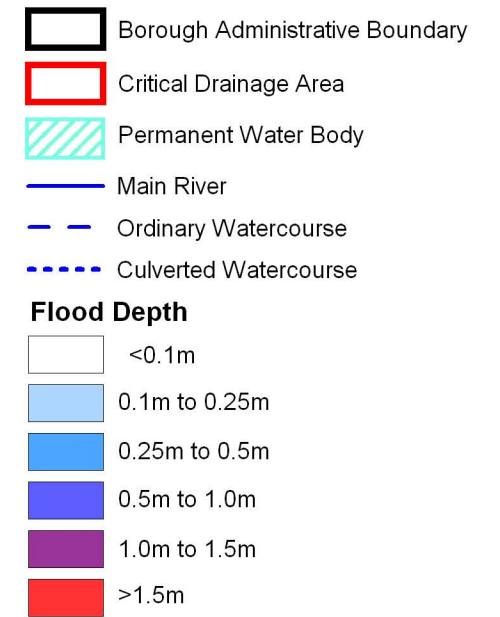
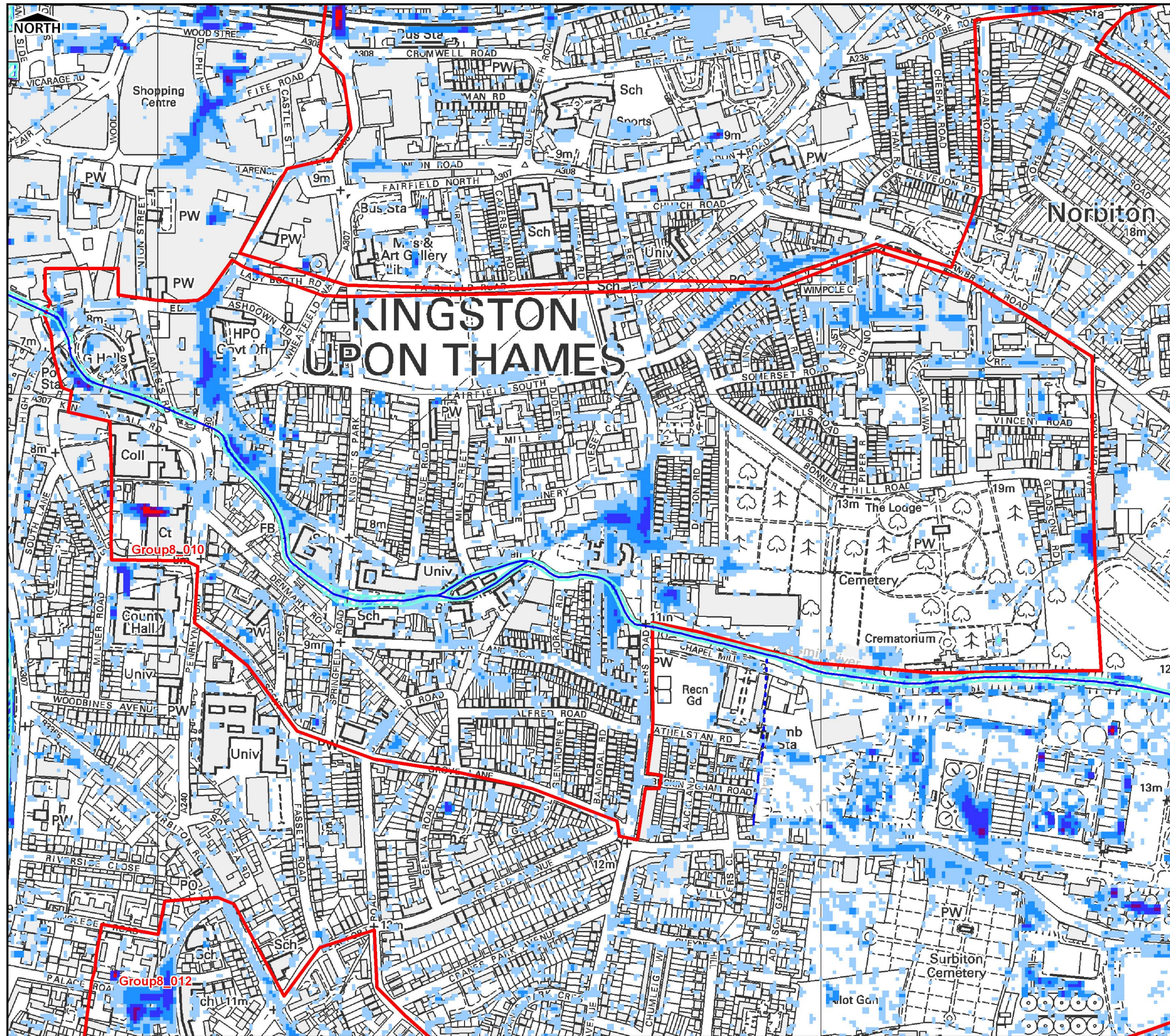


CDA 010 KINGSTON TOWN CENTRE

- 3.8.14 This CDA is located in the centre of Kingston Town where pluvial modelling has identified surface water flooding in the vicinity of Portland Road and Grange Road. The Council does not have any records of surface water flooding at this location. Thames Water DG5 records identify the area as having 1-5 records of sewer flooding in the past. It is not located in an area identified to be at increased potential of elevated groundwater.
- 3.8.15 Reference to Environment Agency Flood Maps identifies modelled areas of surface water flooding (identified by Drain London hydraulic modelling) as being located fully with Flood Zone 3 associated with the River Hogsmill. The primary source of flood risk within this CDA is therefore fluvial flooding and mitigation options should be further considered in collaboration with the Environment Agency as part of their main river flood defence schemes.

Summary Table – CDA 010 Kingston Town Centre	
LLFA	Royal Borough of Kingston upon Thames
Flood Risk Categorisation:	Fluvial Flooding – Flood Zone 3, surface water, sewer flooding
Property Count 1% AEP	<ul style="list-style-type: none"> • Approximately 816 non deprived households are identified to be at risk of flooding to a depth > 0.03m • Approximately 24 non deprived households with basements are identified to be at risk of flooding to a depth > 0.03m
	<ul style="list-style-type: none"> • 2 non deprived households are identified to be at risk of flooding to a depth > 0.5m. • 0 non deprived households with basements are identified to be at risk of flooding to a depth >0.5m
	Approximately 112 deprived households are identified to be at risk of flooding to a depth >0.03m . 0 deprived households are identified at being at risk of flooding to a depth >0.5m
Critical Infrastructure	2 pieces of essential infrastructure being electricity sub stations on Rowlls Road and within a LFRZ on the A307 within the centre of Kingston upon Thames.
Validation	The Council does not have any records of surface water flooding at this location.
Assumptions / Comments	This CDA is located within the Flood Zone 3 flood envelope associated with the River Hogsmill. In accordance with Drain London methodology the CDA area should be mitigated through fluvial measures by the Environment Agency rather than surface water.
Figures	Figure 3.8.3a – Surface Water Depth (1% AEP) Figure 3.8.3b – Surface Water Flood Hazard (1% AEP)



- Notes**
1. This map only shows the predicted likelihood of surface water flooding (this includes flooding from sewers, drains, small watercourses and ditches that occurs in heavy rainfall) for defined areas, and due to the coarse nature of the source data used, are not detailed enough to account for precise addresses.
 2. Users of this map should refer to section 3.2 of the Surface Water Management Plan for a complete description of limitations and accuracy of the flood/hazard extents shown.
 3. This map provides a strategic overview of surface water flood risk and may be subject to further analysis in the future.

Royal Borough of Kingston upon Thames



Surface Water Management Plan

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Group8_010 (Kingston Town Centre South)
Surface Water Depth (m)
1 in 100 Chance of rainfall event occurring in any given year (1% AEP)

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 London SW1P 1PL

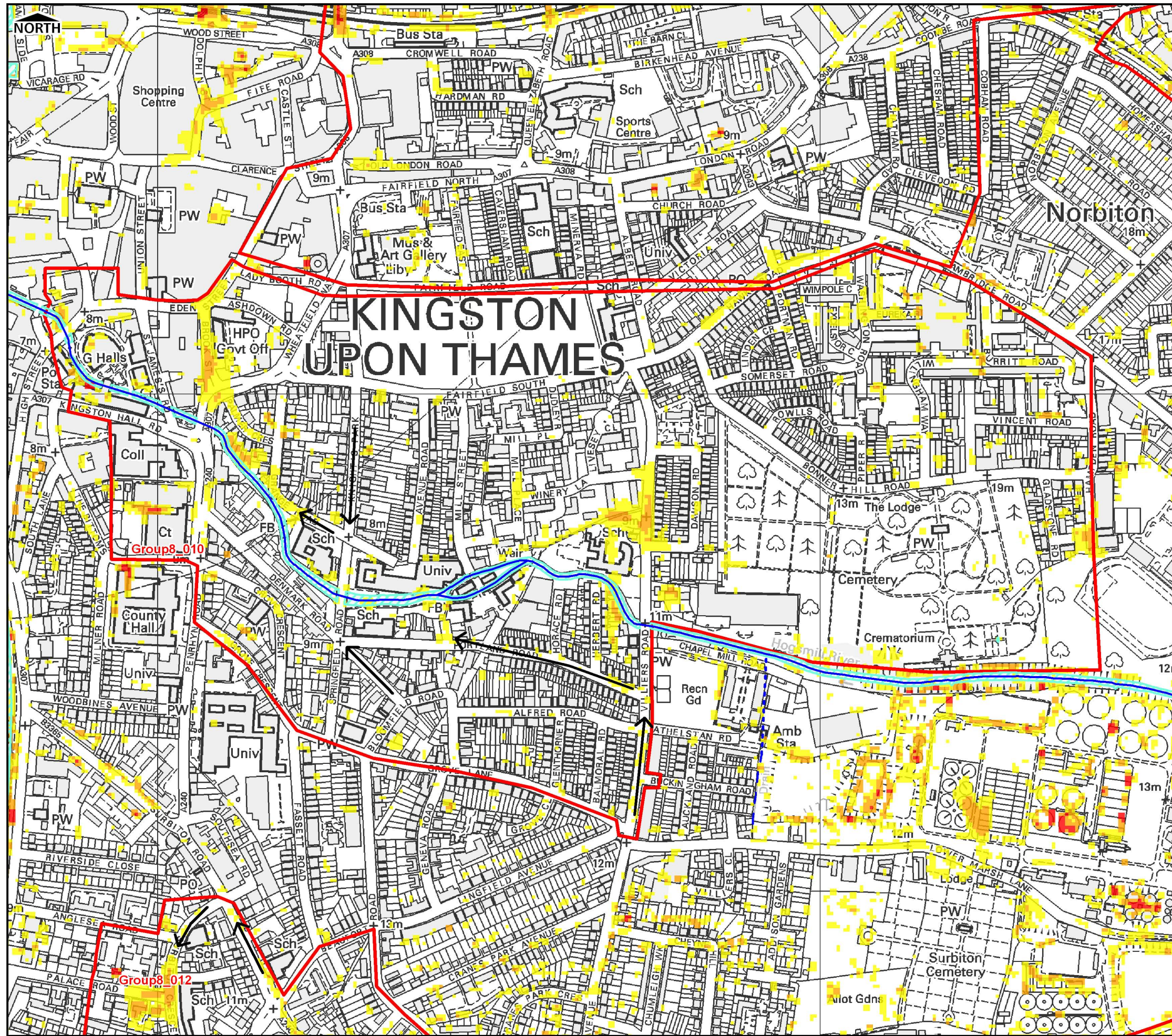
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FIGURE 3.8.3a

Filepath: N:\Current Projects\0134786 DRAIN LONDON Tier 202 Group 8 (D134786)\05 GIS



Legend

- Borough Administrative Boundary
- Critical Drainage Area
- Permanent Water Body
- Main River
- Ordinary Watercourse
- Culverted Watercourse

Flood Hazard

- <0.75 Caution (Very low hazard)
- 0.75 - 1.25 Moderate (Danger for some)
- 1.25 - 2.0 Significant (Danger for most)
- <2.0 Extreme (Danger for all)

Flow Direction Arrows

Notes

- Flood Hazard has been defined based upon the joint EA and Defra R&D Technical Report FD2320 (January 2006).
- Degree of flood hazard can be interpreted as follows:
 - Caution: Flood zone with shallow flowing water or deep standing water
 - Moderate: Flood zone with deep or fast flowing water. Dangerous for children, the elderly and the infirm
 - Significant: Flood zone with deep fast flowing water. Dangerous for most people.
 - Extreme: Flood zone with deep fast flowing water. Dangerous for all (including emergency services)
- This map provides a strategic overview of surface water flood risk and may be subject to further analysis in the future.

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Group8_010 (Kingston Town Centre South) Surface Water Flood Hazard Rating 1 in 100 Chance of rainfall event occurring in any given year (1% AEP)

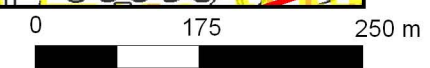
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CAPITA SYMONDS
 Flood Risk Management

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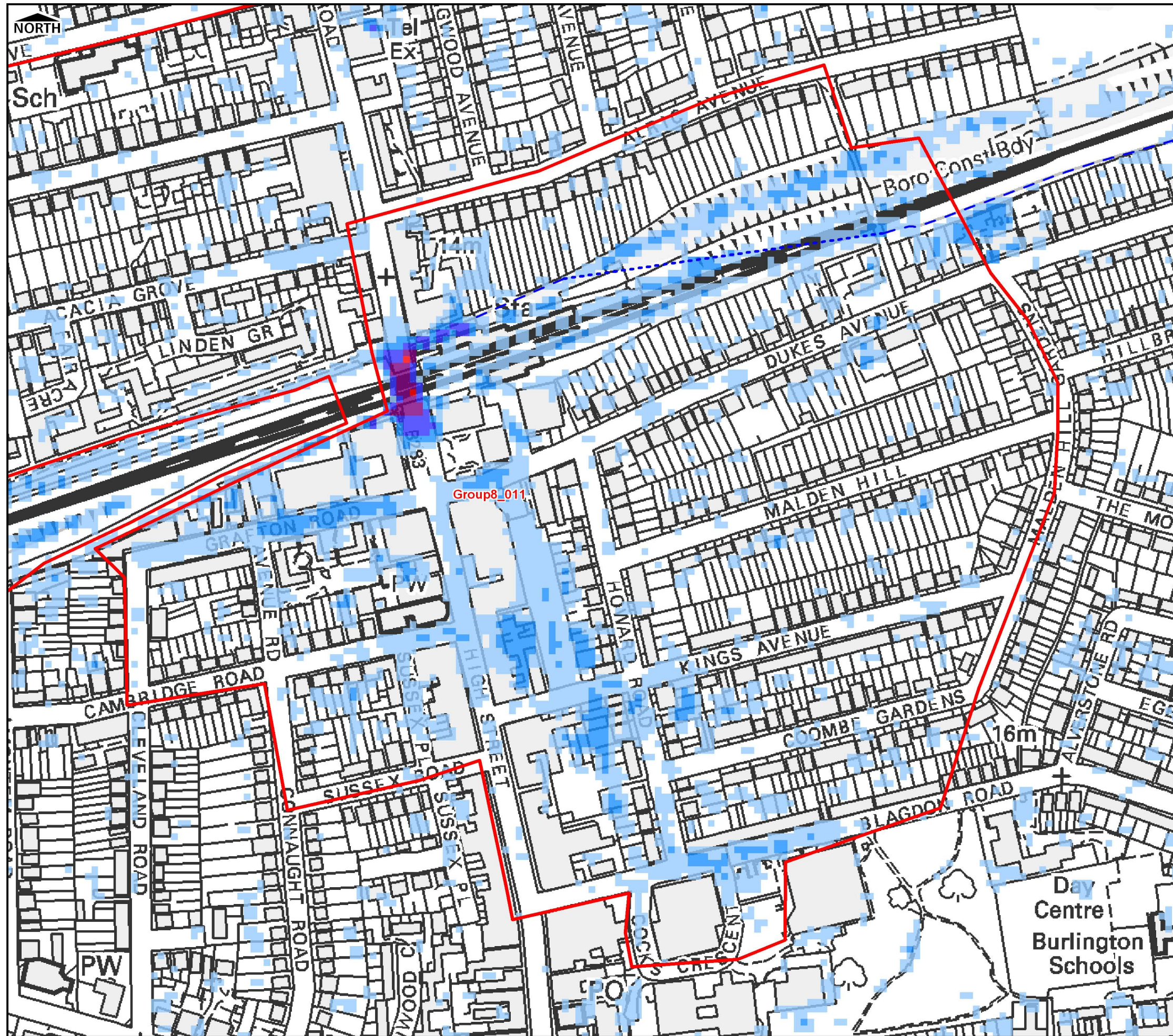
FIGURE 3.8.3b



CDA 011 NEW MALDEN HIGH STREET/COOMBE ROAD RAIL CROSSING

- 3.8.16 This CDA is located in the east of the Borough. Surface water within this CDA flows towards the Coombe Road rail crossing where pluvial modelling has identified a LFRZ. Flooding occurs where the road enters a dip which was created to allow high sided vehicles to pass. London Borough of Kingston upon Thames' flood records validate pluvial modelling at this location. Thames Water sewers also flow towards the High Street and under the same railway bridge. This increases the risk of surcharging which further compounds flooding issues at this location. Thames Water DG5 records identify 1-5 records of sewer flooding within this CDA in the past (Figure D-5).
- 3.8.17 The south and west of the CDA is identified as being located in an area with increased potential of groundwater flooding and the Environment Agency has two records of groundwater flooding within this CDA (see Figure 3).

Summary Table – CDA 011 New Malden High Street	
LLFA	Royal Borough of Kingston upon Thames
Flood Risk Categorisation:	Surface water, sewer flooding, groundwater flooding (2 records) in the south of the CDA
Property Count 1% AEP	<ul style="list-style-type: none"> • Approximately 278 non deprived households are identified to be at risk of flooding to a depth > 0.03m • Approximately 7 non deprived households with basements are identified to be at risk of flooding to a depth > 0.03m
	<ul style="list-style-type: none"> • 0 non deprived households are identified to be at risk of flooding to a depth > 0.5m. • 0 non deprived households with basements are identified to be at risk of flooding to a depth >0.5m
	There are no deprived households identified as being at risk within the CDA
Critical Infrastructure	The NRD dataset identifies an electricity substation at Grafton Road to the south of the rail embankment. This is identified as being in an area potentially at risk of surface water flooding. The London Waterloo rail link traverses this CDA.
Validation	Council flood records validate pluvial modelling at this location
Figures	Figure 3.8.4a – Surface Water Depth (1% AEP) Figure 3.8.4b – Surface Water Flood Hazard (1% AEP)



Legend

- Borough Administrative Boundary
- Critical Drainage Area
- Permanent Water Body
- Main River
- Ordinary Watercourse
- Culverted Watercourse

Flood Depth

- <0.1m
- 0.1m to 0.25m
- 0.25m to 0.5m
- 0.5m to 1.0m
- 1.0m to 1.5m
- >1.5m

- Notes**
1. This map only shows the predicted likelihood of surface water flooding (this includes flooding from sewers, drains, small watercourses and ditches that occurs in heavy rainfall) for defined areas, and due to the coarse nature of the source data used, are not detailed enough to account for precise addresses.
 2. Users of this map should refer to section 3.2 of the Surface Water Management Plan for a complete description of limitations and accuracy of the flood/hazard extents shown.
 3. This map provides a strategic overview of surface water flood risk and may be subject to further analysis in the future.

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Group8_011 (New Malden High Street)
Surface Water Flood Depth (m)
1 in 100 Chance of rainfall event occurring in any given year (1% AEP)

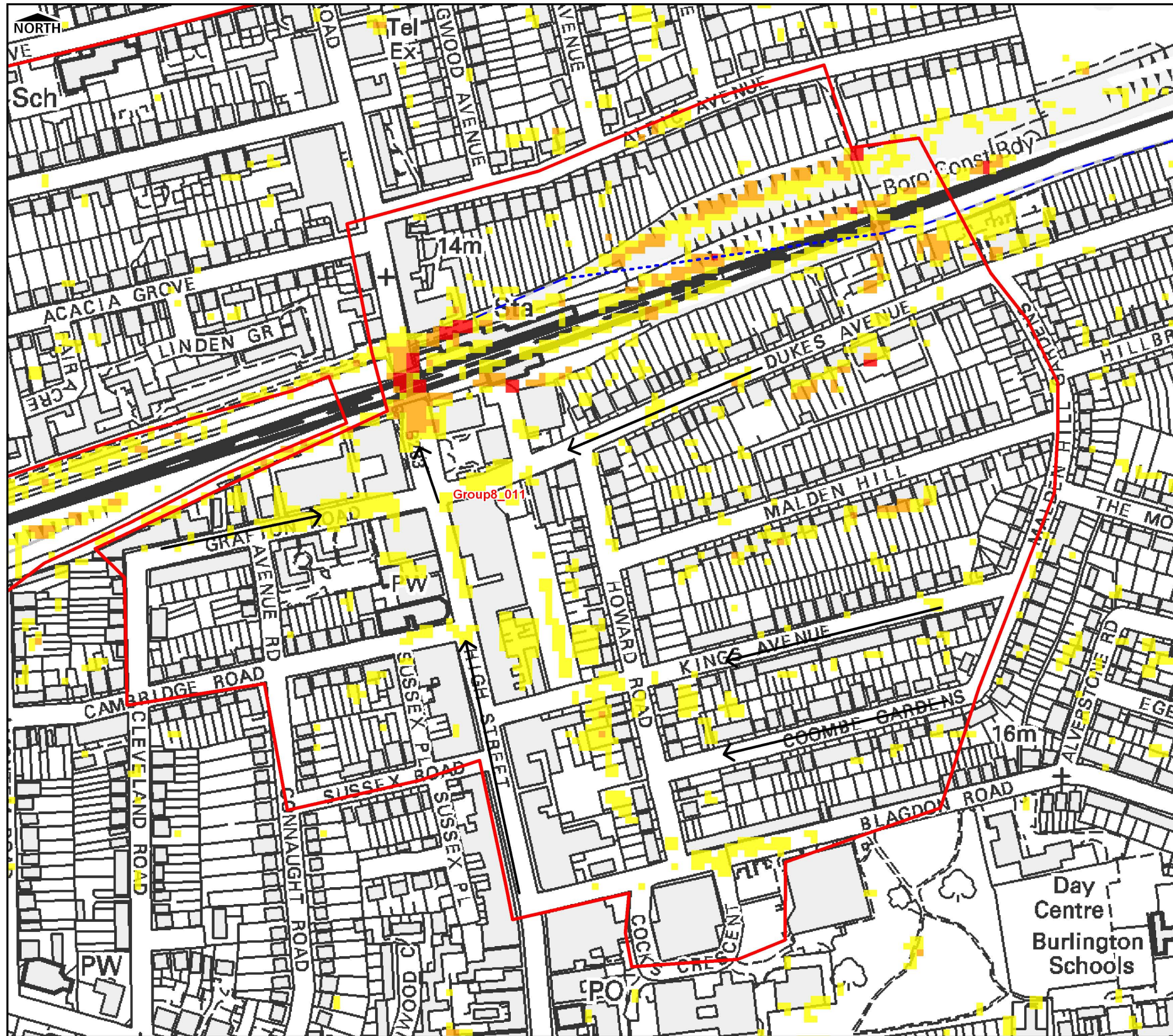
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FIGURE 3.8.4a



Legend

- Borough Administrative Boundary
- Critical Drainage Area
- Permanent Water Body
- Main River
- Ordinary Watercourse
- Culverted Watercourse

Flood Hazard

- <0.75 Caution (Very low hazard)
- 0.75 - 1.25 Moderate (Danger for some)
- 1.25 - 2.0 Significant (Danger for most)
- <2.0 Extreme (Danger for all)

→ Flow Direction Arrows

Notes

1. Flood Hazard has been defined based upon the joint EA and Defra R&D Technical Report FD2320 (January 2006).
2. Degree of flood hazard can be interpreted as follows:
 - Caution: Flood zone with shallow flowing water or deep standing water
 - Moderate: Flood zone with deep or fast flowing water. Dangerous for children, the elderly and the infirm
 - Significant: Flood zone with deep fast flowing water. Dangerous for most people.
 - Extreme: Flood zone with deep fast flowing water. Dangerous for all (including emergency services)
3. This map provides a strategic overview of surface water flood risk and may be subject to further analysis in the future.

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Group8_011 (New Malden High Street)
Surface Water Flood Depth (m)
1 in 100 Chance of rainfall event occurring in any given year (1% AEP)

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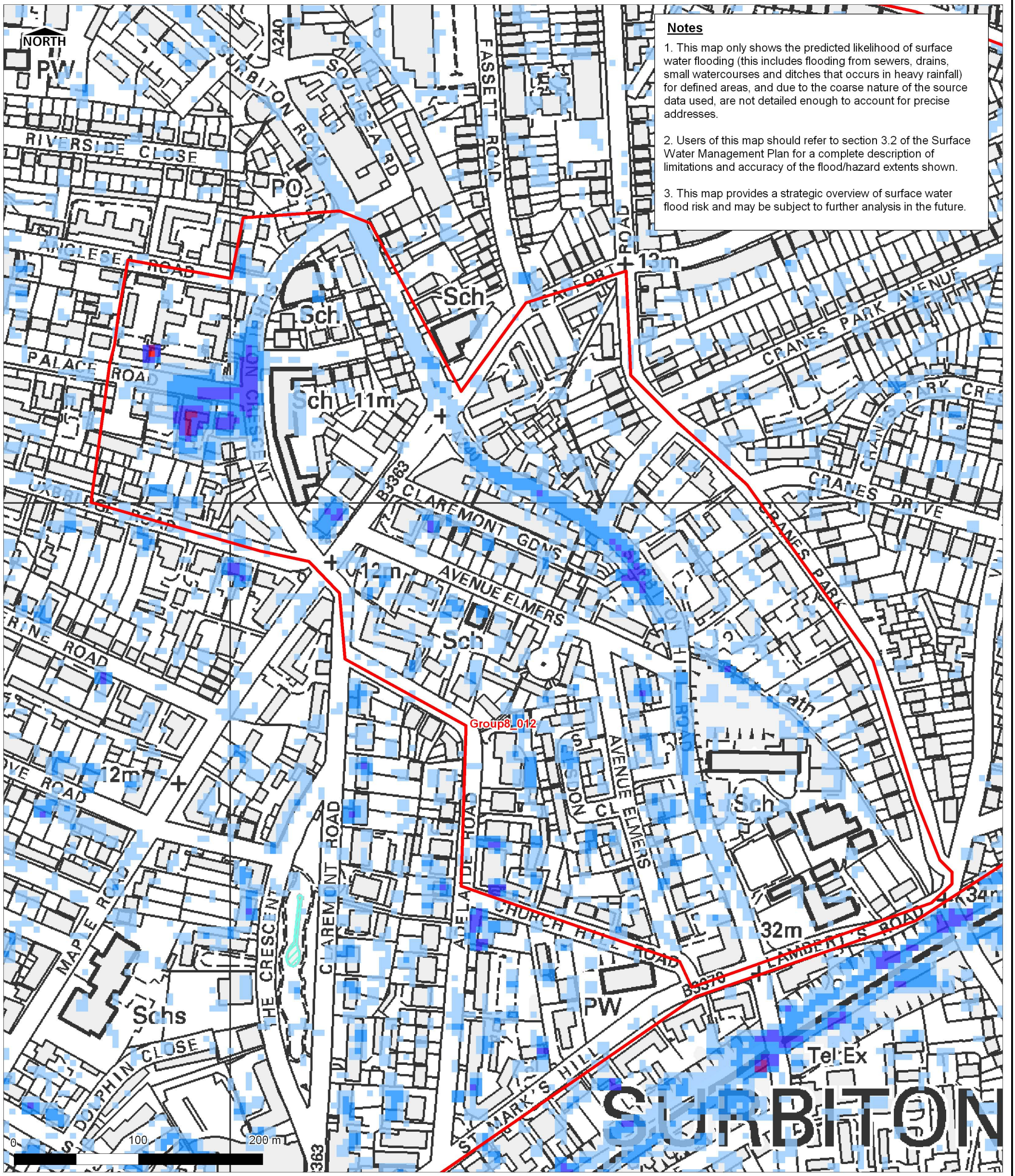
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FIGURE 3.8.4b

CDA 012 SURBITON HILL ROAD/SURBITON CRESCENT

- 3.8.18 CDA_012 is located on the western border of the CDA in close proximity to the River Thames. Surface water runoff from the south flows in a north westerly direction along Surbiton Hill Road to pool at a topographical low at Surbiton Crescent.
- 3.8.19 London Borough of Kingston upon Thames do not have any formal records of flooding at this location, however they are aware that there has been surface water flooding here in the past. Thames Water DG5 records identify 1-5 instances of sewer flooding in the past, and the eastern boundary of the CDA is an area where there are 21-50 records of sewer flooding in the past – the highest number in the Borough.
- 3.8.20 The CDA is not identified as being located within an area of increased potential for groundwater flooding; however, the Environment Agency has provided one record of groundwater flooding within this CDA (Figure 3).

Summary Table – CDA 012 Surbiton Crescent	
LLFA	Royal Borough of Kingston upon Thames
Flood Risk Categorisation:	Surface Water, Sewer Flooding, Groundwater Flooding (1 record)
Property Count 1% AEP	<ul style="list-style-type: none"> • Approximately 344 non deprived households are identified to be at risk of flooding to a depth > 0.03m • Approximately 11 non deprived households with basements are identified to be at risk of flooding to a depth > 0.03m
	<ul style="list-style-type: none"> • 7 non deprived households are identified to be at risk of flooding to a depth > 0.5m. • 0 non deprived households with basements are identified to be at risk of flooding to a depth > 0.5m
	There are no deprived households identified as being at risk within the CDA
Critical Infrastructure	There are no pieces of critical infrastructure located within this CDA
Validation	London Borough of Kingston upon Thames do not have any formal records of flooding at this location, however they are aware that there has been surface water flooding here in the past
Figures	Figure 3.8.5a – Surface Water Depth (1% AEP) Figure 3.8.5b – Surface Water Flood Hazard (1% AEP)



Notes

1. This map only shows the predicted likelihood of surface water flooding (this includes flooding from sewers, drains, small watercourses and ditches that occurs in heavy rainfall) for defined areas, and due to the coarse nature of the source data used, are not detailed enough to account for precise addresses.
2. Users of this map should refer to section 3.2 of the Surface Water Management Plan for a complete description of limitations and accuracy of the flood/hazard extents shown.
3. This map provides a strategic overview of surface water flood risk and may be subject to further analysis in the future.

Filepath: N:\Current Projects\134785 DRAIN LONDON Tier 2\02 Group 8 (D134786)\05 GIS

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Legend	
	Borough Administrative Boundary
	Critical Drainage Area
	Permanent Water Bodies
	Main River
	Ordinary Watercourse
	Culverted Watercourse
Flood Depth	
	<math><0.1\text{m}</math>
	0.1m to 0.25m
	0.25m to 0.5m
	0.5m to 1.0m
	1.0m to 1.5m
	>1.5m

Royal Borough of Kingston upon Thames

Surface Water Management Plan

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Group8_012 (Surbiton Crescent)
Surface Water Depth (m)
1 in 100 Chance of rainfall event occurring in any given year (1% AEP)

Consultants

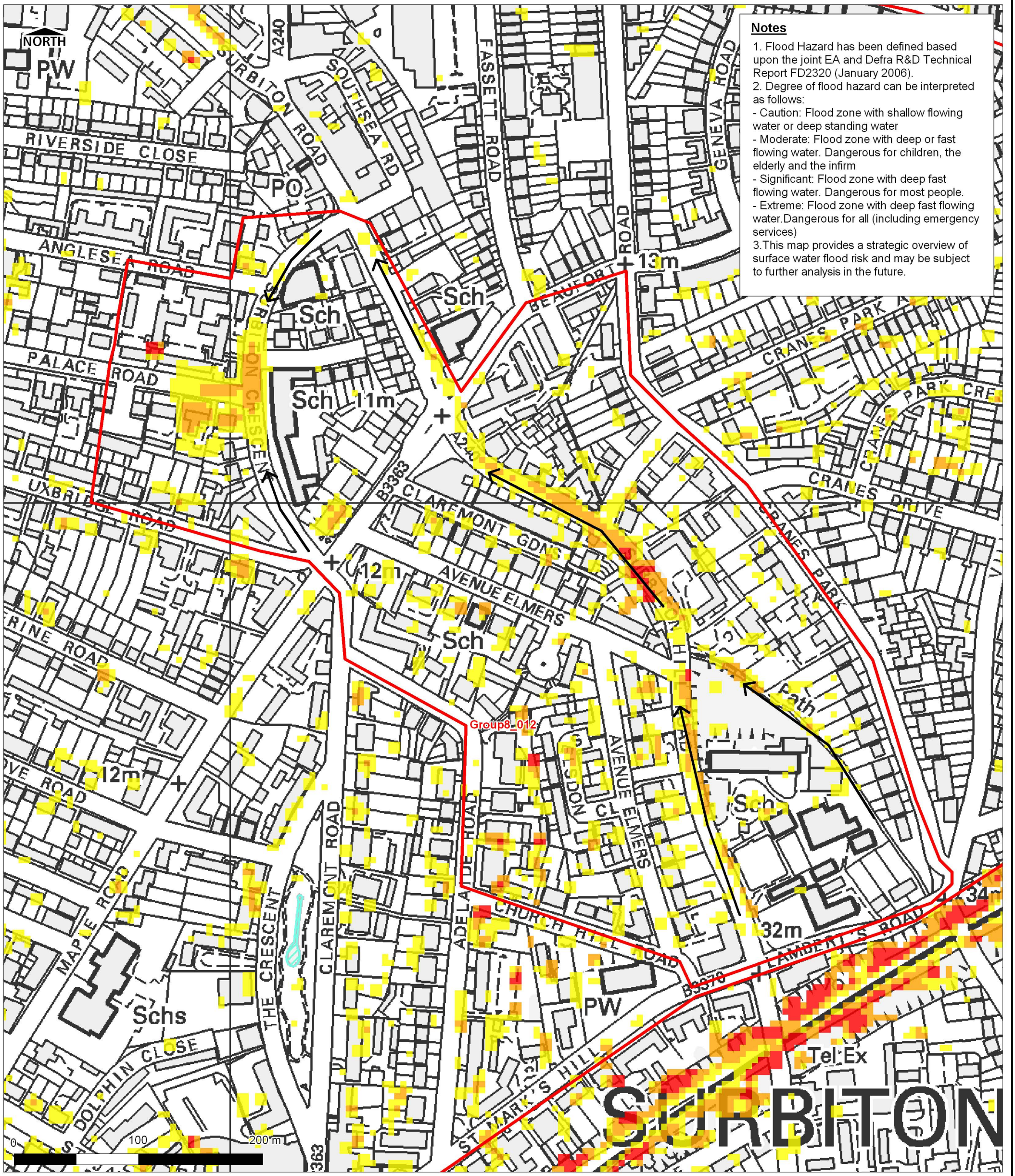
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FIGURE 3.8.5a



Notes

1. Flood Hazard has been defined based upon the joint EA and Defra R&D Technical Report FD2320 (January 2006).
2. Degree of flood hazard can be interpreted as follows:
 - Caution: Flood zone with shallow flowing water or deep standing water
 - Moderate: Flood zone with deep or fast flowing water. Dangerous for children, the elderly and the infirm
 - Significant: Flood zone with deep fast flowing water. Dangerous for most people.
 - Extreme: Flood zone with deep fast flowing water. Dangerous for all (including emergency services)
3. This map provides a strategic overview of surface water flood risk and may be subject to further analysis in the future.

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Legend	
	Borough Administrative Boundary
	Critical Drainage Area
	Permanent Water Bodies
	Main River
	Ordinary Watercourse
	Culverted Watercourse
	Flow Direction Arrows
Flood Hazard	
	<0.75 Caution (Very low hazard)
	0.75 - 1.25 Moderate (Danger for some)
	1.25 - 2.0 Significant (Danger for most)
	<2.0 Extreme (Danger for all)

Royal Borough of Kingston upon Thames

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Group8_012 (Surbiton Crescent)
Surface Water Flood Hazard Rating
1 in 100 Chance of rainfall event occurring in any given year (1% AEP)

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FIGURE 3.8.5b