

Camberwell New Cemetery Area B

Preliminary Ecological Appraisal

For the
London Borough of Southwark

May 2016



72 Sonning Gardens
Hampton
Middlesex
TW12 3PN
T – 020 8979 7810
M – 07813 329396
E - enquiries@salixecology.co.uk
W – www.salixecology.co.uk

TABLE OF CONTENTS

Executive Summary	3
1.0 Introduction	5
2.0 Desk Study	7
3.0 Field survey	7
4.0 Results	9
5.0 Evaluation	14
6.0 Discussion	16
7.0 Recommendations	17
8.0 References	19
Appendix 1: Species lists	20
Appendix 2: Photographs	23
Appendix 3: Relevant Legislation.....	25
Appendix 4: Camberwell New Cemetery, Honor Oak Crematorium and adjacent areas Citation.....	28

Executive Summary

- A preliminary Ecological Appraisal of Camberwell Cemetery Area B was carried out on 9 May 2016. The purpose of the appraisal was to identify habitats present, carry out a protected species risk assessment and to make recommendations for mitigating the impacts of the development.
- A biological record search for species and habitats with a 1km radius of the site was also commissioned from Greenspace Information for Greater London (GiGL).
- Camberwell Cemetery Area B forms part of Camberwell New Cemetery, Honour Oak Crematorium and adjacent areas Site of Importance for Nature Conservation (Borough Grade II).
- Habitats present included mixed woodland, semi-improved neutral grassland, tall ruderal vegetation, dense scrub, scattered scrub and bare ground.
- The woodland was of relatively low intrinsic nature conservation value but may support breeding birds and bat roosts.
- Species-rich semi-improved neutral grassland covered much of the central and eastern parts of the site. Many species present are characteristic of disturbed ground but there were indicator species of high value unimproved neutral grassland present.
- There were areas of tall ruderal vegetation developing on the soil mound to the west of the site. This was of relatively low value for nature conservation.
- There was a small area of willow scrub at the south-eastern corner of the site
- The following species groups are likely to be supported at the site:
 - Breeding birds in areas of woodland and scrub
 - Bats in ivy covered trees
- Slow worm and common lizard were recorded in a separate survey.
- Recommendations include:
 - Assessment of trees for bat roost potential, especially if any works are planned or trees are to be felled.
 - Thinning areas of woodland and removing non-native conifers.
 - Removal of non-native invasive species including cherry laurel and butterfly bush (buddleia).
 - Retain an area of species-rich grassland. This can be achieved by not importing soil and avoiding the application of fertilizer. Use of below ground vaults is preferable to soil importation.
 - Do not plant trees in areas of semi-improved grassland.
 - The grassland management regime should aim to suppress coarse grass species from invading areas of higher value grasslands and allow increased germination of broad leaved herbs. This will involve mowing 2-3 times per year and removing arisings.

- Plant a native hedge along the northern and eastern boundaries by planting native species. Allow to develop.
- Any tree or woodland works should be carried out outside the bird breeding season (March to July inclusive).
- Control dog fouling through provision of bins, notices etc. Dog fouling is likely to have a major detrimental impact on areas of grassland.
- Do not plant any non-native invasive species.
- Keep the use of herbicides, fertilizers and pesticides to a minimum.

1.0 Introduction

1.1 Background

- 1.1.1 Salix Ecology was commissioned to undertake a Preliminary Ecological Appraisal of Camberwell New Cemetery Area B. The purpose of the report is to identify any existing or potential ecological constraints for the proposed change of use to a burial ground.
- 1.1.2 The survey findings together with the results of a biological records search are presented in this report. The ecological value and status of the Cemetery is considered and recommendations to mitigate any adverse impacts of the development and to enhance the nature conservation value of the site are provided.

1.2 Personnel

- 1.2.1 The ecological survey was carried out by Paul Losse BSc (Hons) MSc MCIEEM. Paul is a full member of the Chartered Institute of Ecology and Environmental Management and is subject to the Institute's code of professional conduct when undertaking ecological work.

1.3 Scope of the report

- 1.3.1 The habitat survey was carried out using a modified version of the standard Phase 1 survey methodology (JNCC, 2010) together with a protected species risk assessment. This is generally the most widely used and professionally recognised method for initial ecological site appraisal. This approach was designed to identify broad habitat types present and to assist in providing an overview of the ecological interest of the site.

1.4 Site context and status

- 1.4.1 Camberwell New Cemetery is located in Honor Oak, Southward, London SE23 3RD. It lies within the Nunhead and Peckham Rye Ward close to the south boundary of the borough. Its main entrance is located off Forest Hill Road. It is bounded on its south-east boundary by Honor Oak Park and the railway line, on its north boundary by Brockley Way and on its north-west boundary by Brenchley Gardens. To the immediate south lies the public open space of One Tree Hill and One Tree Hill allotments. Due south lies Honor Oak Park road and Honor Oak Park station. Area B is situated to the south of the site, immediately to the east of the railway line and to the north of Honour Oak Park. The centroid O.S. grid reference is TQ358741. See figure 1 location map below.
- 1.4.2 Area B is a component part of Camberwell New Cemetery, Honor Oak Crematorium and adjacent areas Site of Borough Importance (grade II) for nature conservation.

1.5 Proposal

- 1.5.1 The preferred option is detailed in LUC (2016). The proposed burial site will accommodate approximately 1200 burial spaces. Existing contaminated fill is excavated and removed from site, replaced with 'clean' soil suitable for burials. Biodiversity enhancements are proposed through additional native shrub and scrub planting mixes to the boundaries, and additional tree planting.



Figure 1: Location map

2.0 Desk Study

- 2.1.1 Information regarding the present and historical ecological interest of the site and within a 1km radius was requested from Greenspace Information for Greater London (GiGL). It is important to note that, even where data is held, a lack of records for a defined geographical area does not necessarily mean that there is a lack of ecological interest; the area may be simply under-recorded.

3.0 Field survey

- 3.1.1 The habitat survey followed a modified version of the standard Phase 1 survey methodology (JNCC, 2010). In addition, a list of vascular plant species was compiled, together with an estimate of abundance made according to the DAFOR scale, each species being assigned to one of the following categories: 'Dominant', 'Abundant', 'Frequent', 'Occasional' or 'Rare'. The modifier 'locally' was used where there was a local or clumped distribution of a particular species. The visit for the Phase 1 habitat survey was carried out on the 9 May 2016.
- 3.1.2 A full list of vascular plant species identifiable at the site during this survey, along with an assessment of their abundance, appears in Appendix 1.
- 3.1.3 Scientific names are given after the first mention of a species, thereafter, common names only are used. Nomenclature follows Stace (2010) for vascular plant species. Vascular plant common names follow the Botanical Society of the British Isles 2003 list, published on its web site, www.bsbi.org.uk.

3.2 Preliminary protected species assessment

- 3.2.1 The potential of the site to provide habitat for protected species was assessed from field observations carried out at the same time as the habitat survey, combined with the results of the desk top study. The site was inspected for indications of the presence of protected species as follows:
- Nesting habitat for breeding birds, such as, dense scrub, shrubbery and hedgerows.
 - The presence of features such as trees with fissures, holes, loose bark and ivy which may support bat roosts.
 - Buildings which may support bat roosts.
 - Scrub/grassland mosaic and potential hibernation sites for reptiles.
 - Protected species recorded during the survey.
- 3.2.2 The likelihood of occurrence is ranked as follows and relies on the findings of the current survey and an evaluation of existing data:
- Negligible – while presence cannot be absolutely discounted, the site includes very limited or poor quality habitat for a particular species or species group. No local returns from a data search, surrounding habitat considered unlikely to support wider populations of a species/species group. The site may also be outside or peripheral to known national range for a species.
 - Low – on-site habitat of poor to moderate quality for a given species/species group. Few or no returns from data search, but presence cannot be discounted on the basis of national distribution, nature of surrounding habitats, habitat fragmentation, recent on-site disturbance etc.
 - Medium – on-site habitat of moderate quality, providing all of the known key requirements of given species/species group. Local returns from the data search, within national distribution, suitable surrounding habitat. Factors

limiting the likelihood of occurrence may include small habitat area, habitat severance, and disturbance.

- High – on-site habitat of high quality for given a species/species group. Local records provided by desk-top study. The site is within/peripheral to a national or regional stronghold. Good quality surrounding habitat and good connectivity.
- Present – presence confirmed from the current survey or by recent, confirmed records.

3.2.3 The purpose of this assessment is to identify whether more comprehensive Phase 2 surveys for protected species should be recommended or precautions taken to minimise impact on these species should they be present.

3.3 Limitations

3.3.1 It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no investigation can ensure the complete characterisation and prediction of the natural environment.

3.3.2 The denser woodland/scrub areas along the western boundary were difficult to access. In addition the survey was carried out at a sub-optimal time of year, it therefore likely that plant species were under-recorded.

4.0 Results

4.1 Desk study

International Sites

4.1.1 There were no sites of European importance within the area of search.

National Sites

4.1.2 One Tree Hill immediately to the west of the site is designated as a Local Nature Reserve (LNR).

Non- statutory designations

4.1.3 There are nine Sites of Importance for Nature Conservation (SINCS) within 1km of the site including Camberwell New Cemetery, Honour Oak Crematorium and adjacent areas of which area B forms a part. A citation for the latter is found in appendix 4.

Table 1: SINCS within 1km of Camberwell New Cemetery Area B

Site	SINC tier	Distance from Camberwell New Cemetery	Direction
Forest Hill to New Cross Gate Railway Cutting	Metropolitan importance	750m	North-east
One Tree Hill	Borough Grade I	Adjacent	West
Camberwell Old Cemetery	Borough Grade I	670m	West
Peckham Rye Park and Common	Borough Grade I	1.3km	North-west
Honor Oak Road Covered Reservoir	Borough Grade II	750m	South-west
Camberwell New Cemetery, Honor Oak Crematorium and adjacent areas	Borough Grade II	Area B is a component	
Aquarius Golf Course	Borough Grade II	300m	North-west
Brenchley Gardens	Local Importance	390m	North-west
Brockley Hill Park	Local Importance	1.2km	South-west

Protected species and Species of Principle Importance for the Conservation of Biodiversity

4.1.4 The GiGI data search confirmed a number of records of protected species and Species of Principle Importance for the Conservation of Biodiversity within 1km of the site.

Reptiles and amphibia

4.1.5 There are records of slow worm *Anguis fragilis* and common lizard *Zootoca vivipara* within 650m of the site. These species are Local Species of Conservation Concern, London Biodiversity Action Plan (BAP) species, Species of Principle Importance and are protected from killing, injuring, trade and sale under the Wildlife and Countryside 1981 (as amended).

4.1.6 Common toad *Bufo bufo*, a Species of Principle Importance, London Biodiversity Action Plan species and species of Local Conservation Concern was recorded within 200m of the site. The common toad is protected from sale and trade.

- 4.1.7 There are records of common frog *Rana temporaria*, a species of Local Conservation Concern within 500m. This species is protected from trade and sale.

Birds

- 4.1.8 There are numerous bird records within the area of search. Species most likely to use the site are listed in table 2 below.

Table 2: Relevant bird records within 1km of Camberwell New Cemetery Area B

Species	Status/protection
House martin <i>Delichon urbicum</i>	Species of local conservation concern
Kestrel <i>Falco tinnuculus</i>	Species of local conservation concern
House sparrow <i>Passer domesticus</i>	Red listed Species of principle importance London biodiversity action plan priority species
Willow warbler <i>Pyloscopus trochilus</i>	Species of local conservation concern
Dunnock <i>Prunella modularis</i>	London Biodiversity Action Plan priority species
Bullfinch <i>Pyrrhula pyrrhula</i>	London Biodiversity Action Plan priority species
Goldcrest <i>Regulus regulus</i>	Species of local conservation concern
Tawny owl <i>Strix aluco</i>	Species of local conservation concern
Starling <i>Sturnus vulgaris</i>	Red listed London biodiversity action plan priority species
Redwing <i>Turdus iliacus</i>	Protected under schedule 1 of the Wildlife and Countryside act 1981. Red listed.
Song thrush <i>Turdus philomelos</i>	Red listed London biodiversity action plan priority species
Fieldfare <i>Turdus pilaris</i>	Protected under schedule 1 of the Wildlife and Countryside act 1981 Red listed
Mistle thrush <i>Turdus viscivorus</i>	Species of local conservation concern

Mammals

- 4.1.9 The noctule *Nyctalus noctula* and common pipistrelle *Pipistrellus Pipistrellus* bats were recorded within the area of search. All species of bat have a high level of protection under the Habitat regulations (2010) as well as the Wildlife and Countryside Act 1981 (as amended).
- 4.1.10 Hedgehog *Erinaceus europaeus*, a Species of Principle Importance and a London Biodiversity Action Plan Priority species BAP species has been recorded within 300m of the site.

Invertebrates

- 4.1.11 Stag beetle is a species of Principle Importance for the Conservation of Biodiversity, a London Biodiversity Action Plan Priority species and nationally notable species has been recorded within 100m of the site. Other beetles recorded include *Anthracus consputus* (Nationally notable B) and *Trichosirocalus horridus* (Nationally notable A)
- 4.1.12 The Bright Four-spined Legionnaire *Chorisops nagatomii* and *Dioxya bidentis* are nationally notable species of flies. The latter is also a Local Species of Conservation Concern.
- 4.1.13 *Pseudomalus violaceus*, a species of wasp is a Nationally Notable B species and Local Species of Conservation Concern.

Plants

Table 3: Relevant plant records within 1km of Camberwell New Cemetery Area B

Species	Status/protection
Cornflower <i>Centaurea cyanus</i>	Species of principle importance
Galingale <i>Cyperus longus</i>	Nationally Scarce. Redlist – near threatened
Viper's-bugloss <i>Echium vulgare</i>	Species of local conservation concern
Bluebell <i>Hyacinthoides non-scripta</i>	Species of local conservation concern Protection from sale under Wildlife and Countryside act 1981 (as amended)
Bitter-vetch <i>Lathyrus linifolius</i>	Species of local conservation concern
Black Poplar <i>Populus nigra</i> subsp. <i>betulifolia</i>	London Biodiversity Action Plan priority species
Corn Spurrey <i>Spergula arvensis</i>	Redlist – vulnerable

4.2 Habitat survey

- 4.2.1 Habitats present included semi-natural mixed woodland, semi-improved neutral grassland, dense scrub, scattered scrub, tall ruderal vegetation and bare ground.

Mixed Woodland

- 4.2.2 The woodland areas along the south and west boundaries of the site included a mix of sycamore *Acer pseudoplatanus*, elder *Sambucus nigra*, ash *Fraxinus excelsior* and cherry *Prunus avium* together with planted cypress species. There were also large stands of cherry laurel *Prunus laurocerasus* and butterfly-bush *Buddleja davidii* at the edge of the woodland towards the west of the site.
- 4.2.3 In some areas the shrub layer was formed of dense stands of bramble *Rubus fruticosus* agg. The ground layer was mainly common nettle *Urtica dioica*, bramble and, in more shaded areas, ivy *Hedera helix*.

Tall ruderal vegetation

- 4.2.4 There was a large stand of tall ruderal vegetation to the west of the site which has formed on a recently deposited soil mound. This area comprised abundant creeping thistle *Cirsium arvense*, frequent ribwort plantain *Plantago lanceolata*, a species of bind-weed *Calystegia* sp and broad-leaved dock *Rumex obtusifolius*. Groundsel *Senecio vulgaris* and bristly ox-tongue *Helminthotheca echoides*. There were also scattered clumps of false oat-grass *Arrhenatherum elatius*. There was a small stand of hybrid bluebell *Hyacinthoides x massartiana* in this area.

Semi-improved neutral grassland

- 4.2.5 Semi-improved neutral grassland was recorded over much of the central and eastern part of the site. The sward was relatively species-rich. Grass species included Yorkshire fog *Holcus lanatus*, red fescue *Festuca rubra*, creeping bent *Agrostis stolonifera*, common couch *Elytrigia repens*. Sterile brome *Anisantha sterilis* was locally abundant and perennial rye-grass *Lolium perenne* rare. Herbs included locally abundant bristly ox-tongue and goat's rue *Galega officinalis*, frequent birds-foot trefoil *Lotus corniculatus*, creeping thistle, ribwort plantain, common vetch *Vicia sativa* and colt's-foot *Tussilago farfara*. Locally frequent species included field horsetail *Equisetum arvense*, black medick *Medicago lupulina* and ox-eye daisy *Leucanthemum vulgare*. Common mallow *Malva sylvestris*, creeping buttercup *Ranunculus repens* and green alkanet *Pentaglottis sempervirens* occurred occasionally. A full species list is given in appendix 1.

- 4.2.6 There were scattered planted trees over semi-improved grassland on the slope toward the east of the site. Species included young pedunculate oaks *Quercus rubur*, hawthorn *Crataegus monogyna* and hornbeam *Carpinus betulus*.

Scattered scrub

- 4.2.7 There was scattered willow scrub in the north-eastern corner of the site. It was not possible to reliably identify the willow species at the time of the survey (early May).

4.3 Target notes

- 4.3.1 Refer to habitat map figure 2 below for target note location.

Target note	Grid reference	Type	Notes
1	TQ3578874173	Non-native invasive species	butterfly bush
2	TQ3577174190	Non-native invasive species	Cherry laurel
3	TQ3577474211	Non-native invasive species	Large stand of butterfly bush
4	TQ3577974211	Non-native invasive species	Small butterfly bush
5	TQ3578674203	Non-native invasive species	Small patch of hybrid bluebell

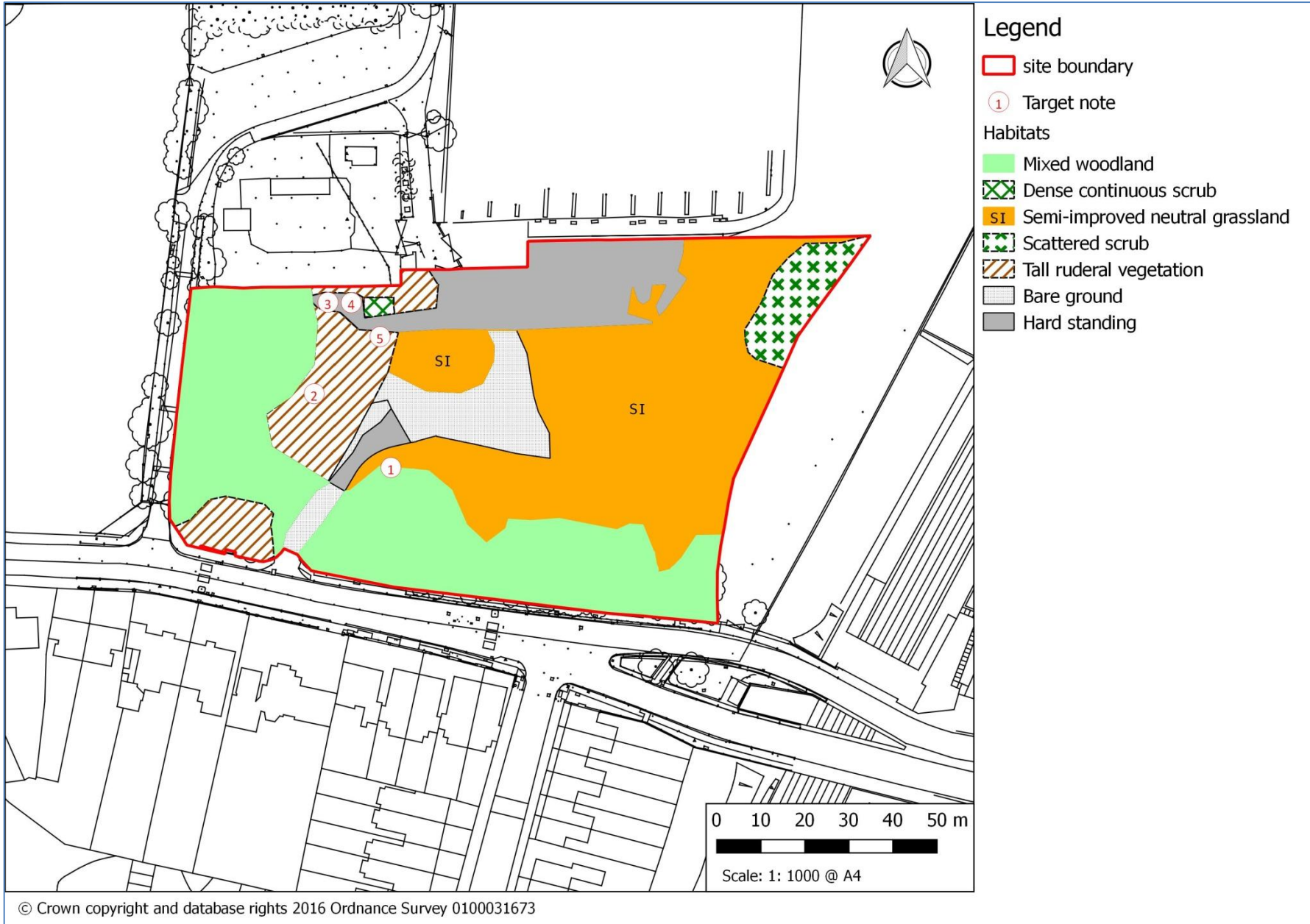


Figure 2: Camberwell Cemetery Area B Habitat Map

5.0 Evaluation

5.1 Habitat assessment

Sites and habitats of international importance

- 5.1.1 Habitats of international importance are principally sites covered by international legislation or conventions. The Conservation of Habitats and Species Regulations 2010 implement the Natural Habitats and Wild Fauna and Flora (92/43/EC) (Habitats Directive) in England and Wales. The Regulations mainly deal with the protection of Sites that are important for nature conservation in a European context (Special Areas for Conservation (SACs) and Special Protection Areas (SPAs).
- 5.1.2 The site does not form part of any sites of international importance for nature conservation. There are no sites of international importance within the area of search.

Sites and habitats of national importance

- 5.1.3 Habitats of national importance include those designated as Sites of Special Scientific Interest (SSSIs) which are notified under the Wildlife and Countryside Act 1981 and Habitats of Principle Importance for the Conservation of Biodiversity (formerly UK BAP priority habitats). The latter are habitats listed under Section 41 (S41) of The Natural Environment and Rural Communities (NERC) Act. These are all the habitats in England that were identified as requiring action in the UK Biodiversity Action Plan (UK BAP) and continue to be regarded as conservation priorities in the subsequent UK Post-2010 Biodiversity Framework.
- 5.1.4 There are no habitats of Principle Importance within the development site
- 5.1.5 One Tree Hill Local Nature Reserve lies immediately to the west of the site.

Habitats of regional importance

- 5.1.6 There are a number of Sites of Importance for Nature Conservation (SINCS) within the area of search including Camberwell Cemetery which forms part of a Site of Borough Importance. The citation for the site appears in appendix 4.
- 5.1.7 Native woodland is a London Biodiversity Action Plan Priority Habitat.

Protected plant species

- 5.1.8 No plant species fully protected under Schedule 8 of the Wildlife and Countryside Act 1981 (as amended) were identified during the survey.

Notable plant species

- 5.1.9 Notable higher plant species are those species recorded from 15% or fewer of the 400 two-kilometre recording squares (tetrads) in Greater London in the *Flora of the London Area* (Burton 1983). No notable species were recorded.

Non-native invasive species

- 5.1.10 The butterfly bush *Buddleja davidii* is listed by the London Invasive Species Initiative (LISI) as 'Species of high impact or concern present at specific sites that require attention (control, management, eradication etc)'. Cherry laurel is listed by the LISI as a 'species of high impact or concern which is widespread in London and require concerted, coordinated and extensive action to control/eradicate'. The hybrid bluebell

Hyacinthoides x massartiana and goat's rue are categorised as species which are widespread for which eradication is not feasible but where avoiding spread to other sites may be required.

5.2 Protected species assessment

5.2.1 The habitats at the site were evaluated as to their likelihood to provide sheltering, roosting, nesting and foraging habitat for the following species and species groups:

- Breeding birds
- Bat species
- Reptiles

5.2.2 These species were selected for further consideration because potentially suitable habitat is in close proximity to Camberwell New Cemetery. The results of the field survey, combined with information from the desk study, are presented in the table below. The relevant legislation and policies relating to protected species is presented within Appendix 3.

Table 4 - Assessment of potential presence of protected species within Camberwell New Cemetery Area B.

Species	Main legislation	Reason for consideration	Likelihood of occurrence
Breeding birds	Wildlife and Countryside Act 1981 (as amended)	Presence of mature trees and woodland habitat for breeding birds.	High: The woodland areas within the site provide suitable nesting habitat.
Bats	Wildlife and Countryside Act 1981 (as amended), The Conservation of Habitats and Species Regulations 2010	Presence of mature trees Proximity of historical species records.	Medium: Some of the trees in the Park are ivy covered which provide suitable roosting opportunities. The surrounding semi-natural habitat including woodland, railway line side provide potential foraging and commuting habitat.
Reptiles	Wildlife and Countryside Act 1981 (as amended)	Suitable habitat.	Present: Woodland and semi-improved grassland provide potential habitat for common lizard and slow worm. Both species recorded in accompanying reptile survey.

6.0 Discussion

- 6.1.1 Camberwell New Cemetery area B supports a range of habitats which have nature conservation value. Woodland, scrubland and brownfield habitat are listed as key habitats of ecological importance for Southwark (London Borough of Southwark, 2013). Area B is also part of a 'Camberwell New Cemetery, Honor Oak Crematorium and adjacent areas' Site of Importance for Nature Conservation Borough Grade II.
- 6.1.2 The semi-improved neutral grassland supports a number of species which are typical of disturbed ground reflecting the previous recreation and industrial use of the site. However the sward was relatively species rich and species typical of unimproved grasslands of high ecological value were also recorded including bird's-foot-trefoil and oxeye daisy. The grassland is likely to be of value to invertebrates due to the range of nectar sources available and structural variation of the sward. It is recommended that at least a proportion of species-rich grassland is retained as this is arguably the most valuable habitat for nature conservation. To achieve this aim, low nutrient status will need to be maintained with no import of topsoil or fertilisation.
- 6.1.3 In general grassland management should aim to reduce, or maintain, a low soil nutrient status in the targeted areas of grassland. The cover of coarse, competitive grasses should be progressively reduced. A number of studies have shown that more than one cut per year can be effective at reducing the cover of coarse grasses and increasing floral diversity. For example Leaney (2005) showed that a cut once per month from early April each year until October but with a gap where no cutting occurs from early May to early July (i.e. an 8 week period) reduced the dominance of coarse grasses in a churchyard but still allowed a good variety of plants to flower.
- 6.1.4 Whichever cutting regime is adopted, removal of arisings from the site is essential to prevent a build up of soil nutrients and a layer of dead vegetation (litter) which inhibits germination. Ideally arisings should be composted.
- 6.1.5 The woodland around the western and southern boundaries of the site were of relatively low value with a number on non-native trees and sparse ground flora. However there is potential for the woodland/scrub areas to provide breeding bird habitat and some potential to support bat roosts. Removal of non-native species and general light thinning of the woodland is recommended.
- 6.1.6 The tall ruderal vegetation that has developed on the soil mound to the west of the site is of low intrinsic value but may be important for invertebrates.
- 6.1.7 The site is known to support slow worm and common lizard, species protected from killing and injury under the Wildlife and Countryside Act 1981 (as amended). Measures to protect these species during the development are essential. Details are provided within the accompanying reptile survey report (Salix Ecology, 2016).
- 6.1.8 A number of non-native invasive species were recorded. In general, these should be eradicated from the site where possible.
- 6.1.9 Relevant policies of the Southwark Open Space Strategy include Objective B1: 'Ensure the protection, management and enhancement of areas of importance for nature conservation and biodiversity and the linkages between them and Objective B2: 'Encourage innovative ways of incorporating new areas of natural habitat within new and existing open space, natural play environments and developments'
- 6.1.10 Strategic Policy 11 of the Southwark Core Strategy : Open spaces and wildlife states that there will be 'No loss or damage to SINCs' (London Borough of Southwark, 2011)
- 6.1.11 The London Plan (Mayor of London, 2015) policy 3D requires boroughs to protect sites of nature conservation value including those of Metropolitan, Borough or Local importance.

7.0 Recommendations

7.1.1 The following recommendations are designed to achieve the 'no loss or damage to SINCS' objective in the London Borough of Southwark's Core Strategy.

7.2 Surveys

7.2.1 If any mature trees are proposed for felling or other arboricultural work, these should be individually assessed for their potential to support bat roosts by an experienced ecologist. Any individual trees with bat roost potential should be surveyed by a licensed ecologist prior to any works being carried out. A Natural England licence may be required.

7.2.2 If substantial re-landscaping is proposed involving tree removal, surveys to establish the extent to which bat species use the site should be carried out. The survey should investigate bat commuting routes within the site and results used to inform any proposed works.

7.3 Habitats

7.3.1 The woodlands within the site should be thinned to allow for the development of a more diverse ground flora.

7.3.2 Non-native invasive species should be removed from the site including cherry laurel and butterfly bush (*buddleia*).

7.3.3 Areas of species rich grassland should be retained where possible. To maintain a low soil nutrient status, essential for ecologically valuable grassland, it is recommended that, subject to human health considerations, the existing soil is retained and that no 'clean' soil is imported to the site for landscaping or for the purpose of burials. The option of using below ground vaults to reduce the importation of soil would be therefore be preferable.

7.3.4 A relaxed mowing regime is recommended in retained areas of species-rich grassland. The grassland should be managed by cutting 2-3 times per year. Cutting, should not, however, take place during the summer months to allow species to set seed. Some grassland refuge areas (approximately 20% of the area of grassland) should be left uncut in any one year on rotation. All cut arising should be removed and, ideally, composted.

7.3.5 Any further tree or shrub planting should be limited to the site boundaries to keep shading of grassland areas to a minimum.

7.3.6 A hedge comprising native species of UK provenance could be planted along the eastern and northern boundaries to provide additional wildlife habitat. Recommended species include field maple hazel, hawthorn, holly, wild Privet, bird Cherry, dog-rose *Rosa canina* and guelder-rose, yew *Taxus baccata*, hornbeam *Carpinus betulus* and beech *Fagus sylvatica*. The base of the developing hedge may be protected from competing weeds using a hedgeline mulch. Planting should take place between October and March i.e. not during the drier months.

7.3.7 The hedge should be well watered and mulched in the first year. Pruning should take place in the first year to encourage growth at the base and then lightly once every three years. An annual trim to create a neat hedge should be avoided as this will prevent the fruit development. No cutting/trimming should take place during the bird nesting season (March – July inclusive).

7.4 Fauna

7.4.1 See recommendations in the accompanying reptile survey report for mitigation measures for common lizard and slow worm (Salix Ecology, 2016).

7.5 General recommendations

7.5.1 Do not use pesticides, fertilizers or herbicides (except in the treatment of non-native invasive species).

- 7.5.2 Do not plant any non-native invasive species.
- 7.5.3 Ideally any planting should be with UK native species of known provenance. It is not recommended that any seeding is carried out within areas of grassland. Species richness will improve with appropriate management.
- 7.5.4 Do not carry out any tree works within the bird breeding season (March to July inclusive).
- 7.5.5 Control dog fouling through notices and the provision of dog waste bins.

8.0 References

Burton R. (1983). *Flora of the London Area*. London Natural History Society, London.

JNCC. (2010) *Handbook for Phase 1 Habitat Survey – A Technique for Environmental Audit*. Joint Nature Conservation Committee, Peterborough.

Leaney, B. (2005) Mowing grasslands in churchyards: getting conservation advice right. *British Wildlife* 16 329-331

London Borough of Southwark (2011) *Core Strategy* Available from: http://www.southwark.gov.uk/downloads/download/4441/core_strategy_and_saved_southwark_plan_policies

London Borough of Southwark (2013) *Southwark Biodiversity Action Plan 2013-2019. Final draft*. Available from: http://www.southwark.gov.uk/info/200073/parks_and_open_spaces/534/southwark_ecology/2

London Borough of Southwark (2013) *Southwark Open Space Strategy*. Available from: http://www.southwark.gov.uk/downloads/download/2948/open_space_strategy_2013

London Invasive Species Initiative (2016) *Species of Concern*. Available from: <http://www.londonisi.org.uk/what-and-where/species-of-concern/>

LUC, 2016 *Camberwell New Cemetery - Area B Pre-Application Report to London Borough of Southwark 6662-LD-REP-801*

London Invasive Species Initiative, (2013) London Invasive Species Initiative - Species of Concern Available from <http://londonisi.org.uk/lisp/> [Accessed 1/07/15]

Mayor of London, 2015 *The London Plan: The Spatial Development Strategy for London Consolidated with Alterations since 2011*. Available from: https://www.london.gov.uk/sites/default/files/gla_migrate_files_destination/London%20Plan%20March%202015%20%28FALP%29.pdf

Salix Ecology, 2016. *Camberwell New Cemetery Area B. Reptile survey For the London Borough of Southwark*. Unpublished report.

Stace, C.A., 2010. *New Flora of the British Isles (3rd Ed.)*. Cambridge University Press, Cambridge.

Appendix 1: Species lists

The vascular plant species list was compiled from the Phase 1 field survey carried out on 9th May 2016.

Scientific nomenclature follows Stace (2010) for vascular plant species. Vascular plant common names follow the Botanical Society of the British Isles 2003 list, published on its web site, www.bsbi.org.uk. Please note that this plant species list was generated as part of a Phase 1 Habitat survey, does not constitute a full botanical survey and should be read in conjunction with the associated report.

Abundance was estimated using the DAFOR scale as follows:

D (Dominant), A (Abundant), F (Frequent), LF (Locally frequent) O (Occasional), R (Rare). The modifier L (Locally) is used to describe a clumped or local distribution of a species.

Latin Names	Common Name	Frequency
<i>Acer campestre</i>	Field Maple	R
<i>Acer platanoides</i>	Norway Maple	R
<i>Achillea millefolium</i>	Yarrow	O
<i>Aesculus hippocastanum</i>	Horse-chestnut	R
<i>Agrostis stolonifera</i>	Creeping Bent	R
<i>Alliaria petiolata</i>	Garlic Mustard	R
<i>Anisantha sterilis</i>	Barren Brome	LF
<i>Anthriscus sylvestris</i>	Cow Parsley	F
<i>Arrhenatherum elatius</i>	False Oat-grass	O
<i>Artemisia vulgaris</i>	Mugwort	R
<i>Bellis perennis</i>	Daisy	F
<i>Brachypodium sylvaticum</i>	False-brome	R
<i>Buddleja davidii</i>	Butterfly-bush	F
<i>Calystegia sepium</i>	Hedge Bindweed	LF
<i>Carex pendula</i>	Pendulous Sedge	R
<i>Carpinus betulus</i>	Hornbeam	R
<i>Cerastium fontanum</i>	Common Mouse-ear	O
<i>Chamerion angustifolium</i>	Rosebay Willowherb	R
<i>Cirsium arvense</i>	Creeping Thistle	LF
<i>Corylus avellana</i>	Hazel	O
<i>Crataegus monogyna</i>	Hawthorn	O
<i>Crepis capillaris</i>	Smooth Hawk's-beard	R
<i>Dipsacus fullonum</i>	Wild Teasel	R
<i>Elytrigia repens</i>	Common Couch	F
<i>Equisetum arvense</i>	Field Horsetail	F
<i>Fagus sylvatica</i>	Beech	R
<i>Festuca rubra</i>	Red Fescue	O
<i>Fraxinus excelsior</i>	Ash	F
<i>Galega officinalis</i>	Goat's-rue	LA
<i>Galium aparine</i>	Cleavers	F
<i>Geranium dissectum</i>	Cut-leaved Crane's-bill	R
<i>Geranium molle</i>	Dove's-foot Crane's-bill	R
<i>Geranium robertianum</i>	Herb-Robert	O
<i>Hedera helix</i>	Common Ivy	F
<i>Helminthotheca echioides</i>	Bristly Oxtongue	A
<i>Holcus lanatus</i>	Yorkshire-fog	F
<i>Hyacinthoides non-scripta x hispanica</i> = <i>H. x massartiana</i>	Hybrid bluebell	O
<i>Ilex aquifolium</i>	Holly	O
<i>Lepidium draba</i>	Hoary Cress	R
<i>Leucanthemum vulgare</i>	Oxeye Daisy	F
<i>Lolium perenne</i>	Perennial Rye-grass	R
<i>Lotus corniculatus</i>	Common Bird's-foot-trefoil	F
<i>Malva sylvestris</i>	Common Mallow	O

Latin Names	Common Name	Frequency
<i>Medicago arabica</i>	Spotted Medick	R
<i>Medicago lupulina</i>	Black Medick	R
<i>Myosotis ramosissima</i>	Early Forget-me-not	R
<i>Pentaglottis sempervirens</i>	Green Alkanet	O
<i>Picris hieracioides</i>	Hawkweed Oxtongue	O
<i>Plantago lanceolata</i>	Ribwort Plantain	F
<i>Poa annua</i>	Annual Meadow-grass	R
<i>Potentilla reptans</i>	Creeping Cinquefoil	R
<i>Prunus avium</i>	Wild Cherry	O
<i>Prunus laurocerasus</i>	Cherry Laurel	LF
<i>Prunus sp</i>	Prunus species	R
<i>Quercus robur</i>	Pedunculate Oak	O
<i>Ranunculus repens</i>	Creeping Buttercup	O
<i>Rosa sp</i>	A rose	R
<i>Rubus fruticosus agg.</i>	Bramble	O
<i>Rumex obtusifolius</i>	Broad-leaved Dock	F
<i>Salix sp</i>	Willow species	O
<i>Sambucus nigra</i>	Elder	R
<i>Senecio vulgaris</i>	Groundsel	R
<i>Sonchus asper</i>	Prickly Sow-thistle	R
<i>Taraxacum officinale agg.</i>	Dandelion	F
<i>Taxus baccata</i>	Yew	O
<i>Trifolium dubium</i>	Lesser Trefoil	R
<i>Trifolium pratense</i>	Red Clover	F
<i>Tussilago farfara</i>	Colt's-foot	F
<i>Veronica chamaedrys</i>	Germander Speedwell	R
<i>Vicia sativa</i>	Common vetch	F
<i>Vinca major</i>	Greater Periwinkle	R

Appendix 2: Photographs

Species-rich semi-improved neutral grassland



Scattered willow scrub on the eastern boundary



Mixed woodland along the site boundary



Cherry laurel – a non-native invasive species



Tall ruderal vegetation developing on a soil mound at the west of the site



Appendix 3: Relevant Legislation

Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England

Species “of principal importance for the purpose of conserving biodiversity” covered under section 41 (England) of the NERC Act (2006) and therefore need to be taken into consideration by a public body when performing any of its functions with a view to conserving biodiversity.

National legislation afforded to species and habitats

The objective of the EU Habitats Directive is to conserve the various species of plant and animal which are considered rare across Europe. The Directive is transposed into UK law by The Conservation of Habitats and Species Regulations 2010 and is commonly referred to as the Habitats Regulations.

The Wildlife and Countryside Act 1981 (as amended) is a key piece of national legislation which implements the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and Council Directive 79/409/EEC on the Conservation of Wild Birds (Wild Birds Directive) in Great Britain. Since the passing of the Act, various amendments have been made, details of which can be found on www.opsi.gov.uk. Key amendments have been made through the Countryside and Rights of Way (CRoW) Act (2000) and Nature Conservation (Scotland) Act 2004.

Other legislative Acts affording protection to wildlife and their habitats include:

- The Protection of Badgers Act 1992
- The Countryside and Rights of Way (CRoW) Act 2000
- Natural Environment & Rural Communities (NERC) Act 2006
- Wild Mammals (Protection) Act 1996

Herpetofauna (amphibians and reptiles)

Species of herpetofauna which could occur at Camberwell New Cemetery are protected under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). The common lizard and slow-worm are listed in respect to Section 9(1) & (5). For these species, it is prohibited to:

- Intentionally (or recklessly in Scotland) kill or injure these species
- Sell, offer or expose for sale, possess or transport for purpose of sale these species, or any part thereof.

Mammals

All species of bat are fully protected under The Conservation of Habitats and Species Regulations 2010 and the Wildlife and Countryside Act 1981 (as amended) and have the same protection as great crested newts.

Badgers are protected under the Wildlife and Countryside Act 1981 (as amended) and the

Birds

With certain exceptions, all birds, their nests and eggs are protected under Sections 1-8 of the Wildlife and Countryside Act 1981 (as amended). Among other things, this makes it an offence to:

- Intentionally (or recklessly in Scotland) kill, injure or take any wild bird
- Intentionally (or recklessly in Scotland) take, damage or destroy (or, in Scotland, otherwise interfere with) the nest of any wild bird while it is in use or being built.
- Intentionally take or destroy an egg of any wild bird.

- Sell, offer or expose for sale, have in his possession or transport for the purpose of sale any wild bird (dead or alive) or bird egg or part thereof.

Certain species of bird, for example the barn owl, black redstart, hobby, bittern and kingfisher receive additional special protection under Schedule 1 of the Act and Annex 1 of the European Community Directive on the Conservation of Wild Birds (79/409/EEC). This affords them protection against:

- Intentional or reckless disturbance while it is building a nest or is in, on or near a nest containing eggs or young.
- Intentional or reckless disturbance of dependent young of such a bird

Plants

With certain exceptions, all wild plants are protected under the Wildlife and Countryside Act 1981 (as amended). This makes it an offence for an 'unauthorised' person to intentionally (or recklessly in Scotland) uproot wild plants. An authorised person can be the owner of the land on which the action is taken, or anybody authorised by them.

Appendix 4: Camberwell New Cemetery, Honor Oak Crematorium and adjacent areas Citation

Borough Grade II

Site Reference: SoBII05

Site Name: Camberwell New Cemetery, Honor Oak Crematorium and adjacent areas

Summary: A large area of open land, including a cemetery, allotments and the site of a former nursery, with a good range of plants and animals.

Grid ref: TQ 358 745

Area (ha): 20.09

Borough(s): Southwark

Habitat(s): Amenity grassland, Hedge, Ruderal, Scattered trees, Scrub, Secondary woodland, Semi-improved neutral grassland

Access: Free public access (all/most of site)

Ownership: London Borough of Southwark

Site Description:

Most of Camberwell New Cemetery is fairly intensively managed, but there are small areas of mixed woodland, scrub and rough grassland in the south-west corner. The cemetery also contains some fine hedges and a wide variety of mature trees. The adjacent crematorium is formally landscaped, but contains plenty of dense shrubberies, which provide nesting habitat for birds, a small pond, and numerous mature trees. The trees and shrubs along the eastern edge of the crematorium grade into the woodland on the adjacent Forest Hill to New Cross Gate railway cutting, a Site of Metropolitan Importance.

Two other areas are included in the site; One Tree Hill Allotments (except the woodland strip on the southern edge, which is included with One Tree Hill) and the former Honor Oak Nursery/Honor Oak Training Centre site. The allotments contain several wild areas with rough grassland and willow scrub, and support common lizards. The nursery site is largely covered in ruderal vegetation, with a wide diversity of plants, some of them relics of the previous nursery use. The future of the nursery site is uncertain. Together these sites form a substantial block of open space, contiguous with One Tree Hill and separated only by roads from Brenchley Gardens and Camberwell Old Cemetery, which provides a good diversity of habitats for birds and invertebrates. The whole area is designated Metropolitan Open Land.

Site first notified: 01/01/1989 **Boundary last changed:** 01/06/1995

Citation last edited: 23/03/2006 **Mayor Agreed:**

Defunct: N

Last Updated: 02/10/2006