

## A CRITICAL ASSESSMENT OF THE PROJECT DESIGN DELIVERED FOR THE PONTEFRACT CASTLE COMMUNITY ARCHAEOLOGY PROJECT

### 1 INTRODUCTION

- 1.1.1 This essay is a critical reflection on how well the Project Design ([Casswell et al. 2019](#)) (hereafter “PD”) created for the Pontefract Castle Gatehouse community excavation project set up and facilitated a successful project. This essay will look at how closely the delivered project matches that outlined in the PD. Where it doesn’t match this essay will examine why this was so and what resources the project team used to respond to these changes.

#### 1.2 Project Background

- 1.2.1 Wakefield Metropolitan District Council launched the ‘Pontefract Castle: Key to the North’ project in order to increase local awareness of the town’s history and the role of Pontefract Castle within this. A key pillar of this was improvements to the castle’s visitor centre and 2016 work on this revealed a previously unknown medieval drawbridge pit. The project discussed in this essay centres on the excavation of this feature.

- 1.2.2 The project was supported by Historic England with funding allocated under the terms of the NPPF Emergency Investigation Assistance fund. The project was managed using MoRPHE management and principles (Lee 2006). Due to the size of the project and being part of development by Wakefield council the procurement was influenced by the Public Services (Social Value) Act (2012) particularly in relation to section 1(3)(a):

*“what is proposed to be procured might improve the economic, social and environmental well-being of the relevant area” (Public Services (Social Value) Act 2012).*

- 1.2.3 Amendments to this policy in 2018 stated that the weighting given to social value when procuring was set to a minimum of 10% (Cabinet Office 2021), in the case of this project it was set to 40%. These government policies and guidelines allowed the project ‘justification’ for the more expensive community led project to fulfil a development brief (Wilkins 2021).
- 1.2.4 Reports produced for this project are available on the DigVentures website ([https://digventures.com/reports/?reports\\_project=pontefract-castle](https://digventures.com/reports/?reports_project=pontefract-castle)) and all primary records created are available on the project specific microsite (<https://ddt.digventures.com/pontefract-castle/browser.php>). The project had a paper published in Internet Archaeology pertaining to the social outcomes of the project ([Wilkins et al. 2021](#)). The project is being prepared to be deposited with ADS and a paper is being written on the archaeological results to be published in Internet Archaeology in the coming months.

### 2 PROJECT MANAGEMENT

- 2.1.1 The project fieldwork was initially scheduled for October 2019. The drawbridge pit was deeper than expected. An auger core taken in the last week of fieldwork showed the drawbridge pit was at least 2m deeper than it would be possible to excavate in the allotted time. Due to these unforeseen circumstances a deviation in the works was triggered, resulting in a second stage of fieldwork that was carried out in June 2020.

## 2.2 Risk Management

- 2.2.1 A core aspect of successful project management is risk management. Potential risks were identified in the risk log as part of the PD ([Casswell et al. 2019](#) Section 14), and measures were taken to reduce the chance of these occurring. This had the advantage of communicating the size of potential delays to the client. However, while none of the risks identified in the log came to pass, there was a major delay in works due to the unexpected depth of the archaeology. While the risk log touched on unexpected archaeology this was in the context of paleo-environmental sampling, and expected impacts were minimal.
- 2.2.2 Risk logs are designed to indicate factors outside of the core scheme of work which may impact the completion or cost of the project. Unexpected depth would not necessarily fall into this category, however there would have been value in indicating the uncertainty of the volume of archaeology within the PD or risk log. This would not have changed the outcome as it would have not been possible to mitigate against effectively, but it would have given the client clearer visibility of this possibility. Despite this, as will be discussed later, adhering to a strict MoRPHE management structure set the project up with sufficient procedures and systems to respond quickly and effectively to the changing nature of the project.

## 2.3 Project Scope

- 2.3.1 Scope creep can be a key downfall in a project if it tries to over-deliver versus what is budgeted (Locock 2012). For Pontefract we should initially look to see what was delivered versus what was planned to be delivered.
- 2.3.2 The outputs DigVentures agreed to produce were a technical report, an evaluation report, a summary leaflet, research archive, and a documentary video. These outputs were all (or soon to be) produced and additional outputs of three videos detailing the progress of the 2020 fieldwork were produced. At a review meeting after the initial five weeks, it was decided that the community aim had been fulfilled ([Casswell et al. 2019](#) Section 3.6), but understanding the drawbridge pit through excavation had not been achieved ([Casswell et al. 2019](#) Section 3.3), therefore the second phase was funded exclusively to meet this aim. No community outreach was in scope for the second phase of fieldwork. As such, the additional videos were not programmed works and could be considered project creep, though for the following reasons that was not harmful:
- Careful project management by the Project Manager. These outputs did not encroach on project time, due to the decision that the videos would need to be resourced outside of the project team. Therefore, a videographer was scheduled to film them.
  - The videos were resources as part of the Archaeology at Home series, which had a separate funding stream. This project was vital in enabling DigVentures to pivot the company and engage its community during the pandemic. They served a clear function and had the benefit of being an add-on for Pontefract project stakeholders.

## 3 METHODOLOGY

- 3.1.1 The full methodology can be viewed in the PD ([Casswell et al. 2019](#) Section 11). The PD gave limited methodological considerations for deep excavation. This was ultimately required due to the unexpected depth of the drawbridge pit. As mentioned above not mitigating against deep archaeology had no negative impact on the response. All staff were excavating unimpeded and delivered a successful field school. The PD correctly estimated how deep the

team would be able to excavate in five weeks, therefore the issue was not the methodology but the fact that the feature was larger than predicted.

- 3.1.2 The methodological considerations for the second stage included equipment for deep excavation. The seven month gap between the phases allowed time to put these changes into place (planned three but extended due to Covid-19). The changes required a winch to lift buckets out of the pit, a ladder to allow access in and out of the pit, a carbon monoxide detector to ensure safe working conditions within the pit, and appropriate staffing. Three members of staff were allocated as one member was needed to work the winch, with an additional member to empty the buckets, as towards the end of the excavation the hand winch took longer to get up and down than the buckets took to fill/empty.
- 3.1.3 Additional resourcing would not have prevented delays. As the feature was a scheduled monument it had to be hand excavated. During both stages there was also a limit to the number of staff who could work efficiently on site. During the first phase, there was a narrow wheelbarrow route that navigated the stepped site and only allowed for a single wheelbarrow to use it at a time. During the second stage the limiting factor to speed was the hand winch. Additional people would not have increased the speed of excavation as they would have been waiting on the winch or to use the wheelbarrow ramp.

## 4 COMMUNICATION WITHIN AND BEYOND THE PROJECT TEAM

- 4.1.1 Communications and relations with and beyond the project team were at an advantage, as the developer/stakeholders were positive and enthusiastic about DigVentures' presence, something that cannot be relied on. This was essential to a project that aimed to deliver more than the publishing and archiving of the archaeological results and therefore needed more room for creativity (Wilkins 2021). However, starting off on the right foot doesn't guarantee that you will still be on it come project closure. DigVentures kept the stakeholders positively engaged throughout the project, due to clear roles and responsibilities, adhering to MoRPHE structure, transparency, and good will.

### 4.2 Roles and Responsibilities

- 4.2.1 The PD was set up to allow clear communication through it's outlining of roles, and assignment of responsibilities. ([Casswell et al. 2019](#)). This is essential to have in place when working with multiple organisations and institutions, as a common cause of friction is a lack of clarity on who is responsible for each item (and unclear responsibilities can cause tasks to not be done) (Project Management Institute and Management Institute Project 2012). Having this clear communication structure allowed the management team to build on the strong client engagement and gave the client the confidence to allow the level of creativity required in the community outreach activities.

### 4.3 MoRPHE

- 4.3.1 As a MoRPHE compliant project, review points were built into the project design (Figure 1). At Review Point 3 it was decided that additional funding was needed to bottom the drawbridge pit to fully achieve the Aim 2 ([Casswell et al. 2019](#) Section 3.3). Between the allocation of this additional funding and the start of the next delivery phase the UK went into a national lockdown. When delivery recommenced additional funding was granted to cover unforeseen Covid-19 costs (such as PPE and socially distanced accommodation). The review points in the PD allowed flexible adjustments to the project, which simultaneously protected DigVentures from incurring the cost of circumstances outside of what they could reasonably be held

accountable for and kept Wakefield council in control of the project, preventing unexpected cost overruns on their part.

#### 4.4 Transparency

- 4.4.1 There was clear progress tracking documentation submitted throughout the project. Figure 2 provides an example of the documentation used to support changes to the programme of work. Gantt charts were used to communicate project timelines to stakeholders. This meant that despite changes to the work, there were no preventable surprises for the client, which helped maintain the strong relationship.

#### 4.5 Good Will

- 4.5.1 As a result of good client management practices DigVentures built up significant good will, which had a positive impact on the project as a whole. For example, the Victorian layers were initially being hand excavated as the original brief forbade any diggers on site. However, DigVentures demonstrated both the depth of the Victorian deposit and the competence of the team, which allowed them to leverage their relationship into allowing a mini-digger to remove the remaining Victorian deposits. This was fully at the discretion of the client and Historic England and would likely not have been allowed had DigVentures not laid a strong foundation.

### 5 SUITABLE OUTCOMES IN TERMS OF PUBLICATION AND ARCHIVE

- 5.1.1 The project had positive outcomes in terms of publication and archive. As can be seen in full detail in the final report, the drawbridge pit was bottomed, exposing its morphology and dating was conducted to explain the phasing of the gatehouse, meeting all key aims ([Casswell et al. 2021](#)). The final report has been written and made accessible online, the resources for schooling, the video, community photos, 3D models, raw files for 3D models as well the usual archaeological digital archive will be deposited with ADS. The quality of the digital archive was ensured by the inclusion of a Digital Management Plan (DMP) in the PD.

#### 5.2 DMP

- 5.2.1 Whilst this project has not yet been deposited with ADS a summary for what DigVentures intend to deposit has been sent off for quotation. Below is a comparison of the predicted data volume from the PD versus what will actually be deposited.

| Type           | Format        | Predicted volume of Data Archive                                                                                                                                                        | Actual volume of Data Archive                                                                                                                                                                          | Differences                     |
|----------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| Spreadsheets   | Excel (.xlsx) | 3 spreadsheets objects (size <2MB total):<br>Context Register / Finds & Samples Register / Photo Register / Drawing Register<br>Context descriptions and data<br>Specialist data tables | 1 Finds & Samples Register<br>4 Photo Register, 217KB<br>1 Drawing Register, 11KB<br>1 Context descriptions and data, 67KB<br>1 Feature descriptions and data, 20KB<br>5 Specialist data tables, 437KB | 9 more files, correct data size |
| Text/documents | Word (.docx)  | 10 word documents (size <100MB): Project Brief Project Design                                                                                                                           | Project Brief, 273KB<br>Project Design, 2.4MB                                                                                                                                                          | 15 more files,                  |

| Type           | Format                                                                                 | Predicted volume of Data Archive                                                                                                                 | Actual volume of Data Archive                                                                                                                                                                                   | Differences                                |
|----------------|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
|                | Portable document format (.pdf)                                                        | Assessment and Updated Project Design<br>Final Technical Report<br>Individual Specialist Reports x6                                              | Assessment and Updated Project Design, 368KB<br>Final Technical Report, 53.7MB<br>Individual Specialist Reports x 17, 14.2 MB<br>School activity worksheets x 4, 408KB                                          | correct data size                          |
| Images         | Uncompressed (.tiff)<br>Lossy graphics file (.jpg)<br>Portable network graphics (.png) | Archive shots x 100, av size 4MB<br>Orthoimages x 10, av size 10MB<br>Images for 3D models x 300, av size 4MB<br>Site drawings x 10, av size 5MB | Archive shots x 58, av size 4MB<br>Community Photos x 52, av size 4MB<br>Finds photos x18, av size 4MB<br>Images for 3D models x 2480, av size 4MB<br>Drawing scans x 7, 48.3MB<br>Composite section x 1, 2.5MB | 2,196 more files, 8.73GB more              |
| Illustrations  | Scalable vector graphics                                                               |                                                                                                                                                  | Finds illustrations x 11, 3.31MB                                                                                                                                                                                | 11 more files, 3.31MB more data            |
| GIS            | ESRI Shapefile (.shp & .shx & .dbf, plus associated files)                             | Overall GIS files x 10, including 6 shp layers <10MB                                                                                             | Overall GIS files x 11, 4.3KB                                                                                                                                                                                   | 1 more file, smaller data size             |
| Survey         | Comma Separated Version (.csv)                                                         | Survey data x 1, av size <1MB                                                                                                                    | Survey data x 1, 8KB                                                                                                                                                                                            | Correct number of files, correct data size |
| Video          | Moving Picture Expert Group-4 (.mp4)                                                   | Video files x 5, av size 500MB to 1GB                                                                                                            | Video files x 1, 2.03GB                                                                                                                                                                                         | 4 less files, 1GB more                     |
| Photogrammetry | Models hosted on Sketchfab (.obj, .jpg, .mtl)                                          | 3D models x 3, 20MB                                                                                                                              | 3D models x 2, 36.4MB                                                                                                                                                                                           | 1 file less, 16MB more                     |

*Table 1. Comparison of files and volumes predicted at project initialisation versus files to be submitted.*

5.2.2 Table 1 demonstrates that the volume of the data archived was predicted with a very good degree of accuracy. The only significant deviation was in images, driven by the decision to archive the raw files that generate the 3D-models. The DMP was updated several times over the lifetime of the project to ensure DigVentures were accurately reflecting what would be deposited, in line with ClfA guidance ([ClfA 2022](#)). For this reason none of the changes in the volume of data would have come as a surprise to the client.

## 6 CONCLUSION

- 6.1.1 The project design provided a strong foundation for the successful delivery of the project. It was particularly effective in structuring communication with the client and other stakeholders, which maintained their enthusiasm and provided them with a high level of control and transparency throughout the project. The only potential shortfall was the lack of consideration for unexpected depth, but after this was identified its processes enabled the project team to effectively deal with the implications.
- 6.1.2 This was not a project that needed little management, it did not run to the scheduled outlined in the initial Project Design. Instead this project relied on the methods and procedures set in place during this project design phase to guide and aid the project team through the changes to the project caused by unforeseeable circumstances.

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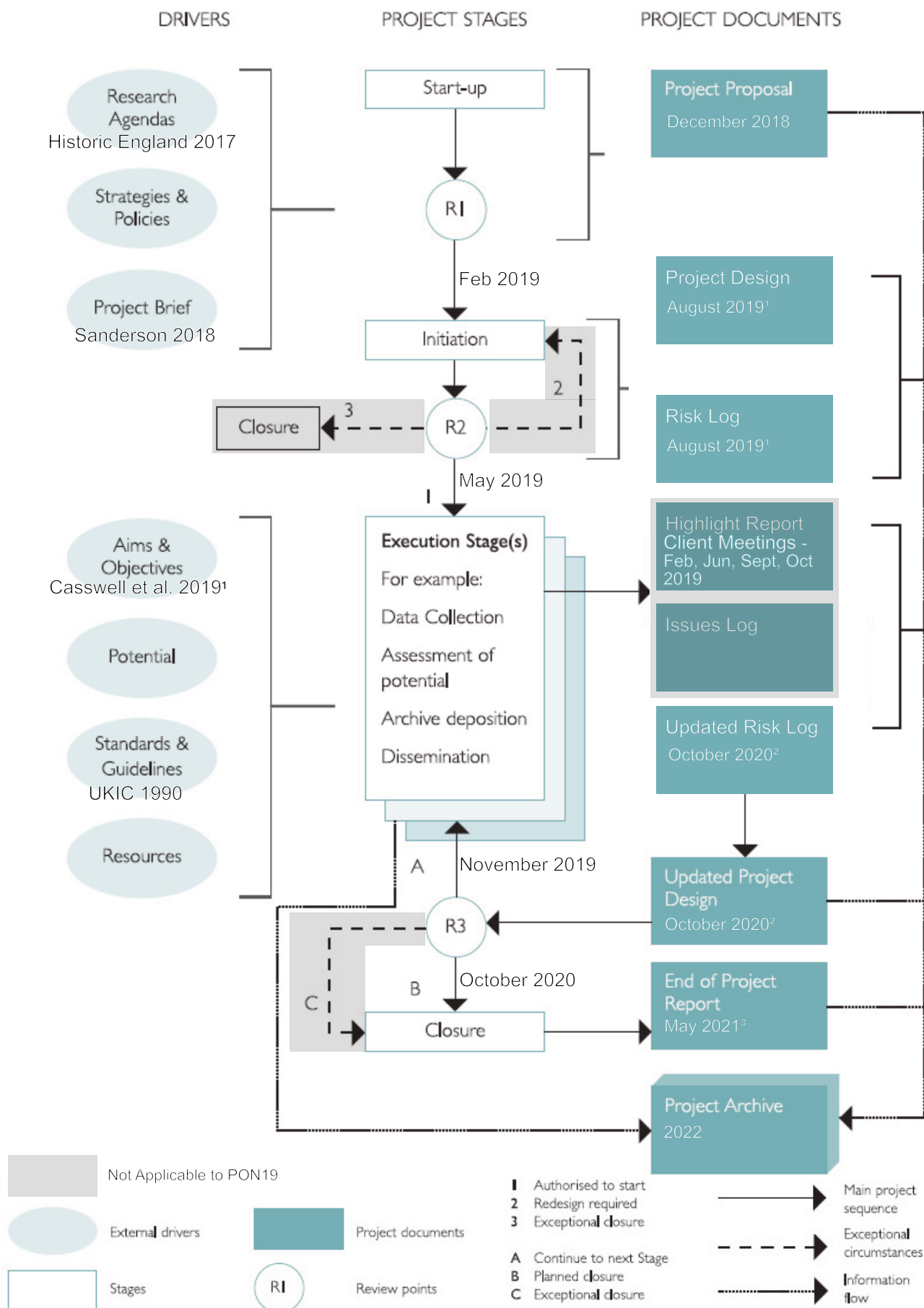
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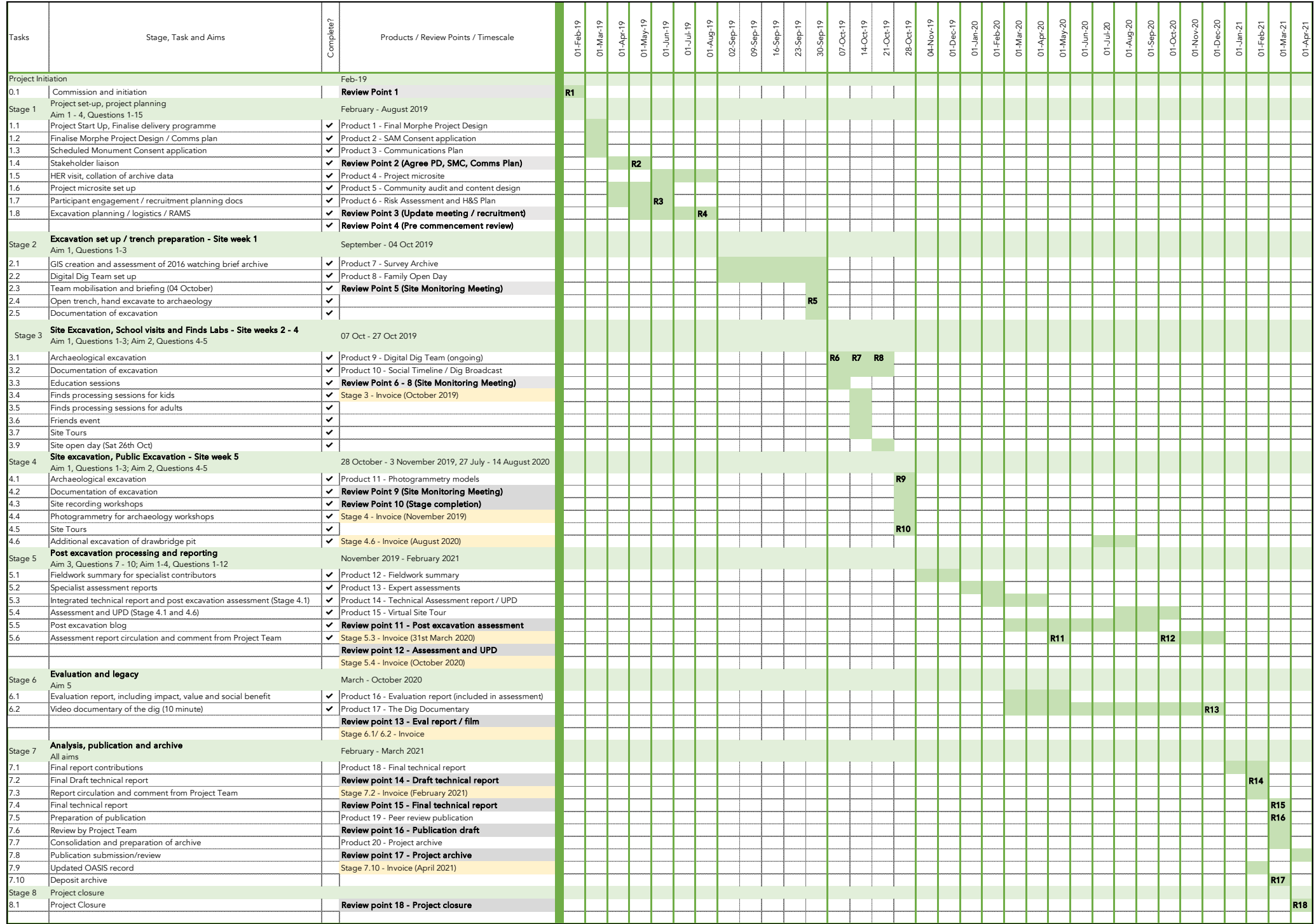


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Figure 1. MORPHE project stages adapted for Pontefract Gatehouse Project



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