

7.4 HABITAT SURVEY AND TARGET NOTES

- 7.4.1 The habitat survey was based on fieldwork undertaken between November 2012 and September 2013.
- 7.4.2 The habitat plan is presented as Figure 7.4.1. Specific habitats within the site are described by Target Notes TN1 to TN19, in Table 7.4.1. Each note includes a brief description of the habitat and the main plant species present. The habitat plan is based on a map-accurate aerial photograph. However, it should only be considered approximate because the habitat features have been plotted by eye, and in several cases, the habitats merge gradually into one another rather than having clearly defined boundaries. Some minor features such as fences have been omitted from the habitat map to avoid unnecessary cluttering. The habitat map has been shown on an aerial photographic background to help set the site in the context of the surrounding area.
- 7.4.3 Figure 7.4.2 shows the study area extended northwards as far as the M4 motorway bridge. The extended area was included to accommodate off-site mitigation works. The habitats within this area are described by Target Notes A1 to A7.

Table 7.4.1. Habitat Survey Target Notes.

Target Note	Description
1	Amenity grassland. A recently established short-mown sward dominated by Perennial Rye-grass, White Clover and Annual Meadow-grass. Associated species occurring at a low frequency include Yorkshire Fog, Greater Plantain, Broad-leaved Dock and Creeping Buttercup. The ground appears to be poorly drained, and drilling investigations had resulted in several areas of vehicle ruts at the time of the November survey.
2	Ditch and reeds. A wet ditch known as Lottery's Reen flows westwards from the eastern boundary to an outfall into the River Usk. Its steep northern bank is mostly fringed by Bramble and Willow scrub, with Common Reed dominating the more open parts at its eastern end. The southern bank is bordered by a steep-sided scrub-covered bund at its eastern end, but the western part is more gently sloping, and Common Reed extends southwards from it to merge into the adjacent damp grassland. The ditch itself appears to support a rather limited flora, dominated by Common Reed, with local Fool's Water-cress and Hemlock Water-dropwort at the margins. A small stand of Indian Balsam is present on part of the northern bank. A short, apparently isolated section of wet ditch beside the track to the south-west of Lottery's Reen also contains standing water and is regularly disturbed by dogs, making it turbid for much of the time. There are several old tyres in the water. The ditch flora includes Bulrush, Common Reed, Branched Bur-reed and Common Duckweed. False Fox-sedge is locally prominent at the margins.
3	Damp grassland and scrub at eastern boundary. The site's eastern margin is bordered by a strip of poorly drained ground that appears to be occasionally used as a path. Common Reed dominates most of the strip, and this is accompanied by Nettle, Large Bindweed and a few plants of Hemlock Water-dropwort. This grades into a small patch of damp grassland with Hard Rush and Silverweed at its

Target Note	Description
	southern end. The drier ground to the northern part of the strip supports neutral grassland, dominated by Yorkshire Fog, Red Fescue, Creeping Bent, White Clover, Tall Melilot, Hemp Agrimony, Wild Parsnip, Michaelmas Daisy, Mugwort and Perforate St.John's-wort. A damp, scrub-covered ditch is present just outside of the boundary fence.
4	Ditch and scrub. The western end of the ditch at TN2 passes between steep banks, densely shaded by Bramble and Hawthorn, with localised patches of Japanese Knotweed. The channel itself has very little vegetation. Beyond the ditch, the scrub margins merge into tall herbs and rough grassland, with the main species including Cock's-foot, False Oat-grass, Creeping Thistle, Mugwort, Hogweed, Couch, Nettle, Greater Willowherb and Large Bindweed. A low concrete wall is present beside the path along the western side of the ditch.
5	Damp grassland. Damp ground dominated by a mix of Creeping Bent, Cock's-foot, Common Reed, Nettle, Hard Rush, Amphibious Bistort, Hairy Sedge, Marsh Bedstraw, Greater Bird's-foot Trefoil, Hemlock Water-dropwort, Red Fescue, Meadow Foxtail and False Oat-grass. The sward grades into dense Greater Willow-herb and Nettle at its western side. Scattered Bramble and Willow Seedlings are present. The area had been subject to ground investigation work prior to the November survey, which had left many deep ruts through the wet ground. Up to three Snipe were observed in this area during the winter, and a clump of Frog spawn was found in one of the water-filled ruts in March 2013.
6	Tall herbs and scrub. A mosaic of recently cleared Bramble scrub and wet grassland. At the time of the November survey this area comprised largely bare ground and flattened Bramble scrub, having been subject to recent drilling investigations. By June the area was largely dominated by young regrowth of Bramble and Wild Raspberry, with tall herbs particularly Nettle and Greater Willowherb. A relatively undisturbed patch of drier grassland near the eastern side of the area is dominated by Wild Parsnip, Tall Melilot, Tansy, Hairy Sedge, Creeping Bent and Creeping Thistle.
7	Dense scrub. A block of scrub, mainly formed from Silver Birch saplings, which reach a height of approximately 5m. Bramble forms an understory through much of the plot, and there are occasional small plants of Hawthorn, Grey Willow, Oak and Butterfly Bush. Remnants of grassland vegetation are present throughout, indicating a recent transition from more open conditions. The ground flora includes Ivy, Colt's-foot, Hairy Sedge, Glaucous Sedge, Common Reed, Red Fescue, Hard Rush, Fleabane and Wild Parsnip.
8	Tall ruderals and scrub. An area of recently cleared Bramble scrub with ground investigation drilling work taking place at the time of the November survey. Most of the area comprised bare ground and flattened Bramble scrub. By June the area had regained much of its vegetation cover, supporting abundant Nettle, Creeping Thistle, Michaelmas Daisy, Greater Willowherb and Bramble regrowth. Celery-leaved Buttercup seedlings were locally abundant in a few more open areas. The western margin of the area includes a dry Bramble-covered ditch, with localised Pendulous Sedge and a few small Japanese Knotweed plants. The eastern margin is a shallow-sided dry ditch, partially covered by Bramble and young Willow bushes, grading into the adjacent tall herb vegetation (TN10), and

Target Note	Description
	locally dominated by Hard Rush, Cock's-foot and Hairy Sedge.
9	Sparsely vegetated ground. A level area of compacted concrete rubble and stone chippings that has been partially colonised (to approximately 20% cover) by sparse ephemeral plants. The ground is poorly drained, with temporary puddles of standing water observed in a few places during the November survey. The most abundant plants include mosses, Black Medick, Creeping Bent, Ragwort, Yorkshire Fog, Hard Rush, Willowherbs, Greater Plantain, Scentless Mayweed, Glaucous Sedge and Creeping Buttercup. The same mix of species is present in greater abundance forming a developing neutral grassland sward at the margins of the area. However, the grassland edges are taller, and include a moderate range of additional species, including Herb Robert, Late Michaelmas Daisy, Hemp Agrimony, Red Clover, Yarrow, Ivy, Ribwort Plantain, Tall Melilot, Creeping Cinquefoil, Wild Parsnip, Timothy, Perforate St.John's-wort, Fleabane, Meadow Vetchling, Common Vetch and Water Figwort. A single plant of Prickly Lettuce was observed growing in a small heap of tipped soil. Scattered scrub within the grassy margins includes Goat Willow, Bramble, Butterfly Bush and Cotoneasters. The boundary fences at the south and east of this area also include a high proportion of Garden Privet (possibly the remains of former hedges).
10	Tall herbs. Damp ground supporting a tall sward dominated by Greater Willowherb, Nettle, Late Michaelmas Daisy and patchy Bramble. Other associated plants include Creeping Thistle, Teasel, Cleavers, Broad-leaved Willowherb and Hairy Sedge.
11	Scrub, ditch and concrete along boundary. A strip of derelict industrial land, including a fence-line fringed by dense Bramble, Willow, Garden Privet and Birch. The ground to the south of the fence comprises old concrete hard-standing, which has become patchily covered by mosses, Ivy and scattered bushes of Goat Willow, Dog Rose, Cotoneaster and Butterfly Bush. A scrub-covered mound of earth at the eastern end of the fence, and this contains Japanese Knotweed, with locally abundant Nettle, Large Bindweed and Bramble. A shallow ditch is present along the north side of the fence. It is dry along most of its length, but the more open western part supported shallow water at the time of the survey. Plants present in and around the ditch include Creeping Bent, Hard Rush, Creeping Buttercup, Soft Rush, False Fox-sedge, Nettle, Couch and Greater Bird's-foot Trefoil.
12	Rough grassland and scrub. The western side of the study area supports a strip of species-poor semi-improved grassland with patchy scrub. A vehicle track runs along its centre, and a smaller footpath extends along its western edge. Both paths are heavily used by local people exercising their dogs. The grassland has a coarse, tussocky, species-poor sward, dominated by False Oat-grass, Rough Meadow-grass, Creeping Bent, Cock's-foot, Couch, Common Bent and Red Fescue. Perennial Rye-grass and Annual Meadow-grass are locally abundant near to the paths. Meadow Barley occurs very locally. Other associated plants include Nettle, Creeping Cinquefoil, Bird's-foot Trefoil, Wild Parsnip, Common Sedge, White Clover, Tall Melilot, Hoary Cress and Meadow Vetchling. Wild Onion occurs in a few small patches. Bramble scrub forms localised patches, often occurring with Nettle and Hogweed. Several small standard trees of Horse

Target Note	Description
	Chestnut have been planted at intervals beside the main path; they appear to be in poor condition, apparently suffering from canker, and some have been subject to vandalism.
13	Tall herbs and scrub. An east-facing bank dominated by dense Bramble scrub in its upper part, grading into tall herb vegetation towards the eastern boundary fence. The scrub is very species poor, with the few accompanying species including Butterfly Bush, Cleavers, Nettle, Ivy, Male Fern and common mosses. The tall herb vegetation is locally dominated by Japanese Knotweed, which extends beyond the boundary fence. Other species in the tall herb vegetation include Late Michaelmas Daisy, Hemp Agrimony, Nettle, Wild Parsnip and Cleavers.
14	Saltmarsh (outside the site boundary). The banks of the River Usk are formed by intertidal mud, and the upper fringe of this supports saltmarsh vegetation. The flora is patchy, with the lower parts tending to be dominated by stands of single species, including Common Reed, Sea Aster, Sea Club-rush and Common Salt-marsh Grass, while the upper parts support a grassy sward of Couch, Creeping Bent and Red Fescue, with local patches of Common Reed. Several landing stages and old boats are present along the shoreline, although very few appear to be functional. The majority of footprints observed in the tidal mud had been made by dogs, but footprints made by Fox, Brown Rat and birds were also observed.
15	Willow Trees. The two largest trees within the site are Goat Willows on the east-facing bank near the Sea Cadet centre. The trunk of the southern one is covered by Ivy. Both trees were examined with a view to their potential for supporting bats but no cracks or cavities were visible and they were considered unlikely to be used as roost sites.
16	East-facing bank. An extension of the bank described in TN13, but more densely covered by scrub, and including several diseased standard Horse Chestnut trees near to the top of the bank. Patchy Japanese Knotweed is present, especially near to the gateway of the Sea Cadet centre. The eastern edge of the bank, beside the Sea Cadet access track is fringed by a narrow strip of species-poor rough grassland.
17	Scrub margin. The narrow strip between the Sea Cadet access track and the eastern boundary fence supports a narrow belt of species-poor semi-improved grassland and a fringe of scrub, including Bramble, Butterfly Bush, Goat Willow, Hawthorn, Apple and Sycamore. The ground flora includes Ivy, Cock's-foot, Couch, Traveller's Joy and Field Horsetail. A line of mature Monterey Cypress trees is present beside the central section of the track, overhanging the boundary into the site.
18	East-facing bank. Dense Bramble scrub on an east-facing bank, similar to the vegetation described in TN13 and 16, but with less of a tall herb component and apparently no Japanese Knotweed. The blocks of dense scrub are fringed by a very narrow strip of rough grassland, and several diseased Horse Chestnut trees are present near the top of the slope.
19	Amenity grassland. A species-poor sward of regularly mown short grassland. It is dominated by Perennial Rye-grass, White Clover and Annual Meadow-grass, with

Target Note	Description
	lesser amounts of Dandelion, Daisy, Greater Plantain, Broad-leaved Dock and Creeping Buttercup. The northern part of the sward grades into short, species-poor semi-improved grassland, which includes local bare areas and ephemeral plants and appears to be occasionally driven across by vehicles.
A1	Species-poor grassland and scattered scrub. An extension of the habitat described in TN12, dominated by Cock's-foot grass and patchy Bramble. Several small trees of Hawthorn and Horse Chestnut are present. The amenity grassland to the east is continuous with the grassland of TN1.
A2	A west-facing slope with dense Bramble and Blackthorn scrub, fringed by patchy Common Reed. Further north the vegetation includes a patch of more open ground damp ground with Flag Iris, Fleabane, Couch, Hemlock Water-dropwort and Greater Willowherb and a mature Crack Willow tree. Local Japanese Knotweed is present near the top of the bank, and there is a high level of use by dogs and people through most of this area.
A3	Amenity grassland and trees. A strip of species-poor sward of heavily trampled amenity grassland between the school and the river-bank. The grassland is bordered by an avenue of over-mature Horse Chestnut trees. The sparse flora at the top of the scrubby bank includes Ivy-leaved Speedwell, Lesser Celandine, Lords and Ladies and Wild Onion.
A4	Pond. A new pond in the grounds of the school (viewed through fence). This is locally dominated by Bulrush, with occasional Brooklime, Water Starwort, Branched Bur-reed and Duckweed. Young Willows and Soft Rush are present at the margins. No signs of fish or amphibians were observed.
A5	Reeds and scrub. A relatively wide fringe of Common Reed, grading into Bramble and dense Blackthorn higher up the bank. The bank is divided by an almost level mid-slope plateau, which is locally water-logged and supports temporary standing water with Hemlock Water Dropwort and Greater Willowherb. This is the least disturbed part of the bank, with relatively few footprints made by dogs and people.
A6	Japanese Knotweed. A large, dense stand of Knotweed on the west-facing slope between the playing fields and the intertidal area. A narrow fringe of Blackthorn, Bramble and Elder is present at the lower edge, beside the reed-dominated intertidal area. Virginea Creeper is locally frequent. There are few associated ground flora species through most of this area, but occasional plants of Lords and Ladies, Ivy, Bluebell, Wild Onion and Male Fern are present in a few places near the top of the slope.
A7	Dense scrub. A species-poor plantation of Hawthorn and Pine, with a ground flora dominated by Nettle, Bramble, Cleavers and Bindweed.

Figure 7.4.1. Phase 1 habitat map.



Figure 7.4.2. Phase 1 habitat survey extended north to include off-site mitigation area.

