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Oxford FAS River Habitat and River Corridor Surveys

Final Draft Report

January 2018

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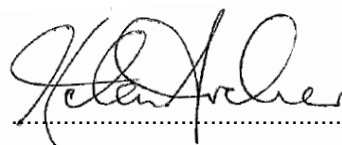
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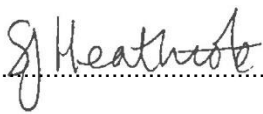
Contract

This report describes work commissioned by Penny Burt, on behalf of the Environment Agency. Robert Harrison and Kimberley Jennings of JBA Consulting carried out this work.

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Purpose

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Abbreviations

EA	Environment Agency
ES	Environmental Statement
FAS	Flood Alleviation Scheme
JBA	Jeremy Benn Associates
JNCC	Joint Nature Conservation Committee
RCS	River Corridor Survey
RHS	River Habitat Survey
SSSI.....	Site of Special Scientific Interest
WFD.....	Water Framework Directive

1 Introduction

1.1 Background

JBA Consulting was commissioned by the Environment Agency (EA) to undertake a River Habitat and River Corridor surveys as part of the Oxford Flood Alleviation Scheme (FAS) on the outskirts of the City. There are no specific development plans yet and therefore this commission is intended to highlight the likely geomorphological constraints to development and/or scope for enhancements to the surveyed watercourses.

The aim of this report is to present the findings of the River Habitat and River Corridor surveys along the surveyed reaches (as shown in Figure 1-1, overleaf). The findings will feed into the Water Framework Directive (WFD) Assessment and Environmental Statement for the Oxford Flood Alleviation Scheme, which are due to be written Summer 2017.

1.2 Site Location

The surveyed area of Oxford is located on the outskirts of the City and follows a number of watercourses (including: Wytham Stream, Bulstake Stream, Hinksey Stream, Hogacre Ditch, Eastwyke Ditch, Weirs Mill Stream and Hinksey Stream) flowing west of Oxford, Oxfordshire (see Figure 1-1).

Each of these watercourses is a tributary of the River Thames. They are surrounded by an agricultural landscape fringed with smaller settlements/suburbia. Notable sites nearby include Oxford Meadows Special Area of Conservation (SAC), Wytham woods Site of Special Scientific Interest (SSSI) to the North and Iffley Meadows SSSI to the South of the survey area.

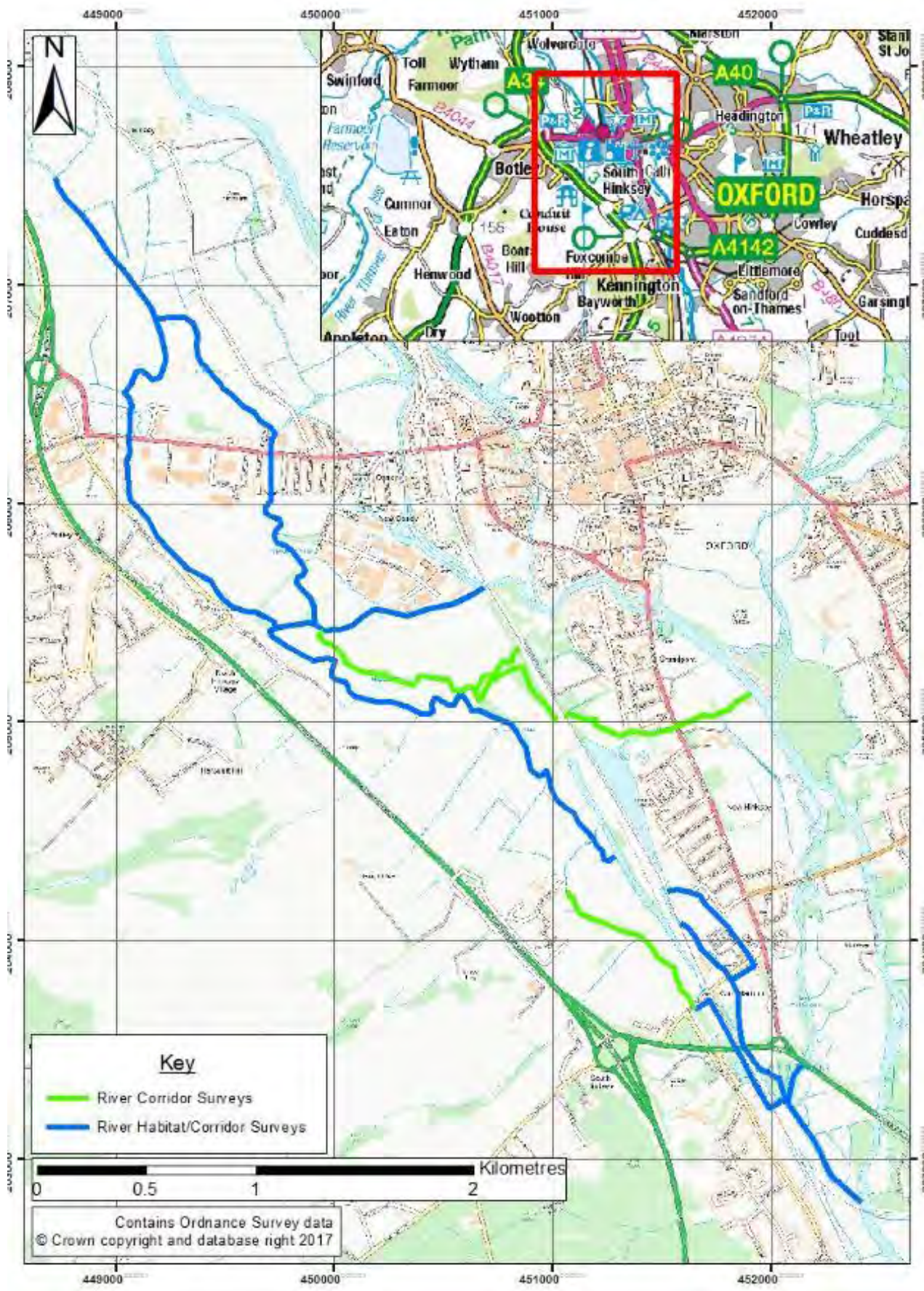


Figure 1-1: Location of surveyed extent at Oxford

2 Methodology

2.1 Overview

As per Figure 1-1, the relevant sections of the surveyed reach were assessed using either the River Habitat or River Corridor methodology or both. Both surveys were undertaken between 15-19th May by an EA Accredited River Habitat Surveyor and an experienced ecologist.

2.2 River Habitat Survey

A 500m section of river was identified within each 'River Habitat Survey' area, as dictated by the Environment Agency. For each 500m section, ten evenly spaced spot checks were made focusing on the channel and banks with wider observations of the surrounding geomorphology.

Features recorded include:

- floodplain features,
- valley shape,
- hydrology,
- vegetation character,
- channel modifications,
- channel substrate, l
- and-use(s),
- Geomorphological features including point bars (and whether these were vegetated), riffles, artificial features, pools, channel height, depth and width.

The presence/absence/number and extent of these features was recorded within a 500m length. Any additional features, not included in the spot checks, were recorded in a 'sweep up' assessment' at the end. The location of the start of each 500m reach was accurately recorded using a GPS device and an overview of each section is presented in Appendix B.1. Any rare features were also highlighted. The survey was conducted by an accredited surveyor (Environment Agency, 2003).

2.3 River Corridor Survey

The River Corridor Survey divided all sections of the survey area into approximately 500m sections, which were then individually mapped. An overview of map of survey sections is presented in Appendix A.1. The following features and their relative positions were recorded on pre-prepared survey maps. Features were sub-divided into the following:

- aquatic zone,
- marginal zone,
- bank zone and
- adjacent land zone; characterised by habitat types and land use.

Where plant communities were identified, individual species were named, and highlighted where rare or problematic (this is especially important in habitat linked to the river e.g. fen).

The adjacent land zone was mapped to the JNCC Handbook for Phase 1 Habitat Survey (JNCC, 2010). For each survey section, a cross-section of the channel was sketched, showing depth of water etc. Likewise, for every survey section, dominant species for each zone were recorded (National Rivers Authority, 1992). Photographs were used to support these observations (Appendix C.1).

Any signs of protected, notable and/or non-native species were also recorded.

2.3.1 Survey Limitations

Some areas were difficult to access due to dense vegetation cover and the presence of temporary camp sites.

During the survey period, there was one day of heavy rainfall which made water levels, geomorphological features and macrophytes species difficult to identify and assess.

3 Results

3.1 General

The survey sections were not assessed from any particular bank, but where access was possible. It was possible in many cases to map features and land use adjacent to the opposite banks from the surveyed bank.

The results are presented in Figures 3-1 to 3-26 and annotated with standard symbols and definitions of features as they appear in Chapter 7; Volume II Appendix 7.7 (Standard RCS symbols) and 7.8 (Standard RCS Definitions of Features), which are given in Appendix A.2.

3.1.1 Habitat Description: Wytham and Seacourt Stream

The upper section of the watercourse contained a moderate flow at the time of the survey. The channel is predominantly straight, approximately 9m wide from banktop to banktop and lacks any significant geomorphological changes or diversity. No features such as riffles, pools, or vegetated islands were recorded. The banks are incised in the upper sections and the bank toe is noticeably bare. The banks are heavily shaded with Crack-willow *Salix fragilis* being the most dominant tree species present. Hawthorn *Crataegus monogyna* and Black Poplar *Populus nigra ssp.* are also present in this reach.

The understory flora is dominated by extensive stands of Himalayan Balsam *Impatiens glandulifera* interspersed with Nettle *Urtica dioica*, Broad-leaved Dock *Rumex obtusifolius*, Yellow Iris *Iris pseudoacorus*, Comfrey *Symphytum officinale* and Burdock *Arctium lappa*.

Macrophytic vegetation consisted of Reed Sweet-grass *Glyceria maxima*, Common Reed *Phragmites australis*, Branched Bur-reed *Sparganium erectum* and Unbranched Bur-reed *Sparganium emersum* with stands of Club rush *Schoenoplectus lacustris* and occasional Water Mint *Mentha aquatica*.

The wider landscape on the western side of the watercourse is mainly arable with hedgerow boundaries. The eastern side of the watercourse is primarily grassland meadows with sedge beds along drainage ditches.

A Badger *Meles meles* sett and latrine was recorded within this survey area. Numerous Banded Demoiselle *Calopteryx splendens* were also recorded.

The lower section of the watercourse (below Botley Road Bridge) comprises reinforced banks lined with scrub vegetation containing Crack-willow, Ash *Fraxinus excelsior* and Alder *Alnus glutinosa*. Within the channel, Yellow Water-lily *Nuphar lutea* and Unbranched Bur-reed are abundant, with Nettle and Himalayan Balsam still present on the banks. Marginal vegetation comprises Water Forget-me-not *Myosotis scorpioides*, Gypsywort *Lycopus europaeus*, Bittersweet nightshade *Solanum dulcamara* and Comfrey.

3.1.2 Habitat Description: Botley Stream

Botley Stream diverges from Wytham Stream and is similar geomorphologically. The channel is approximately 9m wide from banktop to banktop with a water depth of up to 1m. The flow was moderate at the time of the survey. No features such as riffles, pools, or vegetated islands were recorded. The banks were not heavily shaded but occasional trees and scrub were present on the banktop, mainly Crack-willow, Hawthorn and Dog-rose *Rosa canina*. The northernmost section of the watercourse only is shaded by overhanging Crack-willow and Hawthorn.

There is active erosion present occasionally, with bare steep banks present, some of which have subsided and re-vegetated. Dredging debris were noted adjacent to a Golf Course with occasional stands of Japanese Knotweed *Fallopia japonica* recorded. Areas of the watercourse are embanked and colonised by ruderal and scrub species such as Bramble *Rubus fruticosus*, Nettle, Broad-leaved Dock, Cleavers *Galium aparine*, Hops *Humulus sp.* and Great Willowherb *Epilobium hirsutum*.

Further along Botley Stream, towards Botley itself, the watercourse becomes more shaded by treelines. Yellow Water-lily is still present within the channel; however, the banks are reinforced within this section of the reach behind the housing and supermarket.

Macrophytic vegetation recorded in this reach includes Reed Canary-grass *Phalaris arundinacea*, and Reed Sweet-grass within the watercourse margins with Yellow Water-lily present in the channel.

The wider landscape on the western side of the watercourse is primarily grassland meadows, whilst the eastern side of the watercourse is in amenity use.

Other protected species recorded include, Blue Tit *Cyanistes caeruleus*, Swallow *Hirundo rustica*, Blackbird *Turdus merula*, Wren *Troglodytes troglodytes*, Mallard *Anas platyrhynchos*, Perch *Perca fluviatilis* and Trout *Trutta sp.*

3.1.3 Habitat Description: Bulstake Stream

Bulstake Stream is approximately 13m wide from banktop to banktop and was approximately 1.5m deep at the time of the survey with a moderate flow. The channel is not geomorphologically diverse but the watercourse throughout this section does meander. A large pool is located on one meander which provides additional refuge for fish species due to the presence of exposed tree roots, overhanging vegetation and slower flowing water. The substrate is silty in the upper sections with sandy gravels present in the lower sections. The banks are heavily incised in places with an exposed bank toe, or defunct toe piling, present for large stretches. The bankside vegetation is dominated by Nettle, Cleavers, Garlic Mustard *Alliaria petiolata*, Burdock and Common Hogweed *Heracleum sphondylium*.

The uppermost sections of Bulstake Stream are characterised by reinforced banks in relation to housing. Urban debris are also a feature of this watercourse reach. The banktops are vegetated with mature treelines for much of the reach with Crack-willow, Hawthorn, Dogwood *Cornus sanguinea*, Field Maple *Acer campestre* and Alder present.

In-channel and marginal vegetation comprises of Reed Sweet-grass, Branched Bur-reed, Club Rush, Yellow Water-lily and Bottle Sedge *Carex rostrata*. One stand of Hemlock Water Dropwort *Oenanthe crocata* was also recorded.

Himalayan Balsam is present within this reach on both banks.

Kingfisher *Alcedo atthis* was recorded in this reach.

3.1.4 Habitat Description: Hinksey Stream (from North Hinksey to Railway)

Hinksey Stream is a relatively straight watercourse and contains occasional meanders. The channel is not geomorphologically diverse but a small riffle section was recorded. No other features such as pools, or vegetated islands were recorded. The watercourse is approximately 10m wide from banktop to banktop and contained a moderate flow at the time of the survey.

The upper section of Hinksey Stream is located within grassland fields, some of which are managed meadows, others are grazed. The bankside vegetation comprises of a combination of scrub and mature trees, with ruderal vegetation. Species present include Nettle, Spear Thistle *Cirsium vulgare*, Hard Rush *Juncus inflexus*, and Bramble.

The lower section of Hinksey Stream, towards the railway, is more shaded in places by a Willow dominated canopy containing occasional Poplar *Populus spp.*. The watercourse in the lower reaches is wider with lower graded banks, which are almost berm-like. Marginal species present include Meadowsweet *Filipendula ulmaria*, Bottle Sedge, Common Reed, Bitter Nightshade, Brooklime *Veronica beccabunga* and occasional Purple Loosestrife *Lythrum salicaria*.

In-channel and marginal species recorded across the reach include Common Water Starwort *Callitriche stagnalis*, Branched Bur-reed, Floating Sweet-grass *Glyceria fluitans*, Club Rush and occasional Water Forget-me-not, Reed Sweet-grass and Water Mint. The green algae, *Cladophora sp.* was also recorded.

Himalayan Balsam is present throughout the reach and a raft of Ornamental Lily was also recorded.

Evidence of Otter *Lutra lutra* in the form of a spraint was recorded in this reach.

3.1.5 Habitat Description: Hinksey Stream (from Railway to Thames)

Hinksey Stream, from the railway through Cold Harbour, is reinforced across large stretches as it flows immediately adjacent to housing and infrastructure. Consequently, the watercourse is narrower. The watercourse is trapezoidal in nature, and is heavily shaded in places, predominantly by Crack-willow.

In-channel vegetation comprises of Various-leaved Water Starwort *Callitriche platycarpa*, Common Water Starwort, Duckweed *Lemna minor*, Yellow Flag Iris, Water Mint and Yellow Water-lily. Rafts

of filamentous algae were also noted. Marginal species include Bottle Sedge, Reed Sweet-grass, Fool's Watercress *Apium nodiflorum*, Meadowsweet and Water Forget-me-not.

The banks were dominated by ruderal species including Nettle, Bramble, Garlic Mustard, Great Willowherb and Cleaver.

Occasional Snowberry *Symphoricarpos albus* was recorded and Himalayan Balsam is still present in this reach.

3.1.6 Habitat Description: Hogacre Ditch

The upper section of Hogacre Ditch was dry at the time of the survey. However, the ditch became wetter but with minimal flow towards the rail line. The upper sections of the ditch are heavily shaded and are dominated by Himalayan Balsam along the understory.

The watercourse towards the rail line is heavily shaded with little in-channel vegetation present. The banks comprise of ruderal species and areas of the drain which were not shaded were instead choked by Common Reed.

3.2 RCS Survey Sections

3.2.1 RCS Section 1: Wytham / Seacourt Stream SP487074 - SP490070

The watercourse in Section 1 had sandy substrate riverbed material and the aquatic zone was not considered to be species-rich in this section. Only occasional Club Rush *Schoenoplectus lacustris* stands were recorded and Yellow Water-lily *Nuphar lutea* was considered to be rare in Section 1.

The surrounding land use was mainly pasture (permanent grassland fields which are grazed). The left bank in particular was heavily tree-lined by mature Crack-willow *Salix fragilis* trees, some of which are overhanging the watercourse. Himalayan Balsam *Impatiens glandulifera* is present in the understory of the left bank, with other ruderal species including Common Nettle *Urtica dioica*, Common Comfrey *Symphytum officinale* and Yellow Iris *Iris pseudacorus* also present.

The right bank supported a dense stand of the invasive non-native species Himalayan Balsam and lacks tree cover in this section. Other species present on the bank included Reed Canary-grass *Phalaris arundinacea* and Bittersweet *Solanum dulcamara*. The watercourse appeared to have been dredged historically and therefore the right bank is now an embankment. The embankment had slipped and was eroding in places. Consequently, along the right bank there was no marginal vegetation present.

The surrounding fields on both banks were divided by fencelines and hedgerows comprising of Hawthorn *Crataegus monogyna* with Bramble *Rubus fruticosus*. On the left bank, hedgerows also contained trees including Crack-willow and Black Poplar *Populus nigra*. The surrounding area also contained numerous drainage ditches. These were dry at the time of the survey.

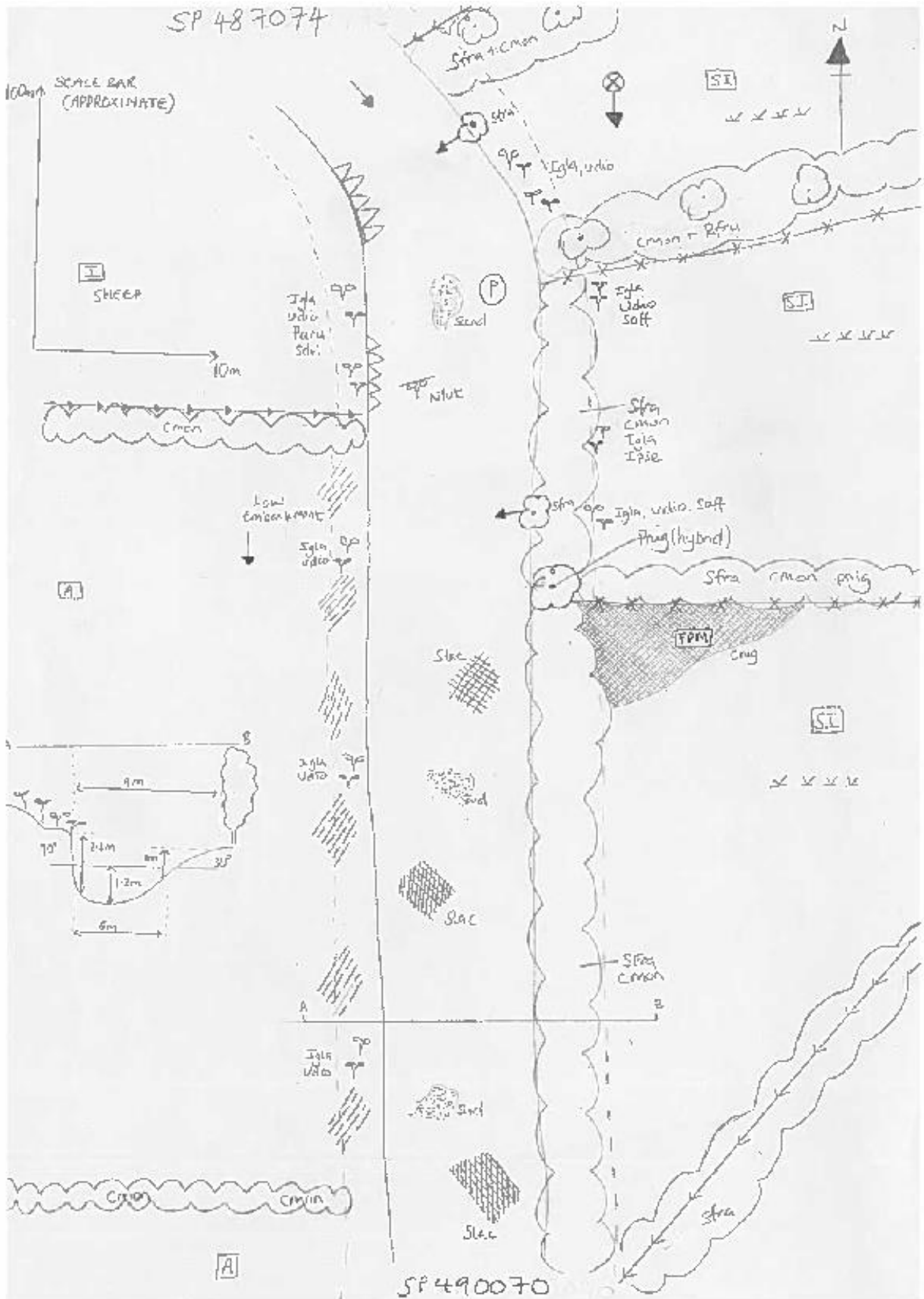


Figure 3-1: RCS Section 1 (SP487074 - SP490070)

3.2.2 RCS Section 2: Wytham / Seacourt Stream SP490070 - SP492066 & SP492068

The aquatic zone within Section 2 contained stands of reedbed with Club Rush, Unbranched Bur-reed *Sparganium emersum*, Reed Sweet-grass *Glyceria maxima* and Common Reed. These species occurred in stands together throughout the reach, although occasional single-species stands of Branched Bur-reed and Common Reed were also present. The marginal zone within this lower part of Section 2 was lined with Reed Sweet-grass, which was encroaching into the channel in places. Yellow Water-lily and Water Mint *Mentha aquatica*, were present but rare in abundance. The substrate throughout this section was a combination of sand and mud.

The bank zone on the left bank was dominated by a mature treeline of Crack-willow, which were noted to be occasionally overhanging the watercourse. The understory was comprised predominantly of ruderal species including Common Nettle, Wild Angelica *Angelica sylvestris*, Cleavers *Galium aparine*, Creeping Buttercup *Ranunculus repens* and Cow Parsley *Anthriscus sylvestris*. Greater Pond Sedge *Carex riparia* and Yellow Iris were also occasionally present on the left bank.

The right bank was heavily colonised by the invasive, non-native species Himalayan Balsam and lacks tree cover in this section with only sporadic Hawthorn bushes present. Other species present on the right bank included Common Nettle (which is dominant), Bittersweet and Common Reed. The right bank was still embanked within the first third of this section, where the watercourse has been straightened. The banks here were considered good habitat for Water Vole.

Himalayan Balsam was abundant within the marginal and bank zone on both banks of the watercourse in this section.

Botley Stream diverges from the main watercourse at SP 49192 06848. The stream had a high earth bank on the right bank initially, however both banks were then subsequently dominated by mature Crack-willow cover, with exposed roots and a ruderal understory to SP492068.

The adjacent land use on the left bank consisted of semi-improved grassland fields which are periodically grazed. The land use adjacent to the right bank was arable with fences and occasional sub-mature Hawthorn with saplings present.

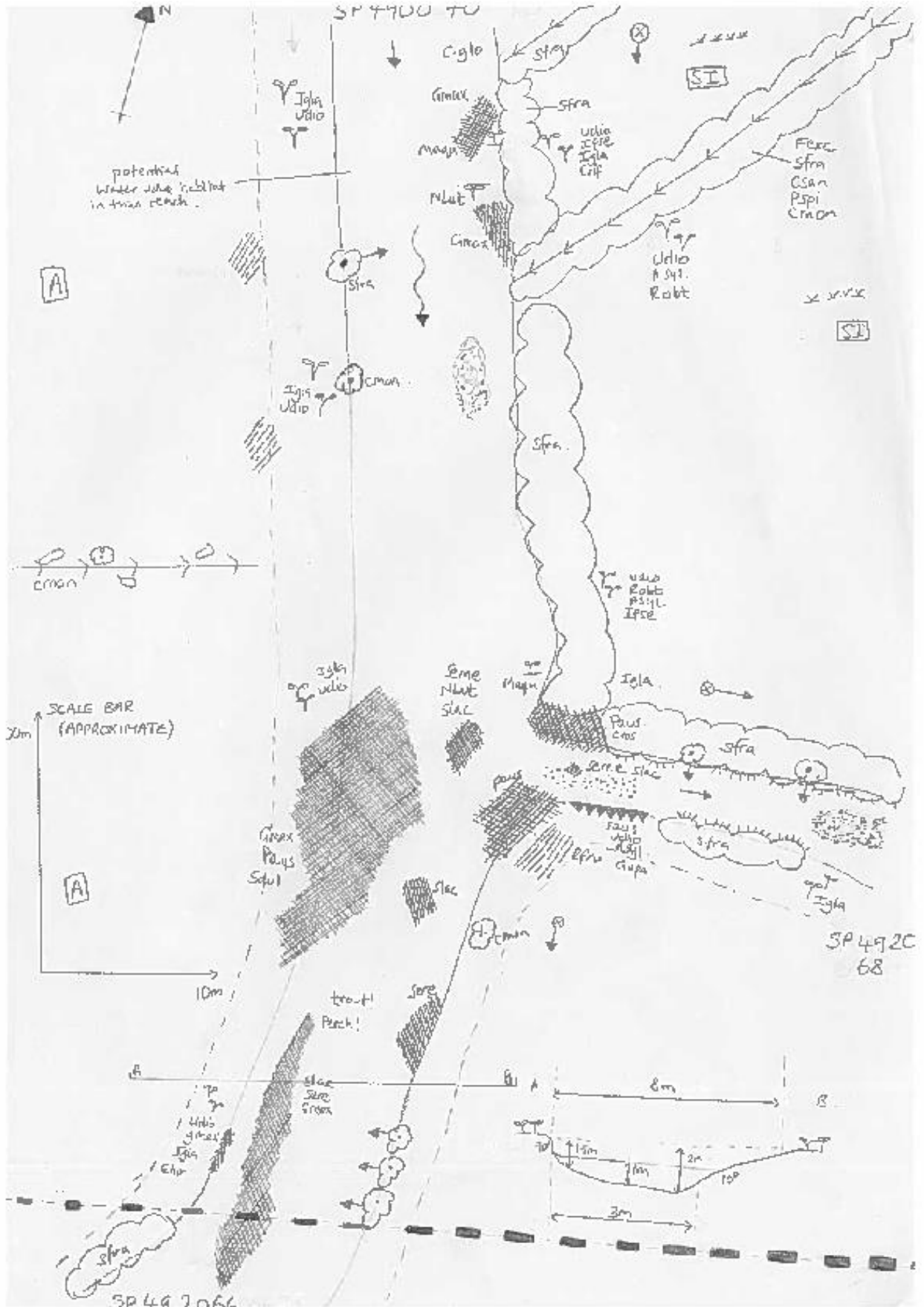


Figure 3-2: RCS Section 2 (SP490070 - SP492066 & SP492068)

3.2.3 RCS Section 3: Wytham / Seacourt Stream SP492066 - SP490062

The aquatic zone within Section 3 contained several stands of Club Rush and Reed-Sweet-grass within the channel. The marginal zone within this upper part of Section 3, was lined with Reed Sweet-grass. Towards the A420 road bridge, Yellow Water-lily and Unbranched Bur-reed became increasingly dominant with Gipsywort *Lycopus europeaus* and Water Forget-me-not *Myosotis scorpioides* present after the bridge. Large stands of Reed Sweet-grass were also dominant after the road bridge on the right bank.

The right bank was heavily treelined with mature Crack-willow and occasional Hawthorn for approximately 200m from SP492066. The surrounding land use on the right bank was urban with many buildings and a carpark present in the vicinity of the watercourse. Where the land was open on this side of the watercourse, it was dominated by ruderal species and scattered Bramble scrub. Before the A420 road bridge, the land use was dominated by an area of Hawthorn scrub, ruderal vegetation and broadleaved woodland areas comprising of Crack-willow and Hawthorn. After the road bridge, wooded areas consisted of Crack-willow, Alder *Alnus glutinosa*, and Horse Chestnut *Aesculus hippocastanum* with improved, amenity grassland habitats.

The left bank of the watercourse was open in the upper sections as the surrounding land use was arable. Towards the road bridge, the land use changed and the banks were dominated by Hawthorn and Crack-willow. The wider area contained intact Hawthorn hedges. After the road bridge, there was an industrial estate located on the left bank. The bankside habitat was much reduced with overhanging trees (Crack-willow and Silver Birch *Betula pendula*) and tall ruderal vegetation present.

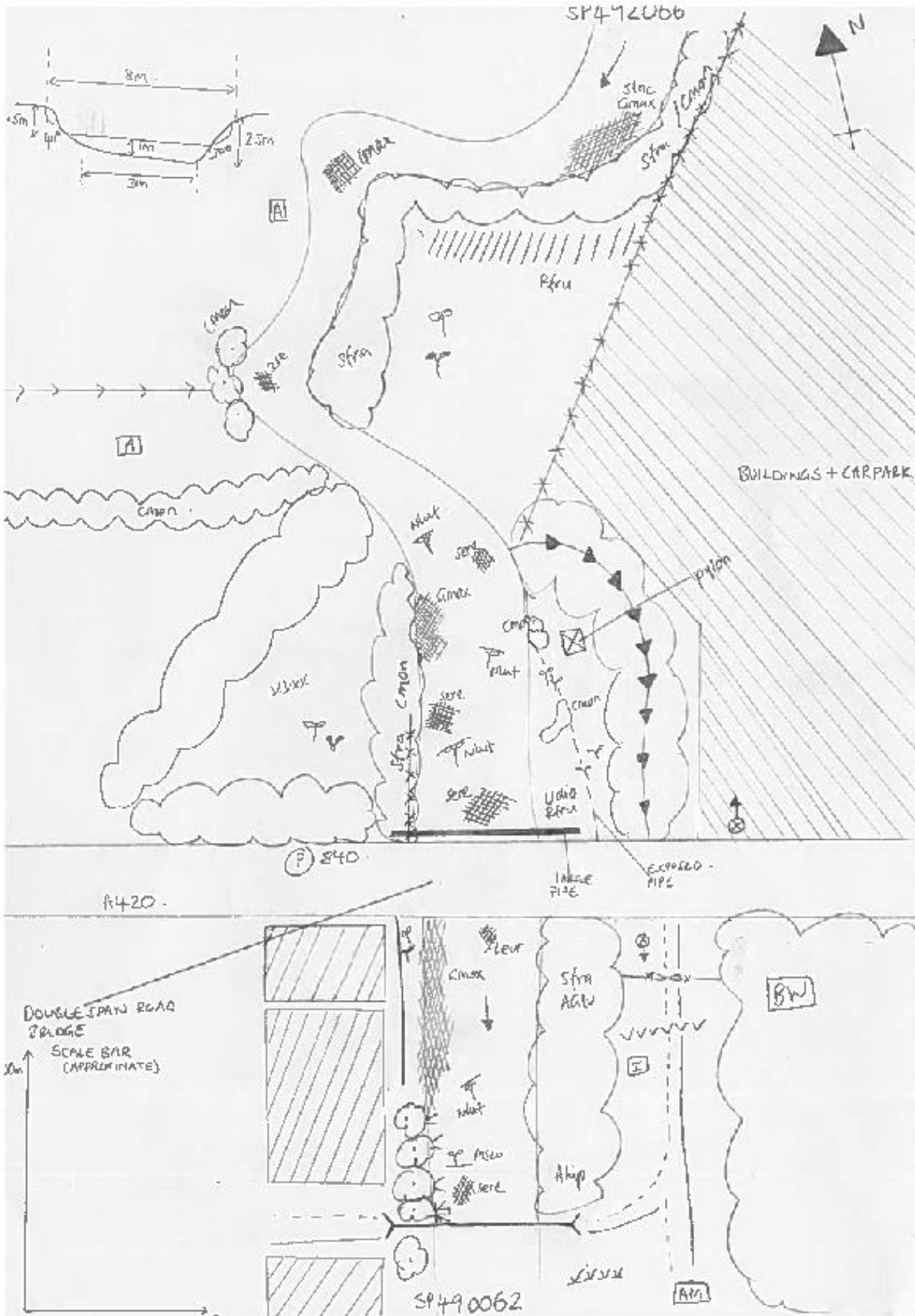


Figure 3-3: RCS Section 3 (SP492066 - SP490062)

3.2.4 RCS Section 4: Botley Stream SP 492068 - SP494065

Within the aquatic zone of Section 4, there were several large Reed Sweet-grass beds present and smaller areas covered by submerged Yellow Water-lily. Occasional Unbranched Bur-reed and Common Reed were also present.

The right bank was fenced along the banktop which separates it from the managed hay meadow and driving range. Species present on the bank included occasional scrub and singular mature trees. Crab Apple *Malus sylvestris*, Hawthorn, Crack-willow, Bramble and Dog-rose *Rosa canina* were all present. Ruderal species recorded include Common Nettle, Broad-leaved Dock, Great Willowherb *Epilobium hirsutum*, Cleavers and Meadowsweet *Filipendula ulmaria*. Hops *Humulus lupulus* is present in rare abundance. A drainage ditch connects to the right bank. However, this was dry at the time of the survey and was heavily shaded by pollarded Crack-willow.

The adjacent land use to the left bank was grazed, semi-improved grassland, which is divided by a defunct hedgerow. Within the bank zone, scattered Hawthorn and Crack-willow were present within the northern extent of the section. The bank then became heavily eroded on the meander and an exposed cliff remains. The left bank was higher than the right bank and not as stable, with numerous subsidised areas. The riparian margin on the bank top was large and was dominated by ruderal species such as Common Nettle, Great Willowherb and Cleavers. Occasional Common Reed and Reed Canary-grass were present along the left bank, as well as Crack-willow saplings. Towards the end of the section, the left bank was dominated by Crack-willow trees with dense Bramble in places.

Two stands of the invasive non-native species Japanese Knotweed *Fallopia japonica* were present within Section 4. One was located on the right bank at approximately SP 49374 06778 near to a spoil heap and the other was located on the left bank at approximately SP 49365 06736.

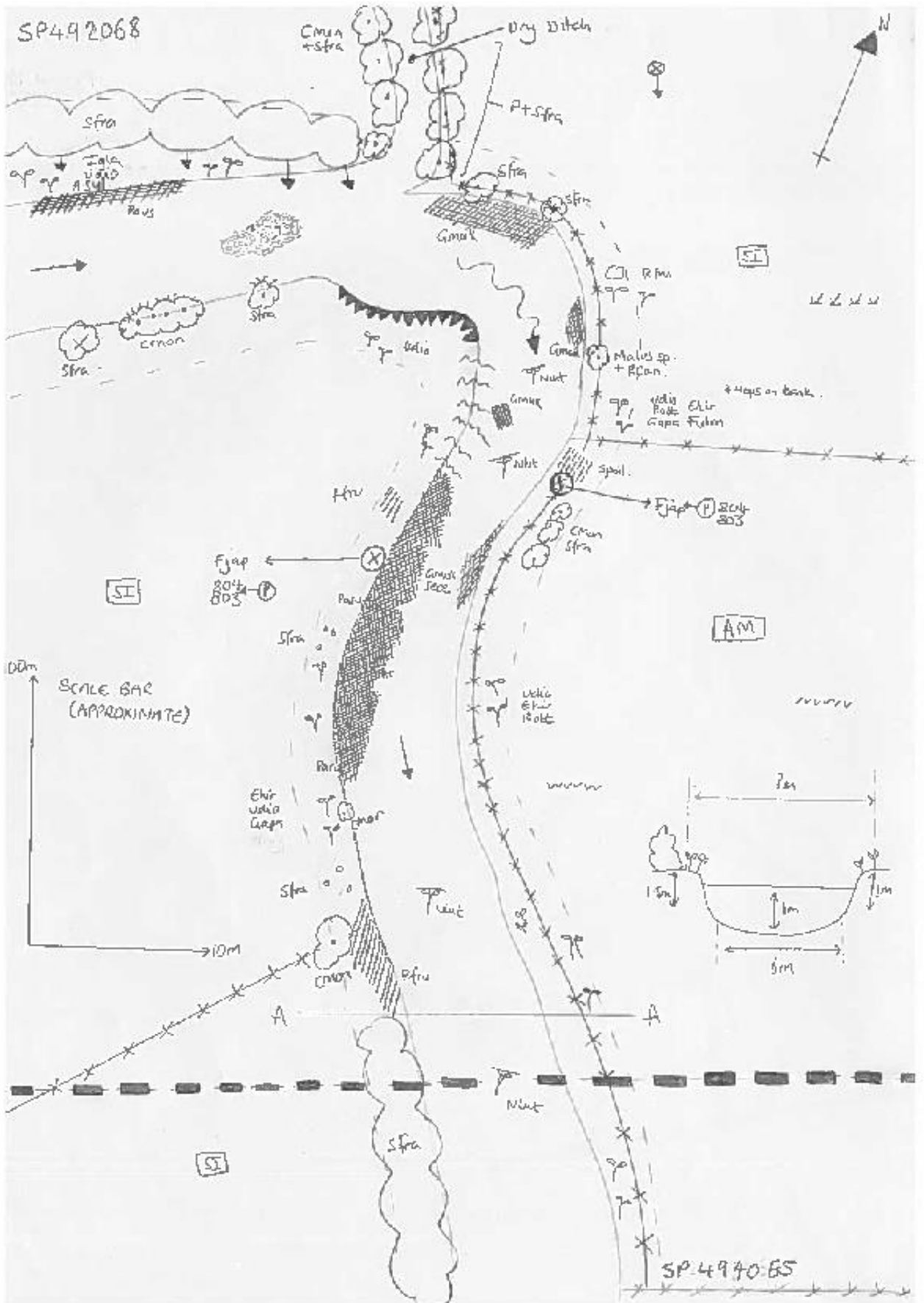


Figure 3-4: RCS Section 4 (SP 492068 - SP494065)

3.2.5 RCS Section 5: Botley Stream - SP494065 - SP495064

The aquatic zone within Section 5 was not very diverse or dense in coverage and comprised Reed Sweet-grass, Branched Bur-reed and Yellow Water-lily.

The bank zone on the left bank was dominated by Crack-willow of varying maturity, with an understory comprised of Cow Parsley, Common Nettle, Creeping Buttercup, Broad-leaved Dock with occasional Reed Sweet-grass and Water Forget-me-not along the bank toe. The left bank was fenced in places. The adjacent land use on the left bank was grazed, semi-improved grasslands, a hay meadow and allotments.

The right bank was fenced and has a small riparian margin. Multi-stemmed Crack-willow and Hawthorn were present sporadically throughout the Section until the southern extent, where woodland becomes dominant both along the bank and within adjacent land parcels. The bank was vegetated by species such as occasional Common Reed, Common Nettle and Water Forget-me-not, with Branched Bur-reed along the toe.

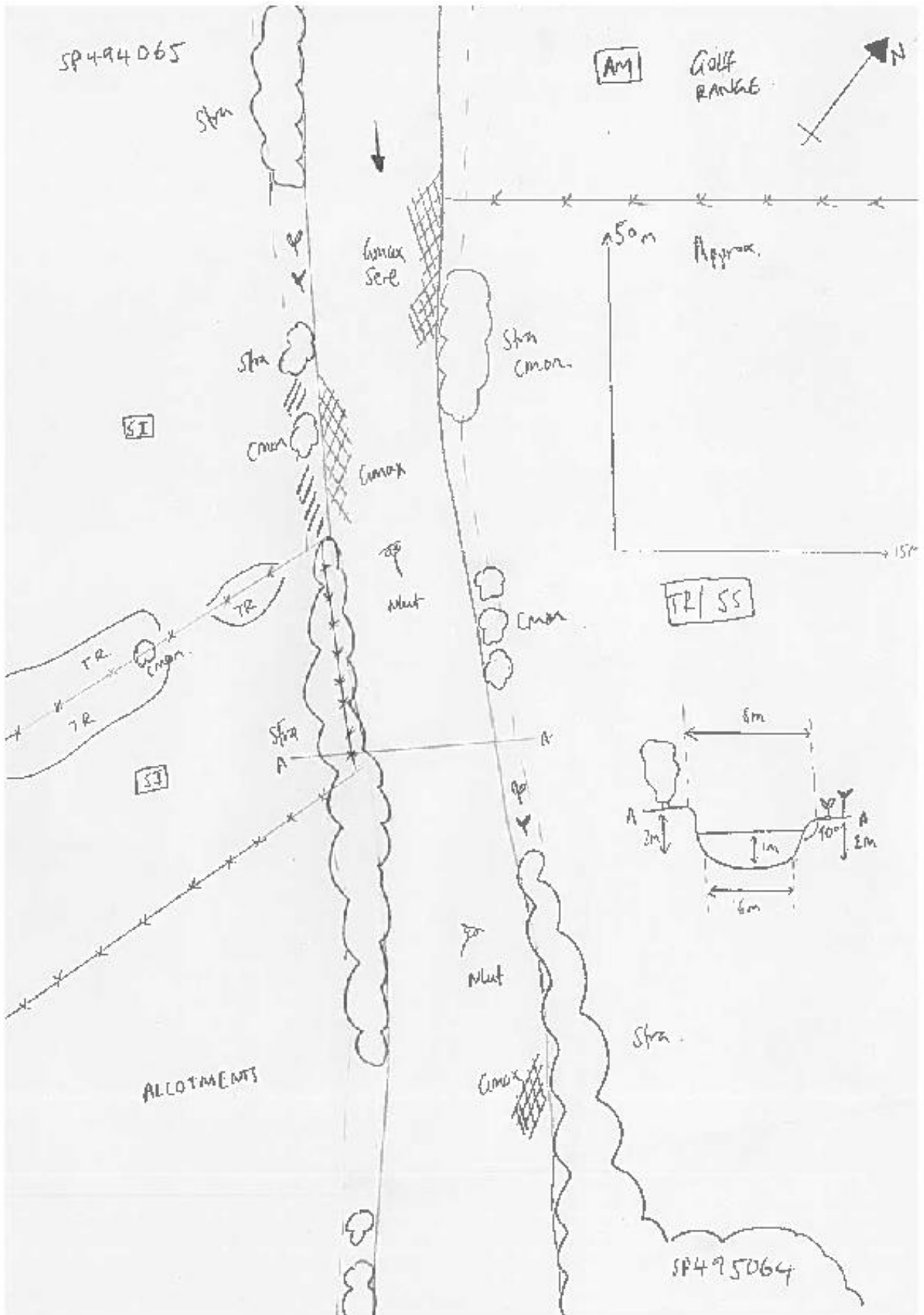


Figure 3-5 RCS Section 5: (SP494065 - SP495064)

3.2.6 RCS Section 6: Botley Stream - SP495064 - SP497060

Section 6 covers the confluence of Botley and Bulstake Streams. The confluence area was dominated by Crack-willow woodland (many of which are overhanging), with a ruderal understory. The adjacent land use to both banks was urban with buildings, private gardens and roads. A brick-built, twin-span road bridge was located across Bulstake Stream in this section and was surrounded by numerous outfalls. Both river banks have been heavily modified to the north of the bridge with concrete retaining walls, leaving areas of exposed bare bank. To the south of the bridge, numerous areas woody debris and garden spoil were recorded within the watercourse. The river banks were reinforced behind the houses. The substrate reflects the urban location of this section, with bricks and debris covered by silt recorded in the watercourse.

The aquatic zone in this section contained submerged Yellow Water-lily, Reed Sweet-grass, Water Forget-me-not and Water-cress *Rorippa nasturtium-aquaticum*. These species were located sporadically within the channel and on a small berm directly to the north of the bridge.

To the north of the bridge the right bank had a limited marginal and bank zone due to the urban location. Tree species present included Horse Chestnut, Poplar saplings, Alder and Crack-willow, with tall herbs including Common Nettle, Great Willowherb and extensive Himalayan Balsam cover. The right bank on the southern side of the bridge was dominated by Crack-willow treelines with occasional Hawthorn behind the houses.

The left bank marginal and bank vegetation was also limited, with overhanging trees present from gardens, including Beech *Fagus sylvatica*, Horse Chestnut, Hawthorn and Crack-willow. Himalayan Balsam and Japanese Knotweed were recorded in this section. Japanese Knotweed was located at approximately SP 49703 06248, to the north of the bridge. Common Nettle and Reed Sweet-grass were also present in limited marginal understory.

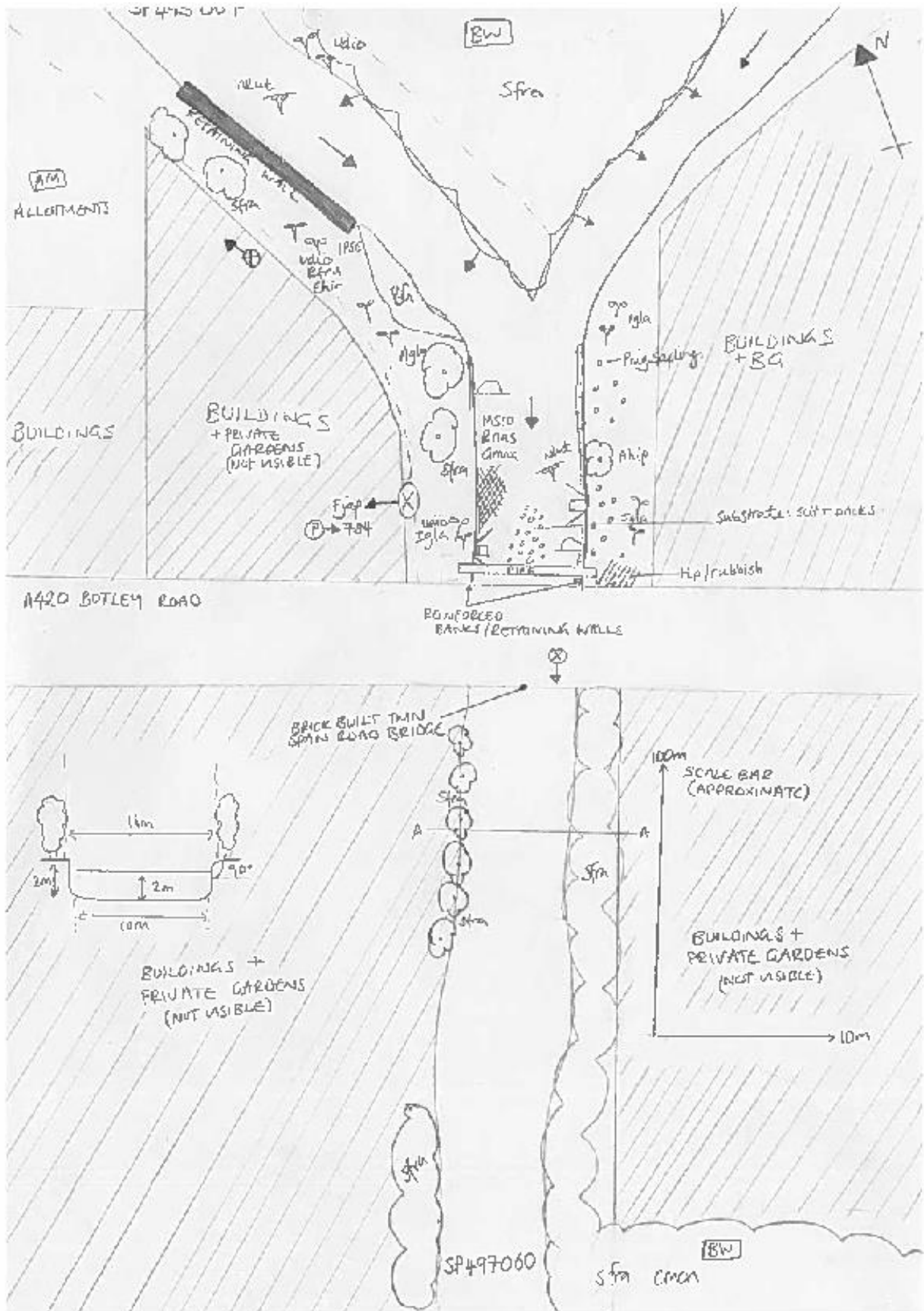


Figure 3-6: RCS Section 6 (SP495064 - SP497060)

3.2.7 RCS Section 7: Bulstake Stream SP497060 - SP499054

Within the aquatic zone of Section 7, submerged Yellow Water-lily, Reed Sweet-grass beds, Club Rush beds and Yellow Iris were all present. One small stand of Water-dropwort *Oenanthe* sp. was noted. The invasive species Zebra Mussel *Dreissena polymorpha* was recorded within the channel. Urban debris in the form of tyres and general rubbish were recorded in the channel.

Numerous trees were present on the right bank including Ash, Field Maple *Acer campestre*, Crack-willow and Alder. Between the two footbridges, the Field Maple treeline was set back and the banks had a small berm. The understory vegetation was dominated by Himalayan Balsam and Common Nettle, Red Campion *Silene dioica*, Cleavers, Common Hogweed *Heracleum sphondylium*, Broad-leaved Dock and Burdock *Articum* sp., with occasional Great Willowherb.

The left bank zone was dominated by Crack-willow woodland initially, with occasional Alder and Dogwood *Cornus sanguinea* trees also present. Himalayan Balsam was dominant in the understory on the right bank. The right bank became less densely-vegetated after the second footbridge and ruderal vegetation cover included Common Nettle, Himalayan Balsam and Great Willowherb. The marginal zone was eroding in places with bare bank cliffs present as well as defunct wooden toe piling.

The adjacent land use was mainly grassland fields, with improved grassland to the right bank and semi-improved grassland fields, with some urban areas, adjacent to the left bank.

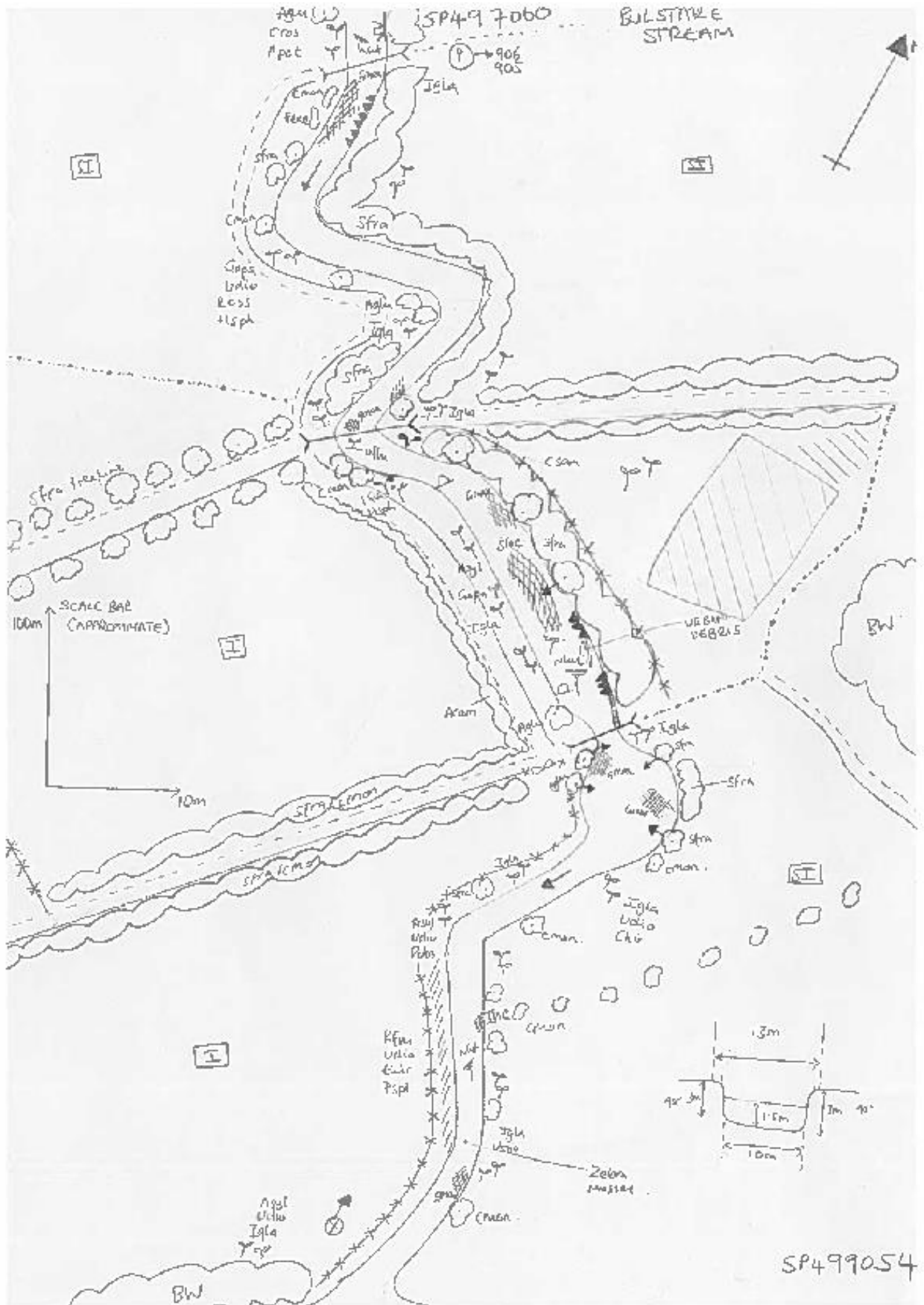


Figure 3-7: RCS Section 7 (SP497060 - SP499054)

3.2.8 RCS Section 8 Wytham / Seacourt Stream - SP490062 - SP492057

The aquatic zone within Section 8 was heavily shaded from the left bank and consequently only sporadic small stands of Water Forget-me-not, Branched Bur-reed and Spiked Water-milfoil *Myriophyllum spicatum* were recorded. Garden escapees Waterleaf *Hydrophyllum* sp. and Periwinkle *Vinca* sp. were recorded in the watercourse by the allotments. Trout were also recorded in the channel.

The left bank marginal vegetation was dominated by Great Willowherb, Pendulous Sedge *Carex pendula* and Branched Bur-reed. Purple Loosestrife *Lythrum salicaria* occurred sporadically. Common Nettle, Ribwort Plantain *Plantago lanceolata*, Broad-leaved Dock, Garlic Mustard *Alliaria petiolata* and Cleavers were all present on the left bank top. The banks were shaded by a dense tree line of Crack-willow, Alder, Silver Birch with occasional Bramble. The surrounding land use from the left bank was short improved (amenity) grassland.

The right bank was heavily modified as the immediate land use is urban with an industrial estate, housing and allotments all in close proximity to the watercourse. Consequently, several outfalls were noted on the right bank. Some trees were present on the bank top including Crack-willow and Hawthorn. However, little bankside and marginal vegetation was present on the right bank as it was reinforced in places, or was a vertical, bare bank lacking vegetation cover.

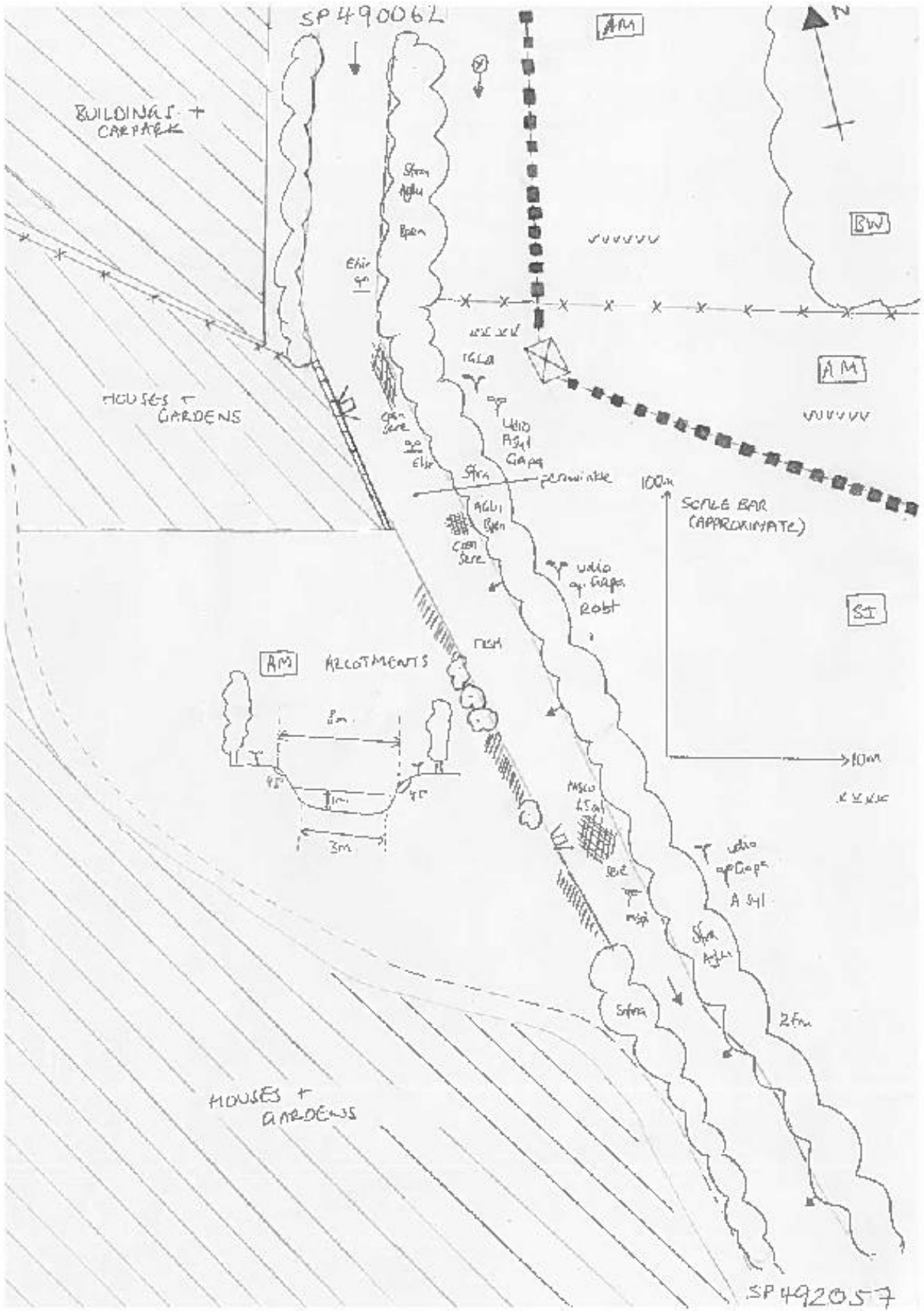


Figure 3-8: RCS Section 8 (SP490062 - SP492057)

3.2.9 RCS Section 9 Wytham / Seacourt Stream - SP492057 - SP497054

A small brick built bridge which carries a track over the river is located in the middle of Section 9. The right bank on the downstream side of the bridge has been reinforced. A small footbridge is located further downstream at approximately SP 49649 05499 and forms part of a public footpath. During the surveys, only several small stands of Water Forget-me-not and Reed Sweet-grass were present within the aquatic zone of Section 9, with submerged Yellow Water-lily only recorded on the downstream side of the bridge. At the southernmost part of Section 9, Wytham / Seacourt Stream joins Hinksey Stream.

The left bank of Section 9 was heavily shaded, mostly by Crack-willow. Other species present included Alder, Hawthorn, Ash and Sycamore *Acer pseudoplatanus*. The bank top ground-flora in this section was dominated by Himalayan Balsam, with other common ruderal species present including Common Nettle, Broad-leaved Dock, Creeping Buttercup, Cleavers, Wild Angelica and Great Willowherb.

The left bank was surrounded by a large area of publicly-accessible semi-improved grassland, with mature treelines of Crack-willow present along paths and tracks in the wider vicinity. Several smaller fenced fields used for horse and cattle grazing were adjacent to the left bank and were species-poor semi-improved, or improved, grassland. The smaller fields contained Hawthorn hedgerows with trees. These fields were fenced off from the river, except for a cattle drink located at approximately SP 49619 05506.

The right bank was less shaded than the left, with mature planted Crack-willow located on the bank top. The wider land use adjacent to the right bank was urban with houses, private gardens and other buildings backing on to the river. There was a small area of marshy grasslands to the north of the bridge. The vegetation within the bank zone on the left bank was dominated by Himalayan Balsam.

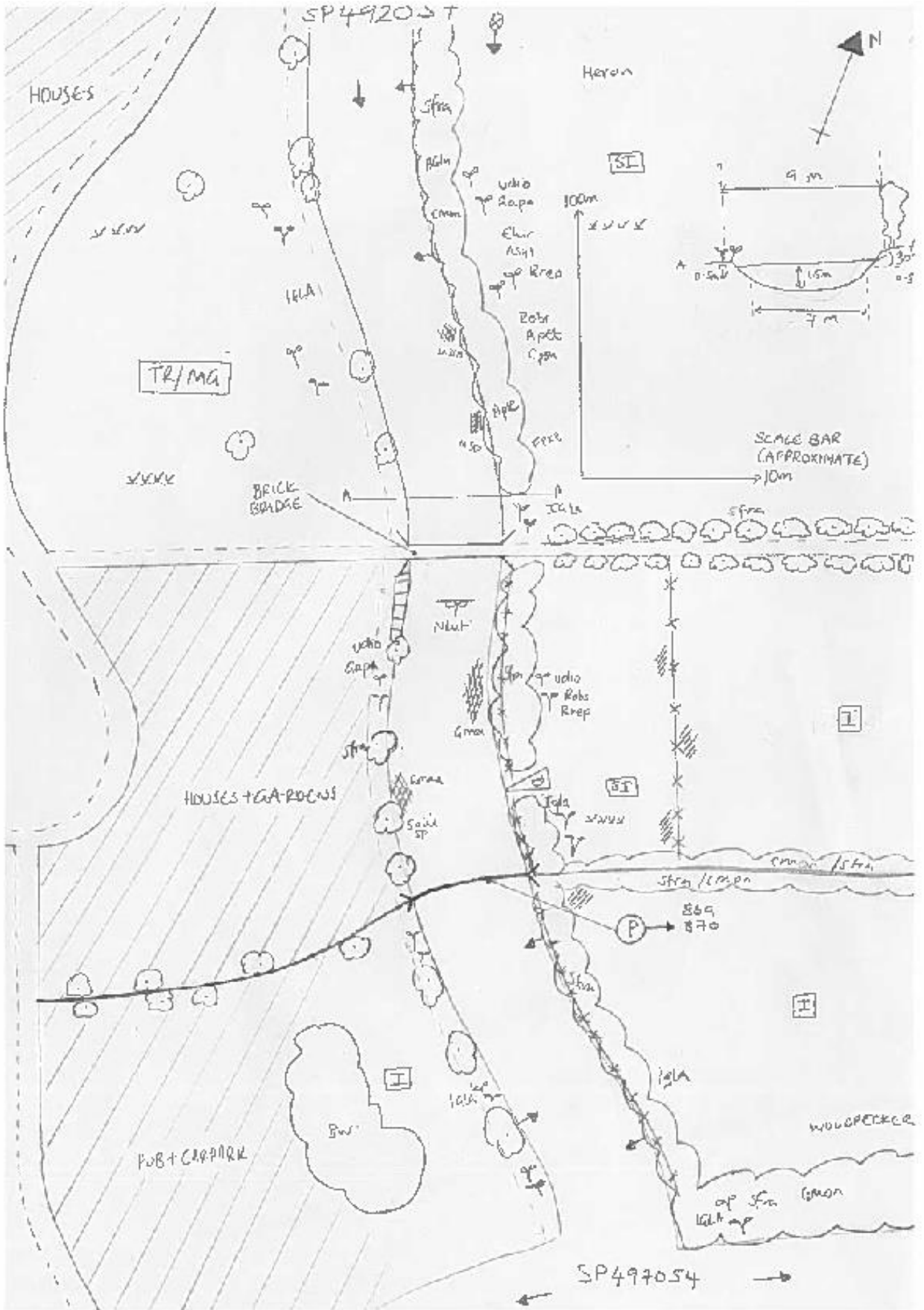


Figure 3-9: RCS Section 9 (SP492057 - SP497054)

3.2.10 RCS Section 10: Hinksey Stream SP497054 - SP501051

Within the aquatic zone of Section 10, Yellow Water-lily was recorded and a large Bulrush *Typha latifolia* reedbed which is blocking the channel. Sporadic Branched Bur-reed and Reed-Sweet grass were recorded along the river margins, but not in abundance. Upstream of the reedbed, a riffle was present, close to a small footbridge located at approximately SP 49735 05374.

The left bank was relatively open, with only a few trees present, including Crack-willow and Hawthorn, along the majority of the section. The upstream extent was heavily wooded by Crack-willow. Both Crack-willow and Hawthorn saplings were noted along the bank top throughout the section. Himalayan Balsam was abundant on the left bank, with Common Nettle and Broad-leaved Dock regularly recorded.

The right bank was tree-lined along the upstream extent to the footbridge and downstream of the meander with overhanging Crack-willow. Himalayan Balsam was also present on the right bank. The wider land use adjacent to the right bank included improved and semi-improved grassland fields intersected by small drainage ditches.

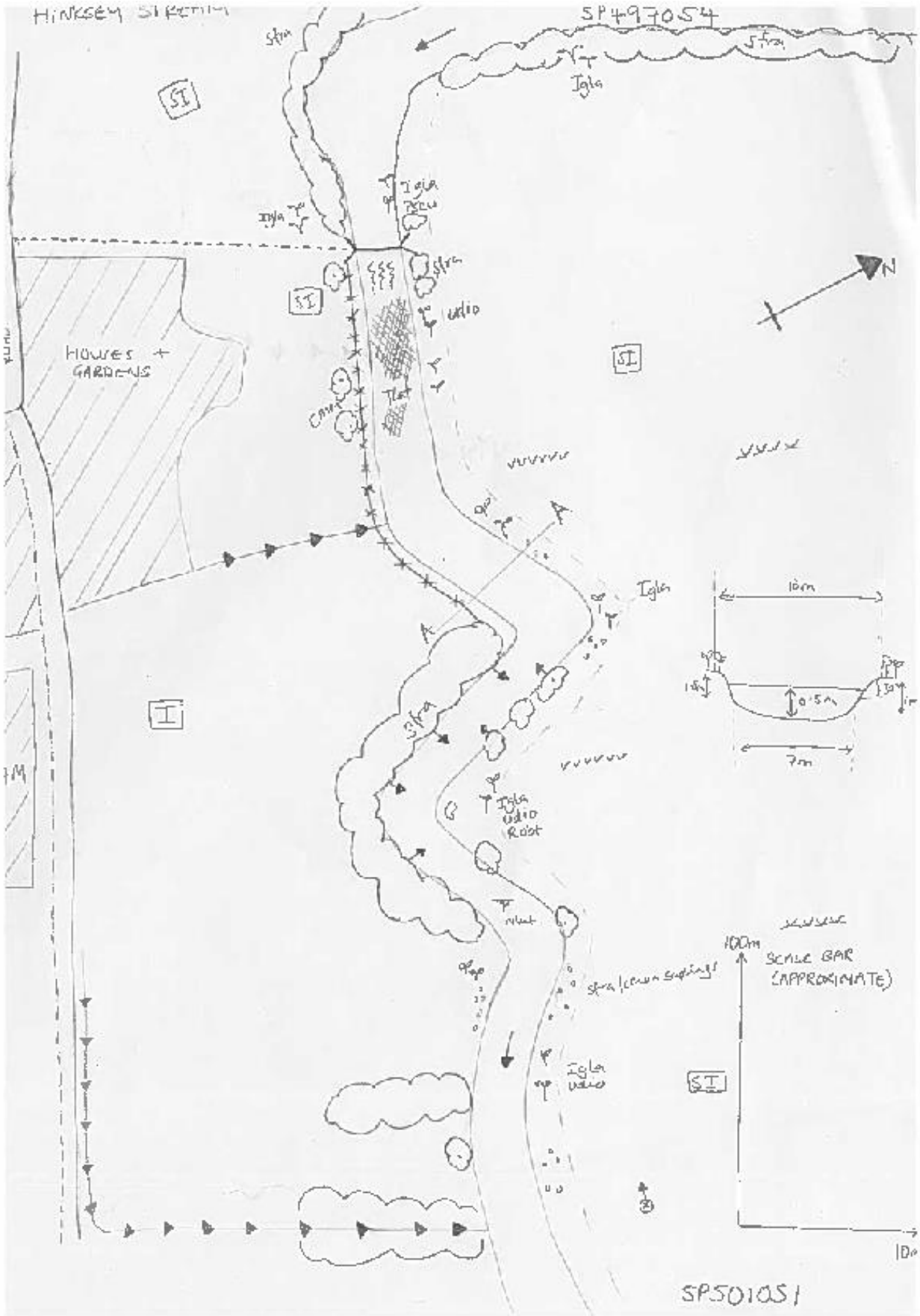


Figure 3-10: RCS Section 10 (SP497054 - SP501051 Hinksey Stream)

3.2.11 RCS Section 11: Hinksey Stream SP501051 - SP505050

Trees and scrub were present along the left bank with Crack-willow and Hawthorn being the most dominant tree species. Goat Willow *Salix caprea* and Sycamore were also present. Scrub species recorded include Guelder-rose *Viburnum opulus*, Blackthorn *Prunus spinosa* and Dog-rose. Both Crack-willow and Hawthorn saplings were noted along the bank top throughout the section.

The right bank was heavily tree-lined with overhanging Crack-willow and occasional Hawthorn. The wider land use adjacent to the right bank includes improved and semi-improved grassland fields intersected by intact Hawthorn hedgerows. The fields are used for sheep grazing and are fenced. A single span track bridge crosses the river at approximately SP 50549 05094.

Within the aquatic zone of Section 11, Yellow Water-lily, Water Mint and Water Forget-me-not were recorded.

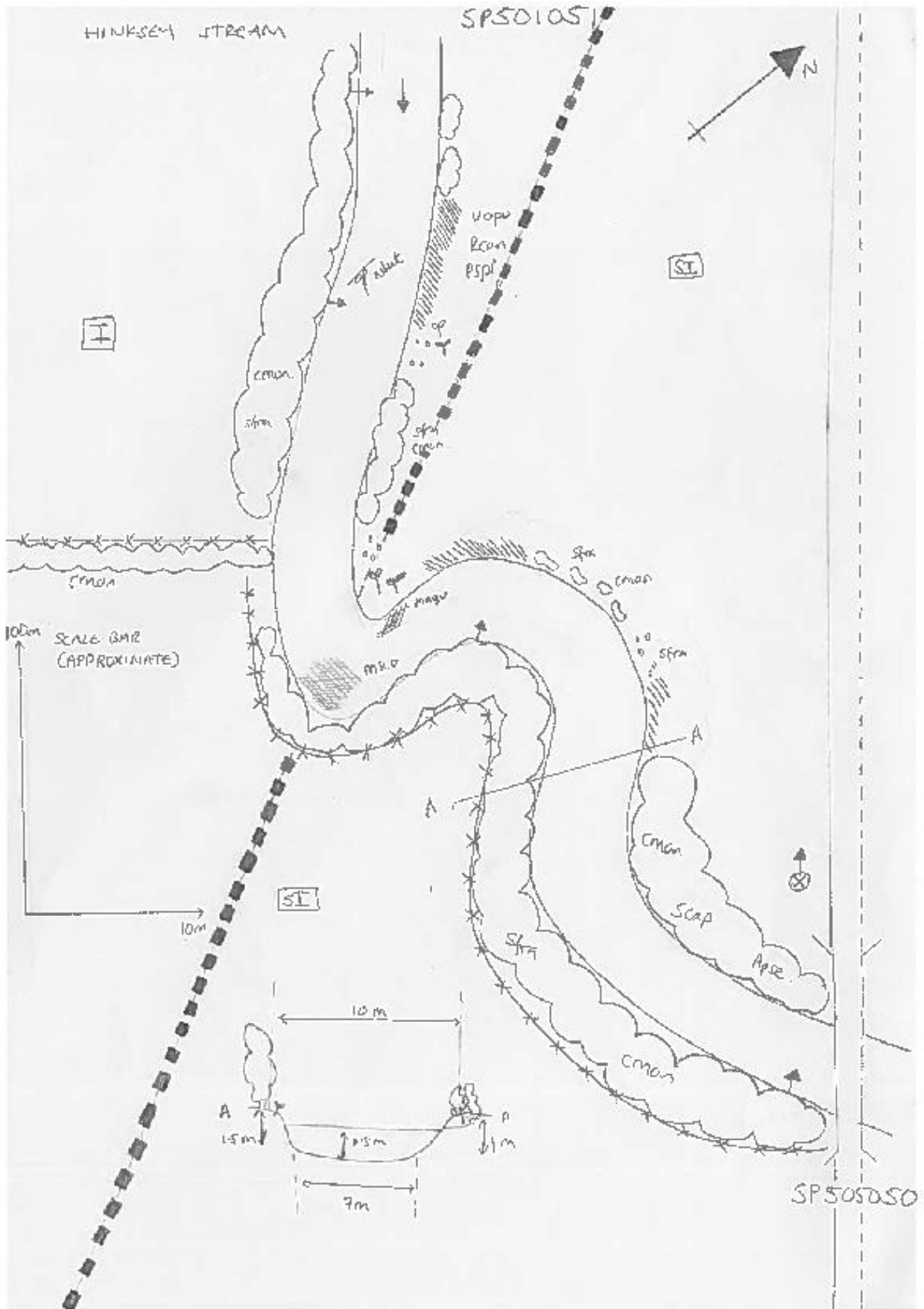


Figure 3-11: RCS Section 11 (SP501051 - SP505050)

3.2.12 RCS Section 12: Hinksey Stream SP50500 - SP508047

A single span track bridge crosses the river at approximately SP 50549 05094, which is located at the start of Section 12. A large pipe crosses above the watercourse at approximately SP 50753 05014.

Vegetation present in the aquatic zone of Section 12 included Branched Bur-reed and Unbrached Bur-reed with several large areas colonised by Yellow Water-lily and Common Water-starwort *Callitriche stagnalis*. Downstream, Yellow Iris dominates the aquatic and left bank marginal zone.

The right bank was open with bank zone vegetation comprising of Common Nettle, Wild Angelica, Spear Thistle *Cirsium vulgare*, White Clover *Trifolium repens* and Hard Rush *Juncus infelixus*. The surrounding land use adjacent to the right bank was semi-improved grassland, which was divided by a flowing drainage ditch which joins the watercourse at SP 50775 04995. The drainage ditch was overshadowed by Ash, Guelder-rose and Pedunculate Oak *Quercus robur*.

The left bank was dominated by Crack-willow woodland with occasional Hawthorn present.

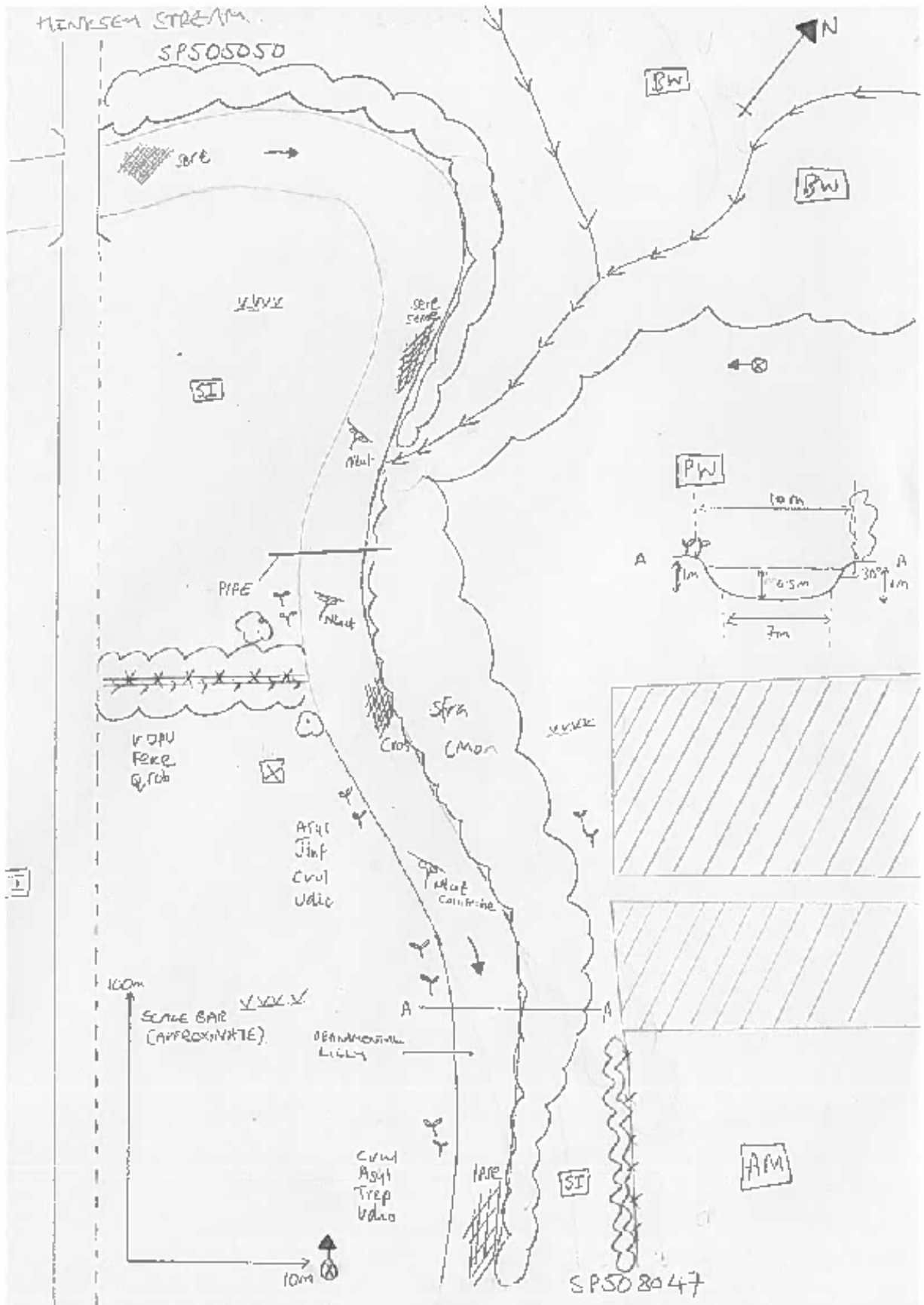


Figure 3-12: RCS Section 12 (SP50500 - SP508047)

3.2.13 RCS Section 13: Hinksey Stream SP509047 - SP512043

Two bridges are located within Section 13, one of which carries a track over the river at approximately SP 51002 04675. A large pipe crosses above the watercourse upstream of the track bridge at SP 50988 04718. The other is a footbridge which is located further downstream at approximately SP 51190 04457 forms part of a public footpath. During the surveys numerous large stands of Yellow Water-lily, Water Mint, Club Rush, Reed Sweet-grass, Floating Sweet-grass and Branched Bur-reed were present in-channel. Within some of these stands, Yellow Iris and Common reed were also present.

The upstream left bank of Section 13 was tree-lined by a combination of Crack-willow and Hawthorn up to the track bridge. Downstream of the track bridge the left bank vegetation was dominated by ruderal and wetland species with occasional trees. Species recorded on the left bank included Purple Loosestrife, Hard Rush, Creeping Buttercup, Spear Thistle, Pendulous Sedge, Bittersweet and Reed Sweet-grass. After the footbridge, the downstream reach of Section 13, Common Nettle, Bramble and Broad-leaved Dock were increasingly common under the broad-leaved woodland canopy. Crack-willow and Black Poplar were present within the large woodland.

The right bank was less shaded than the left, with Hawthorn present as single trees, or small areas of dense scrub alongside the watercourse. The bank and marginal zone was dominated by reedbeds of Common Reed, Reed-sweet Grass and Club Rush. Other species colonising the berm structure of the banks included Meadowsweet, Creeping Bent *Agrostis stolonifera*, Great Willowherb Soft Rush *Juncus effusus*, Bottle Sedge, Brooklime *Veronica beccabunga* and Water Forget-me-not.

The surrounding land use adjacent to the right bank was semi-improved grassland fields which are used for sheep grazing.

3.2.14 RCS Section 14: Bulstake Stream SP498054 - SP502055

A single span track bridge crosses the river at approximately SP 50137 05488, which was located in the middle of Section 14 and connects a public footpath. A wooded area surrounded the bridge, both up and downstream and on both banks. The area was dominated by Crack-willow and occasional Hawthorn. The understory on the left bank is scrub dominated by Hawthorn and Bramble, whereas the right bank has an understory of Himalayan Balsam.

Upstream of the bridge, the right bank zone was mainly treelines with areas of ruderal vegetation. The upstream left bank has lower tree cover and was dominated by tall ruderal vegetation with Common Nettle being the dominant species. The wider land use surrounding the upstream area of the bridge was semi-improved grassland fields.

Downstream of the bridge, the land use adjacent to the left bank was constrained by the presence of a large industrial estate. The main habitat was improved grassland. This was managed to the bank top, resulting in a narrow riparian zone. The right bank, was heavily shaded with overhanging Crack-willow.

Within Section 14, in-channel vegetation was only recorded downstream of the bridge. Species present included Yellow Water-lily and several small Reed Sweet-grass beds, located in the right bank marginal zone.

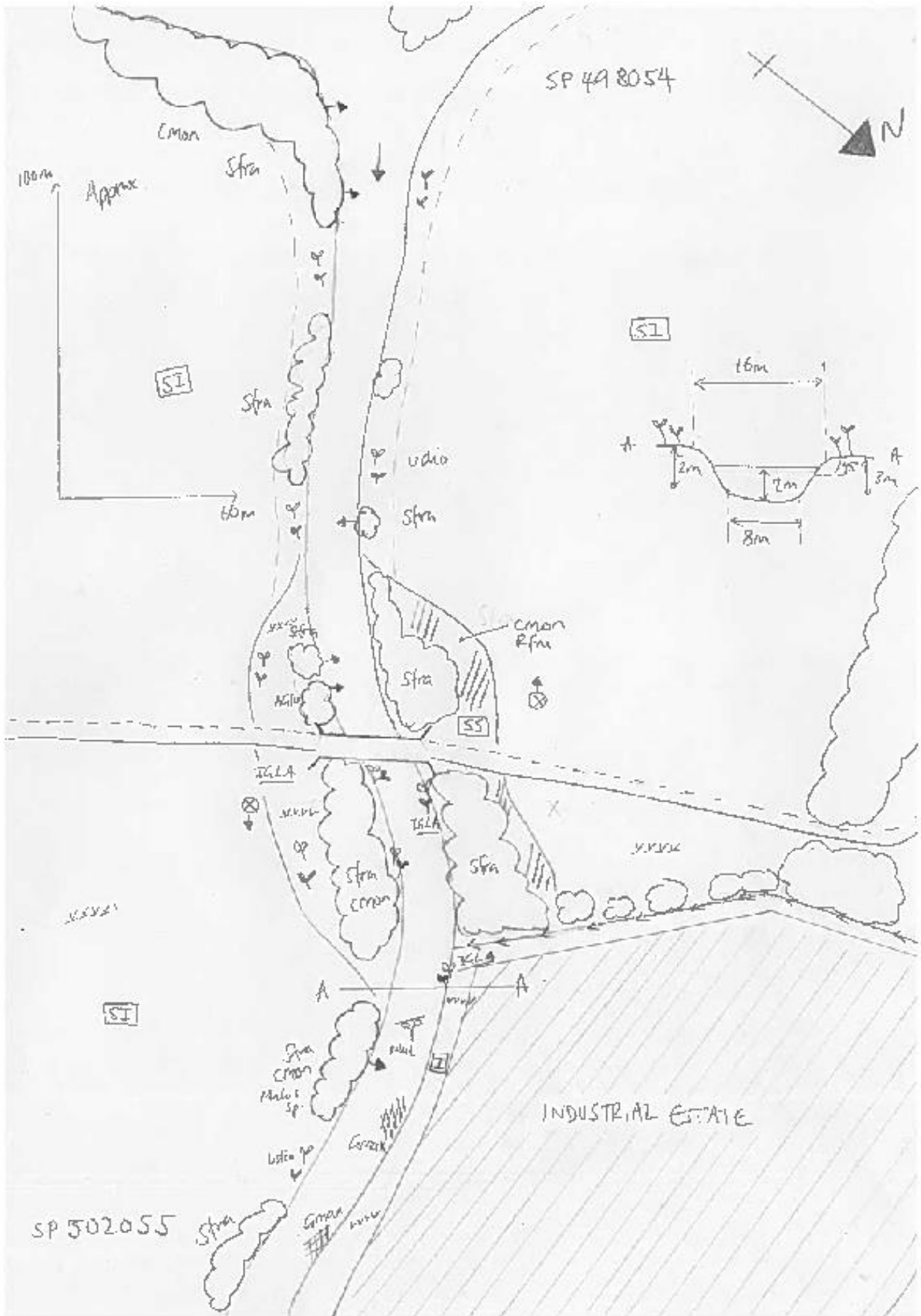


Figure 3-14: RCS Section 14 (SP498054 - SP502055)

3.2.15 RCS Section 15: Bulstake Stream SP502055 - SP506056

A footbridge was located at the most downstream extent of Section 15, where Bulstake Stream joins the River Thames at approximately SP 50676 05609.

Vegetation present in the aquatic zone was minimal with Yellow Water-lily the only species recorded. Within the marginal zone several large Reed Sweet-grass beds were present along the left bank, as the bank has a berm structure.

The left bank was urbanised by a large industrial estate, which was surrounded by a fence, low walls, with a mature, dense tree line located on the bank top. The bank zone of the left bank was dominated by Himalayan Balsam.

The right bank was adjacent to semi-improved grassland fields. Along the bank, treelines and wooded areas were present. Towards the footbridge and Thames confluence, the treeline becomes a planted broadleaved woodland with Crack-willow, Ash and Weeping Willow *Salix babylonica*. The understory contained Himalayan Balsam. Common Liverwort *Marchantia polymorpha* was present on the left bank marginal zone.

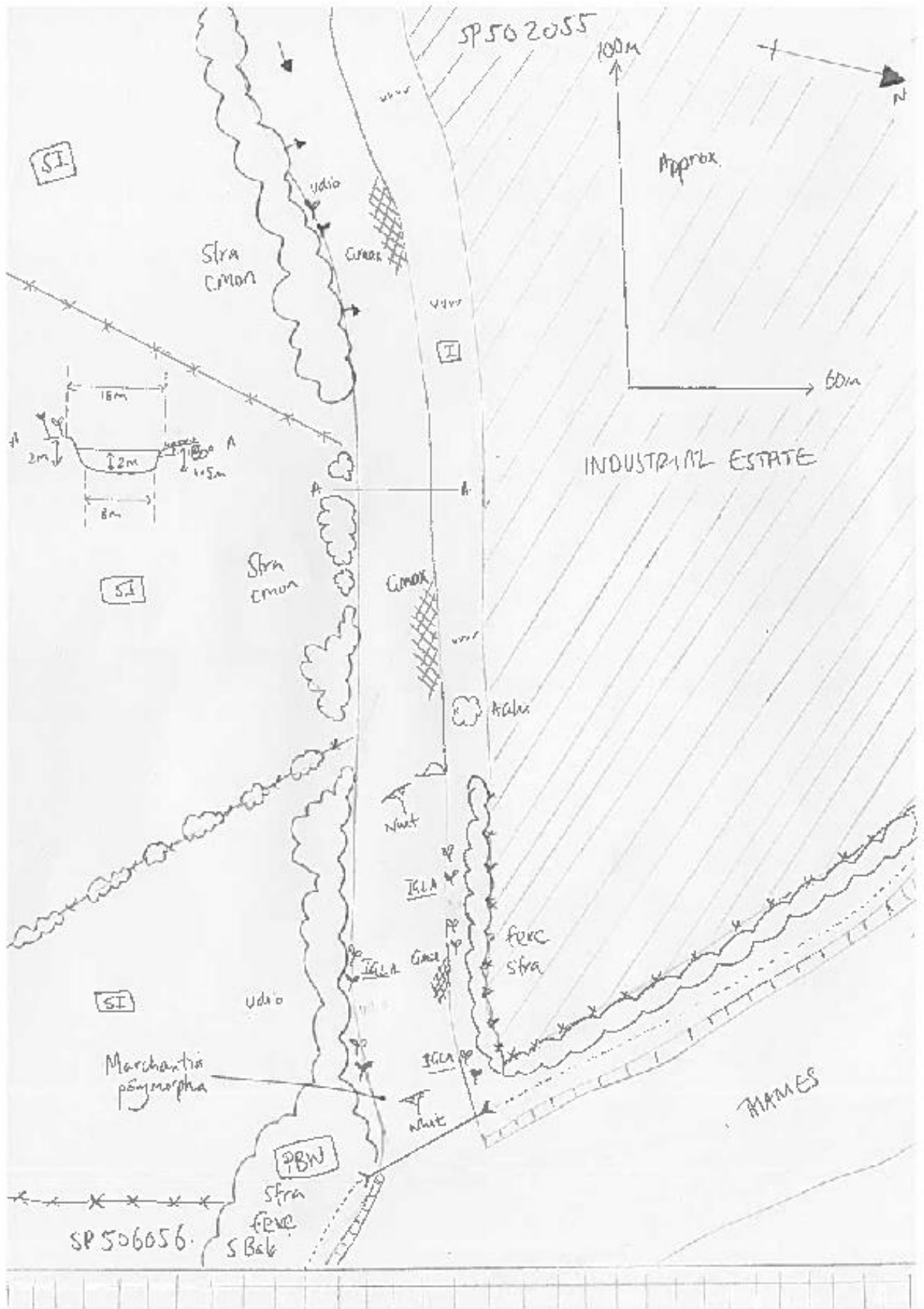


Figure 3-15: RCS Section 15 (SP502055 - SP506056)

3.2.16 RCS Section 16: Hogacre Ditch SP499056 - SP503151

This section of Hogacre Ditch at the time of the survey was dry and extremely overshadowed. Crack-willow, Hawthorn and Sycamore were recorded on the bank top. The dry channel was full of Himalayan Balsam and Common Nettle.

Approximately two thirds of the ditch was overshadowed. The remaining third of Section 16 was open with only occasionally Hawthorn present on both banks. As the ditch opens up, it was noted to be wetter and choked by Common Reed and Branched Bur-reed. Both left and right banks were colonised by Common Nettle, Bramble, Common Hogweed, Great Willowherb and Cleavers.

Semi-improved grassland was present adjacent to both banks. The whole section was also fenced along both banks.

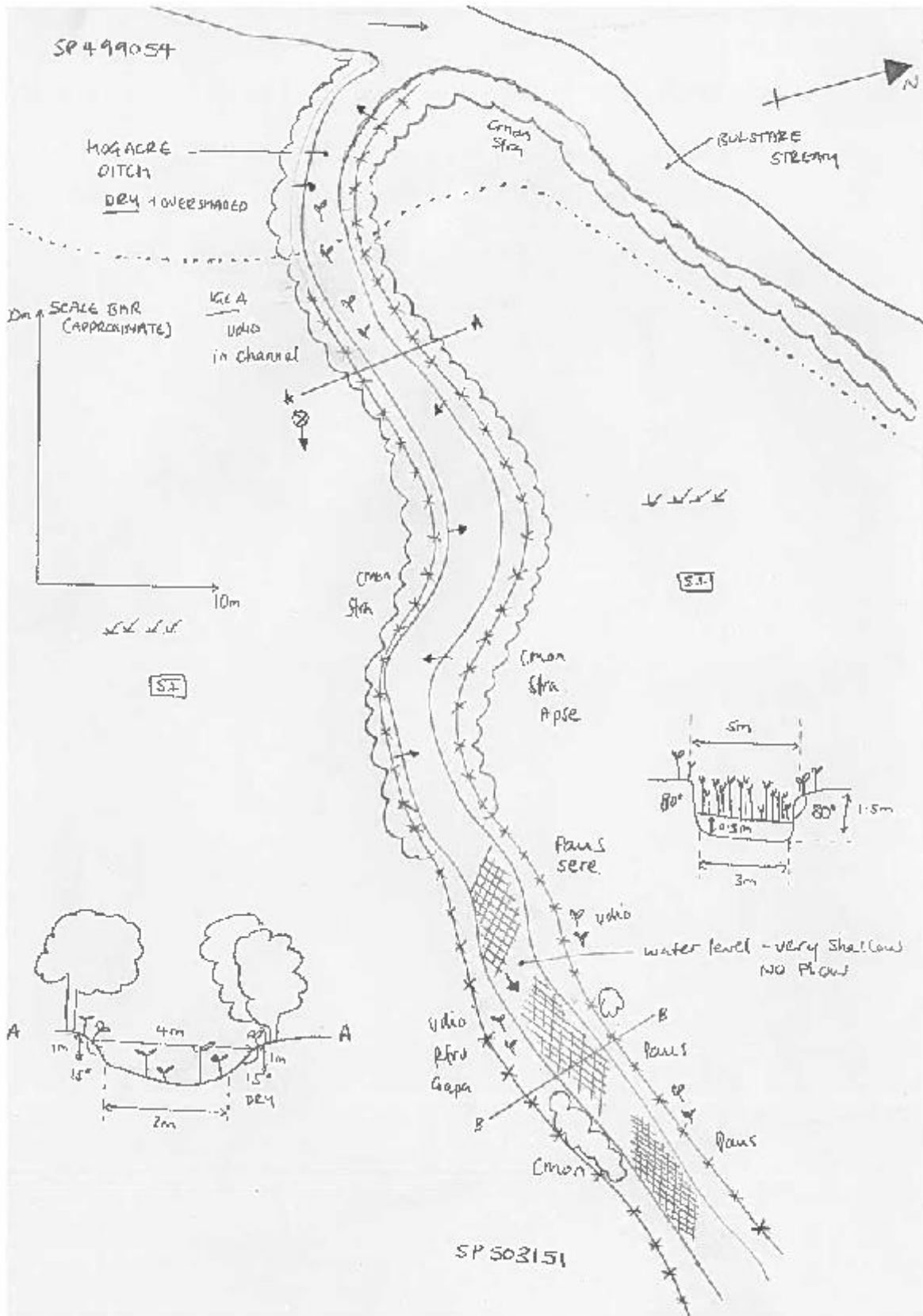


Figure 3-16: RCS Section 16 (SP499056 - SP503151)

3.2.17 RCS Section 17: Hogacre Ditch SP503051 - SP506051

A single span track bridge crosses the ditch at approximately SP 50414 05212, which was located at the start of Section 17 and connects to a public footpath. Semi-improved grassland was present in the vicinity of both banks. The whole section was also fenced along both banks.

Vegetation present in the aquatic zone of Section 17 was limited with only Common Reed recorded during the surveys.

Both banks were open and colonised by occasional Hawthorn and Crack-willow trees and Bramble scrub. Ruderal vegetation present on both banks included Common Nettle, Great Willowherb, Cleaver, Wild Angelica, Creeping Buttercup, Ribwort Plantain and Broad-leaved dock. The left bank was also colonised by Common Reed and Reed Canary-grass.

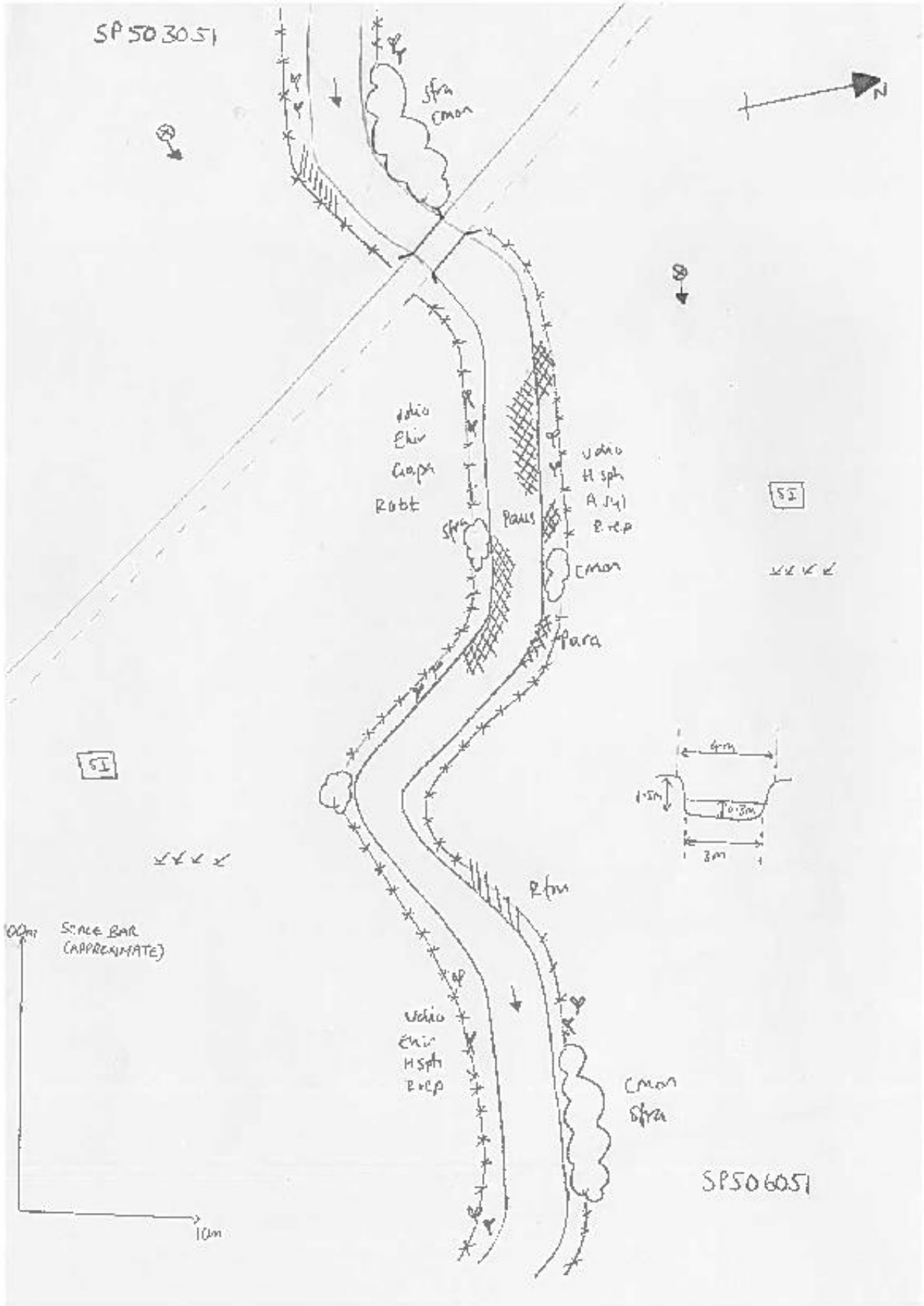


Figure 3-17: RCS Section 17 (SP503051 - SP506051)

3.2.18 RCS Section 18: Minor Watercourse SP506051 - SP508052

Section 18 consists of two drainage ditches, one of which flows from Hogacre Ditch. The second ditch was dry at the time of the survey.

The first ditch, which flows from Hogacre Ditch, was fenced on the left bank. The left bank was relatively open with Himalayan Balsam dominating the bank top. The right bank was dominated by overhanging trees from the adjacent woodland. Species recorded include Crack-willow, Alder, Hawthorn, Sycamore and Ash. A small footbridge crosses this ditch at SP 50786 05253, which connects to a public footpath. The wider landscape was semi-improved grassland and broadleaved woodland.

The second ditch was dominated by the woodland on the left bank and a mature tree line on the right. The main tree species present were Ash, Alder and Crack-willow. The ditch was dry up to a footbridge located at SP 50793 05230, where it became wetter. The wider landscape contains sub-mature planted woodland and amenity grassland.

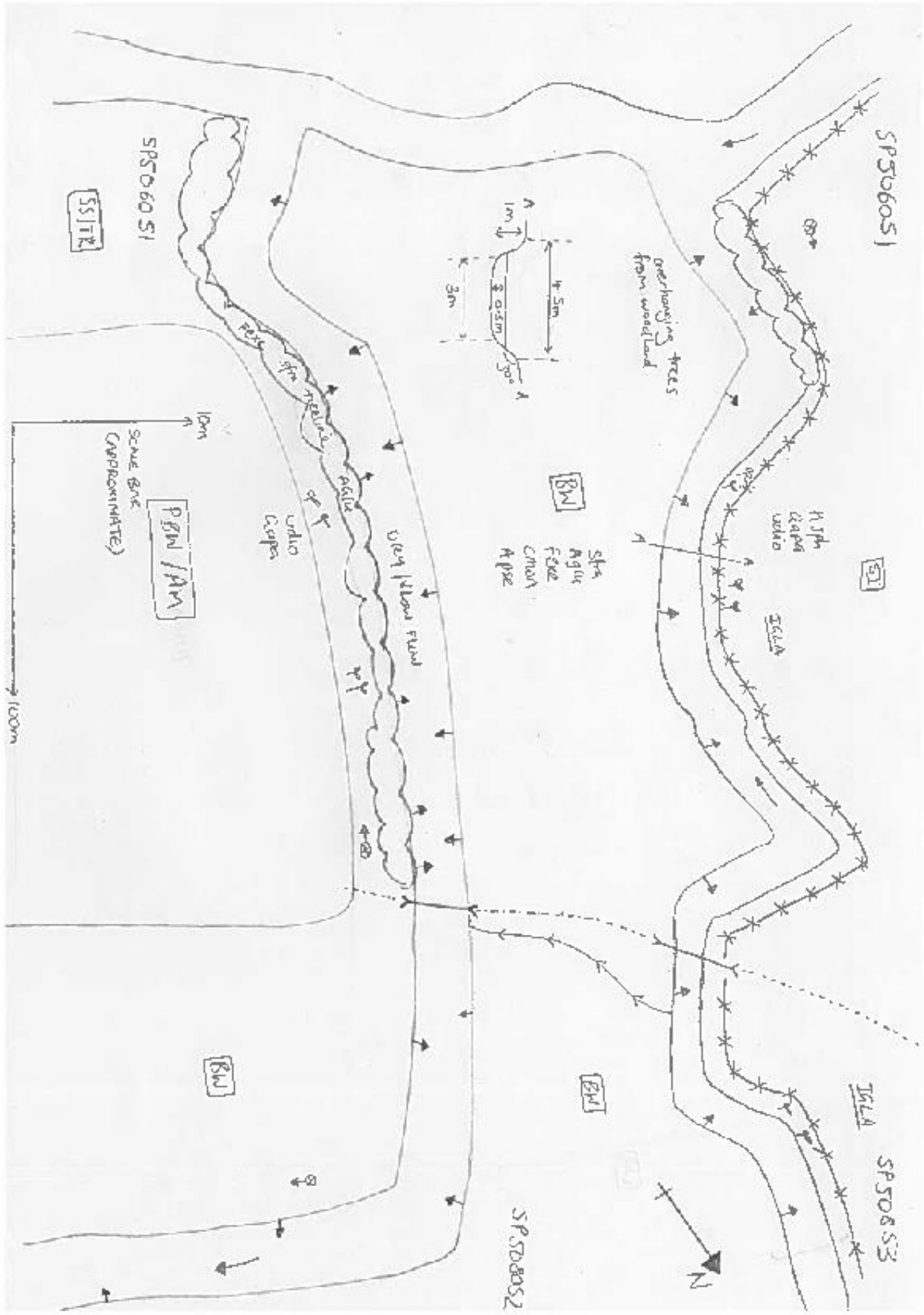


Figure 3-18: RCS Section 18 (SP506051 - SP508052)

3.2.19 RCS Section 19: Minor Watercourse SP508052 - SP511050

Section 19 is split by the railway. The aquatic zone vegetation upstream of the railway was limited as the watercourse is over shaded from both banks by woodland. Species recorded include Crack-willow, Sycamore and Horse Chestnut.

Downstream of the railway, the left bank zone was also dominated by woodland. The right bank was more open with ruderal species present including Common Nettle and Cleavers.

The wider land use adjacent to the right bank was amenity grassland upstream of the railway. Downstream of the railway the land use was more urban with allotments, buildings and private gardens recorded.

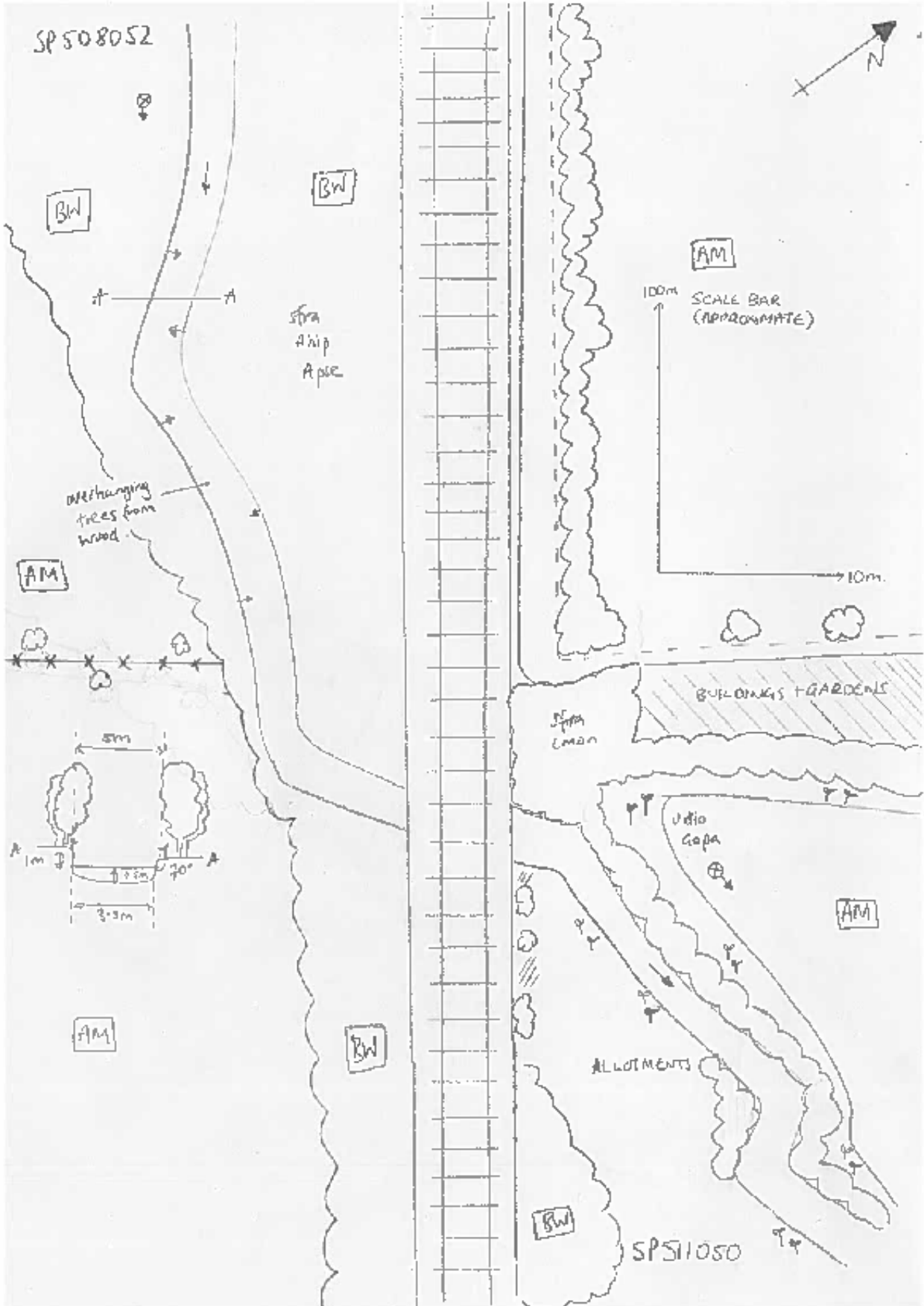


Figure 3-19: RCS Section 19 (SP508052 - SP511050)

3.2.20 RCS Section 20: Minor Watercourse SP511050 - SP515049

A small footbridge is located at SP 51343 04943 and connects a housing estate to Hinksey Park and a public footpath which runs adjacent to the right bank. Upstream of the footbridge, both banks were unmodified, with the right bank being shaded by a dense treeline. The left bank was open, with ruderal species present along the bank top. Adjacent to both banks were improved amenity fields which were heavily managed. Downstream of the footbridge, the surrounding area was urban on the left bank, with amenity fields adjacent to the right. A culvert is located at SP 51563 04976 which runs underneath the A4144 - Abingdon Road.

The aquatic zone surrounding the bridge contained large beds of Gipsywort, Reed Sweet-grass and Fool's Water-cress *Apium nodiflorum*. Upstream of the bridge Yellow Iris and filamentous algae were recorded. Downstream of the bridge, the left bank was heavily modified and little marginal vegetation lined this bank and overshadowed the bank toe. Garden escapees (such as *Cotoneaster* sp.) and scrub species including Hawthorn and Bramble were recorded. However, the right bank was small, with a shallow gradient and consequently, the marginal zone was more diverse with Floating Sweet-grass, Reed Sweet Grass, Yellow Iris, Pendulous Sedge and Bittersweet. On the right bank top, Great Willowherb, Wild Angelica and Common Nettle were present.

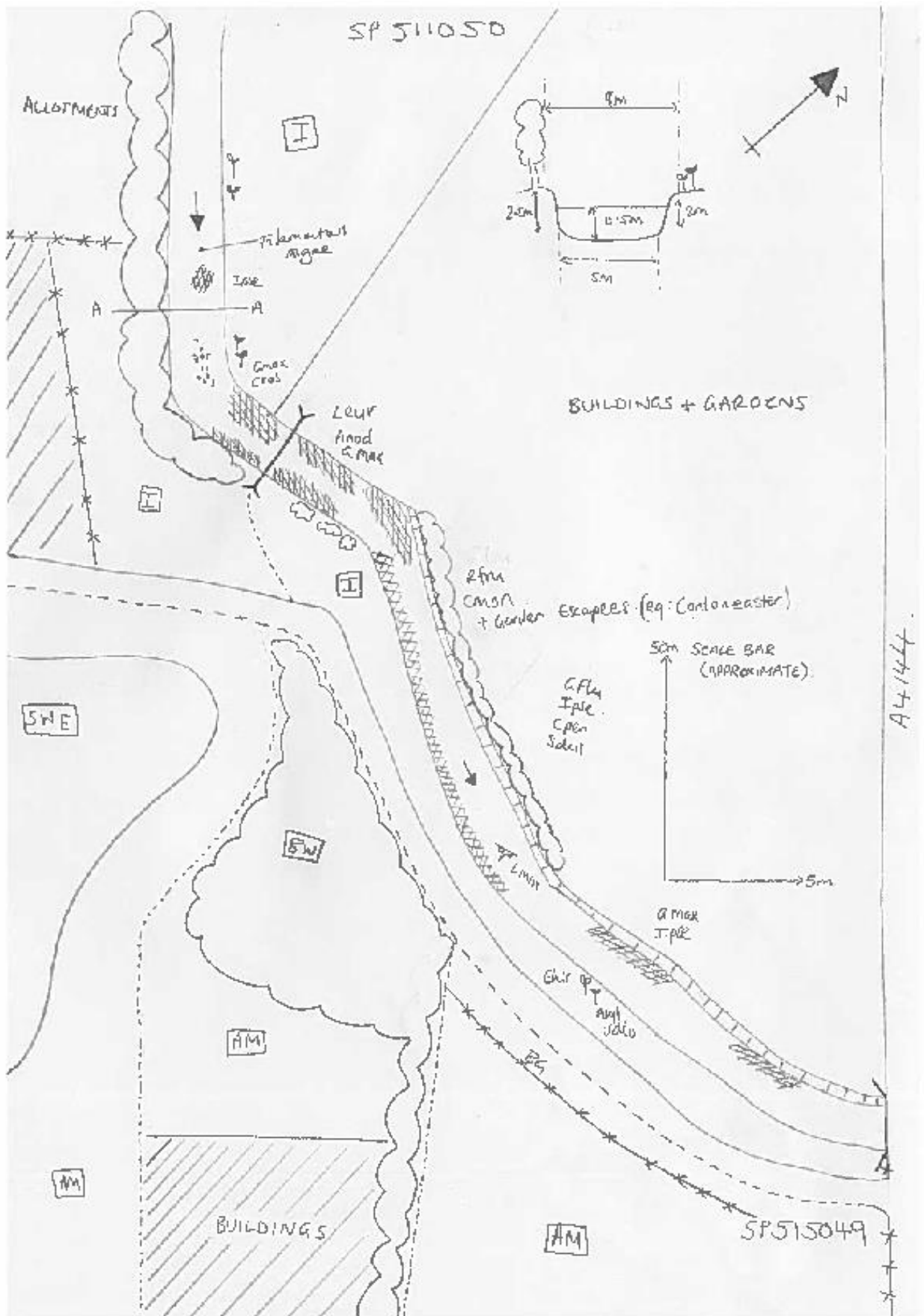


Figure 3-20: RCS Section 20 (SP511050 - SP515049)

3.2.21 RCS Section 21: Eastwyke Ditch SP515049 - SP519051

A road culvert is located at the most upstream extent of Section 21 at SP 51571 04981. The watercourse joins the River Thames at SP 51906 05130, where a small footbridge is also located.

Aquatic zone vegetation was limited in this section with occasional Reed Sweet-grass present along the bank margins. On the right bank top, Hawthorn and Crack-willow trees were recorded, with adjacent land use categorised as marshy grassland and tall ruderals, both with scattered scrub. The left bank was adjacent to two amenity grasslands. The first of which was managed to the bank top. Consequently, the riparian margin was small with Broad-leaved Dock, Common Nettle, Spear Thistle and Ribwort Plantain recorded. Within the second field, a dense treeline dominated by Crack-willow was present which overshadows the channel in places.

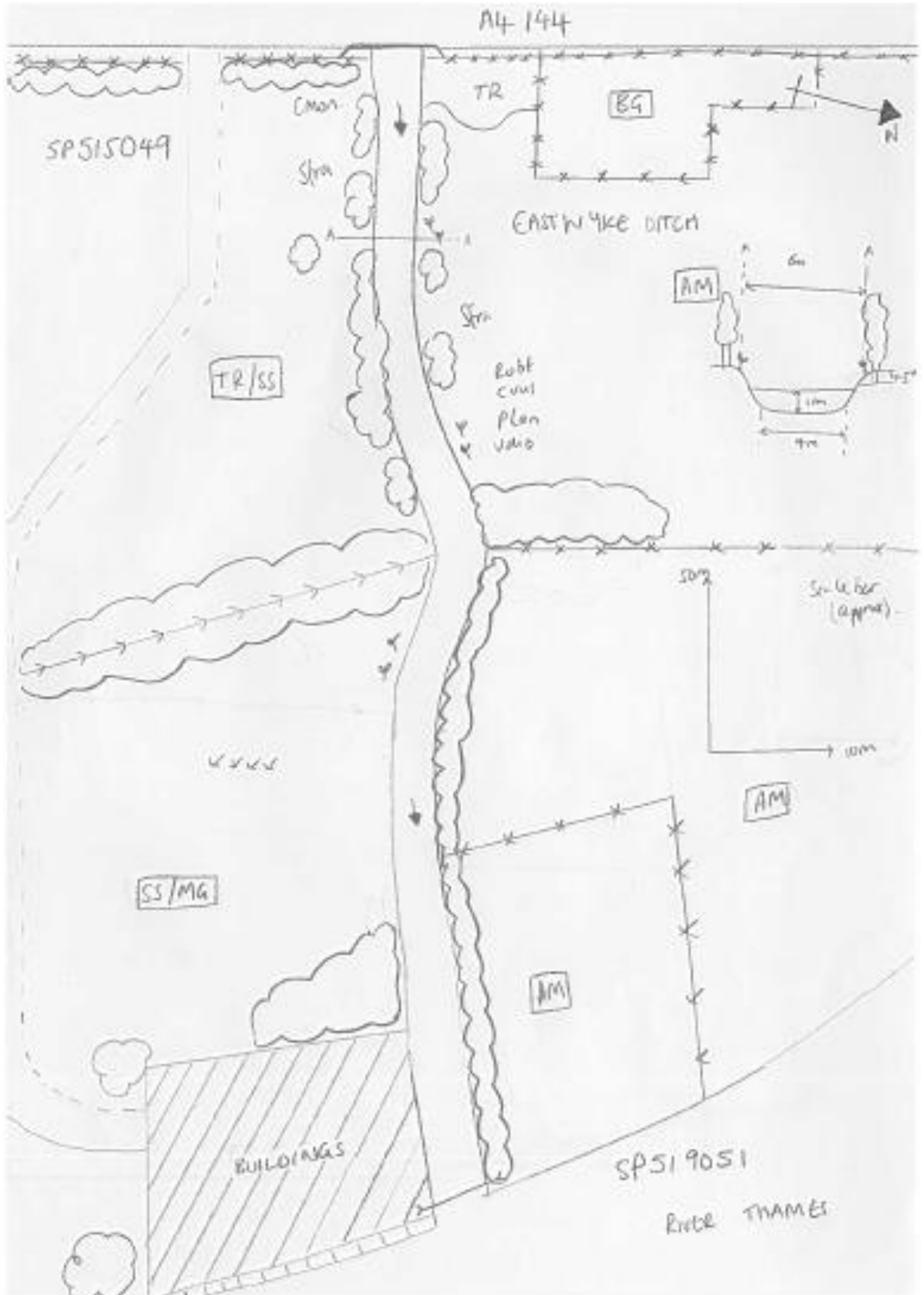


Figure 3-21: RCS Section 21 (SP515049 - SP519051)

3.2.22 RCS Section 22: Devil's Backbone - SP510042 - SP516037

Four bridges cross the main river of Section 22, the first of which is a single span track bridge located at SP 51064 04278 and connects to a public footpath. The aquatic and marginal zone surrounding this bridge was colonised by Fool's Water-cress, Yellow Iris and Reed Sweet-grass. Further downstream, Common Water Starwort, Various-leaved Water-starwort *Callitriche platycarpa*, Water Forget-me-not, Common Reed, Water Mint, and Reed Canary-grass were present as well as Reed Sweet-grass. Species recorded in the bank zone of this reach included Meadowsweet, Common Reed, Wild Angelica and Purple Loosestrife. Tree and scrub species present included Goat Willow, Hawthorn, Bramble, Blackthorn and Crack-willow. The wider land use within Section 22 included houses and gardens, bare ground, intact hedgerows, improved and semi-improved grassland.

A second bridge is located at SP 51161 04115, which is a small footbridge. Downstream of the bridge, the aquatic and marginal zone contained large beds of Bottle Sedge, Reed Sweet-grass, Great Yellow-cress *Rorippa amphibia*, Creeping Bent and Common Reed. Bankside scrub species included Blackthorn, Hawthorn, Dogrose, Bramble and Crack-willow. Ruderal species present within the bank zone included Common Nettle, Teasel *Dipsacus fullonum*, Ribwort Plantain and Common Reed.

A drainage ditch joins the watercourse from the right bank at approximately SP 51400 04019 which was overshadowed by intact Hawthorn hedgerows. The ditch was flowing at the time of the survey. Downstream of the drainage ditch, the left bank was treelined with Hawthorn and Crack-willow. A combination of mature Crack-willow and Hawthorn trees lined the right bank with a small Hawthorn hedgerow also present. Reed Sweet-grass was dominant within the channel and along bank margins. Both the left and right banks were fenced within this reach of Section 22 to Abingdon Road. Towards Abingdon Road, the channel became choked with Reed Sweet-grass and Bottle Sedge with occasional Water Dock *Rumex hydrolapathum* and Common Duckweed *Lemna minor* also present. This vegetation has slowed the flow of the watercourse. The banks in the lower reach of Section 22 were tree and scrub lined, with Hawthorn and Crack-willow being the most abundant species. Other species present on the banks included Meadowsweet, Creeping Buttercup, Common Nettle and Meadow Foxtail *Alopecurus pratensis*.

A double-track concrete access track bridge is located at SP 51635 03721 and the road bridge is located at SP 51645 03698.

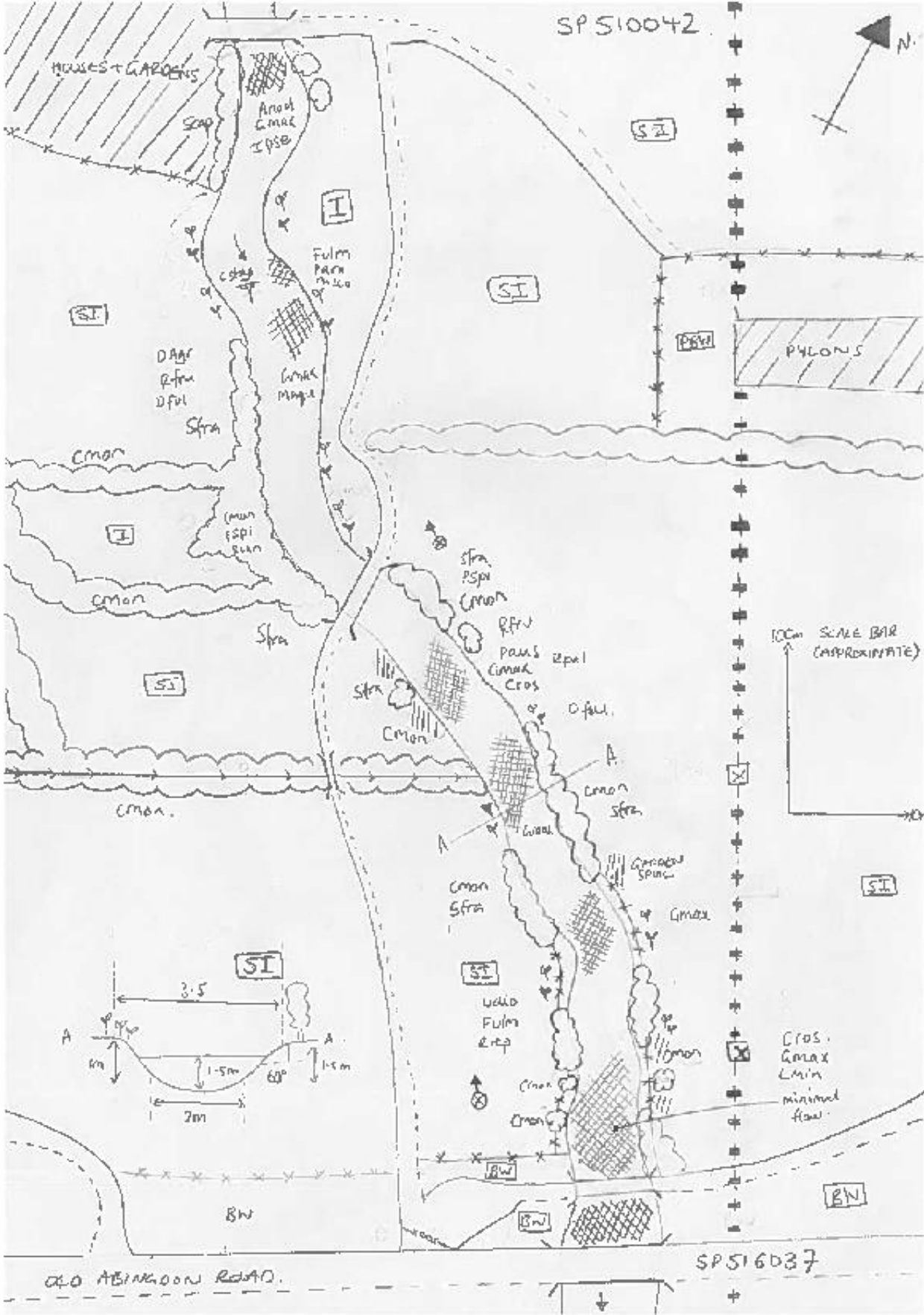


Figure 3-22: RCS Section 22 (SP510042 - SP516037)

3.2.23 RCS Section 23: Hinksey Stream at Redbridge SP515040 - SP518035

Section 23 is comprised of Hinksey Stream and an adjacent drainage ditch, both of which are dissected by Old Abingdon Road at SP 51806 03837 and SP 51697 03741, respectively. Another small drainage ditch runs parallel to Old Abingdon Road and flows in to Hinksey Stream. Hinksey Stream is constrained adjacent to the left bank by urbanisation from the Park and Ride and numerous buildings. It is constrained on the right by a large recycling plant and the railway. The railway separates the drainage ditch from Hinksey Stream in this section.

The northern extent of Hinksey Stream flows under the DCL rail line; here the right bank was reinforced with no marginal vegetation present. However, the left bank had mature Crack-willow treelines and woodland copses. Species present in the understory included Great Willowherb, Common Nettle and Broad-leaved Dock.

In-channel vegetation was recorded upstream of Old Abingdon Road Bridge, with submerged Yellow Water-lily, Water Mint, Yellow Iris and Various-leaved Water Starwort recorded. Vegetation on left bank zone upstream of the bridge included Meadowsweet, Common Nettle and Great Willowherb, with a single coppiced Crack-willow present. The land use adjacent to the left bank was bare ground with sporadic tall ruderal cover, characteristic of brownfield sites. The right bank habitat upstream of the bridge is also bare ground and was in industrial use. There was a mature treeline within the right bank zone with Sycamore, Alder, Crack-willow and Horse Chestnut recorded.

Downstream of Abingdon Road Bridge a small ditch joins Hinksey Stream at SP 51833 03827. This ditch is approximately 120m long and runs parallel to the Park and Ride entrance. The right bank was noted to be piled in places due to the proximity to the main road. The ditch was heavily shaded from the left bank by a dense treeline / woodland which includes Goat Willow, Crack-willow, Hawthorn, Black Poplar, Elder *Sambucus nigra* and Sycamore and is fenced from the carpark. Bat boxes were present on some of these trees. The non-native invasive species *Cotoneaster* sp. was also recorded. The left bank had isolated trees, dense scrub of Crack-willow, Hawthorn and Bramble, along with tall ruderal species including Bindweed and Common Nettle. Within the aquatic and marginal zone of the small ditch, occasional Pendulous Sedge, Reed Sweet-grass, Common Reed and a Cyanobacteria pelt were recorded. Common Liverwort *Marchantia polymorpha* and Kneiff's Feather Moss *Leptodictyum riparium* were also growing in the channel along with some Crack-willow.

Downstream of the road bridge Hinksey Stream has very high, steep banks which are dominated by dense tall ruderal cover. Due to the steep bank toe and water depth, marginal vegetation was limited in this reach with occasional Pendulous Sedge and Reed Sweet-grass present. Common Duckweed was also recorded. Both banks are heavily shaded by overhanging broadleaved woodland cover, with Crack-willow being the most dominant species. Himalayan Balsam is present in the understory. The river is further constrained in this reach by the Southern Bypass Road Bridge at SP 51879 03504, the banks of which were dominated by Bramble cover.

The drainage ditch which runs adjacent to the rail line is very straight. However, a small exposed berm was present which was colonised by Common Hogweed and Great Willowherb. The ditch was fenced on the right bank from a sub-mature planted woodland. There was a mature tree line of five Oak trees alongside the fence. Ground flora within the wider vicinity comprised Great Willowherb, Common Nettle, Cleavers, Ground-ivy *Glechoma hederacea*, Red Campion and Butterbur *Petasites hybridus*. There was evidence of fly tipping at the time of the survey. The aquatic zone was low and not flowing when surveyed. It was choked with emergent species at the time of the survey, including Bulrush, Reed Sweet-grass, Bottle Sedge and Yellow Iris. A rail culvert is located at approximately SP 51772 03636 on the right bank.

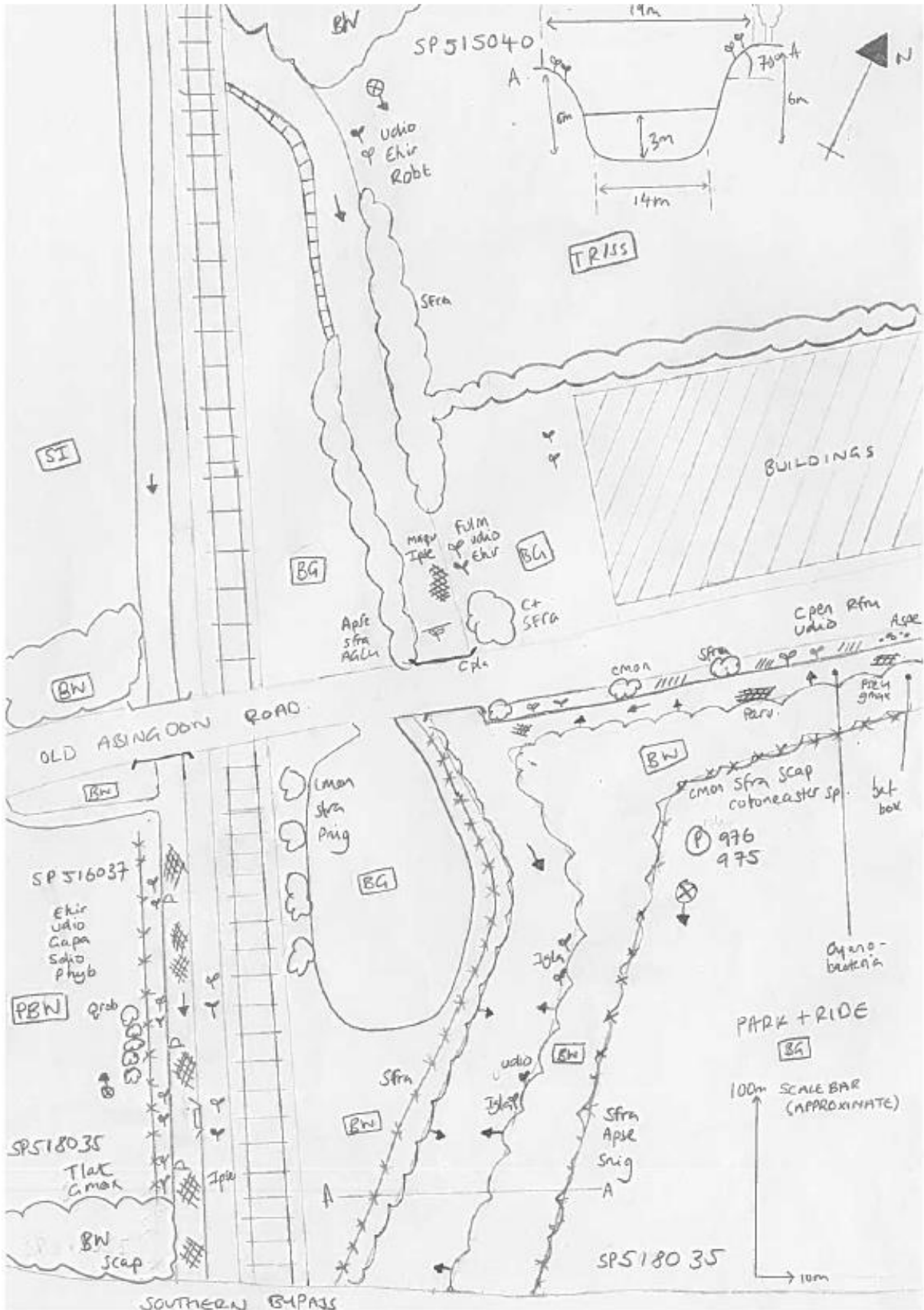


Figure 3-23: RCS Section 23 (SP515040 - SP518035)

3.2.24 RCS Section 24: Hinksey Stream SP518034 - SP520032

Section 24 is also comprised of Hinksey Stream and an adjacent drainage ditch, which is dissected by the DCL rail line. The drainage ditch joins Hinksey Stream at SP 52060 03260. A rail culvert is located at SP 52001 03238. The right bank was heavily reinforced to this point due to adjacent housing and gardens. Both Hinksey Stream and the drainage ditch were constrained by the Southern Bypass to the west of the survey section.

From the Southern Bypass, Hinksey Stream was heavily shaded by dense woodland including trees of Crack-willow, Goat Willow, Sycamore and Alder. The woodland dominates both banks of the watercourse and consequently, the aquatic zone was species poor with little vegetation recorded. Occasional marginal vegetation was noted including Yellow Iris and Reed Sweet-grass.

The drainage ditch which runs adjacent to Hinksey Stream and the rail line is straight, with a two backwater pools located on the right bank. The first pool is located at SP 51940 03283, which is reinforced in places due to the presence of housing and private gardens. This pool also contains an outfall. Aquatic vegetation recorded in the pool includes both Various-leaved Water Starwort and Common Water Starwort, and the green algae *Cladophora glomerata*. A stand of the non-native species *Montbretia Crocosmia* sp. was recorded within this pool. The second pool was located at approximately SP 51921 03340 and contained Various-leaved Water Starwort and Common Water Starwort. Both pools contained urban debris at the time of the survey. Both banks of the drainage ditch were heavily shaded with Sycamore, Hawthorn, Blackthorn and Crack-willow. Both banks of the stream were dominated by Common Nettle, Teasel and Soft-rush.

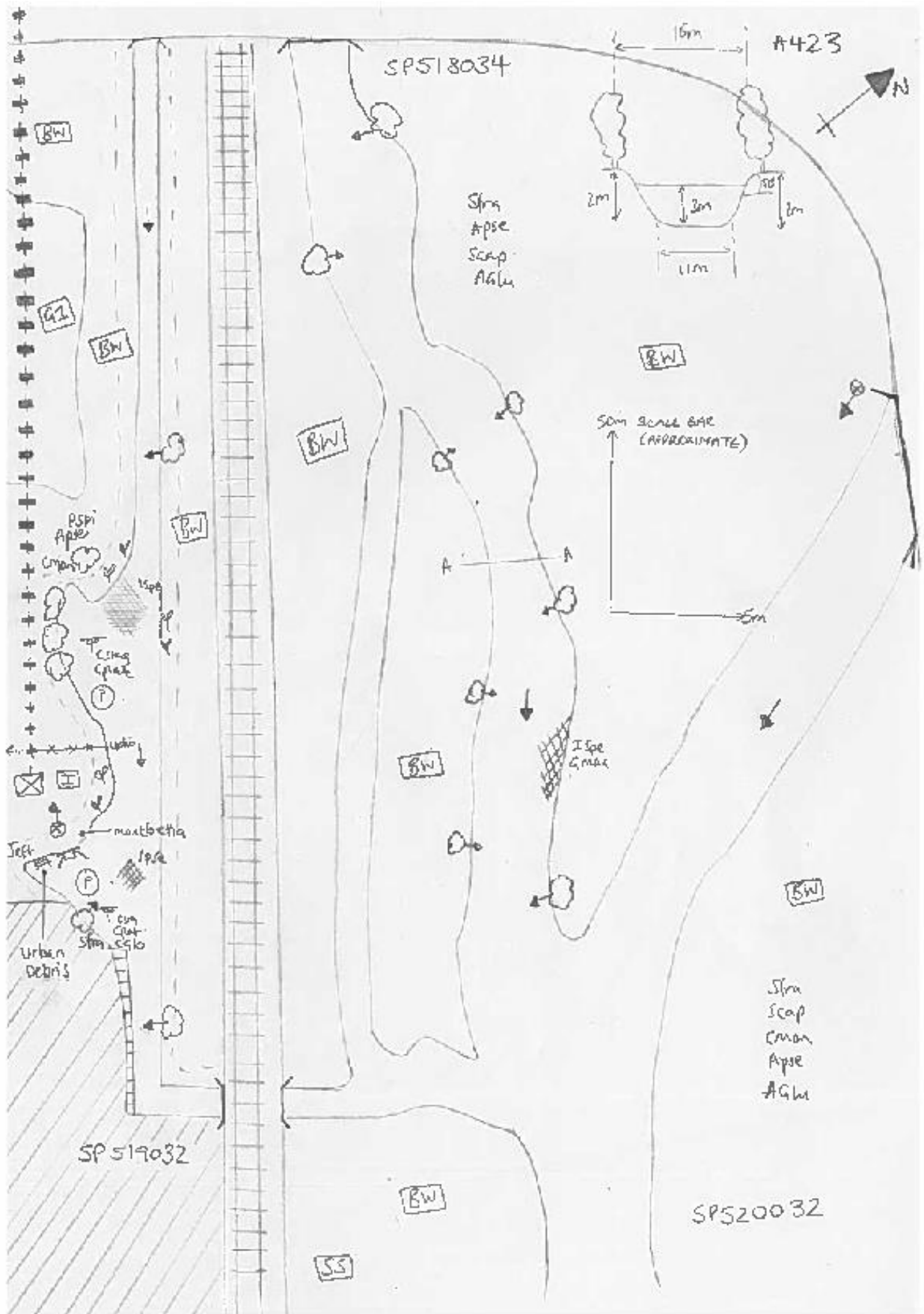


Figure 3-24: RCS Section 24 (SP518034 - SP520032)

3.2.25 RCS Section 25: Hinksey Stream SP520032 - SP524028

A footbridge is located at SP 52405 02803 where Hinksey Stream joins the River Thames. The section is adjacent to Iffley Meadows SSSI on the left bank, which is a combination of Willow broad-leaved woodland, scattered scrub and unimproved neutral grassland. The right bank has a berm present which was dominated by Reed Sweet-grass, creating a swamp-like area.

In-channel vegetation was only occasionally present in this section with Reed Sweet-grass, Water-dropwort and Yellow Water-lily recorded.

The left bank was dominated by tall ruderal and scrub vegetation, with Common Nettle, Great Willowherb and Bramble prevalent. Occasional Himalayan Balsam was recorded. Large reedbeds were also present on the left bank which are dominated by Common Reed and Reed Sweet-grass on a berm. The wider land use adjacent to the left bank was constrained by the railway, which was fenced from the watercourse.

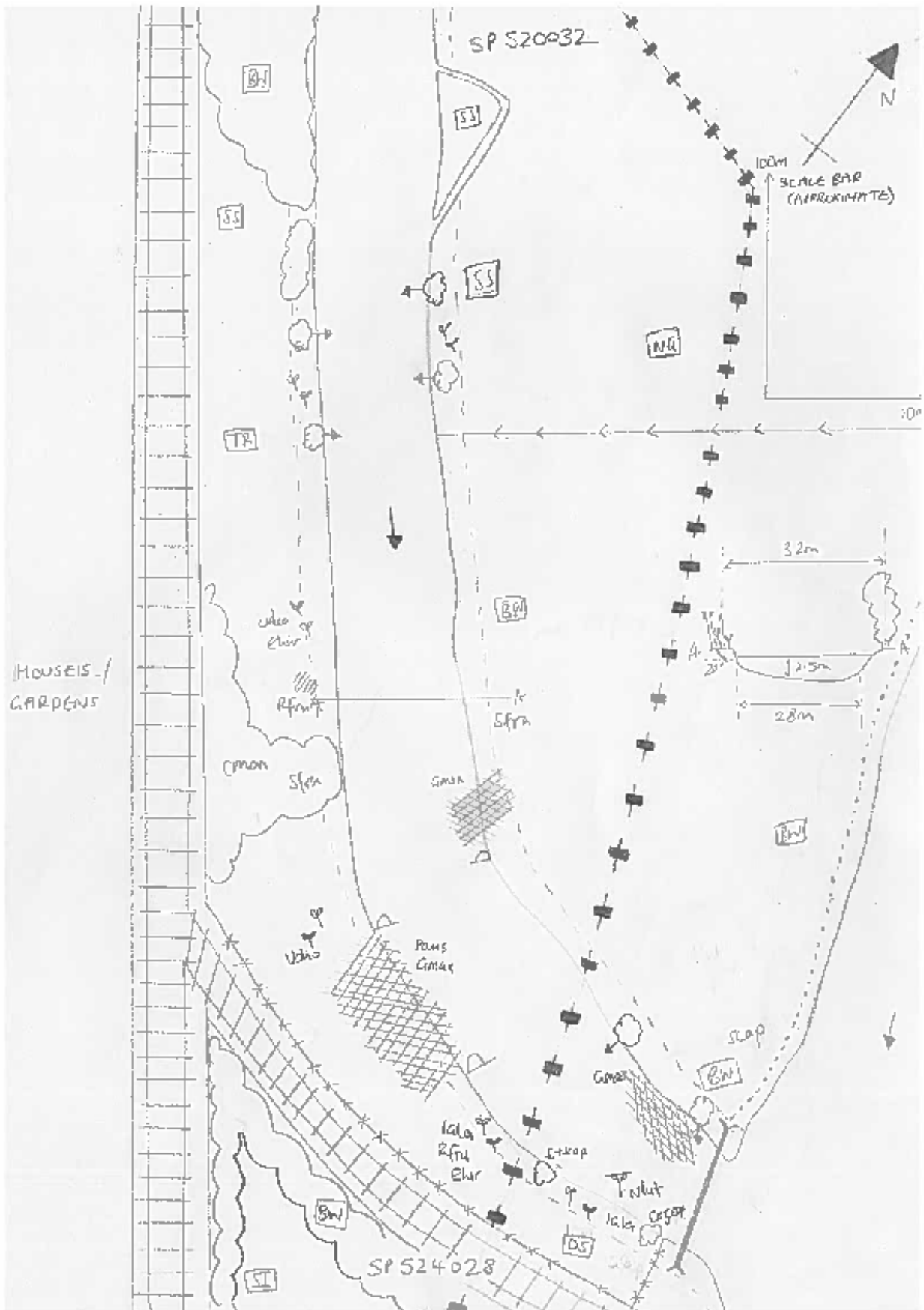


Figure 3-25: RCS Section 25 (SP520032 - SP524028)

3.2.26 RCS Section 26: Cold Harbour SP515042 - SP519039

A footbridge is located at SP 51810 04045. Species in the aquatic zone surrounding the bridge included Reed Sweet-grass, Yellow Iris, Fool's-water-cress, Common Duckweed and Various-leaved Water Starwort. In-channel vegetation was sparse within this section and it only occurred alongside the area of amenity grassland (New Hinksey Playground) on the left bank and the caravan park on the right, where the banks are more natural. Up and down stream of this reach on the right bank, the banks were reinforced with retaining walls behind the housing. The wider land use on the right bank is primarily urban with housing and gardens.

The river banks adjacent to New Hinksey Playground were tree lined with pollarded mature Crack-willow trees and Hawthorn scrub. The understory comprises Common Nettle and Himalayan Balsam. Upstream of the road bridge, Snowberry *Symphoricarpos* sp. was recorded.

Upstream of the footbridge the left bank was dominated by broadleaved woodland and dense scrub. Crack-willow and Hawthorn which overhang the watercourse. A mature Hawthorn treeline separated this area from the caravan park.

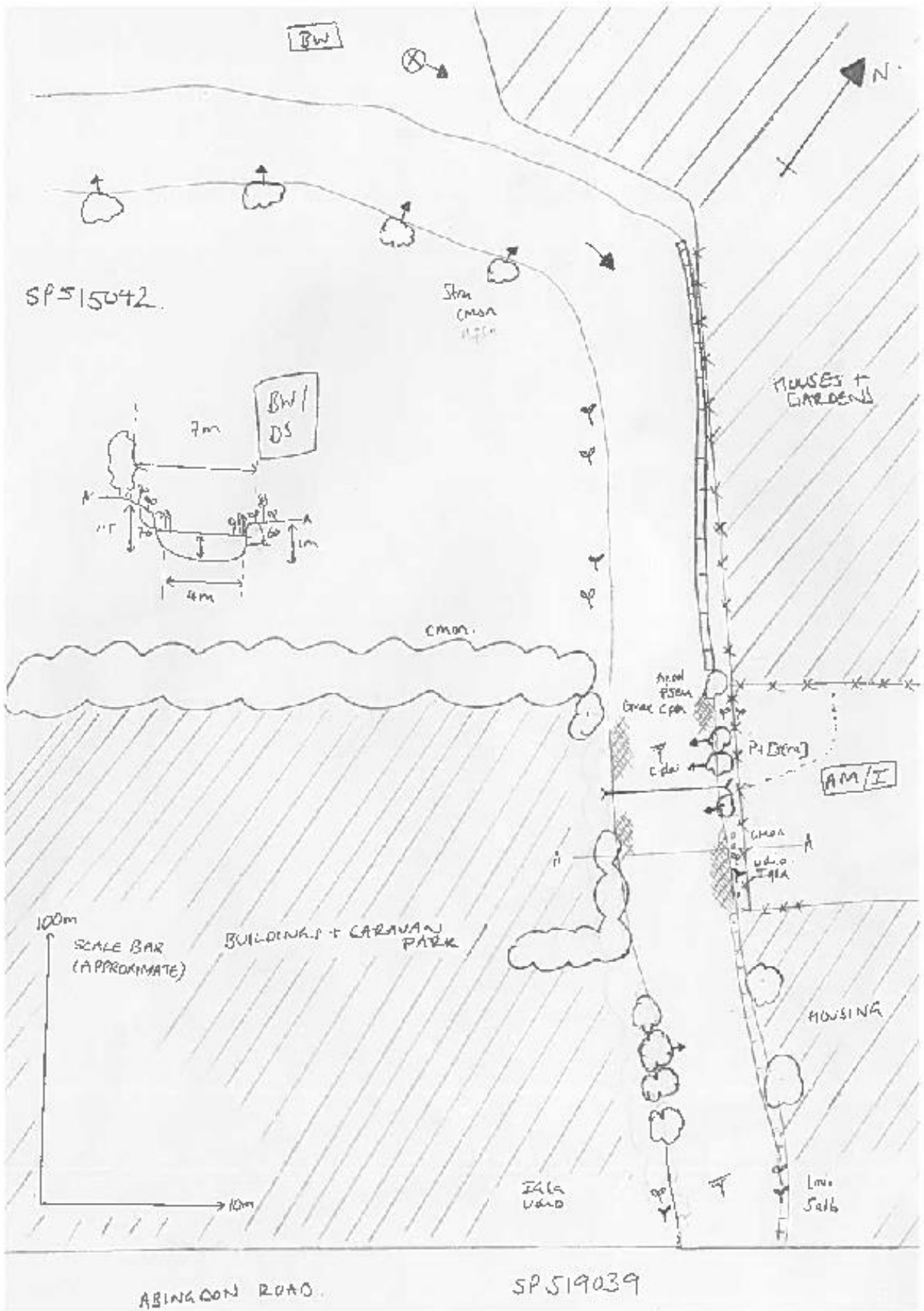
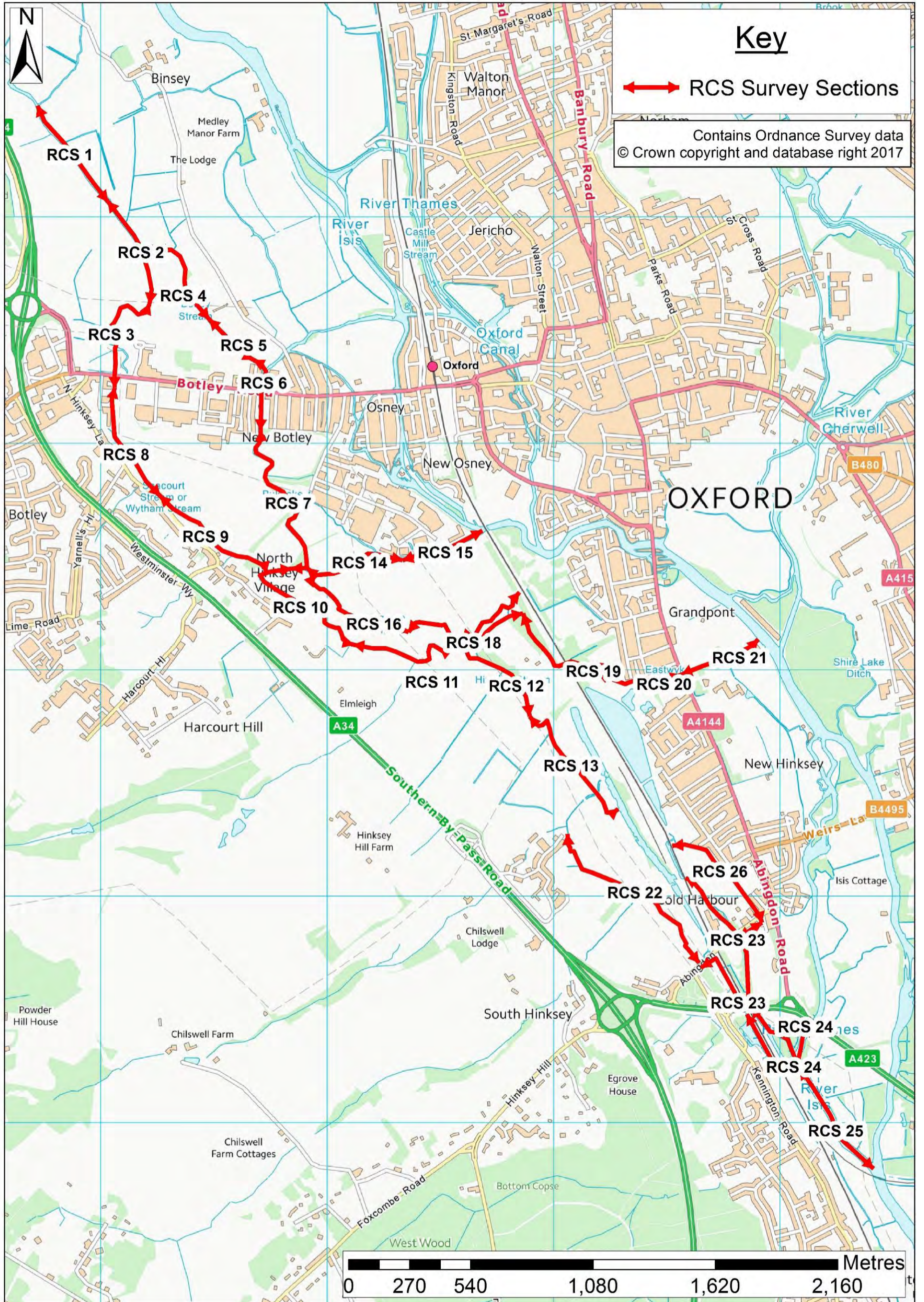


Figure 3-26: RCS Section 26 (SP515042 - SP519039)

Appendices

A River Corridor Survey

A.1 River Corridor Survey Section Map



A.2 RCS Symbols and Abbreviations

A.2.1 Standard Symbols for use in RCS

AQUATIC AND MARGINAL ZONES		BANK AND ADJACENT LAND ZONES	
CHANNEL FEATURES	SUBSTRATE	BANK FEATURES	VEGETATION
Bridge (road/track)	Mud	Base of bank	Trees
Footbridge	Sand	Top of bank	Conifer
Lock	Bare gravel/shingle	Slump	Broadleaf
Inlet	Vegetated gravel/shingle	Stable earth cliff	- overhanging
Weir	Cobbles	Proding earth cliff	- fallen
Pool	Boulders	Rock cliff	- exposed roots
Riffle	CHANNEL VEGETATION	Artificial bank protection	Woodland = symbol for type
Rapids	Emergent Monocots	Cattle drink	<i>P</i> + symbol Pollarded tree
Run	Emergent Dicots	Shed / barn	<i>(P)</i> + symbol Tree needs pollarding
Waterfall	Submerged Monocots	Spring / flush	<i>C</i> + symbol Coppiced tree
Protruding rock	Submerged Dicots	Inflow stream	Sawling
Island (with vegetation)	Bryophytes	Outfall	Shrubs/hedgerows
Direction of flow	Floating leaves	Dredgings/spoil	Shrub (single)
CHANNEL CROSS-SECTION	SURVEY INFORMATION	ADJACENT LAND FEATURES	Dense shrubs
	Direction of survey/bank used	Pence	Sparse shrubs
	Photograph	Gate	Hedgerow
		Road / track	Hedgerow with trees
		Railway	Grasses and herbs
		Footpath	Reed / sedge
		Power lines	Tall grass
		Building	Tall herb / ruderal
		<i>S.I.W.</i> Sewage works	Tall grass with herbs
		Flood bank	Short grass
		Land use category Defined name / Phase 1 code	Mown

A.2.2 Abbreviated Plant Names

DICOTYLEDONS

Herbs

Anod	<i>Apium nodiflorum</i>	Pool's Water-cress
Asyl	<i>Angelica sylvestris</i>	Wild Angelica
Bere	<i>Bernia erecta</i>	Lesser Water-parsnip
Beer	<i>Bidens cernua</i>	Nodding Bur-marigold
Btri	<i>B. tripartita</i>	Trifid Bur-marigold
Cobt	<i>Callitriche obtusangula</i>	Blunt-fruited Water-starwort
Cata	<i>C. stagnalis</i>	Common Water-starwort
Cpal	<i>Caltha palustris</i>	Marsh-marigold
Cpra	<i>Cardamine pratensis</i>	Cuckooflower
Cdent	<i>Ceratophyllum demersum</i>	Rigid Hornwort
Cmac	<i>Conium maculatum</i>	Henlock
Dful	<i>Dipsacus fullonum</i>	Wild Teasel
Dpil	<i>D. pilosus</i>	Small Teasel
Ehir	<i>Epilobium hirsutum</i>	Great Willowherb
Ecan	<i>Eupatorium cannabinum</i>	Hemp-agrimony
Fulm	<i>Filipendula ulmaria</i>	Meadowsweet
Iped	<i>Lotus pedunculatus</i>	Greater Bird's-foot-trefoil
Licu	<i>Lycnia flor-cuculi</i>	Ragged-Robin
Leur	<i>Lycopus europaeus</i>	Gipsywort
Lvul	<i>Lysimachia vulgaris</i>	Yellow Loosestrife
Lsal	<i>Lytthrum salicaria</i>	Purple-loosestrife
Maqu	<i>Mentha aquatica</i>	Water Mint
Mscu	<i>Myosotis scorpioides</i>	Water Forget-me-not
Mspi	<i>Myriophyllum spicatum</i>	Spiked Water-milfoil
Nalb	<i>Nymphaea alba</i>	White Water-lily
Nlut	<i>Nuphar lutea</i>	Yellow Water-lily
Ocro	<i>Oenanthe crocata</i>	Henlock Water-dropwort
Oflu	<i>O. fluvialis</i>	River Water-dropwort
Phyh	<i>Potamogeton hybridus</i>	Butterbur
Pamp	<i>Polygonum amphibium</i>	Amphibious Bistort
Phyd	<i>P. hydropiper</i>	Water-pepper
Pdys	<i>Pulicaria dysenterica</i>	Common Fleabane
Raqu	<i>Ranunculus aquatilis</i>	Common Water-crowfoot
Reir	<i>R. circinatus</i>	Fan-leaved Water-crowfoot
Rfla	<i>R. flammula</i>	Lesser Spearwort
Rflu	<i>R. fluitans</i>	River Water-crowfoot
Rpel	<i>R. peltatus</i>	Pond Water-crowfoot

Rpen	<i>R. ponicillatus</i>	Stream Water-crowfoot
Race	<i>R. sceleratus</i>	Celery-leaved Buttercup
Rnaq	<i>Rorippa nasturtium-aquaticum</i>	Water-cress
Rhyd	<i>Rumex hydrolyapathum</i>	Water Dock
Saur	<i>Scrophularia auriculata</i>	Water Figwort
Sgal	<i>Scutellaria galericulata</i>	Skullcap
Sdul	<i>Solanum dulcamara</i>	Bittersweet
Soff	<i>Symphytum officinale</i>	Common Comfrey
Tfla	<i>Thalictrum flavum</i>	Common Meadow-rue
Udio	<i>Urtica dioica</i>	Common Nettle
Voff	<i>Valeriana officinalis</i>	Common Valerian
Vaaq	<i>Veronica anagallis-aquatica</i>	Blue Water-Speedwell
Vbec	<i>V. beccabunga</i>	Brooklime
Vcat	<i>V. catenata</i>	Pink Water-Speedwell

MONOCOTYLEDONS

Grasses

Aela	<i>Arrhenatherum elatius</i>	False Cat-grass
Arto	<i>Agrostis stolonifera</i>	Creeping Bent
Caqu	<i>Catabrosa aquatica</i>	Whorl-grass
Dees	<i>Deschampsia cespitosa</i>	Tufted Hair-grass
Gdec	<i>Glyceria declinata</i>	Small Sweet-grass
Gflu	<i>G. fluitans</i>	Floating Sweet-grass
Gmax	<i>G. maxima</i>	Reed Sweet-grass
Gnot	<i>G. notata</i>	Plicate Sweet-grass
Paru	<i>Phalaris arundinacea</i>	Reed Canary-grass
Paus	<i>Phragmites australis</i>	Common Reed

Sedges & rushes

Cacu BSBI 340	<i>Carex acuta</i>	Slender Tufted-sedge
Cacu BSBI 341	<i>C. acutiformis</i>	Lesser Pond-sedge
Cfla	<i>C. flacca</i>	Glaucous Sedge
Chir	<i>C. hirta</i>	Hairy Sedge
Cnig	<i>C. nigra</i>	Common Sedge
Cobt	<i>C. obtusae</i>	False Fox-sedge
Cpan	<i>C. paniculata</i>	Greater Tussock-sedge
Cpen	<i>C. pendula</i>	Pendulous Sedge
Crip	<i>C. riparia</i>	Greater Pond-sedge
Epal	<i>Eleocharis palustris</i>	Common Spike-rush

Jacu	<i>Juncus acutiflorus</i>	Sharp-flowered Rush	Qrob	<i>Quercus robur</i>	Pedunculate Oak
Jart	<i>J. articulatus</i>	Jointed Rush	Rfru	<i>Rubus fruticosus</i>	Bramble
Jeff	<i>J. effusus</i>	Soft-rush	Salb	<i>Salix alba</i>	White Willow
Jinf	<i>J. inflexus</i>	Hard Rush	Scap	<i>S. caprea</i>	Goat Willow
Shac	<i>Schoenoplectus lacustris</i>	Common Club-rush	Scin	<i>S. cinerea</i>	Grey Willow
Ssyl	<i>Scirpus sylvaticus</i>	Wood Club-rush	Sfra	<i>S. fragilis</i>	Crack-willow
			Spig	<i>Sambucus nigra</i>	Elder
			Ugla	<i>Ulmus glabra</i>	Wych Elm
			Vopu	<i>Viburnum opulus</i>	Gelder-rose

Other monocotyledons

Apaq	<i>Alisma plantago-aquatica</i>	Water plantain
Alan	<i>A. lanceolatum</i>	Narrow-Leaved Water-plantain
Bumb	<i>Butomus umbellatus</i>	Flowering-rush
Ecaw	<i>Elodea canadensis</i>	Canadian Waterweed
Hmra	<i>Hydrocharis morsus-ranae</i>	Frogbit
Ipsc	<i>Iris pseudacorus</i>	Yellow Iris
Lgib	<i>Lemna gibba</i>	Fat Duckweed
Lmin	<i>L. minor</i>	Common Duckweed
Ltri	<i>L. trisulca</i>	Ivy-leaved Duckweed
Peri	<i>Potamogeton crispus</i>	Curled Pondweed
Pluc	<i>P. lucens</i>	Shining Pondweed
Pnat	<i>P. natans</i>	Broad-leaved Pondweed
Ppec	<i>P. pectinatus</i>	Fennel Pondweed
Pper	<i>P. perfoliatus</i>	Perfoliate Pondweed
Ssag	<i>Sagittaria sagittifolia</i>	Arrowhead
Seme	<i>Sparganium emersum</i>	Unbranched Bur-reed
Sere	<i>S. erectum</i>	Branched Bur-reed
Spol	<i>Spirodela polyrhiza</i>	Greater Duckweed
Tlat	<i>Typha latifolia</i>	Bulrush
Warr	<i>Wolffia arrhiza</i>	Rootless Duckweed
Zpal	<i>Zanichellia palustris</i>	Horned Pondweed

FERNS

Eflu	<i>Equisetum fluviatile</i>	Water Horsetail
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SELECTED ALIEN PLANTS

Afil	<i>Azolla filiculoides</i>	Water Fern
Chel	<i>Crassula helmsii</i>	New Zealand Pigmyweed
Fjap	<i>Fallopia japonica</i>	Japanese Knotweed
Hman	<i>Heracleum mantegazzianum</i>	Giant Hogweed
Icap	<i>Impatiens capensis</i>	Orange Balsam
Igla	<i>I. glandulifera</i>	Indian Balsam
Mgut	<i>Mimulus guttatus</i>	Monkeyflower

TREES & SHRUBS

Acam	<i>Acer campestre</i>	Field Maple
Apse	<i>A. pseudoplatanus</i>	Sycamore
Aglu	<i>Alnus glutinosa</i>	Alder
Ahip	<i>Aesculus hippocastanum</i>	Horse-chestnut
Cave	<i>Corylus avellana</i>	Hazel
Cbet	<i>Carpinus betulus</i>	Hornbeam
Cean	<i>Cornus sanguinea</i>	Dogwood
Cmot	<i>Crataegus monogyna</i>	Hawthorn
Eeur	<i>Euonymus europaeus</i>	Spindle
Fexc	<i>Fraxinus excelsior</i>	Ash
Fsyl	<i>Fagus sylvatica</i>	Beech
Iagu	<i>Ilex aquifolium</i>	Holly
Palb	<i>Populus alba</i>	White Poplar
Pcan	<i>P. canescens</i>	Grey Poplar
Pnig	<i>P. nigra</i>	Black-poplar
Ptre	<i>P. tremula</i>	Aspen
Pspi	<i>Prunus spinosa</i>	Blackthorn
Psyl	<i>Pinus sylvestris</i>	Scots Pine

B River Habitat Survey

B.1 River Habitat Survey Section Overview Map



B.2 River Habitat Survey Data

B.2.1 RHS 1

RIVER HABITAT SURVEY 2003 VERSION: SITE HEALTH AND SAFETY ASSESSMENT			
Site Number ¹ :	Site Ref: OXFASRHS1	River Name: Seacourt Stream	Date: 15/5/17
Grid References/Co-ordinates:	Spot 1 ² :	Mid-site: SP4829107246	End of site ² :
Surveyor Name: Rob Harrison		Accredited Surveyor Code: FA009	
<small>¹ Leave blank if new site</small>		<small>² Optional</small>	
Weather Conditions: Overcast, Windy, 15°C			
Flow Conditions: Low			
Site details: (enter comments or circle if applicable and give details)			Risk Level (Low/Mod/High)
Access and Parking: (entry & exit) @ the Pike PH. entry via field gates			Low
Conditions: comment on ground stability, footing, exposure/remoteness			Low
Obstacles/Hazards: fencing, stiles, dense vegetation, steep bank			Low
Occupied/Unoccupied: people, livestock, animals sheep + dog walkers			Low
Activities/Land-use: agriculture, woodland, residential, industrial, construction, recreational			Low
Risk if lone-working			Low
IF THERE ARE ANY HIGH RISKS OR MORE THAN THREE MODERATE RISKS DO NOT CONTINUE WITH THE SURVEY.			
Weil's Disease (Leptospirosis)			
Instructions to card holders			
<ol style="list-style-type: none"> 1. As infection may enter through breaks in the skin, ensure that any cut, scratch or abrasion is thoroughly cleansed and covered with a waterproof plaster. 2. Avoid rubbing your eyes, nose and mouth during work. 3. Clean protective clothing, footwear and equipment etc. after use 4. After work, and particularly before taking food or drink, wash hands thoroughly. 5. Report all accidents and/or injuries, however slight. 6. Keep your card with you at all times. 			
Lyme Disease			
<ol style="list-style-type: none"> 1. Dress appropriately with skin covered up. 2. Regularly inspect for ticks when in the field. 3. Check for, and remove, any ticks as soon as possible after leaving the site. 4. Seek medical attention if bitten by a tick. 			

RIVER HABITAT SURVEY 2003 Version

A FIELD SURVEY DETAILS

Site Number: leave blank if new site
 Site Reference: OXFAS RHS 1
 Spot-check 1 Grid Ref: SP 48127 07473
 Spot-check 6 Grid Ref: SP 48921 07246
 End of site Grid Ref: SP 49055 07040
 Reach Reference: OXFAS RHS 1
 River name: Sewcourt Stream
 Date 19 / 5 / 2017 Time: 13:50
 Surveyor name: Rob Harrison
 Accredited Surveyor code: FA009

Is the site part of a river or an artificial channel? River Artificial
 Are adverse conditions affecting survey? No Yes
 If yes, state
 Is bed of river visible? barely or not partially ± entirely
 Is health and safety assessment form attached? Yes No
 Number of photographs taken: 3
 Photo references: 754 - SC10US 757 - end point looking US
 755 - SC10DS
 Site surveyed from: left bank right bank channel

When options shown with 'shadow boxes', tick one box only

LEFT banks determined by facing downstream **RIGHT**

B PREDOMINANT VALLEY FORM (within the horizon limit) (tick one box only)

(tick one box only)

	<input checked="" type="checkbox"/> shallow vee		<input type="checkbox"/> concave/bowl
	<input type="checkbox"/> deep vee		<input type="checkbox"/> asymmetrical valley
	<input type="checkbox"/> gorge		<input type="checkbox"/> U-shape valley
			<input type="checkbox"/> no obvious valley sides

Distinct flat valley bottom? No Yes

Natural terraces? No Yes

C NUMBER OF RIFFLES, POOLS AND POINT BARS (enter total number in boxes)















Riffle(s) Unvegetated point bar(s)
 Pool(s) Vegetated point bar(s)

D ARTIFICIAL FEATURES (indicate total number of occurrences of each category within the 500m site)

If none, tick box <input checked="" type="checkbox"/>						
	Major	Intermediate	Minor	Major	Intermediate	Minor
Weirs/sluiques				Outfalls/intakes		
Culverts				Fords		
Bridges				Deflectors/groynes/croys		
Other - state						

Is channel obviously realigned? No Yes, <33% of site ≥33% of site
 Is channel obviously over-deepened? No Yes, <33% of site ≥33% of site
 Is water impounded by weir/dam? No Yes, <33% of site ≥33% of site

SITE REF. <u>OXFAS RHE1</u>		RIVER HABITAT SURVEY: TEN SPOT-CHECKS										Page 2 of 4	
Spot-check 1 is at: upstream end <input checked="" type="checkbox"/> downstream end <input type="checkbox"/> of site (tick one box)													
E PHYSICAL ATTRIBUTES (to be assessed across channel within 1m wide transect)													
When boxes 'bordered', only one entry allowed		1 GPS	2	3	4	5	6 GPS	7	8	9	10	GPS	
LEFT BANK		Ring EC or SC if composed of sandy substrate											
Material NV, BE, BO, CO, CS, EA, FE, CL, CC, SP, WP, GA, BR, RR, TD, FA, BI		EA	EA	EA	EA	EA	EA	EA	EA	EA	EA		
Bank modification(s) NK, NO, RS, RL, PC(B), BM, EM		RS	RS	RS	RS	RS	RS	RS	RS	RS	RS		
Marginal & bank feature(s) NV, NO, EC, SC, PB, VP, SR, VS, NB		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO		
CHANNEL		GP - ring either G or P if predominant										↑ Enter channel substrate(s) not occurring as predominant in spot-checks but present in > 1% of whole site.	
Channel substrate NV, BE, BO, CO, CP, SA, SL, CL, PE, EA, AR		SA	SA	SA	SA	GA	SA	SA	SA	SA	SA		S
Flow-type NV, FF, CH, BW, UW, CF, RP, UP, SM, NP, DR		SM	SM	EM	SM	SM	SM	EM	SM	SM	SM		
Channel modification(s) NK, NO, CV, RS, RL, DA, FO		RS	RS	RS	RS	RS	RS	RS	RS	RS	RS		
Channel feature(s) NV, NO, EB, RO, VR, MB, VB, ML, TR		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO		
For braided rivers only: number of sub-channels													
RIGHT BANK		Ring EC or SC if composed of sandy substrate											
Material NV, BE, BO, CO, CS, EA, FE, CL, CC, SP, WP, GA, BR, RR, TD, FA, BI		EA	EA	EA	EA	EA	EA	EA	EA	EA	EA		
Bank modification(s) NK, NO, RS, RL, PC(B), BM, EM		RS	EM	RS	EM	RS	EM	RS	EM	RS	EM		
Marginal & bank feature(s) NV, NO, EC, SC, PB, VP, SR, VS, NB		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO		
F BANKTOP LAND-USE AND VEGETATION STRUCTURE (to be assessed over a 10m wide transect)													
Land-use: choose one from BL, BP, CW, CP, SH, OR, WL, MH, AW, OW, RP, IG, TH, RD, SU, TL, IL, PG, NV													
LAND-USE WITHIN 5m OF LEFT BANKTOP		RP	TH	TH	BL	BL	BL	BL	BL	BL	BL		
LEFT BANKTOP (structure within 1m) BU/S/C/NV		U	U	U	S	S	S	S	S	S	S		
LEFT BANK-FACE (structure) BU/S/C/NV		S	S	S	S	S	S	S	S	S	S		
RIGHT BANK-FACE (structure) BU/S/C/NV		U	U	U	U	U	U	U	U	U	U		
RIGHT BANKTOP (structure within 1m) BU/S/C/NV		U	U	U	U	U	U	U	U	U	U		
LAND-USE WITHIN 5m OF RIGHT BANKTOP		RP	RP	TL	TL	TL	TL	TL	TL	TL	TL		
G CHANNEL VEGETATION TYPES (to be assessed over a 10m wide transect for E (> 1% area) ✓ ground or NV (not visible))													
None (✓) or Not Visible (NV)													
Liverworts/mosses/lichens													
Emergent broad-leaved herbs												✓	
Emergent reeds/sedges/rushes/grasses/horsetails			✓		✓	✓	✓	✓	✓	✓		✓	
Floating-leaved (rooted)													
Free-floating													
Amphibious													
Submerged broad-leaved		E	✓	✓		✓				✓	✓	✓	
Submerged linear-leaved													
Submerged fine-leaved													
Filamentous algae												✓	
Use end column for overall assessment over 500m, including types not occurring in spot-checks (use ✓, E or NV) ————— ↑													

SITE REF. <u>OXFAS R161</u>		RIVER HABITAT SURVEY : 500m SWEEP-UP				Page 3 of 4	
H LAND-USE WITHIN 50m OF BANKTOP Use ✓ (present) or E (≥ 33% banklength)							
	L	R		L	R		
Broadleaf/mixed woodland (semi-natural) (BL)	E	✓	Natural open water (OW)				
Broadleaf/mixed plantation (BP)			Rough/unimproved grassland/pasture (RP)	E	✓		
Coniferous woodland (semi-natural) (CW)			Improved/semi-improved grassland (IG)				
Coniferous plantation (CP)			Tall herb/rank vegetation (TH)	✓	✓		
Scrub & shrubs (SH)	✓	✓	Rock, scree or sand dunes (RD)				
Orchard (OR)			Suburban/urban development (SU)				
Wetland (e.g. bog, marsh, fen) (WL)			Tilled land (TL)			E	
Moorland/heath (MH)			Irrigated land (IL)				
Artificial open water (AW)			Parkland or gardens (PG)				
			Not visible (NV)				
I BANK PROFILES Use ✓ (present) or E (≥ 33% banklength)							
Natural/unmodified	L	R	Artificial/modified	L	R		
Vertical/undercut 			Resectioned (reprofiled) 	E	E		
Vertical with toe 			Reinforced - whole 				
Steep (>45°) 			Reinforced - top only 				
Gentle 			Reinforced - toe only 				
Composite 			Artificial two-stage 				
Natural berm 			Poached bank 				
			Embanked 			E	
			Set-back embankment 				
J EXTENT OF TREES AND ASSOCIATED FEATURES *record even if <1%							
TREES (tick one box per bank)				ASSOCIATED FEATURES (tick one box per feature)			
	Left	Right		None	Present	E (≥33%)	
None	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Shading of channel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Isolated/scattered	<input type="checkbox"/>	<input checked="" type="checkbox"/>	*Overhanging boughs	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Regularly spaced, single	<input type="checkbox"/>	<input type="checkbox"/>	*Exposed bankside roots	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Occasional clumps	<input type="checkbox"/>	<input type="checkbox"/>	*Underwater tree roots	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Semi-continuous	<input type="checkbox"/>	<input type="checkbox"/>	Fallen trees	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Continuous	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Large woody debris	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
K EXTENT OF CHANNEL AND BANK FEATURES (tick one box for each feature) *record even if <1%							
	None	Present	E (≥33%)	None	Present	E (≥33%)	
*Free fall flow	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Exposed bedrock	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chute flow	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Exposed boulders	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Broken standing waves	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vegetated bedrock/boulders	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unbroken standing waves	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unvegetated mid-channel bar(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rippled flow	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Vegetated mid-channel bar(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*Upwelling	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Mature island(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Smooth flow	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Unvegetated side bar(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No perceptible flow	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vegetated side bar(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No flow (dry)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unvegetated point bar(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Marginal deadwater	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Vegetated point bar(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Eroding cliff(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	*Unvegetated silt deposit(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stable cliff(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	*Discrete unvegetated sand deposit(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				*Discrete unvegetated gravel deposit(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SITE REF. OXFASRHS1 **RIVER HABITAT SURVEY : DIMENSIONS AND INFLUENCES** Page 4 of 4

L CHANNEL DIMENSIONS (to be measured at one location in a straight uniform section, preferably across a riffle)

LEFT BANK		CHANNEL		RIGHT BANK	
Banktop height (m)	2.5	Bankfull width (m)	9	Banktop height (m)	2.0
Is banktop height also bankfull height? (Y or N)	Y	Water width (m)	6	Is banktop height also bankfull height? (Y or N)	N
Embanked height (m)	—	Water depth (m)	1.2	Embanked height (m)	0.5

If trashline lower than banktop, indicate: height above water (m) = — width from bank to bank (m) = —

Bed material at site is: consolidated unconsolidated (loose) unknown

Location of measurements is: riffle other (state) *Glide*

M FEATURES OF SPECIAL INTEREST (Use ✓ or E (≥ 33% length) record even if < 1%)

None <input type="checkbox"/>	Very large boulders (>1m) <input type="checkbox"/>	Backwater(s) <input type="checkbox"/>	Marsh(es) <input type="checkbox"/>
Braided channels <input type="checkbox"/>	*Debris dam(s) <input type="checkbox"/>	Floodplain boulder deposits <input type="checkbox"/>	Flush(es) <input type="checkbox"/>
Side channel(s) <input type="checkbox"/>	*Leafy debris <input type="checkbox"/>	Water meadow(s) <input type="checkbox"/>	Natural open water <input type="checkbox"/>
*Natural waterfall(s) > 5m high <input type="checkbox"/>	Fringing reed-bank(s) <input checked="" type="checkbox"/>	Fen(s) <input checked="" type="checkbox"/>	Others (state) <input type="checkbox"/>
*Natural waterfall(s) < 5m high <input type="checkbox"/>	Quaking bank(s) <input type="checkbox"/>	Bog(s) <input type="checkbox"/>	
Natural cascade(s) <input type="checkbox"/>	*Sink hole(s) <input type="checkbox"/>	Wet woodland(s) <input type="checkbox"/>	

N CHOKED CHANNEL (tick one box)

Is 33% or more of the channel choked with vegetation? No Yes

O NOTABLE NUISANCE PLANT SPECIES (Use ✓ or E (≥ 33% length) record even if < 1%)

	bankface	banktop to 50m	bankface	banktop to 50m
None <input type="checkbox"/>	*Giant hogweed <input type="checkbox"/>	<input type="checkbox"/>	*Himalayan balsam <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	*Japanese knotweed <input type="checkbox"/>	<input type="checkbox"/>	*Other (state)..... <input type="checkbox"/>	<input type="checkbox"/>

P OVERALL CHARACTERISTICS (Circle appropriate words; add others as necessary)

Major impacts: landfill - tipping - litter - sewage - pollution - drought - abstraction - mill - dam - road - rail - industry - housing - mining - quarrying - overdeepening - afforestation - fisheries management - silting - waterlogging - hydroelectric power *farm*

Evidence of recent management: *dredging* - bank moving - weed cutting - enhancement - river rehabilitation - gravel extraction - other (please specify) *not really but embankment seems to be from ditching.*

Animals: otter - mink - water vole - kingfisher - dipper - grey wagtail - sand martin - heron - dragonflies *damsellies, mayflies*

Other significant observations: if necessary use separate sheet to describe overall characteristics and relevant observations

Q ALDERS (tick one box in each of the two categories) (record even if < 1%)

*Alders? None Present Extensive *Diseased Alders? None Present Extensive

R FIELD SURVEY QUALITY CONTROL (✓ boxes to confirm checks)

Have you taken at least two photos that illustrate the general character of the site and additional photos of any weirs/ sluices and major/intermediate structures across the channel?	<input checked="" type="checkbox"/>
Have you completed all ten spot-checks and made entries in all boxes in E & F on page 2?	<input checked="" type="checkbox"/>
Have you completed column 11 of section G (and E if appropriate) on page 2?	<input checked="" type="checkbox"/>
Have you recorded in section C the number of riffles, pools and point bars (even if 0) on page 1?	<input checked="" type="checkbox"/>
Have you given an accurate (alphanumeric) grid reference for spot-checks 1, 6 and end of site (page 1)?	<input checked="" type="checkbox"/>
Have you stated whether spot-check 1 is at the upstream or downstream end of the site (top of page 2)?	<input checked="" type="checkbox"/>
Have you cross-checked your spot-check and sweep-up responses with the channel modification indicators given on page 2 of the spot-check key?	<input checked="" type="checkbox"/>

Photograph



















B.2.2 RHS 2

RIVER HABITAT SURVEY 2003 VERSION: SITE HEALTH AND SAFETY ASSESSMENT			
Site Number ¹ :	Site Ref: OXFAS RHS 2	River Name: Botley stream	Date: 16/5/17
Grid References/Co-ordinates:	Spot 1 ² :	Mid-site: SP4737200056	End of site ² :
Surveyor Name: Rob Harrison		Accredited Surveyor Code: FA009	
<small>¹ Leave blank if new site.</small>		<small>² Optional</small>	
Weather Conditions: Overcast, breezy, 17°C			
Flow Conditions: Low			
Site details: (enter comments or circle if applicable and give details)			Risk Level (Low/Mod/High)
Access and Parking: (entry & exit) @ golf range			Low
Conditions: comment on ground stability, footing, exposure/remoteness			Low
Obstacles/Hazards: <u>fencing</u> , stiles, dense vegetation, steep bank			Low
Occupied/Unoccupied: people, livestock, animals Arable field			Low
Activities/Land-use: <u>agriculture</u> , woodland, residential, industrial, construction, recreational			Low
Risk if lone-working			Low
IF THERE ARE ANY HIGH RISKS OR MORE THAN THREE MODERATE RISKS DO NOT CONTINUE WITH THE SURVEY.			
Weil's Disease (Leptospirosis)			
Instructions to card holders			
<ol style="list-style-type: none"> 1. As infection may enter through breaks in the skin, ensure that any cut, scratch or abrasion is thoroughly cleansed and covered with a waterproof plaster. 2. Avoid rubbing your eyes, nose and mouth during work. 3. Clean protective clothing, footwear and equipment etc. after use 4. After work, and particularly before taking food or drink, wash hands thoroughly. 5. Report all accidents and/or injuries, however slight. 6. Keep your card with you at all times. 			
Lyme Disease			
<ol style="list-style-type: none"> 1. Dress appropriately with skin covered up. 2. Regularly inspect for ticks when in the field. 3. Check for, and remove, any ticks as soon as possible after leaving the site. 4. Seek medical attention if bitten by a tick. 			

RIVER HABITAT SURVEY 2003 Version		Page 1 of 4																																					
A FIELD SURVEY DETAILS																																							
<p>Site Number: leave blank if new site</p> <p>Site Reference: OXFAS.RHS2</p> <p>Spot-check 1 Grid Ref: SP4929706850</p> <p>Spot-check 6 Grid Ref: SP4937206656</p> <p>End of site Grid Ref: P4952906481</p> <p>Reach Reference: OXFAS.RHS2</p> <p>River name: Botley Stream</p> <p>Date 16/5/2017 Time: 9:50</p> <p>Surveyor name: Rob Harrison</p> <p>Accredited Surveyor code: FA009</p>	<p>Is the site part of a river or an artificial channel? River <input checked="" type="checkbox"/> Artificial <input type="checkbox"/></p> <p>Are adverse conditions affecting survey? No <input checked="" type="checkbox"/> Yes <input type="checkbox"/></p> <p>If yes, state</p> <p>Is bed of river visible? barely or not <input type="checkbox"/> partially <input type="checkbox"/> ± entirely <input checked="" type="checkbox"/></p> <p>Is health and safety assessment form attached? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>Number of photographs taken: 5</p> <p>Photo references: 804-SC2 799-SC5 766-SC4 805-SC6 777-SC4</p> <p>Site surveyed from: left bank <input type="checkbox"/> right bank <input checked="" type="checkbox"/> channel <input type="checkbox"/></p> <p><input type="checkbox"/> When options shown with 'shadow boxes', tick one box only</p> <p>LEFT banks determined by facing downstream RIGHT</p>																																						
B PREDOMINANT VALLEY FORM (within the horizon limit) (tick one box only)																																							
<p>(tick one box only)</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <input checked="" type="checkbox"/> shallow vee </div> <div style="text-align: center;"> <input type="checkbox"/> concave/bowl </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> <input type="checkbox"/> deep vee </div> <div style="text-align: center;"> <input type="checkbox"/> asymmetrical valley </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> <input type="checkbox"/> gorge </div> <div style="text-align: center;"> <input type="checkbox"/> U-shape valley </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> <input type="checkbox"/> no obvious valley sides </div> </div>																																							
<p>Distinct flat valley bottom? No <input type="checkbox"/> Yes <input checked="" type="checkbox"/></p> <p>Natural terraces? No <input checked="" type="checkbox"/> Yes <input type="checkbox"/></p>																																							
C NUMBER OF RIFFLES, POOLS AND POINT BARS (enter total number in boxes)																																							
Riffle(s)	<input type="text" value="0"/>	Unvegetated point bar(s)																																					
Pool(s)	<input type="text" value="0"/>	Vegetated point bar(s)																																					
D ARTIFICIAL FEATURES (indicate total number of occurrences of each category within the 500m site)																																							
If none, tick box <input checked="" type="checkbox"/>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Major</th> <th>Intermediate</th> <th>Minor</th> </tr> </thead> <tbody> <tr> <td>Weirs/sluices</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Culverts</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Bridges</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Other - state</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Major	Intermediate	Minor	Weirs/sluices				Culverts				Bridges				Other - state				<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Major</th> <th>Intermediate</th> <th>Minor</th> </tr> </thead> <tbody> <tr> <td>Outfalls/intakes</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Fords</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Deflectors/groynes/croys</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Major	Intermediate	Minor	Outfalls/intakes				Fords				Deflectors/groynes/croys				
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Fords																																							
Deflectors/groynes/croys																																							
<p>Is channel obviously realigned? No <input type="checkbox"/> Yes, <33% of site <input type="checkbox"/> ≥33% of site <input checked="" type="checkbox"/></p> <p>Is channel obviously over-deepened? No <input type="checkbox"/> Yes, <33% of site <input type="checkbox"/> ≥33% of site <input checked="" type="checkbox"/></p> <p>Is water impounded by weir/dam? No <input checked="" type="checkbox"/> Yes, <33% of site <input type="checkbox"/> ≥33% of site <input type="checkbox"/></p>																																							

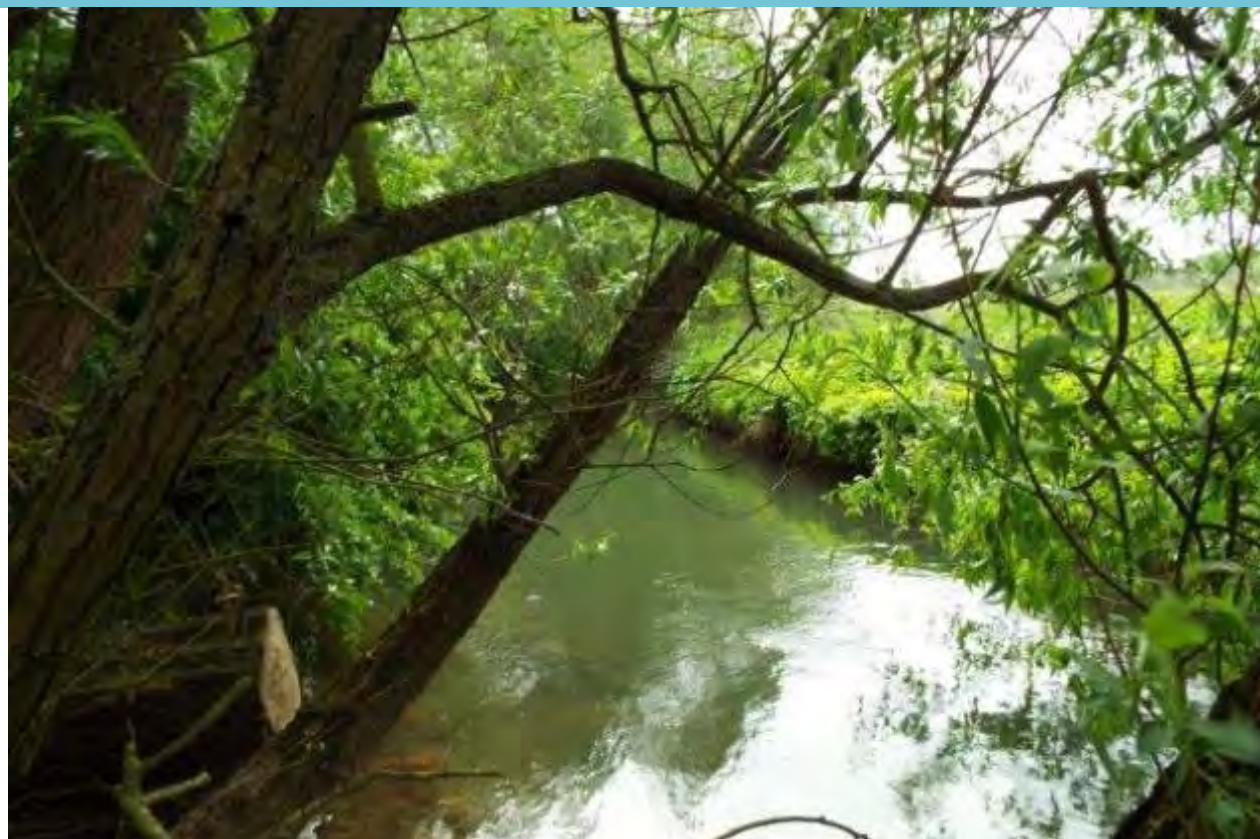
SITE REF: OXFAS Rms 2		RIVER HABITAT SURVEY: TEN SPOT-CHECKS								Page 2 of 4		
Spot-check 1 is at: upstream end <input checked="" type="checkbox"/>		downstream end <input type="checkbox"/>								of site (tick one box)		
E PHYSICAL ATTRIBUTES (to be assessed across channel within 1m wide transects)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

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

SITE REF. OXFASRHS 2		RIVER HABITAT SURVEY : 500m SWEEP-UP				Page 3 of 4	
H LAND-USE WITHIN 50m OF BANKTOP Use ✓ (present) or E (>33% banklength)							
	L	R		L	R		
Broadleaf/mixed woodland (semi-natural) (BL)	✓	✓	Natural open water (OW)				
Broadleaf/mixed plantation (BP)			Rough/unimproved grassland/pasture (RP)	E	E		
Coniferous woodland (semi-natural) (CW)			Improved/semi-improved grassland (IG)	E			
Coniferous plantation (CP)			Tall herb/rank vegetation (TH)	✓	✓		
Scrub & shrubs (SH)	✓	✓	Rock, scree or sand dunes (RD)				
Orchard (OR)			Suburban/urban development (SU)	✓			
Wetland (e.g. bog, marsh, fen) (WL)			Tilled land (TL)				
Moorland/heath (MH)			Irrigated land (IL)				
Artificial open water (AW)			Parkland or gardens (PG)				
			Not visible (NV)				
I BANK PROFILES Use ✓ (present) or E (>33% banklength)							
Natural/unmodified	L	R	Artificial/modified	L	R		
Vertical/undercut 			Resectioned (reprofiled) 	E	E		
Vertical with toe 			Reinforced - whole 				
Steep (>45°) 			Reinforced - top only 				
Gentle 			Reinforced - toe only 				
Composite 			Artificial two-stage 				
Natural berm 			Poached bank 				
			Embanked 				E
			Set-back embankment 				
J EXTENT OF TREES AND ASSOCIATED FEATURES *record even if <1%							
TREES (tick one box per bank)				ASSOCIATED FEATURES (tick one box per feature)			
	Left	Right		None	Present	E (>33%)	
None	<input type="checkbox"/>	<input type="checkbox"/>	Shading of channel	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Isolated/scattered	<input type="checkbox"/>	<input type="checkbox"/>	*Overhanging boughs	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Regularly spaced, single	<input type="checkbox"/>	<input type="checkbox"/>	*Exposed bankside roots	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Occasional clumps	<input type="checkbox"/>	<input checked="" type="checkbox"/>	*Underwater tree roots	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Semi-continuous	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Fallen trees	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Continuous	<input type="checkbox"/>	<input type="checkbox"/>	Large woody debris	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
K EXTENT OF CHANNEL AND BANK FEATURES (tick one box for each feature) *record even if <1%							
	None	Present	E (>33%)	None	Present	E (>33%)	
*Free fall flow	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Exposed bedrock	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chute flow	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Exposed boulders	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Broken standing waves	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vegetated bedrock/boulders	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unbroken standing waves	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unvegetated mid-channel bar(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rippled flow	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Vegetated mid-channel bar(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*Upwelling	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Mature island(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Smooth flow	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Unvegetated side bar(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No perceptible flow	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vegetated side bar(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No flow (dry)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unvegetated point bar(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Marginal deadwater	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Vegetated point bar(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Eroding cliff(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	*Unvegetated silt deposit(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stable cliff(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	*Discrete unvegetated sand deposit(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				*Discrete unvegetated gravel deposit(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SITE REF. <u>OxCR6 (RHS2)</u>		RIVER HABITAT SURVEY : DIMENSIONS AND INFLUENCES		Page 4 of 4	
L CHANNEL DIMENSIONS (to be measured at one location on a straight uniform section, preferably across a riffle)					
LEFT BANK		CHANNEL		RIGHT BANK	
Banktop height (m)	<u>2.5</u>	Bankfull width (m)	<u>7</u>	Banktop height (m)	<u>2.5</u>
Is banktop height also bankfull height? (Y or N)	<u>Y</u>	Water width (m)	<u>4</u>	Is banktop height also bankfull height? (Y or N)	<u>Y</u>
Embanked height (m)	<u>—</u>	Water depth (m)	<u>1.0</u>	Embanked height (m)	<u>—</u>
If trashline lower than banktop, indicate: height above water (m) = <u>—</u> width from bank to bank (m) = <u>—</u>					
Bed material at site is: consolidated <input type="checkbox"/> unconsolidated (loose) <input checked="" type="checkbox"/> unknown <input type="checkbox"/>					
Location of measurements is: riffle <input type="checkbox"/> other <input checked="" type="checkbox"/> (state) <u>Glide</u>					
M FEATURES OF SPECIAL INTEREST (Use V or E (> 33% length) *record even if < 1%)					
None <input type="checkbox"/>	Very large boulders (>1m) <input type="checkbox"/>	Backwater(s) <input type="checkbox"/>	Marsh(es) <input type="checkbox"/>		
Braided channels <input type="checkbox"/>	*Debris dam(s) <input type="checkbox"/>	Floodplain boulder deposits <input type="checkbox"/>	Flush(es) <input type="checkbox"/>		
Side channel(s) <input type="checkbox"/>	*Leafy debris <input type="checkbox"/>	Water meadow(s) <input type="checkbox"/>	Natural open water <input type="checkbox"/>		
*Natural waterfall(s) > 5m high <input type="checkbox"/>	Fringing reed-bank(s) <input type="checkbox"/>	<input checked="" type="checkbox"/> Fen(s)	Others (state) <input type="checkbox"/>		
*Natural waterfall(s) < 5m high <input type="checkbox"/>	Quaking bank(s) <input type="checkbox"/>	Bog(s) <input type="checkbox"/>			
Natural cascade(s) <input type="checkbox"/>	*Sink hole(s) <input type="checkbox"/>	Wet woodland(s) <input type="checkbox"/>			
N CHOKED CHANNEL (tick one box)					
Is 33% or more of the channel choked with vegetation? No <input checked="" type="checkbox"/> Yes <input type="checkbox"/>					
O NOTABLE NUISANCE PLANT SPECIES (Use V or E (> 33% length) *record even if < 1%)					
None <input type="checkbox"/>	bankface <input type="checkbox"/>	banktop to 50m <input type="checkbox"/>	bankface <input type="checkbox"/>	banktop to 50m <input type="checkbox"/>	
*Giant hogweed <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	*Himalayan balsam <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
*Japanese knotweed <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	*Other (state)..... <input type="checkbox"/>	<input type="checkbox"/>	
P OVERALL CHARACTERISTICS (Circle appropriate words, add others as necessary)					
Major impacts: landfill - tipping - <u>litter</u> - sewage - pollution - drought - abstraction - mill - dam - road - rail - industry - housing - mining - quarrying - overdeepening - afforestation - fisheries management - silting - waterlogging - hydroelectric power <u>golf course</u>					
Evidence of recent management: <u>dredging</u> - bank mowing - weed cutting - enhancement - river rehabilitation - gravel extraction - other (please specify)					
Animals: otter - mink - water vole - kingfisher - dipper - <u>grey wagtail</u> - sand martin - heron - dragonflies/ <u>damsel flies</u>					
Other significant observations: if necessary use separate sheet to describe overall characteristics and relevant observations					
Q ALDERS (tick one box in each of the two categories) *record even if < 1%					
*Alders? None <input type="checkbox"/> Present <input checked="" type="checkbox"/> Extensive <input type="checkbox"/>			*Diseased Alders? None <input checked="" type="checkbox"/> Present <input type="checkbox"/> Extensive <input type="checkbox"/>		
R FIELD SURVEY QUALITY CONTROL (✓ boxes to confirm checks)					
Have you taken at least two photos that illustrate the general character of the site and additional photos of any weirs/ sluices and major/intermediate structures across the channel? <input checked="" type="checkbox"/>					
Have you completed all ten spot-checks and made entries in all boxes in E & F on page 2? <input checked="" type="checkbox"/>					
Have you completed column 11 of section G (and E if appropriate) on page 2? <input checked="" type="checkbox"/>					
Have you recorded in section C the number of riffles, pools and point bars (even if 0) on page 1? <input checked="" type="checkbox"/>					
Have you given an accurate (alphanumeric) grid reference for spot-checks 1, 6 and end of site (page 1)? <input checked="" type="checkbox"/>					
Have you stated whether spot-check 1 is at the upstream or downstream end of the site (top of page 2)? <input checked="" type="checkbox"/>					
Have you cross-checked your spot-check and sweep-up responses with the channel modification indicators given on page 2 of the spot-check key? <input checked="" type="checkbox"/>					

Photographs










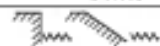



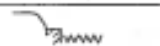



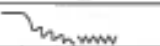


B.2.3 RHS 3

RIVER HABITAT SURVEY 2003 VERSION: SITE HEALTH AND SAFETY ASSESSMENT			
Site Number ¹ :	Site Ref: OXFAS RHS 3	River Name: Hinksey Stream	Date: 16/5/17
Grid References/Co-ordinates:	Spot 1 ² :	Mid-site: SP4914705989	End of site ² :
Surveyor Name: Rob Harrison	Accredited Surveyor Code: FA 009		
¹ Leave blank if new site		² Optional	
Weather Conditions: overcast, breezy, 18°C			
Flow Conditions: low			
Site details: (enter comments or circle if applicable and give details)			Risk Level (Low/Mod/High)
Access and Parking: (entry & exit) @ Richer Sounds			low
Conditions: comment on ground stability, footing, exposure/remoteness Prob			low
Obstacles/Hazards: fencing, stiles, dense vegetation, steep bank			low
Occupied/Unoccupied: people, livestock, animals			low
Activities/Land-use: agriculture, woodland, residential, industrial, construction, recreational nature reserve			low
Risk if lone-working			low
IF THERE ARE ANY HIGH RISKS OR MORE THAN THREE MODERATE RISKS DO NOT CONTINUE WITH THE SURVEY.			
Weil's Disease (Leptospirosis)			
<u>Instructions to card holders</u>			
<ol style="list-style-type: none"> 1. As infection may enter through breaks in the skin, ensure that any cut, scratch or abrasion is thoroughly cleansed and covered with a waterproof plaster. 2. Avoid rubbing your eyes, nose and mouth during work. 3. Clean protective clothing, footwear and equipment etc. after use 4. After work, and particularly before taking food or drink, wash hands thoroughly. 5. Report all accidents and/or injuries, however slight. 6. Keep your card with you at all times. 			
Lyme Disease			
<ol style="list-style-type: none"> 1. Dress appropriately with skin covered up. 2. Regularly inspect for ticks when in the field. 3. Check for, and remove, any ticks as soon as possible after leaving the site. 4. Seek medical attention if bitten by a tick. 			

RIVER HABITAT SURVEY 2003 Version		Page 1 of 4						
A FIELD SURVEY DETAILS								
<p>Site Number: leave blank if new site</p> <p>Site Reference: OXFAS RHS 3</p> <p>Spot-check 1 Grid Ref: SP 49 076 06254</p> <p>Spot-check 6 Grid Ref: SP 49147 05989</p> <p>End of site Grid Ref: SP 49 306 05740</p> <p>Reach Reference: OXFAS RHS 3</p> <p>River name: Hinksey Stream</p> <p>Date 16/5/2017 Time: 13:00</p> <p>Surveyor name: Rob Harrison</p> <p>Accredited Surveyor code: FAC09</p>	<p>Is the site part of a river or an artificial channel? River <input checked="" type="checkbox"/> Artificial <input type="checkbox"/></p> <p>Are adverse conditions affecting survey? No <input checked="" type="checkbox"/> Yes <input type="checkbox"/></p> <p>If yes, state</p> <p>Is bed of river visible? barely or not <input type="checkbox"/> partially <input type="checkbox"/> ± entirely <input checked="" type="checkbox"/></p> <p>Is health and safety assessment form attached? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>Number of photographs taken: 7</p> <p>Photo references: 846-bridge 851-outfall 849-SC705 844-outfall 850-SC705 853-SC905 852-SC905</p> <p>Site surveyed from: left bank <input checked="" type="checkbox"/> right bank <input type="checkbox"/> channel <input type="checkbox"/></p> <p><input type="checkbox"/> When options shown with 'shadow boxes', tick one box only</p> <p style="text-align: center;">LEFT banks determined by facing downstream RIGHT</p>							
B PREDOMINANT VALLEY FORM (within the horizon limit) (tick one box only)								
<p>(tick one box only)</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <input checked="" type="checkbox"/> shallow vee </div> <div style="text-align: center;"> <input type="checkbox"/> concave/bowl </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> <input type="checkbox"/> deep vee </div> <div style="text-align: center;"> <input type="checkbox"/> asymmetrical valley </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> <input type="checkbox"/> gorge </div> <div style="text-align: center;"> <input type="checkbox"/> U-shape valley </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> <input type="checkbox"/> no obvious valley sides </div> </div>								
<p>Distinct flat valley bottom? No <input checked="" type="checkbox"/> Yes <input type="checkbox"/></p> <p>Natural terraces? No <input checked="" type="checkbox"/> Yes <input type="checkbox"/></p>								
C NUMBER OF RIFFLES, POOLS AND POINT BARS (enter total number in boxes)								
Riffle(s)	0	Unvegetated point bar(s)	0					
Pool(s)	0	Vegetated point bar(s)	0					
D ARTIFICIAL FEATURES (indicate total number of occurrences of each category within the 500m site)								
If none, tick box <input type="checkbox"/>		Major	Intermediate	Minor		Major	Intermediate	Minor
	Weirs/sluices				Outfalls/intakes		1	3
	Culverts				Fords			
	Bridges			1	Deflectors/groynes/cross			
	Other - state							
<p>Is channel obviously realigned? No <input type="checkbox"/> Yes, <33% of site <input type="checkbox"/> ≥33% of site <input checked="" type="checkbox"/></p> <p>Is channel obviously over-deepened? No <input type="checkbox"/> Yes, <33% of site <input type="checkbox"/> ≥33% of site <input checked="" type="checkbox"/></p> <p>Is water impounded by weir/dam? No <input checked="" type="checkbox"/> Yes, <33% of site <input type="checkbox"/> ≥33% of site <input type="checkbox"/></p>								

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

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

SITE REF. <u>OXFAS R453</u>		RIVER HABITAT SURVEY : 500m SWEEP-UP				Page 3 of 4	
H LAND-USE WITHIN 50m OF BANKTOP Use ✓ (present) or E (>33% banklength)							
	L	R		L	R		
Broadleaf/mixed woodland (semi-natural) (BL)	✓		Natural open water (OW)				
Broadleaf/mixed plantation (BP)			Rough/unimproved grassland/pasture (RP)	E			
Coniferous woodland (semi-natural) (CW)			Improved/semi-improved grassland (IG)				
Coniferous plantation (CP)			Tall herb/rank vegetation (TH)	E	✓		
Scrub & shrubs (SH)	✓	✓	Rock, scree or sand dunes (RD)				
Orchard (OR)			Suburban/urban development (SU)	✓	E		
Wetland (e.g. bog, marsh, fen) (WL)			Tilled land (TL)				
Moorland/heath (MH)			Irrigated land (IL)				
Artificial open water (AW)			Parkland or gardens (PG)			E	
			Not visible (NV)				
I BANK PROFILES Use ✓ (present) or E (>33% banklength)							
Natural/unmodified		L	R	Artificial/modified		L	R
Vertical/undercut 				Resectioned (reprofiled) 	E	E	
Vertical with toe 				Reinforced - whole 	✓	E	
Steep (>45°) 				Reinforced - top only 			✓
Gentle 				Reinforced - toe only 			
Composite 				Artificial two-stage 			
Natural berm 				Poached bank 			
				Embanked 			
				Set-back embankment 			
J EXTENT OF TREES AND ASSOCIATED FEATURES *record even if <1%							
TREES (tick one box per bank)				ASSOCIATED FEATURES (tick one box per feature)			
	Left	Right		None	Present	E (>33%)	
None	<input type="checkbox"/>	<input type="checkbox"/>		Shading of channel	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Isolated/scattered	<input type="checkbox"/>	<input type="checkbox"/>		*Overhanging boughs	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Regularly spaced, single	<input type="checkbox"/>	<input type="checkbox"/>		*Exposed bankside roots	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Occasional clumps	<input type="checkbox"/>	<input type="checkbox"/>		*Underwater tree roots	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Semi-continuous	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Fallen trees	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Continuous	<input type="checkbox"/>	<input type="checkbox"/>		Large woody debris	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
K EXTENT OF CHANNEL AND BANK FEATURES (tick one box for each feature) *record even if <1%							
	None	Present	E (>33%)	None	Present	E (>33%)	
*Free fall flow	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Exposed bedrock	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chute flow	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Exposed boulders	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Broken standing waves	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vegetated bedrock/boulders	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unbroken standing waves	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unvegetated mid-channel bar(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rippled flow	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Vegetated mid-channel bar(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*Upwelling	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Mature island(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Smooth flow	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Unvegetated side bar(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No perceptible flow	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vegetated side bar(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No flow (dry)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unvegetated point bar(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Marginal deadwater	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Vegetated point bar(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Eroding cliff(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	*Unvegetated silt deposit(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stable cliff(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	*Discrete unvegetated sand deposit(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				*Discrete unvegetated gravel deposit(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SITE REF: OXFASRHS 3		RIVER HABITAT SURVEY : DIMENSIONS AND INFLUENCES				Page 4 of 4
L CHANNEL DIMENSIONS (to be measured at one location on a straight uniform section, preferably across a riffle)						
LEFT BANK		CHANNEL		RIGHT BANK		
Banktop height (m)	2	Bankfull width (m)	8	Banktop height (m)	2	
Is banktop height also bankfull height? (Y or N)	Y	Water width (m)	5	Is banktop height also bankfull height? (Y or N)	Y	
Embanked height (m)	—	Water depth (m)	1.0	Embanked height (m)	—	
If trashline lower than banktop, indicate: height above water (m) = — width from bank to bank (m) = —						
Bed material at site is: consolidated <input type="checkbox"/> unconsolidated (loose) <input checked="" type="checkbox"/> unknown <input type="checkbox"/>						
Location of measurements is: riffle <input type="checkbox"/> other <input checked="" type="checkbox"/> (state) <u>Gride</u>						
M FEATURES OF SPECIAL INTEREST Use ✓ or E (> 33% length) *record even if <1%						
None <input type="checkbox"/>	Very large boulders (>1m) <input type="checkbox"/>	Backwater(s) <input type="checkbox"/>	Marsh(es) <input type="checkbox"/>			
Braided channels <input type="checkbox"/>	*Debris dam(s) <input type="checkbox"/>	Floodplain boulder deposits <input type="checkbox"/>	Flush(es) <input type="checkbox"/>			
Side channel(s) <input type="checkbox"/>	*Leafy debris <input type="checkbox"/>	Water meadow(s) <input type="checkbox"/>	Natural open water <input type="checkbox"/>			
*Natural waterfall(s) > 5m high <input type="checkbox"/>	Fringing reed-bank(s) <input checked="" type="checkbox"/>	Fen(s) <input checked="" type="checkbox"/>	Others (state) <input type="checkbox"/>			
*Natural waterfall(s) < 5m high <input type="checkbox"/>	Quaking bank(s) <input type="checkbox"/>	Bog(s) <input type="checkbox"/>				
Natural cascade(s) <input type="checkbox"/>	*Sink hole(s) <input type="checkbox"/>	Wet woodland(s) <input type="checkbox"/>				
N CHOKED CHANNEL (tick one box)						
Is 33% or more of the channel choked with vegetation? No <input checked="" type="checkbox"/> Yes <input type="checkbox"/>						
O NOTABLE NUISANCE PLANT SPECIES Use ✓ or E (> 33% length) *record even if <1%						
None <input type="checkbox"/>	bankface banktop to 50m		bankface banktop to 50m			
*Giant hogweed <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	*Himalayan balsam <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
*Japanese knotweed <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	*Other (state)..... <input type="checkbox"/>	<input type="checkbox"/>		
P OVERALL CHARACTERISTICS (Circle appropriate words, add others as necessary)						
Major impacts: landfill - tipping <u>litter</u> - sewage <u>pollution</u> - drought - abstraction - mill - dam - <u>road</u> - rail - <u>industry</u> - <u>housing</u> - mining - quarrying - overdeepening - afforestation - fisheries management - <u>silt</u> - waterlogging - hydroelectric power						
Evidence of recent management: dredging - <u>bank mowing</u> - weed cutting - enhancement - river rehabilitation - gravel extraction - other (please specify)						
Animals: otter - mink - water vole - kingfisher - dipper - grey wagtail - sand martin - heron - dragonflies <u>damselflies</u> <u>mayfly</u>						
Other significant observations: if necessary use separate sheet to describe overall characteristics and relevant observations						
Q ALDERS (tick one box in each of the two categories) *record even if <1%						
*Alders? None <input type="checkbox"/> Present <input checked="" type="checkbox"/> Extensive <input type="checkbox"/>			*Diseased Alders? None <input checked="" type="checkbox"/> Present <input type="checkbox"/> Extensive <input type="checkbox"/>			
R FIELD SURVEY QUALITY CONTROL (✓ boxes to confirm checks)						
Have you taken at least two photos that illustrate the general character of the site and additional photos of any weirs/ sluices and major/intermediate structures across the channel? <input checked="" type="checkbox"/>						
Have you completed all ten spot-checks and made entries in all boxes in E & F on page 2? <input checked="" type="checkbox"/>						
Have you completed column 11 of section G (and E if appropriate) on page 2? <input checked="" type="checkbox"/>						
Have you recorded in section C the number of riffles, pools and point bars (even if 0) on page 1? <input checked="" type="checkbox"/>						
Have you given an accurate (alphanumeric) grid reference for spot-checks 1, 6 and end of site (page 1)? <input checked="" type="checkbox"/>						
Have you stated whether spot-check 1 is at the upstream or downstream end of the site (top of page 2)? <input checked="" type="checkbox"/>						
Have you cross-checked your spot-check and sweep-up responses with the channel modification indicators given on page 2 of the spot-check key? <input checked="" type="checkbox"/>						

Photographs









B.2.4 RHS 4

RIVER HABITAT SURVEY 2003 VERSION: SITE HEALTH AND SAFETY ASSESSMENT			
Site Number ¹ :	Site Ref: OXFAS RHS 4	River Name: Hinksey Stream	Date: 17/5/17
Grid References/Co-ordinates:	Spot 1 ² :	Mid-site: SP51281 4532	End of site ² :
Surveyor Name: Rob Harrison	Accredited Surveyor Code: FA009		
¹ Leave blank if new site.		² Optional	
Weather Conditions: Rain, 17°C			
Flow Conditions: Low			
Site details: (enter comments or circle if applicable and give details)			Risk Level (Low/Mod/High)
Access and Parking: (entry & exit) @ Hinksey Village			Low
Conditions: comment on ground stability, footing, exposure/remoteness Low - PROW			Low
Obstacles/Hazards: fencing , stiles, dense vegetation, steep bank			Low
Occupied/Unoccupied: people, livestock, animals			Low
Activities/Land-use: agriculture , woodland, residential, industrial, construction, recreational			Low
Risk if lone-working			Low
IF THERE ARE ANY HIGH RISKS OR MORE THAN THREE MODERATE RISKS DO NOT CONTINUE WITH THE SURVEY.			
Weil's Disease (Leptospirosis)			
Instructions to card holders			
<ol style="list-style-type: none"> 1. As infection may enter through breaks in the skin, ensure that any cut, scratch or abrasion is thoroughly cleansed and covered with a waterproof plaster. 2. Avoid rubbing your eyes, nose and mouth during work. 3. Clean protective clothing, footwear and equipment etc. after use 4. After work, and particularly before taking food or drink, wash hands thoroughly. 5. Report all accidents and/or injuries, however slight. 6. Keep your card with you at all times. 			
Lyme Disease			
<ol style="list-style-type: none"> 1. Dress appropriately with skin covered up. 2. Regularly inspect for ticks when in the field. 3. Check for, and remove, any ticks as soon as possible after leaving the site. 4. Seek medical attention if bitten by a tick. 			

RIVER HABITAT SURVEY 2003 Version		Page 1 of 4																																				
A FIELD SURVEY DETAILS																																						
<p>Site Number: leave blank if new site</p> <p>Site Reference: <u>OXFAS RHS 4</u></p> <p>Spot-check 1 Grid Ref: <u>SPS1281 04377</u></p> <p>Spot-check 6 Grid Ref: <u>SPS1113 04532</u></p> <p>End of site Grid Ref: <u>SPS0971 04709</u></p> <p>Reach Reference: <u>OXFAS RHS 4</u></p> <p>River name: <u>Hinksey Stream</u></p> <p>Date <u>17/5/2017</u> Time: <u>10:00</u></p> <p>Surveyor name: <u>Rob Harrison</u></p> <p>Accredited Surveyor code: <u>FA009</u></p>	<p>Is the site part of a river or an artificial channel? River <input checked="" type="checkbox"/> Artificial <input type="checkbox"/></p> <p>Are adverse conditions affecting survey? No <input checked="" type="checkbox"/> Yes <input type="checkbox"/></p> <p>If yes, state</p> <p>Is bed of river visible? barely or not <input type="checkbox"/> partially <input type="checkbox"/> ± entirely <input checked="" type="checkbox"/></p> <p>Is health and safety assessment form attached? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>Number of photographs taken: 5</p> <p>Photo references: <u>1-SC1 3-bridge 5-SC6DS</u> <u>2-SC1 4-SC6DS</u></p> <p>Site surveyed from: left bank <input type="checkbox"/> right bank <input checked="" type="checkbox"/> channel <input type="checkbox"/></p> <p><input type="checkbox"/> When options shown with 'shadow boxes', tick one box only</p> <p>LEFT banks determined by facing downstream RIGHT</p>																																					
B PREDOMINANT VALLEY FORM (within the horizon limit) (tick one box only)																																						
<p>(tick one box only)</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><input checked="" type="checkbox"/> shallow vee</p> <p><input type="checkbox"/> deep vee</p> <p><input type="checkbox"/> gorge</p> </div> <div style="width: 45%;"> <p><input type="checkbox"/> concave/bowl</p> <p><input type="checkbox"/> asymmetrical valley</p> <p><input type="checkbox"/> U-shape valley</p> <p><input type="checkbox"/> no obvious valley sides</p> </div> </div> <p>Distinct flat valley bottom? No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> Natural terraces? No <input checked="" type="checkbox"/> Yes <input type="checkbox"/></p>																																						
C NUMBER OF RIFFLES, POOLS AND POINT BARS (enter total number in boxes)																																						
<p>Riffle(s) 0</p> <p>Pool(s) 0</p>	<p>Unvegetated point bar(s) 0</p> <p>Vegetated point bar(s) 0</p>																																					
D ARTIFICIAL FEATURES (indicate total number of occurrences of each category within the 500m site)																																						
<p>If none, tick box <input type="checkbox"/></p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Major</th> <th>Intermediate</th> <th>Minor</th> </tr> </thead> <tbody> <tr> <td>Weirs/sluices</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Culverts</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Bridges</td> <td></td> <td></td> <td style="text-align: center;">2</td> </tr> <tr> <td>Other - state <u>Pipeline</u></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Major	Intermediate	Minor	Weirs/sluices				Culverts				Bridges			2	Other - state <u>Pipeline</u>				<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Major</th> <th>Intermediate</th> <th>Minor</th> </tr> </thead> <tbody> <tr> <td>Outfalls/intakes</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Fords</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Deflectors/groynes/croys</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Major	Intermediate	Minor	Outfalls/intakes				Fords				Deflectors/groynes/croys			
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<p>Is channel obviously realigned? No <input type="checkbox"/> Yes, <33% of site <input type="checkbox"/> ≥33% of site <input checked="" type="checkbox"/></p> <p>Is channel obviously over-deepened? No <input type="checkbox"/> Yes, <33% of site <input type="checkbox"/> ≥33% of site <input checked="" type="checkbox"/></p> <p>Is water impounded by weir/dam? No <input checked="" type="checkbox"/> Yes, <33% of site <input type="checkbox"/> ≥33% of site <input type="checkbox"/></p>																																						

SITE REF: OXFASRHS4		RIVER HABITAT SURVEY: TEN SPOT-CHECKS										Page 2 of 4	
Spot-check 1 is at: upstream end <input type="checkbox"/>		downstream end <input checked="" type="checkbox"/>										of site (tick one box)	
E PHYSICAL ATTRIBUTES (to be assessed across channel within 1m wide transect)													
When boxes 'bordered', only one entry allowed		1	2	3	4	5	6	7	8	9	10	GPS	
LEFT BANK		Ring EC or SC if composed of sandy substrate											
Material NV, BE, BO, CO, CS, EA, PE, CL, CC, SP, WP, GA, BR, RR, TD, FA, BI		CC	EA	EA	EA	EA		EA	EA	EA	EA		
Bank modification(s) NK, NO, RS, RI, PC(B), BM, EM		RS	RS	RS	RS	RS		RS	RS	RS	RS		
Marginal & bank feature(s) NV, NO, EC, SC, PB, VP, SB, VS, NB		NO	NO	NO	NO	NO		NO	NO	NO	NO		
CHANNEL		GPS: Ring either G or P if predominant											
Channel substrate NV, BE, BO, CO, GP, SA, SL, CL, PE, EA, AR		GP	GP	GP	GP	GP		GP	GP	GP	GP	SC	
Flow-type NV, FF, CH, BW, UW, CF, RP, UP, SM, NP, DR		SM	SM	SM	SM	SM		SM	SM	SM	SM		
Channel modification(s) NK, NO, CV, RS, RI, DA, FO		RS	RS	RS	RS	RS		RS	RS	RS	RS		
Channel feature(s) NV, NO, EB, RD, VR, NB, VB, ML, TR		NO	NO	NO	NO	NO		NO	NO	NO	NO		
For braided rivers only: number of sub-channels													
RIGHT BANK		Ring EC or SC if composed of sandy substrate											
Material NV, BE, BO, CO, CS, EA, PE, CL, CC, SP, WP, GA, BR, RR, TD, FA, BI		CC	EA	EA	EA	EA		EA	EA	EA	EA		
Bank modification(s) NK, NO, RS, RI, PC(B), BM, EM		RS	RS	RS	RS	RS		RS	RS	RS	RS		
Marginal & bank feature(s) NV, NO, EC, SC, PB, VP, SB, VS, NB		NO	NO	NO	NO	NO		NO	NO	NO	NO		
F BANKTOP LAND-USE AND VEGETATION STRUCTURE (to be assessed over a 10m wide transect)													
Land-use: choose one from BL, BP, CW, CP, SH, OR, WL, MH, AW, OW, RP, IG, TH, RD, SU, TL, IL, PG, NV													
LAND-USE WITHIN 5m OF LEFT BANKTOP		BL	BL	BL	BL	RP	RP	RP	RP	RP	RP		
LEFT BANKTOP (structure within 1m) B/U/S/C/NV		S	S	S	S	U	U	U	U	U	U		
LEFT BANK-FACE (structure) B/U/S/C/NV		S	S	U	U	U	U	S	U	S	S		
RIGHT BANK-FACE (structure) B/U/S/C/NV		U	U	U	U	S	U	U	S	U	S		
RIGHT BANKTOP (structure within 1m) B/U/S/C/NV		U	U	U	U	U	U	U	U	U	U		
LAND-USE WITHIN 5m OF RIGHT BANKTOP		RP	RP	RP	RP	RP	RP	RP	RP	RP	RP		
G CHANNEL VEGETATION TYPES (to be assessed over a 10m wide transect: use EC or SC if present in NV (not 100%))													
None (✓) or Not Visible (NV)													
Liverworts/mosses/lichens													
Emergent broad-leaved herbs													
Emergent reeds/sedges/rushes/grasses/horsetails			✓	✓	✓	✓	✓	✓	✓	✓	✓		
Floating-leaved (rooted)													
Free-floating													
Amphibious													
Submerged broad-leaved (<i>Najas lubrica</i>)		E	✓			✓	✓	✓	✓	✓	✓		
Submerged linear-leaved				✓									
Submerged fine-leaved		✓	✓										
Filamentous algae		✓	✓					✓			✓		
Use end column for overall assessment over 500m, including types not occurring in spot-checks (use ✓, E or NV)													

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

SITE REF: <u>OXFASRIS4</u>		RIVER HABITAT SURVEY : 500m SWEEP-UP				Page 3 of 4	
H LAND-USE WITHIN 50m OF BANKTOP Use ✓ (present) or E (>33% banklength)							
	L	R		L	R		
Broadleaf/mixed woodland (semi-natural) (BL)	E		Natural open water (OW)				
Broadleaf/mixed plantation (BP)			Rough/unimproved grassland/pasture (RP)	E	E		
Coniferous woodland (semi-natural) (CW)			Improved/semi-improved grassland (IG)				
Coniferous plantation (CP)			Tall herb/rank vegetation (TH)	✓	✓		
Scrub & shrubs (SH)	✓	✓	Rock, scree or sand dunes (RD)				
Orchard (OR)			Suburban/urban development (SU)	✓	✓		
Wetland (e.g. bog, marsh, fen) (WL)			Tilled land (TL)				
Moorland/heath (MH)			Irrigated land (IL)				
Artificial open water (AW)			Parkland or gardens (PG)				
			Not visible (NV)				
I BANK PROFILES Use ✓ (present) or E (>33% banklength)							
Natural/unmodified		L	R	Artificial/modified		L	R
Vertical/undercut				Resectioned (reprofiled)		E	E
Vertical with toe				Reinforced - whole		✓	✓
Steep (>45°)				Reinforced - top only			
Gentle				Reinforced - toe only			
Composite				Artificial two-stage			
Natural berm				Poached bank			
				Embanked			
				Set-back embankment			✓
J EXTENT OF TREES AND ASSOCIATED FEATURES *record even if <1%							
TREES (tick one box per bank)				ASSOCIATED FEATURES (tick one box per feature)			
	Left	Right		None	Present	E (>33%)	
None	<input type="checkbox"/>	<input type="checkbox"/>	Shading of channel	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Isolated/scattered	<input type="checkbox"/>	<input type="checkbox"/>	*Overhanging boughs	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Regularly spaced, single	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	*Exposed bankside roots	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Occasional clumps	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	*Underwater tree roots	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Semi-continuous	<input type="checkbox"/>	<input type="checkbox"/>	Fallen trees	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Continuous	<input type="checkbox"/>	<input type="checkbox"/>	Large woody debris	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
K EXTENT OF CHANNEL AND BANK FEATURES (tick one box for each feature) *record even if <1%							
	None	Present	E (>33%)		None	Present	E (>33%)
*Free fall flow	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Exposed bedrock	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chute flow	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Exposed boulders	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Broken standing waves	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vegetated bedrock/boulders	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unbroken standing waves	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unvegetated mid-channel bar(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rippled flow	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Vegetated mid-channel bar(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*Upwelling	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Mature island(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Smooth flow	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Unvegetated side bar(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No perceptible flow	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vegetated side bar(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No flow (dry)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unvegetated point bar(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Marginal deadwater	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Vegetated point bar(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Eroding cliff(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	*Unvegetated silt deposit(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stable cliff(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	*Discrete unvegetated sand deposit(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				*Discrete unvegetated gravel deposit(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SITE REF. <u>OYFASOMKA</u>		RIVER HABITAT SURVEY : DIMENSIONS AND INFLUENCES		Page 4 of 4	
L CHANNEL DIMENSIONS (to be measured at one location on a straight uniform section, preferably across a riffle)					
LEFT BANK		CHANNEL		RIGHT BANK	
Banktop height (m)	<u>2.5</u>	Bankfull width (m)	<u>8</u>	Banktop height (m)	
Is banktop height also bankfull height? (Y or N)	<u>Y</u>	Water width (m)	<u>5</u>	Is banktop height also bankfull height? (Y or N)	<u>Y</u>
Embanked height (m)	<u>—</u>	Water depth (m)	<u>1.2</u>	Embanked height (m)	<u>—</u>
If trashline lower than banktop, indicate: height above water (m) = <u>—</u> width from bank to bank (m) = <u>—</u>					
Bed material at site is: consolidated <input type="checkbox"/> unconsolidated (loose) <input checked="" type="checkbox"/> unknown <input type="checkbox"/>					
Location of measurements is: riffle <input type="checkbox"/> other <input checked="" type="checkbox"/> (state) <u>Glide</u>					
M FEATURES OF SPECIAL INTEREST Use ✓ or E (> 33% length) *record even if < 1%					
None <input type="checkbox"/>	Very large boulders (>1m) <input type="checkbox"/>	Backwater(s) <input type="checkbox"/>	Marsh(es) <input type="checkbox"/>		
Braided channels <input type="checkbox"/>	*Debris dam(s) <input type="checkbox"/>	Floodplain boulder deposits <input type="checkbox"/>	Flush(es) <input type="checkbox"/>		
Side channel(s) <input type="checkbox"/>	*Leafy debris <input type="checkbox"/>	Water meadow(s) <input type="checkbox"/>	Natural open water <input type="checkbox"/>		
*Natural waterfall(s) > 5m high <input type="checkbox"/>	Fringing reed-bank(s) <input checked="" type="checkbox"/>	Fen(s) <input checked="" type="checkbox"/>	Others (state) <input type="checkbox"/>		
*Natural waterfall(s) < 5m high <input type="checkbox"/>	Quaking bank(s) <input type="checkbox"/>	Bog(s) <input type="checkbox"/>			
Natural cascade(s) <input type="checkbox"/>	*Sink hole(s) <input type="checkbox"/>	Wet woodland(s) <input type="checkbox"/>			
N CHOKED CHANNEL (tick one box)					
Is 33% or more of the channel choked with vegetation? No <input checked="" type="checkbox"/> Yes <input type="checkbox"/>					
O NOTABLE NUISANCE PLANT SPECIES Use ✓ or E (> 33% length) *record even if < 1%					
None <input checked="" type="checkbox"/>	bankface	banktop to 50m	bankface	banktop to 50m	
*Giant hogweed <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	*Himalayan balsam <input type="checkbox"/>	<input type="checkbox"/>	
*Japanese knotweed <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	*Other (state)..... <input type="checkbox"/>	<input type="checkbox"/>	
P OVERALL CHARACTERISTICS (Circle appropriate words, add others as necessary)					
Major impacts: landfill - tipping - litter - sewage - pollution - drought - abstraction - mill - dam - road - <u>rail</u> - industry - housing mining - quarrying - overdeepening - afforestation - fisheries management - silting - waterlogging - hydroelectric power					
Evidence of recent management: dredging - bank mowing - weed cutting - enhancement - river rehabilitation - gravel extraction - other (please specify)					
Animals: <u>otter</u> - mink - water vole - kingfisher - dipper - grey wagtail - sand martin - heron - dragonflies/damselflies					
Other significant observations: if necessary use separate sheet to describe overall characteristics and relevant observations					
Q ALDERS (tick one box in each of the two categories) *record even if < 1%					
*Alders? None <input checked="" type="checkbox"/> Present <input type="checkbox"/> Extensive <input type="checkbox"/>			*Diseased Alders? None <input checked="" type="checkbox"/> Present <input type="checkbox"/> Extensive <input type="checkbox"/>		
R FIELD SURVEY QUALITY CONTROL (✓ boxes to confirm checks)					
Have you taken at least two photos that illustrate the general character of the site and additional photos of any weirs/ sluices and major/intermediate structures across the channel? <input checked="" type="checkbox"/>					
Have you completed all ten spot-checks and made entries in all boxes in E & F on page 2? <input type="checkbox"/>					
Have you completed column 11 of section G (and E if appropriate) on page 2? <input checked="" type="checkbox"/>					
Have you recorded in section C the number of riffles, pools and point bars (even if 0) on page 1? <input checked="" type="checkbox"/>					
Have you given an accurate (alphanumeric) grid reference for spot-checks 1, 6 and end of site (page 1)? <input checked="" type="checkbox"/>					
Have you stated whether spot-check 1 is at the upstream or downstream end of the site (top of page 2)? <input type="checkbox"/>					
Have you cross-checked your spot-check and sweep-up responses with the channel modification indicators given on page 2 of the spot-check key? <input checked="" type="checkbox"/>					

Photographs







B.2.5 RHS 5

RIVER HABITAT SURVEY 2003 VERSION: SITE HEALTH AND SAFETY ASSESSMENT			
Site Number ¹ :	Site Ref: OXFAS RHS5	River Name: Hinksey Stream	Date: 18/6/17
Grid References/Co-ordinates:	Spot 1 ² :	Mid-site: SPS1863 OXFAM	End of site ² :
Surveyor Name: Rob Harrison		Accredited Surveyor Code: FA009	
¹ Leave blank if new site		² Optional	
Weather Conditions: clear skies, light breeze, 18°C			
Flow Conditions: Low			
Site details: (enter comments or circle if applicable and give details)			Risk Level (Low/Mod/High)
Access and Parking: (entry & exit) South Hinksey Pub car park			Low
Conditions: comment on ground stability, footing, exposure/remoteness			Low
Obstacles/Hazards: fencing, stiles, dense vegetation, steep bank			Low
Occupied/Unoccupied: people, livestock, animals Homeless population in boats			Mod
Activities/Land-use: agriculture, woodland, residential, industrial, construction, recreational			Low
Risk if lone-working			Mod
IF THERE ARE ANY HIGH RISKS OR MORE THAN THREE MODERATE RISKS DO NOT CONTINUE WITH THE SURVEY.			
Weil's Disease (Leptospirosis)			
Instructions to card holders			
<ol style="list-style-type: none"> 1. As infection may enter through breaks in the skin, ensure that any cut, scratch or abrasion is thoroughly cleansed and covered with a waterproof plaster. 2. Avoid rubbing your eyes, nose and mouth during work. 3. Clean protective clothing, footwear and equipment etc. after use 4. After work, and particularly before taking food or drink, wash hands thoroughly. 5. Report all accidents and/or injuries, however slight. 6. Keep your card with you at all times. 			
Lyme Disease			
<ol style="list-style-type: none"> 1. Dress appropriately with skin covered up. 2. Regularly inspect for ticks when in the field. 3. Check for, and remove, any ticks as soon as possible after leaving the site. 4. Seek medical attention if bitten by a tick. 			