FINAL

ECOLOGICAL WALKOVER TECHNICAL NOTE

Kemnay Flood Study

Project no. 4021839

Prepared for:

Aberdeenshire Council

Date: 21st March 2025

Enhancing lives, communities and the environment

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1. Introduction

1.1 Purpose of this report

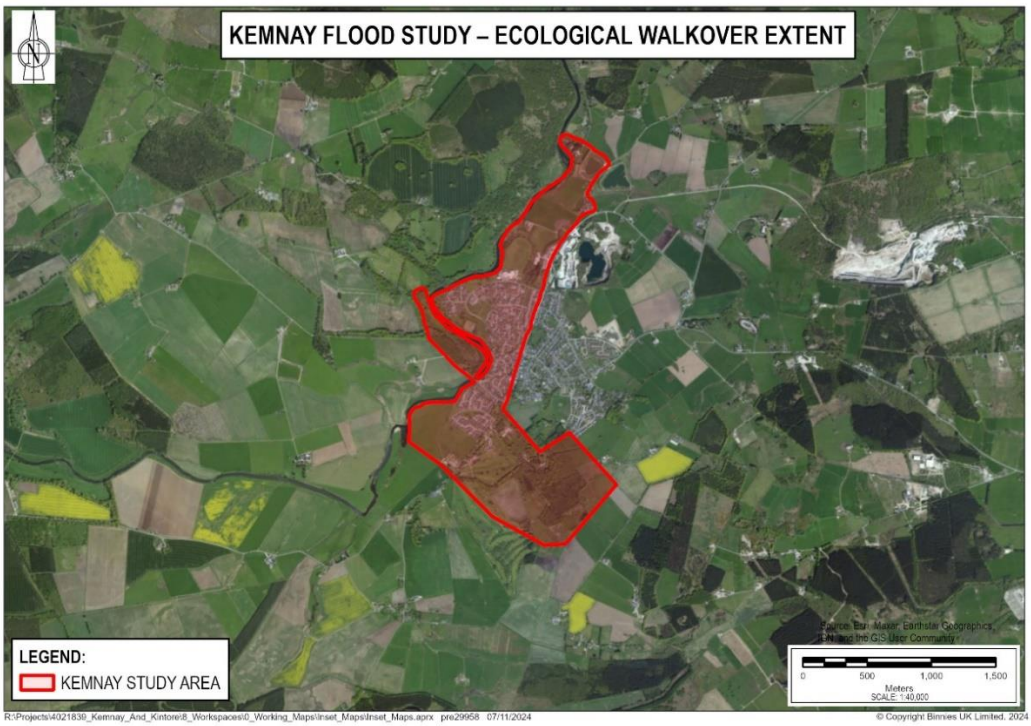
RSK/Binnies were commissioned by Aberdeenshire Council to carry out a flood study in Kemnay town and the surrounding area. This technical note forms part of the initial work to gather data and identify potential ecological constraints and opportunities associated with any proposed flood alleviation scheme options (hereafter referred to as 'the Scheme').

This report provides a summary of an initial desk study and ecological walkover survey completed in September 2024. Further detailed Preliminary Ecological Assessments (PEAs) will be required of specific works locations once they are known. These PEAs could identify additional habitat and protected species constraints.

1.2 Site Location and Context

The town of Kemnay is an urbanised area bordered by the River Don to the west and the B993 (which becomes Victoria Terrace and Grove Road in the town) to the east/south-east. The surrounding area is predominantly rural. The area of the Scheme is centred at national grid reference NJ 72987 16531. The extent of the ecological walkover survey (hereafter referred to as the 'Study Area') is shown in Figure 1. The Study Area is approximately 200 hectares in area and is centred on the town of Kemnay, with additional land to the north and south. The land to the north and south of the town comprises predominantly grassland pasture. A golf course and areas of mature woodland are located to the south of the Study Area. An additional area of mature woodland is located within the Study Area on the opposite side of the River Don, to the north of Riverside Road.

Figure 1: Kemnay Ecological Walkover Study Area



1.3 Proposed Works

The proposals are at an early stage and no specific designs have been developed. Potential works to deliver a flood alleviation scheme will hereafter be referred to as 'Proposed Works'.

1.4 Legislation and Planning Policy

The report has been compiled with reference to relevant nature conservation legislation, planning policy and the UK Biodiversity framework from which the protection of sites, habitats and species is derived in Scotland. The following legislation and policy are highlighted:

- Nature Conservation (Scotland) Act 2004;
- Wildlife and Countryside Act 1981 (as amended);
- Conservation of Habitats and Species Regulations 2017; and
- Protection of Badgers Act 1992.

2. Methodology

2.1 Desk Study

A review of existing ecological and environmental baseline information available in the public domain was undertaken. Freely downloadable datasets (available from MAGIC[1]) were consulted for information regarding statutorily designated sites within 5 km of the Study Area. Appendix 12 of the Aberdeenshire Local Development Plan[2] (2023) was consulted to identify Local Nature Conservation Sites (LNCS) within 2 km of the Study Area boundary. Scotland's Environment web[3] was checked for woodlands listed on the Scotland Ancient Woodland Inventory and sites listed on the Scottish Wetland Inventory.

2.2 Ecological Walkover Survey

The ecological walkover survey was undertaken on the 17th September 2024 by Binnies Principal Ecologist Joe Whittick, who is a full member of the Chartered Institute of Ecology and Environmental Management (MCIEEM). Conditions for the survey were bright and dry. Due to the size of the Study Area and time constraints a full walkover of all areas was not possible as part of the initial site assessment. Full access was also not available to all parts of the Study Area. The aim of the walkover was to broadly characterise habitat types within the Study Area boundary and to identify potential protected and/or invasive species constraints and further survey requirements.

Habitats within the area subject to walkover were classified following the standard Phase 1 survey methodology (JNCC, 2010). Phase 1 is a standard technique for classifying and mapping British habitats. Plant species were recorded, and habitats classified according to their vegetation type and community assemblage. A Phase 1 habitat plan was not part of the scope of this initial walkover and has not been produced as part of this technical note.

The suitability of the Study Area to support protected and/or notable species was assessed using field observations during the survey. The assessment of suitability for species was based on professional experience and judgement. This was supplemented by good practice guidelines on habitat suitability for key fauna, including but not limited to; birds (Gilbert et al, 1998 and Bibby et al, 2000), great crested newt *Triturus cristatus* (Gent and Gibson, 2003 and English Nature, 2001), badger *Meles meles* (Roper, 2010 and Scottish Natural Heritage, 2002), dormouse *Muscardinus avellanarius* (Bright and Mitchell-Jones, 2006), otter *Lutra lutra* (Chanin, 2003), water vole *Arvicola amphibius* (Dean et al, 2016 and Strachan et al, 2011) and bats (Collins, 2023 and Mitchell-Jones, 2004).

A formal Ground Level Tree Assessment (GLTA) was not carried out for the trees that were present within the Study Area due to time constraints, and as specific proposals are not yet known.

[1] MAGIC Multi-Agency Geographic Information for the Countryside – available at https://magic.defra.gov.uk/

[2] Aberdeenshire Local Development Plan 2023 – available at https://www.aberdeenshire.gov.uk/planning/plans-and-policies/ldp-2023/

[3] Scotland Environment Web – available at https://www.environment.gov.scot/

Plant species were recorded, and habitats classified according to their vegetation type and community assemblage. Where appropriate, consideration was given to whether habitats qualify, or could qualify as habitats listed on the Scottish Biodiversity List. The Scottish Biodiversity List is a list of animals, plants and habitats that the Scottish government consider to be of principal importance for biodiversity conservation in Scotland[4].

A detailed invasive non-native species (INNS) survey has not been completed, however incidental observations were made of invasive plant species listed on Schedule 9 of the Wildlife and Countryside Act (WCA) 1981 (as amended), Schedule 2 of the Invasive Alien Species (Enforcement and Permitting) Order 2019 (IAS Order 2019), and other non-native species which were evident during the survey were recorded.

This technical note is produced with reference to current good practice guidelines by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2017a, b) and Joint Nature Conservation Committee (JNCC, 2010) and guidelines contained in the British Standards – Code of Practice for Biodiversity and Development BS42020:2013.

2.3 Limitations

This report is an initial assessment of potential ecological constraints associated with the Scheme. It does not represent a full Preliminary Ecological Appraisal (PEA), and does not include baseline data from the Local Records Centre (NESBReC) or NBN (National Biodiversity Network). The report does not include habitat maps or target notes or species information from detailed surveys, with the exception of Invasive Non-Native Species (INNS). Further surveys will be required when options have been reviewed and the Study Area has been refined

3. Results

3.1 Desk Study

The Paradise Wood Site of Species Scientific Interest (SSSI) is located approximately 5 km from the western boundary of the Study Area. This site is one of the largest and oldest oak woods in north-east Scotland. Whilst not within 5 km of the Study Area, the eastern coast of this part of Scotland (approximately 25 km from the Study Area) has a number of designations including:

- Sands of Forvie and Ythan Estuary SSSI;
- Sands of Forvie Special Area of Conservation (SAC);
- Ythan Estuary, Sands of Forvie and Meikle Loch Special Protection Area (SPA); and
- Ythan Estuary and Meikle Loch Ramsar Site.

These sites are primarily designated for a range of coastal habitats and for the presence of important populations of overwintering and breeding bird species including pink-footed geese *Anser brachyrhynchus*, little tern *Sternula albifrons* and sandwich tern *Thalasseus sandvicensis*. The designated sites at the coast have been considered due to the potential for the Scheme Area to be used as functionally linked land (FLL) by qualifying species of these sites, which could trigger the need for a Habitats Regulation Assessments (HRA).

[4] Scottish Biodiversity List - available at: https://www.nature.scot/scotlands-biodiversity/scottish-biodiversity-strategy-and-cop15/scottish-biodiversity-list

The closest Local LNCS to the Study Area is the 'River Don between Kemnay and Bridge of Alford' (Site 91) which encompasses approximately 9 hectares of the south-western extent of the Study Area adjacent to the River Don. The following additional LNCSs are located within 2 km of the Study Area:

- Red Moss, Kemnay (Site 44), located outside of the north-western boundary of the Study Area on the opposite side of the River Don.
- Fetternear (Site 85), located 1.4 km west of the Study Area.

Two areas of long-established plantation ancient woodland are located within the south-east of the Study Area. These sites are Turquschoonoch Wood and Back Wilderness. An area of wet grassland which is on the Scottish Wetland Inventory is also located within Back Wilderness.

3.2 Habitat Survey

The following habitats were identified within the Study Area. Photographs are provided in Appendix A:

Improved grassland

Improved grassland pasture fields are located to the north and south of Kemnay town on the eastern bank of the River Don (photographs 1 and 2). The fields to the south form part of the River Don floodplain and fall within the boundary of the 'River Don between Kemnay and Bridge of Alford' LNCS.

Amenity grassland

Areas of managed amenity grassland are located within the boundary of Kemnay Golf Club located within the south of the Study Area. Additional areas of amenity grassland are located within the Study Area including small areas of parkland within Kemnay town (photograph 3), and playing fields associated with Alehousewells School and Kemnay Academy to the north.

Semi-improved neutral grassland

A number of fields within the south of the Study Area comprise rough semi-improved grassland pasture.

Marshy grassland

Occasional marshy grassland fields are located within the Study Area, primarily in the south, adjacent to the woodland at Back Wilderness (photograph 4).

Arable

Two small arable fields totalling approximately 10 hectares are located within the south of the Study Area .

Semi-natural and plantation broad-leaved woodland

Areas of mature broad-leaved woodland, part of which are classified as ancient woodland (Back Wilderness), are located within the south of the Study Area around Kemnay House (photograph

5). Additional areas of mature broad-leaved woodland are located on the western bank of the River Don (photograph 6)

Semi-natural and plantation mixed woodland

Areas of mature mixed woodland are located within the south of the Study Area associated with Kemnay House. An area of mature mixed woodland is also located on the western side of the River Don, to the north of Riverside Road.

Scrub and tall ruderal herbs

A band of tall herbs and scattered scrub is located along the right bank of the River Don (photograph 7).

Scattered trees

Scattered mature and semi-mature broad-leaved and coniferous trees are located throughout the Study Area. The majority of these are amenity trees associated with parkland areas (photograph 8).

Running water

The River Don follows the western boundary of the Study Area (photograph 9). The river is approximately 30 metres wide, with earth banks. There are a number of small islands within the channel with scattered trees, these are likely inundated when water levels in the river are high.

A number of drainage channels are located within the Study Area, including a large drain to the south-west, which drains into the River Don (photograph 10). Additional dry drainage channels are located within the mature woodland areas within the south of the Study Area (photograph 11).

Standing water

Two large ponds associated with historic quarrying activities are located within the north of the Study Area.

Full access to the Study Area was not available and additional ponds may be present.

Buildings, bare ground and gardens

Extensive buildings, areas of bare ground, roads and gardens are located within the boundary of Kemnay town.

3.3 Protected Species

Habitats within the Study Area have suitability to support a variety of protected species, and species listed on the Scottish Biodiversity List.

Amphibians

Two large ponds associated with historic quarrying activities are located to the north of the Study Area. These ponds could have suitability as habitat for amphibians including great crested newt.

Badger

No evidence of badger was identified during the ecological walkover, however areas of the Study Area, particularly mature woodland areas and adjacent habitats, have good suitability as locations for badger setts.

Bats

Bats could roost within mature trees, buildings and other structures within the Study Area. Habitats along the River Don and woodland habitats within the Study Area have good suitability as foraging and commuting habitat for a variety of bat species.

Breeding and Over-wintering Birds

Birds could nest within woodland, trees, hedgerows and scrub within the Study Area. Birds could also nest in bankside habitats along the River Don. Arable fields within the Study Area could be used by ground nesting bird species such as lapwing *Vanellus vanellus* and other farmland bird species. Schedule 1 bird species including barn owl *Tyto alba* could also be present.

The two arable fields within the Study Area are relatively small and are considered unlikely to have significant value as functionally linked land for over-wintering bird species associated with the SPA and Ramsar sites at the coast.

Breeding and overwintering birds including waders, geese and whooper swan *Cygnus cygnus* are key considerations for the LNCS site, which falls partly within the Study Area.

Dormouse

No areas of high quality potential dormouse habitat were identified within the Study Area and this species is not considered further.

Fish

The River Don is known to support a range of fish species including both brown trout *Salmo trutta* and salmon *Salmo salar.*

Otter

The River Don has suitability as habitat for otter, including suitable holt locations associated with bankside features and adjacent woodland areas. Anecdotal records of otter also exist along the river corridor.

Red squirrel

The woodlands within the Study Area have suitability to support red squirrel *Sciurus vulgaris*, and anecdotal records of this species exist in the vicinity of Kemnay.

Reptiles

Areas of semi-improved and marshy grassland, scrub and tall herbs and field margins within the Study Area have suitability as habitat for common reptile species.

Water Vole

The River Don and associated tributaries, as well as drainage channels within the Study Area, have suitability to support water vole.

Other

Habitats within the Study Area have suitability for a variety of other protected species and species listed on the Scottish Biodiversity List including pine marten *Martes martes*, polecat *Mustela putorius*, brown hare *Lepus europaeus* and European hedgehog *Erinaceous europaeus*.

3.4 Invasive Non-Native Species

No INNS were identified during the ecological walkover survey. However, access was not available to all parts of the Study Area.

4. Conclusions and Recommendations

4.1 Designated sites

Part of the Study Area lies within a Local Nature Conservation Site. Policy E1 (Natural Heritage) of the Aberdeenshire Local Plan states that for proposals which impact a Local Nature Conservation Site, the proposal's public benefits must clearly outweigh the nature conservation value of the site. In all cases, impacts must be minimised through careful design of proposals and appropriate mitigation measures.

There is a strong presumption against removing ancient semi-natural woodland or plantations. Works within ancient woodland sites should be avoided, and where ancient woodland sites are located in close proximity to Proposed Works, appropriate protection measures should be put in place.

4.2 Habitats

A number of habitats within the Study Area are included on the Scottish Biodiversity List. The listed habitats include lowland deciduous woodland, rivers and hedgerows. Where possible proposals should aim to minimise impacts on these habitats, and provide enhancements where opportunities exist.

In Scotland 'Net Positive for Nature' as part of National Planning Framework 4 (NPF4) Policy 3(e), includes the requirement for 'appropriate measures' to enhance biodiversity as part of development; this should be taken into account when designing proposals. In the future Scotland may adopt a metric based approach for biodiversity net gain, although no date for this has been set. Habitat creation should target habitats listed on the Scottish Biodiversity list.

Appropriate environmental protection measures should be put in place for any Proposed Works. These measures should include:

- Protection of existing ecological features, through avoidance and use of temporary protection measures such as fencing.
- Pollution control measures, particularly in relation to watercourses.

4.3 Protected Species

Habitats within the Study Area have suitability for a variety of protected species, and species listed on the Scottish Biodiversity List as detailed in Table 1 below. A full local records centre search with the North-East Scotland Biological Record Centre has not been completed at this stage and is recommended in order to identify any potential additional constraints in relation to protected species.

Table 1: Recommendations

Feature	Recommendation (design, mitigation and/or survey)	Seasonality/timing
Amphibians	Habitat Suitability Index (HSI) assessments of the ponds to the north of the Study Area are recommended if significant ground works will take place within 250 metres of these waterbodies. If the ponds are assessed as having suitability for great crested newt then additional environmental DNA (eDNA) surveys or full amphibian surveys may be required. If great crested newts are present and could be impacted by the Proposed Works then a licence will be required from NatureScot. In addition to the above, a precautionary working method statement (PWMS) in relation to amphibians is recommended during any works on site. The PWMS should include a toolbox talk (TBT) and pre-works searches of suitable terrestrial habitat within the working area by a suitably qualified ecologist (SQE). Potential refuge/hibernation sites for amphibians (log piles, piles of stone etc.) should not be cleared during the hibernation period.	Great crested newt surveys (including eDNA) from March to June. Amphibian hibernation period runs from November to February inclusive.
Badger	Badger surveys of any proposed working areas should be completed. Where active badger setts are identified works should either be re-positioned to minimise impacts, or where impacts are unavoidable a licence must be obtained from NatureScot. Due to the suitability of habitats within the Study Area for badgers, even where no badger setts are identified during additional surveys, a PWMS should be put in place during works. This PWMS should include a walkover of working areas for signs of new badger activity within 4 weeks of the proposed start on site, a TBT for site personnel and precautionary working methods during construction including no night working and covering trenches/open excavations at the end of each working day.	No seasonal constraints.
Bats	If the Proposed Works will impact trees or existing buildings/structures then further bat	PRA, GLTA – no seasonal

Feature	Recommendation (design, mitigation and/or survey)	Seasonality/timing
	surveys will be required. These would include an initial preliminary roost assessment (PRA) of buildings/structures to assess roosting suitability and search for evidence of bats, and GLTAs of trees. If buildings/structures or trees are found to have suitable roosting sites for bats, additional surveys may be required including tree climbing and/or emergence surveys. Where bat roosts are identified and cannot be avoided, a licence will be required from NatureScot.	constraints, however surveys of trees are more effective in winter. Bat emergence surveys – May to September.
Breeding and overwintering birds	Where possible, removal of any potential bird nesting habitat (as outlined in Section 3.3) should be avoided. Where removal is unavoidable, this should be completed outside of the nesting season (March to September). Where this is not possible, checks for active nests must be completed by an SQE immediately prior to removal of potential nesting habitat. Where mature trees are to be impacted at any time of year, checks should be made for nesting barn owl. These checks can be undertaken as part of bat GLTAs. Nesting bird checks, as detailed above, will also be required for arable land which could be used by species such as lapwing. Any loss of potential nesting habitat should be compensated for with new planting and/or the erection of bird boxes. Impacts on bird species utilising the River Don LNCS will need to be considered. Additional surveys and mitigation measures may be required if works will take place within the boundary of the LNCS.	Breeding birds checks to be undertaken for any removal of potential nesting habitat between March and August inclusive.
Fish	Any in-channel works at the River Don could impact brown trout and salmon. Timing restrictions must be placed on any in-channel works.	No works in salmonid watercourses between 1st October and 14th March
Otter	If works will be undertaken within 30 metres of the top of the bank of the River Don then further otter surveys should be completed.	Otter surveys any time of year

Feature	Recommendation (design, mitigation and/or survey)	Seasonality/timing
	Otter surveys would also be required if works are planned within mature woodland areas close to the river that could potentially support otter holts. If holts or resting sites are identified and will be disturbed as a result of the Proposed Works then an otter licence issued by NatureScot will be required. In addition to the above, even where no evidence of otters is found, a PWMS will be required for any works in close proximity to the river.	
Red squirrel	Wherever possible, existing woodland areas and mature trees should be avoided. Where this is not possible, surveys for red squirrel should be completed. Where red squirrel dreys will be impacted by Proposed Works a licence must be obtained from NatureScot. A PWMS for red squirrel will be required. This would include pre-works checks of any trees that will be impacted by the works to check for evidence of red squirrel dreys. Any planting as part of proposals should take account of red squirrel requirements, including planting suitable food sources such as Norway spruce.	Surveys can be undertaken at any time of year, optimum is spring and autumn
Reptiles	No large areas of potentially suitable reptile habitat were identified within the Scheme Area and full reptile surveys are therefore not considered to be required. Wherever possible, areas of potential reptile habitat should be avoided. Where areas of suitable habitat (long grass, scrub etc.) will be impacted by proposals, a PWMS should be adopted, including adhering to a method statement for the protection of reptiles, which includes a TBT and pre-works searches of the suitable habitat within the working area by an SQE. Potential refuge/hibernation sites for reptiles (log piles, piles of stone etc.) should not be cleared during the hibernation period. Opportunities exist within the proposals to create additional areas of high quality suitable	Reptile active season March/April to September/October (weather dependent). Reptile hibernation period runs from November to February inclusive.

Feature	Recommendation (design, mitigation and/or survey)	Seasonality/timing
	reptile habitat including rough grassland and wetland areas.	
Water voles	Wherever possible, potential water vole habitat should be avoided. Where this cannot be achieved, water vole surveys should be completed (this includes works within 30 metres of the top of the bank of any suitable watercourses and ditches). If water voles are found to be present and will be impacted by the Proposed Works then a water vole licence issued by NatureScot will be required. In addition to the above, even if no water vole are found during additional surveys, a PWMS in respect of this species will be required for works in areas of suitable habitat.	Water vole surveys from mid-April to mid-September
Scottish Biodiversity List species	A pre-works check of working areas for the presence of other notable species should be completed by an SQE immediately prior to the start of works. A method statement should be in place which includes protection of small mammals such as hedgehog.	N/A

4.4 Invasive Non-native Species (INNS)

No INNS were identified during the ecological walkover; however, a detailed survey of all areas was not completed. When working areas are known, a detailed INNS survey should be completed in advance of the proposed start on site.

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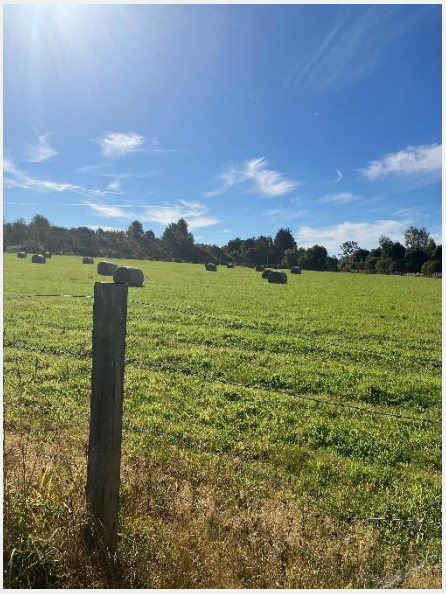
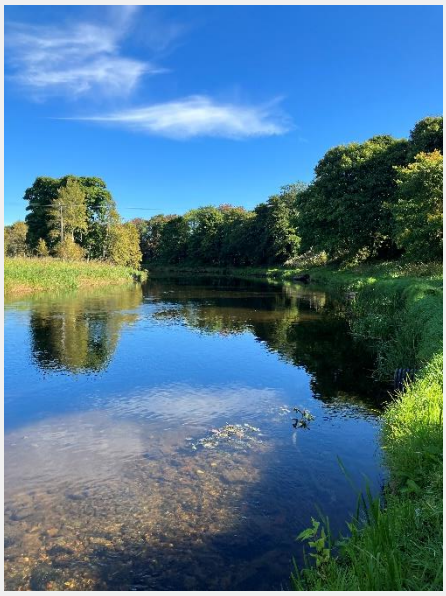
Appendix A: Photographs

Photograph		Photograph	
1	Improved grassland fields to south 	2	Improved grassland fields to north 
3	Amenity grassland parkland area 	4	Marshy grassland areas 

Photograph		Photograph	
5	Mature broad-leaved woodland to the south of the Study Area 	6	Mature broad-leaved woodland to the south of the Study Area 
7	Tall herbs and scrub on eastern bank of River Don 	8	Scattered trees within Study Area 

Photograph		Photograph	
9	River Don within the Study Area 	10	Drainage channel to south of Study Area 
11	Ditch within woodland area to south of Study Area