

2024-25 HIVE Summer Internship Project

Strawberry Hill Farm: A Digital Architectural Visualisation

36HUM_DBE_StrawberryHillFarmViz

Primary Academic Supervisor

Dr. Lee Syminton

Project Background

On Easter Sunday 1870 a fire at Strawberry Hill Farm at Barmup in Albany destroyed two buildings, the first buildings erected at this place which was the site of the first European farm in Western Australia. The earliest was a thatched roof dwelling built in 1831 for Governor James Stirling and his wife Ellen, making it the State's first vice-regal residence. The second cottage was constructed in 1834 by Sir Richard Spencer, the Government Resident, as a three-room extension to the earlier dwelling.

Evidence of these two early buildings exists in various forms that combined could enable modelling to be done which in turn could be used in various ways to interpret these now 'missing' buildings. The evidence includes a stereoscope view dated 1858; a watercolour painting c1870; the outcomes of detailed archaeological investigations in 2012; and contemporary measured drawings and photographs of the extant main house to which the 1831 cottage was attached. There was a verandah along the eastern elevation of the main house, shown in the 1858 photograph and c1870 watercolour, that no longer exists and could also be modelled. There are also historical references to these structures in the archival record which can help support their understanding.

Project Description, Expected Outputs, Possible Stretch Goals

Albany will be the first WA city to mark the bicentenary of British colonisation with a range of events across 2026. This is expected to include exhibitions, installations and multimedia to provide unique, unexpected and distinct visitor experiences that are not offered anywhere else. The outcomes of the internship project would be integrated with the interpretive visitor experience for 2026.

The primary output of the internship project would produce architectural plans/models of the 1831 and 1834 cottages and the 1836 verandah of the main house. The modelling would be intentionally adaptable so it can be used in different ways to interpret the construction, use and destruction of these important buildings.

In addition, as a stretch goal, and if time permits and the documentation is sufficient, then it would be highly desirable to also model the barn and various other buildings that are mainly documented on survey drawings. Collectively these resources have the potential to provide sufficient data to contribute to additional modelling work.

Links to background reading and any relevant recent work in the field

1. Background information from National Trust WA:
<https://www.ntwa.com.au/places-to-visit/strawberry-hill-at-barmup/>
2. Background to Strawberry Hill Farm at Barmup:
<https://www.westernaustralia.com/au/attraction/strawberry-hill-at-barmup/57e3893181007ab14c792048>
3. Strawberry Hill/Barmup Visitor Hub:
<https://www.architecture.com.au/awards/heritage-strawberry-hill-barmup-visitor-orientation-hub>
4. Strawberry Hill Farm watercolour image from 1870
<https://museum.wa.gov.au/museums/albany/looking-strawberry-hill>
5. Strawberry Hill Farm 1858 image from Mitchell Library
<https://www.ntwa.com.au/wp-content/uploads/2023/07/1858-From-Mitchell-Library-1806x1920.jpg>
6. 3DVista: <https://www.3dvista.com/en/products/virtualltour>

What type of visualisation will the student develop or produce?

The student will:

- Develop a workflow to create architectural plans from historical artwork.
- Create a 3D model of the original buildings (and an indicative model of their surroundings)
- Import the model into a package such as Unity, Unreal, or 3DVista to create an immersive experience. The immersive experience could allow a user to explore the building and potentially identify and highlight items of interest in the 3D model.

- Render a video sequence showing the original buildings.

How will the visualisation contribute to your research outcomes?

Potential output uses include: integration within a documentary about the history of Strawberry Hill to be screened onsite; to create immersive interactive multimedia installations; as the basis for the construction of 'ghost structures' in the landscape onsite; for a theatrical/imagined animation of the night of the fire; to support virtual tours and education programs on-line; or for a virtual or augmented reality experience.

If the project is successful, where would you consider publishing the results?

The project will recommend how modelling can be used to provide opportunities for active visitor engagement. An exhibition designer will be contracted by the National Trust in 2025 to design and deliver the new interpretation of Strawberry Hill at Barmup and the outcomes of the internship project would provide an invaluable resource for this work.

Draft Project Timeline:

Week 1

Introduction to the project; scoping of tools required

Week 2

Access through National Trust WA for resources and artwork; Development of workflow

Week 3

Development of architectural plans

Week 4

Start of the 2D-to-3D Modelling process

Week 5

Model refinement and import (into Unity/Unreal/3DVista?)

Week 6

Develop immersive experience (in Unity/Unreal/3DVista?)

Week 7

Simulate environment around the buildings

Week 8

Export a sample video sequence

Week 9

Report writing; presentation and demonstration preparation

Week 10

Final presentation, showcase of demonstration on Cylinder or other displays and report submission

Student Experience and Supervision:

How often will you meet with the student over the 10-week period?

Once per week

Your work desk location and the location of student desk

Possibly HIVE Staff Office: Building 201, Room 212

Student Attributes:

Please indicate any preference for student's academic discipline or field of study

This project would be suited to a student interested in architecture, design, animation/film, and landscape design.

What competencies are required to start this project

Beginner - 2D image and/or video software (e.g. Adobe Suite, Sony Vegas)

Beginner - 3D modelling software (e.g. Blender, 3ds Max)

Beginner - Unity 2D/3D Artistry (assets, lighting, cameras, materials implementation)

Do you have any other student attributes you think are important to the project?

The project will be particularly attractive to a student with a great imagination who can envisage and create innovative opportunities to make heritage interesting and in a way that will attract and engage with new audiences.