Proposal for the Creation of a Virtual Anglo Saxon & Medieval City of Winchester

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UNIVERSITY OF
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PROPOSAL FOR THE CREATION OF A VIRTUAL ANGLO SAXON & MEDIEVAL CITY OF WINCHESTER

OVERVIEW

To create two Unreal Game Engine scenes of the city of Winchester based on research from different disciplines (archaeology, history, digit media, CAD, 3D). The initial two periods of history will be Anglo Saxon and Medieval. Further phases could include Roman, Tudor and Victorian.

The Unreal models will form a platform for presenting more detailed imagery, research regarding the city of Winchester, its culture and communities. In addition, archaeological finds and artefacts would be able to be represented in their context using 3D virtual scenes, stories and tours. Notable characters can be used to lead visitors around 'their' Winchester providing snippets of information to inform and engage visitors to Winchester and online. Ancient crafts and skills can be visualized with 'how to' videos, with possible workshop events for some of the small scale practical skills.

The creation of the virtual Anglo Saxon and virtual medieval cities would be planned to fit with timescales regulated by funding. Funding areas being considered are via AHRC: Heritage Research (https://ahrc.ukri.org/innovation/heritage-research/), Research Grant-Standard (https://ahrc.ukri.org/funding/apply-for-funding/current-opportunities/researchgrantsstandardroute/) and Follow-on Funding for Impact and Engagement (https://ahrc.ukri.org/funding/apply-for-funding/current-opportunities/followonfunding/).

The proposed University of Winchester team would aim to include the CEDI Digital Heritage team, Digital Media students, Archaeology's Dr Simon Roffey and archaeology students, History's Prof. Ryan Lavelle and history students, Computer Science's Dr Claire Ancient and Rachel White, and computer science students. Further support may include Prof. Denise Hewlett.

The proposed external professional support and expertise may include Dr Janet Owen, (The Earth Museum), David Doyle (Studio Free), Dr John Crook (Architectural Historian), Martin Biddle, Hampshire Cultural Trust (?), Hampshire Historic Environment Team (?) (Hampshire County Council) and The Wessex Heritage Trust(?).

CEDI DIGITAL HERITAGE UNIT

The CEDI Digital Heritage team, Digital Media students and alumni have been working on different heritage reconstruction projects over a number of years. More recently, they have collaborated and consulted with an external media company to provide a website for Malmesbury Town Council for their visitors to explore Malmesbury as a medieval market town. Via scenes, historical reference images and historical stories, they have also created a series of Tours/Walks for visitors to Malmesbury. A second phase will enable visitors to interact with the medieval Unreal model via a kiosk, AR and VR through the visitor's mobile devices (see appendices for scenes of the Virtual Medieval Malmesbury).

The process of creating the two virtual cities will be recorded for being able to replicate for further periods of change. The recorded process will also make it easier to approach other historical cities/market towns who may be interested in replicating/reconstructing their past landscapes.

MULTI-SKILLED, CROSS-DISCIPLINED, COLLABORATION

There are six main objectives for the proposed project:

1. To visualise the city of Winchester in different periods of significant change for visitors, researchers, local history groups and communities to understand the growth and changes to the city and the lifestyles of its people
2. To demonstrate how the different disciplines of science, history, archaeology, arts, innovation, design and development collaborate using specialist technology, design and practices within heritage-related interpretation processes
3. Bring together varied areas/disciplines of research, using the Virtual 3D models to act as conduits to research already undertaken and not yet visualised for a wider audience.
4. To build a 3D asset library of culturally significant buildings and artefacts for use with other platforms and projects
5. Enable communities to share their research and historical images/stories via stories relating to areas, buildings and objects across the city.
6. To promote the historical significance of Winchester across specific ages to a wider audience

VISUALISATION OF HISTORICAL AND CULTURALLY IMPORTANT LANDMARK BUILDINGS

Specific landmark buildings will be reproduced in 3D and taken into the Unreal Game Engine to create as close to a realistic version of Anglo Saxon Winchester and Medieval Winchester as possible, selecting time periods of the most significant changes to the city. Please see Appendix A for a list of buildings to be considered. The initial list is a result of a combination of research publications, which include: An Historical Map of Winchester From Medieval Times to 1800, (Winchester Excavations Committee, 2016) and Winchester's Roman and Medieval Defences – A report on Excavations 1974-86 and a Gazetteer, (Ottaway, Qualmann, Scobie & Zant, 2019).

Non-specific buildings will be represented by generic Anglo Saxon and Medieval dwellings/buildings, such as those shown in the Virtual Malmesbury Unreal scenes (see Appendix B).

VISUALISATION OF HISTORICAL AND CULTURALLY IMPORTANT ARTEFACTS IN CONTEXT

Within some of the landmark buildings, there may be culturally important artefacts which will be modelled in 3D and animated to show their use/how they were used and/or crafted.

There will also be artefacts that are more generic which will be used to create 'living' scenes in the dwellings and or market places and similar spaces to help audiences appreciate lifestyles in the different periods.

Working closely with Dr Janet Owen to tie in the artefacts with scenes and context for adding/linking to The Earth Museum.

PLANNED TIMESCALES:

The current plan would be to start the project on receipt of funding. Timescales would therefore need to respect the agreed schedule of the funding programme.

Initial thoughts on timescales would be to start the projects in 2021, and based on the timeframe for the Virtual Malmesbury project, I would expect the project to take approx. two years, possibly less depending on the amount of hours per week the team will be able to commit to.

Starting in 2021 allows for the funding process and project scoping for who is available, and willing, to be involved in the project. By 2021, with funding in place, a full project plan and schedule, with tasks, time scales and costs, will be completed. Each of those involved will have a specific set of tasks and individual deadlines to achieve that have been agreed.

Initially, time would be mapped in to start on collating the research for the land mass of Winchester so that we can accurately form a landscape that would be recognised as Winchester in the eras chosen. Research regarding the buildings, streets and castle defences would need collating with cross reference to the archaeology of Winchester to ensure, as much as possible, the correct placement of known buildings and streets. This may take 4-6 months depending on availability of and access to historians and archaeologists.

The following activity would be to start building the site and the buildings. The time frame for this would depend on how many people would be able to work on the practical build of the project. The CEDI team and specific DM students/alumni have the skills required. The intention would be to 'employ' a team of 4-5 experienced 3D visualisation students/alumni through CEDI to work on this project. CEDI's and DMD's staff members such as Debs Wilson, Kerry Wort, Rob Blofield, Sam Barker would have hours funded to work as consultants and practitioners on the project. CEDI's Paula Richardson as Project Liaison Manager would also have funded hours allotted. Initial thoughts would be approx. 4-6 hrs per week, possibly longer depending on project deadline, amount of funding and availability of those involved.

PLATFORM OUTCOMES

The proposed outcome is to have the following available:

Interactive multi-touch kiosks in the City Museum where visitors can 'walk around' the city as they would in a game, to explore the different buildings. Visitors will be able to view a different time period from specific locations ie 'jump' to and from one era to another to see how where they were standing in the virtual scene had changed.

Web app which visitors will be able to access via their smart phones or tablets to explore points of interest (POIs) individually or via different trails. The POIs will have visual information, images and text, with optional audio, to discover more about Winchester's historic landmarks. The trails could also include stories such as the Ghost Trails, and historical events such as the processional move from Old Minster to New Minster. Specific POIs such as the Cathedral, St Cross Hospital, St Mary's Abbey and other significant buildings would be able to be rotated and artefacts inside queried. A map will be available to show the different POIs and trails to choose from.

AR content accessed via smart phones and tablets using image recognitions (QR image codes). Visitors will be able to be notified there is information available about specific locations, when at those locations and asked if they want to view. Then if they do, they can use their phone to point at the location and view the AR content which could be Hyde Abbey appearing as it used to look, or St James Chapel appearing in West Hill Cemetry.

Within certain locations VR headsets may be available for visitors to explore locations as they used to look, or experience an historical 'story' scene, or how something was built.

A multi touch screen would also be available at the University for visitors, prospective students and academics to explore the city in different ages and access the web app for more in depth content, stories, trails and ongoing research.

WINCHESTER CITY APP

Second Year DMD and CAD students are currently building a Winchester City App, which comes from an initial Client Brief provided by ICE Digital and Winchester City Council. The Council retracted their involvement with ICE Digital, so the project looked as though it would no longer be required. Nonetheless, the app is still being built and will be available to test at the Transmedia End of Year Exhibition on Thursday 2nd April, at West Downs. The app may well form the basis of the Web platform for the Virtual Winchester project.

THE EARTH MUSEUM

'The Earth Museum is a not-for-profit organisation dedicated to building a global learning resource: where anyone anywhere can create, share and explore the stories embedded in cultural heritage wherever it is found.' (https://theearthmuseum.co.uk/)

Dr Janet Owen is currently working with a group of our second year students to develop the interface, and ease of access to upload content, to her project 'The Earth Museum'. The Earth Museum has been designed to pin point museum and collection artefacts where they came from across the world, their provenance and context. Museums and other collection organisations can upload their artefacts and related information to the site. Visitors to the site may access the different artefacts by clicking on the Story Explorer or Object Explorer, or the range of blog posts.

The Virtual Winchester project would be able to add artefacts to The Erath Museum and link Winchester to a wider audience.

APPENDICES:

APPENDIX A:

HISTORIC BUILDINGS TO BE RECREATED IN 3D

(BOLD = ALREADY CREATED BY DIGITAL MEDIA STUDENTS)

Anglo Saxon fortified Burgh, new street plan by King Alfred.

From 1067, extended earthworks, the Cathedral, Hyde Abbey, Wolvesey Palace and St Mary's Abbey were built. The Royal Residence was extended and a new hall built. A second Royal Residence was built within the walls of the Castle. The city included 1300 houses and approx. 50 churches. A decline followed from 1140, Hyde Abbey was destroyed by fire in the Civil War. By 1440, 17 parish churches, 11 streets and 987 properties had fallen into ruin. Dissolution in 1530s saw destruction of Hyde Abbey, St Mary's Abbey, the four Friaries. The castle was demolished in 1645.

410 – C 1550 ANGLO SAXON & MEDIEVAL EXISTING IN PART			
St Bartholomew, Hyde	West Gate	St Thomas, St Thomas Street	
Abbey Barn	St Swithun upon Kings Gate	St Lawrence, Great Minster Street	
Cheyney Court	Great Hall (in progress)	St Maurice, The Causeway	
St Mary's College, College Street	The Market Cross	St Swithun's Priory	
Pilgrim's Hall	Cathedral	St Peter Chesil, Cheesehill Street	
Deanery (Prior's House)	St John's Hospital, The Causeway	St John in the Soke, St John's Street	
Wolvesey Palace	**St Cross Hospital**	St Martin Winnall, Welch Street	
		St Michael in the Soke	

410 – C 1550 ANGLO SAXON & MEDIEVAL NON-EXISTING			
St James Chapel, West Hill Cemetry	Great Gate & Bridge, Barracks	St Leonards	
St Martin Wood Street (House?), Cock Lane	City Wall(s)	St Valery	
Roger de Inkpenne's House, Cock Lane	Great Chapel, Castle Yard	St Martin in the Ditch, Cock Lane	
St Elizabeth's College	Castle Ditch	St Anastastius, nr Weeke Rd	
Carmelite Friary, Kingsgate Street	South Gate	St Martin, Gar Street	

Floodstock Mill, College Street	St Nicholas Outside Kings Gate	St Boniface, Southgate Street	
Segrim's Mill, Wharf Hill	Wolvesey Gate	St Edmund, between Gar and Southgate Street	
Austin Friary, Southgate Street	St Mary's Abbey, Abbey Passage	St Andrew, St Clement's Street	
Abbot's House & New Minster Cloister	New Minster	St Clement, Southgate Street	
Hall of William 1	Old Minster	St Mary of the Vale, Swan Lane	
Synagogue, between Jail Street and St Peter Street	Minster Gate, Great Minster Street	St Alphege, St Thomas Street	
Gaol, Jail Street	**Hyde Abbey**	St Mary, St Clement's Street	
Bridge (nr North Gate)	St Mary over North Gate	St Nicholas, Hammonds Passage	
Posters Mill	North Gate	All Saints, Southgate Street	
Guildhall nr Market Cross	Black Friars	St Peter in the Fleshambles, Royal Oak Passage	
Balchus, High Street	Friars Minor	St Michael Jewry Street	
God Begot	East Gate	St Paul, nr Staple Garden Lane	
Constabulary, Great Minster Street	St Michael's over East Gate	St Martin, Alware Street	
The Penthouse (Pentices), High Street	Hermit's Tower (nr North Gate)	St Michael Fleshmonger Street	
The Meat Shambles, The Square	Holy Trinity Charnel Chapel	St Mary Brudene Street	
The Clothsheld, Middle Brook Street	Durn Gate	St Martin Parchment Street	
Mayden Chamber, Middle Brook Street	Bub's Cross, top of Red House Lane	St Mary Kalendar, High Street	
City Mill,		St Mary Wode, High Street	
Sisterne House, The Causeway		St Ruald, St George's Street	
Durngate Mill, Welch Street		St Peter Colebrook, Colebrook Street	
Coytebury Mill, Nr Buck Street Lane		St John of the Fry	
Newbridge Mill, The Causeway		St George, Lower Brook Street	
High School, Minstergate St.		St Giles, St Giles Hills	
		St Pancreas, St Pancras Lane	
		St Mary Tanner Street	
		St John of the Ford, The Causeway	

APPENDIX B:

Virtual Malmesbury Unreal Scenes (Wilson, 2020)