

STRATEGIC DEVELOPMENT AREAS. PRELIMINARY ECOLOGICAL SURVEYS AND ASSESSMENT

SITE NAME: S.E BRISTOL URBAN EXTENSION -
LOCATION OPTION 4 -

LOCATION: WHITCHURCH

GRID REFERENCE: ST615670 (CGR)

SURVEY DATE: 18, 21, 22, 24 & 25TH APRIL 2008

WEATHER: VARIOUS – HOT & SUNNY TO HEAVY RAIN

THIS REPORT CONTAINS CONFIDENTIAL INFORMATION

Bristol Regional Environmental Records Centre (BRERC)
Third Floor
Bristol Central Library
College Green
Bristol
BS1 5TL



1 INTRODUCTION

The Bristol Regional Environmental Records Centre (BRERC) was commissioned by Bath and North East Somerset Council to conduct an extended Phase 1 field survey of **S.E Bristol Urban Extension - Location Option 4 – Whitchurch**. Two members of BRERC staff visited the site on 18th, 21st, 22nd, 24th & 25th April 2008. The survey and this report reflect the level of detail required by the survey brief.

The objective of the survey was to undertake a general ecological evaluation of the site and to verify and update the nature conservation data of the target site using **Phase 1 habitat mapping (Figure 1)** with additional **detailed Target Notes (Figures 2, 3 & 4)** and to evaluate the condition, extent and structure of **hedgerows (Figure 5)** of the area in order to:

- confirm and update the existing baseline information
- identify any potential constraints to development, including the presence of European Protected Species, UK Priority Habitat and important hedgerows
- to identify key ecological features that could merit retention within strategic development areas
- Identify the nature and extent of further detailed surveys that would be required to inform future master planning of selected areas.

Appendix 1. Target Notes

Appendix 2. Phase 1 codes

Figure 1. Phase 1 Map

Figure 2. Target Notes Map Areas 1 & 2

Figure 3. Target Notes Map Area 3

Figure 4. Target Notes Map Area 4

Figure 5. Hedgerow Condition

Figure 6. Designated Sites

Figure 7. Recommended Feature Retention

Figure 8. Aerial Photo

Figure 9. Locations Map

2 SURVEY

Species in **bold** are notable in the BRERC region.
Other notable features are also in **Bold**.

Methods:

- Phase 1 habitat* mapping following the Handbook for Phase 1 habitat survey (JNCC).
- Detailed Target Notes of key ecological features and areas that could require further detailed surveys and that could merit retention within any potential development (Handbook for Phase 1 habitat survey JNCC).
- Hedgerow characteristics**.
- Identification of areas and features

Notes

*The Phase 1 codes on **Figure 1** are the result of this survey. The exception to this is where both access was not available and remote visual assessment could not be made. In this case the codes will be from an earlier source.

**Hedgerows were audited for all woody species and associated features such as banks, ditches and associated trees.

2.1 Habitat Overview

Within the target area the following habitat types were found:

Arable field
Amenity grassland
Improved grassland
Semi-improved grassland
Semi-improved neutral grassland
Planted broad-leaved Woodland
Scattered scrub
Dense scrub
Hedgerows
Isolated hedgerow and field trees of significant interest
Running mesotrophic water
Standing water

2.2 Habitat Description – Summary of survey.

There are three **designated sites** within this Option area (**Figure 6**). These are:

- **Disused Railway Farrington Gurney to Whitchurch** (Post Industrial Site) and
- **Charlton Bottom and Queen Charlton Watercourse** (Site of Nature Conservation Interest (SNCI))
- **Stockwood Open Space** (SNCI).

One designated site, **Sturminster Road SNCI** lies adjacent to the Option area boundary.

The land in this area is divided north-south by the A37. For locations described below please refer to **Figure 9**.

The land to the west of the A37

Norton Lane divides this area in two.

Area 1 (NW of Norton Lane)

Disused Railway Farrington Gurney to Whitchurch Post Industrial Site runs north-south through the area.

Farmed land primarily composed of level fields of improved grassland dominated by Perennial Rye-grass *Lolium perenne*. Almost all fields have associated hedgerows the majority of which are flailed. A high proportion of the hedgerows in this sector have ditches associated with them. In general, the fields are not species-rich but along hedgerows and ditches there is a higher diversity of common herbs. Several of the fields show some increased diversity (Target Notes 013 and 086).

There are two unusual “ponds” within this area (Target Notes 011 and 023). These appear be associated with springs or ground water and support Sedge and / or Rush communities. The pond at Target Note 011 is the more distinctive of the two with a dense large stand of

Greater Pond-sedge *Carex riparia*. A **Snipe** *Gallinago gallinago* was flushed from this pond. The wetter areas such as the above and ditches may provide resources for birds such as Snipe.

To the far north of this area the fields are smaller and the land slopes gently leading down to ditches and a small stream.

There was **some limitation of access (see Figure 1)**. Surveyors were asked to leave one owner's land leaving them unable to survey three hedgerows.

This area appeared to be widely used by dog walkers.

A **Brown Hare** *Lepus europaeus* was seen in this area.

Area 2 (SE of Norton Lane)

Land usage is less farmed and composed of improved grassland dominated by Perennial Rye-grass, many of which are horse paddocks, amenity grassland sports grounds and domestic curtilage. Where horses are present the swards are generally tightly grazed and hedgerows generally unmanaged or replaced by fences.

There was **some limitation of access (see Figure 1)**.

Land to the east of the A37

Queen Charlton Lane running east- west divides this area in two.

Area 3 (South of Queen Charlton Lane)

Charlton Bottom and Queen Charlton Watercourse SNCI runs north-south through this area.

Land is primarily composed of farmed level fields of improved grassland dominated by Perennial Rye-grass. Almost all fields have associated hedgerows the majority of which are flailed. There are very few ditches associated with the hedgerows in this area. In general the fields are not species-rich but along hedgerows and ditches there is a higher diversity of common herbs. There is also one field of arable crop.

There was **some limitation of access (see Figure 1)**.

A **Brown Hare** *Lepus europaeus* was seen in this area.

Area 4 (North of Queen Charlton Lane)

A **part of Stockwood Open Space SNCI** occurs in the very north of this area adjacent to Stockwood Lane.

Land is primarily composed of level fields of improved grassland dominated by Perennial Rye-grass which is largely given over to horse pastures. Where horses are present the swards are generally tightly grazed and hedgerows generally unmanaged or replaced by fences. There is also one field of arable crop, one of amenity grassland and one of semi-improved neutral grassland.

In the area adjacent to Queen Charlton Lane many of the land parcels are relatively small.

There are eight ponds in this area ranging from good to poor quality.

There was **some limitation of access (see Figure 1)**.

2.3 Areas Not Accessed

There was limited or no access to some parts of the target area. These areas are **marked in red on Figure 1**. The vast majority of the Phase 1 codes on **Figure 1** are the result of this survey. The exception to this is where both physical and visual access was not available preventing remote visual assessment being made. Here the codes will be from an earlier source.

3 RECOMMENDATIONS OF IMPORTANT ECOLOGICAL FEATURES / AREAS TO RETAIN

3.1 Important ecological features identified that warrant retention and / or further survey include:

- **Disused Railway Farrington Gurney to Whitchurch Post Industrial Site (designated site).**
- **Charlton Bottom and Queen Charlton Watercourse SSCI (designated site).**
- **Stockwood Open Space SSCI.**
- **Broad ditch and bank feature with large trees (some pollards)** (Target Note 068).
- **Badger setts** and / or habitats such as hedgerow and scrub that contain (or potentially contain) (Target Notes **016**, 017, 025, 027, **032**, 033, **035**, **036**, **042**, **045**, **062**, 069, 074, 076, 077, 079 and **082**). *Target Notes in **Bold** denotes definite presence, non-bold denotes possible presence.*
- **Potential bat roosts** (Target Notes 001, 005, 006, 007, 008, 010, 012, 014, 015, 018, 021, 022, 026, 027 034, 037, 038, 039, 040, 041, 043, 044, 049, 051, 052, 054, 055, 058, 059, 061, 063 and 072).
- **Target noted trees** in fields and hedgerows (Target Notes 001, 005, 006, 007, 008, 010, 012, 014, 015, 018, 021, 022, 026, 034, 037, 038, 039, 040, 041, 043, 044, 049, 051, 052, 053, 054, 055, 058, 059, 061, 063, 068 and 072).
- **Tree / hedgerow lined ditches**, (Target Notes 009 and 066).
- **Hedgerows with seven or more woody species** qualify as “important hedgerows” under the Hedgerow Regulations 1997 (**Figure 5**).
- **Hedgerow – double hedgerow over ditch** (Target Note 009).
- **Species-rich road verge** (Target Note 031).
- **Semi-improved neutral grassland** (Target Notes 025, 078 and 085).
- **Semi-improved grassland** (Target Notes 069 and 086).
- **Ponds** (Target Notes 011, 019, 020, 023, 050, 056, 057, 060, 067, 083 and 084).

-
- **Running water** (Target Notes 029, 030, 048, 056, 064 and 068).

In addition to the Target Noted areas identified for further survey (see appendix 1), it is **recommended that all the areas listed in section 3.1 are subject to further detailed** survey if likely to be affected by development. Such areas may also warrant protection with buffer zones with to reduce any potential impacts.

APPENDICES
Appendix 1 – Target Notes
Appendix 2 - Phase 1 Codes

MAPS

- Figure 1. Phase 1 Map**
- Figure 2. Target Notes Map Areas 1 & 2**
- Figure 3. Target Notes Map Area 3**
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Appendix 1. Whitchurch Target Notes

Target Note Number/Grid Ref	Date	Site name	Habitat etc.	Notes	Further survey required
001 ST61016687	17/04/2008		Significant tree - Hedgerow	2 x Veteran Quercus robur, stag-headed, one dead, much deadwood on both, splits, loose bark	y
002 ST60976693	17/04/2008		Ditch - wet	Glyceria sp., Juncus effusus & either Juncus acutiflorus or articulatus	n
003 ST60896698	17/04/2008		Ditch - wet	Ditch/pool - bare mud, Juncus effusus, Glyceria sp., Veronica beccabunga	n
004 ST60866684	17/04/2008		Ditch - wet	Shallow ditch - Glyceria sp., Oenanthe crocata, Juncus inflexus, bare mud.	n
005 ST60826694	17/04/2008		Significant tree - Hedgerow	Fallen Ash with hollows	y
006 ST60776698	17/04/2008		Significant tree - Hedgerow	Ash - pollard, hollows, Oak - pollard, hollows	y
007 ST60556681	17/04/2008		Significant tree - Hedgerow	Veteran Crack Willow, splits, deadwood	y
008 ST60506682	17/04/2008		Significant tree - Hedgerow	Veteran Crack Willow, splits, deadwood	y
009 ST60456682	17/04/2008		Hedgerow	Double hedgerow over wet ditch with many Bluebells, almost a mini woodland in places	y
010 ST60726715	17/04/2008		Significant tree - Hedgerow	Ash - pollard, hollows	y
011 ST60726711	17/04/2008		Pond	Unusual marshy raised "pond" dominated by Greater Pond Sedge with Rushes and other aquatic species. SNIPE seen here.	y
012 ST60816710	17/04/2008		Significant tree - Hedgerow	Ash - pollard, deadwood, hollows	y
013 ST60876673	17/04/2008		Herb-rich grassland	Cowslips, Meadow Vetchling, Common Knapweed, Luzula campestris, Lotus corniculatus and other forbs in shallow meander in field	n
014 ST60536702	17/04/2008		Significant tree - Hedgerow	Oak - dead tree	y
015 ST60626705	17/04/2008		Significant tree - Hedgerow	Oak - deadwood, holes	y
016 ST61146701	17/04/2008	Disused Railway Farrington Gurney to Whitchurch	Badger sett	Badger sett in old railway embankment	y

017	ST61076693	17/04/2008	Disused Railway Farrington Gurney to Whitchurch	Dense scrub	Old railway embankment with dense scrub, Badger sett and tracks & diggings (see TN 016) Bramble, scattered shrubs, nettles	y
018	ST61446678	21/04/2008		Significant tree - Hedgerow	Oak - pollard, deadwood, holes, splits, loose bark. Potential bat roost	y
019	ST61416697	21/04/2008		Temporary pond	Iris pseudocorus, large Ash with holes. Probe holes	y
020	ST61366695	21/04/2008		Temporary pond	Iris pseudocorus, Ash. Probe holes	y
021	ST61336673	21/04/2008		Significant tree - Hedgerow	Ash pollard.	y
022	ST61276662	21/04/2008		Significant tree - Hedgerow	Ash pollard, holes, deadwood, epiphytes	y
023	ST61076686	21/04/2008		Pond	Unusual marshy raised "pond" dominated Rushes, Carex nigra, C. hirta and other species.	y
024	ST61096691	21/04/2008		Marsh	Glyceria sp. dominated	n
025	ST61246710	21/04/2008	Disused Railway Farrington Gurney to Whitchurch	Scattered scrub & SNG	Old railway embankment with Bramble scrub, Badger sett and tracks, shuffle holes (see TN 036). Interesting grassland with anthills - Lotus corniculatus, Centaurea nigra and other forbs	y
026	ST61206723	21/04/2008		Significant tree - Hedgerow	Quercus robur - very large, deadwood, holes, loose bark. Potential bat roost	y
027	ST61316718	21/04/2008		Dense scrub	Signs of usage by mammals - tracks. Old stone / brick bridge. Potential for Badgers and bats	y
028	ST61196727	21/04/2008		Dense scrub	Overgrown field corner - Blackthorn	n
029	ST61216733	21/04/2008		Running water	Ditch /stream	y
030	ST61166742	21/04/2008		Running water	Ditch /stream running through several fields. Common "aquatic" plant species	y
031	ST61666699	21/04/2008		Verge, road - species-rich	Carex flacca, C. hirta, Bromopsis erecta, Festuca arundinacea, Filipendula ulmaria, Lotus corniculatus, Allium sp., Lathyrus pratensis, Daucus carota, Geranium dissectum, Centaurea nigra	y
032	ST61706682	21/04/2008		Badger sett - Hedgerow	Small sett on side of old road, whole area need further survey	y
033	ST61696687	21/04/2008		Scattered scrub & SNG	Neglected area with encroaching scrub very near Badger sett (see TN032) assoc trees	y

034	ST61576688	21/04/2008		Significant tree - Hedgerow	Quercus robur - pollard, hollow, deadwood. Potential bat roost	Y
035	ST61576689	21/04/2008		Badger presence - Hedgerow	Apparent Badger activity here	Y
036	ST61226708	21/04/2008	Disused Railway Farrington Gurney to	Badger sett	Badger sett under bramble, appears well used and many signs of Badger activity in this area.	Y
037	ST61446670	18/04/2008	Whitchurch	Significant tree - Field	Quercus robur - very large, hollow. Potential bat roost	Y
038	ST61486668	18/04/2008		Significant tree - Field	Quercus robur - very large, hollow, deadwood. Potential bat roost.	Y
039	ST61756701	22/04/2008		Significant tree - Hedgerow	Ash - pollard, deadwood, holes. Potential bat roost.	Y
040	ST61786701	22/04/2008		Significant tree - Hedgerow	Quercus robur - pollard, holes, deadwood, loose bark. Potential bat roost	Y
041	ST62066639	22/04/2008		Significant tree - Field	Ash - pollard, holes. Potential bat roost.	Y
042	ST61956634	22/04/2008		Badger presence - Hedgerow	Snuffle holes	Y
043	ST62226631	22/04/2008		Significant tree - Hedgerow	Ash - pollard, holes. Potential bat roost.	Y
044	ST624166288	22/04/2008		Significant tree - Hedgerow	Ash - pollard, epiphytes. Potential bat roost.	Y
045	ST62466626	22/04/2008		Badger sett	Badger sett several burrows.	Y
046	ST62476635	22/04/2008		Broadleaved Woodland - planted	Variety of species 5-15m tall, Wild Cherry, Field Maple, Sycamore, Oak, Ash, Willow. Poor ground flora - Cow Parsley, nettles with some interesting forbs	Y
047	ST62226642	22/04/2008		SNG	Rough neglected paddock. Wild Carrot, Knapweed, Yarrow	n
048	ST62166670	22/04/2008	Charlton Bottom and Queen Charlton Watercourse	Flushed area	Sedges & rushes, Glyceria sp. other forbs.	Y
049	ST62326649	22/04/2008	SNCI	Significant tree - Hedgerow	Quercus robur - stag headed. Potential bat roost	Y
050	ST62316680	22/04/2008		Pond	Artificial drinking pond	Y
051	ST62166692	22/04/2008		Significant tree - Hedgerow	Ash - pollard, hollows. Potential bat roost	Y
052	ST61986694	22/04/2008		Significant tree - Hedgerow	Quercus robur - pollard, hollow, deadwood, loose bark. Potential bat roost	Y

053	ST61906702	22/04/2008	Significant tree - Hedgerow	Quercus robur - near dead tree, not old	y
054	ST61806723	24/04/2008	Significant tree - Hedgerow	Quercus robur - pollard, with holes. Potential bat roost	y
055	ST61796719	24/04/2008	Significant tree - Hedgerow	3 x Crack Willow pollards. Potential bat roost	y
056	ST61776717	24/04/2008	Running water / pond	Ditch with flowing water and two ponds, one overgrown, one clear. Moorhen, Water-starwort sp., and other common aquatics	y
057	ST61636729	24/04/2008	Pond	Pond covered with duckweed - enriched and poor	y
058	ST61786731	24/04/2008	Significant tree - Hedgerow	Ash - pollard, hollows, with raptor box. Potential bat roost	y
059	ST61776727	24/04/2008	Significant tree - Hedgerow	3 x Crack Willow pollards. Potential bat roost	y
060	ST61866724	24/04/2008	Pond	Pond - shallow, shaded. No obvious inverts or aquatic plants. Pollarded Willow with holes	y
061	ST61896709	24/04/2008	Significant tree - Field	Quercus robur - pollard, deadwood, holes, splits. Potential bat roost	y
062	ST62246709	24/04/2008	Badger presence	Snuffle holes in shaded verge of drive	y
063	ST62276697	24/04/2008	Significant tree - Hedgerow	Large Poplar sp. possibly native Black Poplar <i>Populus nigra</i> subsp. <i>betulifolia</i> . Knarled trunk	y
064	ST62356697	24/04/2008	Running water	Sunken stream between improved fields. Common bryophytes, shrimps, tall trees - Willows & Ash	y
065	ST62486732	24/04/2008	Improved field - LBAP species	Skylarks singing over field	n
066	ST62486747	24/04/2008	Ditches with trees	Overgrown area with ditches and trees. Very shaded - mature Ash with Bramble/hawthorn scrub. Ivy carpets. "garden" pond. Whirligig Beetles, <i>Glyceria</i> sp. Pond Skaters.	y
067	ST62196707	24/04/2008	Pond		y
068	ST62166714	24/04/2008	Diverse area - Trees, banks, ditches	Broad ditch and bank feature with large trees (some pollards - potential bat roost), floristically diverse - hedgerow and aquatic species	y
069	ST62006717	24/04/2008	Semi-improved grassland	Rough field, with encroachment (Bramble&Blackthorn). Tussocky coarse grasses with Nettles & Thistles. Generally improved but with interest -rushes, <i>Carex hirta</i> & <i>remota</i> , Meadowsweet, Wild Angelica. Inverts/butterflies. Mammal trcks - poss Badger	y

070	ST61826747	25/04/2008		Green lane	Green track bounded by metal fence & bund with shrubs & trees. Common grasses with minor interest - Hairy Sedge, Arum maculatum, Mercurialis perennis, Prunella vulgaris.	n
071	ST62476765	25/04/2008		Ditch	Semi-wet ditch with assoc scrub and herbs. Oenanthe crocata, Filipendula ulmaria, Epilobium hirsutum	n
072	ST62546753	25/04/2008		Significant tree - Hedgerow	Quercus robur - tall pollard, deadwood, holes, splits	y
073	ST62446767	25/04/2008		Verge, track - species-rich	Potentilla reptans, Hyacinthoides non-scripta, Geranium dissectum, Prunella vulgaris, Medicago lupulina, Carex flacca, Lotus corniculatus, Festuca arundinacea	n
074	ST62606777	25/04/2008		Dense scrub	Small area of dense scrub on sloping land - potential for Badgers	y
075	ST62636801	25/04/2008		NO ACCESS	NO ACCESS Limited remote survey - Horsiculture paddocks and riding centre - improved grassland and assoc hedgerows likely to be of similar composition & structure.	y
076	ST62426775	25/04/2008		Hedgerow / Arable margin / Green lane	Signs of usage by mammals - tracks, droppings. Potential for Badgers. Inverts / butterflies (Holly Blue, Bombylius sp.	y
077	ST62156784	25/04/2008		Derelict urban	Area of gravel / scalplings. Ephemeral / short perennials - Hypochaeris radicata, Valerianella sp., Plantago lanceolata, Geranium dissectum, Saxifraga tridactylites and broad tree / scrub line. Badger activity in field - further survey needed	y
078	ST62176774	25/04/2008		SNG	Rough field, with encroachment (Bramble & Blackthorn). Tussocky coarse grasses, few herbs (see TN077). Inverts/butterflies. Many anthills. Mammal tracks - Badger. Much evidence of vole/small mammal activity	y
079	ST61876767	25/04/2008		Scattered scrub & SNG	Bramble & Hawthorn. Mammal signs - diggings, tracks poss Badger. Blackcap singing.	y
080	ST61946786	25/04/2008		Verge, road & scattered scrub	Wide verge (east of Stockwood lane) dominated by Bramble & Blackthorn scrub with tall ruderals (Cow Parsley & Nettles) and coarse grasses. Overgrown ditch. Potential for Badgers sett but none found	y

081	ST61926788	25/04/2008	Stockwood Open Space		Wide verge (west of Stockwood lane) dominated by improved grasses with dense Bramble & Blackthorn scrub. Potential for Badgers sett but none found	y
082	ST61836793	25/04/2008		Verge, road & scattered scrub Badger presence	Well worn tracks along hedgerow (NH102).	y
083	ST61556792	25/04/2008		Pond	Half surrounded by trees & scrub, accessed by stock, poached. Aquatics - Watercress, Glyceria sp. Eleocharis palustris, Lemna minor. Whirligig Beetle, Corixa sp. Assoc outflow. Other -Carex hirta	y
084	ST61696764	25/04/2008		Pond - temporary	Dry temporary pond.	y
085	ST61796720	24/04/2008		SNG	SNG with abundant Succisa pratensis (Devils-bit Scabious). Potentially interesting small meadow.	y
086	ST63046677	17/04/2008		Improved Grassland	Areas of this field are herb-rich (Pignut, Wood heath-rush)	y

Appendix 2. Phase 1 Codes

Code	Habitat classification	Code	Habitat classification	Code	Habitat classification
A	Cultivated/disturbed land, arable	F	Fence	RWD	Running water, dystrophic
AC	Natural inland cliff, acid / neutral	FB	Recently felled woodland: broad-leaved	RWE	Running water, eutrophic
ADH	Dry dwarf shrub heath, acid	FC	Recently felled woodland: coniferous	RWM	Running water, mesotrophic
AF	Acid / neutral flush / spring	FM	Recently felled woodland: mixed	RWO	Running water, oligotrophic
AG	Acid grassland unimproved	FPM	Flood plain fen	S	Artificial spoil
AM	Cultivated/disturbed land, amenity grassland	Ga	Intertidal green algal beds	SAG	Acid grassland semi-improved
AR	Other rock exposure, acid / neutral	H	Hedge, intact, native species poor	SB	Bracken scattered
AS	Natural scree, acid / neutral	H-	Defunct hedge, native species poor	SBW	Parkland / scattered trees, broad-leaved
B	Water, brackish (includes saline lagoons)	HC	Maritime hard cliff	SC	Maritime soft cliff
Ba	Intertidal brown algal beds	HT	Hedge and trees, native species poor	SCG	Calcareous grassland semi improved
BB	Blanket bog	I	Improved grassland	SCW	Parkland scattered trees: coniferous
BC	Natural inland cliff, basic	LH	Lichen / bryophyte heath	SD	Swamp, single species dominant
BDH	Dry dwarf shrub heath, basic	LP	Limestone pavement	SG+target note	Maritime coastal grassland
BF	Basic flush / spring	M	Water, mesotrophic	SH+target note	Maritime coastal heathland
BG	Bare ground	MG	Marsh / marshy grassland	shaded black	Built up area - buildings
BM	Basin mire	MH	Montane heath / dwarf herb	SI	Poor semi improved grassland
BP	Broadleaved parkland / scattered trees	MI	Artificial mine	SMG	Semi natural marshy grassland
BR	Other rock exposure, basic	MP	Mixed plantation	SMW	Parkland scattered trees: mixed
BS	Natural scree, basic	MV	Marginal / inundation, marginal	SNG	Neutral grassland semi improved
BW	Broadleaved woodland	MW	Mixed semi-natural	SP	Swamp
C	Water, marl / tufa	NG	Neutral grassland unimproved	SS	Scrub scattered
CA	Cave	NR	Other herb & fern, non-ruderal	SSM	Saltmarsh scattered plants
CB	Bracken, continuous	O	Water, oligotrophic	SW	Standing water
CG	Calcareous grassland unimproved	OD	Sand-dune, open dune	SWALL	Built up area - sea wall
CP	Parkland/scattered trees, coniferous	P	Bare peat	SWB	Standing water, brackish
CS	Built up area - caravan site	PBW	Broadleaved plantation	SWC	Standing water, marl
CW	Coniferous, semi-natural	PCW	Coniferous plantation	SWD	Standing water, dystrophic
D	Water, dystrophic	PH	Hedges intact or defunct, species poor	SWE	Standing water, eutrophic
DB	Dense bracken	PHT	Hedges with trees, species poor	SWM	Standing water, mesotrophic
DD	Dry ditch	PMW	Mixed plantation	SWO	Standing water, oligotrophic
DG	Sand-dune, dune grassland	Q	Artificial quarry	TR	Other herb & fern, tall ruderal
DGM	Dry heath / acid grassland mosaic	R	Artificial refuse-tip	TS	Tall swamp
DH	Sand-dune, dune heath	RB	Raised bog	VM	Valley mire
DS	Scrub dense / continuous	RH	Hedge, intact, native species rich	W	Wall
DSM	Saltmarsh dense / continuous	RH	Hedges intact or defunct, species rich	WB	Wet modified bog
DW	Sand-dune, dune slack	RH-	Defunct hedge, native species rich	WGM	Wet heath / acid grassland mosaic
DX	Sand-dune, dune scrub	RHT	Hedges with trees, species rich	WH	Wet dwarf shrub heath
E	Water, eutrophic	RHT	Hedge and trees, native species rich	X	Boundary removed
EB	Earth bank	RWB	Running water, brackish	Zo	Intertidal <i>Zostera</i> beds
ESP	Cultivated / disturbed land, ephemeral / short	RWC	Running water, marl		

S.E Bristol Urban Extension - Location Option 4 - Whitchurch

Figure 1. Phase 1 Map

Compiled by BRERC on 08/05/2008

Scale 1:14,240

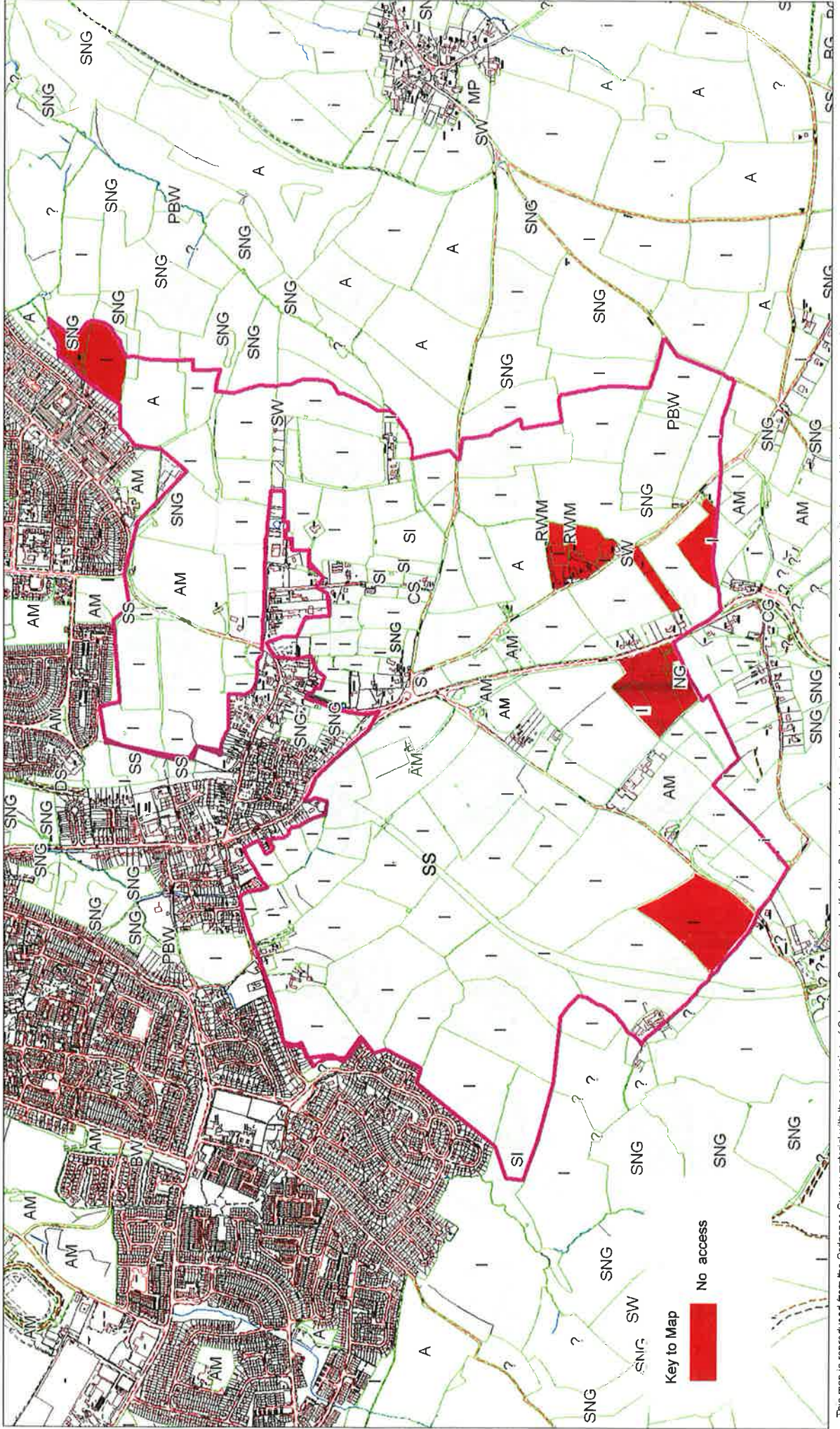
BRERC

Third Floor

Bristol Central Library

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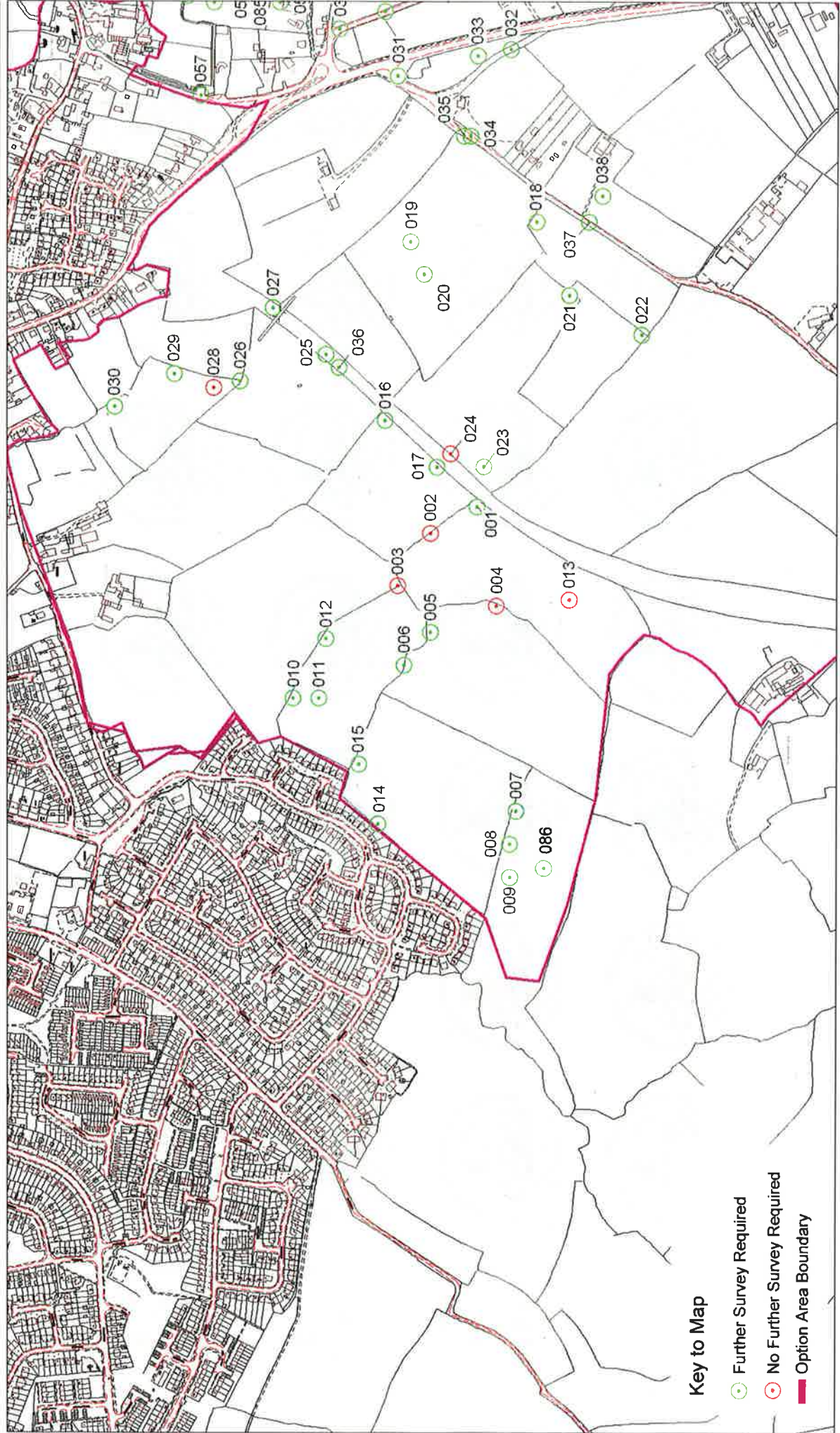
S.E Bristol Urban Extension - Location Option 4 - Whitchurch

Figure 2. Target Notes Areas 1 & 2

Compiled by BRERC on 12/05/2008

Scale 1: 7,703

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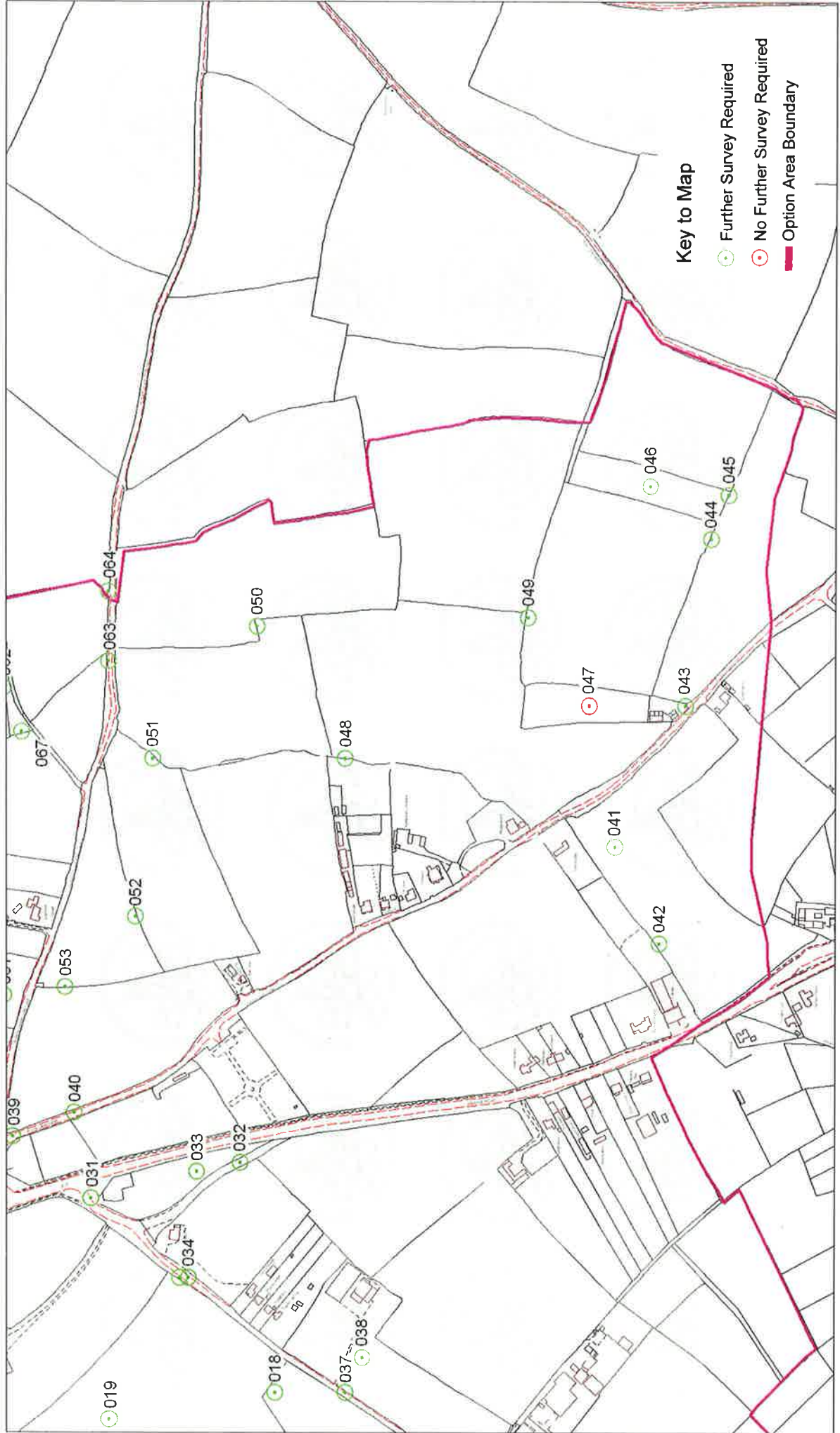
S.E Bristol Urban Extension - Location Option 4 - Whitchurch

Figure 3. Target Notes Area 3

Compiled by BRERC on 12/05/2008

Scale 1: 5,795

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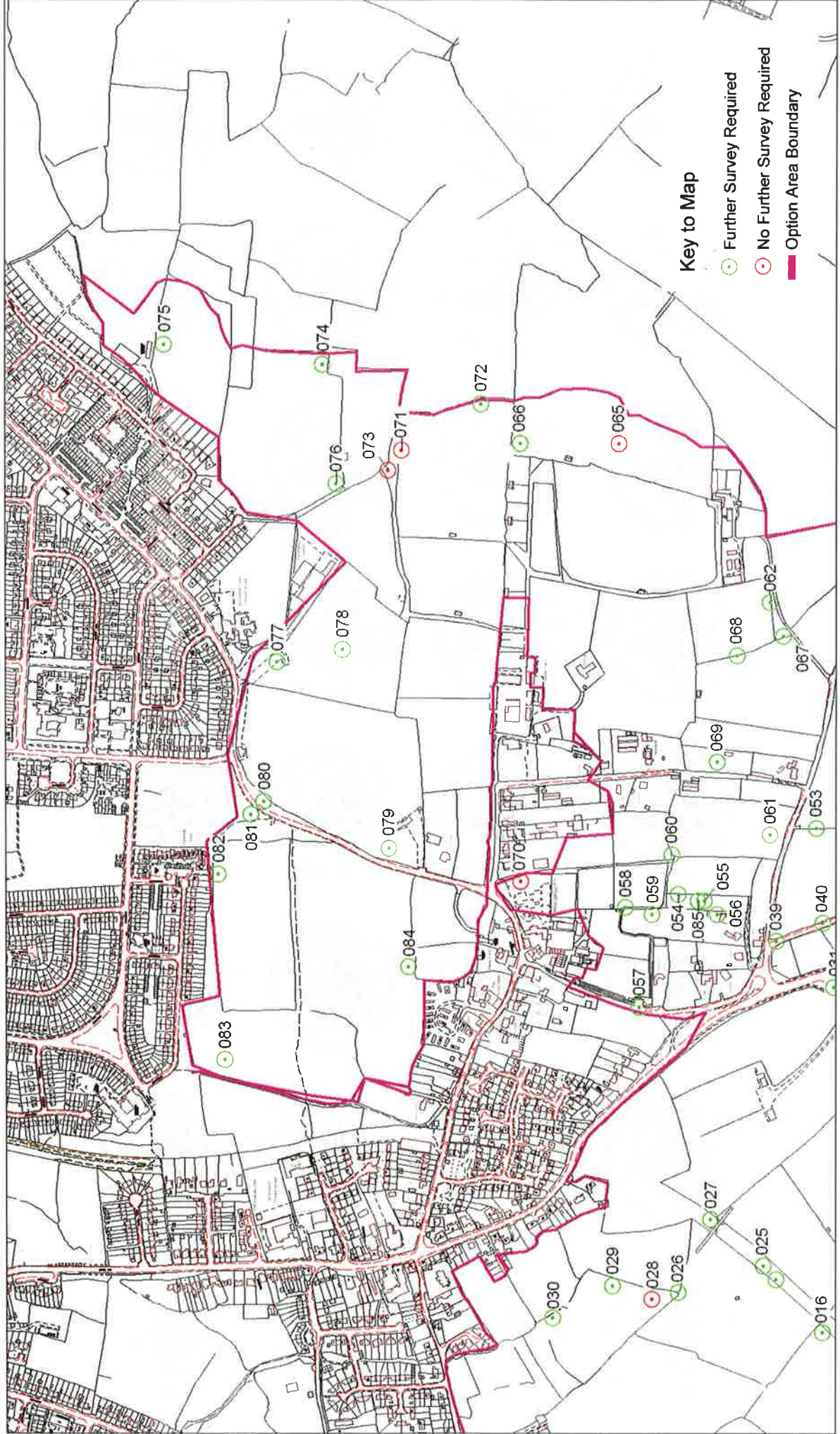
S.E Bristol Urban Extension - Location Option 4 - Whitchurch

Figure 4. Target Notes Area 4

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Key to Map
● Further Survey Required
● No Further Survey Required
— Option Area Boundary

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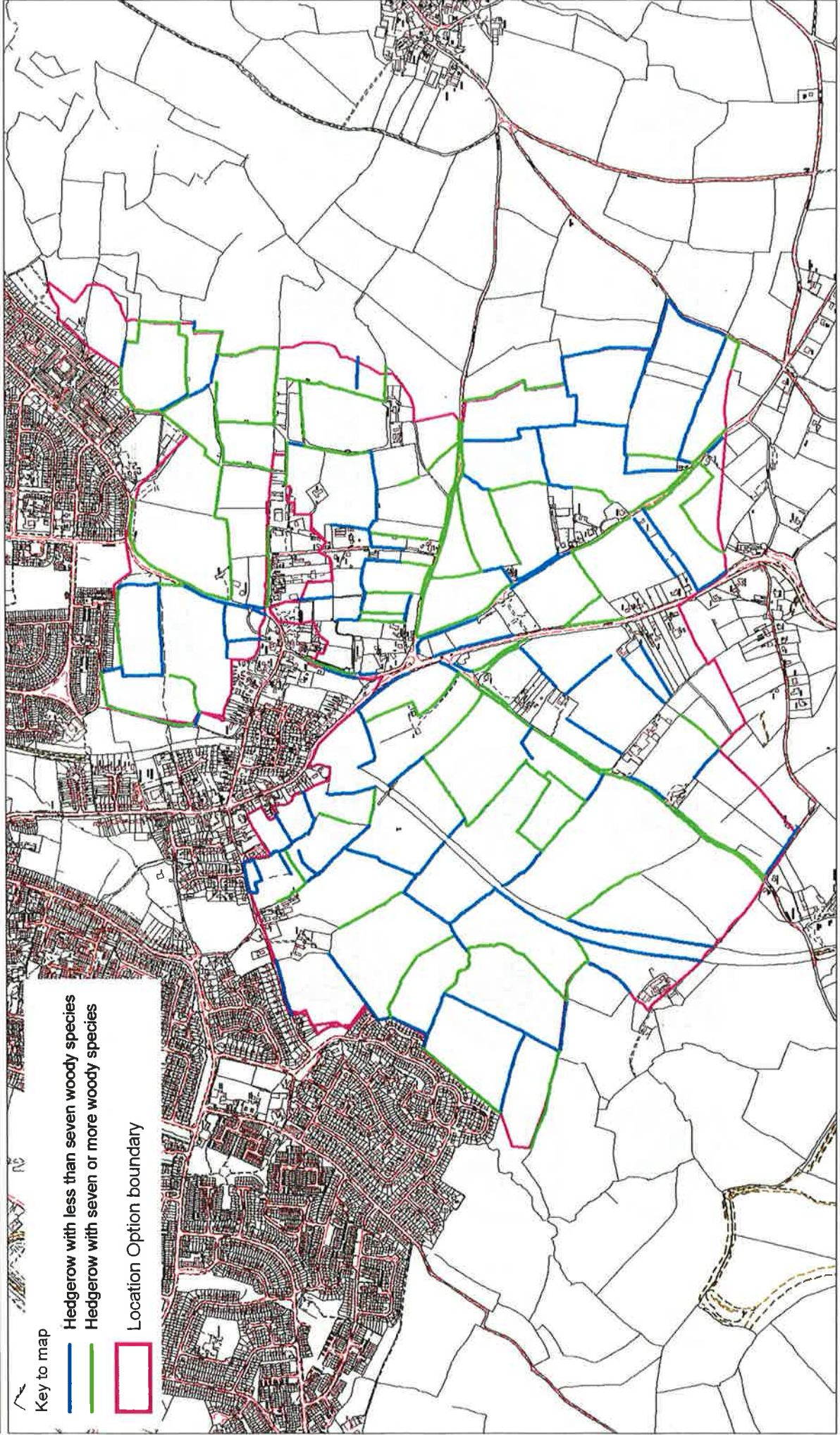
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Figure 5. Hedgerow Condition

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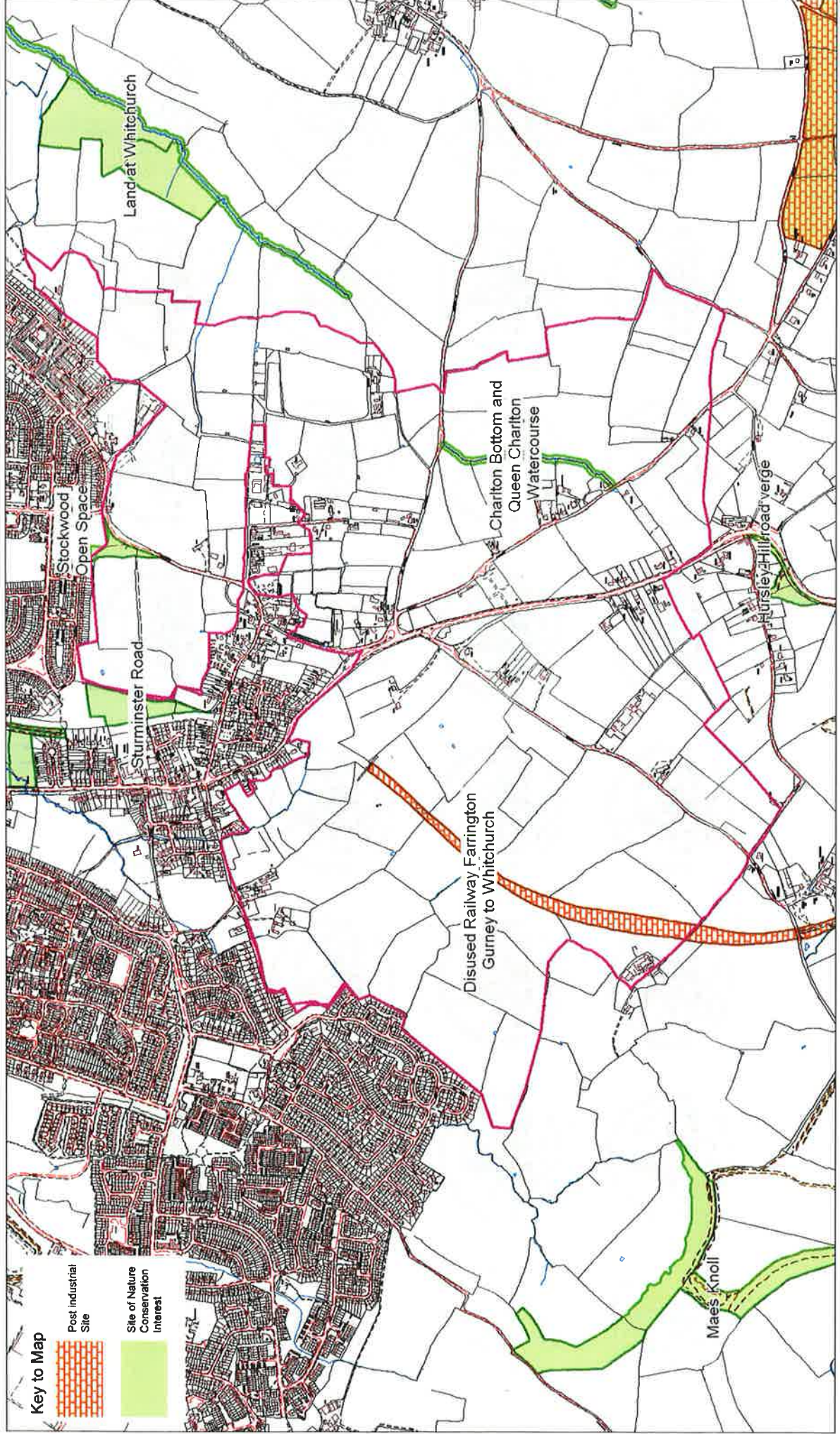
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Figure 6. Designated Sites

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S.E Bristol Urban Extension - Location Option 4 - Whitchurch

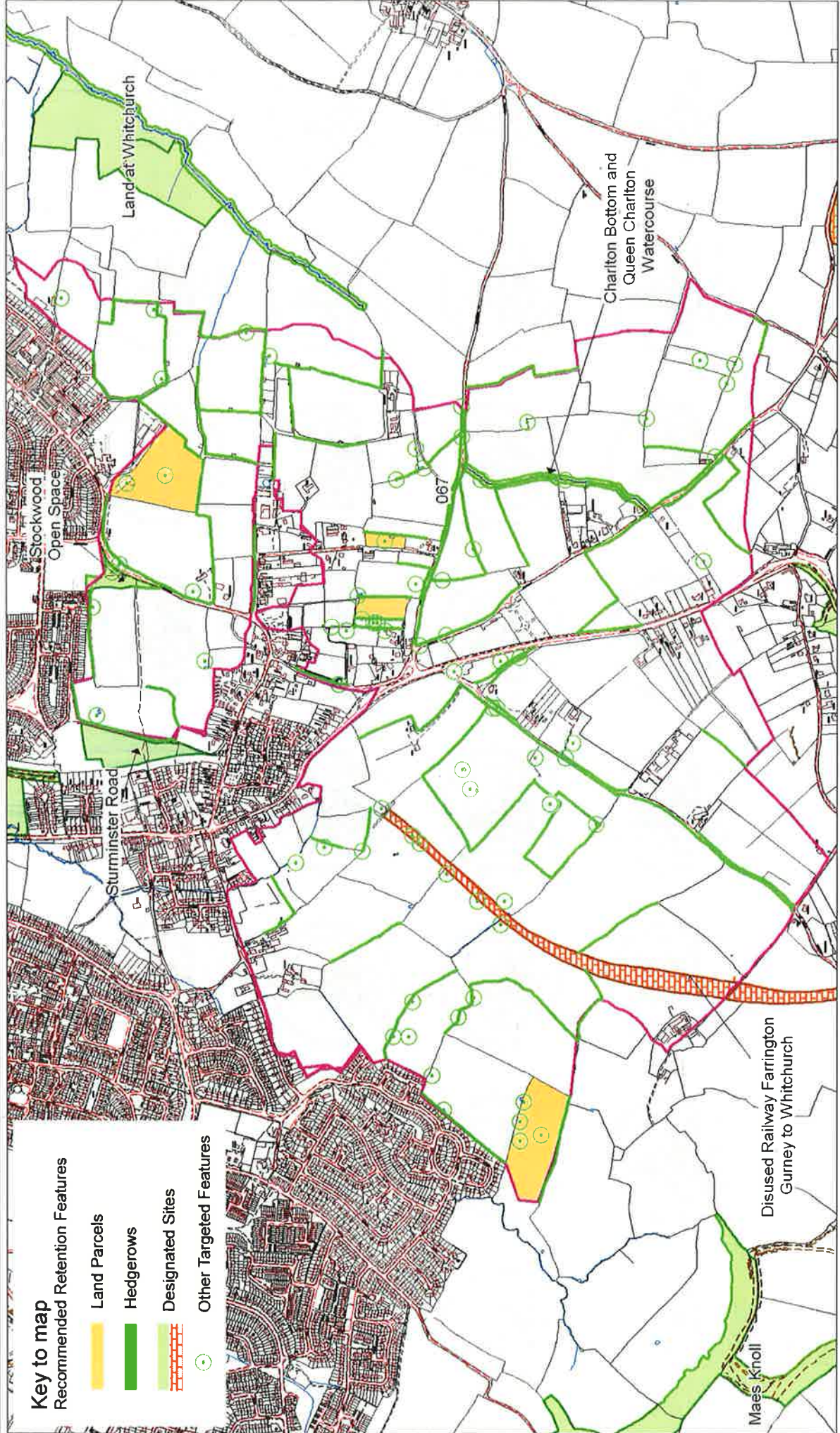
Figure 7. Recommended Retention Features

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Scale 1 : 9,236

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S.E Bristol Urban Extension - Location Option 4 - Whitchurch

Figure 8. Aerial Photo

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Scale 1: 12,370



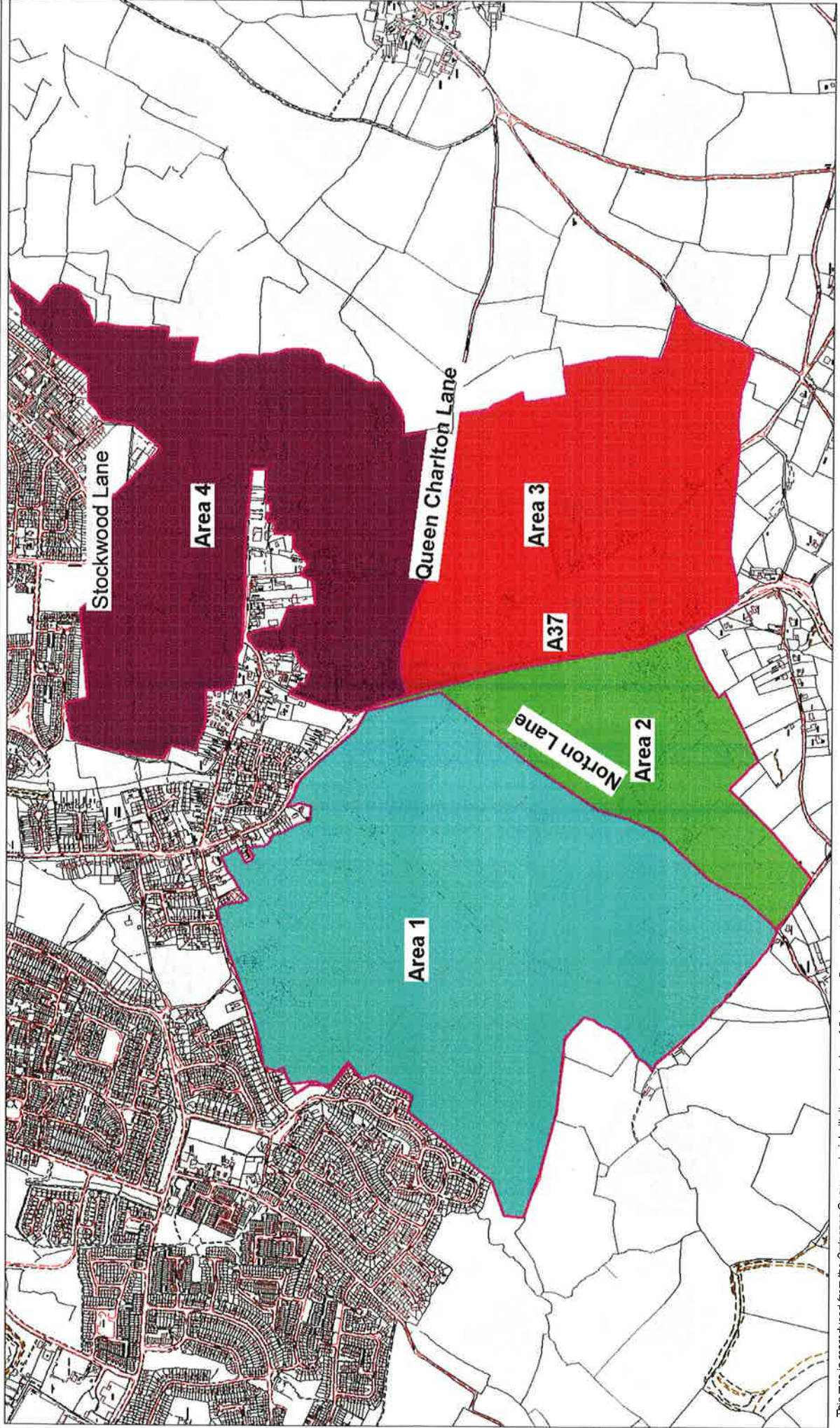
S.E Bristol Urban Extension - Location Option 4 - Whitchurch

Figure 9 . Locations Map

Compiled by BRERC on 14/05/2008

Scale 1: 13,280

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