

**WEST YORKSHIRE ARCHAEOLOGY ADVISORY SERVICE:  
BRIEF FOR AN ARCHAEOLOGICAL EXCAVATION AT PONTEFRACT CASTLE,  
INNER BAILEY GATEHOUSE, PONTEFRACT**

**Brief prepared on behalf of Wakefield Metropolitan District Council**

**1. Summary**

1.1 A targeted amount of archaeological work consisting of open-area excavation within a specified area is proposed to investigate the development and constructional history of the Inner Bailey gatehouse at Pontefract Castle, and to inform its interpretation and display.

1.2 This brief deals with the proposed excavation, with the preparation of a post-excavation assessment of the results of the excavation, and with the preparation of a report on the site and the deposition of the archive.

1.3 The tendering archaeological contractor is requested to submit a project design in response to this brief in accordance with MoRPHE (2015).

1.4 It is expected that the tendering contractor will detail in their tender how they will maximise opportunities for publicising the project (including on-line); provide on-site interpretation during the course of the excavation; and how they will work with and engage local community groups, the visiting public & the people of Pontefract.

1.5 The excavation is intended to result in drawings and information that will feed into a separate long-term Interpretation Plan for the castle, but producing the interpretation material for the long-term interpretation of the gatehouse & castle is not within the scope of this project.

1.6 This brief has been prepared by the curatorial branch of the West Yorkshire Archaeology Advisory Service (WYAAS), the holders of the West Yorkshire Historic Environment Record.

**1.7 Note: the site is a Scheduled Monument (NHLE ref. no. 1010127) & the successful contractor will be expected to obtain Scheduled Monument Consent in advance of works commencing from Historic England, who are fully involved with this project & funding the investigation.**

NOTE: The requirements detailed in paragraphs 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, and 16.1 are to be met by the archaeological contractor **prior** to the commencement of fieldwork.

**2. Site Location & Description**

**Grid Reference: SE 46075 22320**

2.1 Pontefract Castle lies towards the north eastern extent of the historic core of modern Pontefract on a promontory formed of Coal Measures sandstone (Pontefract Rock) at a height of c 50m aOD. The Inner Bailey Gatehouse is situated on the line

of the South curtain wall, to the north east of the Keep. The existing upstanding remains of the Gatehouse consists of low, semi-circular walls with a flight of stone steps between them, leading up to the landscaped grounds of the Inner Bailey.

### **3. Background to Project**

3.1 The Heritage Lottery Fund awarded WMDC £3 million in 2014 for their “Pontefract Castle: Key to the North” project. This project aimed to enhance access to areas of the castle and to improve the visitor experience. As part of this project, the removal of what was believed to be Victorian landscaping was monitored under archaeological watching brief conditions during refurbishment of the gatehouse area. This resulted in below ground remains of the gate house complex being revealed in June 2016. The national significance of the revealed remains was appreciated and Historic England have agreed to fund further investigation of the gatehouse.

### **4. Archaeological Interest**

4.1 Information on the development of the castle has been gained from a wide range of sources, including partial excavation and documentary research. The West Yorkshire Archaeology Service carried out a major programme of work between 1982 and 1986 and this has been published (2002). It should be noted that evidence of a Christian cemetery belonging to the 10<sup>th</sup> century royal town of Tanshelf was found underlying the inner bailey of the castle near the 11<sup>th</sup> century St Clements’s Chapel.

4.2 The first castle comprised an earthen motte and bailey and probably contained timber buildings. During the 12<sup>th</sup> and early 13<sup>th</sup> century the castle was gradually rebuilt in stone. It was at this time that the curtain wall was built around the bailey. Towers were built into this wall at regular intervals; evidence for these can be found in the fabric of the later medieval Gascoigne and Treasurer’s towers. A substantial part of the south west curtain wall is of 12<sup>th</sup> century date. The keep was first built in stone in the 13<sup>th</sup> century, and was heightened in 1374 to three storeys at the order of John of Gaunt.

4.3 The 14<sup>th</sup> and 15<sup>th</sup> centuries saw the strengthening and reorganisation of the castle. The Swillington, Constable, King’s and Queen’s Towers were all constructed around the curtain wall.

4.4 Following a period of continuous rebuilding that coincided with the Wars of the Roses, the castle gradually fell into decay during the 16<sup>th</sup> century. Between 1618 and 1620, the future Charles I paid for substantial repairs to be carried out. At this time the castle housed a substantial Royalist garrison and successfully withstood three prolonged sieges before finally surrendering in 1649.

4.5 The site was subsequently used for liquorice cultivation before being converted into a public park by the Victorians in 1883. The site is owned by the Duchy of Lancaster and under the guardianship of WMDC.

## 4.6 CURRENT UNDERSTANDING OF THE INNER BAILEY GATEHOUSE (By Field Archaeology Specialists)

Current understanding of the gatehouse relies on a combination of pictorial sources and documentary references dating from the 13th-century onwards as well as archaeological evidence in the form of intrusive investigation and examination of upstanding fabric.

Although somewhat piecemeal the documentary sources can be used to identify the later development of the gatehouse from the mid-13th century until its disuse in the years following the Civil War. Archaeological investigation of the gatehouse area has also been piecemeal, but examination and recording of the extant remains has provided outline understanding of the changing form and development of the gatehouse through time. The following archaeological summary also includes the recently exposed features of the gatehouse complex by Wessex Archaeology.

### 4.6.1 Documentary evidence

A gatehouse is first identified in a writ of July 1244, when a wall between it and the tower (assumed to be the keep) was to be crenellated (CLR 1240-25, 256). In the years 1438 to 1443, work was carried out to the gate and wicket, the roof and porch and rails of the inner bridge (PRO DL 29/524/8354-9). The reference to the 'inner bridge' would tend to confirm that it was the inner bailey gatehouse which was the subject of attention. It was noted in 1538 that the castle required eight tons of iron for the making of gates; the quantity might suggest that the inner gatehouse was included (PRO E 36/159). Both gatehouse and attached porter's lodge were mentioned in 1546, indicating that the gatehouse was roofed in lead, while the porter's lodge had a roof of slate (PRO DL 44/114).

The roofing materials are confirmed in the 1564 survey, which also indicates that the gate passage was vaulted:

'...within the which tower there ys a vawte, in the which vawte there is a greate break expedyent to be forsene and amended, and the covering of the leade of the same ys to be amended...and further there are certayne lodgings adjoyning unto the same which are covered with slate...'  
(PRO DL 44/144).

An illustration of c.1560 shows the gatehouse to have consisted of a pair of drum towers, flanking a central gate passage contained within the recess between them (Fig. 2). The passage was reached by a segmental arched opening, closed by a timber door provided with a wicket gate. Projecting below the gate arch is a portcullis, presumably operated from a chamber above the gate passage. A series of three rectangular loops, one above the other, are shown above the gate arch. The whole is surmounted by a further moulded two-centred arch which spans the width of the recess. The flanking towers are shown with openings at three levels and the wall head crenellated. At the front of the gatehouse are a pair of projecting flanking walls, terminating in a pair of castellated gate piers. The section of the approach closest to the gate entrance appears to form a drawbridge, the void beneath it being shown in shadow. In contrast, the outer section of the approach is supported on arches, perhaps suggesting that this portion was spanned with a stone bridge or abutment for the drawbridge. The form of the gatehouse, as portrayed, is typical of the late 13th or 14th century.

The 1625-30 painting of the castle (Fig.3) largely concurs with the c.1560 illustration, and shows an arched gate passage, closed by a timber door provided with a wicket gate. The fronts of the flanking towers are shown slightly curved, but the gate piers and flanking walls are absent. Instead, where the pier walls terminated against the towers, stepped buttresses are shown. Further, the ditch which the drawbridge spanned is notable in its absence, suggesting that between c.1560 and c.1625 the ditch had been filled, the drawbridge and gate piers removed and a pair of buttresses erected. These changes can perhaps be associated with the observation made in the 1564 survey that the gate passage vault was cracked; the erection of buttresses and the partial filling of the ditch may have been part of the solution to this structural problem. Further, it is notable that the middle gate and much of the dividing curtain wall between the two outer baileys are not shown on the c.1560 drawing, while the gatehouse is illustrated in 1625-30 and on subsequent siege maps. Again, it is possible that a new section of wall, provided with a gate, was erected after the ditch had been backfilled.

The complex of buildings around the gatehouse, and the rooms within, are briefly mentioned in the 1643 description of the castle:

‘Betwene this Tower or keepe And the gate are the Houskeeper lodgeinge or Porter Lodge consistinge of twoo Low Roomes And three other romes above the gate’ (SRO GD 34/900).

The Fairfax Crowder siege plan shows the gatehouse in less detail, although a portcullis is shown within the gate passage and it is identified with the Porter’s Lodge. A demolition account of 1649 provides an idea of the scope of dismantling and rebuilding which took place. Neville’s Mount was levelled and the ‘barbican’ (bailey) wall was demolished from the great stable to the ‘low’ (east?) drawbridge. Other sections of the bailey wall also appear to have been demolished. The timber, lead and ironwork were removed from the east and west gatehouses and their superstructures demolished, while the timber was taken up from the ‘low’ drawbridge. Removal of the drawbridges required some reconstruction work and the accounts indicate that walls were constructed to either side of the drawbridge voids (or ‘grafts’), and the space between them filled in to create causeways across the castle ditch.

#### **4.6.2 Archaeological evidence (by Field Archaeology Specialists)**

Originally, entry into the inner bailey would have been gained via a simple arched opening contained within the curtain wall. The earliest phase of gatehouse development appears to have been a rectangular structure of 12th-century date. Of this earliest structure a section of the lower part of the gatehouse passage remains exposed which incorporates a portcullis slot; more of this early phase of the gatehouse probably survives below ground. This structure was subsequently developed to include the classic twin-towered gatehouse arrangement of the 13th century.

Some of the stonework forming the exterior drums of these towers is currently exposed. The southern tower has the greatest area of exposed stonework, with one

course of curved ashlar visible, disappearing beneath garden soil, vegetation and Victorian dry stone walling to the southwest. The northern tower only has one, highly weathered, curved block exposed. In both cases, it is clear that faceted ashlar masonry was added to the front of the towers, partly encasing the original curved masonry. The towers do not appear to have exceeded c.4m in diameter, at the modest end of the scale for gatehouse towers. This compares with c.5m for the gatehouse towers at Knaresborough Castle and the outer gatehouse towers at Corfe Castle, both of which were of solid bastion form at ground level, rather than hollow. It is likely that the Pontefract Castle gate followed a similar form. A pair of chambers would have flanked the gate passage to the rear of the solid section of the towers, while the upper floors of the gatehouse would have incorporated chambers within the hollow upper portions of the towers.

### The 2016 watching brief

During the current works on site a further substantial structure was encountered to the south of the known gatehouse. From the remains encountered thus far it would appear that the 13<sup>th</sup> century gatehouse was re-fronted by the construction of a third tower set between the drum towers articulating with a drawbridge pit (the sections of previously identified faceted masonry forming elements of the lining of the extended passage). The remains of the third tower consist of a substantial curved masonry structure which appears to incorporate an internal room. These structures appear to represent a barbican, a further line of defence, added to the existing gatehouse and which appears to be illustrated in the 1560 survey drawing.

This discovery radically changes understanding of how the gatehouse was altered and extended over time. Rather than just a modest barbican being added to the 13th-century drum towers, the whole gatehouse appears to have been re-fronted with an additional tower, drawbridge and barbican probably in the 14th century. Based on this evidence, a sequence can be proposed which consists of an original 12th-century gate through the curtain wall, elaborated by a twin towered gatehouse in the mid-13th or early 14th century, and then further expanded by flanking wall gate piers and reinforcement of the drum towers in the late 14th century.

As exposed in 2016, the drawbridge pit measures c.2m wide; the length and depth is not known, although excavated examples suggest a length of c.5m and a depth of c.2m to be likely. The line of the ditch which passed in front of the gatehouse can be discerned from a geophysical resistance survey conducted by WYAS in 2002. The results suggest a ditch which was nearly c.10m wide. Unfortunately, the area of geophysics did not extend beyond the gatehouse because of the presence of the Victorian tea house, lodge and access road, but its presence can be established from the manner in which the floor of the lodge has suffered from subsidence. It is likely that the drawbridge pit was built within the pre-existing ditch and thus has high retaining walls perhaps articulating with a bridge structure.

The documentary evidence for the disuse of the drawbridge pit and ditch suggests that the structures were at least partly infilled between 1560 and 1625 providing date parameters for the backfill of the drawbridge pit and part of the fill system of the inner ditch. It is also possible to see evidence for amendments to the structures after their disuse, for example, a base of mortared masonry in the northwest corner of the

backfilled drawbridge pit. After its decommissioning, access would have still be required and the form of this new access is also of interest. Further, the demolition of the gatehouse structures in 1649 is likely to have seen more remodelling, evidence for which is likely to be present in the area.

## **5. Aims of the Excavations**

5.1 The objective of the project is to fully record, analyse and report all archaeological remains within the area of interest ('preservation by record'); to place the results of this work in the public domain by publishing the results in an appropriate format as agreed by Historic England; and to inform how the Gatehouse might be presented to the public.

5.2 The specific aims are to:

- to elucidate the plan, character, function, phasing, contemporary significance and chronological development of the gatehouse structures as far as possible within the area of excavation, particularly with the aim of establishing the possible presence of bridge structures and/ or a barbican in front of the gatehouse
- to establish the width of the apparent ditch/ drawbridge pit
- to establish its depth
- to establish its function
- to attempt to date its original construction & the date of its infilling
- to attempt to identify and date any phases in its use or design
- to examine any revealed masonry for masons' marks & record them if found.

5.3 The excavation will result in scaled drawings and information that will be used to inform a separate Interpretation Plan for the castle.

5.4 The excavation will be fully visible to visiting members of the public and the area of excavation is almost immediately outside Pontefract Castle's Visitor Centre. Separate from the Project Design for the excavation, the Contractor is expected to supply a proposed Communications & Engagement Strategy for the Project which will seek to maximise the opportunities to engage the public both on-site & on-line, with a specific focus on local schools.

5.5 The project design should include separate provision for back-filling & making the site safe / leaving masonry structures protected, following completion of the research aims of the Project. If stonework structures are identified their likely retention and possible presentation should be discussed and agreed with WMDC/Historic England. If left in situ at the end of the excavation they should be suitably protected from possible frost damage. Their subsequent consolidation for display would form a separate project.

## **6. General Instructions**

### **6.1 Health and Safety**

6.1.1 The site is awkward with a number of levels. Shoring and stepping may be necessary in parts. A site visit must be made prior to tendering to establish likely requirements for fencing & means of retention.

6.1.2 The archaeologist on site will naturally operate with due regard for Health and Safety regulations. The excavation will require the preparation of a Risk Assessment of the site in accordance with the Health and Safety at Work Regulations.

6.1.3 The remains within the open area excavation are of national importance and the contractor should be expected to make every reasonable effort (including the employment of shoring and specialist equipment and retrieval techniques) to execute the excavation and recording work as detailed in this brief.

6.1.4 The visiting public will be afforded access to the castle during the excavations and the site is immediately adjacent to the castle visitor centre.

6.1.5 WYAAS and its officers cannot be held responsible for any accidents or injuries that may occur to archaeological contractors, the public or other third parties while attempting to conform to this specification. Any Health and Safety issues which may hinder compliance with this brief should be discussed with WMDC/ Historic England/WYAAS at the earliest possible opportunity.

## 6.2 Confirmation of Adherence to Agreed Project Design

6.2.1 The Contractor will be expected to adhere fully with the agreed Project Design, reference to which will be included in Historic England's Scheduled Monument Consent for the project. Should the contractor feel they need to vary the agreed Project Design, then this will need to be discussed in advance in detail with Historic England & WMDC and written confirmation of the agreement of these parties obtained prior to implementing any agreed variations (WYAAS to be copied in).

## 6.3 Confirmation of Timetable and Contractors' Qualifications

6.3.1 Prior to the commencement of *any work*, the archaeological contractor **must** provide Historic England/ WMDC/ WYAAS **in writing** with:

- a projected timetable for the site work;
- details of the staff structure and numbers;
- names and CVs of key project members (the project manager, site supervisor, any proposed specialists, sub-contractors *etc.*).

6.3.2 All project staff provided by the archaeological contractor must be suitably qualified and experienced for their roles. The timetable should be adequate to allow the work to be undertaken to the appropriate professional standard, subject to the ultimate judgement of Historic England & WYAAS.

## 6.4 Notification

6.4.1 The excavations will be monitored as necessary and practicable by Historic England (as funding body & grantor of Scheduled Monument Consent) & WYAAS in its role as curator of the county's archaeology. Historic England, WMDC & WYAAS should be provided with **as much notice as possible in writing** (and certainly not less than one month) of the intention to start work. A copy of the archaeological contractor's risk assessment of the site should accompany the notification.

6.4.2 The museums officer named in paragraph 16.1 should be notified in writing of the commencement of fieldwork at the same time as WYAAS.

6.4.3 Historic England's Regional Science Adviser, currently Samantha Stein, Assistant Science Advisor (Yorkshire), should also be notified of the intention to commence fieldwork. (Mobile Phone: 07769300665, [samantha.stein@historicengland.org.uk](mailto:samantha.stein@historicengland.org.uk) )

## 6.5 Documentary Research

6.5.1 Prior to the commencement of fieldwork, the West Yorkshire Historic Environment Record should be visited, by either the project manager or the site supervisor, in order to gain an overview of the archaeological/historical background of the site and environs. In addition to providing a knowledge base for the work in hand, the results of this assessment may be incorporated into the contractor's report where they are considered to contribute to that report, but any extraneous material should be omitted. A formal desk-based report is not required and the results of this exercise should be used to inform the whole project. Please note that the HER makes a charge for consultations of a commercial nature.

## 6.6 Location of Services, etc.

6.6.1 The archaeological contractor will be responsible for locating any drainage pipes, service pipes, cables etc which may cross any of the trench lines, and for taking the necessary measures to avoid disturbing such services.

## 7. Fieldwork Methodology

### 7.1 Trench Sizes and Location (see Fig. 1)

7.1. The work will involve the excavation of an area approximately 12.5m x 7m (c 87.5 sq. m), in front of the drum towers. The excavation will include the area of paved skirt in front of the Victorian steps and involve the removal of the first step, but the rest of the steps between the two drum towers are to be left in situ. There is also a smaller irregularly-shaped area which incorporates the western drum tower of the gatehouse. This area is to be cleaned back, planned and recorded, but mortared standing masonry is not to be removed. The intention here is to trace the extent of the drum tower and its relation with other defensive arrangements rather than excavate within the tower.

**7.2.1 N.B Excavation is to be focused on elucidating the aims of the excavation detailed in section 5 above. Once the contractor is confident that these questions have been satisfactorily answered, archaeological excavation can cease.**

### 7.2 Method of Excavation

7.2.1 All archaeological remains will be hand excavated in an archaeologically controlled and stratigraphic manner sufficient to meet the aims and objectives of the project. See section 5 and para. 7.2.1 above. Within these parameters, the excavation will aim to record the complete stratigraphic sequence and will investigate and record all inter-relationships between features. Stone-built structures that are encountered in the area of excavation are to be left initially *in-situ* and discussed with Historic England/WMDC, before any decision is made to remove them.

7.2.4 All artefacts are to be retained for processing and analysis except for unstratified 20<sup>th</sup> and 21<sup>st</sup> century material, which may be noted and discarded.

7.2.5 Samples for environmental analysis and scientific dating should be taken if suitable material is encountered during the excavation. Provision should also be made for specialist sampling if appropriate (soil profiles, archaeomagnetic dating, dendrochronology etc.)

### **7.3 Method of Recording**

7.3.1 The trenches are to be recorded according to the normal principles of stratigraphic excavation. The stratigraphy of each area is to be recorded, even when no archaeological deposits have been identified.

7.3.2 Section and elevation drawings (at a minimum scale of 1:20) must include heights A.O.D. Plans (at a minimum scale of 1:20) must include O.D. spot heights for all principal strata and any features.

7.3.3 The actual areas of excavation and all archaeological (and possibly archaeological) features should be accurately located on a site plan and recorded by photographs, scale drawings and written descriptions sufficient to permit the preparation of a detailed archive and report on the material. The trench locations, as excavated, will be accurately surveyed, tied into the O.S. National Grid and located on an up-to-date 1:1250 O.S. map base.

7.3.4 All stone structures within the areas of excavation are to be recorded stone by stone to Level 3 as set out in Historic England's 2016 "Understanding Historic Buildings: a guide to good recording practice".

7.3.5 Except where otherwise requested, black and white photography using orthodox monochrome chemical development should be used. Film should be no faster than ISO400. Slower films should be used where possible as their smaller grain size yields higher definition images. Technical Pan (ISO 25), Pan-F (ISO50), FP4 (ISO125) and HP5 (ISO400) are recommended. The use of dye-based films such as Ilford XP2 and Kodak T40CN is unacceptable due to poor archiving qualities. Black and white photography should be supplemented by colour photography; this should be in transparency format (i.e. slides or digital photography as an acceptable alternative, see paragraph 7.3.6 below).

7.3.6 Digital photography: as an alternative to colour transparency photography, good quality digital photography may be supplied, using cameras with a minimum resolution of 10 megapixels. Digital photography should follow the guidance given by Historic England in Digital Image Capture and File Storage: Guidelines for Best Practice, July 2015. Note that conventional black and white print photography is still required (although see section 8 below) and constitutes the permanent record. Digital images will only be acceptable as an alternative to colour slide photography if each image is supplied in both JPEG and TIFF versions. The latter as an uncompressed 8-bits per channel TIFF version 6 file of not less than 25Mbs (See section 2.3 of the Historic England guidance). The contractor must include metadata embedded in the TIFF file. The metadata must include the following: the commonly used name for the site being photographed, the relevant centred OS grid coordinates

for the site to at least six figures, the relevant township name, the date of photograph, the subject of the photograph, the direction of shot and the name of the organisation taking the photograph. **Any digital images are to be supplied to WYAAS on gold CDs by the archaeological contractor accompanying the hard copy of the report.**

## 8. Use of Digital Imagery in Place of Film

8.1 In response to the mounting costs and decreasing numbers of practitioners offering professional photographic building recording on large and medium format chemical film the WYAAS have investigated other means to secure the long term preservation of photographic images. The WYAAS are satisfied that it is now feasible to substitute digital photography for this aspect of building recording in some projects as an alternative to monochrome photography as specified above.

8.2 The long-term archiving and curation of image captured during building recording will be carried out by the Archaeology Data Service (ADS). The ADS charge for this service and it is the contractor's responsibility to pay for this long term curation.

8.3 An estimate of the cost of archiving digital images and reports using the ADS Easy service can be obtained from the ADS website:

<http://archaeologydataservice.ac.uk/easy/costing>

8.4 The ADS' policies and requirements for metadata accompanying digital files should be followed. Comprehensive guidance can be found on the ADS website dealing with planning for the creation of a digital archive, collecting data, selection and discard policies, file structures, licencing and the transfer of material to the ADS.

## 8.5. Equipment

8.5.1 A digital SLR with a resolution of at least 10 megapixel should be employed. Cameras with an FX sensor, which is close to equivalency with 35mm film, are preferable to DX sensor equipped cameras. A variety of lenses should be used to best capture the subject and its setting

8.5.2 Care should be taken to ensure sharply focused well composed photographs are taken and when appropriate the camera should be set up and levelled on a tripod, e.g. when recording facades. The use of perspective shift lenses or pan and tilt adaptors may be necessary in some situations to achieve an acceptable image. Alternatively lens distortion may be removed post-capture by software but this must be recorded in the photographic catalogue and details of the software used given in the report. Original pre-correction images should be included in the site archive.

8.5.3 Photographs should be taken with a low ISO setting to reduce noise in the images captured and RAW format used before archiving in tiff format.

8.5.4 The camera should also be Exchange Image File (EXIF) compliant and accurate time, date and, where applicable, GPS information and other metadata set up prior to commencing recording work on site. Further requirements relating to metadata are described below.

## 8.6. Archiving Digital Photographs

8.6.1 Photographs and reports should be archived with using the ADS. Smaller projects (fewer than 300 files and of less than 10MB each) may be submitted online using the ADS-e Easy online service. (<http://archaeologydataservice.ac.uk/easy/home>). Larger project will require 'traditional' submission using either CD/DVD/USB device or a drop-off service. An estimate of the cost to archive digital images and reports using the ADS Easy service can be obtained from the ADS website:

<http://archaeologydataservice.ac.uk/easy/costing>

Grey Literature reports may be archived using the OASIS System free of charge, reports and oasis records can later be linked to an ADS-easy photography submission.

<http://archaeologydataservice.ac.uk/easy/costing>

8.6.2 The contractor should follow the ADS' policies and requirements for metadata accompanying digital files. Comprehensive guidance can be found on the ADS website dealing with planning for the creation of a digital archive, collecting data, selection and discard policies, file structures and naming conventions, licencing and the transfer of material to the ADS

<http://archaeologydataservice.ac.uk/advice/guidelinesForDepositors.xhtml>

8.6.3 **Meta data:** The contractor should create Project-level meta data, this is used to populate the ADS systems (enables users to search for collections, and populates the ADS webpage for the project. The 'coverage@ field in this document or online submission should include the historic township (Pontefract), site name and grid reference of the site:

(<http://archaeologydataservice.ac.uk/advice/DatasetlevelMetadata.xhtml#Collection-level> Metadata Requirements).

8.6.4 A raster data meta data file, cataloguing the digital photographs, should also be prepared. A template for this spreadsheet is available to download from the ADS (a template & examples of the latter are available from the ADS at:

<http://archaeologydataservice.ac.uk/advice/FilelevelMetadata.xhtml>

8.6.5 The contractor is responsible for notifying Historic England & WYAAS of the release of the collection on the ADS website. The forwarding of an email containing the collection Digital Object Identifier (DOI) to [wyher@wyjs.org.uk](mailto:wyher@wyjs.org.uk) will suffice for WYAAS.

8.6.6 Please note the WYAAS still require hard copy of the report accompanied by laser prints (cross referenced plates) of the photographs on archivally stable paper and a facsimile copy of the report in PDF (ISO 1005-1 compliant (PDF/A) format and the images on a "gold" archive quality CD.

## 8.7 Printing

8.7.1 Record photographs should be printed at a minimum of 5" x 7". In addition a small selection of photographs should be printed at 10" x 8". Bracketed shots of identical viewpoints need not be reproduced, but all viewpoints must be represented within the report.

8.7.2 Prints may be executed digitally from scanned versions of the film negatives, and may be manipulated to improve print quality (but **not** in a manner which alters detail or perspective). All digital prints must be made on paper and with inks which are certified against fading or other deterioration for a period of 75 years or more when used in combination. If digital printing is employed, the contractor must supply details of the paper/inks used in writing to the local authority with supporting documentation indicating their archival stability/durability.

## 8.8 Documentation

8.8.1 A photographic register and photo location plan are required. The photographic register should (as a minimum) include location, direction and subject of shot must accompany the photographic record; a separate photographic register should be supplied for any colour slides and digital photographs. Position and direction of each photograph and slide should be noted on a scaled copy of the building plan (minimum acceptable scale 1:100), which should also be marked with a north pointer.

## 8.9 Rectified Digital Photography

8.9.1 As an adjunct to hand drawn elevations and plans the recording of significant and complex built structures, stone and brick surfaces may be carried out using digital rectified photography to provide ortho-photographic images at the scales given in section 7.3.2 above. Photographs must be taken at a resolution adequate to allow the creation of images at these scales. The collection and archiving of digital photographs used to create ortho-photographs must follow and comply with Historic England's guidance contained in "Measured and Drawn: Techniques and practice for the metric survey of historic buildings (2nd edition)", English Heritage 2009 and Photogrammetric Applications for Cultural Heritage, Guidance for Good Practice, Historic England 2017.

8.9.2 In general photographs must be taken parallel or near parallel to the subject's main surface, sufficient photographs must be taken from additional viewpoints to capture any changes in level or concealed areas; photographs must have sufficient overlap (60%-80%) to ensure good interpolation by the software used; targets or scales must be used and the resulting image must be checked against the subject/archaeological features before their destruction. Ortho-photographs or copies should be annotated with relevant context numbers (and feature boundaries when not obvious) and be cross referenced in the descriptive and interpretive text in the site report.

## 9.0 Drones

9.1 If the contractor intends to use a drone to obtain aerial images of the site they must ensure that this activity is in full compliance with aviation law, the operator is fully trained and if necessary licenced by the Civil Aviation Authority and that a pre-flight and onsite risk assessments have been carried out. Digital images obtained

from a drone mounted camera must comply with the requirements for digital photography given above.

## 10. Use of Metal Detectors

10.1 Spoil heaps are to be scanned for non-ferrous metal artefacts using a metal detector capable of making this discrimination, operated by an experienced metal detector user (if necessary, operating under the supervision of the contracting archaeologist). Modern artefacts are to be noted but not retained (19<sup>th</sup>-century material and earlier should be retained.)

10.2 If a non-professional archaeologist is to be used to carry out the metal-detecting, a formal agreement of their position as a sub-contractor working under direction must be agreed in advance of their use on site. This formal agreement will apply whether they are paid or not. To avoid financial claims under the Treasure Act a suggested wording for this formal agreement with the metal detectorist is: "In the process of working on the archaeological investigation at [*location of site*] between the dates of [*insert dates*], [*name of person contributing to project*] is working under direction or permission of [*name of archaeological organisation*] and hereby waives all rights to rewards for objects discovered that could otherwise be payable under the Treasure Act 1996 and later amendments."

## 11. Environmental Sampling Strategy

11.1 Bulk samples must be taken from **all** securely stratified deposits using a strategy which combines systematic and judgement sampling, but which also follows the methodologies outlined in the English Heritage (2011) 'Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (Second Edition)' guidance

11.2 Samples for specialist environmental analysis and scientific dating (soil profiles, archaeomagnetic dating, dendrochronology etc.) should be taken if suitable material is encountered during the excavation. The Historic England Regional Science Advisor should be consulted (see para. 6.4.3 for contact details) and provision should be made for an appropriate specialist(s) to visit the site, take samples and discuss the sampling strategy, if necessary.

## 12. Conservation Strategy

12.1 A conservation strategy must be developed in collaboration with a recognised laboratory. All finds must be assessed in order to recover information that will contribute to an understanding of their deterioration and hence preservation potential, as well as identifying potential for further investigation. Furthermore, all finds must be stabilised and packaged in accordance with the requirements of the receiving museum. As a guiding principle, only artefacts of a "displayable" quality would warrant full conservation, but metalwork and coinage from stratified contexts would be expected to be x-rayed if necessary, and conservation costs should also be included as a contingency.

## 13. Human Remains

13.1 Any human remains that are discovered must initially be left *in-situ*, covered and protected. WMDC & Historic England will be notified at the earliest opportunity. If removal is necessary the remains must be excavated archaeologically in accordance

with the *Guidance for Best Practice for Treatment of Human Remains Excavated from Christian Burial Grounds in England* published by Advisory Panels on the Archaeology of Burials in England (2017 edition), a valid Ministry of Justice licence, and if appropriate, any local environmental health regulations.

#### **14. Treasure Act**

14.1 The terms of the Treasure Act 1996, as amended, must be followed with regard to any finds that might fall within its purview. Any finds must be removed to a safe place and reported to the local coroner as required by the procedures as laid down in the “Code of Practice”. Where removal cannot be effected on the same working day as the discovery, suitable security measures must be taken to protect the finds from theft.

#### **15. Monitoring**

15.1 The project will be monitored as necessary and practicable by Historic England (in its role as project funder & grantor of Scheduled Monument Consent), & by WYAAS, in its role as curator of the county’s archaeology and advisor to WMDC. Both Historic England’s & WYAAS’s representatives will be afforded access to the site at any reasonable time. It is usual practice that the visit is arranged in advance, but this is not always feasible.

#### **16. Archive Deposition (also see section 8 above for digital imagery)**

16.1 Before commencing any fieldwork, the archaeological contractor must contact the relevant District museum archaeological curator to determine the museum's requirements for the deposition of an excavation archive. In this case the contact is : Mr David Evans (Wakefield M.D.C. Museum and Arts, Pontefract Museum, 5 Salter Row, Pontefract, WF8 1BA. Tel:, 01924 305352 (davidevans@wakefield.gov.uk).

who should be notified in writing of the commencement of fieldwork at the same time as WMDC, Historic England & WYAAS

16.2 It is the policy of Wakefield Museums Service to accept complete excavation archives, including primary site records and research archives and finds, from all excavations carried out in the District that it serves.

16.3 It is the responsibility of the archaeological contractor to meet Wakefield Museums’ requirements with regard to the preparation of excavation archives for deposition.

#### **17. Post-excavation Assessment and Analysis**

##### **17.1 Initial Treatment of Artefacts and Samples**

Upon completion of fieldwork all finds will be cleaned, identified, marked (if appropriate) and properly packed and stored in accordance with the requirements of national guidelines. Metalwork will be x-rayed (as per paragraph 7.6) and assessed by a conservator. Any samples taken shall be processed appropriately.

##### **17.2 Archive Consolidation**

17.2.1 The site archive will be checked, cross-referenced and made internally consistent. A fully indexed archive shall be compiled consisting of all primary written

documents, plans, sections, photographic negatives and a complete set of labelled photographic prints/slides.

17.2.2 Any digital prints in the report must be made on paper and with inks which are certified against fading or other deterioration for a period of 75 years or more when used in combination. If digital printing is employed, **the contractor must** supply details of the paper/inks used in writing to the WYAAS, with supporting documentation indicating their archival stability/durability.

17.2.3 Standards for archive compilation and transfer should conform to those outlined in *Archaeological Archives – a guide to best practice in creation, compilation, transfer and curation* (Archaeological Archives Forum, 2011 edition). The contractor should also take account of any additional requirements imposed by the recipient museum (see section 9 above).

17.2.4 The original archive is to accompany the deposition of any finds.

### 17.3 Assessment - Artefacts

All artefacts must be assessed by a qualified and experienced specialist. Assessment should be based on MORPHE and should include:

- preparation of a descriptive catalogue;
- dating (where possible);
- an assessment of the significance of the assemblage;
- an assessment of the potential for further analysis to contribute to the interpretation of the archaeology of this site;
- an assessment of the potential for further analysis to contribute to artefact studies;
- recommendations for additional artefact illustration/photography;
- an assessment of the condition of the assemblage and recommendations for conservation, retention/discard and archiving.

### 17.4 Assessment - Samples

All environmental material must be assessed by a qualified and experienced specialist. Assessment should be based on MORPHE and should include:

- preparation of a descriptive table/catalogue;
- identification of material suitable for scientific dating;
- an assessment of the significance of the assemblage;
- an assessment of the potential for further analysis to contribute to the interpretation of the archaeology of this site;
- an assessment of the potential for further analysis to contribute to environmental studies;
- an assessment of the condition of the assemblage and recommendations for retention/discard and archiving.

### 17.5 Dating

Scientific dating should be undertaken at this stage if it is required to fulfil the aims of the project.

## 18 Reporting (Stage 1) – Interim Assessment of Potential

18.1 Following the return of the specialist reports to the archaeological contractor, but prior to the commencement of preparation of the detailed site report, the contractor should arrange a meeting with the Historic England Principal Inspector for Yorkshire (Neil Redfern, 37 Tanner Row, York, YO1 6WP | 01904 601897 | 07967 722664 | [Neil.Redfern@HistoricEngland.org.uk](mailto:Neil.Redfern@HistoricEngland.org.uk) ), WY Archaeology Advisory Service and (at their discretion) Historic England's Regional Science Adviser. The purpose of this meeting is to discuss the results of the initial stratigraphic synthesis and initial scientific analyses, and to determine

- the ability of the available data to fulfil the stated aims and objectives of the project
- any requirement for further scientific analyses prior to the formulation of the full report on the site.
- Additional historical research to contextualise the results of the excavation

**18.2** Prior to the meeting, documentation sufficient to enable the Advisory Service and Historic England to evaluate any proposals for further analysis should be made available to WYAAS and HE. This documentation should consist of the following as a minimum, but should not include a detailed site narrative or constitute a draft of the final report:

#### 18.2.1 Text

- A brief narrative outline of the results of the excavation (**N.B.** this is not intended to be a detailed description of the stratigraphic sequence, but should provide sufficient detail to permit the form and development of the site to be understood by a third party who has not visited the excavation);
- Detailed description of any features/feature groups, the interpretation of which may be affected by the results of further scientific analysis;
- A re-evaluation of the aims and objectives of the project in the light of the initial specialist analysis;
- A descriptive context catalogue;
- Unedited copies of specialist reports;
- Detailed and specific recommendations for further artefact and environmental analysis;
- Detailed and specific recommendations for any additional scientific dating;
- Detailed and specific recommendations for further documentary research;
- Costings for any recommended further research, scientific analysis or dating;
- Recommendations for general publication in monograph form or in an appropriate journal, if warranted by the results of the excavation.

#### 18.2.2 Illustrations

Illustrations should be sufficient to permit the summary discussion to be understood by a third party, and should include:

- Location plan;
- Trench locations (as excavated), overlaid on an up-to-date 1:1250 O.S. map base;
- Draft phase plans (these should be at a scale sufficient to illustrate major context and feature groups important to an understanding of the site narrative)

- Plans, sections and photographs sufficient to permit the narrative outline to be understood, and to support recommendations for further specialist analysis. Draft drawings and marked-up digital photographs are acceptable as long as these are legible.

## **19. Reporting (Stage 2) – Full Report**

19.1 If further specialist analysis is judged by Historic England & the WY Archaeology Advisory Service to be necessary and appropriate, this work should be commissioned and the results incorporated into a full report. If no further specialist analysis is required, then a full report will be produced.

19.2 Details of the style and format of the full report are to be determined by the archaeological contractor. However, it should be produced with sufficient care and attention to detail to be of academic use to future researchers. The report should be fully illustrated and include:

- background information;
- a description of the methodology;
- a full description of the results;
- an interpretation of the results in a local/regional/national context as appropriate; particularly with relation to the development of castle gatehouses.
- a full bibliography.

Appendices to the report should include:

- Unedited copies of final specialist reports;
- a quantified index to the site archive
- written confirmation from the relevant museum or other repository that the archive has been accepted for long-term storage, with full location details of the archive
- a copy of the agreed project design and this brief.

19.3 Location plans should be produced at a scale which enables easy site identification and which depict the full extent of the site. A scale of 1:50,000 is not regarded as appropriate unless accompanied by more detailed plan(s). The location of the trenches (as excavated) should be overlaid on an up-to-date 1:1250 O.S. map base.

19.4 All illustrations should be executed to publication standard. Site plans should be at an appropriate, measurable scale showing the trenches as excavated and all identified (and, if possible, predicted) archaeological features/deposits. Trench and feature plans must include O.D. spot heights for all principal strata and any features. Section drawings must include O.D. heights and be cross-referenced to an appropriate plan.

19.5 Finds that are critical for dating and interpretation should be illustrated.

19.6 Discrete features crucial to the interpretation of the site should be illustrated photographically.

19.7 In addition to the full report to be deposited with the WY Historic Environment Record, the results of this excavation may merit publication in monograph form or in a suitable archaeological journal (subject to the judgement of Historic England).

19.8 A hard copy of the full report (plus a digital copy on gold disk) will also be submitted directly to the WY Archaeology Advisory Service as holders of the West Yorkshire Historic Environment Record.

19.9 A copy of the final report (in .pdf format) shall also be supplied to Historic England's Regional Science Advisor and to the Historic England Archive (The Engine House, Fire Fly Avenue, Swindon, SN2 2EH. [archive@HistoricEngland.org.uk](mailto:archive@HistoricEngland.org.uk)).

19.10 The full report supplied to WYAAS is on the understanding that it will be added to the West Yorkshire Historic Environment Record and will become a public document after an appropriate period of time (generally not exceeding six months).

19.11 Copyright - Please note that by depositing this report, the contractor gives permission for the material presented within the document to be used by Historic England, WMDC & the WYAAS, in perpetuity, although The Contractor retains the right to be identified as the author of all project documentation and reports as specified in the *Copyright, Designs and Patents Act 1988* (chapter IV, section 79). The permission will allow the Historic England, WMDC & WYAAS to reproduce material, including for commercial use by third parties, with the copyright owner suitably acknowledged.

19.12 The West Yorkshire HER supports the Online Access to Index of Archaeological Investigations (OASIS) project. The overall aim of the OASIS project is to provide an online index to the mass of archaeological grey literature that has been produced as a result of the advent of large-scale developer funded fieldwork. The archaeological contractor must therefore complete the online OASIS form at <http://ads.ahds.ac.uk/project/oasis/>. Contractors are advised to contact the West Yorkshire HER officer prior to completing the form.

## **20. General Considerations**

### **20.1 Authorised Alterations to Agreed Project Design by Contractor**

13.2.1 It is the archaeological contractor's responsibility to ensure that they have obtained Historic England's & WMDC's consent in writing to any variation of the agreed project design.

### **20.2 Technical Queries**

13.3.1 Any technical queries arising from this brief, should be addressed to Historic England & WYAAS without delay.

### **20.3 Valid Period of brief**

13.5.1 This brief is valid for a period of one year from date of issue. After that time it may need to be revised to take into account new discoveries, changes in policy or the introduction of new working practices or techniques.

**Ian Sanderson**  
**West Yorkshire Archaeology Advisory Service**

July 2018

West Yorkshire Archaeology Advisory Service  
c/o WYJS  
Nepshaw Lane South  
Morley  
Leeds  
LS27 7JQ

Telephone: 0113 535 0171

E-mail: [Ian.Sanderson@wyjs.org.uk](mailto:Ian.Sanderson@wyjs.org.uk)

### 7737 Pontefract Castle Gatehouse Project Aims Compliance Matrix

| Aim                                                                                                                              | Question                                                                                                                                                                                                          | Completed | Comments                                                                                                                 |
|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|--------------------------------------------------------------------------------------------------------------------------|
| Aim 1<br>Identify the physical extent and character of the archaeological remains on the site with a programme of remote sensing | Q1: In light of current findings from projects at similar Castle sites, do any outstanding research objectives from the earlier unpublished 2016 watching brief still remain to be addressed?                     | Yes       |                                                                                                                          |
|                                                                                                                                  | Q2: Can the layout of the gatehouse and associated sub-surface archaeology be established by remote survey?                                                                                                       | Yes       | Aerial survey undertaken on 6th November. Layout in relation to extant structural remains of castle can be seen.         |
|                                                                                                                                  | Q3: Can we identify any phasing in the topographic or remote sensing anomalies indicative of an extended period of use?                                                                                           | Yes       | Aerial survey undertaken on 6th November. No additional phasing observed that could not be identified during excavation. |
| Aim 2<br>Characterise the results of non-invasive survey, refining the chronology and phasing of the                             | Q4: What evidence is there for the use of the site pre-Norman Conquest, and how does this compare with remains recovered through recent archaeological investigations within the castle and the surrounding area? |           | Safe working conditions and time limitations meant that the base of the drawbridge pit was not found.                    |

Purple text - 22<sup>nd</sup> October, Green text - 28<sup>th</sup> October, Orange text - 30<sup>th</sup> October, Blue text – 15<sup>th</sup> November

| Aim                                | Question                                                                                                                                                                                                                                                                | Completed | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| site with a programme of trenching | Q5: Can we elucidate the plan, character, function, phasing, contemporary significance and chronological development of the gatehouse structures, with the aim of establishing the possible presence of bridge structures and/ or a barbican in front of the gatehouse? | Yes       | <p>Plan visible in excavated section; to be revealed fully when western fills of the pit are removed. Almost certainly a 14<sup>th</sup>/15<sup>th</sup> century drawbridge pit within a bridge. Phasing to be determined/confirmed when northern corner is excavated, revealing relationship between 'original' gatehouse tower and possible later addition.</p> <p>Drawbridge pit, bridge and gatehouse tower are a later addition to the 'original' tower – confirmed in northern corner of excavation.</p> |
|                                    | Q6: What are the specific characteristics of the apparent ditch / drawbridge pit, including its width and depth?                                                                                                                                                        |           | <p>Width, length and depth (at northern end) established. Depth at southern end in the ditch is still to be determined.</p> <p>Void encountered at southern end of drawbridge pit indicates at least another 1.5m depth to go.</p> <p>Auger survey on 6<sup>th</sup> November indicates the drawbridge pit is at least 6.5m deep. The auger was refused 0.8m below the deepest part of the trench where it encountered burnt sandstone. It is thought this is not the base of the pit.</p>                     |

Purple text - 22<sup>nd</sup> October, Green text - 28<sup>th</sup> October, Orange text - 30<sup>th</sup> October, Blue text – 15<sup>th</sup> November

| Aim | Question                                                                                                                                                                             | Completed | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|     | Q7: What is the date of the feature's original construction, and the date of its infilling?                                                                                          |           | <p>Original construction 14<sup>th</sup>/15<sup>th</sup> century (from mason's marks). Robbed extensively in 19<sup>th</sup> century. Considerable infilling prior to 19<sup>th</sup> century robbing, suggestion of 17<sup>th</sup> century rubble backfill – full sequence still to be ascertained.</p> <p>Rubble backfill contained architectural fragments and is most likely 17<sup>th</sup> century demolition rubble. This sealed well-stratified 17<sup>th</sup> century layers of backfill.</p> <p>Now hitting the top of late medieval deposits.</p> <p>By the end of the excavation we feel like we were in 15<sup>th</sup> century layers.</p> |
|     | Q8: Can we identify and date the sequence and morphological development of archaeological remains encountered from the ditch through environmental sampling and scientific dating?   |           | <p>Targeted samples will be taken when the full sequence is visible and understood.</p> <p>Sampling has begun on all deposits below the rubble backfill of the drawbridge pit.</p> <p>Soil micromorph samples now being taken throughout sealed 17<sup>th</sup> century and earlier layers.</p> <p>Bulk and soil micromorph samples taken from the full excavated sequence.</p>                                                                                                                                                                                                                                                                            |
|     | Q9: Is it possible for a comparison to be made between masonry styles / techniques found during excavation with those identified from other dated structural elements of the castle? | Yes       | <p>14<sup>th</sup>/15<sup>th</sup> century</p> <p>Masons' marks 40, 53, 22, 80, 69 (Roberts 2002: 150)</p> <p>5 new marks</p> <p>Many more marks appearing, all of the same masons.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

Purple text - 22<sup>nd</sup> October, Green text - 28<sup>th</sup> October, Orange text - 30<sup>th</sup> October, Blue text – 15<sup>th</sup> November

| Aim                                                                              | Question                                                                                                                                                                                                                                                          | Completed | Comments                                                                                                                                                                                                                                                                                                       |
|----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Aim 3<br>Understand the site's archaeological and palaeoenvironmental conditions | Q10: What is the current state of the archaeological and palaeoenvironmental material across the site?                                                                                                                                                            | Yes       | Appears to be good, but currently working in later deposits.<br>Encountering waterlogged remains will be unlikely because of the well-drained soils and bedrock.<br>Good preservation likely from 17 <sup>th</sup> century deposits.<br>Preservation initially appears to be good from late medieval contexts. |
|                                                                                  | Q11: How well do deposits and artefacts survive, and how deeply are they buried?                                                                                                                                                                                  | Yes       | Good preservation has been observed across all find types, including bone and metal objects – albeit from mostly coming from 19 <sup>th</sup> century deposits.<br>Good preservation of 17 <sup>th</sup> century material.<br>Good preservation from late medieval material.                                   |
|                                                                                  | Q12: Can the palaeoenvironmental data recovered from sampling in the excavation inform us about the provision of consumable goods to a high-status residence, and any specialised food processing or industrial activities that may have taken place at the site? |           | Currently removing the last of the later deposits from the trench. When sealed deposits of an earlier date are encountered we expect environmental samples to help answer this.                                                                                                                                |
|                                                                                  | Q13: Can we increase our understanding of the local environment during the multi-period occupation of the site and the process by which the ditch was filled?                                                                                                     |           | Significant 19 <sup>th</sup> century modifications to the site. Earlier deposits are just now being encountered, where sampling will tell us more.<br>Bulk samples being recovered now from all stratified deposits.                                                                                           |

Purple text - 22<sup>nd</sup> October, Green text - 28<sup>th</sup> October, Orange text - 30<sup>th</sup> October, Blue text – 15<sup>th</sup> November

| Aim                                                          | Question                                                                                                                                                                                      | Completed | Comments |
|--------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|----------|
| Aim 4<br>Making recommendations,<br>analysis and publication | Q14: Following a comprehensive assessment of all archaeological material, how can the results of this work aid in our interpretation of contemporary regional sites?                          |           |          |
|                                                              | Q15: In light of the evidence recovered from this and previous work, can we articulate a link between the multi-phased use of the site and its different areas?                               |           |          |
|                                                              | Q16: Can we highlight any particular themes within the complete and stable archaeological archive that would benefit archives, local museums and education, improving regional accessibility? |           |          |

Purple text - 22<sup>nd</sup> October, Green text - 28<sup>th</sup> October, Orange text - 30<sup>th</sup> October, Blue text – 15<sup>th</sup> November

  
By Email

5th February 2020

Dear **RE: Additional Archaeological Excavation – Pontefract Castle Gatehouse**

Following consultation with  at Historic England, we have reviewed the provisional results of the Gatehouse excavation and have itemised costs for the complete excavation of the drawbridge pit in the table below.

This includes investigation of the complete sequence of archaeological remains by a team of three archaeologists (Item 1) over the course of 15 working days (3 weeks). Following consultation with deep excavation professionals and having taken advice on working in confined spaces, we have established a project methodology to undertake the work safely. The team will need mobilising with specialist equipment (Item 2) to allow for the safe and practical recovery of remains at depth. This includes use of a Davit Arm System to facilitate removal of spoil from the pit and to act as a secondary backup should personnel require lifting in case of an emergency. Members of the team working in the confined space will also be required to wear a gas monitor at all times. In addition, remedial action will be required to stabilise the trench edge adjacent to the footpath to the south.

Although the previous excavation area is currently in a stable condition, exposure to the elements will result in the degradation of the upstanding walls of the trench. In time this may compromise the integrity of the surrounding area and therefore we would recommend that any work be undertaken at the earliest opportunity. The methodological approach will need to be agreed with Historic England prior to any work being undertaken.

Results of this additional phase will be incorporated into the fully illustrated archaeological report produced for the Gatehouse Project (Item 3). We have included a rate for post excavation analysis, which is subject to some contingencies dependant on the survival of archaeological material. These are outlined with the table of costs below.

I trust this provides you with the information you require. Please do not hesitate to contact me if you have any queries and require additional information. I look forward to hearing from you in due course.

Best Regards,



## Pontefract Castle Gatehouse

### Additional Archaeological Excavation

Table 1

| Item                             | Description                                                                                                  | Cost       |
|----------------------------------|--------------------------------------------------------------------------------------------------------------|------------|
| <b>Archaeological Evaluation</b> |                                                                                                              |            |
| 1                                | Three Archaeological Site Staff x 15 days @ [REDACTED] per day                                               | [REDACTED] |
| 2                                | Team mobilisation, including additional safety/deep excavation equipment (Davit Arm System, gas monitor etc) | [REDACTED] |
| 3                                | Post-excavation assessment ([REDACTED]% of fieldwork costs)                                                  | [REDACTED] |
|                                  | <b>Sub Total</b>                                                                                             | [REDACTED] |

#### CONTINGENCY

- Recovery of exceptional archaeological finds, such as human remains or unexpected survival of waterlogged remains, may incur additional costs for scientific sampling, analysis, conservation, preservation and archive (see table below)

|                                                                              |            |          |
|------------------------------------------------------------------------------|------------|----------|
| Bulk finds Timber: prepare/assessment/recording/database entry               | [REDACTED] | Each     |
| Excavation, recording, storage and reporting of human remains                | [REDACTED] | Each     |
| Conservation of artefacts                                                    | [REDACTED] | Day rate |
| Geoarchaeological samples                                                    | [REDACTED] | Each     |
| Freeze drying of leather objects                                             | [REDACTED] | Each     |
| Provision of X Ray investigation of objects including all materials required | [REDACTED] | Each     |

#### THE ABOVE EVALUATION QUOTATION ASSUMES THE FOLLOWING:

- That access to the relevant areas of the development will be made readily available to facilitate excavation and recording.
- That Item 2 is based on discussions and site visits with deep excavation professionals, and the ability to achieve a pragmatic programme of work undertaken with a single mobilisation.
- That Item 3 is a realistic estimate on the basis of encountering archaeology at depth within the excavated area. If significant archaeological remains are discovered requiring the mobilisation of an additional excavation team (such as the discovery of human remains), or unexpected archaeological material is recovered, this will be charged as additional costs in line with the information presented in contingency items above.
- The site is not contaminated, and no special Health and Safety measures will be required in respect of contamination, and any plans pertaining to the identification of services on the site will be provided in advance.
- Any additional site work or consultation beyond the scope detailed here will be calculated on the basis of our usual day rates, with travel and accommodation billed at cost.
- Invoices will be issued on completion of each item and subject to the usual payment terms.

All costs are exclusive of VAT, which will be charged at the prevailing rates

All costs are valid for 90 days

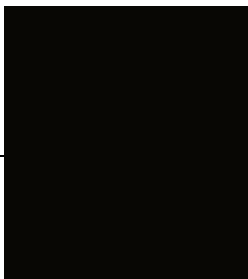
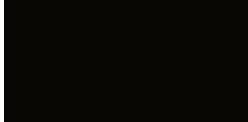
All work will be subject to standard terms and conditions

DigVentures 05/02/2020



## Pontefract Castle - Excavation 2019/20

### Risk Assessment Method Statement

|           | Doc. ref. no.    | Status | Approval                                                                            | Date     | Comments                                                                                 |
|-----------|------------------|--------|-------------------------------------------------------------------------------------|----------|------------------------------------------------------------------------------------------|
| Original  | DV_PON19<br>RAMS | Final  |   | 12/08/19 | Completed following initial walk over assessment                                         |
| Revisions | V3.0             | Final  |  | 21/07/20 | Second stage excavation targeting lower deposits in drawbridge pit; response to COVID-19 |
|           |                  |        |                                                                                     |          |                                                                                          |
|           |                  |        |                                                                                     |          |                                                                                          |
|           |                  |        |                                                                                     |          |                                                                                          |
|           |                  |        |                                                                                     |          |                                                                                          |

## 1 PURPOSE OF THIS DOCUMENT

The purpose of this method statement is to provide detailed guidance on a safe system of work for the employees. The method statement is based on a task specific risk assessment using identified hazards, the likelihood of the hazard occurring and the severity of the consequences. This risk assessment is attached. As conditions may change on site this RAMS may require amendment during the course of work to reflect the conditions at the time. All personnel involved in this operation must be briefed on the content of this RAMS and associated reference documents before commencement of the work.

## 2 METHOD STATEMENT

|   |                              |                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                |                     |              |
|---|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------------|
| 1 | Supervisors                  | Name                                                                                                                                                                                                               | Position                                                                                                                                                                                                                                                                                       | Contact Details     | First Aider? |
|   |                              |                                                                                                                                                                                                                    | Site Director, DV                                                                                                                                                                                                                                                                              |                     | Yes          |
| 2 | Key personnel                |                                                                                                                                                                                                                    | Position                                                                                                                                                                                                                                                                                       | Contact Details     |              |
|   |                              |                                                                                                                                                                                                                    | Managing Director, DV<br>Project Director, DV<br>Director of Operations, DV<br>Community Archaeologist, DV<br>Community Archaeologist, DV<br>Principal Inspector of Ancient Monuments, HE<br>Programme & Events Officer, WC<br>Principal Archaeologist, WYAAS<br>Project Assurance Officer, HE |                     |              |
| 4 | Working Hrs                  | 0800 to 1600, Monday to Friday.                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                |                     |              |
| 5 | Plant /Tools/ Vehicles       | Plant: None<br>Equipment: Davit Arm System, 5m ladder, gas monitor<br>Tools: Hand tools (mattock, shovel, trowel, bucket etc)<br>Vehicles: Minimum number of vehicles required to transport staff to site each day |                                                                                                                                                                                                                                                                                                |                     |              |
| 6 | Specialist Training Required | N/A                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                |                     |              |
| 7 | Personal Protective          | Head Protection                                                                                                                                                                                                    | x                                                                                                                                                                                                                                                                                              | Skin Protection:    |              |
|   |                              | Eye Protection:                                                                                                                                                                                                    | x                                                                                                                                                                                                                                                                                              | Specialist Footwear | x            |

|    |                         |                                                                                                       |                                                                                                                                                                |                 |  |
|----|-------------------------|-------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--|
|    | <b>Equipment</b>        | Ear Protection:                                                                                       |                                                                                                                                                                | Flotation Aids: |  |
|    |                         | Respiratory                                                                                           | x                                                                                                                                                              | Harnesses:      |  |
|    |                         | Hand Protection                                                                                       | x                                                                                                                                                              | Other:          |  |
|    |                         | If other, specify:                                                                                    | Hi visibility jacket/vest at all times; waterproof clothing in inclement weather; head protection required; face masks and visors to be worn where appropriate |                 |  |
| 8  | <b>Permits Required</b> | Scheduled Monument Consent – Historic England                                                         |                                                                                                                                                                |                 |  |
| 9  | <b>COSHH Assessment</b> | N/A                                                                                                   |                                                                                                                                                                |                 |  |
| 10 | <b>Environmental</b>    | Gas monitor always used to test deep excavation for safe gas levels<br>COVID-19 – government guidance |                                                                                                                                                                |                 |  |
| 11 | <b>Sequence of work</b> |                                                                                                       |                                                                                                                                                                |                 |  |

**COVID-19 pandemic**

- Stay alert.
- No unauthorized access to the site.
- Staff are to use the Activity Zone for breaks and are not to use Pontefract Castle staff/office space.
- Staff to keep 2m apart wherever possible. When not possible consider whether the task is necessary.
- Wear face masks and gloves where appropriate to minimise potential transmission.
- Use hand washing facilities and hand sanitizer immediately before and after leaving the trench and site.
- No tool sharing. Individuals are responsible for cleaning them at the end of every day.
- PPE checks on daily basis
- No interactions with members of the public.
- Staff will drive to the site in their own vehicles.

**Mobilisation**

- Collect key for car park area from office.
- Delivery of Davit Arm System, stretcher and ladder.

**Pre-excavation site checks**

- Check perimeter fencing and place signs where appropriate.
- Reestablish safe access/egress points into the trench.
- Inspect the excavation area visually to identify unforeseen hazards. Where necessary additional safety measures may be required.
- Clear suitable area for installation of Davit Arm System.

**Excavation**

- Briefing to all staff outlining tasks for the day and updates to the risk assessment where appropriate.

- All tasks to be carried out in accordance with the agreed safety method statements and any instruction issued by Historic England or Wakefield Council.
- PPE must be worn at all times.
- Excavation will be undertaken in plan using a longitudinal section through drawbridge pit layers using previous methodology. Contexts will be excavated, sampled and recorded to a depth of 1m before the opposing section is removed.
- The edges of the excavation will be stepped as ground conditions demand, but no greater in depth than 1m.
- Access ramps will be located in the corners of the excavation to allow safe access/egress and to enable the safe removal of spoil.
- Spoil storage is to be closely managed throughout this process ensuring that there are no ecological or environmental impacts. Spoil heaps are to be battered at a 45° angle.
- Spoil will be stored within the excavation against the south-facing baulk section.
- All archaeological features will be cleaned and excavated by hand, with the exception of structural remains.
- Upon the discovery of significant/unexpected remains, Historic England and Wakefield Council will be notified immediately.

#### **Community Engagement**

- There will be no direct interaction between the site team and members of the public.
- Signs will be placed on perimeter fencing next to the visitor centre and at the top of the Victorian steps. They will contain basic information and links to online videos detailing the work being undertaken.

#### **Demobilisation**

- Prior to leaving the site all safety measures installed by DigVentures are to be removed together with any works debris.
- Removal of staff and equipment.

### 3 RISK ASSESSMENT

|                                                                                                                                                                                                                                  |                                                        |                         |                                                                               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-------------------------|-------------------------------------------------------------------------------|
| <b>Site Address:</b>                                                                                                                                                                                                             | Pontefract Castle, Castle Garth, Pontefract<br>WF8 1QH | <b>RA completed by:</b> | [REDACTED]                                                                    |
|                                                                                                                                                                                                                                  |                                                        | <b>Date:</b>            | 21st July 2020                                                                |
|                                                                                                                                                                                                                                  |                                                        | <b>Site visit:</b>      | 16th January 2020                                                             |
| <b>Monitors:</b>                                                                                                                                                                                                                 | [REDACTED]                                             | <b>Documentation:</b>   | Project Design                                                                |
| <b>Operation/Task:</b>                                                                                                                                                                                                           | Archaeological excavation                              |                         | <ul style="list-style-type: none"> <li>DV_PON19_ProjectDesign_V3.0</li> </ul> |
| <b>Notes:</b><br><p>All staff and to read this document (in conjunction with the Project Design) before entry on to site, and sign-off the Briefing Log once induction from the Health &amp; Safety Supervisor is completed.</p> |                                                        |                         |                                                                               |
| <p><b><i>Remember – Please report anything that is or seems to be unsafe to DigVentures Staff immediately.</i></b></p>                                                                                                           |                                                        |                         |                                                                               |

Frequency: 1 = A highly improbable occurrence; 2 = A remotely possible but known occurrence; 3 = An occasional occurrence; 4 = A fairly frequent occurrence; 5 = A regular occurrence; 6 = Almost a certainty  
Severity: 1 = Negligible injuries; 2 = Minor injuries; 3 = Major injuries; 4 = Single fatality; 5 = Multiple fatalities; 6 = Multiple fatalities including persons beyond site  
Risk Rating: 1 – 4 = tolerable; 5 – 7 = moderate; 8 – 11 = substantial; 12+ intolerable (Risk Rating = Frequency x Severity)

| Hazard/Risk                                                                 | Risk Rating |   |    | Control Measures                                                                                                                                              | Residual Risk |   |    | Responsibility | Monitor   |
|-----------------------------------------------------------------------------|-------------|---|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---|----|----------------|-----------|
|                                                                             | F           | S | RR |                                                                                                                                                               | F             | S | RR |                |           |
| <b>FIELDWORK</b>                                                            |             |   |    |                                                                                                                                                               |               |   |    |                |           |
| <b>Hand-excavation</b>                                                      |             |   |    |                                                                                                                                                               |               |   |    |                |           |
| Injury to DV staff, visitors and other contractors whilst using hand tools. | 3           | 3 | 9  | All tools will be inspected prior to use by DigVentures staff. All damaged, broken or otherwise unusable hand tools to be marked as such and put to one side. | 1             | 3 | 3  | DV             | DV        |
|                                                                             |             |   |    | All on-site grid pegs will be fitted with safety caps                                                                                                         |               |   |    | DV             | DV/Client |
|                                                                             |             |   |    | Heavy lifting to be avoided where possible. If unavoidable then all staff to receive appropriate training.                                                    |               |   |    | DV             | DV/Client |
|                                                                             |             |   |    | All tools will be used for the purpose for which they were intended.                                                                                          |               |   |    | DV             | DV        |
|                                                                             |             |   |    | At all times DV staff shall be made aware of other persons working in the vicinity.                                                                           |               |   |    | DV/Client      | DV/Client |
| <b>Deep excavation</b>                                                      |             |   |    |                                                                                                                                                               |               |   |    |                |           |
| Injury to DV staff, visitors or other contractors due to trench collapse.   | 3           | 4 | 12 | No unsupported sections greater than 1.2m depth.                                                                                                              | 1             | 4 | 4  | DV             | DV/Client |
|                                                                             |             |   |    | Trench sides to be stepped as ground conditions demand, regardless of depth.                                                                                  |               |   |    |                |           |
|                                                                             |             |   |    | Trench to be enclosed within a perimeter fence with appropriate signage.                                                                                      |               |   |    |                |           |
|                                                                             |             |   |    | No persons other than DV, Client or curatorial staff to enter deep excavations at any time.                                                                   |               |   |    |                |           |
|                                                                             |             |   |    | Access/egress to the trench to be made via a battered ramp in the east corner.                                                                                |               |   |    |                |           |
|                                                                             |             |   |    | The drawbridge pit shall be accessed through use of a ladder of suitable length secured at top and bottom.                                                    |               |   |    |                |           |

Frequency: 1 = A highly improbable occurrence; 2 = A remotely possible but known occurrence; 3 = An occasional occurrence; 4 = A fairly frequent occurrence; 5 = A regular occurrence; 6 = Almost a certainty  
Severity: 1 = Negligible injuries; 2 = Minor injuries; 3 = Major injuries; 4 = Single fatality; 5 = Multiple fatalities; 6 = Multiple fatalities including persons beyond site  
Risk Rating: 1 – 4 = tolerable; 5 – 7 = moderate; 8 – 11 = substantial; 12+ intolerable (Risk Rating = Frequency x Severity)

| Hazard/Risk                                                                                                                               | Risk Rating |   |    | Control Measures                                                                                                                            | Residual Risk |   |   | Responsibility | Monitor   |
|-------------------------------------------------------------------------------------------------------------------------------------------|-------------|---|----|---------------------------------------------------------------------------------------------------------------------------------------------|---------------|---|---|----------------|-----------|
|                                                                                                                                           |             |   |    | Groundwater seepage to be removed either using a water pump or manually bailed.                                                             |               |   |   |                |           |
| Injury to DV staff, visitors or other contractors due to fall into excavations.                                                           | 2           | 3 | 6  | All excavation work including spoil heaps to be fenced.                                                                                     | 1             | 3 | 3 | DV             | DV/Client |
|                                                                                                                                           |             |   |    | Appropriate hazard signs to be erected adjacent to excavations.                                                                             |               |   |   |                |           |
|                                                                                                                                           |             |   |    | Excavated spoil, tools, equipment etc. to be stockpiled/stored at least 1 m beyond the edge of the excavations to minimise trip hazards.    |               |   |   |                |           |
|                                                                                                                                           |             |   |    | All visitors to the site to be made aware of the location of any deep excavations.                                                          |               |   |   |                |           |
| Injury to DV staff through removal of material from deep excavation                                                                       | 3           | 3 | 9  | Davit Arm System winch to be used to safely remove material from the deep excavation.                                                       | 1             | 3 | 3 | DV             | DV        |
|                                                                                                                                           |             |   |    | Banks-person to be present and always have eyes on individual in the deep excavation.                                                       |               |   |   |                |           |
|                                                                                                                                           |             |   |    | Stretcher to be safely stored and used in case of emergency recovery.                                                                       |               |   |   |                |           |
| <b>Utilities/ Buried Hazards</b>                                                                                                          |             |   |    |                                                                                                                                             |               |   |   |                |           |
| Injury to DV staff, other contractors and plant (including utilities) due to rupturing of or contact with utilities (buried or overhead). | 2           | 5 | 10 | All utility mapping possessed by Client will be consulted.                                                                                  | 1             | 5 | 5 | DV             | DV/Client |
|                                                                                                                                           |             |   |    | Site and surrounding area will be visually inspected in detail for any clues to indicate buried services in the area.                       |               |   |   | DV/Client      | DV/Client |
|                                                                                                                                           |             |   |    | Site and surrounding area will be swept where required by trained staff with a proprietary cable detector (i.e. CAT).                       |               |   |   | DV             | DV/Client |
|                                                                                                                                           |             |   |    | If buried services are suspected or anticipated, then hand-excavation will initially establish the location and alignment of such services. |               |   |   | DV             | DV/Client |
|                                                                                                                                           |             |   |    | Any cable or pipe encountered will be considered live at all times and will be protected from any subsequent damage.                        |               |   |   | DV             | DV/Client |
|                                                                                                                                           |             |   |    |                                                                                                                                             |               |   |   |                |           |

**Frequency:** 1 = A highly improbable occurrence; 2 = A remotely possible but known occurrence; 3 = An occasional occurrence; 4 = A fairly frequent occurrence; 5 = A regular occurrence; 6 = Almost a certainty  
**Severity:** 1 = Negligible injuries; 2 = Minor injuries; 3 = Major injuries; 4 = Single fatality; 5 = Multiple fatalities; 6 = Multiple fatalities including persons beyond site  
**Risk Rating:** 1 – 4 = tolerable; 5 – 7 = moderate; 8 – 11 = substantial; 12+ intolerable (Risk Rating = Frequency x Severity)

| Hazard/Risk                                                                                                   | Risk Rating |   |   | Control Measures                                                                                                                                                                         | Residual Risk |   |   | Responsibility | Monitor   |
|---------------------------------------------------------------------------------------------------------------|-------------|---|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---|---|----------------|-----------|
| ENVIRONMENT                                                                                                   |             |   |   |                                                                                                                                                                                          |               |   |   |                |           |
| COVID-19                                                                                                      |             |   |   |                                                                                                                                                                                          |               |   |   |                |           |
| Airborne transmission of virus                                                                                | 2           | 4 | 8 | Anyone displaying symptoms of coronavirus will be instructed not to attend work and follow guidelines.                                                                                   | 1             | 4 | 4 | DV/Client      | DV/Client |
|                                                                                                               |             |   |   | Take note of any signage and floor markings around the site to ensure the 2m distance is maintained between people.                                                                      |               |   |   |                |           |
|                                                                                                               |             |   |   | Rearrange tasks to enable them to be done by one person, or by maintaining social distancing measures (2m).                                                                              |               |   |   |                |           |
|                                                                                                               |             |   |   | Where possible work back-to-back or side-by-side, rather than face-to-face.                                                                                                              |               |   |   |                |           |
|                                                                                                               |             |   |   | Wear face masks when appropriate to do so.                                                                                                                                               |               |   |   |                |           |
| Surface transmission of virus (cross-contamination of surfaces)                                               | 2           | 4 | 8 | Provide facilities to allow staff and visitors to wash their hands for 20 seconds using soap and water or hand sanitiser (minimum 60% alcohol based) when entering and leaving the site. | 1             | 4 | 4 | DV/Client      | DV/Client |
|                                                                                                               |             |   |   | Enhance cleaning regimes for commonly used areas and surfaces, such as access and egress points, welfare and toilet facilities.                                                          |               |   |   | DV             | DV/Client |
|                                                                                                               |             |   |   | Where drivers are required to exit their vehicle, they should wash or sanitise their hands before handling any materials.                                                                |               |   |   | DV             | DV        |
|                                                                                                               |             |   |   | Staff should use their own vehicles to get to site.                                                                                                                                      |               |   |   | DV             | DV        |
|                                                                                                               |             |   |   | No tool sharing. Individuals are responsible for cleaning them at the end of every day.                                                                                                  |               |   |   | DV             | DV        |
|                                                                                                               |             |   |   | Wear gloves where appropriate to minimise potential transmission.                                                                                                                        |               |   |   | DV             | DV        |
| Contamination                                                                                                 |             |   |   |                                                                                                                                                                                          |               |   |   |                |           |
| Injury to DV staff, visitors and other contractors, and damage to the local environment through contamination | 2           | 4 | 8 | Should there be a contamination threat, work will progress in line with <i>Health &amp; Safety Guidance Note 66 – Contaminated Land</i> .                                                | 1             | 4 | 4 | DV/Client      | DV/Client |

Frequency: 1 = A highly improbable occurrence; 2 = A remotely possible but known occurrence; 3 = An occasional occurrence; 4 = A fairly frequent occurrence; 5 = A regular occurrence; 6 = Almost a certainty  
Severity: 1 = Negligible injuries; 2 = Minor injuries; 3 = Major injuries; 4 = Single fatality; 5 = Multiple fatalities; 6 = Multiple fatalities including persons beyond site  
Risk Rating: 1 – 4 = tolerable; 5 – 7 = moderate; 8 – 11 = substantial; 12+ intolerable (Risk Rating = Frequency x Severity)

| Hazard/Risk                                                                          | Risk Rating |   |    | Control Measures                                                                                                                                                                                                                                                 | Residual Risk |   |   | Responsibility | Monitor   |
|--------------------------------------------------------------------------------------|-------------|---|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---|---|----------------|-----------|
|                                                                                      |             |   |    | Groundwater removed from deep excavations (if necessary) will be discharged downslope from the trench directly onto a suitably well-drained area – in agreement with HE – to facilitate the removal of all material carried in solution, suspension or traction. |               |   |   | DV             | DV/Client |
|                                                                                      |             |   |    | Appropriate PPE (overalls, gloves, respirators etc.) to be worn at all times where contaminated ground is anticipated or suspected.                                                                                                                              |               |   |   | DV             | DV/Client |
|                                                                                      |             |   |    | Washing facilities to be provided in accordance with H&S requirements. All staff to use such prior to eating.                                                                                                                                                    |               |   |   | DV             | DV        |
|                                                                                      |             |   |    | Smoking will not be allowed on site or in site accommodation.                                                                                                                                                                                                    |               |   |   | DV             | DV        |
| Damage to ecosystem through soil degradation                                         | 2           | 2 | 4  | Any loose, excavated spoil will be neatly banded in an orderly manner to a maximum height of 3m and capped off to facilitate run-off and minimise waterlogging.                                                                                                  | 1             | 2 | 2 | Client         | DV/Client |
|                                                                                      |             |   |    | DV will follow a like-on-like policy; topsoil will be stored on topsoil, subsoil stored on subsoil.                                                                                                                                                              |               |   |   | DV             | Client    |
| Injury to DV staff through exposure to toxic gases                                   | 2           | 4 | 8  | Use of fully calibrated gas monitor at all times in deep excavations                                                                                                                                                                                             | 1             | 4 | 4 | DV             | DV        |
| <b>Extreme weather conditions</b>                                                    |             |   |    |                                                                                                                                                                                                                                                                  |               |   |   |                |           |
| Hot weather working (i.e. dehydration, sun burn, sun stroke etc.)                    | 3           | 4 | 12 | Sun cream, min. SPF15 (though SPF30+ recommended) with good UVA and UVB protection to be applied regularly to exposed skin.                                                                                                                                      | 1             | 4 | 4 | DV             | DV        |
|                                                                                      |             |   |    | Regular breaks to be taken in shade to limit exposure to sun – use project vehicles with air conditioning if no alternatives available.                                                                                                                          |               |   |   |                |           |
|                                                                                      |             |   |    | Appropriate clothing to be worn (topless working prohibited; long sleeves and trousers to be worn wherever feasible).                                                                                                                                            |               |   |   |                |           |
|                                                                                      |             |   |    | Drinking water to be available on site and consumed at regular intervals – do not wait until thirsty, thirst is a symptom of dehydration.                                                                                                                        |               |   |   |                |           |
|                                                                                      |             |   |    | If necessary, wear sunglasses that offer good UV protection.                                                                                                                                                                                                     |               |   |   |                |           |
| Exposure to wet, cold and/or storm conditions, risk of lightning strike, hypothermia | 2           | 4 | 8  | Appropriate waterproof clothing to be carried and worn when necessary.                                                                                                                                                                                           | 1             | 4 | 4 | DV             | DV        |

Frequency: 1 = A highly improbable occurrence; 2 = A remotely possible but known occurrence; 3 = An occasional occurrence; 4 = A fairly frequent occurrence; 5 = A regular occurrence; 6 = Almost a certainty  
 Severity: 1 = Negligible injuries; 2 = Minor injuries; 3 = Major injuries; 4 = Single fatality; 5 = Multiple fatalities; 6 = Multiple fatalities including persons beyond site  
 Risk Rating: 1 – 4 = tolerable; 5 – 7 = moderate; 8 – 11 = substantial; 12+ intolerable (Risk Rating = Frequency x Severity)

| Hazard/Risk                                                                                              | Risk Rating |   |    | Control Measures                                                                                                                                                                                               | Residual Risk |   |   | Responsibility | Monitor   |
|----------------------------------------------------------------------------------------------------------|-------------|---|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---|---|----------------|-----------|
|                                                                                                          |             |   |    | No fieldwork to be undertaken during electric storms.                                                                                                                                                          |               |   |   |                |           |
|                                                                                                          |             |   |    | Dry clothing to be available, as necessary.                                                                                                                                                                    |               |   |   |                |           |
|                                                                                                          |             |   |    |                                                                                                                                                                                                                |               |   |   |                |           |
| <b>DRIVING</b>                                                                                           |             |   |    |                                                                                                                                                                                                                |               |   |   |                |           |
| Injury to DV staff, DV equipment, plant and members of the public resulting from road traffic accidents. | 3           | 6 | 18 | All members of staff will be drive to site in their own vehicles.                                                                                                                                              | 1             | 6 | 6 | DV             | DV        |
|                                                                                                          |             |   |    | Nominated drivers must familiarise themselves in advance with routes for all journeys, as well as routes to local A&E services and any other destinations considered likely/necessary as part of project work. |               |   |   |                | DV        |
|                                                                                                          |             |   |    | All equipment will be securely stowed during transit, with a fixed bulkhead separating equipment and passengers.                                                                                               |               |   |   |                | DV/Client |
|                                                                                                          |             |   |    | All vehicle manoeuvring will only occur with the assistance of appropriately located 'banksman'.                                                                                                               |               |   |   |                | DV/Client |
|                                                                                                          |             |   |    | Tyres, water, oil and petrol will be checked weekly.                                                                                                                                                           |               |   |   |                | DV        |
|                                                                                                          |             |   |    | Extreme caution will be exercised when entering or leaving public highways.                                                                                                                                    |               |   |   |                | DV        |
|                                                                                                          |             |   |    | Mobile phones will be turned off before commencing any journey and will not be used at all whilst driving.                                                                                                     |               |   |   |                | DV        |
|                                                                                                          |             |   |    | Access to site will be via local roads only.                                                                                                                                                                   |               |   |   |                | DV        |
| <b>GENERAL MEASURES</b>                                                                                  |             |   |    |                                                                                                                                                                                                                |               |   |   |                |           |
| General measures for implementation to maximise any reduction in risk rating.                            | -           | - | -  | A mobile phone will be available at all times for use in emergencies.                                                                                                                                          | -             | - | - | DV             | DV/Client |
|                                                                                                          |             |   |    | Anything that is or seems to be unsafe will be reported to the Site Director immediately.                                                                                                                      |               |   |   | DV/Client      |           |
|                                                                                                          |             |   |    | A first aid kit will be available to DV staff and others at all times (i.e. in the welfare area and vehicles).                                                                                                 |               |   |   | DV             |           |

Frequency: 1 = A highly improbable occurrence; 2 = A remotely possible but known occurrence; 3 = An occasional occurrence; 4 = A fairly frequent occurrence; 5 = A regular occurrence; 6 = Almost a certainty  
Severity: 1 = Negligible injuries; 2 = Minor injuries; 3 = Major injuries; 4 = Single fatality; 5 = Multiple fatalities; 6 = Multiple fatalities including persons beyond site  
Risk Rating: 1 – 4 = tolerable; 5 – 7 = moderate; 8 – 11 = substantial; 12+ intolerable (Risk Rating = Frequency x Severity)

| Hazard/Risk | Risk Rating |  |  | Control Measures                                                           | Residual Risk |  |  | Responsibility | Monitor |
|-------------|-------------|--|--|----------------------------------------------------------------------------|---------------|--|--|----------------|---------|
|             |             |  |  | A fire extinguisher will be located in each welfare unit deployed on site. |               |  |  | DV/Client      |         |

*Frequency:* 1 = A highly improbable occurrence; 2 = A remotely possible but known occurrence; 3 = An occasional occurrence; 4 = A fairly frequent occurrence; 5 = A regular occurrence; 6 = Almost a certainty  
*Severity:* 1 = Negligible injuries; 2 = Minor injuries; 3 = Major injuries; 4 = Single fatality; 5 = Multiple fatalities; 6 = Multiple fatalities including persons beyond site  
*Risk Rating:* 1 – 4 = tolerable; 5 – 7 = moderate; 8 – 11 = substantial; 12+ intolerable (Risk Rating = Frequency x Severity)



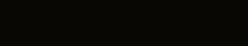
Sent by Email

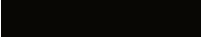
21/07/2020

Dear 

**RE: Additional Archaeological Excavation, Updated Costs – Pontefract Castle Gatehouse**

Following our recent project meeting, I enclose updated costs relating to the complete excavation of the drawbridge pit in the table below, taking place from 27 July – 14 August 2020.

The original costs quoted to complete the excavation of the drawbridge pit were  (February 2020). The unspent contingency from the project was  and Historic England therefore agreed a variation to costs of  in March 2020.

The overall increase amounts to  and relates to:

- Additional costs to improve safety measures onsite in line with requirements for RPE relating to COVID19 safety measures 
- Increased mobilisation cost due to the need for single room / bathroom accommodation space and increased vehicles in line with government guidelines re away working and COVID19 
- Increased supplier costs for Davit Arm system (issued February 2020) 

The variation request, inclusive of the existing contingency amount, is therefore 

I trust this provides you with the information you require. Please do not hesitate to contact me if you have any queries and require additional information. I look forward to hearing from you in due course.

Best Regards,



---



## Pontefract Castle Gatehouse

### Additional Archaeological Excavation – Updated Costs

Table 1

| Item                             | Description                                                                   | Cost       |
|----------------------------------|-------------------------------------------------------------------------------|------------|
| <b>Archaeological Evaluation</b> |                                                                               |            |
| 1                                | Three Archaeological Site Staff x 15 days @ [REDACTED] per day                | [REDACTED] |
| 2                                | Team mobilisation, including additional accommodation and vehicles            | [REDACTED] |
| 3                                | COVID related RPE                                                             | [REDACTED] |
| 4                                | Deep excavation equipment (Davit Arm System, gas monitor etc)                 | [REDACTED] |
| 5                                | Post-excavation assessment ([REDACTED] of fieldwork costs, as original quote) | [REDACTED] |
|                                  | <b>Sub Total</b>                                                              | [REDACTED] |
|                                  | <b>VAT</b>                                                                    | [REDACTED] |
|                                  | <b>Total</b>                                                                  | [REDACTED] |

#### CONTINGENCY

- Recovery of exceptional archaeological finds, such as human remains or unexpected survival of waterlogged remains, may incur additional costs for scientific sampling, analysis, conservation, preservation, and archive (see table below)

|                                                                              |            |          |
|------------------------------------------------------------------------------|------------|----------|
| Bulk finds Timber: prepare/assessment/recording/database entry               | [REDACTED] | Each     |
| Excavation, recording, storage and reporting of human remains                | [REDACTED] | Each     |
| Conservation of artefacts                                                    | [REDACTED] | Day rate |
| Geoarchaeological samples                                                    | [REDACTED] | Each     |
| Freeze drying of leather objects                                             | [REDACTED] | Each     |
| Provision of X Ray investigation of objects including all materials required | [REDACTED] | Each     |

#### THE ABOVE EVALUATION QUOTATION ASSUMES THE FOLLOWING:

- That access to the relevant areas of the development will be made readily available to facilitate excavation and recording.
- That Item 2 is based on discussions and site visits with deep excavation professionals, and the ability to achieve a pragmatic programme of work undertaken with a single mobilisation.
- That Item 3 is a realistic estimate on the basis of encountering archaeology at depth within the excavated area. If significant archaeological remains are discovered requiring the mobilisation of an additional excavation team (such as the discovery of human remains), or unexpected archaeological material is recovered, this will be charged as additional costs in line with the information presented in contingency items above.
- The site is not contaminated, and no special Health and Safety measures will be required in respect of contamination, and any plans pertaining to the identification of services on the site will be provided in advance.
- Any additional site work or consultation beyond the scope detailed here will be calculated on the basis of our usual day rates, with travel and accommodation billed at cost.
- Invoices will be issued on completion of each item and subject to the usual payment terms.

All costs are exclusive of VAT, which will be charged at the prevailing rates / All costs are valid for 90 days

All work will be subject to standard terms and conditions / DigVentures 21/07/2020