

COUNTY: HEREFORD AND WORCESTER/  
SHROPSHIRE/POWYS

SITE NAME: RIVER TEME/AFON  
TEFEIDIAD

Status: Site of Special Scientific Interest (SSSI) notified under Section 28 of the Wildlife and Countryside Act 1981 as amended

Local Planning Authorities: SOUTH SHROPSHIRE DISTRICT COUNCIL, Shropshire County Council, Hereford & Worcester County Council, Worcester City Council, Leominster District Council, Malvern Hills District Council, Powys County Council

National Grid References: SO 121848–SO 850525

Ordnance Survey Sheets:

1:50,000: 136, 137, 138, 150

1:10,000:	SO 18 SW, SE	SO 57 NW, SW	SO 85 SW
	SO 17 NE	SO 56 NW, NE	
	SO 27 NW, NE, SE	SO 66 NW, NE	
	SO 37 SW, SE	SO 75 NW, NE, SE	
	SO 47 SW, SE, NE	SO 76 NW, SW	

Length		Area	
R. Teme in England	109.6 (km.)	England	419.8 ha
R. Teme in Wales	24.7 (km.)	Wales	44.2 ha
Total of R. Teme	134.3 (km.)	Total	464 ha
R. Clun	4.7 (km.)		
Total	139.1 (km.)		

Date of Notification: 19 July 1996

Other Information

This is a new site. The site supports the following species covered by Council Directive 92/43/EEC on the conservation of Natural Habitats and of Wild Flora and Fauna:

Twaite shad <i>Alosa fallax</i>	Annex IIa, Va;
Sea lamprey <i>Petromyzon marimus</i>	Annex IIa
Brook lamprey <i>Lampetra planeri</i>	Annex IIa
Salmon <i>Salmar salmo</i>	Annex IIa, Va;
Bullhead <i>Cottus gobio</i>	Annex IIa
Grayling <i>Thymallus thymallus</i>	Annex Va
Otter <i>Lutra lutra</i>	Annex IIa, IVa;
Atlantic stream crayfish <i>Austropotomobius pallipes</i>	Annex IIa, Va
Freshwater pearl mussel <i>Margaritifera margaritifera</i>	Annex IIa, Iva

Otter, Atlantic stream crayfish, and freshwater pearl mussel are also listed under Schedule 5 of the Wildlife and Countryside Act 1981, as amended.

The Welsh section of the river lies within the Radnor Environmentally Sensitive Area (ESA). The English section of the river runs through the Clun ESA and Shropshire Hills Area of Outstanding Natural Beauty.

The site incorporates part of Downton Gorge SSSI and National Nature Reserve, as well as Temeside and Temebank geological SSSI.

Description and Reasons for Notification:

The River Teme is the second largest tributary of the River Severn, draining a hilly, predominantly rural catchment of Silurian and Devonian rocks. The notified channel is of special interest as a representative, near-natural and biologically-rich river type associated

with sandstone and mudstones. This type has a mainly northern and western distribution in Britain but is especially characteristic of the Welsh Marches.

The Teme demonstrates a close relationship with the underlying geology. A short, rapid-flowing upland section, with nutrient-poor and relatively acidic waters, changes to a more basic and naturally nutrient-rich system for most of the river's length as it passes over Silurian shales and mudstones, and the Old Red Sandstone strata. At its lowest section, the Teme is a sluggish, lowland river on soft deposits.

These attributes and the high water quality, support significant river plant, fish and invertebrate communities and otter populations. A small section of the lower River Clun is included in the SSSI for a notable species.

The Teme rises at 460 m on Cilfaesty Hill, Powys and falls steeply to Knighton, descending 122 m over 1.6 kms of the English/Welsh border. It then flows through a more gentle landscape via Ludlow and Tenbury Wells to join the River Severn just below Worcester. The river is actively eroding and fast flowing, with many shingle bars, especially above Leintwardine. Where the river cuts through the sandstone, the bed is often formed of submerged rock platforms. The banks are well tree-lined with alder *Alnus glutinosa*, with some willow *Salix* spp. stands.

There are extensive areas of rough grassland and wet flushes dominated by mosses and sedges on Cilfaesty Hill Common, but thereafter the adjoining land use is mostly permanent pasture, arable fields, hop-yards and orchards. Parts of the river run through deciduous woodland, mainly of oak *Quercus* spp. and ash *Fraxinus excelsior*, some of which occurs in steep ravines. Wetter areas hold small alder carrs, on both shingle and alluvial soils. Little flood plain wetland has survived, though some of the early river engineering schemes have left cut-off meander loops which have developed marsh vegetation.

#### Geology and Topography

Near to the source the young river drains an upland area based on Silurian siltstones, the bedrock geology being the dominant influence on the river bed. Numerous peaty flushes and several small moorland tributary streams join the river here as it passes through a small, steep-sided rocky gorge. The Ring, an active land slip located on Cilfaesty Common, deposits silt and gravel into the channel which has a locally enriching effect on the nutrient status of the waters. After leaving Cilfaesty Hill the Teme flows through the narrow valley of Cwm Owyn to Felindre and from there on to a wider floodplain. Downstream from here the river shows a variety of fluvial geomorphological features such as back channels, storm flow channels and cut-off pools.

Down to Brampton Bryan the rocks are predominantly shales and mudstones of neutral base status but below this they change to more calcareous types and sandstones. Devonian Old Red Sandstone is the bedrock from Downton to Knightwick, with Triassic Mercian Mudstone from there to the confluence. From Felindre down to Leintwardine the river has a well developed pool and riffle system, with a cobble and pebble river bed. There are also extensive lateral gravel banks. After Downton Gorge and past Ludlow, submerged sandstone rock platforms become a feature. The lowest reaches near to Worcester traverse clays and silts to give a lowland and mature river.

Such variations in geology, flow and substrate give rise to diverse river plant and animal communities, ranging from species-poor upland spate types, to those more characteristic of slow flowing, alluvial rivers.

#### Flora

The highest section of the river has many small falls and pools with a good cover of the moss *Amblystegium tenax*, along with other bryophytes such as the liverwort *Marchantia polymorpha* and the moss *Fontinalis squamosa*. A small side pool supports the stonewort *Chara vulgaris* var. *vulgaris*. Characteristic higher plants in these upper stretches are round-

leaved water crowfoot *Ranunculus omiophyllus* and intermediate water starwort *Callitriche hamulata*, with the reed canary grass, *Phalaris arundinacea*, as a marginal species. There are also algal communities covering the pebble and small boulder-strewn river bed throughout its length, with various species of filamentous green algae and the distinctive red alga *Hildenbrandia rivularis*, the latter reflecting the high water quality.

With an increase in calcareous influence between Knighton and the Clun confluence, beds of the water crowfoots *Ranunculus fluitans* and *R. penicillatus* v *psuedofluitans* appear. The outcropping of the Lower Old Red Sandstone around Ludlow allows the river to cut deeply into the bedrock, with a subsequent change in the aquatic flora. There tends to be one major water plant community in these lower reaches, with the river water crowfoot *R. fluitans* dominating. The large algae *Enteromorpha* is found, together with pondweeds such as fennel pondweed *Potamogeton pectinatus* and perfoliate pondweed *P. perfoliatus*. Vigorous stands of the branched bur reed *Sparganium erectum* occur as a marginal species, along with water plantain *Alisma plantago-aquatica* and water figwort *Scrophularia auriculata*

The river banks between Tenbury Wells and Knightwick are often dominated by dense stands of comfrey *Symphytum officinalis*, with some areas suffering invasion from the alien Himalayan balsam *Impatiens glandulifera*.

#### Mammals

The otter *Lutra lutra* has well established populations on the Teme, the stronghold being between Ludlow and Knighton, but they are found all along the river from Cwm Gwyn to Powick. Mink *Mustela vison* are also reported to be widespread in the catchment.

#### Invertebrates

The Teme has a good population of Atlantic stream crayfish *Austropotomobius pallipes*, a globally threatened and seriously declining species. The extensive shingle shoals hold a particularly interesting and rare riffle beetle community, with some 17 species being recorded. Of these, *Normandia nitens* is classed as Vulnerable, with *Macronychus quadrituberculatus* being nationally rare. The nationally scarce beetles *Riolus subviolaceus* and *R. cupreus* are found in the channel, with the nationally scarce carabid beetle *Bembidium semipunctatum* occurring on the banks. The SSSI also holds a population of the freshwater pearl mussel *Margaritifera margaritifera*, a rare and specially protected species.

#### Fish

The River Teme has long been recognised as a quality salmonid and coarse fishery. The fish communities strongly reflect the ecological changes in the river as it descends the catchment.

The lower and middle reaches have eels *Anguilla anguilla*, dace *Leuciscus leuciscus*, barbel *Barbus barbus*, bream *Abramis brama*, perch *Perca fluviatilis*, roach *Rutilus rutilus* and chubb *Leuciscus cephalus*. The latter species is typical of the slow and deep flows of the lower and middle river and is found upstream as far as Ludlow, whereas the brown trout is found most commonly above this point. Salmon *Salmar salmo* and grayling *Thymallus thymallus* are also present up to the weir at Buckton. Brook lamprey *Lampetra planeri*, stone loach *Noemacheilus barbatulus* and bullhead *Cottus gobio* can be found in the fast and rocky stretches, though bullhead and stone loach do occur low down the river at Knightwick. Bullheads occur even in the very shallow and fist flows on the open hill near the source. Sea lamprey *Petromyzon marinus* has been recorded on the lower reaches of the Teme.

Of particular conservation interest are the records of the very rare twaite shad *Alosa fallax fallax* in the very lowest reaches of the Teme. This may represent an extension of the spawning ground from the Severn, which is one of only four confirmed breeding sites in the UK.

### Breeding Birds

The bird community is typical of that found along medium to fast flowing rivers. The dipper *Cinclus cinclus* is to be found in almost all the rocky sections together with the grey wagtail *Motacilla cinerea*, though the latter species is equally at home on the silt banks of the lower reaches. Both kingfishers *Alcedo atthis* and sand martins *Riparia riparia* readily utilise the eroding earth banks which the river produces as it meanders, and common sandpipers *Tringa hypoleucos* occur on the shingle bars above Ludlow. There are also records of goosander *Mergus merganser*.