




Examples of PlaceMarker Surveys






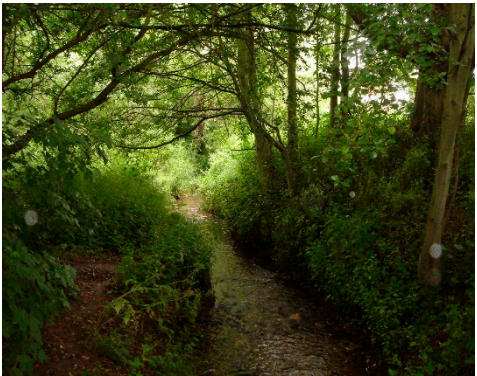


Supplementary Information 3 presents examples of PlaceMarker surveys undertaken in different settings with summary details of metrics, impression-based assessments, and key points: (a) Bradford-on-Avon, Wiltshire; (b) Deben, near Debenham, Suffolk; (c) Moat Road, Wood Brook, Loughborough; (d) River Tame, Bromford and Castle Vale, Birmingham.


For further details on the SHQI values please refer to *Table 4: SHQI values and categories, associated characteristics, and management recommendations to improve physical habitat quality and diversity*.

Full details of the PlaceMarker Survey can be found in Supplementary Information 1: Technical Manual. For details of the PlaceMarker Classifications and Indices please refer to Supplementary Information 2.

<p>(a) Bradford-on-Avon Flood Alleviation Scheme</p>	<p>Pre-project survey completed on 14.4.16</p>
<p>River Stretch Survey Grid references: Upstream ST 82670 60874; Downstream ST 82309 60642</p> <p>Stretch Habitat Quality Index (SHQI): 9 Average Materials class: Lightly engineered (LE) Physical habitat class: Stable (St) Vegetation class: Moderate tree cover, vegetated channel (MTV) Complexity class: High Stability class: Slightly Dynamic Channel condition class: Very Poor Connectivity class: High</p> <p><i>Stretches with varying levels of engineering, but displaying some level of either recovery or activity, with reduced riparian vegetation complexity or excessive macrophyte growth. The recommendation is, where possible, to reduce the levels of immobile substrates and bank materials and increase sinuosity. Tree cover and bank top and face vegetation should be managed to provide increased variety and complexity. These channels show moderate to high levels of activity and should be targeted for rehabilitation where opportunities arise.</i></p>	
<p>Study Area Survey Impression-based assessments Habitat Quality Assessment (HaQA): 4 Poor Landscape Quality Assessment (LQA): 2 Good Amenity Quality Assessment (AQA): 2 Good Heritage Quality Assessment (HeQA): 1 Very Good</p> <p>Key Points: Habitat. River heavily constrained by buildings and walls along its banks, some large mature trees growing on the river margins and out of the river walls, little space for marginal vegetation, little evidence of in channel vegetation. Landscape. Area of high public use and visual appearance of any work will be scrutinised by local people and the visiting public. Vernacular Architecture, mature trees, and adjacent parkland play a significant role in the landscape are important in forming the setting for the site. A 'Landscape Visual Assessment' will be needed to support any Environment Agency scheme. Heritage. Architecture is a major feature of the Study Area and Visual Fringe. The road bridge across the river dating from the 13th Century is a major heritage feature. Amenity. Plentiful public access to the left bank, with good footpath connectivity although this could be improved but there is limited access on the right bank. Much of the Study Area is attractive, mainly formal gardens with plenty pf public seating. The Environment Agency should seek to retain and, if possible, improve the view of the river from the Study Area.</p>	 

<p>(b) Deben, downstream of Debenham, Suffolk Proposed flood risk management scheme</p>	<p>Pre-project survey completed on 11.4.16</p>
<p>River Stretch Survey Grid references: Upstream TM 17661 62752; Downstream TM 18060 62571</p> <p>Stretch Habitat Quality Index (SHQI): 7 Average Materials class: Semi-natural (medium) (SNM) Physical habitat class: Semi-natural moderately active (SNMAct) Vegetation class: Moderate tree cover, vegetated channel (MTV) Complexity class: High Stability class: Dynamic Channel condition class: Average Connectivity class: Very High</p> <p><i>Stretches with varying levels of engineering, but displaying some level of either recovery or activity, with reduced riparian vegetation complexity or excessive macrophyte growth. The recommendation is, where possible, to reduce the levels of immobile substrates and bank materials and increase sinuosity. Tree cover and bank top and face vegetation should be managed to provide increased variety and complexity. These channels show moderate to high levels of activity and should be targeted for rehabilitation where opportunities arise.</i></p>	
<p>Study Area Survey</p> <p>Impression-based assessments Habitat Quality Assessment (HaQA): 2 Good Landscape Quality Assessment (LQA): 3 Average Amenity Quality Assessment (AQA): 5 Very Poor Heritage Quality Assessment (HeQA): 5 Very Poor</p> <p>Key Points: Habitat. Study area comprises ungrazed rough grassland and horse pasture. River has good tree cover along its banks with some mature trees (Ash) and decaying trees mixed with scrub. Some evidence of past dredging and river adjustment. Consult with geomorphologist and Fisheries & Biodiversity Group about potential for habitat improvement including reconnection of an old meander loop. Landscape. Rural landscape village and church can be seen from the Study Area. River is incised and not easily visible so currently not a significant landscape feature. Heritage. No heritage features within the Study Area. Amenity. There is no public access to the Study Area but the conservation area of Debenham with its historic buildings is a 5-minute walk away so there might be an opportunity to create public access and a circular walk.</p>	 

<p>(c) Loughborough Flood Alleviation Scheme (Moat Road, tributary of Wood Brook)</p>	<p>Pre-project survey completed on 29.6.16</p>
<p>River Stretch Survey Grid references: Upstream SK 52513 17111; Downstream SK 52359 17776 Stretch Habitat Quality Index (SHQI): 6 Good Materials class: Semi-natural (medium) (SNM) Physical habitat class: Semi-natural moderately active (SNMAct) Vegetation class: High tree cover with some connectivity, low channel vegetation (HTLV) Complexity class: Above Average Stability class: Dynamic Channel condition class: Average Connectivity class: High</p> <p><i>Semi-natural, recovering and a few uniform channels displaying some activity, with good vegetation complexity and tree cover. The recommendation is to remove any remaining reinforcement to allow the channel to recover more freely. These stretches should also be protected from further development.</i></p>	
<p>Study Area Survey Impression-based assessments Habitat Quality Assessment (HaQA): 3 Average Landscape Quality Assessment (LQA): 3 Average Amenity Quality Assessment (AQA): 2 Good Heritage Quality Assessment (HeQA): 4 Poor</p> <p>Key Points: Habitat. Willow trees form a semi continuous buffer along the channel with tall ruderals and scrub. Two local wildlife sites are linked to the study area including Pignut Spinny LWS and a local designated hedgerow along track between Moat Road and Bramcote Road and leading off Craven Close. Moat Road LWS is a lowland wet grassland with a characteristic flora (Greater Burnett and Meadow Sweet). Landscape. Extensive areas of amenity grassland along right bank adjacent to residential areas with views across and to the tree and scrub watercourse corridor. Filtering the views are clumps of standard planted trees. More varied and active management of the watercourse corridor could seek to improve visual linkages. Heritage. Listed Moat House and associated overflow to the tributary. The building and garden are fenced with tall trees and shrubs boundary and have no visual connection to the study area. Amenity. Three footbridges along the river stretch provide linkages within and across the study area and to the wider area and the public rights of way network. The track and designated hedgerow offer a 'green lane' crossing the area and linking to the surrounding countryside. Area includes amenity grassland and a well-used children's playground with adjacent car park.</p>	  

(d) River Tame, Bromford and Castle Vale Flood Risk Management Scheme	Pre-project survey completed on 21.10.16
<p>River Stretch Survey 1 Grid references: Upstream SP 11642 89473; Downstream SP 11867 89661</p> <p>Stretch Habitat Quality Index (SHQI): 7 Average Materials class: Lightly engineered (LE) Physical habitat class: Semi-natural stable (SNSt) Vegetation class: High tree cover with some connectivity, low channel vegetation (HTLV) Complexity class: Low Stability class: Slightly Dynamic Channel condition class: Very Poor Connectivity class: Poor</p> <p><i>Stretches with varying levels of engineering, but displaying some level of either recovery or activity, with reduced riparian vegetation complexity or excessive macrophyte growth. The recommendation is, where possible, to reduce the levels of immobile substrates and bank materials and increase sinuosity. Tree cover and bank top and face vegetation should be managed to provide increased variety and complexity. These channels show moderate to high levels of activity and should be targeted for rehabilitation where opportunities arise.</i></p>	
<p>River Stretch Survey 2 Grid references: Upstream SP 12755 90008; Downstream SP 13219 90148</p> <p>Stretch Habitat Quality Index (SHQI): 14 Poor Materials class: Heavily engineered (HE) Physical habitat class: Uniform adjusting (UAdj) Vegetation class: Low tree cover, low channel vegetation (LTLV) Complexity class: Very Low Stability class: Slightly Dynamic Channel condition class: Average Connectivity class: Moderate</p> <p><i>Moderate to heavily engineered channels with low to moderate levels of activity, low complexity of bank vegetation and often algal dominated channels. The recommendation is to assess the water quality for improvement of in-channel vegetation diversity and undertake a detailed assessment of the level of rehabilitation required to improve the physical condition of the channel. Where possible, a reduction of reinforcement level and/or type and an increase in sinuosity of the channel is desirable.</i></p>	
<p>Study Area Survey</p> <p>Impression-based assessments Habitat Quality Assessment (HaQA): 4 Poor Landscape Quality Assessment (LQA): 4 Poor</p>	

Amenity Quality Assessment (AQA): 3 Average
Heritage Quality Assessment (HeQA): 5 Very Poor

Key Points:

Habitat. Area of unmanaged scrub and woodland at the downstream end of the study area.

Landscape. Line of trees providing screening of elevated M6 from residential properties.

Heritage. No heritage features.

Amenity. Amenity grassland and new recreational facilities at upstream end of study area adjacent to Bromford Drive comprising children's play equipment, skateboard ramps, basketball court, and outdoor gym equipment and seating benches.

