Ref: A086068

Sent by email only to: [redacted]

17 October 2014

Dear Steve,

Toddington Lane, North Littlehampton – Update Ecological Constraints Appraisal, 2014

Background

The initial extended phase 1 habitat survey for Toddington Lane, North Littlehampton was completed by WYG in 2006 (WYG, 2006). An update Phase 1 survey was completed in 2008 (WYG, 2008). This letter report details the findings of the update ecological constraints appraisal completed at the site in April 2014 prior to the submission of the Reserved Matters application.

Planning Condition 19 states that:

'Development shall not begin until further ecological surveys have been carried out and submitted to the Local Planning Authority. These surveys shall relate to water voles, bats, birds, invertebrates and reptiles...in order to secure adequate habitat enhancement and mitigation of potential impacts of the development.'

It is understood that the application site is to be split into six Parcels (as outlined on the 'Area's Plan' produced by Simon Cooper Associates Dwg No: 10-1969-001) with two additional areas included (proposed football pitches and central wetland area). Initially the site was surveyed as a whole to assess if habitats remain as they did on previous occasions. A range of protected species surveys are to be updated in accordance with planning condition 19 and the scope of these surveys has been agreed with the LPA ecologist.

The outline planning permission was granted in December 2011 (under reference number LU/47/11) and the decision notice was subsequently issued in January 2013, once the Section 106 Agreement had been finalised. The proposed masterplan includes:

* A total of 1,260 dwellings (with the outline planning permission allowing for a further 200 dwellings on third party land);
* A local centre which will provide local convenience shopping together with other retail and food and drink uses and a health club;
* Commercial uses comprising 10,000 sq m of employment floor space (including an Enterprise Centre) and a hotel;
* Community facilities including a primary school, a community centre, a youth facility with associated all-weather multi-use games area, sports pitches, a fitness trail, allotments and land for an extension to the household waste recycling centre;
* Highway improvements – most importantly, delivery of the southern section of the Lyminster Bypass from the site southwards to the A259 Worthing Road (which must bridge both Toddington Lane and the railway line) together with all other elements of the site access strategy including closure of the Toddington Lane level crossing to vehicular traffic;
* Transport – a new bus route to serve the site, linking it with the Wick shopping centre, Littlehampton town centre and the Academy;
* An extensive network of open space, providing for both formal sports and informal recreation, including a biodiversity area in the northern and eastern parts of the site.

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Site location and general description

The site is located at the North Littlehampton Nursery complex, Littlehampton, West Sussex (TQ035039). The majority of the site comprises a disused nursery complex which is dominated by greenhouses and associated buildings, interspersed with amenity grassland, mature trees, scrub, semi-improved grassland and areas of ornamental planting. An area of floodplain, dominated by semi-improved grassland, is present within the northern part of the site, which is, considered to be the most important habitat within the site in terms of conservation importance. This is due to this habitat type being a UK Biodiversity Action Plan priority habitat. The floodplain grassland comprises a series of fields which are bisected by drainage ditches and hedgerows. The majority of the ditches were dry at the time of the update survey. The Black Ditch which is a tributary of the River Arun forms the northern boundary of the site.

Results of 2014 update ecological constraints appraisal

During the ecological constraints appraisal completed by WYG Ecologist Emily Hare in April 2014 the majority of the habitats appeared to remain largely the same as noted during previous surveys (WYG 2006 and 2008). The majority of the nursery site comprises building and hardstanding, in particular greenhouses. At the time of the 2014 ecological constraints survey these were mainly used for growing raspberries, however on subsequent visits to the site for the protected species surveys the greenhouses remained empty as it is understood the nursery had closed. At the time of the 2014 ecological constraints appraisal a number of mobile homes were present between the two western most nurseries; however during subsequent visits to site the mobile homes had been removed.

The areas surrounding the nurseries have limited scope to support notable species, due to the disturbed and 'small industrial' character of the site. The central landscaped area of the site holds a number of mature trees, including weeping willow (*Salix babylonica*), within a mown grass setting. Other trees present within the central landscaped area include; ash (*Fraxinus excelsior*), alder (*Alnus* sp.), willow (*Salix* sp.), silver birch (*Betula pendula*) and Leyland cypress (×*Cupressocyparis leylandii*).

The areas of grassland surrounding the nurseries still appeared to be regularly maintained and short across much of the site, with a low level of species diversity. However, as previously recorded there are strips of longer semi-improved grassland present between some of the greenhouses and areas of hardstanding providing suitable habitats for reptiles (shown on the 2006 Phase 1 Habitat Plan).

The fields at the eastern extent of the site had sheep grazing at the time of the 2014 ecological constraints survey; as such the grass was very short. This land had previously been sheep grazed during the 2008 survey (WYG, 2008). Species present within this semi-improved grassland include; cock's foot (*Dactylis glomerata*), Yorkshire fog (*Holcus lunatus*), meadow foxtail (*Alopecurus pratensis*), Timothy (*Phleum pratense*), annual meadow grass (*Poa annua*) and sweet vernal-grass (*Anthoxanthum odoratum*), with herbs such as thistle (*Cirsium* sp.), common nettle (*Urtica dioica*), creeping buttercup (*Ranunculus repens*), red clover (*Trifolium pratense*) and horsetail (*Equisetum* sp.) in places (refer to the 2008 Phase 1 Habitat Map Area 7). The hedgerows within this area are typically species-poor and fragmented, with little ground flora present due to disturbance created by the sheep. Hawthorn dominates, with bramble (*Rubus fruticosus agg.*) and occasional rose (*Rosa* sp.) also present.

Along the eastern extent of the northern boundary lies a strip of broadleaved semi-natural woodland. The trees are a well established mixture of poplar and willow species with a ground cover of scrub and grasses from the surrounding floodplain.

Bramble scrub has encroached over areas on the floodplain, particularly in the west, along the dry ditch lines and on the northern fringe of the horticultural nursery area. The scrub forms continuous hedge-like features along the ditch sides and has replaced the original hedgerows on the site. The scrub present on site primarily consists of common and widespread species including bramble and elder. The scrub forms scattered patches within or on the edge of the grasslands where management has not occurred recently.

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The allotments and the football ground which lie to the south of the railway remain as they did previously. The fields adjacent to the eastern boundary of the allotments comprised tall semi-improved grassland; species present within these fields species present include; thistle, cock's foot (*Dactylis glomerata*), white clover (*Trifolium repens*), yarrow (*Achillea millefolium*), red clover (*Trifolium pratense*), dock sp. (*Rumex* sp.), ribwort plantain, hogweed (*Heracleum* sphondylium), perennial ryegrass (*Lolium perenne*), birdsfoot trefoil (*Lotus corniculatus*) and bindweed (*Convolvulus arvensis*). The northernmost of these three fields had horses grazing at the time of the 2014 ecological constraints survey (refer to the 2008 Phase 1 Habitat map Areas 2 & 6).

The hedgerows and trees preset on site are considered to be of limited value due to the low diversity of woody and ground flora species. Woody species present within hedgerows include hawthorn, elder, willow sp., and Leyland cypress. Ground plant species included ivy, common nettle and bramble. Many of the hedgerows in particular within the sheep grazed fields at the western extent of the site are very gappy (refer to the 2008 Phase 1 Habitat map Areas 2 & 6).

Results of 2014 Site Wide Surveys

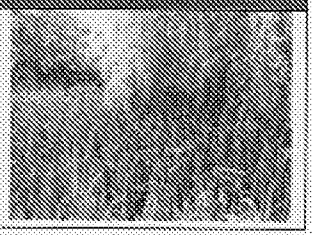
The scope of site wide update surveys have been agreed with the LPA ecologist (in March 2014) and include:

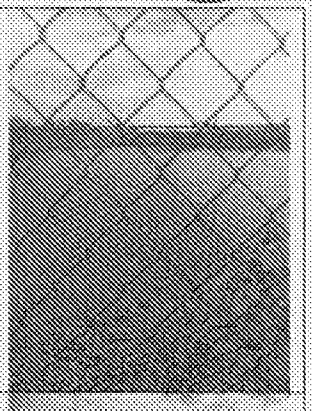
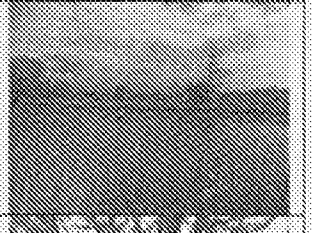
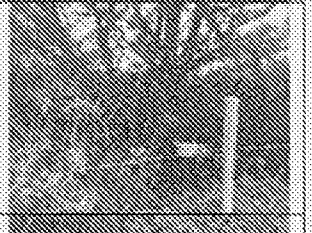
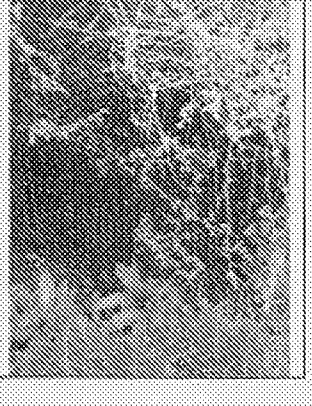
- HSI assessment of waterbodies
- Breeding bird surveys
- Terrestrial invertebrate assessment
- Water vole survey
- Bat roost assessment of any trees/buildings to be impacted – Phase by phase basis
- Check for potential for other protected species surveys

Great Crested Newts

The waterbodies on site and within 500 metres of the site were accessed where possible to determine their suitability to support great crested newts. Table 1 provides a brief description of each pond identified either in the application area or within 500m of the boundary and Table 2 shows the results of the habitat suitability index (HSI) assessment. Locations of the waterbodies can be seen in Figure 1.

Table 1: Waterbody descriptions

Pond reference	OS grid reference	Approximate distance (m) and direction	Approximate size (m^2)	Description	Photos
P1	TQ036039	On site	450	Pond located within amenity grassland in nursery grounds. Shaded by weeping willow. Dense aquatic vegetation present.	

P2	TQ041040	On site	3890	Large lined reservoir, green in colour, no vegetation present.	
P3	TQ040038	On site	9380	Large lined pond with fishing platforms around the outside and an island in the middle.	
P4	TQ043039	On site	90	Shaded ditch within sheep grazed field. Very shallow pools of water present.	
P5	TQ044039	On site	125	Ditch within sheep field, quite a lot of algae present. Little water present.	
P6	TQ036044	On site	50	Heavily vegetated ditch with little water present.	
P7	TQ037043	On site	65	Heavily shaded ditch, overgrown with bramble, very little water present.	

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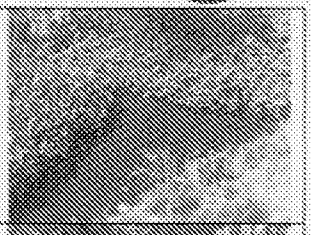
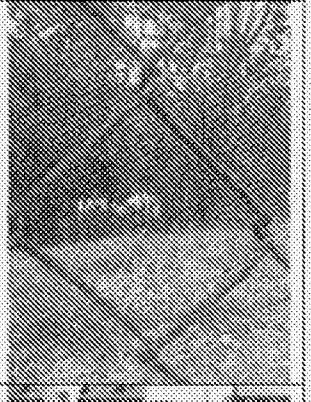
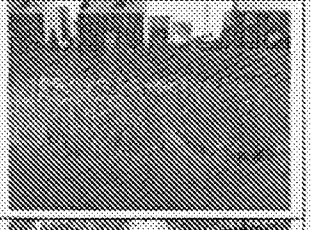
P8	TQ034042	On site	90	Ditch with dense aquatic vegetation present.	
P9	TQ034041	On site	3520	Lined reservoir with hole in lining so water slowly draining out. Surrounded by trees.	
P10	TQ034036	100 m south	190	Balancing pond situated within new housing development. Dense vegetation present within pond.	
P11	TQ037034	350 m south	150	Pond located within the grounds of the Body Shop, surrounded by amenity grassland and ornamental planting. Some aquatic vegetation present.	
P12	TQ037033	370 m south	40	Pond located within the grounds of the Body Shop, surrounded by amenity grassland and ornamental planting.	
P13	TQ040036	50 m south	4900	Large fishing lake with very little aquatic vegetation present.	

Table 2: Habitat Suitability Index Results

Pond Reference	P1	P2	P3	P4	P5	P6
SI1 Field location	1.00	1.00	1.00	1.00	1.00	1.00
SI2 Pond area	0.40	0.49	0.01	0.18	0.25	0.10

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SI3 Pond drying	0.90	0.90	0.90	0.10	0.10	0.10
SI4 Water quality	0.67	0.33	0.33	0.67	0.67	0.67
SI5 Shade	0.80	1.00	1.00	0.40	1.00	1.00
SI6 Fowl	1.00	0.67	0.67	1.00	1.00	1.00
SI7 Fish	0.67	0.01	0.67	1.00	1.00	1.00
SI8 Ponds	1.00	1.00	1.00	1.00	1.00	1.00
SI9 Terrestrial habitat	0.33	0.67	0.67	0.67	0.67	0.67
SI10 Macrophytes	1.00	0.31	0.41	0.31	0.81	0.85
HSI SCORE :	**0.73**	**0.43**	**0.45**	**0.50**	**0.62**	**0.57**
Pond Suitability :	**Good**	**Poor**	**Poor**	**Below average**	**Average**	**Below average**

Pond Reference	P7	P8	P9	P10	P11	P12	P13
SI1 Field location	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SI2 Pond area	0.13	0.18	0.55	0.33	0.30	0.08	0.33
SI3 Pond drying	0.10	1.00	0.50	0.90	1.00	0.90	0.90
SI4 Water quality	0.67	1.00	0.33	0.67	0.67	0.67	0.67
SI5 Shade	0.24	0.30	1.00	1.00	1.00	1.00	1.00
SI6 Fowl	1.00	1.00	0.67	1.00	1.00	1.00	0.67
SI7 Fish	1.00	1.00	0.67	0.67	1.00	0.67	0.01
SI8 Ponds	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SI9 Terrestrial habitat	0.67	0.67	0.67	0.33	0.33	0.33	0.67
SI10 Macrophytes	0.36	0.85	0.36	1.00	0.80	0.36	0.32
HSI SCORE :	**0.47**	**0.71**	**0.63**	**0.73**	**0.75**	**0.57**	**0.44**
Pond Suitability :	**Poor**	**Good**	**Average**	**Good**	**Good**	**Below average**	**Poor**

As some of the waterbodies assessed were deemed suitable to support great crested newts it was recommended that presence / likely absence surveys were completed for this species. These surveys have now been completed at the site and no great crested newts were recorded. Great crested newt presence / likely absence surveys were completed for waterbodies P1, P5, P8, P9, P11 and P12. It was not possible to access P10 for the presence / likely absence surveys. This waterbody was viewed from the roadside for the HSI assessment. The remaining bodies were considered unsuitable or too dry to survey.

Breeding birds

Breeding bird surveys were recommended to be completed across the whole site prior to any works commencing due to potential impacts to nesting birds and this was agreed with the LPA ecologist. Breeding bird surveys were carried out between mid March and mid June. A total of 40 species were recorded using the site and its surrounding areas over the 4 months surveyed, of these 16 species carry

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designations a single schedule 1 species was found and 5 NERC, combined they made up 8 red listed species and 7 amber listed. The schedule 1 species was Cetti's warbler which was found frequently calling around the reservoirs to the west of the site, on rarer occasions it has been recorded to the north of the site in the reed bed along the ditches. Further details can be found in the Breeding Bird Report (WYG, 2014).

Terrestrial invertebrate assessment

It is considered that the main terrestrial invertebrate interest at the site is within the grazing marsh habitat which is present along the northern boundary of the site. This area is largely not due to be impacted by the proposed development, except for a small area for sports fields. It was agreed with the LPA ecologist that an update habitat assessment was completed to determine whether the habitats have changed since the earlier surveys. The habitats on site remained largely the same; the majority of the site comprises building and hardstanding. The scattered trees, hedgerows, ornamental planting and grassland provide potentially suitable habitat for a range of common invertebrate species. However it is still considered that the most significant invertebrate habitat lies within the grazing marsh at the north of the site. As this area is not going to be impacted no further surveys are recommended for terrestrial invertebrates. It is also considered that the site will be enhanced for invertebrates through the inclusion of the central valley area which currently comprises buildings and hardstanding and is of limited value to invertebrate species.

Water vole

It was recommended that an update water vole survey was completed covering the whole site and the Black Ditch. At the time of the update phase 1 survey there was a small amount of water in some of the drainage ditches. This survey has now been completed. The Black Ditch was assessed from the southern boundary only and water vole evidence in the form of latrines, burrows, runs and feeding stations were noted along the length of this waterbody. The majority of the remaining ditches at the site were dry, however one ditch which was wet (P8) had water vole latrines present. The reservoirs within the site boundary were also assessed but no evidence was identified. Full details of this survey can be found in the Water Vole Survey Report (WYG, 2014).

Otter

The Black Ditch is considered suitable to support otters and records of otters using the area in the past were supplied by the local records centre. An update water vole survey was completed at the site in September however no evidence of otters was observed during this survey.

Bats

A bat roost assessment was completed across much of the site, focussing on the Parcels of land A – F. This included a bat roost assessment of trees and buildings from the ground only. No internal inspections were completed. The results of the bat roost assessment can be seen in Tables 3 and 4 below and indicate which Parcel each building / tree is located within. Location can be seen in Figure 2.

Table 3. Bat roost assessment of buildings

Building number	Description	Potential	Surveys required	Parcel
Building 1	Fargro office building, single storey brick built with hip ended tiled roof. Some wooden cladding above entrance but in good state of repair with intact	Negligible potential	No further surveys	B4

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	soffit boards covered in cobwebs.			
Building 2	Large, corrugated warehouse building, with large shutter open to front. Appears to be regularly used for storage / distribution. Corrugated plastic skylights and no roof void present. Appears to be fairly intact but possible small holes in skylights. Large industrial lights present inside.	Negligible potential	No further surveys	B4
Building 3	Large greenhouse constructed from metal and glass. Glass roof with open windows.	Negligible potential	No further surveys	B3 / C1
Building 4	Large greenhouse constructed from metal and glass.	Negligible potential	No further surveys	B4
Building 5	Large greenhouse constructed from metal and glass.	Negligible potential	No further surveys	C1
Building 6	Large greenhouse constructed from metal and glass.	Negligible potential	No further surveys	B1
Building 7	Large, detached two-storey brick built house with a tiled roof. Hanging tiles present on first floor and surrounding dormer windows. Dense foliage on front of building and some slipped / missing tiles present on western elevation, but mostly intact.	**Moderate potential**	**If scheduled for removal internal inspection recommended and emergence / return surveys required (2 dusk emergence and / or pre-dawn re-entry surveys)**	B5
Building 8	Single storey garage / outhouse with pitched, hip-ended roof. Hanging tiles present on upper half of building at gable ends. Appears to be in fairly good condition.	**Low to moderate potential**	**If scheduled for removal internal inspection recommended and emergence / return surveys required (2 dusk emergence and / or pre-dawn re-entry surveys)**	B5
Building 9	Large greenhouse constructed from metal and glass.	Negligible potential	No further surveys	B5

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Building 10	Derelict building, single storey, brick built, previously boarded to front but now open. No roof void present. Flat, slightly sloped roof. Access not gained inside building, but considered unlikely to be suitable for bats, quite open and exposed.	Negligible potential.	No further surveys	A1
Building 11	Large greenhouse constructed from metal and glass.	Negligible potential	No further surveys	A1
Building 12	Derelict, two storey brick-built house with pitched tiled roof. Some windows boarded up with metal sheeting. Broken soffits with holes present and some hanging tiles missing.	**Low to moderate potential**	**It was recommended that emergence / return surveys were completed (2 dusk emergence and / or pre-dawn re-entry surveys) – these surveys have now been completed between August and September and no bats were recorded emerging from or returning to the building**	A1
Building 13	Large greenhouse constructed from metal and glass.	Negligible potential	No further surveys	A1
Building 14	Derelict building subject to fire damage. Brick built, single storey building with no roof in parts and corrugated roof present. Very open and exposed, no windows and doors and some walls missing.	Negligible potential	No further surveys	A1
Building 15	Complex of buildings including greenhouses and a two-storey brick built office building damaged by fire so no roof void present, although some corrugated roof present. Very open and exposed, all windows broken.	Negligible potential	No further surveys	A1
Building 16	Large greenhouse constructed from metal and glass.	Negligible potential	No further surveys	A1

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Building 17	Small garage building with shutter door, breeze block construction with corrugated plastic and asbestos type roof.	Negligible potential	No further surveys	D2
Building 18	Large greenhouse constructed from metal and glass.	Negligible potential	No further surveys	D2 and E5
Building 19	Large greenhouse constructed from metal and glass.	Negligible potential	No further surveys	D2 and E5
Building 20	Two storey building. Lower storey brick built and upper storey mostly constructed from glass. Wooden / felt clad porch which appears to be in a good state of repair. Some metal soffits coming away but mostly appear to be covered in cobwebs.	**Negligible to low potential**	**If scheduled for removal endoscope inspection of broken soffits**	D1 and D2
Building 21	Plastic polytunnels, no suitable features.	Negligible potential	No further surveys	D1
Building 22	Large greenhouse constructed from metal and glass.	Negligible potential	No further surveys	E2
Building 23	Large greenhouse constructed from metal and glass.	Negligible potential	No further surveys	E1
Building 24	Large greenhouse constructed from metal and glass.	Negligible potential	No further surveys	E3
Building 25	Large greenhouse constructed from metal and glass.	Negligible potential	No further surveys	E5
Building 26	Large greenhouse constructed from metal and glass.	Negligible potential	No further surveys	F2
Building 27	Two storey brick built house with a pitched tiled roof. Hole in plastic soffit board but appears to be well maintained otherwise.	**Low potential**	**If scheduled for removal internal inspection recommended and emergence / return surveys required (1 dusk emergence and / or pre-dawn re-entry surveys)**	F1
Building 28	Large warehouse building in regular use. Pitched roof with skylights, well lit internally, large open doors.	Negligible potential	No further surveys	Central wetland area

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Building 29	Corrugated building with corrugated roof mesh panels covered in netting along sides	Negligible potential	No further surveys	Central wetland area
Building 30	Corrugated plastic polytunnel	Negligible potential	No further surveys	Central wetland area
Building 31	Mesh polytunnels with plastic roof	Negligible potential	No further surveys	Central wetland area
Building 32	Single storey flat roofed building with flat felt clad roof and plastic fascias. Appears to be in good state of repair, fascias intact and covered in cobwebs.	Negligible potential	No further surveys	Central wetland area
Building 33	Large corrugated asbestos type building with pitched roof. Some small gaps at corners.	**Low to negligible potential**	**Internal / endoscope survey recommended**	Central wetland area
Building 34	Large open warehouse type building which is very exposed. Breeze block construction with corrugated asbestos type roof.	Negligible potential	No further surveys	B2
Building 35	Corrugated metal shed	Negligible potential	No further surveys	Adjacent to proposed football pitches
Building 36	Concrete building with flat, sloped wooden roof	Low to negligible potential	**Internal survey recommended**	Adjacent to proposed football pitches
Building 37	Wooden shed	Negligible potential	No further surveys	Adjacent to proposed football pitches
Building 38	Wooden shed with asbestos panel roof, some gaps in wooden cladding and large gaps in southern elevation so possibly too exposed for bats.	Low to negligible potential	**Internal survey recommended**	Adjacent to proposed football pitches
Building 39	Metal containers	Negligible potential	No further surveys	Adjacent to proposed football pitches
Building 40	Small, single storey, brick building with a tiled roof. Lots of missing / broken roof tiles.	Low to moderate potential	**If scheduled for removal internal inspection recommended and**	Adjacent to proposed football pitches

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			emergence / return surveys required (1 dusk emergence and / or pre-dawn re-entry surveys)	

Table 4. Bat roost assessment of trees

Tree number	Description	Potential	Surveys required	Parcel
Tree 1 and Tree 2	Black poplar trees clad with ivy, no obvious features suitable for bats present. Tree appears to be in good condition.	Negligible potential	No further surveys	Edge of B4
Tree 3	Hornbeam with a small hole of very shallow depth. No suitable features.	Negligible potential	No further surveys	B3
Tree 4	Hornbeam with no suitable features.	Negligible potential	No further surveys	B3
Tree 5	Large, mature oak tree with holes and broken limbs. Large cavity present in trunk.	**Moderate potential**	**It was recommended that emergence / return surveys were completed for this tree (2 dusk emergence and / or pre-dawn re-entry surveys) – these surveys were completed in September 2014 and no bats were recorded emerging from or returning to the tree**	Just outside B3 boundary
Tree 6	Pine tree with no suitable features present.	Negligible potential	No further surveys	A1
Group 7	Group of 3 mature, multi-stemmed trees. Some well healed pruning scars of very shallow depth.	Negligible potential	No further surveys	B4
Tree 8	Multi-stemmed ash tree with some well healed pruning scars of shallow depth.	Negligible potential	No further surveys	B4

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Group 9	Small group of trees, mostly comprising silver birch with well healed pruning scars. Two leylandii with no suitable features.	Negligible potential	No further surveys	D2
Tree 10	Mature weeping willow. Lots of well healed pruning scars. Woodpecker hole.	**Low potential**	**If scheduled for removal endoscope inspection of woodpecker hole, possible emergence / return surveys**	D2
Group 11	Group of semi-mature trees / ornamental planting induding ash, alder and willow sp. Thick ivy present but trees considered too slight to be suitable for roosting bats.	Negligible potential	No further surveys	D2
Tree 12	Semi-mature ash with no suitable features	Negligible potential	No further surveys	D2
Group 13	Group of semi / mature silver birch trees with well healed superficial pruning scars.	Negligible potential	No further surveys	D1 and D2
Group 14	Group of mature trees, mostly leylandii with some poplar with well healed pruning scars but no suitable features.	Negligible potential	No further surveys	D1
Group 15	Group of mature leylandii trees with no suitable features present.	Negligible potential	No further surveys	E1 and E2
T16	Mature oak tree with cracks and crevices present	**Moderate to high potential**	**If scheduled for removal then emergence / return surveys required (3 dusk emergence and / or pre-dawn re-entry surveys)**	Adjacent to proposed football pitches

The habitats on site, comprising hay meadow, grazing marsh, semi-improved grassland, hedgerows, scrub, scattered trees and ditches are considered to offer suitability for foraging and commuting bats. The proposed residential development at the site is likely to impact on foraging and commuting bats as a result of habitat severance and loss as well as potential impacts from lighting. Therefore, in order to gain information regarding the value of the site for foraging and commuting bats in order to support the planning application and to inform the masterplan, bat activity surveys were recommended. These have been completed at the site between July and September and will be completed between April and June 2014.

Surveys will be completed based on methods outlined in the Bat Conservation Trust's (BCT) Bat Surveys:

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Good Practice Guidelines (2012). As the site is 'large' and of 'medium' value for foraging and commuting bats, the guidelines recommended that bat surveys are completed on a monthly basis between April and September, with one survey visit to comprise a dusk and pre-dawn survey.

It is understood that the Black Ditch and associated grazing marsh within the north of the site will not be impacted either by development or associated lighting and as such will not be subject to bat activity surveys. Two transects will be walked during each survey, with one transect covering habitats to be impacted within the east of the site and the other transect to cover the area of the site extending southwards, which will accommodate a bypass. The remainder of the site comprises hardstanding and buildings which are considered to offer negligible potential for foraging and commuting bats and, therefore, bat activity surveys are not considered necessary for these areas. The scope of this survey work has been agreed with the LPA ecologist. In addition, in accordance with the BCT (2012) guidelines, automated bat detectors will be left at two locations along each transect for five consecutive nights per month.

Badgers

During the ecological constraints survey and subsequent protected species surveys no evidence of badgers was recorded within the site boundary.

Hazel Dormouse

There is limited suitable habitat on site to support hazel dormice. There are small areas of bramble scrub however these are isolated and no connected to more suitable habitat within the wider area. As such the habitats on site are not considered suitable to support hazel dormice.

Invasive species

The site was searched for evidence of invasive plant species, such as Japanese knotweed (*Fallopia japonica*) and Himalayan balsam; however no evidence of invasive species were identified within the site boundary.

Results of 2014 Parcel-specific surveys

It is understood that the application site is to be split into 6 Parcels as outlined on the 'Area's Plan' drawing number: 10-1969-001). The summaries below include survey recommendations with regards to individual Parcels.

Parcel A

This Parcel of land comprises a derelict two storey house (Photo 1) and garden, a number of greenhouses / polytunnels and associated nursery buildings which appeared to have been subject to fire damage (Photo 2). The derelict house is considered to offer bat roosting potential as there are broken soffits with holes present, hanging tiles and some gaps where hanging tiles are missing. This building was boarded at the time of the survey, as such an internal inspection was not completed. This building is considered to offer **low to moderate** bat roost potential. As such nocturnal emergence / return surveys were recommended. The recommended surveys have now been completed and no bats were recorded emerging from or returning to the building.

The grass within the garden had become very long at the time of the 2014 survey and at the northern extent of this Parcel where there was previously hardstanding present vegetation has started to establish. Species present within this area include; thistle (*Cirsium* sp.), buddleia (*Buddleja davidii*), bramble (*Rubus fruticosus*), Yorkshire fog (*Holcus lanatus*), common nettle (*Urtica dioica*) and ribwort plantain (*Plantago lanceolata*), providing additional suitable reptile habitat. As such it was **recommended that reptile**

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presence / likely absence surveys were completed for this Parcel. These surveys have now been completed and a low population of slow worms were recorded.

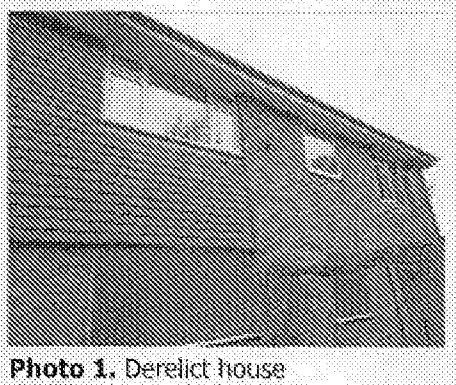


Photo 1. Derelict house

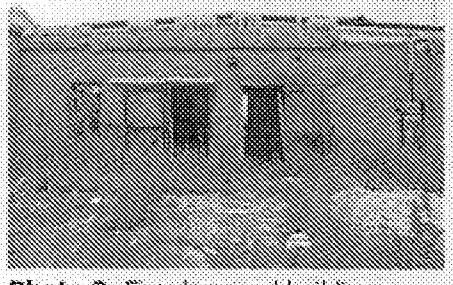


Photo 2. Fire damaged buildings

Parcel B

This Parcel comprises a number of greenhouses (Photo 3) which were being used for raspberry production at the time of the 2014 survey. Between the greenhouses is hardstanding and some small strips of grassland providing potential habitat for reptiles, as such it was recommended that a **reptile presence / likely absence survey** was completed. These surveys have now been completed and no reptiles were recorded.

A bat roost assessment of buildings and trees within this Parcel was completed. The greenhouses were considered to offer **negligible** potential to roosting bats. A mature oak tree (T5) just beyond the southern boundary of B3 had a cavity present and was considered to offer **moderate** bat roost potential as such **nocturnal emergence / return surveys were recommended for this tree.** These surveys have been completed and no bats were confirmed emerging from or returning to the tree. This tree is considered to offer limited suitability for barn owls due to the exposed nature of the cavity and the location adjacent to the road. It is considered that the cavity may be too shallow to support barn owls. No evidence of barn owls was seen at the time of the ecological constraints survey.

Within Parcel B5 is a large, detached two-storey brick built house (Building 7, Photo 5) with a tiled roof. Hanging tiles are present on first floor and surrounding dormer windows. Dense vegetation is present climbing up front of building and some slipped / missing tiles present on the western elevation, but these mostly appear to be intact. This building is considered to offer **moderate** potential for roosting bats as there is the potential for bats to roost beneath the hanging tiles. A single storey garage / outhouse (Building 8, Photo 6) with pitched, hip-ended roof is present adjacent to the house. Hanging tiles present on upper half of building at gable ends, although this appear to be in fairly good condition, ass such this building is considered to offer **low to moderate** potential to support roosting bats. **If these buildings are scheduled for removal internal inspections are recommended followed by emergence / return surveys required (2 dusk emergence and / or pre-dawn re-entry surveys).**

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Photo 3. Greenhouses within Parcel B

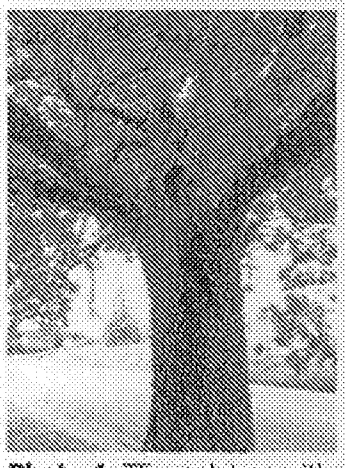


Photo 4. T5 – oak tree with cavity present

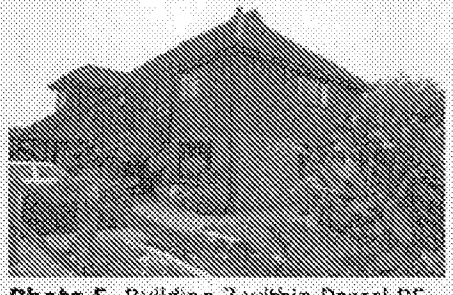


Photo 5. Building 7 within Parcel B5



Photo 6. Building 8 within Parcel B5

Parcel C

Parcel C comprises greenhouses which were being used for raspberry production at the time of the 2014 survey. To the north of the greenhouses where there appeared to be amenity grassland at the time of the 2006 survey the grassland appears to have grown longer and become more suitable for reptiles (Photo 7). As such **it is recommended that reptile presence / likely absence surveys are completed** for this Parcel of land. This area is also covered within the bat activity survey which are currently underway at the site.



Photo 7. Long grassland at the northern extent of Parcel C

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Parcel D

Parcel D comprises greenhouses and plastic polytunnels surrounded by hardstanding, amenity grassland, ornamental shrubs and scattered trees. There is a small garage building (Building 17, Photo 8) with shutter door, breeze block construction with corrugated plastic and asbestos type roof within D2. This building is considered to offer **negligible** potential for roosting bats, as such no further surveys are recommended.

There is also a two storey building (building 20, Photo 9). The lower storey is brick built and the upper storey is mostly constructed from glass. There is a wooden / felt clad porch which appears to be in a good state of repair; however some metal soffits are coming away but mostly appear to be covered in cobwebs. This building is considered to offer **low to negligible** potential for roosting bats, as such it is recommended that **an endoscope inspection** is completed where the soffit board has become detached from the building.

A number of trees within this Parcel have also been assessed for their bat roosting potential, the majority of which are considered to be of negligible potential for roosting bats. However there is a mature weeping willow (T10) which has lots of well healed pruning scars which are considered too shallow to offer a bat roosting feature and a woodpecker hole. This tree is considered to offer **low** potential to support roosting bats therefore if **it is scheduled for removal it is recommended that the woodpecker hole is subject to an endoscopic inspection with possible emergence / return surveys** also required. Emergence / return surveys for this tree have not previously been completed.

A small pond / water feature was recorded during the 2006 extended Phase 1 habitat survey Parcel D, to the south of building 20, however this did not appear to be present at the time of the update survey. The remaining habitats within Parcel D are considered to remain unchanged since the 2006 and 2008 surveys.

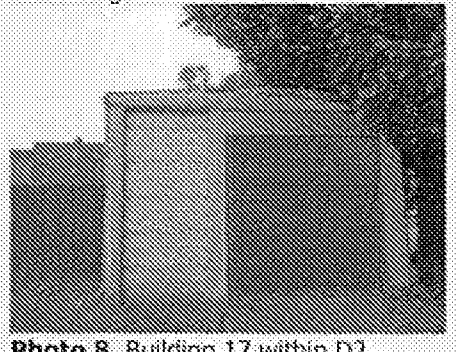


Photo 8. Building 17 within D2



Photo 9. Building 20



Photo 10. T10 – mature weeping willow with woodpecker hole

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Parcel E

The majority of Parcel E comprises greenhouses, polytunnels and hardstanding with strips of grassland between the buildings and the paths and some introduced trees and shrubs. A line of mature introduced leylandii are present along the northern boundary of E1 and E2, these trees were assessed for their potential to support roosting bats and were considered to be of **negligible** potential to support roost bats as such no further surveys are recommended for these trees. Bat activity surveys are currently underway at the site and the transect route covers this part of the site.

Within E3 is an area of long semi-improved grassland, with a dry ditch running through it with long reeds present. Within E4 there is a lined reservoir and in E6 there is a large lake with fishing platforms around the margins. These waterbodies are considered to be of poor suitability to support great crested newts and water voles. The habitats within Parcel E are considered to remain unchanged since the 2006 and 2008 surveys.

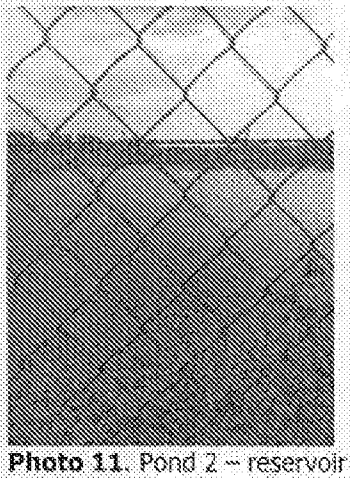


Photo 11. Pond 2 – reservoir within Parcel E



Photo 12. Pond 3 – fishing lake within Parcel E

Parcel F

The western extent of Parcel F1 comprises a two storey brick built house with a pitched tiled roof (Building 27, Photo 13). There is a hole in plastic soffit board but the building appears to be well maintained otherwise. This building is considered to offer **low potential** to roosting bats. On the current proposed masterplan this building appears to be scheduled for removal. As such **it is recommended that an internal inspection is completed and subsequent emergence / return surveys may be recommended.** Surrounding the house is hardstanding and ornamental planting.

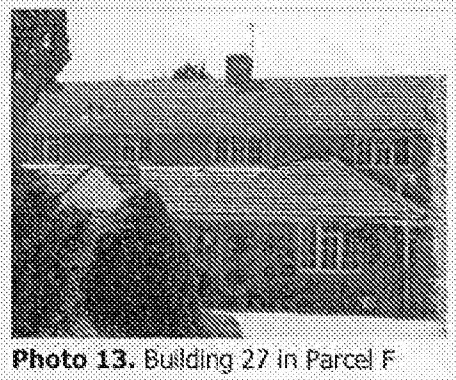


Photo 13. Building 27 in Parcel F

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The eastern extent of Parcel F1 and Parcel F2 comprises hardstanding with greenhouses present offer **negligible** potential for roosting bats. The habitats within Parcel F are considered to remain unchanged since the 2006 and 2008 surveys.

Central Wetland Area

The area at the centre of the site which is to be the 'central wetland area' currently comprises buildings and hardstanding with areas of well maintained amenity grassland present surrounded by scattered trees and ornamental planting. The buildings and trees were assessed for their bat roost potential and were considered to be of **negligible** potential to support roosting bats. The habitats within this area are considered to remain unchanged since the 2006 and 2008 surveys, with the exception of an additional pond (P1) within the amenity grassland adjacent to a weeping willow tree. This pond was considered to offer suitability for great crested newts, as such presence / likely absence surveys were completed. No great crested newts were recorded during these surveys.

Proposed Football Pitches

The area at the eastern extent of the site where the football pitches are proposed had sheep grazing at the time of the 2014 update survey. The majority of the grass was very short, but was slightly longer around the edges. A number of ditches are present leading south from the Black Ditch; these were often overgrown by trees and bramble vegetation. It is considered that the habitats within this area remain unchanged since the 2006 and 2008 surveys.

Summary of Key findings:

- Habitats on site have not changed significantly since previous surveys in 2006 and 2008;
- Great crested newts are considered to be absent from the site;
- Water vole evidence was found within the Black Ditch along the northern boundary of the site and within one of the ditches (P8 on Figure 1) leading south from the ditch. No evidence was found within the reservoirs or the remaining ditches as these were mostly dry.
- No evidence of otters was found during the water vole survey.
- One Schedule 1 species was considered to be breeding on site: Cetti's warbler. Eight Red List Bird (BoCC) were recorded within the survey area, all of which were considered to be breeding: house sparrow, starling, cuckoo, herring gull, skylark, song thrush, linnet and yellowhammer. Eight amber lists (BoCC) were recorded within the survey area, of which seven were considered to be breeding: swallow, green woodpecker, snipe, mallard, tufted duck, whitethroat and dunnock. Twenty six green list (BoCC) species were recorded during the surveys of which twenty two were considered to be breeding.
- It is considered that the area of most interest with regards to potential to support rare and notable terrestrial invertebrates remains to be within the grazing marsh habitat at the northern extent of the site. This area will be retained, with public access, however this is not considered to impact this species.
- No evidence of badgers was found during the update survey or the subsequent protected species surveys.
- The habitats on site are not considered suitable to support hazel dormice.
- No invasive species were identified during the update survey or the subsequent protected species surveys.

Summary of Recommended Surveys:

- Reptile surveys are currently being completed in parcels A1, B2 and B3;
- Bat emergence / return surveys have been completed on a number of features, and no roosting bats were identified.

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- Should the following features require removal to facilitate works, then further bat surveys are likely to be required:
  - Buildings 7 and 8 in Parcel B5
  - Building 20 in Parcel D1/D2
  - Building 27 in Parcel F1
  - Building 33 in the 'central wetland area'
  - Building 36, 38 and 40 adjacent to the proposed football pitches
  - T10 in parcel D1
  - T16 adjacent to the proposed football pitches
- The surveys completed during 2014 will remain valid for two years. Works / reserved matters applications after summer 2016 are likely to require further update surveys / assessments and / or parcel-specific surveys.
- Bat activity surveys are currently underway at the site covering the areas of green space, focussing on the location of the proposed football pitches and the area of the proposed road including the Fitzalan Link to the south of the site as agreed with the LPA ecologist.

I hope this is useful to you. Please do not hesitate to contact us if you wish to discuss this further.

Yours sincerely,

[redacted]

Emily Hare

Consultant Ecologist

[redacted]

Tamsin Clark MCIEEM

Associate Ecologist

References

WYG (2006) North Littlehampton, West Sussex: Extended Phase 1 Habitat Survey Report

WYG (2008) Phase 1 update of the main North Littlehampton Development Site (2008)

WYG (2008) Areas 2 and 6 North Littlehampton Ecological Scoping / Phase 1 Habitat Survey Report

WYG (2008) Ecological Scoping / Phase 1 Habitat Survey Area 7, North Littlehampton, West Sussex

WYG (2014) North Littlehampton: Bat Emergence / Return Survey Report

WYG (2014) North Littlehampton: Breeding Bird Survey Report

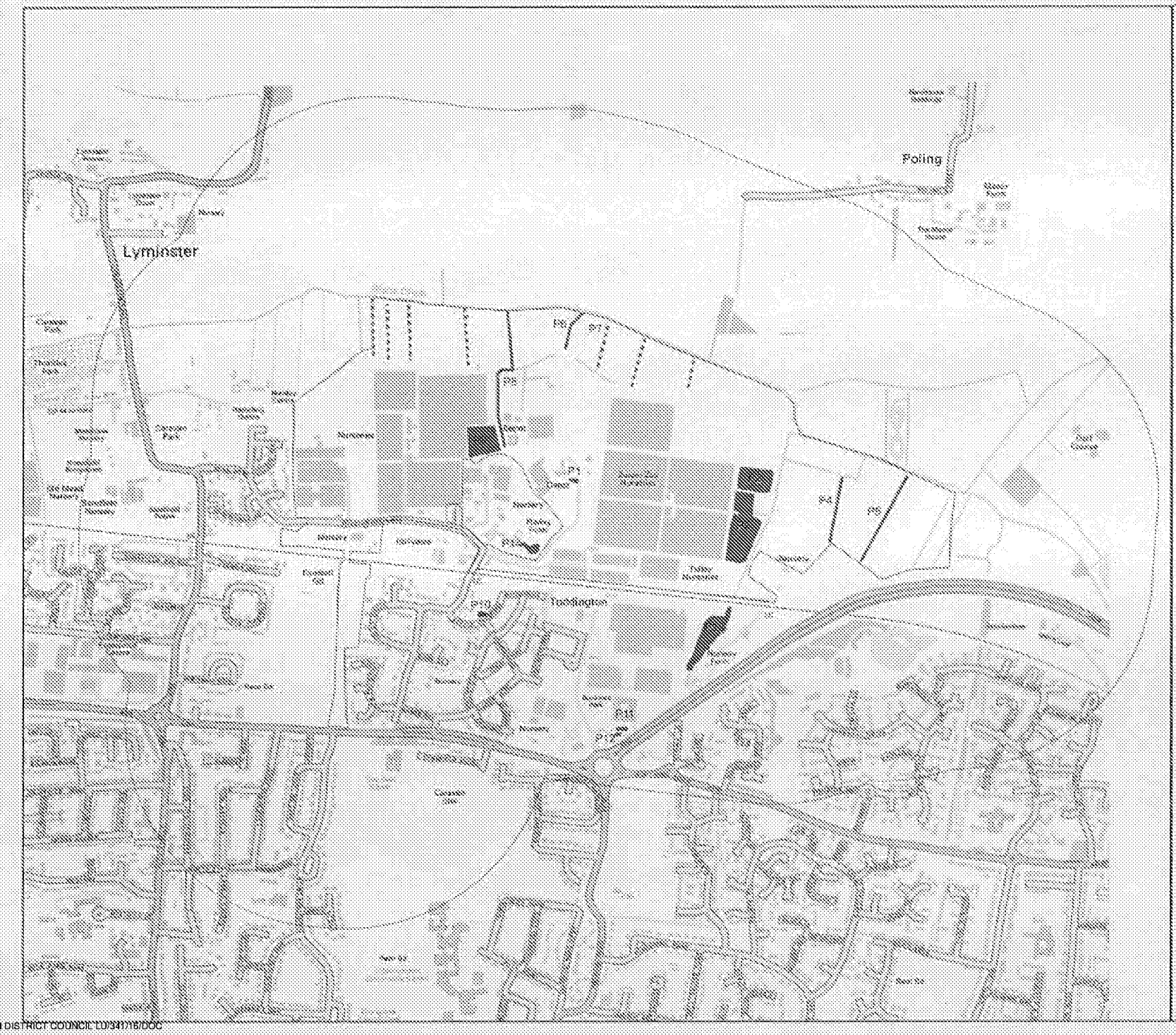
WYG (2014) North Littlehampton: Great Crested Newt Presence / Likely Absence Survey Report

WYG (2014) North Littlehampton: Reptile presence / Likely Absence Survey Report

WYG (2014) North Littlehampton: Water Vole Survey Report

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Appendix - Plans



N

Legend

- Pond
- Wet ditch
- Dry ditch
- Site boundary
- 500 metres buffer

0 125 250 500 Metres

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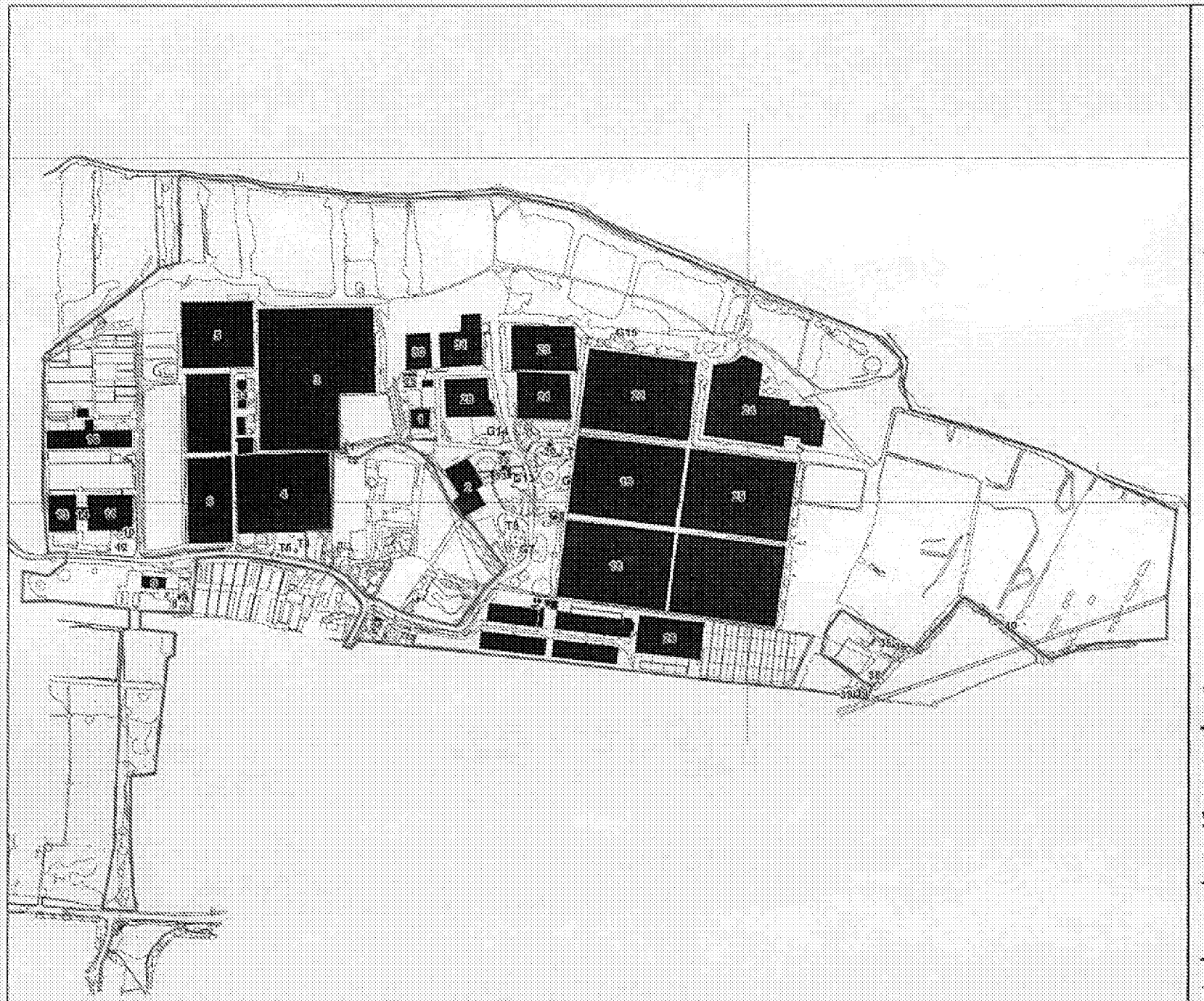
Toddington Lane, North Littlehampton

Waterbody locations

	Drawn by: Date	Checked By: Date	Approved By: Date
	EH 07/10/16	VC 07/10/16	TC 13/10/16

Project No:	Office	Type	Drawing No.	Revision
A060008	45	94	Figure 1	

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Toddington Lane, North Littlehampton

Buildings and trees assessed for bat roost potential

	Drawn By: Date:	Checked By: Date:	Approved By: Date:
	BR 07/10/14	KC 07/10/14	TC 14/10/14

Project No:	Office	Type	Drawing No.	Revision
A086068	45	94	Figure 2	

Base map provided by Ordnance Survey

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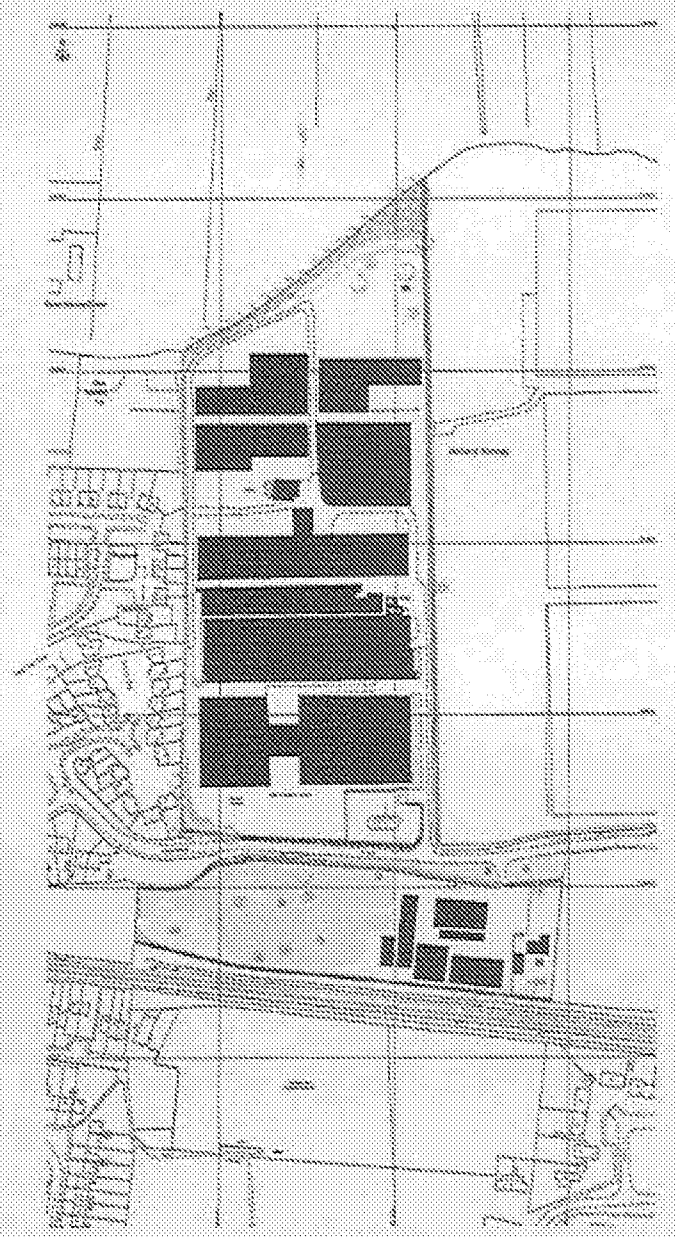
Environmental Consultancy

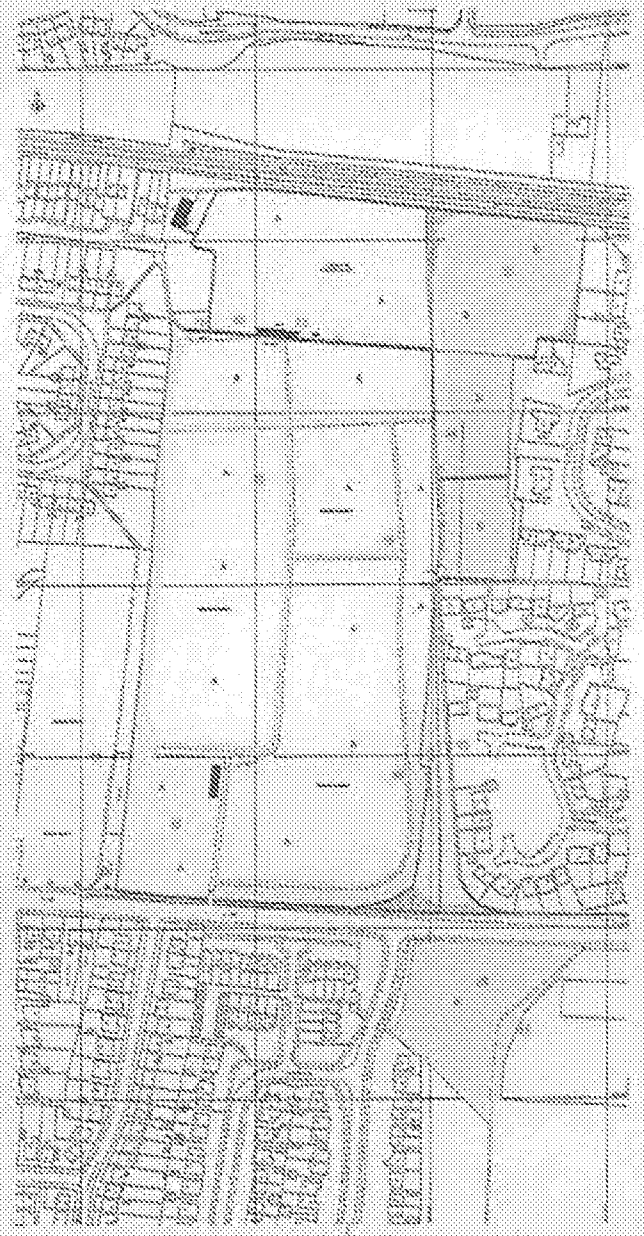
Project
NORTH LITTLEHAMPTON

Client
GREEN CORE GROUP PLC

Drawing Title
PHASE 1 HABITAT PLAN

Size	Type	Project No.	Drawing No.	Revision
A3	ENV	639320	ECO_01	





KEY:

- BUILDINGS
- BARE GROUND
- POND
- GRASSLAND - HEADING
- GRASSLAND - AMENITY
- HEDGES A TREES - SPECIES POOR
- HEDGE - NOT SPECIES POOR
- HEDGE - DEGRADED
- HEDGE - DEFUNCT
- TALL RUDERAL
- NON-RUDERAL TALL HERB
- SCATTERED TREES
- SCRUB - DENSE
- SCRUB - INTIMATE MIX
- STANDING WATER - MARGINS
- TARGET NOTE

No:	Revision:	By:	Chk:	Date:	
Client:	GREENCORE GROUP PLC				
Project:	LAND AT NORTH LITTLEHAMPTON				
	PHASE 1				
	HABITAT MAP				
	AREAS 2 & 4				
Drg No:	SCP/160729/HAB/01			Scale:	@ A3

WYG ENVIRONMENT PLANNING TRANSPORT LTD



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