

National Science Conservation Centre
Twycross Zoo

Design & Access Statement Addendum

July 2024

HLM
Architects

1.00

Introduction

1.01 Introduction
Overview

This document has been prepared on behalf of Twycross Zoo and Hinckley & Bosworth Borough Council (HBBC) as an addendum to the Design and Access Statement submitted with the Full Planning Application for the proposed development to the south west of the Twycross Zoo site (App Ref: 23/00948/FUL), to support a Section 73 application.

Since approval of the Full Planning Application, the Design Team have undertaken the following exercises:

- Further development of the structural and building services strategies, which has allowed the technical designs of each building to become more efficient (ie. reduced building height).
- Rationalisation of glazing apertures and louvre openings in response to daylighting and overheating analysis.
- Review of external wall and roof materials, composition and proportionality to address subsequent changes in building shape and form.
- Review and testing the access, servicing, operation and animal management of the Orangutan House with the Zoo's curator and keeper teams, allowing design changes to enhance the overall building efficiency whilst improving the internal animal facilities
- Review of the external animal habitats with the Zoo's curator and keeper teams to ensure the designs are optimized with regard to animal welfare and prioritise animal behaviour.
- Review of the planting, with a particular focus on the strategy for achieving Biodiversity Net Gains for the site
- Review of the visitor flow, viewing opportunities and general experience throughout the landscape to enhance the education, conservation and overall visitor offering
- Review of the site levels strategy to develop a more sustainable strategy (ie. re-using on site soil rather than importing or exporting).
- Review the external containment for the Orangutans, considering best practice precedents from other zoos.

In addition to the above, there are also some aspects of the scheme previously included in the Full Planning Application, which have been omitted from the project. In summary, the Section 73 Application proposes the following changes:

- Minor amendments to the NSCC and Residential Buildings' height and elevational compositions.
- Change to layout, building form, elevational design and

- siting of Orangutan Habitat Building.
- Alterations to the Refuse Store, from a brick enclosure to a timber fenced compound
- Design amendments to the location, size and landscape proposals of the Additional Habitats located to the north of the Orangutan Building
- Omission of the Songbird Aviary
- Omission of the Residential Lodges
- Omission of the split level Outdoor Classroom with boardwalk interface, instead introducing a covered ground level viewing canopy structure
- Changes to the type of containment being used for the main habitats to maximise borrowed landscape principles and enhance visitor viewing as well as keeper observation of these outdoor habitats
- Alterations to the levels strategy for the site to better tie into existing site levels and achieve a cut & fill balance and reduce the need for retaining elements throughout
- Changes to the location, length and siting of the elevated boardwalk providing visitors access to the Orangutan building
- Changes to the location, form and layout of the Indonesian village to better interface with ground level viewing for the Orangutan external areas , whilst creating a focal visitor node, which enhances the visitor experience, flow and story telling narrative.
- Omission of 1 x themed shelter from the visitor space

Further commentary and details of the proposed changes are explained in the following paragraphs.

NSCC and Residential Buildings

Refinement of the M&E and structural strategy has led to reducing the building height, which in turn has prompted a review of the elevational design to reconsider the new building proportions. A simplification of brick details and patterns to better suit the resulting fenestration arrangement and reduced height was required. The same brick type is proposed, but in two colours remaining consistent with the original design intent, previously attained through complex brick bonds and terracotta coloured concrete.

The main entrance to the NSCC building has been amended to following development of the technical design and improvements to the internal layout.

The lecture theatre block of the NSCC building is proposed to be all brick, corresponding to the simplification of the adjacent elevations.

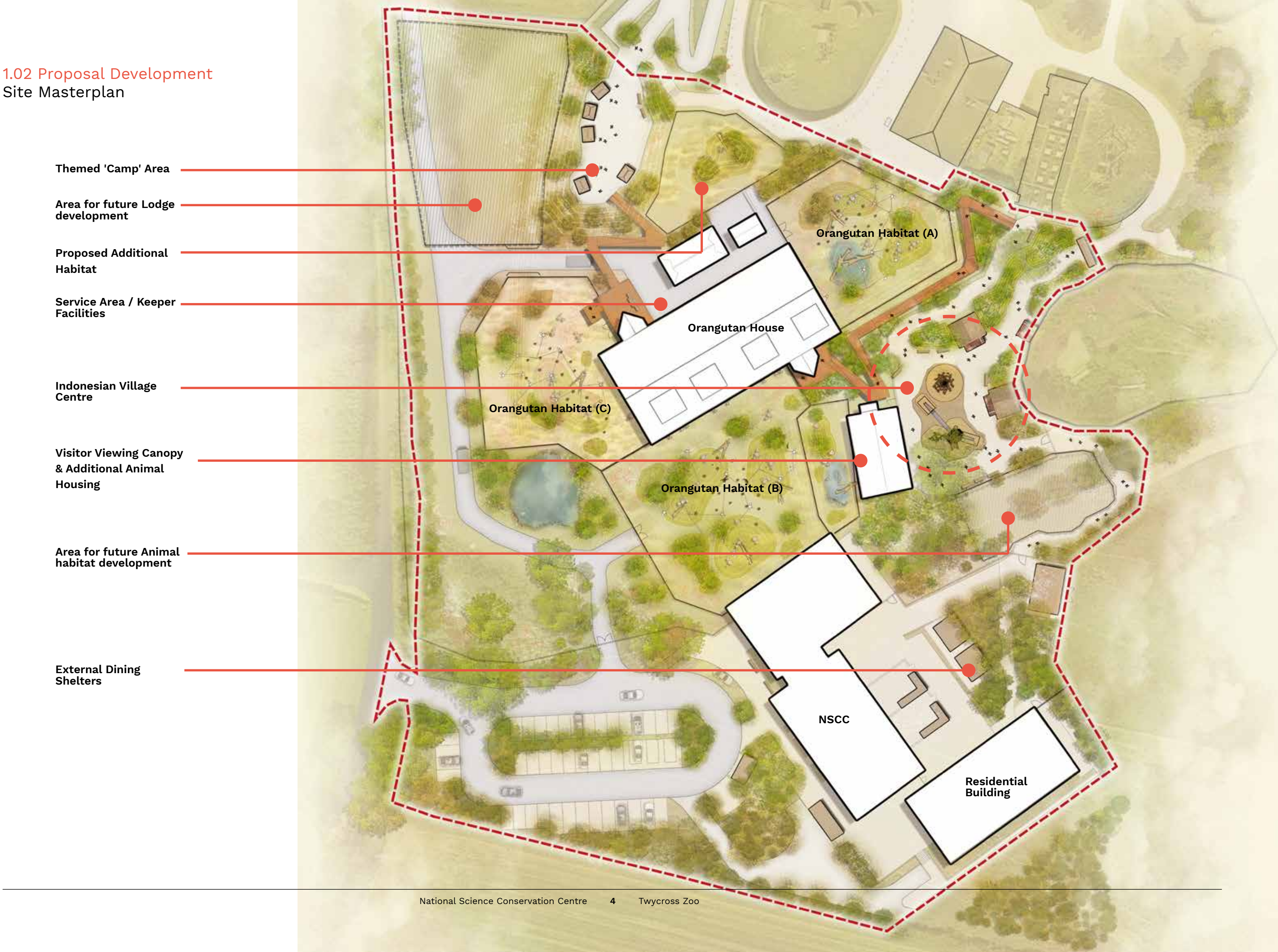
Orangutan Habitat Building

The principals of the internal layout of the Orangutan Habitat Building remain the same, if not improved, with regard to functionality. The altered form and adjusted orientation allows for the visitor boardwalk to adjoin and provide access to the first floor (visitor centre) of the Orangutan Habitat Building without overhanging the external male habitat. This mitigates issues concerning the male orangutan being overlooked when moving between his internal and external habitat spaces, and without compromising the visitor experience.

As a result of the above building reconfiguration, the siting of the external habitats have been altered, to enhance the animal external environment and maximise visitor viewing opportunities.

In addition, the energy efficiency of the building is improved by rationalising the form. Following further development of the building services design, it has also been established that much of the plant can be located internally, which has enabled the plant and zoo keeper areas at the upper levels to be consolidated. Effectively, this removes a storey and allows a pitched roof to be incorporated, which relates better to the NSCC and Residential Buildings. With the changes in form, it was also appropriate to re-evaluate the materiality, for which it is now proposed the building be brick corresponding with the NSCC and Residential Buildings.

1.02 Proposal Development
Site Masterplan



1.02 Proposal Development
Concept Elevation Study: NSCC Building



The intention is to break up the relatively simple elevation through use of two brick types.

Pitched roof with terracotta colour tiles to reflect the local vernacular.

Brick recesses further break up the elevation and mirror the fenestration arrangement.

Pleached trees further activate the facade and reinforce the grid,

Hit and miss brickwork creates a secure line but also helps visually tie the buildings together.

Where possible, existing trees from the site to be power washed to remove the bark and reused in the pergolas and other landscape structures around the site.



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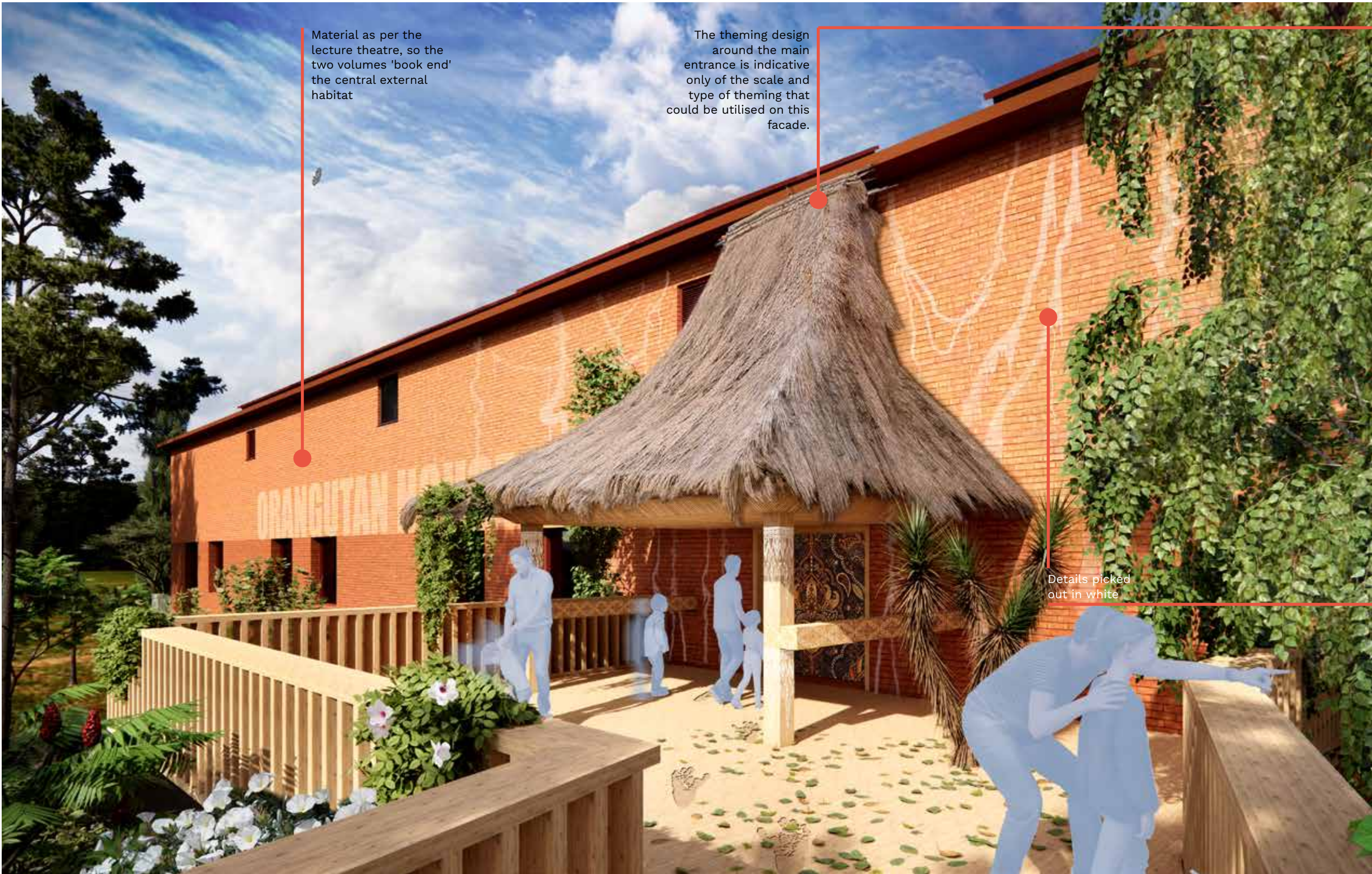
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1.02 Proposal Development

NSCC Concept Entrance View



1.02 Proposal Development
Concept Elevation Study: Orangutan Habitat



Material as per the lecture theatre, so the two volumes 'book end' the central external habitat

The theming design around the main entrance is indicative only of the scale and type of theming that could be utilised on this facade.

Details picked out in white



Thatched roof



Musée Yves Saint Laurent Marrakech
Studio KO



Indonesian Vernacular Detail