

A38 Derby Junctions
TR010022
Volume 6
6.3 Environmental Statement
Appendices
Appendix 8.18: Phase 1 Habitat
Descriptions and Target Notes

Regulation 5(2)(a)

Planning Act 2008

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

**April 2019** 



### Infrastructure Planning

### Planning Act 2008

# The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

# A38 Derby Junctions Development Consent Order 202[]

# 6.3 Environmental Statement Appendices Appendix 8.18: Phase 1 Habitat Descriptions and Target Notes

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# Appendix 8.18: Phase 1 habitat description and target notes

## 1. Phase 1 survey

- 1.1.1 The results presented below summarise the finding of the following surveys for habitats within 50m of the Scheme boundary:
  - Extended Phase 1 Habitat survey undertaken in 2017 (including a resurvey of the habitats previously surveyed in 2015 and 2016 to confirm the nature and extent of habitats).
  - Extended Phase 1 Habitat Survey of the Proposed Construction Compound at Markeaton in 2018.
  - Walkover of the proposed road sign locations where access was available in 2018 undertaken on 29 September and 17 October 2018.

#### 2. Habitats

- 2.1.1 The following habitats were recorded during the Extended Phase 1 Habitat survey undertaken in 2017 (see Figures 8.6, 8.7 and 8.8) [TR010022/APP/6.2]:
  - Semi-natural broad-leaved woodland and scattered broad-leaved trees.
  - Broadleaved plantation woodland.
  - Coniferous plantation woodland.
  - Mixed plantation woodland.
  - Dense and scattered scrub.
  - Scattered broadleaved and coniferous trees.
  - Semi-improved neutral grassland.
  - Poor semi-improved grassland.
  - Marshy grassland.
  - Improved grassland and arable.
  - Tall ruderal.
  - Standing water and associated inundation vegetation.
  - Running water.
  - Amenity grassland.
  - Hard standing, bare ground and rocks.
  - Buildings.
  - Hedgerows.



- Introduced shrubs.
- 2.1.2 The habitat descriptions for the Scheme and 50m buffer are provided below. The Target Notes descriptions, grid references and photographs are presented in Table 1.

#### Semi-natural broad-leaved woodland and scattered broad-leaved trees

- 2.1.3 Pockets of semi-natural broadleaved woodland were recorded at TN16 and TN17. A wide fringe of broad-leaved woodland was also recorded in Markeaton Park. This included a range of native and non-native tree species, with pedunculate oak Quercus robur, ash Fraxinus excelsior, beech Fagus sylvatica, yew Taxus baccata and horse chestnut Aesculus hippocastanum widely recorded. Norway maple Acer platanoides and Scots pine Pinus sylvestris were recorded less frequently. The trees varied in age structure, but many mature trees were present, including some veteran trees as well as others, which had been recently planted (TN31). Trees also fringed Markeaton Lake and the Mill Pond, and these included common lime Tilia x europaea, sycamore Acer pseudoplatanus, alder Alnus glutinosa, crack-willow Salix fragilis, grey willow Salix cinerea, yew Taxus baccata, weeping willow Salix fragilis ssp. babylonica, ash and horse chestnut. This area supported an understory of hawthorn Crataegus monogyna, elder scrub Sambucus nigra and dogwood Cornus sanguinea.
- 2.1.4 At the Little Eaton section of the Scheme, three parcels of broad-leaved woodland dominated by ash and hawthorn were also situated at TN34; which comprises the A38 Scrub (DE050/3) pLWS. Pockets of this habitat were also recorded at TN41 and along Alfreton Road, adjacent to Pond Pb8.
- 2.1.5 Scattered trees occurred in various locations within the extent of the Scheme. Species present comprised native species including veteran pedunculate oak, recorded along the eastern edge of Markeaton Park, along with mature examples of sycamore, London plane *Platanus x hispanica*, ash, willows, cherry *Prunus domesticus*, lime *Tilia spp*. and horse chestnut. The southern section of Markeaton Lake (east of the A38) was bordered with 2 lines of mature lime trees.
- 2.1.6 Several veteran trees locations for within or near the Scheme boundary were reported by DWT (see Figures 8.9 and Figure 8.10 [TR010022/APP/6.2]). These were principally located within Markeaton Park and immediately east of Little Eaton junction around Breadsall. Species included pedunculate oak, turkey oak *Quercus cerris*, willow, horse chestnut, lime and beech.



#### Broad-leaved plantation woodland

- 2.1.7 Two lines of mature horse chestnut were recorded at TN12.
- 2.1.8 Broad-leaved plantation woodland was present within the Kingsway junction (TN26) and the A38 central reservation to the south of the Kingsway junction (TN11). This habitat was dominated by willow *Salix spp.*, with alder, hazel *Corylus avellana*, ash and holly *Ilex aquifolium*. Notable ground flora included hart's tongue fern *Asplenium scolopendrium*, lords and ladies *Arum maculatum*, wood anemone *Anemone nemorosa* and dog's mercury *Mercurialis perennis*. Bramble brook flowed through the woodland and there were extensive stands of Himalayan balsam *Impatiens glandulifera* (TN26). This habitat was also present further north (TN28) comprising silver birch *Betula pendula*, willow and cherry.
- 2.1.9 Broad-leaved plantation was present in Mackworth Park at TN10, TN13, TN19 and TN27.
- 2.1.10 Broad-leaved plantation was present at TN58. This woodland is known to have been planted in 2000 and was dominated with hazel, cleavers *Galium aparine*, hogweed *Heracleum sphondylium*, rough meadow-grass *Poa trivialis*, hedge woundwort *Stachys sylvatica* and common nettle *Urtica dioica*. Other species recorded were: Ash, rowan *Sorbus aucuparia*, oak *Quercus* sp., field maple *Acer campestre*, yew, and blackthorn *Prunus spinosa*.
- 2.1.11 Broad-leaved plantation was present on the approach of the Little Eaton junction on both sides of the carriageway, south west of the River Derwent (from Palm Court junction). This habitat was dominated by ash with frequent hawthorn and blackthorn and occasional alder. Then the broad-leaved plantation extended along both sides of the carriageway at TN40 and TN51 as the A38 heads north from the Little Eaton junction.
- 2.1.12 A patch of broad-leaved plantation was present to the south of Kingsway Junction west of the A38 and east of the A516 (TN78), comprising ash, holly, hawthorn, Swedish whitebeam Sorbus intermedia, field maple, sycamore, and elder. Ground flora was dominated by ivy Hedera helix with occasional soft shield fern Polystichum setiferum. No access was possible to the eastern side of the A38 carriageway. Similarly, a patch of broad-leaved plantation woodland was located to the east of the A38 carriageway, just north of Markeaton Park (TN77). This comprised small leave lime Tilia platyphyllos, silver birch, field maple, ash, sycamore and hawthorn on a steep gradient to the carriageway.
- 2.1.13 Just north of Little Eaton junction is a small patch of semi-mature broad-leaved woodland plantation dominated by hawthorn and gorse *Ulex europaeus*, with dense patches of bramble *Rubus fruticosus agg.* and raspberry *Rubus idaeus* present to the east of the A38 carriageway (TN74). No access was gained to the west of the A38.

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2.1.14 A wide strip of broad-leaved plantation was also recorded along the railway line, but no access was possible along this corridor and therefore no detailed survey was undertaken there.

#### Mixed plantation woodland

- 2.1.15 The central reservation separating the carriageways north of Kingsway junction (leading to Markeaton junction) comprised a very dense mixed plantation woodland, with native broad-leaved species including semi-mature and self-set saplings of ash, silver birch *Betula pendula*, cherry *Prunus spp.*, sycamore, hawthorn, hazel *Corylus avellana*, dogwood and alder, along with frequent Scots pine with a poor understorey species diversity.
- 2.1.16 Mixed woodland plantation woodland was also located to the west of the A38 near to the entrance to Markeaton Park. Species present there were dominated by Scots pine and yew. The habitats beneath these trees were maintained as part of the Markeaton Park public space and as such did not support any notable ground flora, being dominated by perennial rye-grass Lolium perenne with scattered scrub.
- 2.1.17 Some distance north of Little Eaton junction a small patch of mixed plantation woodland was located to the east of the A38 carriageway (TN75). This comprised ash, hawthorn, silver birch, pedunculate oak, Scots pine, with patches of bracken *Pteridium aquilinum*, common nettle *Urtica dioica*, dense area of bramble, rosebay willowherb *Chamerion angustifolium*. Ground flora species included yarrow *Achillea millefolium*, cow parsley *Anthriscus sylvestris*, cock's-foot *Dactylis glomerata*, foxglove *Digitalis purpurea*, wood avens *Geum urbanum* and red campion *Silene dioica*. No access was possible to the west of the carriageway.

#### Dense and scattered scrub

2.1.18 Scattered scrub and dense scrub occurred in areas throughout the extent of the Scheme and were interspersed within grassland habitats. Typical scrub species represented within the extent of the Scheme included bramble *Rubus fruticosus* agg., alder, blackthorn, hawthorn, silver birch and also various willow species including grey willow, goat willow *Salix caprea* and *Salix x spp*,. Willows and alders in particular occurred in proximity to the streams and areas of standing water, which were present across the Site. Scrub were present at TN9, TN15, TN35, TN49, TN62 and TN63.

#### Semi-improved neutral grassland

2.1.19 Semi-improved grasslands dominated by Yorkshire-fog *Holcus lanatus* and false oat-grass *Arrhenatherum elatius* were recorded east of the carriageway at the southern extent of the Kingsway and Markeaton junctions (see TN6, TN7, TN8 and TN20). At TN4, a strip of mown semi-improved grassland surrounded a balancing pond. Species present there included common bent *Agrostis capillaris*, rough meadow grass *Poa trivialis* and creeping buttercup *Ranunculus repens*.

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- 2.1.20 The A38 Roundabout LWS comprised 2 areas of semi-improved grassland, one within the roundabout itself (TN25) and one within the central reservation further south (TN18). The grassland at TN25 was managed and dominated by false oat-grass, whereas the grassland at TN18 was unmanaged and suffered from extensive scrub encroachment due to lack of management.
- 2.1.21 TN29 was managed grassland within the grounds of the Territorial Army Site. It was largely dominated by red fescue Festuca rubra, with herbs such as common knapweed Centaurea nigra, cleavers, selfheal Prunella vulgaris, meadow vetchling Lathyrus pratensis, fox-and-cubs Pilosella aurantiaca and creeping cinquefoil Potentilla reptans making up a much smaller proportion of the sward.
- 2.1.22 TN52 was a horse grazed and species-poor neutral grassland located by the River Derwent, with a large component of perennial rye-grass, along with grasses such as cock's-foot, red fescue, smooth meadow-grass *Poa pratensis*, meadow foxtail *Alopecurus pratensis* and false oat-grass.
- 2.1.23 Alfreton Road Rough Grassland LWS at TN55 was a horse-grazed field by the A38 with local stands of perennial weeds such as common nettle, creeping thistle Cirsium arvense and spear thistle Cirsium vulgare. Creeping bent and red fescue dominated the grasses, with lesser amounts of marsh foxtail Alopecurus geniculatus, Yorkshire-fog, cock's-foot and smooth meadow-grass, perennial rye-grass. The effects of heavy horse-grazing were manifested in the frequent occurrence of daisy, silverweed Potentilla anserina, common ragwort Senecio jacobaea and creeping buttercup. In 2015, AECOM recorded 3 grassland indicator species (Derbyshire Wildlife Trust: 2003, revised 2011) in this area (AECOM(i), 47071319-URS-05-RP-EN-011, 2016): water forget-me-not Myosotis scorpioides, meadowsweet Filipendula ulmaria and meadow crane's bill Geranium pratense. Meadow buttercup Ranunculus acris, ribwort plantain Plantago lanceolata, red clover Trifolium pratense were also noted, along with small amounts of more diminutive herbs, such as common mouse-ear Cerastium fontanum, cut-leaved crane's-bill Geranium dissectum and dove's-foot crane's-bill Geranium molle. The field was variously inundated through the seasons and the invasive New-Zealand pigmyweed Crassula helmsii was locally dominant. There was an area of open water with a draw down zone at the southern end of the field.
- 2.1.24 TN59 was a wetter grassland with dominated by soft rush *Juncus effusus*, meadow foxtail, tufted hair-grass *Deschampsia cespitosa* and Yorkshire-fog with floating sweet-grass *Glyceria fluitans* dominating the wetter hollows. Common spotted-orchid *Dactylorhiza fuchsii* was also recorded rarely.



#### Poor Semi-improved grassland

- 2.1.25 TN47 was an area heavily grazed by sheep and cattle. Vegetation included abundant broad-leaved dock *Rumex obtusifolius*, with crested dog's-tail *Cynosurus cristatus*, annual meadow-grass *Poa annua*, rough meadow-grass, perennial rye-grass and creeping buttercup.
- 2.1.26 TN62 comprised un-managed, poor semi-improved grassland, with some more species rich short areas. The area was heavily disturbed by vehicles and suffered from extensive scrub encroachment.

#### Marshy grassland

2.1.27 TN43 comprised an area of marshy grassland choked by reedmace *Typha sp.*, meadowsweet and ornamental non-native reed sweet grasses *Glyceria spp.* No open water was recorded.

#### Improved grassland and arable

- 2.1.28 The improved grasslands recorded at TN37, TN57 and TN72 comprised Yorkshire-fog, perennial rye-grass and cock's foot.
- 2.1.29 TN73 was an area utilised as a turf farm with scrub and poor ruderal vegetation recorded along the field margins.

#### Tall ruderal

- 2.1.30 This category comprised stands of tall perennial or biennial dicotyledons, usually more than 25 cm high, of species such as cow parsley, rosebay willowherb and nettle. This habitat was commonly found along footpaths and along field margins as well as at TN14, TN38, TN39, TN45, TN46 and TN56. Numerous stands of Japanese knotweed, giant knotweed and Himalayan balsam were also recorded; their locations and descriptions are detailed in the following paragraph. Additionally, there is a mosaic of disturbed ground which has established on a restored landfill site (TN60) of which some areas were open, short rabbit grazed herb-dominated and other areas were taller and grass dominated. There were stands of scrub included bramble, rose, and willow; as well as large stands of ruderals such as rosebay willow herb, common nettle and wild teasel *Dipsacus fullonum*. A patch of marshy grassland is present just south of TN60.
- 2.1.31 No significant changes noted from 2015.

#### Standing water and associated inundation vegetation

2.1.32 Twenty-two ponds were identified within 50m of the Scheme boundary.

#### Running water

- 2.1.33 Seven streams were identified within 50m of the Scheme boundary:
  - Bramble Brook.
  - Markeaton Brook.

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- Middle Brook.
- Watermeadows Ditch.
- Dam Brook.
- Boosemoor Brook.
- River Derwent.

#### Amenity grassland

- 2.1.34 Most of the small gardens (including the gardens along Queensway) and mown verges associated with residential properties within the boundary of the Scheme were included in this habitat category.
- 2.1.35 Amenity grassland was also recorded in Mackworth Park at TN5 and TN21. This area appeared to be used frequently by members of the public for exercise and dog walking.
- 2.1.36 TN30 was an area of mown amenity grassland at Derby University. It was species-poor and dominated by perennial rye-grass with lesser amounts of grasses such as cock's-foot, Yorkshire-fog and smooth meadow-grass. Herbs noted include black medick *Medicago lupulina*, hogweed, creeping cinquefoil, meadow buttercup, creeping buttercup, dandelion *Taraxacum officinale agg.* and red clover.
- 2.1.37 The grasslands at Markeaton Park at TN32 comprised improved/ amenity grassland and the majority of these habitats were regularly mown. Species present included perennial rye-grass, daisy *Bellis perennis*, dandelion, and nettles.
- 2.1.38 A small area of amenity grassland and scrub was located east of the Kingsway roundabout within land owned by Sainsbury's Plc. Species present included cowslip *Primula veris*, daisy, Yorkshire-fog, perennial rye-grass, ribwort plantain, creeping cinquefoil, dandelion, red clover, white clover *Trifolium repens*, and tufted vetch *Vicia cracca*.
- 2.1.39 TN48 was a private garden with closely mown amenity grassland with shrubs and trees. Riverside tree species recorded were sycamore, alder and grey willow. The riverbank flora consisted of common nettle and great willow herb *Epilobium hirsutum*.

#### Hardstanding and bare ground

- 2.1.40 Hardstanding was recorded principally associated with the carriageways of the A38 as well as public footpaths and residential and commercial properties surrounding the Scheme.
- 2.1.41 TN50 was a large area of bare ground by Talbot Turf Farm topsoil works area.



#### **Buildings**

2.1.42 Nine buildings, groups of buildings or man-made structures were recorded during the Extended Phase 1 Habitat survey. These were located either within the boundary of the Scheme, or otherwise within 50m.

#### **Hedgerows**

- 2.1.43 A total of 26 hedgerows were identified during the Extended Phase 1 Habitat survey. These were located either within the boundary of the Scheme, or otherwise within 50m. The majority of these hedgerows were dominated by hawthorn, with occasional elder and blackthorn. No notable ground flora was recorded at the time of survey.
- 2.1.44 Hedgerows H1 to H7, H9 to H16, H25 and H31 to H36 were recorded as intact species-poor; H26 and H30 were recorded as defunct species-poor hedges; and H37 and H38 were recorded as species-poor hedges with trees. All the hedgerows were assessed as 'not important' under the nature conservation criterion of the Hedgerow Regulations 1997.
- 2.1.45 Hedgerows are a priority habitat for England (Section 41 NERC Act, 2006) where they comprise a minimum 80% of at least one native species. Apart from the laurel and leylandii hedges, all the other hedgerows recorded within the Scheme boundary or within 50m therefore qualify.

#### Invasive non-native plant species

- 2.1.46 Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) covers the control of invasive plants and animals. Invasive plant species recorded within or adjacent to the Scheme boundary include:
  - Japanese knotweed.
  - Giant knotweed.
  - Himalayan balsam.
  - Variegated yellow archangel.
  - New Zealand pigmyweed.
  - Cherry laurel and snowberry (although not listed on Schedule 9 species, these species are listed on the Great Britain Invasive Non-Native Species Secretariat).



## 2.1.47 These are shown in Figures 8.11 and 8.12 [TR010022/APP/6.2].

**Table 1: Target notes descriptions and photographs** 

Target note	Grid reference	Description	Photograph
1	SK 32170 35371	No access, but flyover visible from underneath via the carriageway. Structure with tight seals. No PRF for bats recorded.	No photo available
2	SK 32234 35527	Broadleaved Woodland. Species present were dominated by ash and ivy with occasional hazel (old coppice stools), hawthorn Crataegus monogyna and bramble. Stands of Himalayan balsam were also recorded.	
3	SK 32260 35567	Soil mound and bare soil around – likely due to disturbance caused as a result of high levels of access by public (dog walkers etc.)	



Target note	Grid reference	Description	Photograph
4	SK 32418 35576	Managed and mown semi- improved grassland surrounding balancing pond. Species present are typical of semi-improved grassland and include common bent, rough meadow grass, creeping buttercup.	
5	SK 32306 35650	Unmanaged species-poor semi-improved grassland areas within a much wider area of amenity grassland. Planted dogwood was also present.	
6	SK 32484 35600	Yorkshire fog and false oat grass with approximately 15% encroaching scrub, comprising mainly hawthorn. Approximately 50% of the area also comprised tall herb dominated by great willowherb, rosebay willowherb and ragwort Senecio jacobaea.	



Target note	Grid reference	Description	Photograph
7	SK 32443 35649	In this approximate 1.1 ha area Yorkshire-fog dominates with lesser amounts of false oat grass and frequent meadow foxtail and great willowherb. Some hawthorn scrub is present. Tufted vetch, smooth tare and field horsetail Equisetum arvense are locally frequent, along with couch grass Elytrigia repens, and smooth meadow-grass. A range of species occurs in lesser amounts, including sweet vernal-grass Anthoxanthum odoratum, cock's-foot and common vetch. The presence of wild angelica Angelica sylvestris, common sedge Carex nigra, tufted hair-grass and hard rush Juncus inflexus indicates damp conditions.	
8	SK 32552 35657	Yorkshire fog and false oat grass with approximately 30% encroaching scrub, comprising mainly hawthorn and bramble. The habitat includes approximately 50% tall herbs, with species present including great willowherb, rosebay willowherb, and ragwort.	
9	SK 32381 35734	Mature cherry <i>Prunus</i> sp. and blackthorn in scrub thicket with semi- improved grassland.	



Target note	Grid reference	Description	Photograph
10	SK 32307 35749	Young tree and shrub plantation and unmanaged grassland within amenity grassland. Creeping bent <i>Agrostis stolonifera</i> was recorded in high abundance in this area. Pedunculate oak, elder and blackthorn <i>Prunus spinosa</i> in planting.	
11	SK 32530 35821	This is an area of semi- mature, semi-natural woodland with a densely shaded, species- poor understorey. The species recorded include dogwood hawthorn, ash, ivy Hedera helix, Himalayan balsam, poplar species Populus spp, pedunculate oak bramble, crack-willow, elder and common nettle.	
12	SK 32637 35823	Field layer under horse chestnut Aesculus hippocastanum trees: herb Bennett Geum urbanum, saplings field maple, hawthorn, holly and ash and bare ground.	



Target note	Grid reference	Description	Photograph
13	SK 32481 35865	Broadleaved woodland plantation: Species included beech, ash, pedunculate oak, bramble, blackthorn and horse chestnut.	
14	SK 32476 35891	Tall herbs along dry drain, species present included false-brome <i>Brachypodium</i> sylvaticum, rosebay willowherb, great willow herb, bramble, raspberry <i>Rubus idaeus</i> and nettle with occasional <i>Salix sp.</i> scrub.	
15	SK 32153 35894	Dense tall scrub: Species recorded included Occasional: hawthorn, ash. Dominant: blackthorn, goat willow. Broadleaved woodland beyond to the west.	No photo available
16	SK 32173 35913	Broad-leaved woodland with mature white poplar <i>Populus alba</i> present, along with Norway maple, ash, ivy, <i>Prunus sp.</i> , blackthorn and pedunculate oak.	



Target note	Grid reference	Description	Photograph
17	SK 32189 35930	Broadleaved woodland semi-natural. Species included Occasional: hazel, ash, blackthorn, willow sp., and wych elm <i>Ulmus glabra</i> , with ground habitat of common nettle, field woundwort <i>Stachys arvensis</i> , ivy and raspberry.	
18	SK 32630 35924	This area forms part of the A38 Roundabout Local Wildlife Site. This physically isolated, approximate 0.40ha area lying between the A38 carriageways. It is neutral grassland that is suffering from extensive scrub encroachment due to lack of management. The grassland is drier at the eastern edge, where open herb-rich patches occur and this is replaced in the western half by a damper sward which is typically dominated by species such as meadowsweet, with other damp indicators such as soft-rush and wild angelica. Red fescue is dominant in much of the open sward, with lesser amounts of creeping bent, false oatgrass, cock's-foot, Yorkshire-fog and smooth meadow-grass. Herbs recorded include black knapweed Centaurea nigra, meadow vetchling, zigzag clover, oxeye daisy, spotted-orchid Dactylorhiza fuchsii, ribwort plantain, meadow buttercup, perforate St john's wort Hypericum perforatum.	



Target note	Grid reference	Description	Photograph
19	SK 32507 35937	Broad-leaved Woodland Plantation Dominant: ivy, Occasional: horse-chestnut, dogwood, hogweed, poplar species Populus spp., cherry Prunus sp., raspberry, black pine Pinus nigra.	
20	SK 32774 35936	This is an approximate 0.40ha area of tall, unmanaged, neutral grassland that is dominated by Yorkshire-fog with locally dominant rosebay willowherb. Locally frequent species include false oatgrass red fescue and meadow buttercup. Occasional common bent, creeping bent meadow foxtail, cow parsley, cock'sfoot hogweed perennial ryegrass, ribwort plantain smooth meadow-grass <i>Poa pratensis</i> occur. Smaller herbs are rarer, due to the tall coarse sward and include common mouse-ear, meadow crane's-bill, goat's-beard, selfheal and red clover.	
21	SK 32528 35973	Amenity grassland with scattered immature trees and scrub.	



Target note	Grid reference	Description	Photograph
22	SK 32383 35976	Amenity grassland with scattered immature trees and scrub.	
23	SK 32594 36021	Large pile of deadwood and standing deadwood. Invertebrate interest for saproxylic species.	
24	SK 32558 36038	Dismantled railway; bed is wet, with a slow flowing very shallow stream. This stream is highly influenced by rainfall and dries up during extended dry periods.	
25	SK 32826 36036	This tall unmanaged grassland occurs by the Kingsway roundabout and covers approximate 0.32ha in area. The area forms part of the A38 Roundabout LWS. It is dominated by false oat-grass, with abundant red clover and frequent cow parsley, red fescue, hogweed and Yorkshire-fog, with lesser amounts of common mouse-ear, creeping thistle, cock's-foot, ribwort plantain and	



Target note	Grid reference	Description	Photograph
		smooth meadow-grass. It supports a herb component typical of neutral grassland, including meadow buttercup, creeping buttercup, goat's-beard, yarrow, common knapweed, oxeye daisy and tufted vetch.	
26	SK 32816 36068	This is an area of dense semi-mature broad-leaved woodland with poor species diversity in the understory. This woodland has a range of native and non-native tree and shrub species, including field maple, Norway maple, sycamore Acer pseudoplatanus, alder Alnus glutinosa, hawthorn, ash, poplar species, Prunus species, pedunculate oak, osier Salix viminalis, dogrose Rosa canina, and bramble, overtopping a tall. species-poor ground-flora dominated by Himalayan balsam, common nettle and great willowherb.	
27	SK 32680 36107	Broad-leaved Woodland Plantation Species include Occasional: field maple, hawthorn, bramble, elder, and common nettle.	
28	SK 32968 36424	Semi mature silver birch Betula pendula, willow and cherry forming an area of semi-natural woodland on a south facing slope.	No photo available



Target note	Grid reference	Description	Photograph
29	SK 33364 36834	This is an approximate 1.04ha area of managed grassland within the grounds of the Territorial Army Site. It is largely grass—dominated, with herbs making up a much smaller proportion of the sward. There was a lot of grass thatch on the ground from mowing on Site. Red fescue is prominent in the sward with lesser amounts of common bent, false oat-grass, creeping thistle, meadow foxtail, cock's-foot, perennial rye- grass, couch grass and creeping bent. Herbs recorded include common knapweed, cleavers, selfheal, meadow vetchling local stands of fox-and-cubs and creeping cinquefoil.	
30	SK 33841 37293	Herbs noted include black medick, hogweed, creeping cinquefoil, meadow buttercup, creeping buttercup, dandelion Taraxacum officinale agg., and red clover. This is an area of approximately 2.03ha of mown amenity grassland at Derby University. It is not speciesrich and is dominated by perennial rye-grass, with lesser amounts of grasses such as cock's-foot, Yorkshire-fog and smooth meadow-grass.	
31	SK 33544 37448	Markeaton Park included a wide range of native and non-native tree species with pedunculate oak, ash, beech, yew and horse chestnut widely recorded, and less common records for Norway maple and Scots pine. The trees varied in age structure, but many mature	No photo available



Target note	Grid reference	Description	Photograph
		trees were present, including some veteran trees as well as others, which had been recently planted. Trees also fringed the lakes and included common lime, sycamore, alder, crackwillow, grey willow, yew, weeping willow, ash and horse chestnut, with an understorey of hawthorn, elder scrub and dogwood.	
32	SK 33703 37552	Amenity grassland is the dominant habitat type within Markeaton Park with the sward dominated by perennial rye-grass with occasional creeping bent and cock's-foot. Typical herbaceous species included common daisy, ribwort plantain, greater plantain <i>Plantago major</i> , dandelion, creeping buttercup, common field speedwell <i>Veronica persica</i> , white clover, cleavers and common mouse-ear.	
33	SK 35049 39216	Broad leaved plantation dominated by sycamore, silver birch, hawthorn, hazel, cherry, elder. Understorey dominated by ivy with male fern <i>Dryopteris felis-mas</i> , bramble, cleavers, and wood avens <i>Geum urbanum</i> . A small patch of Canadian goldenrod <i>Solidago canadensis</i> , dog rose, hedge woundwort and raspberry is also present.	



Target note	Grid reference	Description	Photograph
34	SK 35823 39869	Broadleaved woodland dominated by ash and hawthorn. The understorey and ground flora are heavily browsed by livestock.	
35	SK 35980 39887	Line of semi-mature trees with alder, Himalayan balsam, crack-willow, osier, common nettle. Dead trees with high potential bat roost features are present.	
36	SK 35779 39893	H11 - Hawthorn hedge along the roadside - no trees.	G
37	SK 35925 39891	Area sown since 2015. Improved grassland west of alder and willow treeline (ref. TN35).	



Target note	Grid reference	Description	Photograph
38	SK 35843 39918	Tall ruderals and scrub with bramble, common nettle and Himalayan balsam.	
39	SK 35833 39951	Riverside scrub and tall ruderals.	
40	SK 36059 39961	Broadleaved woodland plantation by road dominated by ash and hawthorn.	
41	SK 35842 39998	Willow dominated woodland near to A38, very dense ground flora with nettle abundant.	



Target note	Grid reference	Description	Photograph
42	SK 35853 40079	Rabbit activity, several holes. Collapsed and active holes present.	
43	SK 35847 40144	Marshy grassland choked by reedmace, meadowsweet Filipendula ulmaria and ornamental non-native reed sweet grasses Glyceria spp. No open water present.	
44	SK 35836 40183	Bordered by domestic gardens with native and ornamental trees; ash, willow, Norway spruce <i>Picea abies</i> and sycamore. Himalayan balsam present in high abundance throughout.	
45	SK 35877 40177	Tall ruderal dominated area. Species included common nettle, great willowherb, bramble, comfrey Symphytum officinale, and creeping bent.	



Target note	Grid reference	Description	Photograph
46	SK 35938 40156	Tall ruderals with occasional scrub. Species include dominant nettle, with occasional hawthorn, Himalayan balsam, elder and Russian comfrey Symphytum × uplandicum.	
47	SK 35874 40264	Poor semi-improved grassland. Individual trees along bankside dominated by alder and willow.	
48	SK 35988 40159	House and gardens. Closely mown amenity grassland with shrubs and trees. Riverside tree species, sycamore, alder and willow. Riverbank consists of common nettle and great willow herb.	



Target note	Grid reference	Description	Photograph
49	SK 36062 40123	Dense scrub along roadside. Species include hawthorn, sycamore, butterfly bush Buddleia davidii with common nettle.	
50	SK 36073 40063	Talbot Turf Farm topsoil works area.	
51	SK 36023 40054	Broadleaved Woodland Plantation. Species include dominant ash, hawthorn with abundant elder. Understorey of semi improved grassland.	
52	SK 35975 40055	This is a horse grazed and species-poor neutral grassland of approximately 0.31ha in area located by the River Derwent, with a large component of perennial rye-grass, along with grasses such as cock's-foot, red fescue, smooth meadow-grass, meadow foxtail, and false oat-grass. Stands of common nettle have developed in response to horse-grazing. Other	



Target note	Grid reference	Description	Photograph
		herbs recorded include frequent white clover yarrow, ground-elder Aegopodium podagraria, common mouseear, hogweed and meadow buttercup. The invasive species Giant knotweed Fallopia sachalinensis borders the grassland fence along the river edge.	
53	SK 35269 40194	Amenity grassland and mix of native and non-native woody species and introduced shrubs on small road junction.	
54	SK 36309 40011	Semi-improved grassland dominated by young herbs with small amounts of grass cover. It includes early colonisers such as tall rocket Sisymbrium altissimus, groundsel Senecio vulgaris and field madder Sherardia arvensis. Herb species recorded include oxeye daisy, common knapweed, common mouse-ear, creeping thistle, dove's-foot crane's-bill Geranium molle, meadow buttercup, ribwort plantain, creeping buttercup, wild mignonette Reseda lutea and, common vetch. Grasses recorded included cock's-foot, red fescue, Yorkshire-fog, smooth and annual meadow-grass. Vigorous perennial weeds such as broad-leaved dock Rumex obtusifolius and common nettle.	



Target note	Grid reference	Description	Photograph
55	SK 36311 39898	This is a horse-grazed field with perennial weeds, such as common nettle, creeping thistle and spear thistle. The field is variously inundated through the seasons and the invasive New-Zealand pigmyweed is locally dominant and spreading. There is an area of open water with a draw down zone at the southern end of the field. Creeping bent and red fescue dominate the grasses, with lesser amounts of marsh foxtail Yorkshire-fog, cock's-foot and smooth meadow-grass, perennial rye-grass, daisy, silverweed, common ragwort, creeping buttercup, meadow buttercup, ribwort plantain, meadowsweet, meadow crane's-bill and red clover.	
56	SK 36432 39938	The area around and the A38 ditch banks are vegetated by a tall herb community with dominant common nettle, locally abundant false oat-grass and a range of occasional species including hemlock Conium maculatum, cleavers, Yorkshire-fog, rough meadow-grass, water figwort, red campion Silene dioica and hogweed. A small stand of Japanese knotweed Fallopia japonica is present in this area.	



Target note	Grid reference	Description	Photograph
57	SK 36516 39902	Grassland largely dominated by Yorkshire-fog, with lesser amounts of other robust grass species. Herbs are a very minor component of the sward. Along the margins, common bent is locally dominant with abundant false oat-grass and frequent meadow foxtail, smooth meadow-grass, cock's-foot and perennial rye-grass. Herbs recorded included cleavers, hogweed, oxeye daisy, meadow buttercup, common vetch and bush vetch <i>Vicia sepium</i> .	
58	SK 36646 40079	Broadleaf plantation woodland planted in 2000, dominated with hazel, cleavers, hogweed, rough meadow-grass, hedge woundwort and common nettles. Other species recorded were: Ash, rowan Sorbus aucuparia, oak, field maple, yew and blackthorn.	
59	SK 36588 40215	The main sward components are soft rush Juncus effusus, meadow foxtail, tufted hair-grass, Yorkshire-fog and creeping buttercup, common couch. Creeping bent and smooth meadow-grass are also widespread and floating sweet-grass Glyceria fluitans dominates in the wetter hollows. Meadow fescue Schedonorus pratensis is occasional. The herb component is quite varied and includes a range of species associated with damper areas such as common marsh bedstraw Galium palustre, wild angelica, purple-loosestrife	



Target note	Grid reference	Description	Photograph
		Lythrum salicaria, water figwort and bog stitchwort Stellaria alsine. Common spotted-orchid was recorded rarely and other herb records made included meadow buttercup, wavy bitter-cress Cardamine flexuosa, common mouseear, field horsetail and clustered dock Rumex comglomeratus.	
60	SK 36311 40306	Mosaic of disturbed ground which has established on a restored landfill site. Some areas were open, short rabbit grazed herbdominated and other areas were taller and grass dominated. There were stands of scrub included bramble, rose, and willow; as well as large stands of ruderals such as rosebay willow herb, stinging nettle and wild teasel. The invasive non-native Japanese knotweed was growing along the western part of the area and Himalayan balsam was also recorded.	
62	SK 36212 40381	Unmanaged, poor semi- improved grassland with some more species-rich areas of short rabbit-grazed grassland. Much vehicle disturbance. Extensive scrub encroachment.	



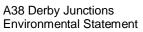
Target note	Grid reference	Description	Photograph
63	SK 36257 40553	Broad-leaved woodland dominated by crack willow over wet ditch.	
65	SK 36646 40675	This unmanaged, speciesrich grassland sward covering approximately 0.24ha occurs on a steep slope near a sewage works on the A38. There is extensive scrub and tree encroachment from species including ash and common hawthorn. It is dominated by tall grasses, but also supports a good range of indicator grassland herb species and few weed species. False oat-grass dominates, with frequent Yorkshire-fog. Other grass records include cock's-foot, red fescue, smooth meadow-grass, common bent and the less widely recorded yellow oat-grass <i>Trisetum flavescens</i> , Locally frequent oxeye daisy occurs with scattered meadow vetchling, common bird's-foot-trefoil, lupin, burnet-saxifrage, meadow buttercup, common sorrel, oat's-beard and smooth tare, yarrow, bladder campion.	



Target note	Grid reference	Description	Photograph
71	SK 35236 39417	Yorkshire fog and false oat grass with occasional great willowherb, rosebay willowherb, ragwort and rare early-spotted orchids.	
72	SK 35589 39681	Perennial rye grass dominated pasture with abundant Yorkshire-fog.	
73	SK 36112 39892	Turf farm.	
74	SK 36720 41348	Strip of semi-mature broad- leaved woodland plantation dominated by hawthorn <i>Crataegus monogyna</i> and gorse <i>Ulex europaeus</i> , with dense patches of bramble <i>Rubus fruticosus agg.</i> and raspberry <i>Rubus idaeus</i> .	



Target note	Grid reference	Description	Photograph
75	SK 36871 42056	Mixed plantation woodland comprising ash Fraxinus excelsior, hawthorn Crataegus monogyna, silver birch Betula pendula, pedunculate oak Quercus robur, Scots pine Pinus sylvestris, with patches of bracken Pteridium aquilinum, common nettle Urtica dioica, dense area of bramble Rubus fruticosus agg., rosebay willowherb Chamerion angustifolium. Ground flora species included yarrow Achillea millefolium, cow parsley Anthriscus sylvestris, cock'sfoot Dactylis glomerata, foxglove Digitalis purpurea, wood avens Geum urbanum and red campion Silene dioica.	
76	SK 35513 39742	20m wide strip of immature plantation of elm <i>Ulmus sp.</i> on bare ground or mat of ivy <i>Hedera helix.</i>	
77	SK 34085 37900	Broad leaf plantation comprising small leave lime <i>Tilia platyphyllos</i> , silver birch <i>Betula pendula</i> , field maple, ash, sycamore and hawthorn on a steep gradient to the carriageway. Residential gardens were also present (not accessed) with a small area of amenity grassland at the northern extent of the survey buffer area. The Habitat within the university land comprised hard standing with scattered trees screening the road cutting. A small section of canalised brook was present	





Target note	Grid reference	Description	Photograph
		within the 50m buffer area.	
78	SK 32087 35219	Broad leaf plantation comprising ash Fraxinus excelsior, holly Ilex aquifolium, hawthorn Crataegus monogyna, Swedish whitebeam Sorbus intermedia, field maple Acer campestris, sycamore Acer pseudoplatanus, and elder Sambucus nigra. Ground flora was dominated by ivy Hedera helix with occasional soft shield fern Polystichum setiferum. A section of Bramble Brook was present within a reinforced channel at the northern extent of the survey area.  The road island had also been used as rough sleeping recently.  No evidence of protected species was observed at the time of the survey.	