Planning Application Submission – February 2014

Biodiversity Report

Consultant: RSK Environmental Ltd

Latchmere House – Scheme 1

Berkeley Homes (Central London) Ltd

Berkeley
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Contents

1. **Phase 1 report** – 3rd September
   Initial habitat and species assessment

Following the findings from the initial Phase 1 survey carried in 2012 the following further surveys were commissioned by Berkeley in 2013:

2. **Bat Initial** – 25th April
   Building inspection

3. **Bat survey report** – 2nd September
   Emergence/ re-entry survey

4. **Badger letter** – 17th July
   Sett monitoring

5. **Stag Beetle survey report** – 6th August
   Presence/absence survey findings

Ministry of Justice

Latchmere House, Richmond

Extended Phase 1 Habitat Survey Report

854481

SEPTEMBER 2012

RSK GENERAL NOTES

Project No.: 854481 (00)

Title: Latchmere House, Richmond – Phase 1 Habitat Survey Report

Client: Ministry of Justice

Date: 03 September 2012

Office: Hemel Hempstead

Status: Rev00

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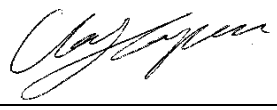
Signature		Signature	
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Where field investigations have been carried out, these have been restricted to a level of detail required to achieve the stated objectives of the work.

This work has been undertaken in accordance with the quality management system of RSK Environment Ltd.

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TABLES

APPENDICES

1 INTRODUCTION

1.1 Purpose of this Report

This report presents the results of ecological field surveys undertaken to inform potential buyers of the current status of the ecology of Latchmere House, Richmond. (OS Grid Reference TW 185 712).

A site location plan and plans showing the potential development area are shown in *Figures 1, 2*, and *3*, *Section 6*.

1.2 Ecological Context

The site is located on the border of Kingston-Upon-Thames and Richmond-Upon-Thames (TQ 185 712). The site comprises a series of buildings (including a Victorian house, Prison cells and workshops), semi-improved grassland, ornamental scrub, a pond, scattered trees and broad-leaved woodland. The site is bordered to the south, east and west by residential properties. To the north it borders Ham Common; a 40 ha site that comprises secondary woodland and grassland. Richmond Park borders Ham common and lies 300 m to the east of Latchmere House. Richmond Park is a designated Special Area of Conservation (SAC), National Nature Reserve (NNR) and a Site of Special Scientific Interest (SSSI).

1.3 Structure of the Report

The remainder of this report is structured as follows:

- Section 2 describes the survey and assessment methods;
- Section 3 presents the survey results;
- Section 4 evaluates the results and provides recommendations.
- Section 5 lists the references;
- Section 6 provides the figures;
- Appendix 1 contains the Greenspace Information for Greater London (GiGL) data search report; and
- Appendix 2 contains the botanical and animal target notes

2 METHODS

2.1 General

A field survey was undertaken by Charles Campbell and Victoria Gilbey on 17th August 2012 and included an extended Phase 1 Habitat Survey and an assessment of the site's potential to support protected species. Charles and Victoria are Members of the Institute of Ecology and Environmental Management (IEEM) and are experienced in undertaking these surveys.

2.2 Background Data Search

A data request was made to Greenspace Information for Greater London (GiGL) up-to-date records of notable species within 1km of Latchmere House.

Species included in the search parameters are:

- species that are protected by international law;
- species listed in European directives and legislation;
- nationally protected species under The Wildlife & Countryside Act 1981 (as amended), Badgers Act 1992 (as amended) and Deer (Scotland) Act 1996;
- all species listed on the RSPB Birds of Conservation Concern 2002-2007 as Red or Amber;
- plant species that are Nationally Rare or Nationally Scarce; and
- species that have Action Plans under the UK Biodiversity Action Plan (UKBAP) or are Priority Species under the London Biodiversity Action Plan (LBAP).

2.3 Extended Phase 1 Habitat Survey

Habitats were assessed following the methods outlined in the Handbook for Phase 1 habitat survey: a technique for environmental audit (2010) including:

- mapping using standardised colours and codes to indicate broad habitat types on a Phase 1 Habitat Map; and
- a description of habitat features to identify specific ecological or nature conservation features on the Phase 1 Habitat Survey Map (referred to as 'Target Notes'). These are provided in Section 11.

Plant nomenclature in this report follows Stace (2010) for native and naturalised species of vascular plant. Introduced species and garden varieties were identified using the relevant texts. Plant names in the text are given with scientific names first, followed by the English name in brackets. Doubtful identifications are preceded by cf. placed before the specific epithet where the plant is very probably the species indicated, but it is impossible to distinguish it from similar members of the genus with certainty.

The survey took place in August which is a suitable time of year for this type of survey.

2.4 Habitat Assessment for Protected Species

2.4.1 General

The habitat was assessed for protected species during the Phase 1 Habitat Survey. Recognisable areas (habitat, land parcels or locations) that are suitable for protected species were identified. Obvious signs and incidental sightings of protected species would have been noted where present, although this type of survey cannot usually confirm whether species are actually present or absent.

Taking into consideration protected species records (detailed in *Section 3.1.3*), the geographical region and the habitat types at the site, protected animals that could be encountered are:

- Badger (*Meles meles*);
- bats;
- common reptiles;
- Great Crested Newt (*Triturus cristatus*); and
- nesting birds.

Other species such as Hedgehog and Stag Beetle could also be encountered.

2.4.2 Badger

An initial assessment was carried out to identify areas that might be used by Badgers (*Meles meles*) for commuting, foraging or sett-building within 30 m of all areas potentially affected by works (where access was possible). The area was systematically searched for signs of Badgers such as setts, foraging signs, paths (runs) and latrines.

2.4.3 Bats

Habitats were assessed for their suitability for roosting, foraging and commuting bats. This included an external assessment of the bat roosting potential of eighteen buildings present at the site, identifying any gaps in which bats could roost or through which they could gain access to roosting spaces inside the buildings. No internal inspection of the buildings for evidence of bats was undertaken, as this was outside of the scope of the survey.

Although foraging requirements differ between species, good bat foraging habitat generally includes sheltered areas and habitats with good numbers of insects, such as woodland, scrub, hedges, watercourses, ponds, lakes and more species-rich or rough grassland. For commuting, well-connected hedgerows, woodland edge, watercourses and other linear features are generally considered to be of high value.

2.4.4 Great Crested Newt

The suitability of aquatic and terrestrial habitat on the site and in the immediate vicinity (up to 500 m from the site, a distance that this species can travel between ponds and terrestrial habitat) was considered, along with the habitat-connectivity between suitable

habitat areas. Aerial photography and Ordnance Survey maps were searched for signs of ponds or other suitable breeding habitat within 500 m of the site.

2.4.5 Nesting Birds

Habitat that might be used by nesting birds was identified. The site was searched for evidence of bird's nests, although a single visit is not sufficient to establish whether or not the site is used by nesting birds.

2.4.6 Common Reptiles

The site was assessed for reptiles, with particular attention paid to those features that provide suitable basking areas (e.g. south-facing slopes), hibernation sites (e.g. banks, walls, piles of rotting vegetation) and opportunities for foraging (rough grassland and scrub).

The site was assessed for its suitability for each of the four common reptile species. The specific habitat requirements differ between species. Common Lizards (*Zootoca vivipara*) use a variety of habitats from woodland glades to walls and pastures, although one of their favoured habitats is rough grassland. Slow-worms (*Anguis fragilis*) use similar habitats to Common Lizards, and are often found in rank grassland, gardens and derelict land. Grass Snakes (*Natrix natrix*) have broadly similar requirements to Common Lizards with a greater reliance on ponds and wetlands, where they prey on Common Frogs. Adders (*Vipera berus*) use a range of fairly open habitats with some cover, but are most often found in dry heath (Beebee & Griffiths 2000).

2.4.7 Other Species

The site was also assessed for its potential to support other London Biodiversity Action Plan priority species particularly the Stag Beetle (*Lucanus cervus*).

2.5 Criteria for Assessment

The nature conservation value of habitats is assessed according to widely accepted criteria that relates to important factors such as naturalness, extent, rarity, and diversity. These and others are described in an extensive literature (Ratcliffe 1977, Usher 1986). In addition, the following criteria were used:

- relevance to International, European and wildlife law;
- relevance to the UK Government's duty to the Convention on Biological Diversity (CBD) through national and local Biodiversity Action Plans;
- semi-natural habitats, such as ancient woodland (Rackham 1986),

Significant species were defined as follows:

- species protected by International, European and wildlife law;
- IUCN Red List species;
- Cournty Red Data Book species (Cheffings and Farrell 2005);
- Priority habitats and species listed within national and local BAPs; and

- other notable species listed as rare or scarce in literature issued by conservation organisations or learned societies (e.g. Stewart et al. 1994).

3 RESULTS

3.1 Background Data Search

A data request was made to Greenspace Information for Greater London (GiGL) encompassing a search area 1 km around the site. GiGL's report is provided in *Appendix 1*. A summary of their results is given below.

3.1.1 Statutory sites

Two statutory sites were recorded within the search area.

Richmond Park (which is approximately 350 m to the east of the site) is Special Area of Conservation (SAC), National Nature Reserve (NNR) and Site of Special Scientific Interest (SSSI). It is an extensive site which contains ancient parkland and associated trees, acid grassland and ponds.

Ham Common is a Local Nature Reserve (LNR) with areas of acid grassland and birch and oak woodland. It is also noted for its dead wood habitat supporting invertebrates, fungi and cavity nesting birds. The proposed development boundary includes approximately 250 m^2 of woodland within the LNR boundary (see *Figure 2* and *Figure 3*).

3.1.2 Non statutory sites

Five Non-Statutory sites were recorded. These comprised:

- River Thames and tidal tributaries – Site of Metropolitan Importance for Nature Conservation, approximately 900 m to the west of the site);
- Richmond Park and associated areas – Site of Metropolitan Importance for Nature Conservation (approximately 350 m to the east of the site);
- Royal Park Gate Open Space – Site of Local Importance for Nature Conservation (approximately 900 m north west of the site);
- Cassel Hospital – Site of Local Importance for Nature Conservation (approximately 800 m north west of the site); and
- Ham Common West – Site of Local Importance for Nature Conservation (north of the site, 250 m^2 of the site is included in the proposed development boundary).

3.1.3 Protected Species

Records of a total of 21 taxa protected by *The Wildlife and Countryside Act 1981* (as amended) were returned. These comprised:

- Badger (*Meles meles*) – 7 records
- Brambling (*Fringilla montifringilla*) – 1 record;
- Brown Long-eared Bat (*Plecotus auritus*) – 1 record;
- Common Frog (*Rana temporaria*) – 41 records;
- Common Pipistrelle (*Pipistrellus pipistrellus*) – 6 records;

- Common Toad (*Bufo bufo*) – 14 records;
- European Water Vole (*Arvicola amphibius*) – 2 records;
- Fieldfare (*Turdus pilaris*) – 4 records;
- Grass snake (*Natrix natrix*) – 11 records;
- Great Crested Newt (*Triturus vulgaris*) – 1 record;
- Greylag Goose (*Anser anser*) – 1 record;
- Northern Pintail (*Anas acuta*) – 1 record;
- Peregrine Falcon (*Falco peregrinus*) – 1 record;
- Red Kite (*Milvus milvus*) – 1 record;
- Redwing (*Turdus iliacus*) – 3 records;
- Serotine (*Eptesicus serotinus*) – 1 record;
- Smooth Newt (*Lissotriton vulgaris*) – 14 records;
- Soprano Pipistrelle (*Pipistrellus pygmaeus*) – 2 records;
- Stag Beetle (*Lucanus cervus*) – 120 records;
- Unidentified Bat (*Myotis* species) – 1 record;
- Unidentified Bat (*Pipistrellus* species) – 13 records; and
- Unidentified Bat (*Vespertillionidae*) – 19 records.

3.2 Habitats

3.2.1 General

The habitats at the site comprise amenity grassland, semi-improved grassland, buildings, hard standing, ornamental plantation woodland, ornamental trees and shrubs and a small pond. All of these are common and widespread habitats in and around Greater London.

All Botanical Target Notes and species lists are provided in *Appendix 2*.

3.2.2 Amentiy Grassland

There is an area of amenity grassland at *Target note 3* that is regularly mown. The sward is approximately 1 cm in height and is predominantly *Lolium perenne* (Perennial Rye-grass) with large areas of *Achillea millefolium* (Yarrow). There are eight planted trees at the northern and southern ends of the grassland comprising *Acer pseudoplatanus* (Sycamore), *Betula pendula* (Silver Birch), *Chamaecyparis* c.f. *pisifera* ' Squarossa' (Sawara Cypress) *Fraxinus excelsior* (Ash), *Quercus ilex* (Evergreen Oak) and *Quercus robur* (Pedunculate Oak).

3.2.3 Semi-improved Grassland

Most of the grasslands at the site are amenity turf where management (*i.e.* mowing and application of fertilisers or herbicide) has relatively recently been discontinued. *Agrostis capillaris* (Common Bent) and *Agrostis stolonifera* (Creeping Bent) are the most abundant species in the sward, with *Festuca rubra* (Red Fescue) occurring regularly throughout. Frequent broad-leaved herbs include *Achillea millefolium* (Yarrow), *Crepis*

capillaris (Smooth Hawk's-beard) and *Hypochaeris radicata* (Cat's-ear). The extensive presence of moderate calcifuges such as *Agrostis capillaris* (Common Bent) and *Hypochaeris radicata* (Cat's-ear) indicates that the underlying soils are base-poor, Due to the lack of management ruderal species such as *Cirsium vulgare* (Spear Thistle) and *Rumex obtusifolius* (Broad-leaved Dock) are scattered across the site.

3.2.4 Hard-standing

As the site is no longer managed, ruderal and annual weed species such as *Buddleja davidii* (Butterfly-bush), *Conyza canadensis* (Canadian Fleabane), *Galinsoga parviflora* (Gallant Soldier) and *Sonchus oleraceus* (Smooth Sow-thistle) have become established in cracks in the hardstanding across the site. At present plants occur as individuals or small groups scattered across the site with little structural or spatial diversity. As such the vegetation present does not qualify as the UK BAP habitat 'open mosaic habitat on previously developed land'.

3.2.5 Ornamental Plantation Woodland

There is a stand of trees at *Target Note 1* and *Target Note 2* that was almost certainly planted for ornamental purposes. The canopy reaches 18 m in height and contains native and non-native plant species including *Tilia × europaea* (Lime) and *Quercus ilex* (Evergreen Oak). In *Target Note 1* the cover of trees is dense and the field-layer comprises ruderal herbs associated with woodlands and typical woodland species such as *Alliaria petiolata* (Garlic Mustard) and *Geum urbanum* (Wood Avens). The trees at *Target Note 2* are more widely spaced and there is a semi-improved grassland field-layer comprising a mix of woodland and grassland herbs such as *Crepis capillaris* (Smooth Hawk's-beard) and *Geum urbanum* (Wood Avens).

3.2.6 Ornamental Trees and Shrubs

Scattered throughout the site there are patches of ornamental shrubs and shrub plantings. They comprise common ornamental shrubs such as *Choisya ternata* (Mexican Orange), *Hebe ×franciscana* (Hedge Veronica) and *Lonicera nitida* (Wilson's Honeysuckle). The ornamental herb *Crocosmia ×crocosmiiflora* (Montbretia), which is an invasive species listed on *Schedule 9* of *The Wildlife and Countryside Act 1981* (as amended), occurs in vegetation at *Target Note 12*.

3.2.7 Pond

There is a small, shallow pond at *Target Note 12*. It is approximately 4 m long by and 2.5 m wide with no aquatic or marginal vegetation. It is surrounded by ornamental shrub planting.

3.3 Protected Species

3.3.1 Badgers

A disused Badger sett was found in an area of woodland 15 m north of the proposed development site boundary at *Animal Target Note 13*, within the Ham Common LNR.

The sett comprised four holes, which appeared to be used by Rabbits, but there were no signs of current use by Badgers.

A boundary wall separates this area of woodland from the site. There was no evidence that Badgers use the site, and no suitable habitat present for foraging or sett building.

3.3.2 Bats

Eighteen buildings were surveyed to assess their bat roost potential, of these seven buildings were identified to have bat roost potential. The results of the survey are also shown in *Figure 2*.

Descriptions of buildings identified with bat roost potential are presented below in *Table 3.1*.

Table 3.1 Details of Bat Roost Potential in buildings

Animal Target Note/Building name	Potential bat roost / access point features
17 – Main House	Potential access points under the soffit board on the north east corner of the property. Evidence of use by nesting birds in one location.
18 – Cell Block	Large complex building, numerous potential access points including gaps between brick work and soffit boards, broken tiles and gaps under lead flushing.
19	Large complex building, numerous broken and missing roof tiles on the main section of the building and loose ridge tiles.
20 – Electricians Workshop	Small building, potential access points under front and end barge boards.
21 – The gymnasium	Large building with a pitched roof, numerous broken and missing roof tiles and an area of broken brickwork exposing parts of the roof void.
22	Large building with small vertical cracks in the brickwork of a size suitable for roosting bats.
23 – Learning Centre	Small building, potential access points under front and end barge boards.

Five mature trees at Animal *Target Notes 4, 8, 11, 12* and *16* have potential to support roosting bats, all had rot holes and woodpecker holes of a size and positioning that would be suitable for use by roosting bats.

Bats could also forage within the patches of grassland and woodland, which are likely to support a range of invertebrate prey. However larger expanses of potentially higher quality foraging habitat is available close by Richmond Park.

3.3.3 Common Reptiles

The grassland areas at *Target Notes 2* and *6* are small, isolated and frequently mown and are therefore unsuitable for reptiles.

However the area of grassland along the eastern edge of the site at Animal *Target Note 15* is suitable sheltering/hibernating habitat for common reptiles including Common Lizard (*Zootoca vivapra*), Grass Snake (*Natrix natrix*) and Slow-worm (*Anguis fragilis*). A thorough search was made during the site visit; however no evidence of reptiles were found. Considering the small size of the area and the isolation of the site (a boundary fence separates it from the Latchmere House site and it is surrounded by a residential road to the east) this area is sub-optimal for reptiles, although their presence cannot be completely ruled out.

3.3.4 Great Crested Newts

The site is suitable terrestrial habitat for Great Crested Newts (*Triturus cristatus*), particularly the grassland at Animal *Target Note 15*. However, the pond at *Animal Target Note 25*) is unsuitable for breeding Great Crested Newts due to the presence of an active water filter/pump and the lack of aquatic vegetation.

Great Crested Newts are present in Richmond Park (350 m to the east) however the boundary wall enclosing the site and the local road network and residential housing would be an effective barrier to movement of these animals onto the site.

3.3.5 Nesting Birds

The mature trees and shrubs which are part of the landscaping on site and within the grassland areas surrounding the site are suitable habitat for nesting birds; however no bird nests were seen during the site visit.

The buildings on site are being used extensively by nesting birds, in particular feral pigeons.

3.3.6 Other Species

The site contains areas of dead wood habitat at Animal *Target Notes 3, 9, 10,* and *14.*

Although no signs of Stag Beetle were found, it is only possible to survey for this species during the adults flight period in July. In addition there are records of Stag Beetle in the local area. Therefore there is potential for this species to be present on site.

4 EVALUATION AND CONCLUSIONS

4.1 Designated Sites

The site borders Ham Common to the north and the ornamental plantation woodland (*Target Note 2*) forms a continuation of the woodland of this LNR. A loss of this area to development or significant removal of trees from this area will have a small detrimental effect on the LNR and it is likely that the local authority would resist any plans which suggested this.

4.2 Habitats

None of the habitats identified on the site are priority habitats of the UK BAP, the Kingston-upon-Thames BAP, the Richmond-upon-Thames BAP or the London Biodiversity Action Plan.

Whilst there is an area of broad leaved plantation woodland on the site it is of ornamental origin with none of the trees older than 200 years and is likely to have been planted when the original house was constructed. As such they are beyond the scope of a Biodiversity Action Plan.

Grasslands of the site are semi-improved and comprise common and widespread species.

4.2.1 Notable species

Hyacinthoides non-scipta (Bluebell) was noted on site. Although this species is listed on the UK BAP, it is not a priority species. It is protected against its sale under The Wildlife and Countryside Act 1981 (As amended)

4.2.2 Invasive Species

Crocosmia ×crocosmiiflora (Montbretia) and *Parthenocissus quinquefolia* (Virginia-creeper) are both on Schedule 9 of the Wildlife and Countryside Act 1981. As such it is illegal to cause their spread in the wild though not illegal to have them growing on a managed site. Removal and disposal of propagules (seeds or material from which plants can grow) should be carried out by specialist contractors. *Crocosmia ×crocosmiiflora* (Montbretia) was recorded at the Ordnance Survey Grid Reference TQ 18514 171307 and *Parthenocissus quinquefolia* (Virginia-creeper) at grid references TQ 18616 71338 and TQ 18455 71279.

4.3 Protected Species

4.3.1 Badgers

No active Badger setts were found on site however there is suitable sett building habitat to the north of the site in Ham Common LNR and a disused sett was found here. As there is evidence that Badgers have been present in the area, a pre-construction survey

should be undertaken prior to any construction activity commencing on site in order to ascertain the current status of the sett and check for any new signs of activity.

4.3.2 Bats

There are seven buildings on site which have potential to support roosting bats. However these buildings have only been externally inspected from ground level and therefore in order to determine if any of these buildings are used by bats further surveys will be required.

An initial bat survey should be undertaken on all buildings that have been highlighted (listed in *Table 3.1*). The survey will assess bat potential through the careful inspection of the buildings both externally and internally to identify features and structures that roosting bats may favour (e.g. potential entrance points and roosting crevices) and to gather any incidental evidence of bats (e.g. droppings). Features might be inspected using a ladder if appropriate, possible and safe and roof voids will be entered to look for signs of roosting bats.

If evidence of bat species is found or if any of the buildings are identified with the potential to support roosting bats, then further bat surveys may need to be undertaken to confirm the presence or absence of a bat roost. These surveys comprise emergence and dawn surveys during the active period for bats (between May and August). Emergence /dawn surveys would only be required if evidence of bats or significant features suitable for roosting bats are found.

The initial survey also records information that would be necessary to inform a European Protected Species (EPS) Licence (if required) from Natural England. This licence permits activities that would otherwise be unlawful such as the destruction of bat roosts or the disturbance of bats.

There are also five trees on site which have potential to support roosting bats. It is not currently known whether these trees will be lost as part of the redevelopment of the site. However if they require felling, further inspections and possible emergence surveys may be required to confirm whether the trees are being used by bats in order to avoid any potential impacts.

4.3.3 Common Reptiles

The area of grassland at *Animal Target Note 15* has been highlighted as suitable sheltering and hibernating habitat for reptiles, although it is sub-optimal due to its small size and isolation. It is therefore considered that reptiles are unlikely to be present but their presence cannot be completely ruled out. Reptiles are listed on the London BAP priority species list and are protected from intentional killing or injury under *The Wildlife and Countryside Act 1981* (as amended). It is not currently known whether this area will be lost of as a result of the proposed development however if it will be, a watching brief (undertaken by a suitably qualified ecologist) whilst clearing the area would allow any reptiles (and amphibians) to be moved to a safe location (*e.g.* to adjacent areas of the Ham Common LNR, which will be retained).

4.3.4 Great Crested Newts

The site has suitable terrestrial habitat for Great Crested Newts (*Triturus cristatus*), particularly the area of grassland at *Animal Target Note 15,* although the absence of any suitable water features on or adjacent to the site and the presence of walls and roads around the site greatly reduces the likelihood of finding this species. If this area is affected by any future development a watching brief would be undertaken (by a suitable qualified ecologist) whilst clearing the grassland area (if required) and this will allow for any amphibians encountered to be moved to a safe location within the garden. If any Great Crested Newts were found, works would have to stop and Natural England would need to be contacted to determine if a protected species licence was required.

4.3.5 Nesting Birds

The shrubs and trees scattered across the site and within the woodland areas have the potential to be used by nesting birds and should only be cleared between September and February or under supervision of a suitably qualified ecologist. If any bird nests were found they would have to be left undisturbed until the young leave the nest.

4.3.6 Other Species

It is not currently known whether the areas of dead wood habitat on site will be affected by the future redevelopment of the site. However if these areas of habitat will be affected, a Stag Beetle survey should be undertaken during the recommended survey month of July.

5 REFERENCES

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6 FIGURES

APPENDIX 1 – GIGL DATA SEARCH

Due to subsequent advice from GIGL on the provision of data, this report has been omitted.
Further details are available on request.

APPENDIX 2 – TARGET NOTES

Botanical Target Notes

Target Note 1. A stand of ornamental broad-leaved trees to 15 m comprising *Aesculus hippocastanum* (Horse-chestnut), *Castanea sativa* (Sweet Chestnut), *×Cupressocyparis leylandii* (Leyland Cypress), *Ilex aquifolium* (Holly), *Quercus ilex* (Evergreen Oak) and *Tilia ×europaea* (Lime). The field-layer is dominated by *Hedera helix* (Ivy) with scattered patches of *Alliaria petiolata* (Garlic Mustard) and *Anthriscus sylvestris* (Cow Parsley). Some woodland herbs are present comprising *Geum urbanum* (Wood Avens), *Hyacinthoides non-scripta* (Bluebell) and *Viola hirta* (Hairy Violet).

Target Note 2. An area of open canopy ornamental trees with a field-layer of semi improved grassland. The 18 m high tree species present include *Aesculus hippocastanum* (Horse-chestnut), *Ilex aquifolium* (Holly), *Quercus robur* (Pedunculate Oak), *Tilia ×europaea* (Lime) and *Tilia platyphyllos* (Large-leaved Lime). The field-layer is dominated by the grass *Holcus lanatus* (Yorkshire-fog) with frequent *Agrostis capillaris* (Common Bent) and remains un-mown with a sward height of approximately 15 cm. Amongst the grasses are herb species typical of semi improved grasslands and woodlands including *Cerastium fontanum* (Common Mouse-ear), *Geum urbanum* (Wood Avens) and *Taraxacum* agg. (Dandelion).

Target Note 3. Semi-improved amenity grassland most of which is regularly mown. The species present are typical of such habitats and include *Achillea millefolium* (Yarrow), *Lolium perenne* (Perennial Rye-grass) and *Plantago lanceolata* (Ribwort Plantain). There are 8 planted trees situated at the northern and southern ends of the grassland comprising *Acer pseudoplatanus* (Sycamore), *Betula pendula* (Silver Birch), *Chamaecyparis* c.f. *pisifera* ' Squarossa' (Sawara Cypress) *Fraxinus excelsior* (Ash), *Quercus ilex* (Evergreen Oak) and *Quercus robur* (Pedunculate Oak).

Target Note 4. Planted trees and shrubs comprising *×Cupressocyparis leylandii* (Leyland Cypress), *Choisya ternata* (Mexican Orange), *Fraxinus excelsior* (Ash), *Ligustrum ovalifolium* (Garden Privet) and *Tilia cordata* (Small-leaved Lime).

Target Note 5. An area of woodland with a canopy height to 18 m. The tree species present comprise *Acer platanoides* (Norway Maple), *Acer pseudoplatanus* (Sycamore), *Castanea sativa* (Sweet Chestnut) and *Robinia pseudoacacia* (False-acacia). The field-layer comprises rough grasses and ruderal herbs including *Anthriscus sylvestris* (Cow Parsley), *Dactylis glomerata* (Cock's-foot) and *Urtica dioica* (Common Nettle).

Target Note 6. Semi-improved, un-mown grassland. *Holcus lanatus* (Yorkshire-fog) dominates much of the 20 cm sward with *Agrostis stolonifera* (Creeping Bent) and *Arrhenatherum elatius* (False Oat-grass) rising to prominence in several patches. The herb species present are typical of such grasslands including *Achillea millefolium* (Yarrow), *Plantago lanceolata* (Ribwort Plantain) and *Stellaria graminea* (Lesser Stitchwort). Several ruderal species have become established *Rumex obtusifolius* (Broad-leaved Dock) and *Senecio jacobaea* (Common Ragwort). In disturbed areas towards the edge of the grassland annular species such as *Arenaria serpyllifolia* (Thyme-leaved Sandwort) and *Euphorbia peplus* (Petty Spurge) occur occasionally.

Target Note 7. Standing pollarded dead Oak trunk with a diameter of approximately 1 m.

Target Note 8. Semi-improved grassland previously under amenity management with several concrete planters around the edge. The sward remains uncut and is covered in abundant *Agrostis stolonifera* (Creeping Bent) and *Festuca rubra* (Red Fescue) with occasional *Agrostis capillaris* (Common Bent), *Lolium perenne* (Perennial Rye-grass). Many of the herbs present are typical

managed grassland species including *Achillea millefolium* (Yarrow), *Trifolium repens* (White Clover) and *Veronica serpyllifolia* (Thyme-leaved Speedwell). Several ephemeral / ruderal species have colonised parts of the grassland including *Arenaria serpyllifolia* (Thyme-leaved Sandwort), *Chamerion angustifolium* (Rosebay Willowherb) and *Trifolium arvense* (Hare's-foot Clover). Individuals of species that may have once been in the concrete planters have become naturalised in the sward and include *Antirrhinum majus* (Snapdragon), *Primula vulgaris* (Primrose) and *Viola ×wittrockiana* (Garden Pansy).

Target Note 9. A strip of grassland and shrub species between a wall and large fence. The grassland is similar to that of *Target Note 8.* Stands of *Pteridium aquilinum* (Bracken) and *Rubus fruticosus* agg. (Bramble) are present.

Target Note 10. Several ornamental roses planted in grassland similar to *Target Note 8.*

Target Note 11. A plant of *The Wildlife and Countryside Act 1981 Schedule 9* listed *Parthenocissus quinquefolia* (Virginia-creeper).

Target Note 12. An ornamental pond approximately 4 m by 2.5 m surrounded by ornamental planting of shrubs comprising *Acer palmatum* (Japanese maple), *Ceanothus* species (a Ceanothus)., *Choisya ternata* (Mexican Orange), *Hebe ×franciscana* (Hedge Veronica), *Lonicera nitida* (Wilson's Honeysuckle) and *Symphoricarpos albus* (Snowberry). There is a small patch of *The Wildlife and Countryside Act 1981 Schedule 9* species *Crocosmia ×crocosmiiflora* (Montbretia).

Target Note 13. A series of grasslands within the boundary fence. Previously under amenity management they have become over grown with a sward height of 15cm. The species present are typical of semi-improved grasslands such as this. *Festuca rubra* (Red Fescue), *Holcus lanatus* (Yorkshire-fog) and *Agrostis capillaris* (Common Bent) form much of the grass composition of the sward with localised patches of *Anthoxanthum odoratum* (Sweet Vernal-grass) and *Holcus mollis* (Creeping Soft-grass). The herb species present include species typical of grasslands including *Achillea millefolium* (Yarrow), *Crepis capillaris* (Smooth Hawk's-beard) and *Veronica chamaedrys* (Germander Speedwell). The presence of the calcifuge *Rumex acetosella* (Sheep's Sorrel) implies that the soils underlying the vegetation may in themselves be of low pH but subsequent improvement has removed much of the characteristic species of such habitats. Through out the grasslands there are several ornmanetal trees and shrubs including native and non-native species. These include *Acer platanoides* (Norway Maple), *Betula pendula* (Silver Birch), *Fraxinus excelsior* (Ash) and *Thuja plicata* (Western Red-cedar).

Target Note 14. A strip of ornamental planting comprising *Mahonia aquifolium* (Oregon-grape), *Hebe ×franciscana* (Hedge Veronica), *Chamaecyparis* c.f. *pisifera* 'Squarossa' (Sawara Cypress), *Rhus typhina* (Stag's-horn Sumach), *Rosa* species (a Garden Rose) and *Escallonia* 'Langleyensis' (an Escallonia),

Target Note 15. A plant of *The Wildlife and Countryside Act 1981 Schedule 9* listed *Parthenocissus quinquefolia* (Virginia-creeper).

Target Note 16. A small area of grassland similar in composition to the field-layer of *Target Note 2.*

Target Note 17. The concrete and tarmac of the site has been colonised by several ephemeral and ruderal species including *Galinsoga parviflora* (Gallant Soldier), *Lactuca virosa* (Great Lettuce) and *Polygonum aviculare* (Knotgrass). Several small plants of *Buddleja davidii* (Butterfly-bush) are scattered across the site.

Target Note 18. A line of 9 20 m tall *Populus ×canadensis* 'Robusta' (Hybrid Poplar).

Animal Target Notes

1 Scattered trees no bat roost potential

2 Regularly mown grassland, no reptile potential

3 Large tree base, potential habitat for stag beetles

4 Large oak with rot hole where branch has broken in middle of fork – bat roost potential

5 Shrubs, potential for nesting birds

6 Rough grassland and tall ruderal, too isolated to provide suitable habitat for reptiles

7 Area of grassland with numerous scattered trees

8 Horse chestnut tree with rot hole and broken branch – bat roost potential

9 Dead stump, potential habitat for stag beetles

10 Dead stump, potential habitat for stag beetles

11 Sweet Chestnut tree with bat roost potential

12 Large oak with woodpecker holes – bat roost potential

13 Disused badger sett, 4 holes

14 Fallen tree, good for invertebrates

15 Rough grassland, isolated + occasionally mown, low reptile potential

16 Oak with low bat roost potential

17 Building with bat roost potential

18 Building with bat roost potential

19 Building with bat roost potential

20 Building with bat roost potential

21 Building with bat roost potential

22 Building with bat roost potential

23 Building with bat roost potential

24 Fox warren, disused

25 Ornamental pond

APPENDIX 3 – SPECIES LISTS

Species	TN1	TN2	TN3	TN5	TN6
A) Trees, Shrubs and Climbers					
×Cupressocyparis leylandii (Leyland Cypress)	o	-	-	-	-
Acer campestre (Field Maple seedling)	-	o	-	-	-
Acer pseudoplatanus (Sycamore)	-	-	r	o	-
Aesculus hippocastanum (Horse-chestnut seedling)	-	o	-	-	-
Aesculus hippocastanum (Horse-chestnut)	o	o	-	-	-
Castanea sativa (Sweet Chestnut)	o	-	-	r	-
Chamaecyparis cf. *pisifera* (Sawara Cypress)	-	-	r	-	-
Fraxinus excelsior (Ash)	-	-	r	-	-
Ilex aquifolium (Holly)	o	o	-	-	-
Quercus cerris (Turkey Oak)	-	r	-	-	-
Quercus ilex (Evergreen Oak)	-	-	r	-	-
Quercus robur (Pedunculate Oak Seedling)	-	o	-	-	-
Quercus robur (Pedunculate Oak)	-	r	r	-	-
Robinia pseudoacacia (False-acacia)	-	-	-	r	-
Rubus fruticosus agg. (Bramble)	-	-	-	o	lf
Tilia ×europaea (Lime)	-	o	-	-	-
Tilia platyphyllos (Large-leaved Lime)	-	r	-	-	-
B) Herbs and Ferns					
Achillea millefolium (Yarrow)	-	-	f	-	lf
Agrostis capillaris (Common Bent)	-	-	f	-	-
Agrostis stolonifera (Creeping Bent)	-	-	-	f	a
Alliaria petiolata (Garlic Mustard)	lf	-	-	-	-
Anisantha sterilis (Barren Brome)	-	r	-	-	-
Anthriscus sylvestris (Cow Parsley)	lf	-	-	o	-
Arrhenatherum elatius (False Oat-grass)	-	-	-	-	o
Avena sterilis (Winter Wild-oat)	-	-	-	-	r
Bromus hordeaceus (Soft-brome)	-	-	lf	-	-
Calystegia sepium (Hedge Bindweed)	-	lf	-	-	-
Cerastium fontanum (Common Mouse-ear)	-	lf	-	-	-
Cirsium arvense (Creeping Thistle)	-	-	-	-	r
Cirsium vulgare (Spear Thistle)	-	-	r	-	r
Convolvulus arvensis (Field Bindweed)	-	-	o	-	-
Conyza cf. *canadensis* (Canadian Fleabane)	-	o	lf	-	-
Corylus avellana (Hazel seedling)	-	-	-	-	r
Crepis capillaris (Smooth Hawk's-beard)	-	o	d	-	-
Dactylis glomerata (Cock's-foot)	-	r	-	r	lf
Elytrigia repens (Common Couch)	-	-	-	o	lf
Epilobium hirsutum (Great Willowherb)	-	-	-	-	r
Euphorbia peplus (Petty Spurge)	-	-	-	-	r
Festuca rubra (Red Fescue)	-	lf	-	-	-
Geranium molle (Dove's-foot Crane's-bill)	-	-	o	-	-
Geranium pyrenaicum (Hedgerow Crane's-bill)	-	-	-	-	r
Geranium robertianum (Herb-Robert)	-	r	-	-	-
Geum urbanum (Wood Avens)	o	o	-	-	-

Holcus lanatus (Yorkshire-fog)	-	-	-	-	ld
Holcus mollis (Creeping Soft-grass)	-	-	-	-	lf
Hordeum murinum (Wall Barley)	-	r	-	-	-
Hyacinthoides non-scripta (Bluebell)	o	-	-	-	-
Hypochaeris radicata (Cat's-ear)	-	-	o	-	-
Lactuca virosa (Great Lettuce)	-	r	-	-	-
Lapsana communis (Nipplewort)	-	r	-	-	-
Lolium perenne (Perennial Rye-grass)	-	o	a	-	-
Malva sylvestris (Common Mallow)	-	r	-	-	-
Pentaglottis sempervirens (Green Alkanet)	-	r	-	-	-
Plantago lanceolata (Ribwort Plantain)	-	-	f	-	lf
Rumex obtusifolius (Broad-leaved Dock)	-	-	-	-	r
Senecio jacobaea (Common Ragwort)	-	r	r	-	lf
Sisymbrium officinale (Hedge Mustard)	-	-	-	-	r
Sonchus oleraceus (Smooth Sow-thistle)	-	r	r	-	-
Stellaria graminea (Lesser Stitchwort)	-	-	-	-	r
Taraxacum agg. (Dandelion)	-	r	f	-	-
Trifolium arvense (Hare's-foot Clover)	-	-	r	-	-
Trifolium repens (White Clover)	-	-	f	-	-
Triticum aestivum (Bread Wheat)	-	-	-	-	r
Urtica dioica (Common Nettle)	-	lf	-	la	lf
Viola hirta (Hairy Violet)	lf	-	-	-	-

Species	TN8	TN9	TN13	TN17	Ornamental Shrubs
A) Trees, Shrubs and Climbers					
Acer platanoides (Norway Maple)	-	-	o	-	r
Buddleja davidii (Butterfly-bush)	-	-	-	o	-
Ceanothus species (a Ceanothus species)	-	-	-	-	r
Cedrus libani (Cedar-of-Lebanon)	-	-	r	-	-
Chamaecyparis c.f. *pisifera* 'Squarossa' (Sawara Cypress)	-	-	-	-	r
Choisya ternata (Mexican Orange)	-	-	-	-	lf
Crocosmia ×crocosmiiflora (Montbretia)	-	-	-	-	r
Escallonia 'Langleyensis' (an Escallonia)	-	-	-	-	f
Eucalyptus cf. *viminalis* (Ribbon Gum)	-	-	r	-	-
Ligustrum vulgare (Wild Privet)	-	-	-	-	r
Lonicera nitida (Wilson's Honeysuckle)	-	-	-	-	lf
Mahonia aquifolium (Oregon-grape)	-	-	-	-	r
Prunus avium (Wild Cherry)	-	-	r	-	-
Rhus typhina (Stag's-horn Sumach)	-	-	r	-	r
Rosa species (a Garden Rose)	-	-	-	-	lf
Rubus fruticosus agg. (Bramble)	-	lf	o	-	-
Symphoricarpos albus (Snowberry)	-	-	-	-	r
Thuja plicata (Western Red-cedar)	-	-	r	-	-
Veronica ×franciscana (Hedge Veronica)	-	-	-	-	lf
B) Herbs and Ferns					
Achillea millefolium (Yarrow)	lf	-	lf	-	-

Agrostis capillaris (Common Bent)	o	-	-	-	-
Agrostis stolonifera (Creeping Bent)	a	-	f	-	-
Anagallis arvensis ssp. *arvensis* (Scarlet Pimpernel)	-	lf	-	-	-
Anisantha sterilis (Barren Brome)	-	r	-	-	-
Anthoxanthum odoratum (Sweet Vernal-grass)	-	lf	f	-	-
Antirrhinum majus (Snapdragon)	r	-	-	-	-
Arenaria serpyllifolia (Thyme-leaved Sandwort)	-	-	-	o	-
Calendula arvensis (Field Marigold)	-	r	-	-	-
Calystegia sepium (Hedge Bindweed)	-	-	-	r	-
Cerastium fontanum (Common Mouse-ear)	-	lf	lf	-	-
Chamerion angustifolium (Rosebay Willowherb)	r	-	-	-	-
Chelidonium majus (Greater Celandine)	-	-	-	r	-
Cirsium vulgare (Spear Thistle)	r	-	o	-	-
Conyza cf. *canadensis* (Canadian Fleabane)	o	o	o	f	-
Crepis capillaris (Smooth Hawk's-beard)	o	o	o	-	-
Dactylis glomerata (Cock's-foot)	-	r	-	-	-
Elytrigia repens (Common Couch)	r	-	o	-	-
Epilobium ciliatum (American Willowherb)	r	-	-	-	-
Epilobium hirsutum (Great Willowherb)	-	-	-	r	-
Equisetum arvense (Field Horsetail)	-	o	-	-	-
Eupatorium cannabinum (Hemp-agrimony)	-	-	-	r	-
Euphorbia peplus (Petty Spurge)	-	-	-	o	-
Festuca rubra (Red Fescue)	a	lf	f	-	-
Galinsoga parviflora (Gallant Soldier)	-	-	-	o	-
Geranium molle (Dove's-foot Crane's-bill)	r	-	-	-	-
Geranium robertianum (Herb-Robert)	-	r	r	-	-
Geum urbanum (Wood Avens)	-	o	-	o	-
Holcus lanatus (Yorkshire-fog)	o	-	a	-	-
Holcus mollis (Creeping Soft-grass)	-	-	lf	-	-
Hordeum murinum (Wall Barley)	r	r	r	o	-
Hypochaeris radicata (Cat's-ear)	o	-	-	-	-
Lactuca virosa (Great Lettuce)	r	r	-	o	-
Lapsana communis (Nipplewort)	-	r	-	-	-
Lolium perenne (Perennial Rye-grass)	o	o	o	-	-
Malva sylvestris (Common Mallow)	-	r	-	-	-
Mycelis muralis (Wall Lettuce)	-	-	-	r	-
Origanum vulgare (Wild Marjoram)	-	-	lf	-	-
Pentaglottis sempervirens (Green Alkanet)	-	r	o	-	-
Phleum pratense (Timothy)	-	r	-	-	-
Plantago lanceolata (Ribwort Plantain)	o	-	f	o	-
Polygonum aviculare (Knotgrass)	-	-	-	o	-
Primula vulgaris (Primrose)	r	-	-	-	-
Pteridium aquilinum (Bracken)	-	la	-	-	-
Pulicaria dysenterica (Common Fleabane)	-	-	r	-	-
Ranunculus repens (Creeping Buttercup)	-	-	lf	-	-
Rorippa sylvestris (Creeping Yellow-cress)	r	-	-	-	-
Rumex acetosella (Sheep's Sorrel)	-	-	lf	-	-
Senecio jacobaea (Common Ragwort)	-	r	o	-	-
Solidago canadensis (Canadian Goldenrod)	-	r	-	-	-
Sonchus oleraceus (Smooth Sow-thistle)	-	r	r	o	-
Stellaria graminea (Lesser Stitchwort)	-	-	r	-	-
Taraxacum agg. (Dandelion)	-	r	o	-	-

Trifolium arvense (Hare's-foot Clover)	r	-	-	-	-
Trifolium repens (White Clover)	lf	-	lf	-	-
Urtica dioica (Common Nettle)	-	r	r	r	-
Verbena officinalis (Vervain)	-	-	-	r	-
Veronica chamaedrys (Germander Speedwell)	-	-	lf	-	-
Veronica serpyllifolia (Thyme-leaved Speedwell)	r	-	-	-	-
Viola ×wittrockiana (Garden Pansy)	r	-	-	-	-
Viola cf. *riviniana* (Common Dog-violet)	-	r	-	-	-

APPENDIX 4 – LEGISLATION

Bats

Bats are European Protected Species listed in Scotland on The Conservation (Natural Habitats, & c.) Regulations 1994 (as amended). This legislation makes it an offence to:

- deliberately capture, injure or kill;
- deliberately disturb, including in particular any disturbance which is likely (a) to impair their ability - (i) to survive, to breed or reproduce, or to rear or nurture their young; or (ii) hibernate or migrate, where relevant; or (b) to affect significantly the local distribution or abundance of the species to which they belong.
- damage or destroy a breeding site or resting place; and
- possess, control, transport, sell, exchange, or offer for sale or exchange.

Badger

Meles meles (Badger) is protected in Britain under the Protection of Badgers Act 1992 and Schedule 6 of the Wildlife and Countryside Act 1981 (as amended).

The legislation affords protection to Badgers and Badger setts, and makes it a criminal 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;
- to obstruct access to, or any entrance of, a Badger sett; or
- to disturb a Badger when it is occupying a sett.

Common Reptiles

Lacerta vivipara (Common Lizard), *Anguis fragilis* (Slow-worm), and *Vipera berus* (Adder) are listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), in respect of Section 9(5) and part of Section 9(1).

Under the above legislation it is an offence to:

- intentionally or deliberately kill or injure any individual of such a species; or
- sell or attempt to sell any part of the species alive or dead.

Nesting Birds

All species of bird are protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended).

The legislation makes it an offence to intentionally:

- kill, injure or take any wild bird;
- take, damage or destroy the nest of any wild bird while that nest is in use or being built; or
- take or destroy an egg of any wild bird.

Berkeley Homes (Central London) Limited

Latchmere House Bat Survey Report

854891

DECEMBER 2013

RSK GENERAL NOTES

Project No.: 854891

Title: Latchmere House – Bat Survey Report

Client: Berkeley Homes (Central London) Limited

Date: December 2013

Office: Hemel Hempstead

Status: Rev 01

Author and Project Manager	Rosmund Benbow	**Technical reviewer**	Sarah Harmer
Signature		Signature	
Date:	19.12.13	Date:	02.09.13

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This work has been undertaken in accordance with the quality management system of RSK Environment. Ltd.

CONTENTS

A. EXECUTIVE SUMMARY

1. This report provides details of bat surveys carried out at Latchmere House, Ham Common, Richmond, Surrey, (Ordnance Survey Grid Reference TQ 184 172), in connection with a planning application for the redevelopment of the site.

2. The initial inspection was carried out at thirteen buildings on 17th April 2013. The survey involved the inspection of all exterior and roof spaces of the buildings. During the initial no signs of bats were found in any building, but three buildings (*Plates 1, 2 and 3*- Main house, Building 9 and 12) had areas which could not be fully accessed during the inspection and had some suitability for bats, hence, emergence surveys were therefore carried out.

3. Two emergence surveys were carried out between 18th June and 6th August 2013 on the Main house, Building 9 and Building 12. During these surveys bats were recorded commuting through the site but no bats were recorded emerging from the buildings. However, during the second survey on Building 12, a single Soprano Pipistrelle (*Pipistrellus pygmaeus)* bat re- entered the building. A third survey was therefore carried out September 3rd 2013, at Building 12, during this no further bats were seen.

4. A European Protected Species (EPS) licence will be required for demolition of Building 12. While this building is being demolished, the roof must be removed by hand, work will be supervised by a licensed bat ecologist.

5. Alternative roosting locations will need to be provided. Ideally, long-term roosts could be provided in the new buildings, involving roosts designed-into brick elevations of the south- or west-facing aspects so that bats can access cavities in walls. Bat boxes will need to be attached to surrounding trees to give alternative roosts during work and would need to be placed in the surrounding trees prior to demolition of Building 12.

B. INTRODUCTION

B.1. Background to Activity / Development

This report provides details of an initial bat survey on thirteen buildings and emergence surveys on three of those buildings at Latchmere House, Ham Common, Richmond, Surrey, (Ordnance Survey Grid Reference TQ 184 172).

Latchmere House Young Offenders Institution has been unoccupied since 2011, and it is proposed to convert the existing main house into apartments, while all other buildings on the site will be demolished, and brand new houses built.

The initial inspection was carried out by David Cove on 17th April 2013, and involved inspection of all exterior and roof spaces of all thirteen buildings. Three buildings had areas which could not be fully inspected (Main house, Building 9 and 12 in *Figure 1*). Emergence surveys deemed appropriate to carry out.

This report is structured in the same way as a European Protected Species licence application *Method Statement Document 1 Background and Supporting Information* to enable easy transfer of information into a licence application (which is needed for demolition of Building 12) and to ensure that all issues relevant to obtaining a licence are addressed at an early stage.

B.2. Full details of the proposed works at the site

The proposals for the site include the following:

- change of use of the main house from offices to that of residential apartments requiring total conversion of the building, including re-pointing; and
- demolition of all other buildings on the site.

C. SURVEY AND SITE ASSESSMENT

C.3. Pre-existing Information on the Bat Species at the Site

Data records for the site were provided by Greenspace Information for Greater London (GiGL) 1 km around site, they showed records for Brown Long-eared Bat *(Plecotus auritus*), Common Pipistrelle *(Pipistrellus pipistrellus)*, Serotine *(Eptesicus serotinus)* and Soprano Pipistrelle *(Pipistrelle pygmaeus*).

D.1. Status of Species

The species that were recorded using building 12 were identified as Soprano Pipistrelle (*Pipistrellus pygmaeus).* Soprano Pipistrelle Bats are common and widespread in the UK.

Other species commuting through the site include Brown Long-eared Bat *(Plecotus auritus*), Common Pipistrelle *(Pipistrellus pipistrellus)* and Soprano Pipistrelle *(Pipistrelle pygmaeus*).

C.3. Objectives of the Survey

This report contains details of bat surveys carried out at Latchmere House and its outbuildings (Ordnance Survey Grid Reference TQ 184 172). The survey included detailed inspection of the buildings for bats, followed up by a series of emergence surveys. Surveys have been commissioned to inform planning and to ensure that no bats are affected by the proposed redevelopment.

C.4. Scaled Plan / Map of Survey Area

Figure 1 provides a site location; *Figure 2* shows the existing overall site layout with emergence survey results and *Plate 1* Main House, *Plate 2* Building 9 and *Plate 3* Building 12.

C.5. Site / Habitat Description

The site is located between Kingston-Upon-Thames and Richmond-Upon-Thames (TQ 185 712) and comprises a series of buildings (including a Victorian house, Prison cells and workshops), grassland, ornamental shrubbery, a pond, scattered trees and broad-leaved woodland. The site is bordered to the south, east and west by residential properties. To the north it borders Ham Common; 40 ha of secondary woodland and grassland. Richmond Park borders Ham Common and lies 300 m to the east of Latchmere House. Richmond Park is a designated Special Area of Conservation (SAC), National Nature Reserve (NNR) and a Site of Special Scientific Interest (SSSI).

C.6. Field Surveys

C.6.1. Survey Methods

Initial Bat Survey:

As bats are crevice dwelling mammals it is often difficult to thoroughly inspect buildings for bats and evidence of bats without a destructive search, which is not generally practical or acceptable. An example of this would be where bats roost between the roofing felt and tiles. These areas cannot be inspected, but a surveyor would know that bats might roost here because there are places where bats could gain entry from the outside.

All buildings were therefore assessed for their **bat roost potential** according to the following factors that influence the likelihood of bat roosting.

- Surrounding habitat: whether there are potential flight-lines and bat foraging areas nearby.
- Construction detail: the type and construction of architectural features such as attics, soffit boxes, lead flashing and hanging tiles that could be used by roosting bats. Some construction details and materials are more favourable to bat occupation than others.
- Building condition: whether the building has no roof or has a sound roof without any potential bat-access points.
- Internal conditions: bats favour sheltered locations with a stable temperature regime, protection from the elements and little wind/light/rain penetration.
- Potential bat-access points: whether there is flight and crawl access.
- Potential roosting locations: descriptions of all bat-accessible voids, cracks and crevices.

Descriptions of the building were recorded onto specially-designed survey sheets, and digital photographs were taken as a record. The building was categorised according to their potential to support roosting bats as per criteria shown in Table 1:

Table 1. Classification criteria for Bat Roosting Potential (BRP) of Buildings and Built structures.

Category (Potential to support roosting bats)	Description
Negligible Potential	Buildings with no features suitable for supporting roosting bats. Modern, well maintained buildings or built structures that provide few opportunities for bat access/roosting (i.e. with no cracks or crevices); composed of prefabricated steel and sheet materials; no internal loft space; high level of regular disturbance; high interior light levels and subject to large temperature fluctuations. Buildings may be surrounded by poor or sub-optimal bat foraging habitat. No evidence of bats found.
Low Potential	Buildings with limited features to support roosting bats - shallow crevices where mortar is missing between brickwork. Buildings may have large open locations subject to large temperature fluctuations. Buildings may be surrounded by poor or sub-optimal bat foraging habitat. No evidence of bats found.
Moderate Potential	Buildings with some features suitable for roosting bats – building usually of brick or stone construction with a small number of features suitable for roosting bats – loose roof or ridge tiles, gaps in brickwork, gaps under fascia boards, and/or sealed internal loft space. No evidence of bats found.
High Potential	Buildings with a large number of features or extensive areas with potential for roosting bats. Sheltered locations with a stable temperature regime and suitable access points. Features can include: weatherboarding and/or hanging tiles with gaps/large (>20cm) roof timbers with mortise joints, cracks, holes); poorly maintained fabric providing ready access into roofs, walls, but at the same time not being draughty and cool; large and complicated roof void with unobstructed flying spaces. No evidence of bats found.
Confirmed Roost	Bats or evidence of bats recorded within the building during the initial inspection surveys or during dusk/dawn surveys. A confirmed record (supplied by records centre/local bat group) would also apply.

The buildings were then inspected for **evidence of bats**. Visual, systematic examinations were made for bats and evidence of bats, both internally and externally, of the following:

- wall, window and door surfaces;
- window and door frames;
- wall bases;
- wall ledges and wall tops;
- cracks, crevices and sheltered voids;
- the floors and stored items; and
- external features such as soffits and lead flashing.

Evidence of roosting bats includes droppings, urine stains, staining from fur-oils, scratch marks, wear marks, feeding remains, dead bats, odour, squeaking and chattering, and in some cases the absence of cobwebs.

Bat droppings can prove beyond doubt that bats use a building and can help to identify roosting locations because piles often accumulate beneath roosting sites or entrance points. The location, size, shape, texture and colour of the droppings can be used to aid species identification. All droppings found were compared to a reference collection of droppings from known species. The number and condition (age) of droppings can indicate the size of the roost and when it was last used.

Urine stains, staining from fur-oils, scratch marks and wear marks are sometimes found underneath or around the entrances to roosting sites. This evidence is often found in conjunction with other evidence such as droppings.

Characteristic odour and squeaks or chattering from individual bats can often alert a surveyor to the presence of bats.

The absence of cobwebs from a hole or roof apex which is otherwise covered in cobwebs can help to locate entrance points or roosting places for bats. This evidence is often found in conjunction with other evidence such as droppings.

Bat Emergence Surveys

Two emergence surveys were conducted on three buildings and a third survey on Building 12. The surveys involved the positioning of four surveyors so that all elevations of the buildings could be observed for the emergence (dusk survey) or re-entry (dawn survey).

Surveyors watched for bats emerging from any part of the buildings noting the emergence time and location on survey sheets. Each surveyor was equipped with a two-way radio so that all observers were kept aware of any seen bats emerging elsewhere or approaching the building from other directions.

Additionally, all observers were equipped with bat detectors (Bat Box Duet or Echo Meter 3), for listening for the echolocation calls of bats as they emerged. All calls were recorded using stereo recorders. If the identification of bats was in any doubt, these recordings were analysed using BatSound® sound analysis software.

C.6.2. Timing

The bat inspection survey was completed within a day on 5th April 2013 by David Cove assisted by Emily Eaton and Jess Breeze, all of RSK. The emergence surveys were carried out during the period of 18th June – 3rd September 2013.

Table 2. Emergence Survey Times

Date	Building number	Survey Type	Sunset/ sunrise Time	Survey Start time	Survey End Time
16/06/13	Main house	Emergence	2121	2115	2330
08/07/13	9	Emergence	2147	2130	2305
09/07/13	Main house	Re- entry	0453	0325	0453
09/07/13	12	Emergence	2147	2130	2305
05/08/13	9	Emergence	2041	2030	2230
06/08/13	12	Re- entry	0532	0330	0540
03/09/13	12	Emergence	1942	1930	2130

C.6.3. Weather Conditions

All emergence surveys were carried out in suitable weather conditions, full details are provided in Table 3.

Table 3. Weather Conditions for emergence surveys

Date	Survey Type	Temp 0^{C}	Wind (Beaufort)	Cloud (Octas)	Rain
18/06/13	Emergence	14.5 -17	0/1	4-8	Nil
08/07/13	Emergence	19.1 - 21.5	0 (Haze)	2/3	Nil
09/07/13	Re- entry	13.9 -15.2	1/2	0 (haze)	Nil
09/07/13	Emergence	18 - 20.2	0	0/1	Nil
05/08/13	Emergence	16.6 -18	0/1	4-8	Nil
06/08/13	Re- entry	11.6 -14	0	0	Nil
03/09/13	Emergence	19.7 - 23.5	0	1-8	Nil

C.6.4. Personnel Involved

The initial survey was carried out by David Cove assisted by Emily Eaton and Jess Breeze of RSK. David Cove holds a Natural England licence allowing the disturbance of bats for the purposes of survey in all counties of England (licence number 20122093). David has extensive experience of surveying for bats in all types of building, and has been surveying bats for 20 years. He is a former police wildlife officer with 15 years experience in that capacity.

The emergence surveys were lead by Rosy Benbow assisted by Victoria Gilbey, Rob Fear, Laura Murray, Corin Simmonds. All are qualified RSK ecologists and experienced in carrying out bat emergence surveys and are practiced in the use of bat detectors.

C.6.5. Equipment Used

Building Survey:

The survey was carried out using 500, 000 candle power torches; headtorches; a ladder; a digital camera; an endoscope; and binoculars.

Emergence Survey

The emergence survey was carried out using Bat Detectors (Bat Box Duet and Echo Meter 3), Edirol stereo recorders, and radios.

C.7. Survey Results

C.7.1. Bat Roost Potential

Building 1 – Main House (See Plate 1)

The main house is a three-storey house constructed of brick with a pitched and hipped roof covered with slate tiles. There are a total of four roof voids. Parts of the roof have been renovated in recent years and have Tyvek lining beneath the slates.

Other parts of the roof have either F1 bitumastic felt or no lining. There are slipped and missing tiles throughout the roof covering and this is evident internally where light penetrates into the roof void.

The main house has three dormers on the front elevation all with hanging tiles and these are lifted in places that could allow bats to enter the space between the hanging tiles and the walls of the dormers.

There are soffits on most elevations of the building and most of these are in good condition. They do not however fit flush to the wall and the gaps are of sufficient size to allow bats to enter the roof void or use the wall plates for roosting.

Bat Roost Potential – Potential bat roosting locations include gaps between the roof tiles and the various linings where bats can access these areas through slipped, missing or broken slates, at the roof apex within the loft voids and beneath the hanging tiles on the dormers.

These locations all offer shelter and darkness for bats to roost. The loft voids are dark, sheltered, undisturbed and warm and therefore have potential to support maternity colonies. This building is also suitable for transitional, mating and night roosting bats. The building appears to be of limited suitability for hibernating bats, although the possibility of hibernation use cannot be excluded. This building is categorised as having **HIGH** bat roosting potential.

Building 2 – Cell Block 1

This building is located at the far south-western corner of the site and the building is orientated north-west to south-east.

This building is a two-storey brick building with a flat cement roof. There are no gaps in the brickwork and the roof has no vents or other gaps where bats could access the interior of the building. There is no loft void present. There is a single-storey modern extension at the south-east corner, which is of modern construction using plastic and metal. This extension has no roof void and no other gaps where bats could enter the building.

Bat Roost Potential – There are no gaps or voids on or within this building where bats could roost and therefore has **NO** Bat Roost Potential.

Building 3 – Resettlement Building

This building is a two-storey building on the south-eastern side of the site. The building is orientated south-east to north-west. It is a brick with a flat roof. The building is in a generally good condition but there is a single gap in the brickwork on the front elevation of the building. This gap is where a single brick has been removed alongside a first floor window. This gap could allow bats access to the void between the two brick skins of the building.

There are no vents in the walls of the building that bats could access, and there is no loft void.

Bat Roost Potential – Though bats could perhaps enter through the missing brick in the front elevation of the building, the void between the two wall skins has insulation that fills the majority of the void and is therefore unsuitable for bats. No other voids or crevices exist in the building that could be used by bats. This building has **NO** bat roost potential.

Building 4 – Workshop

This is a single-storey rectangular shaped workshop on the south-east side of the site. The building is orientated south-west to north-east. It is constructed of brick with single skin walls. It has a pitched roof of corrugated metal sheets with light panels and corrugated metal gable ends. The roofline and the gable ends are sealed along their edges to the brick walls so that there are no gaps into the interior of the building. The building does not have a loft void.

Bat Roost Potential – There are no gaps or voids on or within this building where bats could roost and therefore has **NO** Bat Roost Potential.

Building 5 – Workshop 2

This is a single-storey rectangular workshop on the south-eastern side of the site. The building is orientated south-west to north-east. It is brick with single skin walls and a pitched roof constructed of corrugated asbestos-type sheets. The roofline and the gable ends are sealed along their edges so that there are no gaps into the interior of the building. The building does has a void above a suspended ceiling.

Bat Roost Potential – There are no gaps or voids on or within this building where bats can gain access to roost and therefore has **NO** Bat Roost Potential.

Building 6 – Workshop 3

This is a single-storey 'L'-shaped, modern workshop on the south-eastern side of the site. The building is orientated south-east to north-west. It has brick walls and a pitched corrugated metal roof, gables and wall tops. The metal coverings are sealed to the brick wall tops throughout with no gaps that would allow bats entry to the interior. The interior extends to the ridge with no void.

Bat Roost Potential – There are no gaps or voids on or within this building where bats can gain access to roost and therefore has **NO** Bat Roost Potential.

Building 7 – Workshop 4

This building is identical in construction to Building 6. It is rectangular, in the centre of the site, and is orientated south-east to north-west.

Bat Roost Potential – There are no gaps or voids on or within this building where bats can gain access to roost and therefore has **NO** Bat Roost Potential.

Building 8 – Workshop 5

This building is identical in construction to Buildings 6.and 7. It is rectangular, on the north-western side of the site and is orientated south-west to north-east.

Bat Roost Potential – There are no gaps or voids on or within this building where bats can gain access to roost and therefore has **NO** Bat Roost Potential.

Building 9 – Gymnasium (See Plate 2)

This building is the height of a three-storey building although it has only a single-storey internally. The building is a rectangular building and is in the north-eastern corner of the site.

The building is brick and has a steeply-pitched roof covered with slate tiles. There are single-storey extensions at both ends of the building. The roof of the building is covered with slates. The roof is in poor condition with slipped and missing tiles on both slopes of the roof. The two gable ends are not mortared and there are gaps along the whole of the lengths of the gables.

The gaps beneath the roof covering lead to a narrow void that is created between the tiles and the internal timber cladding. This void would be suitable for roosting bats and would be capable of providing sufficient space for a maternity roost of bats.

Bat Roost Potential – There are extensive gaps in the roof covering both on the slopes of the roof and at the gables potentially allowing bats to enter the void between the tiles and sarking timbers below. This building has **HIGH** roost potential.

Building 10 – Cell Block 2

This is a two-storey, irregular-shaped building at the north-eastern end of the site immediately to the south-west of the Main House. It is orientated south-west to north-east with a single-storey extension at the north-western corner.

It is constructed of brick in good condition with mostly pitched and hipped roofs that are covered with slate tiles. The roof has been well-maintained and there were no gaps into the roof void. The eaves of the roof are sealed against the walls of the building. Access was gained to all roof voids of this building, and no light penetration was evident anywhere within the void.

The small areas of flat roof associated with some areas of the single-storey extensions were of concrete construction with no gaps.

Bat Roost Potential – This building has an intact roof with no potential access to the internal roof voids. These voids would be suitable for bats if they could gain access.

Because there is no bat-access to any sheltered voids this building has **NO** roost potential.

Building 11 – Workshop 6

This is a single-storey building in the north-western corner of the site. The building is aligned south-west to north-east. It is brick with an asbestos-type sheet roof.

There are gaps along the gable edges that could allow entry by bats into the main interior of the building. It is open to the roof with no separate roof void. Internally there are no sheltered crevices or voids suitable for roosting and the building is light and draughty.

Bat Roost Potential – This building has an intact roof but with gaps along the gable edges that could potentially allow bats entry into the main body of the building. The interior is light and draughty with no suitable roosting locations. Because there are no sheltered voids, this building has **NO** roost potential.

Building 12 – Workshops and Tool Stores (See Plate 3)

This building is a large, irregular-shaped building in the north-western corner of the site. It is aligned along a south-west to north-east axis and is brick and has sections that are two-storey and single-storey.

The roof of the two-storey sections is pitched and covered with slates. The central section of the pitched was not accessed due to asbestos warning notices on the access hatch. The second pitched roof was accessed and there were gaps through the roof covering both on the slopes and at the gables that could allow access to bats to the internal void.

The central pitched roof had gaps into the internal void along the edges of both gables. There were also slipped and missing slates where bats could access the roof void. There were gaps along the eaves where bats could access the wall plate and the interior of the roof void.

All flat roof sections of the building had no access to any voids.

All external walls were intact with no crevices or gaps that could be used for roosting.

Bat Roost Potential – The two pitched roof sections of this building have gaps through the roof covering where bats could access the internal voids. Bats could also roost along wall plates where access was possible through gaps along the gables and the eaves. This building has **HIGH** roosting potential.

Building 13 – Offices

This is a square, single-storey, modern building located in the far north-western corner of the site. It is brick with a flat, felt roof. Around all elevations of the buildings at the top of the walls are plastic barge boards that are sealed along their lower edges to the brickwork. This building has a suspended ceiling internally that creates a void between that and the roof. There are no gaps on the exterior of the building that would allow bats to enter the building to access this void.

Bat Roost Potential – This building has no gaps that would allow bats to access any sheltered voids. Therefore this building has **NO** bat roost potential.

C.7.2 Evidence of Bats

Inspection Survey of Buildings

All buildings were searched for evidence of bats (bats, droppings, feeding remains and staining).

No evidence of roosting bats was found in any of the buildings at the site.

Emergence survey

Building	Date	Emergence/ Re- entry	Species	Description
12	06/08/2013	R	Soprano Pipistrelle	Re-entry at apex on gable end on north-west side of building

All other emergence surveys: **no bats recorded**

C.7.3. Constraints to Survey

Three buildings (The Main house, Building 9 and Building 12) could not be fully inspected because of lack of access to loft avoids and health and safety concerns because of the presence of asbestos. Consequently emergence surveys were carried out.

There were no constraints for survey during the emergence surveys, all aspects of the buildings could be clearly seen using 4 surveyors.

C.8. Interpretation / Evaluation of Results

The initial bat survey found no evidence of bats in the buildings, but all areas of the Main house, Building 9 and Building 12 could not be fully inspected and so roosting bats could not be ruled out.

As there was no evidence during the initial building survey and only a single Soprano Pipistrelle seen during re-entry to Building 12, it is likely that the bat population roosting at Latchmere House is very small and Building 12 was likely to be used by a lone male in a temporary roost.

D. FURTHER WORK REQUIRED

D.1 Requirement for a Protected Species Licence

Bats will be disturbed and roosts will be destroyed by works and therefore obtaining a European Protected Species licence will be necessary before these works can proceed. The legal context behind this, and some information about licence applications, is included in *Appendix 1*. Natural England takes 30 working days to process licence applications following receipt of all the relevant documentation.

D.2 Mitigation and Compensation

To ensure that the works are not detrimental to bat populations, Natural England licences are usually only granted if sufficient avoidance / mitigation / compensation is incorporated into the design of works. English Nature's Bat Mitigation Guidelines (Mitchell-Jones 2004) state that the level of mitigation (or compensation) must be proportionate to the ecological impact of the development.

A European Protected Species (EPS) licence will be required for demolition of Building 12. While this building is being demolished, work will be supervised by a licensed bat ecologist. The roof must be removed by hand to prevent any accidental injures to any bats that may be present within the roof void.

Demolition of buildings during the bat hibernation period (mid-November through to mid-March) should be avoided. The ideal time to demolish buildings would be September through to mid-November or mid-May through to beginning of May.

When the new buildings are constructed, to compensate for the loss of the roost in building 12, roosting locations will be constructed in the surrounding houses replacing building 12 in the south or west facing brick walls using Schwegler 1FR Bat Boxes, placed in groups of three built into gable ends of the building.

Alternative roosting locations will need to be provided while the building is being demolished. These should be Schwegler 2FD Tree Bat boxes which will need to be attached to surrounding trees to give alternative roosts during building works. These should be placed in the trees prior to demolition of Building 12.

Finally, an important point to note is that this section has suggested what mitigation 'should' be put in place. A strategy will however need to be agreed for the site before an EPS licence application can be produced, these details will be legally binding and Natural England will be expect all mitigation outlined in the EPS licence application to be agreed and committed to.

Natural England will also typically require planning consent to be in place before they will approve an EPS licence application.

REFERENCES

D.1. Printed Reference material

Bat Conservation Trust (2012) *Bat Surveys – Good Practice Guidelines*. Bat Conservation Trust, London.

D.1. Web Based Resources

Joint Nature Conservation Committee (Statutory Protected Sites)
http://www.jncc.gov.uk/

Multi-Agency Geographic Information for the Countryside (MAGIC)
http://www.magic.gov.uk/

FIGURES

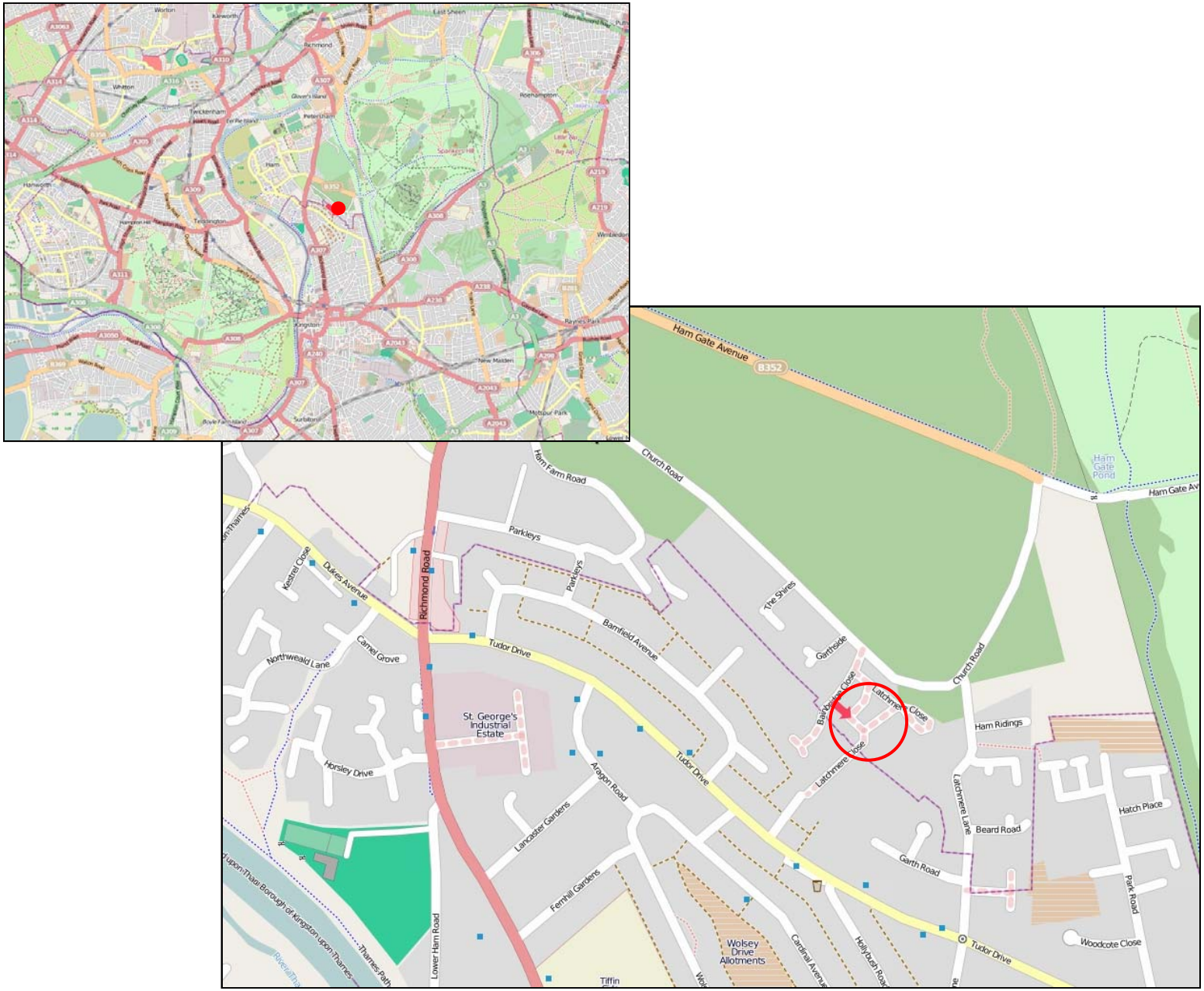


Figure 1

Project Title:
Latchmere House

Figure Title:
Site Location Plan

Contract Number: 854891

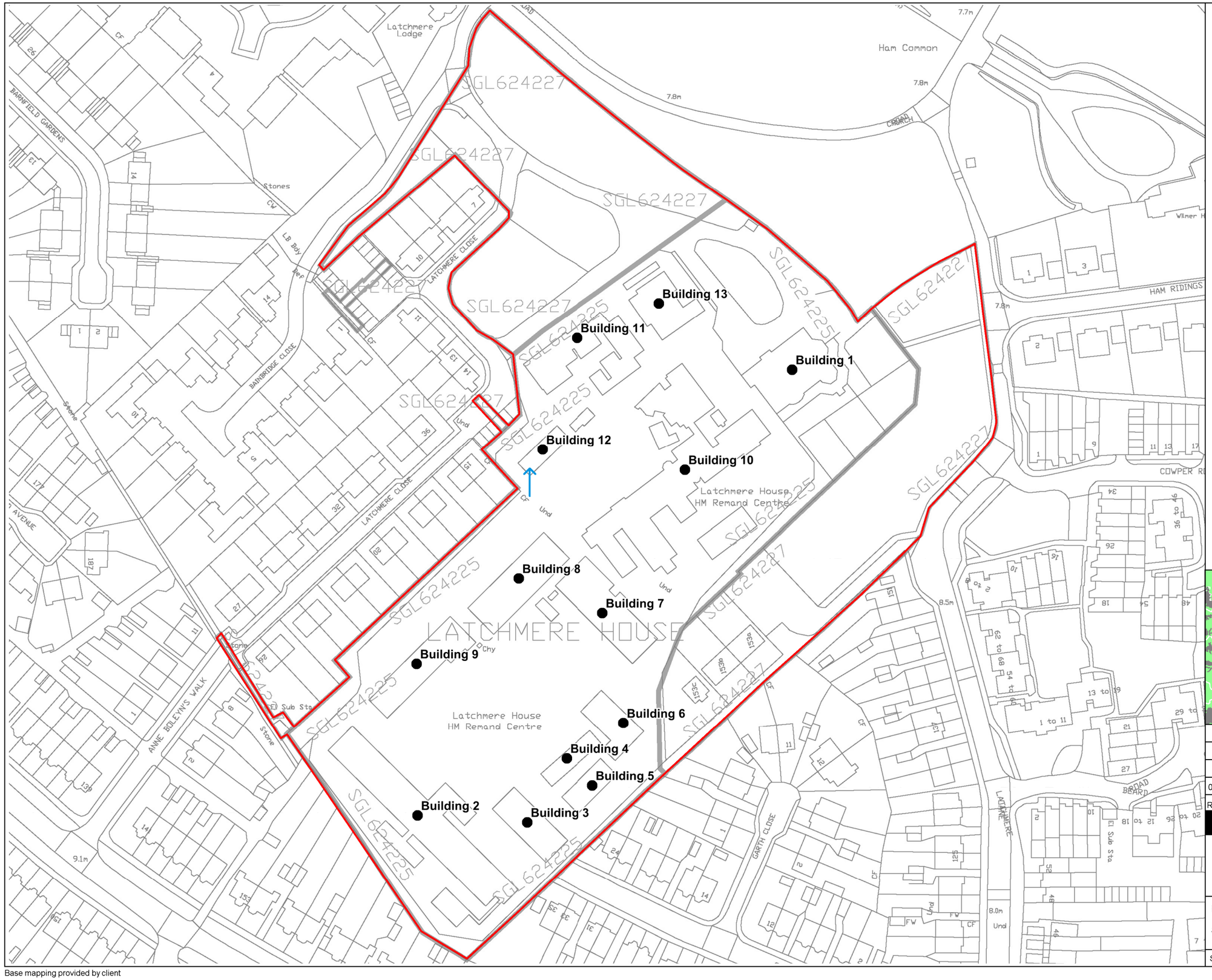
Key:

Site location

N
W E
S

RSK

FILE NAME: T:\Projects\Projects 854881 - 854900\854891- Latchmere House Phase 2\04 Data and Figures\Figures\Final Figures



Site boundary

Numbered building

Soprano Pip

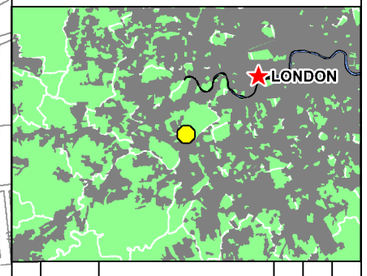
N

W E

S

0 50

metres



Rev	Date	Description	Drn	Chk	App
01	06.09.13	First Draft	JG	RB	DC

Latchmere House

RSK

Figure 2

Site Layout and Emergence Survey Results

SCALE: 1:1,250 @ A3 | REV 00

Base mapping provided by client

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Plate 1

Project Title:
Latchmere House
Building 1 – Main House
External Elevations

Contract Number: 854891

Plate 1a. Front (north-west) elevation showing dormers at third floor.

Plate 1b. Rear (south-east) Elevation.

Plate 1c. Side (north-east) elevation.

Plate 1d. Side (south-west) Elevation

Plate 2

Project Title:
Latchmere House
Building 9 – Gymnasium
External Elevations

Contract Number: 854891

Plate 1a. Front (south-east) elevation

Plate 1b. Side (south-west) Elevation.

Plate 1c. Rear (north-west) elevation.

Plate 1d. Side (north-east) Elevation

Plate 3

Project Title:
Latchmere House
Building 11 – Workshop 6
Building View

Contract Number: 854891

Plate 1. Front (north-west) elevation of building

APPENDIX 1 – LEGAL CONTEXT

All species of British bat are protected by The *Wildlife and Countryside Act 1981* (as amended) extended by the *Countryside and Rights of Way Act 2000*. This legislation makes it an offence to:

- intentionally kill, injure or take a bat;
- possess or control a bat;
- intentionally or recklessly damage, destroy or obstruct access to a bat roost; and
- intentionally or recklessly disturb a bat whilst is occupies a bat roost.

Bats are also European Protected Species listed on *The Conservation of Habitats and Species Regulations 2010*. This legislation makes it an offence to:

- deliberately capture, injure or kill a bat;
- deliberately disturb a bat, including in particular any disturbance which is likely (a) to impair their ability - (i) to survive, to breed or reproduce, or to rear or nurture their young; or (ii) hibernate or migrate, where relevant; or (b) to affect significantly the local distribution or abundance of the species to which they belong.
- damage or destroy a breeding site or resting place of a bat; and
- possess, control, transport, sell, exchange a bat, or offer a bat for sale or exchange.

All bat roosting sites receive legal protection even when bats are not present.

Where it is necessary to carry out an action that could result in an offence under *The Conservation of Habitats and Species Regulations 2010* it is possible to apply for a European Protected Species (EPS) licence from Natural England. Licences are only issued where Natural England are satisfied that there is no satisfactory alternative, works are for overriding reasons of public interest and that the favourable conservation status of bat populations will not be detrimentally affected. The former two tests should be considered carefully the client as they are outside the expertise of the ecologist, who deals primarily with the favourable conservation status test.

Natural England takes 30 working days to process licence applications following receipt of all the relevant documentation. This includes an Application Form, Reasoned Statement of Application and Method Statement in two sections: Background and Supporting Information and Delivery Information.

The Application Form contains sections that require information from both the client and the ecological consultant. The Reasoned Statement of Application should be completed by the client. The Method Statement should be completed by the ecological consultant in consultation with the client. This document includes a mitigation strategy to eliminate or reduce impacts on bats.

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Percy Mullany
Berkeley Homes (Urban Renaissance) Limited
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Letter sent via email to Percy.Mullany@BerkeleyGroup.co.uk

23rd July 2013
Our ref: 854891 – Latchmere House – Badger findings letter – Rev 0

Dear Percy,

BADGER FINDINGS AT LATCHMERE HOUSE, RICHMOND

During the bat emergence survey carried out at the above site on 17th June 2013 a single adult Badger was seen at the rear of the main house, outside the prison security fencing at approximately 22.00pm. During a subsequent emergence survey at the site on 8th July, Rosy Benbow and Laura Murray, both RSK ecologists, surveyed the grassland area to the south of the main building (outside the boundary wall) and identified a newly-dug Badger sett consisting of 5 holes (holes 3-7), 2 further holes have been found within the security fence (hole 1) and the adjoining woodland (hole 2). A single Badger hair was found in hole 6, and a fresh latrine in the adjoining woodlands, within 30m of the site. The attached map shows the location of each hole.

Sticks were placed across the entrance of each hole, wide enough apart to allow rabbits to pass through without disturbance, but close enough to be dislodged and/or broken if Badgers enter or exit. The results are provided in *Table 1* below.

Table 1 – Activity signs at Sett 1 – Latchmere House

Hole number	GPS coordinate	Sticks broken/evidence of Badger	Status of hole/sett
1	518549, 171278	Freshly dug spoil.	Active, though most likely to be a fox (Fox prints in spoil). Inside security fence.
2	518591, 171388	Sticks broken, newly dug spoil, fresh latrine.	Active, Badger sett- in wood (several holes are disused- flagged up in the Phase 1 report).
3	518557, 171270	Newly dug spoil, sticks broken and fresh bedding dragged in.	Active.

Hole number	GPS coordinate	Sticks broken/evidence of Badger	Status of hole/sett
4	518557, 171264	Newly dug spoil, sticks broken and fresh bedding dragged in.	Active.
5	518543, 171260	Clearly dug out Badger-shaped and sized hole, but sticks not moved.	Disused, right next to 6.
6	518537, 171243	Badger hair found in hole entrance, newly-dug spoil and fresh bedding dragged into hole.	Active.
7	518535, 171209	Clearly dug out Badger-shaped and sized holes.	Disused

In addition to the newly-created sett in the grassland (hole 6), a previously disused sett within the adjoining woodland (RSK, 2012) was also re-inspected. While some holes within the woodland appear disused, there are around 2 new holes which are active. A fresh latrine was found in the wood (see map attached for location) and signs of activity were seen in hole 2 *i.e.* fresh latrine along with bedding and freshly dug out holes. Badgers are notoriously mobile species, they move between setts and create new setts throughout the year therefore it is not unusual that they have re-opened this sett.

I understand that Berkeley Homes wishes to fence off the grassland to the south of the main site because this land is inside the boundary of a future planning application for a residential development. Because Badgers are legally protected (*The Protection of Badgers Act 1992*) from deliberate persecution, harm and disturbance, fencing could restrict their movement and therefore constitute disturbance within the meaning of the act.

We therefore suggest that the fencing is not Badger-proof (*e.g.* post-and-rail), or the fence contains Badger gates, Badger push-throughs (gaps in the fence) or underpasses. This would ensure that the Badgers can freely move between this sett and the wider area. Badgers will naturally find their way through, or under, the fence providing the fence is not dug into the ground or sett tunnels destroyed.

Please note that the use of hand tools (within 10m), light machinery (within 20m) or heavy machinery within 30 metres of a sett entrance could also cause disturbance to the Badgers. If the fencing-works fall within this buffer (see map attached) then we can provide advice on avoiding disturbance, licensing (should it be necessary) and ecological supervision to oversee the work.

Long term mitigation for the Badger sett which falls within the site boundary should also be discussed with the Local Planning Authority and Natural England because it is likely that a sett closure will be required before any construction works can proceed in this area. In order to close the sett, a licence will need to be obtained from

Natural England (these licences are generally only issued once planning consent has been approved). These licences take approximately 30 days for Natural England to process.

Works that disturb Badgers (even under licence) usually must be avoided between the beginning of December and the end of June, which is when Badgers are breeding. Licences will not be granted by Natural England for sett closures during this period.

Regular monitoring of the setts would provide up-to-date information for Local Planning Authority when the application is eventually submitted. RSK can provide a short letter and accompanying map detailing the locations of the new setts and details of mitigation (i.e. gaps along the bottom of the temporary fencing large enough to allow Badgers to continue to move in and out of the area) to inform the Local Planning Authority.

If you have any questions regarding this letter please do not hesitate to contact me on 07713 214586 or email rosmund.benbow@rsk.co.uk.

Yours faithfully,

Rosy Benbow
Ecological Consultant

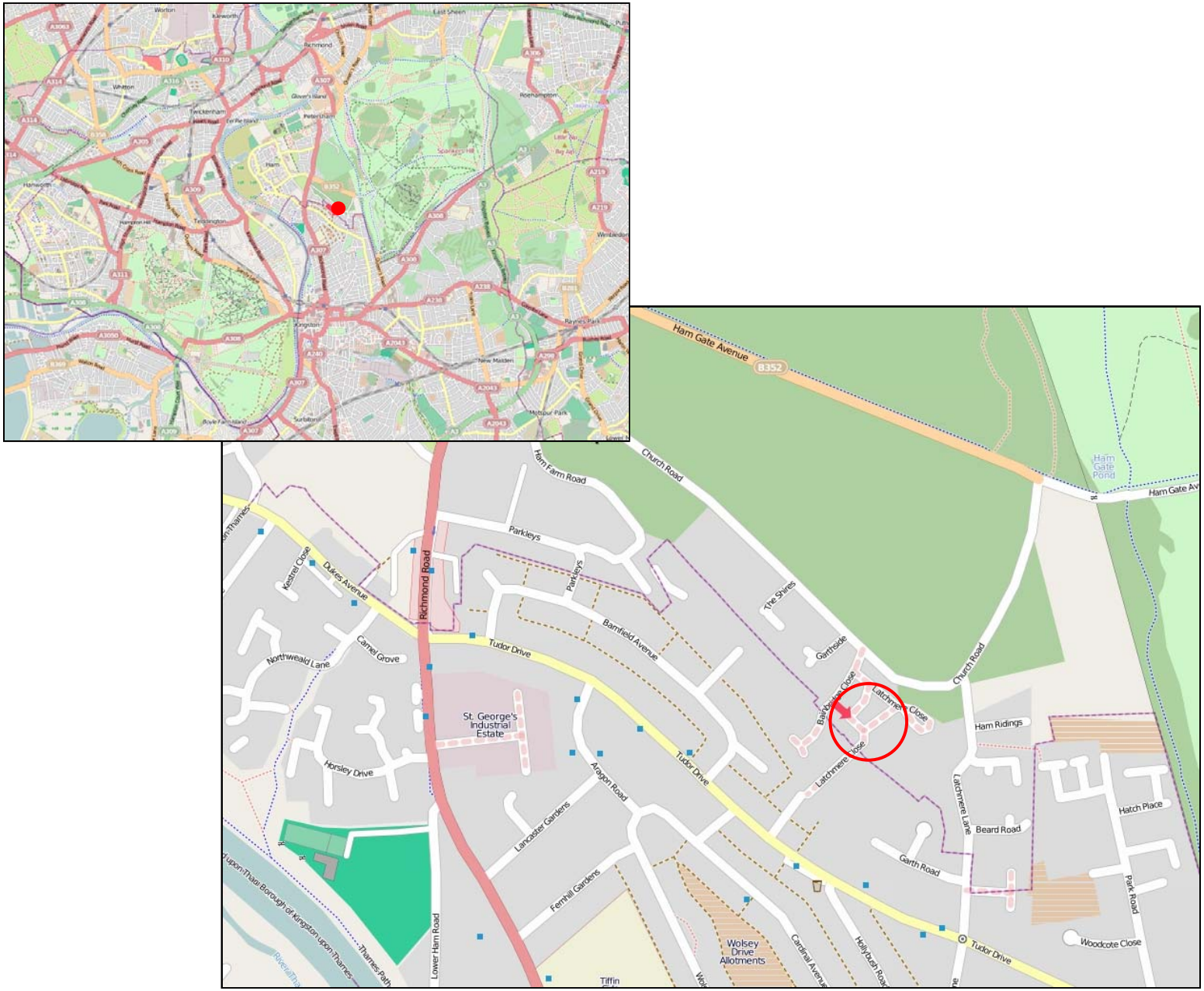

Figure 1

Project Title:
Latchmere House

Figure Title:
Site Location Plan

Contract Number: 854891

Key:

Site location

N
W E
S

RSK

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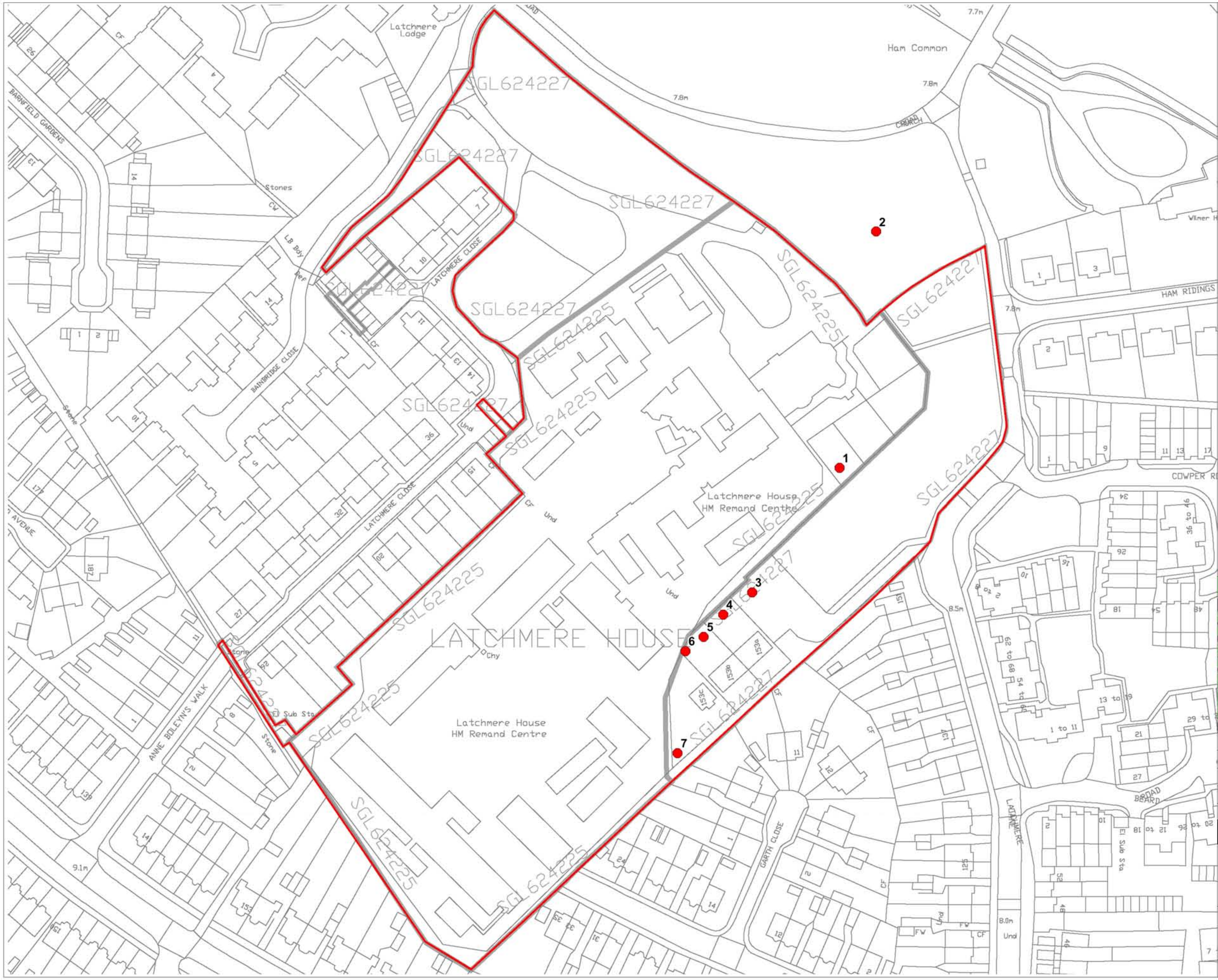

Site boundary

Badger sett

N
W E
S

0 50

metres

00	12.07.13	Badger	SP	RG	DC
Rev	Date	Description	Drn	Chk	App

Latchmere House

Figure 2

Badger Setts

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Base mapping provided by client

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Percy Mullany
Berkeley Homes (West London) Limited
380 Queenstown Road
London
SW8 4PE

Letter report sent via email to Percy.Mullany@BerkeleyGroup.co.uk

6th August 2013
Our ref: 854891 – Latchmere House – Stag Beetle Letter Report

Dear Percy,

STAG BEETLE LETTER REPORT FOR LATCHMERE HOUSE, RICHMOND

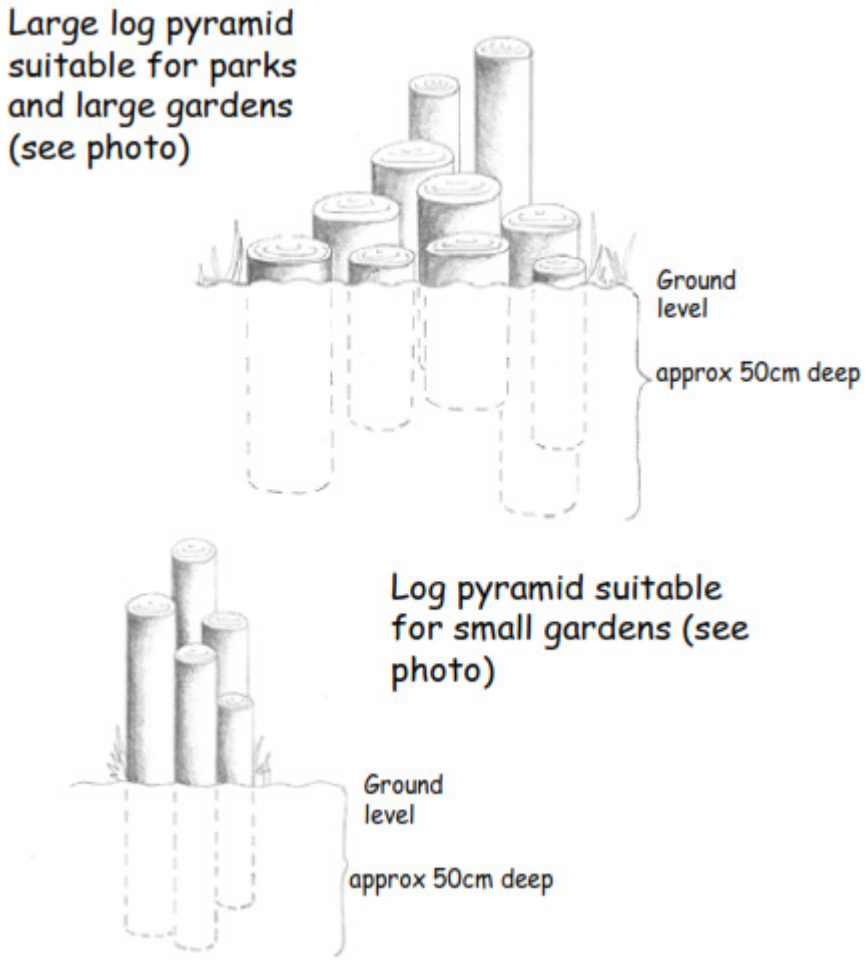
During the Background Data Search and Phase 1 Survey at Latchmere House, conducted by RSK, August 17th 2012, the site was assessed for its potential to support Stag Beetles. Stag Beetles are a London Biodiversity Action Plan Species and protected under *Schedule 5* of the *Wildlife and Countryside Act 1981*, and *Annex 2* of the *EC Habitats Directive*. They are a fairly widespread species in southern England, especially in some London boroughs including Beckenham, Dulwich, Wandsworth and Richmond. Latchmere House is in a belt of records that run through London. This means that it is advisable to check for this species if it might be affected by proposed development.

Stag Beetles are Britain's largest terrestrial beetles; they live most of their lifecycle as developing larvae in rotting wood. A female will lay her eggs in rotting wood, which the saproxylic larvae (dependent of dead or dying wood) will then live in and feed on. The peak season is Mid-May to early August when adult males can be seen flying around, hence are the most appropriate time of year to confirm absence/ presence of Stag Beetles on a site. These surveys were also undertaken on warm evenings around dusk as males tend to fly around this time in search of a mate, making it the optimum time of the day to see them.

Two surveys of dead wood were undertaken. On 17th June 2013 by Victoria Gilbey, an invertebrate specialist, and on 9th July 2013 by Rosmund Benbow assisted by Emily Eaton and Jessie Hine, all of RSK. The surveys involved detailed inspection of decomposing wood and tree stumps (*Fig 1* shows the location of dead stumps at *Stag Beetle Habitat 1, 2, 3* and *4*) as well as searching for signs including flying adults, shell cases, larvae etc.

The main areas of dead wood at Latchmere House are towards the entrance, and the client has confirmed no building work will take place within this area. However, there is also an area of dead wood situated towards the back of site (*Fig 1- Stag Beetle habitat 4*) which will be removed to allow for new housing. As areas within

Richmond, *i.e.* Richmond Park, are such strong holds for the Stag Beetle it is advised that the removed dead wood be replaced with log piles and that additional log piles are incorporated into the development lay out wherever possible. These should be dug vertically into the ground allowing for the larvae to use them in much the same way as dead tree stumps, ideally forming a pyramid shape, see image below.



(Taken from PTES 'Stepping Stones for Stags')

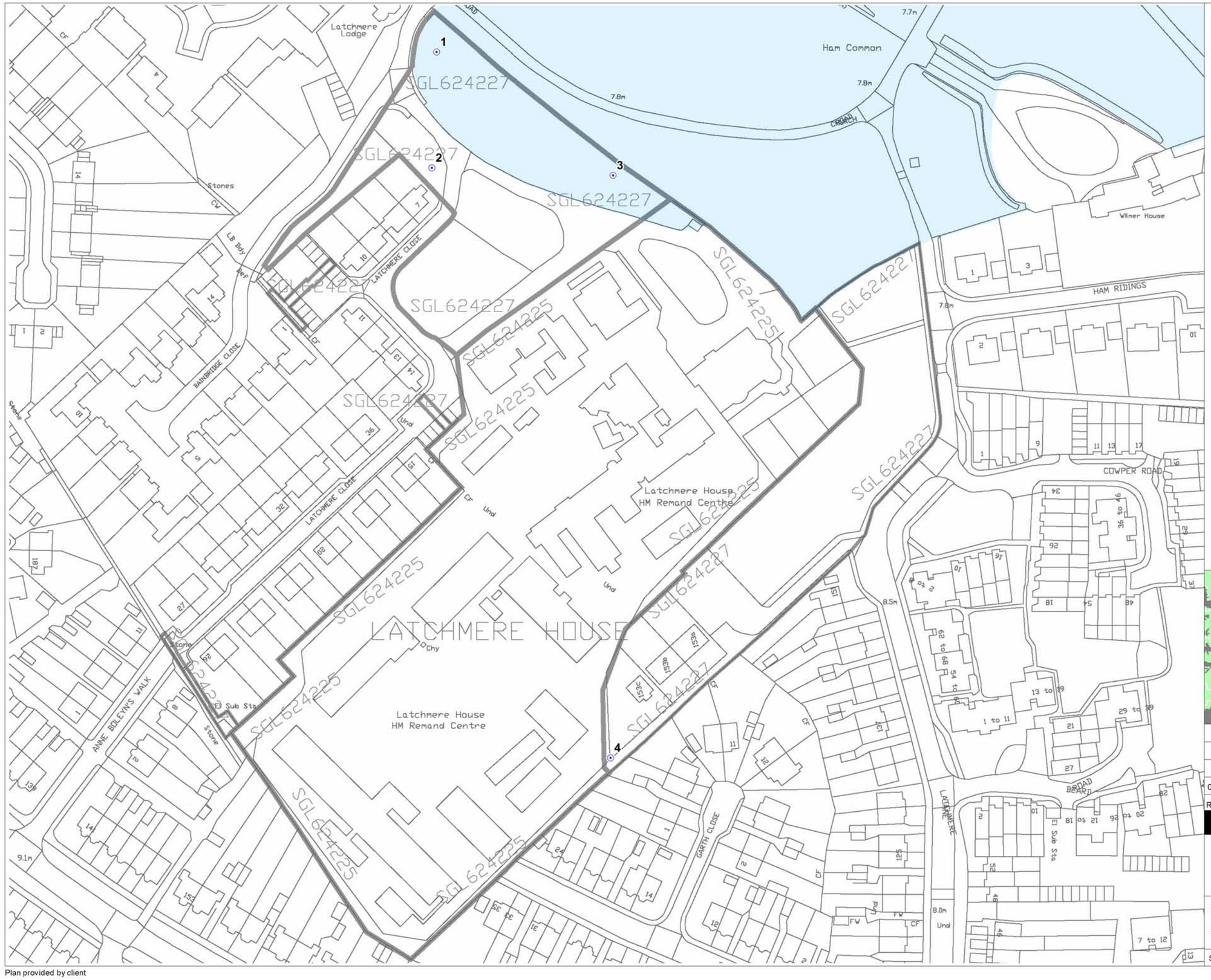
The wood should be from a broadleaved tree species ideally *Quercus robur* (Pedunculate Oak), *Fagus sylvatica* (Beech) or any type of fruit tree (Apple, Pear etc). The log pile should be placed, where possible, in partial shade to allow rotting of the wood to easily occur.

In addition, contractors will be provided with a Tool Box Talk highlighting the characteristics of the larvae should they encounter any duration site clearance works. This talk will also contain details of who to call and what measures to take.

If you have any questions regarding this letter please do not hesitate to contact me on 07713 214586 or email rosmund.benbow@rsk.co.uk.

Yours faithfully,

Rosy Benbow
Ecological Consultant



Stag Beetle Habitat

Ham Common Local Nature Reserve

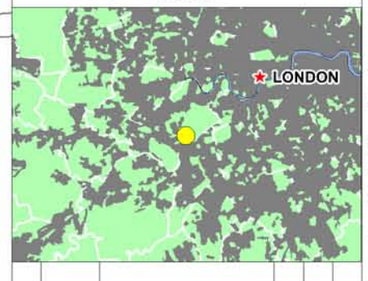
N

W E

S

0 50

metres



Rev	Date	Description	Drn	Chk	App
00	23.08.12	Animal TN	SP	RG	VG

Latchmere House

RSK

Figure 1

Stag Beetle Habitat

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Plan provided by client

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