
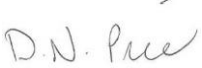


**DAVID CLEMENTS ECOLOGY LTD**

**LAND AT NORTHCLIFFE LODGE, PENARTH  
BIODIVERSITY STRATEGY**

**June 2016**

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## 1.0 INTRODUCTION

- 1.1 This report has been prepared by David Clements Ecology Ltd (DCE) for Jon Shields of Scimitar Homes and refers to an area of land at Northcliffe Lodge, Penarth, Vale of Glamorgan. It consists of an occupied detached dwelling, semi improved grassland, ornamental planting, a pond, scrub and woodland habitats.
- 1.2 The parcel of land, henceforth referred to as the site, is located to the north east of Penarth and overlooks the Cardiff Bay Barrage. The site is centred at NGR ST 18904 72377 and measures approximately 1.3ha. It consists of an occupied detached dwelling, semi-improved grassland, ornamental planting, a pond, scrub and woodland habitats. The site overlooks Cardiff Bay to the north and the Cardiff Bay Barrage with Penarth Marina located to the north-east. Residential housing and flats are located immediately to the east, south and west of the site. The main town of Penarth lies to the south-west of the proposed development site.
- 1.3 Planning permission is currently being sought for the creation of 30 apartments, an access road and parking within the site boundary. Consultee response to the planning application has highlighted that further ecological surveys and a biodiversity strategy are required for the site.
- 1.4 The bat activity surveys (DCE, 2016) revealed that the gardens surrounding Northcliffe Lodge are well used by foraging pipistrelle bats. No evidence of the presence of bats within Northcliffe Lodge has been found and no evidence of the presence of reptiles was found during the refugia survey conducted at site either. Although there is limited evidence of use of the site by species other than nesting birds, the mature trees and garden are of biodiversity value to the local area and are likely to be used by a variety of species such as house mouse and hedgehog.

## 2.0 CONSTRUCTION PHASE MITIGATION MEASURES

- 2.1 To accommodate the proposed development work, the majority of the habitat currently present within the site boundary will be lost. The site slopes steeply from south to north and to create a usable development space, a large amount of engineering works will be required across the site.
- 2.2 The development proposals are shown within the Landscape Proposals plan 2015/101/rev A (October 2015) by Corscadden Associates. Within this plan it is possible to see the vegetation that will be retained compared to the areas of planting proposed. The main areas of habitat to be retained are along the northern and western edge of the site.
- 2.3 In order to protect the biodiversity value of the area as far as possible during any proposed development works at site, the below measures are recommended.

### Habitat Protection Measures

- 2.4 All contractors carrying out scrub clearance works will be warned of the *possible* presence of nesting birds and/or common reptiles, as well as invasive species and of their protected status through the undertaking of a 'Tool box' talk. It will be clearly understood that in the event of any being found during clearance or construction works, all works will cease in the affected area and the advice of the Supervising Ecologist sought immediately.
- 2.5 All retained trees (including those immediately adjacent to the development site) should be treated in accordance with British Standard BS5837 (2005) *Guidance for the Treatment of Trees in Relation to Construction*. Damage to mature trees within broadleaved woodland, as well as tree and scrub understorey and ground flora within retained woodland, must be avoided. The fencing of retained woodland areas to ensure the root protection zone (RPZ) is not impacted on will be required.
- 2.6 Construction compounds, materials storage areas, mixing areas and vehicle refuelling areas etc will not be located anywhere within and/or within the RPZ of retained trees or habitat. All such areas will be drained and bunded in accordance with current requirements and best practice so as to prevent any incidental or accidental spillages of potential contaminants (eg mixing slurry, wash down, oil and diesel etc) affecting retained habitat

### Mitigation for Nesting Birds

- 2.7 Nesting birds have been recorded on the site, and are likely to be utilising trees and scrub throughout the site. Nearly all species of birds are protected against killing or injury as individuals under UK legislation, and this protection extends to their nests, eggs and young. A number of especially rare species are subject to enhance protection under the UK law by virtue of their listing on the schedule 1 of the Wildlife & Countryside Act 1981, and may not be disturbed whilst nesting.
- 2.8 As such, works affecting trees and scrub (eg felling, lopping, clearance etc), including clearance/construction works, will avoid the main bird nesting season, which runs approximately from March to August inclusive. Alternatively, any works which must

necessarily be carried out during this period must be preceded by a survey to ensure that no nesting birds are present, and any which are present must be allowed to complete their nesting cycle unmolested within a buffer zone of at least 5m radius around the nesting site. This restriction also applies to any other habitats which are found to support nesting birds, including ground-nesting species.

Mitigation for Bats

- 2.9 The large retaining wall within the proposed site boundary has a network of large gaps and cracks within the stone work and missing mortar. The gaps appear to extend deep into the stonework which is estimated to be at least 1m thick. As detailed within the DCE (2015 & 2016) reports, surveys which focus upon the retaining wall were not undertaken. The retaining wall is approximately 20m wide and 3m tall. There are three areas spaced across the retaining wall that have suffered damage resulting in missing mortar and stones becoming dislodged. The areas affected are extensive and have created gaps and cracks which are thought suitable for use by bats. The stone wall is very thick and it is not possible to conclude the internal structure. However, given the crevices and thickness of the wall it is thought likely that it could be used by a small number of crevice dwelling bats as a hibernation roost.
- 2.10 In order to adequately mitigate for the potential presence of bats within the retaining wall, the areas of the wall which have suitable gaps and or cracks for bats will be removed during the spring or autumn period. The 'bat risk' areas will be removed by hand as far as possible, due to safety concerns with the wall structure, to allow bats to move away from the disturbed areas. Spring and autumn are a time of year when any bats which could be present within the wall will be active enough to move away when disturbed. The 'bat risk' areas will be left exposed to the elements for a maximum of 24 hrs and then full demolition works will resume. Such sensitive working methods coupled with the habitat removal works across the site will deter bats from using any features within the wall, as the wall will be open and exposed to weather. This will adequately mitigate for their potential presence within the wall.
- 2.11 The trees on site were subject to a visual inspection for the ground for their potential to support roosting bats. No trees within the site were felt to be more than a category 2 tree (BCT guidelines, Appendix 1) with only a few limited features suitable for bats. If mature trees cannot be retained, 'soft' felling techniques which involve the lowering of limbs to the ground will be implemented.
- 2.12 If, at any point during the proposed works on site bats are found all work will cease. Advice will then be sought from the supervising ecologist on how to proceed. This advice may include that all work cease and a derogation from NRW is sought.

### 3.0 POST CONSTRUCTION 'SITE DESIGN'

3.1 The proposed site plans show that a large amount of the site will need to be cleared to allow for the proposed development works. The site slopes steeply from south to north and requires extensive engineering works to create a feasible development space.

3.2 The below measures are to be included within the proposed development site in order to maintain and enhance the biodiversity features within the site.

#### Habitat Mitigation Measures

3.3 A planting schedule is detailed within the Landscape Proposals plan 2015/101/ rev A dated October 2015 by Corscadden Associates. The planting schedule provides detail on the native trees and planting mixes proposed to be used within the development. Sedum planting will be used to create green roofs across the site to further enhance biodiversity across the site.

3.4 It is proposed that a management company will be set up to undertake the general maintenance of the site once the development has been completed. The management company will be owned and paid for by the residents of the apartments and will be responsible for activities across the site such as maintenance of landscaping and retained vegetation.

3.5 The management company created to service the estate will provide the council with an annual report of activities undertaken at site to maintain and enhance biodiversity. Some activities will need to be undertaken by specialised contractors/surveyors with appropriate experience and or licences. Such activities will include, but will not be limited to:

- An annual inspection of all mature trees within the site boundary and directly adjacent to site to ensure the trees remain in good health and are safe. Any work required to be undertaken by a competent specialist
- An annual check of all landscape planting to ensure it has established. Any failed plants will be removed and replaced.
- Annual grass cutting will be undertaken and all arising's will be collected and removed from site. The frequency of grass cutting will be agreed in writing between the management company and the LPA ecologist. Where possible, a margin of between 1 and 5m of grassland along woodland edge and hedgerows will be left uncut, to provide dense cover to sheltering fauna throughout the year.
- Monitoring of the site for litter and a minimum frequency of quarterly litter picks.

3.6 Dark corridors will be created around the periphery of the development site through sensitive site design and lighting. It is in these areas that the majority of the mature vegetation will be kept during the on site development works.

3.7 Careful consideration must be given to the use of lighting within the developed site, as this can adversely affect activity by a variety of fauna, particularly foraging bats. Light

spillage into retained woodland habitats and scrub etc, will be avoided. Brightness must be kept to the lowest permissible level in areas near to adjacent semi-natural habitats.

3.8 It is not possible to ascertain from the current site plans whether or not fencing will be provided within the site boundary. It would appear that the land surrounding the buildings is open. However, if fencing is required at any location within the site boundary, access underneath must be provided for small animals. The fencing used will either be of a post and rail design or have a minimum gap of 5cm between the lowest edge of the fencing and the ground.

3.9 Gully pots, provided along the access roads, will be set a minimum of 5cm away from the road curb. This will ensure that any amphibian or reptile species moving through the site do not fall into the pots and become trapped.

#### Nesting Bird Mitigation Measures

3.10 The removal of bramble, trees and scrub within the site boundary will result in the loss of nesting bird habitat. In order to mitigate for the loss of this habitat it is proposed to provide a range of bird boxes across the site in a variety of designs. The below boxes will be provided on site once the construction works are completed. Photos are provided within Appendix 2.

- 2x 1SP Schwegler Sparrow Terrace boxes
- 2x 2H Schwegler Robin boxes
- 3x Blackbird Nest boxes
- 3x1B Schwegler Nest boxes with a minimum hole width of 32mm
- 2x No.10 Schwegler Swallow Nests

#### Bat Mitigation Measures

3.11 No evidence of roosting bats has been found within Northcliffe Lodge itself. However, the current retaining wall to the north of the site has extensive gaps and cracks within it which could possibly support hibernating bats. Detailed survey work focusing on the retaining wall could not be undertaken. Sensitive working methods that account for the possible presence of bats within the wall are provided above.

3.12 As mitigation for the potential loss of a hibernation roost, a bat hibernation box will be erected upon one of the newly created retaining walls. A 1WQ Schwegler bat box will be positioned on a retaining wall a minimum of 3m above ground level.

#### 4.0 REFERENCES

**David Clements Ecology Ltd. (DCE 2015)** *Land at Northcliffe Lodge, Penarth; Ecological Assessment*. Unpublished report to Scimtar Homes

**David Clements Ecology Ltd. (DCE 2016)** *Land at Northcliffe Lodge, Penarth; Bat & Reptile Surveys*. Unpublished report to Scimtar Homes

**Design Manual for Roads & Bridges (DMRB 2005)** Vol 10: Environmental Design and Good Management. Section 4: The Good Roads Guide – Nature Conservation. Part 7: Nature Conservation Advice in Relation to Reptiles and Roads. HA 116/05. Highways Agency/Scottish Executive/Welsh Assembly Government/Department for Regional Development, Northern Ireland.

**Edgar, P, Foster, J & Baker, J (2010)** *Reptile Habitat Management Handbook*. Natural England/Amphibian & Reptile Conservation Trust, Bournemouth.

**English Nature (EN 2004)** *Reptiles: Guidelines for Developers*. English Nature. Peterborough.



**APPENDIX 1: CATEGORIES FOR TREE ASSESSMENTS WITH BAT ROOSTING POTENTIAL**

Tree category and description	Stage 1 Survey requirements prior to determination	Stage 2 Further measures to inform mitigation	Stage 3 Likely mitigation
<b>Known or Confirmed</b> Confirmed bat roost tree with field evidence of the presence of bats, e.g. droppings, scratch marks, grease marks or urine staining.	Follow SNCO guidance and these guidelines wherever possible, to establish the extent to which bats use the site. This is particularly important for roosts of high risk species and/or roosts of district or higher importance and above.  <b>Consultant ecologist required</b>		Felled under Habitats Regulations licence <sup>1</sup> following the installation of equivalent habitats as a replacement. Felling would be undertaken taking reasonable avoidance measures <sup>2</sup> such as ‘soft felling’ to minimise the risk of harm to individual bats.
<b>Category 1*</b> Trees with multiple highly suitable features capable of supporting larger roosts	Tree identified on a map and on the ground. Further assessed to provide a best expert judgement on the likely use of the roost, numbers and species of bat, by analysis of droppings and other field evidence.  <b>Consultant ecologist required</b>	Avoid disturbance to trees where possible <sup>2</sup> . More detailed, off-the-ground visual assessment. Further dusk and dawn surveys to establish the presence of bats and, if present, the species, numbers and type of roost to inform the requirements for mitigation if felling is required.	Trees with confirmed roosts following further survey would be upgraded to <b>Confirmed</b> category and felled under licence as above. Trees with no confirmed roosts would be downgraded to Category 2 and felled taking reasonable avoidance measures <sup>3</sup> .
<b>Category 1</b> Trees with definite bat potential, supporting fewer suitable features than category 1* trees or with potential for use by single bats	Tree identified on a map and on the ground. Further assessed to provide a best expert judgement on the potential use of suitable cavities, based on the habitat preferences of bats.  <b>Consultant ecologist required</b>	Avoid disturbance to trees where possible <sup>2</sup> . More detailed, off-the-ground visual assessment. Further dusk and dawn surveys to establish the presence of bats and, if present, the species, numbers and type of roost to inform the requirements for mitigation if felling is required.	Trees with confirmed roosts following further survey would be upgraded to <b>Confirmed</b> category and felled under licence as above. Trees with no confirmed roosts would be downgraded to Category 2 and felled taking reasonable avoidance measures <sup>3</sup> .
<b>Category 2</b> Trees with no obvious potential, although the tree is of a size and age that elevated surveys may result in cracks or crevices being found; or the tree supports some features which may have limited potential to support bats	None.  <b>Consultant ecologist required <u>unlikely</u> to be required.</b>	Avoid disturbance to trees where possible <sup>2</sup> .  No further surveys.	Trees may be felled taking reasonable avoidance measures <sup>3</sup> .  Stop works and seek advice in the event bats are found.
<b>Category 3</b> Trees with no potential to support bat roosts	None.  <b>Ecologist involvement will not be required unless new evidence is found.</b>	No further surveys.	No mitigation for bats required.

**Notes**

<sup>1</sup> The licence (issued by NRW) will need to demonstrate that alternative approaches have been previously considered to try to avoid works to the tree.

<sup>2</sup> Wherever possible, avoid disturbance and retain all features which offer some value to bats.

<sup>3</sup> Reasonable avoidance measures are considered to be good practice. ‘Soft felling’ is a generic term used to describe more cautious felling approaches, using lowering and cushioning techniques to reduce the impact of felling limbs which may still have bats within cavities. May include methods such as additional dusk emergence or dawn re-entry surveys immediately prior to felling (during the active bat season) or the use of non-return valves to ensure that bats can leave but not return to a roost cavity before works begin.

**APPENDIX 2: BAT & BIRD BOXES**



Schwegler 2H robin box



Schwegler 1B bird box



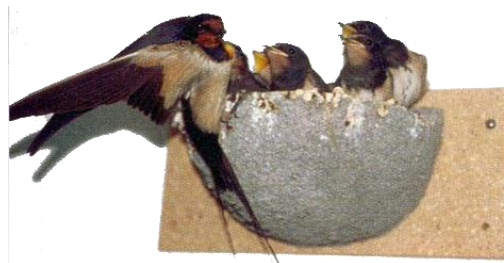
1WQ Scwhegler Bat Box



Schwegler 1SP Sparrow terrace box



Blackbird Nest Box



No.10 Swallow Nest Cup