National Vegetation Classification Survey of Woodland at Kew

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CONTENTS

1 INTRODUCTION

A National Vegetation Classification (NVC) survey of an area of woodland on the right bank of the River Thames, adjacent to Royal Mid-Surrey Golf Club, was undertaken on 11th July 2008.

During the survey, all vascular plants seen were recorded and frequency assessed using the DAFOR scale:

D	Dominant
A	Abundant
F	Frequent
O	Occasional
R	Rare
(L	Locally)

A single one-off survey is insufficient to record all the plants present in any given site and, for example, any strictly vernal species will have been missed. DAFOR ratings for certain species, notably annuals, can change throughout the year.

This report outlines the results of the field survey and includes a map of the site showing mapped NVC communities and, where relevant, transitional/non-fit classifications. Species are referred to by their Latin names throughout (nomenclature of Stace 1997). A checklist of Latin and English names is given in the Appendix.

2 METHODOLOGY

2.1 Field Survey

All fieldwork was undertaken on 11th July 2008. The boundary of the site was defined as follows:

- the western boundary was set as the top of the Thames embankment
- the southern boundary was set in a straight line from the limit of unmown vegetation within the Old Deer Park Recreation Ground
- the eastern boundary was set at the limit of unmown stands of vegetation in the Royal Mid-Surrey Golf Club course and the recreation ground
- the northern boundary was arbitrarily defined by drawing a straight line across the site from close to the southern edge of the 16th tee. The two ponds close to this were excluded from survey

During the field survey all the site was walked over. Many stands were extremely difficult to access due to dense scrub, nettles or steep embankments adjacent to deep water. The open water ditches were assessed only from their margins, although grapnel draglines were sampled in several places.

It was possible to record the overwhelming majority of species to specific and, where relevant, sub-specific level. However, non-flowering Michealmas-daisies could not be identified beyond genus level (*Aster* sp.). An exotic Cherry could not be confirmed due to the lack of flowers or fruits, but is likely to be *Prunus padus*. This is listed in the Appendix as *Prunus* cf *padus* (cf = 'compares favourably'). No aggregates of *Rosa canina*, *Rubus fruticosus* or *Taraxacum officinale* have been separated.

2.2 NVC Mapping

OS Mastermap data for use in MapInfo v.7.5 was provided by the London Borough of Richmond-upon-Thames and all NVC communities have been mapped against this. Where watercourses and tarmac paths have been mapped, vegetation polygons have been 'snapped' to the relevant Mastermap lines in GIS. The western site boundary has also been 'snapped' to Mastermap data.

No aerial photograph was available for mapping and therefore the boundaries of mapped stands are indicative only. Because all eastern stands are defined by the limits of mowing, and these habitat lines are either not displayed by Mastermap or are patently inaccurate, the accuracy of mapped vegetation should be regarded as indicative only. Indeed the entire eastern boundary of the site should be regarded as indicative only.

3 SURVEY RESULTS

3.1 NVC Communities

Eight NVC community-types or transitional community-types have been mapped, plus two non-referable stands (see Site Map). The floristic composition of each is described below.

3.1.1 OV24a

OV24a – *Urtica dioica-Galium aparine* Community; Typical Sub-community

This species-poor community dominates open nettle stands adjacent to the golf course. It covers approximately 1.5ha. Lower lying parts are likely to be inundated during high tides and when there is ditch overspill.

Stands in this classification are species-poor and all dominated by *Urtica dioica* (up to 2m in height) with a sub-ordinate cover of *Galium aparine*. *Heracleum sphondylium* is constant, although it rarely attains great cover, in contrast to *Calystegia sepium*, which can be locally co-dominant with *Urtica*. All other species are local in occurrence. More common amongst these are *Glechoma hederacea, Cirsium arvense, Anthriscus sylvestris, Geranium pratense, Angelica sylvestris, Epilobium hirsutum, Rubus fruticosus, Solanum dulcamara, Arrhenatherum elatius, Poa trivialis, Carduus crispus* and (in the wettest areas) *Carex riparia*.

Most stands of this vegetation, but particularly in northern areas, are ceding to scrub and *Crataegus monogyna* and *Ulmus procera* are locally both very common. In fact their cover may be so great that stands could easily have been mapped as a mosaic of OV24a and W21a. Other encroaching woody species include *Acer pseudoplatanus, Quercus robur, Aesculus hippocastanum, Quercus cerris* and *Sambucus nigra*.

3.1.2 OV25b

OV25b – *Urtica dioica-Cirsium arvense* Community; *Rumex obtusifolius-Artemisia vulgaris* Sub-community

This community has been mapped to cover open stands toward the south of the strip of vegetation running along the western boundary of the site; between the Thames embankment and the mapped tarmac path. It covers approximately 0.1ha in area.

Most of the mapped stand is composed of heavily disturbed, species-poor vegetation dominated by *Urtica dioica* and *Rumex obtusifolius*. *Heracleum sphondylium, Arctium lappa, Alliaria petiolata* and *Calystegia sepium* are also common, with scattered *Brassica rapa, Anisantha sterilis* and *Ballota nigra*. Adjacent to the tarmac path, but not separated from the rest of the vegetation included in the mapped classification, runs a very narrow strip of discontinuous *Lolium perenne* dominated grassland. This includes disturbance-tolerant species such as *Hordeum murinum, Dactylis glomerata, Plantago major, Taraxacum officinale* and *Poa annua*. It lies closest to a variant of the NVC classification of OV21/OV23.

3.1.3 OV26e

OV26e – *Epilobium hirsutum* Community; *Urtica dioica-Cirsium arvense* Sub-community

Continuing on from the mapped stands of OV24a, this classification covers stands of open *Epilobium hirsutum* tall-herb fen/ruderal vegetation. Approximately 0.3ha of it has been mapped to the south of the site; mostly within the recreation ground where stands appear likely to be inundated more frequently than those to the north.

Epilobium hirsutum and *Urtica dioica* dominate all stands of this community with *Calystegia sepium* and *Oenanthe crocata*. The latter is a species not normally associated with OV26, but is common here on account of the perhaps quite frequent inundation. *Impatiens capensis* is also very common with more local *Glechoma hederacea, Poa trivialis, Angelica sylvestris, Heracleum sphondylium, Persicaria hydropiper, Lythrum salicaria, Phalaris arundinacea* and *Barbarea vulgaris*. Other species include *Impatiens glandulifera, Agrostis stolonifera, Cirsium arvense, Galium aparine, Elytrigia repens, Arctium lappa, Cardamine pratensis, Artemisia vulgaris, Rorippa sylvestris, Senecio aquaticus* and *Rumex obtusifolius*.

Unlike stands of OV24a, the vegetation included here is mostly open; lacking encroaching scrub.

3.1.4 S5a/S6

S5a – *Glyceria maxima* Swamp; *Glyceria maxima* Sub-community
S6 – *Carex riparia* Swamp

Approximately 0.3ha of largely open fen-swamp vegetation lies toward the south of the survey site. This occurs in what could be regarded as an effective woodland glade, being surrounded by *Salix fragilis* scrub-woodland. However, stands are likely to be wetter here than much of the scrub-woodland surrounding it; perhaps indicating a lower-lying ditch-overspill flood zone. There was standing water at the time of survey.

Stands are variably dominated by *Glyceria maxima* and/or *Carex riparia*. *Urtica dioica* remains very common with *Impatiens capensis*. *Phalaris arundinacea* is locally common. Other species include *Oenanthe crocata, Myosotis scorpioides, Senecio aquaticus, Mentha aquatica* and *Persicaria hydropiper*. Whilst the classification of S5a/S6 covers most variation recorded, there are evident trends to S26 and S28 (see Section 3.1.6).

3.1.5 W6b

W6b – *Alnus glutinosa-Urtica dioica* Woodland; *Salix fragilis* Sub-community

All stands of wet woodland fall into a variant of the NVC-defined community W6b. In places (see Section 3.1.6) stands are transitional with open vegetation.

Approximately 1.7ha of non-transitional W6b have been mapped. These are all dominated by a mostly closed canopy of *Salix fragilis* with sparsely scattered *Fraxinus excelsior, Acer pseudoplatanus, Aesculus hippocastanum, Salix alba* and *Platanus* x *hispanica*.

The understorey is dominated by recruitment *S.fragilis*, although in drier areas *Crataegus monogyna* is abundant with frequent *Sambucus nigra*. These latter stands are close to W6d. *Humulus lupulus* is locally frequent as a climber. All other species, including recruitment *A.pseudoplatanus, F.excelsior, A.hippocastanum, Ulmus procera, Populus* x *canescens* and the shrub *Ligustrum ovalifolium* are infrequent.

The mostly rather poor field layer is dominated by *Urtica dioica* throughout most mapped W6b, except in the wettest stands where *Glyceria maxima, Myosotis scorpioides, Mentha aquatica Lysimachia nummularia, Callitriche stagnalis* and/or *Lythrum salicaria* may be abundant. These stands have certain similarities to W1 woodland. In the driest stands *Glechoma hederacea* can be common with *Hedera helix, Brachypodium sylvaticum* and *Rubus fruticosus*. These may be close to W6d and/or W8d (see Section 3.1.7). Other locally common species include *Oenanthe crocata, Iris pseudacorus, Impatiens capensis, I.glandulifera, Angelica sylvestris, Galium aparine, Rumex obtusifolius, Lycopus europaeus* and *Aegopodium podagraria*.

3.1.6 W6b-S28b/S26d

W6b – *Alnus glutinosa-Urtica dioica* Woodland; *Salix fragilis* Sub-community
S28b – *Phalaris arundinacea* Tall-herb Fen; *Epilobium hirsutum-Urtica dioica* Sub-community
S26d – *Phragmites australis-Urtica dioica* Tall-herb Fen; *Epilobium hirsutum* Sub-community

Approximately 1ha of this transitional classification have been mapped. On the whole stands are similar to wetter forms of W6b (see above), although most stands here are rather open and a remnant rich-fen community is present; at least in patches.

Closed woodland stands are dominated by *Salix fragilis*. There is little or no understorey, other than recruitment *S.fragilis*; reflecting its recent origin. The field layer is dominated by *Myosotis scorpioides, Oenanthe crocata, Phalaris arundinacea, Lythrum salicaria* and more local *Mentha aquatica*. *Urtica dioica* is absent from the very wettest stands, but dominates more open woodland over drier substrates. Other common, or locally frequent, species (especially of more open stands) include *Impatiens capensis, I.glandulifera, Galium aparine, Callitriche stagnalis, Solanum dulcamara, Angelica sylvestris, Glyceria maxima, Bidens tripartita, Ranunculus repens* and *Rumex obtusifolius*.

Classification of these stands is problematic. With an aerial photograph it may be possible to separate out different components. However, there are strong transitions between several communities, even amongst what appears to be superficially homogenous vegetation. The W6b element is obvious in all areas because of the cover of *S.fragilis* and *Urtica*, although *Urtica*-lacking stands may be closer to W1. The S28b element is rather less evident, although some stands of semi-open *Phalaris* clearly belong here. The S26d element forms a not uncommon variant of the community where *Urtica*-dominated fen occurs in the absence of *Phragmites*.

3.1.7 W8b

W8b – *Fraxinus excelsior-Acer campestre-Mercurialis perennis* Woodland; *Hedera helix* Sub-community

This classification covers all the dry woodland recorded within the site. Occupying approximately 2ha in area, it is confined to dry ditch banks and the top of the Thames embankment. Inundation is likely to be very rare and/or of short duration.

All stands appear to have originated from avenues of trees planted on river and ditch embankments. These probably date back hundreds of years given the size of several veteran Horse-chestnuts. Internal banks may be largely composed of ditch spoil and past alluvial deposition.

The canopy of W8d is dominated by a mixture of mature planted *Acer pseudoplatanus* and *Aesculus hippocastanum* with *Fraxinus excelsior*. Mature, originally planted, *Fagus sylvatica, Tilia* x *europaea* and *Platanus* x *hispanica* are also present, with (especially on wetter margins) natural regeneration *Salix fragilis*.

The understorey is better developed here than in most W6b stands. It is largely dominated by *Crataegus monogyna* and *Sambucus nigra*, with less frequent *Ligustrum ovalifolium* and *Ulmus procera*. Recruitment trees, including all canopy dominants, are frequent along with climbing *Hedera helix*.

For the most part the species-poor field layer is dominated by mixtures of *Hedera helix, Brachypodium sylvaticum* and *Glechoma hederacea* with *Geum urbanum, Alliaria petiolata, Urtica dioica, Anthriscus sylvestris, Poa trivialis, Rubus fruticosus* and locally abundant *Aegopodium podagraria*. Scattered semi-open stands commonly support *Rubus fruticosus-Galium aparine*, and *Anthriscus-Glechoma-Brachypodium* vegetation. Stands either side of the Thames path (mapped as 'Tarmac Path') are commonly disturbed and adjacent to the Thames itself are often dominated by *Urtica* with little or no *Hedera*. These have clear affinities to W6d but can all be retained as dry W8d woodland.

3.1.8 W21a

W21a – *Crataegus monogyna-Hedera helix* Scrub; *Hedera helix-Urtica dioica* Sub-community

Three stands of W21a scrub, covering a total area of approximately 0.4ha, have been mapped on the eastern margins of the survey site. These are all oriented around planted trees but include natural regeneration scrub. Without intervention management all stands of OV24a will most likely cede to this classification; perhaps in a relatively short time given that extant scrub is already very common (see Section 3.1.1).

The northernmost and southernmost stands of mapped W21a are oriented around mature *Populus* x *canadensis* trees. *Tilia* x *europaea* trees are present in the north and centre. The central stand also supports *Robinia pseudoacacia*.

Most scrub is dominated by *Crataegus monogyna, Ulmus procera* and/or *Sambucus nigra*. Recruitment *Robinia* dominates much of the central stand. Other woody species include

recruitment *Fraxinus excelsior, Acer pseudoplatanus, Quercus cerris, Q.robur* and *Aesculus hippocastanum*.

The species-poor field layer is dominated by mixtures of *Urtica dioica, Glechoma hederacea, Brachypodium sylvaticum, Anthriscus sylvestris* and *Galium aparine*. *Hedera helix* is only locally dominant. Other species include *Geum urbanum, Heracleum sphondylium, Poa trivialis* and *Rubus fruticosus*.

3.1.9 Drain (Open Water)

Approximately 1ha of open water has been mapped; covering approximately 1.4km of riverside drain. All is floristically very poor with channels mostly heavily shaded by adjacent woodland and supporting what appears to be quite deep anoxic silt and organic debris. Of several grapnel draglines thrown, no submerged or floating vegetation was recorded, although *Callitriche stagnalis* is scattered on the margins of some stretches. Other species present on ditch margins include *Glyceria maxima, Mentha scorpioides, Oenanthe crocata, Iris pseudacorus, Carex remota* and *C.pendula*. However, all are very infrequent.

3.1.10 Tarmac Path

Approximately 0.3ha of unvegetated tarmac path have been mapped.

3.2 Species

During the field survey 131 species of vascular plant were recorded from the site. Approximately 25% of these are non-native. The full list is given in the Appendix.

4 EVALUATION

4.1 Habitat Evaluation

Seven habitat-types, as defined by Phase I classifications developed by the England Field Unit (Anon 2003), have been recorded during the field survey. These are listed in Table 1 along with broad habitat types, as defined by Jackson (2000), NVC classification and total area. National Priority BAP habitats are also given.

Table 1 – Habitats recorded and their relationship to BAP habitats and survey classifications

Habitat (Phase I code)	Broad HAP Classification	National Priority BAP Habitats	NVC Classification	Area Mapped
Broad-leaved woodland (A1.1)	Broad-leaved, Mixed and Yew Woodland		W8d	2.0ha
Semi-natural broad-leaved woodland (A1.1.1)	Broad-leaved, Mixed and Yew Woodland	Wet Woodland	W6b, W6b-S28b/S26d	2.7ha
Scattered scrub (A2.2)	Urban*		OV24a (part), W21a	0.4-1.9ha
Tall ruderal (C3.1)	Urban*		OV24a (part), OV25b, OV26e	0.4-1.9ha
Fen (F1)	Fen, Marsh and Swamp	Lowland Fen	S5a/S6	0.3ha
Running water – eutrophic (G2.1)	Standing Open Water and Canals		Drain (Open Water)	1.0ha
Other habitat (J5)	Urban*		Tarmac Path	0.3ha

* Scattered scrub and tall ruderal habitats do not fit readily into HAP classifications. Stands within the survey site are derived from alluvial spoil and formerly mown grassland and are ceding toward woodland. They are probably best placed in the former HAP category of 'Urban', although wetter parts are associated with Fen, Marsh and Swamp

4.2 Vegetation Community Evaluation

Eleven NVC community-types have been recorded. There is little published information on the distribution of NVC types and therefore the overview given below is based on distribution notes given in the NVC accounts (Rodwell 1991a *et seq*) and personal experience:

OV24a a very common community of eutrophic soils across a wide range of habitat-types in South East England

OV25b a very common community of enriched soils and disturbed/poorly managed grasslands, waste areas and waysides

OV26e a very common tall-herb ruderal community most commonly associated with wet eutrophic soils. It occurs across lowland Britain, but, as with all other

communities recorded during the survey except W8d and W21a, is absent from dry, unproductive soils.

S5a a very common eutrophic fen swamp community found across lowland Britain. Along with S6, this is the least tolerant community of dry soils recorded during the survey. Although widespread, it is therefore confined to suitably wet situations

S6 as above, but less common than S5a and more commonly associated with less eutrophic conditions. It is thought to be declining in extent nationally (Rodwell 2000)

S26d a very common community of eutrophic reedbeds across lowland Britain. Recorded in transitional form only and lacking *Phragmites*

S28b a very common emergent and tall-herb fen community found across lowland Britain. Only recorded in transitional form.

W6b W6 is the most common community of alluvial wet woods in South East England. W6b is perhaps the most common sub-community in these situations; recorded here in the absence of *Alnus*. Whilst very widespread, the community is largely associated with alluvial woods and becomes rare away from such conditions

W8d a very common woodland community in lowland Britain, found across a range of base-rich soil types. It is a very common community-type of recent secondary woodland

W21a probably the most common scrub community in lowland Britain

4.3 Species Evaluation

131 species of vascular plant were recorded during the survey. Of these approximately 25% are non-native. All native species recorded are common in Britain (Preston *et al* 2002).

Of the 16 10km grid squares that make up the Watsonian vice-county of Middlesex (VC21), almost all the native species recorded during the survey occur in all 16 squares (Kent 2000). Only seven species occur in 14 or less: *Bidens cernua* (13 grid squares), *Carex riparia* (14), *Geranium pratense* (10, but 5 as an alien species), *Lysimachia nummularia* (14, but 2 as an alien species), *Myosotis scorpioides* (14, but 2 as an alien species), *Oenanthe crocata* (14, but 1 as an alien species) and *Senecio aquaticus* (12). All are associated with wetlands: particularly those that are open. None can be regarded as county rare nor scarce.

Some of the veteran trees recorded from W8d, although all non-native, have a nature conservation value in their own right.

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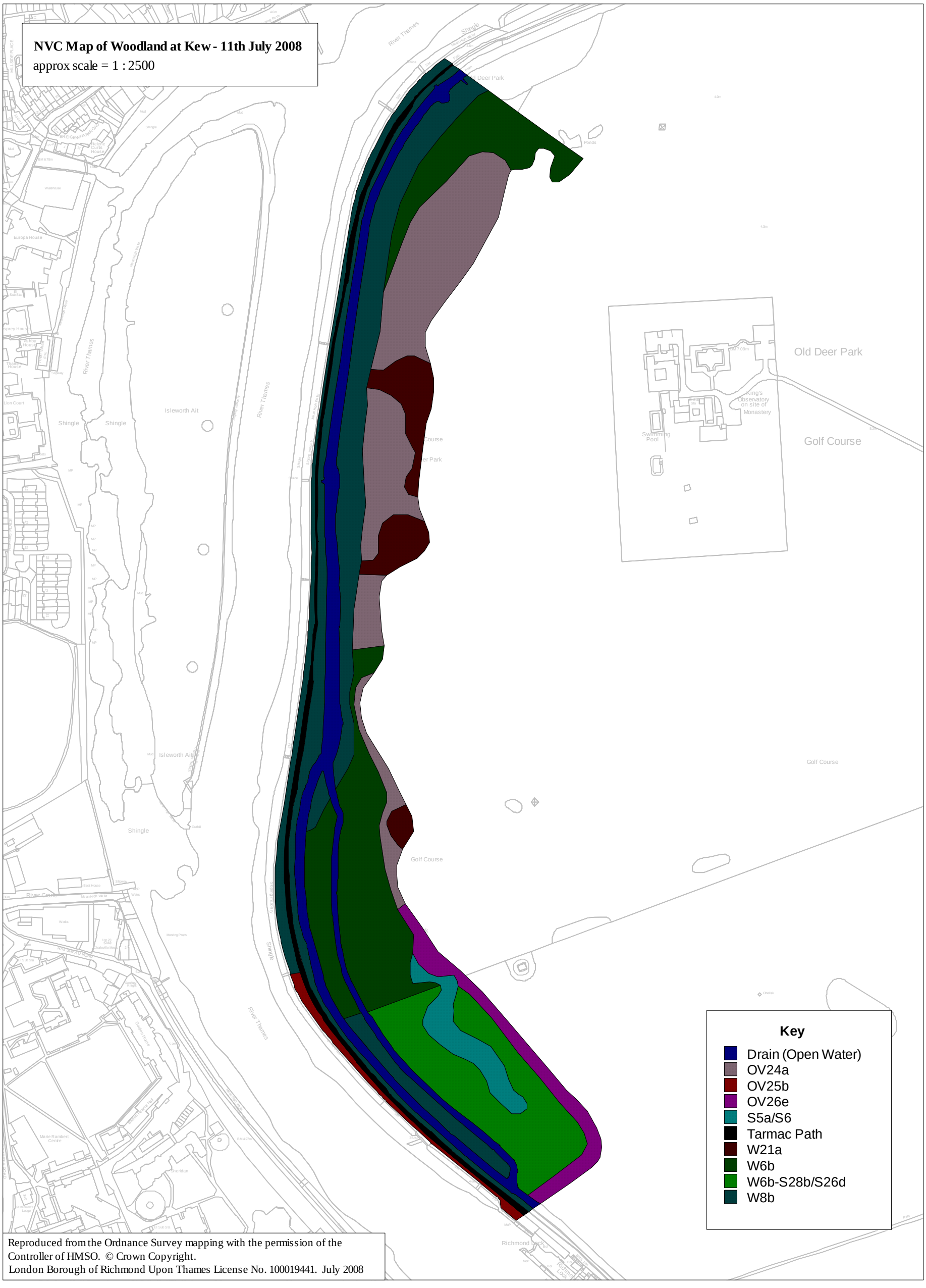
6 SITE MAP



APPENDIX – SPECIES LIST FOR WOODLAND AT KEW

Recorded 11th July 2008 by Giles Groome

Nomenclature follows Stace (1997)

Trees, Shrubs and other Woody Species

Acer pseudoplatanus	Sycamore	LA
Aesculus hippocastanum	Horse-chestnut	LA
Buddleja davidii	Butterfly-bush	R
Crataegus monogyna	Hawthorn	F
Fagus sylvatica	Beech	R
Fraxinus excelsior	Ash	LA
Hedera helix	Ivy	LA
Humulus lupulus	Hop	LF
Ilex aquifolium	Holly	R
Laurus nobilis	Bay	R
Ligustrum ovalifolium	Garden Privet	R
Platanus x *hispanica*	London Plane	R
Populus nigra (fastigate cultivar)	Lombardy Poplar	R
Populus x *canadensis*	Hybrid Black-poplar	R
Populus x *canescens*	Grey Poplar	R
Prunus avium	Wild Cherry	R
Prunus cf *padus*	Bird Cherry	R
Prunus spinosa	Blackthorn	R
Quercus cerris	Turkey Oak	O
Quercus robur	Pedunculate Oak	R
Robinia pseudoacacia	False-acacia	R
Rosa canina agg.	Dog Rose	R
Rubus fruticosus agg.	Bramble	F
Salix alba	White Willow	R
Salix fragilis	Crack Willow	LD
Salix viminialis	Osier	R
Sambucus nigra	Elder	F
Taxus baccata	Yew	R
Tilia x *europaea*	Lime	R
Ulmus procera	English Elm	F

Non-graminaceous Herbaceous Species

Aegopodium podagraria	Ground-elder	LA
Alisma plantago-aquatica	Water-plantain	R
Alliaria petiolata	Garlic Mustard	LA
Angelica archangelica	Garden Angelica	R
Angelica sylvestris	Wild Angelica	F
Anthriscus sylvestris	Cow Parsley	F
Arctium lappa	Greater Burdock	LF
Arctium minus	Lesser Burdock	R

Artemisia vulgaris	Mugwort	LF
Aster agg.	Michaelmas-daisy	R
Atriplex patula	Common Orache	R
Ballota nigra	Black Horehound	LF
Barbarea vulgaris	Winter-cress	LF
Bidens cernua	Nodding Bur-marigold	R
Bidens tripartita	Trifid Bur-marigold	LF
Brassica rapa	Turnip	R
Callitriche stagnalis	Common Water-starwort	F
Calystegia sepium	Hedge Bindweed	F
Capsella bursa-pastoris	Shepherd's-purse	R
Cardamine flexuosa	Wavy Bittercress	O
Cardamine pratensis	Cuckooflower	LF
Carduus crispus	Welted Thistle	LF
Cerastium fontanum	Common Mouse-ear	R
Circaea lutetiana	Enchanter's-nightshade	R
Cirsium arvense	Creeping Thistle	LF
Cirsium vulgare	Spear Thistle	R
Conyza sumatrensis	Guernsey Fleabane	R
Crepis capillaris	Smooth Hawk's-beard	R
Epilobium hirsutum	Great Willowherb	LA
Epilobium parviflorum	Hoary Willowherb	R
Epilobium tetragonum	Square-stalked Willowherb	R
Filipendula ulmaria	Meadowsweet	R
Galium aparine	Cleavers	F
Geranium pratense	Meadow Crane's-bill	LF
Geum urbanum	Wood Avens	LA
Glechoma hederacea	Ground-ivy	F
Heracleum sphondylium	Hogweed	F
Hypochaeris radicata	Cat's-ear	R
Impatiens capensis	Orange Balsam	F
Impatiens glandulifera	Himalayan Balsam	F
Iris pseudacorus	Yellow iris	O
Lamium album	White Dead-nettle	R
Lamium purpureum	Red Dead-nettle	R
Lapsana communis	Nipplewort	LF
Lycopus europaeus	Gypsywort	F
Lysimachia nummularia	Creeping-Jenny	LA
Lythrum salicaria	Purple Loosestrife	LA
Malva sylvestris	Common Mallow	R
Mentha aquatica	Water Mint	LA
Myosotis scorpioides	Water Forget-me-not	LA
Oenanthe crocata	Hemlock Water-dropwort	F
Persicaria hydropiper	Water-pepper	F
Persicaria maculosa	Redshank	R
Plantago lanceolata	Ribwort Plantain	O
Plantago major	Greater Plantain	LF
Polygonum aviculare	Knotgrass	R
Potentilla reptans	Creeping Cinquefoil	R
Ranunculus acris	Meadow Buttercup	R

Ranunculus repens	Creeping Buttercup	LA
Rorippa nasturtium-aquaticum	Water-cress	R
Rorippa sylvestris	Creeping Yellow-cress	R
Rumex conglomeratus	Clustered Dock	R
Rumex obtusifolius	Broad-leaved Dock	F
Sedum album	White Stonecrop	R
Senecio aquaticus	Marsh Ragwort	O
Senecio jacobaea	Common Ragwort	R
Sisymbrium officinale	Hedge Mustard	R
Solanum dulcamara	Bittersweet	F
Sonchus arvensis	Perennial Sow-thistle	R
Sonchus asper	Prickly Sow-thistle	O
Stellaria media	Common Chickweed	R
Taraxacum officinale agg.	Dandelion	LF
Torilis japonica	Upright Hedge-parsley	R
Trifolium repens	White Clover	R
Urtica dioica	Common Nettle	A
Veronica beccabunga	Brooklime	R
Viola odorata	Sweet Violet	R

Graminoids, Ferns and Horsetails

Agrostis stolonifera	Creeping Bent	LA
Alopecurus pratensis	Meadow Foxtail	R
Anisantha sterilis	Barren Brome	LF
Arrhenatherum elatius	False Oat-grass	LA
Brachypodium sylvaticum	False-brome	LA
Bromopsis ramosa	Hairy Brome	R
Bromus hordeaceus	Soft-brome	R
Carex acutiformis	Lesser Pond-sedge	R
Carex pendula	Pendulous Sedge	R
Carex remota	Remote Sedge	O
Carex riparia	Greater Pond-sedge	LA
Dactylis glomerata	Cock’s-foot	LA
Dryopteris filix-mas	Male Fern	R
Elytrigia repens	Common Couch	O
Equisetum arvense	Field Horsetail	R
Festuca gigantea	Giant Fescue	R
Festuca rubra	Red Fescue	R
Glyceria maxima	Reed Sweet-grass	LA
Holcus lanatus	Yorkshire-fog	LA
Hordeum murinum	Wall Barley	LA
Lolium perenne	Perennial Rye-grass	LA
Phalaris arundinacea	Reed Canary-grass	LA
Poa annua	Annual Meadow-grass	R
Poa trivialis	Rough Meadow-grass	LA