FLOOD RISK ASSESSMENT

Milton Park, Abingdon

Prepared for: Vale of White Horse District Council and MEPC
Issue 2: 27 September 2012
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Document History

Issue	Date	Description	Prepared By	Checked By
1	16 Aug. 12	1st Draft	Simon Hudson	John Birch
2	27 Sep. 12	Issue	Simon Hudson	John Birch

Glanville

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1.0 Introduction

1.1 Glanville Consultants has been instructed by MEPC Milton Park to undertake a Flood Risk Assessment for Milton Park, Oxford. The Milton Park Local Development Order (LDO) is a partnership between Vale of White Horse District Council as the local planning authority, and MEPC Milton Park as the landowner. Terence O'Rourke Ltd has been instructed by MEPC to help coordinate the LDO process.

1.2 The purpose of the Milton Park LDO is to enable a vibrant business area, promoting employment-generating uses at the business park, to maximise the success of the Science Vale UK Enterprise Zone and give greater confidence to business to invest in Milton Park. It is being prepared in accordance with the Town and Country Planning (Development Management Procedure) (England) Order 2010.

1.3 The Milton Park LDO will simplify planning control to give greater flexibility for businesses to develop new premises and facilities or adapt existing premises, whilst maintaining a successful and diverse mix of employment generating uses. Development will only be permitted where the local authority is satisfied that it is in accordance with the permitted uses and development parameters set out in the Order. Development proposals not in accordance with the provisions of the Order will be determined by a planning application.

1.4 The LDO has been designed to be effective for a period of 15 years to reflect the typical timescale of business leases and give greater certainty for potential investors.

1.5 Owned by MEPC, Milton Park is one of Europe's largest multi-use business parks, hosting more than 160 companies which employ around 6,500 people on its 100 hectare site. The business park currently provides around 2.7 million square feet (250,000 square metres) of employment and ancillary floor space, and provides a mix of offices, high-tech laboratories, industrial units and warehousing.

1.6 MEPC has secured planning permission for around 600,000 square feet (56,000 square metres) of additional floor space at Milton Park within Enterprise Zone sites, and has identified the potential for a similar quantum of further development.

1.7 The National Planning Policy Framework and Technical Guidance (NPPF) provides national guidance to planning authorities, developers, the public, and the Environment Agency, to ensure that decisions on plans and applications in areas of both existing and future development take full account of flood risk.

1.8 The Vale of White Horse (VoWHDC) Level 1 and Level 2 SFRA (June 2009) refines information on the probability of flooding, taking other sources of flooding and the impacts of climate change into account.

1.9 This report presents a review of the relevant national and local planning policy concerning flood risk in relation to the proposed LDO area, and assesses flood risk on the basis of publically available information.

1.10 This report also summarises the parameters for the management of surface water runoff within the development site.

2.0 Site Characteristics and Proposed LDO Areas

Site Location

2.1 Milton Park is located in Oxfordshire approximately 5 miles south of Abingdon and 3 miles west of Didcot. The Ordnance Survey grid reference relevant to the estate is SU 48932 191665. A plan showing the location of Milton Park is presented as Appendix A.

2.2 Originally an army ordnance depot, the site was decommissioned after the war and has developed since its purchase in 1973 into one of Europe's largest business parks.

Watercourses

2.3 Moor Ditch adjoins the northern boundary of the proposed LDO area. Moor Ditch originates in Milton and flows in an easterly direction through Milton Park and Didcot Power Station, before changing direction and flowing north through agricultural land to its confluence with the River Thames at Little Wittenham.

2.4 Moor Ditch is designated main river by the Environment Agency.

Drainage

2.5 Milton Park is served by a network of public / private surface water sewers and drains including a series of balancing ponds. Surface water runoff generated on the estate ultimately discharges to Moor Ditch.

2.6 The surface water drainage strategy for Milton Park was developed in the mid 1980's in conjunction with the VoWHDC District Council.

2.7 A plan showing the surface water drainage system is presented as Appendix B.

Ground Conditions

2.8 British Geological Survey mapping indicates that Milton Park is underlain by superficial deposits of Alluvium comprising Clay, Sand, Silt, and Gravels, overlaying bedrock of Mudstone formation.

Proposed LDO Areas

2.9 Parts of Milton Park have been included in the Science Vale UK Enterprise Zone (EZ). Nine separate sites have been included within the EZ labelled MP1 – MP9. The locations of the nine sites are shown on the Proposed LDO Area Plan prepared by Terence O'Rourke Ltd, a copy of which is included in Appendix C.

2.10 MEPC has identified that there is potential for around 600,000 square feet (56,000 square metres) of additional floor space at Milton Park, located within the EZ sites.

3.0 Planning Policy

National Planning Policy Framework (NPPF)

3.1 The NPPF requires that inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk, but where development is necessary, making it safe without increasing flood risk elsewhere.

3.2 The NPPF defines “areas at risk of flooding” as land within Flood Zones 2 and 3; or land within Flood Zone 1 which has critical drainage problems which have been notified to the local planning authority by the Environment Agency.

3.3 The NPPF requires site specific flood risk assessments (FRAs) to support applications for development on sites which are over one hectare in area located in Flood Zone 1, or for developments of any size located within Flood Zones 2 or 3.

3.4 Table 2 of the NPPF Technical Guidance classifies the flood risk vulnerability of different land uses for consideration in assessments. Table 2 classifies offices, general industry, storage and distribution, as being 'less vulnerable'. Table 2 classifies hotels as 'more vulnerable'.

Vale of White Horse District Council Strategic Flood Risk Assessment (SFRA)

3.5 The Vale of White Horse District Council (VoWHDC) Level 1 and Level 2 SFRA (June 2009) provides further assessment of flood risk information, taking other sources of flooding and the impacts of climate change into account.

3.6 The SFRA states that for developments on sites in Flood Zone 1 which have known drainage problems, or have experienced flooding from other sources, then a detailed FRA is required where:

i) The site useage will change, moving the site to a higher vulnerability class,

ii) For residential development, additional dwellings will be created by the proposed development.

3.7 The SFRA contains maps which indicate whether sites have been identified at risk of historic flooding, surface water flooding, or groundwater flooding.

VoWHDC Policy DC13 - Flood Risk and Water Run-off

3.8 Where a risk from flooding is identified, new development, including the intensification of existing development or proposals to raise the level of the land, will not be permitted unless:

i) An adequate assessment has been made of that risk including whether the proposed development would increase the risk of flooding elsewhere; and

ii) The flood risk to the development and its possible effects on flood risks elsewhere in terms of flood flows, flood storage capacity and run-off implications are acceptable; and

iii) Any mitigation measures proposed to deal with these effects and risks are adequate, effective and acceptable and, as appropriate, maintain or enhance the biodiversity value of any associated land.

Where development is permitted under this policy, the nature and timing of any associated mitigation measures must be agreed before planning permission is granted.

VoWHDC Policy DC14 - Flood Risk and Water Run-off

3.9 Development generating surface water run-off likely to result in adverse effects, such as an increased risk of flooding, changes in ground water levels, and river channel instability or damage to habitats, will not be permitted unless:

i) The development's surface water management system accords with sustainable drainage principles and has been designed as an integral part of the development layout; and

ii) The system will effectively control and adequately mitigate or attenuate any adverse effects from surface water run-off on people, habitats of acknowledged importance and property.

Where development is permitted under this policy, the associated appropriate attenuation measures must be in place before the development commences.

VoWHDC Policy E5 - Milton Park

3.10 Within Milton Park new business development and the redevelopment of land for business purposes will be permitted for B1, B2 and B8 uses.

VoWHDC Policy E10 - Key Business Sites

3.11 At strategic employment sites, proposals which would lead to the loss of existing business land and premises to other uses will not be permitted.

Other Policies

3.12 Development sites MP5 and MP9 are located outside the VoWHDC for sites for business development (Policies E5, E10). There are additional policies identified in the Local Plan which relate to these development areas as follows:

Area MP5 - TR10 - A34 Service Area
Area MP8 - NE11 - Area for Landscape Enhancement

4.0 Flood Risk Assessment

Fluvial Flooding

4.1 Flood Zones, as described in the NPPF, indicate areas that may be at risk of flooding and locations where FRA's are required to determine flood risk on a particular site.

4.2 Table 1 of the NPPF Technical Addendum defines Flood Zone 1 as comprising land assessed as having a less than 1 in 1000 annual probability of river or sea flooding (<0.1%).

4.3 Table 1 of the NPPF Technical Addendum confirms all types of development are appropriate in Flood Zone 1

4.4 All nine Enterprise Zone sites identified within the proposed LDO area are indicated as being located within Flood Zone 1: Low Risk.

4.5 The VoWHDC SFRA refines the Environment Agency Fluvial Flood Map to show to take account of climate change. The SFRA's Fluvial Flood Risk Map indicates the LDO boundary area as being located in Flood Zone 1. A copy of the Fluvial Flood Risk Map is presented as Appendix D.

4.6 South Oxfordshire District Council's (SODC) SFRA also contains mapping that covers Milton Park showing Fluvial Flood Zones which include an allowance for climate change. The Didcot SFRA indicates the LDO boundary area as being located within Flood Zone 1. A copy of the SODC SFRA Fluvial Flood Risk Map is presented as Appendix E.

4.7 All evidence from the Environment Agency and within the SFRA indicates that the LDO area is located within Flood Zone 1 and is suitable for all types of development in all flood risk vulnerability classes in accordance with National and Local Planning Policy.

Morphology of Moor Ditch

4.8 The Water Resources Act 1991 requires the prior written consent of the Environment Agency for any proposed works or structures in, under, over, or within nine metres of the top of the bank of any watercourse designated a 'main river'.

4.9 Moor Ditch that adjoins Milton Park's northern boundary is classified as a main river. Development areas MP1, MP2, and MP9, adjoin Moor Ditch and written consent would be required for any works proposed within 9m of the top of bank under the requirements of the Water Resources Act. It should be noted that this requirement is separate from planning legislation.

4.10 For this reason proposals within the LDO areas that adjoin Moor Ditch should not undertake any works that could affect the watercourse without prior written consent from the Environment Agency. Therefore, it is expected that the morphology of Moor Ditch would not be affected by development of any of the identified development areas.

Flooding From Other Sources

Pluvial / Overland Flooding

4.11 Flooding of land from surface water runoff can occur when intense rainfall exceeds the infiltration ability of underlying strata and / or the ability of the drainage system to remove runoff from the surface, resulting in ponding or flow of water across land. The effects of this form of flooding are often worse in lower lying areas underlain by impermeable strata and where drainage systems are unable to cope.

4.12 The VoWHDC SFRA provides maps showing surface water flood risk in key settlement areas identified using JFLOW modelling. The SFRA states that this mapping was produced to provide planners with a view of areas considered at greater risk of flash flooding, and urban drainage issues, as well as providing an indication of natural flow paths.

4.13 A copy of the VoWHDC SFRA Other Sources of Flood Risk Map showing the JFLOW pluvial outputs for the Milton Area is presented as Appendix F.

4.14 The SFRA states that the model outputs should be treated as indicative only and that historic records provided by the district provide a useful record of surface water flooding incidents.

4.15 The SFRA Other Sources of Flood Risk Map for Milton also shows historical flood locations including properties where 2007 Flood Grants were claimed. The SFRA mapping does not indicate any recorded incidents of historical flooding within the LDO area which support the outputs from the JFLOW modelling.

Groundwater Flooding

4.16 Groundwater flooding occurs when water levels in aquifers below ground rise above the surface. It is most likely to occur in low-lying areas underlain by permeable rocks. These may be extensive, regional aquifers, such as chalk or sandstone, or may be localised sands or river gravels in valley bottoms underlain by less permeable rocks.

4.17 British Geological Society mapping indicates that the site is underlain by impermeable strata and there is no evidence within the SFRA that the LDO area is at risk of flooding from groundwater sources.

Artificial Sources

4.18 Artificial sources of flooding can include reservoirs, canals and lakes where water is retained above natural ground level, operational and redundant industrial processes including mining, quarrying and sand and gravel extraction, as they may increase floodwater depths and velocities in adjacent areas.

4.19 Mapping on the Environment Agency's website indicates that the LDO area is not within an area considered at risk of flooding from reservoirs.

4.20 There is no evidence within the SFRA to suggest the LDO area is at risk of flooding from artificial sources.

Flooding from Sewers

4.21 Flooding from sewers can results when a sewer becomes blocked or is of inadequate capacity, and will continue until the water drains away.

4.22 The VoWHDC SFRA Sewer Flooding Map indicates two incidents of foul water sewer flooding in the wider OX14 4 post code area between the years of 1997 and 2007. It should be noted that the OX14 4 contains several villages as well as Milton Park. There is no more detailed information available on these incidents.

4.23 A copy of the VoWHDC SFRA Sewer Flood Risk Map is presented as Appendix G.

4.24 Applications will be made to Thames Water for any new indirect / direct connections to their network which should minimise the risk of exacerbating any minor flooding problems that may exist on the site or elsewhere.

Historical Flooding

4.25 The VoWHDC SFRA Other Sources Flood Risk Map for Milton (see Appendix F) does not indicate any records of historic flooding within the proposed LDO boundary. There is historic flooding indicated in Pembroke Lane and Milton High Street to the north of the LDO area.

Safe Access

4.26 The LDO area is indicated as being located in Flood Zone 1 and there are no historical incidents of flooding recorded within the SFRA. On this basis, safe access to development areas would appear to be provided.

Surface Water Runoff

4.27 VoWHDC Policy DC14 requires all new drainage systems within developments to accord with sustainable urban drainage (SuDS) principles and to effectively control and adequately mitigate or attenuate any adverse effects from surface water runoff elsewhere.

5.0 Surface Water Drainage

5.1 At the time of writing the Flood and Water Management Act (2010) is not yet fully implemented resulting in uncertainty over design standards and mechanisms for the adoption of SuDS.

5.2 MEPC is responsible for the maintenance of the existing SuDS on the estate and would be responsible for the maintenance of any new SuDS proposed to serve new development. Provision of suitable maintenance schedules will be provided as part of the surface water drainage strategies.

5.3 CIRIA document C697 'The SuDS Manual' (2007) provides guidance on the design and maintenance of SuDS systems which is often used in the absence of national design standards.

5.4 The SFRA states that surface water runoff should be discharged to infiltration systems where practical in accordance with Building Regulations. Where ground conditions prevent the use of infiltration then appropriate assessments should be undertaken for greenfield and brownfield developments.

5.5 BGS mapping indicates that Milton Park is underlain by clay and infiltration methods for the disposal of surface water drainage are unlikely to be feasible.

5.6 VoWHDC Policy DC14 requires development to accord with sustainable drainage principles and to effectively control and mitigate against any increase in flood risk elsewhere that might have otherwise occurred as a result of the proposed development.

5.7 It is anticipated that developments of the sites identified within the LDO boundary will require the submission of site-specific surface water drainage strategies to the local authority, detailing SUDS and existing / proposed discharge rates. The surface water drainage strategies would require approval by the local authority prior to commencement of development of that particular area.

Enterprise Zones located in Greenfield areas

5.8 The SFRA states that for developments on greenfield sites, rates of discharge of surface water runoff should be restricted to the greenfield runoff rate. In order to satisfy requirements of the SFRA any surface water drainage strategy will have to demonstrate that the development of the sites does not increase the risk of flooding elsewhere for rainfall events up to and including the 1 in 100 year rainfall event (including an allowance for climate change).

5.9 LDO sites MP5, MP8, and MP9, are currently undeveloped and are considered to be greenfield.

Enterprise Zones located in Brownfield areas

5.10 The SFRA states that the Environment Agency will expect, where practicable, the developer to design drainage of a brownfield site such that there is a reduction in flows from the previous usage.

5.11 This can mean restricting surface water runoff discharge to rates less than the calculated 1 year peak runoff rate applicable to the previous development on the site, or installation of complex hydraulic controls to restrict discharge rates to those calculated for the previous development for a range of rainfall events.

5.12 The surface water drainage strategy will have to demonstrate that redevelopment of the brownfield site does not increase the risk of flooding elsewhere for all rainfall events up to and including the 1 in 100 year (including an allowance for climate change).

5.13 LDO sites MP1 – MP4, and MP6 – MP7, are located on previously developed / brownfield sites.

6.0 Conclusions

6.1 The LDO area is indicated as being wholly located within Flood Zone 1, an area designated at the lowest possible risk of flooding from fluvial sources.

6.2 The NPPF states that all types of development are appropriate in Flood Zone 1.

6.3 There is no known evidence contained within the VoWHDC SFRA to suggest that the LDO area could be affected by flooding from other sources including groundwater, artificial sources and sewers.

6.4 Historical evidence of flooding contained within the VoWHDC SFRA does not support JFLOW mapping which indicates that some of Milton Park could be at risk of surface water ponding.

6.5 The SFRA does not indicate any historical evidence of flooding within the LDO area.

6.6 Surface water drainage strategies will be developed for the individual sites to ensure that surface water runoff is not increased as a result of proposed development.

6.7 The use of sustainable drainage techniques or SuDS will need to be incorporated in accordance with local policy requirements. All SuDS should be designed to accommodate runoff from all events up to and including the 1 in 100 year rainfall event, including an allowance for climate change.

6.8 Surface water drainage strategies will need to demonstrate that there is not an increase in runoff from development areas as a result of redevelopment. Discharge from previously undeveloped areas should be restricted to the natural undeveloped greenfield rate appropriate to that site.

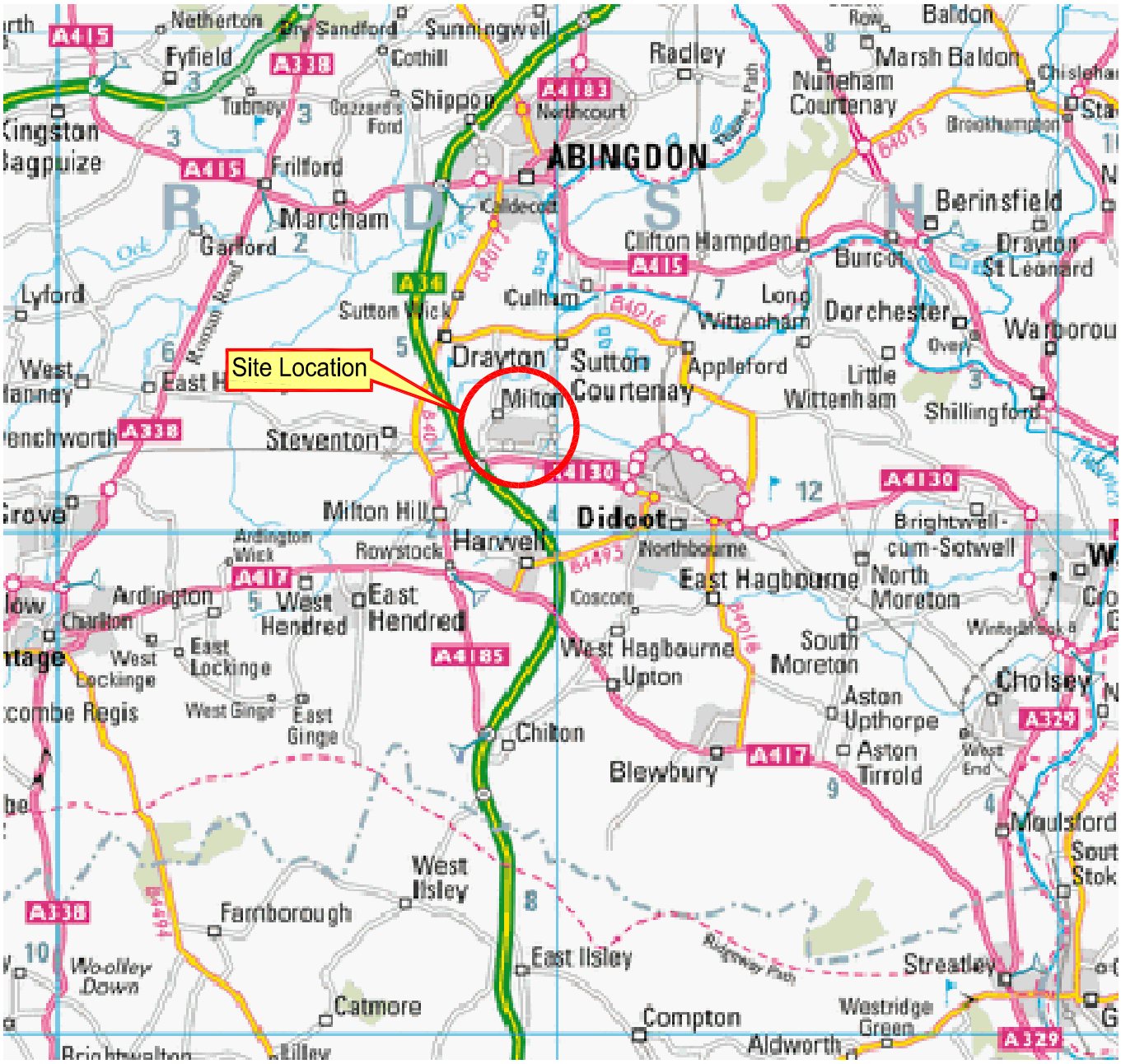
6.9 MEPC will be responsible for the future maintenance of all SuDS and the provision of suitable maintenance schedules will be provided as part of the surface water drainage strategies.

Appendices

Appendix A

Milton Park Location Plan

Milton Park



MILTON PARK

Appendix A – LOCATION PLAN

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Scale : As Shown **Date** : June 2012 **File** : Appendix A

Appendix B

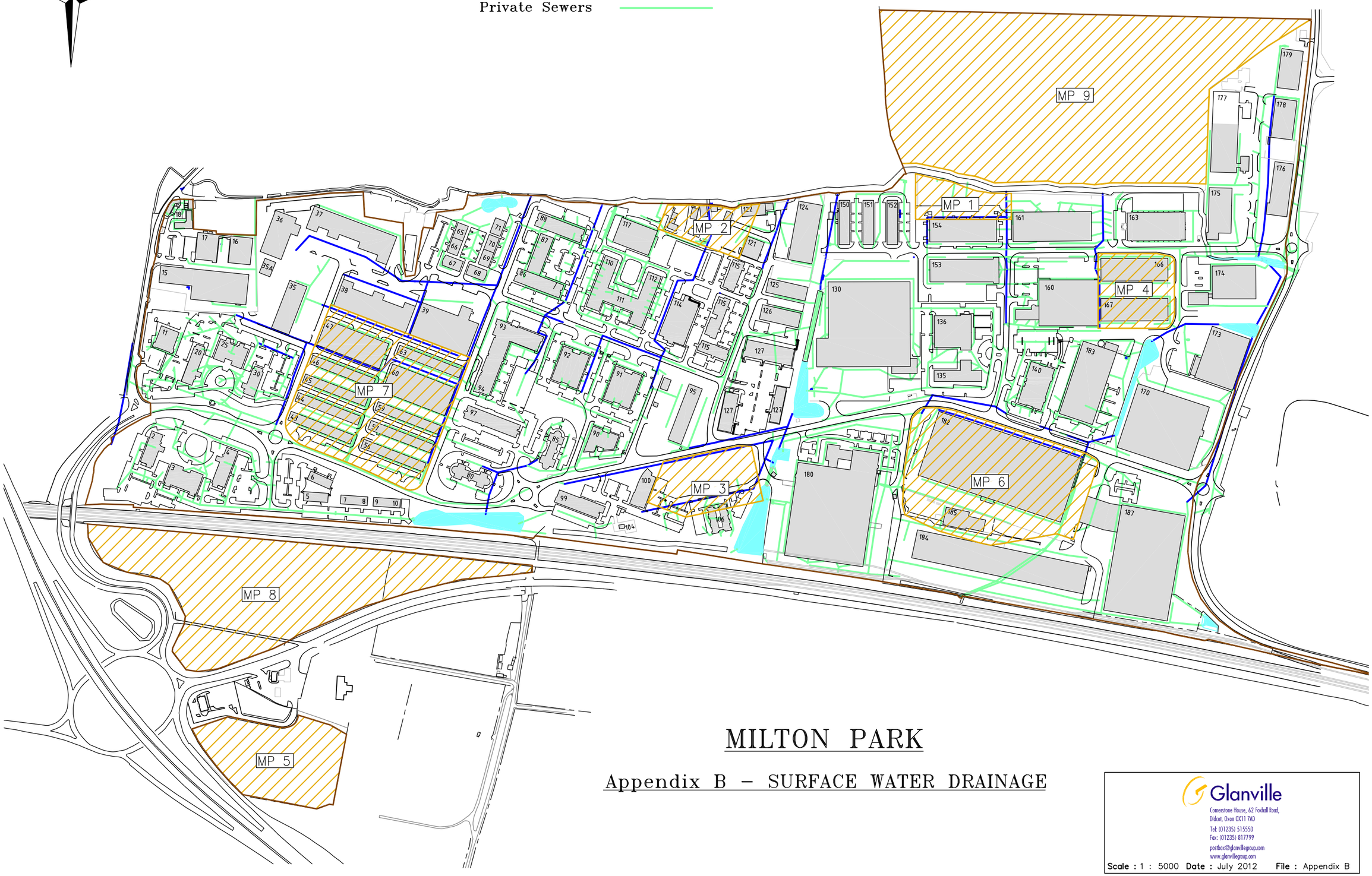
Milton Park Surface Water Drainage System

KEY :-

Adopted Sewers

Private Sewers

Milton Park



MILTON PARK

Appendix B – SURFACE WATER DRAINAGE

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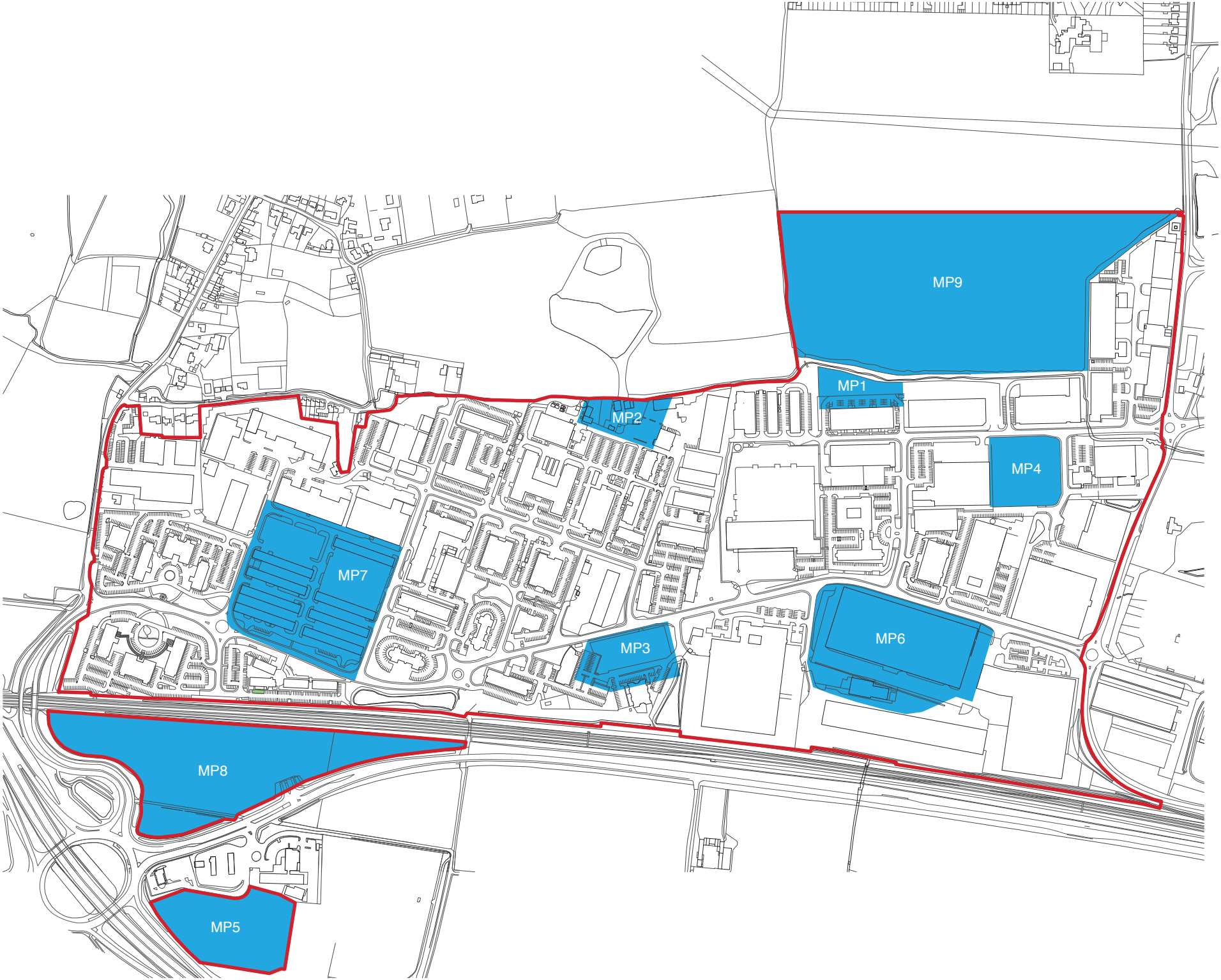
Scale : 1 : 5000 **Date :** July 2012 **File :** Appendix B

Appendix C

Proposed LDO Areas



Key

LDO boundary

LDO zone

MP1 0.447 Ha
MP2 0.481 Ha
MP3 0.898 Ha
MP4 0.915 Ha
MP5 1.882 Ha
MP6 3.356 Ha
MP7 3.834 Ha
MP8 5.813 Ha
MP9 10.261 Ha

Notes

MEPC

Milton Park LDO

Proposed LDO area

199302 PLDOA

Draft	drawn by SWD
Feb 2012	checked by JI
1:2500@A1	revision

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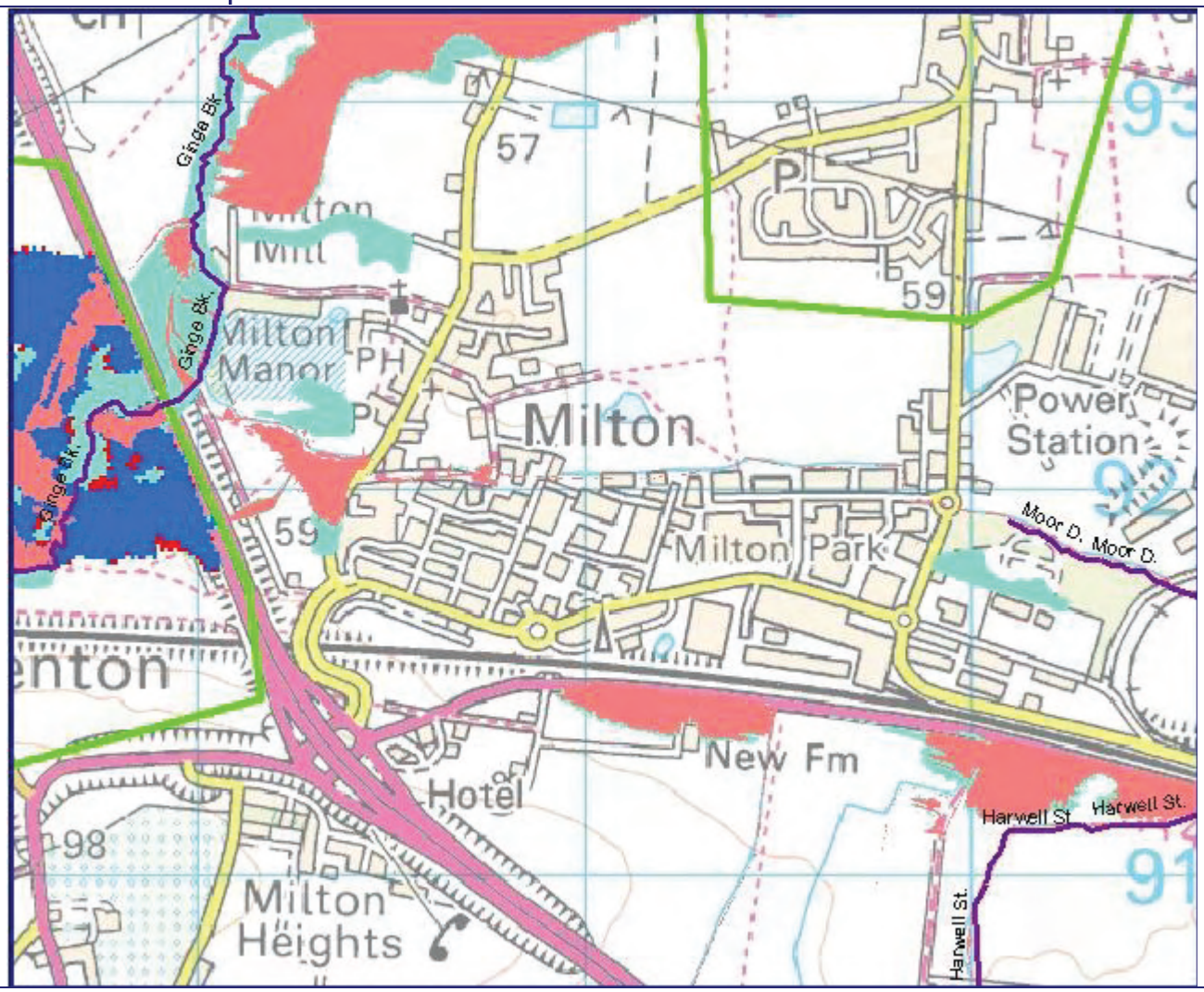
Appendix D

VoWHDC SFRA Fluvial Flood Risk Map

Fluvial Flood Risk Map

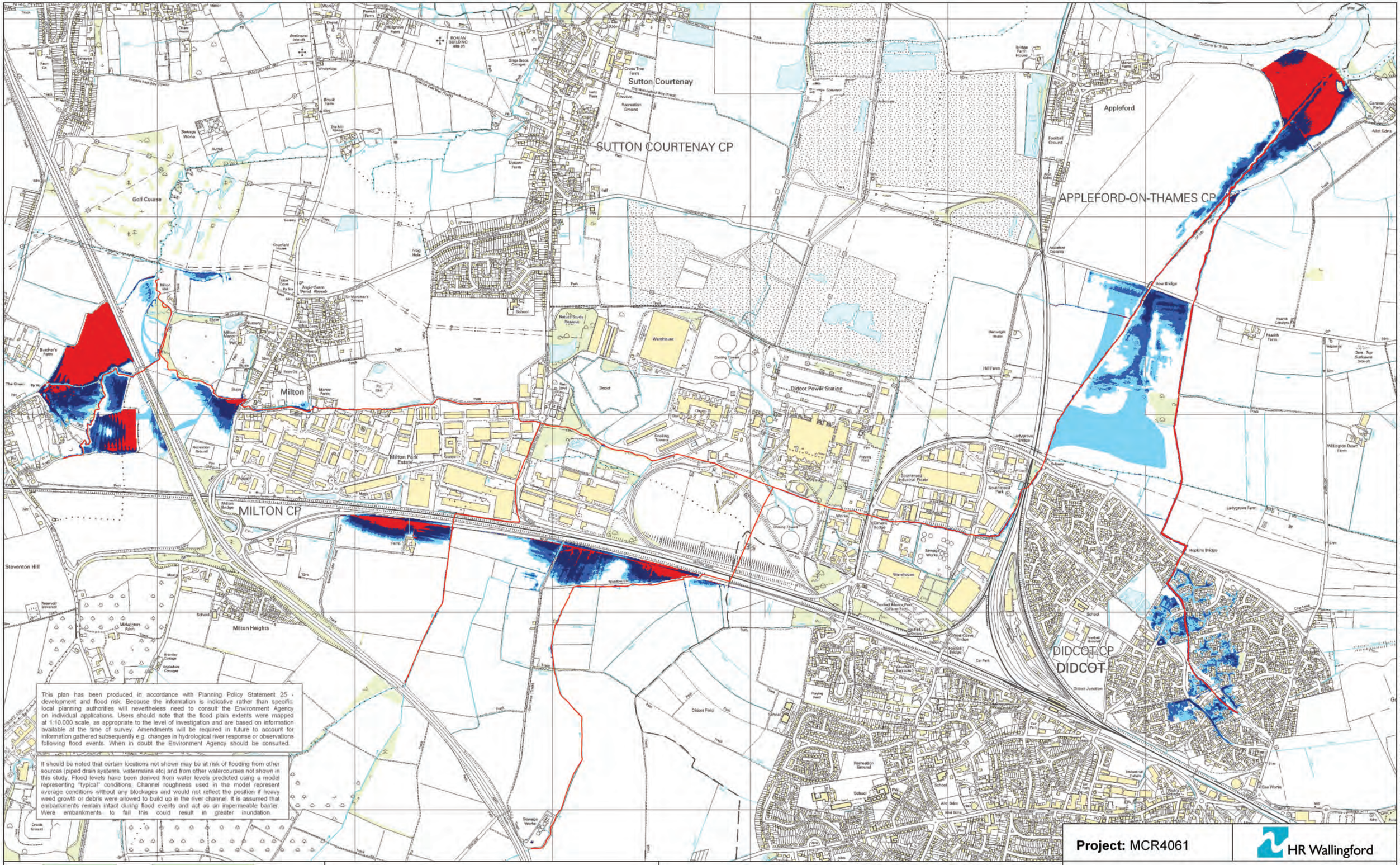


Key to Fluvial Flood Risk Maps

- Outlines from SFRA models and other detailed EA models
- Detailed model built for SFRA but outline unchanged due to DTM issues
- Functional floodplain (Flood Zone 3b). Within modelled area boundaries, 1 in 20. Outside of these areas, 1 in 20 outlines are not available so the 1 in 100 year outline is used as an initial, precautionary approach
- 1 in 100 year (Flood Zone 3a)
- 1 in 100 year + climate change
- 1 in 1000 year (Flood Zone 2)

Appendix E

SODC SFRA Fluvial Flood Risk Map



This plan has been produced in accordance with Planning Policy Statement 25 - development and flood risk. Because the information is indicative rather than specific, local planning authorities will nevertheless need to consult the Environment Agency on individual applications. Users should note that the flood plain extents were mapped at 1:10,000 scale, as appropriate to the level of investigation and are based on information available at the time of survey. Amendments will be required in future to account for information gathered subsequently e.g. changes in hydrological river response or observations following flood events. When in doubt the Environment Agency should be consulted.

It should be noted that certain locations not shown may be at risk of flooding from other sources (piped drain systems, watermains etc) and from other watercourses not shown in this study. Flood levels have been derived from water levels predicted using a model representing "typical" conditions. Channel roughness used in the model represent average conditions without any blockages and would not reflect the position if heavy weed growth or debris were allowed to build up in the river channel. It is assumed that embankments remain intact during flood events and act as an impermeable barrier. Were embankments to fail this could result in greater inundation.

0 0.125 0.25 0.5 0.75 1 Km

N

Notes

Client

Environment Agency

South Oxfordshire District Council

Legend

Flood depth (m)

- 0.00 - 0.10
- 0.10 - 0.30
- 0.30 - 0.60
- > 0.60
- Modelled watercourse

Project: MCR4061

HR Wallingford

Strategic Flood Risk Assessment for Didcot

Ginge Brook; Moor Ditch and Ladygrove Brook
Maximum flood depth, 1% annual probability with climate change

Revision Number: 02

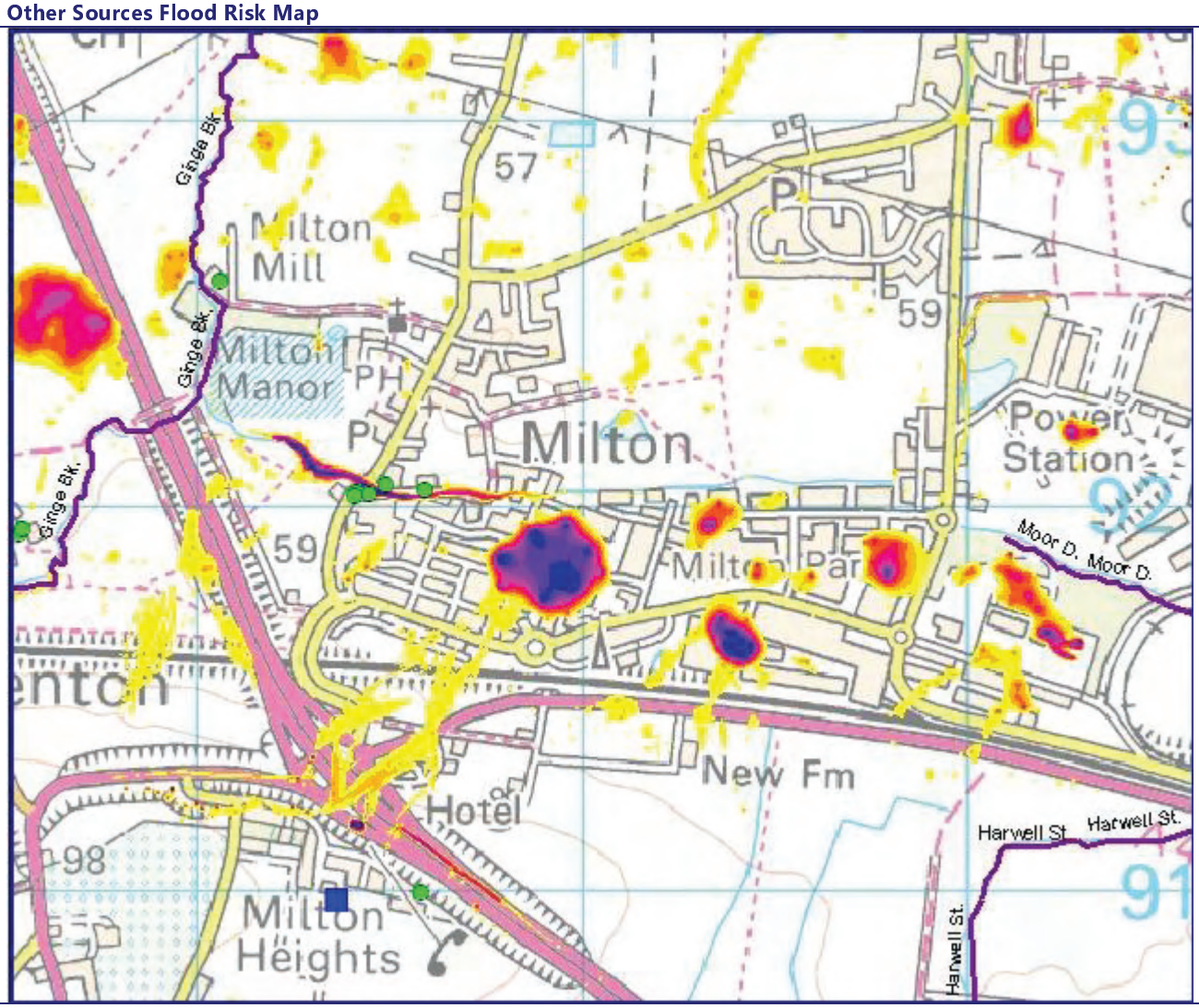
Date: January 2007

Map Number: 06

Appendix F

VoWHDC SFRA Other Sources Flood Risk Map

Other Sources Flood Risk Map



Key to Other Sources Flood Risk Maps

- 2007 Flood Grant Claimed from VoWHDC
- Reported Groundwater flooding
- Groundwater Flood locations 2001
- Historic Flooding - Other Sources

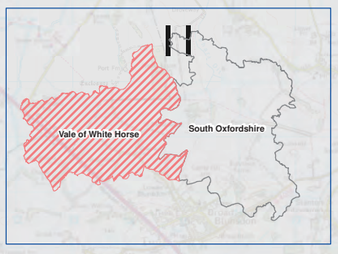
Surface Water Flooding 1 in 100 year
Max depth in metres

- 0.0
- 0.0 - 0.1
- 0.1 - 0.2
- 0.2 - 0.3
- 0.3 - 0.4
- 0.4 - 0.5
- 0.5 - 0.6
- 0.6 - 0.7
- 0.7 - 0.8
- 0.8 - 32.0

Appendix G

VoWHDC SFRA Sewer Flooding Map

North



OX2 8- SW: 0, FW: 0, CS 0
South Oxfordshire
OX2 7- SW: 0, FW: 0, CS 1
OX3 9- SW: 0, FW: 0, CS 0
OX2 8- SW: 0, FW: 0, CS 0
OX3 0- SW: 0, FW: 0, CS 1
OX294- SW: 0, FW: 0, CS 0
OX2 6- SW: 0, FW: 0, CS 1
OX1 1- SW: 0, FW: 0, CS 0
OX3 7- SW: 0, FW: 0, CS 0
OX2 0- SW: 4, FW: 5, CS 1
OX3 8- SW: 0, FW: 0, CS 0
OX1 1- SW: 0, FW: 0, CS 0
OX3 7- SW: 0, FW: 0, CS 0
OX2 9- SW: 0, FW: 0, CS 1
OX4 1- SW: 0, FW: 0, CS 0
OX4 1- SW: 0, FW: 0, CS 0
OX331- SW: 0, FW: 0, CS 0
OX1 1- SW: 1, FW: 1, CS 0
OX4 2- SW: 0, FW: 0, CS 0
OX295- SW: 0, FW: 0, CS 0
OX4 3- SW: 0, FW: 1, CS 0
OX4 3- SW: 0, FW: 1, CS 0
OX4 3- SW: 0, FW: 1, CS 0
OX4 6- SW: 0, FW: 1, CS 0
OX297- SW: 0, FW: 0, CS 0
OX1 5- SW: 9, FW: 0, CS 0
OX4 4- SW: 0, FW: 1, CS 0
OX4 7- SW: 0, FW: 1, CS 0
OX182- SW: 0, FW: 5, CS 1
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GL7 3- SW: 0, FW: 0, CS 0
OX142- SW: 0, FW: 0, CS 0
OX449- SW: 0, FW: 0, CS 0
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OX141- SW: 2, FW: 2, CS 0
SN7 8- SW: 0, FW: 0, CS 0
OX107- SW: 0, FW: 0, CS 0
OX143- SW: 0, FW: 0, CS 0
OX145- SW: 0, FW: 0, CS 0
OX136- SW: 0, FW: 0, CS 0
South Oxfordshire
SN6 7- SW: 1, FW: 8, CS 2
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Vale of White Horse
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OX110- SW: 0, FW: 0, CS 0
OX129- SW: 0, FW: 2, CS 0
OX128- SW: 0, FW: 0, CS 0
V: 0, CS 0
OX109- SW: 0, FW: 1, CS 0
RG17 8- SW: 0, FW: 0, CS 0
RG207- SW: 0, FW: 0, CS 0
RG177- SW: 0, FW: 0, CS 0
RG206- SW: 0, FW: 0, CS 0
RG8 9- SW: 0, FW: 0, CS 0
SN8 2- SW: 0, FW: 1, CS 0

Information regarding modelled and historical flood risk is constantly changing. Users should consult the Environment Agency for the latest flood risk information relating to specific planning applications.

LEGEND

- Rivers
- District Council Boundary
- South Oxfordshire
- Vale of White Horse
- Key Settlements

Thames Water Sewer Flooding by Postcode

Total Incidents 1997-2007. Labels indicate Surface Water (SW), Foul (FW) and Combined Sewers (CS).

- 0
- 1 - 3
- 4 - 6
- 7 - 9
- 10 - 11

Rev.	Modifications	Date	Drawn	Checked	Approved
A	Unnamed watercourses digitised.	08/07/2008	PE	LY	TG

SOUTH OXFORDSHIRE DISTRICT COUNCIL & VALE OF WHITE HORSE DISTRICT COUNCIL
STRATEGIC FLOOD RISK ASSESSMENT MAP 4.2: SEWER FLOODING (VOWH)

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Scale: 1:55,000
0 0.75 1.5 Km

Drawn:	Liu Yang	10/07/2008
Checked:	PE	10/07/2008
Approved:	TG	10/07/2008

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Original @ A1

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