Appendix A: Reach-Scale Mapping

R02

Part I: SURVEY CONDITIONS

See relevant 1:25000 mapping and watercourse summary sheet for watercourse name and Reach ID code

Catchment	Watercourse	Reach ID	NGR Start	Surveyor
Avon	River Avon	UWC-01	SU13238 37851	JLE
			NGR End	

Date	Time	Flow (tick):				
07/08/08	11.00	☐ Low/base	☐ Above low	☑ High		

Conditions influencing survey quality:	LHB ☐ RHB ☑	Reason for upstream reach boundary:	Record photo NGR (GPS) and mark on map	No. of Photos
High flows & vegetation		Mill stream rejoins		

Part II: SEDIMENT SOURCES

*Tally fine and coarse sediment sources, place totals in final box (e.g. F2, C4). * = Take GIS reading and mark on map*
Diffuse sources: tally with F for fine and C for coarse under Micro, Meso or Macro and direct from slope or indirect e.g.through creep

Point Sources

	Fine	Coarse	Totals
Tributaries*			
Field drain/mill leat*			
Tipped Material*			
Collapsed building/wall*			
Vehicle access			
Outfalls			

	Fine	Coarse	Totals
Scour at structure			
Tree fall			
Footpath			
Burrowing			
Poaching			
Fishing platforms			

Diffuse Sources

Fluvial erosion	Micro	Meso	Macro
Toe scour			
Eroding cliff			

Hillslope supply	Micro	Meso	Macro
direct			
indirect			

Geotechnical failure	Micro	Meso	Macro
Toe undermining			
Translational			
Rotational slip			
Complex failure			

Channel weathering			

Part III: SEDIMENT TRANSPORT

Tally each morphological form observed along the reach, most likely to be in sequences according to associated gradient (e.g. pool-riffle)

Morphological Forms

	Tally	Total
Waterfall		
Chute		
Rapid		
Riffle		
Run	1	1

	Tally	Total
Boil		
Glide	III	2
Pool		
Ponded reach		
Marginal deadwater		

Part IV: SEDIMENT SINKS

Tally fine and coarse sediment sources, place totals in final box (e.g. F2, C4)

Point Sinks

	Fine	Coarse	Totals
Weirs*			
Dams			
Fords			
Bridge			
Large woody debris			

Ad-hoc Fisheries Improvements

	Tally	Totals
Dredged pools Island	1	1
Submerged vanes		
Boulder placement		
Deflectors		
Minor weir		
Vegetation management		
Narrowing (though undermined)	II	2

Diffuse Sinks Recent flood chaos? ☐ Yes ☑ No

	Permanent			Semi-permanent			Temporary		
	Micro	Meso	Macro	Micro	Meso	Macro	Micro	Meso	Macro
Floodplain deposits									
Splays									

Channel Deposits

Tally and total permanent, semi-permanent and temporary sediment deposits Micro = <10m², Meso = 10-150m², Macro = < 150m²
Tick types of storage present, place an E on right of box if extensive (>33%) - do not tally isolated boulders

	Permanent			Semi-permanent			Temporary		
	Micro	Meso	Macro	Micro	Meso	Macro	Micro	Meso	Macro
Boulder/cobble									
Cobble/gravel									
Fine material									

Type of Storage

☐ Mid channel bar ☐ Berms ☐ Isolated boulders
☐ Side bars ☐ Mature Islands
☐ Point bars ☑ Toe accumulation (not discrete)

Part V: VALLEY OVERVIEW

Landuse codes: Coniferous Woodland (CW), Broadleaf Woodland (BL), Scrub (SH), Wetland (WL), Moorland Heath (MH), Grazing (G), Tilled land (TL), Standing water (SW), Road/Track (RT), Suburban/urban (SU), Recreational (RE)

Valley Form (tick one)
- ☐ Shallow Vee
- ☐ Deep Vee
- ☐ Gorge
- ☑ Concave/Bowl
- ☐ Terraced valley floor
- ☐ Not visible

Landuse (dominant type)

	5m	50m
LH	BL	G
RH	RE/WL	SH

Floodplain (tick one)
- ☐ None
- ☐ One bank
- ☐ Alternate
- ☑ Both banks

Width (tick one)

	LH	RH	
☐	☐	☐	< 1 river width
☐	☑	☑	1-5 river widths
☐	☐	☐	5-10 river widths
☑	☐	☐	> 10 river widths

Riparian Buffer Strip (tick one)

LH	RH	
☐	☐	None
☐	☐	Indefinite
☐	☐	Fragmentary
☑	☑	Continuous

Width of strip (tick one)

LH	RH	
☐	☐	None
☐	☑	< 1 river width
☑	☐	1-5 river widths
☐	☐	> 5 river widths

Bank top vegetation (tick one)

LH	RH	
☐	☐	Uniform
☐	☑	Simple
☑	☐	Complex
☐	☐	Diseased alders?
☐	☐	Invasive species?

Connectivity

Channel disconnected from floodplain? (no out of bank flow)
- ☐ Yes
- ☑ No

Terraces (tick one)

LH	RH	
☑	☑	None
☐	☐	Indefinite
☐	☐	Fragmentary
☐	☐	Continuous

Insert no. of terraces: LH –, RH –

Levees (tick if present)

LH	RH	
☑	☑	None
☐	☐	Natural
☐	☐	Man Made
☐	☐	Continuous
☐	☐	Fragmented

Trashlines (tick one)
- ☐ LH
- ☐ RH

If Yes: *Estimate height (m)*: –

Other features (e.g. palaeochannels)

Channel narrowing being undermined by flow behind due to higher flows

Part VI: CHANNEL GEOMETRY

Planform (tick one)
- ☐ Straight
- ☑ Sinuous
- ☐ Irregular meanders
- ☐ Regular meanders
- ☐ Braided
- ☐ Anastomosed
- Y/(N) Realigned? *Ring Y/N*

Cross-section (tick one)
- ☐ Rectangular/Trapezoidal
- ☑ U-shaped
- ☐ Two stage
- ☐ Multi-stage
- Y/(N) Resectioned? *Ring Y/N*
- Y/(N) Culverted? *Ring Y/N*
- Est. length of culvert (m):

Channel Dimensions

Width	Depth	Symmetry (tick one)	
☐	☐	☑	Uniform
☐	☐	☐	Variable with planform
☑	☑	☐	Variable without planform
20	0.5		Qbf Min
35	0.7		Qbf Max
25	0.6		Qbf Mean

Estimate (m)

Gradient (tick one) (use look back test)
- ☐ High
- ☐ Medium
- ☑ Low

Velocity (tick one)
- ☐ Uniform
- ☑ Varied
- ☐ Highly varied

Part VII: BOUNDARY CONDITIONS

BED

Bed Material (tick all present, E if > 33%)

☐	Obscured	☑	Cobble
☑	Fine material	☐	Boulder
☑E	Fine gravel	☐	Bedrock
☑E	Coarse gravel	☐	Artificial

Bed Characteristics: (tick all applicable, E if > 33%)

Sorting:	☑E	Sorted	☐	Unsorted	
Debris:	☑	None	☐	Natural	☐ Man made
Sphericity:	☐	Angular	☑E	Sub-angular	☐ Rounded
Imbrication:	☐	None	☐	Imbricated	☑ Armoured
Diversity:	☐	Uniform	☑	Non-uniform	

Channel Vegetation: % cover: 60

☑E	Submerged in-channel vegetation	☐	Filamentous algae
☐	Surface floating vegetation	☐	Moss/lichen/liverworts
☑E	Emergent reeds/sedges/rushes	☐	Exposed tree roots

BANKS

Bank material (tick if present, E if > 33%)

LH	RH	
☑E	☑E	Obscured
☐	☐	Clay
☑	☑	Silt
☑	☑	Sand
☐	☐	Fine gravel
☐	☐	Coarse gravel
☐	☐	Cobble
☐	☐	Boulder
☐	☐	Bedrock
☐	☐	Artificial
Y/(N)	Y/(N)	Cohesive?

Profile (tick if present, E if > 33%)

LH	RH	
☐	☑	Cliff/Vertical
☐	☐	Stepped
☑E	☑E	Graded

Protection (tick if present, E if > 33%)

☐	☐	None
☑	☑	Toe
☐	☐	Full
☐	☐	Walled
☐	☐	Concrete
☐	☐	Wooden
☐	☐	Rip rap
☑	☑	Other……

Tree lining (tick one for each bank)

LH	RH	
☐	☐	None
☐	☑	Isolated/scattered
☐	☐	Reg. spaced/singular
☐	☐	Occasional clumps
☑	☐	Semi-continuous
☐	☐	Continuous
Y/(N)	Y/(N)	Recent tree planting

Bank face vegetation (tick one for each bank)

LH	RH	
☐	☐	None
☐	☐	Uniform
☑	☑	Simple
☐	☐	Complex

R02

Part I: SURVEY CONDITIONS

See relevant 1:25000 mapping and watercourse summary sheet for watercourse name and Reach ID code

Catchment	Watercourse	Reach ID	NGR Start	Surveyor
Avon	River Avon	VWR-01	SU 13181 37563	JLE
			NGR End SU 13067 37896	

Date	Time	Flow (tick):				
07/08/08	12.00	☐ Low/base	☐ Above low	☑ High		

Conditions influencing survey quality:	LHB ☐ RHB ☑	Reason for upstream reach boundary:	Record photo NGR (GPS) and mark on map	No. of Photos
High flows + vegetation		Start of restoration reach		

Part II: SEDIMENT SOURCES

*Tally fine and coarse sediment sources, place totals in final box (e.g. F2, C4). * = Take GIS reading and mark on map*
Diffuse sources: tally with F for fine and C for coarse under Micro, Meso or Macro and direct from slope or indirect e.g.through creep

Point Sources

	Fine	Coarse	Totals
Tributaries*			
Field drain/mill leat*	1		1
Tipped Material*			
Collapsed building/wall*			
Vehicle access			
Outfalls			

	Fine	Coarse	Totals
Scour at structure			
Tree fall			
Footpath			
Burrowing			
Poaching			
Fishing platforms	II		2

Diffuse Sources

	Micro	Meso	Macro
Fluvial erosion			
Toe scour			
Eroding cliff			
Hillslope supply			
direct			
indirect			

	Micro	Meso	Macro
Geotechnical failure			
Toe undermining			
Translational			
Rotational slip			
Complex failure			
Channel weathering			

Part III: SEDIMENT TRANSPORT

Tally each morphological form observed along the reach, most likely to be in sequences according to associated gradient (e.g. pool-riffle)

Morphological Forms

	Tally	Total
Waterfall		
Chute		
Rapid		
Riffle		
Run		

	Tally	Total
Boil		
Glide	1	1
Pool		
Ponded reach		
Marginal deadwater		

Part IV: SEDIMENT SINKS

Tally fine and coarse sediment sources, place totals in final box (e.g. F2, C4)

Point Sinks

	Fine	Coarse	Totals
Weirs*			
Dams			
Fords			
Bridge			
Large woody debris			

Ad-hoc Fisheries Improvements

	Tally	Totals
Dredged pools		
Submerged vanes		
~~Boulder~~ gravel placement	1	1
Deflectors (D shapes)	HHT III	8
Minor weir		
Vegetation management		
Islands	HHT II	7

Diffuse Sinks Recent flood chaos? ☐ Yes ☑ No

	Permanent			Semi-permanent			Temporary		
	Micro	Meso	Macro	Micro	Meso	Macro	Micro	Meso	Macro
Floodplain deposits									
Splays									

Channel Deposits

Tally and total permanent, semi-permanent and temporary sediment deposits Micro = <10m², Meso = 10-150m², Macro = < 150m²
Tick types of storage present, place an E on right of box if extensive (>33%) - do not tally isolated boulders

	Permanent			Semi-permanent			Temporary		
	Micro	Meso	Macro	Micro	Meso	Macro	Micro	Meso	Macro
Boulder/cobble									
Cobble/gravel									
Fine material									

Type of Storage

☐ Mid channel bar ☐ Side bars ☐ Point bars
☐ Berms ☐ Mature Islands ☑ Toe accummulation (not discrete)
☐ Isolated boulders

Part V: VALLEY OVERVIEW

Landuse codes: Coniferous Woodland (CW), Broadleaf Woodland (BL), Scrub (SH), Wetland (WL), Moorland Heath (MH), Grazing (G), Tilled land (TL), Standing water (SW), Road/Track (RT), Suburban/urban (SU), Recreational (RE)

Valley Form (tick one)
- ☐ Shallow Vee
- ☐ Deep Vee
- ☐ Gorge
- ☑ Concave/Bowl
- ☐ Terraced valley floor
- ☐ Not visible

Landuse (dominant type)

	5m	50m
LH	BL	BL
RH	WL	SH

Floodplain (tick one)
- ☐ None
- ☐ One bank
- ☐ Alternate
- ☑ Both banks

Width (tick one)

LH	RH	
☐	☐	< 1 river width
☐	☐	1-5 river widths
☑	☑	5-10 river widths
☐	☐	> 10 river widths

Riparian Buffer Strip (tick one)

LH	RH	
☐	☐	None
☐	☐	Indefinite
☐	☐	Fragmentary
☑	☑	Continuous

Width of strip (tick one)

LH	RH	
☐	☐	None
☐	☐	< 1 river width
☑	☑	1-5 river widths
☐	☐	> 5 river widths

Bank top vegetation (tick one)

LH	RH	
☐	☐	Uniform
☐	☐	Simple
☑	☑	Complex
☐	☐	Diseased alders?
☐	☐	Invasive species?

Connectivity

Channel disconnected from floodplain? (no out of bank flow)
- ☐ Yes
- ☑ No

Terraces (tick one)

Insert no. of terraces: LH –, RH –

LH	RH	
☑	☑	None
☐	☐	Indefinite
☐	☐	Fragmentary
☐	☐	Continuous

Levees (tick if present)

LH	RH	
☑	☑	None
☐	☐	Natural
☐	☐	Man Made
☐	☐	Continuous
☐	☐	Fragmented

Trashlines (tick one)
- ☐ LH
- ☐ RH

If Yes: *Estimate height (m)*

Other features (e.g. palaeochannels)

New island features & causeway constructed. Some D-shapes not vegetated potentially due to high flows

Part VI: CHANNEL GEOMETRY

Planform (tick one)
- ☐ Straight
- ☑ Sinuous
- ☐ Irregular meanders
- ☐ Regular meanders
- ☐ Braided
- ☐ Anastomosed
- Y(N) Realigned? *Ring Y/N*

Cross-section (tick one)
- ☐ Rectangular/Trapezoidal
- ☑ U-shaped
- ☐ Two stage
- ☐ Multi-stage

(Y)N Resectioned? *Ring Y/N*

Y(N) Culverted? *Ring Y/N*

Est. length of culvert (m):

Channel Dimensions

Width	Depth	Symmetry	(tick one)
☐	☐	☐	Uniform
☐	☐	☐	Variable with planform
☑	☑	☑	Variable without planform

	Width	Depth	*Estimate (m)*
Qbf Min	15	0.4	
Qbf Max	30	0.7	
Qbf Mean	25	0.6	

Gradient (tick one) (use look back test)
- ☐ High
- ☐ Medium
- ☑ Low

Velocity (tick one)
- ☐ Uniform
- ☑ Varied
- ☐ Highly varied

Part VII: BOUNDARY CONDITIONS

BED

Bed Material (tick all present, E if > 33%)

☐	Obscured	☐	Cobble
☑	Fine material	☐	Boulder
☑ E	Fine gravel	☐	Bedrock
☑	Coarse gravel	☐	Artificial

Bed Characteristics: (tick all applicable, E if > 33%)

Sorting:	☑	Sorted	☐	Unsorted	
Debris:	☑	None	☐	Natural	☐ Man made
Sphericity:	☐	Angular	☑	Sub-angular	☐ Rounded
Imbrication:	☐	None	☑	Imbricated	☐ Armoured
Diversity:	☐	Uniform	☑	Non-uniform	

Channel Vegetation: % cover: 30

☑ E	Submerged in-channel vegetation	☐	Filamentous algae
☐	Surface floating vegetation	☐	Moss/lichen/liverworts
☑	Emergent reeds/sedges/rushes	☐	Exposed tree roots

BANKS

Bank material (tick if present, E if > 33%)

LH	RH	
☑ E	☑	Obscured
☐	☐	Clay
☑	☑	Silt
☑	☑	Sand
☐	☐	Fine gravel
☐	☐	Coarse gravel
☐	☐	Cobble
☐	☐	Boulder
☐	☐	Bedrock
☐	☐	Artificial
(Y)N	(Y)N	Cohesive?

Profile (tick if present, E if > 33%)

LH	RH	
☐	☑ E	Cliff/Vertical
☐	☐	Stepped
☑ E	☑	Graded

Protection (tick if present, E if > 33%)

☐	☐	None
☑	☐	Toe
☐	☑	Full
☐	☐	Walled
☐	☐	Concrete
☐	☑	Wooden
☐	☐	Rip rap
☐	☐	Other……

Tree lining (tick one for each bank)

LH	RH	
☐	☑	None
☐	☐	Isolated/scattered
☐	☐	Reg. spaced/singular
☐	☐	Occasional clumps
☐	☐	Semi-continuous
☑	☐	Continuous
Y(N)	Y(N)	Recent tree planting

Bank face vegetation (tick one for each bank)

LH	RH	
☐	☐	None
☐	☐	Uniform
☑	☑	Simple
☐	☐	Complex

R02

Part I: SURVEY CONDITIONS

See relevant 1:25000 mapping and watercourse summary sheet for watercourse name and Reach ID code

Catchment	Watercourse	Reach ID	NGR Start	Surveyor
Avon	River Avon	UWR-02	SU 13067 37896	JLE
			NGR End SU 12614 37268	

Date	Time	Flow (tick):				
07/08/08	13.00	☐ Low/base	☐ Above low	☑ High		

Conditions influencing survey quality:	LHB ☐ RHB ☑	Reason for upstream reach boundary:	Record photo NGR (GPS) and mark on map	No. of Photos
High flows & vegetation		Lateral flow.		

Part II: SEDIMENT SOURCES

*Tally fine and coarse sediment sources, place totals in final box (e.g. F2, C4). * = Take GIS reading and mark on map*
Diffuse sources: tally with F for fine and C for coarse under Micro, Meso or Macro and direct from slope or indirect e.g.through creep

Point Sources

	Fine	Coarse	Totals
Tributaries*			
Field drain/mill leat*			
Tipped Material*			
Collapsed building/wall*			
Vehicle access			
Outfalls			

	Fine	Coarse	Totals
Scour at structure			
Tree fall			
Footpath			
Burrowing			
Poaching			
Fishing platforms	1		1

Diffuse Sources

Fluvial erosion	Micro	Meso	Macro
Toe scour			
Eroding cliff			

Hillslope supply	Micro	Meso	Macro
direct			
indirect			

Geotechnical failure	Micro	Meso	Macro
Toe undermining			
Translational			
Rotational slip			
Complex failure			

Channel weathering			

Part III: SEDIMENT TRANSPORT

Tally each morphological form observed along the reach, most likely to be in sequences according to associated gradient (e.g. pool-riffle)

Morphological Forms

	Tally	Total
Waterfall		
Chute		
Rapid		
Riffle		
Run		

	Tally	Total
Boil		
Glide	1	1
Pool		
Ponded reach		
Marginal deadwater		

Part IV: SEDIMENT SINKS

Tally fine and coarse sediment sources, place totals in final box (e.g. F2, C4)

Point Sinks

	Fine	Coarse	Totals
Weirs*			
Dams			
Fords			
Bridge			
Large woody debris			

Ad-hoc Fisheries Improvements

	Tally	Totals
Dredged pools		
Submerged vanes		
Boulder placement		
Deflectors (D shape)	1	1
Minor weir		
Vegetation management		
Islands	11	2

Diffuse Sinks Recent flood chaos? ☐ Yes ☑ No

	Permanent			Semi-permanent			Temporary		
	Micro	Meso	Macro	Micro	Meso	Macro	Micro	Meso	Macro
Floodplain deposits									
Splays									

Channel Deposits

Tally and total permanent, semi-permanent and temporary sediment deposits Micro = <10m², Meso = 10-150m², Macro = < 150m²
Tick types of storage present, place an E on right of box if extensive (>33%) - do not tally isolated boulders

	Permanent			Semi-permanent			Temporary		
	Micro	Meso	Macro	Micro	Meso	Macro	Micro	Meso	Macro
Boulder/cobble									
Cobble/gravel									
Fine material									

Type of Storage

☐ Mid channel bar ☐ Side bars ☐ Point bars
☐ Berms ☐ Mature Islands ☑ Toe accummulation (not discrete)
☐ Isolated boulders

Part V: VALLEY OVERVIEW

Landuse codes: Coniferous Woodland (CW), Broadleaf Woodland (BL), Scrub (SH), Wetland (WL), Moorland Heath (MH), Grazing (G), Tilled land (TL), Standing water (SW), Road/Track (RT), Suburban/urban (SU), Recreational (RE)

Valley Form (tick one)
- ☐ Shallow Vee
- ☐ Deep Vee
- ☐ Gorge
- ☑ Concave/Bowl
- ☐ Terraced valley floor
- ☐ Not visible

Landuse (dominant type)

	5m	50m
LH	SH	BL
RH	RE/WL	SH

Floodplain (tick one)
- ☐ None
- ☐ One bank
- ☐ Alternate
- ☐ Both banks

Width (tick one)

LH	RH	
☐	☐	< 1 river width
☐	☐	1-5 river widths
☐	☐	5-10 river widths
☐	☐	> 10 river widths

Riparian Buffer Strip (tick one)

LH	RH	
☐	☐	None
☐	☐	Indefinite
☐	☐	Fragmentary
☑	☑	Continuous

Width of strip (tick one)

LH	RH	
☐	☐	None
☐	☐	< 1 river width
☑	☑	1-5 river widths
☐	☐	> 5 river widths

Bank top vegetation (tick one)

LH	RH	
☐	☐	Uniform
☑	☑	Simple
☐	☐	Complex
☐	☐	Diseased alders?
☐	☐	Invasive species?

Connectivity

Channel disconnected from floodplain? (no out of bank flow)
- ☐ Yes
- ☑ No

Terraces (tick one)

LH	RH	
☑	☑	None
☐	☐	Indefinite
☐	☐	Fragmentary
☐	☐	Continuous

Insert no. of terraces: LH —, RH —

Levees (tick if present)

LH	RH	
☑	☑	None
☐	☐	Natural
☐	☐	Man Made
☐	☐	Continuous
☐	☐	Fragmented

Trashlines (tick one)
- ☐ LH
- ☐ RH

If Yes: *Estimate height (m)*

Other features (e.g. palaeochannels)

Wooden fishing platform submerged & becoming colonised by vegetation

Part VI: CHANNEL GEOMETRY

Planform (tick one)
- ☐ Straight
- ☑ Sinuous
- ☐ Irregular meanders
- ☐ Regular meanders
- ☐ Braided
- ☐ Anastomosed
- Y/(N) Realigned? *Ring Y/N*

Cross-section (tick one)
- ☐ Rectangular/Trapezoidal
- ☑ U-shaped
- ☐ Two stage
- ☐ Multi-stage

(Y)/N Resectioned? *Ring Y/N*

Y/(N) Culverted? *Ring Y/N*

Est. length of culvert (m):

Channel Dimensions

Width	Depth	Symmetry (tick one)	*Estimate (m)*
☐	☐	☑ Uniform	
☐	☐	☐ Variable with planform	
☑	☑	☐ Variable without planform	
25	0.6		Qbf Min
35	1.2		Qbf Max
27	0.9		Qbf Mean

Gradient (tick one) (use look back test)
- ☐ High
- ☐ Medium
- ☑ Low

Velocity (tick one)
- ☑ Uniform
- ☐ Varied
- ☐ Highly varied

Part VII: BOUNDARY CONDITIONS

BED

Bed Material (tick all present, E if > 33%)

☑	Obscured	☐	Cobble
☑E	Fine material	☐	Boulder
☑E	Fine gravel	☐	Bedrock
☐	Coarse gravel	☐	Artificial

Bed Characteristics: (tick all applicable, E if > 33%)

Sorting:	☐	Sorted	☐	Unsorted	
Debris:	☐	None	☐	Natural	☐ Man made
Sphericity:	☐	Angular	☐	Sub-angular	☐ Rounded
Imbrication:	☐	None	☐	Imbricated	☐ Armoured
Diversity:	☐	Uniform	☐	Non-uniform	

Channel Vegetation: % cover: 10

☑	Submerged in-channel vegetation	☐	Filamentous algae
☐	Surface floating vegetation	☐	Moss/lichen/liverworts
☑	Emergent reeds/sedges/rushes	☐	Exposed tree roots

BANKS

Bank material (tick if present, E if > 33%)

LH	RH	
☑E	☑	Obscured
☐	☐	Clay
☐	☑E	Silt
☐	☑	Sand
☐	☐	Fine gravel
☐	☐	Coarse gravel
☐	☐	Cobble
☐	☐	Boulder
☐	☐	Bedrock
☐	☐	Artificial
(Y)/N	(Y)/N	Cohesive?

Profile (tick if present, E if > 33%)

LH	RH	
☐	☑E	Cliff/Vertical
☐	☐	Stepped
☑E	☑	Graded

Protection (tick if present, E if > 33%)

☐	☐	None
☐	☑	Toe
☑	☑	Full
☐	☐	Walled
☐	☐	Concrete
☐	☑	Wooden
☐	☐	Rip rap
☑	☐	Other……

Tree lining (tick one for each bank)

LH	RH	
☐	☐	None
☑	☑	Isolated/scattered
☐	☐	Reg. spaced/singular
☐	☐	Occasional clumps
☐	☐	Semi-continuous
☐	☐	Continuous
Y/(N)	Y/(N)	Recent tree planting

Bank face vegetation (tick one for each bank)

LH	RH	
☐	☐	None
☐	☐	Uniform
☑	☑	Simple
☐	☐	Complex

R02

Part I: SURVEY CONDITIONS

See relevant 1:25000 mapping and watercourse summary sheet for watercourse name and Reach ID code

Catchment	Watercourse	Reach ID	NGR Start	Surveyor
Avon	River Wylye	SHC-01	SU 08307 34584	JLE
			NGR End SU 08454 34468	

Date	Time	Flow (tick):				
18/08/08	11.00	☐ Low/base	☑ Above low	☐ High		

Conditions influencing survey quality:	LHB ☐ RHB ☑	Reason for upstream reach boundary:	Record photo NGR (GPS) and mark on map	No. of Photos
higher flows		Start of control site		

Part II: SEDIMENT SOURCES

*Tally fine and coarse sediment sources, place totals in final box (e.g. F2, C4). * = Take GIS reading and mark on map*
Diffuse sources: tally with F for fine and C for coarse under Micro, Meso or Macro and direct from slope or indirect e.g.through creep

Point Sources

	Fine	Coarse	Totals
Tributaries*			
Field drain/mill leat*			
Tipped Material*			
Collapsed building/wall*			
Vehicle access			
Outfalls			

	Fine	Coarse	Totals
Scour at structure			
Tree fall			
Footpath			
Burrowing			
Poaching			
Fishing platforms			

Diffuse Sources

Fluvial erosion	Micro	Meso	Macro
Toe scour			
Eroding cliff			

Hillslope supply	Micro	Meso	Macro
direct			
indirect			

Geotechnical failure	Micro	Meso	Macro
Toe undermining			
Translational			
Rotational slip			
Complex failure			

Channel weathering			

Part III: SEDIMENT TRANSPORT

Tally each morphological form observed along the reach, most likely to be in sequences according to associated gradient (e.g. pool-riffle)

Morphological Forms

	Tally	Total
Waterfall		
Chute		
Rapid		
Riffle	|	
Run		

	Tally	Total
Boil		
Glide	|	
Pool		
Ponded reach		
Marginal deadwater		

Part IV: SEDIMENT SINKS

Tally fine and coarse sediment sources, place totals in final box (e.g. F2, C4)

Point Sinks

	Fine	Coarse	Totals
Weirs*			
Dams			
Fords			
Bridge			
Large woody debris			

Ad-hoc Fisheries Improvements

	Tally	Totals
Dredged pools		
Submerged vanes		
Boulder placement		
Deflectors	𝍸 ||||	9
Minor weir		
Vegetation management		

Diffuse Sinks Recent flood chaos? ☐ Yes ☑ No

	Permanent			Semi-permanent			Temporary		
	Micro	Meso	Macro	Micro	Meso	Macro	Micro	Meso	Macro
Floodplain deposits									
Splays									

Channel Deposits

Tally and total permanent, semi-permanent and temporary sediment deposits Micro = <10m², Meso = 10-150m², Macro = < 150m²
Tick types of storage present, place an E on right of box if extensive (>33%) - do not tally isolated boulders

	Permanent			Semi-permanent			Temporary		
	Micro	Meso	Macro	Micro	Meso	Macro	Micro	Meso	Macro
Boulder/cobble									
Cobble/gravel									
Fine material									

Type of Storage

☐ Mid channel bar ☐ Side bars ☐ Point bars
☐ Berms ☐ Mature Islands ☑ Toe accummulation (not discrete)
☐ Isolated boulders

R02

Part V: VALLEY OVERVIEW

Landuse codes: Coniferous Woodland (CW), Broadleaf Woodland (BL), Scrub (SH), Wetland (WL), Moorland Heath (MH), Grazing (G), Tilled land (TL), Standing water (SW), Road/Track (RT), Suburban/urban (SU), Recreational (RE)

Valley Form (tick one)
- ☐ Shallow Vee
- ☐ Deep Vee
- ☐ Gorge
- ☑ Concave/Bowl
- ☐ Terraced valley floor
- ☐ Not visible

Landuse (dominant type)

	5m	50m
LH	SH	G
RH	SH	TL

Floodplain (tick one)

		Width (tick one) LH	RH	
☐	None	☐	☐	< 1 river width
☐	One bank	☐	☐	1-5 river widths
☐	Alternate	☑	☐	5-10 river widths
☑	Both banks	☐	☐	> 10 river widths

Riparian Buffer Strip (tick one)

LH	RH		Width of strip (tick one) LH	RH	
☐	☐	None	☑	☑	None
☐	☐	Indefinite	☑	☑	< 1 river width
☐	☐	Fragmentary	☐	☐	1-5 river widths
☑	☑	Continuous	☐	☐	> 5 river widths

Bank top vegetation (tick one)

LH	RH	
☐	☐	Uniform
☑	☑	Simple
☐	☐	Complex
☐	☐	Diseased alders?
☐	☐	Invasive species?

Connectivity

Channel disconnected from floodplain? (no out of bank flow)
- ☑ Yes
- ☐ No

Terraces (tick one)

Insert no. of terraces LH –, RH –

LH	RH	
☑	☑	None
☐	☐	Indefinite
☐	☐	Fragmentary
☐	☐	Continuous

Levees (tick if present)

LH	RH	
☑	☐	None
☐	☐	Natural
☐	☑	Man Made
☐	☑	Continuous
☐	☐	Fragmented

Trashlines (tick one)
- ☐ LH
- ☐ RH

If Yes: *Estimate height (m)* LH –, RH –

Other features (e.g. palaeochannels)

Willow spiling sprouted & grown on LHB particularly. Reflected grown over.

Part VI: CHANNEL GEOMETRY

Planform (tick one)
- ☑ Straight
- ☐ Sinuous
- ☐ Irregular meanders
- ☐ Regular meanders
- ☐ Braided
- ☐ Anastomosed
- (Y/N) Realigned? *Ring Y/N*

Cross-section (tick one)
- ☐ Rectangular/Trapezoidal
- ☑ U-shaped
- ☐ Two stage
- ☐ Multi-stage

(Y/N) Resectioned? *Ring Y/N*
Y/(N) Culverted? *Ring Y/N*
Est. length of culvert (m)

Channel Dimensions

Width	Depth	Symmetry	(tick one)
☑	☐	☑	Uniform
☐	☐	☐	Variable with planform
☐	☑	☐	Variable without planform

	Estimate (m)
Qbf Min	15 / 1
Qbf Max	18 / 1.8
Qbf Mean	17 / 1.5

Gradient (tick one) (use look back test)
- ☐ High
- ☐ Medium
- ☑ Low

Velocity (tick one)
- ☐ Uniform
- ☑ Varied
- ☐ Highly varied

Part VII: BOUNDARY CONDITIONS

BED

Bed Material (tick all present, E if > 33%)

☐	Obscured	☑	Cobble
☑	Fine material	☐	Boulder
☑E	Fine gravel	☐	Bedrock
☑E	Coarse gravel	☐	Artificial

Bed Characteristics: (tick all applicable, E if > 33%)

Sorting:	☑	Sorted	☑E	Unsorted	
Debris:	☑	None	☐	Natural	☐ Man made
Sphericity:	☐	Angular	☑	Sub-angular	☑ Rounded
Imbrication:	☑	None	☐	Imbricated	☐ Armoured
Diversity:	☐	Uniform	☑	Non-uniform	

Channel Vegetation: % cover 5

☑	Submerged in-channel vegetation	☐	Filamentous algae
☐	Surface floating vegetation	☑	Moss/lichen/liverworts
☑	Emergent reeds/sedges/rushes	☐	Exposed tree roots

BANKS

Bank material (tick if present, E if > 33%)

LH	RH	
☑E	☑E	Obscured
☐	☐	Clay
☑	☑	Silt
☑	☑	Sand
☑	☐	Fine gravel
☐	☐	Coarse gravel
☐	☐	Cobble
☐	☐	Boulder
☐	☐	Bedrock
☐	☐	Artificial
(Y/N)	(Y/N)	Cohesive?

Profile (tick if present, E if > 33%)

LH	RH	
☐	☑	Cliff/Vertical
☐	☐	Stepped
☑E	☑E	Graded

Protection (tick if present, E if > 33%)

☐	☐	None
☑	☑	Toe
☐	☐	Full
☐	☐	Walled
☐	☐	Concrete
☐	☐	Wooden
☐	☐	Rip rap
☑	☑	Other……

Tree lining (tick one for each bank)

LH	RH	
☐	☐	None
☐	☑	Isolated/scattered
☐	☐	Reg. spaced/singular
☑	☐	Occasional clumps
☐	☐	Semi-continuous
☐	☐	Continuous
(Y/N)	(Y/N)	Recent tree planting (willow spiling)

Bank face vegetation (tick one for each bank)

LH	RH	
☐	☐	None
☐	☐	Uniform
☑	☑	Simple
☐	☐	Complex

willow

R02

Part I: SURVEY CONDITIONS

See relevant 1:25000 mapping and watercourse summary sheet for watercourse name and Reach ID code

Catchment	Watercourse	Reach ID	NGR Start	Surveyor
Avon	River Wylye	SHC-02	SU08454 34468	JLE
			NGR End SU08628 34264	

Date	Time	Flow (tick):				
18/8/08	11.30	☐ Low/base	☑ Above low	☐ High		

Conditions influencing survey quality:	LHB ☐ RHB ☑	Reason for upstream reach boundary:	Record photo NGR (GPS) and mark on map	No. of Photos
Higher flows		Deeper. No in-channel narrowing + Landuse change on LHB.		

Part II: SEDIMENT SOURCES

*Tally fine and coarse sediment sources, place totals in final box (e.g. F2, C4). * = Take GIS reading and mark on map*
Diffuse sources: tally with F for fine and C for coarse under Micro, Meso or Macro and direct from slope or indirect e.g.through creep

Point Sources

	Fine	Coarse	Totals
Tributaries*			
Field drain/mill leat*			
Tipped Material*			
Collapsed building/wall*			
Vehicle access			
Outfalls			

	Fine	Coarse	Totals
Scour at structure			
Tree fall			
Footpath			
Burrowing			
Poaching			
Fishing platforms			

Diffuse Sources

Fluvial erosion	Micro	Meso	Macro
Toe scour			
Eroding cliff			

Hillslope supply	Micro	Meso	Macro
direct			
indirect			

Geotechnical failure	Micro	Meso	Macro
Toe undermining			
Translational			
Rotational slip			
Complex failure			

Channel weathering			

Part III: SEDIMENT TRANSPORT

Tally each morphological form observed along the reach, most likely to be in sequences according to associated gradient (e.g. pool-riffle)

Morphological Forms

	Tally	Total
Waterfall		
Chute		
Rapid		
Riffle		
Run		

	Tally	Total
Boil		
Glide	I	1
Pool	III	3
Ponded reach	I	1
Marginal deadwater		

Part IV: SEDIMENT SINKS

Tally fine and coarse sediment sources, place totals in final box (e.g. F2, C4)

Point Sinks

	Fine	Coarse	Totals
Weirs*	I		1
Dams			
Fords			
Bridge			
Large woody debris			

Ad-hoc Fisheries Improvements

	Tally	Totals
Dredged pools		
Submerged vanes		
Boulder placement		
Deflectors	I	1
Minor weir		
Vegetation management		

Diffuse Sinks Recent flood chaos? ☐ Yes ☑ No

	Permanent			Semi-permanent			Temporary		
	Micro	Meso	Macro	Micro	Meso	Macro	Micro	Meso	Macro
Floodplain deposits									
Splays									

Channel Deposits

Tally and total permanent, semi-permanent and temporary sediment deposits Micro = <10m², Meso = 10-150m², Macro = < 150m²
Tick types of storage present, place an E on right of box if extensive (>33%) - do not tally isolated boulders

	Permanent			Semi-permanent			Temporary		
	Micro	Meso	Macro	Micro	Meso	Macro	Micro	Meso	Macro
Boulder/cobble									
Cobble/gravel									
Fine material								\	

Type of Storage

☐ Mid channel bar ☐ Side bars ☐ Point bars
☐ Berms ☐ Mature Islands ☑ Toe accummulation
☐ Isolated boulders

R02

Part V: VALLEY OVERVIEW

Landuse codes: Coniferous Woodland (CW), Broadleaf Woodland (BL), Scrub (SH), Wetland (WL), Moorland Heath (MH), Grazing (G), Tilled land (TL), Standing water (SW), Road/Track (RT), Suburban/urban (SU), Recreational (RE)

Valley Form (tick one)

- ☐ Shallow Vee
- ☐ Deep Vee
- ☐ Gorge
- ☑ Concave/Bowl
- ☐ Terraced valley floor
- ☐ Not visible

Landuse (dominant type)

	5m	50m
LH	SU	SU
RH	SH	TL

Floodplain (tick one)

- ☐ None
- ☐ One bank
- ☐ Alternate
- ☑ Both banks

Width (tick one)

LH	RH	
☐	☐	< 1 river width
☑	☐	1-5 river widths
☐	☑	5-10 river widths
☐	☐	> 10 river widths

Riparian Buffer Strip (tick one)

LH	RH	
☐	☐	None
☐	☐	Indefinite
☑	☐	Fragmentary
☐	☑	Continuous

Width of strip (tick one)

LH	RH	
☐	☐	None
☑	☐	< 1 river width
☐	☑	1-5 river widths
☐	☐	> 5 river widths

Bank top vegetation (tick one)

LH	RH	
☑	☐	Uniform
☐	☑	Simple
☐	☐	Complex
☐	☐	Diseased alders?
☐	☐	Invasive species?

Connectivity

Channel disconnected from floodplain? (no out of bank flow)

- ☑ Yes
- ☐ No

Terraces (tick one)

Insert no. of terraces: LH —, RH —

LH	RH	
☑	☑	None
☐	☐	Indefinite
☐	☐	Fragmentary
☐	☐	Continuous

Levees (tick if present)

LH	RH	
☑	☑	None
☐	☐	Natural
☐	☑	Man Made
☐	☑	Continuous
☐	☐	Fragmented

Trashlines (tick one)

- ☐ LH
- ☐ RH

If Yes: — *Estimate height (m)*: —

Other features (e.g. palaeochannels)

Reflector made of paving slabs has moved.

Part VI: CHANNEL GEOMETRY

Planform (tick one)

- ☐ Straight
- ☑ Sinuous
- ☐ Irregular meanders
- ☐ Regular meanders
- ☐ Braided
- ☐ Anastomosed
- Y/(N) Realigned? *Ring Y/N*

Cross-section (tick one)

- ☐ Rectangular/Trapezoidal
- ☑ U-shaped
- ☐ Two stage
- ☐ Multi-stage

(Y)/N Resectioned? *Ring Y/N*

N/(Y) Culverted? *Ring Y/N*

Est. length of culvert (m):

Channel Dimensions

Width	Depth	Symmetry	(tick one)
☑	☐	☐	Uniform
☐	☑	☑	Variable with planform
☐	☐	☐	Variable without planform

	Width	Depth	*Estimate (m)*
Qbf Min	1.8	1.8	
Qbf Max	2.5	2.5	
Qbf Mean	2.0	2.2	

Gradient (tick one) (use look back test)

- ☐ High
- ☐ Medium
- ☑ Low

Velocity (tick one)

- ☑ Uniform
- ☐ Varied
- ☐ Highly varied

Part VII: BOUNDARY CONDITIONS

BED

Bed Material (tick all present, E if > 33%)

☐	Obscured	☐	Cobble
☑E	Fine material	☐	Boulder
☑	Fine gravel	☐	Bedrock
☑	Coarse gravel	☐	Artificial

Bed Characteristics: (tick all applicable, E if > 33%)

Sorting:	☐	Sorted	☑	Unsorted	
Debris:	☑	None	☐	Natural	☐ Man made
Sphericity:	☐	Angular	☑	Sub-angular	☐ Rounded
Imbrication:	☑	None	☐	Imbricated	☐ Armoured
Diversity:	☑	Uniform	☐	Non-uniform	

Channel Vegetation: % cover: 5

- ☑ Submerged in-channel vegetation
- ☐ Surface floating vegetation
- ☑ Emergent reeds/sedges/rushes
- ☐ Filamentous algae
- ☐ Moss/lichen/liverworts
- ☐ Exposed tree roots

BANKS

Bank material (tick if present, E if > 33%)

LH	RH	
☑E	☑	Obscured
☐	☐	Clay
☐	☑	Silt
☐	☑	Sand
☐	☐	Fine gravel
☐	☐	Coarse gravel
☐	☐	Cobble
☐	☐	Boulder
☐	☐	Bedrock
☑	☑	Artificial
(Y)/N	(Y)/N	Cohesive?

Profile (tick if present, E if > 33%)

LH	RH	
☑E	☑	Cliff/Vertical
☐	☐	Stepped
☐	☑E	Graded

Protection (tick if present, E if > 33%)

☐	☑	None
☐	☐	Toe
☑	☐	Full
☑	☐	Walled
☐	☐	Concrete
☑	☐	Wooden
☐	☐	Rip rap
☐	☐	Other……

Tree lining (tick one for each bank)

LH	RH	
☐	☐	None
☐	☑	Isolated/scattered
☐	☐	Reg. spaced/singular
☐	☐	Occasional clumps
☑	☐	Semi-continuous
☐	☐	Continuous
Y/(N)	Y/(N)	Recent tree planting

Bank face vegetation (tick one for each bank)

LH	RH	
☐	☐	None
☐	☐	Uniform
☑	☑	Simple
☐	☐	Complex

Part I: SURVEY CONDITIONS

R02

See relevant 1:25000 mapping and watercourse summary sheet for watercourse name and Reach ID code

Catchment	Watercourse	Reach ID	NGR Start	Surveyor
Avon	River Wylye	SMR-01	SU 09357 32978	JLE
			NGR End SU 09522 32681	

Date	Time	Flow (tick):					
18/08/08	13.00	☐ Low/base	☑ Above low	☐ High			

Conditions influencing survey quality:	LHB	Reason for upstream reach boundary:	Record photo NGR (GPS) and mark on map	No. of Photos
Deep water	RHB ☐	Start of restoration site		

Part II: SEDIMENT SOURCES

*Tally fine and coarse sediment sources, place totals in final box (e.g. F2, C4). * = Take GIS reading and mark on map*
Diffuse sources: tally with F for fine and C for coarse under Micro, Meso or Macro and direct from slope or indirect e.g.through creep

Point Sources

	Fine	Coarse	Totals		Fine	Coarse	Totals
Tributaries*				Scour at structure			
Field drain/mill leat*				Tree fall			
Tipped Material*				Footpath			
Collapsed building/wall*				Burrowing			
Vehicle access				Poaching			
Outfalls				Fishing platforms			

Diffuse Sources

Fluvial erosion	Micro	Meso	Macro	*Geotechnical failure*	Micro	Meso	Macro
Toe scour				Toe undermining			
Eroding cliff				Translational			
				Rotational slip			
Hillslope supply	Micro	Meso	Macro	Complex failure			
direct				Channel weathering			
indirect							

Part III: SEDIMENT TRANSPORT

Tally each morphological form observed along the reach, most likely to be in sequences according to associated gradient (e.g. pool-riffle)

Morphological Forms

	Tally	Total		Tally	Total
Waterfall			Boil		
Chute			Glide	\	\
Rapid			Pool		
Riffle			Ponded reach	\	\
Run			Marginal deadwater		

Part IV: SEDIMENT SINKS

Tally fine and coarse sediment sources, place totals in final box (e.g. F2, C4)

Point Sinks

	Fine	Coarse	Totals
Weirs*	\		\
Dams			
Fords			
Bridge			
Large woody debris			

Ad-hoc Fisheries Improvements

	Tally	Totals
Dredged pools		
Submerged vanes		
Boulder placement		
Deflectors		
Minor weir		
Vegetation management		

Diffuse Sinks Recent flood chaos? ☐ Yes ☑ No

	Permanent			Semi-permanent			Temporary		
	Micro	Meso	Macro	Micro	Meso	Macro	Micro	Meso	Macro
Floodplain deposits									
Splays									

Channel Deposits

Tally and total permanent, semi-permanent and temporary sediment deposits Micro = <10m², Meso = 10-150m², Macro = < 150m²
Tick types of storage present, place an E on right of box if extensive (>33%) - do not tally isolated boulders

	Permanent			Semi-permanent			Temporary		
	Micro	Meso	Macro	Micro	Meso	Macro	Micro	Meso	Macro
Boulder/cobble									
Cobble/gravel									
Fine material									

Type of Storage

☐ Mid channel bar ☐ Berms ☐ Isolated boulders
☐ Side bars ☐ Mature Islands
☐ Point bars ☑ Toe accummulation (not discrete)

R02

Part V: VALLEY OVERVIEW

Landuse codes: Coniferous Woodland (CW), Broadleaf Woodland (BL), Scrub (SH), Wetland (WL), Moorland Heath (MH), Grazing (G), Tilled land (TL), Standing water (SW), Road/Track (RT), Suburban/urban (SU), Recreational (RE)

Valley Form (tick one)
- ☐ Shallow Vee
- ☐ Deep Vee
- ☐ Gorge
- ☑ Concave/Bowl
- ☐ Terraced valley floor
- ☐ Not visible

Landuse (dominant type)

	5m	50m
LH	SH	G
RH	SH	G

Floodplain (tick one)
- ☐ None
- ☐ One bank
- ☐ Alternate
- ☑ Both banks

Width (tick one)

	LH	RH
< 1 river width	☑	☐
1-5 river widths	☐	☑
5-10 river widths	☐	☐
> 10 river widths	☐	☐

Riparian Buffer Strip (tick one)

	LH	RH
None	☐	☐
Indefinite	☐	☐
Fragmentary	☐	☐
Continuous	☑	☑

Width of strip (tick one)

	LH	RH
None	☐	☐
< 1 river width	☐	☐
1-5 river widths	☑	☑
> 5 river widths	☐	☐

Bank top vegetation (tick one)

	LH	RH
Uniform	☐	☐
Simple	☐	☐
Complex	☐	☐
Diseased alders?	☐	☐
Invasive species?	☐	☐

Connectivity

Channel disconnected from floodplain? (no out of bank flow)
- ☑ Yes
- ☐ No

Terraces (tick one)

	LH	RH
None	☑	☑
Indefinite	☐	☐
Fragmentary	☐	☐
Continuous	☐	☐

Insert no. of terraces: LH ____ RH ____

Levees (tick if present)

	LH	RH
None	☐	☑
Natural	☐	☐
Man Made	☑	☐
Continuous	☐	☐
Fragmented	☑	☐

Trashlines (tick one)
- ☐ LH
- ☐ RH

If Yes: *Estimate height (m)*: LH — RH —

Other features (e.g. palaeochannels)

fencing excludes grazing on both banks.

Part VI: CHANNEL GEOMETRY

Planform (tick one)
- ☐ Straight
- ☑ Sinuous
- ☐ Irregular meanders
- ☐ Regular meanders
- ☐ Braided
- ☐ Anastomosed
- (Y/N) Realigned? *Ring Y/N*

Cross-section (tick one)
- ☐ Rectangular/Trapezoidal
- ☑ U-shaped
- ☐ Two stage
- ☐ Multi-stage

(Y/N) Resectioned? *Ring Y/N*

Y (N) Culverted? *Ring Y/N*

Est. length of culvert (m): —

Channel Dimensions

	Width	Depth
Qbf Min	15	1·5
Qbf Max	20	2·2
Qbf Mean	18	1·8

Symmetry (tick one)
- ☐ Uniform
- ☐ Variable with planform
- ☑ Variable without planform

Estimate (m)

Gradient (tick one) (use look back test)
- ☐ High
- ☐ Medium
- ☑ Low

Velocity (tick one)
- ☑ Uniform
- ☐ Varied
- ☐ Highly varied

Part VII: BOUNDARY CONDITIONS

BED

Bed Material (tick all present, E if > 33%)

☑ E	Obscured	☐	Cobble
☑	Fine material	☐	Boulder
☑	Fine gravel	☐	Bedrock
☑	Coarse gravel	☐	Artificial

Bed Characteristics: (tick all applicable, E if > 33%)

Sorting:	☐	Sorted	☑	Unsorted	
Debris:	☑ E	None	☐	Natural	☐ Man made
Sphericity: NV	☐	Angular	☐	Sub-angular	☐ Rounded
Imbrication: NV	☐	None	☐	Imbricated	☐ Armoured
Diversity:	☑	Uniform	☐	Non-uniform	

Channel Vegetation: % cover 10
- ☐ Submerged in-channel vegetation
- ☐ Surface floating vegetation
- ☑ Emergent reeds/sedges/rushes
- ☐ Filamentous algae
- ☐ Moss/lichen/liverworts
- ☐ Exposed tree roots

BANKS

Bank material (tick if present, E if > 33%)

LH	RH	
☑	☑	Obscured
☐	☐	Clay
☑	☑	Silt
☑	☑	Sand
☐	☐	Fine gravel
☐	☐	Coarse gravel
☐	☐	Cobble
☐	☐	Boulder
☐	☐	Bedrock
☐	☐	Artificial
(Y/N)	(Y/N)	Cohesive?

Profile (tick if present, E if > 33%)

LH	RH	
☐	☐	Cliff/Vertical
☐	☐	Stepped
☑ E	☑ E	Graded

Protection (tick if present, E if > 33%)

☑ E	☑ E	None
☐	☐	Toe
☐	☐	Full
☐	☐	Walled
☐	☐	Concrete
☐	☐	Wooden
☐	☐	Rip rap
☐	☐	Other……

Tree lining (tick one for each bank)

LH	RH	
☐	☐	None
☐	☐	Isolated/scattered
☐	☐	Reg. spaced/singular
☐	☐	Occasional clumps
☐	☐	Semi-continuous
☑	☐	Continuous (over back)
(Y/N)	(Y/N)	Recent tree planting

Bank face vegetation (tick one for each bank)

LH	RH	
☐	☐	None
☐	☐	Uniform
☑	☑	Simple
☐	☐	Complex

R02

Part I: SURVEY CONDITIONS

See relevant 1:25000 mapping and watercourse summary sheet for watercourse name and Reach ID code

Catchment	Watercourse	Reach ID	NGR Start	Surveyor
Avon	River Wylye	SMR-02	SU 09522 32681	JLE
			NGR End SU 09715 32170	

Date	Time	Flow (tick):				
18/08/08	13.40	☐ Low/base	☑ Above low	☐ High		

Conditions influencing survey quality:	LHB ☐ RHB ☑	Reason for upstream reach boundary:	Record photo NGR (GPS) and mark on map	No. of Photos
Deep water		Sewer markers shown		

Part II: SEDIMENT SOURCES

*Tally fine and coarse sediment sources, place totals in final box (e.g. F2, C4). * = Take GIS reading and mark on map*
Diffuse sources: tally with F for fine and C for coarse under Micro, Meso or Macro and direct from slope or indirect e.g.through creep

Point Sources

	Fine	Coarse	Totals
Tributaries*			
Field drain/mill leat*			
Tipped Material*			
Collapsed building/wall*			
Vehicle access			
Outfalls			

	Fine	Coarse	Totals
Scour at structure			
Tree fall			
Footpath			
Burrowing			
Poaching			
Fishing platforms			

Diffuse Sources

Fluvial erosion	Micro	Meso	Macro
Toe scour			
Eroding cliff			

Hillslope supply	Micro	Meso	Macro
direct			
indirect			

Geotechnical failure	Micro	Meso	Macro
Toe undermining	1		
Translational			
Rotational slip			
Complex failure			
Channel weathering			

Part III: SEDIMENT TRANSPORT

Tally each morphological form observed along the reach, most likely to be in sequences according to associated gradient (e.g. pool-riffle)

Morphological Forms

	Tally	Total
Waterfall		
Chute		
Rapid		
Riffle	III	3
Run		

	Tally	Total
Boil		
Glide	IIII	4
Pool	II	1
Ponded reach	I	1
Marginal deadwater		

Part IV: SEDIMENT SINKS

Tally fine and coarse sediment sources, place totals in final box (e.g. F2, C4)

Point Sinks

	Fine	Coarse	Totals
Weirs*	1		1
Dams			
Fords			
Bridge	1		1
Large woody debris			

Ad-hoc Fisheries Improvements

	Tally	Totals
Dredged pools		
Submerged vanes		
Boulder placement		
Deflectors		
Minor weir		
Vegetation management		

Diffuse Sinks Recent flood chaos? ☐ Yes ☐ No

	Permanent			Semi-permanent			Temporary		
	Micro	Meso	Macro	Micro	Meso	Macro	Micro	Meso	Macro
Floodplain deposits									
Splays									

Channel Deposits

Tally and total permanent, semi-permanent and temporary sediment deposits Micro = <10m², Meso = 10-150m², Macro = < 150m²
Tick types of storage present, place an E on right of box if extensive (>33%) - do not tally isolated boulders

	Permanent			Semi-permanent			Temporary		
	Micro	Meso	Macro	Micro	Meso	Macro	Micro	Meso	Macro
Boulder/cobble									
Cobble/gravel									
Fine material							1		

Type of Storage

☐ Mid channel bar ☐ Berms ☐ Isolated boulders
☐ Side bars ☐ Mature Islands
☐ Point bars ☑ Toe accummulation (not discrete) mainly

Part V: VALLEY OVERVIEW

Landuse codes: Coniferous Woodland (CW), Broadleaf Woodland (BL), Scrub (SH), Wetland (WL), Moorland Heath (MH), Grazing (G), Tilled land (TL), Standing water (SW), Road/Track (RT), Suburban/urban (SU), Recreational (RE)

Valley Form (tick one)

- ☐ Shallow Vee
- ☐ Deep Vee
- ☐ Gorge
- ☑ Concave/Bowl
- ☐ Terraced valley floor
- ☐ Not visible

Landuse (dominant type)

	5m	50m
LH	G	G
RH	SH	G

Floodplain (tick one)

		Width (tick one) LH	RH	
☐	None	☑	☐	< 1 river width
☑	One bank	☐	☑	1-5 river widths
☐	Alternate	☐	☐	5-10 river widths
☐	Both banks	☐	☐	> 10 river widths

Riparian Buffer Strip (tick one)

LH	RH		Width of strip (tick one) LH	RH		Bank top vegetation (tick one) LH	RH	
☐	☐	None	☐	☐	None	☐	☐	Uniform
☐	☐	Indefinite	☐	☐	< 1 river width	☑	☑	Simple
☐	☐	Fragmentary	☑	☑	1-5 river widths	☐	☐	Complex
☑	☑	Continuous	☐	☐	> 5 river widths	☐	☐	Diseased alders?
						☐	☐	Invasive species?

Connectivity

Channel disconnected from floodplain? (no out of bank flow)

- ☑ Yes
- ☐ No

Terraces (tick one)

LH	RH		Insert no. of terraces
☑	☑	None	LH
☐	☐	Indefinite	RH
☐	☐	Fragmentary	
☐	☐	Continuous	

Levees (tick if present)

LH	RH	
☐	☐	None
☐	☐	Natural
☑	☑	Man Made
☐	☐	Continuous
☑	☑	Fragmented

Trashlines (tick one)

- ☐ LH
- ☐ RH

If Yes:

	Estimate height (m)
—	

Other features (e.g. palaeochannels)

Fencing excludes cattle on RMB - previously poached sites are being stabilised by macrophytes.

Part VI: CHANNEL GEOMETRY

Planform (tick one)

- ☐ Straight
- ☑ Sinuous
- ☐ Irregular meanders
- ☐ Regular meanders
- ☐ Braided
- ☐ Anastomosed
- Y(N) Realigned? *Ring Y/N*

Cross-section (tick one)

- ☐ Rectangular/Trapezoidal
- ☑ U-shaped
- ☐ Two stage
- ☐ Multi-stage
- (Y)/N Resectioned? *Ring Y/N*
- Y(N) Culverted? *Ring Y/N*
- Est. length of culvert (m)

Channel Dimensions

Width	Depth	Symmetry (tick one)		Qbf Min	Qbf Max	Qbf Mean
☑	☐	☑	Uniform	15	1.5	
☐	☑	☐	Variable with planform	20	2.5	
☐	☐	☐	Variable without planform	18	2	

Estimate (m)

Gradient (tick one) (use look back test)

- ☐ High
- ☐ Medium
- ☑ Low

Velocity (tick one)

- ☐ Uniform
- ☑ Varied
- ☐ Highly varied

Part VII: BOUNDARY CONDITIONS

BED

Bed Material (tick all present, E if > 33%)

☐	Obscured	☑	Cobble
☑	Fine material	☐	Boulder
☑E	Fine gravel	☐	Bedrock
☑E	Coarse gravel	☐	Artificial

Bed Characteristics: (tick all applicable, E if > 33%)

Sorting:	☑	Sorted	☐	Unsorted	
Debris:	☐	None	☐	Natural	☑ Man made
Sphericity:	☐	Angular	☑	Sub-angular	☐ Rounded
Imbrication:	☑	None	☐	Imbricated	☐ Armoured
Diversity:	☐	Uniform	☑	Non-uniform	

Channel Vegetation: % cover 10

- ☑ Submerged in-channel vegetation
- ☐ Surface floating vegetation
- ☑ Emergent reeds/sedges/rushes
- ☐ Filamentous algae
- ☐ Moss/lichen/liverworts
- ☐ Exposed tree roots

BANKS

Bank material (tick if present, E if > 33%)

LH	RH	
☐	☐	Obscured
☐	☐	Clay
☑	☑	Silt
☑E	☑E	Sand
☑	☑	Fine gravel
☑	☑	Coarse gravel
☐	☐	Cobble
☐	☐	Boulder
☐	☐	Bedrock
☐	☐	Artificial
Y(N)	Y(N)	Cohesive?

Profile (tick if present, E if > 33%)

LH	RH	
☑	☑	Cliff/Vertical
☐	☐	Stepped
☑E	☑E	Graded

Protection (tick if present, E if > 33%)

☐	☐	None
☐	☐	Toe
☑	☑	Full
☑	☑	Walled
☐	☐	Concrete
☐	☐	Wooden
☐	☐	Rip rap
☐	☐	Other……

Tree lining (tick one for each bank)

LH	RH	
☐	☐	None
☐	☑	Isolated/scattered
☐	☐	Reg. spaced/singular
☐	☐	Occasional clumps
☐	☐	Semi-continuous
☑	☐	Continuous (set back)
Y(N)	(Y)/N	Recent tree planting

Bank face vegetation (tick one for each bank)

LH	RH	
☐	☐	None
☐	☐	Uniform
☑	☑	Simple
☐	☐	Complex

R02

Part I: SURVEY CONDITIONS

See relevant 1:25000 mapping and watercourse summary sheet for watercourse name and Reach ID code

Catchment	Watercourse	Reach ID	NGR Start	Surveyor
Avon	River Wylye	SHR-03	SU09715 32170	JLE
Date 18/08/08	Time 14.50	Flow (tick): ☐ Low/base	☑ Above low	☐ High
Conditions influencing survey quality: Difficult access.	LHB ☐ RHB ☐	Reason for upstream reach boundary: Railway crossing apron causing impoundment u/s	Record photo NGR (GPS) and mark on map	No. of Photos

NGR End SU09750 32068

Part II: SEDIMENT SOURCES

*Tally fine and coarse sediment sources, place totals in final box (e.g. F2, C4). * = Take GIS reading and mark on map*
Diffuse sources: tally with F for fine and C for coarse under Micro, Meso or Macro and direct from slope or indirect e.g.through creep

Point Sources

	Fine	Coarse	Totals
Tributaries*		|	
Field drain/mill leat*	|		
Tipped Material*			
Collapsed building/wall*			
Vehicle access			
Outfalls			

	Fine	Coarse	Totals
Scour at structure			
Tree fall			
Footpath			
Burrowing			
Poaching			
Fishing platforms			

Diffuse Sources

Fluvial erosion	Micro	Meso	Macro
Toe scour			
Eroding cliff		|	

Hillslope supply	Micro	Meso	Macro
direct			
indirect			

Geotechnical failure	Micro	Meso	Macro
Toe undermining			
Translational			
Rotational slip			
Complex failure			
Channel weathering			

Part III: SEDIMENT TRANSPORT

Tally each morphological form observed along the reach, most likely to be in sequences according to associated gradient (e.g. pool-riffle)

Morphological Forms

	Tally	Total
Waterfall		
Chute		
Rapid		
Riffle	||	
Run		

	Tally	Total
Boil		
Glide	|	
Pool	||	
Ponded reach		
Marginal deadwater		

Part IV: SEDIMENT SINKS

Tally fine and coarse sediment sources, place totals in final box (e.g. F2, C4)

Point Sinks

	Fine	Coarse	Totals
Weirs*			
Dams			
Fords			
Bridge			
Large woody debris			

Ad-hoc Fisheries Improvements

	Tally	Totals
Dredged pools		
Submerged vanes		
Boulder placement		
Deflectors		
Minor weir		
Vegetation management		

Diffuse Sinks Recent flood chaos? ☐ Yes ☑ No

	Permanent			Semi-permanent			Temporary		
	Micro	Meso	Macro	Micro	Meso	Macro	Micro	Meso	Macro
Floodplain deposits									
Splays									

Channel Deposits

Tally and total permanent, semi-permanent and temporary sediment deposits Micro = <10m², Meso = 10-150m², Macro = < 150m²
Tick types of storage present, place an E on right of box if extensive (>33%) - do not tally isolated boulders

	Permanent			Semi-permanent			Temporary		
	Micro	Meso	Macro	Micro	Meso	Macro	Micro	Meso	Macro
Boulder/cobble									
Cobble/gravel				|		|		
Fine material									

Type of Storage

☐ Mid channel bar ☐ Berms ☐ Isolated boulders
☐ Side bars ☐ Mature Islands
☑ Point bars ☐ Toe accummulation

Part V: VALLEY OVERVIEW

Landuse codes:Coniferous Woodland (CW), Broadleaf Woodland (BL), Scrub (SH), Wetland (WL), Moorland Heath (MH), Grazing (G), Tilled land (TL), Standing water (SW), Road/Track (RT), Suburban/urban (SU), Recreational (RE)

Valley Form (tick one)

- ☐ Shallow Vee
- ☐ Deep Vee
- ☐ Gorge
- ☑ Concave/Bowl
- ☐ Terraced valley floor
- ☐ Not visible

Landuse (dominant type)

	5m	50m
LH	BL	BL
RH	G/TH	G

Floodplain (tick one)

		Width (tick one) LH	RH	
☐	None	☐	☐	< 1 river width
☑	One bank	☑	☑	1-5 river widths
☐	Alternate	☐	☐	5-10 river widths
☑	Both banks	☐	☐	> 10 river widths

Riparian Buffer Strip (tick one)

LH	RH		Width of strip (tick one) LH	RH		Bank top vegetation (tick one) LH	RH	
☐	☐	None	☐	☐	None	☐	☐	Uniform
☐	☐	Indefinite	☐	☐	< 1 river width	☑	☑	Simple
☐	☑	Fragmentary	☑	☑	1-5 river widths	☐	☐	Complex
☑	☐	Continuous	☐	☐	> 5 river widths	☐	☐	Diseased alders?
						☐	☐	Invasive species?

Connectivity

Channel disconnected from floodplain? (no out of bank flow)

- ☑ Yes
- ☐ No

Terraces (tick one)

Insert no. of terraces LH –, RH –

LH	RH	
☑	☑	None
☐	☐	Indefinite
☐	☐	Fragmentary
☐	☐	Continuous

Levees (tick if present)

LH	RH	
☑	☑	None
☐	☐	Natural
☐	☐	Man Made
☐	☐	Continuous
☐	☐	Fragmented

Trashlines (tick one)

- ☐ LH
- ☐ RH

If Yes: – *Estimate height (m)*

Other features (e.g. palaeochannels)

Part VI: CHANNEL GEOMETRY

Planform (tick one)

- ☐ Straight
- ☐ Sinuous
- ☐ Irregular meanders
- ☑ Regular meanders
- ☐ Braided
- ☐ Anastomosed
- Y/N Realigned? *Ring Y/N*

Cross-section (tick one)

- ☐ Rectangular/Trapezoidal
- ☑ U-shaped
- ☐ Two stage
- ☐ Multi-stage

Y/N Resectioned? *Ring Y/N*
Y/N Culverted? *Ring Y/N*
Est. length of culvert (m)

Channel Dimensions

Width	Depth	Symmetry	(tick one)	Qbf Min	*Estimate (m)*
☐	☐	☐	Uniform		
☑	☑	☑	Variable with planform	Qbf Max	
☐	☐	☐	Variable without planform	Qbf Mean	
16	1.2				
20	2.5				
18	2				

Gradient (tick one) (use look back test)

- ☐ High
- ☐ Medium
- ☑ Low

Velocity (tick one)

- ☐ Uniform
- ☑ Varied
- ☐ Highly varied

Part VII: BOUNDARY CONDITIONS

BED

Bed Material (tick all present, E if > 33%)

☑	Obscured	☑	Cobble
☑	Fine material	☐	Boulder
☑E	Fine gravel	☐	Bedrock
☑	Coarse gravel	☐	Artificial

Bed Characteristics: (tick all applicable, E if > 33%)

Sorting:	☑	Sorted	☐	Unsorted	
Debris:	☑	None	☐	Natural	☐ Man made
Sphericity:	☐	Angular	☑	Sub-angular	☐ Rounded
Imbrication:	☐	None	☑	Imbricated	☐ Armoured
Diversity:	☐	Uniform	☑E	Non-uniform	

Channel Vegetation: % cover 10

☑	Submerged in-channel vegetation	☐	Filamentous algae
☐	Surface floating vegetation	☐	Moss/lichen/liverworts
☑	Emergent reeds/sedges/rushes	☐	Exposed tree roots

BANKS

Bank material (tick if present, E if > 33%)

LH	RH	
☑	☑	Obscured
☑	☑	Clay
☑E	☑E	Silt
☑	☑	Sand
☐	☐	Fine gravel
☐	☐	Coarse gravel
☐	☐	Cobble
☐	☐	Boulder
☐	☐	Bedrock
☐	☐	Artificial
Y/N	Y/N	Cohesive?

Profile (tick if present, E if > 33%)

LH	RH	
☐	☑	Cliff/Vertical
☐	☐	Stepped
☑E	☑	Graded

Protection (tick if present, E if > 33%)

☐	☐	None
☐	☑	Toe
☑	☐	Full
☐	☐	Walled
☑	☑	Concrete
☐	☐	Wooden
☐	☐	Rip rap
☐	☐	Other.....

bags

Tree lining (tick one for each bank)

LH	RH	
☐	☐	None
☐	☐	Isolated/scattered
☐	☐	Reg. spaced/singular
☐	☑	Occasional clumps
☑	☐	Semi-continuous
☐	☐	Continuous
Y/N	Y/N	Recent tree planting

Bank face vegetation (tick one for each bank)

LH	RH	
☐	☐	None
☐	☐	Uniform
☑	☑	Simple
☐	☐	Complex

R02

Part I: SURVEY CONDITIONS

See relevant 1:25000 mapping and watercourse summary sheet for watercourse name and Reach ID code

Catchment	Watercourse	Reach ID	NGR Start	Surveyor
Avon	River Wylye	SMR-04	SU 09750 32068	JLE
			NGR End SU 09849 31814	

Date	Time	Flow (tick):				
18/08/08	15.50	☐ Low/base	☑ Above low	☐ High		

Conditions influencing survey quality:	LHB ☐ RHB ☑	Reason for upstream reach boundary:	Record photo NGR (GPS) and mark on map	No. of Photos
Deep water		↑ uniformity rescheined		

Part II: SEDIMENT SOURCES

*Tally fine and coarse sediment sources, place totals in final box (e.g. F2, C4). * = Take GIS reading and mark on map*
Diffuse sources: tally with F for fine and C for coarse under Micro, Meso or Macro and direct from slope or indirect e.g.through creep

Point Sources

	Fine	Coarse	Totals		Fine	Coarse	Totals
Tributaries*				Scour at structure			
Field drain/mill leat*				Tree fall			
Tipped Material*				Footpath			
Collapsed building/wall*				Burrowing			
Vehicle access				Poaching			
Outfalls				Fishing platforms			

Diffuse Sources

Fluvial erosion	Micro	Meso	Macro
Toe scour		\	
Eroding cliff			

Hillslope supply	Micro	Meso	Macro
direct			
indirect			

Geotechnical failure	Micro	Meso	Macro
Toe undermining		\	
Translational			
Rotational slip			
Complex failure			

Channel weathering			

Part III: SEDIMENT TRANSPORT

Tally each morphological form observed along the reach, most likely to be in sequences according to associated gradient (e.g. pool-riffle)

Morphological Forms

	Tally	Total		Tally	Total
Waterfall			Boil		
Chute			Glide	\	\
Rapid			Pool		
Riffle			Ponded reach		
Run			Marginal deadwater		

Part IV: SEDIMENT SINKS

Tally fine and coarse sediment sources, place totals in final box (e.g. F2, C4)

Point Sinks

	Fine	Coarse	Totals
Weirs*			
Dams			
Fords			
Bridge	\		\
Large woody debris			

Ad-hoc Fisheries Improvements

	Tally	Totals
Dredged pools		
Submerged vanes		
Boulder placement		
Deflectors		
Minor weir		
Vegetation management		

Diffuse Sinks Recent flood chaos? ☐ Yes ☑ No

	Permanent			Semi-permanent			Temporary		
	Micro	Meso	Macro	Micro	Meso	Macro	Micro	Meso	Macro
Floodplain deposits									
Splays									

Channel Deposits

Tally and total permanent, semi-permanent and temporary sediment deposits Micro = <10m², Meso = 10-150m², Macro = < 150m²
Tick types of storage present, place an E on right of box if extensive (>33%) - do not tally isolated boulders

	Permanent			Semi-permanent			Temporary		
	Micro	Meso	Macro	Micro	Meso	Macro	Micro	Meso	Macro
Boulder/cobble									
Cobble/gravel									
Fine material									

Type of Storage

☐ Mid channel bar ☐ Berms ☐ Isolated boulders
☐ Side bars ☐ Mature Islands
☐ Point bars ☐ Toe accummulation

Part V: VALLEY OVERVIEW

Landuse codes: Coniferous Woodland (CW), Broadleaf Woodland (BL), Scrub (SH), Wetland (WL), Moorland Heath (MH), Grazing (G), Tilled land (TL), Standing water (SW), Road/Track (RT), Suburban/urban (SU), Recreational (RE)

Valley Form (tick one)

- ☐ Shallow Vee
- ☐ Deep Vee
- ☐ Gorge
- ☑ Concave/Bowl
- ☐ Terraced valley floor
- ☐ Not visible

Landuse (dominant type)

	5m	50m
LH	SH	G
RH	SH	G

Floodplain (tick one)

- ☐ None
- ☐ One bank
- ☐ Alternate
- ☑ Both banks

Width (tick one)

	LH	RH	
☐	☐	☐	< 1 river width
☐	☑	☑	1-5 river widths
☐	☐	☐	5-10 river widths
☐	☐	☐	> 10 river widths

Riparian Buffer Strip (tick one)

LH	RH	
☐	☐	None
☐	☐	Indefinite
☐	☐	Fragmentary
☑	☑	Continuous

Width of strip (tick one)

LH	RH	
☐	☐	None
☐	☑	< 1 river width
☑	☐	1-5 river widths
☐	☐	> 5 river widths

Bank top vegetation (tick one)

LH	RH	
☐	☐	Uniform
☑	☑	Simple
☐	☐	Complex
☐	☐	Diseased alders?
☐	☐	Invasive species?

Connectivity

Channel disconnected from floodplain? (no out of bank flow)

- ☑ Yes
- ☐ No

Terraces (tick one)

LH	RH	
☑	☑	None
☐	☐	Indefinite
☐	☐	Fragmentary
☐	☐	Continuous

Insert no. of terraces: LH –, RH –

Levees (tick if present)

LH	RH	
☑	☑	None
☐	☐	Natural
☐	☐	Man Made
☐	☐	Continuous
☐	☐	Fragmented

Trashlines (tick one)

- ☐ LH
- ☐ RH

If Yes: *Estimate height (m)*

Other features (e.g. palaeochannels)

Part VI: CHANNEL GEOMETRY

Planform (tick one)

- ☐ Straight
- ☑ Sinuous
- ☐ Irregular meanders
- ☐ Regular meanders
- ☐ Braided
- ☐ Anastomosed
- (Y/N) Realigned? *Ring Y/N*

Cross-section (tick one)

- ☐ Rectangular/Trapezoidal
- ☑ U-shaped
- ☐ Two stage
- ☐ Multi-stage

(Y/N) Resectioned? *Ring Y/N*

Y/(N) Culverted? *Ring Y/N*

Est. length of culvert (m):

Channel Dimensions

Width	Depth	Symmetry (tick one)		Estimate (m)
☑	☑	☑	Uniform	
☐	☐	☐	Variable with planform	
☐	☐	☐	Variable without planform	
12	1.8		Qbf Min	
17	2.2		Qbf Max	
15	2		Qbf Mean	

Gradient (use look back test) (tick one)

- ☐ High
- ☐ Medium
- ☑ Low

Velocity (tick one)

- ☑ Uniform
- ☐ Varied
- ☐ Highly varied

Part VII: BOUNDARY CONDITIONS

BED

Bed Material (tick all present, E if > 33%)

☑ E	Obscured	☐	Cobble
☑	Fine material	☐	Boulder
☑	Fine gravel	☐	Bedrock
☐	Coarse gravel	☐	Artificial

Bed Characteristics: (tick all applicable, E if > 33%)

Sorting:	☐	Sorted	☑	Unsorted	
Debris:	☑	None	☐	Natural	☐ Man made
Sphericity: NV	☐	Angular	☐	Sub-angular	☐ Rounded
Imbrication: NV	☐	None	☐	Imbricated	☐ Armoured
Diversity:	☐	Uniform	☐	Non-uniform	

Channel Vegetation: % cover: 5

- ☐ Submerged in-channel vegetation
- ☐ Surface floating vegetation
- ☑ Emergent reeds/sedges/rushes
- ☐ Filamentous algae
- ☐ Moss/lichen/liverworts
- ☐ Exposed tree roots

BANKS

Bank material (tick if present, E if > 33%)

LH	RH	
☑	☑	Obscured
☑	☑	Clay
☑ E	☑ E	Silt
☑	☑	Sand
☐	☐	Fine gravel
☐	☐	Coarse gravel
☐	☐	Cobble
☐	☐	Boulder
☐	☐	Bedrock
☐	☐	Artificial
(Y/N)	(Y/N)	Cohesive?

Profile (tick if present, E if > 33%)

LH	RH	
☐	☑ E	Cliff/Vertical
☐	☐	Stepped
☑	☑	Graded

Protection (tick if present, E if > 33%)

☑	☑	None
☐	☐	Toe
☐	☐	Full
☐	☐	Walled
☐	☐	Concrete
☐	☐	Wooden
☐	☐	Rip rap
☐	☐	Other……

Tree lining (tick one for each bank)

LH	RH	
☐	☐	None
☐	☑	Isolated/scattered
☐	☐	Reg. spaced/singular
☑	☐	Occasional clumps
☐	☐	Semi-continuous
☐	☐	Continuous
(Y/N)	(Y/N)	Recent tree planting

Bank face vegetation (tick one for each bank)

LH	RH	
☐	☐	None
☐	☐	Uniform
☑	☑	Simple
☐	☐	Complex

R02

Part I: SURVEY CONDITIONS

See relevant 1:25000 mapping and watercourse summary sheet for watercourse name and Reach ID code

Catchment	Watercourse	Reach ID	NGR Start	Surveyor
Avon	River Nadder	ROR-01	400215 130594	JLE
			NGR End 400675 130740	

Date	Time	Flow (tick):				
12/08/08	11:00	☐ Low/base	☑ Above low	☐ High		

Conditions influencing survey quality:	LHB ☑ RHB ☐	Reason for upstream reach boundary:	Record photo NGR (GPS) and mark on map	No. of Photos
None		Start of restoration reach		

Part II: SEDIMENT SOURCES

*Tally fine and coarse sediment sources, place totals in final box (e.g. F2, C4). * = Take GIS reading and mark on map*
Diffuse sources: tally with F for fine and C for coarse under Micro, Meso or Macro and direct from slope or indirect e.g.through creep

Point Sources

	Fine	Coarse	Totals
Tributaries*			
Field drain/mill leat*			
Tipped Material*			
Collapsed building/wall*			
Vehicle access			
Outfalls			

	Fine	Coarse	Totals
Scour at structure			
Tree fall			
Footpath			
Burrowing			
Poaching			
Fishing platforms			

Diffuse Sources

Fluvial erosion	Micro	Meso	Macro
Toe scour			
Eroding cliff			

Hillslope supply	Micro	Meso	Macro
direct			
indirect			

Geotechnical failure	Micro	Meso	Macro
Toe undermining			
Translational			
Rotational slip			
Complex failure			

Channel weathering			

Part III: SEDIMENT TRANSPORT

Tally each morphological form observed along the reach, most likely to be in sequences according to associated gradient (e.g. pool-riffle)

Morphological Forms

	Tally	Total
Waterfall		
Chute		
Rapid		
Riffle		
Run	𝍸	5

	Tally	Total
Boil		
Glide	𝍸	4
Pool	||	2
Ponded reach		
Marginal deadwater		

Part IV: SEDIMENT SINKS

Tally fine and coarse sediment sources, place totals in final box (e.g. F2, C4)

Point Sinks

	Fine	Coarse	Totals
Weirs*	1		1
Dams			
Fords			
Bridge			
Large woody debris			

Ad-hoc Fisheries Improvements

	Tally	Totals
Dredged pools		
Submerged vanes		
Boulder placement		
Deflectors	𝍸 𝍸 𝍸 𝍸 𝍸 |	29
Minor weir		
Vegetation management		

Diffuse Sinks Recent flood chaos? ☐ Yes ☐ No

	Permanent			Semi-permanent			Temporary		
	Micro	Meso	Macro	Micro	Meso	Macro	Micro	Meso	Macro
Floodplain deposits									
Splays									

Channel Deposits

Tally and total permanent, semi-permanent and temporary sediment deposits Micro = <10m², Meso = 10-150m², Macro = < 150m²
Tick types of storage present, place an E on right of box if extensive (>33%) - do not tally isolated boulders

	Permanent			Semi-permanent			Temporary		
	Micro	Meso	Macro	Micro	Meso	Macro	Micro	Meso	Macro
Boulder/cobble									
Cobble/gravel									
Fine material									

Type of Storage

☐ Mid channel bar ☐ Side bars ☐ Point bars ☐ Berms ☐ Mature Islands ☐ Toe accummulation ☐ Isolated boulders

Part V: VALLEY OVERVIEW

Landuse codes: Coniferous Woodland (CW), Broadleaf Woodland (BL), Scrub (SH), Wetland (WL), Moorland Heath (MH), Grazing (G), Tilled land (TL), Standing water (SW), Road/Track (RT), Suburban/urban (SU), Recreational (RE)

Valley Form (tick one)

- ☐ Shallow Vee
- ☐ Deep Vee
- ☐ Gorge
- ☑ Concave/Bowl
- ☐ Terraced valley floor
- ☐ Not visible

Landuse (dominant type)

	5m	50m
LH	RE	G
RH	BL	BL

Floodplain (tick one)

- ☐ None
- ☐ One bank
- ☐ Alternate
- ☑ Both banks

Width (tick one)

LH	RH	
☐	☐	< 1 river width
☑	☑	1-5 river widths
☐	☐	5-10 river widths
☐	☐	> 10 river widths

Riparian Buffer Strip (tick one)

LH	RH	
☐	☐	None
☐	☐	Indefinite
☐	☐	Fragmentary
☑	☑	Continuous

Width of strip (tick one)

LH	RH	
☐	☐	None
☑	☐	< 1 river width
☐	☑	1-5 river widths
☐	☐	> 5 river widths

Bank top vegetation (tick one)

LH	RH	
☐	☐	Uniform
☑	☑	Simple
☐	☐	Complex
☐	☐	Diseased alders?
☐	☐	Invasive species?

Connectivity

Channel disconnected from floodplain? (no out of bank flow)

- ☑ Yes
- ☐ No

Terraces (tick one) — *Insert no. of terraces*: LH —, RH —

LH	RH	
☑	☑	None
☐	☐	Indefinite
☐	☐	Fragmentary
☐	☐	Continuous

Levees (tick if present)

LH	RH	
☑	☑	None
☐	☐	Natural
☐	☐	Man Made
☐	☐	Continuous
☐	☐	Fragmented

Trashlines (tick one)

- ☐ LH
- ☐ RH

If Yes: *Estimate height (m)*: —, —

Other features (e.g. palaeochannels) Deflectors are improving hydrological transitional zone

Part VI: CHANNEL GEOMETRY

Planform (tick one)

- ☐ Straight
- ☑ Sinuous
- ☐ Irregular meanders
- ☐ Regular meanders
- ☐ Braided
- ☐ Anastomosed
- Y/(N) Realigned? *Ring Y/N*

Cross-section (tick one)

- ☐ Rectangular/Trapezoidal
- ☑ U-shaped
- ☐ Two stage
- ☐ Multi-stage
- (Y)/N Resectioned? *Ring Y/N*
- Y/(N) Culverted? *Ring Y/N*
- Est. length of culvert (m):

Channel Dimensions

Width	Depth	Symmetry	(tick one)
☑	☐	☐	Uniform
☐	☐	☑	Variable with planform
☐	☑	☐	Variable without planform

Width	Depth		*Estimate (m)*
18	2.0	Qbf Min	
22	2.5	Qbf Max	
20	2.2	Qbf Mean	

Gradient (tick one) (use look back test)

- ☐ High
- ☐ Medium
- ☑ Low

Velocity (tick one)

- ☐ Uniform
- ☑ Varied
- ☐ Highly varied

Part VII: BOUNDARY CONDITIONS

BED

Bed Material (tick all present, E if > 33%)

- ☑ Obscured
- ☑ Fine material
- ☑ E Fine gravel
- ☑ Coarse gravel
- ☐ Cobble
- ☐ Boulder
- ☐ Bedrock
- ☐ Artificial

Bed Characteristics: (tick all applicable, E if > 33%)

Sorting:	☑ Sorted	☐ Unsorted	
Debris:	☑ None	☐ Natural	☐ Man made
Sphericity:	☐ Angular	☑ Sub-angular	☐ Rounded
Imbrication:	☐ None	☑ Imbricated	☐ Armoured
Diversity:	☐ Uniform	☑ Non-uniform	

Channel Vegetation:

% cover: 50

- ☑ E Submerged in-channel vegetation
- ☐ Surface floating vegetation
- ☑ Emergent reeds/sedges/rushes
- ☐ Filamentous algae
- ☐ Moss/lichen/liverworts
- ☐ Exposed tree roots

BANKS

Bank material (tick if present, E if > 33%)

LH	RH	
☑	☑	Obscured
☐	☐	Clay
☑	☑	Silt
☑	☑	Sand
☐	☐	Fine gravel
☐	☐	Coarse gravel
☐	☐	Cobble
☐	☐	Boulder
☐	☐	Bedrock
☐	☐	Artificial
(Y)/N	(Y)/N	Cohesive?

Profile (tick if present, E if > 33%)

LH	RH	
☐	☑	Cliff/Vertical
☑	☐	Stepped
☑	☑	Graded

Protection (tick if present, E if > 33%)

LH	RH	
☐	☐	None
☑	☐	Toe
☐	☑	Full
☐	☑	Walled
☐	☐	Concrete
☐	☐	Wooden
☑ (historic)	☐	Rip rap
☐	☐	Other……

Tree lining (tick one for each bank)

LH	RH	
☐	☐	None
☑	☐	Isolated/scattered
☐	☐	Reg. spaced/singular
☐	☐	Occasional clumps
☐	☑	Semi-continuous
☐	☐	Continuous
Y/(N)	Y/(N)	Recent tree planting

Bank face vegetation (tick one for each bank)

LH	RH	
☐	☐	None
☐	☐	Uniform
☑	☑	Simple
☐	☐	Complex

R02

Part I: SURVEY CONDITIONS

See relevant 1:25000 mapping and watercourse summary sheet for watercourse name and Reach ID code

Catchment	Watercourse	Reach ID	NGR Start	Surveyor
Avon	River Avon	MAR-01	416352 117930	JLE
			NGR End 416724 118167	

Date	Time	Flow (tick):					
12/08/08	14.30	☐ Low/base	☐ Above low	☑ High			

Conditions influencing survey quality:	LHB ☐ RHB ☑	Reason for upstream reach boundary:	Record photo NGR (GPS) and mark on map	No. of Photos
High water levels		Upstream limit		

Part II: SEDIMENT SOURCES

*Tally fine and coarse sediment sources, place totals in final box (e.g. F2, C4). * = Take GIS reading and mark on map*
Diffuse sources: tally with F for fine and C for coarse under Micro, Meso or Macro and direct from slope or indirect e.g.through creep

Point Sources

	Fine	Coarse	Totals
Tributaries*			
Field drain/mill leat*	HHT HHT		10
Tipped Material*			
Collapsed building/wall*			
Vehicle access			
Outfalls			

	Fine	Coarse	Totals
Scour at structure			
Tree fall			
Footpath			
Burrowing			
Poaching	11		2
Fishing platforms			

Diffuse Sources

Fluvial erosion	Micro	Meso	Macro
Toe scour			
Eroding cliff	1	11	

Geotechnical failure	Micro	Meso	Macro
Toe undermining			
Translational			
Rotational slip			
Complex failure			

Hillslope supply	Micro	Meso	Macro
direct			
indirect			

Channel weathering			

Part III: SEDIMENT TRANSPORT

Tally each morphological form observed along the reach, most likely to be in sequences according to associated gradient (e.g. pool-riffle)

Morphological Forms

	Tally	Total
Waterfall		
Chute		
Rapid		
Riffle		
Run		

	Tally	Total
Boil	1	1
Glide	1	1
Pool		
Ponded reach		
Marginal deadwater		

Part IV: SEDIMENT SINKS

Tally fine and coarse sediment sources, place totals in final box (e.g. F2, C4)

Point Sinks

	Fine	Coarse	Totals
Weirs*			
Dams			
Fords			
Bridge			
Large woody debris			

Ad-hoc Fisheries Improvements

	Tally	Totals
Dredged pools		
Submerged vanes		
Boulder placement		
Deflectors		
Minor weir		
Vegetation management		

Diffuse Sinks Recent flood chaos? ☐ Yes ☑ No

	Permanent			Semi-permanent			Temporary		
	Micro	Meso	Macro	Micro	Meso	Macro	Micro	Meso	Macro
Floodplain deposits									
Splays									

Channel Deposits

Tally and total permanent, semi-permanent and temporary sediment deposits Micro = <10m², Meso = 10-150m², Macro = < 150m²
Tick types of storage present, place an E on right of box if extensive (>33%) - do not tally isolated boulders

	Permanent			Semi-permanent			Temporary		
	Micro	Meso	Macro	Micro	Meso	Macro	Micro	Meso	Macro
Boulder/cobble									
Cobble/gravel									
Fine material				1	111				

Type of Storage

☐	Mid channel bar	☑	Berms	☐	Isolated boulders
☐	Side bars	☐	Mature Islands		
☐	Point bars	☐	Toe accummulation		

R02

Part V: VALLEY OVERVIEW

Landuse codes: Coniferous Woodland (CW), Broadleaf Woodland (BL), Scrub (SH), Wetland (WL), Moorland Heath (MH), Grazing (G), Tilled land (TL), Standing water (SW), Road/Track (RT), Suburban/urban (SU), Recreational (RE)

Valley Form (tick one)

- ☐ Shallow Vee
- ☐ Deep Vee
- ☐ Gorge
- ☐ Concave/Bowl
- ☐ Terraced valley floor
- ☑ Not visible

Landuse (dominant type)

	5m	50m
LH	BL	BL
RH	G	G

Floodplain (tick one)

- ☐ None
- ☐ One bank
- ☐ Alternate
- ☑ Both banks

Width (tick one)

	LH	RH
< 1 river width	☐	☐
1-5 river widths	☐	☐
5-10 river widths	☑	☑
> 10 river widths	☐	☐

Riparian Buffer Strip (tick one)

LH	RH	
☐	☐	None
☐	☐	Indefinite
☐	☐	Fragmentary
☑	☑	Continuous

Width of strip (tick one)

LH	RH	
☐	☐	None
☐	☑	< 1 river width
☑	☐	1-5 river widths
☐	☐	> 5 river widths

Bank top vegetation (tick one)

LH	RH	
☐	☐	Uniform
☑	☑	Simple
☐	☐	Complex
☐	☐	Diseased alders?
☐	☐	Invasive species?

Connectivity

Channel disconnected from floodplain? (no out of bank flow)

- ☐ Yes
- ☑ No

Terraces (tick one)

LH	RH	
☑	☑	None
☐	☐	Indefinite
☐	☐	Fragmentary
☐	☐	Continuous

Insert no. of terraces: LH —, RH —

Levees (tick if present)

LH	RH	
☑	☑	None
☐	☐	Natural
☐	☐	Man Made
☐	☐	Continuous
☐	☐	Fragmented

Trashlines (tick one)

- ☐ LH
- ☐ RH

If Yes: *Estimate height (m)*: — / —

Other features (e.g. palaeochannels)

wet bank margins - trapping of silt by floodplain vegetation.

Part VI: CHANNEL GEOMETRY

Planform (tick one)

- ☐ Straight
- ☑ Sinuous
- ☐ Irregular meanders
- ☐ Regular meanders
- ☐ Braided
- ☐ Anastomosed
- Y/N Realigned? *Ring Y/N*

Cross-section (tick one)

- ☐ Rectangular/Trapezoidal
- ☑ U-shaped
- ☐ Two stage
- ☐ Multi-stage
- (Y)/N Resectioned? *Ring Y/N*
- Y/(N) Culverted? *Ring Y/N*
- Est. length of culvert (m)

Channel Dimensions

Width	Depth	Symmetry	(tick one)	Estimate (m)
☑	☐	☐	Uniform	
☐	☐	☑	Variable with planform	
☐	☑	☐	Variable without planform	
20	2		Qbf Min	
30	3		Qbf Max	
25	2.5		Qbf Mean	

Gradient (tick one) (use look back test)

- ☐ High
- ☐ Medium
- ☑ Low

Velocity (tick one)

- ☑ Uniform
- ☐ Varied
- ☐ Highly varied

Part VII: BOUNDARY CONDITIONS

BED

Bed Material (tick all present, E if > 33%)

- ☑E Obscured
- ☑ Fine material
- ☑E Fine gravel
- ☐ Coarse gravel
- ☐ Cobble
- ☐ Boulder
- ☐ Bedrock
- ☐ Artificial

Bed Characteristics: (tick all applicable, E if > 33%) Not Visible

Sorting:	☐ Sorted	☐ Unsorted			
Debris:	☐ None	☐ Natural	☐ Man made		
Sphericity:	☐ Angular	☐ Sub-angular	☐ Rounded		
Imbrication:	☐ None	☐ Imbricated	☐ Armoured		
Diversity:	☐ Uniform	☐ Non-uniform			

Channel Vegetation: % cover 20

- ☑ Submerged in-channel vegetation
- ☐ Surface floating vegetation
- ☑ Emergent reeds/sedges/rushes
- ☐ Filamentous algae
- ☐ Moss/lichen/liverworts
- ☐ Exposed tree roots

BANKS

Bank material (tick if present, E if > 33%)

LH	RH	
☑E	☑E	Obscured
☐	☐	Clay
☑	☑	Silt
☑	☑	Sand
☐	☐	Fine gravel
☐	☐	Coarse gravel
☐	☐	Cobble
☐	☐	Boulder
☐	☐	Bedrock
☐	☐	Artificial
(Y)/N	(Y)/N	Cohesive?

Profile (tick if present, E if > 33%)

LH	RH	
☑	☑	Cliff/Vertical
☑	☑	Stepped
☑	☑	Graded

Protection (tick if present, E if > 33%)

☑	☑	None
☐	☐	Toe
☐	☐	Full
☐	☐	Walled
☐	☐	Concrete
☐	☐	Wooden
☐	☐	Rip rap
☐	☐	Other……

Tree lining (tick one for each bank)

LH	RH	
☐	☐	None
☐	☑	Isolated/scattered
☐	☐	Reg. spaced/singular
☐	☐	Occasional clumps
☑	☐	Semi-continuous
☐	☐	Continuous
Y/(N)	Y/(N)	Recent tree planting

Bank face vegetation (tick one for each bank)

LH	RH	
☐	☐	None
☐	☐	Uniform
☑	☑	Simple
☐	☐	Complex

R02

Part I: SURVEY CONDITIONS

See relevant 1:25000 mapping and watercourse summary sheet for watercourse name and Reach ID code

Catchment	Watercourse	Reach ID	NGR Start	Surveyor
Avon	River Avon	HAR-02	416724 118167	JLE
			NGR End 417703 118644	

Date	Time	Flow (tick):				
12/08/08	15-30	☐ Low/base	☐ Above low	☑ High		

Conditions influencing survey quality:	LHB ☐ RHB ☑	Reason for upstream reach boundary:	Record photo NGR (GPS) and mark on map	No. of Photos
High flows		↑ flow depth & speed & ↓ buffer zone		

Part II: SEDIMENT SOURCES

*Tally fine and coarse sediment sources, place totals in final box (e.g. F2, C4). * = Take GIS reading and mark on map*
Diffuse sources: tally with F for fine and C for coarse under Micro, Meso or Macro and direct from slope or indirect e.g.through creep

Point Sources

	Fine	Coarse	Totals
Tributaries*			
Field drain/mill leat*	III		3
Tipped Material*			
Collapsed building/wall*			
Vehicle access			
Outfalls			

	Fine	Coarse	Totals
Scour at structure			
Tree fall			
Footpath			
Burrowing			
Poaching	II		1
Fishing platforms			

Diffuse Sources

Fluvial erosion	Micro	Meso	Macro
Toe scour			
Eroding cliff		1	

Geotechnical failure	Micro	Meso	Macro
Toe undermining			
Translational			
Rotational slip			
Complex failure			

Hillslope supply	Micro	Meso	Macro
direct			
indirect			

Channel weathering			

Part III: SEDIMENT TRANSPORT

Tally each morphological form observed along the reach, most likely to be in sequences according to associated gradient (e.g. pool-riffle)

Morphological Forms

	Tally	Total
Waterfall		
Chute		
Rapid		
Riffle		
Run		

	Tally	Total
Boil	1	1
Glide	1	1
Pool	1	1
Ponded reach		
Marginal deadwater		

Part IV: SEDIMENT SINKS

Tally fine and coarse sediment sources, place totals in final box (e.g. F2, C4)

Point Sinks

	Fine	Coarse	Totals
Weirs*			
Dams			
Fords			
Bridge			
Large woody debris			

Ad-hoc Fisheries Improvements

	Tally	Totals
Dredged pools		
Submerged vanes		
Boulder placement		
Deflectors		
Minor weir		
Vegetation management		

Diffuse Sinks Recent flood chaos? ☐ Yes ☑ No

	Permanent			Semi-permanent			Temporary		
	Micro	Meso	Macro	Micro	Meso	Macro	Micro	Meso	Macro
Floodplain deposits									
Splays									

Channel Deposits

Tally and total permanent, semi-permanent and temporary sediment deposits Micro = <10m², Meso = 10-150m², Macro = < 150m²
Tick types of storage present, place an E on right of box if extensive (>33%) - do not tally isolated boulders

	Permanent			Semi-permanent			Temporary		
	Micro	Meso	Macro	Micro	Meso	Macro	Micro	Meso	Macro
Boulder/cobble									
Cobble/gravel									
Fine material		1							

Type of Storage

☐	Mid channel bar	☑	Berms	☐ Isolated boulders
☐	Side bars	☐	Mature Islands	
☐	Point bars	☐	Toe accummulation	

Part V: VALLEY OVERVIEW

Landuse codes: Coniferous Woodland (CW), Broadleaf Woodland (BL), Scrub (SH), Wetland (WL), Moorland Heath (MH), Grazing (G), Tilled land (TL), Standing water (SW), Road/Track (RT), Suburban/urban (SU), Recreational (RE)

Valley Form (tick one)
- ☐ Shallow Vee
- ☐ Deep Vee
- ☐ Gorge
- ☐ Concave/Bowl
- ☐ Terraced valley floor
- ☑ Not visible

Landuse (dominant type)

	5m	50m
LH	G	G
RH	G	G

Floodplain (tick one)

		Width (tick one) LH	RH	
☐	None	☐	☐	< 1 river width
☐	One bank	☐	☐	1-5 river widths
☐	Alternate	☑	☑	5-10 river widths
☑	Both banks	☐	☐	> 10 river widths

Riparian Buffer Strip (tick one)

LH	RH		Width of strip (tick one) LH	RH	
☐	☐	None	☐	☐	None
☑	☑	Indefinite	☑	☑	< 1 river width
☐	☐	Fragmentary	☐	☐	1-5 river widths
☐	☐	Continuous	☐	☐	> 5 river widths

Bank top vegetation (tick one)

LH	RH	
☐	☐	Uniform
☑	☑	Simple
☐	☐	Complex
☐	☐	Diseased alders?
☐	☐	Invasive species?

Connectivity

Channel disconnected from floodplain? (no out of bank flow)
- ☐ Yes
- ☑ No

Terraces (tick one)

Insert no. of terraces LH —, RH —

LH	RH	
☑	☑	None
☐	☐	Indefinite
☐	☐	Fragmentary
☐	☐	Continuous

Levees (tick if present)

LH	RH	
☐	☐	None
☐	☐	Natural
☑	☑	Man Made
☐	☐	Continuous
☑	☑	Fragmented

Trashlines (tick one)
- ☐ LH
- ☐ RH

If Yes: — *Estimate height (m)*

Other features (e.g. palaeochannels)

Part VI: CHANNEL GEOMETRY

Planform (tick one)
- ☐ Straight
- ☐ Sinuous
- ☐ Irregular meanders
- ☑ Regular meanders
- ☐ Braided
- ☐ Anastomosed
- Y(N) Realigned? *Ring Y/N*

Cross-section (tick one)
- ☐ Rectangular/Trapezoidal
- ☑ U-shaped
- ☐ Two stage
- ☐ Multi-stage
- (Y)N Resectioned? *Ring Y/N*
- Y(N) Culverted? *Ring Y/N*
- Est. length of culvert (m)

Channel Dimensions

Width	Depth	Symmetry (tick one)		Qbf Min / Qbf Max / Qbf Mean	*Estimate (m)*
☑	☑	☐	Uniform	20	2
☐	☐	☑	Variable with planform	30	3
☐	☐	☐	Variable without planform	25	2.5

Gradient (tick one) (use look back test)
- ☐ High
- ☐ Medium
- ☑ Low

Velocity (tick one)
- ☑ Uniform
- ☐ Varied
- ☐ Highly varied

Part VII: BOUNDARY CONDITIONS

BED

Bed Material (tick all present, E if > 33%)

☑E	Obscured	☐	Cobble
☑	Fine material	☐	Boulder
☑	Fine gravel	☐	Bedrock
☑	Coarse gravel	☐	Artificial

Bed Characteristics: (tick all applicable, E if > 33%) Not visible

Sorting:	☐	Sorted	☐	Unsorted	
Debris:	☐	None	☐	Natural	☐ Man made
Sphericity:	☐	Angular	☐	Sub-angular	☐ Rounded
Imbrication:	☐	None	☐	Imbricated	☐ Armoured
Diversity:	☐	Uniform	☐	Non-uniform	

Channel Vegetation: % cover 20
- ☑ Submerged in-channel vegetation
- ☐ Surface floating vegetation
- ☑ Emergent reeds/sedges/rushes
- ☐ Filamentous algae
- ☐ Moss/lichen/liverworts
- ☐ Exposed tree roots

BANKS

Bank material (tick if present, E if > 33%)

LH	RH	
☑	☑	Obscured
☐	☐	Clay
☑	☑	Silt
☑	☑	Sand
☐	☐	Fine gravel
☐	☐	Coarse gravel
☐	☐	Cobble
☐	☐	Boulder
☐	☐	Bedrock
☐	☐	Artificial
(Y)N	(Y)N	Cohesive?

Profile (tick if present, E if > 33%)

LH	RH	
☑	☑	Cliff/Vertical
☑	☑	Stepped
☑	☑	Graded

Protection (tick if present, E if > 33%)

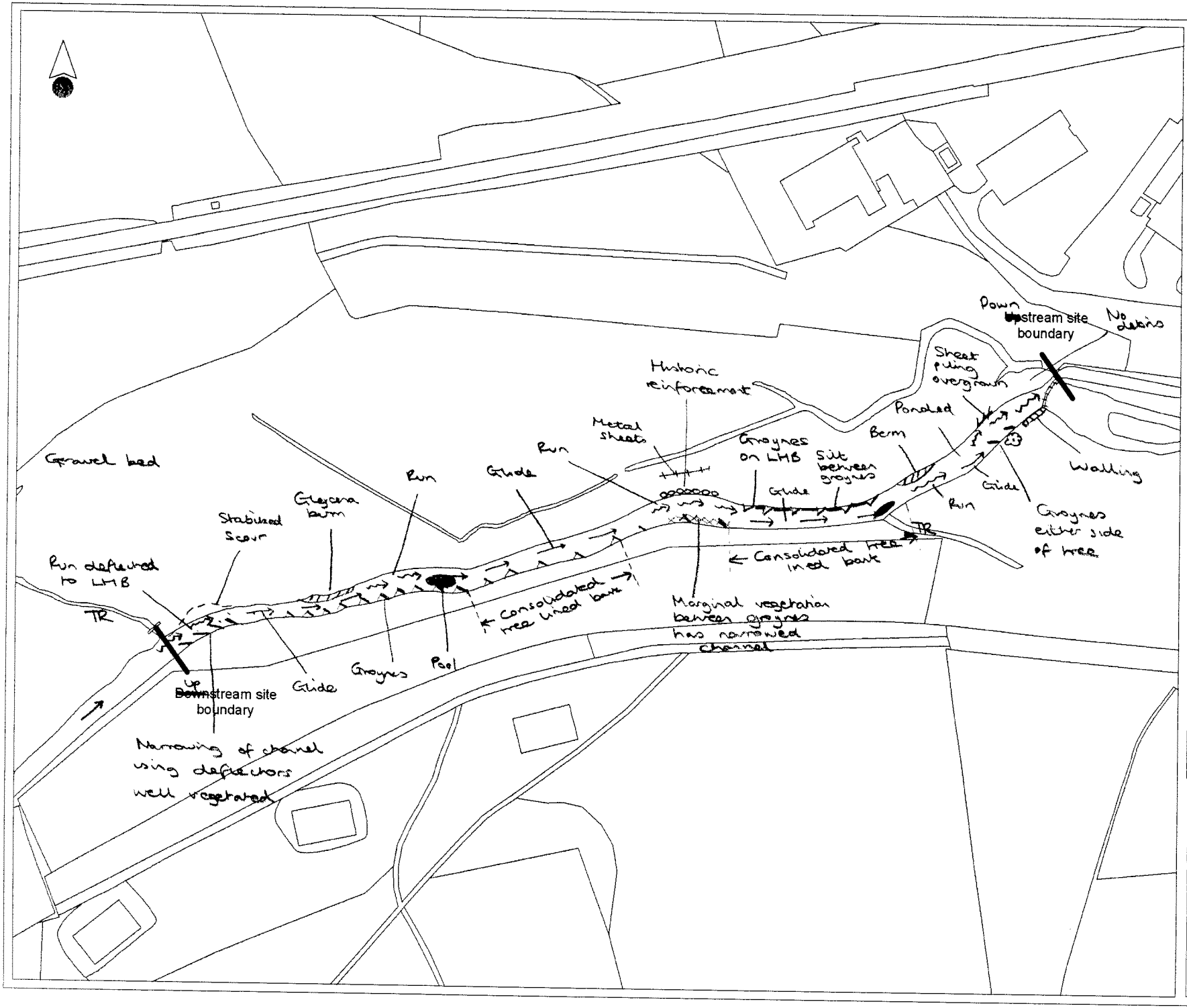
☑	☑	None
☐	☐	Toe
☐	☐	Full
☐	☐	Walled
☐	☐	Concrete
☐	☐	Wooden
☐	☐	Rip rap
☐	☐	Other……

Tree lining (tick one for each bank)

LH	RH	
☐	☐	None
☑	☑	Isolated/scattered
☐	☐	Reg. spaced/singular
☐	☐	Occasional clumps
☐	☐	Semi-continuous
☐	☐	Continuous
Y(N)	Y(N)	Recent tree planting

Bank face vegetation (tick one for each bank)

LH	RH	
☐	☐	None
☐	☐	Uniform
☑	☐	Simple
☐	☐	Complex



Physical Biotope Mapping

JLE 12/08/08

Title:
Fovant Restoration Site (FOR)

Project:
Avon STREAM Monitoring Project

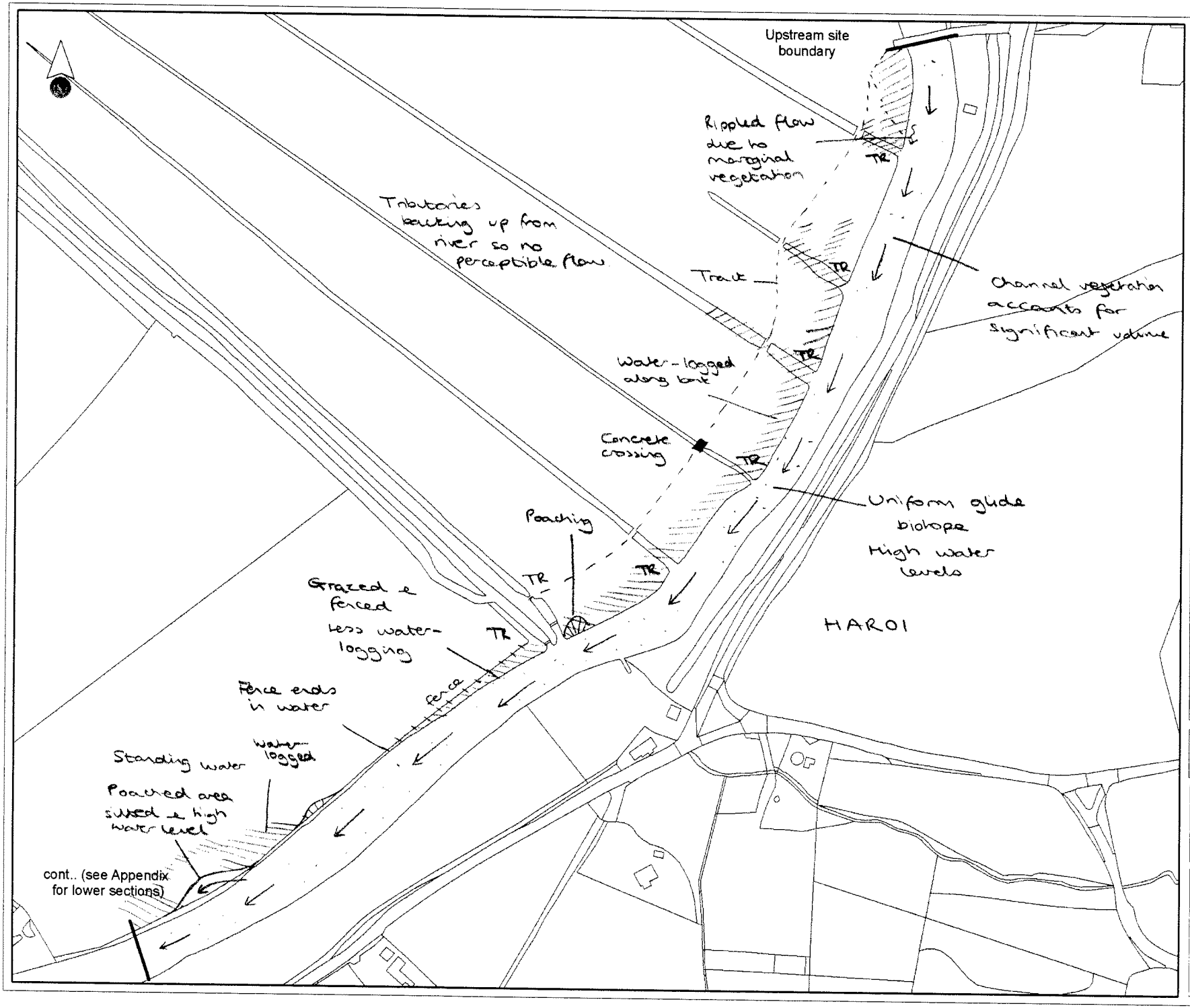
Client:
Natural England

Date:

Scale:
1:2,500

Appendix

ROYAL HASKONING



Physical Biotope Mapping

JLE 12/08/08

Title:
Hale Restoration Site (HAL)

Project:
Avon STREAM Monitoring Project

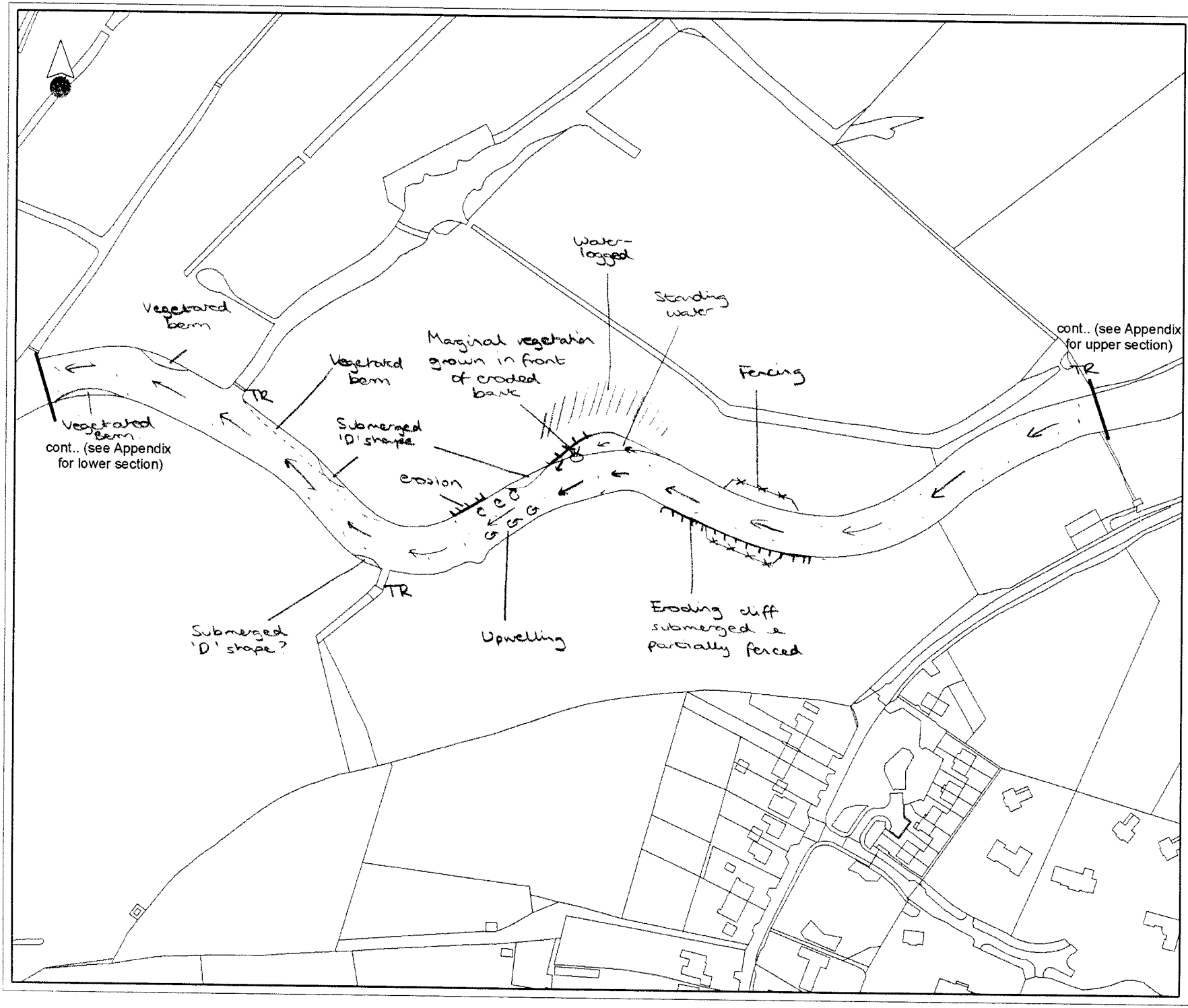
Client:
Natural England

1

Scale:
1:2,500

Appendix A

ROYAL HASKONING



Physical Biotope Mapping

JLE 12/08/08

Title:
Hale Restoration Site (HAL)

Project:
Avon STREAM Monitoring Project

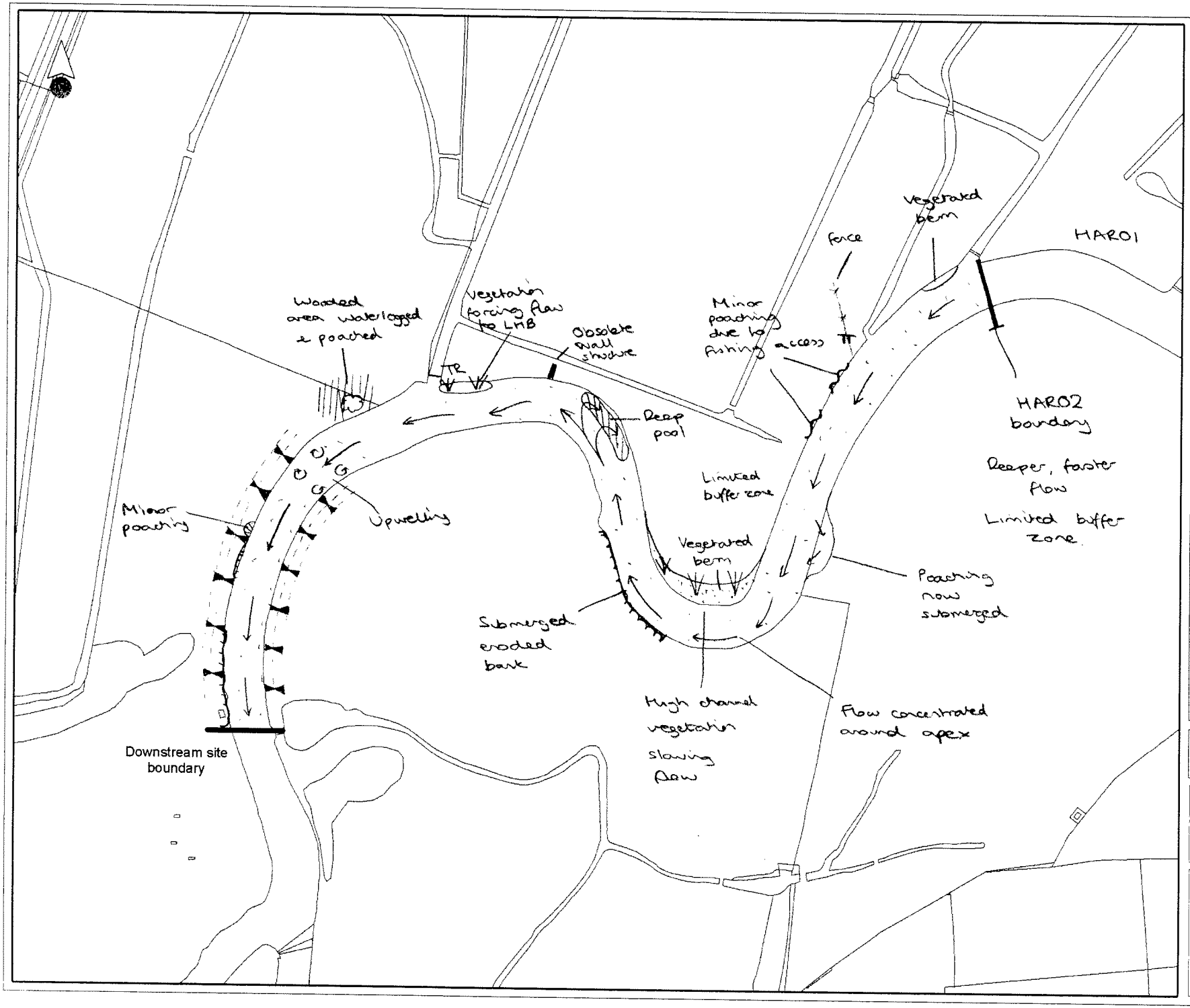
Client:
Natural England

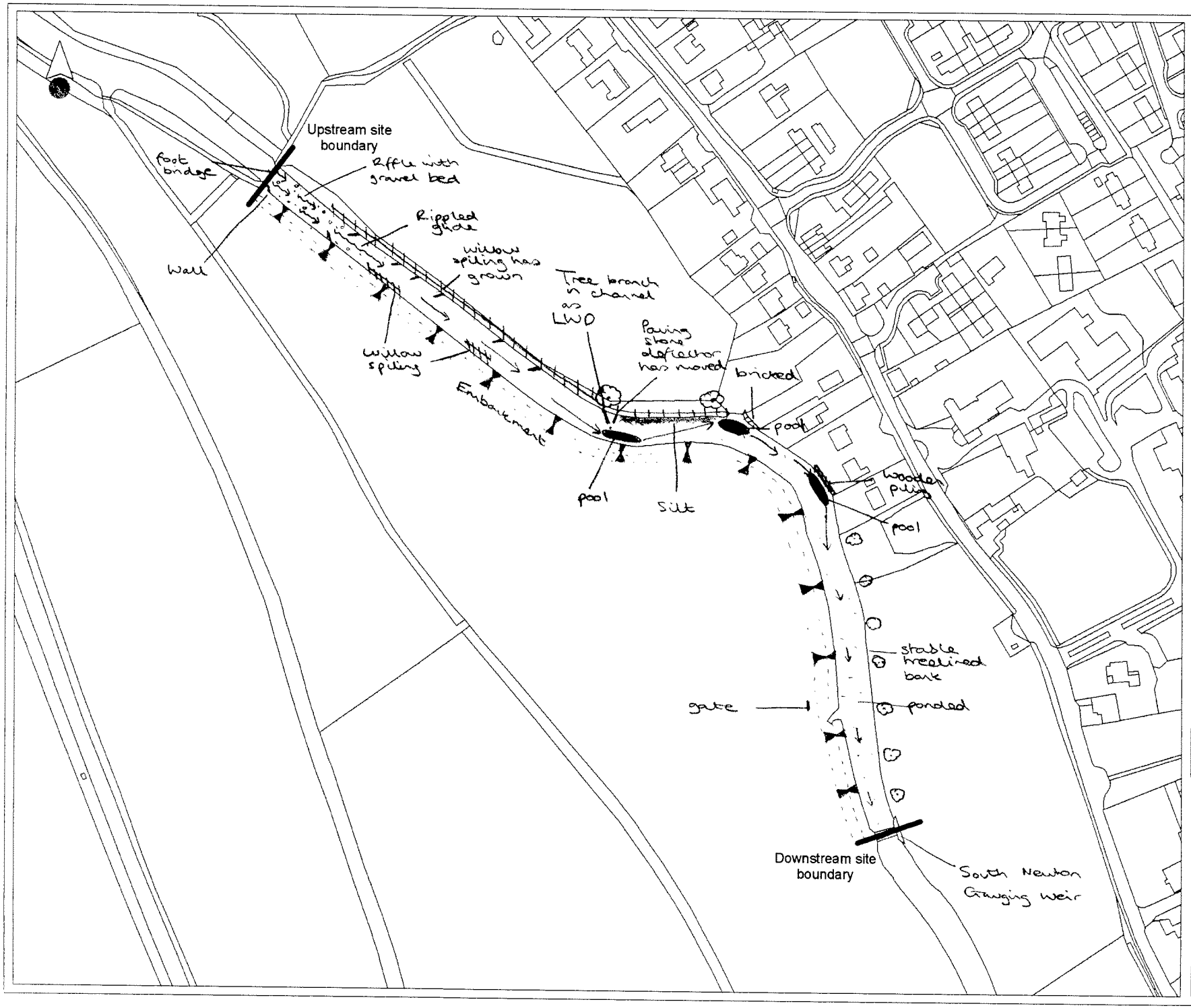
2

Scale:
1:2,500

Appendix A

ROYAL HASKONING


Physical biotope Mapping
JLE 12/08/08
HARO1
Vegetated berm
Fence
Minor poaching due to fishing access
Vegetation forcing flow to LHB
Obsolete wall structure
Wooded area waterlogged & poached
TP
Deep pool
HARO2 boundary
Deeper, faster flow
Limited buffer zone
Limited buffer zone
Vegetated berm
Minor poaching
Upwelling
Poaching now submerged
Submerged eroded bank
High channel vegetation slowing flow
Flow concentrated around apex
Downstream site boundary
Title:
Hale Restoration Site (HAL)
Project:
Avon STREAM Monitoring Project
Client:
Natural England
3
Scale:
1:2,500
Appendix
ROYAL HASKONING



Physical Biotope Mapping

JLE 18/08/08

Title:
Seven Hatches Control Site (SHC)

Project:
Avon STREAM Monitoring Project

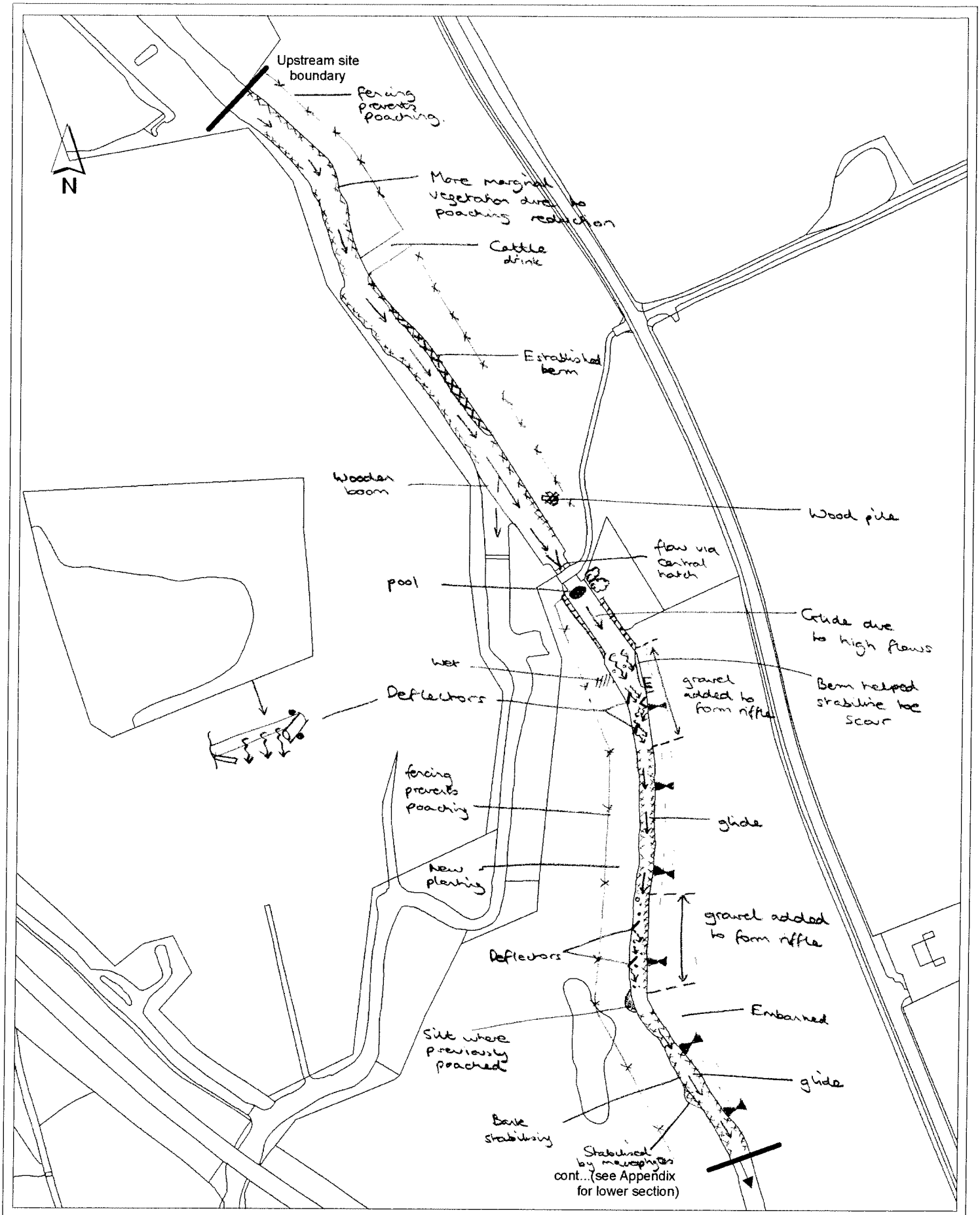
Client:
Natural England

Date:
29/11/2006

Scale:
1:2,500

Appendix

ROYAL HASKONING



Physical Biotope Mapping

JLE 18/08/08

Title: Seven Hatches Restoration Site (SHR)

Project: Avon STREAM Monitoring Project

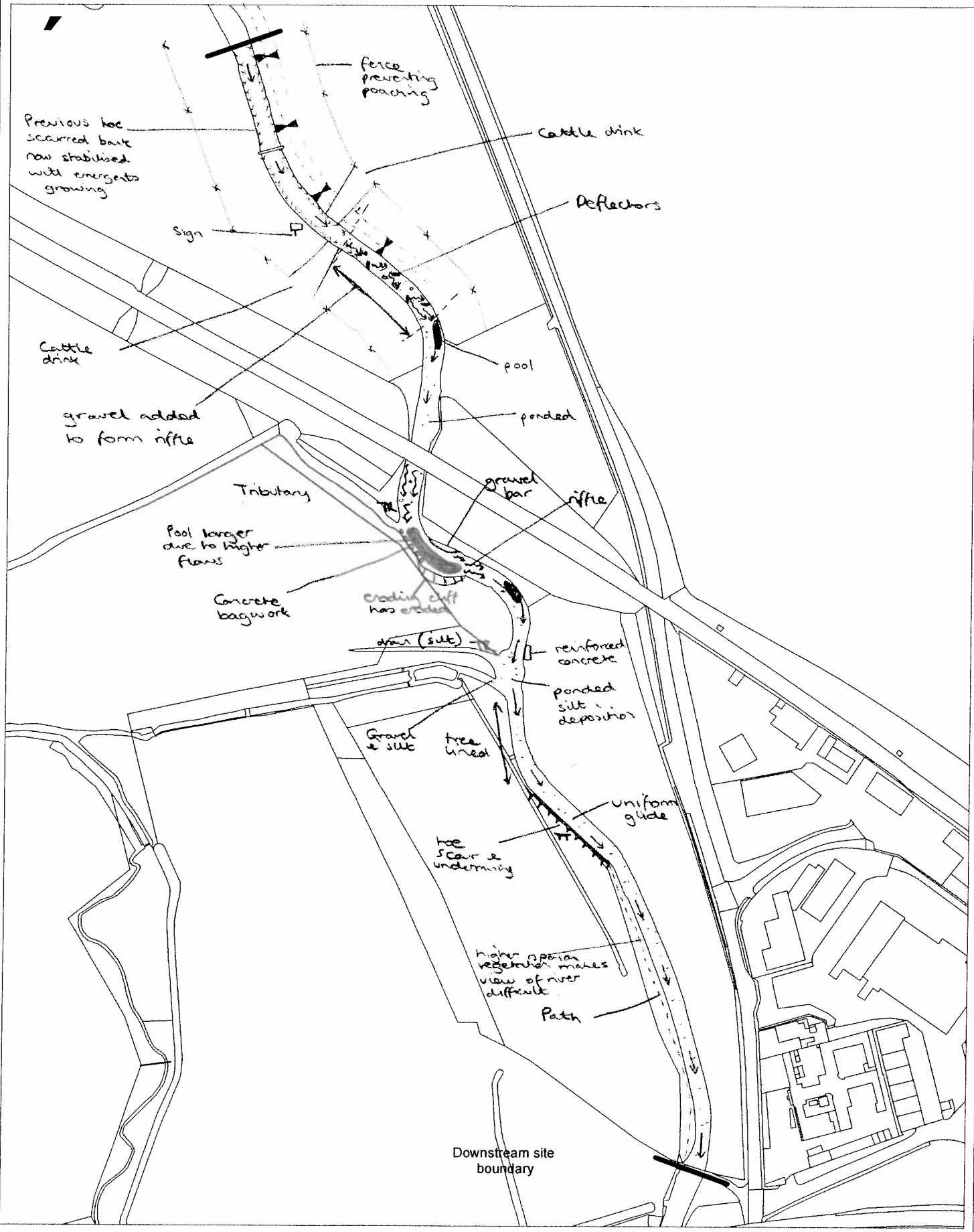
Client: Natural England

Date: [redacted]

Scale: 1:2,500

Appendix A

ROYAL HASKONING



Physical Biotope Mapping

JLE 18/08/08

Title: Seven Hatches Restoration Site (SHR)
Physical biotopes and survey references

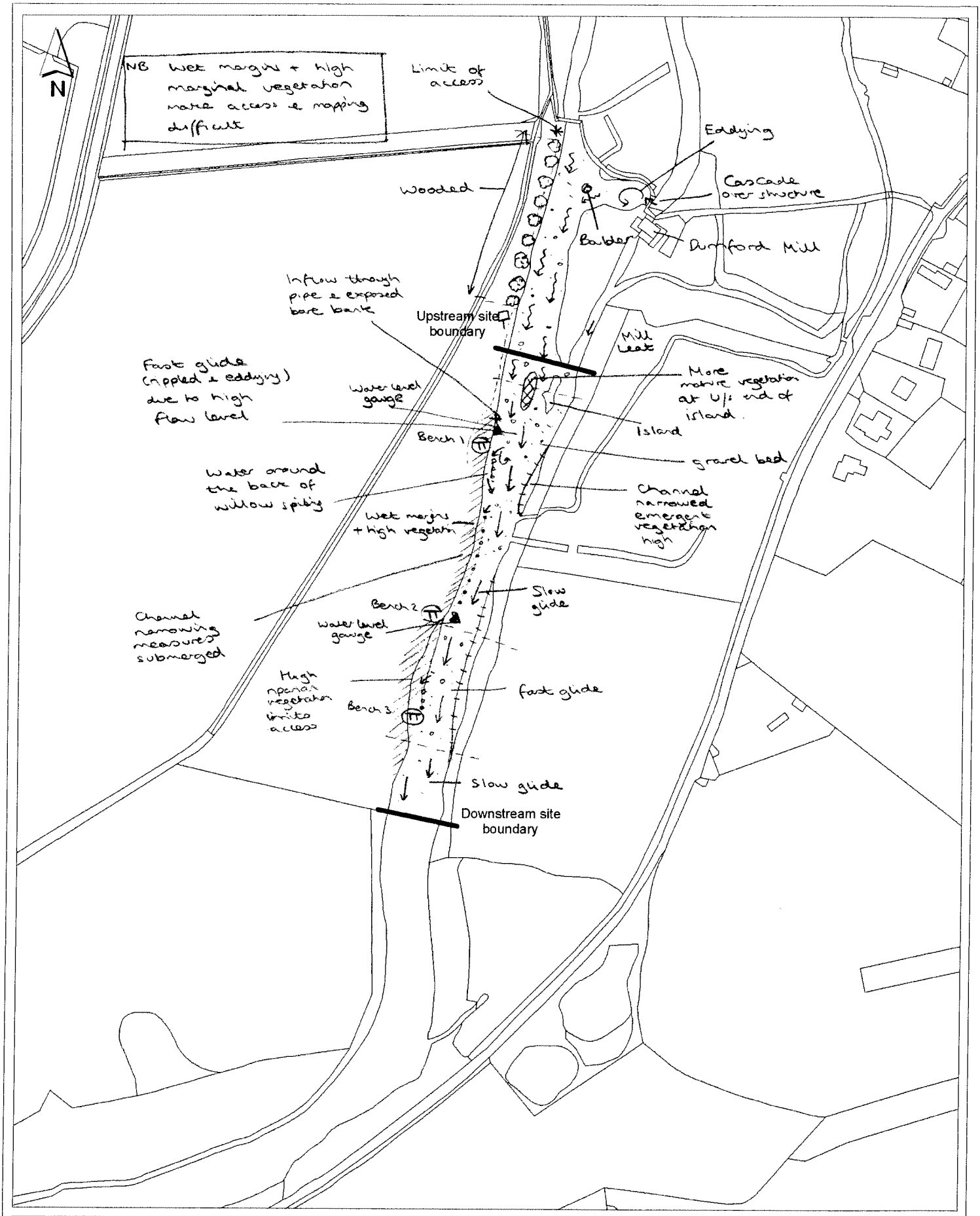
Project: Avon STREAM Monitoring Project

Client: Natural England

Scale: 1:2,500

Appendix A

ROYAL HASKONING



Physical Biotope Mapping

JLE 08/08/08

Title: Upper Woodford Control Site (UWC)

Project: Avon STREAM Monitoring Project

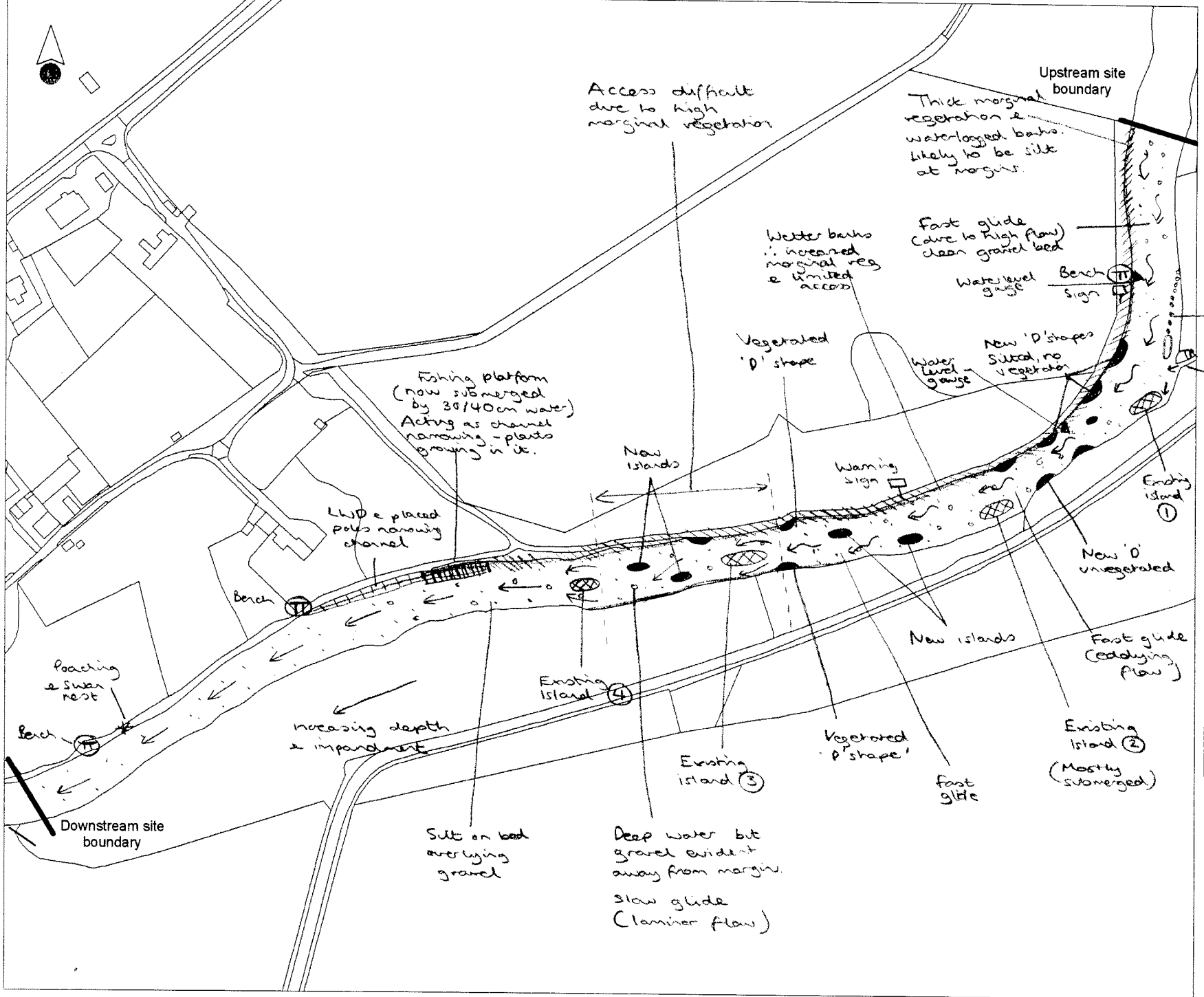
Client: Natural England

Date: 27/11/2006

Scale: 1:2,500

Appendix

ROYAL HASKONING



Physical Biotope Mapping

JLE 08/08/08

Title:
Upper Woodford Restoration Site (UWR)

Project:
Avon STREAM Monitoring Project

Client:
Natural England

Date:
[redacted]

Scale:
1:2,500

Appendix A

ROYAL HASKONING

APPENDIX

Standard Symbols for use in River Corridor Surveys

AQUATIC AND MARGINAL ZONES

CHANNEL FEATURES

- Bridge (road/track)
- Footbridge
- Lock
- Inlet
- Weir
- Pool
- Riffle
- Rapids
- Run
- Waterfall
- Protruding rock
- Island (with vegetation)
- Direction of flow

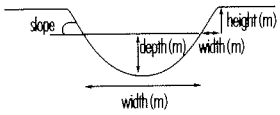
SUBSTRATE

- Mud
- Sand
- Bare gravel/ shingle
- Vegetated gravel/shingle
- Cobbles
- Boulders

CHANNEL VEGETATION

- Emergent Monocots
- Emergent Dicots
- Submerged Monocots
- Submerged Dicots
- Bryophytes
- Floating leaves

CHANNEL CROSS-SECTION



SURVEY INFORMATION

- Direction of survey/bank used
- Photograph

BANK AND ADJACENT LAND ZONES

BANK FEATURES

- Base of bank
- Top of bank
- Slump
- Stable earth cliff
- Eroding earth cliff
- Rock cliff
- Artificial bank protection
- Cattle drink
- Shelf / berm
- Spring / flush
- Inflow stream
- Outfall
- Dredgings/spoil

ADJACENT LAND FEATURES

- Fence
- Gate
- Road / track
- Railway
- Footpath
- Power lines
- Building
- S.T.W. Sewage works
- Flood bank
- [ ] Land use category Defined name / Phase 1 code

VEGETATION

Trees

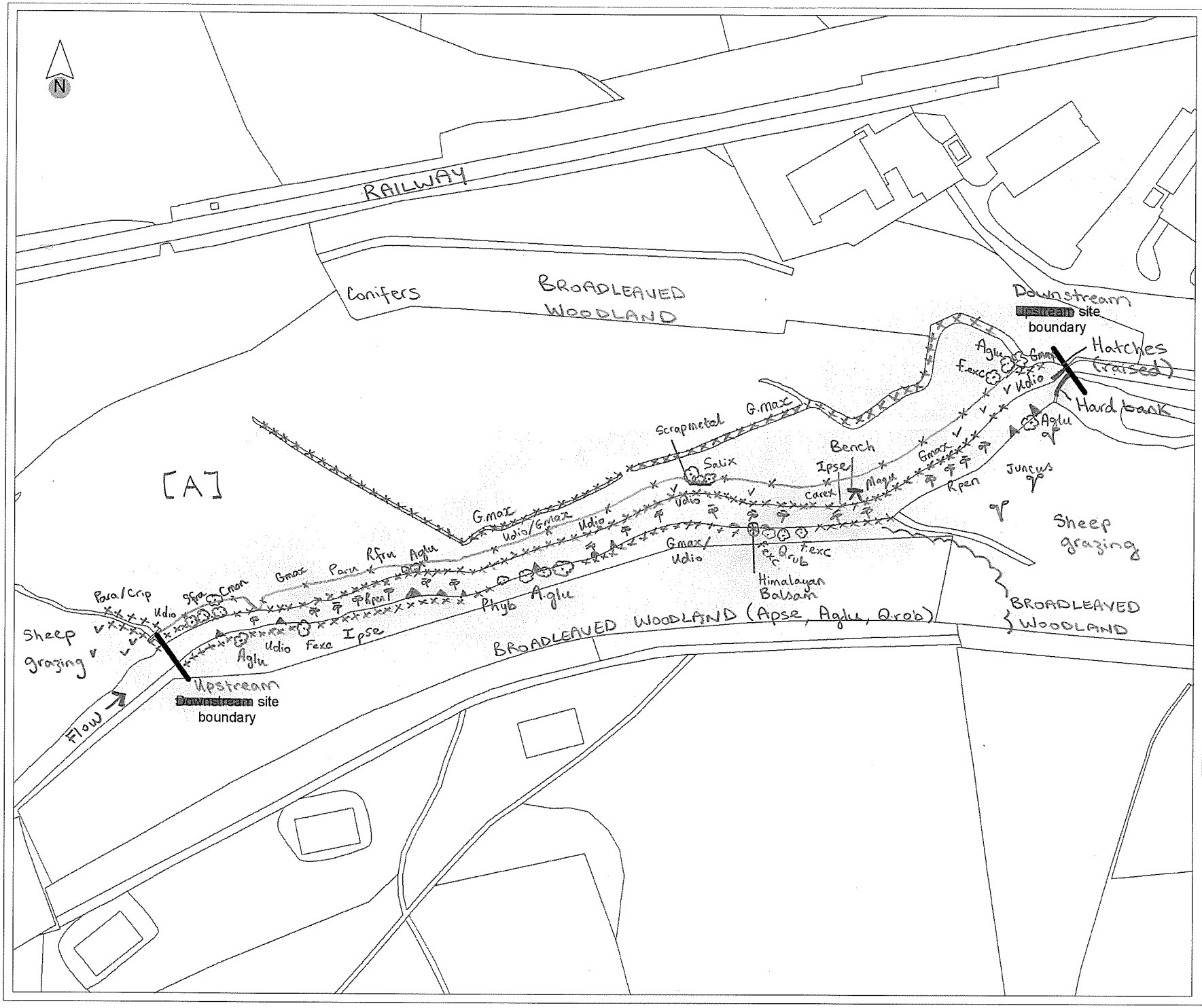
- Conifer
- Broadleaf
- - overhanging
- - fallen
- - exposed roots
- Woodland + symbol for type
- *P + symbol* Pollarded tree
- *(P) + symbol* Tree needs pollarding
- *C + symbol* Coppiced tree
- Sapling

Shrubs/hedgerows

- Shrub (single)
- Dense shrubs
- Sparse shrubs
- Hedgerow
- Hedgerow with trees

Grasses and herbs

- Reed / sedge
- Tall grass
- Tall herb / ruderal
- Tall grass with herbs
- Short grass
- Mown



River Corridor Survey

8/8/08 (survey date)

Amara Glynn (Royal Haskoning)

Title:
Fovant Restoration Site (FOR)

Project:
Avon STREAM Monitoring Project

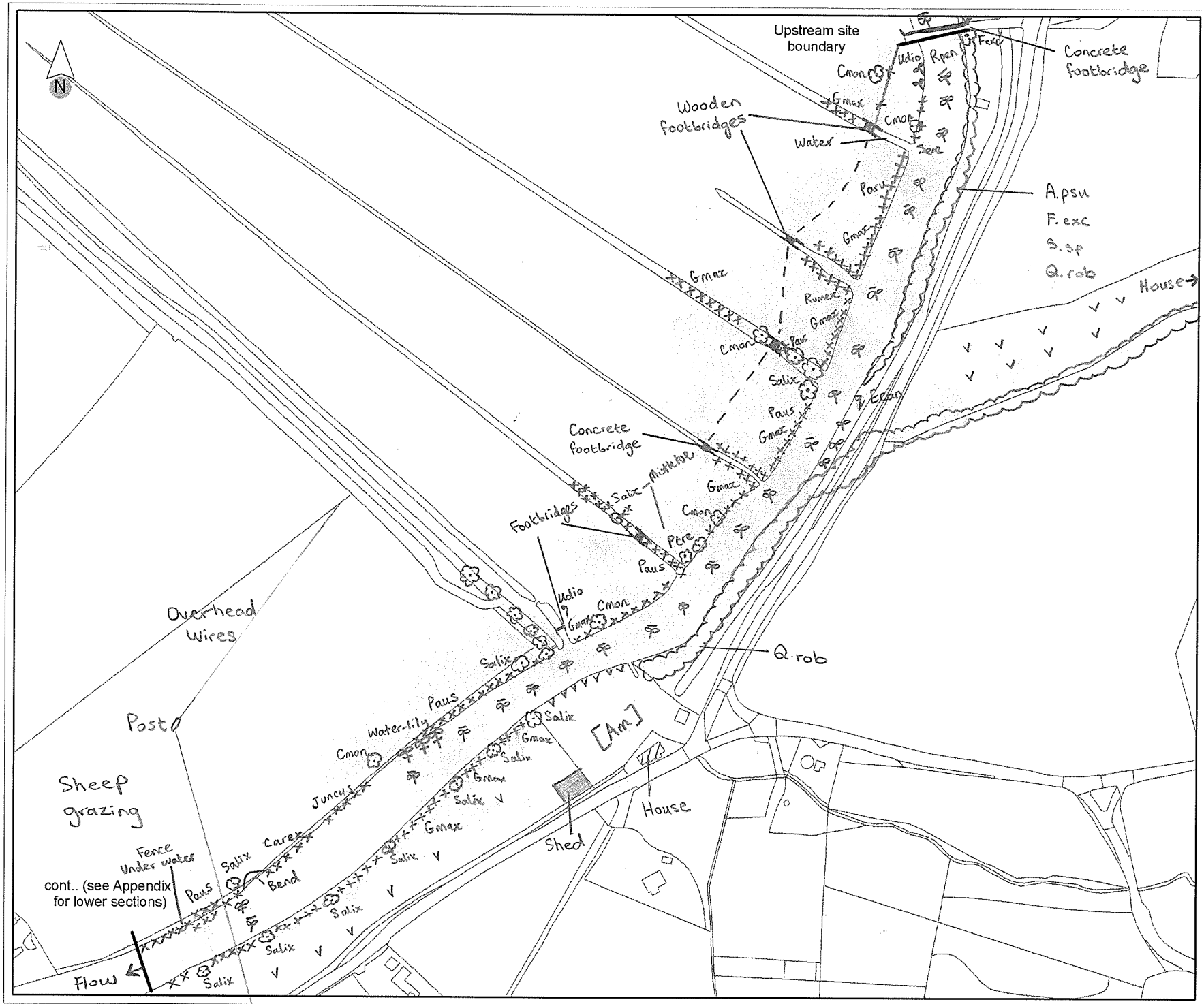
Client:
Natural England

Date:

Scale:
1:2,500

Appendix

ROYAL HASKONING



River Corridor Survey

12/8/08 (Survey date)

Amara Glynn (Royal Haskoning)

Title:
Hale Restoration Site (HAL)

Project:
Avon STREAM Monitoring Project

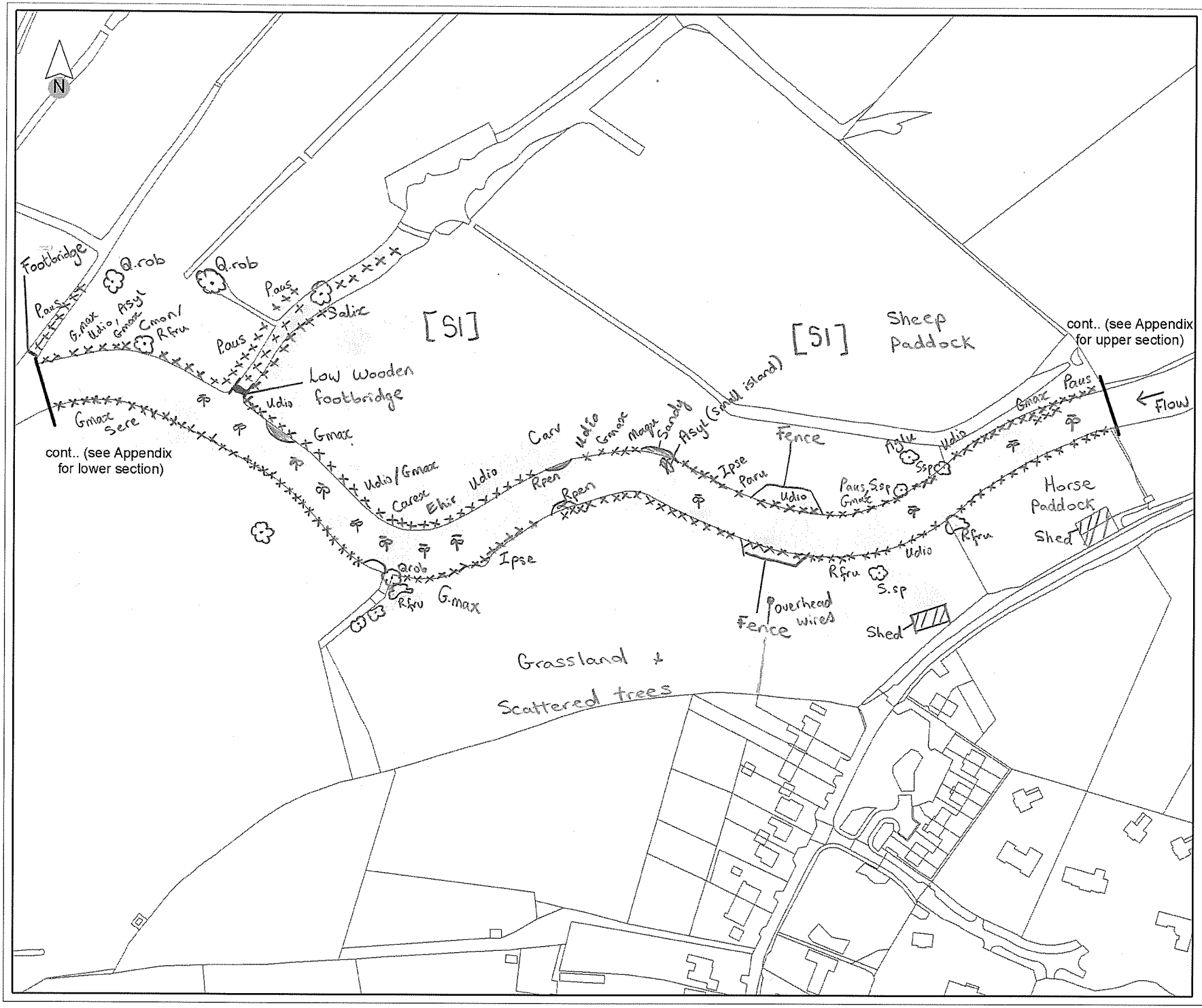
Client:
Natural England

1

Scale:
1:2,500

Appendix

ROYAL HASKONING



River Corridor Survey

12/8/08 (Survey date)

Amara Glynn
(Royal Haskoning)

Title:
Hale Restoration Site (HAL)

Project:
Avon STREAM Monitoring Project

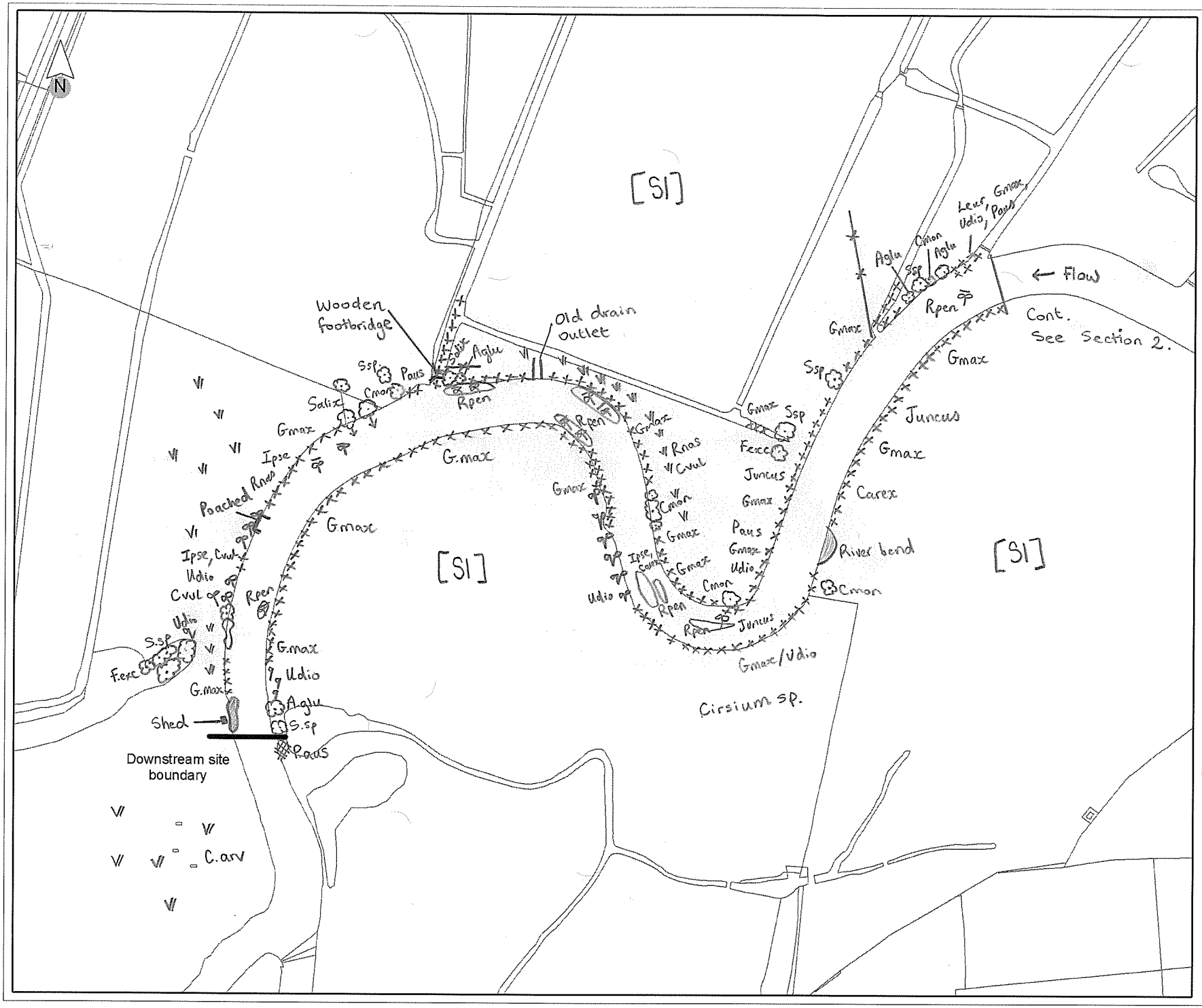
Client:
Natural England

2

Scale:
1:2,500

Appendix

ROYAL HASKONING



Title:
Hale Restoration Site (HAL)

Project:
Avon STREAM Monitoring Project

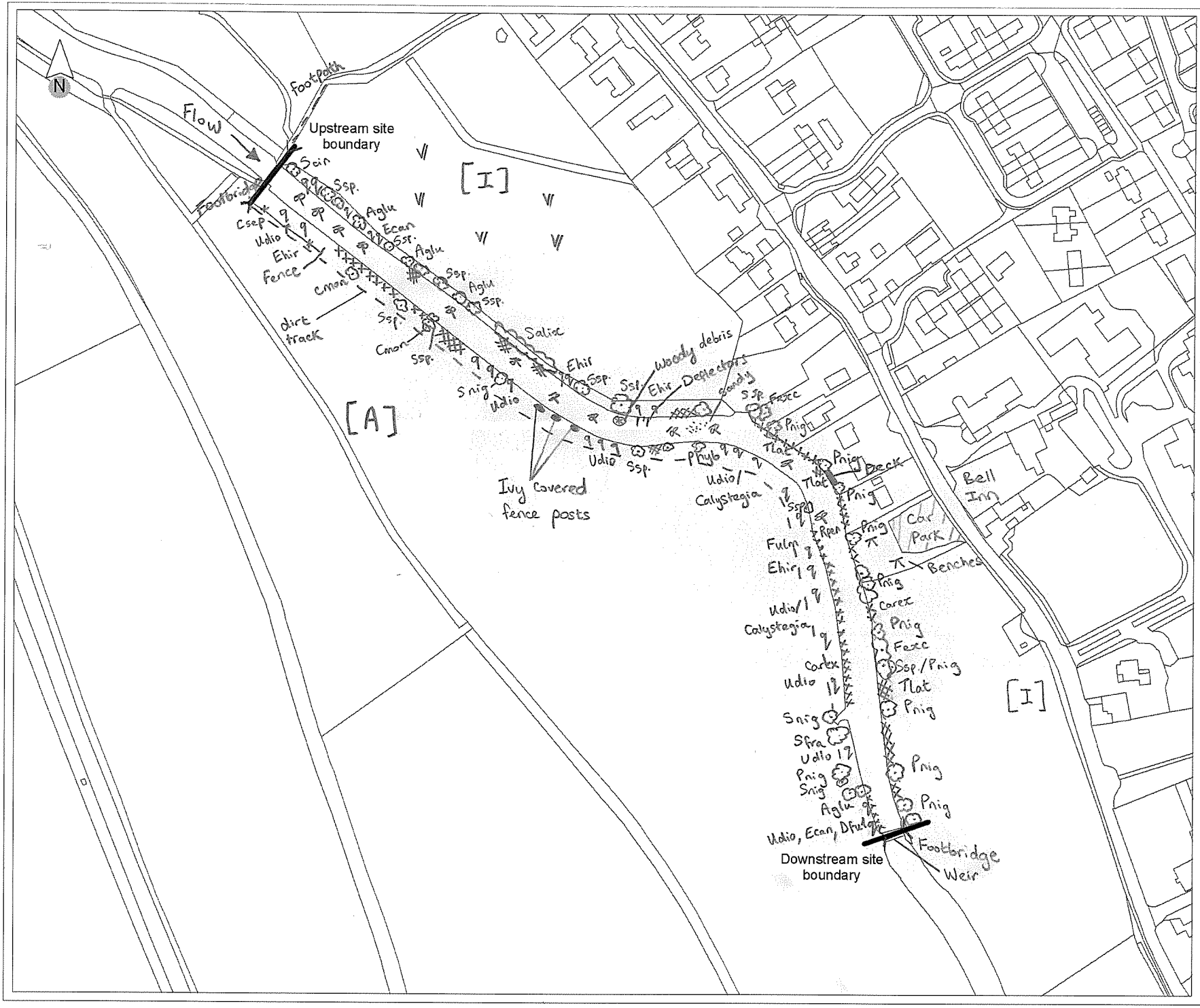
Client:
Natural England

3

Scale:
1:2,500

Appendix

ROYAL HASKONING



River Corridor Survey

18/8/2008 (Survey date)

Amara Glynn (Royal Haskoning)

Title:
Seven Hatches Control Site (SHC)

Project:
Avon STREAM Monitoring Project

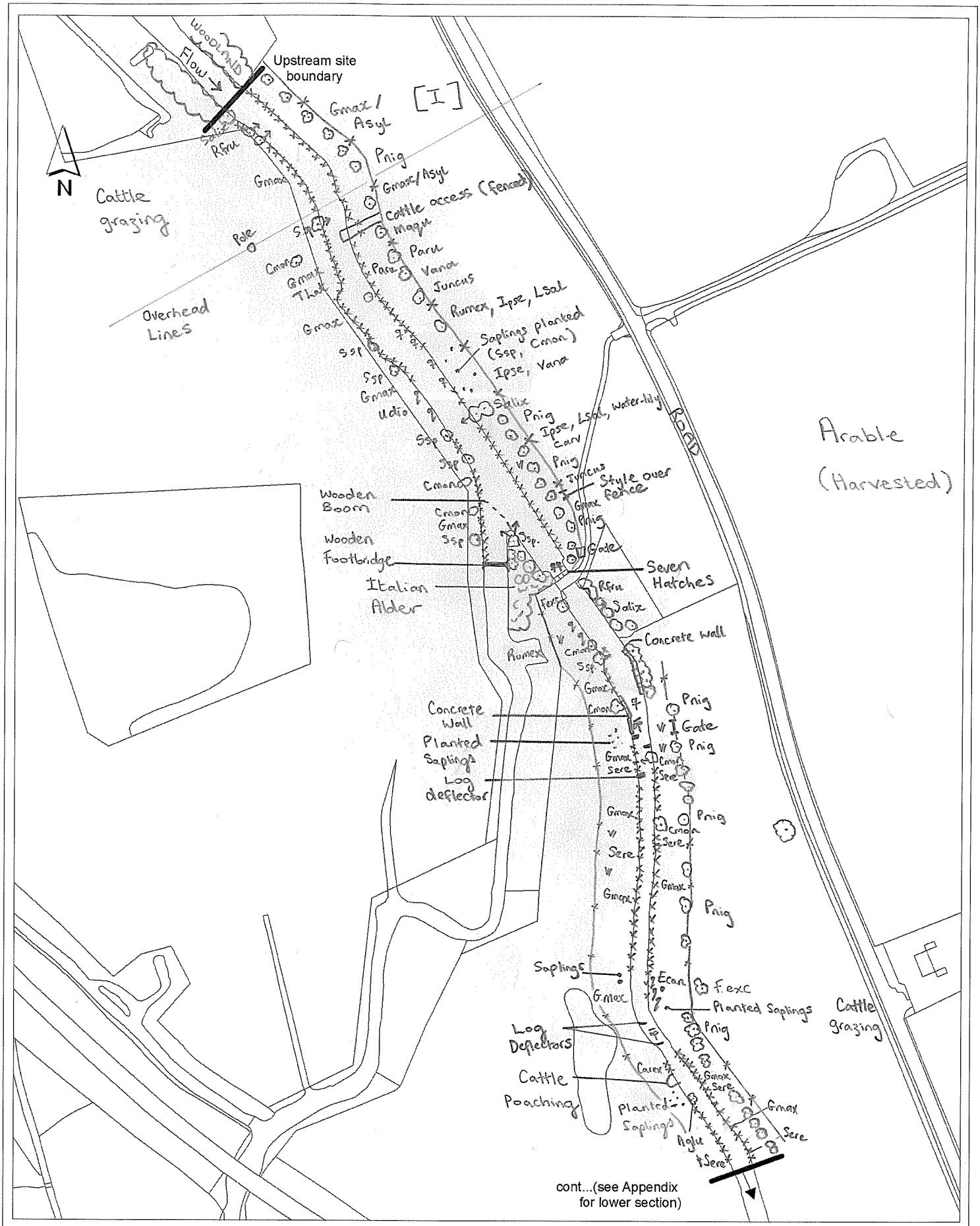
Client:
Natural England

Date:
29/11/2006

Scale:
1:2,500

Appendix

ROYAL HASKONING



River Corridor Survey
18/8/08 (survey date)
Amara Glynn (Royal Haskoning)
Page 1 of 3

Title: Seven Hatches Restoration Site (SHR)

Project: Avon STREAM Monitoring Project

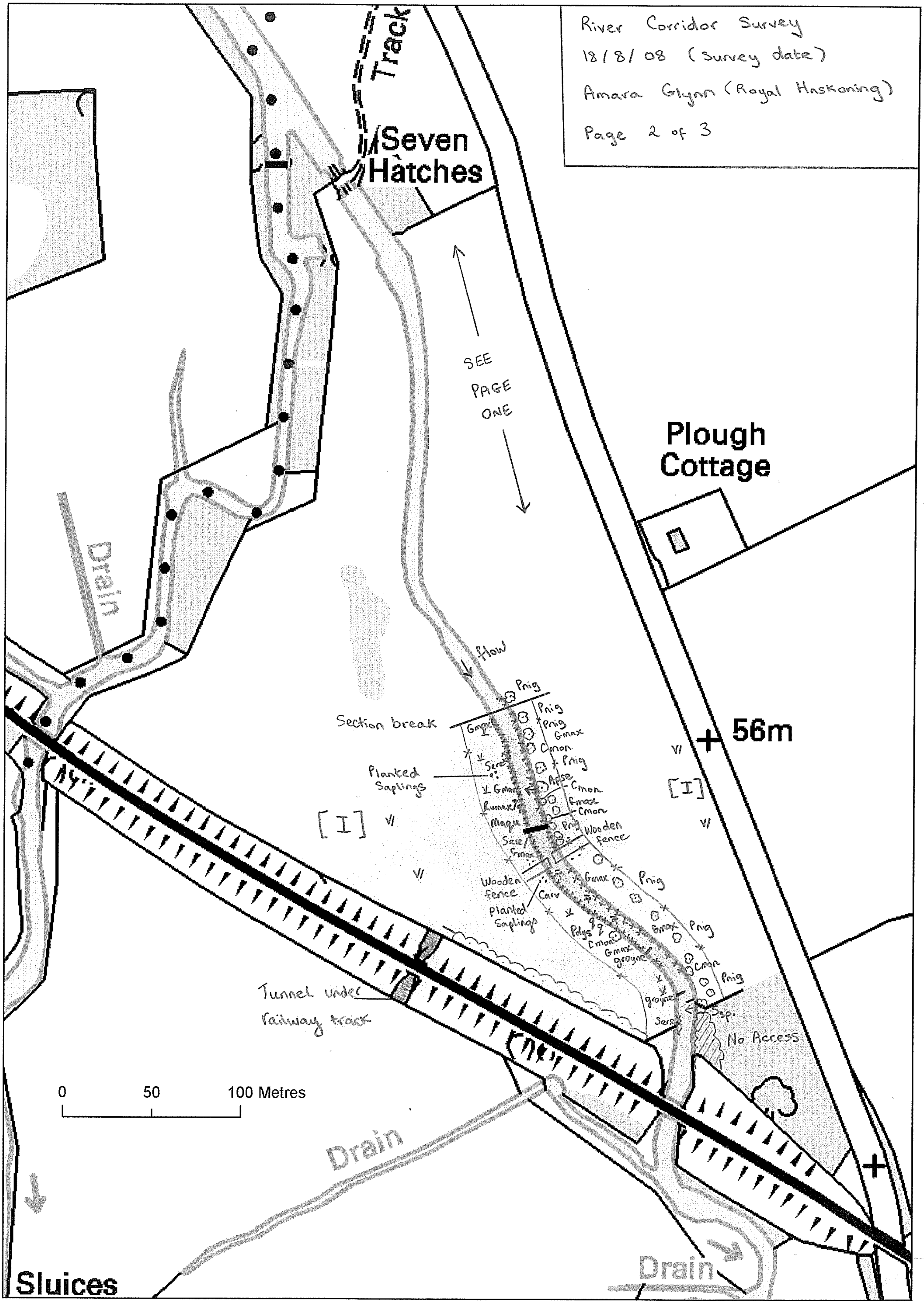
Client: Natural England

Date: 29/11/2008

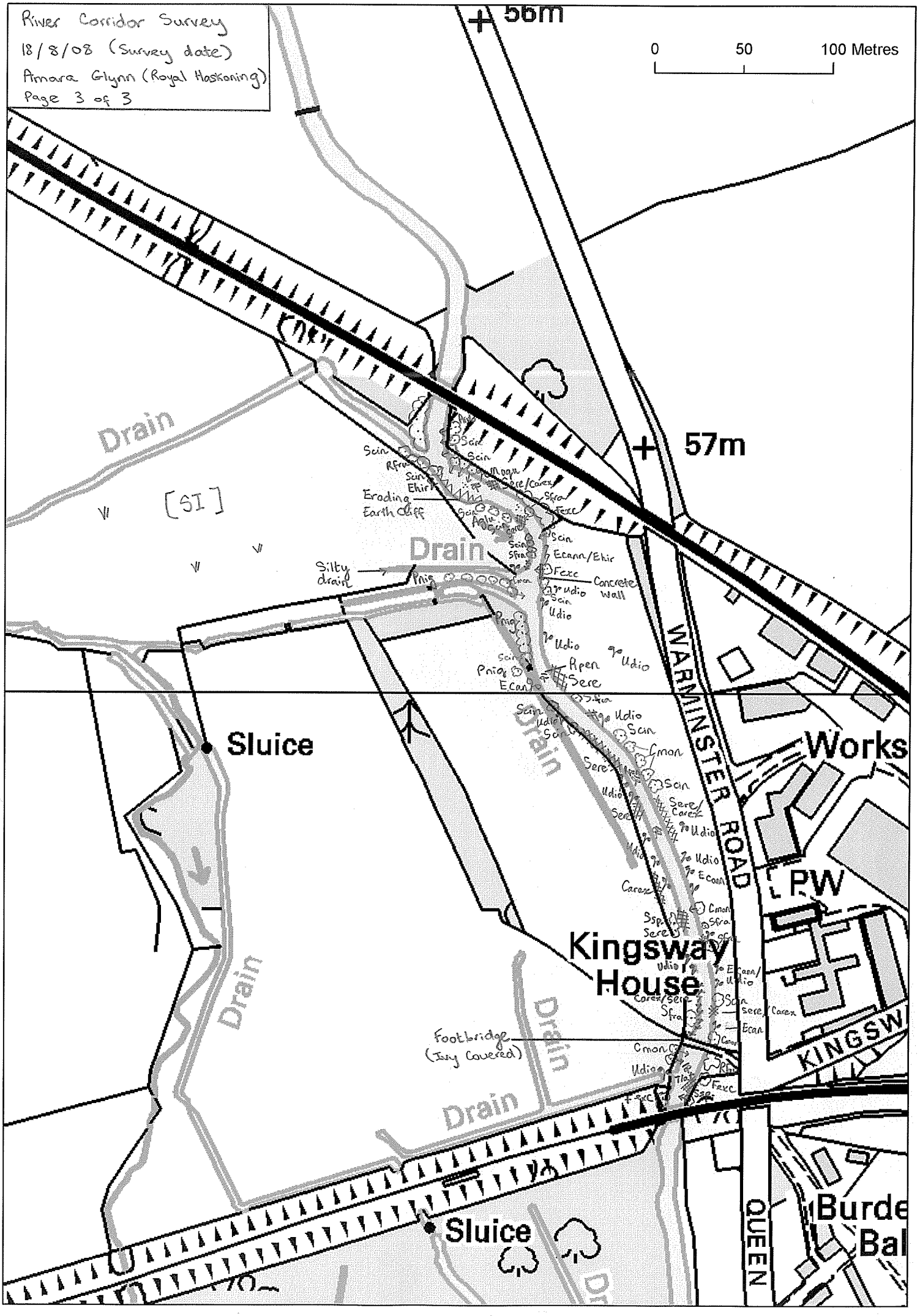
Scale: 1:2,500

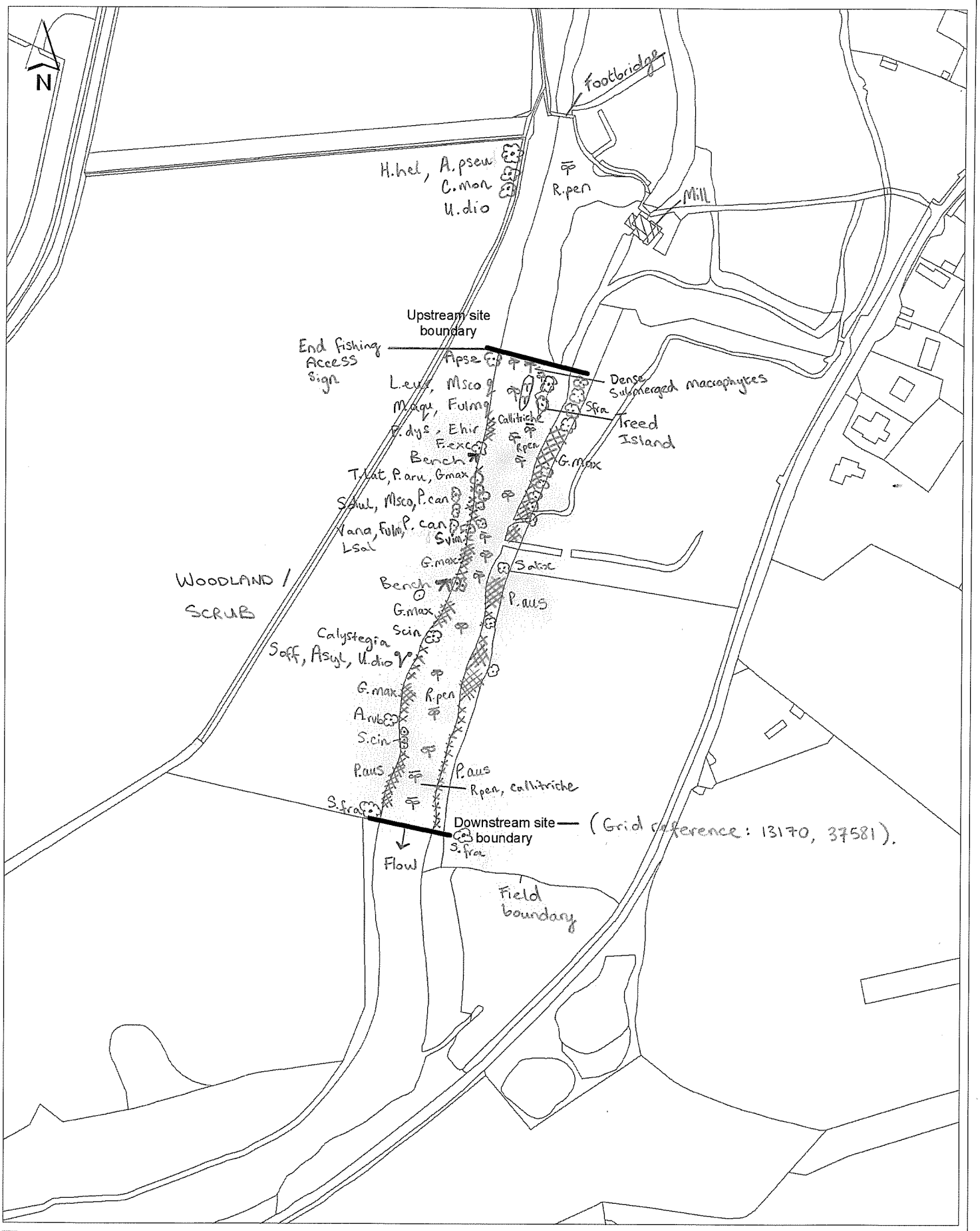
Appendix

ROYAL HASKONING



River Corridor Survey
18/8/08 (Survey date)
Amara Glynn (Royal Haskoning)
Page 2 of 3
Track
Seven Hatches
SEE PAGE ONE
Plough Cottage
Drain
flow
Pnig
Section break
Gmax
Cmon
Planted Saplings
Sere
Rumex
Apse
56m
[I]
Wooden fence
Carv
Polys
groyne
Ssp.
No Access
Tunnel under railway track
0
50
100 Metres
Drain
Drain
Sluices


River Corridor Survey
18/8/08 (Survey date)
Amara Glynn (Royal Haskoning)
Page 3 of 3
56m
57m
0
50
100 Metres
Drain
[SI]
Eroding Earth cliff
Silty drain
Concrete wall
Sluice
Sluice
Footbridge (Ivy Covered)
WARMINSTER ROAD
Works
LPW
Kingsway House
KINGSW
QUEEN
Burde
Bal



River Corridor Survey

7/8/2008 (Survey date)

Amara Glynn (Royal Haskoning)

Title: Upper Woodford Control Site (UWC)

Project: Avon STREAM Monitoring Project

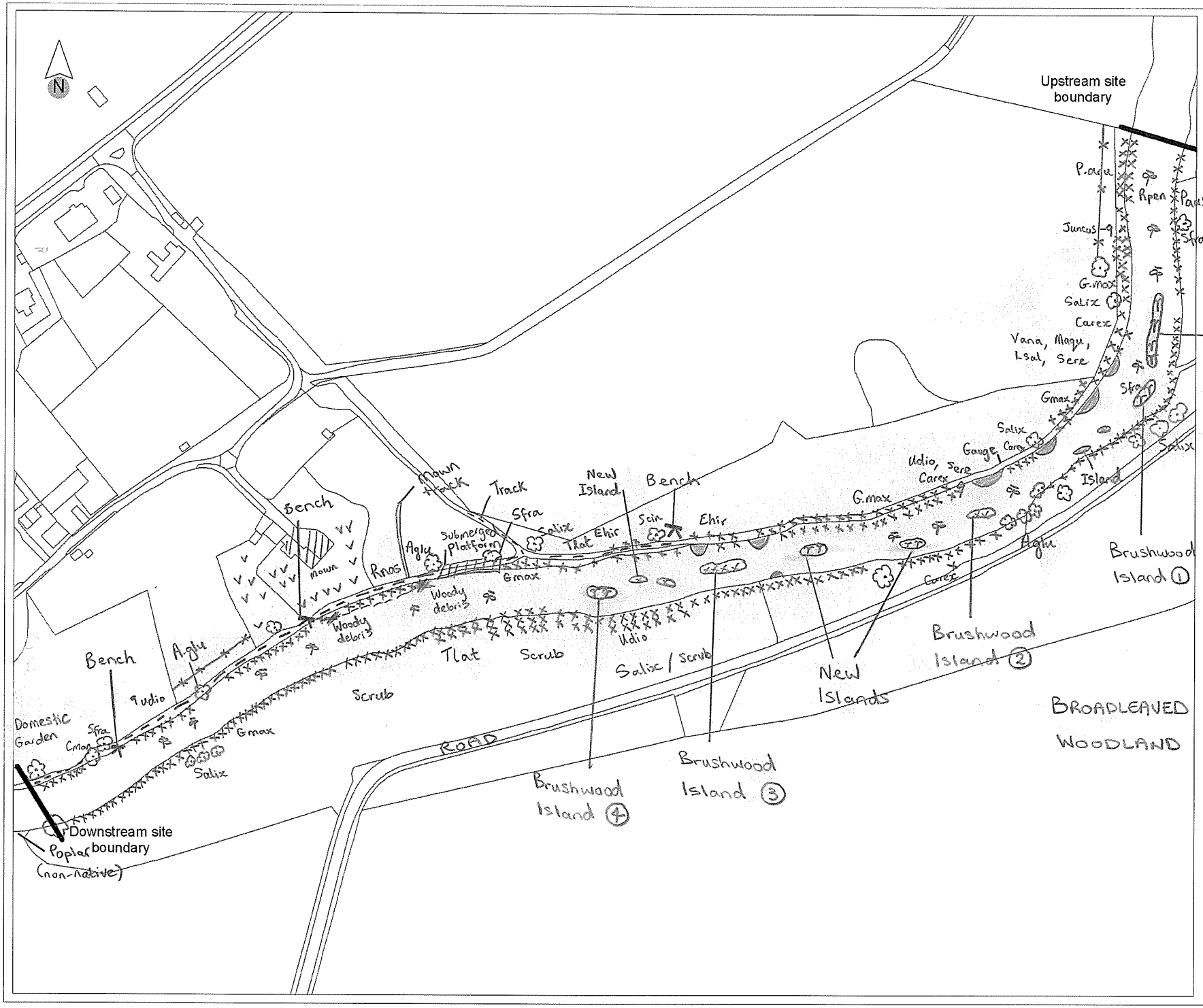
Client: Natural England

Appendix

Date: ~~27/11/2008~~

Scale: 1:2,500

ROYAL HASKONING



River Corridor Survey

7/8/08 (Survey date)

Amara Glynn (Royal Haskoning)

Title:
Upper Woodford Restoration Site (UWR)

Project:
Avon STREAM Monitoring Project

Client:
Natural England

Date:
~~29/11/2006~~

Scale:
1:2,500

Appendix

ROYAL HASKONING

Appendix B: Photographic Records

Date	Site	Geomorphological Reach	Transect/ Cross-section	Photo Reference	Easting	Northing	Orientation	Time	Direction	Height (m)	Description / Comments
19/08/2008	Upper Woodford	UWC01									
08/08/2008	Upper Woodford	UWC01	n/a	UWCO1a	413246	137835	159°	18.10	DS	1.6	By fishing sign "Wading ends"
19/08/2008	Upper Woodford	UWC01	MSO1	UWCO1-MSO1a	413225	137771	35°	18.10	US	1.6	Adjacent to water guage pole Bottom of Island
19/08/2008	Upper Woodford	UWC01	MSO1	UWCO1-MSO1b	413225	137771	115°	18.10	LHB	1.6	Adjacent to water guage pole Bottom of Island
19/08/2008	Upper Woodford	UWC01	MSO1	UWCO1-MSO1c	413225	137771	154°	18.10	DS	1.6	" Flow change not evident due to high flows
19/08/2008	Upper Woodford	UWC01	MSO1	UWCO1-MSO1d	413225	137771	115°	18.10	BED	1.6	No standing waves
19/08/2008	Upper Woodford	UWC01	MSO1	UWCO1-MSO1e	413226	137765	38°	18.10	US	1.6	1st version not to be used. Location of transect MSO1. Just d/s of Black Poplar
08/08/2008	Upper Woodford	UWC01	n/a	UWCO1b	413231	137786	80°	12.39	U/S	1.6	Alder island - not sure in right place
08/08/2008	Upper Woodford	UWC01	n/a	UWCO1c	413231	137786	157°	12.42	DS	1.6	Glyak Max obscuring view
08/08/2008	Upper Woodford	UWC01	n/a	UWCO1d	413227	137753	40°	12.45	US	1.6	Looking towards island
19/08/2008	Upper Woodford	UWC01	MSO2	UWCO1-MSO2a	413220	137731	50°	18.05	US	1.6	Willow obscuring view. Marginal ?? Sumerged therefore not as far into river
19/08/2008	Upper Woodford	UWC01	MSO2	UWC01-MSO2b	413220	137731	105	18.05	LHB		By willow hybrid
19/08/2008	Upper Woodford	UWC01	MSO2	UWC01-MSO2c	413220	137731	195	18.05	DS		
19/08/2008	Upper Woodford	UWC01	MSO2	UWC01-MSO2 d	413220	137731	105	18.05	BED	1.6	Chanel renewing measures
19/08/2008	Upper Woodford	UWC01	MSO2	UWC01-MSO2e	413216	137730	96	18.05	us		Transect MSO2 - by willow hybrid, poles in foreground
19/08/2008	Upper Woodford	UWC01	MSO2	UWC01-MSO2 f	413219	137728	41	18.05	US	1.6	High water levels limit taking photos in chanel here
19/08/2008	Upper Woodford	UWC01	MSO2	UWC01-MSO2 g	413219	137728	105	18.05	LHB	1.6	
19/08/2008	Upper Woodford	UWC01	MSO2	UWC01-MSO2 h	413219	137728	166	18.05	DS	1.6	
19/08/2008	Upper Woodford	UWC01	MSO3	UWC01-MSO3 a	413203	137697	21°	17.49	US	1.6	2nd Version; Willow in foreground. Just d/s of Black Poplar
19/08/2008	Upper Woodford	UWC01	MSO3	UWC01-MSO3 a(2)	413205	137702	21°	17.49	US	1.6	" "
19/08/2008	Upper Woodford	UWC01	MSO3	UWC01-MSO3 b	413205	137702	107°	17.49	LHB	1.6	Phrag??? On LHB. Willow in foreground
19/08/2008	Upper Woodford	UWC01	MSO3	UWC01-MSO3 c	413205	137702	197°	17.49	DS	1.6	
19/08/2008	Upper Woodford	UWC01	MSO3	UWC01-MSO3 d			121°	17.49	BED	1.6	Chanel ???
19/08/2008	Upper Woodford	UWC01	MSO3	UWC01-MSO3 e	413207	137706	50°	17.49	US	1.6	Transect MSO23
19/08/2008	Upper Woodford	UWC01	MSO3	UWC01-MSO3 f	413207	137706	112°	17.49	LHB	1.6	
19/08/2008	Upper Woodford	UWC01	MSO3	UWC01-MSO3 g	413207	137706	170°	17.49	DS	1.6	
19/08/2008	Upper Woodford	UWC01	MSO4	UWC01-MSO4 a	413208	137679	48°	17.37	US	1.6	Chanel narrowing frailed willow ??? Now in chanel. Bench 2
19/08/2008	Upper Woodford	UWC01	MSO4	UWC01-MSO4 b	413208	137679	117°	17.37	LHB	1.6	LHB has also retreated - chanel narrowing frailed
19/08/2008	Upper Woodford	UWC01	MSO4	UWC01-MSO4 c	413208	137679	154°	17.37	DS	1.6	Glycena on RHB. Took 2 due to poor light
19/08/2008	Upper Woodford	UWC01	MSO4	UWC01-MSO4 d	413208	137679	111°	17.37	BED	1.6	Silted at margins
19/08/2008	Upper Woodford	UWC01	MSO4	UWC01-MSO4 e	413201	137672	111°	17.37	LHB	1.6	Location of MSO4. By bench in foreground
19/08/2008	Upper Woodford	UWC01	MSO5	UWC01-MSO5 a	413188	137622	34°	17.32	US	1.6	
19/08/2008	Upper Woodford	UWC01	MSO5	UWC01-MSO5 b	413188	137622	108°	17.32	LHB	1.6	Phragmites
19/08/2008	Upper Woodford	UWC01	MSO5	UWC01-MSO5 c			178°	17.32	DS	1.6	Phragmites
19/08/2008	Upper Woodford	UWC01	MSO5	UWC01-MSO5 d			82°	17.32	BED	1.6	
19/08/2008	Upper Woodford	UWC01	MSO5	UWC01-MSO5 e	413184	137623	82°	17.32	LHB	1.6	Glycena Maxima in foreground . L??? Of MSO5 by Grey Willow. Used access.

Date	Site	Geomorphological Reach	Transect/ Cross-section	Photo Reference	Easting	Northing	Orientation	Time	Direction	Height (m)	Description / Comments
19/08/2008	Upper Woodford	UWR01									
19/08/2008	Upper Woodford	UWR01	MSO1	UWR01-MSO1a	413178	137557	24	17.16	US		Lack of difference in flow types due to high flow
19/08/2008	Upper Woodford	UWR01	MSO1	UWR01-MSO1b	413178	137557	88	17.16	LMB		Phragmites on LMB
19/08/2008	Upper Woodford	UWR01	MSO1	UWR01-MSO1c	413178	137557	178	17.16	DS		Reed Canary Grass on RHB. New courseway evidence
19/08/2008	Upper Woodford	UWR01	MSO1	UWR01-MSO1d	413178	137557	88	17.16	BED		Difficult to see - gravel bed. Raise cover of Ranunculus
19/08/2008	Upper Woodford	UWR01	MSO1	UWR01-MSO1e	413176	137557	34	17.20	US		Location of transect reed canary grass has grown since last survey
19/08/2008	Upper Woodford	UWR01	MSO2	UWR01-MSO2a	413177	137526	14 °	16.50	US		Taken at sign d/s of bench
19/08/2008	Upper Woodford	UWR01	MSO2	UWR01-MSO2b	413177	137526	80°	16.50	LMB		Looking across to causeway - willow tree
19/08/2008	Upper Woodford	UWR01	MSO2	UWR01-MSO2c	413177	137526	144	16.50	DS		Looking along causeway at Island. Reed canary grass in foreground.
19/08/2008	Upper Woodford	UWR01	MSO2	UWR01-MSO2d	413179	137531	80	16.50	BED		Bed. Light not good to see substrate
19/08/2008	Upper Woodford	UWR01	MSO2	UWR01-MSO2e	413174	137525	14°	16.50	US		Looking upstream @ survey location. Water level guage 9cm
19/08/2008	Upper Woodford	UWR01	MSO3	UWR01-MSO3a	413090	137402	88°	16.35	US		May be too far d/s but no view otherwise
19/08/2008	Upper Woodford	UWR01	MSO3	UWR01-MS03b	413090	137402	136°	16.35	LHB		Towards alders may be too far d/s but no view otherwise
19/08/2008	Upper Woodford	UWR01	MSO3	UWR01-MSO3c	413090	137402	210°	16.35	DS		Towards Island
19/08/2008	Upper Woodford	UWR01	MSO3	UWR01-MSO3d	413090	137402	136°	16.35	BED		Silled on margins
19/08/2008	Upper Woodford	UWR01	MSO3	UWR01-MSO3e	413091	137404	220°	16.40	DS		Looking at access point where photo taken
19/08/2008	Upper Woodford	UWR01	MSO4	UWR01-MSO4a	413016	137387	106°	16.16	US		2 new islands u/s
19/08/2008	Upper Woodford	UWR01	MSO4	UWR01-MSO4b	413016	137387	162°	16.16	LMB		carex In foreground, D on 41B d/s
19/08/2008	Upper Woodford	UWR01	MSO4	UWR01-MSO4c	413016	137387	236°	16.16	LMB		Willow drs - Existing island d/s
19/08/2008	Upper Woodford	UWR01	MSO4	UWR01-MSO4d	413011	137383	158°	16.16	BED		Poor view
19/08/2008	Upper Woodford	UWR01	MSO4	UWR01-MSO4e	413011	137384	122°	16.19	US		Coat marks position of photo survey oposite ash tree
19/08/2008	Upper Woodford	UWR01	MSO5	UWR01-MSO5a	412816	137355	110°	18.26	US		Alder tree approx.
19/08/2008	Upper Woodford	UWR01	MSO5	UWR01-MSO5b	412816	137355	151°	18.26	LMB		Willow in foreground
19/08/2008	Upper Woodford	UWR01	MSO5	UWR01-MSO5c	412816	137355	194	18.26	DS		Towards pub
19/08/2008	Upper Woodford	UWR01	MSO5	UWR01-MSO5d	412797	137351	154°	18.26	BED		Difficult to see
19/08/2008	Upper Woodford	UWR01	MSO5	UWR01-MSO5e	412804	137354	100°	18.26	US		

Date	Site	Geomorphological Reach	Transect/ Cross-section	Photo Reference	Easting	Northing	Orientation	Time	Direction	Height (m)	Description / Comments
18/08/2008	Seven Hatches	SHC01	n/a	SHC01a	408309	134583	126°	11.14	DS	1.6	From bridge. Riffle downstream then glide.
18/08/2008	Seven Hatches	SHC01	MS01	SHC01-MS01a	408317	134568	356°	11.16	US	1.6	Bridge.
18/08/2008	Seven Hatches	SHC01	MS01	SHC01-MS01b	408317	134568	21°	11.15	RHB	1.6	Towards sign (blue). Riffle flow type.
18/08/2008	Seven Hatches	SHC01	MS01	SHC01-MS01c	408317	134568	87°	11.17	DS	1.6	Wide embankment.
18/08/2008	Seven Hatches	SHC01	MS01	SHC01-MS01d	408319	134570	21°	11.18	BED	1.6	Bed gravel, little channel vegetation.
18/08/2008	Seven Hatches	SHC01	MS01	SHC01-MS01e	408318	134566	321°	11.35	US	1.6	Where photos taken from for MS01.
18/08/2008	Seven Hatches	SHC01	MS02	SHC01-MS02a	408353	134539	345°	11.38	US	1.6	Towards bridge.
18/08/2008	Seven Hatches	SHC01	MS02	SHC01-MS02b	408353	134539	24°	11.39	LHB	1.6	Opposite white house. Willow has grown.
18/08/2008	Seven Hatches	SHC01	MS02	SHC01-MS02c	408353	134539	112°	11.40	DS	1.6	Willow grown both sides of channel.
18/08/2008	Seven Hatches	SHC01	MS02	SHC01-MS02d	408353	134539	-	-	-	1.6	Bed difficult to access so not taken.
18/08/2008	Seven Hatches	SHC01	MS02	SHC01-MS02e	408352	134538	24°	11.45	LHB	1.6	Location of MS02.
18/08/2008	Seven Hatches	SHC01	n/a	SHC01c	408342	134548	118°	11.54	DS	1.6	Shows embankment height.
18/08/2008	Seven Hatches	SHC01	MS03	SHC01-MS03a	408431	134481	341°	12.05	US	1.6	Glide. Nettles and willow have grown so view reduced.
18/08/2008	Seven Hatches	SHC01	MS03	SHC01-MS03b	408431	134481	41°	12.06	LHB	1.6	Looking torward housing. Nettles and willow have grown so view reduced.
18/08/2008	Seven Hatches	SHC01	MS03	SHC01-MS03c	408431	134481	112°	12.07	DS	1.6	Downstreem to meander bend. LWD trapped on weir.
18/08/2008	Seven Hatches	SHC01	MS03	SHC01-MS03d	408434	134485	14°	12.06	BED	1.6	Gravel and silt.
18/08/2008	Seven Hatches	SHC01	MS03	SHC01-MS03e	408432	134481	173°	12.10	RHB	1.6	Location of MS03.
18/08/2008	Seven Hatches	SHC01	n/a	SHC01d	408452	134463	60°	12..29	RHB	1.6	Branch as LWD. Paving slab deflector undermined.
18/08/2008	Seven Hatches	SHC01	MS04	SHC01-MS04a	408516	134448	300°	12.35	US	1.6	Upstream to paving slabs.
18/08/2008	Seven Hatches	SHC01	MS04	SHC01-MS04b	408516	134448	5°	12.36	LHB	1.6	Marginal vegetation and spiling evident.
18/08/2008	Seven Hatches	SHC01	MS04	SHC01-MS04c	408516	134448	63°	12.37	DS	1.6	Towards upstream meander.
18/08/2008	Seven Hatches	SHC01	MS04	SHC01-MS04d	408516	134448	5°	12.41	BED	1.6	Gravel and silt.
18/08/2008	Seven Hatches	SHC01	MS04	SHC01-MS04e	408516	134448	35°	13.10	DS	1.6	Location of MS04.
18/08/2008	Seven Hatches	SHC02	n/a	SHC02a	408574	134429	354°	12.49	US	1.6	Upstream to pool.
18/08/2008	Seven Hatches	SHC02	n/a	SHC02b	408574	134429	68°	12.50	LHB	1.6	Typha in front of garden.
18/08/2008	Seven Hatches	SHC02	n/a	SHC02c	408574	134429	138°	12.50	DS	1.6	Downstream to treelined section.
18/08/2008	Seven Hatches	SHC02	MS05	SHC02-MS05a	408603	134316	20°	13.28	US	1.6	By upstream side of gate.
18/08/2008	Seven Hatches	SHC02	MS05	SHC02-MS05b	408603	134316	84°	13.23	LHB	1.6	Glide - ripples due to wind. Marginal vegetation.
18/08/2008	Seven Hatches	SHC02	MS05	SHC02-MS05c	408593	134312	124°	13.24	DS	1.6	Overhanging tree.
18/08/2008	Seven Hatches	SHC02	MS05	SHC02-MS05d	408603	134316	84°	13.26	BED	1.6	Rippled surface.
18/08/2008	Seven Hatches	SHC02	MS05	SHC02-MS05e	408608	134316	113°	13.20	DS	1.6	Location of MS05 upstream of trees.
19/08/2008	Seven Hatches	SHC02	n/a	SHC02d	408600	134351	18°	12.50	US	1.6	Shaded, pool.
19/08/2008	Seven Hatches	SHC02	n/a	SHC02e	408600	134351	131°	12.51	DS	1.6	Towards weir
18/08/2008	Seven Hatches	SHC02	n/a	SHC02f	408628	134264	328°	13.25	US	1.6	Impoundment.
18/08/2008	Seven Hatches	SHC02	n/a	SHC02g	408629	134232	356°	13.38	US	1.6	Weir

Date	Site	Geomorphological Reach	Transect/ Cross-section	Photo Reference	Easting	Northing	Orientation	Time	Direction	Height (m)	Description / Comments
18/08/2008	Seven Hatches	SHR01	n/a	SHR01a	409344	132959	16°	15.03	DS	1.6	From upstream boundary on LHB
18/08/2008	Seven Hatches	SHR01	n/a	SHR01b	409408	132883	315°	15.21	US	1.6	Poached area now with marginal vegetation.
18/08/2008	Seven Hatches	SHR01	n/a	SHR01c	409413	132857	230°	15.25	RHB	1.6	Berm established on LH fence moved, but on RH bank
18/08/2008	Seven Hatches	SHR01	n/a	SHR01d	409458	132801	152°	15.39	DS	1.6	Towards Butchers Stream. Emergents on LH side.
18/08/2008	Seven Hatches	SHR01	n/a	SHR01e	409482	132458	175°	15.51	DS	1.6	Confluence with Butchers Stream.
18/08/2008	Seven Hatches	SHR01	n/a	SHR01f	409418	132706	152°	15.58	DS	1.6	Seren Hatches (@ 52.78m)
18/08/2008	Seven Hatches	SHR01	n/a	SHR01g	409523	132697	326°	16.02	US	1.6	Upstream reach showing marginal berm on LHB.
18/08/2008	Seven Hatches	SHR02	n/a	SHR02a	409514	132693	114°	16.05	DS	1.6	Pool below hatches.
18/08/2008	Seven Hatches	SHR02	MS01	SHR02-MS01a	409524	132676	7°	16.10	US	1.6	At Seven Hatches, flow through centre.
18/08/2008	Seven Hatches	SHR02	MS01	SHR02-MS01b	409525	132677	48°	16.11	LHB	1.6	Gauge board to downstream side of transect
18/08/2008	Seven Hatches	SHR02	MS01	SHR02-MS01c	409526	132678	101°	16.12	DS	1.6	Macrophytes submerged.
18/08/2008	Seven Hatches	SHR02	MS01	SHR02-MS01d	409527	132679	42°	16.16	BED	1.6	Gravel overlain by silt.
18/08/2008	Seven Hatches	SHR02	MS01	SHR02-MS01e	409525	132673	350°	16.19	US	1.6	Location of MS01.
18/08/2008	Seven Hatches	SHR02	n/a	SHR02b	409546	132640	18°	16.27	US	1.6	Wall on RHB. Macrophyte growth increased.
18/08/2008	Seven Hatches	SHR02	MS02	SHR02c	409552	132625	0°	16.33	US	1.6	Wall on RHB. Large gravel material added to create riffle.
18/08/2008	Seven Hatches	SHR02	MS02	SHR02-MS02a	409555	132580	31°	16.41	US	1.6	Deflectors and gravel riffle upstream. Poplar cut on LHB.
18/08/2008	Seven Hatches	SHR02	MS02	SHR02-MS02b	409555	132580	84°	16.42	LHB	1.6	Glyceria in foreground.
18/08/2008	Seven Hatches	SHR02	MS02	SHR02-MS02c	409555	132580	146°	16.43	DS	1.6	Marginal fringe both banks.
18/08/2008	Seven Hatches	SHR02	MS02	SHR02-MS02d	409555	132580	71°	16.45	BED	1.6	Gravel and silt.
18/08/2008	Seven Hatches	SHR02	MS02	SHR02-MS02e	409557	132574	24°	16.52	US	1.6	Location of MS02.
18/08/2008	Seven Hatches	SHR02	MS03	SHR02-MS03a	409553	132481	31°	17.05	US	1.6	Upstream of deflector.
18/08/2008	Seven Hatches	SHR02	MS03	SHR02-MS03b	409553	132481	94°	17.06	LHB	1.6	Gravel riffle. No macrophytes.
18/08/2008	Seven Hatches	SHR02	MS03	SHR02-MS03c	409553	132481	144°	17.07	DS	1.6	Drain on RHB. Lack of poaching - riparian vegetation has increased.
18/08/2008	Seven Hatches	SHR02	MS03	SHR02-MS03d	409553	132481	72°	17.09	BED	1.6	Bed - gravel (unconsolidated) with silt and algae.
18/08/2008	Seven Hatches	SHR02	MS03	SHR02-MS03e	409556	132483	150°	17.12	DS	1.6	Location of MS03.
18/08/2008	Seven Hatches	SHR02	MS04	SHR02-MS04a	409600	132406	352°	17.34	US	1.6	Towards meander bend. Macrophytes on LHB.
18/08/2008	Seven Hatches	SHR02	MS04	SHR02-MS04b	409600	132406	49°	17.35	LHB	1.6	Across to cottage. New planting.
18/08/2008	Seven Hatches	SHR02	MS04	SHR02-MS04c	409600	132406	126°	17.36	DS	1.6	Downstream showing riparian grasses and planting.
18/08/2008	Seven Hatches	SHR02	MS04	SHR02-MS04d	409600	132406	46°	17.38	BED	1.6	Silted but some in-channel vegetation.
18/08/2008	Seven Hatches	SHR02	MS04	SHR02-MS04e	409592	132411	134°	17.43	DS	1.6	Location of MS04 opposite cottage.
18/08/2008	Seven Hatches	SHR02	MS05	SHR02-MS05a	409630	132318	7°	17.50	US	1.6	Established macrophytes.
18/08/2008	Seven Hatches	SHR02	MS05	SHR02-MS05b	409630	132318	70°	17.51	LHB	1.6	Fenced bank on LHB.
18/08/2008	Seven Hatches	SHR02	MS05	SHR02-MS05c	409630	132318	126°	17.52	DS	1.6	Cattle drinks downstream. Ponded glide.
18/08/2008	Seven Hatches	SHR02	MS05	SHR02-MS05d	409630	132318	64°	17.53	BED	1.6	Silted and deep.
18/08/2008	Seven Hatches	SHR02	MS05	SHR02-MS05e	409627	132323	111°	18.01	DS	1.6	Location of MS05 4m upstream of sign.
18/08/2008	Seven Hatches			SHR03a	**Flow too high to access channel - photo not taken**						
18/08/2008	Seven Hatches	SHR03	n/a	SHR03b	409706	132134	19	12:51	US	1.6	Towards railway bridge
18/08/2008	Seven Hatches	SHR03	n/a	SHR03c	409704	132125	160	13.01	DS	1.6	Eroding bank from channel. Different angle as pool too deep to wade
18/08/2008	Seven Hatches	SHR03	n/a	SHR03d	409702	132124	143	13.06	RHB	1.6	RHB eroding under fence
18/08/2008	Seven Hatches	SHR03	n/a	SHR03e	409702	132124	110	13.11	DS	1.6	Eroding cliff alongside pool
18/08/2008	Seven Hatches	SHR03	n/a	SHR03f	409759	132068	8	13.12	US	1.6	Glide
18/08/2008	Seven Hatches	SHR04	n/a	SHR04a	409758	132057	192	13.29	US	1.6	Glide d.s channel widens
18/08/2008	Seven Hatches	SHR04	n/a	SHR04c	409794	131976	346	13.35	US	1.6	End of tree line. Taken from bank as water too deep.
18/08/2008	Seven Hatches	SHR04	n/a	SHR04d	409794	131976	120	13.47	DS	1.6	Open and high vegetation. Both banks (emergent and riparian)
18/08/2008	Seven Hatches	SHR04	n/a	SHR04e	409830	131915	8	13.48	US	1.6	Impounded, laminar and uniform flow. High emergent fringe.
18/08/2008	Seven Hatches	SHR04	n/a	SHR04f	409830	131915	62	13.53	LHB	1.6	Dead tree on LHB
18/08/2008	Seven Hatches	SHR04	n/a	SHR04g	409830	131915	138	13.54	DS	1.6	Uniform laminar flow
18/08/2008	Seven Hatches	SHR04	n/a	SHR04h	409850	131823	152	13.55	DS	1.6	Towards bridge
18/08/2008	Seven Hatches	SHR04	n/a	SHR04i	409856	131811	10	14.00	US	1.6	From bridge, impounded flow
18/08/2008	Seven Hatches	SHR04	n/a	SHR04j	409853	131804	120	14.03	LHB	1.6	Deflectors d/s of bridge - riffle
18/08/2008	Seven Hatches	SHR04	n/a	SHR04b	409754	132072	66	14.06	US	1.6	Tributary joining (silt mainly)
18/08/2008	Seven Hatches	SHR02	n/a	SHR02k	409710	132236	188	14.20	DS	1.6	Glide towards railway bridge - u/s riffle
18/08/2008	Seven Hatches	SHR02	n/a	SHR02j	409687	132267	114	14.37	DS	1.6	Riffle d/s using deflectors
18/08/2008	Seven Hatches	SHR02	n/a	SHR02i	409687	132267	330	14.38	US	1.6	Deflector on RHB
18/08/2008	Seven Hatches	SHR02	n/a	SHR02h	409574	132438	131	14.58	DS	1.6	Poaching stablised by marginal vegetation.
18/08/2008	Seven Hatches	SHR02	n/a	SHR02g	409560	132462	348	15.03	DS	1.6	Cliff profile, eroding side of poached area.
18/08/2008	Seven Hatches	SHR02	n/a	SHR02f	409563	132462	120	15.07	DS	1.6	From poached area d/s
18/08/2008	Seven Hatches	SHR02	n/a	SHR02e	409563	132462	352	15.08	US	1.6	Poached area u/s. Shows deflectors upstream.
18/08/2008	Seven Hatches	SHR02	n/a	SHR02d	409555	132493	21	15.13	US	1.6	Poplar cut down. Gravel riffle.

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12/08/2008	Hale	HAR01	HAR01	HAR01a	417709	118650	160°	14.46	DS	1.6	Taken from bridge
12/08/2008	Hale	HAR01	HAR01	HAR01b	417697	118595	180°	15.02	DS	1.6	High weed growth. Taken standing in water.
12/08/2008	Hale	HAR01	HAR01	HAR01c	417697	118595	220°	15.04	DS	1.6	First drain in foreground. Water levels much higher than 2007.
12/08/2008	Hale	HAR01	HAR01	HAR01d	417630	118443	160°	15.37	DS	1.6	Channel vegetation grown since last year. Typical view.
12/08/2008	Hale	HAR01	HAR01	HAR01e	417615	118422	220°	15.42	DS	1.6	Towards large tree. Not exact angle as hard to approach banks due to high water level.
12/08/2008	Hale	HAR01	HAR01	HAR01f	417544	118348	230°	15.51	DS	1.6	Taken upstream of drain. Access difficult.
12/08/2008	Hale	HAR01	HAR01	HAR01g	417457	118295	160°	16.01	BED	1.6	Marginal vegetation.
12/08/2008	Hale	HAR01	HAR01	HAR01h	417457	118295	230°	16.02	DS	1.6	Phragmites in foregound. Glide. Opposite paddock.
12/08/2008	Hale	HAR01	HAR01	HAR01i	417367	118231	180°	16.15	DS	1.6	Poached area now flooded.
12/08/2008	Hale	HAR01	HAR01	HAR01j	417349	118209	160°	16.21	DS	1.6	Reeds in foreground and watercress. Pylon in background.
12/08/2008	Hale	HAR01	HAR01	HAR01k	417229	118135	235°	16.38	DS	1.6	Slightly zoomed towards pylon.
12/08/2008	Hale	HAR01	HAR01	HAR01m	417123	118112	260°	16.45	DS	1.6	Towards meander bend.
12/08/2008	Hale	HAR01	HAR01	HAR01n	417092	118117	210°	16.56	DS	1.6	Submerged eroding cliff and pylon to left.
12/08/2008	Hale	HAR01	HAR01	HAR01o	417077	118127	270°	16.58	DS	1.6	Wide around meander bend.
12/08/2008	Hale	HAR01	HAR01	HAR01p	417063	118142	245°	17.06	DS	1.6	From wide reed area.
12/08/2008	Hale	HAR01	HAR01	HAR01q	416909	118108	280°	17.20	DS	1.6	Looking towards meander adjacent to tributary of LHB.
12/08/2008	Hale	HAR01	HAR01	HAR01r	416788	118188	230°	17.32	DS	1.6	Wide meander, glyceria in foreground.
12/08/2008	Hale	HAR01	HAR01	HAR01s	417709	118175	220°	17.39	DS	1.6	Towards house.
12/08/2008	Hale	HAR02	HAR02	HAR02a	416627	118075	180°	17.55	DS	1.6	Glide. Limited riparian zone.
12/08/2008	Hale	HAR02	HAR02	HAR02b	416613	118036	125°	18.01	LHB	1.6	Poached area now submerged.
12/08/2008	Hale	HAR02	HAR02	HAR02c	416567	118020	280°	18.08	LHB	1.6	Submerged eroded bank.
12/08/2008	Hale	HAR02	HAR02	HAR02d	416547	118089	290°	18.14	DS	1.6	At wide bend. Eddying flow on RH side of channel.
12/08/2008	Hale	HAR02	HAR02	HAR02e	413685	118097	190°	18.24	DS	1.6	Meander bend. Builidng in background.
12/08/2008	Hale	HAR02	HAR02	HARO2f	416337	117990	40°	18.30	DS	1.6	Channel vegetation in foreground. 20m upstream from shed.

Date	Site	Geomorphological Reach	Transect/ Cross-section	Photo Reference	Easting	Northing	Orientation	Time	Direction	Height (m)	Description / Comments
12/08/2008	Fovant	FOR01	FOR01	FOR01a	400215	130599	176°	11.19	US	1.6	Upstream of restoration reach and confluance with tributory
12/08/2008	Fovant	FOR01	FOR01	FOR01b	400215	103599	74°	11.24	DS	1.6	Channel narrowed on RHB tributary confluence in foreground
12/08/2008	Fovant	FOR01	FOR01	FOR01c	400253	130621	256°	11.33	US	1.6	Stabilised scour. Marginal diversity.
12/08/2008	Fovant	FOR01	FOR01	FOR01d	400282	130618	98°	11.46	DS	1.6	Showing glyceria berm on LHB.
12/08/2008	Fovant	FOR01	FOR01	FOR01e	400338	130645	224°	11.52	US	1.6	Upstream groynes on RHB and berm on LHB.
12/08/2008	Fovant	FOR01	FOR01	FOR01f	400375	130646	84°	12.04	DS	1.6	Groynes along treelined RHB. Path on LHB taken from post at apex of meander.
12/08/2008	Fovant	FOR01	FOR01	FOR01g	400375	130646	166°	12.05	RHB	1.6	Bed - deep pool. Some siltation.
12/08/2008	Fovant	FOR01	FOR01	FOR01h	400375	130646	230°	12.06	US	1.6	Upstream run. Groynes on RHB.
12/08/2008	Fovant	FOR01	FOR01	FOR01i	400447	130665	84°	12.15	DS	1.6	Along meander. Vegetation on RHB has grown into channel.
12/08/2008	Fovant	FOR01	FOR01	FOR01j	400447	130665	150°	12.16	RHB	1.6	Across channel. Channel vegetation has increased.
12/08/2008	Fovant	FOR01	FOR01	FOR01k	400447	130665	222°	12.19	US	1.6	Along glide.
12/08/2008	Fovant	FOR01	FOR01	FOR01l	400503	130683	256°	12.30	US	1.6	Reinforcement on LHB. Pool now a run.
12/08/2008	Fovant	FOR01	FOR01	FOR01m	400503	130683	210°	12.31	DS	1.6	Groynes on LHB begin.
12/08/2008	Fovant	FOR01	FOR01	FOR01n	400555	130677	80°	12.54	DS	1.6	Towards bench on LHB. Groyones on RHB.
12/08/2008	Fovant	FOR01	FOR01	FOR01o	400555	130677	166°	12.55	RHB	1.6	Phalaris in foreground.
12/08/2008	Fovant	FOR01	FOR01	FOR01p	400555	130677	256°	12.55	US	1.6	Towards meander.
12/08/2008	Fovant	FOR01	FOR01	FOR01q	400610	130704	210°	13.05	US	1.6	Meander bend.
12/08/2008	Fovant	FOR01	FOR01	FOR01r	400610	130704	128°	13.06	RHB	1.6	Channel vegetation high adjacent to LHB. Flow ponded - mainly RHB flow.
12/08/2008	Fovant	FOR01	FOR01	FOR01s	400610	130704	74°	13.07	DS	1.6	Towards sluice. Run by groyne.
12/08/2008	Fovant	FOR01	FOR01	FOR01t	400610	130704	270°	13.09	LHB	1.6	Field on LHB.
12/08/2008	Fovant	FOR01	FOR01	FOR01u	400653	130728	108°	13.13	DS	1.6	Sluice "Iron Hatches" open.
12/08/2008	Fovant	FOR01	FOR01	FOR01v	400681	130743	234°	13.15	US	1.6	Hatches open.

Appendix C: Macrophyte Survey Data

Site Details:

River: Avon
Site: Upper Woodford Control
Site No: UWC01
NGR Upstream: SU 13238 37851
NGR Downstream: SU 13173 37580
Surveyors: AG / SP
Date: 7th August 2008

Target community: 3260 Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation

Macrophyte assessment:

Latin Name	Common Name	MS01 Run	MS02 Glide	MS03 Glide	MS04 Run	MS05 Glide	(500m) 500m	Notes on key species / negative indicators and invasive species
Acer rubrum	red maple	<5					<1	
Agrimonia eupatoria	agrimony							
Agrostis canina	velvet bent grass			<1			<1	
Agrostis stolonifera	creeping bent grass	<1					<1	
Alisma plantago-aquatica	common water-plantain							
Alliaria petiolata	garlic mustard							
Alnus glutinosa	alder							
Angelica sylvestris	wild angelica			<1			<1	
Apium nodiflorum	fool's watercress	<1			<1	<1	<1	
Arrhenatherum elatius	false oat-grass						<1	
Artemisia vulgaris	mug wort							
Barbarea vulgaris	winter-cress							
Berula erecta	lesser water parsnip	<1	<1			<1	<1	
Brachythecium rutabulum	rough-stalked feather moss						<1	
Butomus umbellatus	flowering rush		<1				<1	
Callitriche obtusangula	blunt-fruited water starwort							Key species absent
Callitriche platycarpa	various-leaved water starwort	<5	<5	<1	<1	<1	<5	Key species (I)
Callitriche stagnalis	common water starwort	<1	<5	<5	<5	<1	<5	Key species (I)
Caltha palustris	marsh marigold, kingcup							
Calystegia sepium	hedge bindweed			<1	<5	<1	<5	
Calystegia silvatica	greater bindweed							
Cardamine pratensis	lady's smock							
Carex hirta	hairy sedge	<1				<1	<1	
Carex paniculata	great tussock sedge							
Carex riparia	greater pond sedge							
Cerastium fontanum	common mouse-ear							
Cirsium arvense	creeping thistle							
Cirsium palustre	marsh thistle							
Cirsium vulgare	spear thistle							
Dactylis glomerata	cocksfoot							
Deschampsia cespitosa	tufted hair grass							
Dipsacus fullonum	teasel							
Eleocharis palustris	common spike-rush			<1		<1	<1	
Elytrigia repens	common couch							
Epilobium hirsutum	great willow herb			<1	<5	<1	<5	
Epilobium parviflorum	hoary willow herb							
Equisetum arvense	field horsetail							
Equisetum palustre	marsh horsetail							
Eupatorium cannabium	hemp agrimony	<1					<1	
Festuca gigantea	giant fescue							
Festuca pratensis	meadow fescue							
Festuca rubra	red fescue							
Filipendula ulmaria	meadow sweet	<1	<5	<1	<1		<5	
Fontinalis antipyretica	common water moss	<1	<1			<5	<1	
Fraxinus excelsior	ash							
Galium aparine	common cleavers							
Galium palustre	marsh bedstraw							
Geranium dissectum	cut-leaved cranesbill							
Glechoma hederacea	ground ivy							
Glyceria maxima	reed sweet grass	<5	5	5	10	10	10	
Heracleum sphondylium	common hogweed							
Holcus lanatus	Yorkshire fog			<1			<1	
Hypericum tetrepterum	square-stalked St-John's Wort							
Impatiens capensis	orange balsam							
Impatiens glandulifera	Himalayan balsam							Invasive species absent
Iris pseudacorus	yellow flag iris							
Juncus acutiflorus	sharp flowered rush							
Juncus bufonius	toad rush							
Juncus effusus	soft rush							
Juncus inflexus	hard rush							
Lactuca serriola	prickly lettuce							
Lemna minor	duckweed	<1	<1	<1	<1	<1	<1	
Lemna trisulca	ivy-leaved duckweed							
Leucanthemum vulgare	oxeye daisy							
Lolium perenne	perennial ryegrass			<1			<1	
Lotus pedunculatus	greater birdsfoot trefoil							
Lycopus europaeus	gypsywort	<5		<1			<5	
Lysimachia nummularia	creeping jenny					<1	<1	
Lythrum salicaria	purple loosestrife		<1				<1	
Mentha aquatica	water mint	<5	<1	<1	<1	<1	<1	
Mimulus guttatus	monkey flower							
Myosotis scorpioides	water forget-me-not	<1	<1	<1		<1	<1	
Myosoton aquaticum	water chickweed							
Odontites vernus	red bartsia							
Oenanthe crocata	hemlock water dropwort	<1	<5	<1	<5	<1	<5	Locally important species (I)
Persicaria amphibia	amphibious bistort							
Persicaria maculosa	redshank							
Petasites hybridus	butterbur	<1					<1	
Phalaris arundinacea	reed-canary grass	<1					<1	
Phleum bertolonii	lesser cat's-tail			<1				
Phragmites australis	common reed		<5	<5	<5	15	<5	
Pimpinella major	greater Burnet saxifrage							
Plantago lanceolata	ribwort plantain							
Plantago major	greater plantain							
Poa trivialis	rough meadow-grass	<1				<1	<1	
Populus nigra	black poplar							
Potamogeton pectinatus	fennel pondweed							Negative Indicator absent
Potentilla anserina	silverweed							

Site Details:

River: Avon
Site: Upper Woodford Control

Site No: UWC01
NGR Upstream: SU 13238 37851
NGR Downstream: SU 13173 37580

Surveyors: AG / SP
Date: 7th August 2008

Target community: 3260 Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation

Macrophyte assessment:

Latin Name	Common Name	MS01 Run	MS02 Glide	MS03 Glide	MS04 Run	MS05 Glide	(500m) 500m	Notes on key species / negative indicators and invasive species
Potentilla reptans	creeping cinquefoil							
Prunella vulgaris	self-heal							
Prunus spinosa	sloe							
Pulicaria dysenterica	common fleabane		<1				<1	
Ranunculus penicillatus spp. pseudofluitans	brook water-crowfoot	45	55	50	75	50	55	Key Species (E)
Ranunuclus repens	creeping buttercup	<1		<1		<1	<1	
Rorippa nasturtium-aquaticum	common watercress	<5			<1	<1	<1	
Rosa arvensis	field rose							
Rubus fruticosa	blackberry				<1		<1	
Rumex acetosa	sorrel							
Rumex conglomeratus	clustered dock	<1		<1		<1	<1	
Rumex crispus	curled dock							
Rumex obtusifolius	broadleaved dock	<1	<1	<1		<1	<1	
Rumex sanguineus	wood dock							
Salix alba	white willow			<5			<1	
Salix caprea	goat willow							
Salix caprea x cinerea	goat willow x grey willow hybrid							
Salix cineria	grey willow	<5	<1	<5		<5	<5	
Salix fragilis	crack willow	<1			<5		<1	
Salix viminalis	osier		<5	<5			<1	
Salix viminalis x cinerea	osier x grey willow hybrid	<5					<1	
Salix viminalis x fragilis	osier x crack willow hybrid							
Sambucus nigra	elder				<1		<1	
Scrophularia auriculata	water figwort	<1					<1	
Senecio aquaticus	marsh ragwort							
Solanum dulcamara	bittersweet	<1	<5		5	<5	<5	
Sonchus asper	prickly sowthistle							
Sparganium emersum	unbranched bur-reed			<1	<1		<1	
Sparganium erectum	branched bur-reed		<1			<1	<1	
Stachys palustris	marsh woundwort							
Symphytum officinale	common comfrey	<1	<1	<1			<1	
Thalictrum flavum	common meadow rue							Regionally scarce plant species
Trifolium pratense	red clover							
Trifolium repens	white clover							
Typha latipholia	reedmace							
Urtica dioica	common nettle			<1			<1	
Valeriana officinalis	common valerian							
Vaucheria sp.	mole-pelt algae	<1	<1	<1			<1	
Veronica anagallis-aquatica	blue water-speedwell	<5	<1	<5	<5		<5	
Veronica beccabunga	brooklime			<1			<1	
Viburnum opulus	guelder-rose				<1		<1	
Zannichellia palustris	horned pondweed	<1		<1	<1	<1	<1	Heavily grazed by swans and geese
	Salix Purpurea	<1	<5				<1	
Total Taxa		**33**	**23**	**32**	**21**	**26**	**56**	

NOTES

KEY	
	Key species
	Species with coverage of <5 or more
	Negative indicator species
	Invasive species

Site Details:

River: Avon
Site: Upper Woodford Restoration

Site No: UWR01
NGR Upstream: SU 13181 3756**3**
NGR Downstream: SU 12614 37268

Surveyors: AG/ SP
Date: 7th August 2008

Target community: 3260 Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation

Macrophyte assessment:

Latin Name	Common Name	MS01 1	MS02 2	MS03 3	MS04 4	MS05 5	(500m) 500m	Notes on key species / negative indicators and invasive species
Acer rubrum	red maple							
Agrimonia eupatoria	agrimony						<1	
Agrostis canina	velvet bent grass						<1	
Agrostis stolonifera	creeping bent grass			<1			<1	
Alisma plantago-aquatica	common water-plantain			<1			<1	
Alliaria petiolata	garlic mustard						<1	
Alnus glutinosa	alder						<1	
Angelica sylvestris	wild angelica						<1	
Apium nodiflorum	fool's watercress	<1		<5			<1	
Arrhenatherum elatius	false oat-grass							
Artemisia vulgaris	mug wort							
Barbarea vulgaris	winter-cress							
Berula erecta	lesser water parsnip							
Brachythecium rutabulum	rough-stalked feather moss							
Butomus umbellatus	flowering rush							
Callitriche obtusangula	blunt-fruited water starwort							Key species absent
Callitriche platycarpa	various-leaved water starwort	<5	<5	<1	<5		<5	Key species (I)
Callitriche stagnalis	common water starwort		<1				<1	Key species (I)
Caltha palustris	marsh marigold, kingcup							
Calystegia sepium	hedge bindweed				<1		<1	
Calystegia silvatica	greater bindweed							
Cardamine pratensis	lady's smock							
Carex hirta	hairy sedge		<1				<1	
Carex paniculata	great tussock sedge							
Carex riparia	greater pond sedge		<1	10	<5	<10	10	
Cerastium fontanum	common mouse-ear							
Cirsium arvense	creeping thistle							
Cirsium palustre	marsh thistle							
Cirsium vulgare	spear thistle							
Dactylis glomerata	cocksfoot							
Deschampsia cespitosa	tufted hair grass							
Dipsacus fullonum	teasel							
Eleocharis palustris	common spike-rush							
Elytrigia repens	common couch		<1				<1	
Epilobium hirsutum	great willow herb	<1	<1		<1		<1	
Epilobium parviflorum	hoary willow herb							
Equisetum arvense	field horsetail							
Equisetum palustre	marsh horsetail	<1					<1	
Eupatorium cannabium	hemp agrimony				<1		<1	
Festuca gigantea	giant fescue							
Festuca pratensis	meadow fescue							
Festuca rubra	red fescue							
Filipendula ulmaria	meadow sweet		<1		<1		<1	
Fontinalis antipyretica	common water moss			<1			<1	
Fraxinus excelsior	ash							
Galium aparine	common cleavers							
Galium palustre	marsh bedstraw			<5	<1	<1	<1	
Geranium dissectum	cut-leaved cranesbill							
Glechoma hederacea	ground ivy							
Glyceria maxima	reed sweet grass		5		<5		<5	
Heracleum sphondylium	common hogweed							
Holcus lanatus	Yorkshire fog							
Hypericum tetrepterum	square-stalked St-John's Wort							
Impatiens capensis	orange balsam		<1		<1		<1	
Impatiens glandulifera	Himalayan balsam							Invasive species present (I)
Iris pseudacorus	yellow flag iris		<1				<1	
Juncus acutiflorus	sharp flowered rush							
Juncus bufonius	toad rush							
Juncus effusus	soft rush	<5	<5		<1	<1	<5	
Juncus inflexus	hard rush							
Lactuca serriola	prickly lettuce							
Lemna minor	duckweed							
Lemna trisulca	ivy-leaved duckweed							
Leucanthemum vulgare	oxeye daisy							
Lolium perenne	perennial ryegrass							
Lotus pedunculatus	greater birdsfoot trefoil							
Lycopus europaeus	gypsywort		<1				<1	
Lysimachia nummularia	creeping jenny							
Lythrum salicaria	purple loosestrife	<1	<1		<5	<1	<5	
Mentha aquatica	water mint	<1	<5	<5	<1	<1	<5	
Mimulus guttatus	monkey flower							
Myosotis scorpioides	water forget-me-not	<1			<5	<1	<1	
Myosoton aquaticum	water chickweed				<1		<1	
Odontites vernus	red bartsia							
Oenanthe crocata	hemlock water dropwort	<1					<1	
Persicaria amphibia	amphibious bistort							
Persicaria maculosa	redshank							
Petasites hybridus	butterbur							
Phalaris arundinacea	reed-canary grass	10	10	10	<5	<1	<5	
Phleum bertolonii	lesser cat's-tail							
Phragmites australis	common reed	10	10	<5			<5	
Pimpinella major	greater Burnet saxifrage							
Plantago lanceolata	ribwort plantain							
Plantago major	greater plantain							
Poa trivialis	rough meadow-grass		<1	<1	<1		<1	
Populus nigra	black poplar							
Potamogeton pectinatus	fennel pondweed					5	<1	Negative indicator (I)
Potentilla anserina	silverweed				<1		<1	

Site Details:

River: Avon
Site: Upper Woodford Restoration

Site No: UWR01
NGR Upstream: SU 13181 3756**3**
NGR Downstream: SU 12614 37268

Surveyors: AG/ SP
Date: 7th August 2008

Target community: 3260 Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation

Macrophyte assessment:

Latin Name	Common Name	MS01 1	MS02 2	MS03 3	MS04 4	MS05 5	(500m) 500m	Notes on key species / negative indicators and invasive species
Potentilla reptans	creeping cinquefoil							
Prunella vulgaris	self-heal							
Prunus spinosa	sloe							
Pulicaria dysenterica	common fleabane	<1	<1	<1	5	<1	<5	
Ranunculus penicillatus spp. pseudofluitans	brook water-crowfoot	65	50	10	15	<5	30	Key Species (I)
Ranunuclus repens	creeping buttercup				<1		<1	
Rorippa nasturtium-aquaticum	common watercress	<1	<1			10	<1	
Rosa arvensis	field rose							
Rubus fruticosa	blackberry							
Rumex acetosa	sorrel							
Rumex conglomeratus	clustered dock		<1				<1	
Rumex crispus	curled dock							
Rumex obtusifolius	broadleaved dock	<1	<1				<1	
Rumex sanguineus	wood dock							
Salix alba	white willow							
Salix caprea	goat willow							
Salix caprea x cinerea	goat willow x grey willow hybrid							
Salix cinerea	grey willow	<5	<1			<1	<5	
Salix fragilis	crack willow	<5	<1				<1	
Salix viminalis	osier				5	<1	<1	
Salix viminalis x cinerea	osier x grey willow hybrid							
Salix viminalis x fragilis	osier x crack willow hybrid							
Sambucus nigra	elder							
Scrophularia auriculata	water figwort		<1				<1	
Senecio aquaticus	marsh ragwort							
Solanum dulcamara	bittersweet		<1	<1		<1	<1	
Sonchus asper	prickly sowthistle							
Sparganium emersum	unbranched bur-reed	<1	<1				<1	
Sparganium erectum	branched bur-reed			<5		<5	<5	
Stachys palustris	marsh woundwort							
Symphytum officinale	common comfrey				<1		<1	
Thalictrum flavum	common meadow rue							Regionally scarce plant species absent
Trifolium pratense	red clover							
Trifolium repens	white clover			<1			<1	
Typha latipholia	reedmace					<5	<1	
Urtica dioica	common nettle	<1				<1	<1	
Valeriana officinalis	common valerian							
Vaucheria sp.	mole-pelt algae							
Veronica anagallis-aquatica	blue water-speedwell	<5	5	<1			<1	
Veronica beccabunga	brooklime	<1	<1				<1	
Viburnum opulus	guelder-rose							
Zannichellia palustris	horned pondweed	<1	10	10	20	<5	10	Heavily grazed by swans and geese
Total Taxa		**22**	**30**	**18**	**23**	**18**	**55**	

NOTES

KEY		
	Key species	
	Species with coverage of <5 or more	
	Negative indicator species	
	Invasive species	

Site Details:

River: Wylye
Site: Seven Hatches Control
Site No: SHC01
NGR Upstream: SU 08307 34584
NGR Downstream: SU 08628 34264
Surveyors: AG / SP
Date: 18th August 2008

Target community: 3260 Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation

Macrophyte assessment:

Latin Name	Common Name	MS01 1	MS02 2	MS03 3	MS04 4	MS05 5	(500m) 500m	Notes on key species / negative indicators and invasive species
Acer rubrum	red maple							
Agrimonia eupatoria	agrimony							
Agrostis canina	velvet bent grass							
Agrostis stolonifera	creeping bent grass							
Alisma plantago-aquatica	common water-plantain							
Alliaria petiolata	garlic mustard							
Alnus glutinosa	alder		<1				<1	
Angelica sylvestris	wild angelica			<1			<1	
Apium nodiflorum	fool's watercress			<1			<1	
Arrhenatherum elatius	false oat-grass	<1	<1	<1	<5	<1	<1	
Artemisia vulgaris	mug wort							
Barbarea vulgaris	winter-cress							
Berula erecta	lesser water parsnip							
Brachythecium rutabulum	rough-stalked feather moss				<1		<1	
Butomus umbellatus	flowering rush							
Callitriche obtusangula	blunt-fruited water starwort		<1		<1		<1	Key species (I)
Callitriche platycarpa	various-leaved water starwort							Key species absent
Callitriche stagnalis	common water starwort							Key species absent
Caltha palustris	marsh marigold, kingcup							
Calystegia sepium	hedge bindweed	10		<1	<5	5	5	
Calystegia silvatica	greater bindweed		<5				<1	
Cardamine pratensis	lady's smock							
Carex hirta	hairy sedge							
Carex paniculata	great tussock sedge							
Carex riparia	greater pond sedge		<5			10	<5	
Cerastium fontanum	common mouse-ear							
Cirsium arvense	creeping thistle				<1		<1	
Cirsium palustre	marsh thistle							
Cirsium vulgare	spear thistle			<1			<1	
Dactylis glomerata	cocksfoot							
Deschampsia cespitosa	tufted hair grass			<1			<1	
Dipsacus fullonum	teasel							
Eleocharis palustris	common spike-rush							
Elytrigia repens	common couch							
Epilobium hirsutum	great willow herb	<5	<5	5	<1	<1	<5	
Epilobium parviflorum	hoary willow herb							
Equisetum arvense	field horsetail	<1					<1	
Equisetum palustre	marsh horsetail							
Eupatorium cannabium	hemp agrimony	<1	<5	<1	<1		<1	
Festuca gigantea	giant fescue							
Festuca pratensis	meadow fescue							
Festuca rubra	red fescue							
Filipendula ulmaria	meadow sweet			<1	<1		<1	
Fontinalis antipyretica	common water moss	<1	<1	<1	20	<1	<5	
Fraxinus excelsior	ash					5	<1	
Galium aparine	common cleavers			<1		<1	<1	
Galium palustre	marsh bedstraw				<1		<1	
Geranium dissectum	cut-leaved cranesbill							
Glechoma hederacea	ground ivy				<1		<1	
Glyceria maxima	reed sweet grass			<1			<1	
Heracleum sphondylium	common hogweed							
Holcus lanatus	Yorkshire fog				<1		<1	
Hypericum tetrepterum	square-stalked St-John's Wort		<1		<1		<1	
Impatiens capensis	orange balsam							
Impatiens glandulifera	Himalayan balsam							Invasive species absent
Iris pseudacorus	yellow flag iris	<5			<5		<1	
Juncus acutiflorus	sharp flowered rush							
Juncus bufonius	toad rush							
Juncus effusus	soft rush							
Juncus inflexus	hard rush							
Lactuca serriola	prickly lettuce							
Lemna minor	duckweed		<1		<1		<1	
Lemna trisulca	ivy-leaved duckweed				<1		<1	
Leucanthemum vulgare	oxeye daisy							
Lolium perenne	perennial ryegrass							
Lotus pedunculatus	greater birdsfoot trefoil							
Lycopus europaeus	gypsywort		<1	<1	<1		<1	
Lysimachia nummularia	creeping jenny							
Lythrum salicaria	purple loosestrife	<1					<1	
Mentha aquatica	water mint		<1	<1	<1		<1	
Mimulus guttatus	monkey flower			<1	<1		<1	
Myosotis scorpioides	water forget-me-not	<1	<1	<1	<1	<1	<1	
Myosoton aquaticum	water chickweed							
Odontites vernus	red bartsia							
Oenanthe crocata	hemlock water dropwort	<5		<1	<1		<1	
Persicaria amphibia	amphibious bistort			<1			<1	
Persicaria maculosa	redshank							
Petasites hybridus	butterbur							
Phalaris arundinacea	reed-canary grass	<5	<1	<5			<1	
Phleum bertolonii	lesser cat's-tail							
Phragmites australis	common reed							
Pimpinella major	greater Burnet saxifrage							
Plantago lanceolata	ribwort plantain							
Plantago major	greater plantain							
Poa trivialis	rough meadow-grass							
Populus nigra	black poplar (native)							
Potamogeton pectinatus	fennel pondweed		10	5	<5	<1	<5	Negative indicator present (I)
Potentilla anserina	silverweed							
Leptodictium riparium		<1	<1	<1	<1	<1	<1	
Oxyrhynchium hians		<1					<1	
Rhyncostegium riparium		<1					<1	
Hedra Helix	Ivy			<5			<1	
Potentilla reptans	creeping cinquefoil							
Prunella vulgaris	self-heal							

Site Details:

River: Wylye
Site: Seven Hatches Control
Site No: SHC01
NGR Upstream: SU 08307 34584
NGR Downstream: SU 08628 34264
Surveyors: AG / SP
Date: 18th August 2008

Target community: 3260 Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation

Macrophyte assessment:

Latin Name	Common Name	MS01 1	MS02 2	MS03 3	MS04 4	MS05 5	(500m) 500m	Notes on key species / negative indicators and invasive species
Prunus spinosa	sloe							
Pulicaria dysenterica	common fleabane		<1	<1	<1		<1	
Ranunculus penicillatus spp. pseudofluitans	brook water-crowfoot	5	<1	<1	<1	<1	<1	Key species (I)
Ranunuclus repens	creeping buttercup		<1				<1	
Rorippa nasturtium-aquaticum	common watercress			<1			<1	
Rosa arvensis	field rose							
Rubus fruticosa	blackberry							
Rumex acetosa	sorrel							
Rumex conglomeratus	clustered dock	<1			<1		<1	
Rumex crispus	curled dock							
Rumex obtusifolius	broadleaved dock							
Rumex sanguineus	wood dock	<1		<1	<1		<1	
Salix alba	white willow							
Salix caprea	goat willow							
Salix caprea x cinerea	goat willow x grey willow hybrid	<5					<1	
Salix cinerea	grey willow	<5	5	5	10		<5	
Salix fragilis	crack willow	5	5	5		<5	<5	
Salix viminalis	osier							
Salix viminalis x cinerea	osier x grey willow hybrid							
Salix viminalis x fragilis	osier x crack willow hybrid							
Sambucus nigra	elder							
Scrophularia auriculata	water figwort	<1	<1	<1	5	<1	<1	
Senecio aquaticus	marsh ragwort							
Solanum dulcamara	bittersweet	<5	<5	<5		<1	<5	
Sonchus asper	prickly sowthistle							
Sparganium emersum	unbranched bur-reed		<1	<1	<1	<1	<1	
Sparganium erectum	branched bur-reed	<1	10	5	<1	5	5	
Stachys palustris	marsh woundwort							
Symphytum officinale	common comfrey	<1	<5		<1	<1	<1	
Thalictrum flavum	common meadow rue							Regionally scarce plant species absent
Trifolium pratense	red clover							
Trifolium repens	white clover							
Typha latipholia	reedmace							
Urtica dioica	common nettle	10	10	15	<5	5	10	
Valeriana officinalis	common valerian		<1				<1	
Vaucheria sp.	mole-pelt algae	<1	<1				<1	
Veronica anagallis-aquatica	blue water-speedwell	<1	<1	<1	<1	<1	<1	
Veronica beccabunga	brooklime			<1	<1	<1	<1	
Viburnum opulus	guelder-rose							
Zannichellia palustris	horned pondweed	5	<1		<1		<1	
Geranium robertiatum				<1			<1	
Kindbergia praylonga	Moss			<1	<1		<1	
Senecio jacabea	common ragwort				<1		<1	
Pellia endiviifolia					<1		<1	
Conosephalum Conicom	Liverwort				<1		<1	
Populus betulifolia	black poplar							
Filamentous algae								
Hawthorn								
Total Taxa		**28**	**31**	**37**	**40**	**20**	**65**	

NOTES

KEY	
	Key species
	Species with coverage of <5 or more
	Negative indicator species
	Invasive species

Site Details:

River: Wylye
Site: Seven Hatches Restoration

Site No: SHR02
NGR Upstream: SU 09522 32681
NGR Downstream: SU 09699 32177

Surveyors: AG / SP
Date: 18th August 2008

Target community: 3260 Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation

Macrophyte assessment:

Latin Name	Common Name	MS01 1	MS02 2	MS03 3	MS04 4	MS05 5	(500m) 500m	Notes on key species / negative indicators and invasive species
Acer rubrum	red maple							
Agrimonia eupatoria	agrimony							
Agrostis canina	velvet bent grass					<1	<1	
Agrostis stolonifera	creeping bent grass	5	<5	5	<5	<5	<5	
Alisma plantago-aquatica	common water-plantain							
Alliaria petiolata	garlic mustard							
Alnus glutinosa	alder							
Angelica sylvestris	wild angelica							
Apium nodiflorum	fool's watercress	<1	<5				<5	
Arrhenatherum elatius	false oat-grass							
Artemisia vulgaris	mug wort							
Barbarea vulgaris	winter-cress		<1				<1	
Berula erecta	lesser water parsnip							
Brachythecium rutabulum	rough-stalked feather moss							
Butomus umbellatus	flowering rush			<1			<1	
Callitriche obtusangula	blunt-fruited water starwort							Key species absent
Callitriche platycarpa	various-leaved water starwort							Key species absent
Callitriche stagnalis	common water starwort							Key species absent
Caltha palustris	marsh marigold, kingcup							
Calystegia sepium	hedge bindweed							
Calystegia silvatica	greater bindweed							
Cardamine pratensis	lady's smock							
Carex hirta	hairy sedge	<1	<1				<1	
Carex paniculata	great tussock sedge							
Carex riparia	greater pond sedge			<1			<1	
Cerastium fontanum	common mouse-ear							
Cirsium arvense	creeping thistle		<1		<1	<1	<1	
Cirsium palustre	marsh thistle							
Cirsium vulgare	spear thistle	<1			<5		<1	
Dactylis glomerata	cocksfoot	<1					<1	
Deschampsia cespitosa	tufted hair grass			<1	<5	<1	<1	
Dipsacus fullonum	teasel		<1				<1	
Eleocharis palustris	common spike-rush							
Elytrigia repens	common couch							
Epilobium hirsutum	great willow herb	<1		<1		<1	<1	
Epilobium parviflorum	hoary willow herb				<1		<1	
Equisetum arvense	field horsetail							
Equisetum palustre	marsh horsetail							
Eupatorium cannabium	hemp agrimony	<1					<1	
Festuca gigantea	giant fescue							
Festuca pratensis	meadow fescue							
Festuca rubra	red fescue					<1	<1	
Filipendula ulmaria	meadow sweet		<1		<1		<1	
Fontinalis antipyretica	common water moss	<1		<1			<1	
Fraxinus excelsior	ash							
Galium aparine	common cleavers							
Galium palustre	marsh bedstraw							
Geranium dissectum	cut-leaved cranesbill							
Glechoma hederacea	ground ivy							
Glyceria maxima	reed sweet grass		10	5	10	15	10	
Heracleum sphondylium	common hogweed							
Holcus lanatus	Yorkshire fog				<1		<1	
Hypericum tetrepterum	square-stalked St-John's Wort	<1					<1	
Impatiens capensis	orange balsam							
Impatiens glandulifera	Himalayan balsam							Invasive species absent
Iris pseudacorus	yellow flag iris							
Juncus acutiflorus	sharp flowered rush			<1		<1	<1	
Juncus bufonius	toad rush							
Juncus effusus	soft rush							
Juncus inflexus	hard rush		<1			<1	<1	
Lactuca serriola	prickly lettuce							
Lemna minor	duckweed	<1		<1	<1		<1	
Lemna trisulca	ivy-leaved duckweed							
Leucanthemum vulgare	oxeye daisy							
Lolium perenne	perennial ryegrass	<1		5	<1		<5	
Lotus pedunculatus	greater birdsfoot trefoil							
Lycopus europaeus	gypsywort	<1	5	<1	<1		<1	
Lysimachia nummularia	creeping jenny							
Lythrum salicaria	purple loosestrife							
Mentha aquatica	water mint		<1	<5		<5	<1	
Mimulus guttatus	monkey flower							
Myosotis scorpioides	water forget-me-not	<1	<1	<5	<1	<1	<1	
Myosoton aquaticum	water chickweed							
Odontites vernus	red bartsia							
Oenanthe crocata	hemlock water dropwort		<5		<1		<1	
Persicaria amphibia	amphibious bistort							
Persicaria maculosa	redshank							
Petasites hybridus	butterbur							
Phalaris arundinacea	reed-canary grass				5		<1	
Phleum bertolonii	lesser cat's-tail							
Phragmites australis	common reed							
Pimpinella major	greater Burnet saxifrage							
Plantago lanceolata	ribwort plantain							
Plantago major	greater plantain							
Poa trivialis	rough meadow-grass							
Populus nigra	black poplar							
Potamogeton pectinatus	fennel pondweed				30	5	<5	Negative indicator present (I)
Potentilla anserina	silverweed					<1	<1	
Aliplex hantch								
Testru amidinace	Tall Fencue			<1			<1	
Kindbergic pocelanga	(moss)			<1			<1	

Site Details:

River: Wylye
Site: Seven Hatches Restoration
Site No: SHR02
NGR Upstream: SU 09522 32681
NGR Downstream: SU 09699 32177
Surveyors: AG / SP
Date: 18th August 2008

Target community: 3260 Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation

Macrophyte assessment:

Latin Name	Common Name	MS01 1	MS02 2	MS03 3	MS04 4	MS05 5	(500m) 500m	Notes on key species / negative indicators and invasive species
Potentilla reptans	creeping cinquefoil							
Prunella vulgaris	self-heal	<1	<1				<1	
Prunus spinosa	sloe							
Pulicaria dysenterica	common fleabane		10	<5	<1		<1	
Ranunculus penicillatus spp. pseudofluitans	brook water-crowfoot	<1	<1	<1	<1		<1	Grazed by swans and geese
Ranunuclus repens	creeping buttercup	<5	<1	<1		<1	<1	
Rorippa nasturtium-aquaticum	common watercress	<1			<1		<1	
Rosa arvensis	field rose							
Rubus fruticosa	blackberry	<1					<1	
Rumex acetosa	sorrel			<1			<1	
Rumex conglomeratus	clustered dock	<1	<1		<1		<1	
Rumex crispus	curled dock							
Rumex obtusifolius	broadleaved dock				<5		<1	
Rumex sanguineus	wood dock			<1			<1	
Salix alba	white willow							
Salix caprea	goat willow							
Salix caprea x cinerea	goat willow x grey willow hybrid	<5			<1		<1	
Salix cinerea	grey willow				<1		<1	
Salix fragilis	crack willow							
Salix viminalis	osier							
Salix viminalis x cinerea	osier x grey willow hybrid							
Salix viminalis x fragilis	osier x crack willow hybrid							
Sambucus nigra	elder							
Scrophularia auriculata	water figwort	<5	<1				<1	
Senecio aquaticus	marsh ragwort							
Solanum dulcamara	bittersweet				<1		<1	
Sonchus asper	prickly sowthistle							
Sparganium emersum	unbranched bur-reed	<1		<1		<1	<1	
Sparganium erectum	branched bur-reed	<1	10	<5	<5	5	<5	
Stachys palustris	marsh woundwort	<5					<1	
Symphytum officinale	common comfrey							
Thalictrum flavum	common meadow rue							Regionally scarce plant species absent
Trifolium pratense	red clover							
Trifolium repens	white clover			<1			<1	
Typha latipholia	reedmace							
Urtica dioica	common nettle	10			<1		<5	
Valeriana officinalis	common valerian							
Vaucheria sp.	mole-pelt algae							
Veronica anagallis-aquatica	blue water-speedwell							
Veronica beccabunga	brooklime	<1				<1	<1	
Viburnum opulus	guelder-rose							
Zannichellia palustris	horned pondweed			<1			<1	
Taraxacum aggrogate	Dandelion	<1					<1	
Canocephelm conicir	A liverwort	<1					<1	
Anisantha Sterilis	Barren Brome	<1					<1	
Total Taxa		**29**	**20**	**24**	**25**	**17**	**58**	

NOTES

KEY	
	Key species
	Species with coverage of <5 or more
	Negative indicator species
	Invasive species

Appendix D: Cross-sectional and DVS Survey Data

Cross-section	Observed point	Easting	Northing	Chainage (m)	Cumulative Chainage (m)	Bed Elevation (mAOD)	Water surface elevation (mAOD)	Water depth (m)	Comments	Distance from RHB (m)	Velocity (ms^{-1})
MS01 - Glide											
MS01	c2-26	413256.55	137761.95	0.000	0.000	58.41	58.410	0.002	Observed water level & River edge	15	0.397
MS01	c2-25	413255.57	137762.01	0.980	0.980	58.10	58.410	0.313		14	0.404
MS01	c2-24	413254.96	137761.54	0.775	1.755	57.83	58.410	0.576		13	0.522
MS01	c2-23	413254.21	137761.50	0.751	2.506	57.78	58.410	0.632		12	0.468
MS01	c2-22	413250.95	137763.00	3.587	6.093	57.82	58.410	0.592		11	0.291
MS01	c2-21	413249.88	137764.02	1.480	7.573	57.87	58.410	0.538		10	0.283
MS01	c2-20	413248.59	137766.87	3.126	10.699	57.89	58.410	0.522		9	0.141
MS01	c2-19	413247.32	137767.07	1.279	11.978	57.89	58.410	0.523		8	0.160
MS01	c2-18	413245.77	137767.36	1.579	13.557	57.83	58.410	0.583		7	0.298
MS01	c2-17	413244.13	137767.64	1.662	15.219	57.73	58.410	0.682		6	0.398
MS01	c2-16	413242.60	137767.91	1.559	16.778	57.73	58.410	0.677		5	0.350
MS01	c2-15	413241.03	137768.46	1.665	18.443	57.78	58.410	0.633		4	0.276
MS01	c2-14	413239.45	137768.54	1.577	20.020	57.97	58.410	0.440		3	0.223
MS01	c2-13	413238.41	137768.82	1.076	21.096	57.87	58.410	0.543		2	0.268
MS01	c2-12	413237.05	137768.95	1.366	22.462	57.87	58.410	0.542		1	0.214
MS01	c2-11	413234.98	137768.84	2.070	24.531	57.88	58.410	0.529		**Mean**	**0.313**
MS01	c2-10	413233.32	137768.91	1.662	26.194	57.89	58.410	0.524			
MS01	c2-09	413230.31	137769.28	3.037	29.231	57.81	58.410	0.601			
MS04	**c2-08**	**413228.83**	**137769.45**	**1.492**	**30.723**	**57.72**	**58.410**	**0.687**			
MS05	c2-07	413227.60	137769.58	1.231	31.954	57.73	58.410	0.678			
MS06	c2-06	413226.40	137769.71	1.210	33.163	57.75	58.410	0.658			
MS07	c2-05	413225.21	137769.85	1.195	34.358	57.82	58.410	0.590			
MS08	c2-04	413223.60	137770.49	1.738	36.096	58.00	58.410	0.407			
MS01	c2-03	413223.20	137770.55	0.399	36.495	58.40	58.410	0.007	Observed water level & River edge		
MS01	c2-02	413222.73	137770.57	0.471	36.966	58.54	58.410				
MS01	c2-01	413221.46	137770.89	1.315	38.281	58.52	58.410				

XS01 - Glide											
XS01	c2-49	413249.00	137751.50	0.000	0.000	58.255	58.395	0.140	Water's edge	1	0.372
XS01	c2-48	413247.18	137751.16	1.850	3.850	57.906	58.395	0.489		2	0.299
XS01	c2-47	413245.94	137750.97	1.252	5.102	57.984	58.395	0.411		3	0.340
XS01	c2-46	413245.01	137750.87	0.939	6.041	57.908	58.395	0.487		4	0.323
XS01	c2-45	413242.16	137749.79	3.047	9.088	57.841	58.395	0.554		5	0.413
XS01	**c2-44**	**413240.52**	**137749.43**	**1.677**	**10.766**	**57.530**	**58.395**	**0.865**		**6**	**0.367**
XS01	c2-43	413239.14	137749.28	1.391	12.157	57.580	58.395	0.815		7	0.358
XS01	c2-42	413237.74	137748.91	1.452	13.609	57.621	58.395	0.774		8	0.303
XS01	c2-41	413236.93	137749.17	0.850	14.459	57.723	58.395	0.672		9	0.495
XS01	c2-40	413235.82	137749.20	1.105	15.564	57.671	58.395	0.724		10	0.655
XS01	c2-39	413234.55	137749.55	1.318	16.882	57.602	58.395	0.793		11	0.361
XS01	c2-38	413233.10	137749.41	1.462	18.344	57.703	58.395	0.692		12	0.540
XS01	c2-37	413232.37	137749.63	0.756	19.100	57.767	58.395	0.628		13	0.216
XS01	c2-36	413230.75	137749.87	1.646	20.746	57.744	58.395	0.651		**Mean**	**0.388**
XS01	c2-35	413229.14	137750.11	1.620	22.367	57.787	58.395	0.608			
XS01	c2-34	413227.58	137750.67	1.660	24.026	57.825	58.395	0.570			
XS01	c2-33	413226.34	137751.11	1.315	25.341	57.776	58.395	0.619			
XS01	c2-32	413225.06	137751.38	1.306	26.648	57.764	58.395	0.631			
XS01	c2-31	413223.77	137751.41	1.296	27.944	57.766	58.395	0.629			
XS01	c2-30	413222.08	137751.90	1.756	33.700	57.778	58.395	0.617			
XS01	c2-29	413220.79	137751.99	1.292	34.992	58.395	58.395	0.000	Observed water level & River edge		
XS01	c2-28	413219.79	137751.91	1.003	35.995	58.380					
XS01	c2-27	413217.29	137752.02	2.506	38.501	58.577					

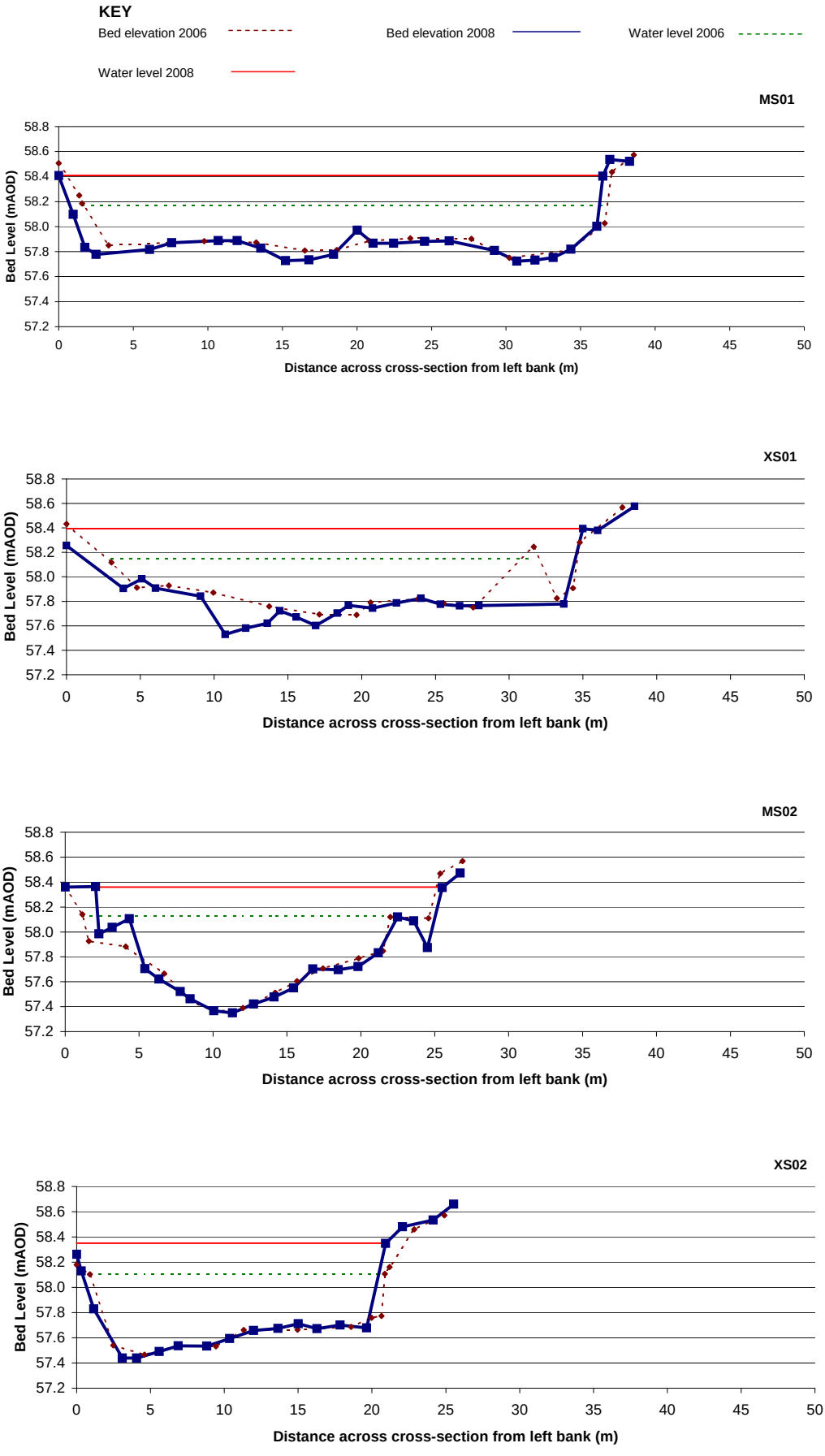
Cross-section	Observed point	Easting	Northing	Chainage (m)	Cumulative Chainage (m)	Bed Elevation (mAOD)	Water surface elevation (mAOD)	Water depth (m)	Comments	Distance from RHB (m)	Velocity (ms^{-1})
MS02 - Glide											
MS02	c2-72	413239.06	137727.76	0.000	0.000	58.360	58.3600	0.000		River Edge	0
MS02	c2-71	413237.86	137729.43	2.060	2.060	58.363	58.3600	-0.003	Observed water level & River edge	6	0.060
MS02	c2-70	413237.69	137729.57	0.219	2.279	57.985	58.3600	0.375		7	0.220
MS02	c2-69	413236.81	137729.74	0.897	3.176	58.037	58.3600	0.323		8	0.397
MS02	c2-68	413235.83	137730.39	1.174	4.350	58.105	58.3600	0.255		9	0.358
MS02	c2-67	413234.79	137730.44	1.041	5.391	57.705	58.3600	0.655		10	0.437
MS02	c2-66	413233.85	137730.56	0.955	6.346	57.621	58.3600	0.739		11	0.514
MS02	c2-65	413232.42	137730.75	1.437	7.783	57.522	58.3600	0.838		12	0.359
MS02	c2-64	413231.76	137730.86	0.674	8.457	57.462	58.3600	0.898		13	0.370
MS02	c2-63	413230.50	137731.85	1.598	10.055	57.366	58.3600	0.994		14	0.338
MS02	**c2-62**	**413229.38**	**137732.43**	**1.263**	**11.319**	**57.350**	**58.3600**	**1.010**		15	0.308
MS02	c2-61	413227.98	137732.66	1.424	12.742	57.421	58.3600	0.939		16	0.253
MS02	c2-60	413226.62	137733.03	1.401	14.143	57.478	58.3600	0.882		17	0.069
MS02	c2-59	413225.40	137733.50	1.318	15.461	57.550	58.3600	0.810		**Mean**	**0.283**
MS02	c2-58	413224.23	137734.06	1.287	16.747	57.702	58.3600	0.658			
MS02	c2-57	413222.57	137734.53	1.729	18.477	57.697	58.3600	0.663			
MS02	c2-56	413221.27	137734.89	1.345	19.822	57.722	58.3600	0.638			
MS02	c2-55	413219.94	137734.61	1.363	21.185	57.833	58.3600	0.527			
MS02	c2-54	413218.69	137734.99	1.307	22.493	58.120	58.3600	0.240			
MS02	c2-53	413217.67	137735.36	1.085	23.578	58.089	58.3600	0.271			
MS02	c2-52	413216.78	137735.66	0.932	24.510	57.873	58.3600	0.487			
MS02	c2-51	413215.78	137735.72	1.007	25.517	58.355	58.3600	0.005	Observed water level & River edge		
MS02	c2-50	413214.68	137736.20	1.204	26.721	58.472	58.3600				

XS02 - Glide											
XS02	c2-91	413233.28	137715.01	0.000	0.000	58.261	58.350	0.089	Rivers edge	River Edge	0
XS02	c2-90	413232.98	137714.92	0.321	0.321	58.130	58.350	0.220		1	0
XS02	c2-89	413232.15	137715.08	0.845	1.166	57.828	58.350	0.522		2	0.162
XS02	**c2-88**	**413230.84**	**137716.50**	**1.926**	**3.092**	**57.439**	**58.350**	**0.911**		**3**	**0.283**
XS02	c2-87	413229.94	137716.88	0.977	4.069	57.439	58.350	0.911		4	0.378
XS02	c2-86	413228.42	137717.09	1.530	5.600	57.491	58.350	0.859		5	0.274
XS02	c2-85	413227.16	137717.31	1.285	6.885	57.537	58.350	0.813		6	0.352
XS02	c2-84	413225.31	137717.86	1.927	8.812	57.533	58.350	0.817		7	0.408
XS02	c2-83	413223.79	137718.22	1.558	10.370	57.593	58.350	0.757		8	0.425
XS02	c2-82	413222.26	137718.69	1.609	11.979	57.658	58.350	0.692		9	0.462
XS02	c2-81	413220.71	137719.28	1.658	13.637	57.674	58.350	0.676		10	0.461
XS02	c2-80	413219.35	137719.46	1.373	15.009	57.712	58.350	0.638		11	0.460
XS02	c2-79	413218.15	137719.91	1.275	16.284	57.672	58.350	0.678		12	0.429
XS02	c2-78	413216.77	137720.61	1.555	17.839	57.701	58.350	0.649		13	0.444
XS02	c2-77	413215.04	137721.12	1.800	19.639	57.679	58.350	0.671		14	0.418
XS02	c2-76	413213.78	137721.36	1.286	20.925	58.348	58.350	0.002	Observed water level & River edge	15	0.433
XS02	c2-75	413212.65	137721.55	1.138	22.063	58.480	58.350	-0.130		16	0.383
XS02	c2-74	413210.59	137721.88	2.090	24.154	58.535	58.350	-0.185		17	0.352
XS02	c2-73	413209.21	137722.04	1.388	25.541	58.660	58.350	-0.310		**Mean**	**0.360**

Cross-section	Observed point	Easting	Northing	Chainage (m)	Cumulative Chainage (m)	Bed Elevation (mAOD)	Water surface elevation (mAOD)	Water depth (m)	Comments	Distance from RHB (m)	Velocity (ms^{-1})
MS03 - Glide											
MS03	c2-115	413230.37	137695.83	0.000	0.000	58.315	58.320	0.005	Observed water level & River edge	River Edge	0
MS03	c2-114	413230.19	137695.94	0.210	3.210	57.811	58.320	0.509		1	0
MS03	c2-113	413229.31	137696.07	0.889	4.099	57.597	58.320	0.723		2	0
MS03	**c2-112**	**413228.03**	**137696.47**	**1.342**	**5.440**	**57.489**	**58.320**	**0.831**		**3**	**0.015**
MS03	c2-111	413226.86	137696.81	1.215	6.656	57.658	58.320	0.662		4	0.052
MS03	c2-110	413225.72	137697.03	1.160	7.816	57.682	58.320	0.638		5	0.108
MS03	c2-109	413224.45	137697.25	1.286	9.102	57.632	58.320	0.688		6	0.409
MS03	c2-108	413224.03	137697.38	0.442	9.544	57.733	58.320	0.587		7	0.301
MS03	c2-107	413222.83	137698.14	1.422	10.967	57.693	58.320	0.627		8	0.404
MS03	c2-106	413221.39	137698.47	1.478	12.445	57.650	58.320	0.670		9	0.344
MS03	c2-105	413219.87	137698.82	1.559	14.003	57.613	58.320	0.707		10	0.443
MS03	c2-104	413218.32	137699.15	1.581	15.584	57.702	58.320	0.618		11	0.375
MS03	c2-103	413217.04	137699.48	1.327	16.911	57.786	58.320	0.534		12	0.436
MS03	c2-102	413215.55	137699.90	1.550	18.461	57.717	58.320	0.603		13	0.333
MS03	c2-101	413214.23	137700.35	1.394	19.855	57.695	58.320	0.625		14	0.348
MS03	c2-100	413212.78	137700.72	1.490	21.346	57.612	58.320	0.708		15	0.374
MS03	c2-99	413211.47	137701.18	1.393	22.739	57.642	58.320	0.678		16	0.352
MS03	c2-98	413210.28	137701.75	1.321	24.059	57.612	58.320	0.708		17	0.382
MS03	c2-97	413208.87	137702.24	1.493	25.553	57.703	58.320	0.617		18	0.444
MS03	c2-96	413207.36	137702.29	1.513	27.065	57.722	58.320	0.598		19	0.445
MS03	c2-95	413206.08	137702.71	1.339	28.404	57.947	58.320	0.373		20	0.486
MS03	c2-94	413205.23	137703.11	0.940	29.344	58.329	58.320	-0.009	Observed water level & River edge	21	0.3
MS03	c2-93	413204.60	137703.67	0.844	30.189	58.233	58.320			**Mean**	**0.334**
MS03	c2-92	413202.92	137704.39	1.833	32.022	58.510	58.320				

MS04 - Glide											
MS04	c2-140	413223.57	137657.82	0.000	0.000	58.266	58.270	0.004	Observed water level & River edge	River edge	0
MS04	c2-139	413222.57	137657.92	1.005	1.005	57.687	58.270	0.583		1	0
MS04	c2-138	413221.02	137658.08	1.560	2.566	57.689	58.270	0.581		2	0.130
MS04	c2-137	413219.58	137658.19	1.447	4.013	57.668	58.270	0.602		3	0.131
MS04	c2-136	413218.03	137658.42	1.561	5.574	57.706	58.270	0.564		4	0.135
MS04	c2-135	413216.36	137658.56	1.683	7.257	57.751	58.270	0.519		5	0.245
MS04	c2-134	413215.31	137658.73	1.063	8.320	57.677	58.270	0.593		6	0.216
MS04	c2-133	413213.79	137658.84	1.517	9.837	57.698	58.270	0.572		7	0.182
MS04	c2-132	413212.16	137658.94	1.633	11.470	57.722	58.270	0.548		8	0.164
MS04	c2-131	413210.67	137659.30	1.532	13.003	57.694	58.270	0.576		9	0.212
MS04	**c2-130**	**413209.30**	**137659.52**	**1.394**	**14.397**	**57.574**	**58.270**	**0.696**		**10**	**0.366**
MS04	c2-129	413208.16	137659.84	1.183	15.580	57.605	58.270	0.665		11	0.423
MS04	c2-128	413207.16	137659.94	1.000	16.580	57.634	58.270	0.636		12	0.469
MS04	c2-127	413206.19	137660.27	1.025	17.605	57.583	58.270	0.687		13	0.348
MS04	c2-126	413204.95	137660.80	1.353	18.959	57.620	58.270	0.650		14	0.368
MS04	c2-125	413203.42	137661.54	1.698	20.656	57.642	58.270	0.628		15	0.264
MS04	c2-124	413202.10	137662.41	1.577	22.233	57.666	58.270	0.604		16	0.429
MS04	c2-123	413200.67	137662.84	1.499	23.732	57.658	58.270	0.612		17	0.367
MS04	c2-122	413199.39	137663.32	1.366	25.097	57.672	58.270	0.598		18	0.332
MS04	c2-121	413197.98	137663.90	1.521	26.618	57.627	58.270	0.643		19	0.333
MS04	c2-120	413196.67	137663.99	1.318	27.936	57.680	58.270	0.590		20	0.147
MS04	c2-119	413195.05	137665.13	1.984	29.920	57.996	58.270	0.274		21	0.169
MS04	c2-118	413193.28	137665.72	1.859	31.779	58.095	58.270	0.175		22	0.157
MS04	c2-117	413191.65	137666.06	1.667	33.446	58.274	58.270	-0.004	Observed water level & River edge	23	0.032
MS04	c2-116	413189.18	137666.97	2.628	36.073	58.390	58.270			25	0.07
										27	0.07
										Mean	**0.24**

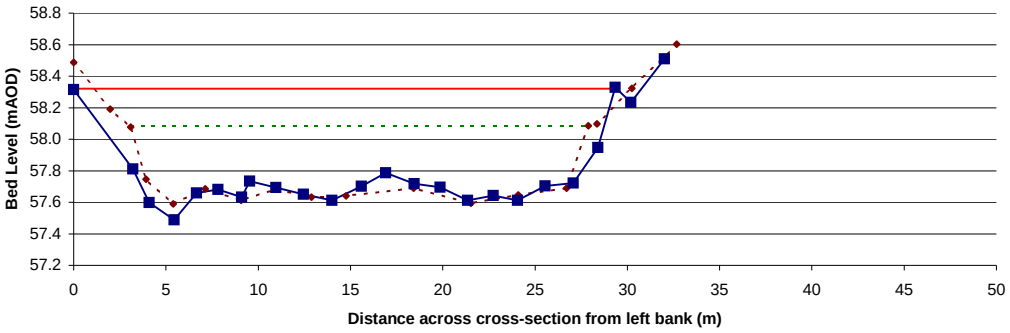
Cross-section	Observed point	Easting	Northing	Chainage (m)	Cumulative Chainage (m)	Bed Elevation (mAOD)	Water surface elevation (mAOD)	Water depth (m)	Comments	Distance from RHB (m)	Velocity (ms^{-1})
XS03 - Glide											
XS03	c2-164	413216.74	137633.42	0.000	0.000	58.247	58.250	0.003	Observed water level & River edge	River Edge	0
XS03	c2-163	413214.63	137633.49	2.105	6.105	57.938	58.250	0.312		1	0
XS03	c2-162	413213.35	137633.67	1.291	7.396	57.651	58.250	0.599		2	0
XS03	c2-161	413212.16	137633.53	1.200	8.596	57.588	58.250	0.662		3	0.028
XS03	c2-160	413211.31	137633.55	0.851	9.447	57.565	58.250	0.685		4	0.225
XS03	c2-159	413210.10	137633.70	1.221	10.669	57.537	58.250	0.713		5	0.278
XS03	c2-158	413208.18	137634.12	1.960	12.629	57.627	58.250	0.623		6	0.266
XS03	c2-157	413206.57	137634.36	1.628	14.257	57.598	58.250	0.652		7	0.270
XS03	c2-156	413204.92	137634.61	1.672	15.929	57.594	58.250	0.656		8	0.287
XS03	c2-155	413203.56	137634.78	1.374	17.303	57.583	58.250	0.667		9	0.312
XS03	c2-154	413201.85	137634.85	1.707	19.010	57.535	58.250	0.715		10	0.334
XS03	c2-153	413200.42	137634.87	1.430	20.440	57.537	58.250	0.713		11	0.314
XS03	c2-152	413198.84	137634.78	1.586	22.026	57.521	58.250	0.729		12	0.328
XS03	c2-151	413197.33	137635.15	1.554	23.580	57.543	58.250	0.707		13	0.330
XS03	**c2-150**	**413195.83**	**137635.35**	**1.509**	**25.089**	**57.498**	**58.250**	**0.752**		**14**	**0.382**
XS03	c2-149	413194.24	137635.33	1.596	26.685	57.528	58.250	0.722		15	0.489
XS03	c2-148	413192.94	137635.50	1.307	27.992	57.578	58.250	0.672		16	0.409
XS03	c2-147	413191.23	137635.64	1.712	29.705	57.605	58.250	0.645		17	0.323
XS03	c2-146	413189.61	137635.60	1.625	31.330	57.632	58.250	0.618		18	0.304
XS03	c2-145	413188.14	137635.72	1.476	32.806	57.657	58.250	0.593		19	0.242
XS03	c2-144	413186.91	137636.00	1.262	34.068	57.777	58.250	0.473		20	0.274
XS03	c2-143	413186.02	137636.58	1.063	35.131	57.977	58.250	0.273		21	0.229
XS03	c2-142	413184.58	137637.08	1.523	36.654	58.250	58.250	0.000	Observed water level & River edge	22	0.078
XS03	c2-141	413183.43	137637.64	1.281	37.935	58.319	58.250			**Mean**	**0.259**
MS05 - Glide											
MS05	c2-184	413207.24	137608.32	0.000	0.000	58.240	58.240	0.000	Observed water level & River edge	River Edge	0
MS05	c2-183	413206.26	137608.62	1.030	1.030	57.951	58.240	0.289		1	0
MS05	c2-182	413204.37	137609.24	1.983	3.013	57.849	58.240	0.391		2	0
MS05	c2-181	413203.38	137609.52	1.031	4.044	57.321	58.240	0.919		3	0
MS05	c2-180	413202.38	137609.70	1.017	5.061	57.330	58.240	0.910		4	0.191
MS05	c2-179	413201.22	137609.99	1.195	6.256	57.326	58.240	0.914		5	0.166
MS05	c2-178	413199.97	137610.39	1.311	7.567	57.333	58.240	0.907		6	0.175
MS05	c2-177	413199.03	137610.69	0.989	8.557	57.386	58.240	0.854		7	0.404
MS05	c2-176	413197.68	137611.29	1.475	10.032	57.397	58.240	0.843		8	0.343
MS05	c2-175	413196.50	137611.69	1.246	11.278	57.386	58.240	0.854		9	0.268
MS05	c2-174	413195.28	137613.14	1.901	13.179	57.325	58.240	0.915		10	0.3
MS05	**c2-173**	**413193.86**	**137613.48**	**1.460**	**14.639**	**57.287**	**58.240**	**0.953**		**11**	**0.266**
MS05	c2-172	413192.56	137613.84	1.346	15.985	57.357	58.240	0.883		12	0.280
MS05	c2-171	413190.90	137614.31	1.722	17.707	57.427	58.240	0.813		13	0.293
MS05	c2-170	413189.30	137615.03	1.758	19.465	57.577	58.240	0.663		14	0.291
MS05	c2-169	413187.68	137615.35	1.648	21.113	57.658	58.240	0.582		15	0.14
MS05	c2-168	413186.43	137615.52	1.261	22.374	57.689	58.240	0.551		16	0.297
MS05	c2-167	413185.40	137615.67	1.047	23.421	57.961	58.240	0.279		17	0.056
MS05	c2-166	413184.41	137615.85	1.003	24.424	58.230	58.240	0.010	Observed water level & River edge	**Mean**	**0.204**
MS05	c2-165	413181.25	137616.42	3.212	27.637	58.352	58.240				


KEY
Bed elevation 2006
Bed elevation 2008
Water level 2006
Water level 2008
MS01
Bed Level (mAOD)
Distance across cross-section from left bank (m)
XS01
Bed Level (mAOD)
Distance across cross-section from left bank (m)
MS02
Bed Level (mAOD)
Distance across cross-section from left bank (m)
XS02
Bed Level (mAOD)
Distance across cross-section from left bank (m)

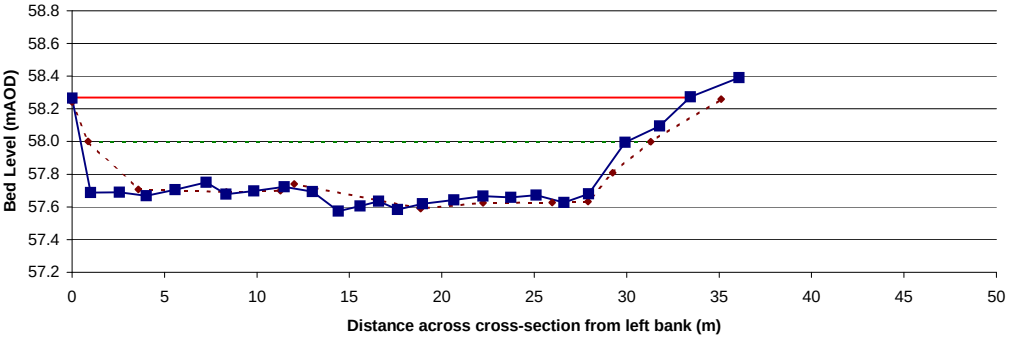
KEY

Bed elevation 2006 ---------- Bed elevation 2008 ———— Water level 2006 - - - - - - -

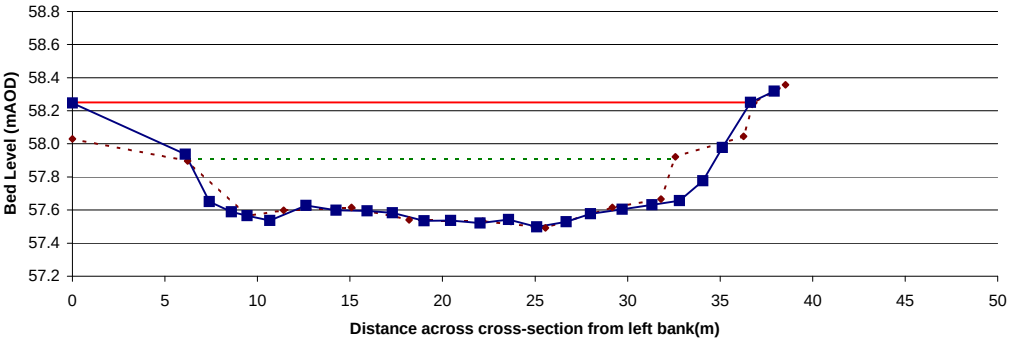
MS03



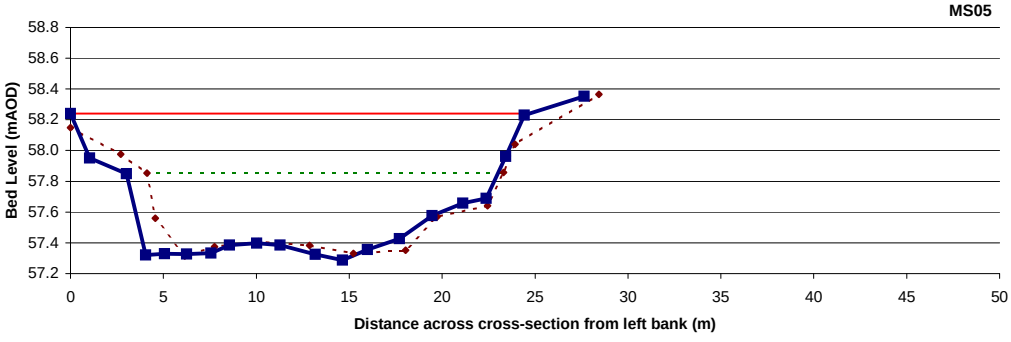
MS04



XS03



MS05



Cross-section	Observed point	Easting	Northing	Chainage (m)	Cumulative Chainage (m)	Bed Elevation (mAOD)	Water Surface Elevation (mAOD)	Water depth (m)	Comments
MS01 - Glide									
MS01	r2-17	413195.28	137560.27	0.000	0.000	58.20	58.200	0.001	Observed water level & River edge
MS01	r2-16	413194.12	137560.02	1.189	1.189	58.05	58.200	0.153	
MS01	r2-15	413193.11	137559.96	1.011	3.200	57.75	58.200	0.455	
MS01	r2-14	413191.57	137560.05	1.537	4.737	57.39	58.200	0.808	
MS01	r2-13	413190.93	137560.10	0.649	5.386	57.35	58.200	0.853	
MS01	r2-12	413189.32	137560.21	1.608	6.993	57.33	58.200	0.870	
MS01	**r2-11**	**413187.94**	**137560.50**	**1.412**	**8.405**	**57.31**	**58.200**	**0.891**	
MS01	r2-10	413186.53	137560.80	1.442	9.847	57.34	58.200	0.858	
MS01	r2-9	413185.18	137560.68	1.353	11.200	57.38	58.200	0.819	
MS01	r2-8	413183.70	137561.01	1.521	12.721	57.38	58.200	0.816	
MS01	r2-7	413182.31	137561.32	1.422	14.143	57.42	58.200	0.776	
MS01	r2-6	413181.05	137561.31	1.262	15.405	57.46	58.200	0.738	
MS01	r2-5	413179.50	137561.53	1.568	16.973	57.45	58.200	0.751	
MS01	r2-4	413178.04	137561.41	1.459	18.432	57.51	58.200	0.692	
MS01	r2-3	413176.88	137561.42	1.160	19.593	57.53	58.200	0.674	
MS01	r2-2	413175.57	137561.34	1.311	20.903	58.19	58.200	0.009	Observed water level & River edge
MS01	r2-1	413174.45	137561.24	1.129	22.033	58.16	58.200		

Distance from RHB (m)	Velocity (ms^{-1})
River Edge	0
1	0
2	0.307
3	0.333
4	0.423
5	0.276
6	0.32
7	0.482
8	0.390
9	0.354
10	0.340
11	0.404
12	0.454
13	0.384
14	0.311
15	0.174
16	0.268
17	0.148
Mean	**0.298**

Cross-section	Observed point	Easting	Northing	Chainage (m)	Cumulative Chainage (m)	Bed Elevation (mAOD)	Water Surface Elevation (mAOD)	Water depth (m)	Comments
MS02 - Glide									
MS02	r2-36	413200.51	137526.32	0.000	3.500	58.15	58.150	0.000	Observed water level & River edge
MS02	r2-35	413199.62	137525.98	0.952	4.452	57.73	58.150	0.421	
MS02	r2-34	413198.61	137526.11	1.012	5.463	57.43	58.150	0.720	
MS02	r2-33	413197.32	137526.38	1.318	6.781	57.88	58.150	0.273	
MS02	r2-32	413195.58	137526.54	1.754	8.535	57.75	58.150	0.405	
MS02	r2-31	413193.96	137526.49	1.619	10.153	57.50	58.150	0.652	
MS02	r2-30	413192.16	137526.57	1.803	11.956	57.49	58.150	0.663	
MS02	**r2-29**	**413189.93**	**137526.83**	**2.240**	**14.195**	**57.43**	**58.150**	**0.721**	
MS02	r2-28	413188.08	137527.02	1.861	16.056	57.45	58.150	0.703	
MS02	r2-27	413186.57	137527.33	1.547	17.603	57.46	58.150	0.689	
MS02	r2-26	413184.86	137527.25	1.712	19.315	57.48	58.150	0.674	
MS02	r2-25	413183.23	137527.39	1.631	20.946	57.47	58.150	0.683	
MS02	r2-24	413181.55	137527.10	1.701	22.648	57.54	58.150	0.615	
MS02	r2-23	413180.00	137527.35	1.575	24.222	57.50	58.150	0.654	
MS02	r2-22	413178.22	137527.04	1.812	26.035	57.52	58.150	0.634	
MS02	r2-21	413177.06	137527.25	1.172	27.207	57.53	58.150	0.621	
MS02	r2-20	413175.81	137527.20	1.255	28.462	57.54	58.150	0.606	
MS02	r2-19	413174.55	137527.67	1.343	29.805	58.16	58.150	-0.010	Observed water level & River edge
MS02	r2-18	413173.65	137527.61	0.897	30.701	58.16	58.150		

Distance from RHB (m)	Velocity (ms^{-1})
River Edge	0
1	0
2	0.031
3	0.228
4	0.289
5	0.268
6	0.32
7	0.344
8	0.315
9	0.37
10	0.288
11	0.324
12	0.422
13	0.400
14	0.334
15	0.351
16	0.371
17	0.172
18	0.140
19	0.133
20	0.130
21	0.284
22	0.013
Mean	**0.2403**

Cross-section	Observed point	Easting	Northing	Chainage (m)	Cumulative Chainage (m)	Bed Elevation (mAOD)	Water Surface Elevation (mAOD)	Water depth (m)	Comments	Distance from RHB (m)	Velocity (ms^{-1})
XS01 - Glide											
XS01	r2-57	413199.55	137465.61	0.000	2.000	58.09	58.090		Observed water level & River edge	7	0.365
XS01	r2-56	413198.29	137465.69	1.262	3.262	57.33	58.090	0.757		8	0.458
XS01	r2-55	413197.22	137465.75	1.072	4.335	57.35	58.090	0.742		9	0.382
XS01	r2-54	413196.35	137466.40	1.093	5.428	57.37	58.090	0.716		10	0.300
XS01	**r2-53**	**413194.86**	**137467.05**	**1.627**	**7.055**	**57.20**	**58.090**	**0.892**		11	0.373
XS01	r2-52	413193.55	137468.32	1.818	8.872	57.29	58.090	0.797		12	0.312
XS01	r2-51	413191.97	137468.42	1.586	10.459	57.27	58.090	0.821		13	0.279
XS01	r2-50	413190.33	137469.28	1.853	12.311	57.26	58.090	0.833		14	0.312
XS01	r2-49	413188.64	137469.58	1.718	14.029	57.22	58.090	0.874		15	0.334
XS01	r2-48	413186.95	137469.93	1.723	15.752	57.30	58.090	0.791		16	0.325
XS01	r2-47	413185.30	137469.93	1.645	17.397	57.25	58.090	0.839		17	0.342
XS01	r2-46	413183.49	137470.27	1.846	19.243	57.32	58.090	0.771		18	0.256
XS01	r2-45	413182.08	137470.47	1.426	20.669	57.40	58.090	0.688		19	0.177
XS01	r2-44	413180.59	137470.57	1.493	22.162	57.40	58.090	0.693		20	0.101
XS01	r2-43	413179.03	137471.08	1.639	23.802	57.31	58.090	0.785		21	0.034
XS01	r2-42	413177.52	137471.22	1.510	25.311	57.28	58.090	0.814		22	0.093
XS01	r2-41	413175.61	137471.46	1.930	27.242	57.34	58.090	0.754		23	0.120
XS01	r2-40	413174.26	137472.15	1.518	28.760	57.35	58.090	0.740		24	0.131
XS01	r2-39	413171.50	137472.56	2.792	31.552	57.69	58.090	0.401		25	0.250
XS01	r2-38	413169.73	137473.14	1.856	33.408	58.11	58.090	-0.020		26	0.201
XS01	r2-37	413167.66	137473.97	2.231	35.639	58.08	58.090	0.013	Observed water level & River edge	27	0.122
										28	0.232
										29	0.010
										30	0.022
										Mean	**0.2405**

XS02 - Glide											
XS02	r2-75	413187.57	137442.79	0.000	0.000	58.08	58.080	-0.001	Observed water level & River edge	5	0.066
XS02	r2-74	413186.28	137441.97	1.529	1.529	57.79	58.080	0.289		6	0.247
XS02	r2-73	413185.10	137442.46	1.271	2.801	57.39	58.080	0.690		7	0.23
XS02	r2-72	413184.26	137443.19	1.115	3.915	57.30	58.080	0.780		8	0.216
XS02	r2-71	413183.04	137444.47	1.773	5.688	57.30	58.080	0.779		9	0.296
XS02	r2-70	413181.36	137445.14	1.808	7.496	57.29	**58.080**	**0.787**		**10**	**0.378**
XS02	r2-69	413180.77	137446.07	1.094	8.590	57.29	58.080	0.787		11	0.326
XS02	r2-68	413178.97	137446.95	2.009	10.599	57.31	58.080	0.774		12	0.312
XS02	r2-67	413177.55	137447.60	1.559	12.158	57.25	58.080	0.833		13	0.273
XS02	r2-66	413175.98	137447.82	1.589	13.747	57.28	58.080	0.799		14	0.326
XS02	r2-65	413174.45	137448.40	1.631	15.378	57.25	58.080	0.827		15	0.347
XS02	r2-64	413172.91	137449.21	1.737	17.115	57.24	58.080	0.842		16	0.147
XS02	**r2-63**	**413170.95**	**137450.23**	**2.211**	**19.326**	**57.20**	58.080	0.881		17	0.156
XS02	r2-62	413169.29	137451.05	1.852	21.179	57.23	58.080	0.852		18	0.181
XS02	r2-61	413166.28	137452.19	3.220	24.399	57.32	58.080	0.760		19	0.145
XS02	r2-60	413164.95	137452.81	1.466	25.866	57.75	58.080	0.330		20	0.189
XS02	r2-59	413163.45	137454.02	1.922	27.788	58.08	58.080	0.000	Observed water level & River edge	21	0.212
XS02	r2-58	413162.42	137454.83	1.319	29.107	57.97				22	0.192
										23	0.185
										24	0.256
										25	0.353
										26	0.074
										Mean	**0.243**

Cross-section	Observed point	Easting	Northing	Chainage (m)	Cumulative Chainage (m)	Bed Elevation (mAOD)	Water Surface Elevation (mAOD)	Water depth (m)	Comments	Distance from RHB (m)	Velocity (ms^{-1})
MS03 - Glide											
MS03	r2-89	413140.85	137401.27	0.000	0.000	58.04	58.040	0.003	Observed water level & River edge	River Edge	0
MS03	r2-88	413139.40	137402.15	1.701	3.701	57.57	58.040	0.466		1	0.426
MS03	r2-87	413138.60	137402.93	1.107	4.808	57.02	58.040	1.025		2	0.390
MS03	**r2-86**	**413137.45**	**137404.14**	**1.668**	**6.476**	**56.93**	**58.040**	**1.113**		3	0.418
MS03	r2-85	413136.43	137405.44	1.658	8.134	57.01	58.040	1.027		4	0.469
MS03	r2-84	413135.99	137406.72	1.351	9.484	57.06	58.040	0.982		5	0.431
MS03	r2-83	413134.80	137408.08	1.808	11.292	57.13	58.040	0.910		6	0.489
MS03	r2-82	413133.60	137408.53	1.280	12.572	57.11	58.040	0.930		7	0.399
MS03	r2-81	413132.47	137409.76	1.675	14.247	57.13	58.040	0.906		8	0.356
MS03	r2-80	413130.71	137411.62	2.562	16.809	57.18	58.040	0.859		9	0.306
MS03	r2-79	413129.28	137413.06	2.028	18.837	57.20	58.040	0.837		10	0.319
MS03	r2-78	413129.05	137413.97	0.933	19.771	57.33	58.040	0.712		11	0.346
MS03	r2-77	413128.14	137415.27	1.592	21.363	57.76	58.040	0.278		12	0.176
MS03	r2-76	413127.31	137416.19	1.235	22.598	58.03	58.040	0.006	Observed water level & River edge	13	0.113
										14	0.059
										15	0.015
										Mean	**0.2945**

XS03 - Glide											
XS03	r2-112	413065.75	137360.26	0.000	0.000	58.15				River Edge	0
XS03	r2-111	413065.28	137361.60	1.418	2.418	57.95	57.950	0.000	Observed water level & River edge	1	0
XS03	r2-110	413065.00	137362.16	0.625	3.043	57.35	57.950	0.604		2	0
XS03	r2-109	413064.56	137363.20	1.133	4.176	57.09	57.950	0.859		3	0
XS03	r2-108	413064.25	137364.45	1.289	5.465	57.00	57.950	0.949		4	0
XS03	r2-107	413063.84	137365.93	1.534	6.999	56.99	57.950	0.964		5	0
XS03	r2-106	413063.69	137367.20	1.282	8.281	56.98	57.950	0.969		6	0
XS03	r2-105	413063.53	137368.40	1.212	9.493	57.09	57.950	0.860		7	0.015
XS03	r2-104	413063.46	137369.47	1.067	10.560	57.10	57.950	0.852		8	0.312
XS03	r2-103	413062.66	137370.67	1.444	12.005	57.18	57.950	0.774		9	0.312
XS03	r2-102	413062.25	137371.78	1.179	13.183	57.07	57.950	0.880		10	0.451
XS03	r2-101	413061.78	137373.14	1.441	14.624	57.03	57.950	0.923		11	0.270
XS03	r2-100	413061.50	137374.10	1.005	15.629	57.10	57.950	0.849		12	0.319
XS03	**r2-99**	**413061.09**	**137375.42**	**1.379**	**17.008**	**56.97**	**57.950**	**0.980**		13	0.381
XS03	r2-98	413060.73	137376.58	1.216	18.224	56.99	57.950	0.963		14	0.28
XS03	r2-97	413060.27	137377.66	1.171	19.395	56.98	57.950	0.966		15	0.208
XS03	r2-96	413060.14	137378.76	1.112	20.507	57.13	57.950	0.822		16	0.197
XS03	r2-95	413059.97	137379.79	1.040	21.547	57.18	57.950	0.769		17	0.290
XS03	r2-94	413059.43	137382.53	2.793	24.340	57.46	57.950	0.488		18	0.212
XS03	r2-93	413058.80	137383.78	1.401	25.740	57.50	57.950	0.447		19	0.223
XS03	r2-92	413058.01	137385.07	1.520	27.260	57.47	57.950	0.481		20	0.232
XS03	r2-91	413058.22	137387.54	2.474	29.734	57.80	57.950	0.152		21	0.242
XS03	r2-90	413057.81	137387.95	0.578	30.312	57.94	57.950	0.010	Observed water level & River edge	22	0.267
										23	0.166
										24	0.144
										Mean	**0.18084**

Cross-section	Observed point	Easting	Northing	Chainage (m)	Cumulative Chainage (m)	Bed Elevation (mAOD)	Water Surface Elevation (mAOD)	Water depth (m)	Comments
MS04 - Glide									
MS04	r2-130	413005.52	137351.35	0.000	0.000	58.07			
MS04	r2-129	413005.43	137353.02	1.680	1.680	57.98	57.980	0.000	Observed water level & River edge
MS04	r2-128	413005.30	137355.01	1.993	3.673	57.09	57.980	0.891	
MS04	r2-127	413005.08	137356.38	1.387	5.060	57.07	57.980	0.906	
MS04	r2-126	413004.71	137357.86	1.519	6.579	57.14	57.980	0.837	
MS04	r2-125	413004.44	137359.61	1.776	8.355	57.04	57.980	0.945	
MS04	r2-124	413004.08	137361.00	1.432	9.787	57.04	57.980	0.944	
MS04	r2-123	413004.27	137362.35	1.366	11.153	57.02	57.980	0.960	
MS04	r2-122	413004.06	137363.89	1.555	12.708	57.02	57.980	0.958	
MS04	**r2-121**	**413003.70**	**137365.27**	**1.428**	**14.136**	**56.98**	**57.980**	**1.004**	
MS04	r2-120	413003.48	137366.53	1.275	15.412	57.06	57.980	0.921	
MS04	r2-119	413002.92	137368.00	1.574	16.985	57.03	57.980	0.950	
MS04	r2-118	413002.54	137369.34	1.389	18.374	56.98	57.980	1.005	
MS04	r2-117	413002.34	137371.12	1.800	20.174	57.05	57.980	0.930	
MS04	r2-116	413002.34	137372.52	1.391	21.565	57.12	57.980	0.865	
MS04	r2-115	413002.63	137374.44	1.948	23.513	57.29	57.980	0.693	
MS04	r2-114	413002.40	137374.90	0.516	24.029	57.96	57.980	0.020	Observed water level & River edge
MS04	r2-113	413002.11	137375.93	1.061	25.089	58.00			

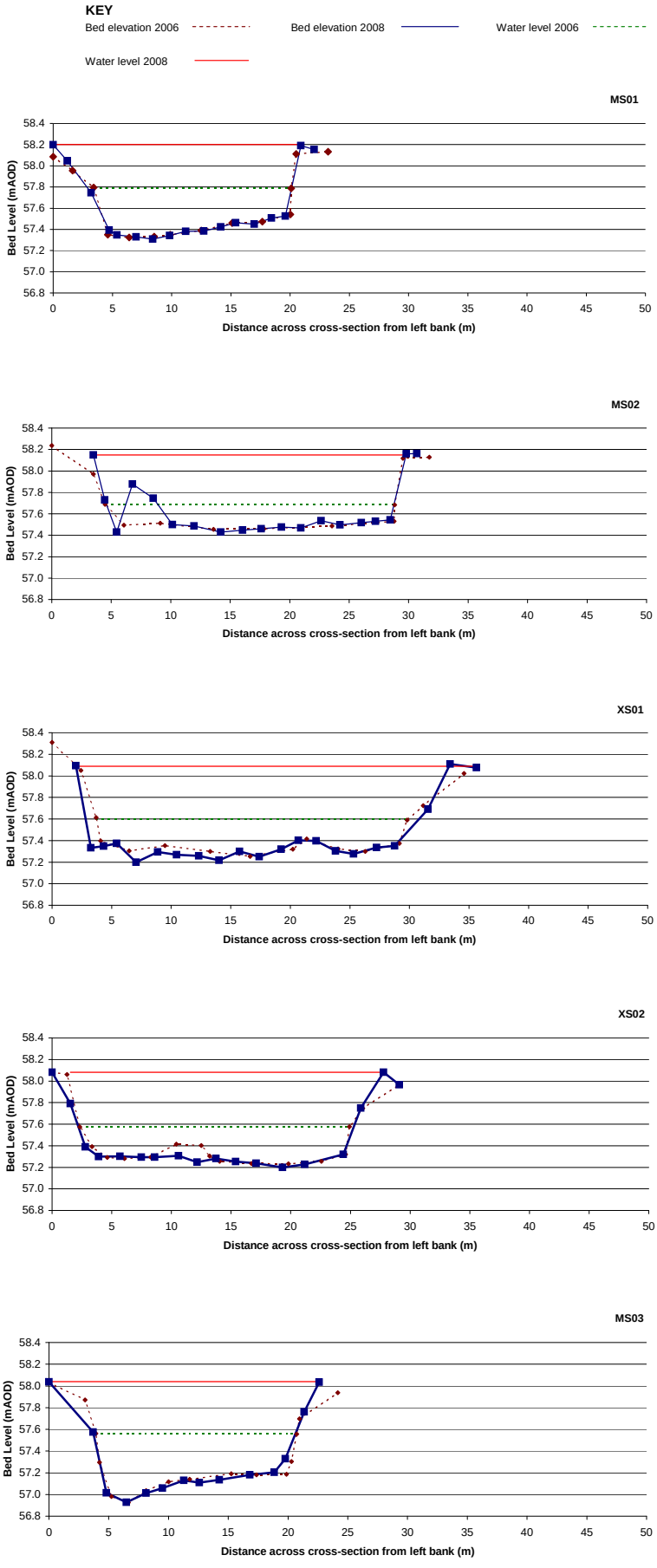
Distance from RHB (m)	Velocity (ms^{-1})
River Edge	0
1	0
2	0.031
3	0.228
4	0.289
5	0.268
6	0.320
7	0.344
8	0.315
9	**0.370**
10	0.288
11	0.324
12	0.422
13	0.400
14	0.334
15	0.351
16	0.371
17	0.172
18	0.140
19	0.133
20	0.130
21	0.284
22	0.013
Mean	**0.2403**

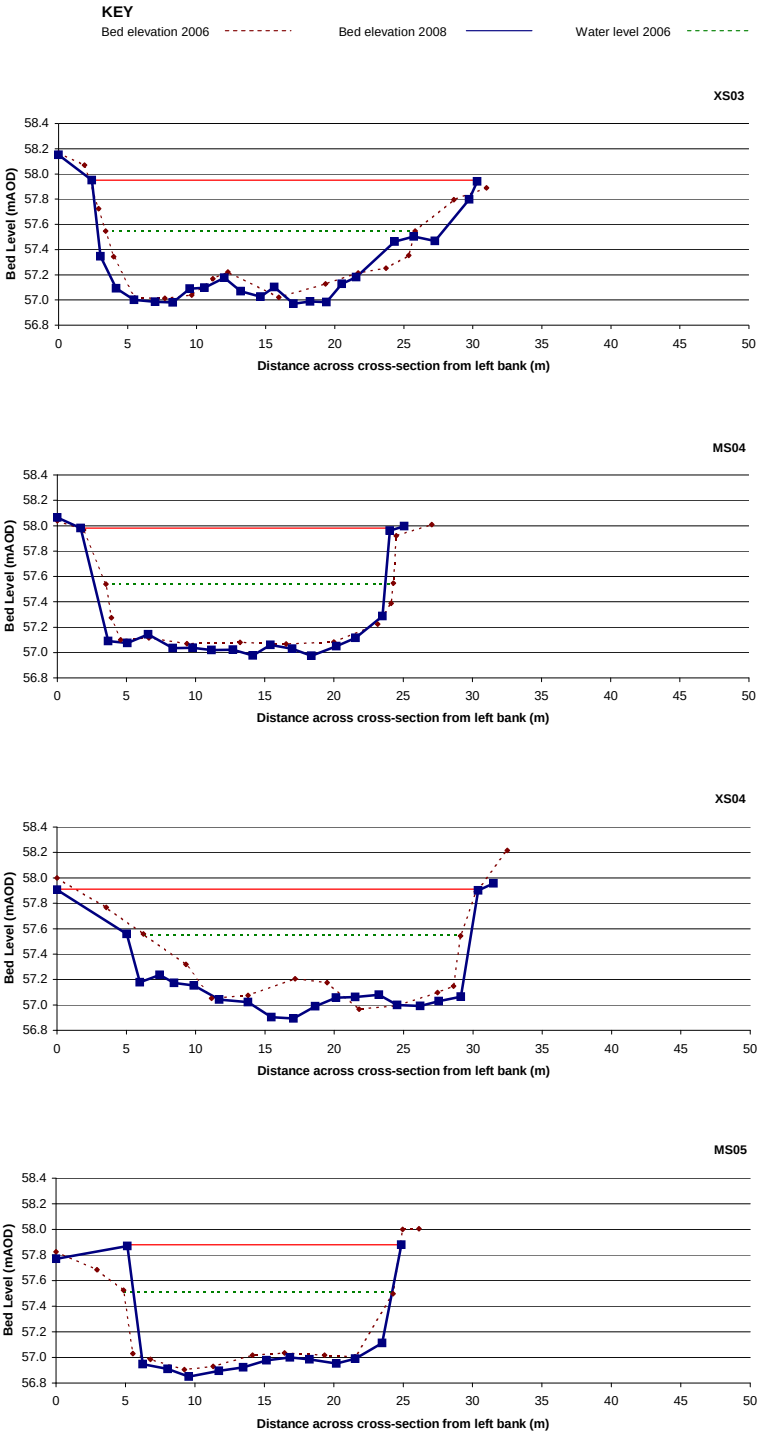
XS04 - Glide									
XS04	r2-150	412922.33	137333.99	0.000	0.000	57.91	57.910	0.003	Observed water level & River edge
XS04	r2-149	412921.99	137334.96	1.026	5.026	57.56	57.910	0.351	
XS04	r2-148	412921.56	137335.82	0.959	5.985	57.18	57.910	0.732	
XS04	r2-147	412921.32	137337.23	1.433	7.419	57.24	57.910	0.673	
XS04	r2-146	412921.37	137338.26	1.037	8.456	57.17	57.910	0.736	
XS04	r2-145	412921.31	137339.68	1.414	9.870	57.15	57.910	0.756	
XS04	r2-144	412921.27	137341.52	1.841	11.711	57.04	57.910	0.869	
XS04	r2-143	412920.82	137343.55	2.074	13.785	57.02	57.910	0.889	
XS04	r2-142	412920.48	137345.19	1.676	15.461	56.90	57.910	1.006	
XS04	**r2-141**	**412920.13**	**137346.74**	**1.598**	**17.059**	**56.89**	**57.910**	**1.016**	
XS04	r2-140	412919.65	137348.24	1.573	18.632	56.99	57.910	0.922	
XS04	r2-139	412919.33	137349.70	1.487	20.119	57.06	57.910	0.852	
XS04	r2-138	412919.47	137351.09	1.403	21.522	57.06	57.910	0.849	
XS04	r2-137	412919.22	137352.76	1.692	23.214	57.08	57.910	0.831	
XS04	r2-136	412919.24	137354.09	1.329	24.543	57.00	57.910	0.912	
XS04	r2-135	412918.85	137355.71	1.658	26.201	56.99	57.910	0.918	
XS04	r2-134	412918.44	137356.98	1.341	27.543	57.03	57.910	0.880	
XS04	r2-133	412917.96	137358.50	1.591	29.134	57.06	57.910	0.846	
XS04	r2-132	412917.74	137359.73	1.254	30.387	57.90	57.910	0.010	Observed water level & River edge
XS04	r2-131	412917.05	137360.60	1.107	31.495	57.96	57.910		

River Edge	0
1	0
2	0
3	0.129
4	0.201
5	0.336
6	0.298
7	0.295
8	0.357
9	0.308
10	0.242
11	0.235
12	0.221
13	0.274
14	0.259
15	0.232
16	0.212
17	0.278
18	0.295
19	0.269
20	0.174
21	0.139
22	0.183
Mean	**0.2147**

Cross-section	Observed point	Easting	Northing	Chainage (m)	Cumulative Chainage (m)	Bed Elevation (mAOD)	Water Surface Elevation (mAOD)	Water depth (m)	Comments
MS05 - Glide									
MS05	r2-164	412821.69	137324.66	0.000	0.000	57.77			
MS05	r2-163	412820.28	137329.59	5.136	5.136	57.87	57.880	0.011	Observed water level & River edge
MS05	r2-162	412819.86	137330.63	1.118	6.254	56.95	57.880	0.933	
MS05	r2-161	412819.61	137332.39	1.784	8.038	56.91	57.880	0.971	
MS05	**r2-160**	**412819.53**	**137333.91**	**1.518**	**9.556**	**56.85**	**57.880**	**1.030**	
MS05	r2-159	412819.39	137336.09	2.181	11.738	56.90	57.880	0.984	
MS05	r2-158	412819.32	137337.84	1.753	13.491	56.92	57.880	0.958	
MS05	r2-157	412819.15	137339.51	1.676	15.167	56.98	57.880	0.902	
MS05	r2-156	412819.02	137341.18	1.683	16.850	57.00	57.880	0.881	
MS05	r2-155	412819.04	137342.59	1.406	18.256	56.99	57.880	0.895	
MS05	r2-154	412818.86	137344.52	1.935	20.191	56.95	57.880	0.927	
MS05	r2-153	412818.62	137345.87	1.372	21.563	56.99	57.880	0.890	
MS05	r2-152	412818.27	137347.75	1.917	23.480	57.11	57.880	0.767	
MS05	r2-151	412818.27	137349.13	1.382	24.862	57.88	57.880	0.000	Observed water level & River edge

Distance from RHB (m)	Velocity (ms^{-1})
River Edge	0
1	0
2	0
3	0
4	0.021
5	0.261
6	0.208
7	0.170
8	0.197
9	0.252
10	0.232
11	0.203
12	0.307
13	0.321
14	0.233
15	0.211
16	0.224
17	0.232
18	0.264
19	0.076
Mean	**0.1706**


KEY
Bed elevation 2006
Bed elevation 2008
Water level 2006
Water level 2008
MS01
Bed Level (mAOD)
Distance across cross-section from left bank (m)
MS02
Bed Level (mAOD)
Distance across cross-section from left bank (m)
XS01
Bed Level (mAOD)
Distance across cross-section from left bank (m)
XS02
Bed Level (mAOD)
Distance across cross-section from left bank (m)
MS03
Bed Level (mAOD)
Distance across cross-section from left bank (m)


KEY
Bed elevation 2006
Bed elevation 2008
Water level 2006
XS03
MS04
XS04
MS05
Bed Level (mAOD)
Distance across cross-section from left bank (m)

Cross-section	Observed point	Easting	Northing	Chainage (m)	Cumulative Chainage (m)	Bed Elevation (mAOD)	Water Surface Elevation (mAOD)	Water depth (m)	Comments	Distance from RHB	Velocity (ms^{-1})
MS01 - Run											
MS01	c2-18	408320.07	134587.04	0.000	0.000	56.35				1	0.484
MS01	c2-17	408317.53	134584.16	3.832	3.832	56.51				2	0.532
MS01	c2-16	408316.40	134582.29	2.185	6.017	56.03	56.02	-0.01	Water's edge	3	0.577
MS01	c2-15	408316.11	134581.63	0.721	6.737	55.85	56.02	0.17		4	0.534
MS01	c2-14	408315.57	134579.78	1.927	8.665	55.57	56.02	0.45		5	0.674
MS01	c2-13	408314.53	134578.45	1.692	10.356	55.57	56.02	0.45		6	0.681
MS01	c2-12	408314.13	134577.06	1.445	11.801	55.54	56.02	0.48		7	0.607
MS01	c2-11	408312.85	134575.75	1.834	13.635	55.56	56.02	0.46		8	0.559
MS01	c2-10	408312.22	134574.25	1.627	15.262	55.52	56.02	0.50		9	0.556
MS01	**c2-9**	**408311.28**	**134572.59**	**1.908**	**17.170**	55.63	**56.02**	**0.39**		10	0.300
MS01	c2-8	408309.64	134571.01	2.277	19.447	55.64	56.02	0.38		11	No Flow
MS01	c2-7	408309.22	134570.07	1.030	20.477	55.68	56.02	0.34		**Mean**	**0.55**
MS01	c2-6	408307.95	134568.88	1.739	22.216	55.87	56.02	0.15	Water's edge		
MS01	c2-5	408306.91	134568.01	1.357	23.573	56.08	56.02				
MS01	c2-4	408304.80	134566.57	2.555	26.128	57.05	56.02				
MS01	c2-3	408304.55	134565.18	1.413	27.541	57.09	56.02				
MS01	c2-2	408303.87	134564.43	1.012	28.553	56.80					
MS01	c2-1	408302.32	134562.24	2.683	31.236	56.87					
MS02 - Glide											
MS02	c2-36	408365.62	134548.34	0.000	0.000	56.30	55.88			1	0.3
MS02	c2-35	408362.00	134544.69	5.137	5.137	55.97	55.88			2	0.527
MS02	c2-34	408361.05	134543.43	1.579	6.716	56.14	55.88			3	0.586
MS02	c2-33	408360.19	134542.76	1.090	7.806	55.78	55.88	0.10	Water's edge	4	0.597
MS02	c2-32	408359.82	134542.04	0.808	8.614	55.24	55.88	0.64		5	0.576
MS02	c2-31	408359.18	134541.45	0.873	9.487	55.24	55.88	0.64		6	0.062
MS02	**c2-30**	**408358.18**	**134540.51**	**1.372**	**10.859**	**55.14**	**55.88**	**0.74**		**Mean**	**0.441**
MS02	c2-29	408357.34	134539.59	1.246	12.105	55.17	55.88	0.71			
MS02	c2-28	408355.79	134537.71	2.436	14.541	55.20	55.88	0.68			
MS02	c2-27	408354.71	134536.97	1.309	15.851	55.26	55.88	0.62			
MS02	c2-26	408353.99	134535.98	1.225	17.075	55.37	55.88	0.51			
MS02	c2-25	408353.17	134535.30	1.065	18.141	55.77	55.88	0.11			
MS02	c2-24	408352.37	134534.51	1.124	19.265	55.81	55.88	0.07	Water's edge		
MS02	c2-23	408351.80	134533.89	0.845	20.110	56.18	55.88				
MS02	c2-22	408350.60	134532.69	1.694	21.804	57.27	55.88				
MS02	c2-21	408349.73	134531.80	1.245	23.049	57.33	55.88				
MS02	c2-20	408348.73	134530.34	1.770	24.818	56.89	55.88				
MS02	c2-19	408347.12	134528.12	2.742	27.561	56.69	55.88				
XS01 - Glide											
XS01	c2-51	408401.3115	134512.1261	0.000	0.000	55.79	55.87	0.08	Water's edge	1	0.218
XS01	c2-50	408401.1646	134511.5608	0.584	0.584	55.75	55.87	0.12		2	0.421
XS01	c2-49	408400.7038	134511.1508	0.617	1.201	55.01	55.87	0.86		3	0.301
XS01	c2-48	408399.5634	134509.9092	1.686	2.887	54.99	55.87	0.88		4	0.461
XS01	**c2-47**	**408398.7034**	**134508.8092**	**1.396**	**4.283**	**54.96**	**55.87**	**0.91**		5	0.441
XS01	c2-46	408397.7634	134507.7092	1.447	5.730	55.06	55.87	0.81		6	0.226
XS01	c2-45	408396.7134	134506.6992	1.457	7.187	55.18	55.87	0.69		7	0.172
XS01	c2-44	408395.8534	134505.7592	1.274	8.461	55.28	55.87	0.59		**Mean**	**0.32**
XS01	c2-43	408394.9134	134504.1592	1.856	10.317	55.65	55.87	0.22	Water's edge		
XS01	c2-42	408393.2738	134502.3439	2.446	12.763	56.17					
XS01	c2-41	408392.2631	134500.7531	1.885	14.648	56.90					
XS01	c2-40	408391.2873	134499.6813	1.449	16.097	57.02					
XS01	c2-39	408390.3631	134498.1831	1.760	17.857	56.79					
XS01	c2-38	408388.6873	134496.6913	2.244	20.101	56.69					
XS01	c2-37	408387.3031	134494.1631	2.882	22.983	56.67					

Cross-section	Observed point	Easting	Northing	Chainage (m)	Cumulative Chainage (m)	Bed Elevation (mAOD)	Water Surface Elevation (mAOD)	Water depth (m)	Comments	Distance from RHB	Velocity (ms^{-1})
MS03 - Glide											
MS03	c2-66	408440.50	134484.88	0.000	0.000	56.16				1	0.153
MS03	c2-65	408438.30	134483.64	2.526	2.526	55.84	55.84		Water's edge	2	0.262
MS03	c2-64	408438.16	134483.36	0.313	2.839	55.26	55.84	0.58		3	0.393
MS03	c2-63	408437.66	134482.42	1.066	3.905	55.09	55.84	0.75		4	0.396
MS03	c2-62	408436.72	134481.16	1.569	5.475	55.06	55.84	0.78		5	0.356
MS03	c2-61	408435.68	134479.99	1.568	7.043	55.08	55.84	0.76		6	0.238
MS03	**c2-60**	**408435.24**	**134478.66**	**1.405**	**8.448**	**55.03**	**55.84**	**0.81**		7	0.076
MS03	c2-59	408434.54	134477.79	1.117	9.564	55.04	55.84	0.80		**Mean**	**0.27**
MS03	c2-58	408433.66	134476.64	1.448	11.012	55.03	55.84	0.81			
MS03	c2-57	408432.80	134475.42	1.489	12.501	55.20	55.84	0.64			
MS03	c2-56	408432.28	134474.21	1.317	13.818	55.49	55.84	0.35	Water's edge		
MS03	c2-55	408431.51	134472.10	2.246	16.064	56.31					
MS03	c2-54	408428.80	134469.75	3.587	19.651	57.33					
MS03	c2-53	408425.73	134466.44	4.517	24.168	56.77					
MS03	c2-52	408424.32	134463.69	3.089	27.257	56.65					

XS02 - Glide											
XS02	c2-82	408479.92	134465.30	0.000	0.000	56.40				1	0.272
XS02	c2-81	408478.46	134463.03	2.703	2.703	55.84	55.84	0.00	Water's edge	2	0.421
XS02	c2-80	408478.34	134462.62	0.425	3.128	55.42	55.84	0.42		3	0.392
XS02	c2-79	408477.28	134461.18	1.783	4.911	55.50	55.84	0.34		4	0.371
XS02	c2-78	408476.72	134459.67	1.610	6.521	55.51	55.84	0.33		5	0.553
XS02	c2-77	408476.40	134458.04	1.661	8.182	55.43	55.84	0.41		6	0.044
XS02	c2-76	408476.11	134456.56	1.508	9.691	55.31	55.84	0.53		7	0.137
XS02	c2-75	408474.70	134455.49	1.773	11.463	55.32	55.84	0.52		8	0.188
XS02	**c2-74**	**408473.97**	**134453.53**	**2.092**	**13.555**	**55.27**	**55.84**	**0.57**		9	0.08
XS02	c2-73	408473.62	134451.96	1.609	15.164	55.24	55.84	0.60	Water's edge	**Mean**	**0.273**
XS02	c2-72	408473.71	134450.57	1.391	16.555	55.24	55.84	0.60			
XS02	c2-71	408473.13	134449.37	1.333	17.888	55.49	55.84	0.35			
XS02	c2-70	408472.28	134448.51	1.209	19.097	55.71	55.84	0.13			
XS02	c2-69	408471.32	134444.89	3.740	22.837	57.12					
XS02	c2-68	408469.72	134441.76	3.515	26.352	56.69					
XS02	c2-67	408469.41	134438.50	3.277	29.629	56.73					

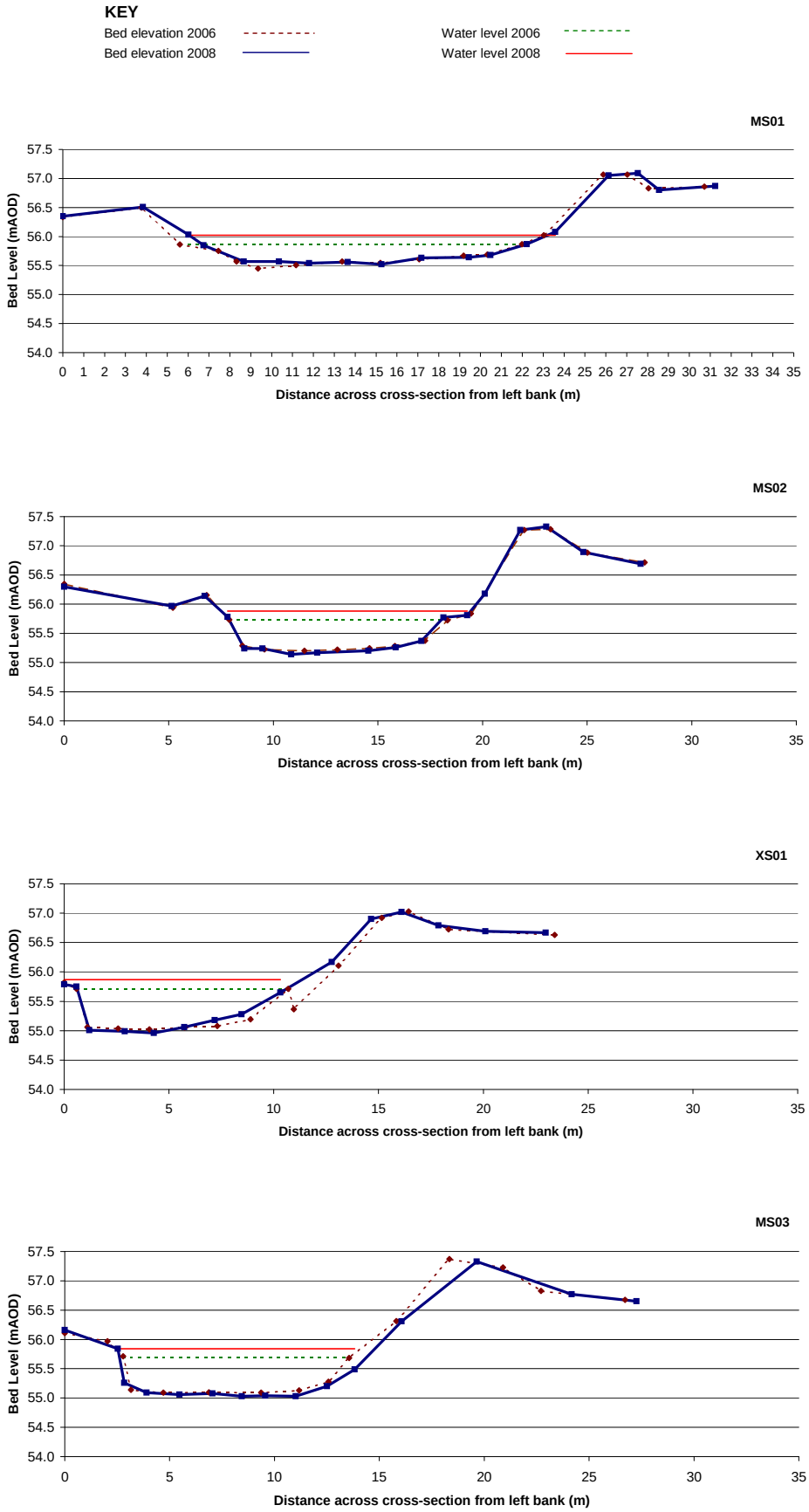
MS04 - Glide											
MS04	c2-102	408522.14	134461.41	0.000	0.000	56.16				1	0.072
MS04	c2-101	408522.66	134459.76	1.726	1.726	55.81	55.80		Water's edge	2	0.226
MS04	c2-100	408522.70	134459.59	0.180	1.905	55.66	55.80	0.14		3	0.149
MS04	c2-99	408522.78	134457.99	1.602	3.507	55.38	55.80	0.42		4	0.321
MS04	c2-98	408522.78	134456.69	1.300	4.807	55.34	55.80	0.46		5	0.501
MS04	c2-97	408522.81	134455.06	1.630	6.438	55.22	55.80	0.58		6	0.476
MS04	c2-96	408522.82	134453.25	1.810	8.248	55.20	55.80	0.60		7	0.381
MS04	c2-95	408522.84	134451.82	1.430	9.678	55.14	55.80	0.66		8	0.17
MS04	**c2-94**	**408522.85**	**134450.34**	**1.480**	**11.158**	**55.09**	**55.80**	**0.71**		10	0.122
MS04	c2-93	408523.38	134449.02	1.422	12.580	55.02	55.80	0.78		11	0.144
MS04	c2-92	408523.15	134447.45	1.587	14.167	55.09	55.80	0.71		12	0.046
MS04	c2-91	408522.91	134446.37	1.106	15.273	55.38	55.80	0.42		**Mean**	**0.237**
MS04	c2-90	408522.57	134445.25	1.170	16.444	55.50	55.80	0.30			
MS04	c2-89	408522.55	134443.73	1.515	17.959	55.67	55.80	0.13			
MS04	c2-88	408522.52	134443.59	0.149	18.108	55.79	55.80	0.01	Water's edge		
MS04	c2-87	408522.01	134442.07	1.601	19.709	57.13					
MS04	c2-86	408521.90	134439.78	2.295	22.004	57.08					
MS04	c2-85	408521.65	134436.28	3.506	25.509	56.67					
MS04	c2-84	408521.18	134434.44	1.902	27.411	56.61					
MS04	c2-83	408521.42	134431.80	2.647	30.059	56.60					

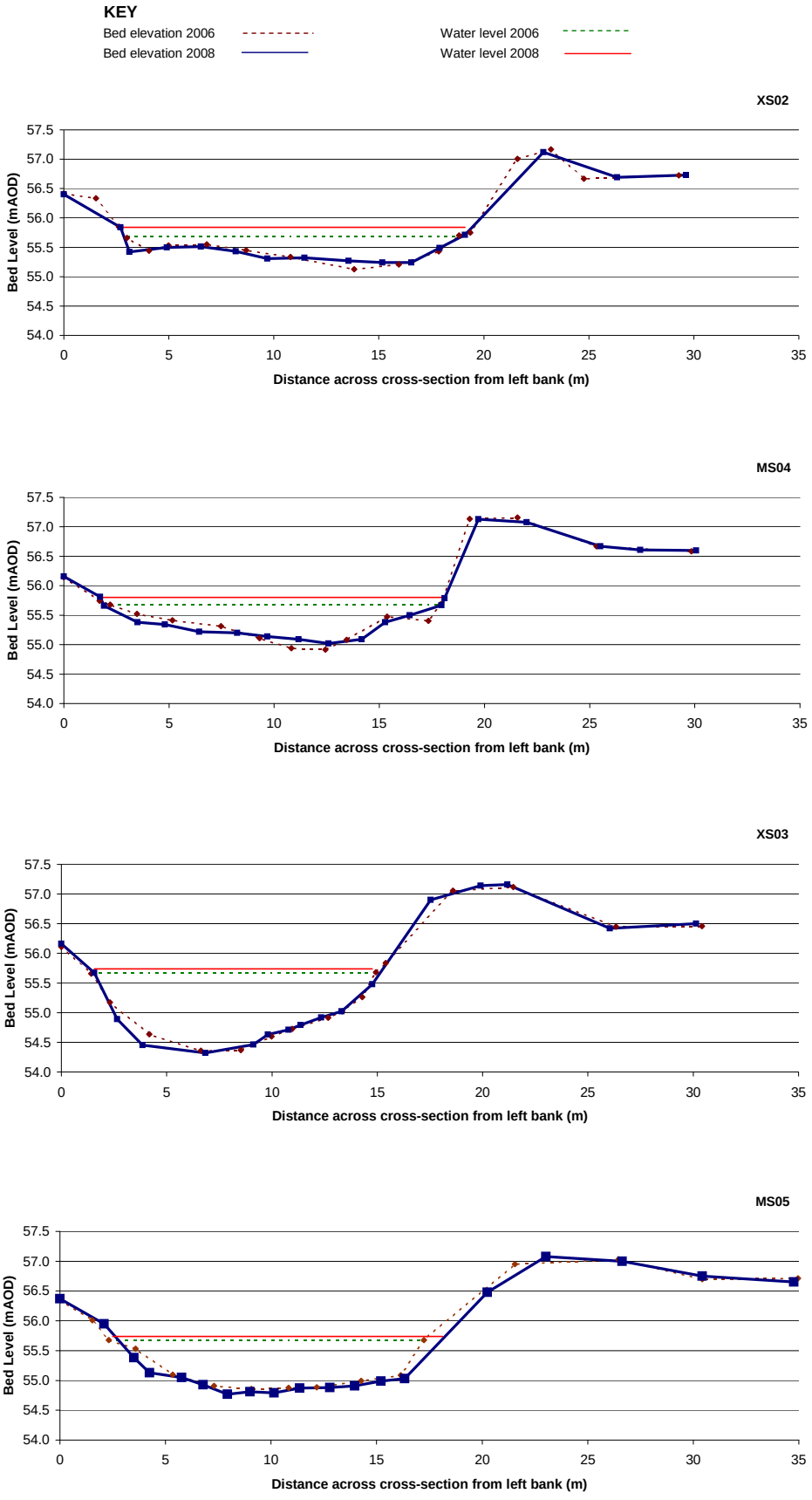
Cross-section	Observed point	Easting	Northing	Chainage (m)	Cumulative Chainage (m)	Bed Elevation (mAOD)	Water Surface Elevation (mAOD)	Water depth (m)	Comments
XS03 - Glide									
XS03	c2-119	408605.79	134372.56	0.000	0.000	56.16			Water's edge
XS03	c2-118	408604.24	134372.76	1.563	1.563	55.67	55.74	0.07	
XS03	c2-117	408603.19	134372.48	1.087	2.650	54.89	55.74	0.85	
XS03	c2-116	408602.01	134372.22	1.208	3.858	54.45	55.74	1.29	
XS03	**c2-115**	**408599.03**	**134372.06**	**2.984**	**6.842**	**54.32**	**55.74**	**1.42**	
XS03	c2-114	408596.89	134371.28	2.278	9.120	54.46	55.74	1.28	
XS03	c2-113	408596.25	134371.03	0.687	9.807	54.63	55.74	1.11	
XS03	c2-112	408595.49	134370.42	0.975	10.781	54.71	55.74	1.03	
XS03	c2-111	408594.93	134370.30	0.573	11.354	54.79	55.74	0.95	
XS03	c2-110	408593.95	134370.30	0.980	12.334	54.92	55.74	0.82	
XS03	c2-109	408593.12	134369.79	0.974	13.308	55.02	55.74	0.72	
XS03	c2-108	408591.69	134369.49	1.461	14.769	55.48	55.74	0.26	Water's edge
XS03	c2-107	408589.10	134368.52	2.766	17.535	56.90			
XS03	c2-106	408586.82	134367.89	2.365	19.901	57.14			
XS03	c2-105	408585.63	134367.44	1.275	21.176	57.16			
XS03	c2-104	408580.92	134366.20	4.870	26.046	56.42			
XS03	c2-103	408576.91	134365.41	4.087	30.133	56.50			

Distance from RHB	Velocity (ms^{-1})
1	0.107
2	0.32
3	0.345
4	0.216
5	0.3
6	0.06
7	0.009
8	No Flow
Mean	**0.17**

MS05 - Glide									
MS05	c2-138	408617.82	134316.41	0.000	0.000	56.37			
MS05	c2-137	408615.76	134316.70	2.083	2.083	55.95			
MS05	c2-136	408614.34	134316.77	1.422	3.505	55.38	55.74	0.36	Water's edge
MS05	c2-135	408613.60	134316.83	0.742	4.247	55.13	55.74	0.61	
MS05	c2-134	408612.08	134316.74	1.523	5.770	55.05	55.74	0.69	
MS05	c2-133	408611.08	134316.58	1.013	6.783	54.93	55.74	0.81	
MS05	**c2-132**	**408609.93**	**134316.49**	**1.154**	**7.936**	**54.77**	**55.74**	**0.97**	
MS05	c2-131	408608.87	134316.39	1.065	9.001	54.81	55.74	0.93	
MS05	c2-130	408607.73	134316.47	1.143	10.144	54.79	55.74	0.95	
MS05	c2-129	408606.53	134316.25	1.220	11.364	54.87	55.74	0.87	
MS05	c2-128	408605.11	134316.14	1.424	12.788	54.88	55.74	0.86	
MS05	c2-127	408603.96	134315.92	1.171	13.959	54.91	55.74	0.83	
MS05	c2-126	408602.71	134315.86	1.251	15.210	54.99	55.74	0.75	
MS05	c2-125	408601.61	134315.68	1.115	16.325	55.03	55.74	0.71	Water's edge
MS05	c2-124	408597.70	134315.36	3.923	20.248	56.48			
MS05	c2-123	408594.94	134315.07	2.775	23.023	57.08			
MS05	c2-122	408591.34	134315.20	3.606	26.629	57.00			
MS05	c2-121	408587.54	134315.28	3.797	30.426	56.75			
MS05	c2-120	408583.20	134315.08	4.339	34.766	56.65			

1	0.167
2	0.277
3	0.332
4	0.33
5	0.277
6	0.27
7	0.171
8	0.036
Mean	**0.233**


KEY
Bed elevation 2006
Bed elevation 2008
Water level 2006
Water level 2008
MS01
Bed Level (mAOD)
Distance across cross-section from left bank (m)
MS02
Bed Level (mAOD)
Distance across cross-section from left bank (m)
XS01
Bed Level (mAOD)
Distance across cross-section from left bank (m)
MS03
Bed Level (mAOD)
Distance across cross-section from left bank (m)


KEY
Bed elevation 2006
Bed elevation 2008
Water level 2006
Water level 2008
XS02
MS04
XS03
MS05
Bed Level (mAOD)
Distance across cross-section from left bank (m)
57.5
57.0
56.5
56.0
55.5
55.0
54.5
54.0
0
5
10
15
20
25
30
35

Cross-section	Observed point	Easting	Northing	Chainage (m)	Cumulative Chainage (m)	Bed Elevation (mAOD)	Water Surface Elevation (mAOD)	Water depth (m)	Comments
MS01 - Run									
MS01	r2-17	409531.96	132679.32	0.000	0.000	54.61			
MS01	r2-16	409529.00	132678.79	3.007	3.007	53.06	53.16	0.10	Water's edge
MS01	r2-15	409528.38	132677.95	1.049	4.056	52.66	53.16	0.50	
MS01	r2-14	409527.47	132677.20	1.169	5.224	52.48	53.16	0.68	
MS01	r2-13	409526.62	132676.35	1.208	6.432	52.47	53.16	0.69	
MS01	r2-12	409525.62	132675.58	1.262	7.694	52.54	53.16	0.62	
MS01	r2-11	409524.36	132674.98	1.396	9.090	52.51	53.16	0.65	
MS01	**r2-10**	**409523.21**	**132674.19**	**1.395**	**10.485**	**52.47**	**53.16**	**0.69**	
MS01	r2-9	409522.16	132673.35	1.345	11.830	52.47	53.16	0.69	
MS01	r2-8	409521.25	132672.88	1.024	12.854	52.55	53.16	0.61	
MS01	r2-7	409520.43	132672.38	0.960	13.814	52.59	53.16	0.57	
MS01	r2-6	409519.68	132671.73	0.992	14.807	52.75	53.16	0.41	
MS01	r2-5	409519.27	132671.21	0.661	15.468	52.95	53.16	0.21	
MS01	r2-4	409518.96	132670.41	0.859	16.327	53.16	53.16	0.00	Water's edge
MS01	r2-3	409517.91	132669.56	1.351	17.678	54.40			
MS01	r2-2	409515.96	132668.63	2.160	19.838	54.42			
MS01	r2-1	409514.04	132667.08	2.470	22.308	54.49			

Distance from RHB (m)	Velocity (ms^{-1})
1	0.054
2	0.064
3	0.091
4	0.176
5	0.226
6	0.185
7	0.075
Mean	**0.124**

MS02 - Glide									
MS02	r2-34	409573.20	132590.76	0.000	0.000	54.83			
MS02	r2-33	409568.54	132590.81	4.659	4.659	54.63			
MS02	r2-32	409561.69	132591.25	6.867	11.527	52.94	53.12	0.18	Water's edge
MS02	r2-31	409561.16	132591.05	0.566	12.093	52.78	53.12	0.34	
MS02	r2-30	409560.09	132590.71	1.123	13.216	52.67	53.12	0.45	
MS02	r2-29	409559.05	132590.49	1.063	14.279	52.66	53.12	0.46	
MS02	**r2-28**	**409558.07**	**132590.27**	**1.004**	**15.283**	**52.63**	**53.12**	**0.49**	
MS02	r2-27	409556.82	132590.23	1.251	16.534	52.68	53.12	0.44	
MS02	r2-26	409556.02	132590.04	0.822	17.356	52.72	53.12	0.40	
MS02	r2-25	409555.12	132589.79	0.934	18.290	52.82	53.12	0.30	
MS02	r2-24	409554.32	132589.53	0.841	19.132	52.62	53.12	0.50	
MS02	r2-23	409553.08	132589.29	1.263	20.395	52.76	53.12	0.36	
MS02	r2-22	409552.61	132589.08	0.515	20.909	52.81	53.12	0.31	
MS02	r2-21	409551.62	132589.20	0.997	21.907	52.87	53.12	0.25	
MS02	r2-20	409551.08	132589.02	0.569	22.476	53.05	53.12	0.07	Water's edge
MS02	r2-19	409549.75	132588.77	1.353	23.829	53.76			
MS02	r2-18	409546.64	132589.03	3.121	26.950	53.81			

1	0.03
2	0.148
3	0.462
4	0.56
5	0.475
6	0.322
7	0.223
8	0.06
Mean	**0.456**

Cross-section	Observed point	Easting	Northing	Chainage (m)	Cumulative Chainage (m)	Bed Elevation (mAOD)	Water Surface Elevation (mAOD)	Water depth (m)	Comments
XS01 - Glide									
XS01	r2-51	409578.50	132536.97	0.000	0.000	54.10			
XS01	r2-50	409567.19	132536.85	11.310	11.310	54.51			
XS01	r2-49	409562.87	132537.00	4.323	14.633	54.23			
XS01	r2-48	409561.34	132537.27	1.554	16.186	53.74			
XS01	r2-47	409561.97	132537.16	0.640	16.826	53.08	53.08	0.00	Water's edge
XS01	r2-46	409560.98	132537.21	0.991	17.817	52.37	53.08	0.71	
XS01	r2-45	409560.00	132537.09	0.987	18.805	52.04	53.08	1.04	
XS01	r2-44	409559.02	132537.04	0.981	19.786	51.92	53.08	1.16	
XS01	r2-43	409557.97	132537.18	1.059	20.845	51.88	53.08	1.20	
XS01	**r2-42**	**409556.72**	**132537.36**	**1.263**	**22.108**	**51.87**	**53.08**	**1.21**	
XS01	r2-41	409555.82	132537.57	0.924	23.032	51.94	53.08	1.14	
XS01	r2-40	409554.97	132537.51	0.852	23.884	51.97	53.08	1.11	
XS01	r2-39	409553.87	132537.40	1.105	24.990	52.03	53.08	1.05	
XS01	r2-38	409552.89	132537.45	0.981	25.971	52.36	53.08	0.72	
XS01	r2-37	409551.45	132537.02	1.503	27.474	52.89	53.08	0.19	Water's edge
XS01	r2-36	409550.09	132537.10	1.362	28.836	53.53			
XS01	r2-35	409545.49	132537.49	4.617	33.453	53.70			

Distance from RHB (m)	Velocity (ms^{-1})
1	0.068
2	0.145
3	0.118
4	0.125
5	0.056
6	0.108
7	0.108
Mean	**0.104**

MS03 - Glide									
MS03	r2-69	409575.83	132489.53	0.000	0.000	53.88			
MS03	r2-68	409565.05	132486.19	11.287	11.287	54.02			
MS03	r2-67	409562.33	132485.94	2.731	14.019	53.67			
MS03	r2-66	409559.87	132485.96	2.460	16.479	52.69	53.07	0.38	Water's edge
MS03	r2-65	409559.16	132485.73	0.746	17.225	52.47	53.07	0.60	
MS03	**r2-64**	**409557.98**	**132485.69**	**1.181**	**18.406**	**52.30**	**53.07**	**0.77**	
MS03	r2-63	409557.10	132485.75	0.882	19.288	52.34	53.07	0.73	
MS03	r2-62	409556.26	132485.86	0.847	20.135	52.50	53.07	0.57	
MS03	r2-61	409555.64	132485.92	0.623	20.758	52.51	53.07	0.56	
MS03	r2-60	409554.69	132486.07	0.962	21.720	52.63	53.07	0.44	
MS03	r2-59	409553.81	132486.09	0.880	22.600	52.46	53.07	0.61	
MS03	r2-58	409552.87	132486.04	0.941	23.541	52.51	53.07	0.56	
MS03	r2-57	409551.15	132486.09	1.722	25.263	52.64	53.07	0.43	
MS03	r2-56	409550.09	132486.07	1.060	26.323	52.64	53.07	0.43	
MS03	r2-55	409549.14	132485.95	0.958	27.280	52.92	53.07	0.15	Water's edge
MS03	r2-54	409547.77	132485.57	1.420	28.701	53.74			
MS03	r2-53	409545.41	132485.58	2.360	31.061	53.95			
MS03	r2-52	409537.68	132484.49	7.805	38.865	53.98			

1	0.002
2	0.004
3	0.026
4	0.153
5	0.354
6	0.382
7	0.326
8	0.397
9	0.239
10	0.186
Mean	**0.207**

Cross-section	Observed point	Easting	Northing	Chainage (m)	Cumulative Chainage (m)	Bed Elevation (mAOD)	Water Surface Elevation (mAOD)	Water depth (m)	Comments
XS02 - Glide									
XS02	r2-85	409584.66	132454.88	0.000	0.000	53.95			
XS02	r2-84	409577.72	132451.02	7.941	7.941	53.96			
XS02	r2-83	409575.89	132449.94	2.125	10.066	53.58			
XS02	r2-82	409572.74	132448.44	3.489	13.555	52.99	53.05	0.06	Water's edge
XS02	r2-81	409571.95	132447.46	1.257	14.812	52.79	53.05	0.26	
XS02	r2-80	409570.38	132446.56	1.813	16.625	52.07	53.05	0.98	
XS02	**r2-79**	**409569.14**	**132445.39**	**1.701**	**18.326**	**51.83**	**53.05**	**1.22**	
XS02	r2-78	409568.56	132444.22	1.306	19.631	51.91	53.05	1.14	
XS02	r2-77	409567.79	132443.93	0.823	20.454	52.05	53.05	1.00	
XS02	r2-76	409567.27	132443.19	0.900	21.354	52.13	53.05	0.92	
XS02	r2-75	409566.51	132442.88	0.821	22.175	52.23	53.05	0.82	
XS02	r2-74	409565.82	132442.61	0.741	22.916	52.45	53.05	0.60	
XS02	r2-73	409565.03	132442.27	0.860	23.776	52.69	53.05	0.36	Water's edge
XS02	r2-72	409564.10	132441.62	1.138	24.915	53.87			
XS02	r2-71	409560.09	132439.54	4.517	29.432	53.84			
XS02	r2-70	409556.81	132437.07	4.103	33.535	53.90			
MS04 - Glide									
MS04	r2-105	409613.14	132409.34	0.000	0.000	54.25			
MS04	r2-104	409610.78	132407.31	3.118	3.118	54.23			
MS04	r2-103	409609.32	132406.12	1.884	5.001	54.09			
MS04	r2-102	409606.02	132404.27	3.783	8.784	53.17			
MS04	r2-101	409604.57	132402.98	1.941	10.725	52.90	53.04	0.14	Water's edge
MS04	r2-100	409602.79	132402.52	1.838	12.564	52.33	53.04	0.71	
MS04	r2-99	409602.19	132401.96	0.821	13.384	51.92	53.04	1.12	
MS04	r2-98	409601.30	132401.55	0.980	14.364	51.73	53.04	1.31	
MS04	r2-97	409600.72	132401.17	0.693	15.058	51.73	53.04	1.31	
MS04	**r2-96**	**409599.93**	**132400.28**	**1.190**	**16.248**	**51.72**	**53.04**	**1.32**	
MS04	r2-95	409599.28	132399.95	0.729	16.977	51.73	53.04	1.31	
MS04	r2-94	409598.67	132399.77	0.636	17.613	51.80	53.04	1.24	
MS04	r2-93	409597.98	132399.22	0.882	18.495	51.95	53.04	1.09	
MS04	r2-92	409597.19	132398.99	0.823	19.318	52.00	53.04	1.04	
MS04	r2-91	409596.55	132398.70	0.703	20.020	52.10	53.04	0.94	
MS04	r2-90	409595.68	132398.21	0.998	21.019	52.19	53.04	0.85	
MS04	r2-89	409594.88	132397.92	0.851	21.870	52.66	53.04	0.38	Water's edge
MS04	r2-88	409594.53	132396.99	0.994	22.864	53.67			
MS04	r2-87	409592.10	132396.12	2.581	25.445	53.78			
MS04	r2-86	409587.37	132393.85	5.250	30.694	53.83			

Distance from RHB (m)	Velocity (ms^{-1})
1	0.05
2	0.1
3	0.149
4	0.138
5	0.119
6	0.13
7	0.074
Mean	**0.109**

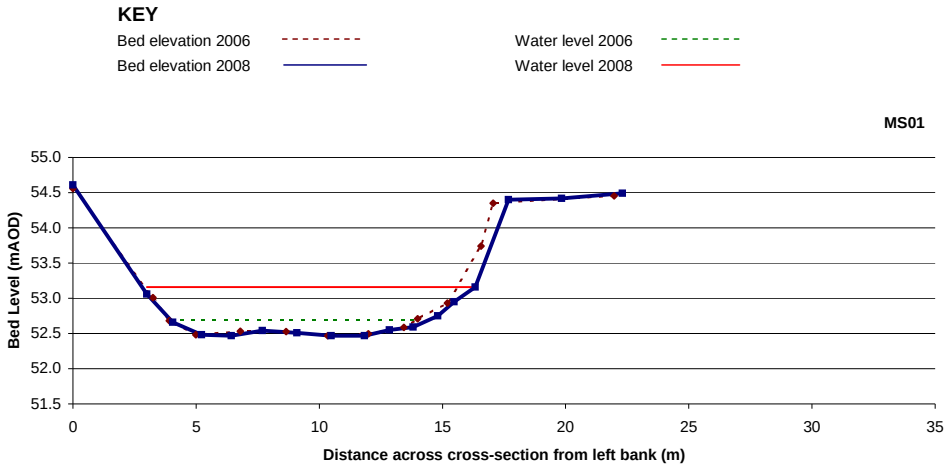
1	0.096
2	0.113
3	0.051
4	0.116
5	0.138
6	0.064
7	0.061
Mean	**0.091**

Cross-section	Observed point	Easting	Northing	Chainage (m)	Cumulative Chainage (m)	Bed Elevation (mAOD)	Water Surface Elevation (mAOD)	Water depth (m)	Comments
MS05 - Glide									
MS05	r2-121	409646.34	132321.14	0.000	0.000	53.90			
MS05	r2-120	409636.94	132318.97	9.652	10.652	53.36			
MS05	r2-119	409636.14	132318.05	1.225	11.876	52.88	53.04	0.16	Water's edge
MS05	r2-118	409634.65	132317.92	1.496	13.372	52.00	53.04	1.04	
MS05	r2-117	409633.49	132317.35	1.292	14.665	51.92	53.04	1.12	
MS05	r2-116	409632.54	132316.86	1.069	15.733	51.91	53.04	1.13	
MS05	r2-115	409631.74	132316.22	1.024	16.758	51.89	53.04	1.15	
MS05	**r2-114**	**409630.90**	**132315.82**	**0.930**	**17.688**	**51.88**	**53.04**	**1.16**	
MS05	r2-113	409630.18	132315.36	0.854	18.543	51.90	53.04	1.14	
MS05	r2-112	409629.66	132314.69	0.848	19.391	51.90	53.04	1.14	
MS05	r2-111	409628.78	132314.26	0.979	20.370	51.94	53.04	1.10	
MS05	r2-110	409627.28	132313.27	1.797	21.668	52.13	53.04	0.91	
MS05	r2-109	409626.57	132312.85	0.825	22.492	52.80	53.04	0.24	Water's edge
MS05	r2-108	409624.61	132311.81	2.214	24.706	53.80			
MS05	r2-107	409622.33	132310.51	2.623	27.329	53.88			
MS05	r2-106	409619.05	132307.97	4.151	31.480	53.90			

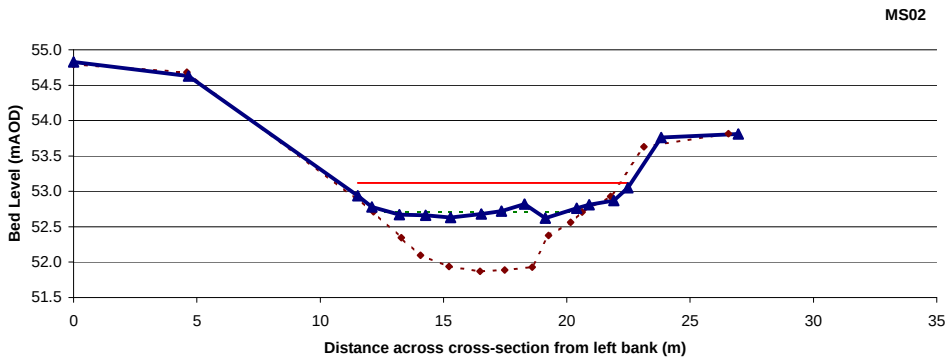
Distance from RHB (m)	Velocity (ms^{-1})
1	0.303
2	0.355
3	0.372
4	0.387
5	0.372
6	0.396
7	0.211
8	0.212
9	0.006
Mean	**0.290**

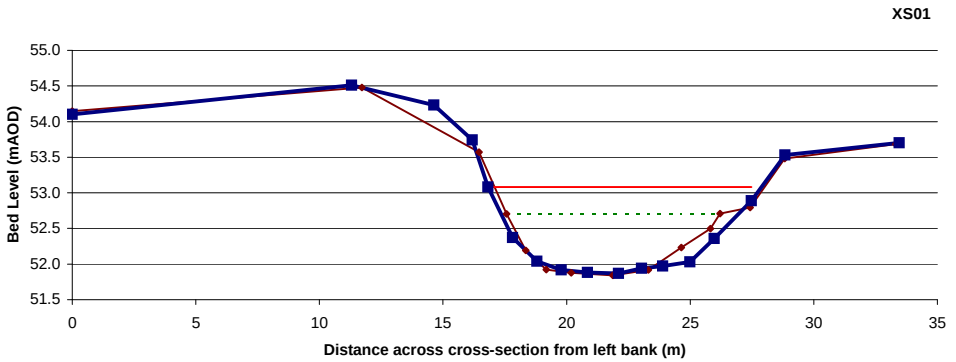
XS03 - Glide									
XS03	r2-141	409711.67	132258.91	0.000	0.000	53.85			
XS03	r2-140	409704.98	132256.62	7.072	9.072	53.31			
XS03	r2-139	409704.21	132256.07	0.944	10.016	52.70	52.95	0.25	Water's edge
XS03	r2-138	409703.16	132255.21	1.357	11.373	52.31	52.95	0.64	
XS03	**r2-137**	**409702.61**	**132254.73**	**0.730**	**12.103**	**52.21**	**52.95**	**0.74**	
XS03	r2-136	409701.40	132253.95	1.440	13.543	52.60	52.95	0.35	
XS03	r2-135	409701.06	132253.50	0.564	14.107	52.44	52.95	0.51	
XS03	r2-134	409700.55	132253.15	0.619	14.726	52.51	52.95	0.44	
XS03	r2-133	409700.06	132252.75	0.633	15.358	52.47	52.95	0.48	
XS03	r2-132	409699.73	132252.43	0.460	15.818	52.52	52.95	0.43	
XS03	r2-131	409699.14	132251.94	0.767	16.585	52.50	52.95	0.45	
XS03	r2-130	409698.63	132251.58	0.624	17.209	52.54	52.95	0.41	
XS03	r2-129	409698.49	132250.75	0.842	18.051	52.68	52.95	0.27	
XS03	r2-128	409698.02	132250.46	0.552	18.603	52.60	52.95	0.35	
XS03	r2-127	409697.46	132250.08	0.677	19.280	52.73	52.95	0.22	
XS03	r2-126	409696.76	132249.74	0.778	20.058	52.68	52.95	0.27	
XS03	r2-125	409695.83	132249.13	1.112	21.170	52.74	52.95	0.21	Water's edge
XS03	r2-124	409695.20	132248.29	1.050	22.220	53.39			
XS03	r2-123	409693.94	132247.17	1.686	23.906	53.46			
XS03	r2-122	409690.38	132244.74	4.305	28.211	53.60			

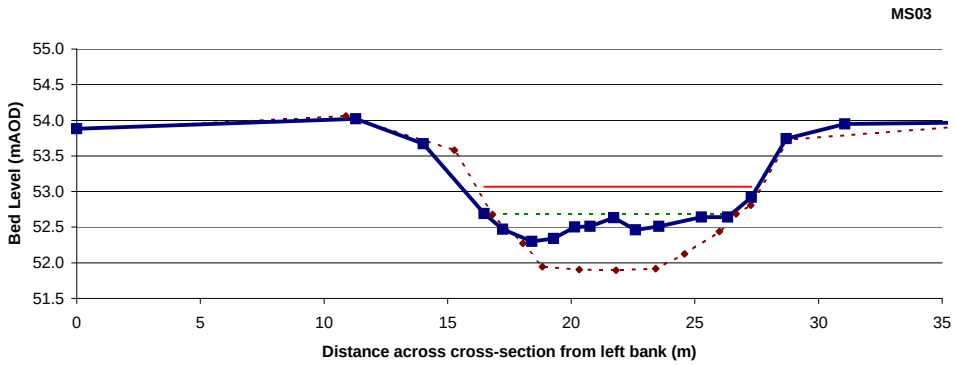
1	0.037
2	1.103
3	0.134
4	0.170
5	**0.203**
6	0.310
7	0.028
8	0.332
Mean	**0.290**

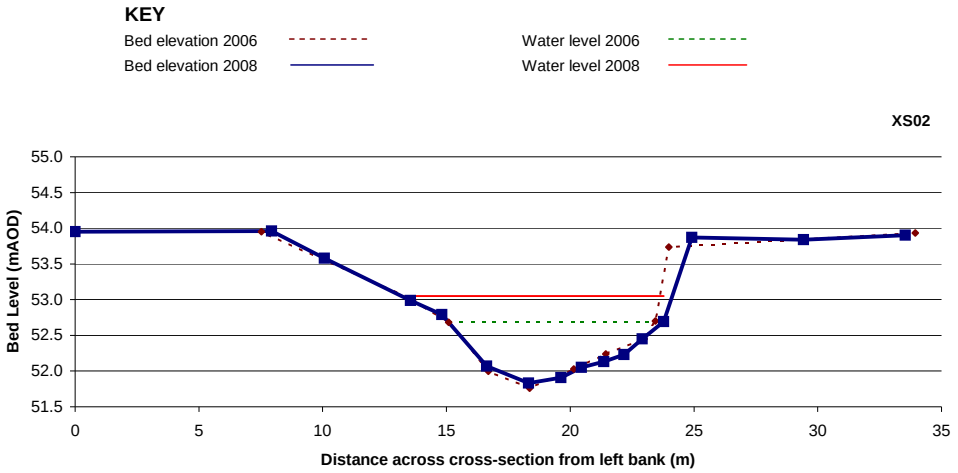

KEY
Bed elevation 2006
Bed elevation 2008
Water level 2006
Water level 2008

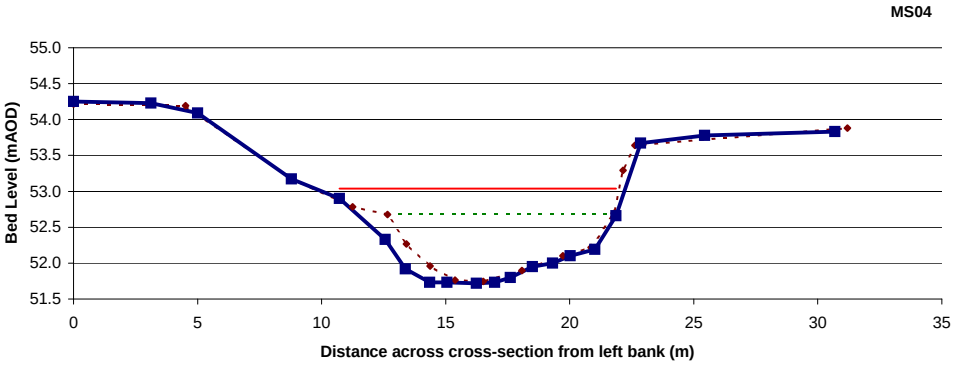
MS01
Bed Level (mAOD)
55.0
54.5
54.0
53.5
53.0
52.5
52.0
51.5
0
5
10
15
20
25
30
35
Distance across cross-section from left bank (m)

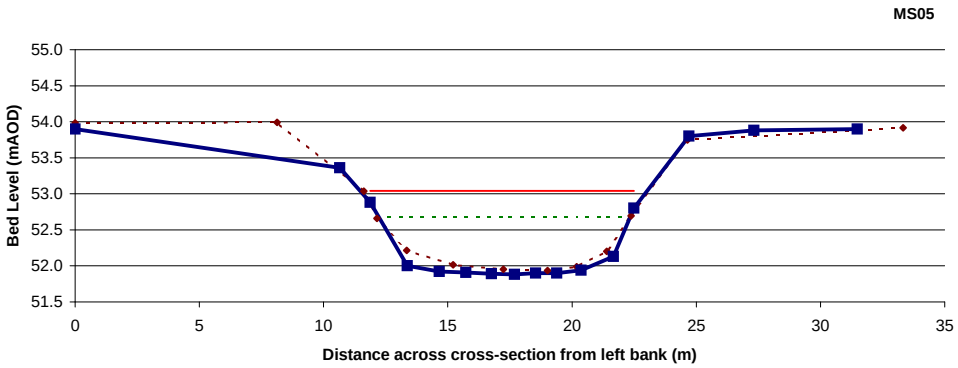

MS02
Bed Level (mAOD)
55.0
54.5
54.0
53.5
53.0
52.5
52.0
51.5
0
5
10
15
20
25
30
35
Distance across cross-section from left bank (m)

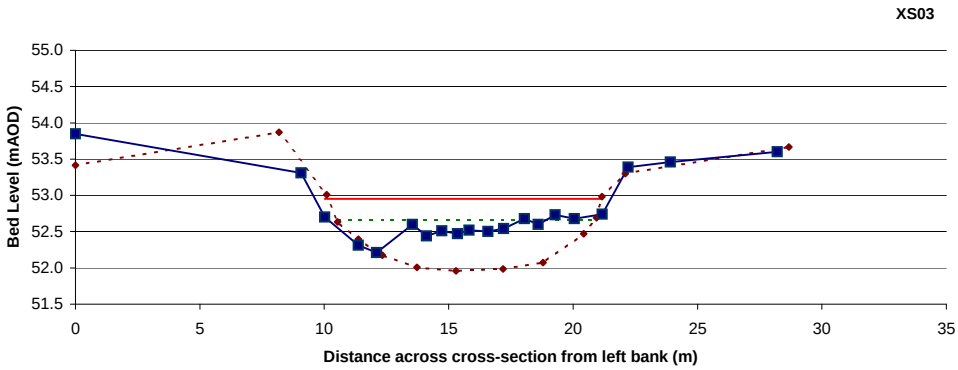

XS01
Bed Level (mAOD)
55.0
54.5
54.0
53.5
53.0
52.5
52.0
51.5
0
5
10
15
20
25
30
35
Distance across cross-section from left bank (m)


MS03
Bed Level (mAOD)
55.0
54.5
54.0
53.5
53.0
52.5
52.0
51.5
0
5
10
15
20
25
30
35
Distance across cross-section from left bank (m)


KEY
Bed elevation 2006
Bed elevation 2008
Water level 2006
Water level 2008
XS02
Bed Level (mAOD)
55.0
54.5
54.0
53.5
53.0
52.5
52.0
51.5
0
5
10
15
20
25
30
35
Distance across cross-section from left bank (m)


MS04
Bed Level (mAOD)
55.0
54.5
54.0
53.5
53.0
52.5
52.0
51.5
0
5
10
15
20
25
30
35
Distance across cross-section from left bank (m)


MS05
Bed Level (mAOD)
55.0
54.5
54.0
53.5
53.0
52.5
52.0
51.5
0
5
10
15
20
25
30
35
Distance across cross-section from left bank (m)


XS03
Bed Level (mAOD)
55.0
54.5
54.0
53.5
53.0
52.5
52.0
51.5
0
5
10
15
20
25
30
35
Distance across cross-section from left bank (m)

Appendix E: Fisheries Survey Data

Sampled meso-habitat, location and staff

Date	6th October 2008	Time of the day	Start of sampling	14:00
			End of sampling	16:30
Catchment name	Avon	River name		Avon
Fishing staff leader and crew members	Scott Rice	Kevin Ackerman		Tom Litch
	George Hide	John Aplin		Nicholas Taylor
Meso-habitat code	UWC -01	NGR	Upstream	413218, 137764
Fishing method	Sweeping / boat / quadrat		Downstream	413205, 137712

Equipment and prerequisites

Manufacturer	Electrocatch	Current (A)		3 Amps
Model	3.5Kva	Anode type	Ring	netted
Mobility	Portable / not packback		Anode diameter	10 inch
Pulse type	DC or PDC		Number	2
Pulse frequency (Hz)	Manually flipped			
Voltage (V)	230v	Use of stop-nets / quadrat		Yes

Environmental conditions

Water level		Temperature of water (ºC)	12.5ºC
Air temperature	15.5ºC	Cloudiness	moderate
Precipitation	Showers	Windiness	light
Resistance or conductivity value of water (µS cm-1)	Not recorded	Visibility (colour and/or turbidity of the water)	Clear/good

Meso-habitat sampling area

Notes at the time of survey			
Fished area (m2)	800 (netted) 60 (transect)		
Photograph reference	Description	Photographic reference	Description

Catch

Common name	Scientific name	Number caught	Number of removals	External anomalies or parasites
Bullhead	***Cottus gobio***			
Salmonids	***Salmo salar***	19		
Brook lamprey / river lamprey	***Lampetra planeri / Lampetra fluviatilis***	0		
Sea lamprey	***Petromyzon marinus***	0		
Chubb	***Leuciscus cephalus***	0		
Dace	***Leuciscus leuciscus***	0		
Eurasian Perch	***Perca fluviatilis***	0		
European eel	***Anguilla anguilla***	1		
Grayling	***Thymallus thymallus***	9		
Minnow	***Phoxinus phoxinus***	100>		
Pike	***Esox lucius***	0		
Roach	***Rutilus rutilus***	0		
Stone loach	***Noemacheilus barbatulus***	7		
Trout	***Salmo trutta***	49		

Details of catch per run for Annex II species

bullheads			salmonids				brook lamprey				sea lamprey			
Run A	Run B	Run C	Run A	Run B	Run C		Run A	Run B	Run C	Total/m^2	Run A	Run B	Run C	Total/m^2
Total catch per run			**Total catch per run**				**Total catch per run**				**Total catch per run**			
0	0	0	11	12	7		0	0	0					
Fork length / body lengh (mm)			**Fork length / body lengh (mm)**				**Fork length / body length (mm) of lamprey caught in quadrats**				**Fork length / body length (mm) of lamprey caught in quadrats**			
			110	112	105									
			105	115	110	Q1	0				0	0	0	0
			120	110	115									
			100	105	130	Q2	0				0	0	0	0
			110	110	110									
			110	110	115	Q3	0				0	0	0	0
			118	109	105									
			120	110		Q4	0				0	0	0	0
			100	109										
			110	110		Q5	0				0	0	0	0
			100	115										
				120		Sw	0				0	0	0	0

Sampled meso-habitat, location and staff

Date	6th October 2008	Time of the day	Start of sampling	09:30
			End of sampling	14:00
Catchment name	Avon	River name		Avon
Fishing staff leader and crew members	Scott Rice	Kevin Ackerman		Tom Litch
	George Hide	John Aplin		Nicholas Taylor
Meso-habitat code	UWC -02	NGR	Upstream	413204, 137628
Fishing method	Sweeping / boat / quadrat		Downstream	413232, 137586

Equipment and prerequisites

Manufacturer	Electrocatch	Current (A)		3 Amps
Model	3.5Kva	Anode type	Ring	netted
Mobility	Portable / not packback		Anode diameter	10 inch
Pulse type	DC or PDC		Number	2
Pulse frequency (Hz)	Manually flipped			
Voltage (V)	230v	Use of stop-nets / quadrat		Yes

Environmental conditions

Water level		Temperature of water (ºC)	13ºC
Air temperature	15ºC	Cloudiness	
Precipitation	showers	Windiness	Blustery
Resistance or conductivity value of water (µS cm-1)	Not recorded	Visibility (colour and/or turbidity of the water)	Clear

Meso-habitat sampling area

Notes at the time of survey			
Fished area (m^2)	540 (netted) 54 (transect)		
Photograph reference	Description	Photographic reference	Description
UWC-01, -02 & -03	Team & apparatus boat		
UWC-04 (413180, 137575)	Upstream to netted reach		

Catch

Common name	Scientific name	Number caught	Number of removals	External anomalies or parasites
Bullhead	***Cottus gobio***	0	0	0
Salmonids	***Salmo salar***	10	0	0
Brook lamprey / river lamprey	***Lampetra planeri / Lampetra fluviatilis***	0	0	0
Sea lamprey	***Petromyzon marinus***	0	0	0
Chubb	***Leuciscus cephalus***	0	0	0
Dace	***Leuciscus leuciscus***	0	0	0
Eurasian Perch	***Perca fluviatilis***	0	0	0
European eel	***Anguilla anguilla***	3	0	0
Grayling	***Thymallus thymallus***	24	0	0
Minnow	***Phoxinus phoxinus***	100>	0	0
Pike	***Esox lucius***	3	0	0
Roach	***Rutilus rutilus***	0	0	0
Stone loach	***Noemacheilus barbatulus***	2	0	0
Trout	***Salmo trutta***	33	0	0

Details of catch per run for Annex II species

bullheads			salmonids								sea lamprey			
Run A	Run B	Run C	Run A	Run B	Run C		Run A	Run B	Run C	Total/m^2	Run A	Run B	Run C	Total/m^2
Total catch per run			**Total catch per run**				**Total catch per run**				**Total catch per run**			
0	0	0	4	3	3		0	0	0					
Fork length / body lengh (mm)			**Fork length / body lengh (mm)**				**Fork length / body length (mm) of lamprey caught in quadrats**				**Fork length / body length (mm) of lamprey caught in quadrats**			
			110	108	125									
			115	112	115	Q1	0							
			110	115	130									
			114											
						Q2	0							
						Q3	0							
						Q4	0							
						Q5	0							
						Sw	0							

Sampled meso-habitat, location and staff

Date	29th October 2008	Time of the day	Start of sampling	08:30
			End of sampling	11:00
Catchment name	Avon	River name		Avon
Fishing staff leader and crew members	Scott Rice	Kevin Ackerman		Tom Litch
	George Hide	John Aplin		Nicholas Taylor
Meso-habitat code	UW-R-01	NGR	Upstream	413179, 137530
Fishing method	Sweeping / boat / quadrat		Downstream	413176, 137502

Equipment and prerequisites

Manufacturer	Electrocatch	Current (A)		3 - 5 Amps
Model	3.5Kva	Anode type	Ring	netted
Mobility	Portable / not packback		Anode diameter	10 inch
Pulse type	DC or PDC		Number	2
Pulse frequency (Hz)	Manually flipped			
Voltage (V)	230v	Use of stop-nets / quadrat		Yes

Environmental conditions

Water level	Normal	Temperature of water (ºC)	10ºC
Air temperature	0 - 1 ºC	Cloudiness	Clear
Precipitation	Nil	Windiness	Light
Resistance or conductivity value of water (µS cm-1)	-	Visibility (colour and/or turbidity of the water)	V Good

Meso-habitat sampling area

Notes at the time of survey	Vcold and Clear with good Viz		
Fished area (m^2)	1,377 (netted) 27 (transect)		
Photograph reference	Description	Photographic reference	Description

Catch

Common name	Scientific name	Number caught	Number of removals	External anomalies or parasites
Bullhead	***Cottus gobio***	28		
Salmonids	***Salmo salar***	16		
Brook lamprey / river lamprey	***Lampetra planeri / Lampetra fluviatilis***	2		
Sea lamprey	***Petromyzon marinus***	0		
Chubb	***Leuciscus cephalus***	0		
Dace	***Leuciscus leuciscus***	0		
Eurasian Perch	***Perca fluviatilis***	0		
European eel	***Anguilla anguilla***	5		
Grayling	***Thymallus thymallus***	11		
Minnow	***Phoxinus phoxinus***	100>		
Pike	***Esox lucius***	2		
Roach	***Rutilus rutilus***	0		
Stone loach	***Noemacheilus barbatulus***	3		
Trout	***Salmo trutta***	22		

Details of catch per run for Annex II species

bullheads			salmonids				brook lamprey				sea lamprey			
Run A	Run B	Run C	Run A	Run B	Run C		Run A	Run B	Run C	Total/m^2	Run A	Run B	Run C	Total/m^2
Total catch per run			**Total catch per run**				**Total catch per run**				**Total catch per run**			
15	9	4	9	5	2				2					
Fork length / body lengh (mm)			**Fork length / body lengh (mm)**				**Fork length / body length (mm) of lamprey caught in quadrats**				**Fork length / body length (mm) of lamprey caught in quadrats**			
65	60	40	105	125	105									
60	55	45	115	120	100	Q1								
60	54	30	130	105										
60	65	25	120	135		Q2								
55	54		100	96										
65	30		105			Q3	130							
40	40		105				120							
45	30		98				120							
30	30		90				50							
40														
40														
45						Q4								
48														
30						Q5								
48														
						Sw								

Sampled meso-habitat, location and staff

Date	29th October 2008	Time of the day	Start of sampling	
			End of sampling	
Catchment name	Avon	River name		Avon
Fishing staff leader and crew members	Scott Rice	Kevin Ackerman		Tom Litch
	George Hide	John Aplin		Nicholas Taylor
Meso-habitat code	UWR-02	NGR	Upstream	413159, 137467
Fishing method	Sweeping / boat / quadrat		Downstream	413147, 137452

Equipment and prerequisites

Manufacturer	Electrocatch	Current (A)		3 Amps
Model	3.5Kva	Anode type	Ring	netted
Mobility	Portable / not packback		Anode diameter	10 inch
Pulse type	DC or PDC		Number	2
Pulse frequency (Hz)	Manually flipped			
Voltage (V)	230v	Use of stop-nets / quadrat		Yes

Environmental conditions

Water level	Normal	Temperature of water (ºC)	10ºC
Air temperature	0 - 1 ºC	Cloudiness	Clear
Precipitation	Nil	Windiness	Light
Resistance or conductivity value of water (µS cm-1)	-	Visibility (colour and/or turbidity of the water)	V Good

Meso-habitat sampling area

Notes at the time of survey			
Fished area (m^2)	1200 (netted) 22 (transect)		
Photograph reference	Description	Photographic reference	Description

Catch

Common name	Scientific name	Number caught	Number of removals	External anomalies or parasites
Bullhead	***Cottus gobio***	22		
Salmonids	***Salmo salar***	22		
Brook lamprey / river lamprey	***Lampetra planeri / Lampetra fluviatilis***	2		
Sea lamprey	***Petromyzon marinus***	0		
Chubb	***Leuciscus cephalus***	0		
Dace	***Leuciscus leuciscus***	25		
Eurasian Perch	***Perca fluviatilis***	0		
European eel	***Anguilla anguilla***	1		
Grayling	***Thymallus thymallus***	42		
Minnow	***Phoxinus phoxinus***	100>		
Pike	***Esox lucius***	2		
Roach	***Rutilus rutilus***	2		
Stone loach	***Noemacheilus barbatulus***	3		
Trout	***Salmo trutta***	36		

Details of catch per run for Annex II species

bullheads			**salmonids**				**brook lamprey**				**sea lamprey**			
Run A	Run B	Run C	Run A	Run B	Run C		Run A	Run B	Run C	Total/m^2	Run A	Run B	Run C	
Total catch per run			**Total catch per run**				**Total catch per run**				**Total catch per run**			
1	16	5	11	7	4		0	1	1					
Fork length / body lengh (mm)			**Fork length / body lengh (mm)**				**Fork length / body length (mm) of lamprey caught in quadrats**				**Fork length / body length (mm) of lamprey caught in quadrats**			
60	65	82	90	115	100									
	65	65	100	115	110	Q1	0				0	0	0	0
	50	70	110	115	122									
	40	40	100	120	110	Q2	0				0	0	0	0
	40	30	90	115										
	45		80	115										
	30		100	95										
	30		100											
	40		90											
	20		10											
	20		**90**			Q3	0				0	0	0	0
	20													
	30													
	25													
	70													
	40													
						Q5	0				0	0	0	0
						Q4	0				0	0	0	0
						Sw	0				0	0	0	0

Sampled meso-habitat, location and staff

Date	29th October 2008	Time of the day	Start of sampling	15:00
			End of sampling	18:00
Catchment name	Avon	River name		Avon
Fishing staff leader and crew members	Scott Rice	Kevin Ackerman		Tom Litch
	George Hide	John Aplin		Nicholas Taylor
Meso-habitat code	UWR-03	NGR	Upstream	413072, 137384
Fishing method	Sweeping / boat / quadrat		Downstream	413032, 137368

Equipment and prerequisites

Manufacturer	Electrocatch	Current (A)		3 Amps
Model	3.5Kva	Anode type	Ring	netted
Mobility	Portable / not packback		Anode diameter	10 inch
Pulse type	DC or PDC		Number	2
Pulse frequency (Hz)	Manually flipped			
Voltage (V)	230v	Use of stop-nets / quadrat		Yes

Environmental conditions

Water level	Normal	Temperature of water (ºC)	10ºC
Air temperature	0 - 1 ºC	Cloudiness	Clear
Precipitation	Nil	Windiness	Light
Resistance or conductivity value of water (µS cm-1)	Not recorded	Visibility (colour and/or turbidity of the water)	V Good

Meso-habitat sampling area

Notes at the time of survey			
Fished area (m^2)	1100 (netted) 22 (transect)		
Photograph reference	Description	Photographic reference	Description

Catch

Common name	Scientific name	Number caught	Number of removals	External anomalies or parasites
Bullhead	***Cottus gobio***	3		0
Salmonids	***Salmo salar***	14		0
Brook lamprey / river lamprey	***Lampetra planeri / Lampetra fluviatilis***	1		0
Sea lamprey	***Petromyzon marinus***	0		0
Chubb	***Leuciscus cephalus***	0		0
Dace	***Leuciscus leuciscus***	3		0
Eurasian Perch	***Perca fluviatilis***	0		0
European eel	***Anguilla anguilla***	1		0
Grayling	***Thymallus thymallus***	20		0
Minnow	***Phoxinus phoxinus***	100>		0
Pike	***Esox lucius***	1		0
Roach	***Rutilus rutilus***	2		0
Stone loach	***Noemacheilus barbatulus***	5		0
Trout	***Salmo trutta***	16		0

Details of catch per run for Annex II species

bullheads			salmonids				brook lamprey				sea lamprey			
Run A	Run B	Run C	Run A	Run B	Run C		Run A	Run B	Run C	Total/m^2	Run A	Run B	Run C	Total/m^2
Total catch per run			**Total catch per run**				**Total catch per run**				**Total catch per run**			
0	3	0	7	5	2		0	0	1					
Fork length / body lengh (mm)			**Fork length / body lengh (mm)**				**Fork length / body length (mm) of lamprey caught in quadrats**				**Fork length / body length (mm) of lamprey caught in quadrats**			
	50		115	110	120									
	52		130	110	80	Q1	80	50			0	0	0	0
	50		**110**	**120**			80	130						
			120	115			90	130						
			117	130			85	120						
			125				80							
			120			Q2					0	0	0	0
						Q3	100				0	0	0	0
							130							
							80							
						Q4					0	0	0	0
						Q5					0	0	0	0
						Sw					0	0	0	0

Sampled meso-habitat, location and staff

Date	1st October 2008	Time of the day	Start of sampling	1.00pm
			End of sampling	3.30pm
Catchment name	Avon	River name		Wylye
Fishing staff leader and crew members	Scott Rice	Kevin Ackerman		Tom Litch
	George Hide	John Aplin		Nicholas Taylor
Meso-habitat code	SHC-01	NGR	Upstream	408411 134522
Fishing method	Sweeping / boat / quadrat		Downstream	468464 134481

Equipment and prerequisites

Manufacturer	Electrocatch	Current (A)		3
Model	3.5Kva	Anode type	Ring	Netted
Mobility	Portable / not packback		Anode diameter	10 inch
Pulse type	DC or PDC		Number	2
Pulse frequency (Hz)	Manually flipped			
Voltage (V)	230v	Use of stop-nets / quadrat		Yes

Environmental conditions

Water level	Normal	Temperature of water (ºC)	13.5ºC
Air temperature	18 ºC	Cloudiness	Light
Precipitation		Windiness	Blustery
Resistance or conductivity value of water (µS cm-1)	Not recorded	Visibility (colour and/or turbidity of the water)	good

Meso-habitat sampling area

Notes at the time of survey			
Fished area (m^2)	1740m2 (netted) 20m2 (transect)		
Photograph reference	Description	Photographic reference	Description

Catch

Common name	Scientific name	Number caught	Number of removals	External anomalies or parasites
Bullhead	***Cottus gobio***	6		
Salmonids	***Salmo salar***	1		
Brook lamprey / river lamprey	***Lampetra planeri / Lampetra fluviatilis***	12		
Sea lamprey	***Petromyzon marinus***			
Chubb	***Leuciscus cephalus***			
Dace	***Leuciscus leuciscus***			
Eurasian Perch	***Perca fluviatilis***	4		
European eel	***Anguilla anguilla***	3		
Grayling	***Thymallus thymallus***	14		
Minnow	***Phoxinus phoxinus***	100>		
Pike	***Esox lucius***			
Roach	***Rutilus rutilus***			
Stone loach	***Noemacheilus barbatulus***	1		
Trout	***Salmo trutta***	22		

Details of catch per run for Annex II species

bullheads			salmonids			brook lamprey					sea lamprey			
Run A	Run B	Run C	Run A	Run B	Run C		Run A	Run B	Run C	Total/m^2	Run A	Run B	Run C	Total/m^2
Total catch per run			**Total catch per run**				**Total catch per run**				**Total catch per run**			
	7	1	1					4			0	0	0	
Fork length / body lengh (mm)			**Fork length / body lengh (mm)**				**Fork length / body length (mm) of lamprey caught in quadrats**				**Fork length / body length (mm) of lamprey caught in quadrats**			
	60	60	130											
	60					Q1	125	120						
	60						130	50						
	50						80	80						
	45						100	130						
	45													
	40													
						Q2								
						Q3								
						Q4								
						Q5								
						Sw								

Sampled meso-habitat, location and staff

Date	1st October 2008	Time of the day	Start of sampling	9am
			End of sampling	11.30am
Catchment name	Avon	River name		Wylye
Fishing staff leader and crew members	Scott Rice	Kevin Ackerman		Tom Litch
	George Hide	John Aplin		Nicholas Taylor
Meso-habitat code	SCH-02	NGR	Upstream	408631 134328
Fishing method	Sweeping / boat / quadrat		Downstream	408639 134249

Equipment and prerequisites

Manufacturer	Electrocatch	Current (A)		3
Model	3.5Kva	Anode type	Ring	netted
Mobility	Portable / not packback		Anode diameter	10 inch
Pulse type	DC or PDC		Number	2
Pulse frequency (Hz)	Manually flipped			
Voltage (V)	230v	Use of stop-nets / quadrat		Yes

Environmental conditions

Water level		Temperature of water (ºC)	13.5ºC
Air temperature	18.5ºC	Cloudiness	heavy
Precipitation	At times heavy	Windiness	Blustery
Resistance or conductivity value of water (µS cm-1)	Not recorded	Visibility (colour and/or turbidity of the water)	Good (except with distrubance in silt)

Meso-habitat sampling area

Notes at the time of survey			
Fished area (m^2)	1000m2 (netted) 20m2 (transect)		
Photograph reference	Description	Photographic reference	Description

Catch

Common name	Scientific name	Number caught	Number of removals	External anomalies or parasites
Bullhead	***Cottus gobio***	25		0
Salmonids	***Salmo salar***	5		0
Brook lamprey / river lamprey	***Lampetra planeri / Lampetra fluviatilis***	5		0
Sea lamprey	***Petromyzon marinus***	0		0
Chubb	***Leuciscus cephalus***	0		0
Dace	***Leuciscus leuciscus***			0
Eurasian Perch	***Perca fluviatilis***	8		0
European eel	***Anguilla anguilla***	5		0
Grayling	***Thymallus thymallus***	16		0
Minnow	***Phoxinus phoxinus***	100>		0
Pike	***Esox lucius***	1		0
Roach	***Rutilus rutilus***	0		0
Stone loach	***Noemacheilus barbatulus***	0		0
Trout	***Salmo trutta***	27		0

Details of catch per run for Annex II species

bullheads			salmonids Parr								sea lamprey			
Run A	Run B	Run C	Run A	Run B	Run C		Run A	Run B	Run C	Total/m^2	Run A	Run B	Run C	
Total catch per run			**Total catch per run**				**Total catch per run**				**Total catch per run**			
3	18	4	3	0	2		0	1			0	0		
Fork length / body lengh (mm)			**Fork length / body lengh (mm)**				**Fork length / body length (mm) of lamprey caught in quadrats**				**Fork length / body length (mm) of lamprey caught in quadrats**			
60	60	60	140		140									
50	70	60	120		125	Q1	90							
60	65	41	140				120							
	71	32												
	35													
	72													
	76													
	45					Q2								
	70													
	42					Q3	100							
	41						70							
	61													
	40													
	40													
	41					Q4								
	70													
	31					Q5								
	45													
						Sw								

Sampled meso-habitat, location and staff

Date	2nd October 2008	Time of the day	Start of sampling	14:00
			End of sampling	17:30
Catchment name	Avon	River name		Wylye
Fishing staff leader and crew members	Scott Rice	Kevin Ackerman		Tom Litch
	George Hide	John Aplin		Nicholas Taylor
Meso-habitat code	SHR01	NGR	Upstream	409551 132586
Fishing method	Sweeping / boat / quadrat		Downstream	409543 132500

Equipment and prerequisites

Manufacturer	Electrocatch	Current (A)		3
Model	3.5Kva	Anode type	Ring	netted
Mobility	Portable / not packback		Anode diameter	10 inch
Pulse type	DC or PDC		Number	2
Pulse frequency (Hz)	Manually flipped			
Voltage (V)	230v	Use of stop-nets / quadrat		Yes

Environmental conditions

Water level		Temperature of water (ºC)	13.5ºC
Air temperature	18ºC	Cloudiness	Cloudy
Precipitation	Light	Windiness	Light
Resistance or conductivity value of water (µS cm-1)	Not recorded	Visibility (colour and/or turbidity of the water)	Good

Meso-habitat sampling area

Notes at the time of survey			
Fished area (m^2)	1,200 (netted) and 24 (transect)		
Photograph reference	Description	Photographic reference	Description

Catch

Common name	Scientific name	Number caught	Number of removals	External anomalies or parasites
Bullhead	***Cottus gobio***	162		
Salmonids	***Salmo salar***	19		
Brook lamprey / river lamprey	***Lampetra planeri / Lampetra fluviatilis***	1		
Sea lamprey	***Petromyzon marinus***	0		
Chubb	***Leuciscus cephalus***	9		
Dace	***Leuciscus leuciscus***	2		
Eurasian Perch	***Perca fluviatilis***	6		
European eel	***Anguilla anguilla***	6		
Grayling	***Thymallus thymallus***	14		
Minnow	***Phoxinus phoxinus***	100>		
Pike	***Esox lucius***	1		
Roach	***Rutilus rutilus***	0		
Stone loach	***Noemacheilus barbatulus***	11		
Trout	***Salmo trutta***	12		

Details of catch per run for Annex II species

bullheads			**salmonids**				**brook lamprey**				**sea lamprey**			
Run A	Run B	Run C	Run A	Run B	Run C		Run A	Run B	Run C	Total/m^2	Run A	Run B	Run C	Total/m^2
Total catch per run			**Total catch per run**				**Total catch per run**				**Total catch per run**			
53	80	29	16	3	7			1						
Fork length / body lengh (mm)			**Fork length / body lengh (mm)**				**Fork length / body length (mm) of lamprey caught in quadrats**				**Fork length / body length (mm) of lamprey caught in quadrats**			
70	80	30	120	100	100									
35	82	82	120	75	105	Q1					0	0	0	0
65	80	55	90	80	105									
75	75	73	130		125	Q2					0	0	0	0
83	65	80	85		105									
70	70	65	115		105	Q3					0	0	0	0
70	60	40	90		85									
70	65	60	115											
77	76	70	135			Q4					0	0	0	0
60	77	62	120											
35	40	55	100			Q5	100				0	0	0	0
65	50	35	100											
65	40	40	100			Sw					0	0	0	0
70	77	33	90											
63	80	50	105											
65	80	40	95											
70	45	35												
66	60	50												
80	75	45												
63	75	40												
67	76	40												
65	70	35												
57	70	35												
65	40	35												
55	60	35												
40	50	35												
50	35	40												
50	47	30												
30	50	**30**												
40	50													
57	30													
47	33													
37	60													
40	35													
40	40													
40	52													
60	40													
45	45													
40	45													
40	40													
45	45													
35	50													
40	45													
45	40													
50	35													
45	39													
37	35													
40	80													
40	45													
30	35													
45	45													
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35	40													
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	45													
	30													
	35													
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	40													
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Sampled meso-habitat, location and staff

Date	1st October 2008	Time of the day	Start of sampling	09:45
			End of sampling	13:00
Catchment name	Avon	River name		Wylye
Fishing staff leader and crew members	Scott Rice	Kevin Ackerman		Tom Litch
	George Hide	John Aplin		Nicholas Taylor
Meso-habitat code	SHR02	NGR	Upstream	409588 132396
Fishing method	Sweeping / boat / quadrat		Downstream	409638 132304

Equipment and prerequisites

Manufacturer	Electrocatch	Current (A)		3
Model	3.5Kva	Anode type	Ring	netted
Mobility	Portable / not packback		Anode diameter	10 inch
Pulse type	DC or PDC		Number	2
Pulse frequency (Hz)	Manually flipped			
Voltage (V)	230v	Use of stop-nets / quadrat		Yes

Environmental conditions

Water level		Temperature of water (ºC)	13ºC
Air temperature	17ºC	Cloudiness	light cover
Precipitation	light	Windiness	SLIGHT
Resistance or conductivity value of water (µS cm-1)	Unknown	Visibility (colour and/or turbidity of the water)	Good

Meso-habitat sampling area

Notes at the time of survey			
Fished area (m^2)	1200 (netted) 24 (transect)		
Photograph reference	Description	Photographic reference	Description

Catch

Common name	Scientific name	Number caught	Number of removals	External anomalies or parasites
Bullhead	***Cottus gobio***	6		
Salmonids	***Salmo salar*** **(+ 2 Adults)**	2		
Brook lamprey / river lamprey	***Lampetra planeri / Lampetra fluviatilis***	1		
Sea lamprey	***Petromyzon marinus***	0		
Chubb	***Leuciscus cephalus***	2		
Dace	***Leuciscus leuciscus***	3		
Eurasian Perch	***Perca fluviatilis***	0		
European eel	***Anguilla anguilla***	1		
Grayling	***Thymallus thymallus***	8		
Minnow	***Phoxinus phoxinus***	100>		
Pike	***Esox lucius***	7		
Roach	***Rutilus rutilus***	0		
Stone loach	***Noemacheilus barbatulus***	1		
Trout	***Salmo trutta***	0		

Details of catch per run for Annex II species

bullheads			salmonids				brook lamprey				sea lamprey			
Run A	Run B	Run C	Run A	Run B	Run C		Run A	Run B	Run C	Total/m^2	Run A	Run B	Run C	Total/m^2
Total catch per run			**Total catch per run**				**Total catch per run**							
1	3	2	2					1 (120)						
Fork length / body lengh (mm)			**Fork length / body lengh (mm)**				**Fork length / body length (mm) of lamprey caught in quadrats**				**Fork length / body length (mm) of lamprey caught in quadrats**			
40	40	65	95											
	30	50	105			Q1	0							
	40													
						Q2	0							
						Q3	0							
						Q4	0							
						Q5	0							
						Sw	0							