

## **1. Introduction**

This plan has been compiled by London Conservation Services (LCS) under contract to the London Borough of Southwark (LBS). The site description was produced by Barry Nicholson following a vegetation survey carried out on the 14<sup>th</sup> March 2007. The plan was then compiled by Alan Scott.

This plan covers the period of the next 5 years (2007 to 2012). The habitats and species present are described and the management required to preserve and enhance the wildlife value of the site is detailed.

## **2. Description**

### **2.1 General Information**

#### **2.1.1 Name**

Dog Kennel Hill Open Space

#### **2.1.2 Location**

The site is situated in East Dulwich in the London Borough of Southwark, approximately 300m north of East Dulwich Station

#### **2.1.3 Area**

0.7 Hectares (estimate)

#### **2.1.4 Grid Reference**

TQ 097 838 331 755

#### **2.1.5 Access**

The site is open to the public at all times via footpaths from Dog Kennel Hill to the east, Champion Hill Estate to the north and the Sainsbury supermarket to the south.

#### **2.1.6 Land Tenure**

London Borough of Southwark holds the freehold.

#### **2.1.7 Status**

Dog Kennel Hill Open Space has been designated as a Site of Local Importance for Nature Conservation by the Greater London Authority. It is also designated as Metropolitan Open Land.

#### **2.1.8 Public Rights of Way**

Although it is open to the public there are no public rights of way through the site.

#### **2.1.9 Planning Authority:**

London Borough of Southwark.

## **2.2 Biological Description**

A habitat and vegetation survey of Dog Kennel Hill was carried out on the 14<sup>th</sup> March 2007. The survey followed standard phase 1 habitat survey methodology, as modified for Greater London by the former London Ecology Unit and adopted by the Greater London Authority (LEU 1994). The reserve was traversed on foot and constituent habitats were described and mapped and a list of plant species compiled.

### **2.2.1 Habitats**

To facilitate description the site has been divided into 3 compartments. These are shown on figure 1 and described in turn below. Scientific names are given at the first mention of a species – thereafter English names only are used.

#### **2.2.1.1 Compartment 1**

Located in the south-western part of the site, this is an area of non-native broadleaved woodland. It is largely dominated by sycamore *Acer pseudoplatanus*, with some ash *Fraxinus excelsior*, false acacia *Robinia pseudoacacia*, horse chestnut *Aesculus hippocastanum* and senescent silver birch *Betula pendula*. Many of the sycamore are dead or dying, apparently as result of sooty bark disease. Holm oak *Quercus ilex* seedlings are abundant in the understorey, which also includes scattered privet *Ligustrum ovalifolium*, hawthorn *Crataegus monogyna* and holly *Ilex aquifolium*. The ground vegetation is dominated by bramble *Rubus fruticosus* agg. and ivy *Hedera helix*, with cow parsley *Anthriscus sylvestris* frequent towards the margins. Native bluebells *Hyacinthoides non-scripta* have been planted along the margins of a path that meanders through the wood. Several patches of Japanese knotweed *Fallopia japonica* occur along a tarmac path and fenceline that runs across the western-most part of the wood.

An open glade occurs in the central part of the compartment. This is largely covered by low bramble scrub, with some cow parsley.

#### **2.2.1.2 Compartment 2**

This compartment covers the central part of the site and extends in a narrow limb along the northern margin towards Dog Kennel Hill [Note: the eastern-most section of the site adjacent to Dog Kennel Hill had been cleared due to building works on the adjacent housing estate at the time of survey, but would normally be similar in character to and be an extension of this compartment]. Most of the compartment is covered by amenity grassland. This is dominated by perennial ryegrass *Lolium perenne*, with some smooth meadow-grass *Poa pratensis*, red fescue *Festuca rubra* and cock's-foot *Dactylis glomerata*. Associated herbs include white clover *Trifolium repens*, yarrow *Achillea millefolium*, common daisy *Bellis perennis*, common mouse-ear *Cerastium fontanum*, dove's-foot crane's-bill *Geranium molle* and creeping buttercup *Ranunculus repens*. Daffodils *Narcissus pseudonarcissus* cv. have been planted in places. A desire line runs across the eastern part of the compartment and the sward here is heavily trampled and disturbed, with a range of weed species present including bristly ox-tongue *Picris echioides*, shepherd's purse *Capsella bursa-pastoris*, broad-laved dock *Rumex obtusifolius* and smooth sow-thistle *Sonchus oleraceus*, amongst others.

An area of tall herb vegetation occurs on the northern edge along the bank. This is dominated by nettles *Urtica dioica* together with cow parsley, cleavers *Galium aparine* and other rank species. Japanese knotweed occurs in places.

Several individual specimen trees occur along the northern margin of the compartment, including sycamore, hornbeam *Carpinus betulus*, London plane *Platanus x hispanica*, pear *Pyrus communis* and cherry *Prunus sp.*

### **2.2.1.3                      *Compartment 3***

This comprises a mix of woodland, scrub and bare ground in the south-central part of the site.

The woodland extends in a narrow belt along the southern edge of the site, with two 'arms' that extend northwards to surround an open glade of scrub to the south-west of the adventure playground. The woodland is variously dominated by sycamore and grey poplar *Populus x canescens*, with a scattered understorey of elder *Sambucus nigra*, privet and common hawthorn. The ground below is dominated by bramble and ivy, with some cow parsley, nettle *Urtica dioica*, garlic mustard *Alliaria petiolata*, wood avens *Geum urbanum*, etc.

The open glade is covered by dense bramble scrub, with large bushes of elder and *Prunus* species along its northern edge. Rhizomes of Japanese knotweed have been dumped in this area.

An access ramp to the nearby superstore crosses the southern margin of the site. This has recently been upgraded and the ground on either side of the path was largely bare at the time of survey. Some shoots of Japanese knotweed were beginning to regenerate in this area.

## **2.2.2                      *Fauna***

### **2.2.2.1                      *Invertebrates***

No records were made available.

### **2.2.2.2                      *Reptiles and Amphibians***

No records were made available.

### **2.2.2.3                      *Birds***

No records were made available.

### **2.2.2.4                      *Mammals***

No records were made available.

### 3. Evaluation

The habitats and features within the site are evaluated against a range of standard assessment criteria in table 1 below. These have been developed by the Greater London Authority and its predecessor the London Ecology Unit (GLA 2002).

**Table 1: Evaluation of features against GLA criteria**

Criterion	Remarks
Representation	The site supports typical examples of urban secondary woodland and amenity grassland.
Habitat rarity	None of the habitats present at the site are rare or unusual.
Species rarity	No uncommon or London notable plant species were recorded from the site.
Habitat richness	Habitat richness is moderate, with areas mature woodland, scrub, amenity grassland and scattered trees.
Species richness	None of the habitats present at the site are species rich.
Size	The site extends over 0.7 hectares (estimate) and as such is of sufficient size to be viable conservation unit, especially when taken in conjunction with the nearby Greendale Playing Fields.
Important populations of species	None known.
Ancient character	The woodland is clearly of secondary origin. All of the habitats present are of relatively recent origin.
Recreatability	All of the habitats present are potentially recreatable but woodland would take several decades to reach its present maturity.
Typical urban character	The site has a typical urban character.
Cultural or historic character	None known.
Geographic position	The site is located in a densely populated area of south London, with few other areas of semi-natural open space. It is contiguous with areas of rough grassland and scrub within Greendale Playing Fields.
Access	There is free public access.
Use	The site is managed for nature conservation and recreation.
Potential	There is some potential for woodland management and enhancement of the grassland areas.
Aesthetic appeal	The site is potentially a pleasant area of greenspace. However it has suffered from a degree of neglect in recent years and has been recently disturbed by landscaping/construction works.

#### **4. References**

Greater London Authority (2002) Connecting with London's nature: the Mayor's Biodiversity Strategy, Greater London Authority, London.

London Ecology Unit 1994 Habitat Survey for Greater London, London Ecology Unit, London.

Stace, C., 1997 New Flora of the British Isles, 2<sup>nd</sup> Edition, Cambridge University Press, Cambridge.

Kirby, P. (1992) Habitat Management for Invertebrates: A Practical Handbook. Royal Society for the Protection of Birds, Sandy.

## **5. Ideal Management Objectives**

The general long-term aims are to conserve the existing nature conservation interest of the site and to enhance or restore this where appropriate. These aims incorporate the following ideal management objectives:

### **To conserve the existing biodiversity of the reserve, and enhance it where appropriate.**

- To manage the habitats present to conserve and improve their value for biodiversity
- To monitor populations of the reserve's biodiversity to assess progress of conservation management.

### **To maintain the reserve for the quiet enjoyment and understanding by people.**

- To maintain pedestrian access through the reserve in good order.
- To provide information on the ecological value of the reserve.
- To promote the reserve as an educational resource for people of all ages.

## **6. Policy**

### **6.1 General Principles on Ecological Issues**

#### **6.1.1 Survey and monitoring**

It is essential that all management work is recorded and monitored in order to be able to ensure that the work carried out is of benefit to the wildlife on the site and to visitors. Management tasks should be recorded and an annual report of work produced. It is therefore necessary to know what species and habitats are already on the site. The vegetation of the site has been surveyed recently but there is very little information on the fauna of the site. Ideally vegetation/habitat surveys and broad-based invertebrate surveys should be carried out every 5 years and regular bird monitoring should be carried out on an ongoing basis if suitable volunteers can be found. Reptile and amphibian and mammal surveys are also required. There are some groups where little, if any, information prevails – e.g. molluscs, annelids, micro-moths, etc. – and surveying of these should be undertaken as and when resources permit.

All surveying should conform to standardised techniques, from which accurate and relevant data can be drawn. Monitoring, likewise, should conform to standardised methodology. The London Ecology Unit/Greater London Authority bird monitoring transect and butterfly transects should also be considered.

#### **6.1.2 Species recording**

Ideally biological data recorded on site should be made available to Greenspace Information for Greater London (GIGL). Records of unusual sightings, especially birds and invertebrates, should also be relayed quickly to the appropriate London Natural History Society recorders.

#### **6.1.3 Dead Wood**

There is now a considerable body of knowledge regarding the value of standing and fallen dead and dying timber. It is an essential habitat for many species, especially invertebrates, bats, birds, bryophytes and fungi. Standing dead wood is also important for woodpeckers and other birds for feeding and nesting and there is evidence of woodpecker activity on some of the dead trees on the site. Removal of dead wood and 'tidying-up' leads to relatively sterile conditions and takes away an essential part of the woodland ecology. The aim is to provide as much dead wood as feasible - lying, standing, and hanging - without compromising other management aims.

Hollow trees are of particularly high value and often more stable than other trees. Normal arboricultural practice is to remove dead or hollow trees for safety reasons. However in a SINC they should be retained wherever possible. If safety work is required they should be cut as far above the ground as possible to leave the hollow trunk standing. Dead wood should not be tidied away or cut from trees unless clearly dangerous. Cut timber should be left lying on the ground preferably in partial shade, and normally simply where it has fallen.

Ivy climbing up trees should not be cleared unless there is a real danger of the weight causing the tree to fall. Ivy provides a valuable habitat for invertebrates, a late winter food source for many birds and roosting opportunities for bats and owls.

However, standing dead wood can be a safety hazard and this must always take precedence in areas of high public use. Consequently any trees which are in a demonstrably unsafe condition must be made safe especially where they are near boundaries or footpaths.

Regular arboricultural inspections should be carried out to ensure that trees do not present a hazard to members of the public. Any dead or dying trees that pose a safety hazard by being situated close to a path or any other well-used area should be felled, preferably at head height (or above) to retain some standing dead wood. The cut timber should be left on site, and allowed to accumulate randomly across the site and ideally maintained in contact with damp soil in a variety of shaded and open areas. Brushings (small cut material) can be used to form dead hedges or woodpiles in strategic locations, which may also help to deter access to certain areas.

Information should be provided for visitors about the role of dead wood in the reserve and that they should be aware of the potential hazard that it may pose to those who stray off the designated paths.

#### **6.1.4 Species management**

Any species that spread rapidly and are detrimental to the wildlife value of the site in general should be controlled or removed.

#### **6.1.5 Introductions, translocations and planting**

Any planting should only be of native species, preferably of local provenance.

There should be a presumption against the introduction of animals into the site. If any introductions are considered in order to meet management objectives, reference should be made to policies of relevant organisations, e.g. the London Wildlife Trust's Translocation Policy.

#### **6.1.6 Fires**

There should be a general presumption against burning any material on the reserve.

### **6.2. General Principles on Amenity Issues**

#### **6.2.1 Paths**

A clearly defined and well maintained path is the best way of reducing trampling of sensitive vegetation and will ensure that people can enjoy their visit and not have an adverse effect. Ideally paths should be upgraded to provide wheelchair access where possible.

#### **6.2.2 General Safety**

All boundaries, footpaths and other visitor facilities need to be inspected regularly and any necessary remedial action taken immediately (see sections on footpaths and boundaries). Regular inspections must also be carried out of all trees near boundaries and footpaths, to ensure they are in a safe condition, i.e. not about to fall over or shed dead branches onto

an area frequently used by the public. Appropriate action should be taken but in recognition that standing dead wood is an essential feature of the woodland ecosystem (see section on Dead Wood).

### **6.2.3 Access**

The site is presently open access at all times. LBS therefore has a responsibility to ensure that all footpaths and other visitor facilities are in a safe condition at all times.

### **6.2.4 Litter**

Litter makes a site look untidy and uncared for and can spoil the enjoyment of visitors. Some litter can also be unsafe, or lethal to small mammals and some invertebrates. Litter should therefore be cleared on a regular basis.

### **6.2.5 Dogs**

Visitors to the reserve should be encouraged to keep their dogs on a leash to minimise disturbance to wildlife. Fouling by dogs presents a problem and visitors should be requested not to allow their animals to defecate within the site and to clear up after them if they do. Dog bins could be installed on site.

### **6.2.6 Interpretation**

It is important to provide visitors to the site with information about the wildlife that occurs there and the management that is being carried out to conserve it. This can be achieved in a variety of ways, for example through information leaflets, guided walks, articles in the local press etc.

The provision of information boards is a simple and direct way of informing people about the site. They can make people feel more welcome and positive about their visit and, by providing information about what is to be seen, can increase the level of enjoyment. Boards should be kept clean and in good repair and have a contact telephone number to report problems or other information about the site.

## **6.3. *General Principles on Management Practise***

### **6.3.1. Health and Safety and Risk Assessment**

It is essential that all activities take place in a healthy and safe environment. Management of the site poses a number of potential risks, which any one working there must be aware of. The site must have an updated risk assessment to highlight any particular dangers to workers or visitors. This must be reviewed annually.

Tasks should normally be carried out by more than one person at any one time, especially if tools are being used.

All work tasks will require a risk assessment identifying hazards, level of risk and appropriate measures taken to avoid or reasonably reduce risk. Reference should be made to the relevant LBS safety policies and current risk assessments.

### **6.3.2. Herbicides**

There should be a presumption against the use herbicides. By their very nature all herbicides are damaging to the environment to a greater or lesser extent, and can be a danger to the public. Consequently their use should be restricted to only necessary tasks and only if other management methods are inappropriate or have failed. It may sometimes be necessary to treat the stumps of species scheduled for removal from the site where these have grown too large and where it would be a waste of resources to keep on cutting the plants back every year.

Similarly herbicides may be the only way to combat some invasive non-native species such as Japanese knotweed. If chemicals are used, the appropriate LBS policies and risk assessments must be followed.

## **7. Management**

### **7.1 Habitat/Species Management Proposals**

#### **7.1.1 Grassland**

This habitat covers the central part of the site and extends in a narrow limb along the northern margin towards Dog Kennel Hill. It is amenity grassland dominated by perennial ryegrass, with some smooth meadow-grass, red fescue and cock's-foot. Herbaceous species include white clover, yarrow, common daisy, common mouse-ear, dove's-foot crane's-bill and creeping buttercup. Daffodils have been planted in places. Where it has been disturbed by trampling etc a range of other species can be found including bristly ox-tongue, shepherd's purse, broad-leaved dock and smooth sow-thistle.

This area is currently managed by regular mowing during the growing season. This has limited the species diversity and reduces the value for wildlife. However it is an important area for visitors to the site to use and so at least some of the area should remain in this management. Other areas should be managed as meadow by leaving un-cut until late in the summer. Mowing should be carried out after the flowering season when the seeds of grasses had the chance to set. The cuttings should be removed to keep the fertility of the soil low. In high fertility soils the sward tends to be taken over by fast growing species such as nettles and amenity grasses. In lower fertility soils everything grows slowly and therefore more species thrive leading to a more diverse sward.

It is therefore recommended that the central section (approx 50% of the area) of the grassland is continued to be mown regularly but the margins are managed as wild flowers areas. These should be cut in late summer at a height of approx. 10 to 15cm and the cuttings raked off into piles in the adjacent woodland.

#### **7.1.2 Woodland**

Non-native broadleaved woodland is located in the south-western part of the site and in a narrow belt along the southern edge of the site, with two 'arms' that extend northwards to surround an open glade of scrub to the south-west of the adventure playground. It is largely dominated by sycamore, with some ash, false acacia, horse chestnut and senescent silver birch. Many of the sycamore are dead or dying, apparently as result of sooty bark disease. Holm oak seedlings are abundant in the understorey, which also includes scattered privet, hawthorn and holly. The ground vegetation is dominated by bramble and ivy, with cow parsley frequent towards the margins. Native bluebells have been planted along the margins of a path that meanders through the wood. Several patches of Japanese knotweed occur along a tarmac path and fence line that runs across the western-most part of the wood and where horticultural debris has been dumped in the eastern part of the site.

The main work required in the woodland should consist of any work necessary for the safety of visitors and neighbouring property. The site should be inspected annually by a suitable qualified arboriculturalist and any dangerous trees should be made safe as soon as possible. When this is done due regard should be made to the policy on dead wood (see above). Where possible dead timber should be left standing. Consequently trees should be made safe by removing limbs etc. if possible rather than felling the entire tree. All arisings should be retained on site as dead wood habitat.

Some coppicing is recommended, specifically on the woodland edges. Maximum ecological diversity can be promoted by creating a graded edge, with a more gradual transition from woodland through scrub to open grassland. Such edge habitats support rich invertebrate communities (Kirby 1992) and are favoured foraging and nesting habitats for many bird species. Management should therefore consist of selectively coppicing back shrubs along the boundary of the woodland with the grassland in Compartment 2 southern and eastern boundaries. Several bays approximately 3 to 5m deep should be cut back each year on rotation so that the entire boundary is coppiced every few years.

Sycamore is the dominant tree and this is often regarded as having low wildlife value and being a problem tree in nature reserves as it can be very invasive to the detriment of other species. However in fact it actually has a wildlife value as a nectar source and sycamore aphids are an important food source for many insects and birds. Many of the sycamores in the woodland are showing the effects of sooty bark disease and may well die back in the near future. Therefore in the short term no felling or thinning of sycamore is considered necessary, but the situation should be monitored and the sycamore seedlings removed if necessary.

The understorey could be diversified by planting other native shrub species including the introduction of some species which are not found on the site at present such as hazel *Coryllus avellana* and guelder rose *Viburnum opulus*.

### **7.1.3 Glades**

Glades are an important part of any woodland as they provide habitats and foraging areas for many invertebrates and birds and support a range of plant species. One glade already exists in the woodland (Sub-compartment 1a). A second glade (Sub-compartment 3a) has recently been colonised by brambles and scrub. In order to keep the glades open a cutting regime should be instigated. 50% of 1a should be cut in the autumn each year and the arising raked off and stacked in the adjacent woodland. 3a should also be managed by cutting. However a path should be created through the middle and a seating area installed in the centre. This will require the central area and the path to be cleared of vegetation and then cut periodically through the growing season at the same time as the regularly mown amenity grassland. 50% of the remainder of the glade should then be cut each year in the autumn and the arising raked off and stacked in the adjacent woodland.

### **7.1.4 Tall Herb**

An area of tall herb vegetation occurs on the northern edge along the bank. This is dominated by nettles together with cow parsley, cleavers and other rank species. Unfortunately this had all been cut down when the site was visited in May 2007. Japanese knotweed occurs in places.

The management of this area should be the same as for the meadow areas, i.e. cut in late summer and then raked off into piles in the adjacent woodland.

### **7.1.5 Japanese Knotweed**

It is strongly advised that the Japanese knotweed should be eradicated through the implementation of a herbicide spraying programme. Several repeat treatments are likely to be necessary to achieve control. The normal herbicide used is glyphosate which is a broad spectrum herbicide and care should be taken to avoid damage to non-target

vegetation. Any cut vegetation or soil contaminated with Japanese knotweed rhizomes is regarded as 'controlled waste' under Section 34 of the Environmental Protection Act. Consequently there is a 'duty of care' placed upon landowners, managers and contractors to ensure safe disposal in accordance with the provisions of the Act. Any Japanese knotweed waste that leaves the site of origin must be securely transported to a licensed landfill site, where it must be buried to a depth of at least five metres.

The building and landscaping work to the neighbouring Sainsbury supermarket has necessitated the construction of a new pedestrian ramp. This unfortunately has spread soil contaminated by Japanese knotweed rhizomes and many new shoots have appeared in the newly disturbed areas. In the opinion of the author this is the responsibility of the developers and they must ensure it is eradicated before it spreads to new areas. It is essential that the developers are contacted immediately and told of their responsibilities and that they start to treat the area with herbicide.

Treatment of Japanese knotweed is a specialist job and it may be advisable to employ a company who specialise in its treatment to ensure a thorough job is done and that no other areas of the site are affected by either the Japanese knotweed or by the herbicide.

Further information can be found at [www.netregs.gov.uk/netregs/processes/367836/](http://www.netregs.gov.uk/netregs/processes/367836/).

## **7.2 Management by Compartments**

### **7.2.1 Compartment 1**

#### ***Description***

Located in the western part of the site, this is an area of non-native broadleaved woodland. It is largely dominated by sycamore, with some ash, false acacia, horse chestnut and senescent silver birch. Many of the sycamore are dead or dying, apparently as result of sooty bark disease. Holm oak seedlings are abundant in the understorey, which also includes scattered privet, hawthorn and holly. The ground vegetation is dominated by bramble and ivy, with cow parsley frequent towards the margins. Native bluebells have been planted along the margins of a path that meanders through the wood. Several patches of Japanese knotweed occur along a tarmac path and fenceline that runs across the western-most part of the wood.

An open glade occurs in the central part of the compartment (sub-compartment 1a). This is largely covered by low bramble scrub, with some cow parsley.

A path runs along the south east side of the compartment and a second runs from the northern corner to join with it. These have been surfaced with hoggin at some point in the past but are now quite overgrown. At the southerly corner there is an unofficial access path to Greendale Playing Fields. However loose fencing makes this quite dangerous at present. A tarmac path runs up the western side from this access point to join with the road to the north where there is a gate.

On the north west boundary of the woodland there is a chainlink fence separating the site from the housing estate. Similar fence runs down the south west boundary and separates the tarmac path from the rest of the site (although a hole in the fence allows access). The south eastern boundary is mostly intact but has been damaged during the work to Sainsburys.

#### ***Management***

The main work required in the woodland should consist of any work necessary for the safety of visitors and neighbouring property. The site should be inspected annually by a suitable qualified arboriculturalist and any dangerous trees should be made safe as soon as possible. When this is done due regard should be made to the policy on dead wood (see above). Where possible dead timber should be left standing. Consequently trees should be made safe by removing limbs etc. if possible rather than felling the entire tree. All arisings should be retained on site as dead wood habitat.

Some coppicing is recommended on the south west and north west boundaries to create a graded edge, with a more gradual transition from woodland through scrub to open grassland. Such edge habitats support rich invertebrate communities (Kirby 1992) and are favoured foraging and nesting habitats for many bird species. Management should consist of selectively coppicing back shrubs along the northern and eastern boundaries of the woodland. Several bays approximately 3 to 5m deep should be cut back each year on rotation so that the entire boundary is coppiced every few years.

Sycamore is the dominant tree and this is often regarded as having low wildlife value and being a problem tree in nature reserves as it can be very invasive to the detriment of other species. However in fact it actually has a wildlife value as a nectar source and sycamore aphids are an important food source for many insects and birds. Many of the sycamores in the woodland are showing the effects of sooty bark disease and may well die back in the near future. Therefore in the short term no felling or thinning of sycamore is considered necessary, but the situation should be monitored and the sycamore seedlings removed if necessary.

The understorey could be diversified by planting other native shrub species including the introduction of some species which are not found on the site at present such as hazel and guelder rose.

The central glade (sub-compartment 1a) should be maintained by cutting approximately 50% each year in the autumn and the cuttings stacked in the adjacent woodland.

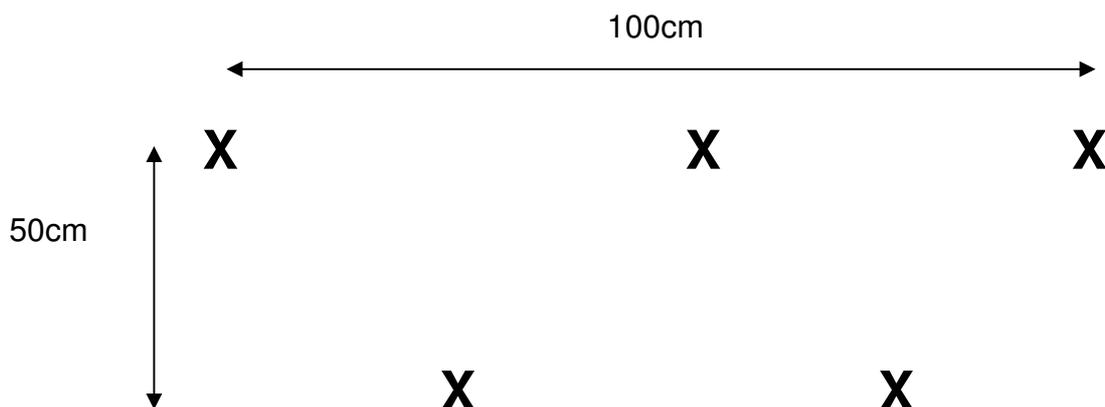
The path through the woodland is in need of resurfacing. Ideally this should be done with a self-binding gravel or hoggin (e.g. Coxwell gravel from Grundon Aggregates) which would create a suitable surface for wheelchair access. It is suggested that the path is extended to create a circular route through the woodland (see Map 3). Alternatively if the chainlink on the western boundary is removed the path could be linked to the existing tarmac path. However a return route inside the northern boundary of the wood would still be desirable. Once established the paths should be managed by cutting back in May and June to keep them clear. Then in September/October the sides should be cut back further to create bays along the length of the path.

The unofficial access path to Greendale Playing Fields should be either made safe by repairing the fence or blocked as a matter of priority. The damaged area of fencing on the boundary with Sainsburys will presumably be repaired once the work has been completed on the buildings.

Ideally the chainlink fence on the western boundary should be removed as it is unattractive. This would then allow official access to the woodland from the west rather than the unofficial hole in the fence which is there at present.

The chainlink along the northern boundary should also be removed but not immediately. Instead a native hedge should be planted outside the fence. The fence should be left until the hedge is established. A good species mixture would be predominantly hawthorn, but could also include blackthorn, field maple, hazel, crab apple and wild privet.

The hedge should be planted in a double row as shown in the diagram



This planting would be an ideal job to involve the school children.

The strip of grassland outside the hedge could be incorporated into the site and managed as a meadow by cutting annually in the late summer and raking off the arisings.

There are relatively few holes in the trees which could provide nest sites for birds. The installation of nest boxes can help to improve a site for hole nesting birds. A mixture of hole fronted and open fronted boxes should be used to maximise the species which can use them. Once installed the boxes should be cleared out of any debris annually in the autumn/winter.

### 7.2.2 Compartment 2

#### **Description**

This compartment covers the central part of the site and extends in a narrow limb along the northern margin towards Dog Kennel Hill. Most of the compartment is covered by amenity grassland which is dominated by perennial ryegrass, with some smooth meadow-grass, red fescue and cock's-foot. Associated herbs include white clover, yarrow, common daisy, common mouse-ear, dove's-foot crane's-bill and creeping buttercup. A desire line runs across the eastern part of the compartment and the sward here is heavily trampled and disturbed, with a range of weed species present including bristly ox-tongue, shepherd's purse, broad-laved dock and smooth sow-thistle, amongst others.

Several individual specimen trees occur along the northern margin of the compartment, including sycamore, hornbeam, London plane, pear and cherry. A strip of tall herb vegetation dominated by nettles together with cow parsley, cleavers and other rank species runs along this boundary. Unfortunately this had all been cut down when the site was visited in May 2007. Japanese knotweed occurs in places.

A chainlink fence runs along the northern boundary. The boundary with the adventure playground along the access path from the north east is also partly chainlink. However some of the length had recently been replaced with a more attractive and secure metal palisade fence.

A tarmac path runs round the western edge of the compartment connecting a ramp from the housing estate to ramp down to Sainsburys. This however is little used and a desire

line path has been created across the grassland. The access path from the north east corner is surfaced with hoggin but is in poor condition in places.

### **Management**

The amenity grass is currently managed by regular mowing during the growing season. This has limited the species diversity and reduces the value for wildlife. However it is an important area for visitors to the site to use and so at least some of the area should remain in this management. However to maximise the diversity and to create an attractive edge to the grassland it is recommended that the margins (approx 50% of the area) of the grassland are managed as wild flowers areas. These should be cut in late summer at a height of approx. 10 to 15cm and the cuttings raked off into piles in the adjacent woodland.

The area of tall herb vegetation should also be managed by leaving un-cut until late summer and then mowing and raking off the cuttings. The grassy bank could also be incorporated into this management.

The Japanese knotweed should be controlled with herbicide as a matter of priority (see 7.1.5 above).

The chainlink fence on the northern boundary serves no real purpose and should be removed. Ideally the metal palisade fence on the boundary with the adventure playground should be continued along the side of the access path to make the entrance more attractive. However this would be an expensive and is a relatively low priority as the existing chainlink is still intact.

The desire line path should be surfaced with self-binding gravel or hoggin to prevent it widening further in the future. The access path in the north east corner should also be re-surfaced with self-binding gravel or hoggin.

### **7.2.3            Compartment 3**

#### **Description**

This comprises a mix of woodland, scrub and bare ground in the south-central part of the site. The woodland extends in a narrow belt along the southern edge of the site, with two 'arms' that extend northwards to surround an open glade of scrub to the south-west of the adventure playground. The woodland is variously dominated by sycamore and grey poplar, with a scattered understorey of elder, privet and common hawthorn. The ground below is dominated by bramble and ivy, with some cow parsley, nettle, garlic mustard, wood avens, etc.

The open glade (Sub-compartment 3a) is covered by dense bramble scrub, with large bushes of elder and species along its northern edge. Rhizomes of Japanese knotweed have been dumped in this area together with other horticultural debris.

An access ramp to the nearby superstore crosses the southern margin of the site. This has recently been upgraded and the ground on either side of the path was largely bare at the time of survey. Some shoots of Japanese knotweed were beginning to regenerate in this area. The ramp is a permanent replacement for another ramp. Care must be taken to ensure that the Japanese knotweed is not spread further at this time.

Quite a lot of rubbish has been dumped in the woodland on the southern boundary.

An old chainlink fence runs along the boundary with compartment 2 and an old gate is still in place at the northern end of this. These are now redundant and almost totally overgrown with ivy and scrub.

### ***Management***

The main work required in the woodland should consist of any work necessary for the safety of visitors and neighbouring property. The site should be inspected annually by a suitable qualified arboriculturalist and any dangerous trees should be made safe as soon as possible. When this is done due regard should be made to the policy on dead wood (see above). Where possible dead timber should be left standing. Consequently trees should be made safe by removing limbs etc. if possible rather than felling the entire tree. All arisings should be retained on site as dead wood habitat.

In order to keep the glade (3a) open a cutting regime should be instigated. A path should be created through the middle and a seating area installed in the centre. This will require the central area and the path to be cleared of vegetation and then cut periodically through the growing season at the same time as the regularly mown amenity grassland. 50% of the remainder of the glade should then be cut each year in the autumn and the arising raked off and stacked in the adjacent woodland.

The cutting regime should keep the path open through the glade and no surfacing is recommended. However the path will need steps installing to take it up on to compartment 2 at the south west corner of the compartment. 1 or 2 benches could be installed in the centre of the glade.

The Japanese knotweed should be controlled with herbicide as a matter of priority (see 7.1.5 above). Also the tipping of horticultural debris should be stopped as it is unsightly and could lead to the reintroduction of the Japanese knotweed.

The rubbish should be removed as soon as possible.

The old chainlink fence and gate should also be removed as they are redundant and unsightly.

The Japanese knotweed on the slope by the ramp has been spread by the landscaping work carried out by Sainsburys and it is therefore the responsibility of the developers to ensure it is eradicated before it spreads to new areas. It is essential that the developers are contacted immediately and told of their responsibilities and that they start to treat the area with herbicide.

## **7.3 General Management**

### **7.3.1 Litter**

The site should be cleared of litter on a regular basis.

### **7.3.2 Interpretation**

An interpretive board should be installed in Compartment 2 to give information on the wildlife and management of the site. It should also have a contact telephone number to report problems or other information about the site. Once installed it should be inspected regularly and be kept clean and in good repair.

### **7.3.3 Surveys and Monitoring**

Very few faunal records exist for the site, except invertebrates. It would be very desirable to carry out monitoring of birds and invertebrates if resources allow and suitable experienced volunteers can be found.

All work on the reserve should be recorded and monitored.

The vegetation should be re-surveyed in the summer of 2011 and the management plan reviewed in 2012.

### **7.3.4 Safety**

All boundaries, footpaths, and other visitor facilities need to be inspected annually and any necessary remedial action taken immediately. Inspections must also be carried out of all trees near boundaries and footpaths, to ensure they are in a safe condition, i.e. not about to fall over or shed dead branches onto an area frequently used by the public.

Appropriate action should be taken but in recognition that standing dead wood is an essential feature of the woodland ecosystem (see section on Dead Wood).

## 8 Work Programme

### 8.1 Five year work programme

	Financial Year				
	2007/08	2008/09	2009/10	2010/11	2011/12
<b>Compartment 1</b>					
Coppice bays along western and northern boundaries	✓	✓	✓	✓	✓
Diversify under-storey by planting native shrubs	✓				
Cut 50% of glade in autumn and stack arisings in adjacent woodland	1a	1a	1a	1a	1a
Re-surface and extend hogging path through woodland	✓				
Cut back vegetation to 1m along footpaths in May	✓	✓	✓	✓	✓
Cut back vegetation to 1m along footpaths in July	✓	✓	✓	✓	✓
Cut back vegetation to 1m along footpaths in October	✓	✓	✓	✓	✓
Make safe or block unofficial access to Greendale Playing Fields	✓				
Remove chainlink fence on western boundary	✓				
Plant hedge on northern boundary	✓				
Remove chainlink fence on northern boundary once hedge established					✓
Manage strip of grassland on northern boundary by cutting annually in late summer/autumn and stacking arisings in woodland	✓	✓	✓	✓	✓
Install nest boxes	✓				
Clear out nest boxes annually in		✓	✓	✓	✓

autumn/winter

## Compartment 2

Cut central area of grassland regularly during growing season	✓	✓	✓	✓	✓
Cut margins of grassland annually in late summer/autumn and stacking arisings in woodland	✓	✓	✓	✓	✓
Cut tall herb areas annually in late summer/autumn and stacking arisings in woodland	✓	✓	✓	✓	✓
Control Japanese knotweed	✓			As necessary	
Remove chainlink fence on northern boundary	✓				
Replace chainlink on boundary of playground with metal palisade fence				If funding available	
Surface desire line path with hoggin	✓				

## Compartment 3

Manage scrub/woodland by non-intervention	✓	✓	✓	✓	✓
Install seating in centre of glade	✓				
Install steps at south west corner to allow access to Compartment 2	✓				
Cut path and central seating area regularly during growing season	✓	✓	✓	✓	✓
Cut 50% of glade in autumn and stack arisings in adjacent woodland	3a	3a	3a	3a	3a
Remove horticultural debris	✓			As necessary	
Control Japanese knotweed	✓			As necessary	
Contact developers to ensure treatment of Japanese knotweed before repositioning of access ramp	✓				
Remove chainlink and old gate on western boundary	✓				

## General Management

Collect litter as necessary

Throughout

Carry out safety and arboricultural inspection of reserve annually and implement any necessary safety/tree work

Throughout

Install information board

✓

Re-survey the vegetation and review management plan

✓

## 8.2 Annual Work Programme Financial Year 2007/08

<u>Management Task</u>	<u>Compartment</u>
<b>Quarter 1 April – June</b>	
Re-surface and extend hogging path	1, 2
Cut back vegetation to 1m along footpaths in May	Throughout
Make safe or block unofficial access to Greendale Playing Fields	1
Remove chainlink fence on western boundary	1
Cut central area of grassland regularly during growing season	2
Control Japanese knotweed	Throughout
Remove chainlink fence on northern boundary	2
Replace chainlink on boundary of playground with metal palisade fence	2
Install seating	3a
Install steps	3
Cut path and central seating area regularly during growing season	3
Remove horticultural debris	3
Contact developers to ensure treatment of Japanese knotweed before repositioning of access ramp	3
Remove chainlink and old gate	3
Collect litter as necessary	Throughout
Install information board	2
Install nest boxes	1, 3
<b>Quarter 2 July – September</b>	
Cut back vegetation to 1m along footpaths in July	Throughout
Cut central area of grassland regularly during growing season	2
Control Japanese knotweed	Throughout

Cut path and central seating area regularly during growing season	3
Collect litter as necessary	Throughout
<b>Quarter 3 October – December</b>	
Coppice bays along south west and north west boundaries	1
Cut 50% of glade in autumn and stack arisings in adjacent woodland	1a, 3a
Cut back vegetation to 1m along footpaths in October	Throughout
Manage strip of grassland on northern boundary by cutting annually in late summer/autumn and stacking arisings in woodland	1
Cut margins of grassland annually in late summer/autumn and stacking arisings in woodland	2
Cut tall herb areas annually in late summer/autumn and stacking arisings in woodland	2
Collect litter as necessary	Throughout
Carry out safety and arboricultural inspection of reserve annually and implement any necessary safety/tree work	
<b>Quarter 4 January – March</b>	
Diversify under-storey by planting native shrubs	1
Plant hedge on northern boundary	1
Collect litter as necessary	Throughout

### 8.3 Annual Work Programme Financial Year 2008/09

<u>Management Task</u>	<u>Compartment</u>
<b>Quarter 1 April – June</b>	
Cut back vegetation to 1m along footpaths in May	Throughout
Cut central area of grassland regularly during growing season	2
Control Japanese knotweed	As necessary
Cut path and central seating area regularly during growing season	3
Collect litter as necessary	Throughout
<b>Quarter 2 July – September</b>	
Cut back vegetation to 1m along footpaths in July	Throughout
Cut central area of grassland regularly during growing season	2
Control Japanese knotweed	As necessary
Cut path and central seating area regularly during growing season	3
Collect litter as necessary	Throughout
<b>Quarter 3 October – December</b>	
Coppice bays along south west and north west boundaries	1
Cut 50% of glade in autumn and stack arisings in adjacent woodland	1a, 3a
Cut back vegetation to 1m along footpaths in October	Throughout
Manage strip of grassland on northern boundary by cutting annually in late summer/autumn and stacking arisings in woodland	1
Cut margins of grassland annually in late summer/autumn and stacking arisings in woodland	2
Cut tall herb areas annually in late summer/autumn and stacking arisings in woodland	2
Collect litter as necessary	Throughout

Carry out safety and arboricultural inspection of reserve annually and implement any necessary safety/tree work

Clear out nest boxes annually in autumn/winter

1, 3

**Quarter 4 January – March**

Throughout

Collect litter as necessary

Throughout

## 8.4 Annual Work Programme Financial Year 2009/10

<u>Management Task</u>	<u>Compartment</u>
<b>Quarter 1 April – June</b>	
Cut back vegetation to 1m along footpaths in May	Throughout
Cut central area of grassland regularly during growing season	2
Control Japanese knotweed	As necessary
Cut path and central seating area regularly during growing season	3
Collect litter as necessary	Throughout
<b>Quarter 2 July – September</b>	
Cut back vegetation to 1m along footpaths in July	Throughout
Cut central area of grassland regularly during growing season	2
Control Japanese knotweed	As necessary
Cut path and central seating area regularly during growing season	3
Collect litter as necessary	Throughout
<b>Quarter 3 October – December</b>	
Coppice bays along south west and north west boundaries	1
Cut 50% of glade in autumn and stack arisings in adjacent woodland	1a, 3a
Cut back vegetation to 1m along footpaths in October	Throughout
Manage strip of grassland on northern boundary by cutting annually in late summer/autumn and stacking arisings in woodland	1
Cut margins of grassland annually in late summer/autumn and stacking arisings in woodland	2
Cut tall herb areas annually in late summer/autumn and stacking arisings in woodland	2
Collect litter as necessary	Throughout

Carry out safety and arboricultural inspection of reserve annually and implement any necessary safety/tree work

Clear out nest boxes annually in autumn/winter

1, 3

**Quarter 4 January – March**

Throughout

Collect litter as necessary

Throughout

## 8.5 Annual Work Programme Financial Year 2010/11

<b><u>Management Task</u></b>	<b><u>Compartment</u></b>
<b>Quarter 1 April – June</b>	
Cut back vegetation to 1m along footpaths in May	Throughout
Cut central area of grassland regularly during growing season	2
Control Japanese knotweed	As necessary
Cut path and central seating area regularly during growing season	3
Collect litter as necessary	Throughout
<b>Quarter 2 July – September</b>	
Cut back vegetation to 1m along footpaths in July	Throughout
Cut central area of grassland regularly during growing season	2
Control Japanese knotweed	As necessary
Cut path and central seating area regularly during growing season	3
Collect litter as necessary	Throughout
<b>Quarter 3 October – December</b>	
Coppice bays along south west and north west boundaries	1
Cut 50% of glade in autumn and stack arisings in adjacent woodland	1a, 3a
Cut back vegetation to 1m along footpaths in October	Throughout
Manage strip of grassland on northern boundary by cutting annually in late summer/autumn and stacking arisings in woodland	1
Cut margins of grassland annually in late summer/autumn and stacking arisings in woodland	2
Cut tall herb areas annually in late summer/autumn and stacking arisings in woodland	2
Collect litter as necessary	Throughout

Carry out safety and arboricultural inspection of reserve annually and implement any necessary safety/tree work

Clear out nest boxes annually in autumn/winter

1, 3

**Quarter 4 January – March**

Throughout

Collect litter as necessary

Throughout

## 8.6 *Annual Work Programme Financial Year 2011/12*

<b><u>Management Task</u></b>	<b><u>Compartment</u></b>
<b>Quarter 1 April – June</b>	
Cut back vegetation to 1m along footpaths in May	Throughout
Cut central area of grassland regularly during growing season	2
Control Japanese knotweed	As necessary
Cut path and central seating area regularly during growing season	3
Collect litter as necessary	Throughout
Re-survey the vegetation	Throughout
<b>Quarter 2 July – September</b>	
Cut back vegetation to 1m along footpaths in July	Throughout
Cut central area of grassland regularly during growing season	2
Control Japanese knotweed	As necessary
Cut path and central seating area regularly during growing season	3
Collect litter as necessary	Throughout
<b>Quarter 3 October – December</b>	
Coppice bays along south west and north west boundaries	1
Cut 50% of glade in autumn and stack arisings in adjacent woodland	1a, 3a
Cut back vegetation to 1m along footpaths in October	Throughout
Manage strip of grassland on northern boundary by cutting annually in late summer/autumn and stacking arisings in woodland	1
Cut margins of grassland annually in late summer/autumn and stacking arisings in woodland	2

Cut tall herb areas annually in late summer/autumn and stacking arisings in woodland	2
Collect litter as necessary	Throughout
Carry out safety and arboricultural inspection of reserve annually and implement any necessary safety/tree work	
Clear out nest boxes annually in autumn/winter	1, 3
<b>Quarter 4 January – March</b>	Throughout
Collect litter as necessary	Throughout
Review management plan	Throughout

## Appendices

### Appendix 1: Plant Species List for Dog Kennel Hill

Common Name	Scientific name	Abundance <sup>1</sup>
Field maple	<i>Acer campestre</i>	R
Sycamore	<i>Acer pseudoplatanus</i>	O
Yarrow	<i>Achillea millefolium</i>	F
Horse chestnut	<i>Aesculus hippocastanum</i>	O
Garlic mustard	<i>Alliaria petiolata</i>	F
Cow Parsley	<i>Anthriscus sylvestris</i>	F
Lesser burdock	<i>Arctium minus agg.</i>	O
Mugwort	<i>Artemisia vulgaris</i>	O
Black horehound	<i>Ballota nigra</i>	O
Common daisy	<i>Bellis perennis</i>	O
Silver birch	<i>Betula pendula</i>	O
Shepherd's purse	<i>Capsella bursa-pastoris</i>	R
Hornbeam	<i>Carpinus betulus</i>	R
Common mouse-ear	<i>Cerastium fontanum</i>	O
Spear thistle	<i>Cirsium vulgare</i>	O
Old man's beard	<i>Clematis vitalba</i>	R
Dogwood	<i>Cornus sp.</i>	R
Cotoneaster sp.	<i>Cotoneaster sp.</i>	R
Hawthorn	<i>Crataegus monogyna</i>	O
Cock's-foot	<i>Dactylis glomerata</i>	O
Perennial wall-rocket	<i>Diplotaxis tenuifolia</i>	O
Couch	<i>Elytrigia repens</i>	R
Japanese knotweed	<i>Fallopia japonica</i>	F
Red fescue	<i>Festuca rubra</i>	R
Ash	<i>Fraxinus excelsior</i>	O
Cleavers	<i>Galium aparine</i>	O
Cut-leaved crane's-bill	<i>Geranium dissectum</i>	O
Dove's-foot crane's-bill	<i>Geranium molle</i>	O
Wood avens	<i>Geum urbanum</i>	O
Ivy	<i>Hedera helix</i>	F
Bluebell	<i>Hyacinthoides non-scripta</i>	O
Cat's-ear	<i>Hypochaeris radicata</i>	R
Holly	<i>Ilex aquifolium</i>	R
White dead-nettle	<i>Lamium album</i>	O
Red dead-nettle	<i>Lamium purpureum</i>	O
Privet	<i>Ligustrum ovalifolium</i>	O
Honeysuckle	<i>Lonicera sp.</i>	O
Common mallow	<i>Malva sylvestris</i>	R
Spotted medick	<i>Medicago arabica</i>	O
Daffodil	<i>Narcissus pseudonarcissus</i>	O
Green alkanet	<i>Pentaglottis sempervirens</i>	O
Bristly ox-tongue	<i>Picris echioides</i>	F
Hawkweed ox-tongue	<i>Picris hieracioides</i>	F
London plane	<i>Platanus x hispanica</i>	R
Smooth meadow-Grass	<i>Poa pratensis</i>	R
Grey poplar	<i>Populus x canescens</i>	O
Creeping cinquefoil	<i>Potentilla reptans</i>	R

<sup>1</sup> **DAFOR Scale:** This provides an estimate of the relative abundance of each species recorded, whereby D = Dominant; A = Abundant; F = Frequent; O = Occasional and R = Rare.

<b>Common Name</b>	<b>Scientific name</b>	<b>Abundance<sup>1</sup></b>
Cherry	<i>Prunus sp.</i>	R
Cherry plum	<i>Prunus cerasifera</i>	R
Wild plum	<i>Prunus domestica</i>	R
Pear	<i>Pyrus communis</i>	R
Holm oak	<i>Quercus ilex</i>	F
Pedunculate oak	<i>Quercus robur</i>	R
Creeping buttercup	<i>Ranunculus repens</i>	O
False acacia	<i>Robinia pseudacacia</i>	F
Bramble	<i>Rubus fruticosus agg.</i>	F
Broad-leaved dock	<i>Rumex obtusifolius</i>	O
Elder	<i>Sambucus nigra</i>	F
Prickly sow-thistle	<i>Sonchus asper</i>	O
Smooth sow-thistle	<i>Sonchus asper</i>	O
Common chickweed	<i>Stellaria media</i>	O
White comfrey	<i>Symphytum orientale</i>	O
Dandelion	<i>Taraxacum officinale agg.</i>	O
Common lime	<i>Tilia x europaea</i>	R
White clover	<i>Trifolium repens</i>	A
Common nettle	<i>Urtica dioica</i>	F
Ivy-leaved speedwell	<i>Veronica hederifolia</i>	O
Sweet violet (garden)	<i>Viola odorata</i>	R

