















RIVER HABITAT SURVEY 2003 Version		Page 1 of 4					
<b>A FIELD SURVEY DETAILS</b>							
<p>Site Number: <span style="border: 1px solid black; padding: 2px;">leave blank if new site</span></p> <p>Site Reference: OXFAS RMSS</p> <p>Spot-check 1 Grid Ref: SP51803 03845</p> <p>Spot-check 6 Grid Ref: SP51863 03599</p> <p>End of site Grid Ref: SP51985 03386</p> <p>Reach Reference: OXFAS RMSS</p> <p>River name: Hinksey Stream</p> <p>Date 18/15/2017 Time: 11:00</p> <p>Surveyor name: Rob Harrison</p> <p>Accredited Surveyor code: FA009</p>	<p>Is the site part of a river or an artificial channel? River <input checked="" type="checkbox"/> Artificial <input type="checkbox"/></p> <p>Are adverse conditions affecting survey? No <input checked="" type="checkbox"/> Yes <input type="checkbox"/></p> <p>If yes, state .....</p> <p>Is bed of river visible? barely or not <input type="checkbox"/> partially <input type="checkbox"/> ± entirely <input checked="" type="checkbox"/></p> <p>Is health and safety assessment form attached? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>Number of photographs taken: <span style="border: 1px solid black; padding: 2px;">4</span></p> <p>Photo references: <i>96th bridge</i> SCBUS-930 <i>165-05 from bridge</i> SCBDS-979</p> <p>Site surveyed from: left bank <input checked="" type="checkbox"/> right bank <input type="checkbox"/> channel <input type="checkbox"/></p> <p><input type="checkbox"/> When options shown with 'shadow boxes', tick one box only</p> <p style="text-align: center;"><b>LEFT banks determined by facing downstream RIGHT</b></p>						
<b>B PREDOMINANT VALLEY FORM (within the horizon limit) (tick one box only)</b>							
<p>(tick one box only)</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><input checked="" type="checkbox"/> shallow vee</p> <p><input type="checkbox"/> deep vee</p> <p><input type="checkbox"/> gorge</p> </div> <div style="width: 45%;"> <p><input type="checkbox"/> concave/bowl</p> <p><input type="checkbox"/> asymmetrical valley</p> <p><input type="checkbox"/> U-shape valley</p> <p><input type="checkbox"/> no obvious valley sides</p> </div> </div> <p>Distinct flat valley bottom? No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> Natural terraces? No <input checked="" type="checkbox"/> Yes <input type="checkbox"/></p>							
<b>C NUMBER OF RIFFLES, POOLS AND POINT BARS (enter total number in boxes)</b>							
<p>Riffle(s) <span style="border: 1px solid black; padding: 2px;">0</span></p> <p>Pool(s) <span style="border: 1px solid black; padding: 2px;">0</span></p>		<p>Unvegetated point bar(s) <span style="border: 1px solid black; padding: 2px;">0</span></p> <p>Vegetated point bar(s) <span style="border: 1px solid black; padding: 2px;">0</span></p>					
<b>D ARTIFICIAL FEATURES (indicate total number of occurrences of each category within the 500m site)</b>							
<p>If none, tick box <input type="checkbox"/></p>							
	Major	Intermediate	Minor	Outfalls/intakes	Major	Intermediate	Minor
				2			
				Fords			
				Deflectors/groynes/croys			
				Other - state			
<p>Is channel obviously realigned? No <input type="checkbox"/> Yes, &lt;33% of site <input type="checkbox"/> ≥33% of site <input checked="" type="checkbox"/></p> <p>Is channel obviously over-deepened? No <input type="checkbox"/> Yes, &lt;33% of site <input type="checkbox"/> ≥33% of site <input checked="" type="checkbox"/></p> <p>Is water impounded by weir/dam? No <input checked="" type="checkbox"/> Yes, &lt;33% of site <input type="checkbox"/> ≥33% of site <input type="checkbox"/></p>							

SITE REF. <u>OXFAS RHS 5</u>		RIVER HABITAT SURVEY: TEN SPOT-CHECKS										Page 2 of 4	
Spot-check 1 is at: upstream end <input checked="" type="checkbox"/>		downstream end <input type="checkbox"/>		of site (tick one box)									
<b>E PHYSICAL ATTRIBUTES</b> (to be assessed across channel within 1m wide transect)													
<b>When boxes 'bordered', only one entry allowed</b>		1 GPS	2	3	4	5	6 GPS	7	8	9	10	GPS	
<b>LEFT BANK</b>		Ring EC or SC if composed of sandy substrate											
<b>Material</b> NV, BE, BO, CO, GS, EA, PE, CL, CC, SP, WP, GA, BR, RR, TD, FA, BI		EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	
<b>Bank modification(s)</b> NK, NO, RS, RI, PC(B), BM, EM		RS	RS	RS	R	RS	RS	RS	RS	RS	RS	RS	
<b>Marginal &amp; bank feature(s)</b> NV, NO, EC, SC, PB, VP, SB, VS, NB		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
<b>CHANNEL</b>		GP-ring either G or P if predominant											
<b>Channel substrate</b> NV, BE, BO, CO, GP, SA, SL, CL, PE, EA, AR		GP	GP	SL	SL	SL	SL	SL	SL	SL	SL	SL	AR
<b>Flow-type</b> NV, FF, CH, BW, UW, CF, RP, UP, SM, NP, DR		SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	
<b>Channel modification(s)</b> NK, NO, CV, RS, RI, DA, FO		RS	RS	R	RS	RS	RS	RS	RS	RS	RS	RS	
<b>Channel feature(s)</b> NV, NO, EB, RO, VR, MB, VB, ML, TR		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
<b>For braided rivers only: number of sub-channels</b>													
<b>RIGHT BANK</b>		Ring EC or SC if composed of sandy substrate											
<b>Material</b> NV, BE, BO, CO, GS, EA, PE, CL, CC, SP, WP, GA, BR, RR, TD, FA, BI		EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	
<b>Bank modification(s)</b> NK, NO, RS, RI, PC(B), BM, EM		RS	RS		RS	RS	RS	RS	RS	RS	RS	RS	
<b>Marginal &amp; bank feature(s)</b> NV, NO, EC, SC, PB, VP, SB, VS, NB		NO	NO	N	NO	NO	NO	NO	NO	NO	NO	NO	
<b>F BANKTOP LAND-USE AND VEGETATION STRUCTURE</b> (to be assessed over a 10m wide transect)													
<b>Land-use: choose one from BL, BP, CW, CP, SH, OR, WL, MH, AW, OW, RP, IG, TH, RD, SU, TL, IL, PG, NV</b>													
<b>LAND-USE WITHIN 5m OF LEFT BANKTOP</b>		TH	BL	L	BL	BL	BL	BL	BL	BL	BL	BL	
<b>LEFT BANKTOP (structure within 1m)</b> B/U/S/C/NV		U	S	S	S	S	S	S	S	S	S	S	
<b>LEFT BANK-FACE (structure)</b> B/U/S/C/NV		U	S	S	S	S	S	S	S	S	S	S	
<b>RIGHT BANK-FACE (structure)</b> B/U/S/C/NV		S	S	S	S	S	S	S	S	S	S	S	
<b>RIGHT BANKTOP (structure within 1m)</b> B/U/S/C/NV		S	S		S	S	S	S	S	S	S	S	
<b>LAND-USE WITHIN 5m OF RIGHT BANKTOP</b>		BL	BL	BL	BL	BL	BL	BL	BL	BL	BL	BL	
<b>G CHANNEL VEGETATION TYPES</b> (to be assessed over a 10m wide transect: use E (> 33% area), ✓ (present) or NV (not visible))													
None (✓) or Not Visible (NV)											✓	✓	
Liverworts/mosses/lichens													
Emergent broad-leaved herbs													
Emergent reeds/sedges/rushes/grasses/horsetails		✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	
Floating-leaved (rooted)													
Free-floating													
Amphibious													
Submerged broad-leaved ( <i>Najas tuberosa</i> )		✓										✓	
Submerged linear-leaved													
Submerged fine-leaved		✓										✓	
Filamentous algae													
Use end column for overall assessment over 500m, including types not occurring in spot-checks (use ✓, E or NV)													

↑ Enter channel substrate(s) not occurring as predominant in spot-checks but present in >1% of whole site.

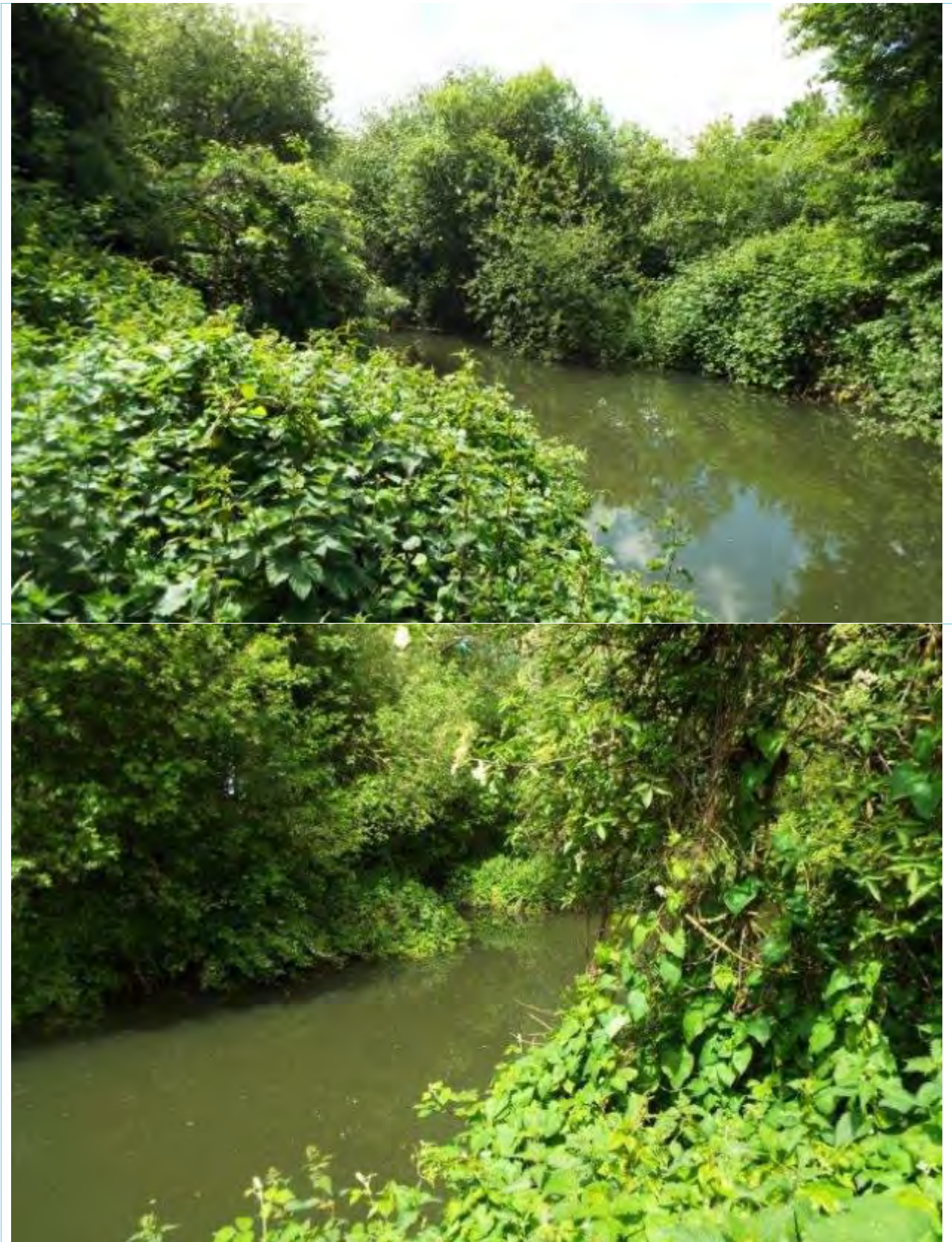
Mag bridge - 1

SITE REF: <b>OXFAS BRSS</b>		<b>RIVER HABITAT SURVEY : 500m SWEEP-UP</b>				Page 3 of 4	
<b>H LAND-USE WITHIN 50m OF BANKTOP</b> Use ✓ (present) or E (> 33% banklength)							
	L	R		L	R		
Broadleaf/mixed woodland (semi-natural) (BL)	E	E	Natural open water (OW)				
Broadleaf/mixed plantation (BP)			Rough/unimproved grassland/pasture (RP)				
Coniferous woodland (semi-natural) (CW)			Improved/semi-improved grassland (IG)				
Coniferous plantation (CP)			Tall herb/rank vegetation (TH)	✓	✓		
Scrub & shrubs (SH)			Rock, scree or sand dunes (RD)				
Orchard (OR)			Suburban/urban development (SU)	E	E		
Wetland (e.g. bog, marsh, fen) (WL)			Tilled land (TL)				
Moorland/heath (MH)			Irrigated land (IL)				
Artificial open water (AW)			Parkland or gardens (PG)				
			Not visible (NV)				
<b>I BANK PROFILES</b> Use ✓ (present) or E (> 33% banklength)							
<b>Natural/unmodified</b>	L	R	<b>Artificial/modified</b>	L	R		
Vertical/undercut 			Resectioned (reprofiled) 	E	E		
Vertical with toe 			Reinforced - whole 	✓	✓		
Steep (>45°) 			Reinforced - top only 				
Gentle 			Reinforced - toe only 				
Composite 			Artificial two-stage 				
Natural berm 			Poached bank 				
			Embanked 				
			Set-back embankment 				
<b>J EXTENT OF TREES AND ASSOCIATED FEATURES</b> *record even if < 1%							
<b>TREES</b> (tick one box per bank)				<b>ASSOCIATED FEATURES</b> (tick one box per feature)			
	Left	Right		None	Present	E (>33%)	
None	<input type="checkbox"/>	<input type="checkbox"/>	Shading of channel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Isolated/scattered	<input type="checkbox"/>	<input type="checkbox"/>	*Overhanging boughs	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Regularly spaced, single	<input type="checkbox"/>	<input type="checkbox"/>	*Exposed bankside roots	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Occasional clumps	<input type="checkbox"/>	<input type="checkbox"/>	*Underwater tree roots	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Semi-continuous	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Fallen trees	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Continuous	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Large woody debris	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>K EXTENT OF CHANNEL AND BANK FEATURES</b> (tick one box for each feature) *record even if < 1%							
	None	Present	E (>33%)	None	Present	E (>33%)	
*Free fall flow	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Exposed bedrock	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chute flow	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Exposed boulders	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Broken standing waves	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vegetated bedrock/boulders	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unbroken standing waves	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unvegetated mid-channel bar(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rippled flow	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vegetated mid-channel bar(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*Upwelling	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Mature island(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Smooth flow	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Unvegetated side bar(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No perceptible flow	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vegetated side bar(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No flow (dry)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unvegetated point bar(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Marginal deadwater	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Vegetated point bar(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Eroding cliff(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	*Unvegetated silt deposit(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stable cliff(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	*Discrete unvegetated sand deposit(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				*Discrete unvegetated gravel deposit(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SITE REF: <u>OKFAS R1155</u>		RIVER HABITAT SURVEY : DIMENSIONS AND INFLUENCES				Page 4 of 4
L CHANNEL DIMENSIONS (to be measured at one location on a straight uniform section, preferably across a riffle)						
LEFT BANK		CHANNEL		RIGHT BANK		
Banktop height (m)	<u>4.5</u>	Bankfull width (m)	<u>16</u>	Banktop height (m)	<u>4.5</u>	
Is banktop height also bankfull height? (Y or N)	<u>Y</u>	Water width (m)	<u>10</u>	Is banktop height also bankfull height? (Y or N)	<u>Y</u>	
Embanked height (m)	<u>—</u>	Water depth (m)	<u>—</u>	Embanked height (m)	<u>—</u>	
If trashline lower than banktop, indicate: height above water (m) = <u>—</u> width from bank to bank (m) = <u>—</u>						
Bed material at site is: consolidated <input type="checkbox"/> unconsolidated (loose) <input checked="" type="checkbox"/> unknown <input type="checkbox"/>						
Location of measurements is: riffle <input type="checkbox"/> other <input checked="" type="checkbox"/> (state) <u>Glide</u>						
M FEATURES OF SPECIAL INTEREST Use Y or E (> 33% length) *record even if < 1%						
None <input type="checkbox"/>	Very large boulders (>1m) <input type="checkbox"/>	Backwater(s) <input type="checkbox"/>	Marsh(es) <input type="checkbox"/>			
Braided channels <input type="checkbox"/>	*Debris dam(s) <input type="checkbox"/>	Floodplain boulder deposits <input type="checkbox"/>	Flush(es) <input type="checkbox"/>			
Side channel(s) <input type="checkbox"/>	*Leafy debris <input type="checkbox"/>	<input checked="" type="checkbox"/> Water meadow(s)	Natural open water <input type="checkbox"/>			
*Natural waterfall(s) > 5m high <input type="checkbox"/>	Fringing reed-bank(s) <input type="checkbox"/>	<input checked="" type="checkbox"/> Fen(s)	Others (state) <input type="checkbox"/>			
*Natural waterfall(s) < 5m high <input type="checkbox"/>	Quaking bank(s) <input type="checkbox"/>	Bog(s) <input type="checkbox"/>				
Natural cascade(s) <input type="checkbox"/>	*Sink hole(s) <input type="checkbox"/>	Wet woodland(s) <input type="checkbox"/>				
N CHOKED CHANNEL (tick one box)						
Is 33% or more of the channel choked with vegetation? No <input checked="" type="checkbox"/> Yes <input type="checkbox"/>						
O NOTABLE NUISANCE PLANT SPECIES Use Y or E (> 33% length) *record even if < 1%						
None <input type="checkbox"/>	bankface banktop to 50m		bankface banktop to 50m			
*Giant hogweed <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	*Himalayan balsam <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
*Japanese knotweed <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	*Other (state) <u>Scaevola, etc.</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
P OVERALL CHARACTERISTICS (Circle appropriate words, add others as necessary)						
<b>Major impacts:</b> landfill - <u>ripping</u> - <u>litter</u> - sewage - <u>pollution</u> - drought - abstraction - mill - dam - <u>road</u> - <u>rail</u> - <u>industry</u> - <u>housing</u> - mining - quarrying - <u>overdeepening</u> - afforestation - fisheries management - <u>silting</u> - waterlogging - hydroelectric power						
<b>Evidence of recent management:</b> dredging - bank mowing - weed cutting - enhancement - river rehabilitation - gravel extraction - other (please specify) <u>bank reprofiling @ Sept check 2</u>						
<b>Animals:</b> otter - mink - water vole - kingfisher - dipper - grey wagtail - sand martin - heron - dragonflies/damselflies						
<b>Other significant observations:</b> if necessary use separate sheet to describe overall characteristics and relevant observations						
Q ALDERS (tick one box in each of the two categories) *record even if < 1%						
*Alders? None <input type="checkbox"/> Present <input checked="" type="checkbox"/> Extensive <input type="checkbox"/>		*Diseased Alders? None <input checked="" type="checkbox"/> Present <input type="checkbox"/> Extensive <input type="checkbox"/>				
R FIELD SURVEY QUALITY CONTROL (✓ boxes to confirm checks)						
Have you taken at least two photos that illustrate the general character of the site and additional photos of any weirs/ sluices and major/intermediate structures across the channel?						<input checked="" type="checkbox"/>
Have you completed all ten spot-checks and made entries in all boxes in E & F on page 2?						<input checked="" type="checkbox"/>
Have you completed column 11 of section G (and E if appropriate) on page 2?						<input checked="" type="checkbox"/>
Have you recorded in section C the number of riffles, pools and point bars (even if 0) on page 1?						<input checked="" type="checkbox"/>
Have you given an accurate (alphanumeric) grid reference for spot-checks 1, 6 and end of site (page 1)?						<input checked="" type="checkbox"/>
Have you stated whether spot-check 1 is at the upstream or downstream end of the site (top of page 2)?						<input checked="" type="checkbox"/>
Have you cross-checked your spot-check and sweep-up responses with the channel modification indicators given on page 2 of the spot-check key?						<input checked="" type="checkbox"/>

Photographs





## C Survey Plates

### C.1 Survey Photographs referenced in maps

Photograph	Number
	803
	804

Photograph

Number



784



905



Photograph

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906



869



Photograph

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870



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## C.1.1 RCS Site Photographs

Photograph

Reach

RCS 1



RCC 1



Photograph

Reach

RCS 2



RCS 2



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RCS 3



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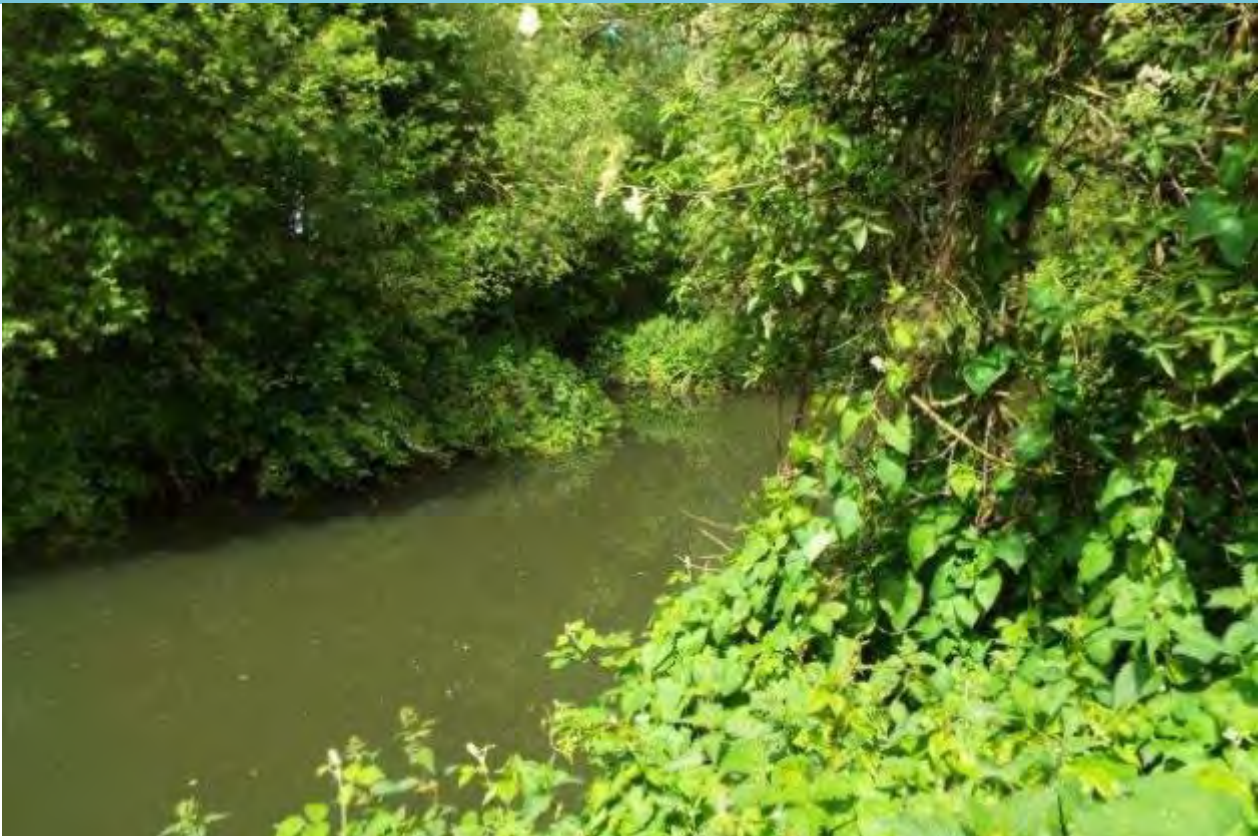
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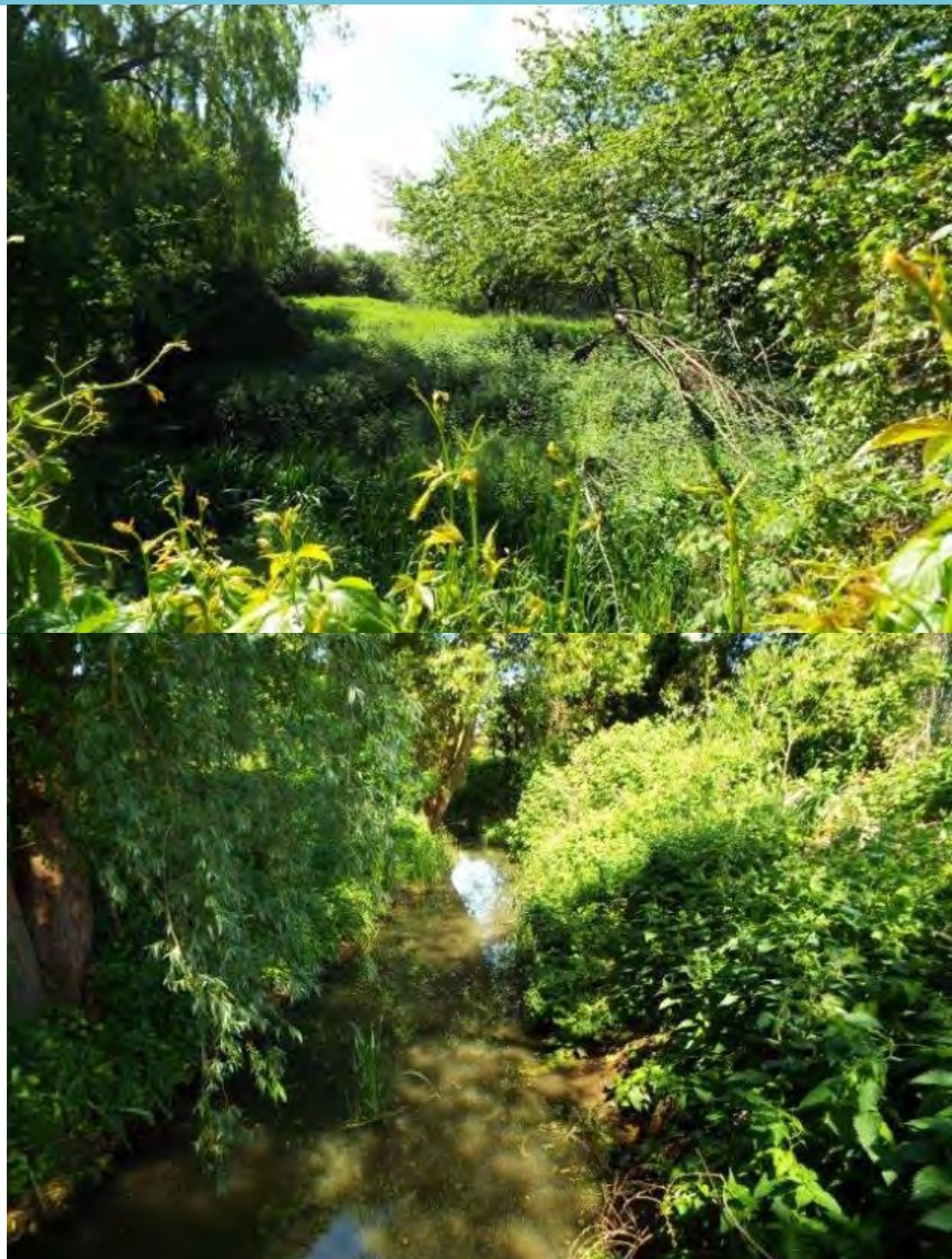




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## References

Environment Agency. (2003). *River Habitat Survey in Britain and Ireland: Field Survey Guidance Manual*.

JNCC (2010) *Handbook of Phase I Habitat Survey - a technique for environmental audit*. Peterborough: JNCC.

National Rivers Authority (1992) *River Corridor Surveys Methods and Procedures: Conservation Technical Handbook No.1*

River Restoration Centre (2002) *Manual of River Restoration Measures - Web Edition*



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