

# The Flora of Haysden Country Park

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(April 2022 revision)

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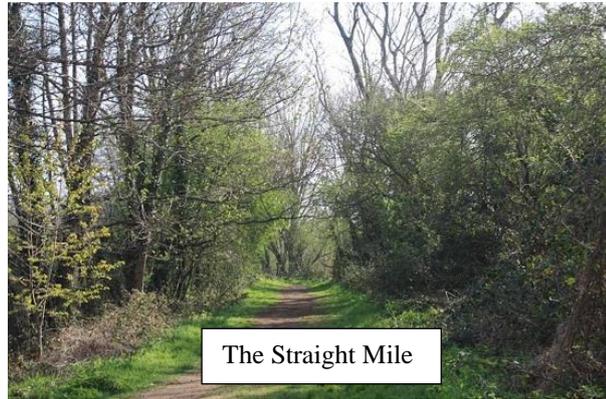
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## Summary

Haysden Country Park is positioned just west of Tonbridge. It lies in the floodplain of the River Medway and is made up of a mixture of meadows, woodland, ditches, small ponds, marsh, a disused canal watercourse and two lakes. It comprises an area of some 65 hectares. The site is cut by a railway line, the Leigh

Flood Barrier earth dam and is crossed by the A21 road viaduct. These different structures, and the River Medway, have provided habitats for an exceptional range of plants, a few of them rare in Kent and elsewhere in Britain.



The Straight Mile



Watercourse next to Friendship Wood

The purpose of this report is to document the flora of the park as fully as possible, to inform the park management and the Haysden Country Park volunteers of plant locations. Such information is now being used to help shape future maintenance work and avoid adversely impacting biodiversity.

The surveys commenced in Autumn 2019 and have so far identified and located over 400 plants (and some 70 fungi species and their locations which are referenced in a separate report). Surveys are undertaken 2-3 times a week. All photographs taken in the park by the author.



Haysden Lake

Several plants identified in the current survey have not been previously recorded in the area covered by the park.

**Note – a more detailed copy of this report will be made available later this year to the Park Ranger, and the Haysden Country Park Volunteers, with more photographs to aid future identification of the plants in the park.**

## Introduction

Haysden Country Park covers an area of about 65 hectares (160 acres) in the Medway Valley, to the west of Tonbridge. It is covered by Ordnance Survey one kilometre grid squares TQ56/45,56/46,57/45 and 57/46. It includes a range of habitats such as a river, grassland, freshwater lakes, marshland and woodland. The Environment Agency's Leigh Flood Barrier is also present. It is an east-west facing earth dam covered with grass. The site is designated as a Local Nature Reserve and in part a Site of Nature Conservation Interest. It has also been a Green Flag Award winning park since 2006 and is a Natural England accredited park. The park is home to a rich variety of wildlife.

The park was opened as a Country Park in 1988, incorporating some land already owned by the Tonbridge and Malling Borough Council. The land had been used by the public long before then, with several long-established footpaths crossing the area.

Leading off the River Medway is the Straight Mile, which was dug in 1830 as part of the Tonbridge - Penshurst Canal, built by James Christie. It was never filled with water, and Christie went bankrupt in 1832 with the canal unfinished. The Stone Lock, built in 1829 as part of the canal, remains largely intact. The lock was intended for the transfer of barges between the level of the Straight Mile and the higher level of the River Medway.

Another compartment of the park is called 'The Shallows', which is a winding water course leading off the River Medway. It was at one stage part of the River Medway, with meanders which were sometimes shallow and therefore difficult to navigate with large boats. Since the river was to be used by canal craft, a navigable diversion was constructed around this section (the river was further straightened in this area with the construction of the Leigh Flood Barrier in 1970). The Shallows then became a quiet backwater stream and is now contains water plants such as Bulrush, Branched Bur-reed, Marsh Woundwort and Reed Canary-grass.

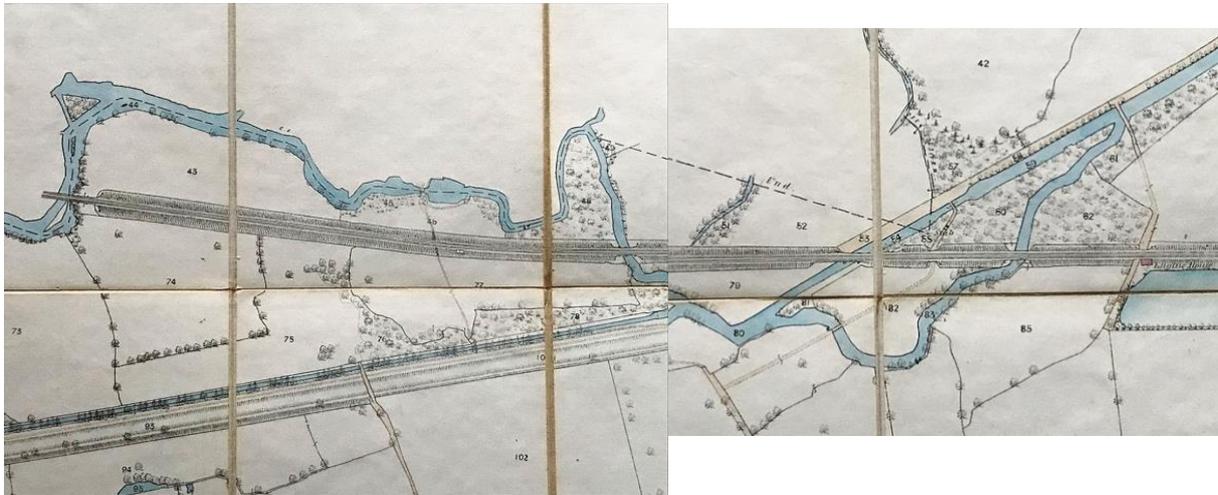


The Leigh Flood Barrier in spring

Barden Lake was created when sand and gravel was extracted from the land between 1974 and 1980. Extensive ecological planting was undertaken in and around the lake after sand and gravel extraction ended.

The first edition of the Ordnance Survey 25 inch to one mile map, surveyed by a Captain Palmer and published in March 1867, shows the area covered by the park was agricultural, with small fields lined with hedges and scattered patches of woodland on either side of the Medway. It is likely this agricultural pattern of small fields and hedges has existed on the site since medieval times.

The map also clearly shows the line of the unfinished Tonbridge – Penshurst Canal, only abandoned some 30 years before the area was surveyed by the Ordnance Survey. The route of many of the footpaths that lead to enter the park today are visible on the 1867 map – see sections of the map below:

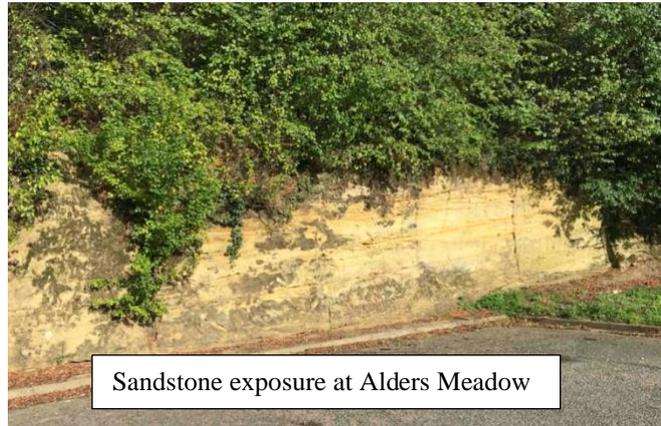


## Geology and underlying soils

Hayden Country Park is at a height of around 24 metres above 'Mean Sea Level'. The land is essentially flat and comprises part of the valley floor of the River Medway.

Cretaceous rocks up to 135 million years old, underlie the alluvium, brickearth and sand and gravel covering the River Medway Flood Plain.

Trial boreholes for the Tonbridge bypass where it crossed the Medway in the Park, proved that Cretaceous Wadhurst Clay underlies the alluvium and brickearth of the River Medway at a depth of 19-38 feet between Haysden and the present riverbed. Just on the edge of the park at Alders Meadow there is also a massive sandstone outcrop of Lower



Tunbridge Sand - Ardingly Sandstone (probably quarried for the construction of Tonbridge Castle). Lower Tunbridge Wells Sand also underlies much of the park. Ardingly Sandstone was also quarried on the higher ground north of the park near Powder Mills<sup>1</sup>. The park is covered by a mixture of soils reflecting the different material deposited by the River Medway, the restoration work associated with former sand and gravel workings, the construction of the Tonbridge - Penshurst Canal, as well as the Leigh Flood Barrier, and of course, past agricultural practices.

## Main compartments of the park

**Haysden Lake** – This is the largest lake covering some 60 acres, which was formed by sand and gravel workings in the 1960s. Although there has been a fair amount of environmental planting around the lake since sand and gravel workings ceased, the edges of the footpaths and margins of the lake contain a surprisingly good collection of naturally introduced plant species. These include several different species of Sedge, the Water Dock, Common Agrimony, and several members of the Apiaceae family, amongst many others.

**A21 viaduct area and the waste ground near the Haysden Lake car park** – These areas contain a remarkably wide range of plant species due to the different environments they provide. For example, salt spray from the road viaduct has enabled plants normally seen in coastal areas to grow here, such as the Greater Sea Spurrey (*Spergularia marina*) and Bur Chervil (*Anthriscus caucalis*). Several species are probably also present due to seeds transported by vehicles travelling on the A21 road above from across the South East.

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<sup>1</sup> Geology of the Country around Sevenoaks, Geological Survey of Great Britain, 1969

**Water Meadow** - This area is lined by the railway and the River Medway. It is an example of a scarce habitat and is the only place where a limited number of an endangered species can be found - Narrow-Leaved Water-Dropwort (*Oenanthe silaifolia*). This only found in meadows which flood in winter. The two artificially created 'scrapes' in the meadow now host a good assemblage of water-loving plants.

Another rare plant to be found in this area is Little Robin (*Geranium purpureum*). It is growing on the edge of the meadow close to the railway bridge in a ballast-filled gabion.



One of the scrapes in the Water Meadow

**Leigh Flood Barrier** - This area of land is owned and managed by the Environment Agency and is maintained as a close-mown grass bank for much of the year, to comply with earth dam regulations. The embankment is host to a wide variety of plants and fungi – notably waxcaps.

**Woodland and meadow** - adjacent to the Straight Mile water course. This area contains excellent specimens of many of the twelve fern species found in the park, and a good variety of spring flowers, as well as a line of oak trees planted some 200-250 years ago.

**Heusenstamm Friendship Woodland** - A German town twinned with Tonbridge in 1984. After the Great Storm in 1987 its citizens donated 400 saplings including oak, ash, lime, and wild cherry which form the basis of a mixed species broad-leaved woodland. It now hosts a good range of wildflowers and some recently planted species, including snowdrops, bluebells, and red campion. This woodland is located on the former site of the so-called 'Tonbridge Lido' or 'Weir Pool', both now filled in. Some 40 broad-leaved helleborine orchids (*Epipactis helleborine*) were recorded in the wood in 2020 and 2021.

**The Shallows** - This water course was a section of the River Medway before work on the Penshurst - Tonbridge Canal took place. It is now heavily silted through lack of water flow, except in times of flood. The area contains a good assemblage of water-loving plants, such as Water-plantain (*Alisma plantago-aquatica*), Flowering rush (*Butomus umbellatus*) and Branched Bur-reed (*Sparganium erectum*).



The Shallows viewed from the dipping platform

**River Meadows** - Bordering the River Medway this area contains numerous wildflower species. Most of the trees lining the meadows have been planted in the past 10 -20 years judging from their size. They contain a good mix of yellow composite plants, such as Goat's-beard (*Tragopogon pratensis* Ssp. minor), and Autumn hawkbit (*Scorzoneroides autumnalis*).

**Barden Lake & Woodlands** - Dominated by Barden Lake, this area is bordered by woodland to the north and east (Barden Shaw and Audley Wood), the River Medway to the north, and the railway line to the south. Many of the plants and trees which line the lake have been planted over the past 20-30 years. However, a good assemblage of wildflowers can also be seen, such as the Broad-leaved helleborine orchids (*Epipactis helleborine*).

**Barden Nature Reserve** – This area is at the western end of Barden Lake nestled between the railway line and the River Medway. It is often flooded in winter and waterlogged for a good deal of the year. It contains some interesting plants not seen elsewhere in the park notably a fine patch of Water Forget-me-not (*Myosotis scorpioides*), Common Marsh-bedstraw (*Galium palustre*), Jointed Rush (*Juncus articulatus*), and Water-plantain (*Alisma plantago-aquatica*).

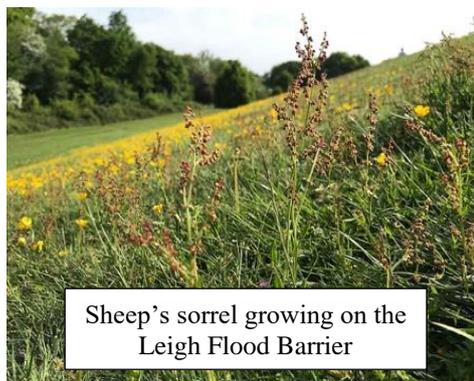
## History of Recording

An appendix of the Management Plan for Haysden Country Park contains a list of some 300 plants and fungi which the author understands have been collated over several years since the inception of the park. It is based on contributions made by experienced botanists and mycologists. The list was never intended to be a complete list but demonstrates the excellent biodiversity in the area covered by the park. This list does not however give details of where or when the individual plants were surveyed, or who recorded them.

The volunteer group decided in 2019 that it was important to undertake a more detailed study of the plants in the park to provide an up-to-date plant register, and, most importantly, to ensure future work by the volunteers would not impact adversely on the flora of the park. The results of the survey would, it was hoped, influence future planting decisions relating to the creation of a new wildflower meadow next to Barden Lake, and to provide a database for the selection and collection of local seed for this purpose. The results of the survey would also be expected to contribute to future public outreach exercises designed to promote the value of plant biodiversity in the park. A detailed knowledge of plant assemblages and their changes over time would also contribute to a greater awareness of the biodiversity of the area.

## Species List

This list records the plants located in Haysden Country Park from Autumn 2019 to March 2022 through frequent surveys across the area within the park boundary. This list is also available as an Excel spreadsheet which is distributed to the volunteers and the park officials. The register will be regularly updated as new plants are discovered. **This written report will be updated annually.**



Many of the plants listed here, have been reported before, notably in the list of plants in the Park Management Plan and reported to the Kent Botanical Recorder through the work of the Kent Botanical Recording Group.

However, a substantial number of plants listed in this report are new recordings and the list of plants found in the surveys of the park over the past two years have now been placed in the National Botanical database by the Kent Botanical Recorder. Notable amongst these are the ferns, of which none were listed in the Management Plan.

A distinctive achievement of the recording to date has been to locate three rare plants.

***Oenanthe silaifolia*** - Narrow-leaved water dropwort present in the Water Meadow (On 16/06/2010, Sue Buckingham recorded 2 plants at TQ 56174 46093 - very close to A21 road bridge, 60 plants at TQ56130 46086 and 9 plants at TQ56118 46089). These were located again in 2021 by the author with over a hundred plants in flower in early June.

***Geranium purpureum*** - the Little Robin was also first recorded in 2010 by Sue Buckingham. This was fortunately found again in the 2020 survey at the same location and is still present in 2022.

***Tragopogon x mirabilis*** – Two specimens in flower of this rare hybrid of Goat's-beard and Salsify were found close to the Leigh Flood Barrier in June 2021 by the author.

## Plant List

A brief description of the location of each plant is given below where it was first recorded by the author and comments made if it can be seen at other locations. The precise location is given by an eight figure Ordnance Survey grid reference (TQ.....) for the individual specimen. Many of these plants can be seen throughout the year in leaf form, but the comments indicate whether the plant was in flower at the time of recording. Comments have also been made if in the view of the recorder the plant is likely to have been planted over the past few years. The plants are listed first by their botanical names and then one of their familiar common names<sup>2</sup>.

***Acer campestre*, Field Maple:** There are numerous examples of this tree across the park, with some fine specimens close to the car park and the Shallows (57054588). Some of the trees have clearly been planted since the inception of the park, notably where it has been used in hedging, but several of the larger trees are probably self-sown.

***Acer pseudoplatanus*, Sycamore:** Although numerous specimens of this tree can be found outside the park boundary, only one sizeable tree has been found so far during this survey (57134606) - in the Nature Reserve at the western end of Barden Lake. Probably not planted, and possibly a remnant of the wood that used to cover this part of the park.

***Achillea millefolium*, Yarrow:** This plant can be found throughout the park, notably along the northern edge of Haysden Lake (56024596) and along the bank of the Medway between Friendship Bridge and Stone Lock.



***Adoxa moschatellina*, Moschatel:** Several specimens of this plant seen just coming into flower growing close to the bank of the River Medway in late April 2021 (57584643).

***Aegopodium podagraria*, Ground-elder:** A substantial patch of this plant can be found forming the vegetation along the Medway riverbank by the Water Meadow (56134614). It can be seen in flower from early May.

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<sup>2</sup> All plant names, both their Latin and Common name, are derived from New Flora of the British Isles, Clive Stace, 4<sup>th</sup> Edition, 2019

***Aesculus hippocastanum*, Horse-chestnut:** As with the Sycamore, only one mature specimen of this tree was found during the current survey, growing on the edge of the Straight Mile watercourse (56694591).

***Agrimonia eupatoria*, Agrimony:** Numerous examples of this plant can be observed lining the footpath around the northern and north-eastern edge of Haysden Lake (56064600). Its distinctive yellow flower spikes appear in early June with some spikes still present into September.



Agrimonia eupatoria

***Agrostis capillaris*, Common Bent:** This grass can be found throughout the park particularly on the Medway Meadows (56974605).

***Agrostis stolonifera*, Creeping Bent:** A common grass present throughout the park with numerous plants found growing along the gravel drainage ditches of the Flood Barrier. (56074606)



Ajuga reptans

***Ajuga reptans*, Bugle:** A welcome flower in Spring and at its best in late April. Excellent patches of the plant can be found in Friendship Wood (56534602) but can also be found throughout the park.

***Alisma plantago-aquatica*, Water-plantain:** Excellent specimens of this plant can be found growing in the largest pond in the Water Meadow behind the Flood Barrier (56284609), the Shallows and the Nature Reserve at the end of Barden Lake. Best seen in flower late June to early July.

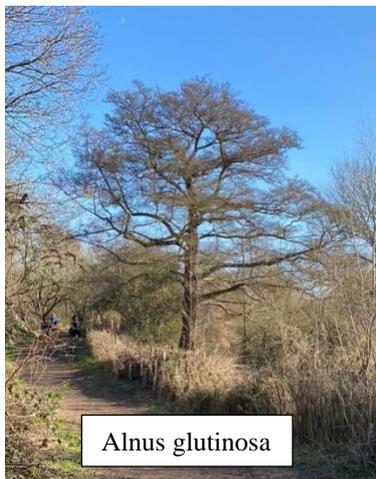
***Alisma lanceolatum*, Narrow-leaved Water-plantain:** A specimen observed growing in Barden Nature Reserve close to the flooded section of the Reserve in early July 2021 (57144604).

***Alliaria petiolata*, Garlic Mustard:** Substantial patches of this plant can be seen covering much of the eastern side of Friendship Wood in Spring. It generally flowers from mid-April although scattered plants can often be seen to be in flower as early as January. Also seen across the park but nowhere as abundant as in Friendship Wood.



***Allium ursinum*, Ransoms:** Extensive patches of this well-known plant can be seen along the Straight Mile footpath (56404584) and along the banks of the watercourse here in Spring, accompanying Wood Anemone and Dog's Mercury.

***Allium vineale*, Wild Onion:** A couple of small patches of this plant were observed growing in the grass sward of the Leigh Flood Barrier near its crest (56354583). The leaves have a very strong aroma.



***Alnus glutinosa*, Alder:** There are several Alder trees across the park, some planted but others not, judging from their position. These latter tend to be the largest specimens and clearly much older. Good examples can be found close to both Straight Mile Bridge (56654592) and Rainbow Bridge, where perhaps the oldest Alder in the park is growing on the edge of the Shallows (see photograph opposite).

***Alnus incana*, Grey Alder:** Most, if not all the trees in Friendship Wood were planted in 1987 as a gift from Heusenstamm. This Alder (56464606) was probably one of them.

***Alopecurus geniculatus*, Marsh Foxtail:** A few specimens seen growing in the still water of the pond in the centre of the Water Meadow (56304606).

***Alopecurus pratensis*, Meadow Foxtail:** Numerous plants of this grass form the sward of the Water Meadow. The plant can also be seen elsewhere in the park.

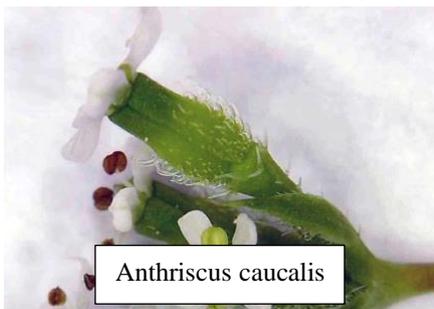
***Anacamptis pyramidalis*, Pyramidal Orchid:** Three specimens in flower observed in June on the edge of the flood barrier close to the Tudor Trail cycle path (56274553).



***Anemone nemorosa*, Wood Anemone:** The plant can be found throughout the park in early Spring, flowering from early March. The best place to see it is along the Straight Mile, where extensive patches line (5646452) both sides of the watercourse mixed in with Dog's Mercury and Wild Garlic.

***Angelica sylvestris*, Wild Angelica:** Two plants were found growing near the A21 road viaduct (56254584) and in flower in mid-August. Specimens can also be seen in the Shallows and Stone Lock.

***Anisantha sterilis*, Barren Broome:** Numerous specimens seen growing in the grass sward lining the footpath around Barden Lake (57704628). This grass can also be seen elsewhere in the park.



***Anthriscus caucalis*, Bur Chervil:** A few specimens observed in flower under the A21 road viaduct near Haysden Lake in early May (56364562).

***Anthriscus sylvestris*, Cow Parsley:** One of the most common members of the Apiaceae family in the park and found throughout, lining many footpaths, especially along the Straight Mile. Can be seen in flower as early as late January.

***Aphanes arvensis*, Parsley-piert:** Numerous specimens seen in the disturbed ground directly in front of the Leigh Flood Barrier near Haysden Lake car park (5627462) and the edges of the road to the Lake.

***Arctium lappa, Greater Burdock:*** Several specimens seen growing close to the edge of the footpath lining the northern edge of Haysden Lake (55034601).

***Arctium minus, Lesser Burdock:*** Several specimens can be seen across the park especially near Haysden Lake (56074599).

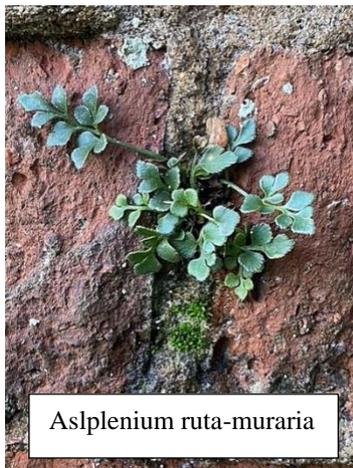
***Artemisia vulgaris, Mugwort:*** Several plants can be seen growing by the Shallows watercourse (56854593) and by the footpaths around Haysden Lake.

***Arum maculatum, Lords-and-Ladies:*** Found throughout the park, usually under trees and close to hedges. A sizeable patch of the plant can be seen by the eastern side of Barden Lake footpath just before the railway bridge (57234607).

***Asplenium adiantum-nigrum, Black Spleenwort:*** This fern has been observed on two railway brick bridges at (56664599) and (57214600), growing in the mortar joints.



Asplenium adiantum-nigrum



Asplenium ruta-muraria

***Asplenium ruta-muraria, Wall-rue:*** A few specimens can be seen on the railway bridges in the park (56024603).

***Asplenium scolopendrium, Hart's tongue:*** Found throughout the park notably along the Shallows, in Friendship Wood (56494603), and along both sides of the Straight Mile watercourse where most of the other ferns are also found.

***Asplenium trichomanes, Maidenhair Spleenwort:*** A couple of specimens observed growing from the mortar joints of the brick railway bridge crossing the River Medway just north of Haysden Lake (56024604). Also present in Stone Lock.

***Aster novi-belgii agg, Michaelmas-daisies:*** Three plants were found in flower in early September close to the A21 viaduct. This group is

notoriously difficult to nail down to a specific type. Hopefully this can be achieved in the summer of 2022.

***Athyrium filix-femina*, Lady-fern:** Several specimens grow on the southern bank of the Straight Mile watercourse (56434585) – both red and green stem versions. This fern can also be observed growing on the southern bank of the Medway where it flows past the Water Meadow, in Stone Lock (57024605), and in Audley Wood (red stem type).

***Atriplex patula*, Common Orache:** A patch about one metre square was seen directly under the A21 viaduct in late September growing with *Atriplex prostrata* (56324580).

***Atriplex prostrata*, Spear-leaved Orache:** Growing with *Atriplex patula* directly under the A21 viaduct.

□

***Ballota nigra*, Black Horehound:** A couple of plants observed in flower in early August, growing directly under the A21 viaduct (56284580). Also seen growing in the Ranger's compound.

***Barbarea vulgaris*, Winter-cress:** Several plants seen in mid-April spread over several square metres along the southern side of the footpath (56064599) which runs along the northern edge of Haysden Lake.

***Bellis perennis*, Daisy:** One large plant flowering in early April (56544605) in Friendship Wood but many growing throughout the park especially in the grass sward of the nearby flood barrier.

***Beta vulgaris subsp. maritima*, Beet:** Several plants growing directly under the A21 viaduct (56324581) were found just about to come into flower in early June.

***Betula pendula*, Silver Birch:** One tree growing on the side of the Straight Mile footpath (56634595) in a hedge line of mixed trees leading to the flood barrier. This tree species can be seen across the park, most of which have probably been planted.

***Betula pubescens*, Downy Birch:** One small tree growing in the hedgerow between Barden Lake and the Nature Reserve (57214603).

***Bidens tripartita* Trifid Bur-marigold:** A patch of the plant found just coming into flower in early August in the Water Meadow associated with Marsh Cudweed (56334604).



***Brachypodium sylvaticum*, False Brome:** Numerous specimens grow under the A21 road viaduct and elsewhere in the park (56284582).

***Brassica nigra*, Black Mustard:** Several specimens observed in flower in late August by the footpath near Haysden Lake (55824583).

***Bromopsis ramosa*, Hairy-brome:** Numerous specimens grow close to the hedge line near Barden Lake (572246100).

***Bromus commutatus*, Meadow Brome:** A few specimens observed growing by the footpath in mid-July (56204598).

***Bromus hordeaceus*, Soft-brome:** A few specimens observed growing in the main car park and also throughout the park (57054565).



***Bolboschoenus maritimus*, Sea Club-rush:** A two metre square patch observed growing on the northern edge of Haysden Lake (56164597) in 2020. This was confirmed by Fred Rumsey of the Natural History Museum. It is very close to *B.laticarpus* (Inland Club-rush) and needed specialist advice to distinguish between the two species. *B.maritimus* is increasingly being found in inland sites. The patch was observed to be much reduced in size in the summer of 2021.

***Buddleja davidii*, Butterfly-bush:** One large specimen in flower overhanging the footpath near Rainbow Bridge (56664598). Numerous plants can be seen elsewhere in the park.

***Butomus umbellatus*, Flowering-rush:** Two plants found in flower on the first of July 2021, growing on the edge of the dipping platform by the Shallows (56854593). Also observed in the Barden Nature Reserve in July 2021.





***Callitriche agg.*, Water-starwort:** Numerous specimens observed growing on the surface of the watercourse leading from Barden Lake to the River Medway in mid-August (577346530). *Callitriche stagnalis* has been recorded in the park in the past, but no fruits seen in these specimens to confirm this identification.

***Caltha palustris*, Marsh-marigold:** A few specimens in flower in mid-August growing in a drainage ditch leading to the River Medway (57754634).

***Calystegia sepium*, Hedge Bindweed:** This plant can be seen throughout the park. In flower by Shallows Bridge (56974591) in mid-October.

***Campanula trachelium*, Nettle-leaved Bellflower:** One specimen observed just coming into flower at the beginning of July, on the grass bank in the overflow car park (57074586).

***Capsella bursa-pastoris*, Shepherd's purse:** Numerous plants were observed in flower growing along the gravel drainage ditch on the east side of the flood barrier (56114606). The plant can be found on other drainage ditches of the dam, as well as in the grass sward of the dam.

***Cardamine flexuosa*, Wavy Bitter-cress:** Several specimens observed in flower in early March growing in Friendship Wood close to the path at the western end of the wood (56454603).

***Cardamine hirsuta*, Hairy Bitter-cress:** Several plants observed in flower in March growing on the edge of the eastern side of the flood barrier (56084601). Can also be seen elsewhere in the park.

***Cardamine pratensis*, Cuckooflower:** This plant can be seen in flower from early March across the park but one of the best places to see it is in Friendship Wood where numerous patches can be found, especially in the centre of the wood (56564606).

***Carex divulsa*, Grey Sedge:** A few plants observed in early June growing close to the footpath that runs along the northern edge of Haysden Lake (56274596).



**Carex hirta, Hairy Sedge:** Several plants observed growing on the waste ground opposite the car park at Haysden Lake. The only location in the park for this sedge seen and recorded so far

(56284563). Recorded in early June 2020. Access to see it in 2021 was not possible due to work by the Environment Agency.

**Carex leporina, Oval Sedge:** A few plants observed growing close to the A21 viaduct recorded in late May (56124574).



**Carex otrubae, False Fox Sedge:** A one metre square patch of this plant grows close to the A21 viaduct, with Canary Reed grass and Water Mint (56124574). Recorded in late May.

**Carex pendula, Pendulous Sedge:** A large patch of the plant can be seen growing close to the edge of Haysden Lake (56174596) together with a patch of Remote Sedge. Pendulous Sedge is by far the most common sedge in the park and can be found in several places.



**Carex pseudocyperus, Cyperus Sedge:** One large specimen observed in flower in mid-June under the shade of Fraxinus excelsior (57134605).

**Carex remota, Remote Sedge:** Several plants observed in mid-June growing on the northern edge of Haysden Lake, close to a large patch of Pendulous Sedge (56174596).

**Carex sylvatica, Wood-sedge:** A few specimens observed in flower in mid-May growing on the edge of the footpath by the River Medway (57654646).

**Carpinus betulus, Hornbeam:** One of several trees of this species planted in Friendship Wood (56534603).

**Centaurea cyanus, Cornflower:** A few plants observed in flower in late May. Probably part of a mix of flowers sown in this area close to Barden Lake (57244608) over the past few years. Not seen elsewhere in the park.

***Centaurea nigra* agg. Common Knapweed:** Numerous plants coming into flower by the footpaths around Haysden Lake observed in late May (56214592). Can also be seen elsewhere in the park notably in scattered patches lining the footpaths.

***Centaureum erythraea*, Common Centaury:** Numerous plants in flower in mid-June in the Haysden Lake car park (56374555) and growing in the low bank edging the road to the lake. Many more can be observed growing on the surface of the waste ground west of the lake road including some white and pink flowered plants.



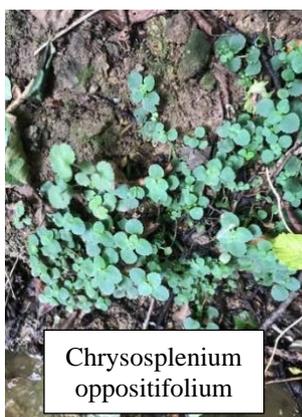
***Cerastium fontanum*, Common Mouse-ear:** Numerous plants can be found in the grass sward of the east side of the flood barrier. Recorded in flower in early April (56394597). Also found throughout the park.

***Cerastium glomeratum*, Sticky Mouse-ear:** Several of these plants can be found in the grass sward of the east side of the flood barrier. Recorded in flower in early April (56394597).

***Chamaenerion angustifolium*, Rosebay Willowherb:** Numerous patches of this plant can be seen along the edge of the footpath which runs along the northern edge of Haysden Lake, and close to the bank of the Medway (56084601).

***Chelidonium majus*, Greater Celandine:** Two specimens observed in late March, growing under the A21 road viaduct close to one of the concrete bridge supports near Haysden Lake (56284584).

***Chenopodium album*, Fat-hen:** A common plant across the park and can be seen under the A21 viaduct (56284584).



***Chrysosplenium oppositifolium*, Opposite-leaved Golden-saxifrage:** This has only been seen growing in one location along the Straight Mile watercourse in August, so the earlier flowering time was missed (56434585). Given the steepness of the bank this can only really be seen by wading in the watercourse. A detailed survey of the whole length of the watercourse is planned for 2022.

***Circaea lutetiana*, Enchanter's-nightshade:** A sizeable patch of the plant in flower was seen in early July in the dried-up watercourse under the railway bridge arch close to Rainbow Bridge (56664500).

***Cirsium vulgare*, Spear Thistle:** This large, easily identifiable thistle can be seen throughout the park. Several recorded close to railway tunnel near Stone Lock (57064595).

***Cirsium arvense*, Creeping thistle:** A very common thistle that can be found throughout the park. The recorded plant was one of several in the overflow car park (57045459).

***Clematis vitalba*, Traveller's-joy:** Found covering the brambles and other plants on the railway embankment near Rainbow Bridge (56684599). Surprisingly, for a very common plant, only found in this location so far.



***Cochlearia danica*, Danish**

**Scurvygrass:** Several specimens in flower in early May growing under the A21 road viaduct adjacent to the railway fence (56204600).

***Conium maculatum*, Hemlock:**

Numerous specimens can be seen of this member of the Apiaceae family throughout the park, particularly along the road leading to Haysden Lake, and close to the railway line near the Shallows (56854597).

***Convolvulus arvensis*, Field Bindweed:** This plant can be seen in a few locations across the park. Recorded in flower in July growing over the vegetation that lines the railway line fence by the Shallows (56894597).

***Cornus sanguinea*, Dogwood:** A few trees in flower in early June, lining the meadow and in front of the railway line. Growing with Blackthorn, Birch, Elder, Guelder Rose, Field Maple and Bird Cherry. A planted hedgerow (56514596). Also present across the park.

***Corylus avellana*, Hazel:** This can be found throughout the park, particularly in hedges. Good specimens in the hedge line near the Shallows watercourse (56564597).

***Crataegus crus-galli*, Cockspurthorn:** One large tree with berries observed in early October growing close to the edge of Barden Lake (57424626). Probably planted in the 1980s as part of the restoration of this former sand and gravel pit.

***Crataegus laevigata*, Midland Hawthorn:** One large tree observed in late May growing close to the hedge line (57204604). Possibly a remnant of the original woodland that was at this location prior to sand and gravel extraction that created Barden Lake nearby.

***Crataegus laevigata x media*, Midland Hawthorn hybrid:** One tree observed growing by the railway line fence in Barden Lake Nature Reserve in early June (57184602).

***Crataegus monogyna*, Hawthorn:** Another plant that can be found in the hedge lines with some mature trees throughout, especially close to the Shallows and along the Straight Mile.

***Crepis biennis*, Rough Hawk's-beard:** A few specimens observed in flower in early June, growing in the Water Meadow, close to the A21 road viaduct (56364594).

***Crepis capillaris*, Smooth Hawk's-beard:** A few plants observed in flower growing in the grass sward of the east side of the flood barrier (56394603). The east side of the flood barrier has a significantly larger assemblage of plants than the west facing side. This is possibly due to the east side being less exposed to the prevailing winds.

***Crepis vesicaria*, Beaked Hawk's-beard:** One plant recorded in flower in late July, on the edge of the footpath leading to the Shallows watercourse, growing through the nettles (56974588). Specimens can also be seen growing under the A21 viaduct near Haysden Lake.

***Cruciata laevipes*, Crosswort:** This was first recorded just west of Friendship Bridge (56394598) but it can be seen throughout the Park particularly close to hedges lining the meadows. Flowers from early April.

***Cynosurus cristatus*, Crested Dog's-tail:** Numerous specimens observed in flower in mid-June, growing close to the edge of the Water Meadow (56374605).

***Cytisus scoparius*, Broom:** Several plants seen in flower in early July growing on the earth bank that slopes up to the A21 (56914579) opposite Tonbridge Town Sailing Club.

***Dactylis glomerata*, Cock's-foot:** A common grass that can be seen across the park in the meadows and lining footpaths. Numerous plants seen in flower in the meadow west of Friendship Bridge in early June (56704606).



***Dactylorhiza fuchsii*, Common Spotted-orchid:** One specimen in flower in mid-June seen right on the eastern edge of Haysden Lake (56224586).

***Daucus carota*, Wild Carrot:** Numerous plants observed in flower in early July on the grass bank in the overflow car park (57094583). This bank was sown by the volunteers, but scattered patches of wild carrot (most unlikely to have been sown by the volunteers) can be seen on the eastern side of the flood barrier and in the small meadow by the flood barrier gates.

***Deschampsia cespitosa*, Tufted Hair-grass:** One large patch seen in flower, in mid-July, growing by the footpath that runs through the small wood between Barden Lake and the River Medway (57594642). Several patches can also be seen scattered across the Water Meadow.

***Digitalis purpurea*, Foxglove:** One plant observed on one of the railway bridge arches crossing the Medway (56024604). Surprisingly, this is not a common plant in the park, but a few scattered plants can be seen in Friendship Wood.

***Dipsacus fullonum*, Wild Teasel:** A good patch of the plant at Barden Lake (56744630) observed in early October. A common plant across the park, especially in the overflow car park and lining the footpath on the northern side of Haysden Lake.

***Dryopteris borreri*, Borrer's Scaly Male-fern:** One specimen observed close to the footpath in Friendship Wood (56534607).



***Dryopteris dilatata*, Broad Buckler-fern:** A fern of acid woodland; several specimens can be seen growing close to the Straight Mile water course (56414585) and one near the Shallows Bridge.

***Dryopteris filix-mas*, The Male-fern:** The most common fern in the park and can be found for much of the year in woodland and lining footpaths, especially in the Straight Mile area (56534589), Friendship Wood, the ditch lining Audley Wood, and the Shallows.

***Echium vulgare*, Viper's-bugloss:** A couple of these plants were seen in early July in flower on the edge of the low bank in the overflow car park of the main car park (57084582).

***Elodea nuttallii*, Nuttall's Waterweed:** Numerous specimens washed up against the bank of Haysden Lake seen in June (56134597).

***Elymus repens*, Common Couch:** A common grass seen in numerous places across the park. A good place to see this grass is along the footpath in Barden Lake in early August (57284616).

***Epilobium ciliatum*, American Willowherb:** Numerous specimens observed in mid-June in full flower covering the waste ground near Haysden Lake (56314565).

***Epilobium hirsutum*, Great Willowherb:** Several plants observed coming into flower in late June (56024596) by the footpath skirting the north-western side of Haysden Lake.

***Epilobium obscurum*, Short-fruited Willowherb:** One specimen observed in flower in early July growing on the railway bridge arch by Rainbow Bridge where it crosses the Shallows watercourse (56664599).

***Epilobium tetragonum*, Square-stalked Willowherb:** Numerous plants observed in flower in early August growing in loose gravel, and recently disturbed area on waste ground in front of the Leigh Flood Barrier (56934558).

***Epipactis helleborine*, Broad-leaved helleborine:** Several specimens observed in flower in early July 2020 in Friendship Wood growing on the edges of both footpaths and often through the brushwood lining the paths (56524603). A few plants also noted by Haysden Lake and Barden Lake. This orchid also observed in similar numbers in 2021.

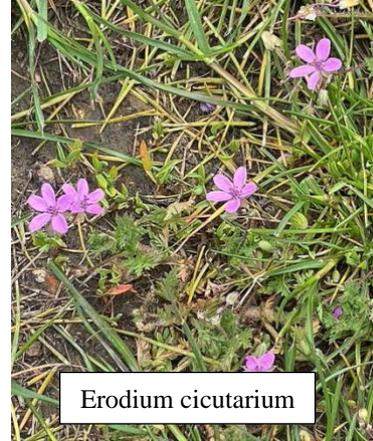
***Equisetum arvense*, Field Horsetail:** A small patch of this plant observed close to the edge of the Shallows watercourse and under a Pendunculate Oak just off the Weald Way footpath (56794590). Also present under the A21 viaduct growing through the fence opposite Tonbridge Town Sailing Club (56304579).

***Erigeron canadensis*, Canadian Fleabane:** A few plants growing close to the patch of Guernsey Fleabane under the A21 viaduct (56294580).



***Erigeron sumatrensis*, Guernsey Fleabane:** A large patch of the plant can be seen growing under the A21 viaduct close to Haysden Lake (56294580).

***Erodium cicutarium*, Common Stork's-bill:** Three specimens in flower observed growing in the grass sward of the dog exercise area in early May 2021 (57084597).



***Ervilia hirsuta*, Hairy Tare:** Several specimens in flower observed in late May growing through the grasses of the Water Meadow (56444608).

***Ervum tetraspermum*, Smooth Tare:** A couple of plants seen in flower in mid-July (56064608) growing through the grasses of the Water Meadow.

***Eschscholzia californica*, Californian Poppy:** Two specimens observed growing in a gravel drainage ditch of the Leigh Flood Barrier in early May (56224567).

***Eupatorium cannabinum*, Hemp-agrimony:** Three specimens observed growing close to the edge of the water course on the edge of Friendship Wood (56564603). Large patches of this plant can be seen growing on the bank of the River Medway just outside the park.

***Euonymus europaeus*, Spindle:** Several plants form part of the planted hedge line along the footpath between the Shallows and the railway line (56894598).

***Euphorbia helioscopia*, Sun Spurge:** One specimen observed growing in late May close to the fence of the Ballast Pit fishing lake and opposite the park café seating area (57184595).

***Festuca ovina*, Sheep's fescue:** A few specimens observed growing in the Medway Meadow in late July (56974605).

***Festuca rubra*, Red Fescue:** Numerous specimens observed in early July growing in the Medway Meadow (56854604).

***Ficaria verna*, Lesser Celandine:** Scattered patches can be seen in flower from late February, growing along the edges of the footpath of the Straight Mile (56674593), and other footpaths throughout the park.

***Filipendula ulmaria*, Meadowsweet:** Extensive patches can be found in the centre of the Water Meadow. Recorded not yet in flower in late April (56114609).

***Fragaria vesca*, Wild Strawberry:** Several plants observed in flower in mid-March growing just by the hedge line on the eastern side of the entrance road to the park (57194587).

***Frangula alnus*, Alder Buckthorn:** One tree with berries at the red colour stage seen in late July, growing close to the southern edge of Barden Lake (57584611). Probably planted as part of the reclamation of this former sand and gravel working.

***Fraxinus excelsior*, Ash:** Three very large ash trees grow close to the Straight Mile watercourse (56654587). There are numerous ash trees throughout the park with many showing signs of Ash Dieback disease.

***Fumaria muralis*, Common Ramping-fumitory:** Several specimens observed in flower in early May growing under the A21 road viaduct (56284582).

***Galeopsis bifida*, Bifid Hemp-nettle:** A large specimen with white flowers observed in mid-August growing under the trees lining the northern edge of the meadow near Rainbow Bridge (56644595).

***Galeopsis tetrahit*, Common Hemp-nettle:** A few specimens observed in flower in early August with pale purple flowers growing close to the footpath just east of the flood barrier. (56434596).



***Galeopsis tetrahit*, Common Hemp-nettle:** A few specimens observed in flower in early August with white flowers growing close to the Straight Mile footpath (56514585).

***Galium album*, Hedge Bedstraw:** Numerous plants in flower growing by the side of the gravel path around Haysden Lake.

***Galium aparine*, Cleavers:** A few specimens in flower in early May growing at the base of the hedges (56394583). A common plant throughout the park.

***Galium palustre*, Common Marsh-bedstraw:** Numerous specimens observed in flower in late May in Barden Lake Nature Reserve (57154603).

***Galium verum*, Lady's Bedstraw:** Numerous plants in flower in late July growing with several other species probably sown a few years ago when the western end of Barden Lake was restored (57274605).

***Geranium dissectum*, Cut-leaved Crane's-bill:** Several plants observed growing in the grass sward near Barden Lake (57674629), also in the Water Meadow and under the A21 viaduct by Haysden Lake.

***Geranium molle*, Dove's-foot Crane's-bill:** Probably the most common member of the geranium family in the park. Numerous plants can be seen growing on the flood barrier, particularly on its east side (56374594).

***Geranium pratense*, Meadow Crane's-bill:** A few specimens observed in flower in early July seen growing on the low bank in the overflow car park at the end of the main car park (57084582). Probably introduced as part of the seed mix when the bank was constructed.

***Geranium purpureum*, Little Robin:** This is a rare plant in Kent and nationally. It has been recorded in the Kent Rare Plant Register for February 2021 following its rediscovery as part of this survey. Several plants were seen growing on a stone-filled gabion by the railway bridge arch (56044604) on the edge of the Water Meadow. A few plants were seen in flower in late December which made it possible to confirm its identification. Still present in spring 2022.



***Geranium purpureum***

***Geranium pusillum*, Small-flowered Crane's-bill:** Several plants recorded growing by the edge of the footpaths around Haysden Lake (56244585), and also along the gravel drainage ditch lining the Water Meadow.

***Geranium robertianum*, Herb-Robert:** A few plants were observed in flower in late April at the base of the hedge by the footpath by the Ballast Pit leading to the main car park (57174594). Also present at several other locations across the park usually on the edges of the footpaths.

***Geum urbanum*, Wood Avens:** Several plants were seen coming into flower in late April in Friendship Wood (56524607), and elsewhere in the park at the bottom of hedges.

***Glebionis segetum*, Corn Marigold:** A few plants observed in flower in late July growing with other species sown a few years ago when the western end of Barden Lake was restored (57244608).

***Glechoma hederacea*, Ground-ivy:** A common plant throughout the park and numerous specimens observed growing along the side of the footpaths of the Straight Mile watercourse (56664590). One of the first plants in flower from early March.

***Glyceria fluitans*, Floating Sweet-grass:** Numerous specimens observed in early June growing in the water-filled scrape in the centre of the Water Meadow (56304606).

***Glyceria maxima*, Reed Sweet-grass:** A thick sward of this grass observed in early July growing in the Shallows watercourse under Rainbow Bridge (56674597).

***Gnaphalium uliginosum*, Marsh Cudweed:** Several square metres of this plant observed growing in late Spring across the footpath skirting the edge of the Water Meadow close to the River Medway (56284609).

***Hedera helix*, Common Ivy:** Ivy is found throughout the park, growing in its hedges and trees. This recording was made by the footpath close to the railway fence, north of the Shallows (56804598).

***Helminthotheca echioides*, Bristly Oxtongue:** A common plant throughout the park particularly by the footpaths of Haysden Lake and at the base of the west side of the flood barrier. Seen still in flower in October on the surface and lining the edges of the overflow car park beyond the main car park (57044588). This plant can be seen in flower throughout the summer and autumn.

***Helosciadium nodiflorum*, Fool's-water cress:** A one square metre patch of the plant observed in mid-June growing in the Barden Lake Nature Reserve (57114604).

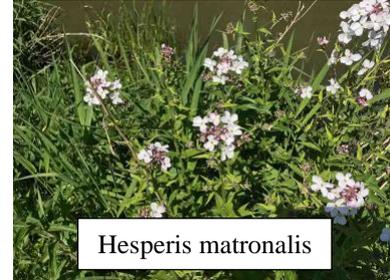


Helosciadium nodiflorum

***Heracleum mantegazzianum*, Giant Hogweed:** Specimens of these plants are often seen in early May, growing on the south bank of the River Medway where it flows by the Water Meadow (56264609). When this plant is noticed it is destroyed though a few reach the flowering stage before they are observed.

***Heracleum sphondylium*, Hogweed:** Many specimens can be observed across the park growing by the side of footpaths and in its meadows. A group of plants were observed growing close to the footpath at Haysden Lake (56084614). The plants can be seen in flower as late as December.

***Hesperis matronalis*, Dame's-violet:** A few plants were seen in flower in mid-May growing on the south bank of the Medway where it runs by the edge of the Water Meadow (56034613).



***Hirschfeldia incana*, Hoary Mustard:** One plant observed in flower in early July, growing on the loose gravel of the overflow car park (57074582).

***Hordeum murinum*, Wall Barley:** A common grass across the park. This recording was made of several specimens of the grass in early June growing beneath the A21 viaduct (56294579).

***Hordeum secalinum*, Meadow Barley:** Numerous specimens of this grass can be seen growing on the edge of the Water Meadow in early July, close to the gravel drainage ditch of the Leigh Flood Barrier (56364604).

***Humulus lupulus*, Hop:** Hop plants can be observed growing on hedges and trailing over the railway line fences in several places across the park. Good examples can be seen on the railway line fence by the Shallows and in the main car park (57024588).

***Hyacinthoides hispanica*, Spanish Bluebell:** A few specimens observed flowering in early May close to the hedge lining the road to Haysden Lake (56314567).

***Hyacinthoides x massartiana*, Hybrid Bluebell:** A few plants in flower in late April in Friendship Wood (56494606) including a couple of white ones.

***Hyacinthoides non-scripta*, Bluebell:** Numerous specimens can be seen flowering in Friendship Wood in early April (56464602). Most of these were planted in Autumn 2019 by the Volunteers, after a successful public appeal. Others can be seen elsewhere in the park and are likely to be there naturally.

***Hypericum calycinum*, Rose-of-Sharon:** One specimen displaying fruits but no flowers in late July growing on the edge of Barden Lake (57564638). From its position very unlikely to have been planted.

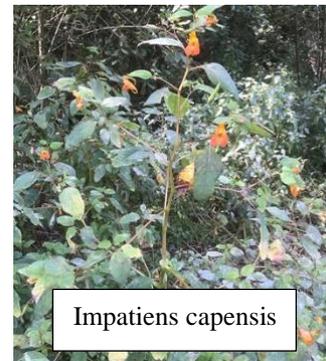
***Hypericum hirsutum*, Hairy St John's-wort:** Several plants in flower in mid-June growing alongside the gravel paths by Haysden Lake (56064598). This plant can be seen at several locations across the park.

***Hypericum perforatum*, Perforate St John's-wort:** Several plants (not yet in flower) observed in mid-May at Haysden Lake (56064599). The plant has also been observed in Friendship Wood.

***Hypochaeris radicata*, Cat's-ear:** One plant seen in flower in late June, growing on the edge of the gravel drainage ditch of the flood barrier (56164605). A common plant in the grass sward of the Leigh Flood Barrier.

***Ilex aquifolium*, Holly:** There are several specimens around the park and this recording was of one found growing close to the railway line fence near the Shallows (56764598). It was probably not planted, unlike many seen in the park.

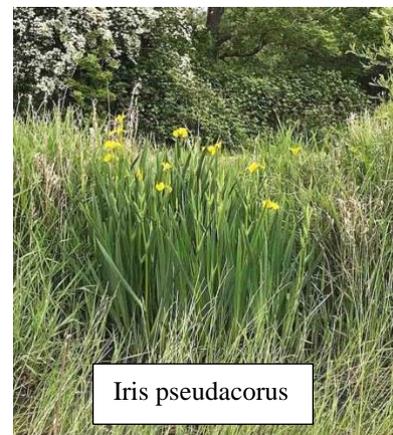
***Impatiens capensis*, Orange Balsam:** Two plants seen in flower in mid- October, close to the footpath on the west side of the flood barrier (56354598). A larger patch of the plant can also be seen in the Nature Reserve at the western end of Barden Lake.



***Impatiens glandulifera*, Himalayan Balsam:** Found throughout the Park in dense patches, especially close to the River Medway and in the Shallows. Numerous specimens observed flowering in early October in Audley Wood (57634640).

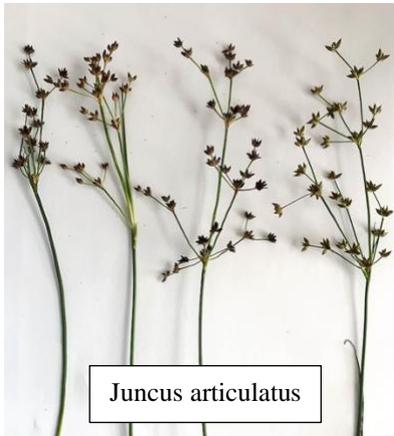
***Ipheion uniflorum*, Spring Starflower:** One large flowering specimen observed under the A21 road viaduct in early May (56364582).

***Iris pseudacorus*, Yellow Iris:** One of two native Iris. An excellent patch of the plant was seen in flower in early May, growing in the shallow water of the largest scrape in the Water Meadow (56284609).



***Jacobaea vulgaris*, Common Ragwort:** Scattered plants can be seen growing under the A21 viaduct (56294583). A larger patch of the plant was removed from the southern side of Barden Lake by volunteers in 2020 but will no doubt return!

***Juglans regia*, Walnut:** Two obviously planted trees growing on the edge of the car park opposite the Ranger's enclosure and very close to a Red Oak (57144597).



***Juncus articulatus*, Jointed Rush:** A square metre patch seen in early August in the dried-out scrape in the middle of the Water Meadow (56294608). Further examples can be seen in the protected area at the western end of Barden Lake.

***Juncus bufonius*, Toad Rush:** Several specimens observed in early August growing in a muddy footpath close to the A21 road viaduct (56224595).



***Juncus conglomeratus*, Compact Rush:** A half-metre patch observed growing on the edge of the scrape in the middle of the Water Meadow (562846090). Growing close to extensive patches of soft and hard rush.

***Juncus effusus*, Soft-rush:** A small clump growing close to the footpath that runs between Haysden Lake and the A21 viaduct (56204598). Numerous patches can also be seen growing in the grass just to the south of Barden Lake, and in the Water Meadow.

***Juncus inflexus*, Hard Rush:** Patches of this plant observed close to the footpath between Haysden Lake and the A21 viaduct (56284598). It can also be found around the scrape in the centre of the Water Meadow.

***Juncus tenuis*, Slender Rush:** One specimen observed in late July close to the footpath of Barden Lake (57524635).

***Knautia arvensis*, Field Scabious:** A few plants seen in flower in early July, growing on the low bank in the overflow car park at the end of the main car park (57084582).

***Lactuca serriola*, Prickly Lettuce:** One specimen seen growing on the flood barrier in mid-June (56314596). Also a few specimens seen growing under the A21 viaduct (56294583).

**Lamiastrum galeobdolon, Yellow Archangel:** A patch of the plant observed just coming into flower in June, growing along the northern edge of the Straight Mile footpath (56534586).

**Lamium album, White Dead-nettle:** A very common plant throughout the park, especially at the edges of footpaths by hedges. A plant that flowers well into winter and seen by the Straight Mile footpath in flower in October (56444597).

**Lamium hybridum, Cut-leaved Dead-nettle:** One flowering specimen observed in early May growing through the footpath fence on top of the Leigh Flood Barrier (56254549).



**Lamium purpureum, Red Dead-nettle:** This plant can be seen throughout the Park, but it is not as common as Lamium album. Several specimens observed in October growing by the fence between the main car park and the overflow car park (57054588). A number of white-flowered plants are also present in a few places mixed in with purple-flowered plants, e.g. Haysden Lake car park - on the low bank between the road and car park (56364562).

**Lapsana communis, Nipplewort:** A common plant that can be seen throughout the park, growing by the footpaths. A plant with small yellow flowers which continues to bloom well into autumn. This plant was seen in bud in late May growing near Stone Lock (56794606) and just on the edge of the River Medway by the entrance to Friendship Wood coming from Friendship Bridge.

**Lathyrus pratensis, Meadow Vetchling:** Numerous plants observed in early June, growing in the Water Meadow (56324606).

**Lathyrus nissolia, Grass Vetchling:** Several specimens flowering in early July in the Meadow (56924604).

**Lemna minor, Common Duckweed:** This plant observed completely covering the surface of the stagnant water along with Spirodela polyrhiza in Friendship Wood (56564602).

***Leontodon hispidus*, Rough Hawkbit:** One specimen in flower observed in mid-July growing on the edge of the gravel ditch of the flood barrier (56164605).

***Leontodon saxatilis*, Lesser Hawkbit:** A few plants observed in flower in early September growing on the east side of the flood barrier (56404603).

***Lepidium didymum*, Lesser Swine-cress:** Numerous plants can be found growing along and over the flood barrier gravel drainage ditch (56084606).

***Lepidium draba*, Hoary Cress:** Numerous flowering specimens observed in mid-May growing under the A21 road viaduct (56284582).

***Leucanthemum vulgare*, Oxeye daisy:** Several plants observed coming into flower in late April, growing on the edge of the footpath at Haysden Lake (56104600).

***Linaria purpurea*, Purple Toadflax:** Several plants observed not yet in flower in early June, growing close to the footpath at Haysden Lake (56254581).

***Linaria vulgaris*, Common Toadflax:** Several plants observed in flower in early October, growing immediately south of the railway arch near Stone Lock (56994598). Can also be observed on the eastern side of Haysden Lake (56244585) and in the meadow near the Shallows (56944594).

***Linum usitatissimum*, Flax:** One plant observed in flower in late August, close to the northern bank of Barden Lake (57554637).



***Lipandra polysperma*, Many-seeded goosefoot:** Several plants can be seen in the western corner of the overflow car park. Recorded mid-October and easily noted as a mass of dark red plants growing on the loose grey gravel of the car park surface.

***Lolium perenne*, Perennial Rye-grass:** Numerous specimens of this grass observed growing in the Water Meadow and elsewhere in late July (56064608).

***Lonicera japonica*, Japanese Honeysuckle:** One specimen observed in late March with flower buds close to the eastern end of Barden Lake (57634625). Another specimen also observed in the wood just east of Lucifer Bridge by the footpath. Both specimens most unlikely to have been planted given their position.

***Lonicera periclymenum*, Honeysuckle:** One specimen observed in flower in mid-July growing over the hedge by Barden Bridge (57634630). A further specimen was observed growing in the small wood by the railway line to the north of Haysden Lake (56094601).

***Lotus corniculatus*, Common Bird's-foot-trefoil:** A few specimens observed coming into flower in early May, growing at the base of a hedge near Haysden Lake (56254580).

***Lotus pedunculatus*, Greater Bird's-foot-trefoil:** Several plants observed flowering in mid-June, right on the edge of the northern bank of Haysden Lake (56024595).

***Luzula campestris*, Field Wood-rush:** Numerous specimens observed growing on the grass sward of the flood barrier (56394597).

***Lycopus europaeus*, Gypsywort:** A few specimens observed in flower in July on the edge of the large scrape in the centre of the Water Meadow (56284609). Several specimens can also be seen growing in the water close to the bank on the northern edge of Haysden Lake.

***Lysimachia arvensis*, Scarlet Pimpernel:** The patch of waste ground just in front of the flood barrier does not look like a promising area to find plants and it is frequently used by the Environment Agency and Highways England to store materials and vehicles. However, it is host to several species including the Scarlet Pimpernel, Parsley-piert and Thyme-leaved Speedwell, growing together on the loose gravel covering much of the ground (56314565).

***Lysimachia nummularia*, Creeping-Jenny:** Numerous specimens observed on the footpath and close to the hedge line along the northern edge of Haysden Lake (56364598).

***Lysimachia vulgaris*, Yellow Loosestrife:** Numerous specimens observed flowering in mid-July in the Barden Lake Nature Reserve (57194604). A few specimens also observed flowering in early June just by the entrance to Haysden Lake car park (56394556). These are likely to have been introduced, unlike the specimens in Barden Nature Reserve.

***Lythrum salicaria*, Purple-loosestrife:**

Several plants observed in flower in early June, growing by the water course of the Shallows (56844592). This plant can be observed in abundance in the Water Meadow and under the A21 viaduct near Haysden Lake.



Lythrum salicaria in the Water Meadow

***Malus domestica*, Apple:** A small tree observed in fruit in late June by the River Medway just west of the flood barrier (56374610).

***Malus sylvestris*, Crab Apple:** One tree observed in fruit in late September in Friendship Wood (56584607). Two smaller trees also observed at the edge of the road leading to Haysden Lake. All three likely to have been planted, particularly the one in Friendship Wood.



Malva moschata

***Malva moschata*, Musk-mallow:** One specimen observed in flower in early July, under the hedge line of the meadow just beyond Rainbow Bridge (56464597). Two plants were also observed in early July in flower on the flood barrier near the railway line.

***Malva sylvestris*, Common Mallow:** Several specimens observed in flower growing under the A21 viaduct (56324581). Can be seen growing on the edges of footpaths throughout the park.

***Matricaria discoidea*, Pineappleweed:** Numerous specimens in flower observed growing on the edge of the footpath near Rainbow Bridge and just on the edge of the meadow (56644597). Can also be seen at a few other locations in the park especially on the footpaths.

***Medicago arabica*, Spotted Medick:** The plant can be seen in several places across the park on footpaths and their edges, notably, close to the A21 viaduct (56254581) by Haysden Lake (56254581). Also seen on the flood barrier and on the gravel just outside the dog exercise area by the hedge opposite the toilet block.



Medicago arabica

***Medicago lupulina*, Black Medick:** A one metre square patch of this plant observed in early May by the footpath east of Haysden Lake (56254580).



**Melilotus officinalis, Ribbed Melilot:** One specimen in flower was observed in early July 2020 growing in the gravel of the overflow car park (57044584).

**Mentha aquatica, Water Mint:**

Extensive patches of this plant can be observed along the footpaths east of Haysden Lake and growing under the A21 viaduct (56244597). Flowers from later June to early Autumn. Also seen growing around Barden Lake.



**Mercurialis perennis, Dog's Mercury:**

Extensive patches of the plant can be seen in flower in Spring along the northern bank of the Straight Mile water course together with Wild Garlic and Wood Anemone. There is also a patch of this plant under the Straight Mile bridge (56684591) and in scattered small patches throughout the park.

**Muscari armeniacum, Garden Grape-hyacinth:** Two specimens observed in flower in late March (56294582).

**Myosotis scorpioides, Water Forget-me-not:** Several square metres of this plant can be seen in flower from mid-August in the Barden Nature Reserve close to the railway line (57174603).

**Myosotis arvensis, Field Forget-me-not:** Several plants seen in flower in mid-April, on the bank between the main car park and the overflow car park (57044588).

**Myosotis discolor, Changing Forget-me-not:** A few scattered plants seen still in flower in early November, on the east side of the flood barrier (56414598).

**Myosoton aquatica, Water Chickweed:** One specimen seen in flower at the end of September, close to the Shallows watercourse (56824593).

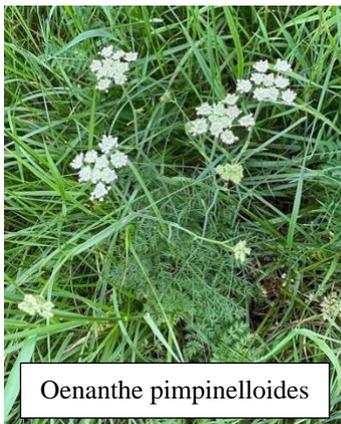
***Nuphar lutea*, Yellow Water-lily:** A number of plants seen in flower in early July growing in the Shallows watercourse (56814593). Can also be seen growing on the western side of Haysden Lake near the Straight Mile watercourse, with extensive patches in the Ballast Pit Lake.

***Nymphaea alba*, White Water-lily:** Several specimens seen in flower in mid-July in the watercourse close to Sharp's Bridge (57164610).

***Odontites vernus*, Red Bartsia:** A couple of specimens seen in flower in late July, growing close to the gravel footpath on the eastern edge of Haysden Lake (56204592).



***Oenanthe crocata*, Hemlock Water-dropwort:** Numerous specimens seen in flower in June all along the edges of Haysden Lake (56224591). These plants can also be seen on the edges of the Shallows and the River Medway.



***Oenanthe pimpinelloides*, Corky-fruited Water-dropwort:** Three specimens observed in flower in mid-June, growing under the A21 road viaduct (56194607).



***Oenanthe siliifolia*, Narrow-leaved Water-dropwort:** Over 150 specimens of this endangered species observed in flower in late May–early June 2021, in the Water Meadow growing just west of the A21 road viaduct (56174608).

***Oenothera glazioviana*, Large-flowered Evening-primrose:** Several square metres of scattered plants observed flowering in early June, in the waste ground immediately east of the flood barrier (56254567).

***Ophrys apifera*, Bee Orchid:** Three specimens observed in flower in late June, growing on the low grass bank lining the entrance road to Haysden Lake (56364559).

***Origanum vulgare*, Wild Marjoram:** one large specimen seen in flower in mid-July, growing by the fence between the main car park and the overflow car park (57044585).



***Oxalis articulata*, Pink-sorrel:** Two specimens seen in flower in early May, growing directly under the A21 viaduct (56294579). A single plant was also seen growing on the flood barrier itself.

***Papaver rhoeas*, Corn Poppy:** Two specimens seen in flower in late June, growing directly under the A21 viaduct (56284585).

***Parapholis strigosa*, Hard-grass:** Numerous specimens observed in mid-July growing under the A21 road viaduct (56254586).

***Pentaglottis sempervirens*, Green Alkanet:** Numerous specimens seen in flower seen in mid-April, growing around the edge of the Haysden Lake overflow car park (56354555).

***Persicaria hydropiper*, Water-pepper:** A substantial number of specimens can be seen growing in Barden Nature Reserve in mid-August (57154603). Extensive patches can also be observed growing by the footpath lining the northwestern corner of Haysden Lake.

***Persicaria maculosa*, Redshank:** This plant was seen growing in mid-October, amongst a mixed assemblage of plants, including self-heal, creeping thistle, and hemlock, close to the fence between the main car park and the overflow car park and the main car park (57054588).

***Persicaria lapathifolia*, Pale Persicaria:** A patch about a metre square seen in flower in early July, in the overflow car park of the main car park (57074582).

***Phalaris arundinacea*, Reed Canary-grass:** Several square metres of this plant seen coming into flower in mid-June, under the A21 viaduct near Haysden Lake (56024595). This plant can also be seen near the dipping platform by the Shallows and in the Water Meadow.



***Phleum bertolonii*, Smaller Cat's-tail:** Several specimens observed in mid-July, growing in Medway Meadow (56814597).

***Phleum pratense*, Timothy:** Numerous specimens can be seen in mid-June, growing close to the bank of Haysden Lake (56024595). Also seen throughout the park.

***Phragmites australis*, Common Reed:** An extensive patch of this plant can be seen lining the north-eastern side of Haysden Lake (56214592). It can also be seen lining sections of Barden Lake.

***Picea abies*, Norway Spruce:** One tree observed growing close to the hedge line in Barden Nature Reserve in mid-July (57204609). Probably planted.

***Picris hieracioides*, Hawkweed Oxtongue:** One specimen seen in flower in mid-October, growing through nettles close to the edge of the Shallows water course (56984590). Specimens of this plant can also be observed growing under the A21 road viaduct.

***Pilosella officinarum*, Mouse-ear-hawkweed:** Numerous specimens seen in flower in early July, growing in the grass sward of the east side of the flood barrier (56394604).



***Pimpinella saxifraga* Burnet-saxifrage:** A few scattered specimens seen in flower in late September, growing close to a few scattered specimens of *Daucus carota* (Wild Carrot) in the grass sward of the flood barrier (56334580). Also observed growing in Medway Meadow.

***Plantago coronopus*, Buck's-horn Plantain:** A four square metre patch of the plant can be seen directly under the A21 viaduct, with many plants in flower in mid-May (56294583). A much smaller patch of the plant can be seen in the gravel surface of the waste ground near Haysden Lake.

***Plantago lanceolata*, Ribwort Plantain:** A very common plant throughout the park. Seen growing near the Shallows dipping platform (56794596).

***Plantago major*, Greater Plantain:** A very common plant throughout the park. This example seen growing near the Shallows dipping platform (56794596).

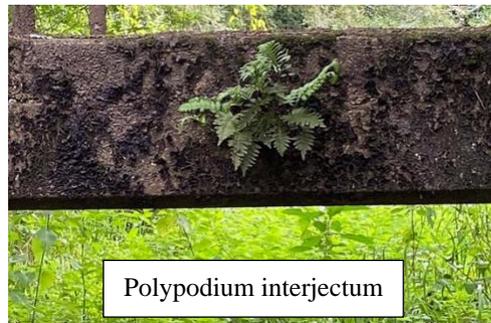
***Poa annua*, Annual Meadow-grass:** Numerous specimens seen growing as part of the grass sward of the flood barrier (56354586).

***Poa pratensis* agg., Smooth Meadow-grass:** Many of these plants can be seen growing along with Cocksfoot in the 'uncut' meadow opposite Friendship Bridge. Also common in other areas of the park (56704606).

***Polygonatum x hybridum*, Garden Solomon's-seal:** Two plants seen in flower in late April, growing in the verge by the entrance road to Haysden Lake (56404554). Likely to have been introduced via dumped garden waste.

***Polygonum aviculare*, Knotgrass:** Several specimens seen in early July, growing in the stone chip surface of the overflow car park of the main car park (57044584). Also observed growing in the footpath running along the edge of the Water Meadow (56244605).

***Polypodium interjectum*, Intermediate Polypody:** Numerous specimens growing on the north-eastern facing side of Little Lucifer Bridge (57674648).



***Polystichum aculeatum*, Hard Shield-fern:** A few specimens of this fern can be observed in early September close to the patch of *Polystichum setiferum* on the north bank of the Straight Mile watercourse (56554586).



***Polystichum setiferum*, Soft Shield-fern:** Several specimens can be seen on the north bank of the Straight Mile watercourse from late spring to early winter (56554586).

***Populus tremula*, Aspen:** A group of trees immediately adjacent to the road leading to Haysden Lake, and just by the locked gate (56274576).

***Populus. x canadensis*, Hybrid Black poplar:** A group of around 15 trees, the tallest of which is about 8 metres high, growing close to the A21 viaduct near Haysden Lake (56254581).

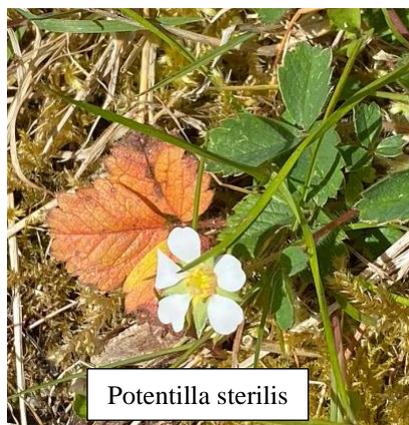
***Potamogeton natans*, Broad-leaved Pondweed:** Several specimens of this plant can be seen in late August, growing in the shallow water close to the riverbank by the flood barrier gates (56364609).



***Potentilla angelica*, Trailing Tormentil:** A few specimens in flower in late August, growing through Brambles in the meadow opposite Friendship Bridge (56864605).

***Potentilla anserina*, Silverweed:** A patch several metres in length observed in flower in early June, growing along the footpath by the Shallows (56724597).

***Potentilla reptans*, Creeping Cinquefoil:** Several plants seen just coming into flower in mid-May, growing on the edge of the footpath alongside Haysden Lake (56194597).



***Potentilla sterilis*, Barren Strawberry:** Several specimens observed in flower in mid-May, growing by the hedge on the eastern side of the entrance road to the park.



***Poterium sanguisorba*, Salad Burnet:** Two specimens observed in late October, growing in the grass sward close to the A21 road viaduct.

***Primula veris*, Cowslip:** One large plant seen in flower in mid-April, by the hedge adjacent to the picnic area (57174595). Probably planted in the past few years.

***Primula vulgaris*, Primrose:** Several plants seen in flower in late March, in Friendship Wood and elsewhere in the park (56504605).

***Prunella vulgaris*, Selfheal:** A common plant throughout the park, especially along the northern edge of Haysden Lake near the A21 viaduct and in Friendship Wood. First observed by the fence between the main car park and the overflow car park (57044588).

***Prunus avium*, Wild Cherry:** Several planted trees observed on the border between the main car park and the Children's Playground (57074586).

***Prunus cerasifera*, Cherry Plum:** There are several early flowering cherries in the park, especially close to Haysden Lake and near the main car park. All likely to have been planted, though some close to the largest tree by Shallows Bridge, probably spread via suckers (57014594).

***Prunus domestica*, Wild Plum:** A mature tree observed in fruit in late July, with branches overhanging the gravel footpath near the A21 road viaduct (56334597).

***Prunus laurocerasus*, Cherry Laurel:** One small specimen observed in late April, growing in Barden Shaw close to the River Medway (57694653).

***Prunus padus*, Bird Cherry:** A couple of trees seen in full flower in mid-April, growing in the meadow just along from Rainbow Bridge, in the planted hedge line by the railway (56634595).

***Prunus spinosa*, Blackthorn:** Very common throughout the park with specimens still full of fruit in early October, growing in the planted hedge line by the railway (56624597), and throughout the park.

***Pteridium aquilinum*, Bracken:** A several metres square patch seen growing along the fence and A21 embankment by the road entrance to Haysden Lake (56334565).

***Puccinellia distans*, Reflexed Saltmarsh-grass:** Several specimens observed in mid-July growing directly under the A21 road viaduct (56204604).

***Pulicaria dysenterica*, Common Fleabane:** Extensive patches of the plant can be seen under the A21 viaduct near the northeast corner of Haysden Lake (56244597), with patches elsewhere by the footpaths around the lake. In flower from late June.



Pulicaria dysenterica

***Quercus robur*, Pedunculate Oak** (known as the English oak): The plant has been much planted across the park, but a line of seven large trees can be seen in the small wood just north of the Straight Mile watercourse (56594592). The largest, with a girth of 4.29 metres, is approximately 228 years old, using the Woodland Trust formula for estimating the age of oaks.

***Quercus rubra*, Red Oak:** One tree can be seen growing close to the entrance road to the main car park, opposite the Ranger's compound (57144595). A planted tree.



Ranunculus auricomus

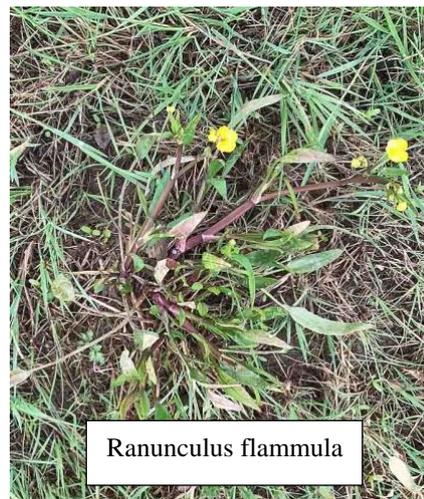
***Ranunculus acris*, Meadow Buttercup:** Numerous plants observed in flower in mid-May, growing in the Water Meadow (56304604).

***Ranunculus auricomus*, Goldilocks Buttercup:** This plant was seen in mid-April growing close to the hedge line of the meadow near Rainbow Bridge (56394597). Scattered specimens can also be seen lining the footpath through Barden Shaw, the wood between Barden Lake and the River Medway.

***Ranunculus bulbosus*, Bulbous Buttercup:** Many plants can be seen growing and in flower on the flood barrier from early May (56384591).

***Ranunculus flammula*, Lesser Spearwort:** A patch several metres square can be seen in the largest scrape in the Water Meadow (5634604). Seen in flower from mid-April.

***Ranunculus repens*, Creeping Buttercup:** This plant can be seen across the park, but a particularly large specimen was seen flowering in Stone Lock in early March (57074607).



Ranunculus flammula



***Rapistrum rugosum*, Bastard Cabbage:**

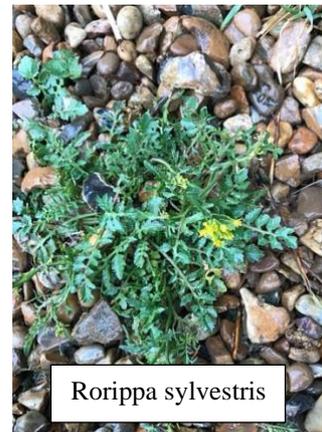
Numerous specimens observed growing under the A21 road viaduct in early May (56274582).

***Reseda luteola*, Weld:** Several examples of the plant can be seen from mid-June, growing on the east side of the flood barrier (56394597). A few specimens were also seen in January 2021, growing under the A21 viaduct near the railway line (56214601).

***Rhamnus cathartica*, Buckthorn:** One tree can be seen growing close to the footpath under the A21 viaduct (56304587). Probably not planted, unlike specimens on the south eastern side of Barden Lake.

***Ribes rubrum*, Red Currant:** Numerous specimens in flower growing close to the footpath running through the wood between the River Medway and Barden Lake (57654647).

***Rorippa sylvestris*, Creeping Yellow-cress:** A few plants in flower seen growing in the gravel surface of the footpath running along the eastern edge of Haysden Lake (56234589).



***Rosa sp.*, Dog Rose:** This rose can be seen in profusion growing around the northern and northeastern sides of Haysden Lake and under the A21 viaduct. Pink- and White-flowered specimens in flower from early May (56064598).

***Rubus fruticosus* agg, Bramble:** Very common throughout the park from mid-April. Excellent specimens (***Rubus armeniacus***) of the plant with large fruit clusters on the eastern edge of Barden Lake (57594640).

***Rubus ulmifolius*** seems to be the most common species across the park.

***Rubus idaeus*, Raspberry:** Numerous specimens with a few ripe berries observed in mid-July, growing in front of the hedge lining the meadow at the eastern end of Barden Lake (57734621).

***Rumex acetosa*, Common sorrel:** Many specimens seen in late May, in the small meadow just beyond the western end of Friendship Wood close to the River Medway (56444609).

***Rumex acetosella*, Sheep's Sorrel:** A metre square patch seen in late April, on the east side of the flood barrier (56394591).

***Rumex conglomeratus*, Clustered Dock:** One specimen observed in early July, growing in the Water Meadow (56214605).

***Rumex crispus*, Curled Dock:** This plant can be spotted in a few locations around the park, especially close to the footpath on the northern side of Haysden Lake with a few specimens in Friendship Wood (56554603) and in the Water Meadow.

***Rumex cristatus*, Greek Dock:** Several specimens observed in mid-July growing directly under the A21 road viaduct (56364582).

***Rumex hydrolapathum*, Water Dock:** Some excellent specimens observed growing on the northern edge of Haysden Lake (56114577).

***Rumex obtusifolius*, Broad-leaved Dock:** One specimen observed growing directly under the A21 road viaduct next to *R. cristatus* (56364582). Also found throughout the park.

***Rumex x pratensis*, Curled Dock hybrid:** Several specimens observed in the Water Meadow in mid-July with parents nearby (56214605)



***Rumex x sagorskii*, Curled Dock hybrid:** One specimen observed in mid-July, growing between the A21 road viaduct and Haysden Lake (56254586).

***Rumex sanguineus*, Wood Dock:** Numerous specimens can be seen in Friendship Wood (56550460) and elsewhere in the park.

***Rumex x schulzei*, Curled Dock hybrid:** One specimen observed in mid-July growing close to the edge of the Water Meadow (56204605).

***Sagina procumbens*, Procumbent Pearlwort:** Numerous specimens observed in the disturbed ground in front of the Leigh Flood Barrier (56284562).



***Sagittaria latifolia*, Duck-potato:** Not the native Arrowhead but the US species and planted in Haysden Lake around 10 years ago. A patch of around two square metres seen in flower in mid-September on the edge of Haysden Lake (56224586).

***Salix alba*, White Willow:** A large specimen, some eight metres tall, with many branches, can be seen close to the edge of Haysden Lake (56234583).

***Salix caprea*, Goat Willow:** Several specimens of this tree can be seen throughout the park. A good example can be seen in the Shallows close to the footpath (56854596).

***Salix cinera*, Grey Willow:** A few specimens observed in mid-July in Barden Nature Reserve (57164607). Numerous specimens can be seen throughout the park with many planted especially around Barden and Haysden Lakes.

***Salix x fragilis*, Hybrid Crack-willow:** Several specimens can be seen throughout the park. Good examples can be seen by the footpath leading to the Straight Mile Bridge (56674595).

***Salix x reichardii*, Hybrid Goat Willow:** a few specimens observed in mid-July, growing close to the bank of the River Medway (56344609).

***Salix viminalis*, Osier:** Several specimens were observed growing in and alongside the watercourse of the Shallows (56874595).

***Sambucus nigra*, Elder:** Several specimens of this plant can be seen across the park. A good example can be seen growing close to the railway line fence near the Shallows (56784597).

***Sanguisorba officinalis*, Great Burnet:** Four specimens observed in flower in late July growing in the grass sward close to the edge of Barden Lake (57564638). A surprising find, and either got here via a water bird or planted by a member of the public.



*Sanguisorba officinalis*

***Schedonorus giganteus*, Giant Fescue:** One large specimen observed in early June growing close to the footpath in Friendship Wood (56464607). A substantial patch of this grass also observed growing in the Barden Nature Reserve, close to the railway line and the River Medway.



*Schoenoplectus lacustris*

***Schoenoplectus lacustris*, Common Club-rush:** One patch of the plant can be seen on the northwestern edge of Barden Lake (57374623).

***Scirpus sylvaticus*, Wood Club-rush:** One sizeable specimen observed in mid-August growing on the edge of the watercourse which runs under Little Lucifer Bridge to the River Medway (57694651).

***Scorzoneroides autumnalis*, Autumn Hawkbit:** One large specimen in flower in mid-July, growing on the edge of the gravel ditch of the western side of the flood barrier (56954593). This plant can also be seen growing throughout the park, especially on the grass bank of the flood barrier.

***Scrophularia auriculata*, Water figwort:** The best place to see this plant is in the waste ground near Haysden Lake (56274564) where numerous specimens in flower were seen in late May, close to the metal fence in front of the flood barrier. This plant can be seen, throughout the park, often as single plants, notably in Friendship Wood and Stone Lock.

***Scrophularia nodosa*, Common Figwort:** A few specimens observed in late April, growing on the edge of the footpath by the River Medway (57534639).

***Senecio squalidus*, Oxford Ragwort:** A few specimens seen in flower in mid-May, under the A21 viaduct (56294585).



*Senecio squalidus*

***Senecio vulgaris*, Groundsel:** One plant was seen in flower in late April, growing in the overflow car

park beyond the main car park (57044588). Numerous specimens can be seen throughout the park usually as single plants by the edges of footpaths.

***Silene dioica*, Red Campion:** Numerous specimens were seen in flower in late April, growing along the Straight Mile (56434584). A patch of the plant can also be seen by the Haysden Lake car park, along with White Campion.

***Silene flos-cuculi*, Ragged-Robin:** Numerous specimens in flower observed in late May, growing in the low bank on the southern side of Barden Lake (57294605). Very likely to have been sown as part of a wildflower seed mix following work to stabilise the lake bank a few years ago.



***Silene x hampeana*, Hybrid Campion:** This hybrid observed in flower in early July, in a small population of *S.latifolia* and *S.dioica*, at the end of the low grass bank by the road entrance to Haysden Lake.

***Silene latifolia*, White Campion:** Two specimens in flower were seen in late April, by the Haysden Lake car park (56384554) growing with Red Campion.

***Sinapis arvensis*, Charlock:** Several specimens observed in early May, growing under the A21 road viaduct (56284582).

***Sison amomum*, Stone Parsley:** One specimen in flower seen in late July, growing by the Ballast Pit fence (57214600). Several specimens of the plant can also be seen growing close to the railway fence in the Water Meadow, as well as by Barden Lake and under the A21 road viaduct (56244594).

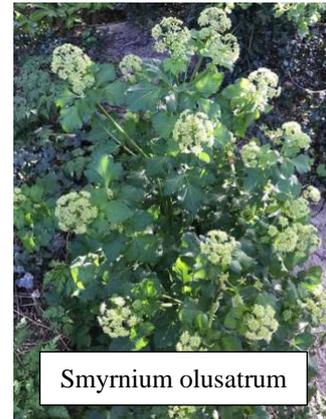


***Sisymbrium officinale*, Hedge Mustard:** Numerous plants seen in early November under the A21 viaduct (56284578).

***Sisymbrium orientale*, Eastern Rocket:**

Numerous specimens seen in mid-April, by the footpath to the north of Haysden Lake (56064599).

***Smyrniium olusatrum*, Alexanders:** Specimens of this plant observed at the flood barrier end of Friendship Wood near the stile by the River Medway (56464610). Also a few plants observed in the Water Meadow.



***Solanum dulcamara*, Bittersweet:** This plant can be seen growing through and over the hedges of the main car park (57044588), and in various places throughout the park especially by the footpaths round Haysden Lake (56124574).

***Solanum nigrum*, Black Nightshade:** A good specimen seen by the Straight Mile footpath (57056456), with other specimens elsewhere in the park.

***Sonchus arvensis*, Perennial Sowthistle:** A common plant throughout the park observed in flower from late June. A good specimen seen by Haysden Lake (56224591).

***Sonchus asper*, Prickly Sowthistle:** One specimen seen in flower in mid-July, growing in the Water Meadow by the flood barrier gravel drainage ditch (56134606). A few other specimens can be seen elsewhere in the park.

***Sonchus oleraceus*, Smooth Sowthistle:** One specimen observed in late February by the footpath of the Straight Mile (56474584).

***Sorbus aucuparia*, Rowan:** Several plants form part of the hedge line by the footpath leading to Rainbow Bridge (56724597). Other specimens can be seen throughout the park.



***Sparganium emersum*, Unbranched Bur-reed:** One specimen observed in early September growing in the River Medway by one of the concrete pillars of the Leigh Flood Barrier gates (56364609).

***Sparganium erectum*, Branched Bur-reed:** This plant can be seen growing in the Shallows, in the Nature Reserve, on the edges of Barden Lake, and in the large pond in the centre of the Water Meadow (56294606). The specimens in

the Water Meadow display good branching with both male and female flowers seen in early August.

***Spergularia marina*, Lesser Sea-spurrey:** A patch some 0.25 square metre in size growing directly under the end of the A21 viaduct close to the fence (56314578). The identification of the plant was confirmed by the Kent Recorder. The list of plants in the Haysden Management Plan also records *S. rubra* as being present (recorded by Sue Buckingham in 1994 north of Haysden Lake on the path between the lake and the railway) but not seen in the current surveys.



***Spirodela polyrhiza*, Greater Duckweed:** Numerous specimens observed in early September growing on the surface of the watercourse in Friendship Wood along with *Lemna minor* (56644595).

***Stachys officinalis*, Betony:** Only one specimen has been identified to date in the park, but others are likely to be present. It was observed near the northern end of the overflow car park beyond the main car park. The bank also contains Wild Carrot, Scabious and Bellflowers (57074587).



***Stachys palustris*, Marsh Woundwort:** Several specimens can be seen in flower in mid-June, growing near the dipping platform by the Shallows (56964586). Can also be seen in profusion in the Water Meadow and in various locations on the edges of Haysden Lake.

***Stachys sylvatica*, Hedge Woundwort:** Several patches seen in flower in late May in Friendship Wood (56564605 and 56484605).

***Stellaria aquatica*, Water Chickweed:** One specimen observed in flower in early August by the River Medway growing up, through and supported by a patch of nettles (56624609).

***Stellaria alsine*, Bog Stitchwort:** A small patch seen growing in the grass sward on the east side of the flood barrier. (56234567).

***Stellaria graminea*, Lesser Stitchwort:** This plant can be seen in several locations across the park, often on the edges of the footpaths, growing close to hedge lines and on grass banks. Seen in flower from April. Some good patches growing near the Shallows (56954590).

***Stellaria holostea*, Greater Stitchwort:** Specimens can be seen in several locations across the park, on the edges of footpaths and on grass banks. Seen in flower in early April in Friendship Wood (56654601).

***Stellaria media*, Common Chickweed:** A few specimens seen in flower in late May growing under the A21 viaduct (56324581). A common plant likely to be found throughout the park.



***Succisa pratensis*, Devil's-bit Scabious:** One specimen observed in flower in early September, in the meadow beyond Rainbow Bridge (56644595).

***Symphytum officinale*, Common Comfrey:** There are scattered patches of the plant throughout the park, notably along the footpaths of the Straight Mile and between the Shallows and the railway line fence (56794598).

***Symphytum x uplandicum*, Russian Comfrey:** There are scattered patches of the plant throughout the park, notably along the footpaths of the Straight Mile and between the Shallows and the railway line fence (56794598).

***Tamus communis*, Black Bryony:** Specimens of this plant can be observed in a few places throughout the park, usually on the railway line fence near Barden Lake, with other specimens growing over other vegetation along the Straight Mile (56434583).

***Tanacetum vulgare*, Tansy:** Another common plant throughout the park by footpaths and meadows, with numerous good specimens seen coming into flower in late June, near Haysden Lake (56234583).

**Taraxacum, Dandelions:** A very common plant throughout the park next to footpaths and in meadows. Several patches also near Haysden Lake (56984595). There are clearly different microspecies present in the park but no attempt to identify these has been undertaken yet.

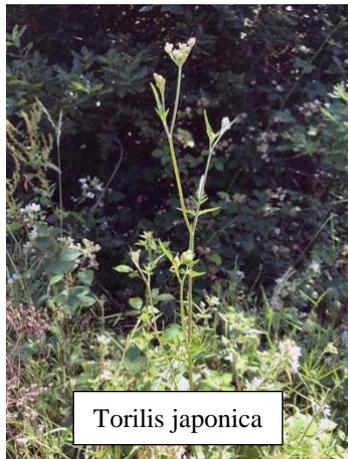
**Taxus baccata, Yew:** There are a few young yew trees in the park with most seen in Barden Shaw, the wood between Barden Lake and the River Medway (57284617) and in Audley Wood (57704642).

**Teucrium scorodonia, Wood Sage:** A few specimens were seen growing close to the railway fence on the edge of the Water Meadow near to the point at which it is crossed by the A21 viaduct (56274603).



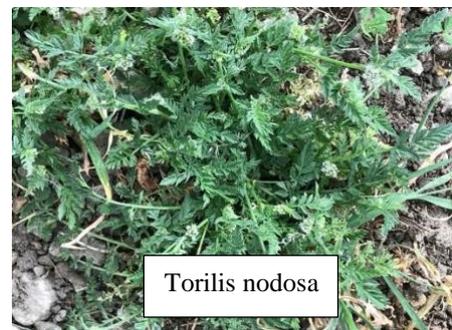
**Tilia cordata, Small-leaved Lime:** Two planted trees can be seen in Friendship Wood (56524602)

**Tilia x europaea, Lime:** Two planted but recently cut trees with shoots growing up from their stumps in Friendship Wood (56494602).



**Torilis japonica, Upright Hedge-parsley:** Several specimens were seen in flower in mid-June, by the footpath on the northern bank of Haysden Lake (56934589). The flowers have tinges of pink. Other specimens seen on the low grass bank opposite Haysden Lake car park.

**Torilis nodosa, Knotted Hedge-parsley:** The only place the plant has been observed is directly under the A21 viaduct near Haysden Lake (56324581).





Tragopogon pratensis Ssp minor

**Tragopogon pratensis Ssp minor, Goat's-beard:** Several specimens observed in flower in late June, growing in the meadow next to the Shallows watercourse (56954595). The seed heads of the plant are noticeably larger than those of dandelion and other yellow composites. Specimens can be seen across the park.

**Tragopogon x mirabilis, Tragopogon hybrid:** Two specimens were observed in flower in early June (2021) close to several T.pratensis Ssp minor (56424609 and 56424608). Their location was in the small meadow just east of the Leigh Flood Barrier. No specimens of T.porrifolius found so far in the park, or in adjacent fields that are accessible.



**Trifolium dubium, Lesser Trefoil:** A few specimens seen in flower in early May, on the east side of the flood barrier (56374595).

**Trifolium pratense, Red Clover:** A few specimens seen in flower as late as early November, growing on the west side of the flood barrier (56344583).

**Trifolium repens, White Clover:** Numerous specimens seen in flower in late May, in the Water Meadow (56354602).

***Tripleurospermum inodorum*, Scentless Mayweed:** Several specimens seen in flower in late July, close to the gravel drainage ditch on the west side of the flood barrier (56164606).

***Triticum aestivum*, Bread Wheat:** One specimen observed in mid-July growing close to the hedge line at the western end of Barden Lake (57234605)

***Typha latifolia*, Bulrush:** This plant seen in several places throughout the park, notably in Barden Lake (57624631) and along much of the Shallows watercourse.

***Ulex europaeus*, Gorse:** Several specimens seen growing by the footpath along the northwestern edge of Haysden Lake (56994594).

***Urtica dioica*, Common Nettle:** Very common throughout the park especially on the edges of the meadows alongside the Shallows and the River Medway. Good specimens of the plant can also be seen growing by the railway line fence north of the Shallows (56874598).

***Urtica dioica ssp galeopsifolia*, Stingless Nettle:** A few specimens observed in early July growing with *Urtica dioica* close to the gate of Barden Nature Reserve (57214605).

***Valerianella carinata*, Keel-fruited Cornsalad:** A few specimens observed in flower in early May, growing under the A21 road viaduct (56294583).



***Verbascum nigrum*, Dark Mullein:** One specimen seen in flower in early August, by the bank in the overflow car park of the main car park (57084584).

***Verbascum thapsus*, Great Mullein:** One specimen observed in flower in late June, growing amongst several teasels on the edge of the waste ground near the flood barrier (56304565).

***Verbena officinalis*, Vervain:** Several specimens seen in flower in mid-July, on the top of the flood barrier close to the A21 viaduct (56274576). The grass on the flood barrier is mowed regularly from May onwards by the Environment Agency to comply with earth dam regulations. Frequent visits are required to spot this plant.



***Veronica arvensis*, Wall Speedwell:**

Several specimens observed in flower in late July growing on the eastern side of the Leigh Flood Barrier (56394598).

***Veronica chamaedrys*, Germander Speedwell:** This plant seen throughout the park growing close to the edges of footpaths. Seen in flower from early April. A good place to see it is along the Straight Mile, often associated with Ground-ivy and Common Dog-violet in early Spring (56324597).

***Veronica hederifolia*, Ivy-leaved Speedwell:** Numerous specimens observed in bud in early March, by the edge of the Straight Mile footpath (56664587).

***Vicia villosa*, Fodder Vetch:** Numerous specimens observed in flower in early July, close to several patches of *Vicia cracca* that were also in flower (56254609).

***Veronica montana*, Wood Speedwell:** Several specimens seen in flower in mid-April, by the edge of the footpath along the Straight Mile (56664589) and in Friendship Wood.

***Veronica agrestis*, Green Field-speedwell:** Several specimens seen in flower as late as early November, on the low bank of the Haysden Lake car park (56364561).

***Veronica persica*, Common field-speedwell:** Several patches of the plant seen in flower in April, along the Straight Mile (56574588) and in numerous other places throughout the park.

***Veronica serpyllifolia*, Thyme-leaved Speedwell:** This plant seen in several places throughout the park, especially in Friendship Wood (56524602) and in the waste ground opposite the car park near Haysden Lake (56314561).



***Viburnum lantana*, Wayfaring-tree:** One tree, probably planted some 4-5 years ago, seen on the edge of the cut meadow close to the River Medway (56904601).

***Viburnum opulus*, Guelder-rose:** A fine specimen of the plant can be seen growing in the hedge lining the footpath to Friendship Bridge and opposite a patch of crack willow trees (56664594).

***Vicia cracca*, Tufted Vetch:** Several specimens observed in flower in mid-June, close to the footpath around Haysden Lake (56904586).

***Vicia sativa*, Common Vetch:** Two specimens observed in late April, in front of a fine patch of flowering Germander Speedwell, immediately west of Friendship Bridge (56704606).

***Vinca major*, Greater periwinkle:** A specimen of the plant in flower was observed growing through the wooden fence of the car park at Haysden Lake in early February. Probably originating from dumped material on the waste land on the other side of the fence (56394556).

***Viola odorata*, Sweet Violet:** Several specimens seen in flower in mid-March, growing by the road by the Ranger's compound (57219576).

***Viola reichenbachiana*, Early Dog-violet:** A few specimens seen in flower in early March, growing on the low bank just before Lucifer Bridge (57664649). A few plants were also seen in early March, on the southern edge of Stone Lock.

***Viola riviniana*, Common Dog-violet:** Numerous specimens seen in flower in early March, growing by the hedge on the eastern side of the flood barrier (56424598). A few scattered patches can also be seen throughout the park.

# Survey Plans for 2022

## Grasses

There was limited time to record all the grasses present in the park in 2020 and 2021, and the aim is to do this over the Spring and summer months of 2022.

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