

NYMNFA

11 JAN 2013

NYM / 2013 / 0 0 2 4 / FL =



Aurum Ecology

The Barn Cottage, Wheelers Lane, Seething,
Norfolk, NR15 1EJ

DALBY FOREST NORTH YORKSHIRE

A Protected Species Survey and Report

ON THE PROPOSED SITE FOR A NEW 'GO APE' ADVENTURE COURSE



Client: Go Ape

Survey Date: 14th October 2006

Job Number: AE- 0700

CONSTRAINTS

Aurum Ecology has produced this report with professional diligence and skill for the named client. The ecological interpretation of wildlife species, their identification, behaviour, requirements and other matters are not necessarily part of an exact tested science and may, on occasion, be open to alternative interpretation by other "experts".

This report is confidential to the client under the full terms and conditions of the Aurum Ecology contract and responsibility for release of the report in part or whole to third parties does not imply any legal responsibility for the contents to any such third parties who may see or be given copies of the report.

Experience of working, since its inception, with the requirements of the **1981 Wildlife and Countryside Act** (as amended by subsequent legislation), and the **Conservation (Natural Habitats, &c.) Regulations 1994** shows it is most satisfactory and cost-efficient to tackle appropriate surveys for protected species at the earliest opportunity with experienced people, who are prepared to work for and with the client as well as within the existing and changing legislation in this complex and poorly understood area of specialist wildlife work.

Aurum Ecology
October 2006

NYMNP

11 JAN 2013



A Brown Long-eared Bat at rest

1 SUMMARY

This site on the eastern side of the Dalby Beck in the Dalby Forest, North Yorkshire, just north of Pickering, has been chosen by Go Ape and the Forestry Commission for a new Go Ape high wire attraction as it has all the attributes required by way of suitable mature trees, existing good visitor facilities and a new environmentally friendly Forestry Commission Visitor Centre with adjacent car parks and amenities.

As part of the planning process, the PPS9 planning assessment requires to be informed of any European Protected Species that might exist at the site and, if any are present, how these are to be mitigated for.

Go Ape requested Aurum Ecology to undertake an independent European Protected Species search at this site. A survey was undertaken on October 14th 2006, which covered all aspects of European Protected Species likely to be present.

None were found or suspected of being present, which, in our opinion, as wildlife consultants, places no wildlife planning restraints upon the proposal under the relevant legislation, as usage by protected species here is gauged as "very low" or non-existent.

This paper reports on some of the detailed findings of that survey.

NYM/NPA

11 JAN 2013

2 INTRODUCTION

This document reports upon a Protected Species Survey carried out on 14th October 2006 in the limestone-rich area of Dalby Forest. The Dalby Forest, so called because the Dalby Beck flows more or less along the western boundary, is some 8,600 acres in extent and is mainly man-made planted forest. The area is a series of south-west - north-east ridges deposited as glacial features and known and named as "riggs" and "dales".

The site chosen for the new Go Ape attraction is a mature larch-covered ridge situated to the north of Snever Dale and to the south of Seive Dale. It is just north of the forestry village of Low Dalby adjacent to visitor car parks and a short distance from the newly constructed, timber clad, environmentally friendly, Forestry Commission Visitor Centre. There is a toll road running through the Dalby Forest past this site, while a children's play area and the Dalby Beck lie just to the west of the proposed site.

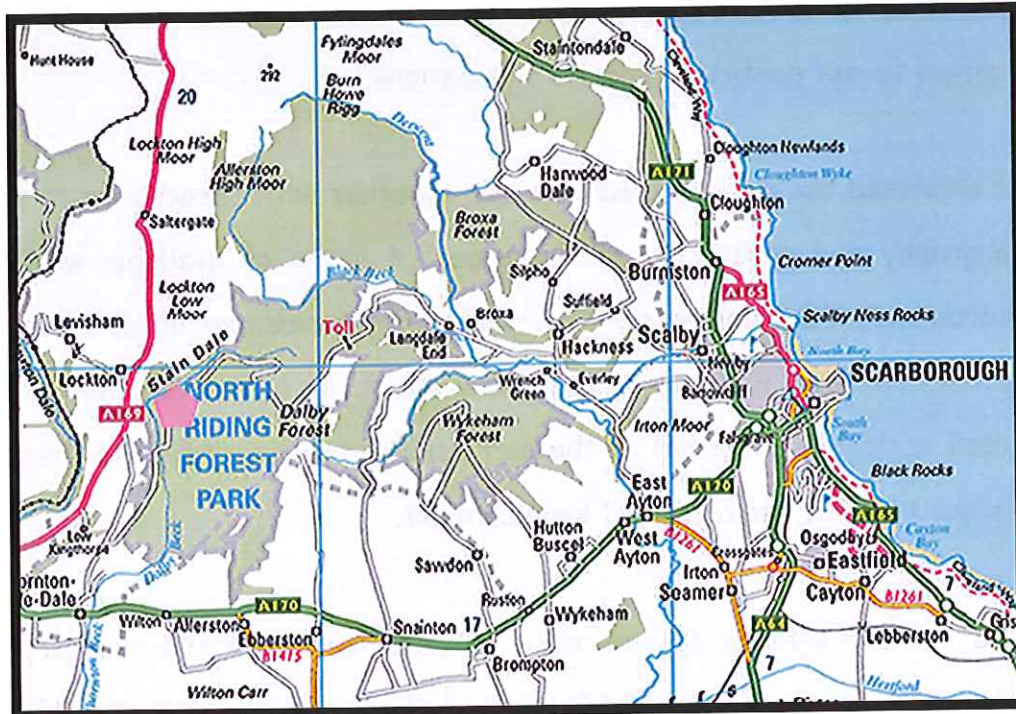
The Low Dalby visitor centre with attendant craft units attracted over 300 cars with visitors on the day we surveyed the site, and the area clearly draws large numbers of energetic walkers, bikers and joggers, as well as those with more sedentary habits.



Proposed Go Ape Course, Dalby Forest, Yorkshire – a Protected Species Report

LOCATION MAP OF PROPOSED NEW GO APE SITE AT DALBY FOREST

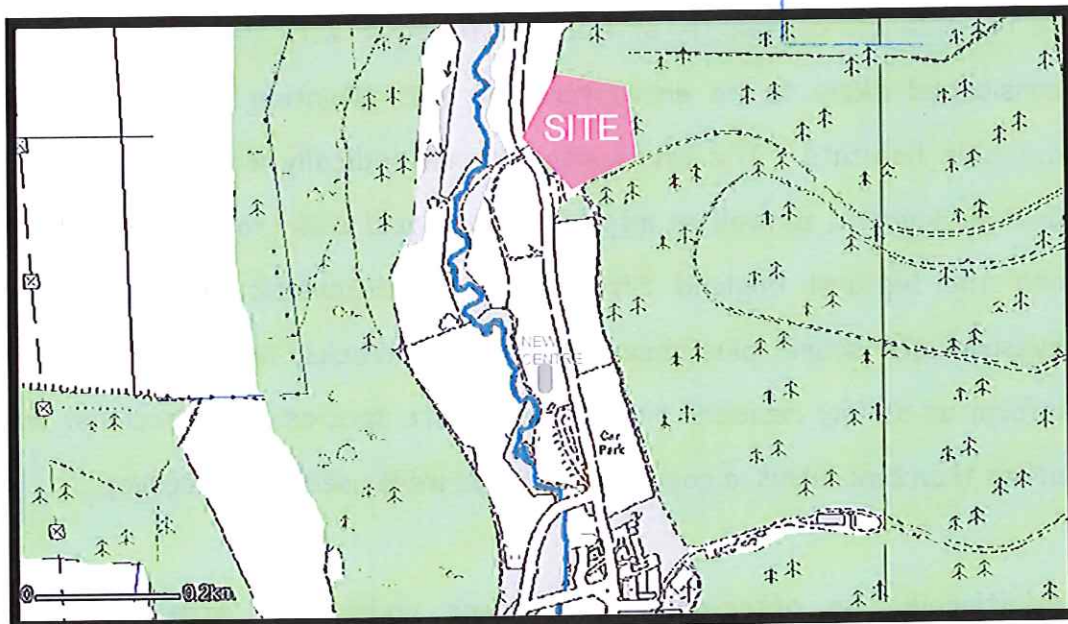
For guidance only, the pink polygon shows the site:



SITE PLAN:

for guidance only:

NYMNPA
11 JAN 2013



3 APPROACH & METHODS

The protected species survey approach is a fairly standard one, although modified to suit particular species or locations.

We examined the general area on maps, together with observation of the topography and vegetation of the area. A study of available wildlife records within approximately a two kilometre radius was undertaken, in partnership with Forestry Commission staff, in order to assess the overall ecological potential of the surrounding area in wildlife terms and to place the site into a correct local context.

A list of the wildlife species that fall into the protected category is included as appendix 4, although many of these occur in very specialised habitats that are not represented at Dalby Forest.

The field check involved a daylight visit, the time taken being in relation to the size and complexity of the site, together with the target species considered likely to be encountered in this situation as judged from available habitats. The whole site was methodically walked or crawled over in daylight, as well as adjacent blocks and down to the Dalby Beck and the Natural England Site of Special Scientific Interest, using eyesight and sound, plus observation of any tracks, trails and signs, to inform us of any resident or passing wildlife species. No specialist kit, other than binoculars, a compass and maps were used in this survey.

Additionally, an after-dark survey was undertaken with electronic detecting equipment in order to detect any bats, while listening for owls.

Proposed Go Ape Course, Dalby Forest, Yorkshire – a Protected Species Report

Two detectors tuned to different frequencies were used to ensure no calls were missed. The air temperature was checked at the start and finish, and was steady at 14 degrees, high enough for flying insect activity, which was observed. Only below 8 degrees does bat-feeding activity normally cease in most species.

The check began around the old visitor centre and progressed northwards. The whole proposed area was covered slowly and methodically along transects from dusk until more than 90 minutes after dark, during the period from bat emergence through to a time when all likely species would be active.

The recorded information was kept as hand-written notes that form the basis of this report.

NYMNP

11 JAN 2013

4 OBSERVATIONS AND RESULTS

Our survey for birds showed a small number of common species present during the day including Blue and Great Tit, Robin, Chaffinch, Blackbird and Dunnock. Other resident species included Nuthatch, Jays, Magpie, Wood Pigeon, Great Spotted Woodpecker, Sparrow Hawk and Crossbill. An important raptor species present in the general area is Goshawk, but none nest within two kilometres of this site, while Buzzards are, surprisingly, not present as breeding birds in the Dalby Forest.

The summer breeding bird visitors had departed and migrating thrushes were passing over and through the site on the day of the survey, including Blackbirds and Redwing. Goldcrests were quite numerous, so may have included migrants as well. Tawny Owls were heard adjacent to the site after dark, but no Barn Owls were present.

Three bird species typically associated with fast running streams, Dipper, Grey Wagtail and Kingfisher, were observed on the Dalby Beck. This waterway is said to have native White-clawed crayfish present, but it was too late in the year to sample for these and the Go Ape scheme, not being adjacent to the Beck, could not reasonably be expected to impact on either this species or Otters, which may appear from time to time.

Mammals present included Roe Deer, of which two were seen, and many tracks and trails of this species passed through the pines, and droppings were found plus Grey Squirrels. Badgers, which are a protected species, occur in the area, but no setts were located, while Forestry Commission staff confirmed there are no occupied setts within 1 kilometre of this

Proposed Go Ape Course, Dalby Forest, Yorkshire – a Protected Species Report

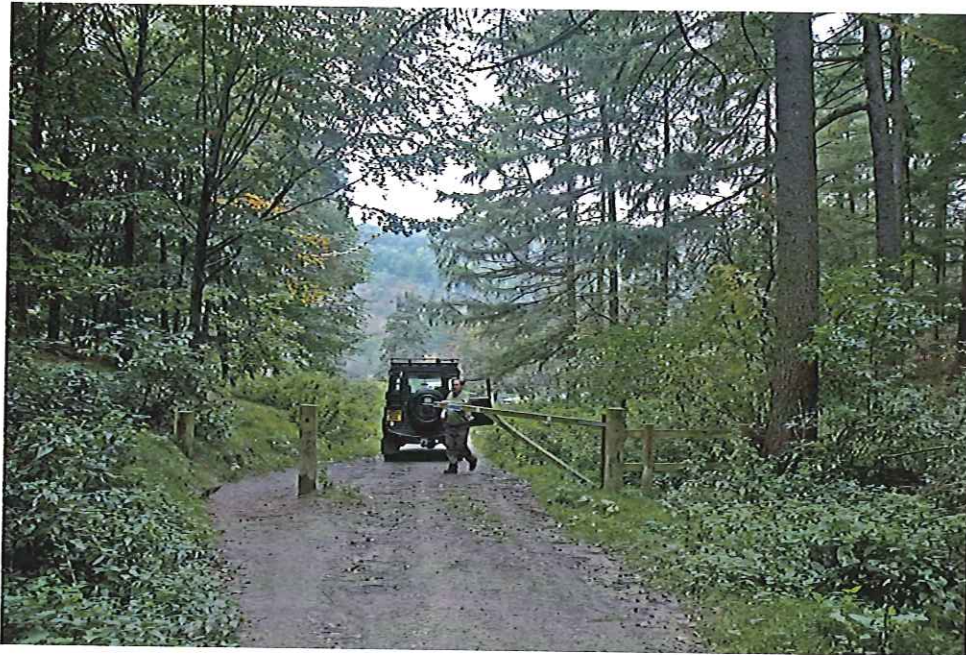
block of woodland. Even if occasional animals did wander into the area, it is unlikely that the Go Ape daytime activities would impact upon these nocturnal mammals.

Bat species which use pine plantations in the north-east include Brown Long-eared, Common and Soprano Pipistrelle, Natterer's Bat and Noctule.

The Larch trees on this site were an even age structure, perhaps 60+ years old, and no trees here showed rot holes or any crevices that might provide a suitable roosting niche for bats to roost in. Additionally, Larch is a very resinous species, so any wounds would be likely to leak resin. This resin is exceedingly sticky and can glue a bat permanently to the tree so, naturally, they tend to avoid such circumstances! The adjacent forestry blocks contained some broadleaved species, such as beech, but these were still too immature to contain suitable crevices. The vegetated under-storey consisted of bramble, elder, Rowan and ferns.

Bats were certainly present around the buildings from about 20 minutes after sunset time around both the old and new visitor centres and also the craft units with 45 kHz Common Pipistrelles and a single Noctule passing south down the river valley at 18.39 hours over the collection of houses known as Low Dalby. A total of perhaps six Pipistrelles were heard on the bat detector around those buildings.

NYM / 2013 / 0 0 2 4 / F L
11 JAN 2013



The forest ride beside the proposed site

However, no bats were located near or adjacent to the proposed site, not even over the grassland near the river, although the areas used by bats for feeding can change on a day-to-day and month-to-month basis. A clue to their absence may lay in a lack of flying moths seen in the woodland. Within the rides sampled adjacent to the site, only one moth per 100 metre transect walked were seen, but near the stream this figure rose to c. six per 100 metre transect. The survey finished at 20.00 hours.

With respect to protected reptiles, Adder, Common lizard, Grass snake, and Slow worm occur in the general area of Dalby Forest, but need warm sites in sunlight to thrive, so the shady regime in the Larch plantation would make it untenable.

NYM/NPA
11 JAN 2013

11 JAN 2013

5 DISCUSSION & CONCLUSIONS

At first examination, this area, sited in the attractive Dalby Beck valley and situated amongst large areas of potentially suitable feeding habitat for a wide range of species, might appear to be attractive to a wide range of wildlife. In practise, the extensive commercial Forestry Commission conifer plantations present limit the range of habitats, and therefore species, that are able to exist within the limited range of tree species and heavy shade conditions found here here.

In particular the site selected for the Go Ape high wire installation is entirely within a Larch plantation. European Larch is a deciduous conifer and recognised as having low biological potential (Alexander, K. Butler, J. & Green, T. 2006).

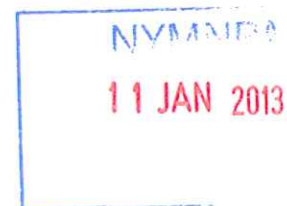
Bat species known to use pine plantations in the north-east include Brown Long-eared, Common and Soprano Pipistrelle, Natterer's Bat and Noctule. There is a Dalby bat box scheme some two kilometres to the south of the proposed Go Ape site, which attracts Pipistrelle and Brown Long-eared. Any daylight activity on the proposed Go Ape location is not likely to interfere with nocturnally feeding species such as bats and badgers, so they are able to share the same site, but at different times during the twenty-four hours, although, realistically, as our survey suggests, the Larch plantation is not a key feeding environment and the wetter open areas adjacent to the beck are likely to be much more important.

Proposed Go Ape Course, Dalby Forest, Yorkshire – a Protected Species Report

The population of small birds present is equally unlikely to be adversely affected, as the area is well used by the public already and species such as Goldcrest and Crossbills, high up in the trees, judging by previous observations at Go Ape sites, carry on their daily activities seemingly oblivious to people sharing their trees, while other species such as Chaffinch take advantage of offered or spilt human food!

Woodland of this type in this area might be expected to contain a few pairs of both Redstart and Pied Flycatcher. None were seen, as they are summer migrant visitors, but local knowledge suggests there is a scheme planned to erect some boxes suitable for Pied Flycatcher in the vicinity, so it may be possible to assist this laudable conservation aim in some way. No other protected species, such as Great Crested Newts or Barn Owls were detected on this site, although Great Crested Newts are recorded from a pond about one kilometre to the south.

Our professional conclusion, based on this site assessment, is that no European Protected Species will be affected by this proposal as, at the time of examination, and there was no evidence of bats or other EPS using this area of Larch plantation.



6 MITIGATION

A Natural England (DEFRA/RDS) licence is not considered appropriate to this site, as mitigation is not legally required, since no European Protected Species can be judged to be adversely affected by this proposal.

In terms of wider conservation considerations on adjacent areas of Dalby Forest it may be considered appropriate to work in tandem with the existing Forestry Commission wildlife aims. This could include some help with proposed bat box and bird box schemes that are always of considerable benefit to animals and birds in commercial plantations where nesting and roosting cavities are at a premium, due to the nature of the crop.

It may also be appropriate to help further the conservation aims of the Natural England Site of Scientific Interest on the west of the Dalby beck. This could be low key in the way of working in with a local voluntary group to undertake management work at an appropriate time of year, or it could be more directly by way of sponsorship of management work, with appropriate publicity, which could broaden further the countryside conservation footprint of Go Ape.

NYMNPA

11 JAN 2013

7 ACKNOWLEDGEMENTS

In compiling this report and reaching conclusions, experts and staff from English Nature, DEFRA/RDS, The Bat Conservation Trust, various bat scientists/conservationists and Forestry Commission staff have been consulted and their help is gratefully acknowledged.

8 REFERENCES

- Alexander, K. Butler, J. & Green, T. (2006) The value of different tree and shrub species to wildlife. *British Wildlife* Vol. 18 No 1.
- Appleton, C. (2003) The effect of building work on bats: ten case studies. The National Trust. CD.
- Bat Conservation Trust (2006). A review of the success of bat boxes in houses. *Scottish Natural Heritage Commissioned Report No. 160*.
- Corbet, G.B. & Southern, H.N. (eds) (1977) *Handbook of British Mammals*, Blackwell Scientific, Oxford.
- Entwhistle, A.C., Harris, S., Hutson, A.M., Racey, P.A., Walsh, A., Gibson, S.D., Hepburn, I., and Johnston, J. (2001) *Habitat Management for Bats - A guide for Land Managers, land owners and their advisors*. JNCC, Peterborough. 48 pp.
- Mitchell-Jones, A.J. (2004) *Bat Mitigation Guidelines*, English Nature. 74 pp.
- Stebbing R.E. (1974) Artificial roosts for bats. *J. Devon Nat. Conserv.* 6, 114-119
- Stebbing R.E. & Walsh, S.T. (1991) *Bat Boxes*. The Bat Conservation Trust, London.
- Tuttle, M.D. & Hensley, D.L. (1993) *The Bat House Builder's Handbook*. Bat Conservation International.
- Species Conservation Handbook*, English Nature, 1994. Includes updated summary of legislation by English Nature, Peterborough.
- The *Wildlife and Countryside Act 1981*, HMSO, 1981 (plus subsequent amendments).
- The *Conservation (Natural Habitats, &c.) Regulations 1994*: SI No.2716, HMSO, 1994
- The *Protection of Badgers Act 1992*, HMSO, 1992.

NYMNPA
11 JAN 2013

Appendix 1

Planning mitigation and compensation - Key Principles

NYMNP

11 JAN 2013

Adapted from “Planning mitigation and compensation – Key principles” by Dr. Tony Mitchell-Jones, English Nature. January 2004.		
Conservation significance	Roost Status	Mitigation/compensation requirement (Depending on impacts)
1	Maternity sites of rarest species	Oppose interference with existing roosts or seek improved roost provisions. Timing restraints. No destruction of former roost site until replacement completed and significant usage demonstrated. Monitor for as long as possible.
2	Sites meeting SSSI guidelines	
3	Significant hibernation sites for rarest species or all species assemblages	Timing constraints. Like-for-like replacement as a minimum. No destruction of former roost site until replacement completed and usage demonstrated. Monitoring for at least 2 years.
4	Maternity sites of rarer species	
5	Maternity roosts of common species	Timing restraints. More or less like-for-like replacement. Bats not to be left without a roost and must be given time to find the replacement. Monitoring for 2 years.
6	Hibernation sites for small numbers of common species	
7	Hibernation sites for small numbers of rarer species	
8	Small numbers of rarer species. Not a maternity site.	Provision of new roost facilities where possible. Need not be like-for like, but should be suitable, based on species requirements. Minimal timing restraints or monitoring requirements.
9	Feeding perches of annex II species	
10	Small numbers of common species. Not a maternity site.	Flexibility over provision of bat boxes, access to new buildings etc. No conditions about timing or monitoring. Licence not required.
11	Individual bats of common species.	
12	Feeding locations of rarer species	
* 13	Occasional feeding locations of common species	

* Position at proposed site, Dalby Forest

NYMNDP
11 JAN 2013

Appendix 2

List of the BAP and Protected Species

NYMNPA

11 JAN 2013

An alphabetical common name list of the main EPS and BAP protected species that "PPS9" refers to

BIRDS

Avocet
Barn owl
Bearded tit
Bittern
Black redstart
Black-tailed godwit
Cetti's warbler
Crossbill
Firecrest
Garganey
Golden oriole
Goshawk
Hobby
Honey buzzard
Kingfisher
Little ringed plover
Little tern
Marsh harrier
Montague's harrier
Quail
Red kite
Roseate tern
Stone curlew
Woodlark

MAMMALS

Badger
Bats (all species)
Otter
Red squirrel
Water vole



Proposed Go Ape Course, Dalby Forest, Yorkshire – a Protected Species Report

REPTILES & AMPHIBIANS

Adder
Common lizard
Grass snake
Natterjack toad
Great crested newt
Slow worm

INVERTEBRATES

Fen raft spider
Lagoon sand shrimp
Large copper butterfly
Norfolk Aeshna dragonfly
Starlet sea anemone
Swallowtail
White-clawed crayfish

This is not an exhaustive list of all protected wildlife species. Species can fall into several categories of protection and may be covered by a number of separate pieces of legislation.

John Goldsmith
Aurum Ecology
October 2006



3. NATURAL HERITAGE MANAGEMENT

• SSSI/SPA/SAC Y(N)
 Is it necessary to consult Natural England Y(N) Recommendations:

POST OPERATION CHECKOUT COLUMN

RECOMMENDATION IMPLEMENTED?

Y/N

• PAWS/ASNW Y(N)
 Impact on operation?

Y/N

• PAWS/ASNW ground flora
 % Cover by native species (circle appropriate value):
 <20% 20-50% 50-80% >80%

Main species: (e.g. bluebell/wild garlic)

Flora taken into account on implementation? Y/N

• OTHER e.g. NATURAL RESERVE/SSCV/FNR Y(N)
 Is it necessary to consult with other specialist Y/N Recommendations:

Y/N

• DEADWOOD - Has national and local deadwood policy been applied Y/N
 Impact on operations and recommendations:

POLICY APPLIED. Y/N

• ANCIENT/VETERAN TREES – Are ancient and Veteran trees present and has national guidance been applied Y/N
 Impact on operations and recommendations:

Y/N

Y/N

• Are Ancient and veteran trees noted on GIS Conservation extension? Y/N

Has GIS been updated?

CONSERVATION SITE REPORT

HABITAT DESCRIPTION

(i.e. conifer forest on upland heath, acidic grassland, gill woodland)

NYM/PA
11 JAN 2013

3. NATURAL HERITAGE MANAGEMENT

EUROPEAN PROTECTED SPECIES

(Where presence is suspected/confirmed, consult EPS guidance notes)

- Bats
- Great crested newt
- Otter – (attach copy of decision tree)

Impact on operation?

Recommendations -


OTHER SPECIES OF NOTE: Water vole Badger W&CA Schedule 1 Bird

- Lepidoptera
- Wood Ant
- Nightjar
- Reptiles

Impact on operation?

Recommendations -

Recommendations for protection required and opportunities presented



POST OPERATION CHECKOUT COLUMN

RECOMMENDATION IMPLEMENTED?

DECISION TREE ATTACHED. Y/N

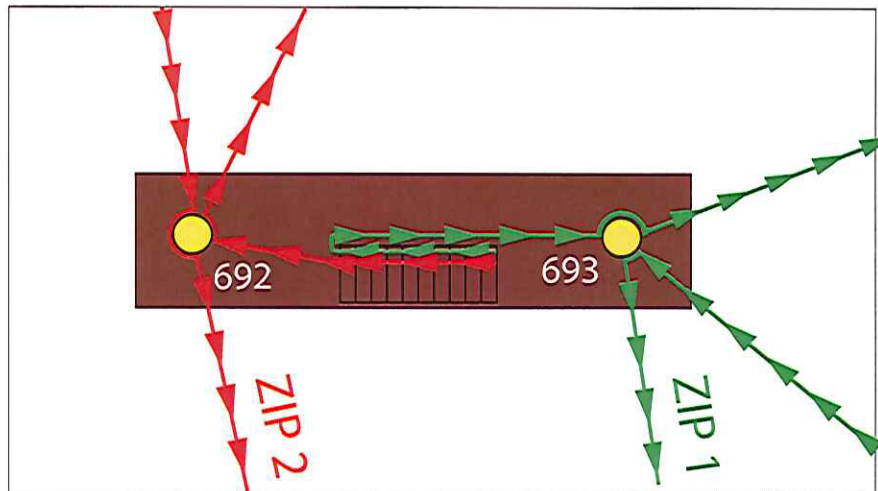
Recommendations taken into account on implementation? Y/N

Recommendations taken into account on implementation? Y/N

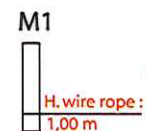
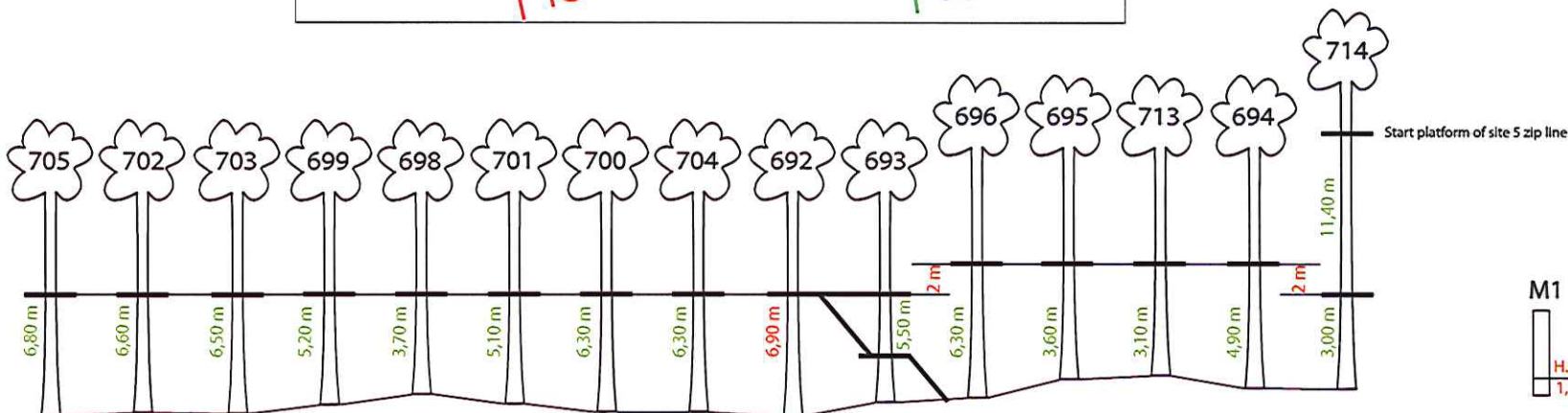
Recommendations taken into account on implementation? Y/N

FOREST NATURE CONSERVATION GUIDELINES APPLIED AT ALL TIMES

Signed: (Ecologist/Wildlife Ranger) Date..... 10/1/13



NYMNP
 11 JAN 2013



NYM / 2013 / 0 0 2 4 / F L

NB : Figures in green = indicative measurements / Figures in red = final measurements

A	August 2012	Initial construction		
Rev.	Date	Modifications	original format : A4	Course n° : 105.13
		SARL ALTUS 1191 Rte de Bidaille 74 930 SCIENRIER (Fr)	Adventure Forest LLC Go Ape ! Hargrave Hall Church Lane, Hargrave	<p style="text-align: center;">LEVEL</p> <p style="text-align: center;">DALBY FOREST</p> <p style="text-align: center;">TTJ COURSE</p>



Appendix 1

Example of a Typical Go Ape Tree Top Adventure Course

NYM/NPA
11 JAN 2013

NYM / 2013 / 0 0 2 4 / F L



Appendix 2(a)

Example of a Tree Top Junior Course (Moors Valley)

NYM/NPA
11 JAN 2013

NYM / 2013 / 0 0 2 4 / F L

NYM / 2013 / 0024 / FL

NYMNPA

11 JAN 2013



Appendix 2(b)

Example of a Tree Top Junior Course (Thetford)

Adventure Forest T/A Go Ape, Proposed Tree Top Junior at Dalby Forest

N.B. Please note the children's play area is managed by the Forestry Commission and was already in situ before the TTJ was constructed around it.

NYM / 2013 / 0 0 2 4 / PL

Adventure Forest T/A Go Ape, Proposed Tree Top Junior at Dalby Forest



Appendix 3(a)

Example of the 'Miller's Stairs' (Moors Valley).

NYM / 2013 / 0024 / FL

11 JAN 2013

Adventure Forest T/A Go Ape, Proposed Tree Top Junior at Dalby Forest



Appendix 3(b)

Example of the 'Miller's Stairs' (Thetford).



NYMANIPA
11 JAN 2013

NYM / 2013 / 0 0 2 4 / FL

Appendix 4

Example of Non-Invasive Brace and Platform Construction

Adventure Forest T/A Go Ape, Proposed Tree Top Junior at Dalby Forest



Appendix 5

Example of a Typical TTJ Tree Top Platform
(Small wooden octagon secured to non-invasive wooden brace)



Appendix 6

Example of Typical TTJ Crossings

NYM / 2013 / 0 0 2 4 / F L
NYM/NPA
11 JAN 2013



(Go Ape, Grizedale)

Appendix 7
Example of Artificial Support and Stays

NYM/NPA
11 JAN 2013

NYM / 2013 / 0 0 2 4 / F L

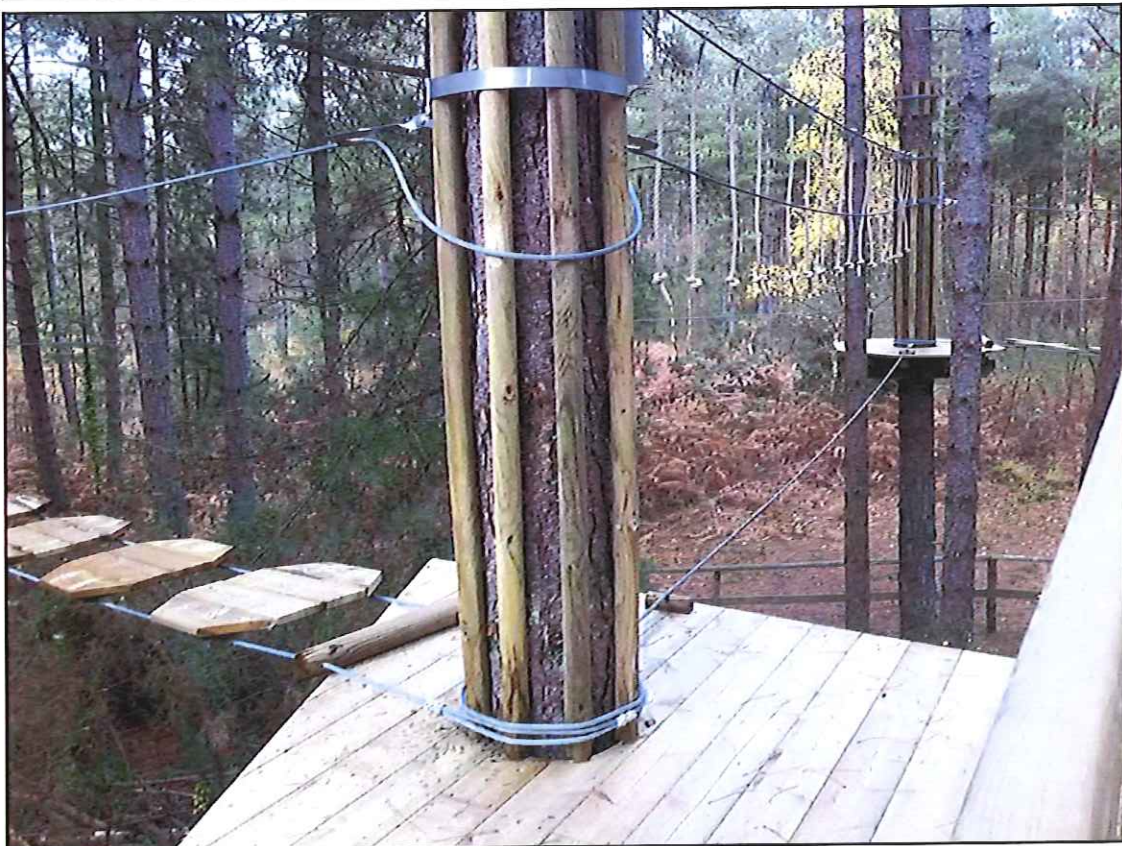


Appendix 8
Example of a Typical Landing Site

NYM/APP/0024/FL
11 JAN 2013

NYM / 2013 / 0 0 2 4 / F L

Adventure Forest T/A Go Ape, Proposed Tree Top Junior at Dalby Forest



Appendix 9

Example of Sacrificial Battens

Note how both metal cable and metal collars are kept away from the tree by the battens. As the tree grows it forces the battens into the cable, these are then replaced when appropriate.

Adventure Forest T/A Go Ape, Proposed Tree Top Junior at Dalby Forest



Appendix 10

Example of 'Miller's Stairs' Ground Anchors

(Top Image: Moors Valley, Bottom Image: Thetford)

Adventure Forest T/A Go Ape, Proposed Tree Top Junior at Dalby Forest



Appendix 11

Example of 'Continuous Belay' System

Note how the belay device (pulley) is threaded onto the cable (safety line). The safety line then runs around the whole course. Once the pulley is threaded on it is always attached until participants are back on ground level and the device is pulled off the other end of the safety line