

**Name:** Paul Crame. **Course Module:** MA Archaeological Practice - Archaeological Project Reporting (HPAR7006). **Tutors:** Nigel Nayling and Martin Locock. **Date:** 31/12/2022 **Word Count:** 3576.

Consider the requirements of formal publication, including standards for writing, editing and style, for a range of archaeological project outputs.

An input can be described as an activity which involves an archaeological intervention resulting in an output, which could include any of the following: excavation, historic building surveys, planning consultations, mitigation advice, environmental impact assessments, archaeological evaluations, test pitting, archaeological stripping, mapping, and sampling, watching briefs, geoarchaeology surveying, environmental data analysis, scientific dating, finds processing and analysis. However, research inputs can also be derived from academic sources. For example, new archaeological project data generated from qualitative attitudinal surveys on specific topics; or a re-valuation and interpretation of longitudinal datasets gathered over many years and locations by researchers.

The resulting research output can be equally nebulous to identify and include various formats and categories of publication from numerous research activities. For example, a museum information panel explaining a display of artefactual evidence can result from multiple project outputs over decades of multidisciplinary research, distilled into a succinct descriptive paragraph of information on the outside of a display case. Conversely, at the other end of the spectrum, it could take the format of a vast four-volume monograph, journal article, conference paper, thesis, published report, grey literature report, news article, datasets, computer code, image files, artistic installations or OASIS and Historical Environmental Records (HER).

The possibilities for archaeological project outputs can be multiple in the broader sphere of communication and publication. Although choice, in terms of what, how and why we publish a project's output, can be circumscribed by external formal structural requirements, available project resources, and perhaps subtle cultural influences (Ellenberger, *et al.* 2018). These factors determine the shape of research outputs in terms of the style employed and how research is edited before final publication. The following assignment, therefore, considers the formal publication requirements for project outputs from the minimal requirements of dissemination in a singular HER record to more extensive forms of publication, such as reports, journal articles and monographs.

Formal publication processes can be grouped in terms of what information we make available at specified times in a research project cycle, which depends on the type of input used to generate the research output. Broadly we can categorise these input activities into three groups. Firstly, inputs that set-in motion to produce a publication which facilitates project planning; for example, this can take the format of Desk Based Assessments (DBAs), internal project management reports, data management and archival plans or Written Schemes of Investigation (WSI). Secondly, inputs that consolidate understanding once a project has started; for example, this can take the format of highlight reports, monitoring reports and initial post-ex data cleaning and processing reports. Lastly, the most prominent

mode of publication is the dissemination of a project's cumulative outputs at the end of a project cycle. For example, this can take the format of HER records, watching briefs, excavations reports, monographs, journal articles, conference proceedings and published project archives.

The first and second groups in the project cycle have a limited or selective publication strategy targeted at key research project stakeholders. This pre-emptive grey literature and extant communication reports are written to inform professionals in the heritage sector efficiently. Therefore, these outputs are predominantly determined by guidance and advice from professional organisations. For example, CIFA's regulations standards and guidance (CIFA, 2022); Historic England MORPHE projects design templates (Historic England, 2022); and representative bodies such as the Association of Local Government Archaeological Officers (ALGEO); who produce generalised frameworks for archaeological assessments based on the requirements of local planning policies (ALGAO, 1993).

Notably, much of this documentation is intended as guidance for professionals in producing grey literature publications, which to a certain extent, allows agency for the author. This does bring into question the main critique of any grey literature report, how do we determine accuracy? The interpretation of the author characterises grey literature. There may be an editing process by a senior team member to proofread for technical mistakes in a report, but essentially grey literature is not a vigorously peer-reviewed project output, and this should always be taken into consideration when we evaluate the merit of these outputs. Therefore, the onus of responsibility is shared with the professional readership to check that publication standards are being followed by paying attention to how the information is being presented and cited. For example, in a DBA, this could have significant implications for a heritage project, as often, these types of grey literature reports are commissioned by a developer to a consulting agent who minimises the project expenditure.

Good practice in producing published grey literature at the start and during the project cycle should therefore follow certain conventions on style to communicate reliable and detailed information. Various archaeological contractors and heritage consultancies can produce these types of publications, so they need to use corporate branding to identify the organisation responsible for the report. The report title identifies the project's geographical location, which should be preceded by the type of grey literature report, i.e., WSI, and maybe include information such as in response to a particular planning application number. Dates and version numbers are important, especially with large infrastructure projects that can produce a multitude of grey literature reports. This information is preferably placed into a version control table that lists the version numbers against the changes by authors with the corresponding dates.

Any grey literature report should show evidence of due diligence. A transparent process, where the report has been approved and signed by a named senior member of the project team on specific dates, listing the type of information that has been reviewed and approved before the final publication of the research output. A well-structured grey literature report should be signposted for the reader with a contents page linked to sub-titled sections of the report with page numbers. The first three sections of a content table should direct the

reader to the index of illustrations, index of tabulated data and acknowledgements, avoiding emotive language. Reports generally use numerical pagination to break information into digestible sections, removing the requirement of textual signpost to order the flow of content.

It would be convoluted to impose a strict layout structure for a grey literature report, as many variables can determine the final content, not least the type of input. However, generally, the body of a report should have some of the following structure. A summary that contains the purpose, results, conclusions, and recommendations of the report; the language style should be neutral but informative, accurately reflecting the broad content of the report. Background, which could, for example, include technical information about geology, topography, and archaeological phasing, providing a prologue for the body of the report. Methodology detailing the nature of the research intervention, such as documentary research, field survey or excavation. Results, often the language style can be repetitive in grey literature reports, for example, evaluations that require a lot of similar data to be articulated for each evaluation trench. However, the objective is not to be entertaining but to evidence in the literature that the methodology has been carried out to a requisite professional standard. Conclusion or discussion often involves recommendations for further mitigation or a justification that the objectives have already been achieved in the research output. The bibliography is essential to any grey literature report, as it substantiates the content with sources. How the bibliography is ordered and edited depends on the adopted internal house style of the organisation commissioned to produce the grey literature.

The appendices of grey literature reports in archaeology can contain a larger volume of information than the actual body of a report. Over the years, we have broadly seen a community of standardisation; as grey literature in repositories such as the Archaeological Data Service (ADS) has increased in volume, the structure and style have become formulaic across organisations (Evans, 2015). The structure of appendices reflects this shift, where we see GIS maps, photos, illustrations, tabularised data, figures, glossary, archival coversheets, Oasis data collection forms and specialist scientific reports taken from the main flow of the text body and referenced to the appendices.

*Grey literature* is an unfortunate term that carries baggage, which is now becoming outdated, while *white literature* is debatably losing some of its appeal and dominance with the arrival of internet repositories and open-access publications (Coalition-S.org, 2022). As a profession, what we produce in reports far outweighs what is produced in peer-reviewed articles, proceedings, and monographs (Fulford, 2011 ). We can therefore see many factors interplaying in the production of structured and standardised reports, produced by archaeological contractors to a professional standard and uploaded to ADS under creative commons. Therefore, a community process of quality and version control exists, which is very sustainable, and more guidance and toolkits are produced each year on a wide range of topics to improve standards in publication. For example, how we plan and publish project data (Forester, 2019); and guidance on specialist toolkits and advisory checklists to produce consistent reporting across various specialities (CIFA, 2021). More must be done to disseminate the core skills and knowledge needed to publish reports; otherwise, style can

become biased and outmoded with organisations that strictly follow internal procedures and house style without developing outward community practice.

Over the last few decades, we have also experienced a shift towards stricter standardisation in grey literature research outputs, with the expansion of both OASIS, ADS, and the use of structured metadata and controlled vocabularies (FISH, 2022) in the HER. This change follows on from the FAIR principles (Go Fair, 2016); where the first principal was to make research outputs **Findable** for humans and computers, via persistent identifiers such as author Orchid IDs (Orchid, 2021); accurate, descriptive metadata standards and linked metadata and datasets indexed on the internet. Secondly, **Accessible** research data that used internet protocols that are free and open-sourced to anyone with a connection to the internet. Thirdly, research data that is **interoperable**, this means that information concerning a new research project can be shared among stakeholders. The latest iteration of OASIS V (Oasis, 2021) has facilitated this principle by allowing research outputs to be uploaded to ADS with requisite metadata standards (DCMI, 2022); and quality controlled with local statutory agencies responsible for the updated maintenance of HER records. Lastly, **Reusability**, an important advantage from commercial publication is the use of creative commons (Creative Commons, 2021), enabling research outputs on ADS to be shared and reused, bypassing profit-based copyright requirements. These principles have helped to substantiate grey literature from paper-based reports, collecting dust and locked away in a limited number of archives, to a model which raises professional standards of analysis and enables transparency of research outputs to be feedback into regional and national frameworks.

From an author's perspective, this means that there are stricter protocols to be aware of and follow when producing research outputs from work in the field; comparatively to a post-excavation report in the past, where both resources and time may have been limited and not allocated into a project's life cycle. This translates into better IT literacy skills to use sophisticated reporting platforms such as OASIS, a basic understanding of what controlled vocabularies mean when describing project data and how this converts into HER record and is structured with MIDAS (MIDAS, 2012) a data standard. Although repositories and databases are automated and quality controlled to a certain extent, it is still necessary to consider these requirements when producing outputs, not least as they can entail significant costs to a projects budget if large amounts of data need to be uploaded.

Occasionally a standard research output will be approved for publication by a regional journal, university press, learned society publishers, mainstream national or international private publishers into a journal article, conference proceedings or perhaps a monograph. Occasionally is the keyword, as the overall volume of archaeological research outputs that translates to this higher form of publication is relatively small compared to formal research outputs produced everyday from interventions by commercial archaeology units in the UK (Fulford, 2011).

The scholarly publishing landscape is hierarchical and constantly evolving. From rapid changes in regulative frameworks for categorising research outputs (REF, 2021), financial restructuring from traditional subscription-based journals to open access and hybrid

journals, and statistical metrics to measure how journal rankings and citation data is used across different platforms and media types to achieve research impact. The overall process is, therefore, bewildering for both early-stage researchers and senior academics, who may be experts in a particular subject area but lack the IT literacy skills to navigate the modern publishing model.

At a fundamental level, there are specific requirements, questions, and decision-making processes that all researchers need to consider.

Where does the research output fit into the scholarly communication landscape? If the output was a descriptive field report in style and contributed to an accumulative better understanding of a particular geographic area or established subject without being original. In that case, it may be preferable to produce a grey literature report to be uploaded to ADS. Alternatively, consider smaller forms of private formal publication, such as regional journals where dissemination is focused on a particular interest group or geographical area. The impact is the axiom for assessing how a research output fits into the Research Excellence Framework. It is a practical approach for considering any dissemination strategy to a particular category of higher publication. This method requires the author to contextualise the research output into either a **one-star** publication, where it can be recognised in a national publication as being original new work of sufficient rigour. A **two-star** international publication of originality, significance, and rigour. **Three-star** international excellence and originality of a high standard, and finally, **four-star** world-leading with excellence and originality (REF, 2014).

Having established the level of higher publication, it is then necessary to consider the format, the disciplinary subject area, and the choice of journal. This can be based on citation data or the copyright or Digital Rights Management (DRM) if the corresponding author has funding for Open Access and wants wider dissemination of the research output. The format will almost always be digital in higher forms of publications; the exception might be monographs where an external funder in the private or public sectors for large infrastructure projects pays for the paper publication costs. However, in the modern publishing of research outputs, they are invariably communicated in a digital format.

Proceedings from conference papers are an excellent conduit to get work recognised and published. This is especially the case with early career researchers who need to network and contact commercial publishers and other academics in a chosen field of study. Therefore, it is good practice to submit papers, abstracts, or posters to a conference as a first requirement to get published.

Alternatively, a corresponding author can contact a journal editorial board, many of whom are senior academics contributing to research in the subject area. However, it is essential to have a plan of action before approaching a journal's editorial team. The first objective is to look at the aims and scope of the journal and then review if the research output is a good fit for the journal. Secondly, reviewing the journal's data is important, and several online tools can help with this task. Scopus for online citation and ranking data (Scopus, 2022). The Directory of Open Access Journals (DOAJ) to review open access options (DOAJ, 2022).

Altmetric to see how and where articles are being downloaded and shared globally (Altmetric, 2022). From a career development perspective, there is a clear benefit in trying to publish in high-ranking journals, but this must be balanced against factors such as the suitability of the research output and the level of scholarship required to meet those higher standards.

It is essential to communicate practical considerations when contacting a publisher to produce a journal article or even a substantive monograph. The final publication is a serious undertaking involving a significant commitment in both time and resources for all the parties involved. Therefore, the author should include an accurate working title, a description of the research aims, the approximate number of pages, deliverable objectives, timetables and, importantly, detailed information about illustrations, photos and figures used in the output. Archaeology is a visual discipline, and a substantive amount of the final publication could be non-textual in format. It is, therefore, important to include information such as scales and units to be used in maps, digital formats, resolutions, textual descriptions of visual data, sourced accreditations and copyright approval and use of colouration in the output. All these factors impact the overall production cost, time, and accessibility of the research output.

Critical factors also need to be clearly communicated when contacting a publisher. Firstly, who is the audience? Publishers publish to return a profit, or the whole process would be unsustainable, so it is essential to clarify who the target audience is and back this claim up with data. Secondly, what is unique about the research output? The author needs to comprehensively review the available literature on the subject area and make a clear case to the publisher that the output should be published because it is a new and relevant research area.

A journal's guidelines to authors determine the structure. Evident variations in requirements can be found between purely science-based journals that usually require a tighter structure with pre-determined subheadings (Science Direct, 2022) and journals that produce humanities research, allowing increased agency in structure and layout (Springer, 2022). However, the style depends on the corresponding author's writing skills and disciplinary background. Although, some universals should be adhered to in the use of signposting to structure the content, avoiding the repetition of language and ideas, no use of idiomatic or colloquial language, critical objectivity with structured reasoning, cohesive words to connect ideas and plenty of punctuation to make the language digestible, concise.

The submission process usually involves sending a digital PDF version of the output with associated image files, spreadsheets, or audio as pre-determined by the guidelines. It is important to consider the legal requirements, such as consent from co-authors and other affiliations and organisations, preferably evidenced in the submission process with a declaration. Also, disclosure of any financial or non-financial interest should be made clear at this point, and compliance with the journal's ethical guidelines in terms of plagiarism, confidentiality, and accessibility of content.

Peer review is followed on from the initial checks in the submission process. This formal process of peer review contrasts with grey literature reports, as the content of the output is vigorously deconstructed and examined by experts in the specific area of research. Therefore, the standards can be considerably exacting, but the feedback is usually instructive and valuable. The corresponding author is entitled to challenge feedback, but it is essential to provide critical justification to counter the feedback. Otherwise, the author should accept the advice and make changes. However, if it is a substantive change to the overall content and character of the output, then a revision might not be a possible option. It may be time to consider publishing in a less rigorously peer-reviewed journal.

If the output passes the peer review process and the article is accepted for publication, the author usually receives acceptance and a formal authors agreement. At this point proofs of the output are produced, and it is an opportunity for the corresponding author to disseminate these unpublished outputs as Author Accepted Manuscripts (AAMs) to green open access institutional repositories, usually hosted by universities. Often there is an embargo period placed on these outputs of twelve months from the date that the output was accepted, and a requirement that it is under a specified creative common for copyright protection. Gold open access is another option for the corresponding author, but this is dependent on funding; often publishers have agreements with universities to offset the costs of gold open access when institutions subscribe to large journal packages or organisations such as UK Research and Innovation (UKRI) will make funding available for gold open access when they award funding for research outputs.

The standards and for formal publication in archaeological outputs are extensive and changing. Furthermore, this assignment can only touch upon these issues without analysing the significant cultural and historical themes for why we have such an array of options when trying to communicate archaeological research into formally published outputs. Hopefully, this assignment can give a broader view of formal publication as a process that goes beyond the high standards of scholarship found only in world-leading journals based upon a matrix of ranking data. Instead, maybe also recognising the everyday professional standards and collective endeavour to produce grey literature reports, which makes digital platforms such as ADS an essential and open resource to develop new high-quality research for the future. Although, how we measure the type of impact gained from this type of publication is difficult to ascertain, especially when we think about public archaeology and how this might be measured in terms of impact for the future.

The requirements for higher forms of publication are complex and resource-dependent and, therefore, should not be considered the main area where most research outputs are published in everyday archaeology practice. In the smaller academic publishing field, we see the number of research outputs reducing as output is categorised into areas of research excellence with ranking impact. The many options and decisions that an author must navigate in the scholarly landscape make the process seem disjointed, and the amount of time required for extensive processes such as peer review can be challenging, especially for an early career researcher developing a new knowledge base in a specialist area of practice.

## Bibliography:

Altmetric (2022) *Altmetric, Home Page*. Available at: <https://www.altmetric.com/> (Accessed: 31/12/2022).

Association of Local Government Archaeological Officers, (1993) *Model Briefs and Specifications for Archaeological Assessments and Field Evaluations*. ALGAO. Available at: [https://www.algao.org.uk/sites/default/files/documents/Pubs\\_Model\\_Briefs\\_Specifications.pdf](https://www.algao.org.uk/sites/default/files/documents/Pubs_Model_Briefs_Specifications.pdf) (Accessed: 31/12/2022).

CIFA, (2021) *Toolkits for Specialist Reporting*. Chartered Institute for Archaeologists. Available at: <https://www.archaeologists.net/reporting-toolkit> (Accessed: 31/12/2022).

CIFA, (2022) *Regulations, Standards and Guidance*: Chartered Institute for Archaeologists. Available at: <https://www.archaeologists.net/codes/cifa> (Accessed: 31/12/2022).

Coalition-s.org, (2022) *Making Full and Immediate Open Access a Reality*. Available at: <https://www.coalition-s.org/> (Accessed: 31/12/2022).

Creativecommons.org, (2022) *Creative Commons, Home Page*. Available at: <https://creativecommons.org/> (Accessed: 31/12/2022).

DOAJ, (2022) *The Directory of Open Access Journals, Home Page*. Available at: <https://doaj.org/> (Accessed: 31/12/2022).

Dublin Core Metadata Initiative (2022) *Dublin Core Metadata Initiative (DCMI)*. Available at: <https://www.dublincore.org/about/> (Accessed: 31/12/2022).

Ellenberger, K. Richardson, L.J. (2018) 'Reflecting on evaluation in public archaeology' *Online Journal in Archaeology*. 8 p 65-94. Available at: <http://revistas.jasarqueologia.es/index.php/APJournal/article/view/141/173> (Accessed: 31/12/2022).

Evans, T.N.L. (2015) 'A Reassessment of Archaeological Grey Literature: semantics and paradoxes' *Internet Archaeology* 40. <https://doi.org/10.11141/ia.40.6>

Forester, M. (2019) *Work Digital / Think Archive: A guide to managing data generated from archaeological investigations*. Dig ventures, Archaeological Archives Forum, CIFA and Historic England. Available at: <https://digventures.com/wp-content/uploads/2019/12/WDTA-Guide-FINAL.pdf> (Accessed: 31/12/2022).

Forum on Information Standards in Archaeology, FISH (2022) *Fish Vocabularies*. Available at: <http://www.heritage-standards.org.uk/fish-vocabularies/> (Accessed: 31/12/2022).

Fulford, M. (2011) 'The Impact of Commercial Archaeology on the UK Heritage' in Cunliffe, B (ed.) *History for the Taking? Perspectives on Material Heritage*. British Academy, Policy Centre. Available at: <https://www.thebritishacademy.ac.uk/documents/251/History-for-the-taking.pdf> (Accessed: 31/12/2022).

GoFair.org, (2016) *Fair Guiding Principles for scientific data management and stewardship*. Available at: <https://www.go-fair.org/fair-principles/> (Accessed: 31/12/2022).

Historic England, (2015) *Management of Research Projects in the Historic Environment, The MoRPHE Project Managers' Guide*. Historic England. Available at: <https://historicengland.org.uk/images-books/publications/morphe-project-managers-guide/heag024-morphe-managers-guide/> (Accessed: 31/12/2022).

MIDAS Heritage, (2012) *The UK Historic Environmental Data Standard, Version 1.1*. Forum on Information Standards in Heritage (FISH). Available at: [https://historicengland.org.uk/images-books/publications/midas-heritage/midas-heritage-2012-v1\\_1/](https://historicengland.org.uk/images-books/publications/midas-heritage/midas-heritage-2012-v1_1/) (Accessed: 31/12/2022).

OASIS, (2022) *The online system for reporting archaeological investigations and linking research outputs and archives*. Available at: <https://oasis.ac.uk/> (Accessed: 31/12/2022).

ORCID, (2022) *Open Researcher and Contributor ID*. Available at: <https://info.orcid.org/what-is-orcid/> (Accessed: 31/12/2022).

Research Excellence Framework, (2014) *Assessment Criteria and Level Definitions*. Available at: <https://ref.ac.uk/2014/panels/assessmentcriteriaandleveldefinitions/> (Accessed: 31/12/2022).

Research Excellence Framework, (2021) *REF 2021, Home Page*. Available at: <https://www.ref.ac.uk/> (Accessed: 31/12/2022).

Science Direct, (2022) *Journal of Archaeological Science Author Information Pack*. Available at: [https://www.elsevier.com/wps/find/journaldescription.cws\\_home/622854?generatepdf=true](https://www.elsevier.com/wps/find/journaldescription.cws_home/622854?generatepdf=true) (Accessed: 31/12/2022).

SCOPUS, (2022) *Abstracts and Citation Databases Sources*. Available at: <https://www.scopus.com/sources> (Accessed: 31/12/2022).

Springer, (2022) *Journal of Archaeological Research Submission Guidelines*. Available at: <https://www.springer.com/journal/10814/submission-guidelines#Instructions%20to%20Authors> [Instructions%20for%20Authors](https://www.springer.com/journal/10814/submission-guidelines#Instructions%20for%20Authors) (Accessed: 31/12/2022).