

In this task, you are going need to use your knowledge on biodiversity and conservation. You will need to work in groups of no more than three to complete the two parts and present your results as a poster.

It has been decided that the South East of the UK needs another zoological park. It is up to you to select a suitable site from a shortlist and then select three priority species for conservation. You should give reasons for your selections.

Picking your site

There are three sites which have been selected for the short list. There is a detailed description of each site below. When selecting your site, you might like to think about the following factors:

- 1) Ease of access for visitors
- 2) Habitats that may be lost
- 3) Presence of protected species
- 4) Ecosystem services (e.g. drainage from a floodplain)

You should list any ecological impact assessment survey work that might be needed and licences which might need to be obtained prior to work starting. There are several websites that may help you with this exercise:

http://en.wikipedia.org/wiki/Environmental_impact_assessment

<http://www.epr.uk.com/index.html>

<http://www.eiatoolkit.ewt.org.za/>

<http://www.naturalengland.org.uk/ourwork/regulation/wildlife/default.aspx>

<http://www.rspb.org.uk/ourwork/policy/planning/index.asp>

<http://www.environment-agency.gov.uk/research/default.aspx>

Site 1

This site is a large disused airfield, with some old hangars, about 1.5 times the size required for the zoo. It is very close to a motorway junction and has a

good bus service from a local university town. Around the periphery of the site, there are some woodlands which have been left unmanaged for fifty years and are regularly used by local residents for walking. There are several oak trees which may be over one hundred years old and large amounts of hazel. A past survey reported some feeding signs of the hazel dormouse. In the nearby village, residents report large numbers of bats on summer evenings.

Site 2

Site 2 consists of arable farmland, which is being sold as farming is no longer profitable and is approximately twice the size required for the zoo. The site was intensively farmed using large numbers of pesticides and many of the hedgerows, which were home to many bird and animal species were ripped out to allow easy movement of farm machinery. It is in a fairly remote area but there are plans in place for a major A-road nearby. There is also a local railway station with hourly trains to the nearest city, a forty minute journey. For the last three years, the land has not been farmed. There are several species of birds that now nest on the site, including corn buntings and linnets and an increasing number of 'weed' species. A volunteer surveys the site annually for the RSPB to monitor the status of the nesting bird species. There is a stream running around the site with steep sides and little vegetation. Residents in the area remember the stream being very different and having a population of water voles.

Site 3

This site is just outside a city centre, with very good public transport links. In the city, there is a university with a conservation research unit. The site was a housing estate but it is now derelict and is about twice the minimum size that the zoo would need. There is a stream on the site with thick vegetation on the banks. The local wildlife trust suspects there may be water voles resident on the stream but have not yet surveyed the site. Slightly upstream, there is an industrial estate with several manufacturing companies. There are some green areas on the site which have been allowed to grow, allowing species such as

the red fox and also badgers to take residence. There are many feral pigeons, some nesting starlings and the occasional house sparrow sighting on the site.

Part two

In this task, you need to select three priority species for your conservation effort from the list below.

The following factors may help with your decision:

- 1) The conservation status of the species
- 2) The 'aww' factor- will the public support the programme?
- 3) Species behaviour- diet, territory size etc
- 4) How much is known about the species
- 5) Possibility of release into the wild

There are other factors which you may use to influence your decision. If you base your decision on any other factor, you should explain this on your poster.

Websites to help:

<http://www.ukbap.org.uk/>

<http://www.iucn.org/>

<http://www.zsl.org>

<http://www.wri.org/publication/content/8212>

Species to choose from:

- 1) Hazel dormouse, *Muscardinus avellanarius*
- 2) Black-faced Black Spider Monkey, *Ateles chamek*
- 3) Woolly Spider Monkey, *Brachyteles arachnoids*
- 4) California Tiger Salamander, *Ambystoma californiense*
- 5) Madagascar Serpent Eagle, *Eutriorchis astur*
- 6) Lion, *Panthera leo*
- 7) Goldie's bird of paradise, *Paradisaea decora*
- 8) Splendid tree frog, *Cruziohyla calcarifer*
- 9) Reddish parachute spider, *Poecilotheria rufilata*
- 10) Axolotl, *Ambystoma bombypellum*

If you have completed the two main tasks, think about the following:

- 1) All the sites have existing biodiversity- how could you incorporate this into your site?
- 2) How will you minimise the impact of the zoo on the environment in the long term?