

WallCAP Historic Building Recording App Brief

1. Introduction

The Hadrian's Wall Community Archaeology Project (WallCAP) at Newcastle University wishes to appoint an individual or team to design and build a mobile app suitable for recording historic buildings. The app must comply with Newcastle University and National Lottery Heritage Fund policy and practice.

The app will support an ambitious program of survey, research, and community engagement for the Stone Sourcing and Dispersal strand of activities of WallCAP.

2. Brief for Consultants

WallCAP, based in the McCord Centre of Newcastle University, is funded by the National Lottery Heritage Lottery Fund (NLHF) to deliver a three-year project linked to capital investment in the conservation of heritage for the Hadrian's Wall World Heritage Site and complete a program of activities to better research and understand the monument in the landscape. The activities focus on developing an improved awareness and involvement of existing and new audiences on the changing, sometimes fragile state of heritage and how heritage is incorporated into their own communities. The majority of activities are planned around three major strands: Heritage At Risk (HAR); Stone Sourcing and Dispersal (SSD); and WallWatch. These strands are supported by secondary strands consisting of training activities, public events and engagements, and development and use of digital resources. Full details of these strands, target audiences, and planned activities can be found in the Activity Plan, which can be provided on request.

The SSD strand is focused on helping local communities and professional audiences better understand how Hadrian's Wall was construction from the natural environment, and how its structure has changed from the time of its construction to the present day by focusing on the stone that was used to construct the Wall. SSD activities focus on: (1) the natural geology of Central Britain, to make volunteers aware of the raw material the Romans built with; (2) observation and recording of the building fabric of the Wall itself; (3) attempting to source the fabric of the Wall with quarrying locations; and (4) identifying and recording the reuse of Wall fabric in post-Roman buildings and structures.

The app will be used to support this fourth range of activities, in which volunteers identify and record the reuse of Wall fabric.

3. Outputs

The appointed individual or firm (the consultant) is expected to deliver a mobile-based app that provides the following functionality:

1. Utilise the camera-functionality of a mobile to build/auto-create a photogrammetric model of a structure (building of scale from small barn/outbuilding up to church or castle in size), generated with a 3D mesh to enhance the appearance of the model.
2. Ideally, photographs should utilise location information from the mobile to locate the subsequent model.
3. Each model must have an associated comments box to record additional information.
4. Export the 3D model.
5. Utilise the 3D model to, manually or automatically, generate 2D orthomosaics of different building elevation.
6. Export render.
7. Provide a visual recording interface (assuming touchscreen functionality) to create polygon and point data in 2D to record features visible on a render consistent with methods of historic buildings recording.
8. For each polygon/point created, a series of pre-determined database fields will be created so that the user can input relevant data (database fields and controlled content to be provided by WallCAP).
9. Export annotated render (as .jpg, .tif or other universal format) and database (as a .csv).
10. Functional on Android and IOS platforms.
11. The app should be accessible to those with visual impairments and colour blindness.
12. Outputs of the app(s) should be available via a Creative Commons licence.

It is anticipated that two discrete apps may be required to provide the full functionality.

4. Budget and Indicative Timescale

A budget of not more than **£12,000** (excluding VAT) is allocated for this contract, including reasonable expenses. Payments can be scheduled according to an agreed timetable, but the client will withhold the final 25% until satisfactory completion of the contract.

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| • Issue of brief | 10 June 2020 |
| • Tender submission deadline | 26 June 2020 |
| • Appointment of consultant | 3 July 2020 |
| • Finalised delivery of app(s) | 4 Dec 2020 |

The consultant should indicate how many site visits/meetings/contributions to activities will be necessary to complete the work in addition to the start-up meeting.

5. Project Management, Communication, and Resources

The consultant will need to liaise with the WallCAP Project Manager, Digital Heritage Officer, and Project Support Officer as required.

WallCAP will facilitate alpha- and beta-testing of the app(s).

6. Publication and Copyright

The final product (app) must be made freely available to WallCAP volunteers during the course of the project, and to the National Lottery Heritage Fund for free dissemination and re-use on completion of WallCAP (Dec 2021).

As a freely available product, it is anticipated that no licences or proprietary software will be necessary for functionality.

7. Bidding Requirements, Process, and Award

Consultants interested in the project should submit the following:

1. An outline of the proposed approach.
2. Track record of the bidder delivering similar or related work.
3. Outline of proposed key milestones for the project, including information about servers for processing/hosting the app.
4. Details of key personnel to be involved.
5. Costs to be charged (excluding VAT) and day rates of all personnel involved. Additional charges, e.g. server hire, should be itemised.

WallCAP and Newcastle University will award this contract according to the following criteria:

- Price (30%)
- Experience (20%)
- Approach and methodology (30%)
- Timeliness of delivery (10%)
- Adherence to University tender terms and conditions (10%)

Consultants are referred to the University's terms and conditions:

<https://www.ncl.ac.uk/media/wwwnclacuk/business/files/terms-conditions-purchase-services.pdf>

Final delivery of the app(s) is necessary by December 2020, however, if successful final delivery can be achieved prior to Dec 2020, that will be considered in the evaluation of the tender.

Bids will only be considered if they are received by email by the WallCAP Project Manager, Rob Collins, not later than **5pm Friday 26 June 2020**. Emails should be marked "WallCAP Evaluation Consultancy".

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Informal enquiries can be made to Rob Collins via email. At request, a meeting can be held via telephone or videoconference.

8. Payment

25% of the consultant's fee will be payable on commission. A further 50% will be paid at agreed stages of the evaluation and 25% on completion of the contract.

9. This brief can be made available in alternative formats if required.