br>(23% of total archaeological archive) | 1,140 m3 |
| Estimated archaeological archive holdings within contracting units considered undepositable | 23% |
| Annual accrual of archaeological archives | 492m3 |
| Annual accrual of undepositable archive material (23% of total archaeological archive) | 113m3 |
| Estimated number of boxes per annum (using average box size 0.5*0.25*0.2m = 0.025m3) | 19,680 |
| Estimated number of undepositable boxes per annum | 4,530 |

*Data gathered during the Options for Sustainable Archaeological Archives project (Carroll et al 2021, Section 3.3).*

## 5.2. Cost Model 1 – Volume, unit or box charge

5.2.1. Cost Model 1 is based on the status quo, with archive transfer fees based on the existing and well-known box charge model. Whilst the data gathered within this project indicates that this current charging system has arguably failed in its implementation to date (eg Section 4.9), the model was deemed useful to include in the discussion of developing cost models as a familiar process and to explore if / how it could be made workable. A variation based on when the fee is paid provides a critical change in the management of the costs, with the fee paid during the project delivery programme (Model 1B). This variation is based on an existing model (Suffolk County Council (Section 3. Para 3.2.13).

5.2.2. The charge basis is linked to the physical size of an archive, either to the number of boxes included or the total volume of the archive to be deposited. It therefore maintains the link between the physical attributes of the archive produced through an archaeological project and the cost of transfer. Variations outline in Table 6 are Model 1A, fees charged on archive deposition and Model 1B, where fees would be charged at assessment or project review stage during delivery. Estimated revenue is provided for Model 1B (Table 7), but Model 1A considered too unpredictable in terms of annual revenue stream – as payment would be made on project completion and therefore be very variable.

5.2.3. The box / unit-based transfer fee model updates the cost of the fee to more sustainable figures, as suggested by case study analysis (Section 3) and introduces an initiation fee + transfer fee model with the latter charged at project conclusion (Model 1A) or assessment / review stages (Model 1B). Based on Model 1b, transfer fees of between £2.1 and £2.6m per annum are estimated, with between £489k and £605k linked to currently undepositable archives.

Table 6Cost Model 1A and 1B – profile

| Characteristics | Description | Example fee structure / options |
|---|---|---|
| Archive initiation fee | An archive initiation fee will<br>• support initiation of a collection profile on the datastore<br>• contribute to administration costs of the host repository (national store / other repository) | **£50 initiation fee per project** on agreement of WSI / Project Design |
| Archive transfer fee linked to volume of selected archive to be deposited | The archive transfer fee will<br>• contribute to maintenance of the collection datastore<br>• contribute to administration costs of the host repository (national store / other repository)<br>• cover costs of accession and ingestion of the archive (national store / other repository)<br>• support access to archaeological archives<br>• contribute to management of the archive infrastructure | **£108 transfer fee per box** / based on average box size of 0.5*0.25*0.2m (0.025m$^3$)<br><br>*OR*<br><br>**£5,344 m$^3$** / charge based on volume of archive rather than box numbers |
| Assumptions | • archive costs included in project tenders / budgets.<br>• fee based on archive volume, estimated at assessment or similar review stage during delivery.<br>• selected project archive deposited when the project is complete. | |
| Fee payment / variations | Fee payment by archaeological contractor<br>• paid in full at deposition (Model 1A)<br>• on agreement of the estimate at assessment / review stage (Model 1B) | *Note: cost estimates for Model 1A are not included in Table 7, as they are considered unpredictable.* |

Table 7Cost Model 1b – Potential revenue

| Potential revenue (annual) | Description | Estimated revenue |
|---|---|---|
| Project initiation fee / £50 per project | Based on number of projects initiated in 2022 and estimated annual accrual of archives. OASIS records initiated in 2022 with physical archive, n=1505 | £75,250 |
| Value of archive transfer fee / £108 per box | TOTAL archive accrual p/a, n=19,680 boxes | £2,125,440 |
| | UNDEPOSITABLE archive accrual p/a, n=4,529.6 boxes | £489,196 |
| Value of archive transfer fee / £5,344 per $m^3$ | TOTAL archive accrual p/a, n=492$m^3$ | £2,629,248 |
| | UNDEPOSITABLE archive accrual p/a, n=113.24$m^3$ | £605,154 |

## 5.3. Cost Model 2 – Fee based on archaeological project value

5.3.1. Cost Model 2 moves away from the status quo and removes the connection of the transfer fee with archive volume. Instead, the charge is based on a percentage value of the archaeological project costs, with revenue estimated from the current understanding of sector value of development-led work within England's commercial archaeological organisations (Section 5.1).

5.3.2. The archive transfer fee in this model recognises the need for the sector to contribute to the ongoing maintenance and support provided by the wider remit of a national collection which goes beyond the shelf space needed for an archive. For the benefit of ease, reference to the national collection is noted in the tables below as the NCAA. Based on a percentage of the overall archaeological project value, calculation of the fee would be consistent and predictable, and proportionate to the overall size of a development. Whilst divorcing the fee from boxes and physical size of an archive, Cost Model 2 retains an important link with the impact of development on the archaeological site and therefore remains aligned with the sustainable development principles of NPPF. The charge is designed to contribute more fully to the running and infrastructure of the national collection, which provides numerous benefits in return – including (as a minimum) preservation of and provision of access to archaeological archives created from development.

5.3.3. The charge would be made directly to the contractor and charged as a % fee based on the cost of the archaeology project. This could be framed either as Model 2A) % fee for all archaeology projects from development (irrespective of archive potential), or Model 2B, % fee for archive producing projects only. The income value from

archive collecting projects is calculated as the percentage of collecting archives listed on OASIS, and the value of development led projects suggested by State of the Market. A fee applied to all archaeology projects would enable each contribution to be relatively low (such as 1 or 2% of the project value) and would represent a substantial shift from current practice. An alternative would be to charge a higher % fee to just those projects where archive products are known to be created, but bring the % more in line with the expected cost of long term preservation of archive elements. For the purposes of revenue estimation, the model uses % figures calculated from the example provided above, where known deposition costs have been recalculated using a standard box fee of £100 (see Section 4, Para 4.7.4). This suggested that a minimum fee of 3.36% of the overall archaeological project cost should be applied.

5.3.4. Potential income for both models these is included below in Table 9. This includes, for Model 2A, a fee of 1% applied to all archaeology projects from development (irrespective of archive volume) would raise an estimated £1.78m and 2%, £3.56m. For Cost Model 2B, application of a minimum fee of 3.36% to only those projects which are depositing archives, retains the link to project value rather than archive volume. In this case, physical archive fees raised are estimated at £1.4m (£339k from undepositable).

Table 8 Cost model 2 – profile

| Characteristics | Description | Example fee structure / options |
|---|---|---|
| Single payment linked to the cost of the archaeological project and, therefore, the impact from development on archaeology. | The fee will<br>• support initiation of a collection profile on the datastore<br>• contribute to maintenance of the collection datastore<br>• contribute to administration costs of the host repository (national store / other repository)<br>• cover costs of accession and ingestion of the archive (national store / other repository)<br>• support access to archaeological archives<br>• contribute to management of the archive infrastructure | Fee based on % cost of the archaeology project. Either:<br><br>**1% or 2% fee** applied to ALL development led archaeology projects.<br><br>*OR*<br><br>**Fixed archive % fee** for ARCHIVE producing projects (see Section 5): Physical only > 3.36% |
| Assumptions | • Charge based on cost of all execution stages of archaeological project<br>• Need to recognise contingencies for unexpected finds<br>• Selected project archive deposited when the project is complete. | |
| Fee payment / variations | Fee payment by archaeological contractor<br>• on agreement of WSI<br>• % fee for all projects (Model 2A) or archive producing projects only (Model 2B) | |

Table 9Cost model 2 – Potential revenue

| Potential revenue (annual) | Description | Revenue |
|---|---|---|
| From ALL DEVELOPMENT projects | Value of commercial contractors in England x market sector from development (2022, n=£178,480,084 see Table 2, ID H), with flat % charge | 1% = £1,784,800<br>2% = £3,569,601 |
| For projects with a PHYSICAL archive only eg 25% of projects from development x an archive fee of 3.36% of project costs | Derived as 25% (OASIS planning projects with physical archive) of STM development led projects in England (n=£43,881,298 | £1,474,411 |
| Value of currently undepositable material | UNDEPOSITABLE physical archives = 23% | £339,114 |

## 5.4. Cost Model 3 – Fee based on contractor turnover

5.4.1. This cost model offers a different mechanism for the transfer of archive costs, and one which is not linked to an individual project but to the organisations which use the national collection for the deposition of archives. Fees in this case are linked to the size and turnover of an individual organisation, and the contractor would directly manage how they pass those costs on for each project, eg to the client. In those terms, the model gives the impression of simplicity but, in reality, becomes a far more difficult concept to find a workable mechanism or funding structure for.

5.4.2. For planning based projects, disassociation of the archive fee from the development project itself – whether to support the ongoing costs of a national store or collection, or to simply pay for deposition of boxes – is problematic. The concept itself moves further from NPPF's principles of sustainable development, where mitigation balances the impacted assets by supporting public access to cultural heritage. Losing a direct link to the planning framework is not ideal and the allocation of archive transfer costs by individual contracting organisations would be variable.

5.4.3. In terms of implementation, the model is also impractical. Contractors are often multi regional actors who operate across multiple areas and work with diverse income streams. Determination and monitoring of an appropriate annual fee from turnover would therefore be very complex. In addition, even where a contracting organisation undertakes 100% of work within the development archaeology sector, the concept maintains that some regional repositories would continue to collect archaeology outside of the national collection model. Therefore, some archive material will be subject to fees from regional museum or repository. For a model of this nature to work, it would require the archive solution to be standard across England and not allow for regionally based collecting bodies (e.g. no archaeological archive could be deposited in a museum which was not included in the dispersed national collection network). If this were the case (eg all work is development led, and all archives deposited at a national store or within a dispersed national collection), it might be argued that Cost Model 3 could retain a link to NPPF where the basis of the fee is limited to turnover from development (Model 3B), rather than the full contractor turnover (Model 3A). However, in terms of predicting revenue, there are too many unknowns and variables to calculate.

5.4.4. This model has potential to raise £1.9m per annum from a 1% fee or £3.8m from a 2% fee based on contractor turnover, and £1.7m to £3.5m from development-led contracts. How much of this income would be linkable to areas covered by a national collection is unknown and revenue cannot be estimated.

 

Table 10 Cost Model 3 – profile

| Characteristics | Description | Example fee structure / options |
|---|---|---|
| Single payment linked to the turnover of the contracting organisation | The fee will<br>• support initiation of a collection profile on the datastore<br>• contribute to maintenance of the collection datastore<br>• contribute to administration costs of the host repository (national store / other repository)<br>• cover costs of accession and ingestion of the archive (national store / other repository)<br>• support access to archaeological archives<br>• contribute to management of the archive infrastructure | Fee based on % contractor turnover from development.<br><br>Either:<br><br>**1% or 2% fee** applied to contractor turnover from all projects (Model 3A)<br><br>OR<br><br>**1% or 2% fee** applied to turnover generated from development led archaeology projects (Model 3B) |
| Assumptions | • Annual turnover of organisation disclosed / monitored<br>• Selected project archive deposited when the project is complete. | |
| Variations | Fee payment by archaeological contractor<br>• Fee based on % of TOTAL turnover (Model 3A)<br>• Fee based on % of turnover FROM DEVELOPMENT ONLY (Model 3B) | |

Table 11 Cost Model 3 – Estimated revenue

| Potential revenue (annual) | Description | Estimated Revenue |
|---|---|---|
| Model 3A From CONTRACTING ORGS | Value of commercial contractors in England (n=£191,914,068, see Table 2, ID G), with flat % charge | 1% = £1,919,140<br>2% = £3,838,281 |
| Model 3B From DEVELOPMENT projects | Value of commercial contractors in England x market sector from development (2022, n=£178,480,084 see Table 2, ID H), with flat % charge | 1% = £1,784,800<br>2% = £3,569,601 |
| From national collection operating areas | Unknown – variability re regional collecting areas | Unknown |

## 5.5. Cost Model 4 – Fee based on a Developer Levy

5.5.1. Cost Model 4 is essentially the same as Cost Model 2 but with payment of fees administered directly between the national collection body and the development body. On the face of it, this model is similar to one currently used by grant giving bodies, where payment of archive transfer fees for both physical and digital archives are arranged directly between the collecting repository and the funding body (e.g. AHRC, Historic England).

5.5.2. However, rather than being a unit or volume-based charge, the model based on a percentage value of the overall impact of development on archaeology. As with Cost Model 2, this charging model would overtly contribute to the infrastructure and maintenance of the national collection. It also offers a consistent and predictable cost mechanism which is proportionate to the overall size of the archaeological element of a development. This model therefore retains the link with development and would be calculated to contribute fully to the national collection body. Similar to Cost Model 3, having made the leap from a contractor-based fee to a direct developer fee – this model behaves more like a Levy or endowment fee, and may need to be supported by clearer definition within the planning process, with legislative frameworks supporting a standardised and national approach to archives across England.

5.5.3. As with Cost Model 2, fees would be charged as a % fee based on the cost of the archaeology project for all development projects (irrespective of archive transfers), or a flat fee for projects which produce archive products. The same % fee applied across all archaeology projects would enable contributions to be relatively low (such as 1 or 2% of the project value), raising potentially greater revenue but representing a substantial shift from current practice. A fee of 1% applied to all

archaeology projects from development (irrespective of archive volume) would raise an estimated £1.78m and 2%, £3.56m.

5.5.4. As a developer related fee, utilising the more complex hierarchical model of Cost Model 2 would be difficult to enact and the administration of the model would need to be considered. For Cost Model 2, this would need dialogue between the national collection and/or host repositories, as well as the contracting organisation; for Cost Model 4 that dialogue would need to happen between the relevant planning department and national collection and/or host repository.

Table 12 Cost model 4 – profile

| Characteristics | Description | Example fee structure / options |
|---|---|---|
| Single payment of a fee linked to the cost of the archaeological project and, therefore, the impact from development on archaeology. | The fee will<br>• support initiation of a collection profile on the datastore<br>• contribute to maintenance of the collection datastore<br>• contribute to administration costs of the host repository (national store / other repository)<br>• cover costs of accession and ingestion of the archive (national store / other repository)<br>• support access to archaeological archives<br>• contribute to management of the archive infrastructure | Fee based on % cost of archaeological project within development.<br><br>**1% or 2% fee** applied to ALL development led archaeology projects. |
| Assumptions | • Fees based on impact of development on archaeology agreed through planning process.<br>• Selected project archive deposited when the project is complete. | |
| Variations | Fee payment directly by the developer | |

Table 13 Cost Model 4 – estimated revenue

| Potential revenue (annual) | Description | Estimated revenue |
|---|---|---|
| From DEVELOPMENT projects | Value of commercial contractors in England x market sector from development (2022, n=£178,480,084 see Table 2, ID H), with flat % charge | 1% = £1,784,800<br>2% = £3,569,601 |

## 5.6. Cost Model 5 – Storage cost based on volume

5.6.1. Cost Model 5 takes the construction of a charge back to the contractor with the national collection acting more like a centralised store and providing a service to contracting archaeological organisations and potentially other bodies needing to purchase storage capacity (such as museums). This model has the danger of becoming a very commercial venture – the big yellow archaeology storage company – losing the link to an enhanced package provided by the concept of a national collection or dispersed collection model which is supported as part of sustainable development mitigation and enhancement of cultural heritage.

5.6.2. For the same reasons as Cost Model 3, the disassociation of an archive fee from the individual development project, or in this case, from developers is problematic and not in line with the proposed mission and values of the concept of a national collection. Costs from the developer's perspective would be inconsistent and unpredictable, as they would be based on how individual contracting organisations passed on the cost via project budgets. The link between project and deposition could be retained if the collection's datastore and each project portfolio was still part of the facility offer. Charges could therefore be by project (as an admin fee), and then fees issued by volume. As such, revenue estimates are essentially the same as Cost Model 1, although using this model to support a network which includes distributed hosts would be far more complex when considering issues of ownership under Transfer of Title (e.g. if this is categorised as a 'storage' service for contracting organisations).

5.6.3. Based on estimates of physical archive accrual, a volume-based charge has potential to raise around £2.6m, with £605k from undepositable archives.

Table 14 Cost model 5 – profile

| Characteristics | Description | Example fee structure / options |
|---|---|---|
| Archive initiation fee | An archive initiation fee will<br>• support initiation of a collection profile on the datastore<br>• contribute to administration costs of the host repository (national store / other repository) | **£50 initiation fee per project** on agreement of WSI / Project Design |
| Archive transfer fee linked to volume of selected archive to be deposited | The archive transfer fee will<br>• contribute to maintenance of the collection datastore<br>• contribute to administration costs of the host repository (national store / other repository)<br>• cover costs of accession and ingestion of the archive (national store / other repository)<br>• support access to archaeological archives<br>• contribute to management of the archive infrastructure | **£108 transfer fee per box** / based on average box size of 0.5*0.25*0.2m (0.025m$^3$)<br><br>*OR*<br><br>**£5,344 m$^3$** / charge based on volume of archive rather than box numbers |
| Assumptions | • archive costs passed on to developer / funders directly form contractor via project tenders / budgets.<br>• fee based on archive volume, estimated at assessment or similar review stage during delivery.<br>• selected project archive deposited when the project is complete. | |
| Fee payment / variations | Fee payment by archaeological contractor<br>• paid in full at deposition (Model 1A)<br>• on agreement of the estimate at assessment / review stage (Model 1B) | |

Table 15 Cost model 5 – estimated revenue

| Potential revenue (annual) | Description | Estimated revenue |
|---|---|---|
| Archive initiation fee / £50 per project | Based on number of projects initiated in 2022 and estimated annual accrual of archives.<br><br>OASIS records initiated in 2022 with physical archive, n=1505 | £75,250 |
| Value of archive transfer fee / £108 per box | TOTAL archive accrual p/a, n=19,680 boxes | £2,125,440 |
| | UNDEPOSITABLE archive accrual p/a, n=4,529.6 boxes | £489,196 |
| Value of archive transfer fee / £5,344 per $m^3$ | TOTAL archive accrual p/a, n=492$m^3$ | £2,629,248 |
| | UNDEPOSITABLE archive accrual p/a, n=113.24$m^3$ | £605,154 |

## 5.7. Project examples

5.7.1. To support consultation, the project team provided worked examples of how the cost models would apply using data collected from the real project examples (see Appendix 3). Each of the 'real world' project examples is drawn from the Current Cost of Archiving Data request (see Section 4) and utilises the overall project costs and deposition fees information provided by the commercial units.

5.7.2. A range of project sizes are included from a £3,500 monitoring project to a £3,500,000 multi-phase excavation. For each of the five examples (A-E), details are provided on the type and size of the project, the overall project costs, actual deposition costs, number of boxes/ files deposited, and the annual turnover of the contracting unit.

5.7.3. The Cost Models presented above are then applied and the financial implication for each detailed in the information boxes. The proposed final deposition costs for each of the cost models can be compared with the actual deposition costs as reported by the contracting unit (at the bottom of each example).

# 6. Sector consultation

## 6.1. Consultation activities

6.1.1. Consultation with the sector took place via workshops and presentations, both in person and on-line, between April and November 2023. The feedback for each potential Cost Model, and themes emerging during discussions are presented below.

## 6.2. CIfA Conference session

6.2.1. The project team ran a session at the CIfA Conference in Nottingham (April 2023) titled *Covering the Cost: Archaeological Archives* (see Appendix 4 for full session outline). The session presented the initial findings from the data collection phase of the project and explored the potential impact and sustainability of different cost models using real-world project examples. The session was delivered in four sections:

- The concept of the National Collection of Archaeological Archives – Manda Forster provided a summary of the Options for Archives project recommendations, followed by an open discussion about potential impacts and changes proposed.
- Cost models for a sustainable archive – Sam Paul presented the cost mechanisms collated from desk-based research and modelling, followed by a Q&A session with the project team to get to grips with the different model elements.
- The Stress Test – Participants were invited to look at different project scenarios and how they would be affected by each cost model. Working in groups, they undertook a simple SWOT analysis of each scenario, and discussed the results.
- Feedback and next steps – Delegates discussed the results of the session and the project team made a note of key findings.

6.2.2. The session was attended by 89 delegates (57 in person and 32 online) who were asked to take a closer look at the proposed cost models, helping to stress test and assess each scenario and provide feedback into the overall project results. The session provided a key moment for those interested in creating a sustainable future for archaeological archives to contribute to new models which will impact the sector. The feedback from the CIfA session was collated and used as a baseline for the targeted on-line workshops.

## 6.3. FAME Forum

6.3.1. The project team attended the FAME forum meeting in June 2023. The forum presented an excellent opportunity to engage with commercial project managers and collate some initial feedback on the concept of a national collection for archaeological archives as well as explore some of the proposed funding options. The project team presented the findings of the data collection and proposed costs models and collected feedback from the FAME members for each scenario.

## 6.4. Targeted workshops – consultation and SWOT analysis

6.4.1. Three workshops took place in July 2023 and one each in November and December 2023 (the workshop outline can be found in Appendix 5, and Miro Boards from each workshop are included in Appendix 6). Each of the online workshops targeted a different area of the sector in order to focus responses based on sector specific experience:

- Consultants - 9 attendees (17 booked)
- Planning archaeologists / HERs - 22 attendees (39 booked)
- Contractors - 20 attendees (38 booked)
- Museums - 24 attendees over 2 separate workshops (35 booked)

6.4.2. The project team presented the proposals from the first stage of the project (*Options for Sustainable Archaeological Archives 2021*) and the findings of the data collection and initial feedback from the CIfA session on each of the proposed costs models. The participants were then divided up into smaller groups to undertake a SWOT analysis of each scenario. The results of each groups SWOT analysis were added to a Miro board and following the first three workshops, this data was combined. The final boards are included in Appendix 6.

### Museum professionals workshop

6.4.3. The project team felt and discussed with the steering group (Variation D3.2) that that level of museum consultation needed around the concept of the national collection, was not achievable in this stage. This was not because of an issue with resources, but rather one about the level of information and detail needed to respond key questions which would need to be considered. The museum consultation was held using a different workshop format which focused on the results of this project in terms of the concept of the national collection and possible cost models. The museum focus group was facilitated via Zoom in November 2023.

6.4.4. The session presented the results of the CIfA session feedback and the three targeted SWOT analysis workshops, followed by an open discussion around ‘next

steps'. This was considered important to understand what the museum sector would need to know and understand in order to provide feedback about the national collection concept and consider the implications of the different cost models. During the focus group session, the project team reiterated that the need for a wider conversation and extensive consultation with the museums sector had been recognised throughout project delivery, and that both HE and FAAP were aware of the need to undertake meaningful consultation with the museum sector about the project once more concrete plans/operational options had been formulated.

6.4.5. However, attendees specifically requested the opportunity to respond to and comment on the proposed cost models and the SWOT analysis. As a result, a follow-up workshop was run in December 2023 for those museums that had attended the November session. The feedback from the museum sector is discussed separately below as part the Sector response to the options modelling.

## 6.5. Cost Model 1A and 1B SWOT Analysis (Volume, Unit or Box Charge)

6.5.1. Option Model 1 is based on the current box charge at deposition model, albeit with a standardised approach across the country to archive deposition management and costing structure (see Section 5.2). Variation 1B was offered as the potential to pay deposition fees at post-excavation assessment stage, as instigated in Suffolk in 2022.

### Model 1a Strengths and Opportunities:

6.5.2. The main strength of this model as identified at the CIfA conference was that it was 'familiar' or 'tried and tested'. Delegates also pointed out that it would save the time and costs of implementing a new solution. The main strength of the model from the project managers and consultants' perspective was that the approach was consistent across the country (a comment that was consistent across all potential models, so cannot be attributed just to OPA Model 1). The idea that the cost was directly related to the size of the archive, and was demonstrably measurable was seen as a positive when explain the costs to clients. Some responders questioned if the 'problem' would reduce over time as we were depositing less due to selection practices.

6.5.3. Key Themes:

- Familiar/ tried and tested
- Measurable/ linked to size of archive

## Model 1a Weaknesses and Threats

6.5.4. In general, the sector response to Model 1a was that it was not sustainable, it represented a continuation of the current system which ‘does not work’ and would not ‘solve the problem’. The cost of archiving should be tied to the development and linked to the size and impact of the project.

6.5.5. Key Themes:

- A box fee approach was seen as not providing a sustainable cost model
- Continuation of a system that doesn’t work
- Doesn’t solve the problem
- Money being spent prior to deposition will continue under this model
- Costs should be tied to developer not contractor
- Developers want to know the costs at the start of the project

## Model 1B Strengths, Opportunities, Weaknesses and Threats

6.5.6. A small number commented that implementation of the current Suffolk model, where deposition is invoiced and paid at assessment stage, might ‘ringfence archiving costs’ and ‘increase the visibility’ of the archive within the project budget. However, the large majority of the feedback from archivists based within contracting organisations considered Model 1B to be unworkable in practice due to perceived issued of implementation: potential contractual disputes, legality of inducing a cost review stage, ability to ‘sell’ the concept to developers’ and the reliance on ethical practices around selection etc. (Note: this view contrasts with that of the Suffolk repository and planning team - see below). All the weakness and threats identified for Model 1A applied to 1B, and the lack of an assessment stage for many projects in practice was considered a major stumbling block for this variation.

6.5.7. Key themes

- All weaknesses identified for Model 1A were seen as relevant here
- Considered unworkable in practice
- Not all projects have an assessment stage where archive volume is known
- Can’t force a price review / can’t change a fixed cost
- Lacks consistency of application

Figure 6-13. OPA Model 1 CIfA conference session feedback.

Key: * no. of times feedback received; emboldened text relates to general feedback received across all models (as summarised in Section 6.5)

| Strengths | Opportunities |
|---|---|
| • Based on something tangible<br>• Familiar/ 'tried & tested' ****<br>• Measurable/ related to project ***<br>• Simple **<br>**Model 1B:**<br>• Know the costs of deposition sooner ****<br>• Deposition costs more likely to get paid by the developer<br>• Measurable<br>• Ring fences funds within contractor finances<br>• Increased visibility of archive costs in project | • Save the time and costs of implemented another solution<br>• Fewer boxes are being deposited<br>• **Less risk to units if the whole process is standardised**<br>• **Sending out universal archives budget to clients/ standardising costs**<br>• **National solution can be sold to developers**<br>• **Multi site archive boxes reduces costs for small sites *****<br>**Model 1B:**<br>• More secure in terms of securing finances for the archive and repository<br>• **Standardising and a national solution**<br>• Charges are actually representative of deposition fees?<br>• More flexible |
| **Weaknesses** | **Threats** |
| • Current system shown to be not sustainable ****<br>• It is not working - money is all gone by deposition *****<br>• It's not fair and disproportionately impacts small projects **<br>• Does not cover costs for repositories ***<br>• Developers don't know the costs of deposition / cost only known at end of project ***<br>• Contracting orgs would need to be fully standardised **<br>• Does not cover deposition costs *** (one repository calculated £400+ VAT per box would be needed to cover yearly running costs<br>• Issues with SELECTION practices/ decisions<br>**Model 1B:**<br>• ALL weaknesses as 1A ******<br>• Volume of archive not a good way of calculating deposition costs<br>• Potential for overcharge **<br>• Changes during analysis stage ** | • Not sustainable<br>• Doesn't solve the problem<br>• Encourages deposition of as few boxes as possible (Aggressive de-selection!) ***<br>• Will costs be covered if not all museums join a national approach?<br>• Client management<br>**Model 1B:**<br>• More likely to upset developers earlier in project- contractual disputes?<br>• Contractors might not engage in selection<br>• Anecdotally- contractors don't like it and have issues selling it to developers<br>• Reliance on ethics |

| | |
|---|---|
| • There is not always an assessment! | |

## Model 1A - Museum feedback

6.5.8. The museums reported that where this system was robust and enforced, it bought in income and supported curatorial care. However, for museums with no curator or resources to monitor selection and deposition, many of the current issues would continue. Standardisation was discussed but no conclusions reached.

6.5.9. Key Themes:

- Model 1A Strengths and Opportunities:
  - Easy to manage from a museum perspective
  - Museums generate income from this model
- Model 1A Weaknesses and Threats:
  - Still places the onus on museums to chase the deposition charges
  - Not predictable form of income for museums and some don't ringfence the fees
  - Could lead to more homeless archives as a continuation of current system
  - Where no expertise in house, whole process is hard to manage
  - Removal of this system could be a threat to museums position/ argument for curators

## Model 1B- Museum feedback

6.5.10. A representative from Suffolk was in attendance and provided feedback on the last year of implementing Model 1B which they reported as very positive. In general, the participants considered this a potential solution to some of the issues with Model 1A, but thought that it was only implementable where the planning authority and museum/repository were in alignment.

6.5.11. Key Themes:

- Model 1B Strengths and Opportunities:
  - Works in Practice – planning only signs off once the deposition fees have been paid
  - Brings in money sooner in the project's lifecycle- less chance of it being spent prior to deposition
  - Income has increased since instigation of the system= guarantees new projects pay
  - Can invoice developer directly = polluter pays in practice
- Model 1B Weaknesses and Threats:
  - Requires a strong relationship with planning department and won't work in all counties.

## 6.6. OPA Model 2 SWOT Analysis (Fee based on archaeological project value)

6.6.1. Model 2 links a single payment for archiving to the overall cost of the archaeological project (see section 5.3). The archiving fee is paid at the start of the project (either directly by the developer or through the archaeological contractor) and is related to the size and impact of the archaeological project, and not the number of boxes on shelves.

### Model 2 Strengths and opportunities

6.6.2. In general, the feedback from both the CIfA conference session and the targeted workshops were in agreement: this model is proportional to the scale of the project, fair across all projects/ contractors, linked to the tender process, simple to explain to clients, links costs of archive directly to the developer/ polluter, and ensures the financing for the national collection. It was also considered important that the costs of long-term archive conservation were visible 'upfront'.

6.6.3. Key themes:

- Fair
- Proportional to scale/ impact of project
- Deposition costs always covered (i.e. money not spent prior to deposition)
- Simple/ easy to explain
- Elevates long-term value of archive
- Developers like to know the full costs upfront
- Opportunity to 'sell a concept' i.e. carbon offsetting, contribution to national collection

### Model 2 Weaknesses and Threats

6.6.4. It is clear from the engagement with this Model at the CIfA session and following workshops, that delegates and participants thought it was a possible solution, but had multiple questions over its implementation and operational details. While some thought that developers would not pay upfront, the large majority of the threats and weaknesses identified involved the practical application and need for a level playing field/ legislation in order to implement the model.

6.6.5. Key themes/ questions:

- What if overall project costs change?
- What if there is very little/ no archive?
- Logistics of a multistage/ multi contractor project needs considering
- Would this be seen as a tax by developers?
- Requires legislation
- If % doesn't include digital, developers would not like a separate payment at the end?

- Not linked to size of deposition.

Figure 6-14. OPA Model 2 - Discussion workshop feedback

Key: * no. of times feedback received; **emboldened text** relates to general feedback received across all models (as summarised in Section 6.6; also see Appendix 6)

| Strengths | Opportunities |
|---|---|
| • Up front costs are transferred early, not spent prior to deposition) **<br>• Proportionate to scale of project *******<br>• Fixed-simple to explain to client (clarity) *****<br>• Built into tender process, costs known in advance **<br>• Links archive with developer **<br>• Elevates long-term value of archive (reflects value of AA) **<br>• Fair to all sizes and types of project | • Measurable 'Bill of Quantities" approach **<br>• Easy to pass costs across to developers<br>• Opportunities for funds to be used for preparation?<br>• Standardising and a national solution<br>• **Standardising archiving standards / practice with a national solution ****<br>• **Sending out universal archives budget to clients/ standardising costs**<br>• **A national solution can be sold to developers** |
| **Weaknesses** | **Threats** |
| • What is the % based on - variables in defining 'overall costs'? **<br>• Costs can change through the course of a project- does the 'estimate' reflect the reality of project costs? *****<br>• Multi-phase projects (archiving left to end?)<br>• WSI's can change - how is this tracked and monitored? **<br>• Commercial sensitivity issues (WSI and variables) | • Risk on repository<br>• Overall project costs include other values i.e. outreach **<br>• What if project doesn't happen (refund developer)? **<br>• Will it be seen as an increase in contractor costs by developers (rather than an addition at the end?) **<br>• Will developer pressure to reduce costs and impact the %? |

## Model 2 Museum Feedback

6.6.6. Cost Model 2 was thought to be a solution for the current issue of undepositable archives and the museums liked that it was linked to the scale of the archaeological impact and easy to calculate income at the start of the project. A couple of participants commented that this was the only model that would work at scale and support the idea of a national collection and standardised approach in the long-term. The direct link the ‘polluter pays’ principle was considered a bonus and that Model 2 was likely to generate more money that the current box charge system.

6.6.7. Key Themes:

- Model 2 Strengths and Opportunities:
  - Directly links to the ‘polluter pays’ principle
  - Only model that will work at scale

  - Takes the work of managing the money away from museums
  - Easy and fair calculation
  - Could bring in more money to cover archiving
  - Linked to the impact of archaeology
- Model 2 Weaknesses and Threats:
  - Could threaten the selection process
  - How will it integrate with the museum system? - what if the local authority is not on board?
  - What if museum opt out?
  - May be harder for smaller museums to implement
  - How will the money 'flow' between a centralised national collection and partner museums if not linked to a physical / volume metric?

## 6.7. Cost Model 3 SWOT Analysis (Contractor Turnover % Levy)

6.7.1. Model 3 proposed a single annual payment linked to contractor turnover (earther total turnover-3A, or developer funded turnover only-3B) to cover the costs of all archive deposition with the national collection (see Section 5.4).

### Model 3 Strengths and Opportunities

6.7.2. Not may positives were identified with this model, and where they were, they were not considered major strengths or opportunities.

6.7.3. Key themes:

- Simple (less admin etc)
- Developer may prefer this model
- Should include digital

### Model 3 Weaknesses and Threats

6.7.4. The weaknesses and threats identified for both Model 3A and 3B significantly outweighed the positives.

6.7.5. Key Themes:

- How would this be enforced?
- Open to abuse

- What about contractors who are part of councils? How identify ‘turnover’?
- What if contractors don’t pay?
- Won’t work
- Removes incentive to be efficient, selective or think about significance or sustainability
- How could this be monitored?
- Does not financially support the national collection
- How explain to developers?
- Same issues passing cost onto developers as current system
- What about unexpected discoveries?
- Not linked to size of deposition.

Figure 6-15. OPA Model 3 - Discussion workshop feedback

Key: * no. of times feedback received; **emboldened text** relates to general feedback received across all models (as summarised in Section 6.7, also see Appendix 6)

| Strengths | Opportunities |
|---|---|
| • Simple<br>• RO's submit figures anyway<br>• One off annual payment<br>• Predictable(?)<br><br>**Model 3B:**<br>• As 3a<br>• Does not penalise contractors for undertaking community/ outreach | • **National solution**<br>• Distributed costs of national collection across the industry?<br><br>**Model 3B:**<br>• As 3a |
| **Weaknesses** | **Threats** |
| • Unworkable *****<br>• What can it be based on? Turnover not the same as developer project income *****<br>• How deal with fluctuations in workload? ****<br>• How verify? relies too much on trust ****<br>• Invisible to developers *****<br>• How pass on costs to developers? (contestable?) ***<br>• Disproportionate?/ Based on previous years turnover?<br><br>**Model 3B:**<br>• As 3A<br>• Lack of contractual basis for levy **<br>• How can it be monitored and regulated? Through planning system?<br>• % too low | • Burden/RISK on contractors ****<br>• Regionality of project/ contractors **<br>• What if contractors cant pay at end year?<br>• How is money apportioned (out to museums etc)<br>• Risk that museums will not buy in to model as not project based<br>• Less pressure to select/ produce a properly curated archive<br><br>**Model 3B:**<br>• As 3a<br>• Impose significant workload o planning departments<br>• need robust financial admin<br>• still does not cover costs |

## Model 3 Museum Feedback

6.7.6. No strengths or opportunities from a museums point of view were identified with OPA Model 3. There were however several concerns around how this model would translate to museum provision, and how it could be implemented in practice. It was also though that this model took archiving away from the polluter pays principle and turned archiving into a financial endeavour. The ethical implications and legality of this model were also considered an issue.

6.7.7. Key Themes:

- Model 3 Weaknesses and Threats:
  - Removes the ‘polluter pays principle’

- Ethical argument of charging contractors for a service
- Turns archiving into a financial endeavour
- Local authorities have a tendering process, they have no obligation to go to a specific museum to provide a service.

## 6.8. OPA Model 4 SWOT Analysis (Development Levy)

6.8.1. Model 4 proposes that a % levy be obtained directly from the developer (see Section 5.5). The levy would be based on the impact of the development to be agreed through the planning application process.

### Model 4 Strengths and Opportunities

6.8.2. This model proved popular with contractor as the risk, cost and admin was moved onto the developer.

6.8.3. Key themes:

- Risk moved to developer (=polluter pays)
- Deposition always covered/ encourages deposition
- Tested with AG levy
- Option for large schemes?

### Model 4 Weaknesses and Threats

6.8.4. Despite the positive responses to the idea of this model, the practical application was considered very difficult. Specifically, the Local Planning Archaeologists and Consultants had a lot of concerns about its practical application and the resources required to implement and monitor.

6.8.5. Key themes:

- Administration and enforcement a problem (LPS's already too busy)
- The existing development levy is difficulty to administer
- Already a problem getting developers to pay for PX- this would not help
- Developers won't do it
- Commercial sensitivities in revealing costs
- Requires legislation
- Ownership issues
- What about unexpected discoveries?

- Not linked to size of deposition.
- Disincentivises section?

Figure 6-16. OPA Model 4 - Discussion workshop feedback

Key: * no. of times feedback received; **emboldened text** relates to general feedback received across all models (as summarised in Section 6.8, also see Appendix 6)

| Strengths | Opportunities |
|---|---|
| • Risk on developer, not contractor **** <br>• Negligible cost to developer <br>• Fees upfront ** <br>• Already tested via agricultural levy <br>• Transparent to developers *** <br>• Doesn't penalise community projects | • **If museums were statutory might be easier to impose** <br>• Creates space for contractors to free up budgets <br>• Encourages deposition? <br>• Build into planning process/ make a requirement of development ** |
| **Weaknesses** | **Threats** |
| • Will developers reject another fee? *** <br>• How administer/ implement? **** <br>• Needs legislation/ direct involvement of planning departments <br>• Needs by in from developers <br>• Does not account for exceptional discoveries ** <br>• Changes to WSI or variations would be hard to administrate** <br>• Commercial sensitivities in revealing costs <br>• Who administers the system/ conducts checks and balances? <br>• Generalises that scale of development = level of deposition | • Pressure on planning archaeologists <br>• Needs legislative change? ** <br>• If not all museum sign up it creates a mixed system <br>• Retrospective planning applications? <br>• What happens in areas without archaeological advisors? <br>• Atypical archives? <br>• Ownership issues <br>• Disparity between urban and rural (weighted accordingly?) |

## Model 3 Museum Feedback

6.8.6. The strengths or opportunities from a museums point of view were identified with OPA Model 4 were similar to that with OPA Mosel 2. A clear link to the ‘polluter pays’ principle was the main positive. However, the museums raised the workloads of LPA’s and the tension around NCIPS and developers and planners and that it would be very hard for museums to be involved in this process.

6.8.7. Key Themes:

- Model 2 Strengths and Opportunities:
  - Directly links to the ‘polluter pays’ principle
- Model 4 Weaknesses and Threats:
  - Time/ resources of LA to implement and monitor this model

- Existing tensions between developed and LA's (developers can change to vary the conditions/ will they pay)
- Museums would struggle to instigate this model

## 6.9. OPA Model 5 SWOT Analysis (Cost by Volume)

6.9.1. OPA Model 5 was introduced following the CIfA Conference session in response to a discussion around variations in box sizes and cost of deposition per metre cubed. Model 5 assumes the contractor will pay in advance for 'space' in the national collection and store, and purchase more space when required (see Section 5.6).

### Model 5 Strengths and Opportunities

- Simple and clear
- Linked to size of archive
- Pass on actual cost of deposition to developer
- Good for large projects

### Model 5 Weaknesses and Threats

6.9.2. Many of the concerns raised were similar to the weaknesses and threats identified with Model 1; Questions were raised as to if contractors would pay in advance for 'empty space', and if not, would they just pay at the point of deposition as now?

- Risk back on contractor
- Box charges without the box- all weaknesses as option 1
- Won't cover long term maintenance costs
- Will contractors actually pay in advance?
- Not tied to polluter pays model
- What about different storage types?
- Who monitors?
- Convoluted to explain to developers

Table 16 OPA Model 5 - Discussion workshop feedback

Key: * no. of times feedback received; emboldened text relates to general feedback received across all models (as summarised in Section 6.9, also see Appendix 6)

| Strengths | Opportunities |
|---|---|
| • Clarity on costs<br>• Good for bigger projects<br>• Passing on a deposition cost per amount<br>• For contractors, benefit in knowing they don't need to store archives in the long term<br>• Relates to a quantifiable size<br>• Sounds simple to administer | • Could still be a planning requirement<br>• Standardise box sizes?<br>• Charging set fees per project could work<br>• Like a 'big yellow store'<br>• Could ask contractors to prove they have space 'booked' ahead of WSI approval<br>• Hybrid model? The industry is seen as supporting infrastructure<br>• Retention?<br>• May be easier to cover the overall costs over time |
| **Weaknesses** | **Threats** |
| • Don't know the volume until the project is live / progressing<br>• Difficult to higher costs at start of projects<br>• In principle, could figure out costs for legacy projects, but no money to store them – how does this address the problem?<br>• Clients prefer a set fee<br>• Too complex – what happens if space is not used?**<br>• Seems similar to box fee model***<br>• Better to be tied to a project, not the general storage cost<br>• In perpetuity? Challenging to deliver<br>• Does the initiation fee become out of date?<br>• Maintains same issues we have now<br>• Won't work with all financial models (of contractors) | • Influence over retention / selection decisions – and how would you monitor that? ***<br>• Cash flow issues**<br>• Tied to contractor and not developer<br>• Risk to contractors re space being booked<br>• Divorced from NPPF / polluter pays**<br>• Difference in storage conditions – is this too generic for conservation and maintenance costs<br>• Not easily monitored by LPA*** |

## Model 5 Museum Feedback

6.9.3. The strengths or opportunities identified with OPA Model were that units could guarantee space within a repository and could raise one off income for museums. However, in general, museum practitioners thought that this model went against many of the ethics and principles of museum storage as a museum would never 'hold' space for a future deposition. It was also questioned what would happen if the

LA or museum no longer existed (threat of section 114 notices) but the unit had paid for the space in advance. Additionally, if the service provided is simply ‘storage space’, then commercially the museums would be in competition with other (potentially cheaper) storage solutions.

6.9.4. Key Themes:

- Model 2 Strengths and Opportunities:
  - Could guarantee commercial units sufficient space in the store
- Model 4 Weaknesses and Threats:
  - It’s just about space- moves away from ‘polluter pays’
  - Dilutes the idea of the national collection
  - How would museums mange empty ‘space’?
  - 114 notices could be a threat to museum providing the ‘space’ that had been pre-paid
  - Hard to organise storage if units buying in bulk

## 6.10. Sector consultation summary

6.10.1. While strengths and weaknesses were identified for all the potential cost models, some key themes emerged across the sector consultation:

### Deposition costs need to be identified earlier in (ideally at the beginning of) the archaeological project.

- The current scenario where the costs associated with archiving are not established until the point of deposition (sometimes years after the actual fieldwork has taken place), is one of the major factors leading to the current ‘crisis’ in archiving, and any new model implemented should not repeat this.
- The ability to identify these costs at the outset of the project would be appreciated by developers and directly links to the ‘polluter pays’ principle.
- Upfront payments are more likely to support the running costs of a national collection and store.
- Moving the costs of to the front end of a project elevates the significance of the archive and promotes the long-term benefits of securing the resource.

### Digital archives should be considered.

- Across all areas of the sector, the consensus was that management of the process would be more simple for those producing archives (eg the contracting organisations) if the cost of deposition for both digital material and physical archive elements were not be separated, but could be

considered together. Whilst outside the remit of the current project, the regular occurrence of this observation is worth noting.

## Deposition costs and archive creation should be standardised across the country.

- Standardising the creation, compilation (including box sizes where possible), selection and transfer of archaeological archives would be fairer, simpler and easier to explain to developers.
- A strength of all proposed models was that it standardised and levelled the playing field for contractors.

## The cost of archiving should be directly linked to the impact of development.

- In order to maintain the principles embedded within NPPF, the developer should cover the cost of archiving and deposition (either directly or via the archaeological project costs).
- If the burden remains volume based and linked to size of archive deposited, or more directly linked to the contractor (Models 1, 3 and 5), the running costs of a national collection are unlikely to be met, and the current archiving 'crisis' will continue.

## Link the deposition cost to the proposed National Collection of Archaeological Archives

- The national collection is a selling point, something that developers could 'buy into', adopting from the outset a sustainable process in line with the NPPF.
- Promotion of the national collection and store to developers can reflect the mitigation + enhancement model (public benefit), and provide additional benefit, such as carbon offsetting (sustainable storage), or social value (research access) etc.

## Support for the national collection via legislation would be preferable

- The implementation of a standardised cost model for the long-term management and curation of archaeological archives from development would require significant buy-in from contractors, developers and the museum sector. Legislation would help with the instigation, monitoring and enforcement of a countrywide system and support a sustainable and national approach.

## The Cost model should be linked to the 'National Collection', not to storage space

- Any model that simply links the cost of archiving to volume or shelf space dilutes the idea of the national collection of archaeological archives and should be avoided.

Relationship between the proposed national collection and all collecting museums must be clear.

- Museum professionals are concerned about the impact of a national collection and store on their sector, so find it difficult to engage in discussion about how it might be implemented (eg in this case, the potential cost models outlined above).

- Currently the level of information which exists about the concept and possible operational models is not detailed enough for those in the museum sector to understand how a national collection could affect how they run, how they collect fees from archive transfer and what benefits the proposals could have.

# 7. Project recommendations

## 7.1. The argument for change

7.1.1. Prior to the initiation of this project, it was already clear and understood that change in the transfer of archaeological archives from development funded archaeology was needed. The success of development-led archaeology since the early 1990s led to a major increase in the quantity of archaeological material in museum stores across the country and many museums are becoming unable to accept new finds. The 21st Century Challenges in Archaeology project reported that new repositories were needed at a national or regional scale (Wills, 2018). The problem itself was further quantified in 2021 with additional sector research finding that 23% of archive material created through development was undepositable at that time (Carroll et al 2021, 13). The same research provided a clear recommendation that a sustainable solution needed to be ambitious and aspirational. A national solution needed to maximise public benefit from development, providing capacity, enhancing existing provision and supporting a significant shift in how archives are perceived, accessed and used. The project also recognised the need to identify a sustainable funding source to cover the cost of archaeological archives, to fully support the ongoing management, conservation and access to collections (Carroll et al 2021, Section 6.3).

## 7.2. Strengths of current models

7.2.1. The current project has investigated cost models which could support a sustainable solution to the archives crisis. Desk-based research and consultation undertaken has amplified the need to establish a fair, realistic and sustainable model for archives transfer. Analysis of the costs of archive deposition to contractors has shown that the current system is neither fair nor proportionate, and is highly

variable. Importantly, the current box deposition fee model, used by museums and repositories across England, is currently contributing less than 10% towards the current cost of archaeological archives (see Section 4.9). A review of existing funding structures for museums and physical archive collections demonstrates that funding models across the UK and Europe do not offer a tried-and-tested solution to this problem. Rather, they confirm similar issues in using the box fee model or else are funded directly by the State (Section 3). However, there are some characteristics in the implementation of existing models which are worth noting.

7.2.2. Application of the box fee model in Suffolk includes some variation in practice and could suggest that an amended (rather that wholly redesigned) approach could be workable. Suffolk County Council Archaeological Service have employed an updated charging structure since 2022, collecting archive fees at a review stage while the project is live. The team at Suffolk have reported this early payment model has been beneficial. One possible avenue for consideration of the proposed national approach could be to look at this variation of the box fee model (eg Cost Model 1b, see Section 5.2) in light the Suffolk experience, once the process has been in place for a longer period of time. The main advantage of amending the existing box fee approach, according to consultation, would be its familiarity. It should be noted that this variation was seen as difficult to implement especially by archive producers, including commercial organisations and by archivists based in commercial organisations, as many projects currently lack a review stage at the point that the archive volume will be known (see Section 6.5). Museum professionals also noted the need for a strong working relationship between the local authority planning team and the collecting repository, which is not always the case.

7.2.3. One of prevailing issues with understanding how far box fees cover the cost of archive maintenance is that collecting archaeological archives tends to form only one part of a museum function, and costs are not fully understood. The Archaeology Data Service provides a useful comparison, providing an example of an in use and successful model for an archaeological collection and store which has one key function – and therefore full costs are more easily defined. The Core Trust Seal accredited repository collects digital archives from the UK archaeology sector. Their £1.2m income (2021_2022) is sourced from a mixed revenue stream model which includes deposition fees from UK commercial archives, UKRI infrastructure funding, EU research funding, support from grant funded infrastructure and an online journal Internet Archaeology. This mixed model demonstrates a successful approach to establishing a business model which supports infrastructure costs and archive transfer fees from individual development-led and other types of archaeological projects. Here, the cost model for the transfer of archives is volume based, operating a similar approach to box fees, but perhaps

 

more easily related to the full cost of running the archive and providing access. Perhaps unsurprisingly, the fees for ADS deposition of archives are proportionally higher (eg our analysis showed an average cost of 1.77% for physical deposition and 2.76% for digital deposition, of overall project fees), and come with a fixed administration charge.

## 7.3. Different approaches to cost models for archives

7.3.1. Development of five cost models provided detail of how alternative models could be developed, with estimates of how much income might be generated using up to date information about England's archaeological market, alongside estimates for archive transfer need from the OSAA 2020 project, OASIS and ADS figures (Section 5). The models include;

- Cost Model 1 – Box Fees, introduced an 'initiation fee + transfer fee' model and updated fees, with a variation charged at assessment / review stages. Based on this model, transfer fees of between £2.1 and £2.6m per annum are estimated, with between £489k and £605k linked to currently undepositable archives.

- Cost Model 2 – Standardised Fee, implemented a national fee charged all archaeology projects and based on a % of overall project costs. This enables project contribution to be relatively low (such as 1 or 2% of the project value) and represents a substantial shift from current practice. A fee of 1% applied to all archaeology projects from development (irrespective of archive volume) would raise an estimated £1.78m and 2%, £3.56m. Variation of this model used a higher fee of 3.36%, applied only to projects depositing archives – still linked to project value rather than archive volume. In this case, revenue from fees was estimated at £1.4m (£339k from undepositable).

- Cost Model 3 – Contractor Turnover, offered a fee linked directly to contractors, who would be charged an annual fee for use of the national collection and facility. Although this model had potential to raise £1.9m per annum from a 1% fee or £3.8m from a 2% fee based on contractor turnover, the mechanism would be extremely complex to administrate, due to the variation in hosts across regions.

- Cost Model 4 – Development Levy, proposed a fee charged directly to the developer (eg similar to Cost Model 1), with income raised to the same levels as estimated for Cost Model 2 (eg all development projects). This model raised fees from the cost of impact on archaeology from

development, eg measured by the value of archaeological works delivered, e.g. 1% estimated at £1.78m and 2%, £3.56m.

- Cost Model 5 – Storage cost based on volume, treated the proposed national collection and facility more as a storage warehouse, with contractors purchasing space for deposition of archives. This model disassociates an archive transfer fee from individual projects with contractors passing the costs down the line to developers / project funders. Based on estimates of physical archive accrual, a volume-based charge has potential to raise around £2.6m, with £605k from undepositable archives - however this model was considered unworkable from the perspective of ownership and Transfer of title.

7.3.2. Consultation was undertaken through workshop discussions, presenting the project background and outlining each possible cost model. Discussions were framed as a rapid SWOT analysis, with an initial in person workshop delivered at the 2023 CIfA conference followed up with virtual workshops with sector groups (Planning archaeologists and advisors, consultants, contractors and museum professionals). During consultation, it was evident that provision of detail and discussion of implementation led to some participants shifting their opinion on models from a preference to stick with the status quo, to a more open view of different models. From this perspective, understanding the details of any changes proposed, including how any cost model will be implemented and involving sector wide discussion will be vital to manage expectations.

7.3.3. The consultation exercise provided valuable feedback from different actors within the archaeological project process, providing insight into how practitioners respond to the models set out. Importantly, the project team were able to draw key themes from the consultation which can be applied to any cost model proposed. These are that:

- Deposition costs need to be identified earlier in (ideally at the beginning of) the archaeological project.
- Deposition costs and archive creation should be standardised across the country.
- The cost of archiving should be directly linked to the impact of development.
- Deposition cost should support the proposed infrastructure and maintenance of a national collection, as well as archive administration and ingest.
- Support for the proposed national collection via legislation would be preferable.

 

- The Cost model should support public benefit, eg via the proposed national collection, and not be linked to provision of storage and volume.
- Relationships and interdependencies between existing and/or collecting local and regional museums, and the proposed national collection and store, must be clearly articulated.

## 7.4. Central tenets of a charging model

7.4.1. The key themes listed above provide an important understanding around cross sector responses to the proposed cost models. These can be further consolidated into four central tenets able to guide the development of a sustainable approach to archaeological archives.

7.4.2. A cost model which guarantees public benefit through the long term preservation, management and access to archaeological archives;

1) Must reflect the overall impact of development on archaeological work, and enhance the public benefit of cultural heritage through curation, dissemination and access of archaeological archives.
2) Will be based on a proportional fee which is identified, ring-fenced and secured during project delivery.
3) Will make sufficient contribution to generate a sustainable model for curation and access, including the skills needed to facilitate this.
4) Will support the existing public repository network and potential increases in capacity and access to archaeological archives in England.

## 7.5. Recommendations

7.5.1. In summary, our recommendations are to:

- **Standardise fees across <u>all development projects</u>:** Utilise a cost model which reflects the four central tenets identified above (or variations thereof). The Project Team felt that Cost Model 2, a standardised fee linked to the impact / cost of every archaeological project from development, provides a sustainable income, is clear and workable, and retains a vital link to the NPPF principles of sustainable development. By removing the association of the cost model from boxes / volume to impact of development on archaeological sites, the wider role and contribution of the proposed national collection and the museums network is acknowledged.
- **Museums consultation**: meaningful engagement and consultation with museum professionals needs a lot of thought and more clarity. Key consultation questions should focus on potential for museums to transfer existing archaeological archives to a centralised facility, exploration of potential relationships, distribution of charges and ongoing access to collections. One of the main issues with the project has been the inability to

fully discuss the implications with the museum sector – who have remained engaged and positive in both stages of the Options projects.

- **Discussion with other potential users:** establishing the national collection provides opportunities beyond archaeological works from development which can be explored – such as research funded or community based works – or more complex development, such as national infrastructure projects. A blended cost model could include direct infrastructure funding from different bodies, grant funders and agencies which commission archaeological works, for example UKRI, Historic England, Highways Agency, Environment Agency etc.

- **Exploration of interface projects,** specifically:

  - Museum Data Service: https://museumdata.uk/
  - RICHeS Research Infrastructure for Conservation and Heritage Science: https://www.heritagescienceforum.org.uk/what-we-do/riches
  - Towards a National Collection: https://www.nationalcollection.org.uk/about

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# Appendix 1. Existing Charging Structures Request

The following request and questionnaire was used to gather information about charging regimes in operation (see Section 3).

Options for Archaeological Archives: Charging regimes for archaeological archives

Historic England (HE) are funding a new project to assess strategic options for the ongoing issue of storing archaeological archives. The project will continue work which has previously been undertaken, including an assessment of strategic options for storing archaeological archives funded by Historic England and Arts Council England. The outcomes of that project and the recommendations made can be found here: Reports – Options for Archives | DigVentures

The aim of the current project is to inform the development of a charging system for archaeological archives that is fair, proportionate and easily understood.

The project team is led by Sam Paul Heritage and DigVentures, working with Cambridge County Council. The team will be collecting information on alterative charging structures, speaking directly with existing stores to better understand how current cost models contribute to long term storage. Using that data, we'll propose a series of cost model options which will be tested using scenarios based on real case study data. Sector consultation will inform our round up of the project and – importantly – a series of recommendations made to Historic England for discussion within the scope of the Future for Archaeological Archives Programme.

To find out more, visit the project webpages: Options for Sustainable Archaeological Archives | DigVentures

About this questionnaire
As part of the project, we are seeking information from existing archives to include as Case Studies and would like to include your repository in the study. This questionnaire is intended to be a launching point for data collection and will help us begin to compare the range of current cost models utilised across the UK and Europe. Our aim is to better understand how repositories and stores cover the costs of archaeological archives, and plan for future costs. We appreciate that some information might be difficult to provide, so you may not be able to responds to all the questions below. Our intention is to follow-up this initial form with an interview to enable more detail to be added to some of the questions and the opportunity to provide further clarification where appropriate. The results will be anonymised and redacted within any reporting materials.

*Questionnaire*

| **Part 1 – Basic Information** |
|---|
| What is the name of your organisation? |
| Is your organisation accredited? (Yes/No). |
| What is your name? |
| What is your role within your organisation and are you able to answer on behalf of your organisation? |
| What is your contact email address? |

| **Part 2 – Your collection and cost model** |
|---|
| What are the main sources of income for your organisation?<br>Central government.<br>Local authority.<br>Charging for deposition.<br>Charging for research services (x-ray, XRF etc.).<br>Other (please specify). |
| How much new archive material do you accept into your collection / store annually? |
| Do you charge for the deposition of any of newly deposited archives? (yes or no) |
| If yes to above- Is your charging policy based on a box fee structure? (yes, no or occasionally) if not box fees-how? |
| Can you outline your current charging policy?<br>If yes - can you provide an outline? |
| How did you formulate the cost model structure? |
| When was your policy put in place and how often is it reviewed? |
| Where income is generated through your charging policy, is that funding used to resource specific expenditure or does it contribute to the general annual costs of running the store? |
| If your charging policy contributes to a % of costs, do you know what that is? |
| If you are not currently charging for deposition, why not and are you considering doing so in the future? |
| Any other comments or further information? |

# Appendix 2. Archive Deposition Cost Data Capture

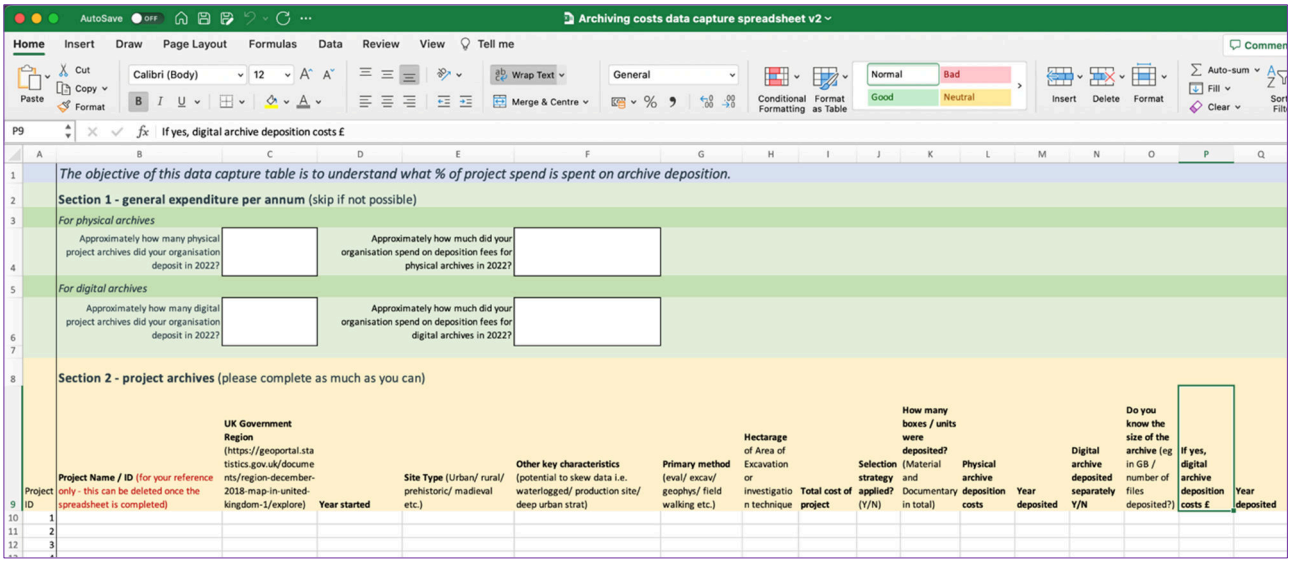
Archiving costs data capture spreadsheet distributed to commercial units (discussed in Section 4). Table 6 shows individual fields requested and Figure 27 shows the spreadsheet used.

Appendix 2, Table 17 Headings within the 'Current cost of archive deposition' data request spreadsheet

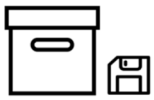
| |
|---|
| Project ID |
| Project Name / ID (for reference only – site specific data is removed) |
| Year started |
| Site Type (Urban/ rural/ prehistoric/ medieval etc.) |
| Other key characteristics<br>(potential to skew data i.e. waterlogged/ production site/ deep urban stratigraphy) |
| Primary method (eval/ excavation/ geophysics/ field walking etc.) |
| Hectarage of Area of Excavation or investigation technique |
| Total cost of project |
| Selection strategy applied? (Y/N) |
| How many boxes / units were deposited? (Material and Documentary in total) |
| How many boxes / units were deposited? (Material and Documentary in total) |
| Physical archive deposition costs |
| Physical archive deposition costs |
| Year Deposited |
| Digital archive deposited separately Y/N |
| Do you know the size of the archive (e.g. in GB / number of files deposited?) |
| If yes, digital archive deposition costs £ |
| Year Deposited |

Appendix 2, Figure 17 Archive Deposition cost data capture spreadsheet (discussed in Section 4).

Image depicts the archive deposition cost data capture spreadsheet sent to archive creators in order to collect details on current archive deposition costs (summarised in Table 17).



# Appendix 3. OPA Model Project Examples



## OPA Example Project A

| | |
|---|---|
| Region: | North East |
| Primary method: | Watching brief |
| Hectarage: | 0.3 |
| Site Type/ other info: | Rural |
| Total cost of project: | £1,500.00 |
| Annual company turnover: | £2.5 million (1.8 million from development) |

### OPA Model 1- Volume or box charge

**Physical only-** Volume, unit or box charges (£50 + £108 per box)

RESULT: **£158** (**Model 1A**)
**+** digital costs to be paid at deposition (***£156***)

Or

**£158 at PXA** (**Model 1B**)
**+** digital costs to be paid at deposition (***£156***)

### OPA Model 2 – Project % Levy

**Physical only**
Levy of 3.5% of project costs on agreement of WSI

RESULT: **£53**
**+** digital cost to be paid at deposition (***£156***)

**Physical & digital**
Levy of 7% of project costs on agreement of WSI

RESULT: **£105**

### OPA Model 3 – Contractor Turnover % Levy

**Physical only**
Contractor turnover Levy

RESULT: **£75,000 pa (Model 3A - 3%)**
**+** all digital deposition costs

OR
**£63,000 pa (Model 3B – 3.5%)**
**+** all digital deposition costs

**Physical and Digital**
Contractor turnover Levy

RESULT: **£150,000 pa (Model 3A - 6%)**

OR
**£126,000 pa (Model 3B – 7%)**

### OPA Model 4- Development Levy

**Physical and Digital**
Levey of 7% of project costs on WSI

RESULT:
**£105**

### OPA Model 5 – Cost by Volume

**Physical and Digital**
NCAA charge £280 per project at WSI, plus £5,344 per M3 +£4/GB

RESULT:
**£438**

What Project A actually cost to deposit:

| | | |
|---|---|---|
| Deposited in 2022 | **Total deposition cost £186.00** | 12.40% of overall costs |
| (1 physical box £30 & 17 digital files £156) | | |

## OPA Example Project B

| | |
|---|---|
| Region: | East Midlands |
| Primary method: | Monitoring |
| Hectarage: | |
| Site Type/ other info: | (digital only) |
| Total cost of project: | £3,500 |
| Annual company turnover: | £150,000 (all from development) |

### OPA Model 1- Volume or box charge

**Physical only-** Volume, unit or box charges (£50 + £108 per box)

RESULT**: £0** (**Model 1A**)
**+** digital costs to be paid at deposition (***£210***)

OR
**£0 at PXA** (**Model 1B**)
**+** digital costs to be paid at deposition (***£210***)

### OPA Model 2 – Project % Levy

**Physical only**
Levy of 3.5% of project costs on agreement of WSI

RESULT: **£123**
**+** digital cost to be paid at deposition (***£210***)

**Physical & digital**
Levy of 7% of project costs on agreement of WSI

RESULT: **£245**

### OPA Model 3 – Contractor Turnover % Levy

**Physical only**
Contractor turnover % Levy

RESULT: **£4,500 pa (Model 3A - 3%)**
**+** all digital deposition costs

OR
**£5,250 pa (Model 3B – 3.5%)**
**+** all digital deposition costs

**Physical and Digital**
Developer funded Contractor turnover % Levy

RESULT: **£9,000 pa (Model 3A - 6%)**

OR
**£10,500 pa (Model 3B – 7%)**

### OPA Model 4- Development Levy

**Physical and Digital**
Levey of 7% of project costs on WSI

RESULT:
**£245**

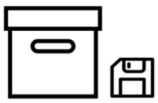
### OPA Model 5 – Cost by Volume

**Physical and Digital**
NCAA charge £280 per project at WSI, plus £5,344 per M3 +£4/GB

RESULT:
**£490**

What Project B actually cost to deposit:

| | | |
|---|---|---|
| Deposited in ? | **Total deposition cost £210** | 5.76 % of overall costs |
| (digital only- 80 files £210) | | |



## OPA Example Project C

| | |
|---|---|
| Region: | Yorkshire and the Humber |
| Primary method: | Evaluation |
| Hectarage: | 0.9 |
| Site Type/ other info: | Excavation, Roman Rural |
| Total cost of project: | £38,504.60 |
| Annual company turnover: | £5 million (£3.8 million from development) |

### OPA Model 1- Volume or box charge

**Physical only-** Volume, unit or box charges (£50 + £108 per box)

RESULT**: £1,238** (**Model 1A**)
**+** digital costs to be paid at deposition (***£233***)

OR
**£1,238 at PXA** (**Model 1B**)
**+** digital costs to be paid at deposition (***£233***)

### OPA Model 2 – Project % Levy

**Physical only**
Levy of 3.5% of project costs on agreement of WSI

RESULT: **£1348**
**+** digital cost to be paid at deposition (***£233***)

**Physical & digital**
Levy of 7% of project costs on agreement of WSI

RESULT: **£2,695**

### OPA Model 3 – Contractor Turnover % Levy

**Physical only**
Contractor turnover % Levy

RESULT: **£150,000 pa (Model 3A - 3%)**
**+** all digital deposition costs

OR
**£133,000 pa (Model 3B – 3.5%)**
**+** all digital deposition costs

**Physical and Digital**
Developer funded Contractor turnover % Levy

RESULT: **£300,000 pa (Model 3A - 6%)**

OR
**£266,000 pa (Model 3B – 7%)**

### OPA Model 4- Development Levy

**Physical and Digital**
Levey of 7% of project costs on WSI

RESULT:
**£2,695**

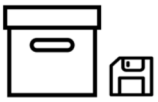
### OPA Model 5 – Cost by Volume

**Physical and Digital**
NCAA charge £280 per project at WSI, plus £5,344 per M3 +£4/GB

RESULT:
**£1,701**

What Project C actually cost to deposit:

| | | |
|---|---|---|
| Deposited in 2022 | **Total deposition cost £1,169.78** | 3.04 % of overall costs |
| (11 physical boxes £936 & 190 GB data £233) | | |



## OPA Example Project D

| | |
|---|---|
| Region: | North East |
| Primary method: | Excavation |
| Hectarage: | |
| Site Type/ other info: | Road scheme, Roman settlement |
| Total cost of project: | £300,000 |
| Annual company turnover: | £12 million (£11.5 million from development) |

### OPA Model 1- Volume or box charge

**Physical only-** Volume, unit or box charges (£50 + £108 per box)

RESULT**: £16,250** (**Model 1A**)
**+** digital costs to be paid at deposition (***£?***)

OR
**£16,250 at PXA** (**Model 1B**)
**+** digital costs to be paid at deposition (***£?***)

### OPA Model 2 – Project % Levy

**Physical only**
Levy of 3.5% of project costs on agreement of WSI

RESULT: **£10,500**
**+** digital cost to be paid at deposition (***£?***)

**Physical & digital**
Levy of 7% of project costs on agreement of WSI

RESULT: **£21,000**

### OPA Model 3 – Contractor Turnover % Levy

**Physical only**
Contractor turnover % Levy

RESULT: **£120,000 pa (Model 3A - 3%)**
**+** all digital deposition costs

OR
**£240,000 pa (Model 3B – 3.5%)**
**+** all digital deposition costs

**Physical and Digital**
Developer funded Contractor turnover % Levy

RESULT: **£720,000 pa (Model 3A - 6%)**

OR
**£805,000 pa (Model 3B – 7%)**

### OPA Model 4- Development Levy

**Physical and Digital**
Levey of 7% of project costs on WSI

RESULT:
**£21,000**

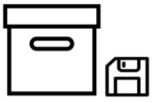
### OPA Model 5 – Cost by Volume Levy

**Physical and Digital**
NCAA charge £280 per project at WSI, plus £5,344 per M3 +£4/GB

RESULT:
**£16,480 +** digital (***£?***)

What Project D actually cost to deposit:

| | | |
|---|---|---|
| Deposited in 2018 | **Total deposition cost £7,500** | 2.5 % of overall costs |
| (150 physical boxes £7,500, no digital deposition) | | |



## OPA Example Project E

| | |
|---|---|
| Region: | West Midlands |
| Primary method: | Excavation |
| Hectarage: | |
| Site Type/ other info: | Large infrastructure project, multi-period |
| Total cost of project: | £3,500,000 |
| Annual company turnover: | £24.5 million (£22 million from development) |

### OPA Model 1- Volume or box charge

**Physical only-** Volume, unit or box charges (£50 + £108 per box)

RESULT**: £86,450** (**Model 1A**)
**+** digital costs to be paid at deposition (***£23,000***)

OR
**£86,450 at PXA** (**Model 1B**)
**+** digital costs to be paid at deposition (***£23,000***)

### OPA Model 2 – Project % Levy

**Physical only**
Levy of 3.5% of project costs on agreement of WSI

RESULT: **£122,500**
**+** digital cost to be paid at deposition (***£23,000***)

**Physical & digital**
Levy of 7% of project costs on agreement of WSI

RESULT: **£245,000**

### OPA Model 3 – Contractor Turnover % Levy

**Physical only**
Contractor turnover % Levy

RESULT: **£735,000 pa (Model 3A - 3%)**
**+** all digital deposition costs

OR
**£770,000 pa (Model 3B -3.5%)**
**+** all digital deposition costs

**Physical and Digital**
Developer funded Contractor turnover % Levy

RESULT: **£1,147,000 pa (Model 3A - 6%)**

OR
**£1,540,000 pa (Model 3B – 7%)**

### OPA Model 4- Development Levy

**Physical and Digital**
Levey of 7% of project costs on WSI

RESULT:
**£245,000**

### OPA Model 5 – Cost by Volume Levy

**Physical and Digital**
NCAA charge £280 per project at WSI, plus £5,344 per M3 +£4/GB

RESULT:
**£109,680**

What Project E actually cost to deposit:

| | | |
|---|---|---|
| Deposited in 2021 | **Total deposition cost £63,000** | 1.8 % of overall costs |
| (800 physical boxes £40,000 & 50,600 files £23,000) | | |

# Appendix 4. CIfA Conference Session Outline

**Covering The Cost: Archaeological Archives** | Thursday, 20 April: 14:00 – 17:30

Organiser(s): Samantha Paul, Manda Forster and Sally Croft

The success of development-led archaeology since the early 1990s led to a major increase in the quantity of archaeological material in museum stores across the country. Increasingly, museums are becoming unable to accept new finds, limiting access to archives and creating issues of storage. Recent research projects commissioned by Historic England and Arts Council England have aimed to understand how this issue can be best supported by exploring a sustainable model with capacity for future and legacy archives.

The 2021 Options for Sustainable Archaeological Archives (OSAA) project made recommendations for the creation of a National Collection of Archaeological Archives (NCAA) (find the report here). The OSAA project suggested a new model for archives which guaranteed accession for all archives, highlighting the need for a new sustainable cost model which moves away from the traditional box fee approach. The implementation of a new cost model would potentially impact all stages within planning led archaeology – from the initial costing and tender processes, through to selection, deposition and accessioning of the final project archive. The feasibility of alternative cost models and implications for the sector are being investigated through a new project funded by HE: the Options Appraisal for Costing Models for the Transfer of Archaeological Archives.

This session will present the initial findings from a data collection phase of the project, exploring the potential impact of different cost models using real-world project examples to explore the sustainability of potential costing structures. Session attendees will be asked to take a closer look at the proposed cost models, helping to stress test and assess each scenario and provide feedback into the overall project results. If it is your job to cost projects or manage organisational budgets, whether you deal with archive deposition boxes or fees, or if you simply love the idea of depositing some stuck archives – come along. The session provides a key moment for those interested in creating a sustainable future for archaeological archives to contribute to new models which will impact the sector.
The session will be delivered in four sections:

1. The National Collection of Archaeological Archives – Manda Forster will provide a summary of the Options for Archives project recommendations, followed by an open discussion about potential impacts and changes proposed.

2. Cost models for a sustainable archive – Sam Paul, Manda Forster and Sally Croft will present the cost mechanisms collated from desk-based research and modelling. We'll have a Q&A session to get to grips with the different model elements.

3. The Stress Test – Participants will be invited to look at different project scenarios and how they would be affected by each cost model. Working in groups, we'll do a simple SWOT analysis of each scenario, and discuss the results.

4. Feedback and next steps – We'll discuss the results of the session and make a note of key findings, which will feed into recommendations made to Historic England and further development of the proposed cost models.

The importance of archives as a resource for future research, must be assured with a realistic and scalable model able to guarantee future access to the results of archaeological projects. Following this session and with additional sector wide consultation, it is hoped the current project will produce a framework and recommendations which can kickstart a sustainable future for archaeological archives.

# Appendix 5. Targeted Workshops Outline

**Workshop Information**
Organiser(s):
Samantha Paul, Consultant
Manda Forster, Chief Operating Officer, DigVentures
Sally Croft, HER & Archives Manager, Cambridgeshire County Council.

The success of development-led archaeology since the early 1990s led to a major increase in the quantity of archaeological material in museum stores across the country. Increasingly, museums are becoming unable to accept new finds, limiting access to archives and creating issues of storage. Recent research projects commissioned by Historic England and Arts Council England have aimed to understand how this issue can be best supported by exploring a sustainable model with capacity for future and legacy archives.

The 2021 Options for Sustainable Archaeological Archives (OSAA) project made recommendations for the creation of a National Collection of Archaeological Archives (NCAA) (find the report here). The OSAA project suggested a new model for archives which guaranteed accession for all archives, highlighting the need for a new sustainable cost model which moves away from the traditional box fee approach. The implementation of a new cost model would potentially impact all stages within planning led archaeology – from the initial costing and tender processes, through to selection, deposition and accessioning of the final project archive. The feasibility of alternative cost models and implications for the sector are being investigated through a new project funded by HE: the Options Appraisal for Costing Models for the Transfer of Archaeological Archives.

The project team will be hosting three online conversations to discuss the proposed NCAA and explore the potential impact of different cost models and their sustainability. Workshop participants will be asked what they think will work, looking at the proposed cost models, helping to stress test and assess each scenario and providing feedback into the overall project results.

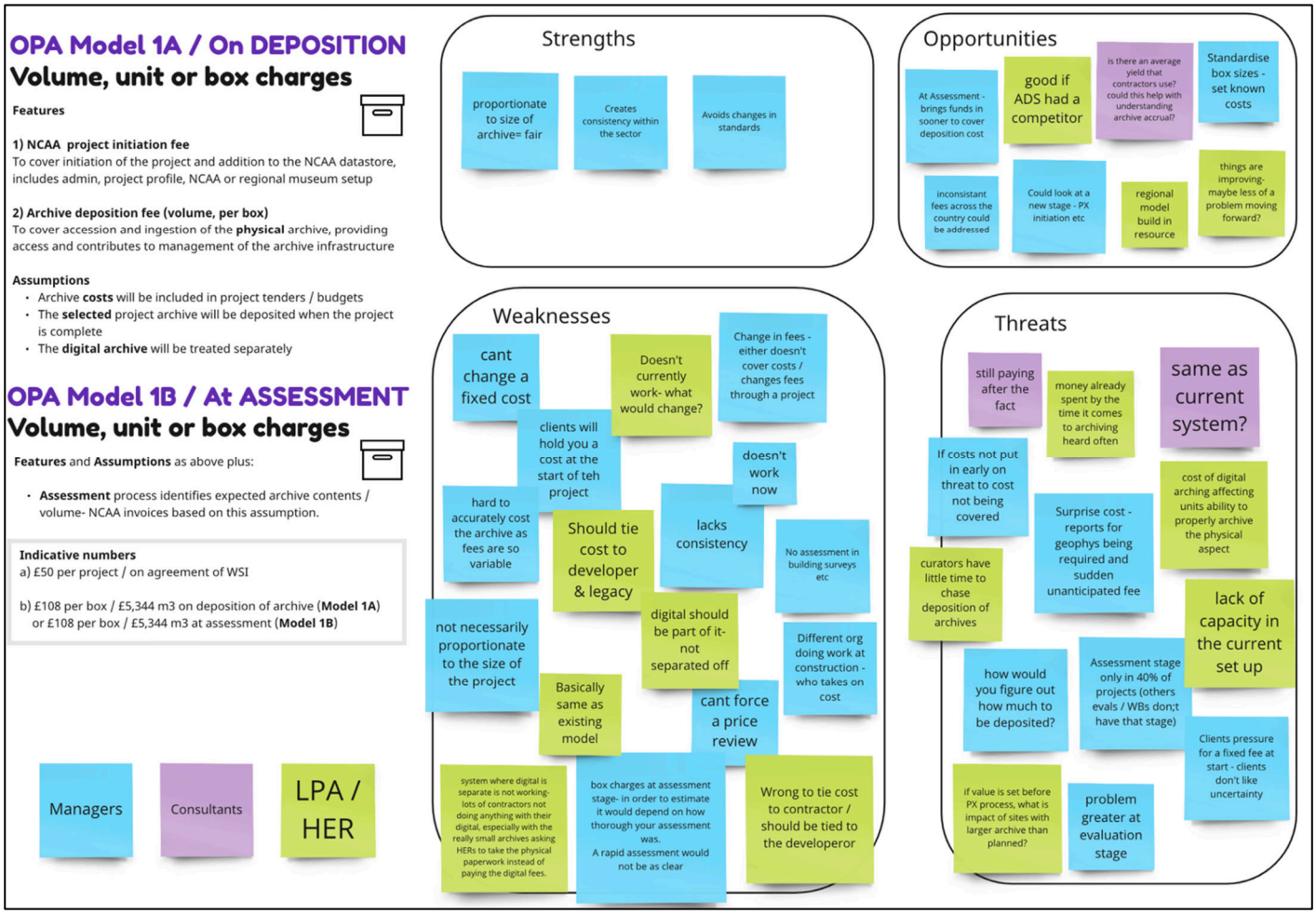
The importance of archives as a resource for future research, must be assured with a realistic and scalable model able to guarantee future access to the results of archaeological projects. The workshops are a key moment for those interested in creating a sustainable future for archaeological archives to contribute to new models which will impact the sector. Following this session and with additional sector wide consultation, it is hoped the current project will produce a framework and recommendations which can kickstart a sustainable future for archaeological archives.

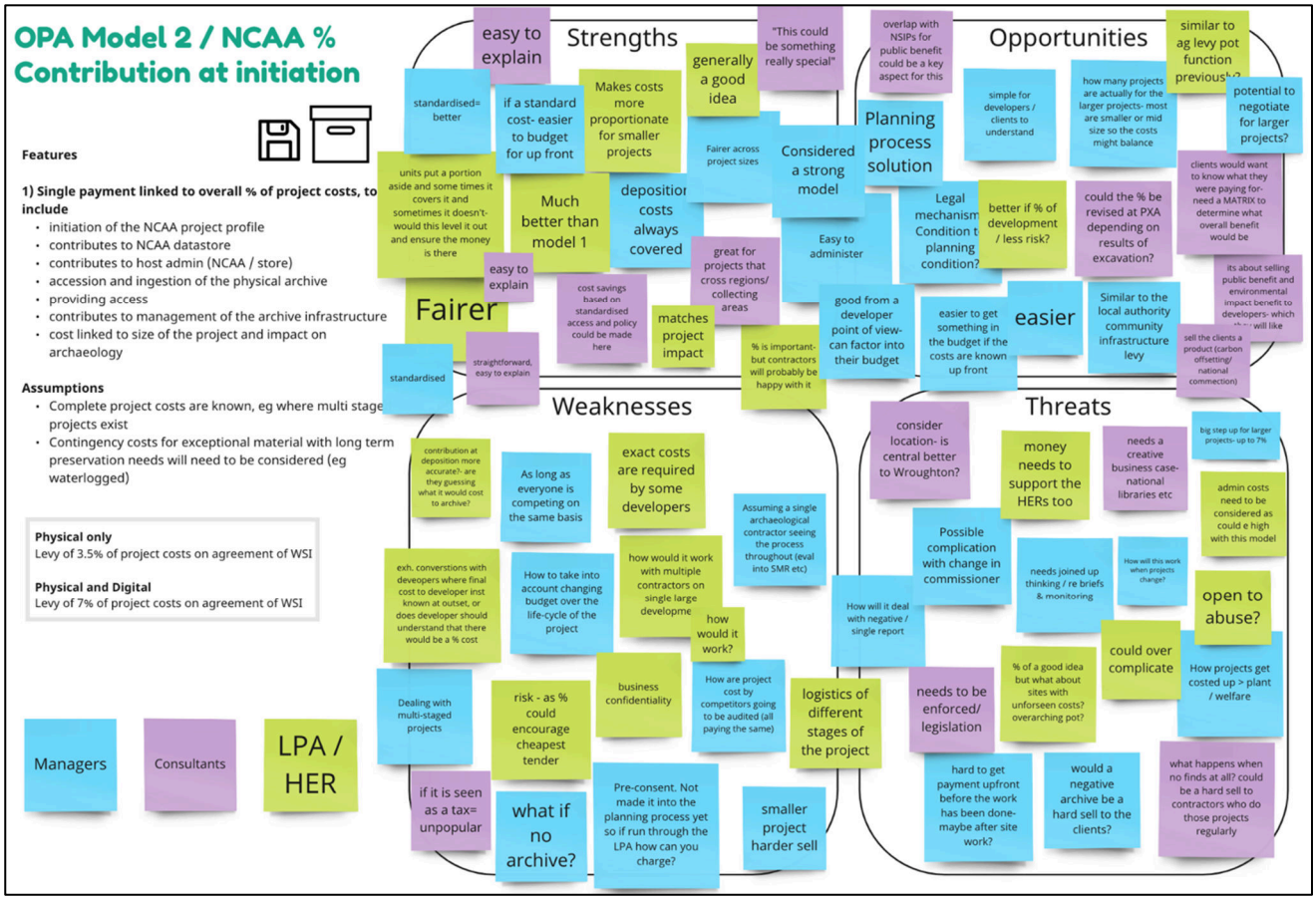
# Appendix 6. Workshop Feedback

During all consultation workshops a Miro board canvas was used to collect feedback during delivery. Note that the following images show these boards as collected during the workshop – they have not been amended, and so any variation in font size of notes is a result of the platform used, rather than any emphasis added by the project team. They provide a record of the discussions held during the consultation, but should be considered a visual representation to be viewed alongside the summaries presented in Section 6 of the main report text, and not a standalone product.

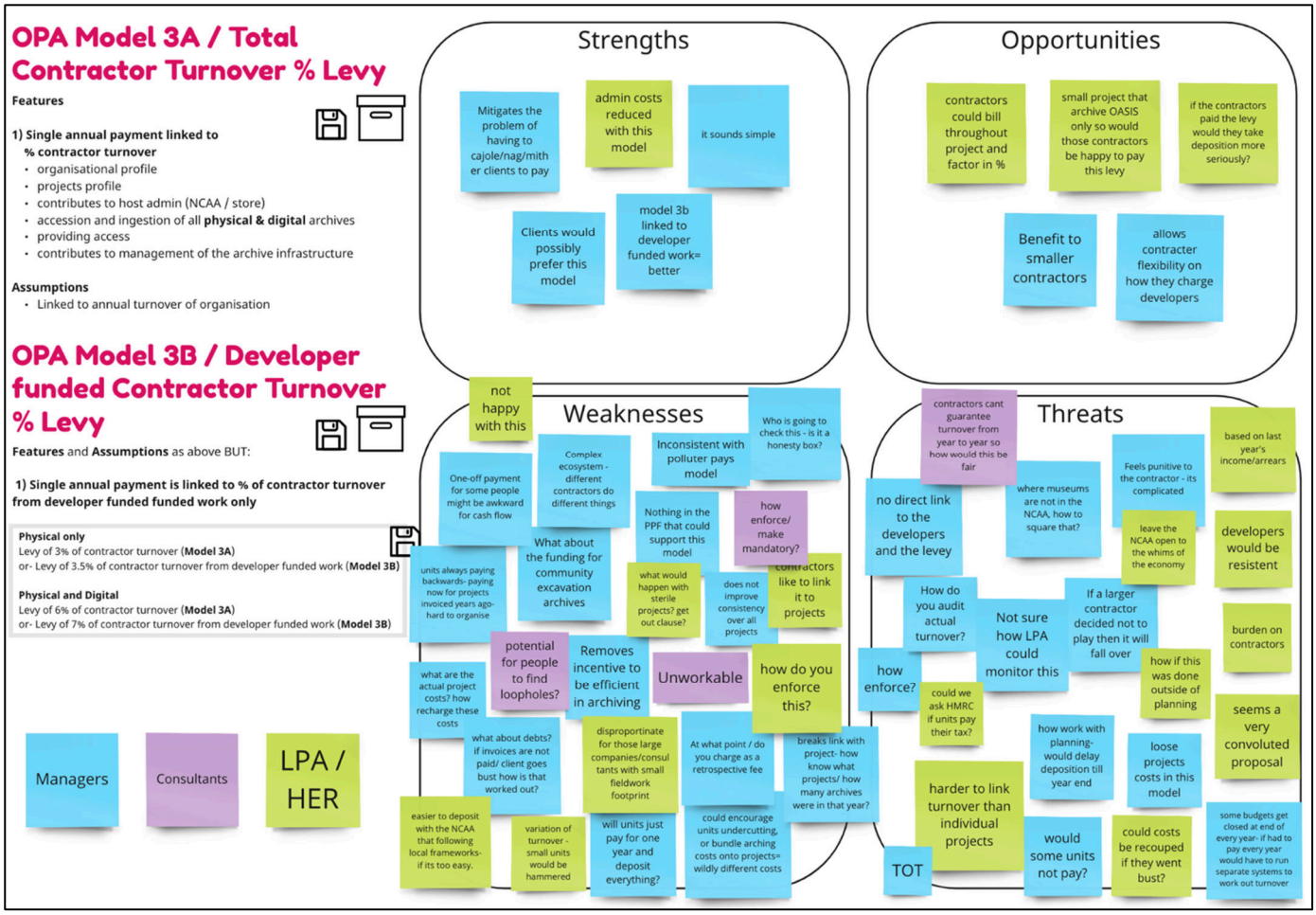
The boards show collated responses from each workshop: responses from the consultants are shown on purple post-it notes, the planning archaeologists and HER representatives on green post-it notes, and the contractors' responses on blue post-it notes.



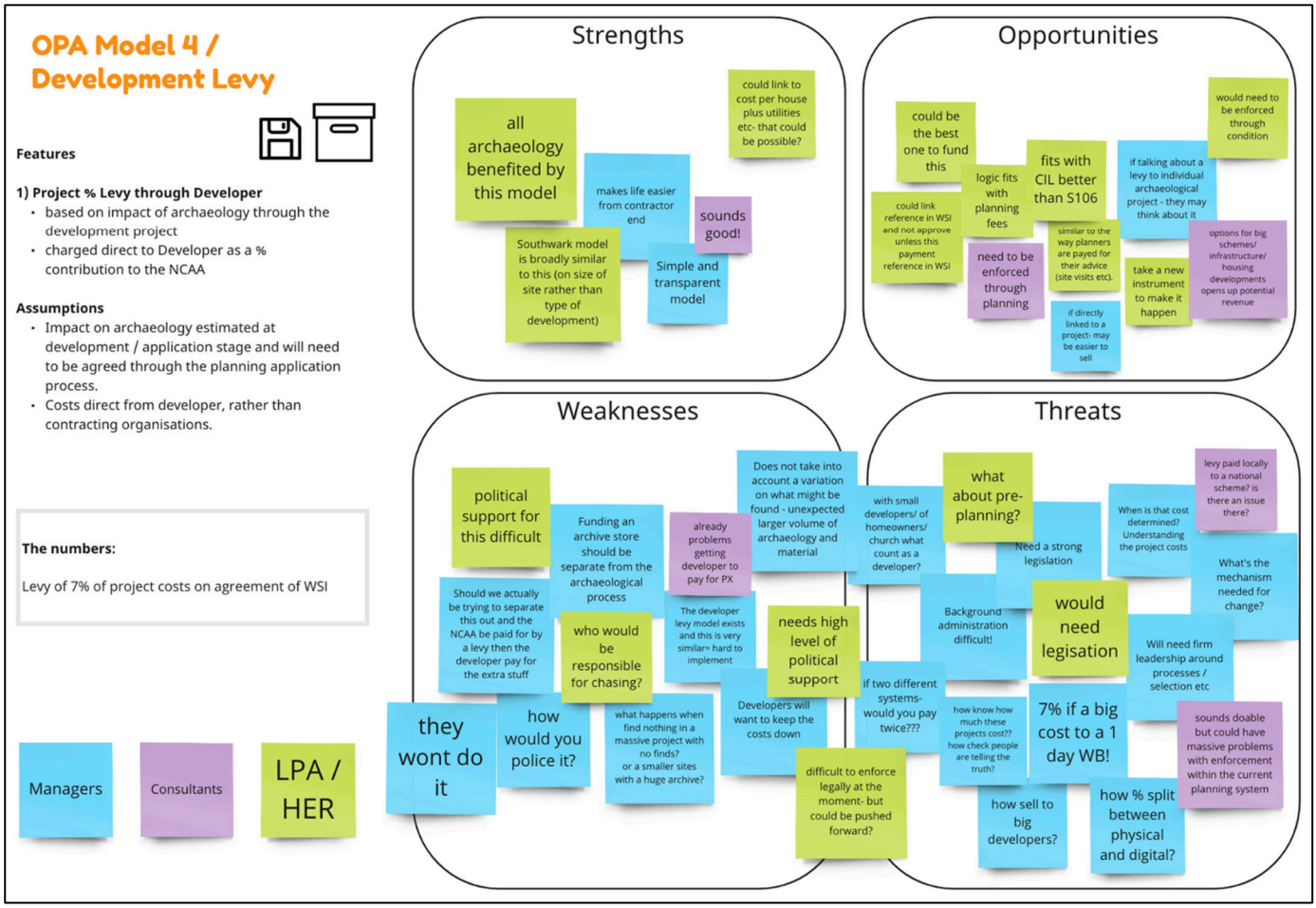

Appendix 6, Figure 18 OPA Model 1 targeted workshop sessions feedback (summarised in Section 6.5)



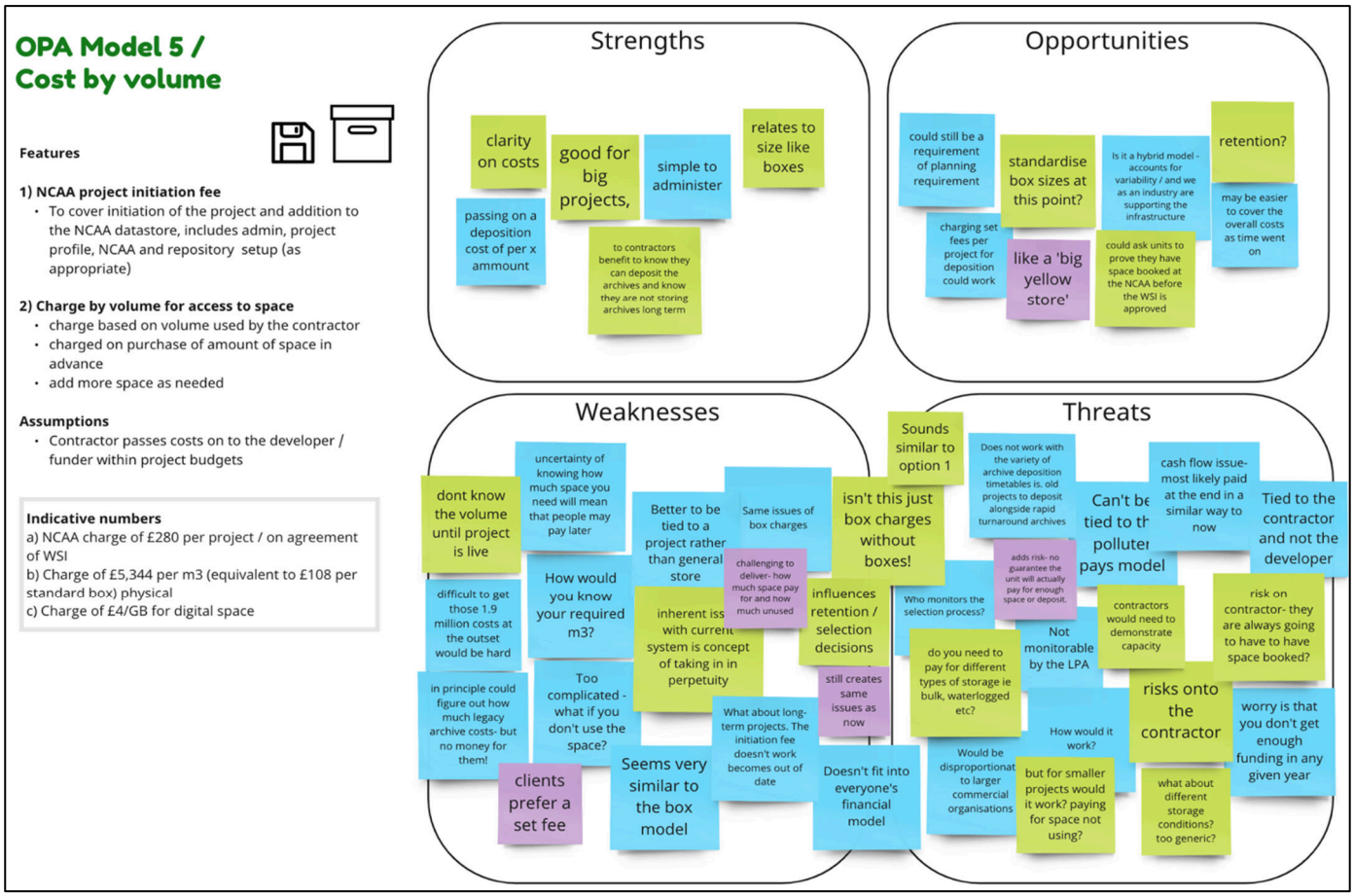

Appendix 6, Figure 19 in Section 6.6) OPA Model 2 CIfA conference session feedback (summarised




Appendix 6, Figure 20 OPA Model 3 targeted workshop session feedback (summarised in Section 6.7)




Appendix 6, Figure 21 OPA Model 4 targeted workshops session feedback (summarised in Section 6.8)




Appendix 6, Figure 22 OPA Model 5 targeted workshops session feedback (summarised in Section 6.9)

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