

## 4 Ecological Assessment

### 4.1 *Introduction*

This high level environmental review identifies the key constraints and opportunities in the study area. Data has been obtained from a brief desktop study.

As this is a high level review, further detailed environmental appraisal of the key issues identified will be required at feasibility stage.

### 4.2 *Protected Sites*

There is one SSSI that straddles the canal route. This is Froghall Meadow and Pastures (Citation 2000357) at NGR: SK 023 469. It consists of a series of unimproved, species-rich fields, showing a range of grassland types which are locally flushed, and areas of scrub.

There is a second SSSI that is situated within approximately 80m to the north-west and north-east of the proposed canal start point. This is Churnet Valley (Citation 1007135) at SK 024 485. The SSSI retains the largest remaining concentration of semi-natural ancient woodland in Staffordshire, intermixed with scrub, unimproved neutral and acid grassland and large areas of mire, marsh and carr. The area supports an outstanding assemblage of woodland birds.

Operations likely to damage the special interest at both SSSIs include, but are not limited to, modification of the structure of water courses and alterations to water levels and tables. As such further investigation will be required as the scheme progresses.

There are no statutory protected sites in the study area. Information on Ancient Woodland areas, Forestry Commission woodland and Countryside Stewardship agreements close to the proposed canal route are presented in the table below.

### 4.3 *Flora and Fauna*

The Staffordshire Local Biodiversity Action Plan (LBAP) comprises of a series of habitat and species action plans targeted towards those features important in Staffordshire. The species and habitats for which BAP's have been completed are listed in the Table below. There is no specific BAP for the canal route itself. The BAP's will be investigated in more detail at the feasibility stage. Connection of

isolated water bodies may have impacts upon flora and fauna by the introduction of alien species or water of differing acidity.

<b>Group</b>	<b>Species/ Habitat</b>
SPECIES	
Amphibians	Natterjack Toad, Great Crested Newt
Birds	Skylark, Nightjar, Linnet, Reed Bunting, Woodlark, Corn Bunting, Tree Sparrow, Grey Partridge, Bullfinch
Crustaceans	Freshwater White-clawed Crayfish
Fungi	Pink Meadow Cap
Local Species	Atlantic Salmon, Barn Owl, Bog Bush-cricket, Dyer's greenweed, Grass Snake, Ground Nesting Solitary Bees & Wasps, House Sparrow, Hybrid Bilberry, Lapwing, Native Black Poplar, Noctule Bat, Small Pearl-bordered Fritillary, Snipe, White-faced Darter, Yellowhammer
Mammals	Water Vole, Brown Hare, Otter, Pipistrelle Bat
Vascular Plants	Floating Water Plantain, Grass-wrack Pondweed
HABITAT	
Broad Habitats	Bogs, Broadleaved, mixed and yew woodland, Neutral grassland, Rivers and streams, Standing open water and canals
Local Habitat	Inland Saltmarsh
Priority Habitats	Ancient and/or species-rich hedgerows, Cereal field margins, Coastal and floodplain grazing marsh, Lowland calcareous grassland, Lowland dry acid grassland, Lowland heathland, Lowland wood-pasture and parkland, Reedbeds, Wet woodland

#### 4.4

##### ***Water Quality***

This is not thought to be a major issue, however reconnecting/connecting previously separated water bodies can impact upon water quality. In this instance, while the river and canal are joined further upstream, work would still be required to ensure this scheme had no adverse impacts. There may also be issues with water quality during flood events with interaction between the canal and other water courses.

#### 4.5

##### ***Cultural Heritage***

There are three Scheduled Monuments within 500m of the proposed canal route, as follows:

- Alton Castle (monument number 12002) at NGR SK 072 424 is approximately 185m to the South of the canal route.
- Bunburry Hillfort (monument number 21633) at NGR SK 071 431 – SK071 429 is approximately 220m to the north of the proposed canal route.
- Bowl Barrow (monument number 22422) at NGR SK 061 429 is approximately 490m to the west of the proposed canal route.

The proximity to the canal route may cause problems depending upon the nature of the ground between the canal and the monuments.

#### 4.6

##### ***Human Beings***

The canal route starts in Froghall, where there is a small settlement. On its route southwards the canal route bypasses the settlements of Oakamoor, Alton, Denstone, Stubwood, Rocester, Crakemarsh, Stramshall and Spath before terminating north of the town of Uttoxeter.

#### 4.7

##### ***Traffic and Transport***

The main transport links in the study area are the A52 and A50. The A52 goes through Froghall from west to east, connecting Stoke-on-Trent and Derby. The A50 passes to the north of Uttoxeter from west to east, connecting Stoke-on-Trent to the A1, bypassing Derby to the South.

The canal route also crosses the smaller B5417 at Oakamoor, B5031 and B5032 at Denstone and passes close to the B5030 between Denstone and Spath.

#### 4.8

##### ***Contaminated Land***

Depending on the finalised route and construction methods, contaminated land may prove an issue particularly on the brownfield sites on either side of the A52.

#### 4.9

##### ***Key Opportunities and Constraints***

The scheme presents the opportunity to restore the canal for the benefit and use of the public with the creation of wetland habitats, and a corridor linking other areas of habitat.

Key known and potential constraints in the study area include:

- Froghall Meadow and Pastures SSSI
- Churnet Valley SSSI
- Heritage and archaeological features
- Protected species/habitats (presence/absence to be confirmed)
- Possible contaminated land issues.
- Possible water quality issues

#### 4.10

##### ***Recommendations***

As a minimum, the following external consultees should be consulted to obtain further baseline information and to maximise potential environmental opportunities:

- Environment Agency Officers
- Relevant Local Authority Officers
- Natural England
- Local Wildlife Trust
- English Heritage

An ecological walkover survey should also be undertaken to ascertain the need for more detailed species surveys.

Canal Section				
	Froghall to Oakamoor	Oakamoor to Alton	Alton to Denstone	Denstone to Uttoxeter
	MoseyMoor Wood, 20.89Ha Ancient Replanted Woodland NGR SK024482. Approx 60m to the North of canal route	Light Oaks Wood, 5.51Ha Ancient & Semi Natural Woodland NGR SK063429. Approx 190m to the West of canal route	Barbary Gutter, 6.6Ha Ancient & Semi Natural Woodland NGR SK066432. Adjacent to Canal Route	The Alders, 2.3Ha Ancient and Semi Natural Woodland NGR SK092386, approx 640m to the West of canal route
	Straigh Hills Wood, 4.61Ha Ancient & Semi Natural Woodland NGR SK027472. Approx 25m to the North-East of canal route	(Name Unknown), 0.11Ha Ancient Replanted Woodland NGR SK054443. Adjacent to canal route	Barbary Gutter, 57.63Ha Ancient Replanted Woodland NGR SK079430. Adjacent to Canal Route	-
Ancient Woodland	Ashbourne Hey, 9.32Ha Ancient & Semi Natural Woodland NGR SK035459. Approx 125m to the North of canal route	(Name Unknown), 0.28Ha Ancient Replanted Woodland NGR SK056442. Adjacent to canal route	Crumpwood, 3.17Ha Ancient & Semi Natural Woodland NGR SK089425. Adjacent to Canal Route	-
	Lockwood and Lockwood Waste, 2.24Ha Ancient Replanted Woodland NGR SK029453. Approx 250m to the South of canal route	(Name Unknown), 6.5Ha Ancient Replanted Woodland NGR SK059439. Adjacent to canal route	-	-
	Lockwood and Lockwood Waste, 8.89Ha Ancient & Semi Natural Woodland NGR SK026454. Approx 250m to the South of canal route	Moss Bank, 33.16Ha Ancient Replanted Woodland NGR SK056436. Approx 115m to the West of canal route	-	-

Canal Section				
Froghall to Oakamoor	Oakamoor to Alton	Alton to Denstone	Denstone to Uttoxeter	
Ashbourne Hey, 3.61Ha Ancient Replanted Woodland NGR SK034456. Approx 30m to the North of canal route	Moss Bank, 9.72Ha Ancient Replanted Woodland NGR SK058432. Approx 160m to the West of canal route	-	-	
Ashbourne Hey, 0.65Ha Ancient & Semi Natural Woodland, NGR SK034455 Approx 30m to the North of canal route	Moss Bank, 8.57Ha Ancient & Semi Natural Woodland NGR SK063429. Approx 95m to the West of canal route	-	-	
Lightoaks Wood, 1.15Ha Ancient & Semi Natural Woodland NGR SK038450. Approx 100m to the South of canal route	-	-	-	
Lightoaks Wood, 43.31Ha Ancient Replanted Woodland NGR SK041446. Approx 50m south of canal route	-	-	-	
Key Wood, 13.48Ha Ancient Replanted Woodland NGR SK044454. Close to Canal Route	-	-	-	
Carr Wood, 17.08Ha Ancient Replanted Woodland NGR SK02453. Close to Canal Route	-	-	-	
Ancient Woodland				

Canal Section				
	Froghall to Oakamoor	Oakamoor to Alton	Alton to Denstone	Denstone to Uttoxeter
	Carr Wood, 0.18Ha Ancient & Semi Natural Woodland, NGR SK047451. Close to Canal Route	-	-	-
Countryside Stewardship Agreement	36.46Ha & 118.3Ha, adjacent to canal route	None	None	204.34Ha approx 85m to the East of canal route
Forestry Commission Woodland	Cannock, Key Wood, 4.18Ha & 7.38Ha	None	Cannock, Land at Dimmings Dale, 115.77Ha	None