



Meadow Orchard Project

Management Brief

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Report written by

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1. Introduction

This management brief aims to give an insight into how to best to manage the current habitats present at the Meadow Orchard site to maintain and enhance its wildlife value of the site. It also gives some pointers of good practice on how to design and develop a sustainable wildlife friendly garden that can support wildlife and be used by people in order to enhance the biodiversity and social value of the site.

2. General description

2.1 Location

The Meadow Orchard is located to the west of the Hornsey Central Medical Centre on Park Road, Crouch End, London N8, within the London Borough of Haringey.

2.2 Grid reference

TQ 2948 8883

2.3 Area

0.6 hectares

2.4 Accessibility

Pedestrian access is via a wooden gate at the eastern end of the site from the Hornsey Central Medical Centre car park. Permission from the Meadow Orchard Project members is required as the site does not have general public access. There is no vehicular access.

2.5 Tenure

The site is owned by NHS Haringey who have provided a 29 year lease to the Meadow Orchard Project to manage the site as a wildlife friendly community garden. This runs until 2038.

2.6 Management compartments

For the purposes of the proposed management, the site has been divided into the following compartments and sub compartments (see Compartment map):

1. Wildlife Garden and educational areas
2. Neutral grassland
 - 2a. Eastern grassland
 - 2b. Western grassland
3. Woodland edge
4. Scrub
 - 4a. Boundary scrub
 - 4b. Woodland scrub
5. Ponds (developed from seasonal wet depressions)
 - 5a. Main pond
 - 5b. Seasonal pond

3. Evaluation

In May 2010 an Extended Phase I habitat survey was undertaken by London Wildlife Trust. The habitat and species descriptions and evaluations are included below.

3.1 Habitat evaluation

3.1.1 Dry grassland (48%)

This habitat was found to be in two patches divided by the damp grassland described below; one at the eastern end and one at the western end. It is unknown when the grassland was last mown and it appears to have had little or no management in the last five years.

No grass species is dominant although false oat-grass (*Arrhenatherum elatius*) is the most abundant. Other frequent grasses are common bent, (*Agrostis capillaris*), cock's-foot (*Dactylis glomerata*), common couch *Elytrigia repens*) and Yorkshire-fog (*Holcus lanatus*) while meadow foxtail (*Alopecurus pratensis*), barren brome (*Anisantha sterilis*) red and giant fescues (*Festuca rubra* and *F. gigantea*), perennial rye-grass (*Lolium perenne*) and narrow-leaved, smooth and rough meadow-grasses (*Poa angustifolia*, *P. pratensis* and *P. trivialis*) are present to a lesser degree.

Forbs¹ present include yarrow (*Achillea millefolium*), common mouse-ear (*Cerastium glomeratum*), meadow vetchling (*Lathyrus pratensis*), ribwort plantain (*Plantago lanceolata*), silverweed (*Potentilla anserina*), creeping buttercup (*Ranunculus repens*), curled dock (*Rumex crispus*), common ragwort (*Senecio jacobaea*), dandelion group (*Taraxacum* species), red clover (*Trifolium pratense*) and common vetch (*Vicia sativa*).

There are a scattering of young trees and shrubs of pedunculate oak (*Quercus robur*), cherry species (*Prunus* species), white poplar (*Populus alba*), bramble species (*Rubus fruticosus* agg) and buckthorn (*Rhamnus cathartica*) present within the dry grassland area.

3.1.2 Damp grassland (30%)

The damp grassland divides the two areas of dry grassland and like the dry grassland appears to have had little or no management in the last five years.

The grass composition is similar to that of the dry grassland although common bent is the most frequent species while narrow-leaved meadow-grass, barren brome and giant fescue are absent while a small patch of tufted hair-grass (*Deschampsia cespitosa*); a species commonly found in wet grasslands and fens can be found towards the site boundary to the north.

¹ Herbaceous species that are not grasses, rushes or sedges.

Forbs composition is frequented by silverweed with the occasional yarrow, meadow vetchling, ribwort plantain, creeping buttercup, dandelion and common vetch. Wetland plant species not found in the dry grassland are jointed rush (*Juncus conglomeratus*) and great willowherb (*Epilobium hirsutum*).

There are a scattering of young trees and shrubs of pedunculate oak (*Quercus robur*), cherry species (*Prunus* species) and bramble species (*Rubus fruticosus* agg) present within the wet grassland area.

Collectively the grasslands can be classified as typical semi-improved neutral grassland.

3.1.3 Woodland edge type habitat (17%)

Woodland edge type habitat was characteristic of areas where it was generally very shady due to the presence of a somewhat closed canopy of large trees. This habitat borders the entire length of the southern site boundary and is generally narrow and defined by the width of one large tree. Some cutting of shrubs has been undertaken in recent years.

Trees and shrubs creating the shade of these areas are composed of predominantly pedunculate oak and cherry species with laburnum (*Laburnum anagyroides*) and sycamore (*Acer pseudoplatanus*). Several lilac shrubs along the fenceline have been heavily cut back in recent years and are now rather stunted in growth as a result. Tree saplings are predominantly of sycamore, horse-chestnut (*Aesculus hippocastanum*), ash (*Fraxinus excelsior*) and cherry with lesser amounts of Norway maple (*Acer platanoides*), hornbeam (*Carpinus betulus*), laburnum, white poplar, Oregon-grape (*Mahonia aquifolium*), buckthorn, elder and yew and pedunculate oak.

Ground flora composition is mostly that of wood avens (*Geum urbanum*) with garlic mustard (*Alliaria petiolata*), cleavers (*Galium aparine*), ivy (*Hedera helix*), Spanish bluebell (*Hyacinthoides hispanica*), honeysuckle (*Lonicera perelymenum*), ribwort plantain, creeping buttercup, bramble species, common nettle (*Urtica dioica*) and ivy-leaved speedwell (*Veronica hederifolia*).

3.1.4 Bramble scrub (3%)

This habitat is located in patches along the northern and western boundaries of the site and as two patches, one large and one small, within the confines of the site. There is some very limited evidence of cutting of the scrub but its effect on controlling the spread of the bramble has been limited.

The bramble scrub habitat is clearly dominated by bramble species with lesser amounts of grass and forb species present that are found within the adjacent habitats. A few young and sapling pedunculate oak and cherry trees can be found within this habitat.

3.1.5 Seasonal wet depressions (2%)

There are two seasonal wet depressions and both are found within the wet grassland area. The plant species composition similar to that found in the wet grassland habitat with less species but has more bare soil. No true wetland habitat around or within these depressions has developed suggesting that they have only recently formed.

The current habitats have developed due in part to the lack of management. Although this has benefitted the wildlife of the site through the development of a mosaic of semi-improved grassland, scrub and woodland edge habitats, if the lack of management continues woodland and scrub succession will invariably reduce the wildlife value. It is suggested that the habitats present should be maintained through appropriate management that will encourage natural colonisation of appropriate species instead of planting/seeding with wildflower mixes and/or planting of trees/shrubs. Some local translocation of saplings oak trees from the grassland area to the woodland edge could be considered as could some planting of a hedgerow feature along the northern boundary.

It is considered good practice that any development having an impact on these habitats is adequately mitigated for.

It should be emphasised that although habitats have some and occasionally great value as stand alone 'parcels' within the landscape, a mosaic of differing habitats within that landscape have significantly more value for biodiversity than any single habitat type.

3.2 Species evaluation

3.2.1 Plant species evaluation

The plant species found are typical of an urban grassland with trees that has been left to develop 'naturally' (not intensively mown). Collectively the species present contribute to a locally important habitat for invertebrates, birds and mammals that is surrounded by habitats that typically have poorer value for wildlife.

No plant species fully protected under Schedule 8 of the Wildlife and Countryside Act 1981 were identified during this survey. It is a criminal offence to pick, uproot or otherwise damage any of these species. It is considered unlikely that any schedule 8 protected plant species were present at the site.

No UK or London (regional) Biodiversity Action Plan vascular plant species were recorded during the survey.

No species found on site are considered to be London notable species. These are those species that occur in less than 15% of the 400 tetrads as indicated in the *Flora of the London Area* (Burton 1983).

3.2.2 *Animal species evaluation*

The site holds a locally important population of yellow meadow ant (*Lasius flavus*). The ant hills present within the grassland are possibly the only ones present within a several mile radius of the site and provide a valuable food source for green woodpecker (*Picus viridis*).

The other animal species found suggest that the site offers good food plants for feeding invertebrates such as bees and butterflies and other nectar feeding species. These invertebrates in turn attract a variety of birds, which also find cover in the trees, shrubs and scrub to breed and/or roost and hide from predators.

No animal species fully protected under the Schedule 5 of the Wildlife and Countryside Act was identified during the survey. It is possible that bats are present on site due to the presence of mature trees. All bat species are protected by law and a bat survey should be undertaken if any works on the mature trees is undertaken on site.

It is possible that reptiles such as slow worm may be present on site as the habitat would be ideal to support them. However, it is considered unlikely that a population is present due to the isolation of the site from other suitable habitat. Despite this a reptile survey should ideally be taken out before the areas of grassland are significantly changed.

No UK or London (regional) Biodiversity Action plan animal species were recorded during the survey

3.3 Site status

The whole site can be considered to fit into the designation 'Parks and Green spaces' as both a London (regional) and Haringey (local) Biodiversity Action Plan local habitat. There are no UK Biodiversity Action Plan habitats present. Whilst no important habitats are present, the site is still locally valuable, and through appropriate management can continue to be locally important for wildlife.

The site comprises part of the Crouch End Playing Fields Complex Site of Borough Grade I importance for Nature Conservation (SINC).

4. Conservation objectives and projects

- To conserve and enhance the existing wildlife and habitats of the site by appropriate management.
- To record where possible the wildlife on the site to monitor the effects of management carried out.
- To conserve the fragile and locally important ant hills.

Maintain grassland habitat through mowing management

The grassland habitat as defined by compartment 2 should be cut on a two-year rotation with each sub compartment (a and b) being cut on alternate years. The grass should be cut between 1 and 3 times a year with a cut in October being essential. Additional cuts could be made at the end of March and again in January. The key is to not cut between April and October.

The grass should be cut to a height no shorter than 10cm in height and all grass cuttings (known as arisings) should be removed from the grassland. A suggested method would be to use a strimmer or scythes. The grass cuttings (or some) could be piled into a single suitable dry location along the western or southern edges of the reserve as a winter refuge for small mammals and invertebrates or be used as compost.

Care needs to be taken to avoid damaging all ant hills present in the grassland during cutting and the raking of cut materials for removal. Vegetation on the ant hills should only be cut after the main cut using hand tools (garden shears, grass hook or similar) again to a height no shorter than 10cm. Arisings from the ant hills should also be removed.

Control tree and scrub successional growth

Each winter all scrub patches (compartments 4a and 4b) and successional trees/shrubs in the grassland areas (i.e. seedlings that have colonised) should be cut back and removed/cut respectively. It is suggested these are cut with strimmer and/or loppers brushcutters and slashers. Arisings should be removed from site or piled as with the grass arisings to form winter refuges.

All new scrub growth should be cut back every year between the months of October and February to a line where grasses and wild flowers are no longer present underneath the scrub leaving only areas that are of bare or of near bare ground underneath the scrub.

Successional trees and shrubs present in the grasslands should be either cut back to ground level or removed (if possible by pulling) each year between the months of October and February. Some could be translocated and replanted within the woodland edge habitat area (compartment 3) trying not to disturb existing woodland ground flora.

Establish two ponds; one permanent and one seasonal

Before this is carried out it is suggested that the current hydrology of the site (especially the origin of the wet depressions and damp grassland habitat) is understood before undertaking this project.

The current proposal is to establish a permanent pond in the south next to the woodland edge while allowing the depression to the north to become a seasonal (winter) pond. Once the hydrology is fully understood it may be more sensible to reverse this proposal.

Place invertebrate, bird and bat boxes up around site and create deadwood loggeries

To encourage wildlife to the site the placement of invertebrate, bird and bat boxes and the creation of two dead wood loggeries would be beneficial (one educational and one to be left alone). Ideally no more than four bird boxes should be installed on trees in the woodland (2x tit style and 2x robin style). They should be spaced evenly away from each other.

Monitor wildlife sightings and undertake regular wildlife surveys

If possible records of wildlife sightings should be kept and sent to either Greenspace Information for Greater London (GiGL) or the London Natural History Society/London Bird Club or they could be sent to the London Wildlife Trust.

To properly understand how a site is changing or whether the wildlife value is being maintained, enhanced or is degenerating, regular wildlife surveys should be undertaken. These tend to require specialists, are costly and complex and many different types of surveys are required for a detailed assessment. At the very least an extended phase I habitat survey should be undertaken every 5 years. Other valuable surveys would be for birds, bats and insects. An ant hill survey could also be useful every five years to monitor the exact location and size of the ant hills.

5. Community objectives and projects

- To set up and maintain a wildlife friendly community garden to promote nature conservation and the work of the Meadow Orchard Project to visitors and local residents by providing educational and interpretation facilities.
- To maintain and improve the path system to allow safe public access.

Design, construct and maintain wildlife garden

The detailed design of the wildlife friendly garden and forest garden is beyond the scope of this management brief. However, there are a few pointers that should be considered in the design and construction of the wildlife garden.

- It is recommended that the extent of the garden including buildings and fruit trees is contained within the area indicated on the proposed development maps. The only exception to this is the creation of a loggery which could be located outside the area in an appropriate area. Ideal locations would be in the southeast corner or along the southern boundary or western boundaries.
- Ideally no plants or seeds from outside the site should be planted or sown within the wild area without careful consideration of the impact they may have on the current habitats and species present. Tree saplings in the grassland can be carefully pulled and re-planted in more appropriate areas.
- The area within the garden where the ant hills are present should not be disturbed or loss of the ant hills is likely. This area would make an ideal wildflower meadow where appropriate wildflower seed mixes could be sown to complement the grasses and flowers already present. The site would benefit better if it was not entirely isolated from the existing grassland.
- The trees currently in the garden area may prove to be problematic in the garden design and fitting in all that is wanted. They are all relatively young and their removal would not have a significant impact on the sites biodiversity. The wood from these trees could be used to make dead wood loggeries.
- It is more beneficial to wildlife to plant/sow locally native species of herbs, flowers, shrubs and trees than to use non-native species.
- A number of plants should never be planted or sown anywhere on site, due to their potential for causing damage to habitats (this includes species which are illegal to plant). These are listed in Appendix I.

Create and maintain path network

The path network throughout the site could be maintained simply by mowing a 1 metre wide strip along the designated path line and maintaining it as short grass say 5cm in height throughout the year. This will prevent the need for woodchip which can be costly and or damaging to the environment and/or the need for other artificial surfaces which can also be costly. In addition the shorter grasses will encourage those species such as common daisy, creeping buttercup, white clover and tougher grasses to colonise these areas adding to the biodiversity. In areas that get wet, a wooden boardwalk section could be added to prevent the damp area becoming heavily eroded.

6. Work plan

This work plan is a guide and will need to be changed and added too as more tasks are required to undertake. Particularly those related to the garden maintenance once it has been created. Details of the conservation tasks in compartments 2-5 and other can be found in the respective sections of Chapter 5.

	Financial Year (April-March)				
	2010-11	2011-12	2012-13	2013-14	2014-15
Compartment 1					
Design garden area	June-Aug				
Design detailed garden workplan	Aug				
Prepare, develop and plant up/sow land for garden area	Sept - March	April-June			
Implement garden workplan	Sept-March	All year	All year	All year	All year
Compartment 2					
Remove saplings and young trees from grassland area by digging up	Dec-Feb				
Mow grassland to no less than 10cm in height and remove all grass cuttings taking care to avoid ant hills	Oct, Jan and March (2a)	Oct, Jan and March (2b)	Oct, Jan and March (2a)	Oct, Jan and March (2b)	Oct, Jan and March (2a)
Compartment 3					
Plant some saplings and young trees removed from grassland into woodland edge area	Dec-Feb				

Compartment 4

Cut back scrub and remove material (to green material piles)	Nov-March	Nov-March	Nov-March	Nov-March	Nov-March
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Compartment 5

Investigate water table and potential underground stream/drain	June-Aug				
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Design and dig ponds as required	Sept-Feb				
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Plant up ponds		April-May			
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Other

Maintain path network throughout site by cutting back overhanging branches and mowing 1m strip	Throughout year as required				
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Put up invertebrate, bird and bat nest boxes		July-Sept			
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7. Site maps

Legend

-  **Dry grassland**
-  **Damp grassland**
-  **Woodland edge habitat**
-  **Bramble scrub**
-  **Seasonal wet depressions**
-  **Ponds**
-  **Wildlife garden area**
-  **Forest garden area**
-  **Tool shed**
-  **Main trees**
-  **Fallen white poplar tree**
-  **Area of ant hills**
-  **Existing trails**
-  **Proposed path network**
-  **Site and compartment boundaries**
-  **Entrance gate**
-  **Bee hive**
-  **Old brick drain**

Existing Habitat Map

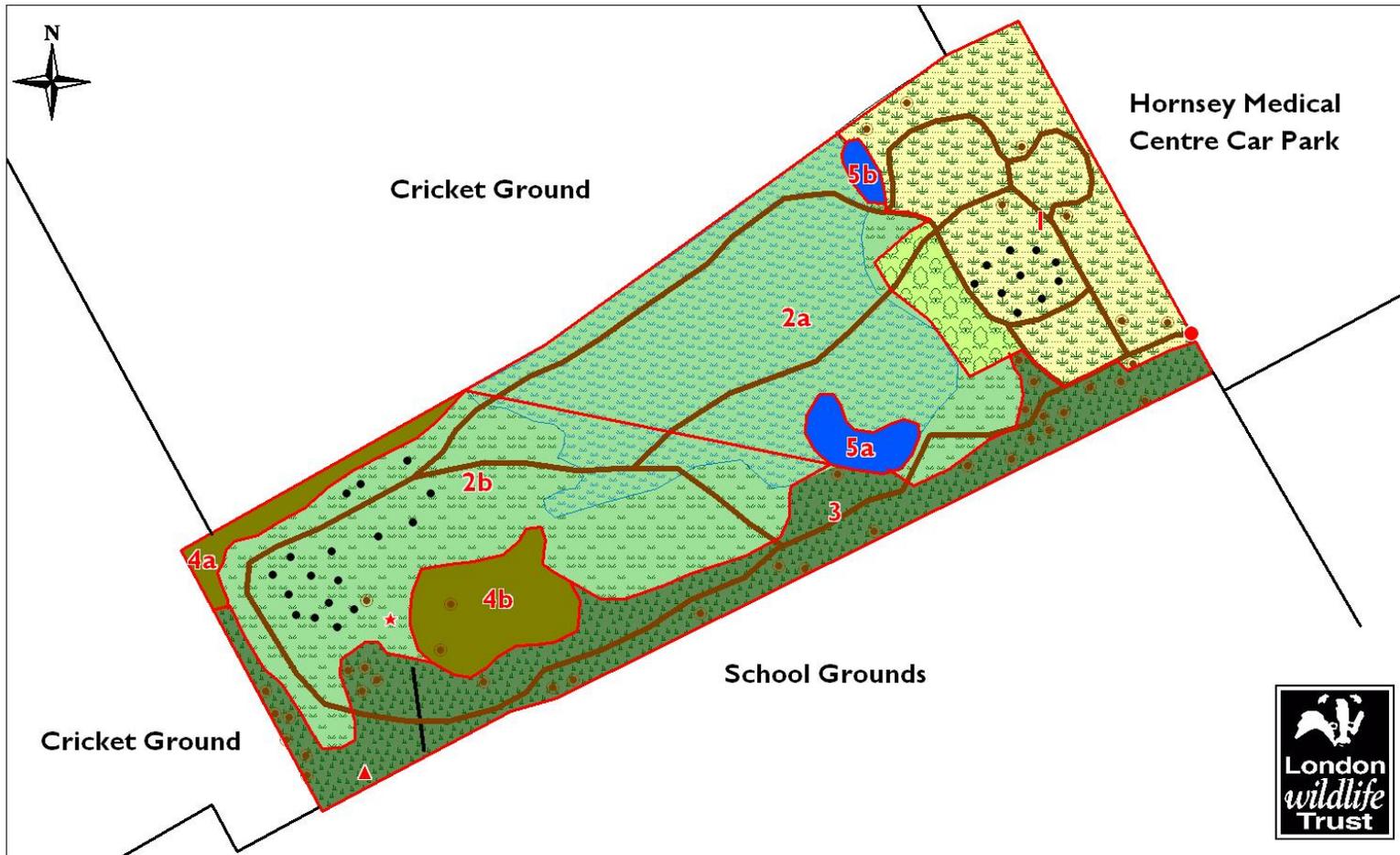


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Scale 1: 730

Proposed Habitat map incorporating compartments



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Scale 1: 730

Appendix I

List of plants that should not be planted on site

Cotoneasters (*Cotoneaster bullatus*, *C. horizontalis*, *C. microphyllus* and *C. simonsii*)
False acacia (*Robinia pseudoacacia*)
Tree-of-heaven (*Ailanthus altissima*)
Evergreen oak (*Quercus ilex*)
Foxglove tree (*Paulownia tomentosa*)
Few-flowered leek (*Allium paradoxum*)
Three-cornered leek (*Allium triquetrum*)
Giant hogweed (*Heracleum mantegazzianum*)
Giant knotweed (*Fallopia sachalinensis* and hybrid *F. x bohemica*)
Japanese knotweed (*Fallopia japonica*)
Giant rhubarb (*Gunnera tinctoria*)
Hottentot fig (*Carpobrotus edulis*)
Indian (Himalayan) balsam (*Impatiens glandulifera*)
Orange balsam (*Impatiens capensis*)
Small balsam (*Impatiens parviflora*)
Japanese rose (*Rosa rugosa*)
Montbretia (*Crocsmia x crocosmiiflora*)
Perfoliate alexanders (*Smyrniium perfoliatum*)
Rhododendron (*Rhododendron ponticum* and hybrid *R. maximum*)
Cherry laurel (*Prunus laurocerasus*)
Spotted Laurel (*Aucuba japonica*)
Shallon (*Gaultheria shallon*)
Spanish bluebell (*Hyacinthoides hispanica* and hybrid *H. x massartiana*)
Yellow skunk cabbage (*Lysichiton americanus*)
Variegated yellow archangel (*Lamiastrum galeobdulum argentatum*)
Snowberry (*Symphoricarpos* species)
Large blue alkanet (*Anchusa azurea*)
Goat's-rue (*Galega officinalis*)
Cockspur grasses (*Echinochloa* species)
Pale galingale (*Cyperus eragrostis*)
Duck potato (*Sagittaria latifolia*)
Australian swamp stonecrop (New Zealand pigmyweed) (*Crassula helmsii* but also known as *Tillaea recurva* and *Tillaea helmsii*)
Canadian pondweed (*Elodea canadensis*)
Nuttall's pondweed (*Elodea nuttallii*)
Curly waterweed (*Lagarosiphon major*)
Fanwort (*Cabomba caroliniana*)
Floating pennywort (*Hydrocotyle ranunculoides*)
Giant salvinia (*Salvinia molesta*)
Parrot's feather (*Myriophyllum aquaticum*)
Water fern or Fairy fern (*Azolla filiculoides*)
Water hyacinth (*Eichornia crassipes*)

Water primrose (*Ludwigia* species)
Water lettuce (*Pistia stratiotes*)

In addition various herbs and fruits can be invasive if allowed to escape from there required areas. These include various species of mint, garden strawberries, raspberry etc. care should be taken to make sure these species are contained or managed to prevent them from escaping into the wider environment.