

TABLE 4A: FLOODING HISTORY

DATE	LOCATION	ADDRESS	SOURCES OF FLOODING/DETAILS	DATA SOURCE
21/10/2001	Abington Piggotts	Abington Church	Pluvial	SCDC
01/01/2010	Abington Piggotts	High Street	Pond	Cambs Police
21/10/2001	Babraham	High Street	River Granta	EA
01/11/2002	Bar Hill	Hollytrees	Local Stream	Bar Hill PC
21/10/2001 01/01/2003 10/02/2009 11/02/2009	Barrington	Foxton Road, High Street	River Cam and Groundwater	SCDC and EA and Cambs Police
11/02/2009 03/03/2010	Barrington	West Green, Shepreth Road	River Cam	EA
Unknown	Barrington	Church Road, Barrington Road	River Rhee	Barrington PC
21/10/2001	Bartlow	Throughout the village	River Granta, River Bourn	EA
01/03/2010	Barton	B1046 by Duck Pond	Pluvial	Barton PC
1960's 2001	Bassingbourn	Spring Lane, Shedbury Lane, Pepper Close	Groundwater in Fields	Bassingbourn-cum-Kneesworth PC
Oct 1993	Bourn	Throughout the village	Bourn Brook	EA
03/02/2001 07/02/2001 21/10/2001	Bourn	Caxton End, Alms Hill, Kingfisher Close, Riddy Lane	Bourn Brook	SCDC and Bourn PC
21/10/2001	Bourn	Riddly Lane	Pluvial	Bourn PC
01/05/1925	Cambridge	Cambridge University Botanical Gardens	River Cam	Historical Records
05/05/1978	Cambridge	Barton Road, Newnham Terrace	Bin Brook, River Cam	EA
2000 21/10/2001	Cambridge	Herschel Road, Gough Way, Grange Road	Bin Brook	Cambridge Federation of Residents' Association and EA

DATE	LOCATION	ADDRESS	SOURCES OF FLOODING/DETAILS	DATA SOURCE
03/02/2001	Cambridge	Manhattan Drive	River Cam	St Neots Library
21/10/2001	Cambridge	Jesus Green, University of Cambridge Colleges	River Cam	Cambridgeshire County Council
21/10/2001 02/04/2007	Cambridge	Wilberforce Road	Coton Stream	EA
Jan 2003 17/07/2009	Cambridge	Riverside	River Cam	Riverside RA and CCC
24/08/2004	Cambridge	Nuffield Road	Pluvial	Milton Road Library
10/02/2009	Cambridge	Grantchester Road	River Cam	Camb's Police
19/02/2010	Cambridge	Coleridge Road	Groundwater	EA
24/02/2010	Cambridge	Mawson Road	Groundwater	EA
Regularly in Winter	Cambridge	Stratfield Close, Tavistock Road, Woodlark Road	Pluvial	Windsor Road Residents' Association
Unknown	Cambridge	Bell School Playing Fields	Pluvial	Greenlands RA
Unknown	Cambridge	Junction of Queens Road/ Sidgwick Avenue	Pluvial	Pinehurst South Residents' Association
2003 Autumn 2009 March 2010	Cambridge	Eights Marina, Willobank, Cutter Ferry Bridge, Logan's Way, Mariners Way, Lynfield Lane, Camside, Fen Rd, Water Street	River Cam	Friends of Stourbridge Common and Old Chesterton Residents' Association

DATE	LOCATION	ADDRESS	SOURCES OF FLOODING/DETAILS	DATA SOURCE
21/10/2001	Cambridge	Logans Way, Water Lane, St Andrews Road, Lynfield Lane	River Cam	SCDC and EA
31/08/2004	Cambridge	Chesterton High Street	Pluvial	Milton Rd Library
21/10/2001	Caxton	Ermine Street, Brockholt Road, Royston Road, Gransden Road, Roman Road,	Bourn Brook	EA
1993 1998 Oct 2003	Caxton	Royston Road	Bourn Brook	Caxton PC
21/10/2001	Comberton	Village School, Swaynes Lane, Barton Road, The Kentings	Pluvial	EA
21/10/2001	Coton	Brook Lane, Brookfield Road	Bin Brook	EA
Unknown	Coton	Silverdale Avenue	Pluvial	Coton PC
21/10/2001	Cottenham	Broad Lane	Pluvial	SCDC
Annually	Cottenham	Broad Lane, Denmark Road, Twenty Pence Road (B1049)	Local Ditches	Cottenham PC
21/10/2001	Croxton	High Street	Pluvial	EA
28/02/2010 Annually	Dry Drayton	Junction of Madingly Street/ Park Street	Callow Brook	Dry Drayton PC and Cambs Police
Unknown	Dry Drayton	Scotland Farm	Pluvial	Dry Drayton PC
Various	Fen Drayton	High Street	Fluvial	SCDC
25/04/2001	Fowlmere	Mill Road	River Shep	EA
Unknown	Fulbourn	Unknown	Local Ditches	Fulbourn PC
2001	Fulbourn	Thomas Road	Groundwater	SCDC

DATE	LOCATION	ADDRESS	SOURCES OF FLOODING/DETAILS	DATA SOURCE
Unknown	Gamlingay	Station Road/ Hatley Road, Millbridge Brook Field	Millbridge Brook	Gamlingay PC
1978 21/10/2001	Girton	Dodford Lane, Fairway, Oakington Road, High Street, Northfield	Beck and Washpit Brooks	Girton PC and EA
12/1874	Grantchester	Grantchester Mill	River Cam	Historic Records
09/04/1998	Grantchester	Unknown	Pluvial	St Neots Library
10/02/2009 (Every 3 Years)	Grantchester	Grantchester Road	River Cam	Grantchester PC and Cambs Police
21/10/2001 17/07/2009	Great Eversden	Ivetts Close, High Street, Wimpole Road	Groundwater and Ditches	Great and Little Eversden PC and EA
22/10/2001	Great Shelford	Kings Mill Lane	River Granta, River Cam	Great Shelford PC and EA
Unknown	Harston	Haslingfield Road, Button End, Various Fields in the village	River Rhee, Rising Groundwater Table due to closing of Cement Works	Harston PC
17/07/2009	Haslingfield	Cantelupe Road	Pluvial	Haslingfield PC
Unknown	Hauxton	Meadows by High Street, Riddy Close	River Granta	Hauxton PC
3 per Year	Hinxton	Duxford Road	River Granta	Hinxton PC
09/09/2005	Histon	Lucketts Close, Park Lane	Pluvial	Histon & Impington PC
2005	Histon	High Street, Saffron Road, New School Road, School Hill	Pluvial	SCDC
2001 and 2005	Histon	Glebe Road, Station Road, The Green, Water Lane	Pluvial	SCDC

DATE	LOCATION	ADDRESS	SOURCES OF FLOODING/DETAILS	DATA SOURCE
Unknown	Horningsea	Area beside river, mostly fields	River Cam	Horningsea PC
1947/1968 severely	Ickleton PC	Mill Lane, Church Street	River Cam	Ickleton PC
Unknown	Ickleton PC	Copole Road, Abbey Street	River Cam	Ickleton PC
2005	Impington	Herward Close, Impington Lane	Pluvial	SCDC
09/09/2005	Impington	South Road, Impington Lane, Ambrose Way, Villa Road	Pluvial	Histon & Impington Parish Councils
15/08/2008	Kneesworth	Old North Road	Unnamed Brook	Bassingbourn-cum-Kneesworth PC
1947 1968 1974 21/10/2001	Linton	High Street, Meadow Lane, Church Lane, Green Lane, Horn Lane, Mill Lane	River Granta	SCDC and Linton PC and EA
21/10/2001	Linton	Green Lane, Flaxfields, The Grip, The Maltings, Back Lane, Horn Lane	Pluvial	EA
10/02/2009	Linton	Hadstock Road	River Granta	Atkins
Unknown	Litlington	Church Street, Steeple Morden Road, Malting Lane, Silver Street	Pluvial	Litlington PC
Unknown	Little Abington	Sluice Wood, Bourn Bridge, Village Recreation and Cricket Ground	River Granta	Little Abington PC
21/10/2001	Little Eversden	High Street, Lowfields	Ditches	EA
Unknown	Little Eversden	Church Lane	Groundwater	Great and Little Eversden PC

DATE	LOCATION	ADDRESS	SOURCES OF FLOODING/DETAILS	DATA SOURCE
1946 14/06/2007	Longstowe	Old North Road	Dene Brook	Lonstowe PC
2005	Madingley	A428	Ditches	Highways Agency
01/02/2010	Madingley	Church Lane	Groundwater	Madingley PC
Fall 2000 21/10/2001 01/01/2003	Meldreth	Elin Way, High Street, Whitecroft, Chiswick End	Pluvial	SCDC and EA
2001	Milton	Fields By Fenn Road, Hall End, Old School Lane Chesterton Fen Road	River Cam and local ditches	Milton PC and Historical Records
1947 1953 1978 1998	Oakington	Unknown	Oakington Brook	EA
05/05/1978	Oakington	Dry Drayton Road	Oakington Brook	EA
21/10/2001	Oakington	Orchard Way, Cambridge Road, The Drift, Longstanton Road, Station Road, Arcadia Gardens, The Broadway, Dry Drayton Road	Oakington Brook	SCDC and EA
21/10/2001	Orwell	Brookside, Town Green Road, Greenfield Close	Orwell Brook	EA
Unknown	Pampisford	Brewery Road, Church Lane	Unnamed Brook	Pampisford PC

DATE	LOCATION	ADDRESS	SOURCES OF FLOODING/DETAILS	DATA SOURCE
1918 1968	Sawston	Mill Lane, Springfield Road, Granta Road, meadowfield Road, Town Close	High Water Table	Sawston PC
23/10/2001	Sawston	Mill Lane	River Cam	SCDC
Unknown	Sawston	Paddock Way, High Street, Junction of Faulkner Road/ Sunderlands Avenue	Soakaways	Sawston PC
02/1795	Sawston	Kings Mill	River Cam	Historic Records
01/01/2003	Shepreth	Barrington Road	River Rhee	SCDC and Shepreth PC
Unknown	Shepreth	Church Lane, Barrington Road	Pluvial	Shepreth PC
21/10/2001	Six Mile Bottom	High Street, Delamere Close	Pluvial	Little Wilbraham PC
22/10/2001	Stapleford	London Road, Bury Road, Josceynes	River Granta	Stapleford PC and EA
Unknown	Stapleford	Aylesford Road	Pluvial	Stapleford PC
10/02/2009	Swavesey	Boxworth End	Local Ditches	Cambs Police
1947	Swavesey	Northern End of Swavesey: Whitegate Close, Over Road, Moat Way, Station Road, Taylors Lane	River Ouse	Swavesey PC
16/03/2005	Tadlow	Unknown	Perched Groundwater In the Till	EA
2009/10	Tadlow	Highstreet, B1042 opposite New England Farm.	Local Ditch	Tadlow PC

DATE	LOCATION	ADDRESS	SOURCES OF FLOODING/DETAILS	DATA SOURCE
2000	Thriplow	Farm Lane	Groundwater	SCDC
1974 22/10/2001	Toft	Brookside, Millers Road, High Street	Bourn Brook	Toft PC and EA
10/02/2009 28/02/2010	Toft	B1046	Bourn Brook	Cambs Police
07/1875	Waterbeach	Waterbeach Fields	River Cam	Historic Records
16/11/2004	Waterbeach	Waterbeach Railway Station	Pluvial	Milton Road Library
Feb 2001 22/10/2001	Waterbeach	Whitmore Way	River Cam	EA
21/10/2001 10/02/2009	Waterbeach	Clayhithe Bridge	River Cam	SCDC and Cambs Police and EA
Unknown	Waterbeach	Cambridge Road	Groundwater Levels Rising In Fields	Waterbeach PC
11/02/2009	Wendy	High Street	River Cam	Cambs Police
23/10/2001	Weston Colville	Weston Colville Road	River Stour	SCDC
Unknown	Weston Colville	Common Road, Church End, Chapel Road	River Stour	Weston Colville PC
2001	Willingham	Mill Field, Over Road, B1050, The Green	Pluvial	SCDC
1947	Willingham	West Fen, Cranes Fen	Unnamed Brook	Willingham PC
Unknown	Wimpole	Wimpole Old Road	Local Brook and Ditches	Wimpole PC

TABLE 4B: SEWER FLOODING HISTORY

DATE	LOCATION	ADDRESS	SOURCES OF FLOODING/DETAILS	DATA SOURCES
13/09/2008	A14	Junction 33	Highway Drainage	Highways Agency
06/08/2009	A14	Junction 31,34	Highway Drainage	Highways Agency
05/09/2005 16/09/2005 15/01/2008	A428	Junction for Cambourne	Highway Drainage	Highways Agency
13/09/2008 01/11/2008 10/11/2008	A428	Hardwick Junction	Highway Drainage	Highways Agency
Unknown	Arrington	Alms Houses on A1198	Blocked Culvert	Arrington PC
01/06/1985 21/10/2001	Balsham	High Street	Inadequate Drainage System	EA
21/10/2001	Barrington	Challis Green, West Green	Foul Sewer Overflow, Culverts	EA
01/03/2010	Barton	A603, Lords Bridge	Surface Water Sewers could not cope with rainfall	Barton Parish Council
01/10/2008	Bassingbourn	High Street, The Limes, Orchard Close	Blocked SW Drains	Bassingbourn – cum –Kneeswoth PC
01/06/2009	Bassingbourn	Church Close	Blocked Drain	Bassingbourn – cum –Kneeswoth PC
07/06/2009	Bassingbourn	A1198	Highway Drainage	Cambds Police
Unknown	Bassingbourn	Canberra Close	Foul Sewage Pumping Station	Bassingbourn – cum –Kneeswoth PC
Frequently	Bourn	Throughout the village	Sewerage System	EA
Unknown	Caldecote	Main Street	Foul and surface water flooding due to storms	Caldecote PC

DATE	LOCATION	ADDRESS	SOURCES OF FLOODING/DETAILS	DATA SOURCES
21/10/2001	Caldecote	Highfields, East Drive	Blocked Drains and Culverts	EA
Mar 2010	Cambourne	School Lane	Foul Sewer	SCDC
1978	Cambridge	Barton Road	Culverts	EA
01/07/1979	Cambridge	Gunhild Way, Bourne Road, Union Lane, Courtney Way, Windsor Road Playing Fields, Corona Road, Walpole Road Malta Road, Marlowe Road, Hobson Street.	Sewer Flooding Due to Storm	Cambridgeshire CC Weather Charts
1979-1982	Cambridge	Oxford Road, Windsor Road	Foul Sewer	Windsor Road Residents' Association
1978, Feb 2001, 21/10/2001	Cambridge	Riverside, Cutter Ferry Close, Acrefield Drive, Priory Road	Foul Sewer, Drainage Systems unable to discharge into River Cam due to heavy rainfall	EA; Riverside Area RA and Great Ouse CFMP (2010)
21/10/2001	Cambridge	Gough Way, Birdwood Road	Surface Water Sewer, Culverts	EA
Aug 2008, Summer 2009	Cambridge	Riverside	Inadequate Gulleys	Riverside Area Residents' Association
1 in 20yr	Cambridge	Glisson Road	Sewer Flooding	Anglian Water
1 in 20yr	Cambridge	Kingston Street	Sewer Flooding	Anglian Water

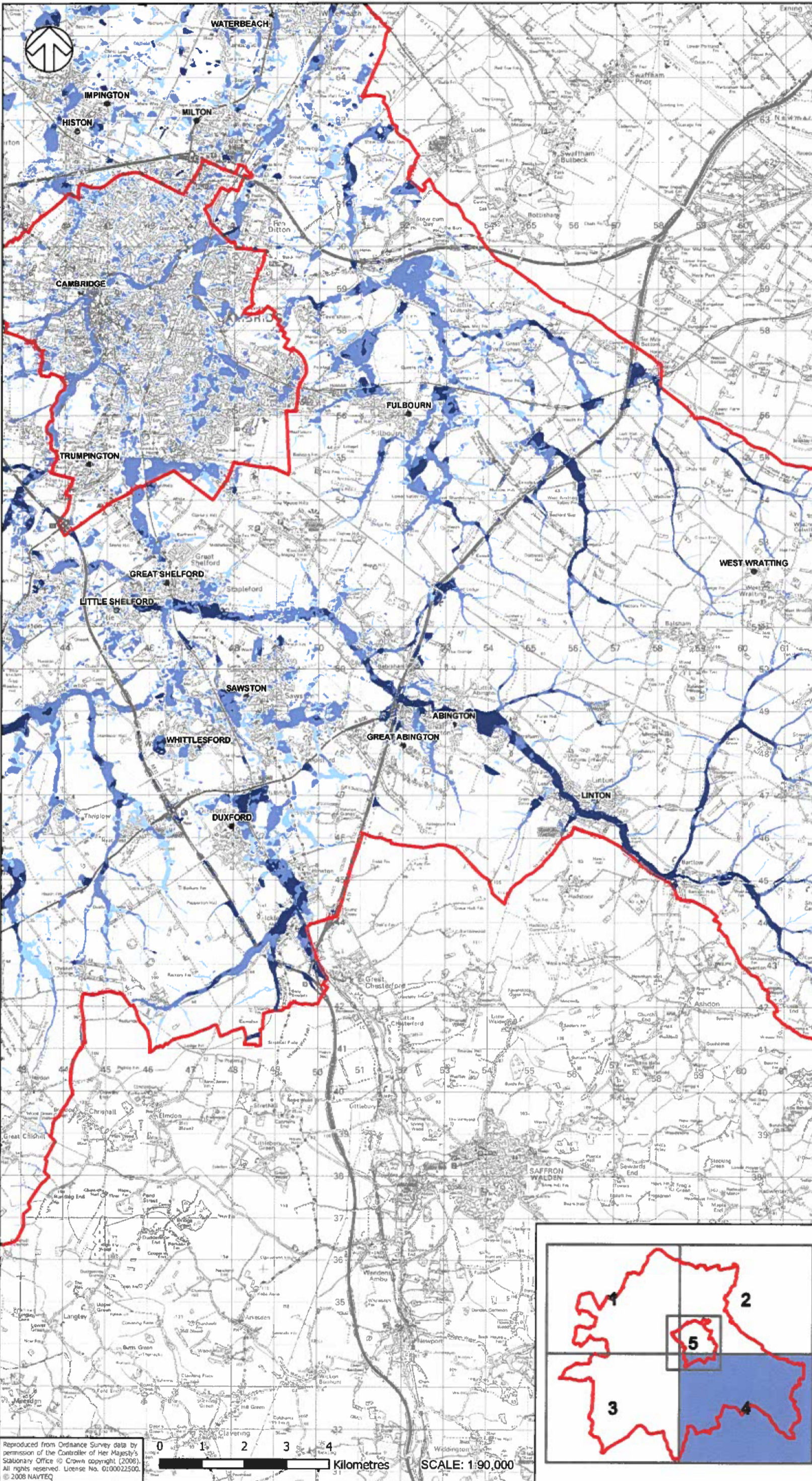
DATE	LOCATION	ADDRESS	SOURCES OF FLOODING/DETAILS	DATA SOURCES
1 in 20yr	Cambridge	Windsor Road	Sewer Flooding	Anglian Water
Unknown	Cambridge	Blossom Street, Norfolk Terrace	Blocked Drain	Norfolk Terrace & Blossom Street Residents' Association
30/08/2008	Cambridge	Trumpington Street	Blocked Runnels	Newton RA and Cams Police
15/06/2009	Cambridge	Babraham Road	Highway Drainage	CCC
20/09/2009	Cambridge	Huntingdon Road	Burst Water Main	Cams Fire and Rescue
31/10/2009	Cambridge	Madingley Road	Water Leak	Cams Police
12/11/2009	Cambridge	Newmarket Road, Gonville Place	Highway Drainage	Cams Police
11/07/2008	Caxton	A1198	Highway Drainage	CCC
Oct 2001 28/02/2010 Mar 2010 (frequently)	Comberton	Barton Road, Swaynes Lane, West Street, Thornbury, Royston Lane, South Street, The Green	Overflowing Surface and Foul Sewers	Comberton PC and Cams Police
Oct 2001	Coton	The Footpath	Surface Water Sewer	Coton PC
1 in 20yr	Cottenham	Unknown	Sewer Flooding	Anglian Water
2003	Croxton	High Street	Foul and surface water flooding due to storms. Pumping Station Blocked when flooding occurs.	Croxton PC
Unknown	Duxford	Bustlers Rise	Surface water drainage	Duxford PC

DATE	LOCATION	ADDRESS	SOURCES OF FLOODING/DETAILS	DATA SOURCES
Unknown	Elitsley	Meadow View	Sewer Overflow	Elitsley PC
1993,1997, 21/10/2001	Elsworth	Boxworth Road, Brook Street, Paddock Row, Rogers Close, Fardells Lane	Culverts/Fluvial	EA
21/10/2001	Foxton	Foxton Sewage Works	Foxton Sewage Works	South Cambridgeshire DC
Unknown	Fowlmere	Chapel Lane, High Street, The Way	Drains Silted Up	Fowlmere PC
15/11/2009 28/02/2010	Gamlingay	The Cinques	Highway Drainage	Cambs Police
27/04/2005	Girton	Girton Road	Sewer overflowed due to heavy rainfall	Milton Road Library
05/05/1978	Girton	Oakington Road	Inadequate culverts	EA
01/06/2008	Great Chishill	Hall Lane	Inadequate Drainage System	Great & Little Chishill PC
Unknown	Great Shelford	Elms Avenue	Drain Blocked by Construction	Great Shelford PC
15/06/2009	Great Wilbraham	Angle End	Highway Drainage	CCC
Unknown	Guilden Morden	Church Street, Swan Lane, Potton Road	Culverts	Guilden Morden PC
1 in 20yr	Hardwick	St Neots Road	Sewer Flooding	Anglian Water
Unknown	Hardwick	Main Street	Blocked Drains	Hardwick PC
Unknown	Harlton	Eversden Road, Washpit Lane	Rainwater, plus blocked drains resulted in flooding	Harlton PC

DATE	LOCATION	ADDRESS	SOURCES OF FLOODING/DETAILS	DATA SOURCES
22/07/2009	Harston	High Street	Blocked Surface Water Drains	Harston PC
21/10/2001	Histon	Glebe Way, Station Road	Drains and Sewers	EA
09/09/2005	Histon	Kay Hitch Way	Sewer Overflowing	Histon & Impington PC
Multiple times a year	Horningsea	St John's Lane	Foul Sewer Overflowing	Horningsea PC
21/10/2001	Impington	South Road, Impington Lane	Drains and Sewers	EA
Unknown	Kingston	Throughout the Village	Poor Maintenance of Surface Water Sewers.	Kingston PC
Unknown	Knapwell	Manor Farm, High Street	Surface Water Sewer	Knapwell PC
17/07/2009	Linton	Chalklands	Highway Drainage	CCC
1 in 20yr	Linton	Granta Vale, Lonsdale	Sewer Flooding	Anglian Water
21/10/2001	Little Eversden	High Street	Surface Water Drainage	Great & Little Eversden PC
28/02/2010	Little Gransden	Main Road, Church Street	Blocked Drains, Drainage Ditch Blocked	Little Gransden PC and Cambs Police
07/06/2009	Little Wilbraham	High Street	Highway Drainage	Cambs Police
Unknown	Longstanton	Hatton's Park, Haddows Close, Station Road, Rampton Road, Wilsons Road	Blocked Sewer/ Inadequate Sewage System	Longstanton Parish Council
21/10/2001	Longstanton	Colesfield, High Street, Spiggots Close	Private culverts along award drain	EA
28/02/2010	Longstanton	School Lane	Highway Drainage	Cambs Police

DATE	LOCATION	ADDRESS	SOURCES OF FLOODING/DETAILS	DATA SOURCE
17/08/2005 28/02/2010	M11	Junction 14	Highway Drainage	Highways Agency
Unknown	Meldreth	Chiswick End	Blocked and Inadequate Culverts	Meldreth PC
Unknown	Melbourn	Back Lane, Moat Lane	Highway drains	SCDC
Unknown	Milton	Chesterton Fen Road	Inadequate Sewage System	Milton PC
09/02/2009	Nosterfield End (Castle Camps)	Unnamed Road	Highway Drainage	Sewer
05/05/1978	Oakington	Longstanton Road	Drains	EA
Unknown	Oakington	Throughout the village: Longstanton Road, The Drift, Mill Road, Cambridge Road, Water Lane	Insufficient Highway Gullies	Oakington & Westwick PC
11/02/2009	Orwell	Malton Road	Highway Drainage	Cambs Police
1 in 20yr	Orwell	Lotfield Road, Town Green Road, SG8 0HJ	Sewer Flooding	Anglian Water
Unknown	Over	Fen End	Highway flooding	SCDC
21/10/2001	Papworth Everard	Ermine Street South, Ermine Street North, Byfield Road/Hamden Way, Wood Lane	Culverts, Blocked Highway Drains	EA and Papworth Everard PC
21/10/2001	Rampton	King Street, Cow Lane, Church End, The Green	Blocked Drains, Highway Drains	EA, SCDC and Rampton PC

DATE	LOCATION	ADDRESS	SOURCES OF FLOODING/DETAILS	DATA SOURCE
07/08/2008	Shepreth	Fowlmere Road	Highway Drainage	Cambs Police
28/02/2010	Six Mile Bottom	Brinkley Road	Highway Drainage	Cambs Police
2009	Stapleford	Priam's Way	Culverts	Stapleford PC
2010	Stapleford	Crispin Cottage, London Road	Blocked Pumps at Effluent Pumping Station	Stapleford PC
Unknown	Stow cum Quy Fen	Browns Park	Foul and Surface Water Sewers Overflowing	Stow cum Quy PC
Unknown	Swavesey	Boxworth End, Wallmans Lane	Field Culverts, drains	Swavesey PC
Unknown	Toft	Brookside, Hardwick Road, High Street	Foul Sewer Emissions, Highway Drains Flood	Toft PC
Unknown	Waterbeach	Greenside, Whitmore Way, Car Dyke Road, Cambridge Road, Cow Hollow Wood, Clayhithe Road, Waterbeach Sailing Club	Surface Water Sewer Flooding – Lack of Maintenance of ditches	Waterbeach PC
2001/02 (occurs about twice a year)	Whaddon	Bridge Street	Blocked Drain	Whaddon Parish Council
15/06/2009 06/08/2009	Whittlesford	A505/Hunts Road	Highway Drainage	Cambs Police
21/10/2001	Willingham	Millfield, High Street, Station Road	Culverts	EA
2010	Willingham	Bourneys Manor, Brook Grove, West Meadow Close	Foul Sewer	Willingham Parish Council

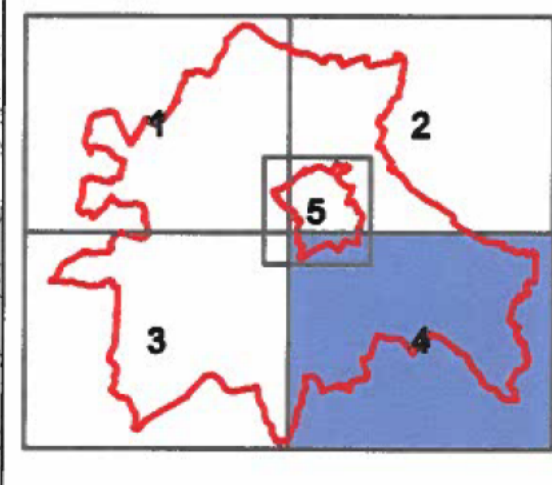



KEY

- South Cambridgeshire DC & Cambridge City Council Boundaries
- More
- Intermediate
- Less

NOTE: The maps only provide a general indication of areas which may be more likely to suffer from surface water flooding, and have been produced by the Environment Agency using a strategic broad scale modelling approach assuming an extreme rainfall event. They do not show the susceptibility of individual properties to surface water flooding. They should not be used to substitute more detailed investigations at a site specific scale, that allow a more accurate assessment of surface water flooding to be made.

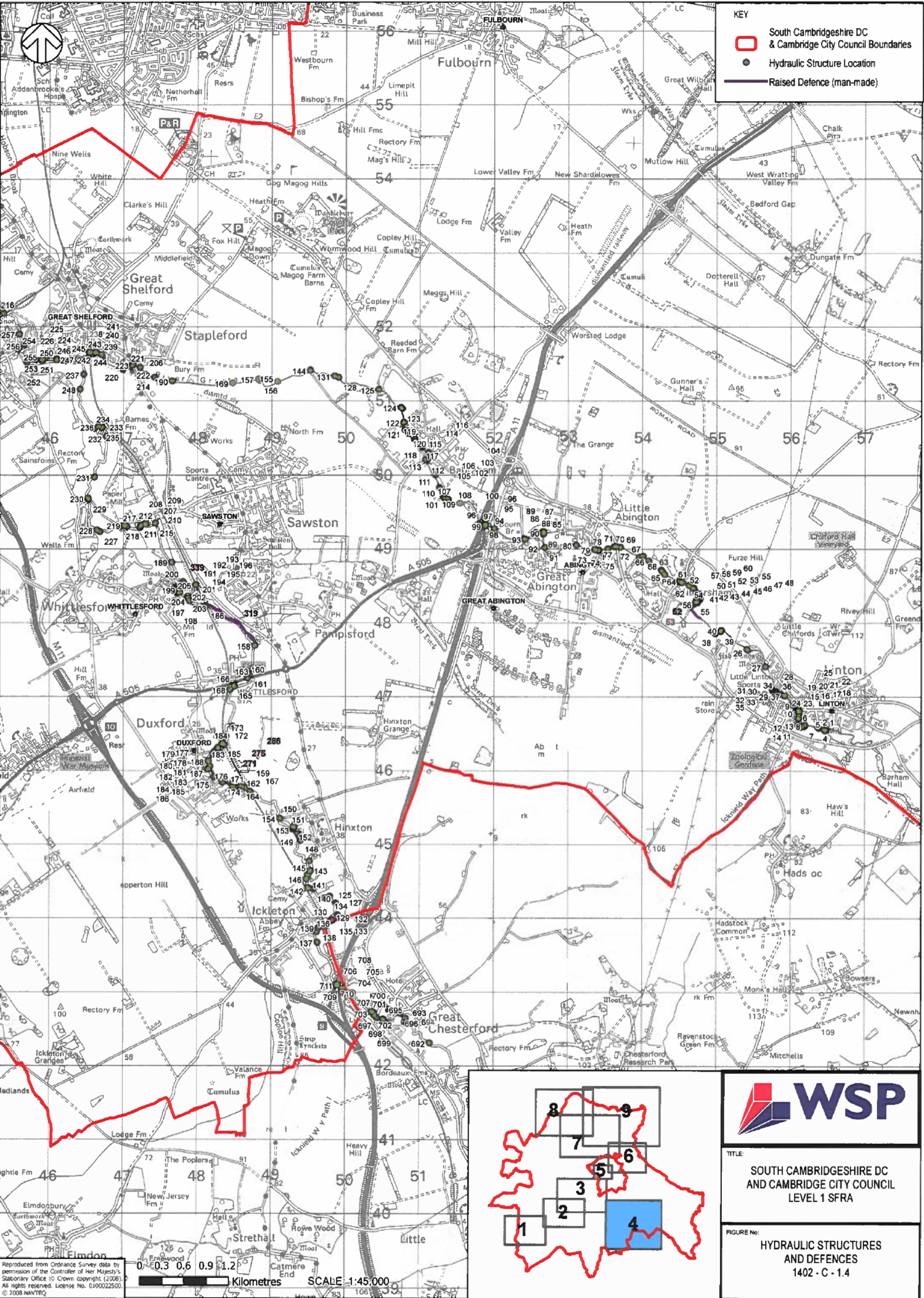
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TITLE:
SOUTH CAMBRIDGESHIRE DC
AND CAMBRIDGE CITY COUNCIL
LEVEL 1 SFRA

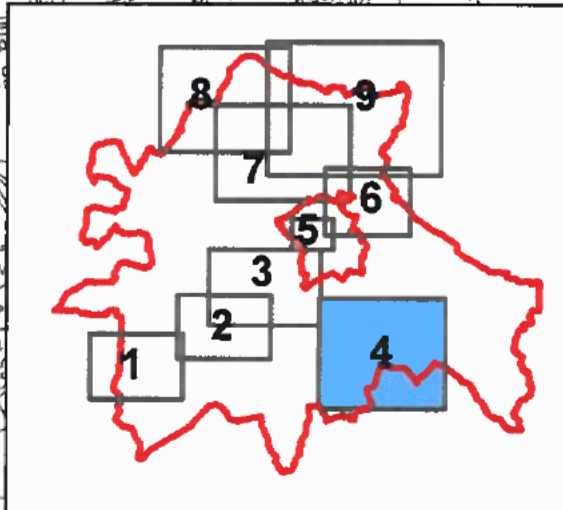
FIGURE NO:
SURFACE WATER FLOOD RISK
1402 - B - 4.4

Date Modified: 29/09/2010
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KEY

- South Cambridgeshire DC & Cambridge City Council Boundaries
- Hydraulic Structure Location
- Raised Defence (man-made)



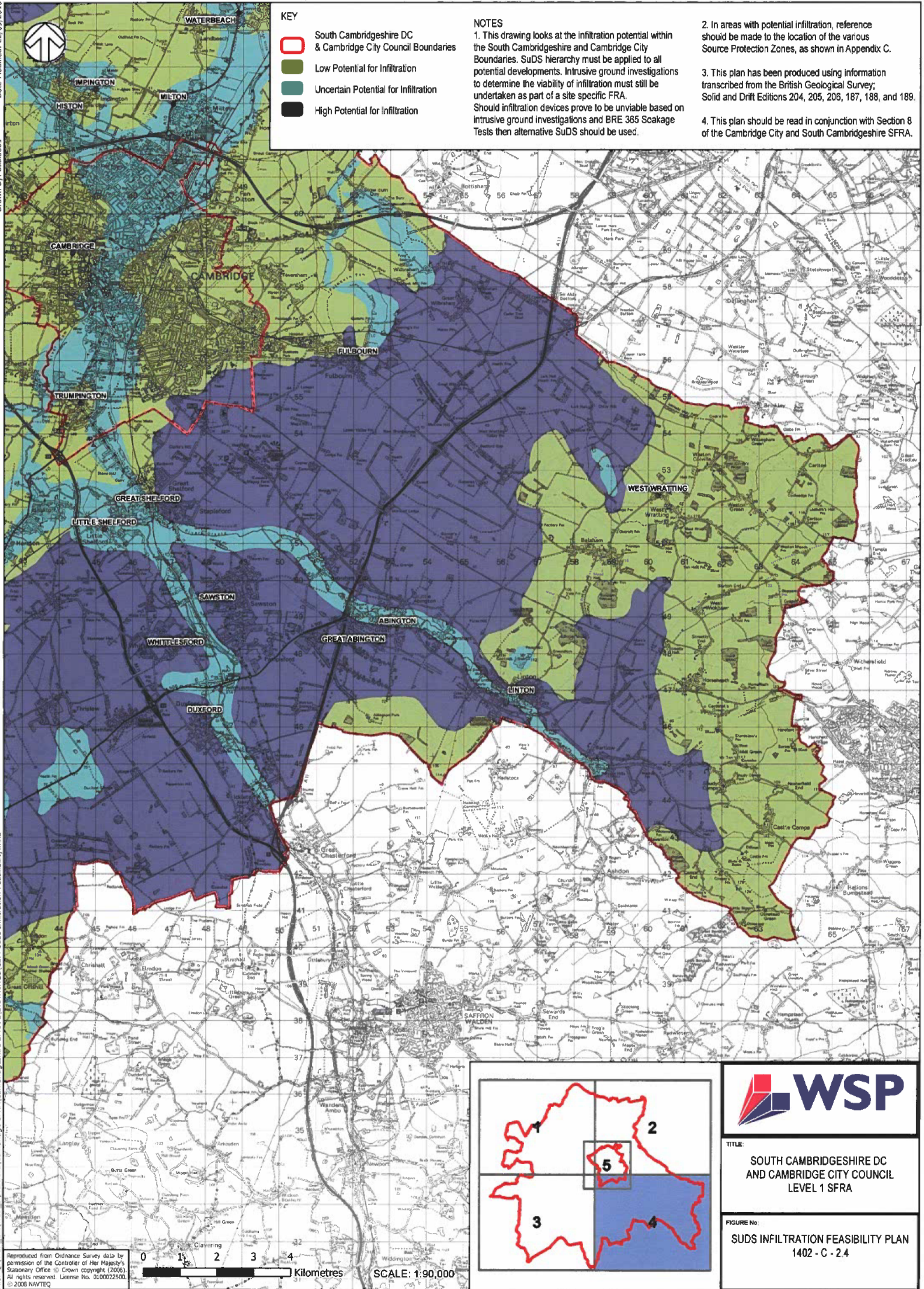
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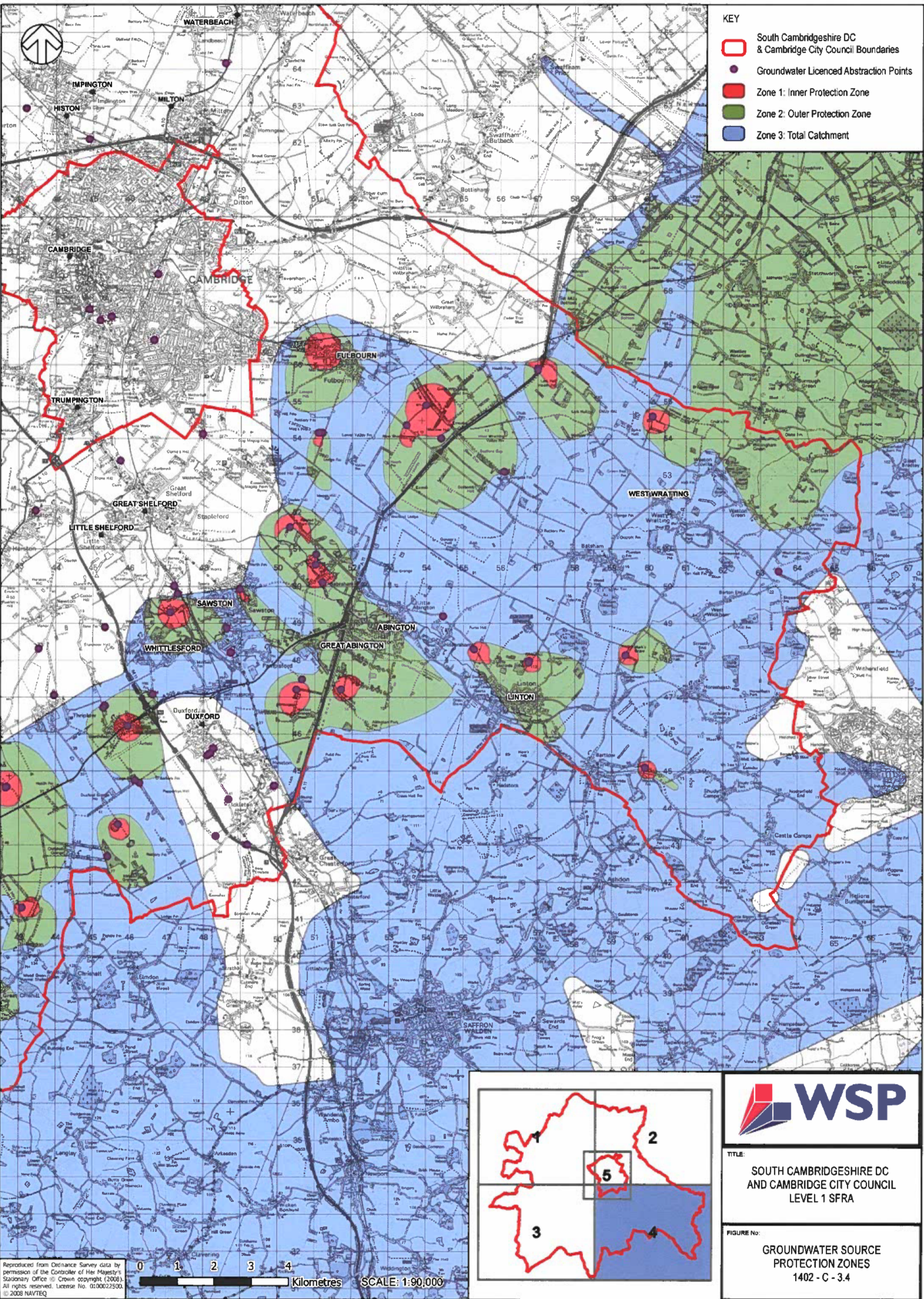
TITLE:
**SOUTH CAMBRIDGESHIRE DC
AND CAMBRIDGE CITY COUNCIL
LEVEL 1 SFRA**

FIGURE No:
**HYDRAULIC STRUCTURES
AND DEFENCES
1402 - C - 1.4**

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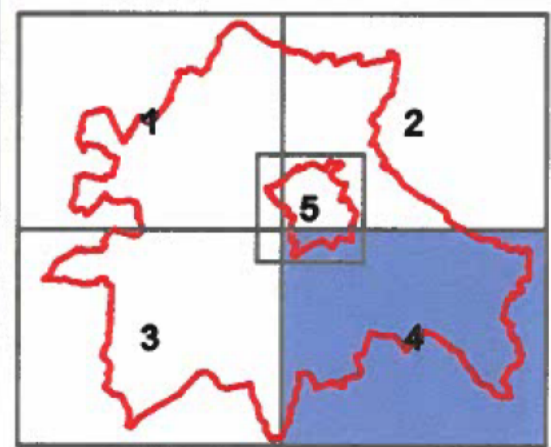


KEY

- South Cambridgeshire DC & Cambridge City Council Boundaries
- Groundwater Licenced Abstraction Points
- Zone 1: Inner Protection Zone
- Zone 2: Outer Protection Zone
- Zone 3: Total Catchment

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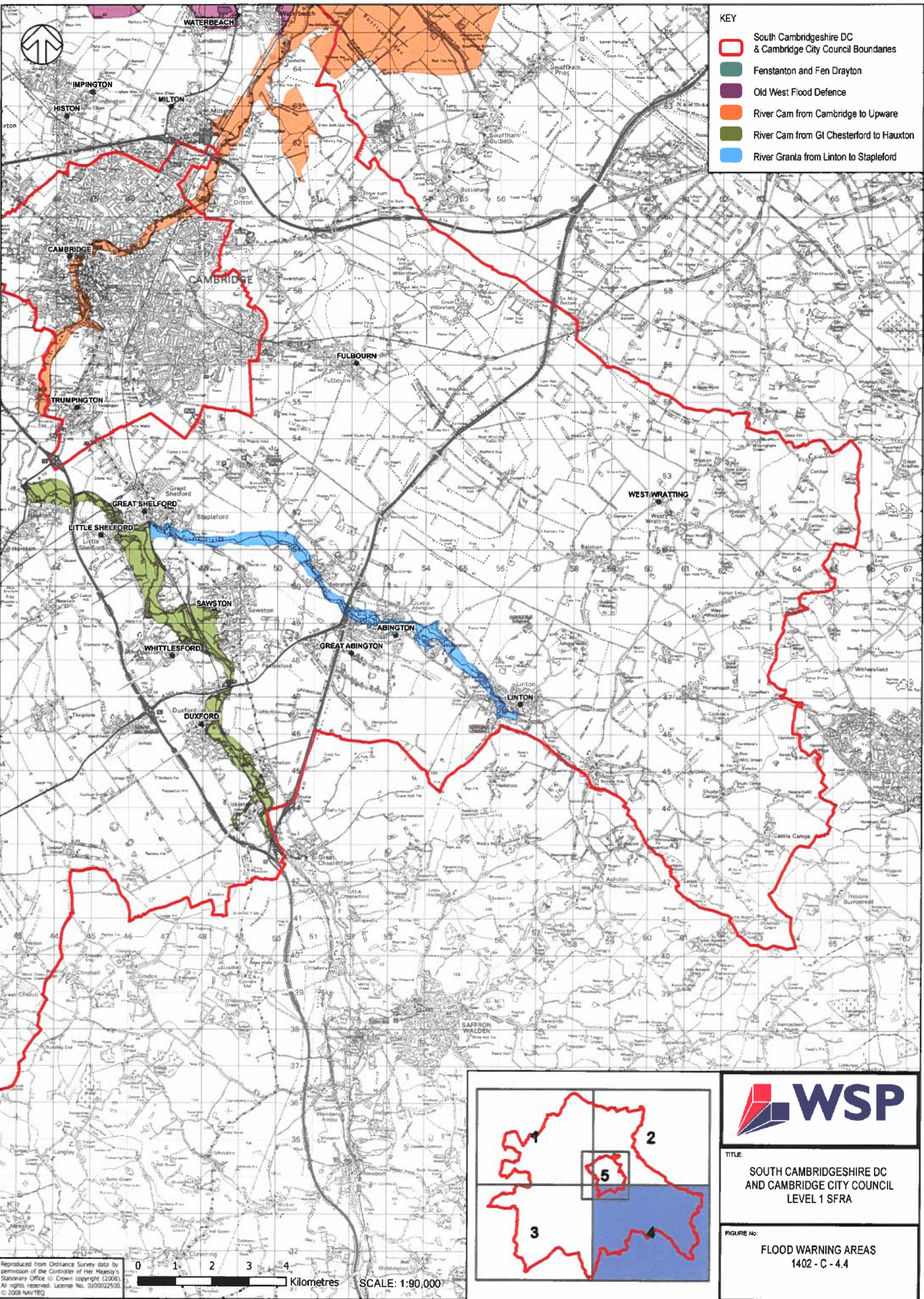
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WSP

TITLE:
**SOUTH CAMBRIDGESHIRE DC
AND CAMBRIDGE CITY COUNCIL
LEVEL 1 SFRA**

FIGURE No:
**GROUNDWATER SOURCE
PROTECTION ZONES
1402 - C - 3.4**


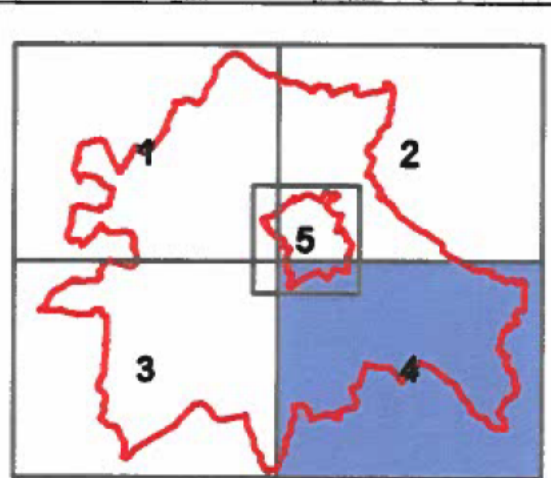


KEY

- South Cambridgeshire DC & Cambridge City Council Boundaries
- Fenstanton and Fen Drayton
- Old West Flood Defence
- River Cam from Cambridge to Upware
- River Cam from GI Chesterford to Hauxton
- River Granta from Linton to Stapleford

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0 1 2 3 4 Kilometres SCALE: 1:90,000



TITLE:
**SOUTH CAMBRIDGESHIRE DC
AND CAMBRIDGE CITY COUNCIL
LEVEL 1 SFRA**

FIGURE No:
**FLOOD WARNING AREAS
1402 - C - 4.4**

APPENDIX D

Calculated by:

Site name:

Site location:

Site Details

Latitude:

Longitude:

Reference:

Date:

This is an estimation of the greenfield runoff rates that are used to meet normal best practice criteria in line with Environment Agency guidance "Rainfall runoff management for developments", SC030219 (2013), the SuDS Manual C753 (Ciria, 2015) and the non-statutory standards for SuDS (Defra, 2015). This information on greenfield runoff rates may be the basis for setting consents for the drainage of surface water runoff from sites.

Runoff estimation approach

Site characteristics

Total site area (ha):

Methodology

Q_{BAR} estimation method:

SPR estimation method:

Soil characteristics

	Default	Edited
SOIL type:	3	3
HOST class:	N/A	N/A
SPR/SPRHOST:	0.37	0.37

Hydrological characteristics

	Default	Edited
SAAR (mm):	578	578
Hydrological region:	5	5
Growth curve factor 1 year:	0.87	0.87
Growth curve factor 30 years:	2.45	2.45
Growth curve factor 100 years:	3.56	3.56
Growth curve factor 200 years:	4.21	4.21

Notes

(1) Is Q_{BAR} < 2.0 l/s/ha?

When Q_{BAR} is < 2.0 l/s/ha then limiting discharge rates are set at 2.0 l/s/ha.

(2) Are flow rates < 5.0 l/s?

Where flow rates are less than 5.0 l/s consent for discharge is usually set at 5.0 l/s if blockage from vegetation and other materials is possible. Lower consent flow rates may be set where the blockage risk is addressed by using appropriate drainage elements.

(3) Is SPR/SPRHOST ≤ 0.3?

Where groundwater levels are low enough the use of soakaways to avoid discharge offsite would normally be preferred for disposal of surface water runoff.

Greenfield runoff rates

	Default	Edited
Q _{BAR} (l/s):	14.5	14.5
1 in 1 year (l/s):	12.61	12.61
1 in 30 years (l/s):	35.52	35.52
1 in 100 year (l/s):	51.62	51.62
1 in 200 years (l/s):	61.04	61.04

APPENDIX E

INDICATIVE SURFACE WATER DRAINAGE STORAGE

OPTION A – INFILTRATION

Quick Storage Estimate

Variables

FSR Rainfall		Cv (Summer)	0.750
Return Period (years)	100	Cv (Winter)	0.840
Region	England and Wales	Impermeable Area (ha)	1.950
Map	M5-60 (mm)	Maximum Allowable Discharge (l/s)	0.0
	Ratio R	Infiltration Coefficient (m/hr)	0.01000
		Safety Factor	2.0
		Climate Change (%)	40

Buttons: Analyse, OK, Cancel, Help

Quick Storage Estimate

Results

Global Variables require approximate storage of between 2432 m³ and 2432 m³.

With Infiltration storage is reduced to between 877 m³ and 1788 m³.

These values are estimates only and should not be used for design purposes.

Buttons: Analyse, OK, Cancel, Help

INDICATIVE SURFACE WATER DRAINAGE STORAGE

OPTION B – ATTENUATION & DISCHARGE

Quick Storage Estimate

Micro Drainage

Variables

Results

Design

Overview 2D

Overview 3D

Vt

Variables

FSR Rainfall

Return Period (years) 100

Region England and Wales

Map

M5-60 (mm) 20.000

Ratio R 0.450

Cv (Summer) 0.750

Cv (Winter) 0.840

Impermeable Area (ha) 1.900

Maximum Allowable Discharge (l/s) 12.6

Infiltration Coefficient (m/hr) 0.00000

Safety Factor 2.0

Climate Change (%) 40

Analyse OK Cancel Help

Quick Storage Estimate

Micro Drainage

Variables

Results

Design

Overview 2D

Overview 3D

Vt

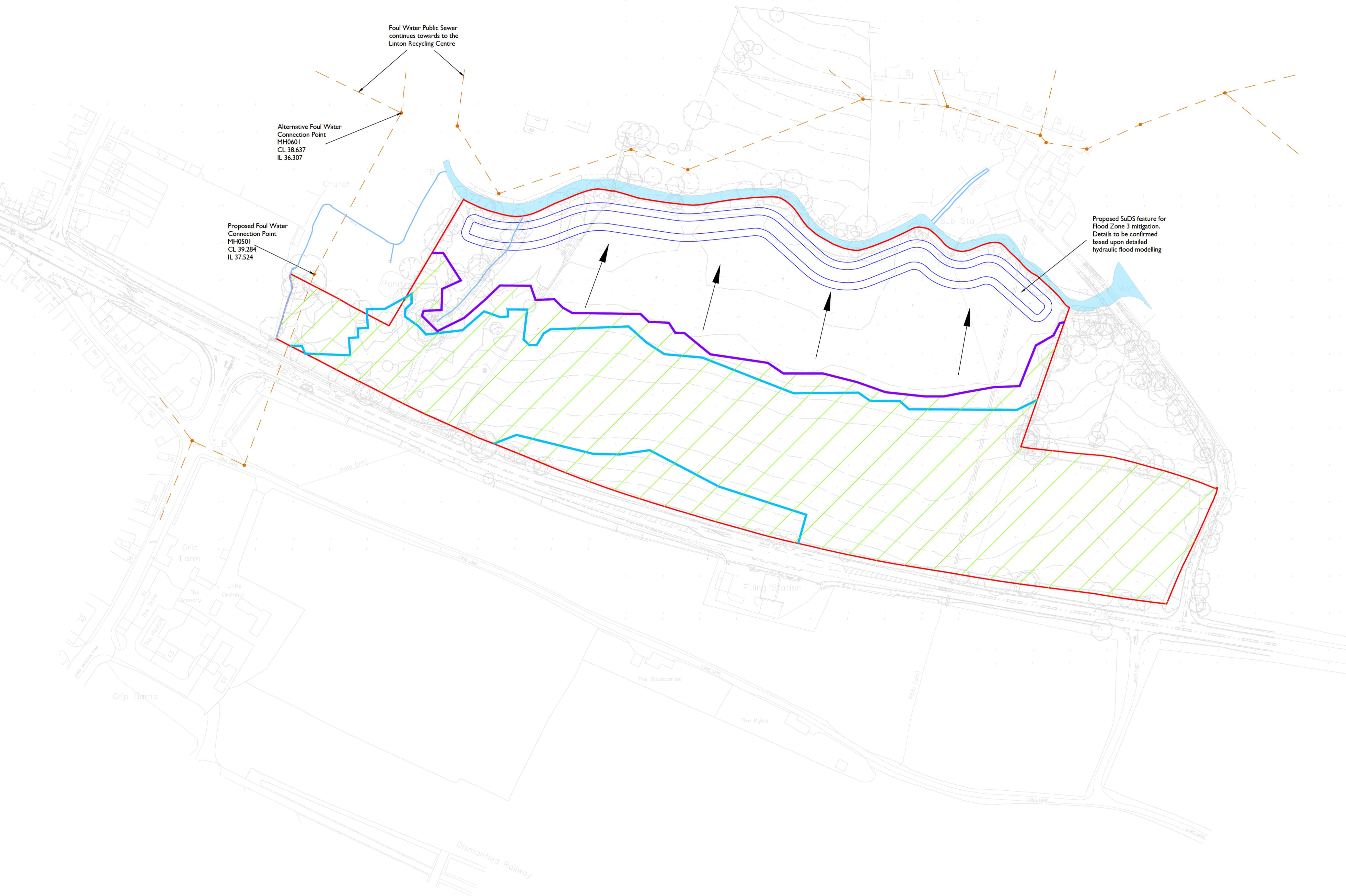
Results

Global Variables require approximate storage of between 1064 m³ and 1389 m³.

These values are estimates only and should not be used for design purposes.

Analyse OK Cancel Help

- KEY:
- Indicative Site Boundary
 - Indicative Flood Zone 3 Extent
 - Indicative Flood Zone 2 Extent
 - ▨ Indicative Area Available for Residential Development within Flood Zones 1 & 2 where a Residential use is permitted (3.70ha)
 - Existing Main River - River Granta
 - Existing Drains
 - - - Existing Foul Water Public Sewer
 - Proposed 1m3 Embankment towards to the Main River to provide further protection against flooding to future Residential Development



Rev	Date	Details	Drawn By	Checked By	Approved By



CLIENT:
Taylor Wimpey UK Ltd

PROJECT:
Land north and south of the A1307, Linton

TITLE:
Indicative Flood Risk & Surface Water Opportunities and Constraints Plan

STATUS:
FEASIBILITY

SCALE:	DATE:	DRAWN:	CHECKED:	APPROVED:
1:1,000	20.02.20	NR	TH	JC
JOB NO:	DRAWING NO:	REVISION:		
1902-05	SK100	-		



INDICATIVE

APPENDIX F

**Pre-Planning
Assessment Report
LAND AT LINTON, CAMBRIDGESHIRE
155852/904071263/1/0077505**

Section 1: Proposed development

Thank you for submitting a pre-planning enquiry. This has been produced for Transport Planning Associates. Your reference number is **155852/904071263/1/0077505**. If you have any questions upon receipt of this report, please contact the Pre-Development team on 03456 066087 or email planningliaison@anglianwater.co.uk.

The response within this report has been based on the following information which was submitted as part of your application:

List of planned developments	
Type of development	No. Of units
Dwellings	85

The anticipated residential build rate is:

Year	Y1	Y2
Build rate	50	35

Site grid reference no.

TL5625946497

Development type

Greenfield

Planning application status

Unknown

The comments contained within this report relate to the public water mains and sewers indicated on our records. Your attention is drawn to the disclaimer in the useful information section of this report.

Section 2: Assets affected

Our records indicate that we have the following types of assets within or overlapping the boundary of your development site as listed in the table below.

Additionally, it is highly recommended that you carry out a thorough investigation of your proposed working area to establish whether any unmapped public or private sewers and lateral drains are in existence. We are unable to permit development either over or within the easement strip without our prior consent. The extent of the easement is provided in the table below. Please be aware that the existing water mains/public sewers should be located in highway or open space and not in private gardens. This is to ensure available access for any future maintenance and repair and this should be taken into consideration when planning your site layout.

Water and Used water easement information		
Asset type	Pipe size (mm)	Total easement required (m)
Sewer mains	375	3.00 m either side of the centre line
Sewer mains	150	3.00 m either side of the centre line
Sewer mains	150	3.00 m either side of the centre line

If it is not possible to avoid our assets then these may need to be diverted in accordance with Section 185 of the Water Industry Act (1991). You will need to make a formal application if you would like a diversion to be considered.

Due to the private sewer transfer in October 2011 many newly adopted public used water assets and their history are not indicated on our records. You also need to be aware that your development site may contain private water mains, drains or other assets not shown on our records. These are private assets and not the responsibility of Anglian Water but that of the landowner.

Section 3: Water recycling services

In examining the used water system we assess the ability for your site to connect to the public sewerage network without causing a detriment to the operation of the system. We also assess the receiving water recycling centre and determine whether the water recycling centre can cope with the increased flow and influent quality arising from your development.

Water recycling centre

The foul drainage from the proposed development is in the catchment of Linton Water Recycling Centre, which currently has capacity to treat the flows from your development site. Anglian Water cannot reserve capacity and the available capacity at the water recycling centre can be reduced at any time due to growth, environmental and regulation driven changes.

Used water network

Our assessment has been based on development flows connecting to the nearest foul water sewer of the same size or greater pipe diameter to that required to drain the site. The infrastructure to convey foul water flows to the receiving sewerage network is assumed to be the responsibility of the developer. Conveyance to the connection point is considered as Onsite Work and includes all work carried out upstream from of the point of connection, including making the connection to our existing network. This connection point has been determined in reference to the calculated discharge flow and on this basis, a 150mm internal diameter pipe is required to drain the development site. The nearest practicable connection is to the 150mm diameter sewer at manhole 0501 at National Grid Reference NGR TL 56030 46562. The cover level is 39.28m and the invert level is 37.52m. Anglian water has assessed the impact of gravity flows from the planned development to the public foul sewerage network. We can confirm that this is acceptable as the foul sewerage system, at present, has available capacity for your site. A gravity connection from the development should be possible, however if site levels require a pumped discharge, we can confirm that connection can be made via a pumped regime with an assumed rising main size of 90mm. Please note that Anglian Water will request a suitably worded condition at planning application stage to ensure this strategy is implemented to mitigate the risk of flooding.

It is assumed that the developer will provide the necessary infrastructure to convey flows from the site to the network. Consequently, this report does not include any costs for the conveyance of flows.

Surface water disposal

Unfortunately, There are no public surface water sewers within the vicinity of the proposed development. Therefore Anglian Water will be unable to provide the site with a feasible solution of surface water disposal within the current assets. Alternative methods of surface water disposal will need to be investigated such as infiltration techniques or a discharge to a watercourse in accordance with the surface water management hierarchy as outlined in Building Regulations Part H. We suggest investigating the possibility of a surface water connection to the adjacent watercourse. The alternative is that a new surface water sewer is constructed which is used to convey your surface water to a watercourse or as part of a SuDs scheme, where appropriate. Subject to the sewer being designed in accordance with the current version of Sewers For Adoption, the sewer can be put forward for adoption by Anglian Water under Section 104 of the Water Industry Act 1991. If the outfall is to a watercourse, the applicant will be required to obtain consent to discharge via the appropriate body. If your site has no means of drainage due to third party land then you may be able to requisition Anglian Water, under Section 98, to provide a connection to the public sewer for domestic drainage purposes. As part of this option, you may wish to enter into a works agreement in accordance with Section 30 of the Anglian Water Authority Act 1977. This will allow you to design and construct the public sewer using Anglian Waters' statutory powers in accordance with Section 159/168 of the Water Industry Act 1991.

As you may be aware, Anglian Water will consider the adoption of SuDs provided that they meet the criteria outline in our SuDs adoption manual. This can be found on our website at <http://www.anglianwater.co.uk/developers/suds.aspx>. We will adopt features located in public open space that are designed and constructed, in conjunction with the Local Authority and Lead Local Flood Authority (LLFA), to the criteria within our SuDs adoption manual. Specifically, developers must be able to demonstrate:

1. Effective upstream source control,
2. Effective exceedance design, and
3. Effective maintenance schedule demonstrating that the assets can be maintained both now and in the future with adequate access.

If you wish to look at the adoption of any SuDs then an expression of interest form can be found on our website at: <http://www.anglianwater.co.uk/developers/suds.aspx>

The proposed method of surface water disposal is not relevant to Anglian Water; we suggest that you contact the relevant Local Authority, Lead Local Flood Authority, the Environment Agency or the Internal Drainage Board, as appropriate.

Trade Effluent

We note that you do not have any trade effluent requirements. Should this be required in the future you will need our written formal consent. This is in accordance with Section 118 of the Water Industry Act (1991).

Used Water Budget Costs

As a result of the recent charging rules published by Ofwat, our charging regime has changed. Your development site will be required to pay a Zonal charge for each new property connecting to the public sewer that benefits from Full planning permission.

Payment of the Zonal charge must be made before premises are connected to the public sewer. More information on the Zonal charge can be found at <http://www.anglianwater.co.uk/developers/charges>

The Zonal charge consists of two elements. The first is called the 'Fixed Element' which is the same in nature to the Infrastructure charge applied prior to April 2018. The second is called the 'Variable Element' which may vary each financial year.

The elements are combined together to create the 2018/19 Zonal charge for Sewerage:

Fixed Element	£ 370
Variable Element	£ 101

In most circumstances zonal charges are raised on a standard basis of one charge per new connection (one for water and one for sewerage). However, if the new connection is to non-household premises, the fixed element is calculated according to the number and type of water fittings in the premises. This is called the "relevant multiplier" method of calculating the charge. Details of the relevant multiplier for each fitting can be found at our web-page: <http://www.anglianwater.co.uk/developers/charges/>

The total Zonal charge payable for your site for Sewerage is:

Zona charge per new connection - Sewerage	No. Of Units	Tota amount payable
£ 471	85	£ 40,035.00

It has been assumed that the onsite used water network will be provided under a section 104 Water Industry Act application.

It is recommended that you also budget for connection costs. Please note that we offer alternative types of connections depending on your needs and these costs are available at our website.

Section 4: Map of Proposed Connection Points



Figure 1: Showing your used water point of connection

Section 5: Useful Information

Used water

Water Industry Act – Key Used Water Sections:

Section 98:

This provides you with the right to requisition a new public sewer. The new public sewer can be constructed by Anglian Water on your behalf. Alternatively, you can construct the sewer yourself under section 30 of the Anglian Water Authority Act 1977.

Section 102:

This provides you with the right to have an existing sewerage asset vested by us. It is your responsibility to bring the infrastructure to an adoptable condition ahead of the asset being vested.

Section 104:

This provides you with the right to have a design technically vetted and an agreement reached that will see us adopt your assets following their satisfactory construction and connection to the public sewer.

Section 106:

This provides you with the right to have your constructed sewer connected to the public sewer.

Section 185:

This provides you with the right to have a public sewerage asset diverted.

Details on how to make a formal application for a new sewer, new connection or diversion are available on our website at <http://www.anglianwater.co.uk/developers> or via our Development Services team on 03456 066087.

Sustainable drainage systems:

Many existing urban drainage systems can cause problems of flooding, pollution or damage to the environment and are not resilient to climate change in the long term. Therefore our preferred method of surface water disposal is through the use of Sustainable Drainage Systems (SuDS). SuDS are a range of techniques that aim to mimic the way surface water drains in natural systems within urban areas. For more information on SuDS, please visit our website at <http://www.anglianwater.co.uk/developers/suds.aspx>. We also recommend that you contact the Local Authority and Lead Local Flood Authority (LLFA) for the area to discuss your application.

Private sewer transfers:

Sewers and lateral drains connected to the public sewer on the 1 July 2011 transferred into Water Company ownership on the 1 October 2011. This follows the implementation of the Floods and Water Management Act (FWMA). This included sewers and lateral drains that were subject to an existing Section 104 Adoption Agreement and those that were not. There were exemptions and the main non-transferable assets were as follows:

- Surface water sewers and lateral drains that did not discharge to the public sewer, e.g. those that discharged to a watercourse.
- Foul sewers and lateral drains that discharged to a privately owned sewage treatment/collection facility.
- Pumping stations and rising mains will transfer between 1 October 2011 and 1 October 2016.

The implementation of Section 42 of the FWMA will ensure that future private sewers will not be created. It is anticipated that all new sewer applications will need to have an approved section 104 application ahead of a section 106 connection.

Encroachment:

Anglian Water operates a risk based approach to development encroaching close to our used water infrastructure. We assess the issue of encroachment if you are planning to build within 400 metres of a water recycling centre or, within 15 metres to 100 metres of a pumping station. We have more information available on our website at

<http://anglianwater.co.uk/developers/encroachment.aspx>

Locating our assets:

Maps detailing the location of our water and used water infrastructure including both underground assets and above ground assets such as pumping stations and recycling centres are available from . All requests from members of the public or non-statutory bodies for maps showing the location of our assets will be subject to an appropriate administrative charge. We have more information on our website at: <http://www.anglianwater.co.uk/developers/our-assets/>

Summary of charges:

A summary of this year's water and used water connection and infrastructure charges can be found at <http://www.anglianwater.co.uk/developers/charges>

Disclaimer:

The information provided in this report is based on data currently held by Anglian Water Services Limited ('Anglian Water') or provided by a third party. Accordingly, the information in this report is provided with no guarantee of accuracy, timeliness, completeness and is without indemnity or warranty of any kind (express or implied).

This report should not be considered in isolation and does not nullify the need for the enquirer to make additional appropriate searches, inspections and enquiries. Anglian Water supports the plan led approach to sustainable development that is set out in the National Planning Policy Framework ('NPPF') and any infrastructure needs identified in this report must be considered in the context of current, adopted and/or emerging local plans. Where local plans are absent, silent or have expired these needs should be considered against the definition of sustainability holistically as set out in the NPPF.

Whilst the information in this report is based on the presumption that proposed development obtains planning permission, nothing in this report confirms that planning permission will be granted or that Anglian Water will be bound to carry out the works/proposals contained within this report.

No liability whatsoever, including liability for negligence is accepted by Anglian Water, or its partners, employees or agents, for any error or omission, or for the results obtained from the use of this report and/or its content. Furthermore in no event will any of those parties be liable to the applicant or any third party for any decision made or action taken as a result of reliance on this report.

This report is valid for the date printed and the enquirer is advised to resubmit their request for an up to date report should there be a delay in submitting any subsequent application for water supply/sewer connection(s).