

**Ecological Surveys  
Proposed Milton Park LDO  
Milton Park  
Didcot  
Oxfordshire**

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## **ECOLOGICAL SURVEYS – MILTON PARK LDO - MILTON PARK – DIDCOT - OXFORDSHIRE**

### **EXECUTIVE SUMMARY**

Elizabeth McKay Consultant Ecologist has been instructed by MEPC Milton Park to undertake baseline ecological and protected species surveys for Milton Park, Oxford.

The Milton Park Local Development Order (LDO) is a partnership between Vale of White Horse District Council as the local planning authority, and MEPC Milton Park as the landowner. Terence O'Rourke Ltd has been instructed by MEPC to help coordinate the LDO process.

The purpose of the Milton Park LDO is to enable a vibrant business area, promoting employment-generating uses at the business park, to maximise the success of the Science Vale UK Enterprise Zone and give greater confidence to business to invest in Milton Park. It is being prepared in accordance with the Town and Country Planning (Development Management Procedure) (England) Order 2010.

The Milton Park LDO will simplify planning control to give greater flexibility for businesses to develop new premises and facilities or adapt existing premises, whilst maintaining a successful and diverse mix of employment generating uses.

Development will only be permitted where the local authority is satisfied that it is in accordance with the permitted uses and development parameters set out in the Order. Development proposals not in accordance with the provisions of the Order will be determined by a planning application.

The LDO has been designed to be effective for a period of 15 years to reflect the typical timescale of business leases and give greater certainty for potential investors.

The surveys detailed in this report are designed to give baseline survey data for the whole of the Milton Park LDO and also provide legally protected species information as appropriate. The original baseline studies showed that parts of the site had suitability for Great Crested Newts and Reptiles; the findings of these surveys are detailed below. The Reptile Surveys were undertaken by Patricia Vaux of Sedgehill Ecology Services.

The report also includes a desk data search undertaken by Thames Valley Environmental Records Centre.

The results of these surveys showed that a small population of Common Lizards are present within areas MP8 and MP9. Because these species receive legal protection, a mitigation strategy has been detailed in the separate reptile report (Sedgehill Ecology Services). This includes translocation of reptiles from MP8 and the affected areas of MP9 into the unaffected areas of MP9, with suitable enhancements to habitat.

Approximately 75% of MP9 was identified as valuable neutral semi-improved grassland – which is a UK Biodiversity Action Plan Priority Habitat, with UK BAP Priority Species – Skylarks – also present. This area will now not be the subject of development.

A residual population of the legally protected Water Vole is also thought to be present along Moors Ditch – which forms the northern boundary of the site – and this habitat also will be protected from the effects of development. No evidence of Water Voles was found in other water bodies around the site.

No evidence of Great Crested Newts was found as a result of the surveys but the pools, and water courses in general were identified as being valuable habitats for birds, foraging bats and invertebrates. A small population of Smooth Newts were found in Pool 8 but these are protected against sale only.

Hedges and treelines around the site were also identified as being valuable habitat for birds and foraging bats.

None of these habitats will be affected by the proposals for the LDO. Two buildings were identified as having roosting potential for bats but these will also remain unaffected by the LDO proposals.

On the basis of thorough survey effort it is not considered that there will be any other protected species issues affecting the proposals or that there will be any habitats of value adversely impacted provided the recommendations of these surveys are followed as detailed below.

## **BASELINE ECOLOGICAL SURVEYS**

### **1. INTRODUCTION**

The baseline surveys of the existing Milton Park were undertaken on the 14<sup>th</sup> and 18<sup>th</sup> of February 2011. Surveys of areas MP5 and MP9 were undertaken on the 30<sup>th</sup> of July 2012. An update to the June 2007 survey of MP8 was also undertaken on the 11<sup>th</sup> of May 2012. These reports have been combined below.

The baseline report includes a site description, an assessment of the potential of the site to contain protected species, conclusions and recommendations.

Site photographs have been included as appendix 1 as well as site plans (figures 1A-1C).

A desk data search carried out by the Thames Valley Environmental Records Centre has also been included – appendix 2.

### **2. METHODOLOGY**

The survey work has been undertaken using the extended Phase 1 habitat survey methodology recommended by the Institute of Environmental Assessment (IEA 1995) in “Guidelines for Baseline Ecological Assessment”. This is based on the Phase 1 habitat survey methodology developed by the former Nature Conservancy Council (1990), a nationally accepted standard method for baseline ecological survey. Phase 1 habitat survey codes are used to classify habitats in the text below.

The survey of the site was carried out by Elizabeth McKay, a Consultant Ecologist of 20 years standing.

### **3. SITE DESCRIPTION**

#### **Overview**

The existing Milton Park is a business and industrial Park, near Didcot in Oxfordshire, made up mostly of modern office blocks and large warehouse style industrial units with areas of car parking and other hard standing. Surrounding these areas and along most of the access road around the Park are areas of closely mown grass and ornamental shrubs and trees varying from young to semi-mature.

To the north of Milton Park is a large rough grass field - Kelart's Field MP9 - and further west arable land. To the east is Sutton Courtenay Field Centre (described below) and Didcot Power Station.

Delineating the southern boundary of Milton Park is the railway line with site 1 - MP8 – also described below – to the south and further areas of mainly arable land and occasional pasture, bordered by hedgerows. MP5 is located to the south of the A4130 to Didcot adjacent to McDonalds.

To the west of Milton Park is pasture land and the A34 dual carriageway. Ponds and streams are present in the surrounding landscape.

The more natural and naturalised habitats of greater value for wildlife at Milton Park are described below and target noted on the site plan as well as specific descriptions for MP5, MP8 and MP9.

## Pools

G1 Standing Water / F2.1 Marginal Vegetation / B2.2 Neutral Grassland – Semi-improved / C3.1 Ruderal / A2.1 Dense Scrub A3.1 Scattered Broad-Leaved Trees

Pool 1 (Figure 1A) is lined with trees on its south, east and western sides - at the top of the banks. These trees include Crack Willow *Salix fragilis*, Weeping Willow *Salix babylonica*, Goat Willow *Salix caprea*, Alder *Alnus glutinosa*, Ash *Fraxinus excelsior*, Poplar *Populus sp*, Dogwood *Cornus sanguinea*, Hazel *Corylus avellana* and ornamental shrubs.

Aquatic vegetation consists mainly of Reedmace *Typha latifolia*, Sedges *Carex sp.* and occasional Hard Rush *Juncus inflexus*, but essentially the pool itself is quite large and open. It has gently sloping sides and some grassy banks on the northern and southern sides. These are regularly mown particularly on the northern bank. However on the south bank there are small areas of less regularly mown semi-improved grass, which have greater diversity than the regularly mown areas. Herbaceous species include St John's-wort *Hypericum sp.*, Ox-eye Daisy *Leucanthemum vulgare*, Creeping Buttercup *Ranunculus repens* and Ribwort Plantain *Plantago lanceolata*.

Pool 2 is mainly surrounded by semi-mature trees, close to the waters edge, creating a more shaded habitat lacking in aquatic vegetation. The margins are gently sloping on the west bank and much steeper on the southern and eastern banks. This is the largest pool within Milton Park. Trees include Ash, Crack Willow and Goat Willow.

There is rough grass and ruderal vegetation to the west of pool 2. The ruderal habitat consists of Nettle *Urtica dioica*, Teasel *Dipsacus fullonum*, Creeping Thistle *Cirsium arvense* and Broad-leaved Dock *Rumex obtusifolius*. Between this and the pool is a small area of semi-natural grassland exhibiting a fine-leaved sward of common grasses and other herbaceous species. Herbs include St John's-wort, Creeping Buttercup, Cowslip *Primula veris* and Ground Ivy *Glechoma hederacea* (the timing of the survey should be borne in mind – other species would be evident in the spring).

Pool 3 is much smaller, shallower and more open. The aquatic vegetation was originally dominated by Reedmace with some Great Willowherb *Epilobium hirsutum* around the margins, however this lagoon had been recently dredged with aquatic vegetation just starting to re-colonise. There is some limited tree and shrub cover on the south-facing bank including Alder and Goat Willow.

Pool 4 is shaded and has steeper banks. Dominant trees and shrubs are Crack Willow, Silver Birch and Dogwood. There is some Reedmace and Sedges *Carex sp.* on the east side of the pool where it is more open.

Pool 5 has some shrub cover on its western and northern banks consisting of Goat Willow, Alder and ornamental shrubs but is otherwise open with Reedmace and Common Reed *Phragmites australis* dominating the aquatic vegetation in large swathes. The western banks are steeper with gently sloping margins on the east side.

Pool 6 consists mainly of open water. There is a limited area of Sedges and Hard Rush. A line of trees is present on the south side of the pool consisting of Silver Birch, Crack Willow and Alder. This pool has quite steeply sloping sides.

Pool 7 is a shallow isolated pond in the south-east corner of the site. It was originally well vegetated with Reedmace and Watercress *Rorippa nasturtium-aquaticum*. There is Goat Willow scrub on the south side of the pool, which is otherwise open. The pool has very shallow sides on its south bank but the north bank is lined with gabion baskets, these have recently been replaced and the pool dredged so that it was currently lacking in vegetation at the time of survey.

Pool 8 is also open and shallow with very gently sloping margins. It is dominated by Reedmace and there are also Sedges. On the north side of the pool are Crack Willows and ornamental shrubs.

All these pools are part of the drainage system for Milton Park and are therefore linked via culverts and streams with inlets and outlets to each lagoon. Water levels therefore fluctuate.

Adjacent to the A34 roundabout and the entrance slip road to Milton Park is a large lagoon which takes surface water drainage from surrounding roads (Pool 9). These has also been recently dredged and was lacking in aquatic vegetation. There are trees lining the embankment with the A34 on the west side of the lagoon.

Within MP8 (Site 1) is a recently created small lagoon, lined with gabion baskets, this is entirely open and lacking in marginal / aquatic vegetation (Pool 10). Surrounding habitat is ruderal with occasional trees.

It was possible to update the descriptions of these ponds during the Great Crested Newt Surveys carried out in April / May 2012, this information has been added to the text above.

### **Streams**

G2 Running Water / F2 Marginal Vegetation / A2.1 Dense Scrub / A3.1 Scattered Trees

### **Moors Ditch**

Delineating the northern boundary of Milton Park is a natural stream corridor lined with trees and scrub – Moors Ditch. Species include Goat Willow, Crack Willow, Ash, Hazel, Hawthorn, Blackthorn, Bramble *Rubus fruticosus* and occasional mature Oak *Quercus robur*. Hedgerow ground flora evident at the time of survey included Dog's Mercury *Mercurialis perennis* and Lord's and Ladies *Arum maculatum*. There were occasional sedges along the stream corridor, but this was mainly shaded.

At the eastern end of Moors Ditch where it flows immediately to the north of unit 174 the brook is lined with Crack Willow on its north bank but is open on its south bank. Large sedges are present along this section. There is an open concrete culvert at the eastern end of this section lacking in vegetation.

### **Stream Corridor Linking Pools 2, 3 and 4**

A stream corridor flows into the site part way along the southern boundary from a culvert under the railway line. It then flows east into pool 2. It has been straightened in this section but has natural earth banks (steep in places). It then flows through a short underground culvert and into the pool. The straightened section is dominated by scrub, which is overgrown at the western end. Species included Hawthorn (which dominates), Dogwood and Snowberry.

Moving further east there is a line of Poplars with Goat Willow, Silver Birch and Ash adjacent to the stream corridor.

Between pools 2 and 3 there is an underground culvert where the stream goes under an access road. The stream flows briefly alongside pool 3, which is online and then through another culvert under a road and into pool 4.

To the north of pool 4 the stream corridor has steep banks and this has been straightened with artificial reinforcements in places. The east bank is lined with trees and scrub with more limited scrub on the west bank. Species include Alder, Dogwood, Hazel, Goat Willow, Ash and Hawthorn.

The stream then flows into a fairly lengthy underground culvert before joining Moors Ditch. Above this culvert (or either side of it) are closely mown grassland areas and semi-mature trees and ornamental shrubs including Hazel, Ash, Dogwood, Elder, Snowberry and Sycamore *Acer pseudoplatanus*.

### **Stream Corridor to the South of Pool 5**

Much of this stream corridor is culverted under roads and buildings but it appears to flow south to north across Milton Park and into Moors Ditch. A short section is above ground including and to the south of Pool 5. It has been straightened with artificially re-inforced vertical banks. It is lined with trees and ornamental shrubs including Horse Chestnut *Aesculus hippocastanum*, Alder and Snowberry.

### **Hedgerow and Tree Boundaries**

J2.1.2 Intact Hedge – Native Species Poor / A.2.2 Scattered Scrub / A3.1 Scattered Broad-Leaved Trees

Alongside unit 177 and delineating the boundary between this and Kelart's field is a mature unmanaged hedge dominated by Hawthorn *Crataegus monogyna*, with some Blackthorn *Prunus spinosa*, Elder *Sambucus nigra* and Bramble *Crataegus monogyna* (H1).

Along the eastern boundary of Milton Park is a hedgerow / tree line containing Hawthorn, Blackthorn, Ash *Fraxinus excelsior*, Crack Willow *Salix fragilis*, English Elm *Ulmus procera* and Dogwood *Cornus sanguinea*. (H2).

Further south alongside pool 6 (H3) is a Leylandii hedge with Crack Willow, Hawthorn and Elder growing on the inside of the hedge alongside a dry ditch.

In the north-west section of the site adjacent to the west side of unit 36 is a small area of semi-mature trees including Ash, Beech *Fagus sylvatica*, Silver Birch and Cherry Prunus sp. (T1).

To the north of unit 37 is a line of deciduous trees and shrubs including Silver Birch, Cherry, Ash, Alder *Alnus glutinosa*, Holly *Ilex aquifolium* and also Cherry Laurel *Prunus laurocerasus* (T2).

In the south-west corner of the site between the Milton Park entry slip road and unit 2 is an embankment vegetated with young trees and scrub. This includes Hawthorn, Blackthorn, Ash and Cherry. (T3).

### **MP 8 - Site 1**

C3.1 Ruderal / J2.2 Intact Hedge – Species Poor / G1 Open Water / F2 Marginal Vegetation

The following information is based on an ecological survey report for this part of the site undertaken in June 2007 and subsequently updated in May 2012. Essentially MP8 consists of two fields, currently unmanaged. (Formerly arable and pasture). The larger western-most field (field 1) consists entirely of ruderal habitat including Great Willowherb *Epilobium hirsutum*, Creeping Thistle *Cirsium arvense*, Broad-leaved Dock, Weld and Prickly Sow-thistle *Sonchus asper*. There are currently earth mounds, rubble and brush piles in certain parts of the site.

Young trees are present on the embankment, which separates the field from the Milton Park Slip Rd to the west.

A short section of Hawthorn hedge separates field 1 from field 2 with a ditch below.

Field 2 to the east is a smaller and triangular. This triangular area has been hollowed out and an earth embankment created on all sides with a pathway running along the top. The hollowed area has colonised with ruderal species similar to field 1. There is a shallow marshy area towards the western end where the hollowed out area is deeper. This has been colonised with Soft Rush *Juncus effusus* and Reedmace. A small triangular pool has also been created in the south-west corner of this area using gabion baskets and stones. This is currently unvegetated.

A short line of semi-mature Plane *Platanus x hispanica* trees exists in this field adjacent to the railway embankment on the northern boundary.

Hedgerows alongside the southern boundary of site have been removed because of Highways works, some recent replanting has taken place.

### **MP5**

B6 Poor Semi-improved Grassland / C3.1 Ruderal / J2.1.2 Intact Hedges - Species Poor

MP5 consists of a small field with a Petrol Station, Hotel and McDonalds restaurant to the north, and areas of ruderal habitat / disturbed ground to the east (formerly a quarry). To the south is further ruderal habitat and to the south-west the A34 dual carriageway.

The field consists of a rough grass / ruderal habitat with areas of scattered Bramble *Rubus fruticosus* scrub.

Dominant ruderal species include Teasel *Dipsacus fullonum*, Nettle *Urtica dioica*, Great Willowherb *Epilobium hirsutum*, Creeping Thistle *Cirsium arvense*, Prickly Sow Thistle *Sonchus asper*, Broad Leaved Dock *Rumex obtusifolius*, Ragwort *Senecio jacobea*, Lesser Burdock *Arctium minus*, Common Thistle *Cirsium vulgare* and Common Comfrey *Symphytum officinale*.

Dominant grasses include Yorkshire Fog *Holcus lanatus*, Perennial Rye-grass *Lolium perenne*, Red Fescue *Festuca rubra*, Smooth Meadow-grass *Poa pratensis* and Common Bent *Agrostis capillaris*.

Other flowering plants consist of Self Heal *Prunella vulgaris*, Field Forget-me-knot *Myosotis arvensis*, Cut Leaved Cranesbill *Geranium dissectum*, Lesser Trefoil *Trifolium dubium*, Perforate St John's-wort *Hypericum perforatum*, Common Mouse-ear *Cerastium fontanum*, Creeping Buttercup *Ranunculus repens*, White Clover *Trifolium repens*, Germander Speedwell *Veronica chamaedrys*, and occasional Common Centaury *Centaureum erythraea*, Agrimony *Agrimonia eupatoria*, Ox-eye Daisy *Leucanthemum vulgare*, Wild Carrot *Daucus carota* and Lady's Mantle *Alchemilla vulgaris*.

The eastern boundary of the site (H1 – Figure 1B) consists of a dry ditch enclosed by scrub. The scrub is Hawthorn *Crataegus monogyna*, Blackthorn *Prunus spinosa* and Elder *Sambucus nigra* dominated. Nettle *Urtica dioica* dominates the field layer.

The southern boundary of site consists of a Hawthorn, Elder and Blackthorn hedge (H2) with a single mid-aged Ash *Fraxinus excelsior* tree. This is discontinuous in the south-east corner.

Hedge 2 then adjoins a hedge planted more recently alongside the A34 (H3) which is Hawthorn dominated.

On the north-west boundary of the site (H4) is a more formal hedge boundary with the MacDonald's car park. This has been planted with Hazel *Corylus avellana*, Hawthorn, Field Maple *Acer campestre*, Guelder Rose *Viburnum opulus*, Field Rose *Rosa arvensis* and Elder.

## **MP9**

### **B2.2 Neutral Semi-improved Grassland / J2.1.2 Intact Hedges – Species Poor**

Site MP9 or Kelart's Field is a large open field immediately to the north of Milton Park. The southern boundary is delineated by Moors Ditch. To the north of the field is the village of Sutton Courtenay and to the east areas of marshy habitat and scrub adjacent to the Didcot Power Station. To the west is arable land.

The central and northern parts of Kelart's Field consist of species diverse neutral semi-improved grassland. These will not now be the subject of development in light of ecological and archaeological interest.

Dominant grasses consist of Red Fescue, Yorkshire Fog, Creeping Bent *Agrostis stolonifera*, False Oat-grass *Arrhenatherum elatius*, Perennial Rye-grass, Meadow Foxtail *Alopecurus pratensis*, Sweet Vernal-grass *Anthoxanthum odoratum* and Crested Dogs-tail *Cynosurus cristatus*.

Other flowering plants include Field Scabious *Knautia arvensis*, Wild Carrot, Black Knapweed *Centaurea nigra*, Lady's Bedstraw *Galium verum*, Ox-eye Daisy, Creeping

Buttercup *Ranunculus repens*, Self Heal, Bird's-foot Trefoil *Lotus corniculatus*, Lesser Trefoil *Trifolium dubium*, Bush Vetch *Vicia sepium*, Agrimony, White Clover, Red Clover *Trifolium pratense*, Yarrow *Achillea millefolium*, Perforate St John's-wort *Hypericum perforatum*, Ribwort Plantain *Plantago lanceolata*, Common Centaury and Cut Leaved Cranesbill.

Development will now be confined to the southern-most quarter of the field, which is much poorer quality habitat, less diverse and more disturbed. Common grass species are abundant dominated by False Oat-grass, Yorkshire Fog, Red Fescue, Perennial Rye-grass, Crested Dog's-tail and Cock's-foot *Dactylis glomerata* with ruderal species such as Great Willowherb, Teasel, Field Horsetail *Equisetum arvense*, Broad-leaved Dock, Creeping Thistle and Ragwort common. Wild Carrot is abundant with Red Clover, White Clover, Ox-eye Daisy, Lesser Trefoil and Black Nipweed present in much smaller quantities.

Along the eastern boundary of Kelart's Field is a Hawthorn and Elder hedge (H2) (Figure 1C) with Nettle, Ivy *Hedera helix* and Bramble dominating the field layer.

The western boundary has a discontinuous hedge (H2) consisting of Hawthorn, Blackthorn, Elder, immature Oak *Quercus robur* and Ash.

Along the southern boundary is Moors Ditch, described separately, above.

#### 4. DESK DATA SEARCH

A desk data search for the site and surrounding area was obtained by contacting Thames Valley Environmental Records Centre.

This revealed a local Wildlife Trust Nature Reserve – The Sutton Courtenay Field Centre immediately to the east of Milton Park, adjacent to the Didcot Power Station. This contains areas of wetland, woodland and stream corridors. There are records for Frog, Toad, Smooth Newt and Great Crested Newt as well as Water Vole and a range of invertebrate and bird species at this site.

There are also Water Vole records for Moors Ditch, which delineates the northern boundary of Milton Park, and for other streams to the north and west of Milton Park.

Bird records also exist for Drayton Gravel Pit to the north-west of Milton Park and Milton Pond just to the north of the Park.

There are Pipistrelle Bat records for Milton Park, Milton Village immediately to the north and Steventon to the west. Also Myotis bat records for Milton Park and Milton Heights adjacent to the west.

## 5. FAUNA

The Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulation 2010 provides protection for the following species against killing, injury, disturbance or sale. It also protects their places of shelter, protection, breeding and resting sites.

### Bats

The hedgerows, stream corridors, semi-improved grassland and pools provide good foraging habitat for bat species. Mature trees with cavities in unlit locations such as along Moors Ditch also provide potential opportunities for roosting bats.

Lighting along access road and around buildings is likely to be deterring to bats and many trees around the Park are insufficiently mature to contain cavities, which might be suitable for roosting.

Only two buildings appear to contain potential opportunities for roosting. These are unit 18 which has a pitched tiled roof and weather boarding externally and unit 11 which has a pitched roof but is likely to be more lit up at night. Neither building is affected by the LDO. All other buildings are of a modern construction, often warehouse style or modern office blocks and are largely unsuitable.

### Birds

The pools, stream corridors, hedgerows and trees all provide good nesting and foraging habitat for birds. However opportunities for hole and chamber nesting birds are fairly lacking due to the lack of suitable mature trees and suitable buildings.

Three pairs of ground nesting Skylarks were observed associated with the middle and northern sections of Kelart's Field in July 2012. Greater numbers were observed on a previous site visit in the spring of 2008. The poor weather conditions in the spring and early summer of 2012 should be borne in mind.

### Badgers

- Badgers are protected under the protection of Badgers act 1992.

A disused badger sett was noted within the scrub associated with the eastern boundary of MP5 – several sett entrances (H1). The setts appear to have been disused for several years at least. Rabbit warrens were also observed associated with this same boundary. No other evidence of badgers was found anywhere within the Milton Park LDO area.

### Amphibians

The eight pools around Milton Park were identified as being potentially suitable for amphibians to breed (particularly the smaller pools) with the possible exception of pools 2 and 4 which are more shaded and which have been stocked with fish. (Fish predate newt larvae). Amphibians also need terrestrial habitat around their breeding ponds in the form of rough grass, scrub etc for foraging and shelter. This is present around some pools.

Based on the close proximity of Great Crested Newt records at the Sutton Courtenay Field Centre and the suitable habitat within Milton Park a dedicated Great Crested Newt survey was undertaken (April / May 2012) the results of which are detailed in part 2 of the report, below.

### **Water Voles**

Water Voles have been recorded along Moors Ditch and in surrounding water courses in the past and more recently (March 2007). However the habitat is very sub-optimal having become shaded and overgrown with scrub. Water Voles need grassy habitat adjacent to the water-course for feeding.

There may be an opportunity to improve this habitat in association with other agencies as part of a co-ordinated strategy for the improvement of habitat. A piecemeal approach is unlikely to be successful and may damage habitat for other species.

In the course of the Great Crested Newt Surveys carried out in April / May 2012 it was possible to establish that Water Voles are not present in the lagoons around the Milton Park Site.

### **Reptiles**

Casual observations of 2 Common Lizards were made in June 2009 on site MP8 as part of a site walkover. As this site as well as MP5 and MP9 were identified as being suitable for reptiles a dedicated reptile survey was undertaken in August / September 2012. Rough grass / ruderal habitats for basking with scrub or hedgerows for shelter often provide a suitable combination for reptile species. The results of this survey are detailed in section 3 below.

## GREAT CRESTED NEWT SURVEY

### 1. INTRODUCTION

As suitable habitat for Great Crested Newts was identified a Great Crested Newt Survey was undertaken of eight lagoons within the Milton Park Business Park and two further lagoons immediately outside the Park were also assessed. These are described above in the habitat report and also shown on figure 1A.

Detailed below are the results of this survey carried out in April / May 2012. Site photographs are included in appendix 1.

### 2. METHODS AND SURVEY CONSTRAINTS

The fieldwork was undertaken by Elizabeth Mckay a Consultant Ecologist of 20 years standing and licenced Great Crested Newt Surveyor. The survey techniques used were as per the Great Crested Newt Mitigation Guidelines (English Nature August 2001). This requires three methods of surveying a water body, selected from: day time egg searches; night time torchlight surveys; overnight bottle trapping; and day and/or night time sweep netting with four visits to be undertaken during the recognised survey period to establish presence / absence.

A combination of bottle trapping, torch counts, netting and egg searching techniques were employed.

Lagoon 1 was not bottle trapped because it was known to contain fish. Lagoon 2 was only bottle trapped on one occasion because it was known to contain fish. Lagoon 9 and 10 were also considered to have a low likelihood of containing Great Crested Newts and were also not bottle trapped.

An appropriate 1 million-candle power torch was used for the torch counts.

#### Timing

At least three visits were conducted between mid April and mid May 2012 (in keeping with recognised guidance). Survey dates were as detailed below.

#### Weather Conditions

1. 27<sup>th</sup> April – Cloudy, still, dry. Air temperature 9 degrees at sunset.
2. 28<sup>th</sup> April – Cloudy / light rain, light breeze. Air temperature 7 degrees at sunrise. Overnight minimum 7 degrees.
3. 4<sup>th</sup> May – Still, 100% cloud, dry. Air temperature 8 degrees at sunset.
4. 5<sup>th</sup> May – Still, 100% cloud, dry. Air temperature 6 degrees at sunrise. Overnight minimum 5 degrees.
5. 11<sup>th</sup> May – Light breeze, clear skies, dry. Air temperature 12 degrees at sunset.
6. 12<sup>th</sup> May – Clear skies, dry, still. Air temperature 6 degrees at sunrise. Overnight minimum 5 degrees.
7. 18<sup>th</sup> May – 100% cloud, still, dry, warm. Air temperature 13 degrees at sunset.
8. 19<sup>th</sup> May – 100% cloud, still, dry, warm. Air temperature 11 degrees at sunrise. Overnight minimum 10 degrees.

### 3. RESULTS

#### Lagoon 1

Visit 1	27th April 2012	
	Survey Type	Results
	Egg Searching	0
	Netting	0
	Torch Count	0
Visit 2	4 <sup>th</sup> May 2012 / 5 <sup>th</sup> May 2012	
	Survey Type	Results
	Egg Searching	0
	Bottle Trapping (15 traps)	0
	Torch Count	0
Visit 3	11th May 2012	
	Survey Type	Results
	Egg Searching	0
	Netting	0
	Torch Count	0
Visit 4	18 <sup>th</sup> May 2012	
	Survey Type	Results
	Egg Searching	0
	Netting	0
	Torch Count	0 Large Carp observed.

#### Lagoon 2

Visit 1	27th April 2012	
	Survey Type	Results
	Egg Searching	0
	Netting	0
	Torch Count	0 Large Carp observed.
Visit 2	4 <sup>th</sup> May 2012	
	Survey Type	Results
	Egg Searching	0
	Netting	0
	Torch Count	0
Visit 3	11th May 2012	
	Survey Type	Results
	Egg Searching	0
	Netting	0
	Torch Count	0
Visit 4	18 <sup>th</sup> May 2012	
	Survey Type	Results
	Egg Searching	0
	Netting	0
	Torch Count	0 Large Carp observed.

**Lagoon 3**

Visit 1	27th April / 28 <sup>th</sup> April 2012	
	Survey Type	Results
	Egg Searching	0
	Bottle Trapping – 10 Traps	0
	Torch Count	0 – Large Carp observed.
Visit 2	4 <sup>th</sup> / 5 <sup>th</sup> May 2012	
	Survey Type	Results
	Egg Searching	0
	Bottle Trapping 10 Traps	0
	Torch Count	0 – Large Carp observed.
Visit 3	11 <sup>th</sup> / 12 <sup>th</sup> May 2012	
	Survey Type	Results
	Netting	0
	Bottle Trapping – 10 Traps	0
	Torch Count	0
Visit 4	18 <sup>th</sup> / 19 <sup>th</sup> May 2012	
	Survey Type	Results
	Netting	0
	Bottle Trapping – 10 Traps	0
	Torch Count	0

**Lagoon 4**

Visit 1	27th April / 28 <sup>th</sup> April 2012	
	Survey Type	Results
	Egg Searching	0
	Bottle Trapping – 10 Traps	0
	Torch Count	0
Visit 2	4 <sup>th</sup> / 5 <sup>th</sup> May 2012	
	Survey Type	Results
	Egg Searching	0
	Bottle Trapping 10 Traps	0
	Torch Count	0 – Large Carp observed, Sticklebacks.
Visit 3	11 <sup>th</sup> / 12 <sup>th</sup> May 2012	
	Survey Type	Results
	Egg Searching	0
	Bottle Trapping – 10 Traps	0
	Torch Count	0
	Egg Search	0
Visit 4	18 <sup>th</sup> / 19 <sup>th</sup> May 2012	
	Survey Type	Results
	Egg Searching	0
	Bottle Trapping – 10 Traps	0
	Torch Count	0 - Sticklebacks

**Lagoon 5**

Visit 1	27th April / 28 <sup>th</sup> April 2012	
	Survey Type	Results
	Egg Searching	0
	Bottle Trapping – 10 Traps	0 - Sticklebacks

	Torch Count	0
Visit 2	4 <sup>th</sup> / 5 <sup>th</sup> May 2012	
	Survey Type	Results
	Egg Searching	0
	Bottle Trapping 10 Traps	0
	Torch Count	0
Visit 3	11 <sup>th</sup> / 12 <sup>th</sup> May 2012	
	Survey Type	Results
	Egg Searching	0
	Bottle Trapping – 10 Traps	0
	Torch Count	0
Visit 4	18 <sup>th</sup> / 19 <sup>th</sup> May 2012	
	Survey Type	Results
	Egg Searching	0
	Bottle Trapping – 10 Traps	0
	Torch Count	0 - Sticklebacks

### Lagoon 6

Visit 1	27th April / 28 <sup>th</sup> April 2012	
	Survey Type	Results
	Egg Searching	0
	Bottle Trapping – 10 Traps	0
	Torch Count	0
Visit 2	4 <sup>th</sup> / 5 <sup>th</sup> May 2012	
	Survey Type	Results
	Egg Searching	0
	Bottle Trapping 10 Traps	0
	Torch Count	0 - Sticklebacks
Visit 3	11 <sup>th</sup> / 12 <sup>th</sup> May 2012	
	Survey Type	Results
	Netting	0
	Bottle Trapping – 10 Traps	0
	Torch Count	0
Visit 4	18 <sup>th</sup> / 19 <sup>th</sup> May 2012	
	Survey Type	Results
	Netting	0
	Bottle Trapping – 10 Traps	0
	Torch Count	0 - Sticklebacks

### Lagoon 7

Visit 1	27th April / 28 <sup>th</sup> April 2012	
	Survey Type	Results
	Netting	0
	Bottle Trapping – 10 Traps	0
	Torch Count	0
Visit 2	4 <sup>th</sup> / 5 <sup>th</sup> May 2012	
	Survey Type	Results
	Netting	0
	Bottle Trapping 10 Traps	0
	Torch Count	0
	11 <sup>th</sup> / 12 <sup>th</sup> May 2012	

Visit 3	11 <sup>th</sup> / 12 <sup>th</sup> May 2012	
	Survey Type	Results
	Netting	0
	Bottle Trapping – 10 Traps	0
	Torch Count	0
Visit 4	18 <sup>th</sup> / 19 <sup>th</sup> May 2012	
	Survey Type	Results
	Netting	0
	Bottle Trapping – 10 Traps	0
	Torch Count	0

**Lagoon 8**

Visit 1	27th April / 28 <sup>th</sup> April 2012	
	Survey Type	Results
	Egg Searching	0
	Bottle Trapping – 10 Traps	1 Male & 1 Female Smooth Newt, Sticklebacks
	Torch Count	0
Visit 2	4 <sup>th</sup> / 5 <sup>th</sup> May 2012	
	Survey Type	Results
	Egg Searching	2 Smooth Newt Eggs
	Bottle Trapping 10 Traps	0
	Torch Count	1 Female Smooth Newt, Sticklebacks
Visit 3	11 <sup>th</sup> / 12 <sup>th</sup> May 2012	
	Survey Type	Results
	Egg Searching	0
	Bottle Trapping – 10 Traps	1 Female Smooth Newt, Sticklebacks
	Torch Count	1 Female Smooth Newt, Sticklebacks
Visit 4	18 <sup>th</sup> / 19 <sup>th</sup> May 2012	
	Survey Type	Results
	Egg Searching	0
	Bottle Trapping – 10 Traps	1 Female Smooth Newt, Sticklebacks
	Torch Count	0 Sticklebacks

**Lagoon 9**

Visit 1	27th April 2012	
	Survey Type	Results
	Egg Searching	0
	Netting	0
	Torch Count	0
Visit 2	4 <sup>th</sup> May 2012	
	Survey Type	Results
	Egg Searching	0
	Netting	0
	Torch Count	0
Visit 3	11th May 2012	
	Survey Type	Results
	Egg Searching	0
	Netting	0
	Torch Count	0
	18 <sup>th</sup> May 2012	

Visit	18 <sup>th</sup> May 2012	
4	Survey Type	Results
	Egg Searching	0
	Netting	0
	Torch Count	0

**Lagoon 10**

Visit	27th April 2012	
1	Survey Type	Results
	Egg Searching	0
	Netting	0
	Torch Count	0
Visit	4 <sup>th</sup> May 2012	
2	Survey Type	Results
	Egg Searching	0
	Netting	0
	Torch Count	0
Visit	11th May 2012	
3	Survey Type	Results
	Egg Searching	0
	Netting	0
	Torch Count	0
Visit	18 <sup>th</sup> May 2012	
4	Survey Type	Results
	Egg Searching	0
	Netting	0
	Torch Count	0

## **REPTILE SURVEY**

### **Summary**

The reptile survey as been undertaken by Patricia Vaux of Sedgehill Ecology Services (September 2012) and the findings have been detailed in a separate report . However in summary two individual Common Lizards were found during surveys of MP8 and two further individual Lizards were also found during surveys of MP9.

The conclusions and recommendations resulting from this survey have been summarised below.

## CONCLUSIONS

The pools and associated scrub / grassland habitat provide a suitable environment for birds, foraging bats and invertebrates.

The stream corridors also provide good environments for birds, bats and small mammals. The tree lined corridors and hedgerows also provide further habitat for birds and foraging bats in particular.

The above areas will be unaffected by the proposals for the LDO.

There are no mature trees, which might contain roosting opportunities for bats, affected by the proposals for the LDO.

Only two buildings appear to contain potential opportunities for roosting bats. These are unit 18 which has a pitched tiled roof and weather boarding externally and unit 11 which has a pitched roof but is likely to be more lit up at night. Neither building is affected by the LDO. All other buildings are of a modern construction, often warehouse style or modern office blocks and are largely unsuitable.

No current badger activity was found within the current LDO area.

Based on thorough survey effort at an appropriate time of year, under suitable weather conditions and as per guidance, no evidence of Great Crested Newts was found in any of the 10 lagoons. A small population of Smooth Newts was found in lagoon 8, however these do not receive the same level of legal protection.

In spite of the records for Great Crested Newts for the adjacent Sutton Courtenay Field Centre immediately to the east of Milton Park, it is apparent that the lagoons do not provide suitable habitat. Whilst most contained suitable vegetation for egg laying, all the lagoons within Milton Park were found to contain fish, which have a tendency to predate Newt larvae.

All these lagoon are also linked via ditches and culverts and form the drainage system for Milton Park, therefore the lagoons have a slow flow of running water through them, rather than being standing water. Water levels also fluctuate. All this is also discouraging to Great Crested Newts. These factors combined appear to have precluded them.

Lagoon 9 is isolated in the landscape being surrounded by very busy roads and a railway line, and is used to take surface water drainage. The lagoon is also lacking in suitable vegetation for egg laying currently. So once again GCN's were not found to be present.

Lagoon 10 is recently created, also rather isolated from the other water bodies and lacking suitable vegetation. No evidence was found, of amphibian life.

Therefore it is not considered that Great Crested Newts pose a constraint to proposed development / redevelopment works at Milton Park and no further survey has been recommended.

MP5, MP8 and MP9 were identified as being suitable habitats for reptiles. Subsequent dedicated surveys revealed a small population of Common Lizards associated with MP8 and MP9. It is proposed that prior to development a translocation exercise will be undertaken to transfer Common Lizards from M8 and

affected areas of MP9 to unaffected areas of MP9. Habitat enhancements for reptiles will also occur on these unaffected areas of MP9.

The greater part of Kelart's Field (MP9) provides an example of good quality neutral semi-improved grassland habitat. The majority of this type of habitat has been lost over the last 60 years mainly due to agricultural intensification and development. The habitat would now be considered scarce at European level. It is included in the UK Biodiversity Action Plan, which identifies priority habitats, and species, which have declined significantly, and puts in place strategies for reversing this decline.

The Natural Environment and Rural Communities Act (NERC Act 2006) required Local Authorities and Statutory organisations to take account of these habitats and species in their decision making processes.

Based on survey evidence, the central and northern sections of Kelart's Field also provide nesting habitat for Skylarks, which are also a UK Biodiversity Action Plan priority species.

Semi-improved grasslands also typically contain a high invertebrate diversity, although no specific studies have been undertaken here.

In light of the ecological value of the central and northern parts of the field and also archaeological interest, no development will now take place in these areas.

Development will now be confined to the southern-most quarter of Kelart's Field (see figure 1C), which is more disturbed and less diverse and would not be classified in the above category. This would be classified as a more species poor ruderal / rough grassland habitat.

Likewise MP5 and MP8 would be classified as a more disturbed rough grassland / ruderal habitat. Whilst there is a wide range of species, providing habitat for invertebrates, these species and the species assemblage is common and widespread meaning that these areas do not have the same habitat value as the neutral semi-improved grassland habitat of Kelart's Field.

There is no reason to suggest that MP5, MP8 or the southern-most section of MP9 might contain invertebrate species of note as these are commonly occurring habitats.

The invertebrate records contained in appendix 2, detail invertebrate records for the nearby Sutton Courtenay Field Centre and other locations within a km radius however these species are quite common and associated with food plants that are also widespread. So there are no notable species, which might suggest that surveys for invertebrates would be necessary in the area.

Otherwise Milton Park consists of modern industrial and office buildings surrounded by closely mown grassland, ornamental shrubs and young trees. These areas are also well lit at night and are of limited value to wildlife except birds and invertebrates.

It is not considered that any other protected species would be affected by the proposals.

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## RECOMMENDATIONS

### MP9 and Moors Ditch

1. A Common Lizard translocation exercise will need to be undertaken in accordance with the method statement outlined in the Reptile Survey Report – Sedgehill Ecology Services September 2012 - prior to any development occurring with respect to MP8 and MP9 – because of the legal protection these species receive.
2. Enhancements to the receptor site – the undeveloped areas of MP9 - would also need to occur prior to this translocation so the exercise needs to be planned well in advance of any proposed development.
3. MP9 also needs to be managed appropriately to protect reptiles, ground nesting birds and to preserve the botanical interest. These recommendations have also been made in the reptile report. A brief management plan for this site is also recommended.
4. It is also recommended that the reptile survey is updated prior to any development if more than two years have elapsed.
5. No reptiles were found on MP5 and the recommendations of the reptile survey are that the grass is mown in December and kept short and uniform to avoid any future establishment of reptiles on this site.
6. Development should not proceed on MP9 in the nesting season without careful checks for ground nesting Skylarks in particular. Initial ground works would be best timed to take place between September and February.
7. It is recommended that the access point to the developable area of MP9 should be brought in via the south-east corner of the field or along the eastern boundary with the existing Milton Park Business Park in order to protect the valuable Moors Ditch wildlife corridor.
8. It is recommended that Moors Ditch is appropriately buffered from development impacts (including buildings, car parking and other areas of hard standing). A three metre buffer is recommended from the edge of the current tree canopy to allow for tree growth and to preserve a relatively undisturbed corridor for wildlife. This should also apply to new developments (MP1 and MP2) on the south side of the brook.
9. Careful attention also needs to be paid to lighting to ensure that this is sufficiently muted or directional so that the stream corridor is not lit at night. This is because bright lighting is deterring to nesting birds, foraging bats and other wildlife.
10. Dredging of Moors Ditch is not recommended for conservation purposes. However if this is required at any stage for maintenance purposes it should not be undertaken without survey for Water Voles. Works would have to be undertaken without affecting the banks at an appropriate time of year and staggered so that the Ditch is not dredged all at once. Supervision may also be required.

11. It should be ensured that there are no adverse discharges into the ditches or lagoons around Milton Park during construction works.

### **Hedgerows and Pools**

12. It is recommended that hedgerows bordering MP5 and MP9 are retained because of their value to nesting birds, foraging bats and other wildlife. Hedges and treelines around the Milton Park LDO in general should also be protected.
13. There is an opportunity to gap up hedges with native hedge planting around MP9 and MP5, as an enhancement measure.
14. It is recommended that hedgerow planting be undertaken around the site peripheries of MP8 wherever possible. Recommended species include Field Maple, Hawthorn, Dogwood, Ash, Holly, Hazel, Buckthorn and Spindle.
15. Enhancement measures designed to protect and improve the ecology of the Milton Park site in general are detailed in the Baseline Ecological Survey for Milton Park carried out in March 2011. These include measures to protect and enhance the pools located within the site.

### **Birds and Bats**

16. Development within the existing Milton Park Business Park should be mindful of the need to protect existing trees and undertake compensatory planting where necessary. Mature trees should be protected because of their habitat value for birds, bats and invertebrates.
17. No mature trees should be felled without being first checked by a qualified Ecologist for their potential to contain roosting bats.
18. Any scrub areas and trees to be lost should be cleared during the winter months or checked for nesting birds by a suitably qualified Ecologist during the nesting season – March to August inclusive.

### **REFERENCES**

- JNCC (1993). *Handbook for Phase 1 Habitat Survey*. English Nature, Peterborough, UK.
- English Nature (2001) *Great Crested Newt Mitigation Guidelines*. English Nature, Peterborough, UK.

**APPENDIX 1 – SITE PHOTOGRAPHS**



**PHOTO 1 – POOL 4**



**PHOTO 2 – POOL 5**



**PHOTO 3 – POOL 6**



**PHOTO 4 – POOL 10 AND MP8**



**PHOTO 5 – MP8 FROM WESTERN BOUNDARY**



**PHOTO 6 – HEDGE 2 MILTON PARK**



**PHOTO 7 – TYPICAL ACCESS ROAD MILTON PARK**



**PHOTO 8 – TREES (T1)**



**PHOTO 9 – MOORS DITCH**



**PHOTO 10 - MP5 - LOOKING EAST**



**PHOTO 11 - MP9 – MORE DIVERSE MIDDLE SECTION – LOOKING EAST**



**PHOTO 12 - MP9 – DIVERSE MIDDLE SECTION – LOOKING SOUTH-WEST**

## **APPENDIX 2 – DESK DATA SEARCH**

**FIGURES 1A – 1C**

**FIGURE 1A – LOCATION OF HABITATS OF VALUE – WITHIN MILTON PARK  
– ALSO SHOWING PROPOSED LDO DEVELOPMENT AREAS**

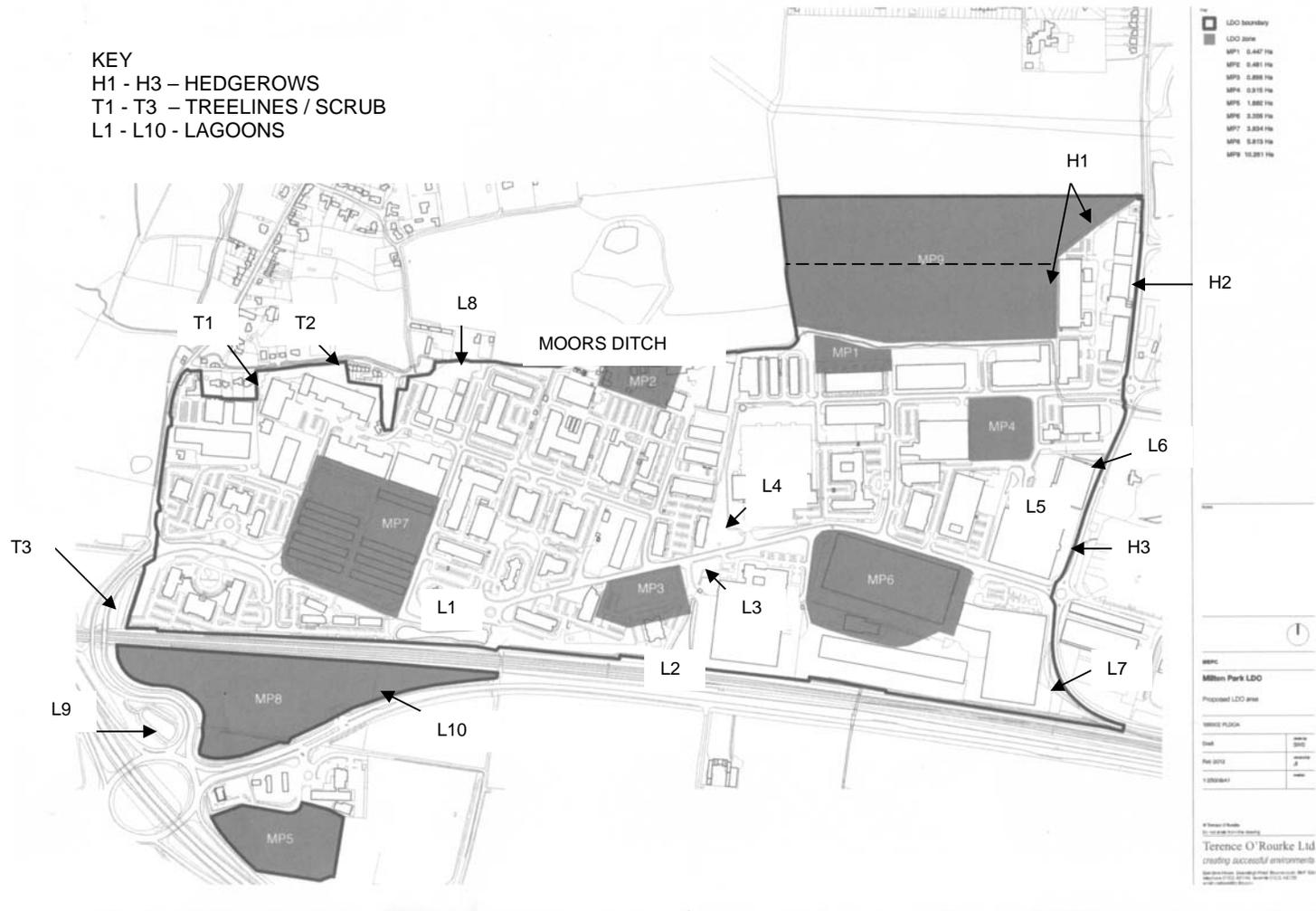
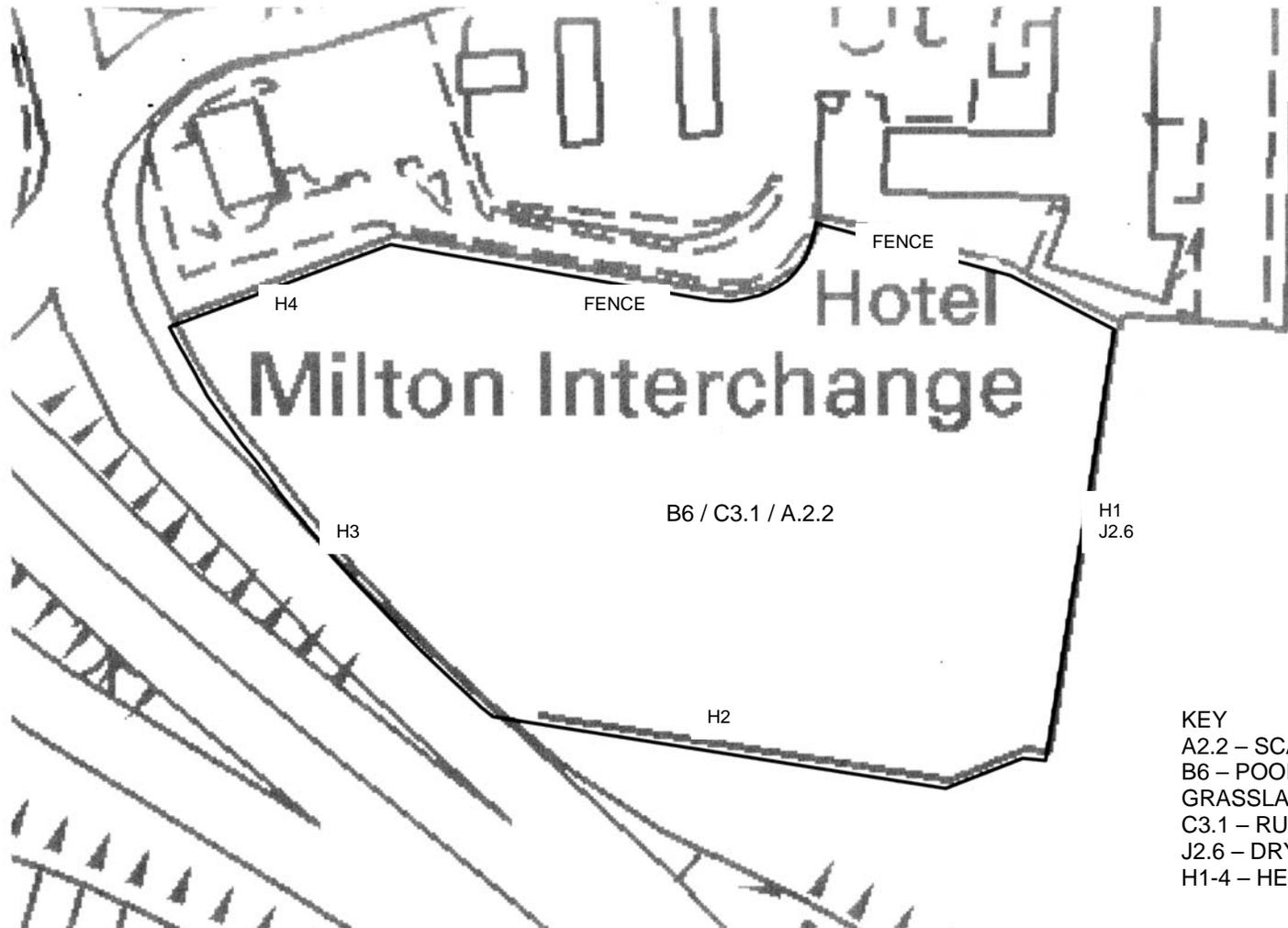


FIGURE 1B – HABITAT PLAN MP5



**FIGURE 1C – MP9 KELARTS FIELD – SITE PLAN**

