

TARGET NOTE 1:

HABITAT(S): Wet Ditch

DESCRIPTION:

This is a man-made overflow channel, between 0.5-1m wide, which runs along the northern boundary of the site. At the time of survey there was water to a depth of up to 30cm which was flowing from east to west. The substrate was clay and there was little aquatic vegetation. There were frequent inlets from the fields to either side of the ditch.

To the east, the banks were a clear v-shape, to a height of between 4-5m above the water at an angle of approximately 45°. Towards the west, the bank was flatter and less artificially contoured. Some areas of flat plain were present towards the western end – here the bank was set 2-3m away from the edge of the water and areas in between were damp and boggy with grass and some bulrush (*Typha spp.*) present. In some places, the bank was composed of gabions which had a heavy covering of moss and grasses in places. Part of the ditch and bank towards the centre of the Application Site was not accessed as it was on private land outside of the Application Site boundary.

Species recorded as marginals include bulrush, willowherb (*Epilobium spp.*), fool's watercress (*Apium nodiflorum*), soft rush (*Juncus effusus*) and rare marsh marigold (*Caltha palustris*). Vegetation on the banks was largely grass dominated with false oat-grass (*Arrhenatherum elatius*), cock's foot (*Dactylis glomerata*) and Yorkshire fog (*Holcus lanatus*) with frequent creeping buttercup (*Ranunculus repens*) and occasional dock (*Rumex spp.*), willowherb, shining cranes bill (*Geranium lucidum*) and ribwort plantain (*Plantago lanceolata*) and rare hogweed (*Heracleum sphondylium*) and broad leaf plantain (*Plantago major*). In some places, there were trees, primarily ash (*Fraxinus excelsior*) and alder (*Alnus glutinosa*) present adjacent to the bank offsite. The bank on the site side was covered with grass and small herbaceous species.

Mallards (*Anas platyrhynchos*) and a yellow wagtail (*Motacilla flava*) were seen using the ditch.

TARGET NOTE 2:

HABITAT(S): Improved Grassland

DESCRIPTION:

A grass access track running along the southern bank of the overflow channel, TN1, on the site side. There was sparse grass cover, predominantly perennial rye grass (*Lolium perenne*) with Yorkshire fog and creeping bent (*Agrostis stolonifera*) and occasional dandelion (*Taraxacum officinale agg.*), cow parsley (*Anthriscus sylvatica*), white clover (*Trifolium*

repens) and creeping buttercup. Bare ground was present where vehicles passed along the track with some moss covering.

TARGET NOTE 3:

HABITAT(S): Intact hedge

DESCRIPTION:

A hedge which has been managed to approximately 1.5m height, although re-growth from the top extended for a further 0.5m at the time of survey, and approximately 1.5m wide. The hedge is generally in good condition although it is gappy in places. There is evidence that the hedge has been laid in the past and has more recently been re-enforced with railway sleepers in places.

The dominant species within the hedgerow is hawthorn (*Crataegus monogyna*) although blackthorn (*Prunus spinosa*), field maple (*Acer campestre*), ash, hazel (*Corylus avellana*) and elder (*Sambucus nigra*) were also present. Six mature standard ash trees were present within the hedgerow as well as one small English oak (*Quercus robur*). Bramble (*Rubus fruticosus*) and occasional cleavers (*Galium aparine*) were found growing throughout the hedge. Beneath the hedge was largely bare ground with leaf litter.

TARGET NOTE 4:

HABITAT(S): Tall ruderal

DESCRIPTION:

A patch of tall ruderal vegetation growing adjacent to the hedgerow TN3. The most prominent species include cock's foot, nettle (*Urtica dioica*), creeping thistle (*Cirsium arvense*) with frequent bramble, hogweed, mugwort (*Artemisia vulgaris*), reed canary grass (*Phalaris arundinacea*), false oat grass, nipplewort (*Lapsana communis*), ragwort (*Senecio jacobaea*) and cleavers. Rosebay willowherb (*Epilobium angustifolium*) was locally dominant in small patches. Occasional creeping bent and rare tufted hair grass (*Deschampsia cespitosa*) were present throughout the habitat. Where ruderal cover was less dense, creeping buttercup, ground ivy (*Glechoma hederacea*), cow parsley and Yorkshire fog were present. A low earth bank, approximately 0.5m high with gently sloping banks, is present to the south-east of the habitat – here there is abundant moss as well as ruderal species. There is occasional suckering of blackthorn from the adjacent hedgerow (TN3) to the north-western end of the habitat.

TARGET NOTE 5:

HABITAT(S): Tall ruderal

DESCRIPTION:

This is a patch of tall ruderal vegetation abutting the fence which separates the field from the residential terrace of properties to the north-east. Species include dock, nettle, cleavers, hogweed, false oat grass, cock's foot, rosebay willowherb and creeping thistle. The eastern side of the habitat is dominated by tussocky false oat grass with frequent ruderals above, whilst the western side closer to the houses is dominated by the ruderals; primarily nettle, creeping thistle and rosebay willowherb.

TARGET NOTE 6:

HABITAT(S): Semi-improved grassland

DESCRIPTION:

This is a rough, tussocky false oat-grass dominated grassland with Yorkshire fog, red fescue (*Festuca rubra*) and occasional clumps of cock's foot. Perennial rye grass was also recorded occasionally, especially close to a path which runs close to the hedgerow, TN3, and was frequented by dog walks throughout the survey. Frequent creeping buttercup was recorded throughout along with occasional dock, ribwort plantain and dandelion. There were frequent molehills.

TARGET NOTE 7:

HABITAT(S): Semi-improved grassland

DESCRIPTION:

This is an area of semi-improved grassland which was previously maintained as a sports pitch and appears to be more improved than the adjacent TN6. Grass species include perennial rye grass, Yorkshire fog, false oat grass, red fescue and meadow foxtail (*Alopecurus pratensis*). Herbaceous species include frequent creeping buttercup as well as rosebay willowherb, white clover and ribwort plantain and rare dock, spear thistle and hogweed. The grassland becomes more tussocky towards the southern corner. There were frequent molehills.

PROTECTED SPECIES:

Badger trails and feeding signs were recorded in this area.

TARGET NOTE 8:

HABITAT(S): Semi-improved grassland

DESCRIPTION:

This is an area of semi-improved grassland which was previously maintained as a sports pitch; there are the remains of a concrete post and metal pole fence between this and TN7. This is a tussocky false oat-grass dominated grassland with a relatively thick thatch present. Occasional clumps of cock's foot were present along with common bent, occasional creeping bent and rare red fescue. Herbaceous species include frequent creeping buttercup (which was locally dominant in places), occasional creeping thistle, ragwort and ribwort plantain and rare dock. The proportion of the ruderals increased towards the transition between this habitat and the strip of tall ruderal (TN10) to the south. Small mammal runs were observed through the thatch and a field vole was seen under refugia.

PROTECTED SPECIES:

There were frequent badger trails and feeding signs, especially where creeping buttercup was locally dominant exposing earth in between.

TARGET NOTE 9:

HABITAT(S): Tall ruderal

DESCRIPTION:

This is an area of dense nettle, creeping thistle and rosebay willowherb with bare ground and moss beneath. Some false oat grass and cock's foot were present with occasional dock, tufted hair grass, ragwort and meadow foxtail. Small patches of reed canary grass were recorded. Tussocky patches dominated by false oat grass were present where the cover of ruderals was less dense.

TARGET NOTE 10:

HABITAT(S): Tall ruderal

DESCRIPTION:

This is a patch of tall ruderal vegetation at the edge of the field TN8. Below and in between the tall ruderal vegetation, the grassland maintains the same character as TN8. Ruderals include hogweed, rosebay willowherb, dock, cock's foot, nettle, ragwort and creeping thistle along with bramble in places.

PROTECTED SPECIES:

A badger trail was recorded running from south-east to north-west.

TARGET NOTE 11:

HABITAT(S): Tall ruderal/bramble scrub mosaic with scattered broadleaf trees

DESCRIPTION:

This is a bank which runs parallel to the river TN12. It rises to a height of approximately 2m above the field (TN7 & TN8) to the south with a gently sloping bank at 35°. This bank is widest towards the north-east but forms a thinner strip to the south-west, narrowing when it passes the boundary fence of the Churnet works to the west.

Tall ruderal species include rosebay willowherb, hogweed, nettle and dock along with ivy (*Hedera helix*) and bramble beneath. In other places, the bramble is dense and forms patches of scrub. Other species in the field layer include cock's foot, false oat grass, ground ivy, creeping buttercup and rare lesser celandine (*Ranunculus ficaria*). A dense stand of tall rosebay willowherb was recorded along the bank which was almost a monoculture. There is abundant raspberry on the bank at the southern end along with bramble, field bindweed (*Convolvulus arvensis*), ivy, nettle and rare bracken. Ash and hawthorn whips were also present towards this end.

A number of semi-mature and mature alder trees were recorded growing close to the river. Other trees included sycamore (*Acer pseudoplatanus*), mature willow (*Salix spp.*), lime (*Tilia spp.*) beech (*Fagus sylvatica*) and ash.

The bank sloping towards the field (TN7 & 8) was covered with grass and herbaceous species, similar to those found in the field, along with ruderal species including nettle, dock and hogweed.

PROTECTED SPECIES:

A badger latrine was recorded within this habitat, along with feeding signs and strong trails which run parallel to the river and into the grassland to the north-west. Beneath the bridge at the northern end of this bank, badger footprints were noted in the mud indicating that the badgers are entering and leaving the Application Site at this point.

TARGET NOTE 12:

HABITAT(S): River

DESCRIPTION: See River Corridor survey.

TARGET NOTE 13:

HABITAT(S): Residential houses and gardens

DESCRIPTION:

On the eastern bank of the river are residential houses and gardens.

TARGET NOTE 14:

HABITAT(S): Intact hedge

DESCRIPTION:

This is a steep-sided bank which rises to a height of approximately 1.5m. It appears to be artificial and runs along the boundary between Churnet works and the field. Newly planted hawthorn whips are found along the peak of the bank whilst the sides are primarily bare ground with some moss, bramble, field bindweed and nettle with rare rose (*Rosa spp.*). Very little grass was present – only occasional clumps of false oat grass.

Several mature/semi-mature trees were present along the bank, primarily ash although a single semi-mature English oak and a single sycamore (*Acer pseudoplatanus*) were present.

TARGET NOTE 15:

HABITAT(S): Defunct hedgerow

DESCRIPTION:

This is the remnant of a hedgerow around a wire fence which consists of unmanaged shrubs in places and individual trees in others. The shrubs and saplings towards the north-western end, including hawthorn, hazel, young ash and field maple are to a height of approximately 5m. There is a single mature sycamore and several mature hawthorn trees towards the south-eastern end.

TARGET NOTE 16:

HABITAT(S): Tall Ruderal

DESCRIPTION:

This is a patch of tall ruderal vegetation, including rosebay willowherb, nettle and dense bramble scrub, found between TN14 and TN15.

PROTECTED SPECIES:

This area was not accessed and visibility was poor; it would provide suitable habitat for badger setts although no strong trails were observed entering the area.

TARGET NOTE 17:

HABITAT(S): Semi-improved grassland

DESCRIPTION:

This is a tussocky, false oat-grass dominated grassland with a dense thatch. Occasional tufted hair grass, cocks foot, Yorkshire fog, vetch (*Vicia spp.*), dock, ragwort, hogweed and creeping thistle were present, along with rare patches of reed canary grass towards the wet ditch to the north-east. Rare ash saplings occurred through the sward. Trails characteristic of small mammals such as field voles (*Microtus agrestis*) were recorded especially within the dense thatch.

TARGET NOTE 18:

HABITAT(S): Semi-improved grassland

DESCRIPTION:

This is a semi-improved grassland between the overflow channel (TN1) and the semi-improved grassland (TN17). It is in private ownership and so was not accessed or surveyed, although it did appear to be more maintained than the semi-improved grasslands on the Application Site.

TARGET NOTE 19:

HABITAT(S): Bare ground/Hard standing/Tall ruderal mosaic.

DESCRIPTION:

This is a shady area with a large building immediately to the south and much industrial debris on the ground. There are large areas of bare ground with sporadic (although sometimes dense) moss cover, especially on areas of hard standing. Bramble, nettle and rosebay willowherb were all frequent. Several elder shrubs, hawthorn whips and young ash saplings were present, along with rare ornamental shrubs and honeysuckle (*Lonicera spp.*). Other occasional species include dandelion, creeping buttercup, field bindweed, ground ivy and ribwort plantain. Patches of Yorkshire fog were also present in places.

TARGET NOTE 20:

HABITAT(S): Tall ruderal

DESCRIPTION:

This is a shady area with much industrial debris and areas of bare ground and leaf litter. Field bindweed, nettle and bramble were present. Some patches of grass, predominantly false oat

grass, cock's foot and Yorkshire fog, were present along with creeping buttercup, ribwort plantain and mugwort. There were many self-sown alder saplings present.

TARGET NOTE 21:

HABITAT(S): Bare ground/Ephemeral vegetation

DESCRIPTION:

Lots of bare ground, which appears contaminated from the employment area, with patchy vegetation including moss, cock's foot, Yorkshire fog and rosebay willowherb.

TARGET NOTE 22

HABITAT(S): Tall ruderal

DESCRIPTION:

This is a bank of tall ruderal vegetation including rosebay willowherb, reed canary grass, nettle, creeping thistle, cock's foot and bramble with occasional mugwort, burdock (*Arctium lappa*), ragwort, dock, black knapweed (*Centaurea nigra*) hogweed and field bindweed. Bare ground is present in places with some moss covering. There was an alder tree and several young alder whips present.

PROTECTED SPECIES:

Badger trails were observed entering this dense vegetation and this would provide good habitat for badger setts although poor visibility prevented the determination of any setts present.

TARGET NOTE 23

HABITAT(S): Tall ruderal

DESCRIPTION:

This is an area of tall ruderal vegetation growing on top of piles of rubble. Species include rosebay willowherb, reed canary grass, nettle, creeping thistle, cock's foot and bramble with occasional mugwort, burdock, ragwort, dock, black knapweed, hogweed and field bindweed. Some of the piles of rubble appeared to have been dumped a considerable time ago and have a good covering of mosses and grasses, others have been dumped more recently.

PROTECTED SPECIES:

This area provides excellent habitat for reptiles.

TARGET NOTE 24

HABITAT(S): Tall ruderal with scattered scrub and trees

DESCRIPTION:

This is a bank of tall ruderal vegetation with scattered scrub and trees which is found adjacent to the bank TN14 and runs parallel to the overflow channel TN1. It is on the same level as Churnet works to the south but drops by approximately 5-6m to the level of the wet ditch, TN1, with a slope of approximately 40°.

There is good grass cover, including false oat grass, Yorkshire fog, cock's foot and rare tufted hair grass. Ruderal species include rosebay willowherb, hogweed, bramble, nettle, field bindweed, reed canary grass, ragwort, burdock and dock.

Many alder, willow and ash saplings were present, along with blackthorn and hawthorn shrubs. One large fir tree was recorded towards the southern end.

TARGET NOTE 25

HABITAT(S): Semi-improved grassland with patches of scrub

DESCRIPTION:

This is a semi-improved grassland whose character, in terms of rank and species composition, is spatially variable at least partially in response to the level of disturbance and spillages and contaminants from industrial debris. In places it is rank with thatch whereas a finer sward is present in others.

Grass species include false oat grass, Yorkshire fog, creeping bent, crested dogs tail (*Cynosurus cristatus*), cock's foot and red fescue. Herbaceous and ruderal species include creeping thistle, spear thistle (*Cirsium arvense*), red clover (*Trifolium pratense*), white clover (*Trifolium repens*), creeping buttercup, ribwort plantain, black knapweed, mugwort, dock and rare great willowherb (*Epilobium hirsuta*).

Small patches of young, developing scrub were dominated by alder with a single rose and butterfly bush (*Buddleia davidii*). Associated with these scrub patches were hogweed, reed canary grass, mugwort and bramble.

TARGET NOTE 26

HABITAT(S): Dense Scrub

DESCRIPTION:

This is an area of dense bramble scrub with privet (*Ligustrum spp.*). Ruderal species including rosebay willowherb, hogweed and field bindweed were growing throughout along with cock's foot and false oat grass. Young alder trees were present.

PROTECTED SPECIES:

This area was not inspected thoroughly due to the density of the scrub; it would provide suitable habitat for badger setts although no strong trails were observed entering the area.

TARGET NOTE 27

HABITAT(S): Tall ruderal with scattered trees.

DESCRIPTION:

This is a strip, approximately 4m wide, of tall ruderal vegetation between hard standing and the river (TN12). The ground is largely bare with leaf litter; tall ruderals growing above included bramble, rosebay willowherb, nettles and nipplewort. Large mature alder trees and a single mature ash were recorded along with rare hawthorn whips.

TARGET NOTE 28

HABITAT(S): Bare ground with some tall ruderals

DESCRIPTION:

This is an area of gravel/hard standing which has patches of grasses and ruderal species including cock's foot, rosebay willowherb, rock, creeping buttercup and red fescue. A small willow was also recorded.

TARGET NOTE 29:

HABITAT(S): Introduced shrubs

DESCRIPTION:

This is an area of ornamental planting including several large fir trees, Portuguese laurel (*Prunus lusitanica*), spotted laurel (*Aucuba japonica* var. *crotonifolia*) and butterfly bush. Holly (*Ilex europaeus*), cock's foot and bramble were patchily present beneath.

TARGET NOTE 30

HABITAT(S): Introduced shrubs

DESCRIPTION:

This is sparse ornamental planting, including a cultivar of silver birch (*Betula pendula*), cotoneaster (*Cotoneaster spp.*) and variegated holly, along with a line of tall (25-30m) Leyland cypress (*x Cupressocyparis leylandii*). False oat grass, red fescue and bramble were patchily present beneath.

TARGET NOTE 31

HABITAT(S): Semi-improved grassland with scattered trees

DESCRIPTION:

This is a thin strip of grassland, with cock's foot, nettle, false oat grass, cow parsley and bramble. Three ash trees, one rowan tree (*Sorbus aria*) and one mature crack willow (*Salix fragilis*) were present.

TARGET NOTE 32

HABITAT(S): Bare ground with scattered trees

DESCRIPTION:

A number of young alder trees above bare ground, rubble and large amounts of debris. Bramble was patchily present beneath.

PROTECTED SPECIES:

The presence of rubble and the proximity to the river (TN12) may provide suitable habitat for reptiles, especially grass snake (*Natrix natrix*). However, it appeared heavily shaded which may limit its suitability.

TARGET NOTE 33

HABITAT(S): Semi-improved grassland with scattered ornamental shrubs

DESCRIPTION:

This is an area of grassland containing false oat grass, crested dogs tail, red fescue, cock's foot, Yorkshire fog, common bent, creeping buttercup, dock, selfheal (*Prunus vulgaris*), black knapweed, ribwort plantain and dandelion. A fir species and an ornamental heather were also recorded.

TARGET NOTE 34

HABITAT(S): Introduced shrubs

DESCRIPTION:

This is a small area of ornamental shrub planting, including fir species, with false oat grass and nettle beneath.

TARGET NOTE 35

HABITAT(S): Buildings and hard standing

DESCRIPTION:

This is a mixed use employment area with hard standing in between units.

PROTECTED SPECIES:

Many of the buildings may provide suitable roosting sites for bats.