

Nursery Row Park,
Southwark

Phase 1 Habitat Survey and
Protected Species Assessment

A Report for
Friends of Nursery Row Park



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Executive Summary

- The site is not situated within any statutory or non-statutory designated nature conservation sites. The nearest non-statutory site is Victory Park and Elba Place Nature Garden, located 0.4 km to the north of the site and it is not considered that there will be no effect on this site as a result of the development.
- On the basis of the Phase 1 survey, although the site is currently considered to have limited wildlife interest in terms of habitats and species, it is, nevertheless, considered to be of significance at a local scale, given its location in an area of Open Space Deficiency.
- The site is considered to be worthy of designation as a local Site of Importance for Nature Conservation based on its local significance and the efforts of local people to increase and diversify the habitats present in the park which, as they mature will increase in their value for wildlife.
- With respect to protected species the site is considered to have the potential to support breeding birds and foraging bats.
- Recommendations for additional surveys and habitat retention and management to address the potential presence of these species are provided, as are recommendations for enhancing the development for wildlife.

1.0 Introduction

1.1 BACKGROUND

Ecology Consultancy Ltd (ECL) was commissioned by the Friends of Nursery Row Park to carry out an ecological assessment of Nursery Row Park, Southwark, London. This comprised an extended Phase 1 habitat survey and protected species assessment, in order to provide an overview of the Site's ecological interest and a basis for recommending any necessary Phase 2 surveys. It is proposed to develop a number of blocks of residential housing within and along the northern and western sides of the park.

1.2 SCOPE OF THE REPORT

This report is based on a desk top study, and field survey using standard Phase 1 survey methodology (JNCC 1993) as updated by the GLA. This approach is designed to identify broad habitat types at a site, to identify the potential of habitats to support protected species, and to assist in providing an overview of the ecological interest at a site. It is generally the most widely used and professionally recognised method for initial ecological site appraisal.

1.3 DEVELOPMENT PROPOSALS

It is proposed to develop new housing and retail units along the northern end of the park and on either side of the Crown public house, located on Brandon Street. The scheme consists of five separate buildings separated by courtyards. The development will occupy the area currently used as a car park and approximately 17% of the existing area of park.

1.4 SITE CONTEXT AND STATUS

Nursery Row Park is located in the London Borough of Southwark and lies within an area surrounded by roads. Stead Street lies to the north, Orb Street to the east, Brandon Street to the west and East Street to the south. Within this block, in addition to the park, are part of the Rodney Estate to the north-east, and the Browning Estate to the south-west.

The park is 1.76 ha in extent and comprises amenity grassland, a wildflower meadow, scrub and shrubs, a large number of mature trees and a number of recently planted fruit trees. Nursery Row Park is located at the north-east corner of the park and contains a community orchard and scrub. To the west of the community garden is a car park.

Statutory Sites of Importance for Nature Conservation.

There are no sites with statutory designation within the 1km search area of the site. LNRs are designated under Section 21 of the National Parks and Access to Countryside Act (1949), primarily to allow access to local sites of nature conservation interest. There are no Sites of Special Scientific Interest within 2 kilometres of the site.

Non-Statutory Sites of Importance for Nature Conservation.

Five non-statutory sites of importance for nature conservation are within 1 kilometre of the Site.

Table 1: Sites of Importance for Nature Conservation within 1 kilometre of the proposed development site.

Site Name	Reason for designation	Area (ha)	Distance from site (km)
Sites of Borough Importance (Grade II)			
Burgess Park	A large park, which includes several features of interest for nature conservation, such as the lake which supports a diverse fish population, and the nature area on New Church Road with a variety of trees and shrubs.	48 ha	0.8 S
Walworth Garden Farm	A horticultural city farm, growing a wide range of European, Asian and Afro-Caribbean vegetables, provides a valuable resource for environmental education. A nature area at one edge of the farm contains a small pond, surrounded by typical roughland vegetation and a few trees and shrubs.	< 0.5 ha	0.8 SW
Sites of Local Borough Importance for Nature Conservation			
Victory Park and Elba Place Nature Garden	A community Park and Nature garden with a mixture of habitats including amenity grassland, trees, scrub, rough, secondary woodland and semi-improved neutral grassland.	<0.5 ha	0.4 N
Dickens Square Park (Rockingham Park)	Small area of once derelict land now landscaped as a public open space – contains developing woodland.	0.82	0.5 N
Surrey Square Park	A small park in the Aylesbury Estate and just off the Old Kent Road. The park is less intensively managed than most. An area of rough grassland and a chalk bank, surrounded by scrub, formerly fenced off as a school nature area, is now being integrated into the rest of the park.	1.22	0.5 SE

Sites of Importance for Nature Conservation (SINCs) are non-statutory and are identified by the Greater London Authority on account of their flora and fauna.

2.0 Methodology

2.1 DESK TOP STUDY

A search was made of an on-line mapping service (www.Magic.com) to ascertain the presence of any statutory sites. In addition, a search for information regarding non-statutory sites was also carried out (www.wildweb).

2.2 HABITAT SURVEY

A Phase 1 habitat survey of the Site was carried out on the 27th October, 2008. Habitats were described and mapped following standard Phase 1 survey methodology (JNCC 1993). The weather was cold but very bright. The survey was conducted by an experienced ecologist and took 2 hours.

A habitat plan of the Site appears in Appendix 1.

A full list of plant species identifiable at the Site during this survey, along with an assessment of their abundance, appears in Appendix 3. Photographs of the Site are presented in Appendix 2.

Incidental records of birds and other fauna noted during the course of the habitat survey were also compiled. Scientific names are given after the first mention of a species, thereafter, common names only are used. Nomenclature follows Stace (1997) for vascular plant species.

2.3 PRELIMINARY PROTECTED SPECIES ASSESSMENT

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 and combined with the results of the desk top study. The Site was inspected for indications of the presence of protected species as follows:

- evidence of badger, including setts, runs, snuffle holes and hairs;
- the presence of features such as trees with fissures, holes, loose bark and ivy or buildings with basements, roof voids, soffits, cladding etc. indicating potential for roosting bats;
- scrub/grassland mosaic and potential hibernation sites for common reptiles;
- the presence of potential nesting sites for birds.

The likelihood of occurrence is ranked as follows and relies on the current survey and 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. Site 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.

The purpose of this assessment is to identify whether more comprehensive Phase 2 surveys for protected species should be recommended.

2.4 SITE EVALUATION

Habitats and species on the Site and within the zone of influence of the Development were evaluated following standard guidance on ecological impact assessment published by the Institute of Ecology and Environmental Management (IEEM) in 2006 IEEM guidelines define the zone of influence as:

"...the areas/resources that may be affected by the biophysical changes caused by activities associated with a project"

This requires that professional judgment should be used to determine the extent of effects of any given development. The following geographic frames of reference were therefore used:

- International;
- National;
- Regional (i.e. SE England);
- Local ; and
- Within zone of influence only, regarded as within a 250m radius of the Site.

In accordance with the IEEM guidelines a range of criteria have been considered in assigning ecological value:

- Presence of sites or features designated for their nature conservation interest. Examples include internationally or nationally designated sites such as candidate Special Areas of Conservation (cSACs) and SSSIs, locally designated sites such as Local Nature Reserves (LNRs) and Sites of Importance for Nature Conservation (SINCs);
- Biodiversity value, for example, habitats or species which are rare or uncommon, species rich assemblages, species which are endemic or on the edge of their range, large populations or concentrations of uncommon or threatened species, and/or plant communities that are typical of valued natural/semi-natural vegetation types;
- Secondary and supporting value, for example, habitats or features which provide a buffer to valued features or which serve to link otherwise isolated features;
- Presence of legally protected species;
- Presence of UK BAP and/or London BAP habitats and species; and

- Criteria recommended by DEFRA for selecting sites of nature conservation importance

2.5 LIMITATIONS

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.

The survey was carried out outside the plant growing season, so plant species will have been under-recorded. This Phase 1 habitat survey does not constitute a full botanical survey, or a Phase 2 pre-construction survey that would include accurate GIS mapping for invasive or protected plant species.

The protected species assessment provides a preliminary view of the likelihood of protected species occurring on the Site, based on the suitability of the habitat, known distribution of the species in the local area provided in response to our enquiries and any direct evidence on the Site. It should not be taken as providing a full and definitive survey of any protected species group. It is only valid at the time the survey was carried out. Additional surveys may be recommended if, on the basis of the preliminary assessment or during subsequent surveys, it is considered reasonably likely that other protected species may be present.

3.0 Survey results

3.1 EXTENDED PHASE 1 HABITAT SURVEY

Overview - Site

Nursery Row Park supported a number of habitats including amenity grassland, wildflower meadow, scrub and shrubs, and a large number of mature trees.

Nursery Row Community Orchard was located at the northern end of the park and comprised a crescent of trees, scrub and tall herbs, including a number of established fruit trees. A new bed of apple and pear trees had been planted along the northern edge of the park immediately prior to the survey. To the west of the Community Orchard was a car park of hardstanding, along the southern edge of which was a wildlife hedge. To the south of the Community Orchard, the central area of the park rose to form a large mound with a paved summit. The western half of the mound had been sown with a wildflower mix and is managed as a meadow, whilst the eastern half is managed as amenity grassland.

Within the larger park area and near its north-east corner, on Orb Street, was housing, part of the Rodney Estate. Immediately south of the housing was a fenced children's play area with amenity grassland and a planted hedge of shrubs, which extended around the boundary with the estate. Almost opposite, on the west side of the park was the Crown public house, on either side of which were areas of horticultural planting. The southern half of the site comprised a more formal area with shrubs along the wall of the western perimeter, and a large number of trees, the majority were located in grassland on the eastern side of the park. Numerous formal paths lead into and around the park.

Amenity grassland

Amenity grassland was present over a large area of the park. The dominant species were perennial rye-grass *Lolium perenne* and red fescue *Festuca rubra*, with frequent annual meadow-grass *Poa annua*. Cock's foot *Dactylis glomerata* was occasional and wall barley *Hordeum murinum* frequent along the more disturbed edges by paths. A large number of herbaceous species were present in the grassland, all low-growing species. White clover *Trifolium repens* was the most abundant species with frequent daisy *Bellis perennis*, smooth cat's-ear *Hypochaeris radicata*, mallow *Malva sylvestris*, yarrow *Achillea millefolium*, black

medick *Medicago lupulina*, dandelion *Taraxacum agg.* and ribwort plantain *Plantago lanceolata*. Some species were locally abundant including broad-leaved dock *Rumex obtusifolius*, perennial wall-rocket *Diplotaxis tenuifolia*, ground ivy *Glechoma hederacea*, bristly oxtongue *Picris echioides*, black horehound *Ballota nigra*, weld *Reseda luteola*, ox-eye daisy *Leucanthemum vulgare*, smooth sow-thistle *Sonchus oleraceus* and dove's-foot crane's-bill *Geranium molle*. Single specimens of green alkanet *Pentaglottis sempervirens* and comfrey *Symphytum sp.* were also recorded.

Below the trees on the south-east side of the park the grassland was species-poor. Perennial rye-grass, wall barley and annual meadow-grass were abundant and the few herbs noted included abundant white clover with occasional mallow, Guernsey fleabane *Conyza sumatrensis* and chickweed *Stellaria media*.

Wild flower meadow

The western half of the central mound had been seeded with a wildflower mix in 2007 and was being managed as a wildflower meadow, half of which had been cut with a scythe immediately prior to the survey. Timothy *Phleum pratense* was abundant with frequent crested dog's-tail *Cynosurus cristatus*, false oat-grass *Arrhenatherum elatius* and cock's foot. Sterile brome *Anisantha sterilis* was locally frequent. Tall herbs included wild carrot *Daucus carota*, kidney vetch *Anthyllis vulneraria*, meadow vetchling *Lathyrus pratensis*, tufted vetch *Vicia cracca*, bladder campion *Silene vulgaris*, ribbed and white melilot *Melilotus officinalis* and *M. alba*, wild mignonette *Reseda lutea*, chicory *Cichorium intybus* and grey field speedwell *Veronica polita*.

Scrub

The dense planting within the community orchard formed the largest block of scrub in the park. This area supported a large number of established apple trees *Malus spp.*, hawthorn *Crataegus monogyna*, blackthorn *Prunus spinosa*, field maple *Acer campestre*, wild cherry *Prunus avium*, and wild privet *Ligustrum vulgare*, along with recently planted saplings, including rowan *Sorbus aucuparia*, loquat *Eriobotrya japonica*, ash *Fraxinus excelsior* and a single young maidenhair tree *Ginkgo biloba*.

Tall herbs

Tall herbs were present around the edges of the planted beds and within the community orchard. Species in the latter included chickweed, black horehound, red and white deadnettle *Lamium purpureum* and *L. album*, hemlock *Conium maculatum*, common and Chinese mugwort *Artemisia vulgaris* and *A. verlotiorum*, prickly lettuce *Lactuca serriola*, common vetch *Vicia sativa* and common nettle *Urtica dioica*. Ground ivy formed a locally dominant groundcover in places.

Hedge

A wildlife hedge, planted along the southern side of the car park contained hawthorn, blackthorn, cotoneaster *Cotoneaster sp.*, hazel *Corylus avellana*, hornbeam *Carpinus betulus*, wild privet, dogwood *Cornus sanguinea* and a single large butterfly bush *Buddleia davidii* was located at its eastern end. A grassland strip running alongside the hedge had been scarified by a mower and its constituent species differed in abundance from that of the amenity grassland. Wall barley was abundant, with frequent annual meadow-grass and perennial ryegrass. Herbs included abundant white clover, frequent mallow *Malva sylvestris*, daisy and dandelion, and occasional burdock *Arctium minus*, cow parsley *Anthriscus sylvestris*, spotted medick *Medicago arabica*, fat hen *Chenopodium album* and knotgrass *Polygonum aviculare*.

Planted shrubbery/ scrub

Along the eastern wall of the public house, which backed onto the park was a strip of shrub and scrub species, including blackthorn, privet, dogwood, a single specimen of elder *Sambucus nigra* and a small pear *Pyrus sp.* Lining the northern and eastern walls of the housing estate that backed onto the park were shrubs including firethorn *Pyracantha sp.*, dogwood, bladder senna *Colutea arborescens* and rose *Rosa sp.* A number of mature stands of ivy *Hedera sp.* were also growing along the wall. A dense hedge of rose *Rosa sp.*, with occasional cotoneaster, was planted around all three sides of the boundary with the Rodney Estate. There were few herbs present below the hedge, but this included two species not recorded anywhere else in the park, greater celandine *Chelidonium majus* and glandular globe thistle *Echinops sphaerocephalus*.

Horticultural planting

A raised flower bed was located at the northern entrance into the park off Brandon Street and on the north and south sides of the Crown public house

exotic shrubs and perennials had been planted in the amenity grassland of the park.

Trees

A large number of trees were scattered around the park, the most numerous being London plane *Platanus x hispanica*, of which a large proportion were planted on the south-east side of the park in an area of species-poor grassland. The only other tree within this block was a single Lombardy poplar *Populus nigra italica*. Other trees planted in the hardstanding at the southern end of the park were wild cherry *Prunus avium*, Swedish whitebeam *Sorbus intermedia* and silver maple *Acer saccharinum*. London plane were also located on the south side of the Crown public house and along the northern boundary of the Browning housing estate. Also growing in this area were silver birch *Betula pendula*, hornbeam, small-leaved lime *Tilia cordata*, a young Turkish hazel *Corylus colurna* and wild cherry. On the north side of the pub was a large London plane. In the children's play area were three mature London plane and growing in the community orchard, other than the young fruit trees were Norway maple *Acer platanoides*, hornbeam and ash. Young ash trees had recently been planted on either side of the north-east footpath leading to the summit of the mound and along the footpath leading past the play area.

3.3 OTHER FAUNA

The only bird species seen on the site during the course of the survey was feral pigeon *Columba livia*, but numerous birds were heard singing in the community orchard, including wren *Troglodytes troglodytes* and blackbird *Turdus merula*.

3.4 PROTECTED SPECIES ASSESSMENT

The habitats at the Site were evaluated as to their likelihood to provide sheltering, roosting, nesting and foraging habitat for the following animals:

- Bats
- Breeding birds
- Reptiles

These protected species were selected for further consideration given the presence of potentially suitable habitat is present on Site. The results of the field survey, combined with information from the desk top study, are presented in

Table 2 below. The relevant legislation and policies relating to protected species and habitats is set out in Appendix 4.

Table 2: Assessment of potential presence of protected, notifiable and BAP priority species and habitats at the proposed development Site

Species	Main legislation and policy (see appendix 4)	Areas where presence should be considered	Reason for consideration	Likelihood of occurrence
Bat	Wildlife and Countryside Act 1981 (as amended). Schedule 5. Schedule 2 of the Conservation (Natural Habitats, & c.) Regulations 1994	Mature trees. Buildings.	Mature trees with features such as fissures and loose bark, may have the potential to support roosting bats. Two bat sightings were reported in August and October 2008.	LOW. There were few good roosting opportunities in the park itself, but nearby buildings may have features such as gaps and crawl spaces. Nearby habitat suitable for foraging was considered to be limited.
Breeding birds	Wildlife and Countryside Act 1981 (as amended)	Scrub and hedges at the northern end of the park. Shrubs and ivy on walls around site periphery and mature trees.	Areas of vegetation scrub and trees are all highly suitable for breeding birds.	HIGH. Although limited in extent, there were suitable areas providing ideal conditions in terms of cover and foraging for common bird species such as blackbird, wren, robin and tits.
Common reptiles	Wildlife and Countryside Act, 1981 (as amended). Schedule 5 (partial protection)	N/A	Reptiles, such as common lizard have been recorded on urban sites.	LOW The site contains limited habitat suitable to support these species and is isolated from nearby areas with the potential to support them and from which they could migrate.

4.0 Site evaluation

Habitats and species on the Site and within the zone of influence of the development were evaluated following standard guidance on ecological impact assessment published by the Institute of Ecology and Environmental Management (IEEM) in 2006. Ecological features of value on the site and adjacent land, possibly within the zone of influence of the development, are evaluated according to the geographic scale provided by the above guidance.

Features of international importance

Features of international importance are principally sites covered by international legislation or conventions. The Habitats Regulations implements 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). However, they also give protection to certain species of flora and fauna including bats and great crested newts.

No such sites are present in the vicinity of the Site. As noted in Table 2, it is considered possible that bats may use the Site for foraging. Bats are protected by the above legislation, however it is not considered possible that the Site could support a population of bats of any more than local significance.

Features of national importance

Features of national importance include SSSIs which are designated under the Wildlife and Countryside Act 1981 (as amended) as well as species such as common reptile species which are subject to national legislation rather than international legislation.

There are no SSSIs in the vicinity of the site and it is considered unlikely that the site has the potential to support common reptile species.

A limited number of species covered by National Biodiversity Action Plans could occur at the Site of which the following are most likely and require consideration in terms of mitigation.

- Pipistrelle bat *Pipistrellus pipistrellus* may forage over the site as outlined in Table 2.
- Breeding birds including house sparrow *Passer domesticus*, starling *Sturnus vulgaris* and song thrush *Turdus philomelos*.

Features of regional value

No features of possible value at the regional level have been identified, nor are there any sites of London importance present within 2 kilometres of the Site.

Features of local importance

Populations of any protected or BAP priority species present are likely to be of local significance at most. The site is isolated from other areas of green open space by roads and development. Nearby sites designated as Sites of Importance for Nature Conservation are all much smaller in area, apart from Burgess Park, which occupies 48 ha and lies approx. 0.8 km to the south. The Community Orchard provides valuable habitat and foraging for a range of bird and invertebrate species, which will increase in biodiversity as it matures. It will provide an increasingly important local resource making a valuable urban contribution to the loss of traditional orchards in the wider countryside (Biodiversity Action Plan review, 2005).

Features of value within the zone of influence of the project

All onsite habitat is regarded as being of value at this level. Although of limited ecological value at the current time, given its relatively young age, it provides an important local resource. Its potential to support protected or notable species is also limited by the isolation of the site from other open spaces. However, on-site biodiversity will increase with age.

The Greater London Authority has produced criteria for the evaluation of sites of wildlife interest in Greater London as being of Metropolitan, Borough or Local importance. The GLA evaluation is based on standard criteria developed by the Nature Conservancy Council and successor bodies.

This evaluation is based on the site visit and data provided by the other sources of information mentioned in this report. A summary of our view is presented in Table 2.

Table 2: Evaluation of Nursery Row Park using Greater London Authority criteria

Criteria	Comments
Habitat rarity	The site supports a community orchard, scrub, trees, amenity grassland and wildflower meadow. None of which are particularly rare, apart from the community orchard, which is relatively uncommon.
Species rarity	No rare species have been recorded on the site and it is unlikely that the site currently has the potential to support rare species.
Habitat richness	The site is relatively rich in terms of habitats for a small area.
Species richness	Based on the findings of the survey, the site cannot be considered to be species-rich.
Size	The site covers an area of 1.76 ha which although relatively small, supports a number of habitats and is larger than a number of other local SINC's. The area of scrub on the site, particularly in the Community Orchard is sufficient to be considered of local importance for breeding birds
Important populations	The site is not considered to have the potential to hold important populations of species.
Ancient character	NA
Recreatibility	The grassland habitats can be recreated in the short-term, but the trees and scrub, including the community orchard, could only be recreated in the medium-term.
Typical urban character	The site is typically urban in character in being relatively small and surrounded by urban housing and roads..
Cultural or historic character	The site provides an local community resource, whose character will develop over time.
Geographic position	The site is isolated from other areas of greenspace by roads and development. The site is located in an area where open space is small and fragmented.
Access	The site is open to the public..
Use	The site is used by walkers, dog-walkers and children. Local people are involved with planting the community orchard and managing the wildflower meadow.
Potential	The site, in particular the community orchard, has the potential to contribute to increasing the biodiversity of the park as it matures. There is also the potential to increase the diversity of trees and shrubs elsewhere in the park.
Aesthetic appeal	The site has great aesthetic appeal, particularly due to site management and its location amidst urban housing.

In summary, the site supports a number of habitats, which, although of relatively recent origin, provide an important wildlife and open space resource in an area of open space deficiency. The development of the Community Orchard and recent additional planting, has been the focus of local community involvement and will, over time, make an increasing contribution to the biodiversity of the park. Based on these findings the site is considered worthy of designation as a local site of nature conservation importance.

5.0 Conclusions and recommendations

5.1 CONCLUSIONS

Overall, on the basis of the results of the Phase 1 habitat survey and protected species assessment, the site is considered to be of limited nature conservation value at a borough or metropolitan level, but is significant at the local level, being in an area where habitat with the potential to support wildlife is limited and highly fragmented. In addition, the maturation of the community orchard will make an increasing contribution to local biodiversity. Nursery Row Park is the largest of a number of small sites in the immediate area and currently has the potential to support a number of bird species and provide foraging for a variety of common invertebrates.

Further surveys for protected species and species-specific mitigation are described below. Surveys should be completed prior to site clearance works taking place. If these species are found on the Site, specific mitigation measures, possibly including translocation to off-site receptor sites, may be required to comply with nature conservation legislation. Sufficient time should be allowed to complete surveys, to obtain any necessary licences and carry out mitigation works prior to the start of any development programme.

5.2 RECOMMENDED PHASE 2 SURVEYS

It is recommended that, prior to any works commencing on-site, the following surveys for protected species are carried out.

Bat survey

The trees at the Site were considered to have low potential for roosting bats, but the possibility that bats may be present cannot be discounted. There were two reports of bat sightings in 2008 and a bat activity survey is, therefore, recommended, in order to determine the presence of bat roosts in the mature trees on the site due to be removed by the proposed development. If a bat roost is detected and is adversely affected by the works then it may be necessary to apply for a licence Natural England (NE) and to complete mitigation works if necessary. Note that NE licences can take a number of weeks to prepare and secure. The information provided by the bat survey may also assist in developing

more detailed mitigation proposals for bats with regard to night time lighting and landscaping.

References

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Appendix 1: Habitat plan



ecologyconsultancy

Phase 1 Habitat Survey
 Nursery Row Community Garden

for Waste Care
 541 551 Persico Road
 London SE14 6LJ
 020 7489 8800

This plan is provided solely for the purposes of assisting the client and is not to be construed as a guarantee of accuracy.

KEY

	Sods		Scattered trees
	Hard-standing buildings		Flower beds/horizontal planting
	Amenity grassland		
	Willow meadow		
	Tall grassland		

CLIENT: Nursery Row Community Garden

Date of survey: Dec 11 2008

Drawn by: Jane Kendall

Approved by: John Novak

Appendix 2: Photographs

Photograph 1

North-east corner of park, showing amenity grassland, newly planted ash trees and rose hedge around perimeter of Rodney Estate (top right)



Photograph 2

Scrub and newly planted fruit trees along northern side of park, adjacent to the Community Orchard



Photograph 3

Community Orchard and eastern end of wildlife hedge.



Photograph 4

Looking north-west from top of summit, showing wildlife hedge (centre) along edge of car park



Photograph 5

Looking west, showing part of wildflower meadow and trees around the Crown public house.



Photograph 6

Looking south from top of mound showing area of London plane trees (left) and shrubbery along wall of estate (right).



Appendix 3: Plant species list

Plant Species List for Nursery Row Park, Southwark, London, compiled from the Phase 1 field survey carried out on 27th October, 2008

Scientific nomenclature follows Stace (1997) 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 Phase 1 Report.

Abundance was estimated using the DAFOR scale as follows:

D = dominant, A = abundant, F = frequent, O = occasional, R = rare
e=edge only, p=planted, s=seedling or sucker, t=tree, y= young tree

Latin name	English name	Abundance	Qualifier
<i>Acer campestre</i>	Field maple	O	p
<i>Acer saccharinum</i>	Silver maple	R	t, p
<i>Achillea millefolium</i>	Yarrow	O	
<i>Aesculus hippocastanum</i>	Horse chestnut	R	T
<i>Anisantha sterilis</i>	Barren brome	F	
<i>Anthriscus sylvestris</i>	Cow parsley	O	
<i>Anthyllis vulneraria</i>	Kidney vetch	O/l	
<i>Arctium minus</i>	Lesser burdock	O	
<i>Arrhenatherum elatius</i>	False oat-grass	F	
<i>Artemisia vulgaris</i>	Mugwort	O	
<i>Ballota nigra</i>	Black horehound	O	
<i>Bellis perennis</i>	Daisy	F/l	
<i>Betula pendula</i>	Silver birch	O	t, y
<i>Buddleja davidii</i>	Buddleia	R	
<i>Capsella bursa-pastoris</i>	Shepherd's-purse	O	
<i>Carpinus betulus</i>	Hornbeam	O	t, y
<i>Centaurea scabiosa</i>	Greater knapweed	O	
<i>Chelidonium majus</i>	Greater celandine	O/l	
<i>Chenopodium album</i>	Fat-hen	O	
<i>Cichorium intybus</i>	Chicory	O/l	
<i>Cirsium arvense</i>	Creeping thistle	O	
<i>Cirsium vulgare</i>	Spear thistle	O	
<i>Colutea arborescens</i>	Bladder-senna	O/l	p
<i>Conium maculatum</i>	Hemlock	F	
<i>Conyza canadensis</i>	Canadian fleabane	O	
<i>Cornus sanguinea</i>	Dogwood	O	
<i>Corylus avellana</i>	Hazel	F/l	p
<i>Corylus colurna</i>	Turkish hazel	R	t, p

Latin name	English name	Abundance	Qualifier
<i>Cotoneaster spp.</i>	Cotoneasters	O	e
<i>Crataegus monogyna</i>	Hawthorn	F	e
<i>Cupressus spp.</i>	Cypresses	R	p
<i>Cynosurus cristatus</i>	Crested dog's-tail	F	
<i>Dactylis glomerata</i>	Cock's-foot	O	
<i>Daucus carota</i>	Wild carrot	F	
<i>Diplotaxis tenuifolia</i>	Perennial wall-rocket	O F/I	
<i>Echinops sphaerocephalus</i>	Glandular globe thistle	R	e
<i>Eriobotrya japonica</i>	Loquat	O	p
<i>Festuca rubra</i>	Red fescue	A D/I	
<i>Fraxinus excelsior</i>	Ash	O	p, y
<i>Galium aparine</i>	Cleavers	F/I	
<i>Geranium dissectum</i>	Cut-leaved crane's-bill	O	
<i>Geranium molle</i>	Dove's-foot crane's-bill	O	
<i>Geranium pyrenaicum</i>	Hedgerow crane's-bill	O	
<i>Geranium robertianum</i>	Herb-Robert	O/I	e
<i>Ginkgo biloba</i>	Maidenhair tree	R	p, y
<i>Glechoma hederacea</i>	Ground-ivy	O D/I	
<i>Hedera sp</i>	Garden ivy	F A/I	e, p
<i>Hirschfeldia incana</i>	Hoary mustard	O	
<i>Hordeum murinum</i>	Wall barley	F A/I	
<i>Hypochaeris radicata</i>	Cat's-ear	F	
<i>Lactuca serriola</i>	Prickly lettuce	O F/I	
<i>Lamium album</i>	White dead-nettle	O F/I	
<i>Lamium purpureum</i>	Red dead-nettle	O/I	
<i>Lathyrus pratensis</i>	Meadow vetchling	O/I	
<i>Laurus nobilis</i>	Bay	R	p
<i>Leucanthemum vulgare</i>	Oxeye daisy	O	
<i>Ligustrum ovalifolium</i>	Garden privet	O	
<i>Ligustrum vulgare</i>	Wild privet	O/I	p
<i>Linaria vulgaris</i>	Common toadflax	O	
<i>Lolium perenne</i>	Perennial rye-grass	A D/I	
<i>Malus domestica</i>	Apple	F/I	p
<i>Malva sylvestris</i>	Common mallow	F	
<i>Medicago arabica</i>	Spotted medick	O F/I	
<i>Medicago lupulina</i>	Black medick	O	
<i>Melilotus alba</i>	White melilot	O/I	
<i>Melilotus officinalis</i>	Ribbed melilot	O/I	
<i>Mentha spp.</i>	Mints	R	p
<i>Mercurialis annua</i>	Annual mercury	O/I	
<i>Pentaglottis sempervirens</i>	Green alkanet	R	
<i>Phleum pratense</i>	Timothy	A	
<i>Picris hieracioides</i>	Hawkweed oxtongue	O	
<i>Plantago lanceolata</i>	Ribwort plantain	O F/I	

Latin name	English name	Abundance	Qualifier
<i>Platanus x hispanica</i>	London plane	F	t
<i>Poa annua</i>	Annual meadow-grass	A	
<i>Polygonum aviculare</i>	Knotgrass	O/I	
<i>Populus nigra italica</i>	Lombardy poplar	R	t
<i>Potentilla reptans</i>	Creeping cinquefoil	F/I	
<i>Prunus avium</i>	Wild cherry	O	t
<i>Prunus sp.</i>	Cherry	O	p
<i>Prunus spinosa</i>	Blackthorn	O	e
<i>Pyracantha spp.</i>	Firethorns	O/I	p
<i>Pyrus sp.</i>	Pear	O	p
<i>Reseda lutea</i>	Wild mignonette	F/I	
<i>Reseda luteola</i>	Weld	O	
<i>Rosa sp.</i>	Rose	F/I	p
<i>Rumex obtusifolius</i>	Broad-leaved dock	O	
<i>Sambucus nigra</i>	Elder	R	e
<i>Sanguisorba minor minor</i>	Salad burnet	F/I	
<i>Senecio jacobaea</i>	Common ragwort	O	
<i>Senecio squalidus</i>	Oxford ragwort	O	
<i>Silene vulgaris</i>	Bladder campion	O/I	
<i>Sisymbrium officinale</i>	Hedge mustard	O	
<i>Solanum dulcamara</i>	Bittersweet	O/I	
<i>Sonchus oleraceus</i>	Smooth sow-thistle	O	
<i>Sorbus aucuparia</i>	Rowan	O	s
<i>Stellaria media</i>	Common chickweed	F	
<i>Taraxacum sp.</i>	Dandelion	F	
<i>Tilia cordata</i>	Small-leaved lime	O	t, p
<i>Torilis japonica</i>	Upright hedge-parsley	O/I ?	
<i>Trifolium repens</i>	White clover	A	
<i>Tripleurospermum inodorum</i>	Scentless mayweed	O	
<i>Urtica dioica</i>	Common nettle	O F/I	
<i>Veronica polita</i>	Grey field speedwell	O/I	
<i>Vicia cracca</i>	Tufted vetch	O/I	

Appendix 4: Legislation, planning policy and Biodiversity Action Plans

Important notice: This section contains details of legislation and planning policy applicable in Britain only (i.e. not including the Isle of Man, Northern Ireland, the Republic of Ireland or the Channel Islands) and is provided for general guidance only. While every effort has been made to ensure accuracy, this section should not be relied upon as a definitive statement of the law.

A NATIONAL LEGISLATION

Wildlife in Britain receives protection under various legislation including:

- Wildlife and Countryside Act 1981 (as amended)
- The Protection of Badgers Act (1992)
- The Countryside and Rights of Way Act 2000
- Conservation (Natural Habitats etc.) Regulations (1994)

Habitats of regional or national importance are designated as statutory Sites of Special Scientific Interest (SSSIs).

Other statutory designations applied for sites of international importance include Special Protection Areas (SPAs), Wetlands of International Importance (Ramsar sites) and Special Areas of Conservation (SACs). Such sites are by definition also designated as SSSIs.

In addition to statutorily protected sites, there are a range of non-statutory designations applied at a local level by local planning authorities. These are called Sites of Biological Importance (SBIs), Sites of Nature Conservation Importance (SNCIs) or similar.

Species that are protected or otherwise regulated under this legislation include:

- amphibians and reptiles
- badgers
- bats
- birds
- dormouse
- plants: injurious weeds
- plants: invasive plant species

Amphibians and Reptiles

All native herpetofauna are listed on Schedule 5 of the Wildlife and Countryside Act, 1981 and receive some degree of protection. The sand lizard *Lacerta agilis*, smooth snake *Coronella austriaca*, natterjack toad *Bufo calamita* and great crested newt *Triturus cristatus* receive full protection under the Act, and are also protected under Schedule 2 of the Conservation (Natural Habitats &c.) Regulations, 1994 (Regulation 39). This prohibits the intentional killing, injuring or taking of animals; intentional disturbance whilst occupying a place used for shelter; the destruction of these places; and the sale of animals. The adder *Vipera berus*, grass snake *Natrix natrix*, common lizard *Lacerta vivipara* and slow-worm *Anguis fragilis* receive protection against deliberate killing, injuring and sale under subsections 9(1) and 9(5) of the act, whilst common frog *Rana temporaria*, common toad *Bufo bufo*, smooth newt *Triturus vulgaris* and palmate newt *T. helveticus* are protected from sale only.

Licences are only required for works affecting fully protected species of amphibian and reptile, but mitigation measures may be required to prevent the deliberate killing or injury of adder, grass snake, common lizard and slow worm.

Badger

Badgers *Meles meles* receive protection under The Protection of Badgers Act, 1992 which makes it an offence to:

- wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so;
- intentionally or recklessly interfere with a sett by damaging or destroying it;
- intentionally or recklessly obstruct access to, or any entrance of, a badger sett; or
- disturb a badger when it is occupying a sett.

A badger sett is defined in the legislation as "any structure or place which displays signs indicating current use by a badger" and this also means seasonally used setts. Badgers within a sett cannot be disturbed or excluded except under licence from Natural England. Badgers could be disturbed by work near the sett even if there is no direct interference or damage to the sett. Natural England has issued guidelines on what constitutes a licensable activity.

Bats

All species of bat are fully protected under the Wildlife and Countryside Act 1981 (as amended) through their inclusion in Schedule 5. All bats are also included in Schedule 2 of the Conservation (Natural Habitats, & c.) Regulations 1994. The Act and Regulations make it illegal to:

- intentionally or deliberately kill, injure or capture (take) bats;
- deliberately disturb bats (whether in a roost or not);
- damage, destroy or obstruct access to bat roosts;
- possess or transport a bat or any other part of a bat, unless acquired legally; or
- sell, barter or exchange bats or parts of bats.

If a bat roost is to be affected by development activities, a licence from the Department for the Environment, Food and Rural Affairs (DEFRA) will need to be obtained to mitigate any detrimental effects.

Birds

All birds, their eggs and nests are protected by law under the Wildlife and Countryside Act 1981 (as amended). It is an offence to kill, injure or take any wild bird, or to take or destroy their eggs. It is also an offence to take, damage or destroy the nest of any wild bird while it is in use or being built. Certain species including black redstart receive additional special protection under Schedule 1 of the Act and under Annex 1 of the European Community Directive on the conservation of Wild Birds (79/409/EEC).

Plants: Invasive plant species

Certain species of plant, including Japanese knotweed *Fallopia japonica* and giant hogweed *Heracleum mantegazzianum*, are included in Section 14 and Part II of Schedule 9 of the Wildlife and Countryside Act 1981 making it an offence for them to be planted in the wild or otherwise caused to grow or spread in the wild.

B NATIONAL PLANNING POLICY

Guidance on nature conservation is issued by the Government in the form of Planning Policy Statement 9: Nature Conservation (PPS 9) and circular 06/2005 on biodiversity and the planning system. The key principles in this guidance include the aim that all planning decisions should prevent harm to biodiversity.

PPS 9 offers the following guidance on Species and Habitats of Principal Importance for Biodiversity designated under section 74 of the Countryside and Rights of Way Act 2000 (which generally comprise UK Biodiversity Action Plan priority habitats species):

“Planning authorities should ensure that these species and habitats are protected from the adverse effects of development, where appropriate, by using planning conditions and obligations. Planning authorities should refuse permission where harm to the species or their habitats would result unless the need for and benefits of the development clearly outweigh that harm.”

PPS 9 also states that in the case of previously developed land or ‘wasteland’:

“where such sites have significant biodiversity interest of recognised local importance, local planning authorities, together with developers, should aim to retain this interest or incorporate it into any development of the site.”

In general, planning authorities should also

“maximise opportunities for building in beneficial biodiversity features as part of good design ... using planning obligations where appropriate.”

C LOCAL PLANNING POLICY **The Southwark Plan**

The following policies are relevant to the site:

SP 15 Open space and biodiversity

All developments should, where appropriate, create, preserve and enhance open spaces, green corridors, traffic free routes, and biodiversity. The benefits of open space include those associated with health, sport, recreation, children’s play, regeneration, the economy, culture, biodiversity and the environment.

Policy 3.28 Biodiversity

354. The LPA will take biodiversity into account in its determination of all planning applications and will encourage the inclusion in developments of features which enhance biodiversity, requiring an ecological assessment where relevant.

355. Developments will not be permitted which would damage the nature conservation value of sites of importance for nature conservation (SINCs) and local nature reserves (LNRs) and/or damage habitats, populations of protected species or priority habitats/species identified in the United Kingdom, London or the Southwark biodiversity action plan. Where, exceptionally, such developments are permitted, the Council will seek mitigation and/or compensation for the damage to biodiversity.

356. Where new sites of importance for nature conservation and local nature reserves are identified, these sites will be afforded protection under this policy and policy 3.27, Other Open Spaces.

D UK BIODIVERSITY ACTION PLAN

The UK BAP was initiated to comply with obligations under the Convention on Biological Diversity 1992. It describes the UK's biological resources and commits to developing detailed plans to conserve these resources. The UK BAP comprises Habitat Action Plans (HAPs) and Species Action Plans (SAPs). In addition, local authorities promote habitat and species conservation at a regional level through development of Local BAPs (LBAPs).

E SOUTHWARK BIODIVERSITY ACTION PLAN

The following species and habitat action plans are relevant to the site

- Pipistrelle bat
- Parks and Open Spaces

Objectives:

- ~ To protect biodiversity in Southwark's Parks and open spaces
- ~ To enhance habitats in Southwark's Parks and open spaces
- ~ To promote biodiversity in Southwark's Parks and open spaces

Appendix 5: Species of value to wildlife

Ornamental and Native Species of Wildlife Value

Different horticultural varieties of the following species are commonly available, but where possible standard stock is advised, especially for native species. Single flowering plants should be chosen over double flowering plants. With exception of * (biennials) and ** (annuals) all species are perennial. **E** = Exotic, **N** = Native. Note: the list includes species that may be harmful if handled or ingested. Numerous sources of further information are available. See for instance *Poisonous Plants and Fungi: An Illustrated Guide*, M.R. Cooper, A.W. Johnson and E. Dauncey, TSO: 2nd edition, 2003 ISBN 100117028614

Tree

Cherry *Prunus* spp., *P. avium* (wild cherry) **N**
Ash *Fraxinus excelsior* **N**
Crab apple *Malus sylvestris* **N**
Pear *Pyrus* spp. *Pyrus calleryana* **E**
Small-leaved lime *Tilia cordata* (or similar hybrid) **N**
Silver birch *Betula pendula* **N**
Foxglove tree *Pawlonia tomentosa* **E**
Lacebarks *Hoheria* spp. *H. glabrata*, *H. lyallii* **E**
Tulip tree *Liriodendron tulipifera* **E**
Rowan and whitebeam *Sorbus* spp **N/E**

nb: many of the shrub species below will form small trees when mature

Large Shrubs

Shrubby veronica *Hebe* spp. **E**
Hawthorn *Crataegus monogyna* **N**
Blackthorn *Prunus spinosa* **N**
Rose *Rosa canina* (dog rose) *R. arvensis* (field rose) *R. pimpinellifolia* (burnet rose) **N**
Elder *Sambucus nigra* **N**
California lilac *Ceanothus arborea* / spp. **E**
Common holly *Ilex aquifolium* **N**
Barberry *Berberis darwinii*, *B. thunbergii*, *B. x stenophylla* **E**
Daisy bush *Olearia x hastii*, *O. macrodonta* and *O. traversii* **E**
Firethorn *Pyracantha coccinea* **E**
Hazel *Corylus avellana* **N**
Guelder rose *Viburnum opulus* **N**
Wayfaring tree *Viburnum lantana* **N**
Buddleia *Buddleja davidii*, *B. alternifolia*, *B. globosa* **E**
Dogwood *Cornus sanguinea* **N**
Mexican orange bush *Choisya ternate* **E**
Laurustinus *Viburnum tinus* **E**
Flowering currant *Ribes sanguineum* **E**
Escallonia *Escallonia macrantha* **E**

Hardy fuchsia *Fuchsia magellanica* **E**
Buckthorn *Rhamnus cathartica* **N**
Tutsan *Hypericum androsaemum* **N**

Herbaceous perennials and small shrubs

Tree mallow *Lavatera* spp. *L. olblio*, *L. thuringiaca* **E**
Ice plant *Sedum spectabile* **E**
Lavender *Lavandula angustifolia*, *L. x intermedia* **E**
Globe thistle *Echinopsis ritro* **E**
Michaelmas daisy *Aster novi-belgii* **E**
Teasel *Dipsacus fullonum** **N**
Sunflowers *Helianthus annua*** **E**
Red valerian *Centranthus rubra* **E**
Hemp agrimony *Eupatoria cannabinum* **N**
Common knapweed *Centaurea nigra* **N**
Black-eyed susan *Rudbeckia hirta*** or *R. fulgida* **E**
Rosemary *Rosmarinus officinalis* **E**
Rock rose *Cistus* spp. **E**

Climbers

Climbing hydrangea *Hydrangea petiolaris* **E**
Virginia creeper *Parthenocissus quinquefolia* **E**
Honeysuckle *Lonicera periclymenum* or *L. japonica*, *L. fragrantissima*, *L. standishii* **N/E**
Clematis spp. *Clematis vitalba* or *C. armandii*, *C. alpina*, *C. montana*, *C. tangutica* **N/E**
Firethorn *Pyracantha atalantioides* **E**
Nasturtium *Tropaeolum majus*** **E**