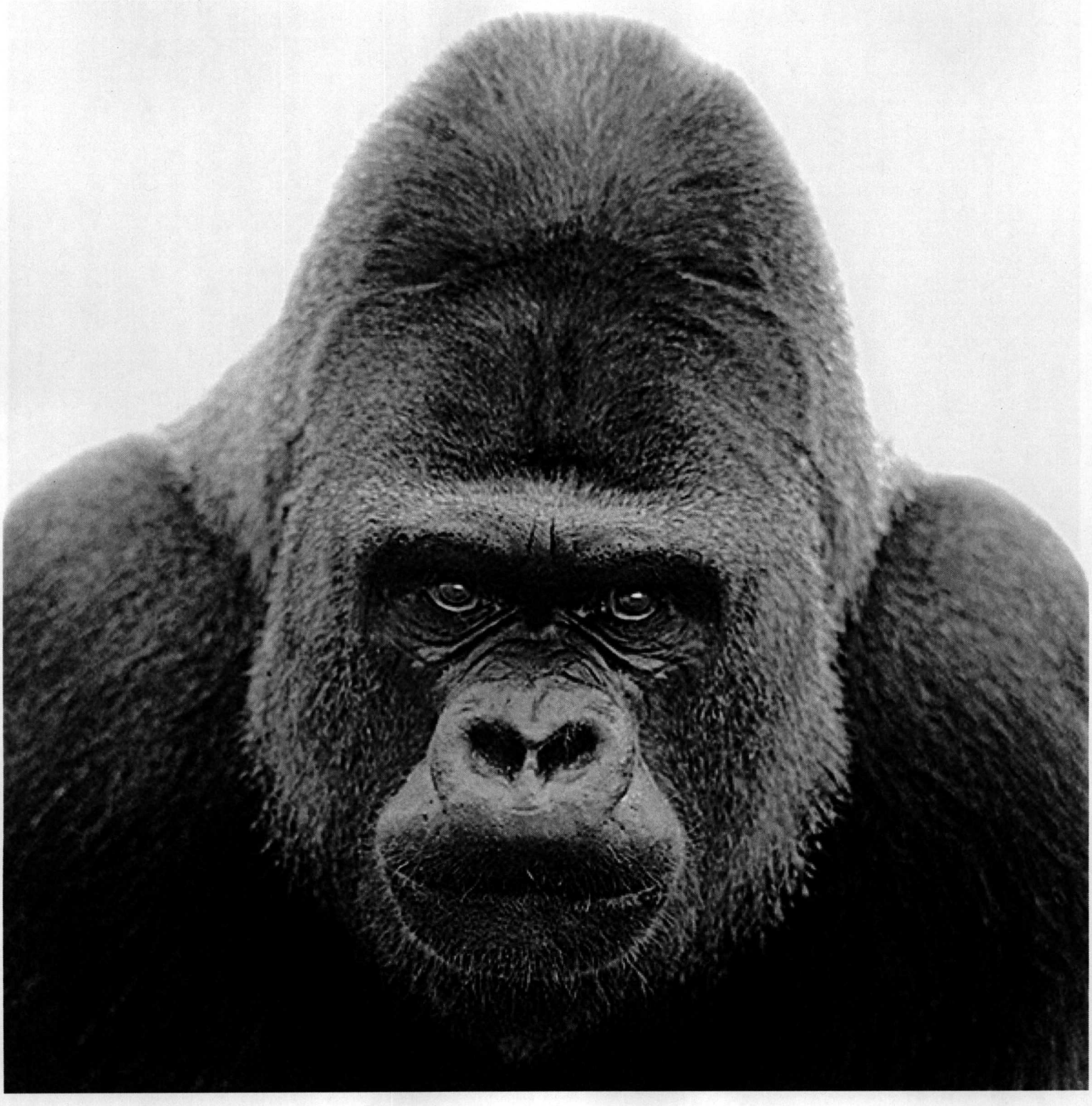
DC DESIGN

# Twycross Zoo - Ape Enclosure
## Design and Access Statement



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Twycross Zoo

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## Introduction

This Design and Access Statement relates to proposals for the demolition of two outdated structures and the construction of a new ape enclosure at Twycross Zoo. The new enclosure is required to improve animal welfare and to allow better management of ape groups across the zoo site.

Twycross Zoo - East Midland Zoological Society Limited (EMZS) is the second most attended gated tourist attraction in the East Midlands attracting in excess of 500,000 visitors per year. A registered charity and social enterprise, EMZS is the largest zoological institution in the entire Midlands region and the fourth largest zoological attraction run on a non-profit and social enterprise basis in the country.

Tourism is a priority sector for Leicestershire, in order for EMZS to lead the growth and contribute to the wider economy we must grow and improve our physical base. In order to maintain and increase our visitor numbers; and provide a high quality visitor experience it is essential that, as with any tourism destination, we are continuously improving our existing exhibits and providing new exhibits.

In 2005 we developed a masterplan for the site that identified the zones for change within the following 10 years. As part of this we identified the area where the buildings included within this planning application are located as a priority area for redevelopment due to the following reasons:

- As one of the main gateways into the zoo the area needs to be redeveloped to provide that wow factor and sense of arrival.
- Many of the buildings in the area were developed from the late sixties right through to the early eighties. Animal husbandry and enclosure design have significantly changed since they were developed and subsequently visitor expectation. In order to meet welfare and visitor expectation we must provide the highest quality experience for both visitors and animals.
- Redevelopment must ensure that it allows the future growth and development of the site.

## Planning policy

Twycross Zoo is identified in the Hinckley & Bosworth Borough Council Local Development Framework Core Strategy (December 2009) as an important tourist destination within the borough. Policy 12 of the Core Strategy states that development of the tourism industry will be supported by the council. The Core Strategy further identifies the zoo as one of three significant visitor attractions which, combined with a series of smaller attractions, offers a wide variety and range of visitor experiences within the borough. Policy 23 strongly supports the development of existing visitor attractions subject to various criteria (see extract below).

### Policy 23: Tourism Development

Tourism development for new and extended visitor attractions including major facilities (e.g. Twycross Zoo, Bosworth Battlefield, Mallory Park) and holiday accommodation including bed and breakfast accommodation, holiday lodges, and tenting fields will be encouraged in suitable locations where:

- The development can help to support existing local community services and facilities and
- Is of a design and at a scale which is appropriate to minimise impact and assimilate well with the character of the surrounding area with acceptable landscaping and
- The development adds to Hinckley & Bosworth's local distinctiveness and
- Complements the tourism themes of the borough and
- The development adds to the economic wellbeing of the area

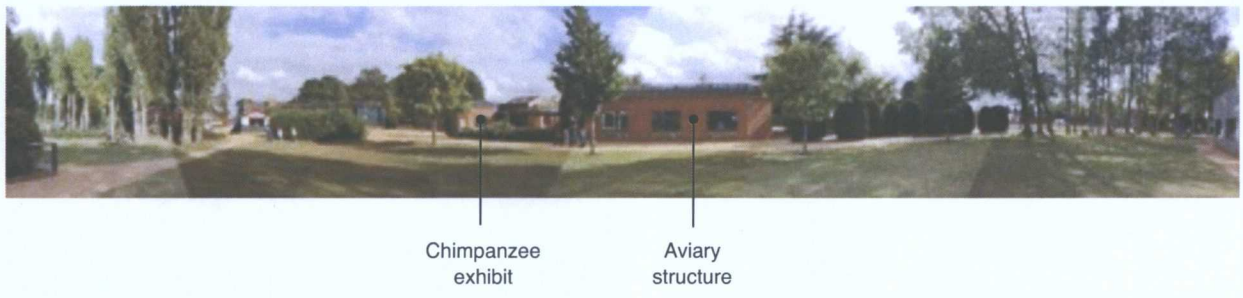
The proposals do not represent a major new development or an extension of the zoo. However, the proposals have been carefully considered to take account of the relevant criteria above, as well as the design guidance contained in the Hinckley & Bosworth Local Plan and emerging planning policy. The following section of this report sets out the design process and details of the proposed building and enclosure.

One of the buildings to be demolished is currently home to a bat roost (see separate bat survey report). It is therefore necessary for the proposals to take into account the guidance contained in Planning Policy Statement 9 and circulars 06/05 and 02/2002 to ensure that the proposals include suitable mitigation measures for these protected species. Prior to demolition, it will be necessary for the zoo to obtain a protected species licence. Further information, which will provide the basis of the licence application, is included at the end of this report.

# Design

## The site

The planning application site is located in the centre of the zoo, adjacent to the main visitor path running east / west from the Himalaya entrance building to the Uda Walawe Elephant Walkway. The site contains two existing buildings, a chimpanzee exhibit and aviary (see photograph below) that will be demolished. The aviary building is no longer in use due to ongoing maintenance problems. The site is located well within the boundary of the zoo site and is not visible from any surrounding roads or neighbouring properties.




The site has been chosen to allow a potential future link to the area to the north east (see aerial photograph below). Twycross Zoo are continuing to plan the wider site in line with the Development Framework submitted to HBBC in October 2008 and this area is being masterplanned as the location for a major new ape exhibit. The proposed ape enclosure has been sited to allow it to become an integral part of this future development.




## Design process

The design of the new enclosure has been led by the zoo's internal team and has particularly focused on the animal requirements for the internal and external areas, the security of the enclosure and the visitor experience.

The site choice is based on compatibility with future development opportunities (see above) and it also enables the removal of two underperforming buildings.

A habitat survey was carried out for the existing buildings and a bat roost was identified within the roof of the chimpanzee exhibit. The building design was subsequently amended to accommodate a new bat roost within the roof void (see final section of this report). The existence of a European Protected Species

on the site presents an exciting opportunity for the zoo to enhance visitor understanding of bats and to provide exemplary new accommodation within the new building.

## Building

The size and layout of the building is determined by animal husbandry requirements and visitor / keeper safety considerations. The building is of similar height to a two-storey house, with the internal animal area full height and the keeper area split to provide space for the bat roost above. The form of the building is functional and the plan has been kept simple to ensure easy everyday use and maintenance. The northern wall of the building has been cranked to provide the best visitor views into the internal area.

The roof will have a mono-pitch, which will help to minimise the perceived height of the building from the visitor side. This also allows for the provision of north-facing rooflights, which will create a naturally-lit interior and minimise the need for electric lighting during daylight hours.

The proposed building will make use of cross laminated timber construction (CLT). CLT is a sustainable construction material with the raw material coming from managed forests. CLT is delivered to site as pre-cut panels and allows for very fast construction. Solid timber walls will also offer exceptional strength to ensure safe animal containment, and can be left exposed to the elements, presenting an unclimbable, smooth wall on the animal side. A further advantage of this type of construction is that it allows for flexibility in the future. Animal husbandry and management practices / standards change regularly and the construction method would enable panels to be easily reconfigured or redeployed elsewhere.

On the visitor-facing side of the building, the building will be cedar clad, providing a softer appearance and enabling for electrical services for internal lights / rooflights to be routed away from the internal animal area, hidden behind the external cladding.

## Paddock / moat

The new enclosure represents a move away from the type of design that is evident in many of the other enclosures within the zoo - brick buildings with caged or glazed external areas. The new enclosure will include a moat boundary, creating more open visitor views and providing a more naturalistic environment for the animals. The edge of the moat will be protected by a post and rail fence and planting (see drawing 0201). Hot wires that are out of view from visitors allow for safe containment of animals in addition to the moat barrier.

## Trees and landscaping

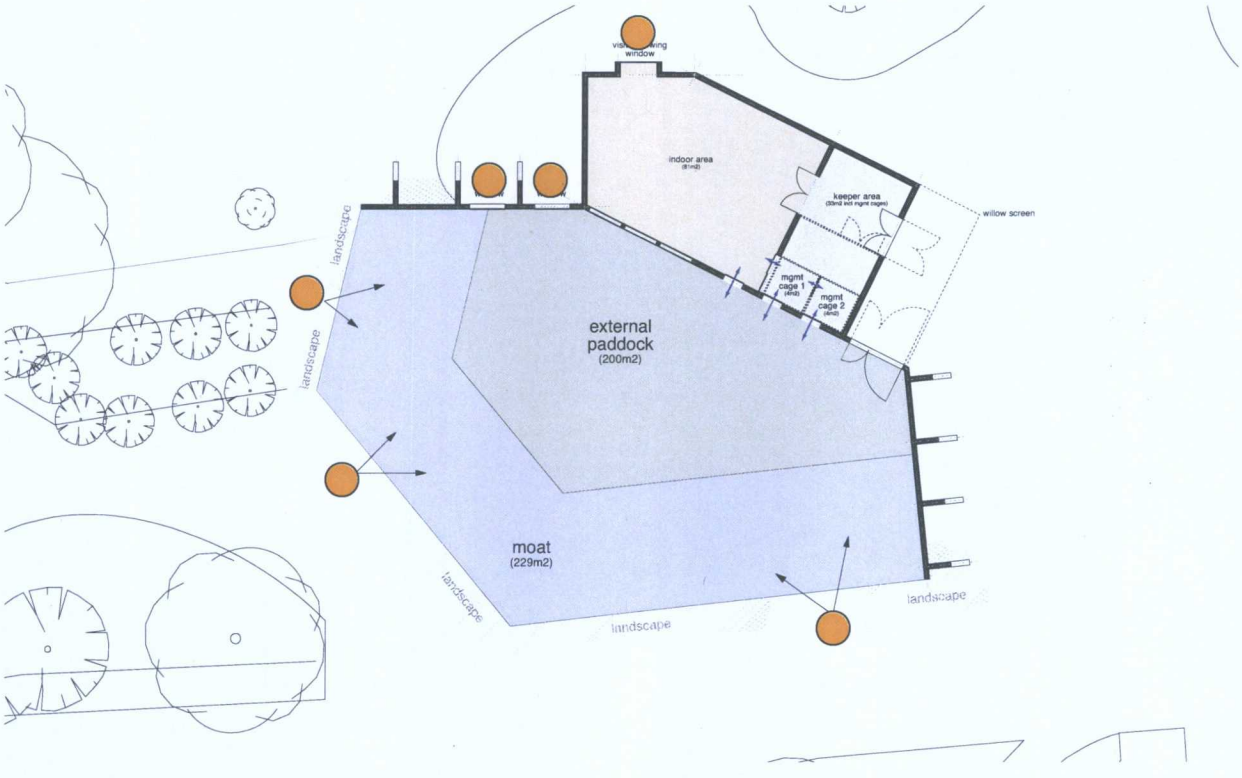
The proposed development will require the felling of two large trees and a number of smaller conifers / saplings (see drawing 0102). Replacement trees will be planted to the north of the new building (number and species type to be confirmed).

The edge of the moat will be planted with low shrubs to hide any retaining structure and soften the edge of the water. Bamboo will also be used to screen parts of the external paddock and control visitor views. The area to the north and east of the new enclosure will be finished to match existing paths within the zoo.

# Access

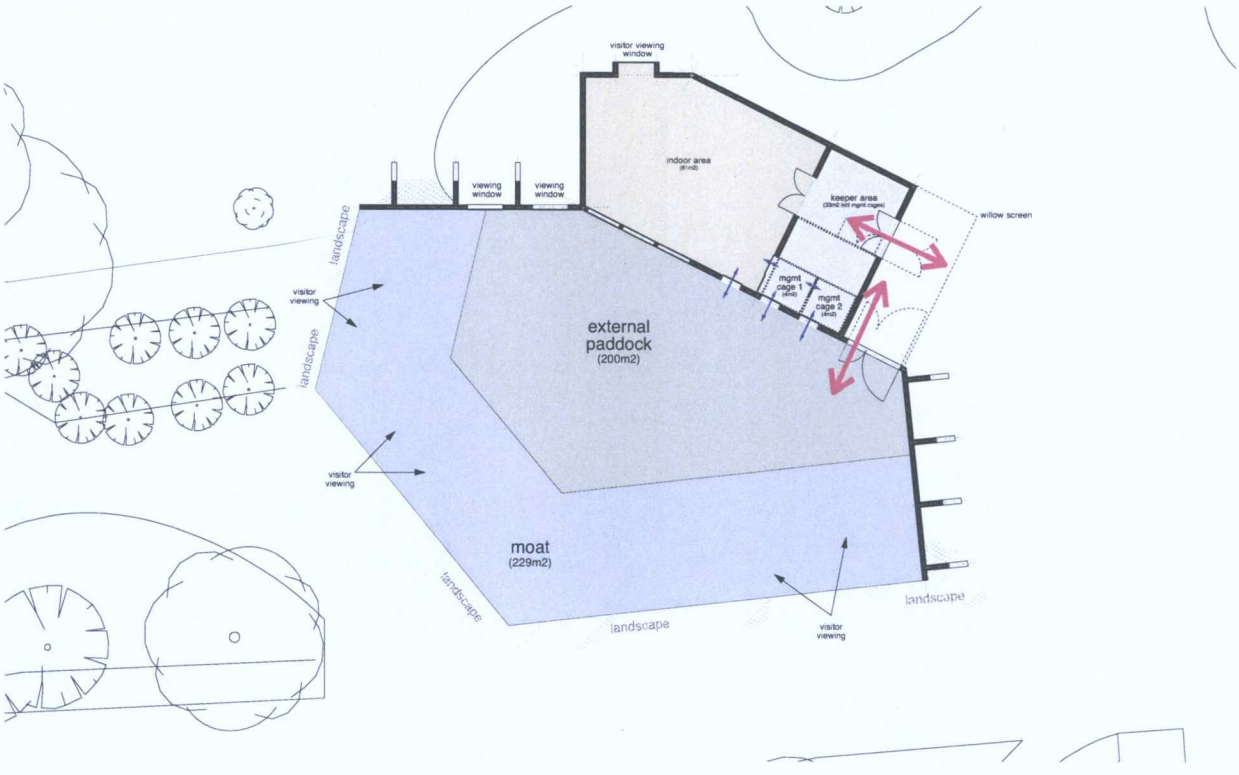
## Visitors

There are a number of visitor viewing locations (indicated as orange dots below) to allow views across the external paddock and directly into the internal area. These viewing areas will be fully accessible and will link to existing visitor paths within the zoo site. Visitors are not able to access inside the proposed building.



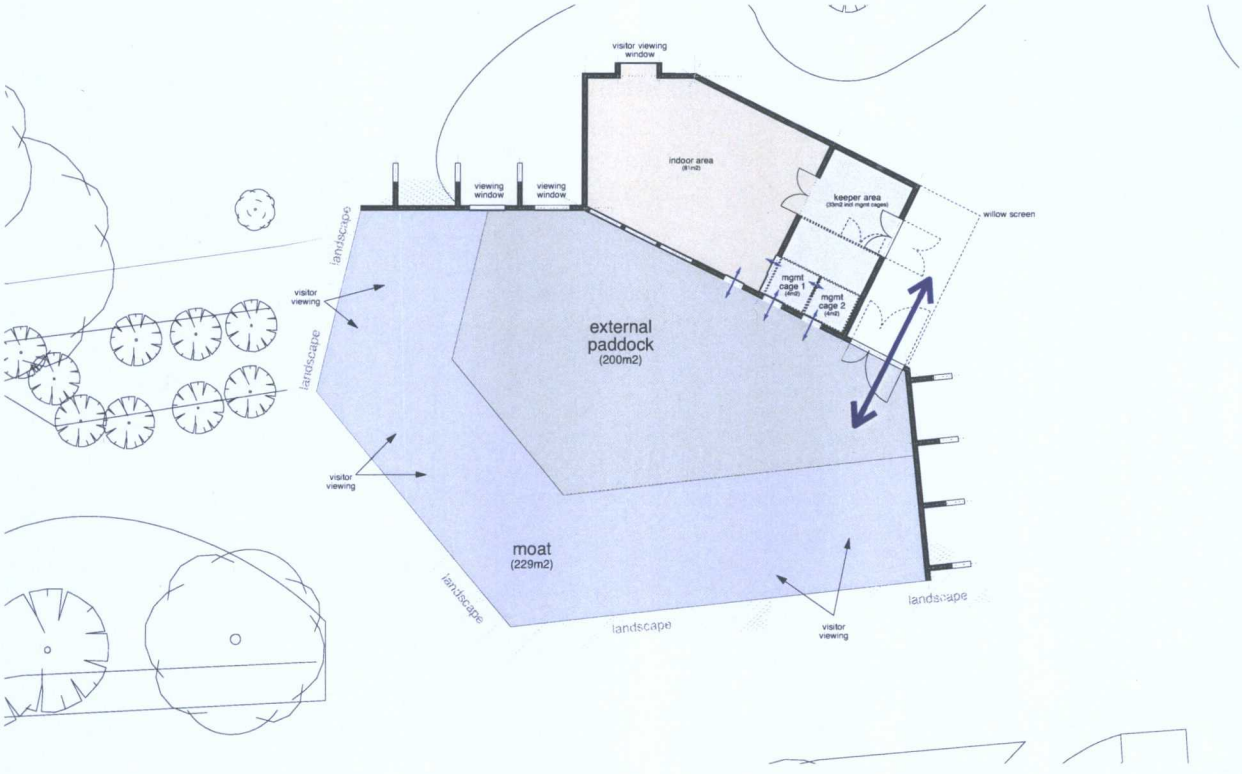
## Keepers

Keeper access is located at the eastern end of the building and is via a mesh cage for additional safety - always keeping two doors between visitors and the animals. Day-to-day keeper access will be via double mesh doors through to the internal keeper area or through a single door out in to the paddock (pink arrow below).



## Maintenance

For maintenance and for the moving of larger items (climbing structures etc) there is a larger door in the mesh cage allowing for direct access through to the external paddock (see blue arrow below).



## European Protected Species

The following section of the report provides consideration of the planning application against Regulation 53 (2)(e) and Regulation 53(9)(a) of the Conservation of Habitats & Species Regulations 2010. Further consideration of the proposals against Regulation 53(9)(b) is provided in the protected species report which supporting this application.

### Imperative Reasons of Overriding Public Interest

Regulation 53(2)(e) 'in the interests of preserving public health or for other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment'.

There is overriding public interest in removing the current building in order for new zoo animal accommodation, together with suitable wild Long-eared bat accommodation, to be built.

Overriding Animal Welfare

As Twycross Zoo is a leading conservation-sensitive zoological collection we endeavour to both promote optimum welfare for our captive zoo animals but also for native wildlife species present on our site. To this end we have a Native Species officer on site and are part of the BIAZA Native Species Working Group.

We are delighted to have wild native bats on site and will make every attempt to rehouse these animals in optimum facilities. Indeed we will also use this opportunity to educate the public about our native bats. These issues, for test 1 around 'imperative reasons of overriding public interest or for public health and safety' include:

- improved animal welfare for the zoo animals; the current buildings to be demolished for this build are too small compared with modern standards of primate care
- the site is away from the other group of gorillas to enhance the welfare of the animals (gorilla groups, especially males, are best housed away from each other to avoid excessive territorial displays)
- the new exhibit allows greater public education by demonstrating modern animal enclosure design, for primates, allowing more naturalistic animal groupings and environment, something we cannot achieve with the current accommodation
- the aged building being emptied as a result of this new build cannot be brought up to modern standards (including ongoing structural work to ensure it remains escape proof) requiring a new build of this type

Overriding Economic Reasons

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- Redevelopment must ensure that it allows the future growth and development of the site.

Over the last twelve months we have been working with a panel of international advisors to look at repositioning the organisation. Zoos are often perceived as animal collections who carry out some conservation work, and for many cases this is an accurate description, but EMZS's activity is far greater than this. The physical zoo site is a central element of what the organisation does, as it provides entertainment and education to our 500,000 visitors per year. However, we support over 100 research projects per year, are engaged with international research and conservation programmes, support the collation and dissemination of animal health on a global basis and are involved in worldwide animal health and innovation research and development.

One of the major aspects of the repositioning is the development of an 'Institute for Biodiversity Integrity', which will enable us to take forward many of our current projects and collaborations, and to act as a think tank to develop new initiatives and partnerships that will help us to achieve our vision of reconnecting humankind with nature and make a significant contribution to biodiversity and ecosystem health. Through repositioning the organisation we believe that there will be a greater understanding in the role that we currently play, and that we will be able to develop into a world leader for biodiversity health.

This future growth will enable us to contribute more widely to the growth of the economy, providing high value jobs in a rural area, encouraging inward investment and through the diverse economic base securing against future economic downturn.

Overriding Education Reasons

The development of new primate facilities at Twycross Zoo will create huge public interest potential for both the primates and bats providing a beneficial education requirement both locally and nationally. This educational requirement is demonstrated through the increasing visitor numbers which are currently in excess of 500,000 visitors each year who visit to see our world class primate collection. At present, Twycross is the only institution in the UK that is home to all five types of ape including some of our closest relatives. Visitors are captivated by the apes spending large dwell times at their enclosures. These new facilities will enable us to demonstrate how our relatives interact in a naturalistic environment, giving our visitors a glimpse of the wild, which under normal circumstances, the majority would not be able to experience. This new enclosure will allow display of naturalistic behaviours allowing our visitors to see just similar we are to our wild relatives helping to build a connection between our visitors and the natural world.

The development of the new facilities will also allow a unique setting for raising public awareness to the plight of our native species. The large dwell time visitors will spend at the development once complete will enable us to educate them about the bat species involved and the steps taken to protect them. The concept of an endangered native species living in the same home as an endangered exotic species will make an endearing story.

## The 'No Satisfactory Alternative' Test

Regulation 53(9)(a) 'that there is no satisfactory alternative'.

Meeting the Need

As described above, there are clear reasons why the existing building containing the roost needs to be demolished, particularly in light of changing animal husbandry requirements. In addition, the zoo have explored a number of possible alternative sites as part of the design process (set out overleaf) and consider that the application site is the only viable option for the proposed use.




Alternative sites:

| Site | Positive features | Negative features |
|---|---|---|
| 1 | - Easy to connect to existing services<br>- Compatible with future masterplan aspirations<br>- Prominent location within the site for new enclosure<br>- Opportunity to replace unsuitable existing buildings<br>- Accommodation away from existing gorilla accommodation | - Demolition of existing buildings required |
| 2 | - No demolition required | - Site removed from existing services<br>- Site removed from existing visitor routes<br>- Proximity to existing gorilla accommodation |
| 3 | - Easy to connect to existing services<br>- No demolition required | - Potential conflict with future masterplan aspirations<br>- Proximity to existing gorilla accommodation |

| Site | Positive features | Negative features |
|---|---|---|
| 4 | - Easy to connect to existing services | - Demolition of large existing building required<br>- Potential conflict with creation of a larger amenity area in this location<br>- Requirement to relocate electrics hub |
| 5 | - Easy to connect to existing services | - Potential conflict with future masterplan aspirations<br>- Site size limited by existing buildings and mature trees |

"Doing Nothing" as an Alternative

The buildings identified for demolition are not fit for purpose and can not continue to be used for animal accommodation. There are strong economic reasons for the zoo to be continually renewed and to offer visitors ever-improving animal exhibits and visitor experiences. The zoo would otherwise stagnate and be limited in its ability to provide high-quality new animal exhibits. The proposed enclosure also provides an opportunity to construct an improved bat roost and to link the zoo's conservation and education agendas.

## The 'Favourable Conservation Status' Test

Long-eared bats are generally not crevice-roosting bats, but prefer pitched roofs with open flight spaces in which to roost. This is why they are often encountered in residential buildings with attic spaces - uncluttered lofts in older buildings are perfect as summer roosts. The buildings replacement loft space is of a similar size and height to the one that currently supports the roost. We are exceeding NE guidelines for the size recommend when replacing a Long-eared bat roost.

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