

Edinburgh

Survey of Gardens and Designed Landscapes

**024 Corstorphinehill House, Scottish National
Zoological Park or Edinburgh Zoo**

Consultants

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Survey visit: September 2007

024 - Corstorphinehill House



Key

- Site boundary
- Ruined buildings
- Principal buildings
- Gardens
- Water
- Woodlands
- Parkland
- Essential setting
- Site of former house
- Main drive
- Principal views or vista
- Panoramic View
- Walled Garden

EDINBURGH
THE CITY OF EDINBURGH COUNCIL

**SURVEY OF GARDENS AND
DESIGNED LANDSCAPES**

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**024 Corstorphinehill House, Scottish National
Zoological Park or Edinburgh Zoo**

Parish Corstorphine, later Edinburgh

NGR NT 2074 7308

Owners Royal Zoological Society of Scotland

Designations

Listing Corstorphinehill House, including sundial B
Toilets flanking west lodge C (S)
West Lodge complex C (S)

City of Edinburgh Green Belt

Urban Wildlife Site (north part of site)

Area of Great Landscape Value

REASONS FOR INCLUSION

The site of a large suburban mansion and grounds from the late 18th century onwards and a component of the woodland and open spaces on the slopes of Corstorphine Hill, that has continued to grow in significance with the establishment of Edinburgh zoo in the early 20th century. Its development and expansion involving a number of prominent planners, designers and directors over nearly a century has created a world-class zoo and visitor attraction in a high quality environment.

LOCATION, SETTING AND EXTENT

Edinburgh Zoo is located in three miles west of the city centre on the south of Corstorphine Hill in over 30 hectares of sloping parkland. Its main entrance is on the north side of Corstorphine Road (A8) with visitor car parking on the east behind the Holiday Inn hotel. Corstorphinehill House is sited centrally within the southern part of the site and has a good southerly view; views eastward and southward over the city and its setting become increasingly expansive as one progresses to the upper parts of the site. Site area 31.7ha.

The Zoo is one of Scotland's most successful visitor attractions, second only to Edinburgh Castle in terms of paying visitors, with over 600,000 visitors a year.

MAIN PHASES OF DEVELOPMENT

1790s; 1890s; early-20th century and fairly continuously since.

*General view south-west from
above penguin pool with a
Corstorphine sycamore on
right*



HISTORY OF LANDSCAPE DEVELOPMENT

The estate of Corstorphine Hill was originally feued by John Dickie in 1720; the name was retained for the west part of the land after Dickie's feu was subdivided, creating Beechwood in the middle section and Brucehill (later known as Belmont) to the east (Harris 194).

The Corstorphine Hill feu was sold to brewer David Johnston in 1768. In 1791 the feu was bought by accountant William Keith, who built Corstorphine Hill House in 1793 (NSA 216). The whinstone villa was baronialised and extended in 1891 by Alexander Wood Macnaughtan with stables added separately to the north-west. Early in the 20th century the owner was John MacMillan of the Melrose Tea company.

Further additions were made to the house after its purchase by the Royal Zoological Society of Scotland (RZSS) in 1912, including alterations by Sir Robert Lorimer in 1913.

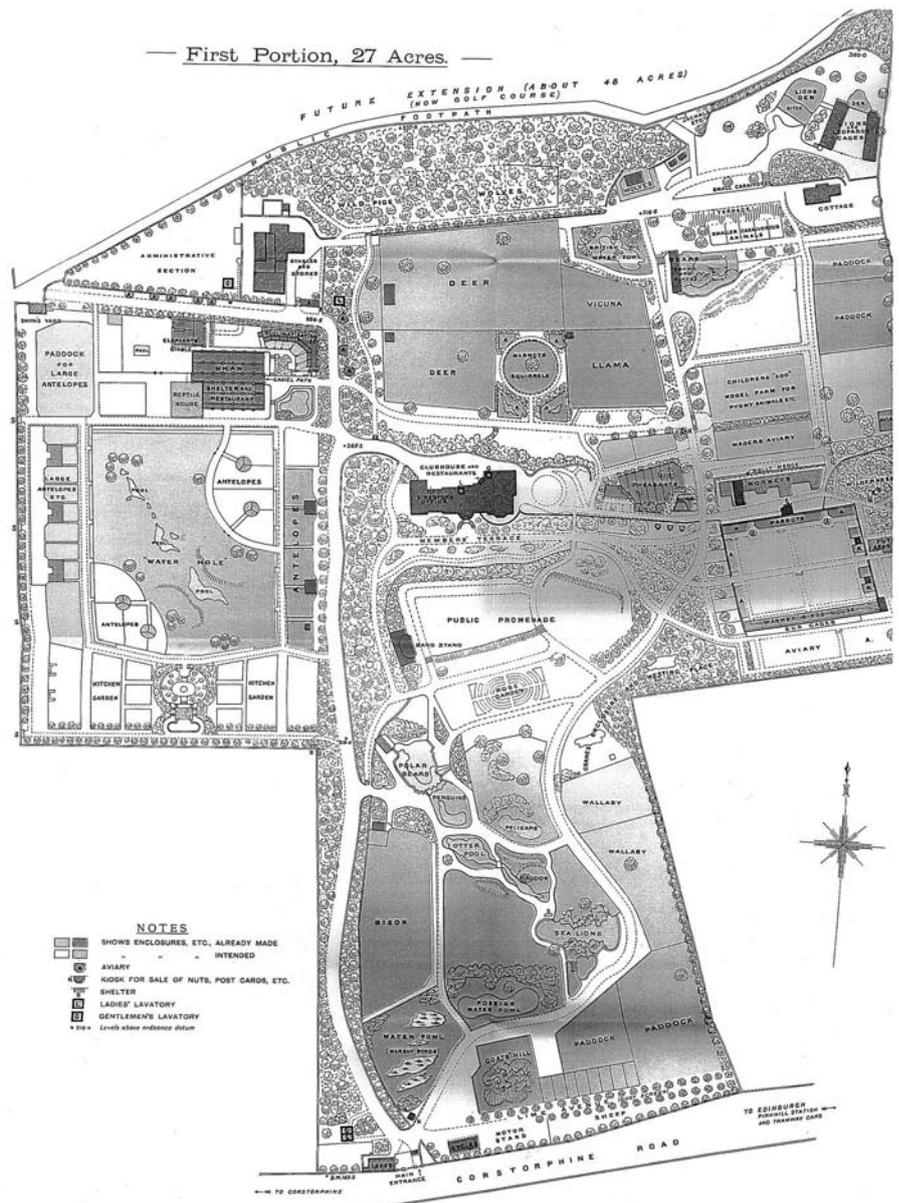
The first zoo in Edinburgh was located on a six acre site near East Claremont Street but although successful and popular, achieving royal patronage as The Royal Edinburgh Zoological Gardens, only lasted from 1839 to 1857. In the early years of the 20th century an Edinburgh lawyer, Thomas Gillespie, became obsessed with the idea of establishing a zoological garden or park in the city and in 1909 was instrumental in founding what became The Royal Zoological Society of Scotland. Initially interest in and growth of the new society was slow but by 1912 funds had been raised and the estate of Corstorphine Hill House identified as a site suitable to establish a zoo.

Following a series of lectures by Professor Arthur Thomas under the title *The Modern Zoo*, the Society had become committed to a new approach to animal care in captivity that was being practised by Carl Hagenbeck at Stellingen Zoo near Hamburg using open and natural environments. The aim of the society was that the 'ground ... would fit it for the well-being of the animal but would aid the amenity and beauty of the ultimate layout such as the existence of growing trees and shrubs, of water and of rocks.' To this end the society sought a site that had a 'sunny exposure with shelter from north and east winds, and a warm dry soil.' A further consideration was that the location had to be 'accessible from all parts of the city within a moderate times and for a trifling [tram] car or bus fare' (Gillespie 1964, 10). Although this part of Corstorphine Road was not at that time served by trams, it seemed likely that the tramline would shortly be extended.

At the Corstorphine Hill House estate there were '75 acres, a fine house, good outbuildings, pleasant gardens, well-timbered and on a southern slope' and the asking price was moderate at £17,000. The Society had estimated that a further £8,000 would be needed for laying out and stocking the zoo. An appeal for funds was launched in November 1912 with articles in *The Scotsman* and the *Glasgow Herald*, but brought in less than the required sums. An appeal was made to the City Council, who agreed to buy the house and grounds, and then feued them back to the society; this also enabled the council to get the road widened.

Thomas Gillespie was appointed as Director of the zoological park, as well as being Secretary of the Society, posts he held until 1950. In order to achieve an early opening of the zoo, the bulk of the animals came on a three-month loan from Mr Garrard Tyrwhitt-Drake's private collection in Kent, with the society having to pay only transport costs. This left funds to spend on beginning its own collection. Frantic work began to prepare enclosures and cages for the animals. The superb qualities of the site facilitated the aim to display animals in as open and natural a way as possible, following the Hamburg example.

On 22 July 1913 the Edinburgh Zoological Park opened to the public, who visited in large numbers. The rush to opening proved sensible – some members considered that if it been delayed the zoo project may have failed due to the outbreak of war the next year.



Zoo plan around time of first opening, November 1913

The eminent social visionary and town planner Professor Patrick Geddes, together with his son-in-law Frank Mears, was responsible for the design of the new zoo. After researching and visiting zoos across Europe, they produced a plan and a report incorporating the best ideas of planning and building for the benefit of animal and visitors. Large open enclosures using ditches and moats to separate animals from the visitor were used. As the zoo developed during the 20th century, other new ideas, designs and materials were incorporated.

Initially the site was divided in two with the zoo occupying the south part and a golf course the north part. After the purchase the southern 27 acres was laid out to the Geddes and Mears plan. In 1924 a dividing footpath was removed and in 1928 the Corstorphine Golf Club was served notice to leave the 47 acres to the north. The golf club found a new home at Ratho Park (site 134). Mears and his practice partner Carus-Wilson completed this part of the site in 1927-37. The old estate avenue on the west was continued from the stable building up the hill by a winding route to the top, at a height of 165m.

In 1925, Mears added the tropical bird and reptile house, and more buildings for both visitors and animals followed, many by notable architects. In 1942, Pinkhill Nursery to the east was bought, and in 1947 work commenced at the top of the hill to make a small loch for use as the zoo's water supply.



Proposed plan of the new zoo, featuring habitat biomes, transport system and new Scottish conservation area

The Zoo has remained at the forefront of zoo enclosure design, and regularly wins awards for the natural and stimulating habitats for its animals. Today the mission statement of Edinburgh Zoo is 'To excite and inspire our visitors with the wonder of living animals, and so to promote the conservation of threatened species and habitats'. The Zoo has an ambitious plan for the next 20 years, with an estimated £72 million required for expansion and development. A Masterplan shows the site divided into four biomes:

- Grasslands – North Asian, African and South American grasslands and savannah and open plains habitats.
- Woodlands – Asian, South American, Far East and Australian woodlands and mixed mountainous forest habitats.
- Oceans and Wetlands – Arctic, Antarctic, North and South America, Pacific aquatic, tropical wetland and South Atlantic coast habitats.
- Tropical rainforest – South American, Asiatic, African rainforest and swamp forest habitats.

In addition, a Scottish Conservation biome is proposed in the east of the site.

The first phase of this Masterplan has been completed in 2008 by the opening of the new state-of-the-art chimpanzee enclosure, the Budongo Trail.

In each biome, the visitor will be 'immersed' in the habitat, which will not only enhance the experience but also increase their understanding of the animals to be found there. Each biome will feature a few iconic species, like lions, polar bears and penguins, as well as a mix of different animal types that will convey the story of that particular habitat. These will be mixed, wherever possible, in groupings that you might find in the wild.

Visitors will be able to travel around the Zoo on a continuous transport system, which will link all four biomes, radiating from a new entrance sited at the top of the car park.

The Zoo will aim to be environmentally sustainable with all materials and processes in the building of the new Zoo selected to have the lowest impact on the environment.

Part of the Masterplan is for the Society to raise a substantial sum of money by residential development on some surplus land along the western boundary of

Ordnance Survey 6" map
1852-53



Roy's map c1750



the zoo. Approval was given for this in 2006 but the decision was reversed in 2007 by the new Council administration in producing its Local Plan for the city.

Maps and Graphic Evidence

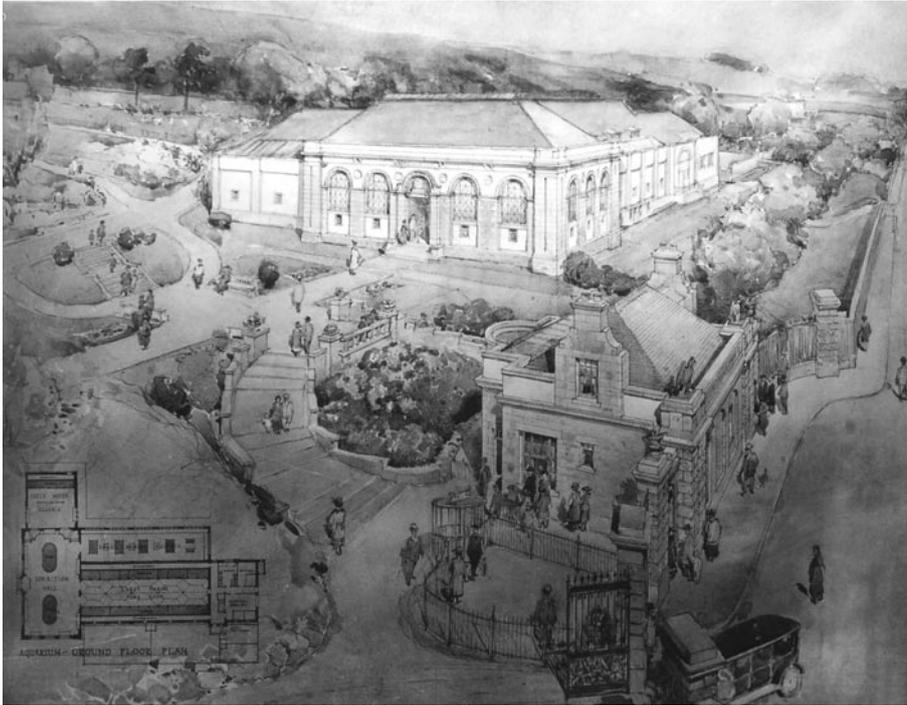
Roy's map c1750 shows Corstorphine Hill house and estate, although without naming it, with the house at the centre of a rectangular group of tree-lined enclosures with a thicker tree belt on the east side. Early 19th century maps show a similar layout in simplified form with other houses in small areas of grounds on the lower hill slope along the road to the east. David Crawford's *Plan of Ravelston and Corstorphine Hill* dated 1826 shows the layout in detail with outbuildings either side of the main house, a small walled garden east of the house and a *South Park* with naturalistic enclosing tree belts and two small tree groups and a drive along the west side to a service buildings courtyard. *House Park* and *Garden Park* lie to the north of the house, both largely retaining their previously rectilinear form. Further north are larger grazed parks with naturalistic tree belts on the higher part of the hill and to the east is *Beechwood*, another house with similar features on a larger scale. The 1st edition Ordnance Survey maps of 1852-53 shows similar detail although with a new buildings with a grid layout of trees in what was previously *Blackies Feu* to the south-east indicating nursery use. More outbuildings on the east of Corstorphine Hill appear to have replaced the services courtyard further west.

The zoo plan of November 1913, the *First Portion, 27 Acres*, shows the result of the Geddes/Mears collaboration and the exceptional progress in laying out the zoo in a short time for opening that year. All parts of the initial area are shown put to use and includes *enclosures etc already made* as well as those *intended*. Many features of the initial layout can be seen in later and modern plans.

An architectural perspective of the entrance area circa 1927 shows the Carnegie Aquarium completed that year, with the new gate-house or lodge and gates added in 1926.



Detail from Crawford's Plan of
Ravelston and Corstorphine Hill
1826



*Perspective drawing of
Carnegie Aquarium and gate-
house or lodge, c1927*

COMPONENTS OF THE DESIGNED LANDSCAPE

Architectural Features

Corstorphinehill House

Originally built in 1793 as the family home of accountant William Keith. In 1891 altered and enlarged by the Macmillan family, whose fortunes came from the Melrose Tea company, in the Scots Baronial style, designed by Alexander Wood Macnaughtan. The original bow window on the south front was heightened to form a heavy castellated tower and a large turreted extension was added on the east. Over the years the mansion has provided living accommodation for keepers, offices for administrators and a meeting place for visitors. The Mansion is now the Members House and provides a bar and restaurant for society members, their guests and the public, as well as offices.

Lodges, Estate and Zoo Buildings

The principal non-animal buildings include the following.

The old stables remain, in use by the maintenance section, designed by Macnaughtan in 1890s.



Stables buildings



*Corstorphinehill House south
front and lawn*

*Gate-house, Carnegie
Aquarium and current arrival
building*



The Walled Garden also survives in an altered state with aviaries against the north and east walls and the Tropical Bird and Reptile House (by Mears, 1925) on the south.

Estate cottage 1890s.

A Bandstand (now demolished), on the west side of the lawn below the house, and toilets flanking west lodge by designed by Robert Lorimer in 1913.

Book shop by Mears, 1913.

*Carnegie Aquarium exhibition
hall west elevation*



Gate-house or lodge, Corstorphine Road, by Alexander N Paterson in Beaux-Arts classical style, 1923-26. Two stone falcons on the building and rusticated gate-piers with heavy cast-iron gates were originally at Falcon Hall, Morningside.

Carnegie Aquarium by Alexander N Paterson, 1924-27, with round-arched blind arcade and coloured cement roundels and modern dormers. Only the west Exhibition Hall part remains, now converted to office use.

Restaurant, west of mansion house, single storey approx. 25m x 13m, designed by Sir Frank Mears, built 1936

Entrance building and shop, with prominent lattice-beam flat roof and approached by steps and ramps through lush planting from the main road, 1990s

Animal Buildings and Enclosures

Only a few of the animal houses and enclosures are included here. The zoo has continued to develop and evolve throughout its life and several new developments are currently under way. Some features may have been lost to subsequent development.

The first features included pools near the entrance, the Lion Rock or Den, using rock quarried from the hillside, and the Brown Bear Enclosure in 1913-15. Lion House added 1976.



Oasis cafe

*Gate-house or lodge,
Corstorphine Road*





Enclosures with mature planting in the lower original area of the zoo

Below Tiger enclosure with quarry wall



Monkey house and west boundary tree belt

Tiger enclosure formed by building up the wall around an old quarry with a long pool at the front and a cave-like viewing point, 1936.

Baboon Rock and Ape House 1928-29.

Prairie Dog Rock 1958.

Big Cats enclosure c1987 developed from the natural rock of the hillside converted into dens and rocky ledges to provide a natural environment for leopard, lynx and jaguar.

Monkey House with large conservatory-like cages at either end, 1970-71.

Orang- Utan House 1980.

Recent Buildings and Enclosures

Penguin Pool – Edinburgh Zoo’s long association with penguins began in January 1914, with the arrival of three King penguins from the Christian Salvesen whaling expedition that docked in Leith. The subsequent successful hatching of a King penguin chick in 1919 was the first penguin to be hatched in captivity. These were the first penguins to be seen anywhere in the world outside of the South Atlantic. A large penguin pool and enclosure was constructed by keepers in 1930. This in turn was replaced by the present enclosure with its long pool and viewing bridge after a design competition in the 1990s.

Budongo Trail – a state-of-the-art chimpanzee enclosure, opened in May 2008, the Budongo Trail is a naturalistic enclosure which can house up to 40 chimps. It includes a large outdoor area and three separate indoor areas for the chimps together with observation areas and a lecture theatre for the public.

Grevy’s Zebra enclosure – with elevated walkway and viewing pavilion.



Grevy’s Zebra enclosure



Visitors' plan of zoo today

Magic Forest – housing several species of south American marmosets and tamarins.

Living Links – primate behaviour research centre.

Rainbow Landings – housing up to 100 rainbow lorikeets that will be the most interactive exhibit in the Zoo (opening mid-December 2008). The birds will fly down to land on visitors and drink nectar, purchased at the door. It is the first indoor exhibit in a series of projects that will see the Zoo transformed into an all-weather attraction.

Drives and Paths

Several circulation features remain in use from the estate layout:

West drive – a vehicular service route along the west boundary

Mansion House drive and paths – link from west drive to house, and terrace and other paths around the house and gardens

Budongo Trail chimpanzee enclosure, section through west elevation





Extended west drive leading to upper zoo and mature trees

Stables drive – linking mansion and stables and a route to a former west gate

Cross drive – broad east-west walk across the centre of the site

Former public footpath – part of route that marked the north boundary of the 1913 zoo area to the north of the big cats enclosures

Many later paths lead from these routes and from the early 20th century gate lodge and present arrival building. The west drive was continued northward to the upper parkland area when the zoo was extended after 1924 and has been further extended in the 1990s to form a loop.

Gardens and Policy Planting

‘Surrounding the mansion are well grown and charming shrubberies, while to the east of it are the old fruit and flower gardens in which are some magnificent cedars, yews and other fine old trees. To the west is a second grass park some acres in extent, while northwest of the mansion house and gardens lies another large grass park across which one looks to a well wooded rocky ridge.’

The landscape planting in Gillespie’s description from 1915 largely remains although greatly altered and supplemented by new planting in the intervening decades and by recent planting accompanying new built features. Elements of the old estate planting that remain include a belt of mature lime, horse chestnut, sycamore and purple beech along the old main west drive and various large broadleaves (notably ash, horse chestnut and sycamore, plus Scots pine) in the central part of the site. The lower site developed on open parkland includes younger mature planting from the early days of the zoo providing the setting for some of the older enclosures. Zoo period planting is very varied and includes trees such as walnut, Corstorphine sycamore, weeping willow and cypresses. On the south side of the mansion are a well-planted terrace and lower lawns with a mixed herbaceous and shrub border

Japanese-style garden on east of mansion



Typically well-planted enclosure and site planting in lower part of zoo



View from upper parks with mixed tree species in middle distance, including cypresses and thujas among more natural planting

*Kudu enclosure and
outstanding view in upper
parks*



*Localised themed planting of
eucalypts*

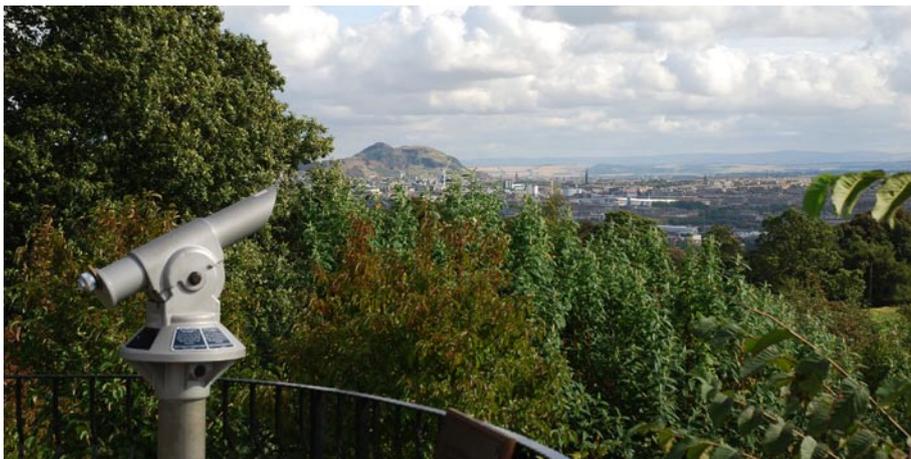
and rose beds; to the east, a Japanese-style water garden. The upper part of the site retains its hillside parkland character with old tree belts supplement by new planting containing enclosures for African plains animals, deer, camels and other herbivores. Themed planting in and around individual enclosures is a feature throughout the zoo with species such as bamboos, eucalypts, pampas grass and cordylines.

Today, the Zoo boasts one of the most diverse tree collections in the Lothians with some 120 species. Increasingly, Zoo horticulture is seen as a discipline in its own right, with the focus on habitat creation within enclosures, food stuffs for the animals, and enrichment for both the animals and the visiting public. Edinburgh Zoo has a rich horticultural tradition; horticultural features include the following.

- Over 1,000 trees on the site, each one tagged and catalogued.
- A row three *Acer pseudoplatanus* 'Corstorphinensis' on the north side of the penguin lawn, planted in 1920 as a memorial to those who fell during WW1. The original Corstorphine sycamore was blown down in 1989, although a daughter tree stands in the grounds of Corstorphine parish church.
- A collection of rare conifers as part of the Conifer Conservation Programme. These trees have been grown from seed collected in the wild, the location of each mother tree being logged by satellite navigation so that in the future their descendants can be planted in the same location.
- Four trees listed as heritage trees by the City of Edinburgh Council – an Atlantic Cedar, a Himalayan Cedar and two impressive sycamores.
- Several plant species listed as threatened or vulnerable by the International Union for the Conservation of Nature (IUCN).

*West boundary tree belt and
enclosures*





Hilltop viewpoint with views over Edinburgh, the firth of Forth and Pentland hills

- A range of tender plants made possible by south-facing aspect and winter protection – windmill palms in red-ruffed lemur enclosure, bananas at the side of the new rhino enclosure, and a Canary Island date palm in the garden at the rear of the Mansion House.
- A Physick Garden with a collection of medicinal plants.
- The field of habitat creation is unique to Zoos and to this end horticulture can be part of the wider conservation of both plant and animals. Edinburgh Zoo was one of the founders of the Zoo Plant Group and a member of the Botanic Garden Conservation International (BGCI) organisation.
- Before 1913, part of the site was a nursery, once owned by Thomas Blaikie, a famous plantsman who planted some of the great French parks such as *La Bagatelle*. On this site two nurserymen raised the apple cultivars *John Downie* and *James Grieve*. There is a small memorial to Blaikie to the west of the pygmy hippo enclosure.

Boundary and Field Enclosures

Estate walls remain on the east and west boundaries and along Corstorphine Road, retaining ground and altered for access in places.

Water Features

A system of surface rills or burns between pools in different enclosures is a feature of the lower zoo area. Few enclosures do not include pools in some form for drinking, swimming, bathing or separating animals and visitors.

Views and Vistas

The zoo's hillside location and the dramatic views across the west of the city to the city centre landmarks and Pentland Hills is one of the zoo's special features. The well-planted nature of the lower site prevents many views, but from the mansion terraces and further north views become increasingly wide and impressive, terminating with a hilltop viewpoint complete with telescope. The enclosures on the upper hill often have these spectacular views as their backdrop.

Visual Intrusions

In a site as varied and well planted as the zoo, the idea of visual intrusion does not really apply. A hilltop telecoms mast is perhaps the only really jarring feature. Occasional planting on the upper hill, where one would expect a natural and native theme, employs coloured-foliage exotics and cultivars.

Area of Influence

The zoo site is part of the wider landscape of Corstorphine Hill that includes its publicly-accessible wooded upper slopes with public access, Murrayfield golf course, and various mansions, hotels and institutions in their own grounds, or newer housing development in well-treed grounds – all visible from others

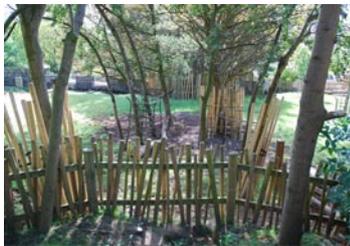


Animal enclosure with pool and marginal aquatic planting



Telecoms tower and discordant plants

*Some of the range of
disparate building and
planting styles*



*Example of current use of
timber and natural materials*

viewpoints, particularly from the nearer of the other seven hills of Edinburgh, the two Craiglockhart hills and Castle Hill.

PUBLIC ACCESS

Publicly accessible on payment of admission charges; open every day of the year.

FUTURE MANAGEMENT POTENTIAL

Given that in the zoo's history of almost 100 years there are buildings and enclosures from almost every decade it is inevitable that a wide variety of design styles are present. The range of animals kept further adds to the diversity of forms and materials. Important design issues are how a sense of order and structure in the layout is achieved to aid orientation and understanding of the site and how cohesion is maintained. The use of planting is and should continue to be an important tool in drawing together the disparate parts and features of the layout, together with a clear circulation system. Consistency in use of material can also be used to this end, and there is a move to use natural materials, including wood in various forms, in buildings, enclosures and barriers. There can be few environments where the continuity of change is so marked as at a successful zoo, where improved enclosures or buildings are needed regularly as understanding of animals needs develops and standards of care rise and where facilities to increase the enjoyment and understanding of visitors are also subject to continuous improvement.

ASSESSMENT OF SIGNIFICANCE

Overall

The Corstorphinehill House site retains some architectural and historic interest from its 18th and 19th century estate origins, although its prime importance is as the Scottish National Zoological Park. It has unique values in this survey on account of its zoological collection (giving it outstanding Nature Conservation value in a world context), but also for its botanical or horticultural interest. The number of eminent directors and designers who have been involved with the zoo's development add to its cultural values, its prominence in Edinburgh views give it high scenic value and the overall quality of environment and recognition as 'one of Britain's most beautiful zoos' give it high aesthetic worth.

Work of Art

High

Historical

High

Horticultural / Arboricultural / Sylvicultural

High

Architectural

High

Scenic

Outstanding

Nature Conservation

Outstanding

Archaeological

Little

Recreational

Outstanding

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Parish map OS (1898-1904)

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NLS National Library of Scotland www.nls.uk

NMRS National Monuments Record of Scotland

SCRAN Scottish Cultural Resource Access Network www.scran.ac.uk

www.edinburghzoo.org.uk

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