

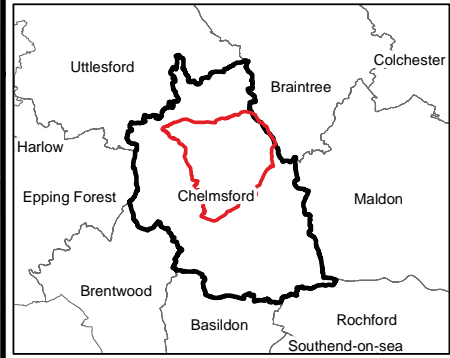
CC009-D (EB104D)

Chelmsford Surface Water Management Plan Appendix C

THIS DRAWING MAY BE USED ONLY FOR THE PURPOSE INTENDED

Legend

- Administrative Boundary
- Model Extent
- Main River
- Ordinary Watercourse
- Culverted Watercourse



Notes

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Chelmsford Location Plan

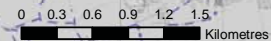
Consultant

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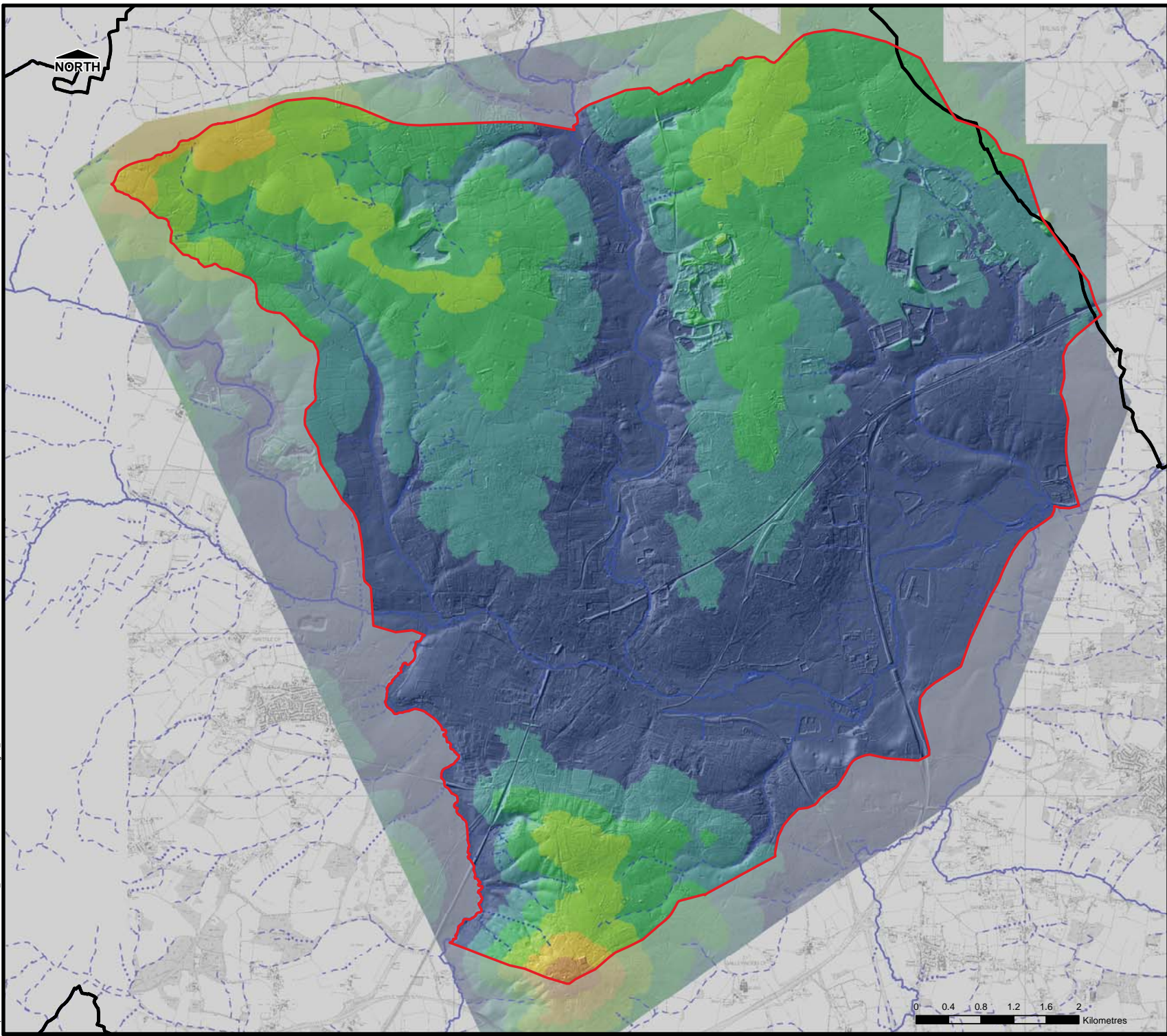
Capita Symonds
Level Seven,
52 Grosvenor Gardens,
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FIGURE 1

Filepath: G:\environment\2WE\TICS061237 - ChelmsfordSWMP\GIS\ArcMxds\Fig01_LocationPlan.mxd



Filepath: G:\environment\2WE\TICS061237 - ChelmsfordSWMP\GIS\ArcMads\Fig02_DTM.mxd



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Legend

- Administrative Boundary
 - Model Extent
 - Main River
 - Ordinary Watercourse
 - Culverted Watercourse
- Terrain Height (m)
- 0 - 40
 - 40 - 50
 - 50 - 60
 - 60 - 70
 - 70 - 80
 - 80 - 90
 - 90 - 100

Notes

1. Digital Terrain Model is based on unfiltered data and therefore includes buildings and vegetation.

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**Digital Terrain Model
Overview**

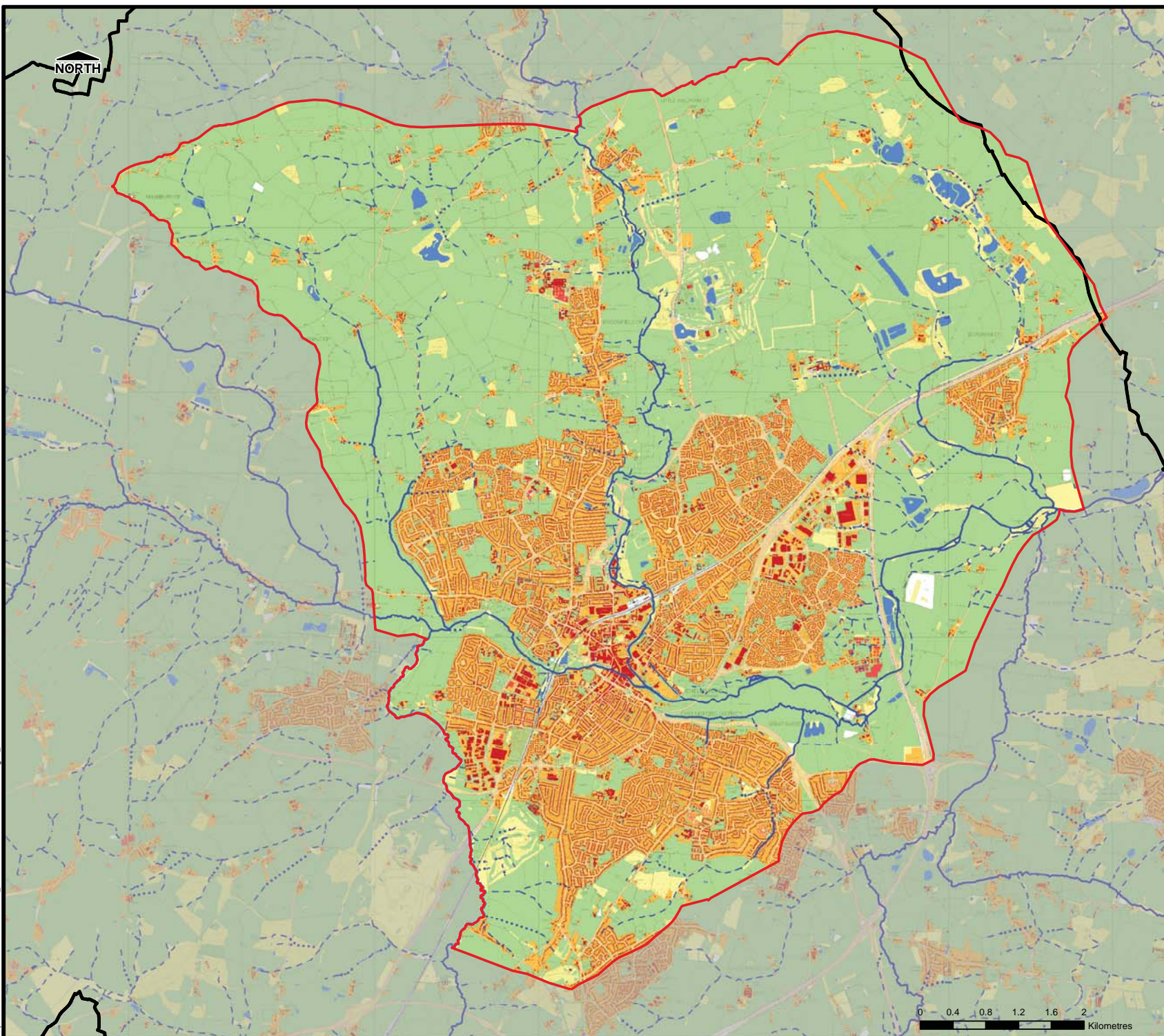
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FIGURE 2

Filepath: G:\environment\2WE\TICS061237_ChelmsfordSWMP\GIS\ArcMads\Fig03_Landuse.mxd



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Legend

- Administrative Boundary
- Model Extent
- Main River
- Ordinary Watercourse
- Culverted Watercourse
- Building/Structure
- General Surface (Manmade)
- General Surface (Natural)
- Inland Water
- Paths, Roads, Tracks or Rail
- Unclassified, Land

Notes

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**Land Use Areas
Overview**

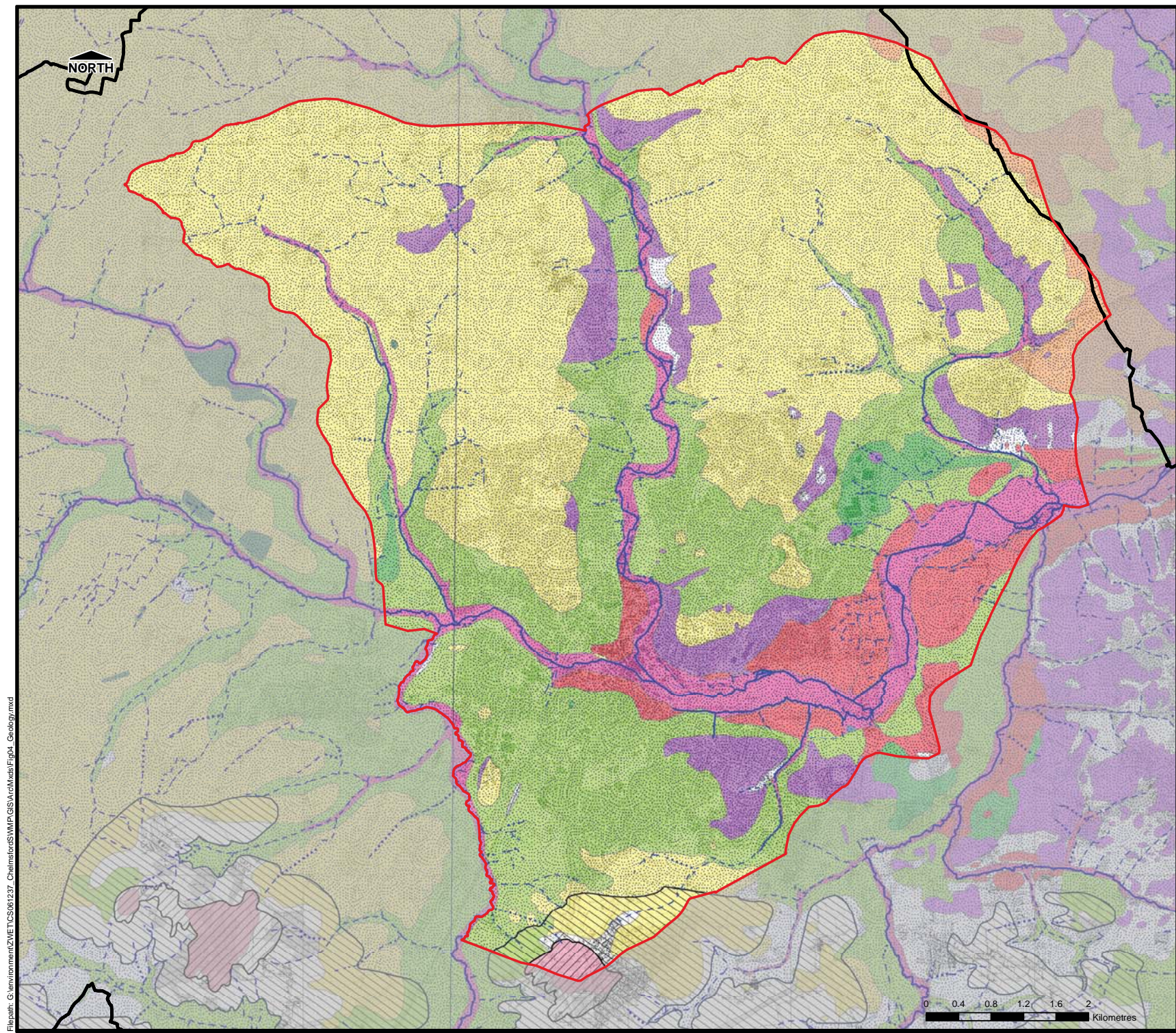
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FIGURE 3

Filepath: G:\environment\2WETICS061237 - ChelmsfordSWMP\GIS\ArcMxds\Fig04_Geology.mxd



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THE PURPOSE INTENDED

Legend

- Administrative Boundary
- Model Extent
- Main River
- Ordinary Watercourse
- Culverted Watercourse
- Bedrock**
 - Bagshot Formation (BGS-SAND)
 - Claygate Member (CLGB-CLSS)
 - London Clay Formation (LC-CLSS)
- Superficial Deposits**
 - Alluvium (ALV-CSSG)
 - Brickearth (BRK-CLSS)
 - Glaciofluvial Deposits (GFDMP-SAGR)
 - Glaciolacustrine Deposits (GLLMP-CLSS)
 - Head (HEAD)
 - Kesgrave Catchment Subgroup (KGCA-SAGR)
 - Lowestoft Formation (LOFT-DMTN)
 - Peat (PEAT-PEAT)
 - River Terrace Deposits (RTD)
 - Stanmore Gravel Formation (STGR-SAGR)
 - Tufa (TUFA-CATU)

Notes

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**Geological Map
Overview**

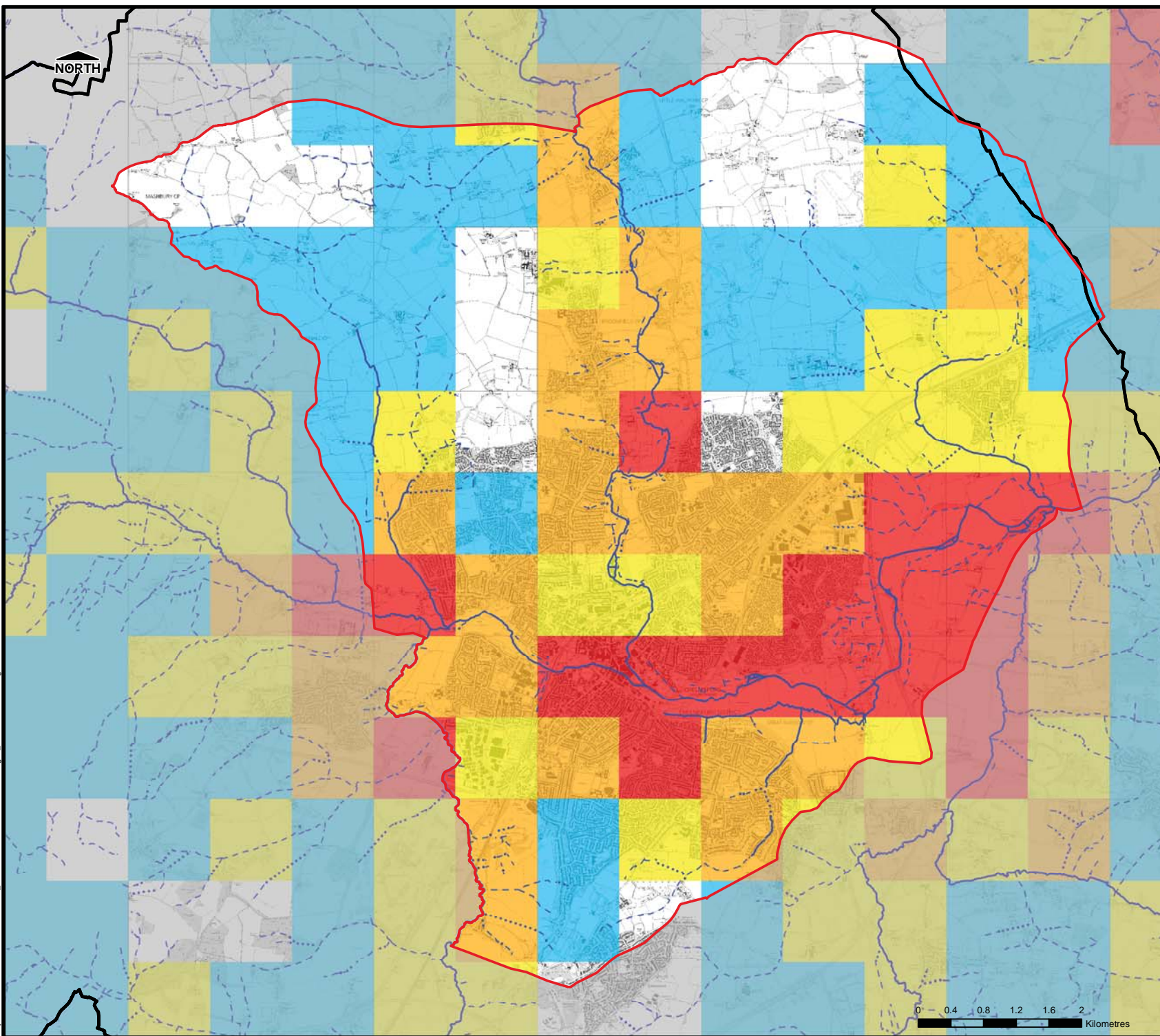
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FIGURE 4

Filepath: G:\environment\2WE\TICS061237_ChelmsfordSWMP\GIS\ArcMads\Fig05_GroundwaterFlooding.mxd



THIS DRAWING MAY BE USED ONLY FOR
THE PURPOSE INTENDED

Legend

- Administrative Boundary
- Model Extent
- Main River
- Ordinary Watercourse
- Culverted Watercourse

Susceptibility to Groundwater Flooding

- Very High; $\geq 75\%$
- High; $\geq 50\% < 75\%$
- Moderate; $\geq 25\% < 50\%$
- Low; $< 25\%$

Notes

This susceptibility data is suitable for use for regional or national planning purposes where the groundwater flooding information will be used along with a range of other relevant information to inform land-use planning decisions. The susceptibility data should not be used on its own to make planning decisions at any scale, and, in particular, should not be used to inform planning decisions at the site scale. The susceptibility data cannot be used on its own to indicate risk of groundwater flooding.

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Susceptibility to Groundwater Flooding Map with Reported Historic Incidents

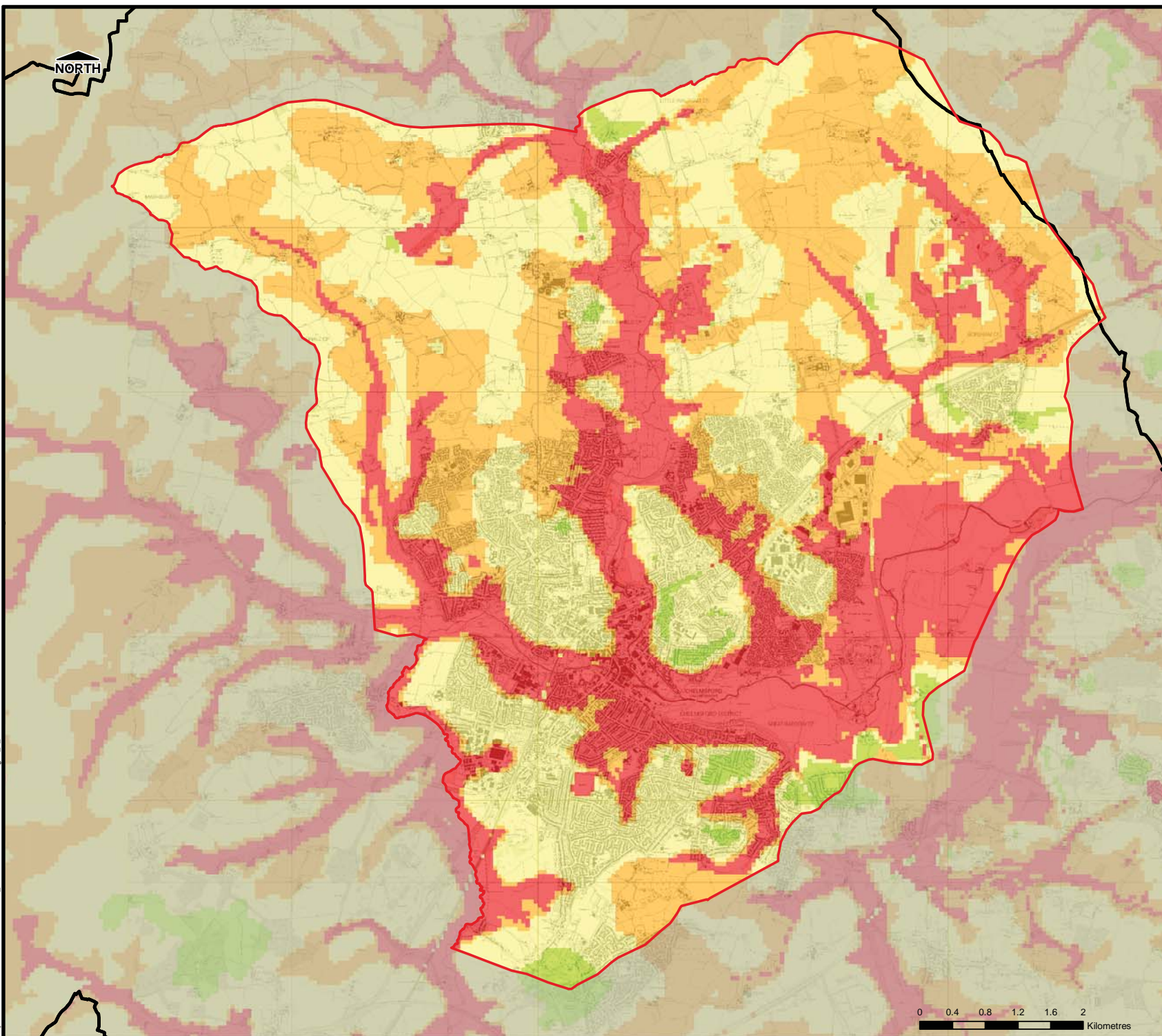
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FIGURE 5

Filepath: G:\environment\2WET\CS061237_ChelmsfordSWMP\GIS\ArcMxds\Fig06_1_SUDs.mxd



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Legend



- Administrative Boundary
- Model Extent

Drainage Summary

- Highly Compatible
- Opportunities For Bespoke Infiltration SUDS
- Probably Compatible
- Very Significant Constraints

Notes

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Infiltration SuDS Suitability Map

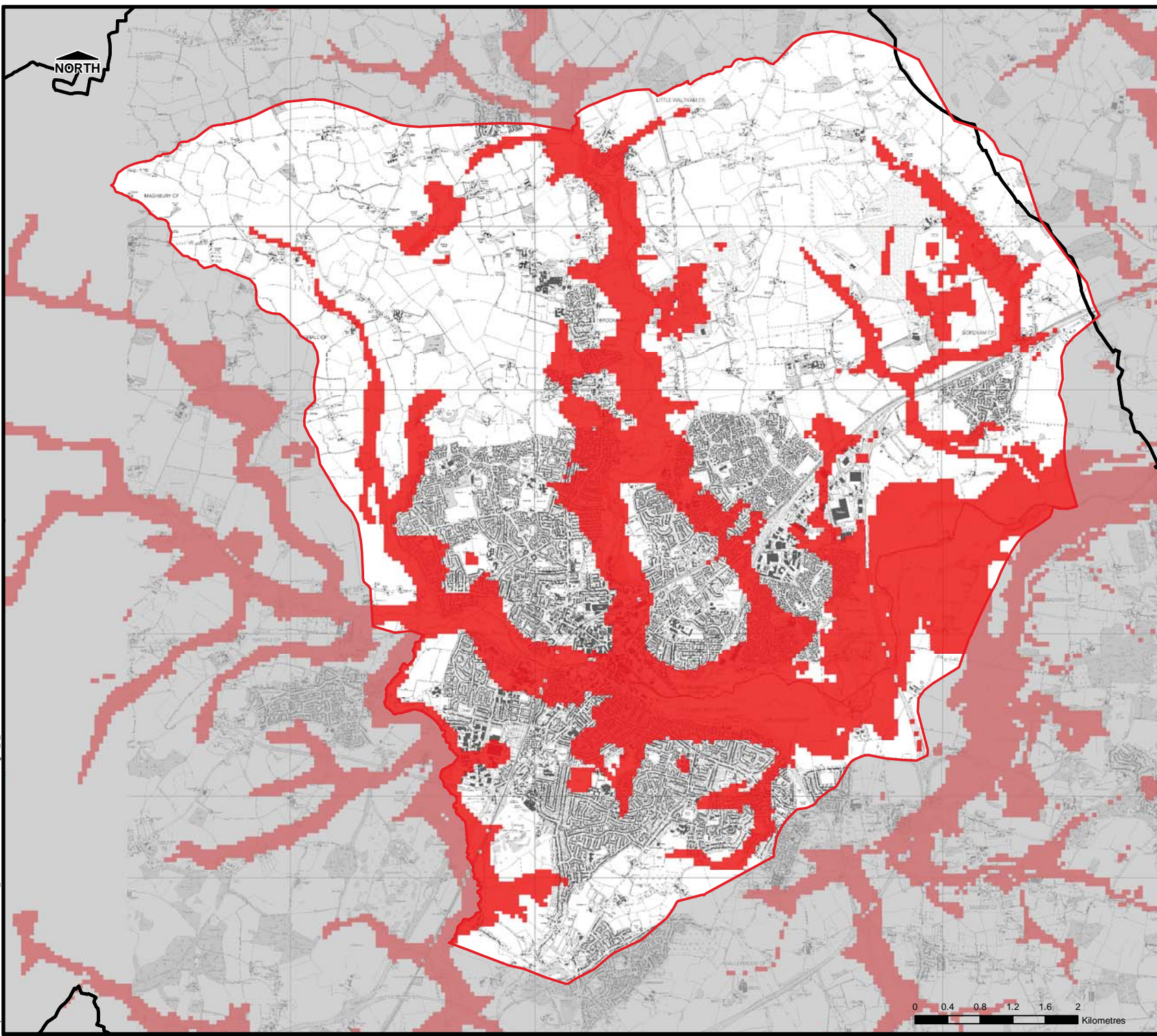
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FIGURE 6.1

Filepath: G:\environment\2WETICS061237 - ChelmsfordSWMP\GIS\ArcMxds\Fig06_2_SUDs.mxd



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Legend

- Administrative Boundary
- Model Extent
- Infiltration Constraints Summary**
- Very Significant Constraints

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**Infiltration SUDS
Infiltration Constraints Summary**

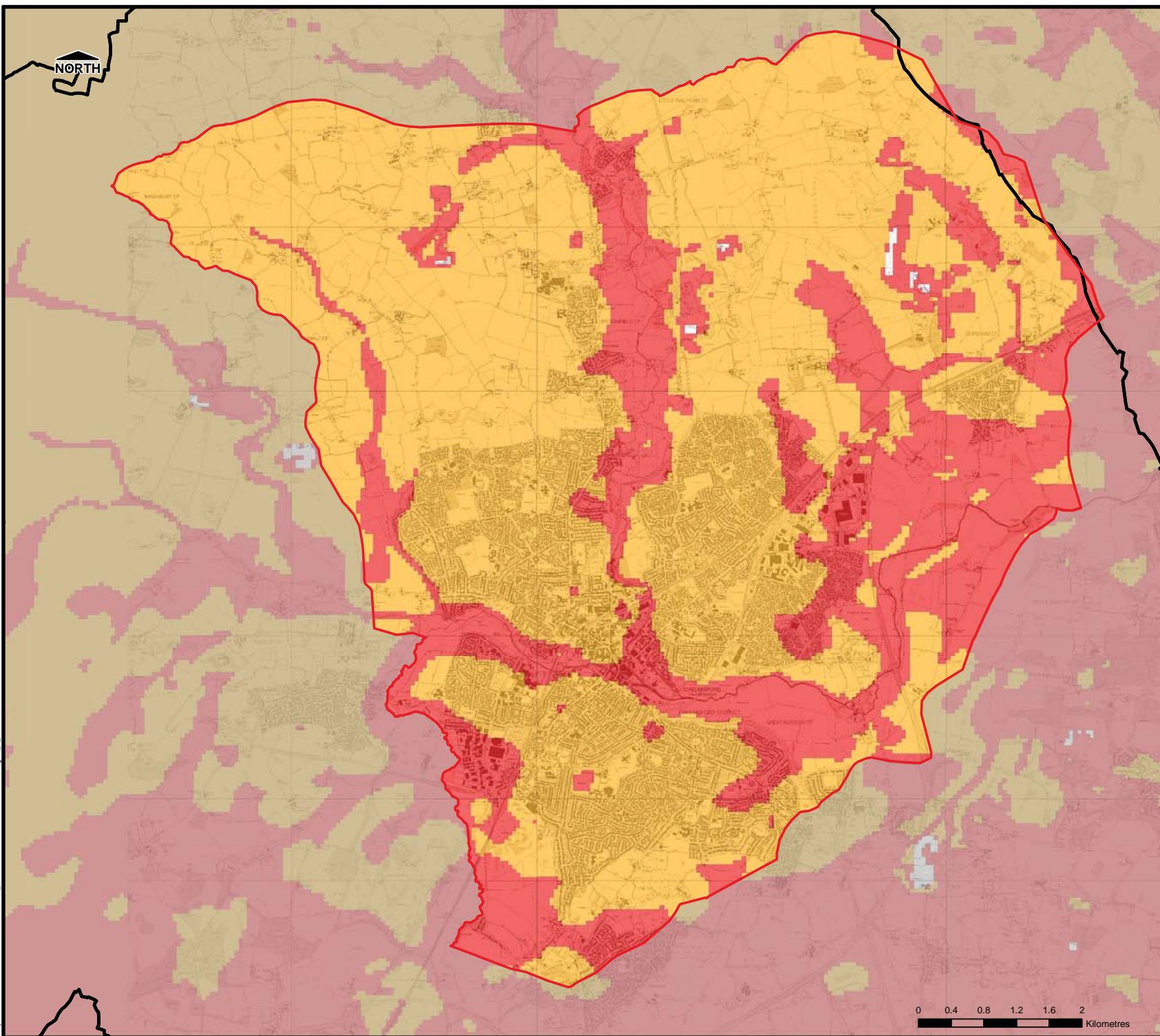
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FIGURE 6.2

Filepath: G:\environment\2WETICS061237_ChelmsfordSWMP\GIS\ArcMxds\Fig06_3_SUDs.mxd



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Legend

Administrative Boundary

Model Extent

Summary of Ground Stability

Potential For Geohazard

Significant Potential For Geohazard

Notes

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**Infiltration SUDS
Ground Stability Summary**

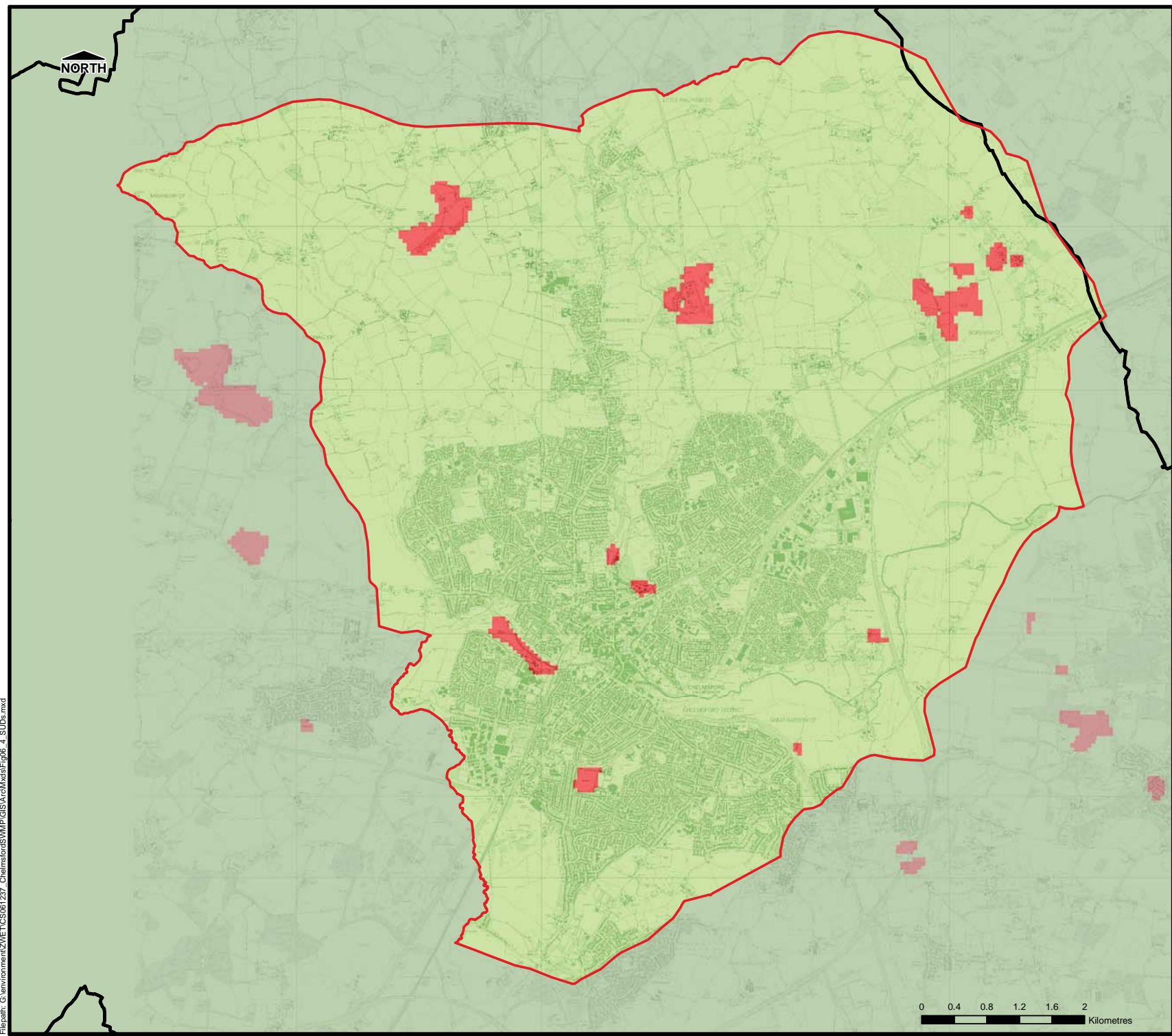
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FIGURE 6.3

Filepath: G:\environment\2WETICS061237 - ChelmsfordSWMP\GIS\ArcMxds\Fig06_4_SUDs.mxd



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Legend

- Administrative Boundary
- Model Extent
- Susceptibility to Groundwater Deterioration**
 - Low Susceptibility
 - Considerable Susceptibility
 - Moderate Susceptibility
 - Very Significant Constraints Are Indicated

Notes

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Infiltration SUDS Groundwater Protection Summary

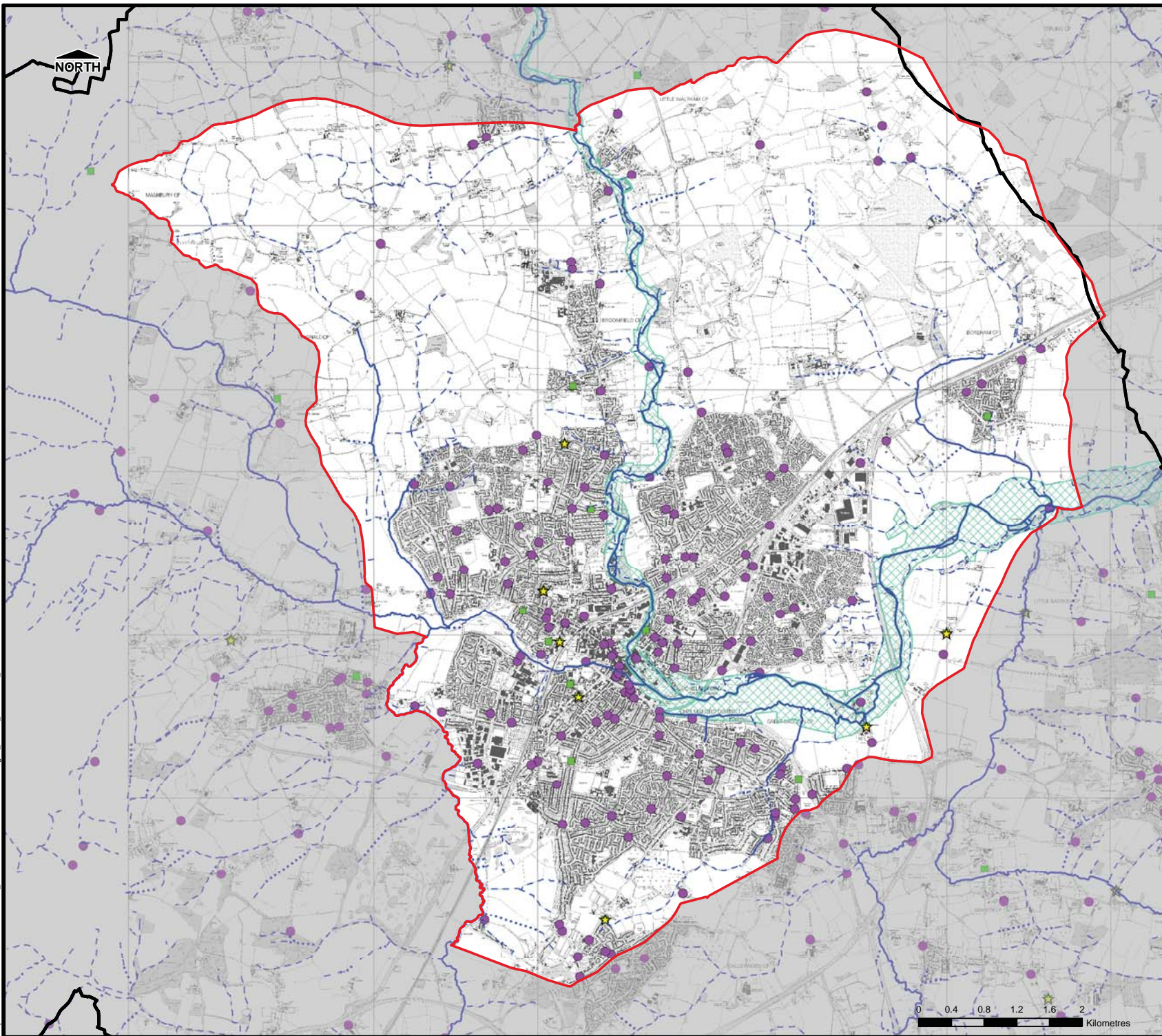
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FIGURE 6.4

Filepath: G:\environment\2WE\TICS061237_ChelmsfordSWMP\GIS\ArcMap\Fig07_SWMP_Chelmsford_HisFl.mxd



THIS DRAWING MAY BE USED ONLY FOR
THE PURPOSE INTENDED

Legend

- Administrative Boundary
- Main River
- Ordinary Watercourse
- Culverted Watercourse
- Environment Agency's Historic Flood Map
- Flood Incidents (PFRA)
- Fire and Rescue Service
Callouts for weather related flooding
- Essex Highways flood records

Notes

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Historical Flooding Overview DRAFT

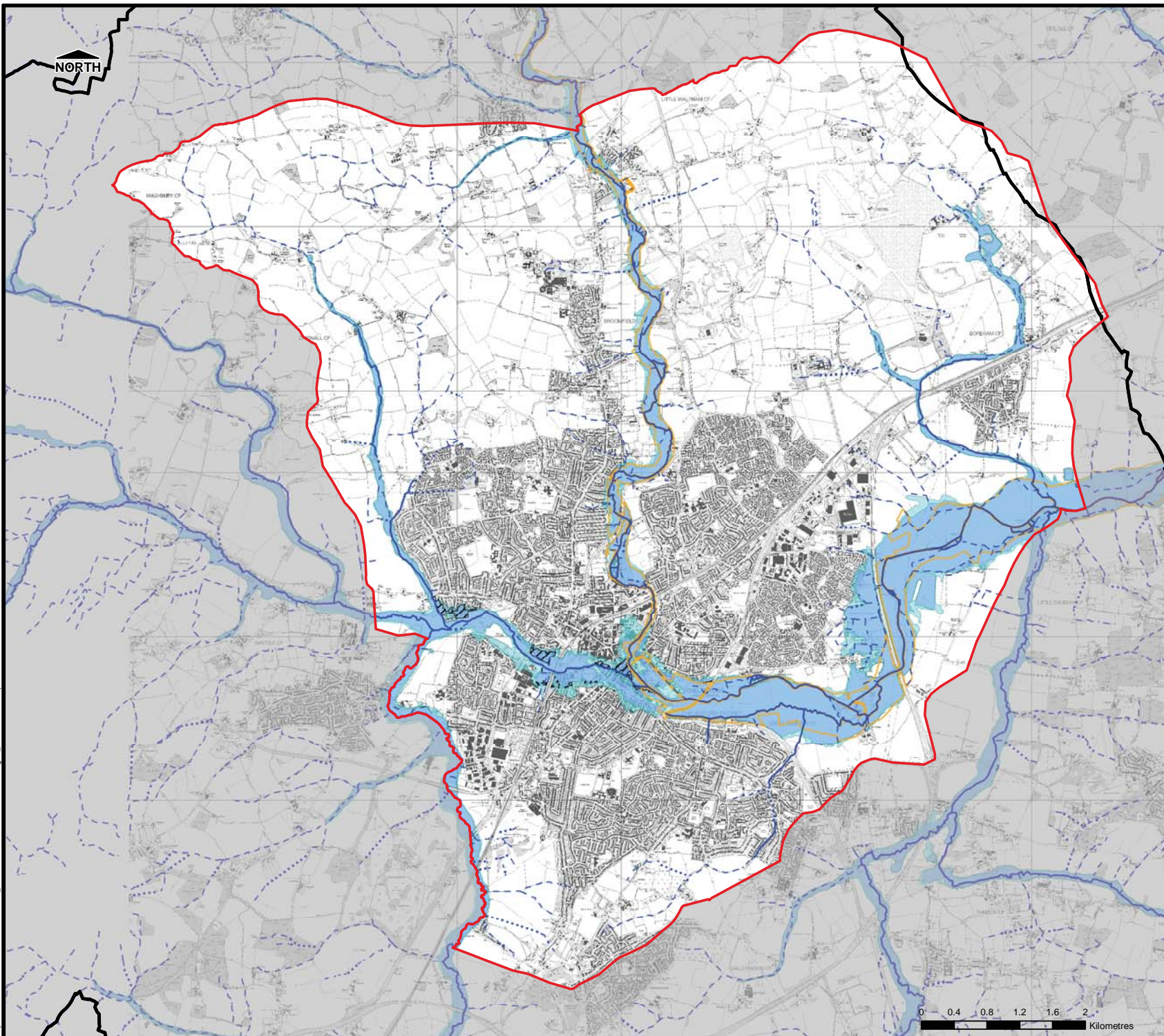
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FIGURE 7

Filepath: G:\environment\2WE\TICS061237 - ChelmsfordSWMP\GIS\ArcMxds\Fig08_EAFloodZoneMap.mxd



THIS DRAWING MAY BE USED ONLY FOR THE PURPOSE INTENDED

Legend

- Administrative Boundary
- Model Extent
- Main River
- Ordinary Watercourse
- Culverted Watercourse
- Defences
- Environment Agency Historic Flood Map (Known Flooding From Rivers)
- Areas Benefiting from Defences
- Environment Agency Flood Zone 3
- Environment Agency Flood Zone 2

Notes

- Environment Agency Flood Zone 3: Land assessed, ignoring the presence of flood defences, as having a 1% or greater annual probability of fluvial flooding or a 0.5% or greater annual probability of tidal flooding.
- Environment Agency Flood Zone 2: Land assessed, ignoring the presence of flood defences, as having between a 1% and 0.1% annual probability of fluvial flooding or between a 0.5% and 0.1% annual probability of tidal flooding in any year.
- Environment Agency - Areas that benefit from flood defences: land that may benefit from the presence of major defences during a 1% fluvial or 0.5% tidal event. These are areas that would flood if the defence were not present, but may not flood because the defence is present. Areas benefiting from flood storage areas may be remote from the flood defence structure.
- Environment Agency Flood Defences: The map displays the location of linear raised flood defences such as embankments & walls

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Environment Agency Flood Zones Overview

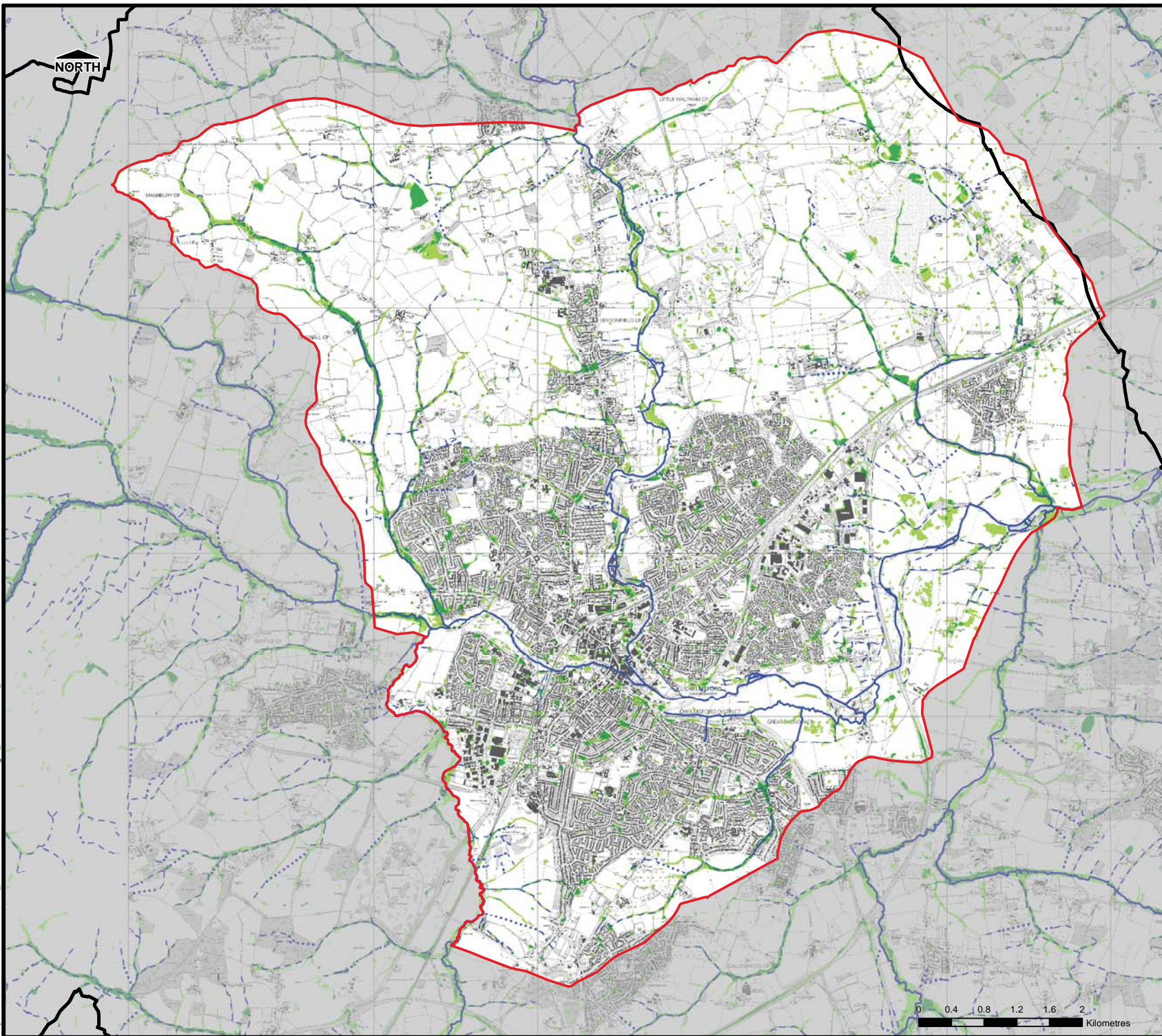
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FIGURE 8

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THE PURPOSE INTENDED

Legend

-  Administrative Boundary
-  Model Extent
-  Main River
-  Ordinary Watercourse
-  Culverted Watercourse
-  Surface Water 1 in 30 year (Shallow)
-  Surface Water 1 in 30 year (Deep)

Notes

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Date
July 2013

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Approved by
M.ARTHUR

Environment Agency Flood Map for Surface Water 1 in 30 Year Probability Overview

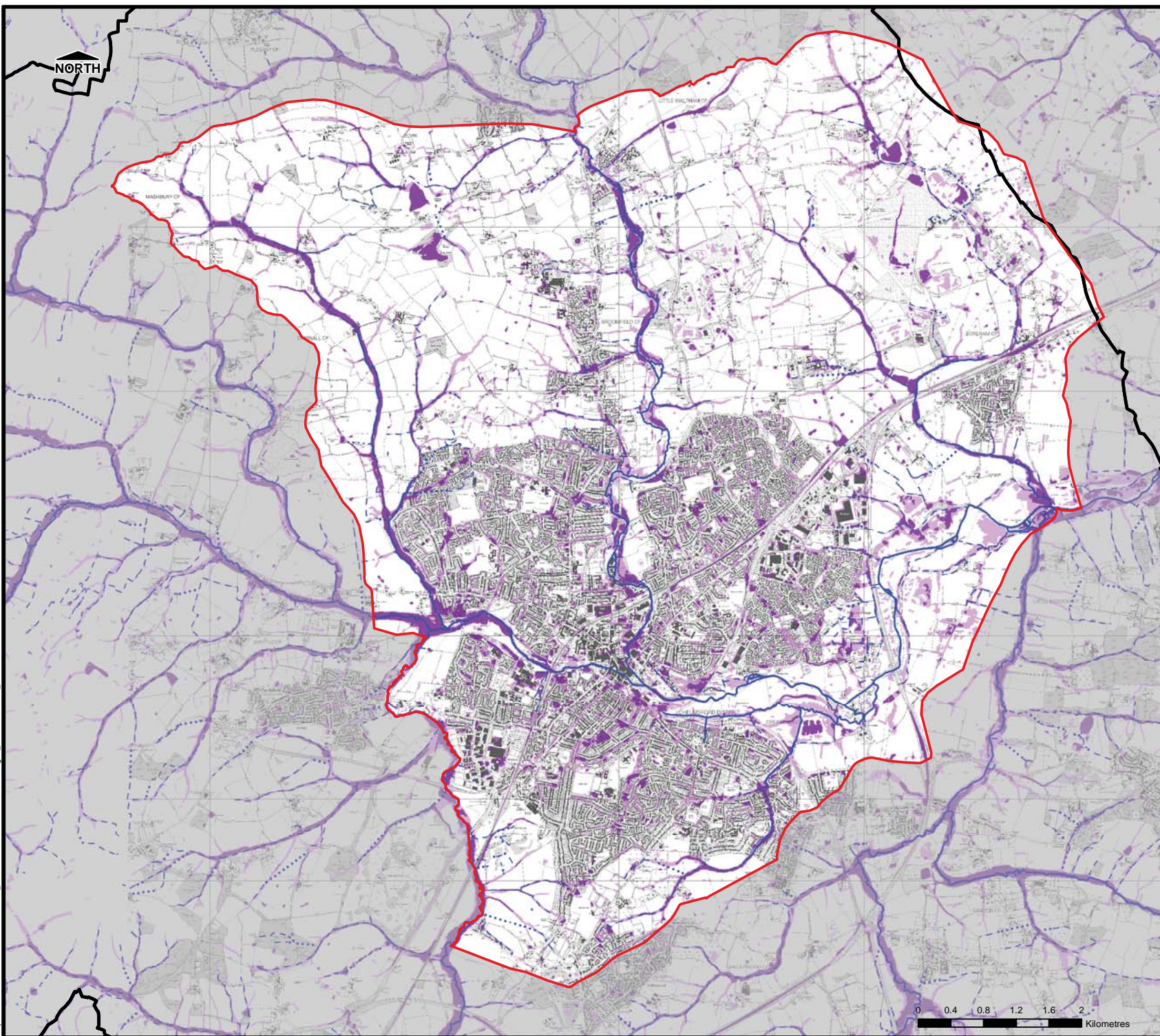
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FIGURE 9

Filepath: G:\environment\2WE\TICS061237 - ChelmsfordSWMP\GIS\ArcMads\Fig10_EASurfaceWater_200.mxd



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THE PURPOSE INTENDED

Legend

-  Administrative Boundary
-  Model Extent
-  Surface Water 1 in 200 year (Deep)
-  Surface Water 1 in 200 year (Shallow)
-  Main River
-  Ordinary Watercourse
-  Culverted Watercourse

Notes

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Environment Agency Flood Map for Surface Water 1 in 200 Year Probability Overview

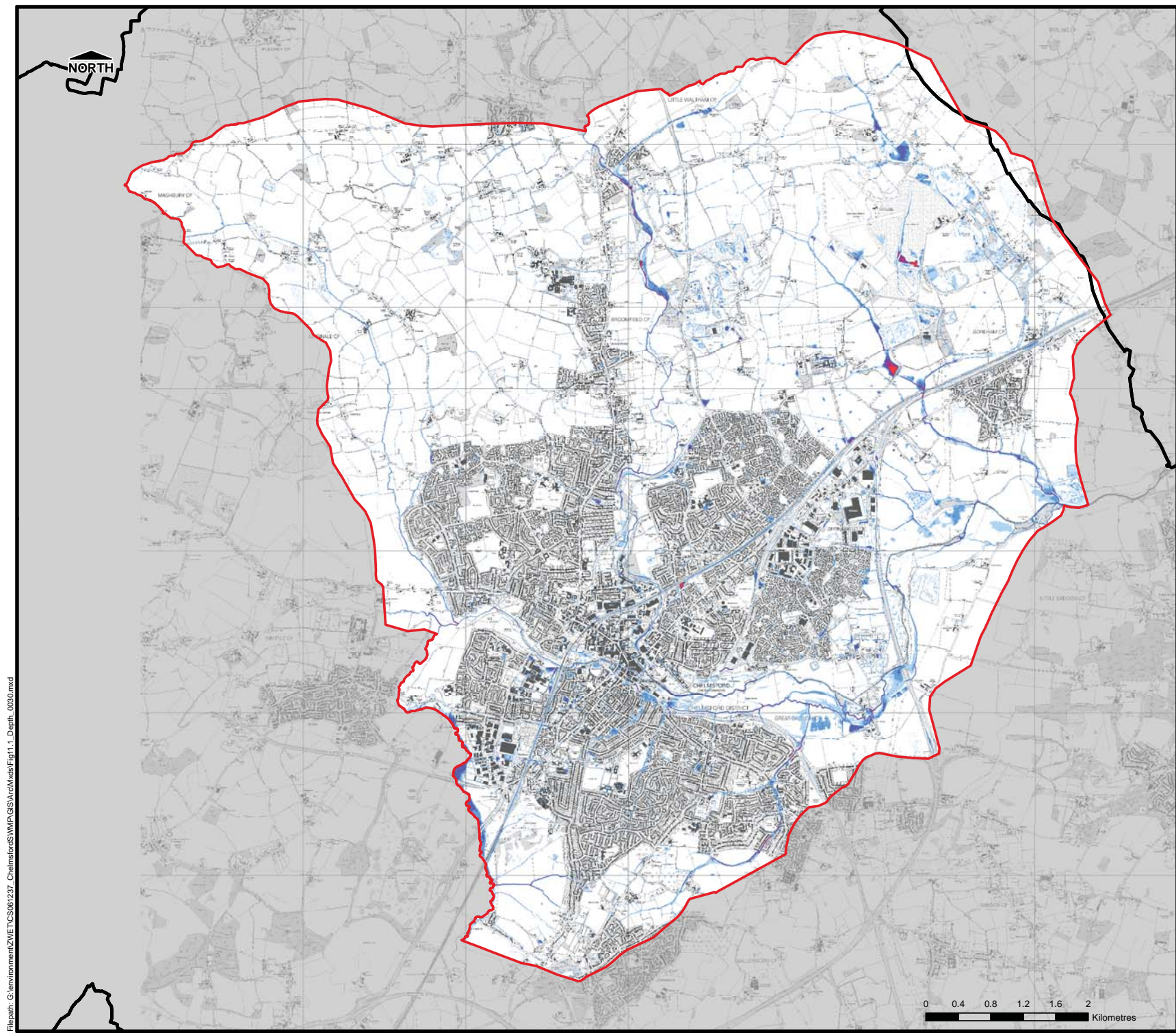
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FIGURE 10

Filepath: G:\environment\2WE\TICS061237 - ChelmsfordSWMP\GIS\ArcMxds\Fig11_1_Depth_0030.mxd



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Legend


- Administrative Boundary
- Model Extent

Flood Depth (m)

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

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**Surface Water
Flood Depth
1 in 20yr, 3hr duration**

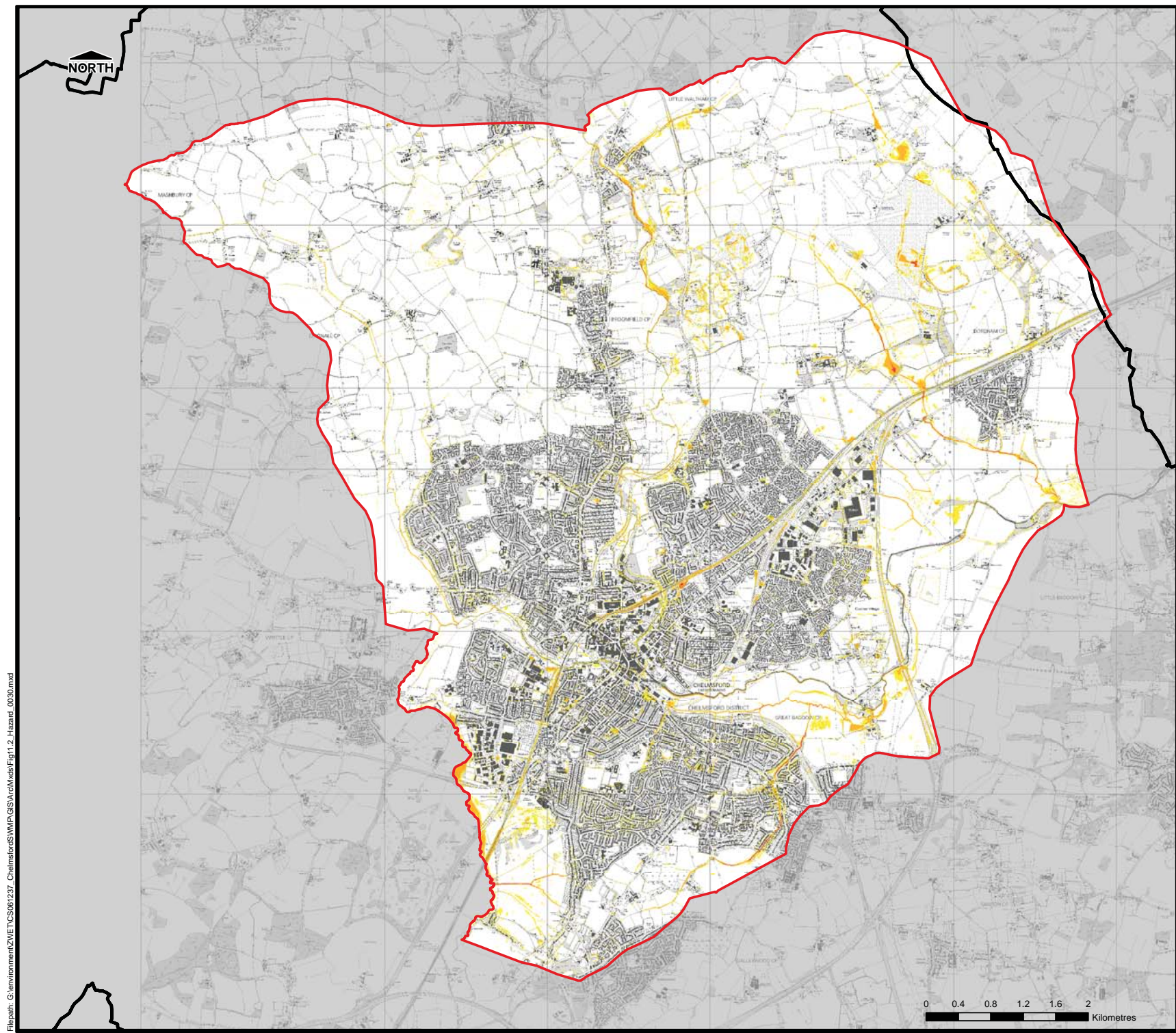
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FIGURE 11.1

Filepath: G:\environment\2WE\TCS061237 - ChelmsfordSWMP\GIS\ArcMxds\Fig11.2_Hazard_0030.mxd



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Legend

- Administrative Boundary
- Model Extent
- Flood Hazard**
 - Caution (Very Low Hazard)
 - Moderate (Danger for Some)
 - Significant (Danger for Most)
 - Extreme (Danger for All)

Notes

- Digital Terrain Model is based on unfiltered data and therefore includes buildings and vegetation.

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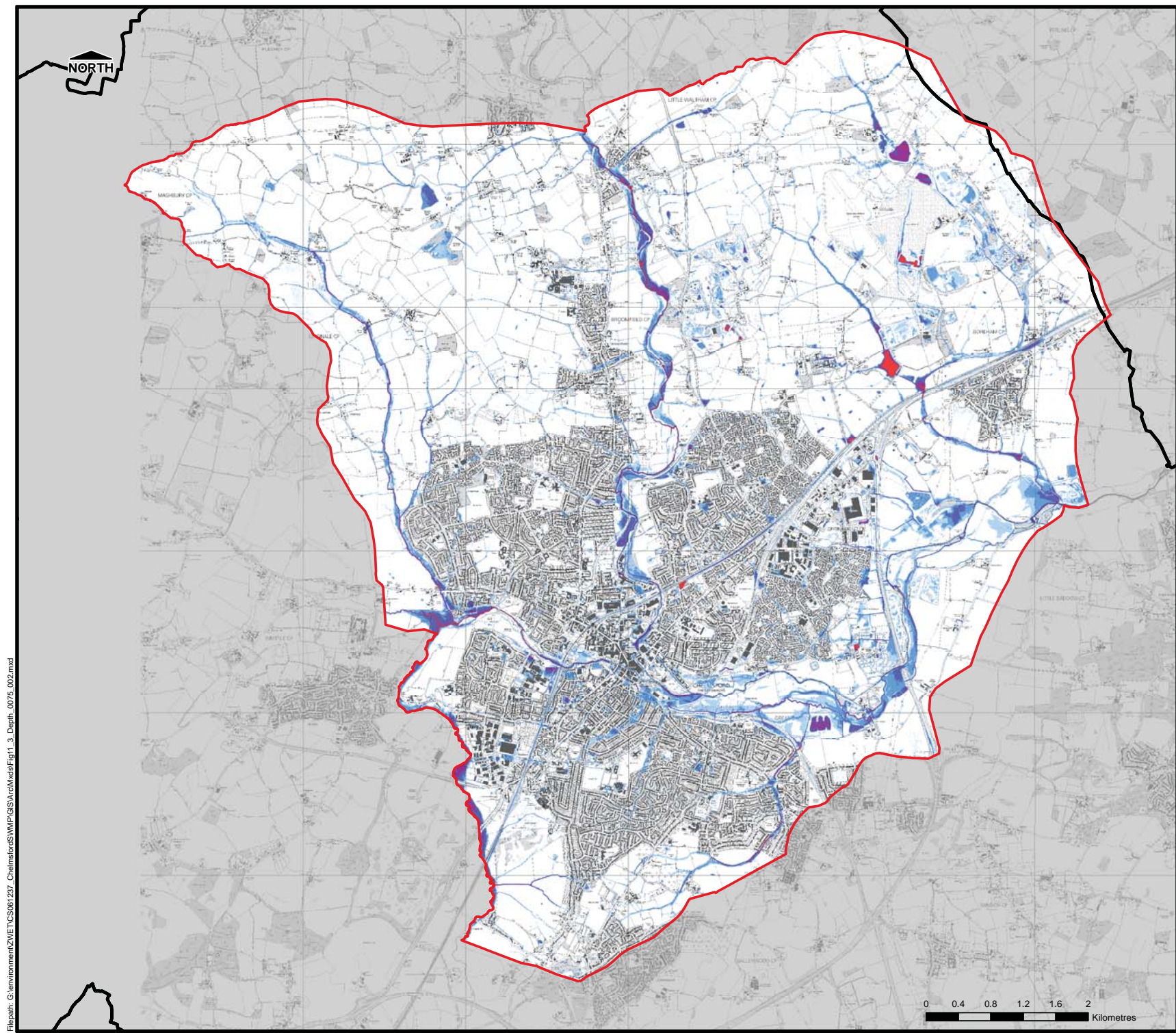
**Surface Water
Flood Hazard
1 in 20yr, 3hr duration**

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FIGURE 11.2

Filepath: G:\environment\2WE\TICS061237 - ChelmsfordSWMP\GIS\ArcMxds\Fig11_3_Depth_0075_002.mxd



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Legend


- Administrative Boundary
- Model Extent

Flood Depth (m)

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

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**Surface Water
Flood Depth
1 in 75yr, 3hr duration**

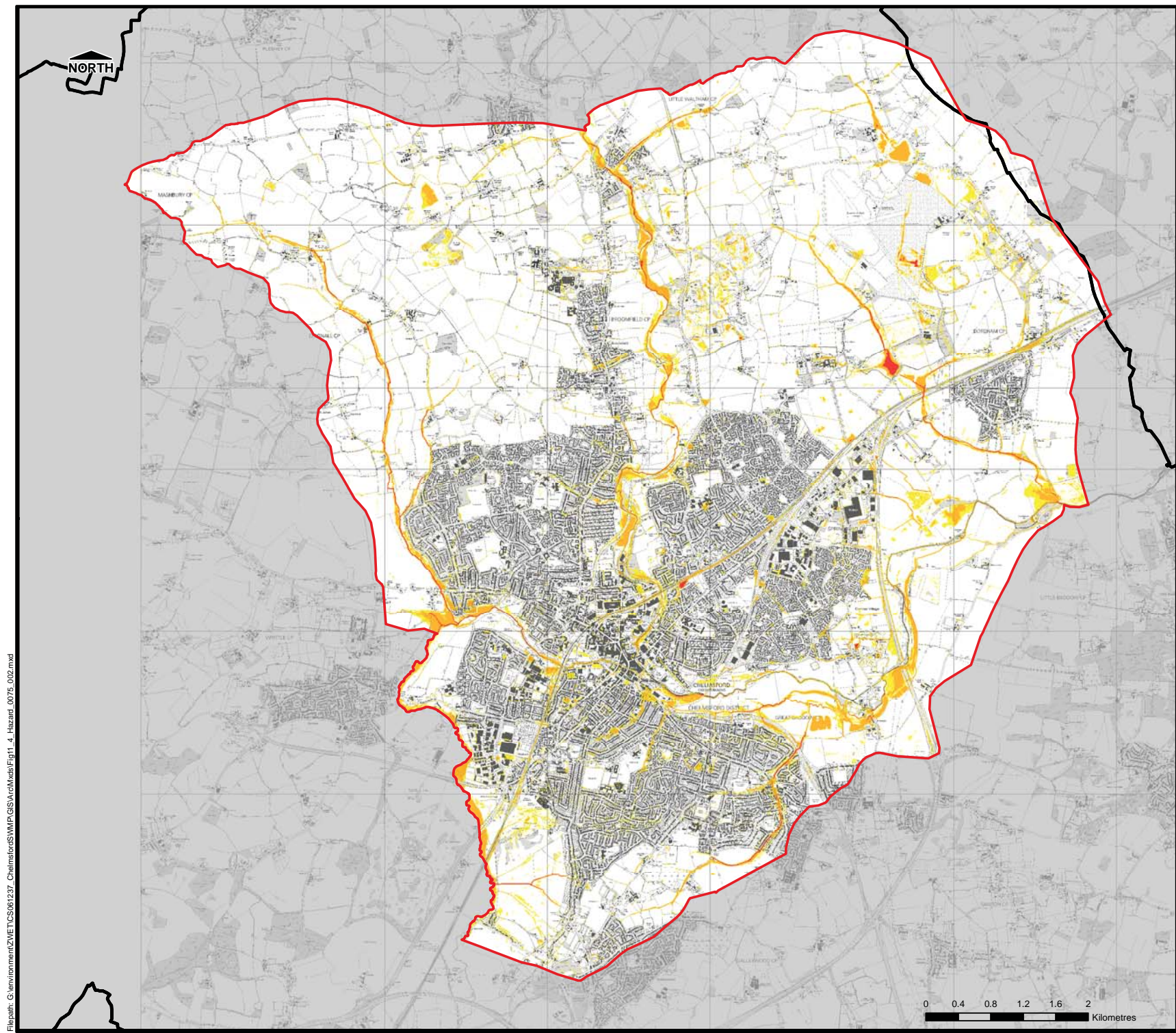
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FIGURE 11.3

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Legend

Administrative Boundary

Model Extent

Flood Hazard

Caution (Very Low Hazard)

Moderate (Danger for Some)

Significant (Danger for Most)

Extreme (Danger for All)

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**Surface Water
Flood Hazard
1 in 75yr, 3hr duration**

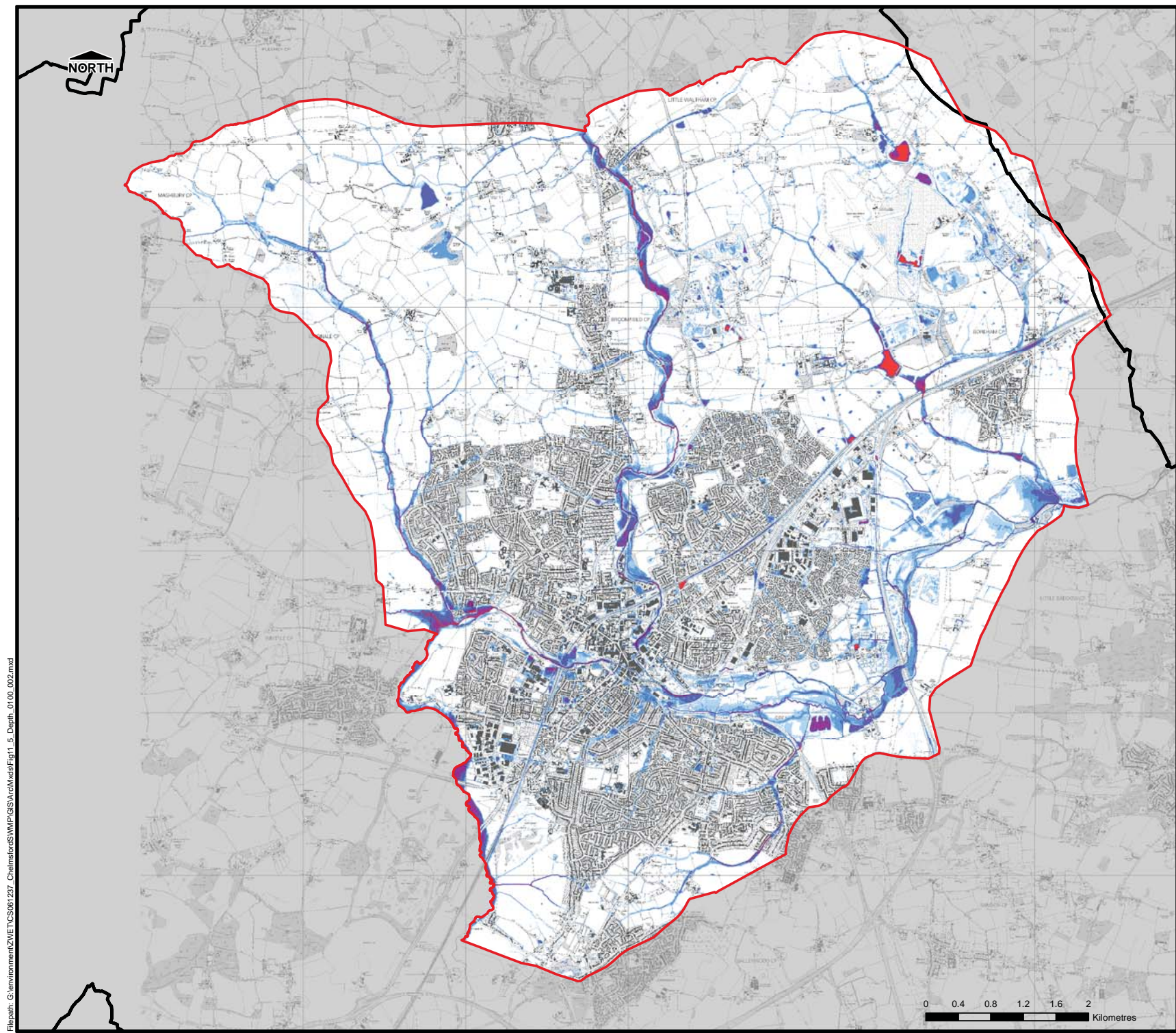
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FIGURE 11.4

Filepath: G:\environment\2WE\TICS061237 - ChelmsfordSWMP\GIS\ArcMxds\Fig11_5_Depth_0100_002.mxd



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Legend


- Administrative Boundary
- Model Extent

Flood Depth (m)

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

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**Surface Water
Flood Depth
1 in 100yr, 3hr duration**

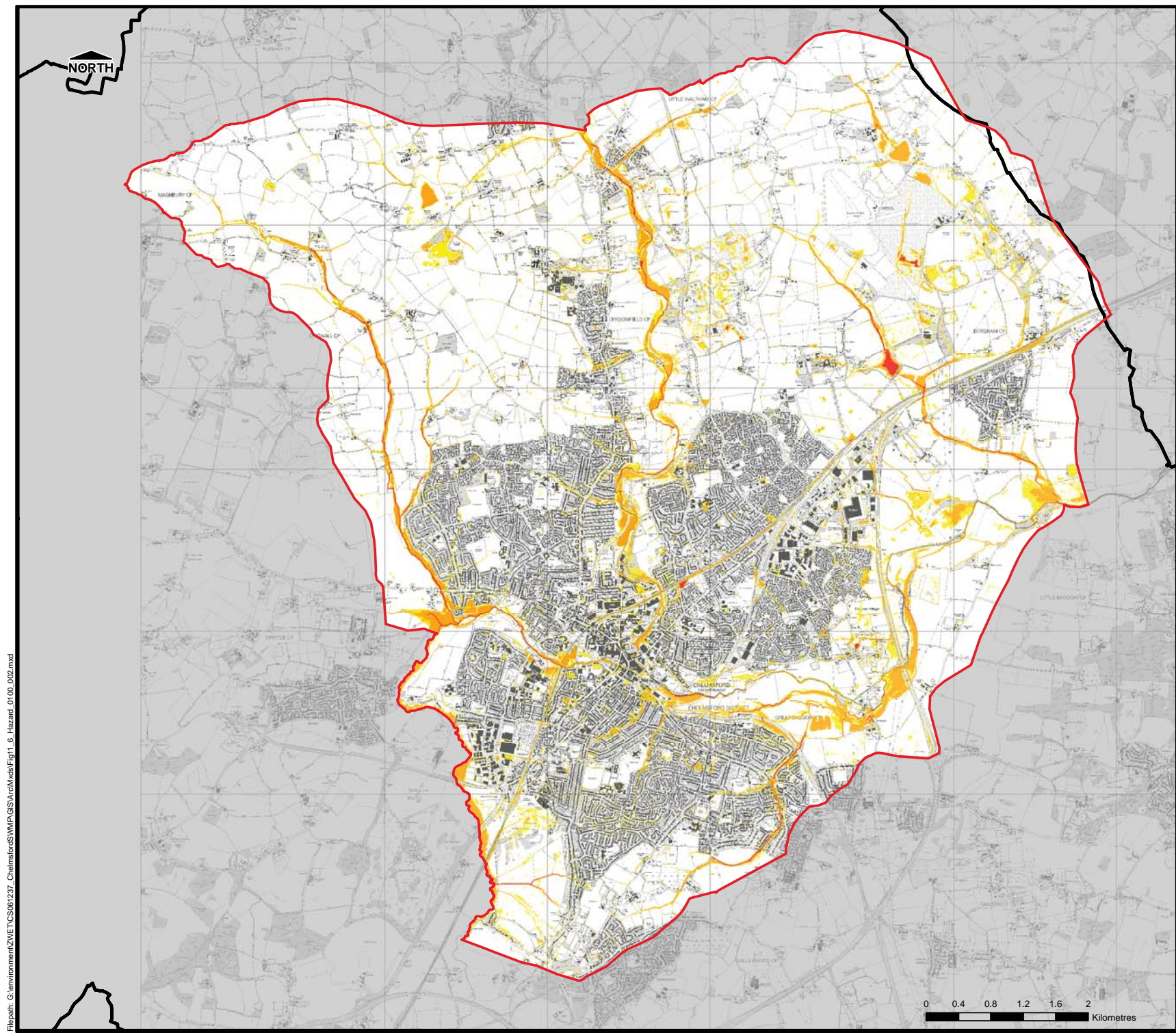
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FIGURE 11.5

Filepath: G:\environment\2WE\TCS061237 - ChelmsfordSWMP\GIS\ArcMxds\Fig11_6_Hazard_0100_002.mxd



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Legend

- Administrative Boundary
- Model Extent
- Flood Hazard**
 - Caution (Very Low Hazard)
 - Moderate (Danger for Some)
 - Significant (Danger for Most)
 - Extreme (Danger for All)

Notes

1. Digital Terrain Model is based on unfiltered data and therefore includes buildings and vegetation.

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**Surface Water
Flood Hazard
1 in 100yr, 3hr duration**

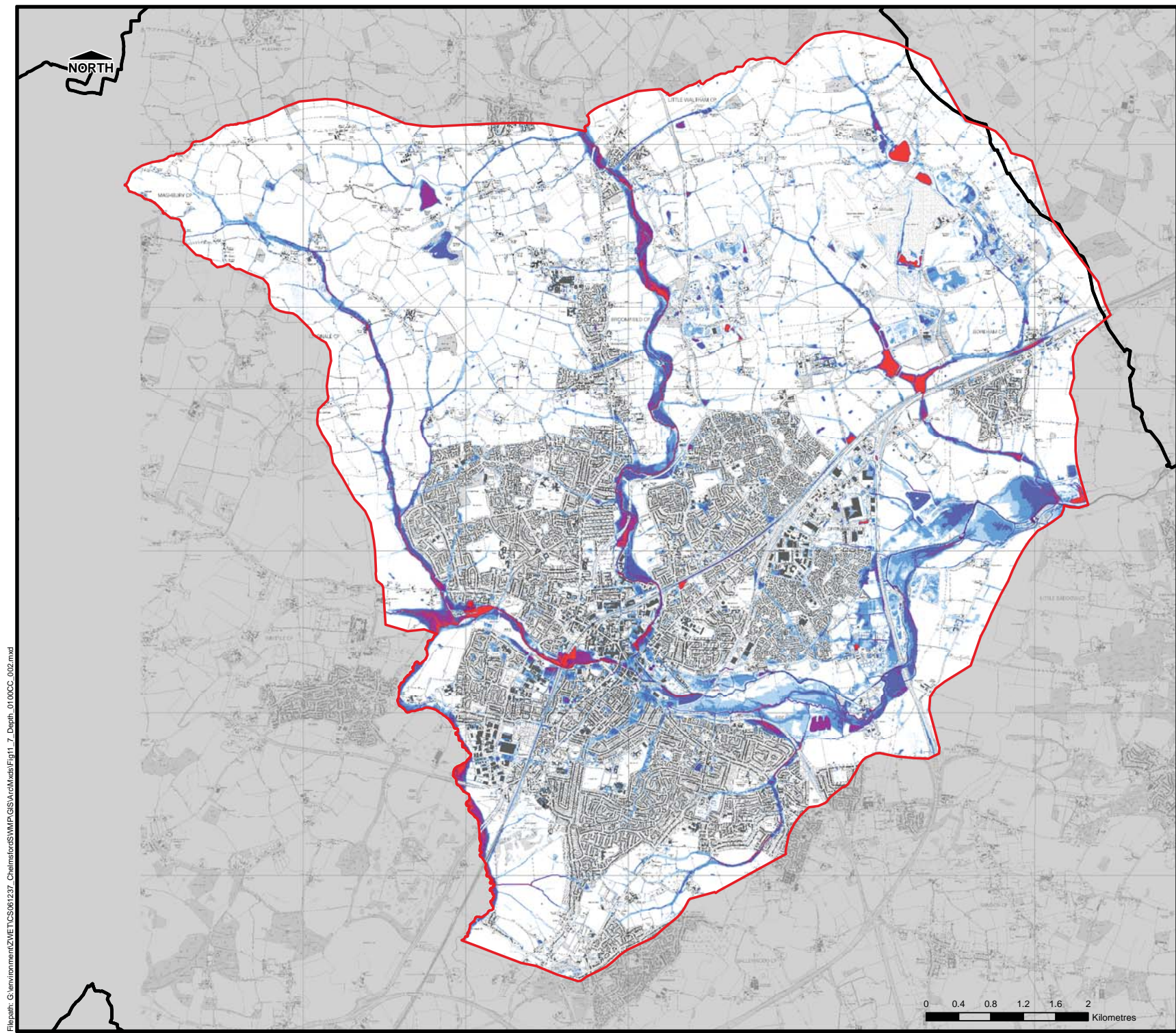
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Flood Risk Management

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52 Grosvenor Gardens,
Belgravia,
London
SW1W 0AU

FIGURE 11.6

Filepath: G:\environment\2WE\TICS061237 - ChelmsfordSWMP\GIS\ArcMxds\Fig11_7_Depth_0100CC_002.mxd



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Legend


- Administrative Boundary
- Model Extent

Flood Depth (m)

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

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**Surface Water
Flood Depth
1 in 100yr CC, 3hr duration**

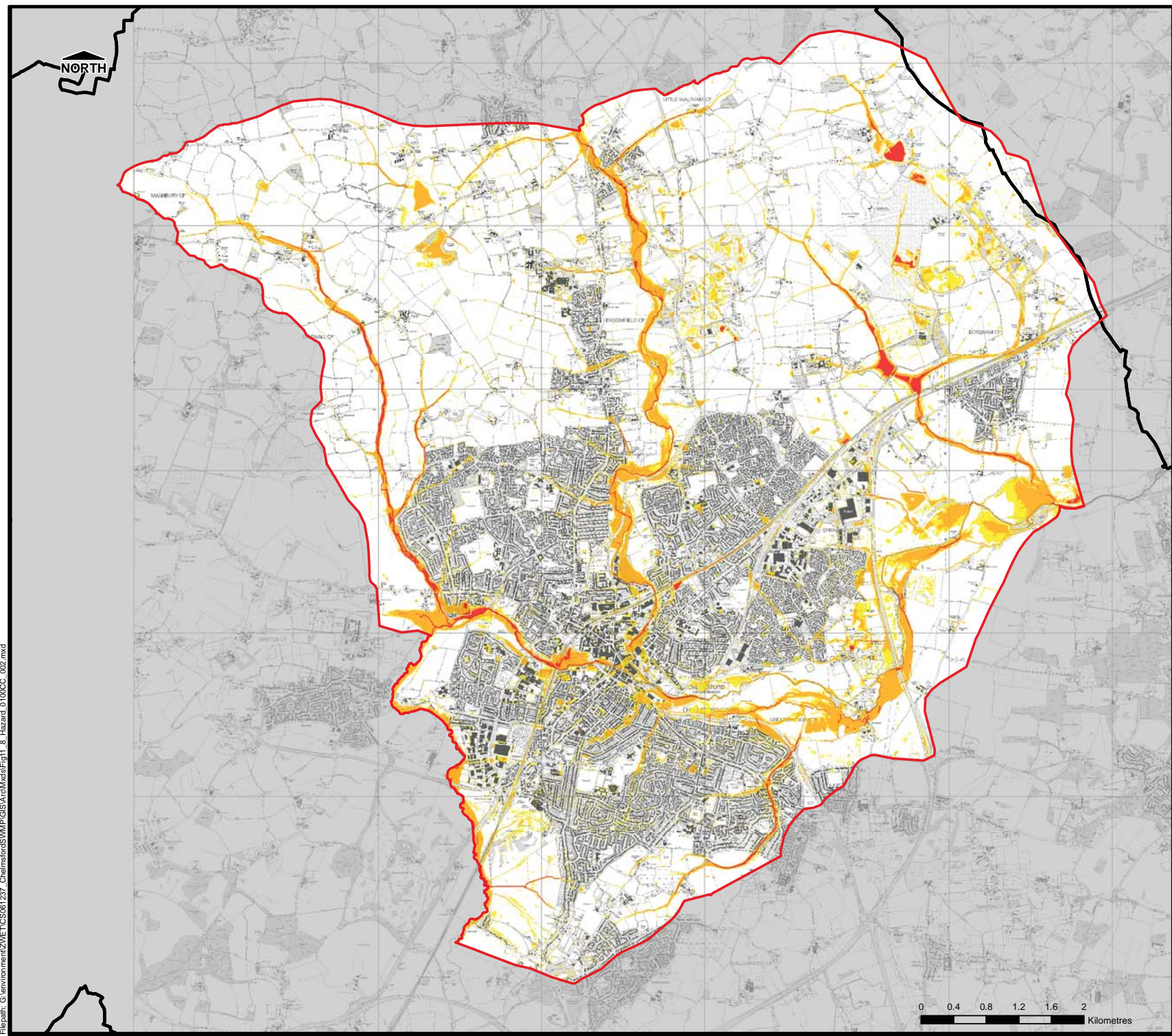
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Belgravia,
London
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FIGURE 11.7

Filepath: G:\environment\2WE\TCS061237 - ChelmsfordSWMP\GIS\ArcMads\Fig11_8_Hazard_0100CC_002.mxd



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Legend

- Administrative Boundary
- Model Extent
- Flood Hazard**
 - Caution (Very Low Hazard)
 - Moderate (Danger for Some)
 - Significant (Danger for Most)
 - Extreme (Danger for All)

Notes

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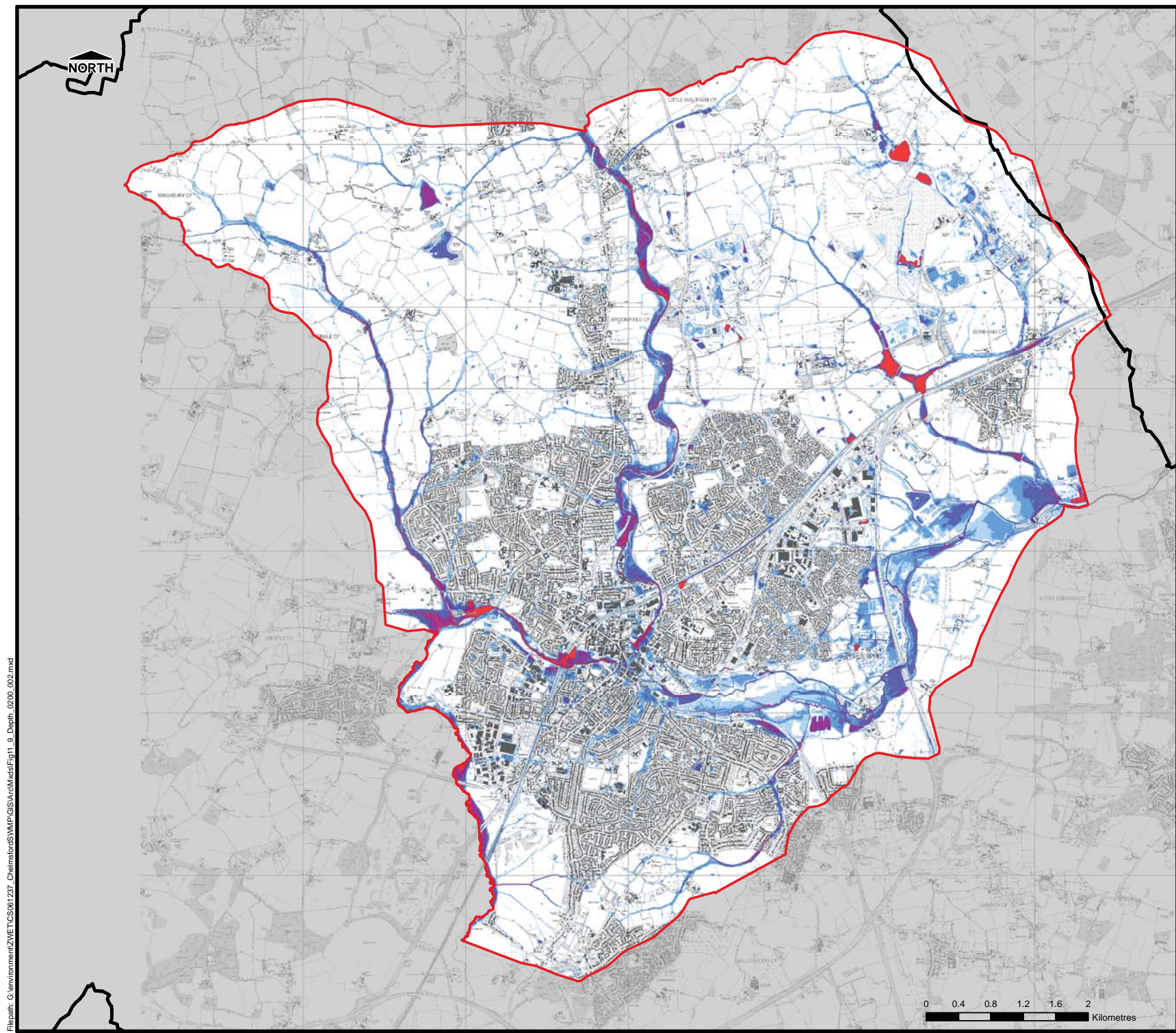
**Surface Water
Flood Hazard
1 in 100yrCC, 3hr duration**

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FIGURE 11.8

Filepath: G:\environment\2WE\TICS\061237 - ChelmsfordSWMP\GIS\ArcMxds\Fig11_9_Depth_0200_002.mxd



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Legend


- Administrative Boundary
- Model Extent

Flood Depth (m)

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

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**Surface Water
Flood Depth
1 in 200yr, 3hr duration**

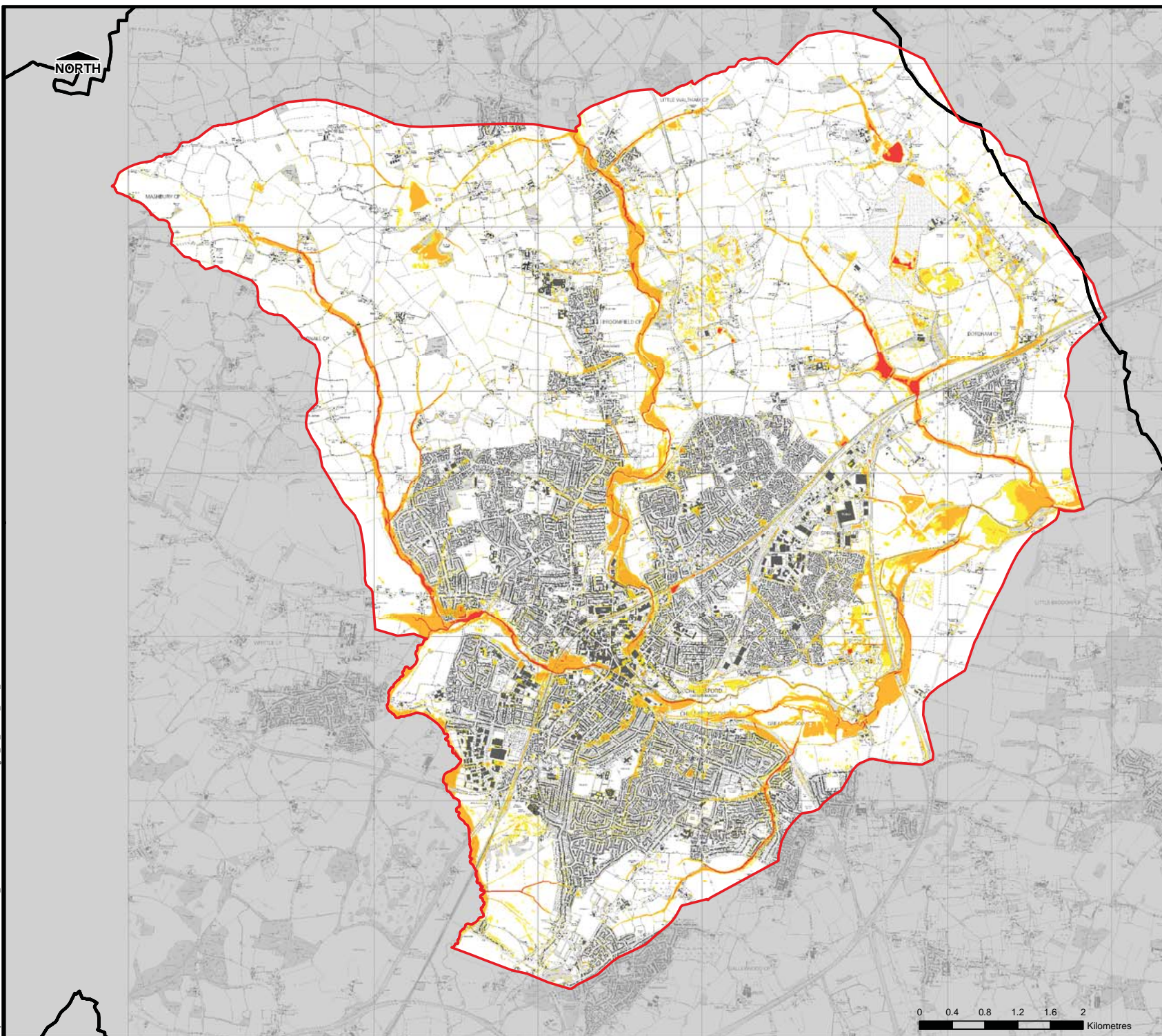
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FIGURE 11.9

Filepath: G:\environment\2WE\TCS061237 - ChelmsfordSWMP\GIS\ArcMads\Fig11_10_Hazard_0200_002.mxd



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Legend

Administrative Boundary

Model Extent

Flood Hazard

Caution (Very Low Hazard)

Moderate (Danger for Some)

Significant (Danger for Most)

Extreme (Danger for All)

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**Surface Water
Flood Hazard
1 in 200yr, 3hr duration**

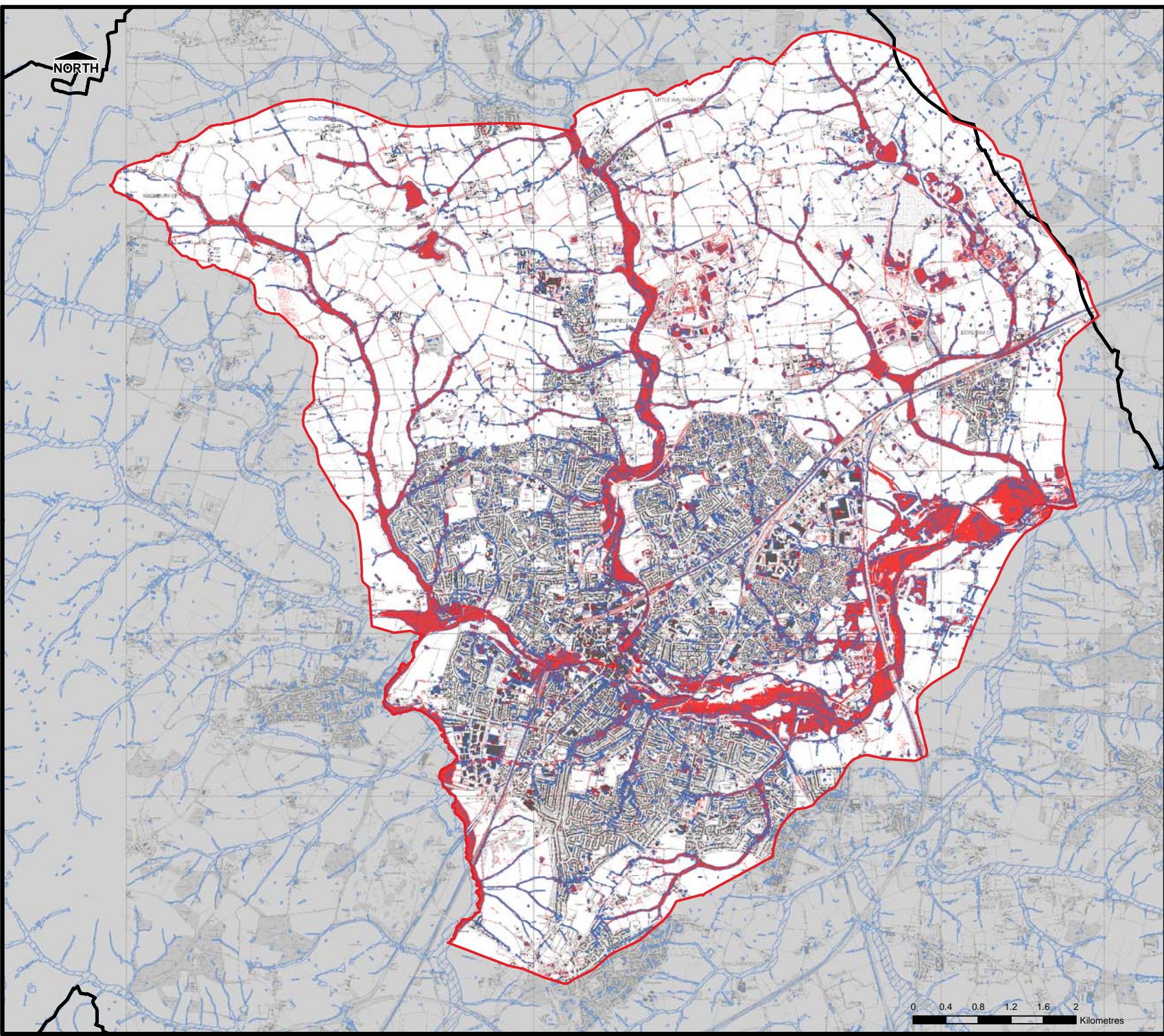
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FIGURE 11.10

Filepath: G:\environment\2WE\TICS061237 - ChelmsfordSWMP\GIS\ArcMads\Fig12_EA_vs_Modelled_Extent_0200.mxd





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Legend

- Administrative Boundary
- Model Extent
- EA FMfSW 200yr extent
- Modelled Extents 1 in 200yr

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**Comparison of the EA FMfSW
and the Modelled Extent for the
1 in 200yr, 3hr duration**

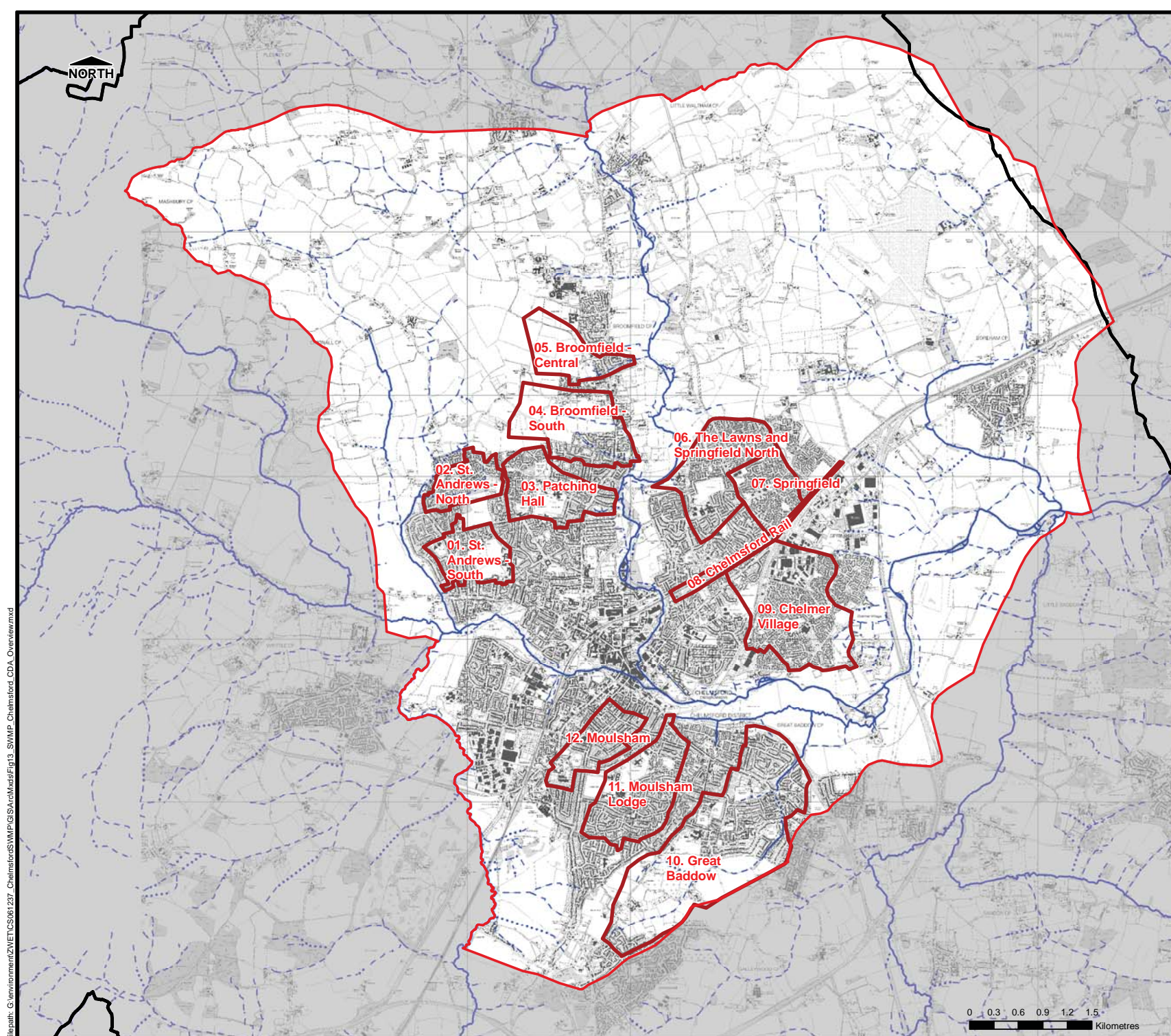
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FIGURE 12

Filepath: G:\environment\2WETICS061237 - Chelmsford SWMP\GIS\ArcMads\Fig13 - SWMP - Chelmsford CDA Overview.mxd





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Legend

- Administrative Boundary
- Model Extent
- Main River
- Ordinary Watercourse
- Culverted Watercourse
- Critical Drainage Areas

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Critical Drainage Areas Overview

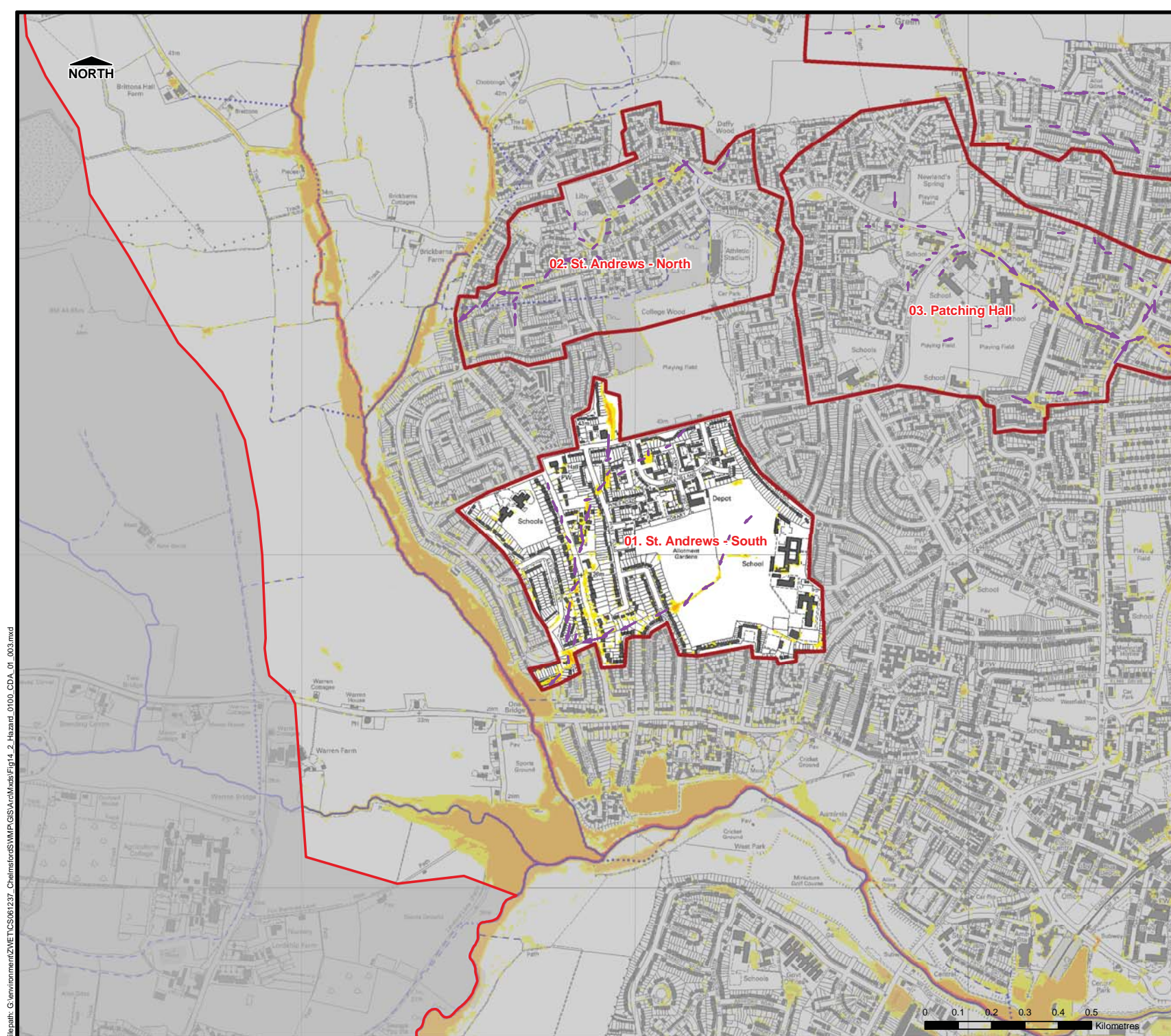
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FIGURE 13

Filepath: G:\environment\2WE\TICS061237 - Chelmsford\SWMP\GIS\ArcMxds\Fig14_2_Hazard_0100_CDA_of_003.mxd



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Legend

- Administrative Boundary
- Model Extent
- Main River
- Ordinary Watercourse
- Culverted Watercourse
- Direction of flow
- Critical Drainage Areas

Flood Hazard

- Caution (Very Low Hazard)
- Moderate (Danger for Some)
- Significant (Danger for Most)
- Extreme (Danger for All)

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**Surface Water Flood Hazard
1 in 100yr, 3hr duration
Critical Drainage Area
01. St. Andrews - South**

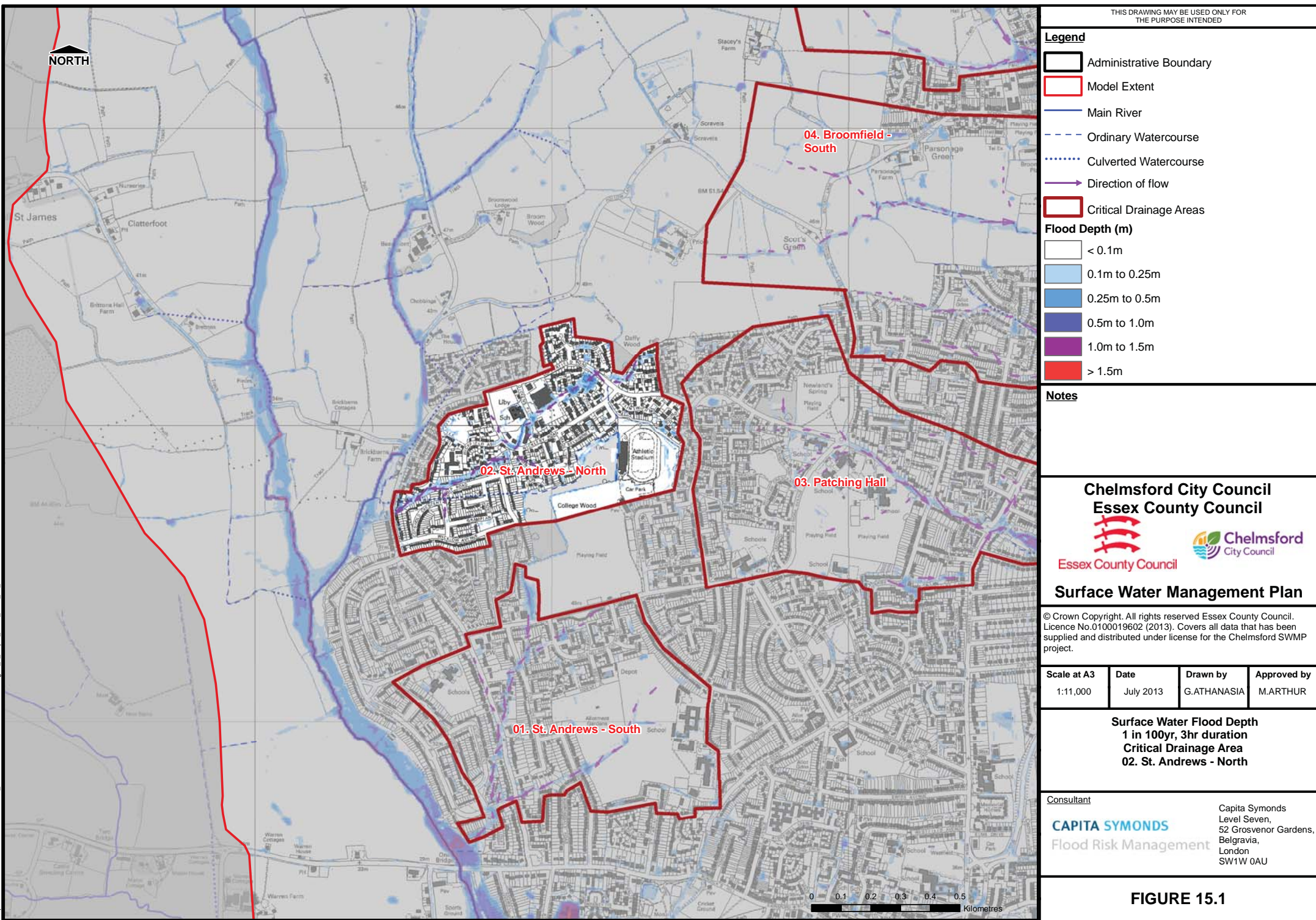
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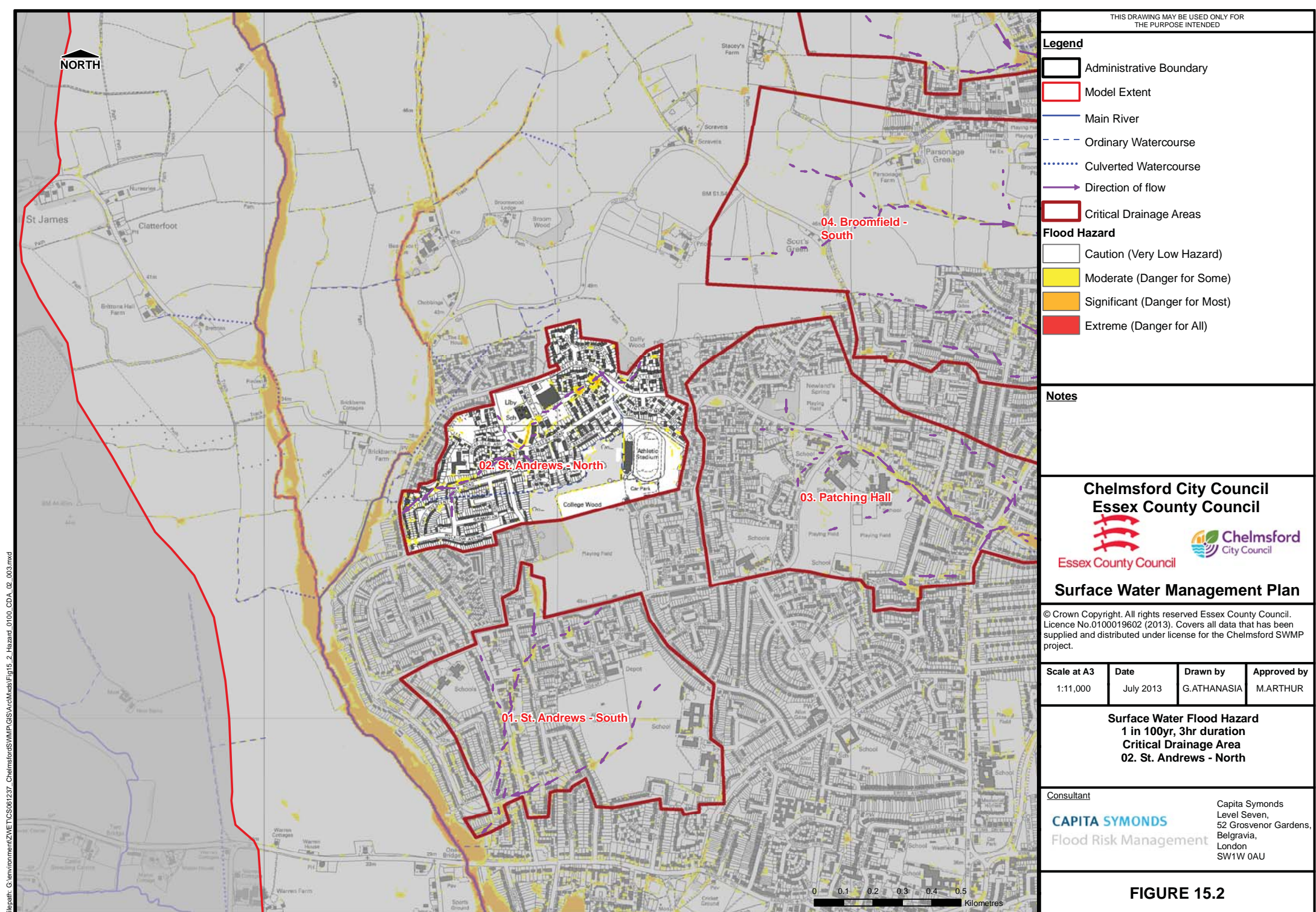
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FIGURE 14.2

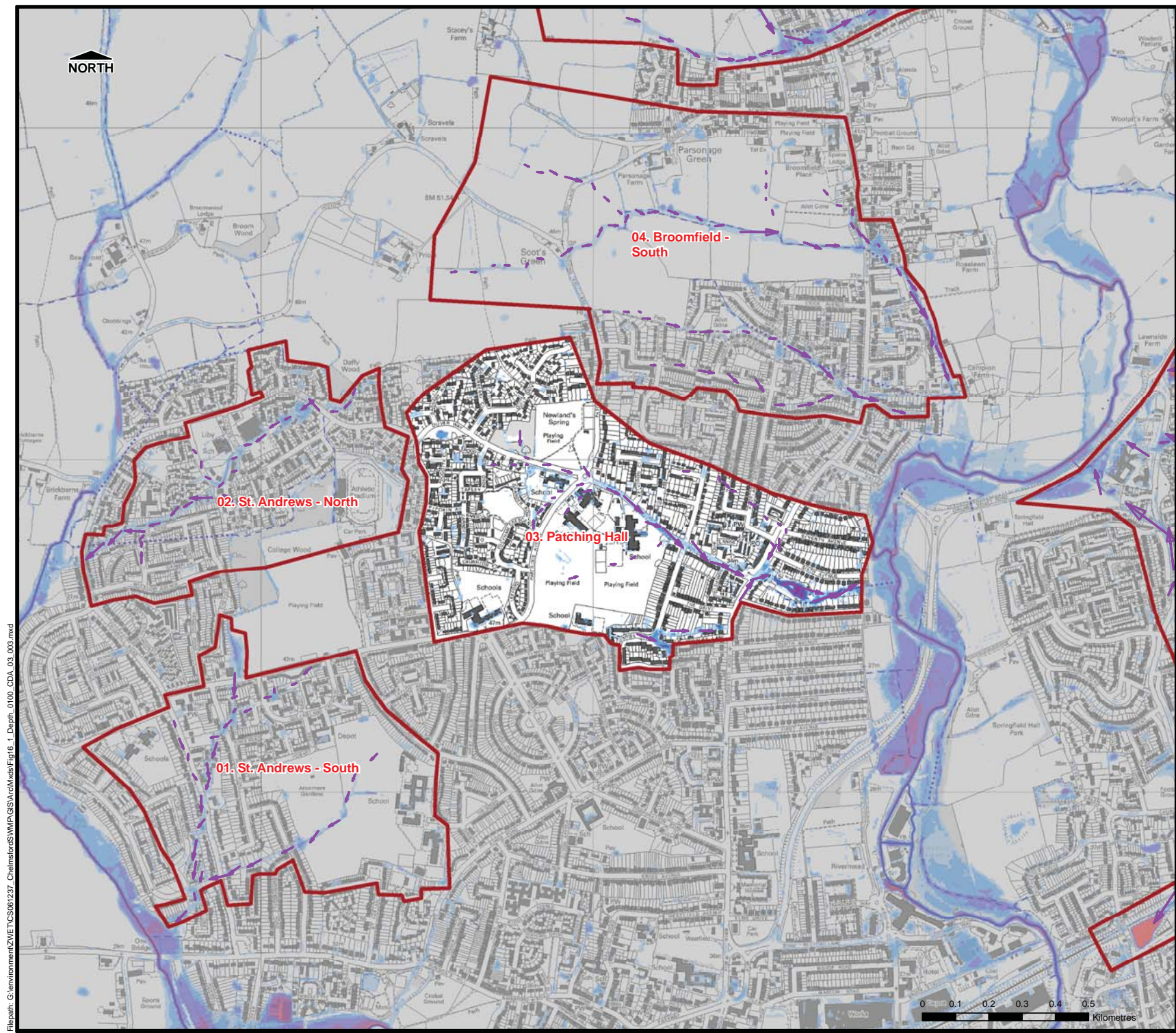
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Filepath: G:\environment\2WE\TICS061237 ChelmsfordSWMP\GIS\ArcMxds\Fig15.2_Hazard_0100_CDA_02_003.mxd



Filepath: G:\environment\2WE\TICS061237 - ChelmsfordSWMP\GIS\ArcMxds\Fig16_1_Depth_0100_CDA_03_003.mxd



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Legend

- Administrative Boundary
- Model Extent
- Main River
- Ordinary Watercourse
- Culverted Watercourse
- Direction of flow
- Critical Drainage Areas

Flood Depth (m)

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

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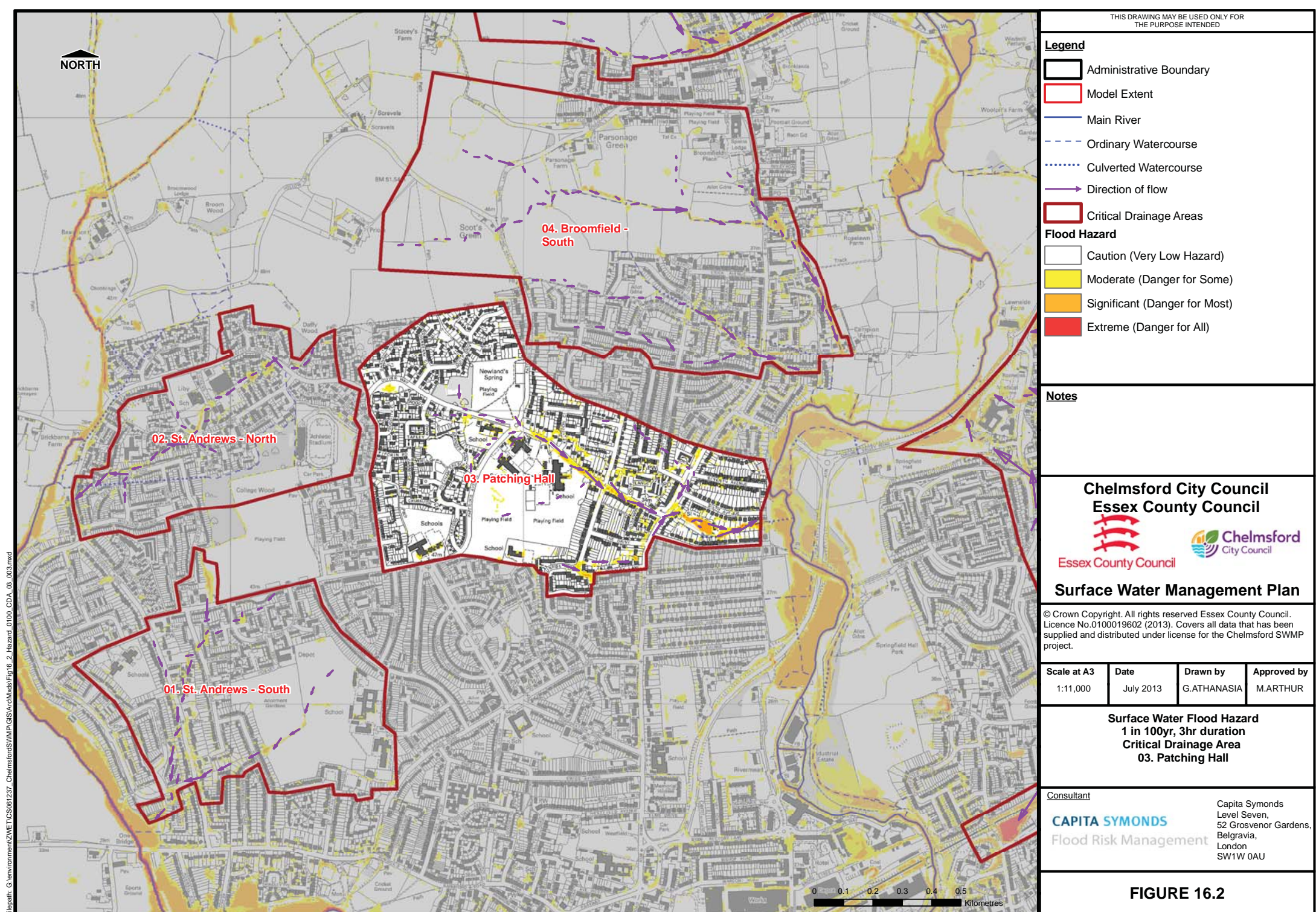
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**Surface Water Flood Depth
1 in 100yr, 3hr duration
Critical Drainage Area
03. Patching Hall**

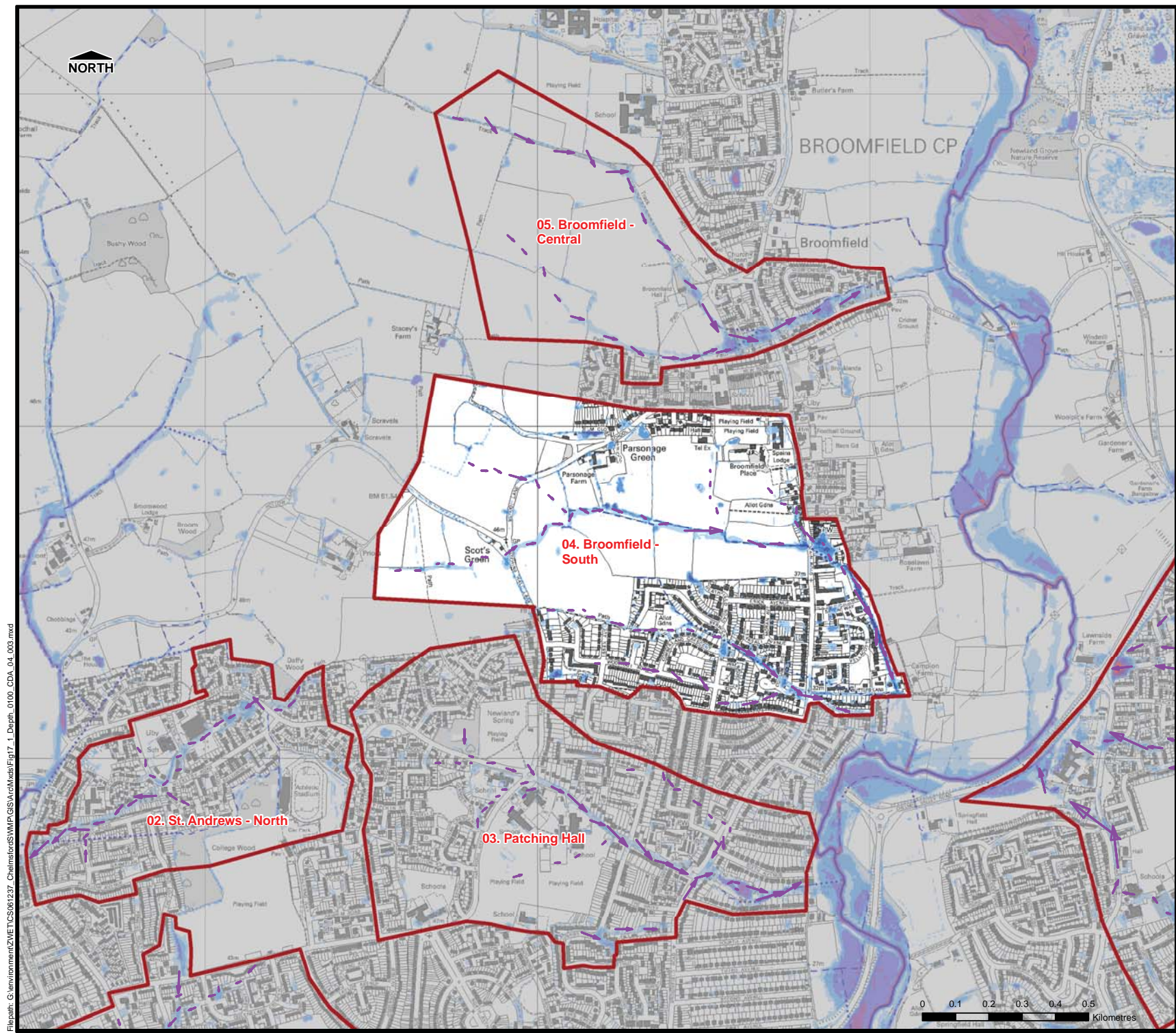
Consultant CAPITA SYMONDS Flood Risk Management	Capita Symonds Level Seven, 52 Grosvenor Gardens, Belgravia, London SW1W 0AU
---	---

FIGURE 16.1

Filepath: G:\environment\2WE\TICS061237 - ChelmsfordSWMP\GIS\ArcMxds\Fig16.2 - Hazard_0100_CDA_03_003.mxd



Filepath: G:\environment\2WE\TCS061237 - Chelmsford SWMP\GIS\ArcMxds\Fig17_1_Depth_0100_CDA_04_003.mxd



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Legend

- Administrative Boundary
- Model Extent
- Main River
- Ordinary Watercourse
- Culverted Watercourse
- Direction of flow
- Critical Drainage Areas

Flood Depth (m)

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

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**Surface Water Flood Depth
1 in 100yr, 3hr duration
Critical Drainage Area
04. Broomfield - South**

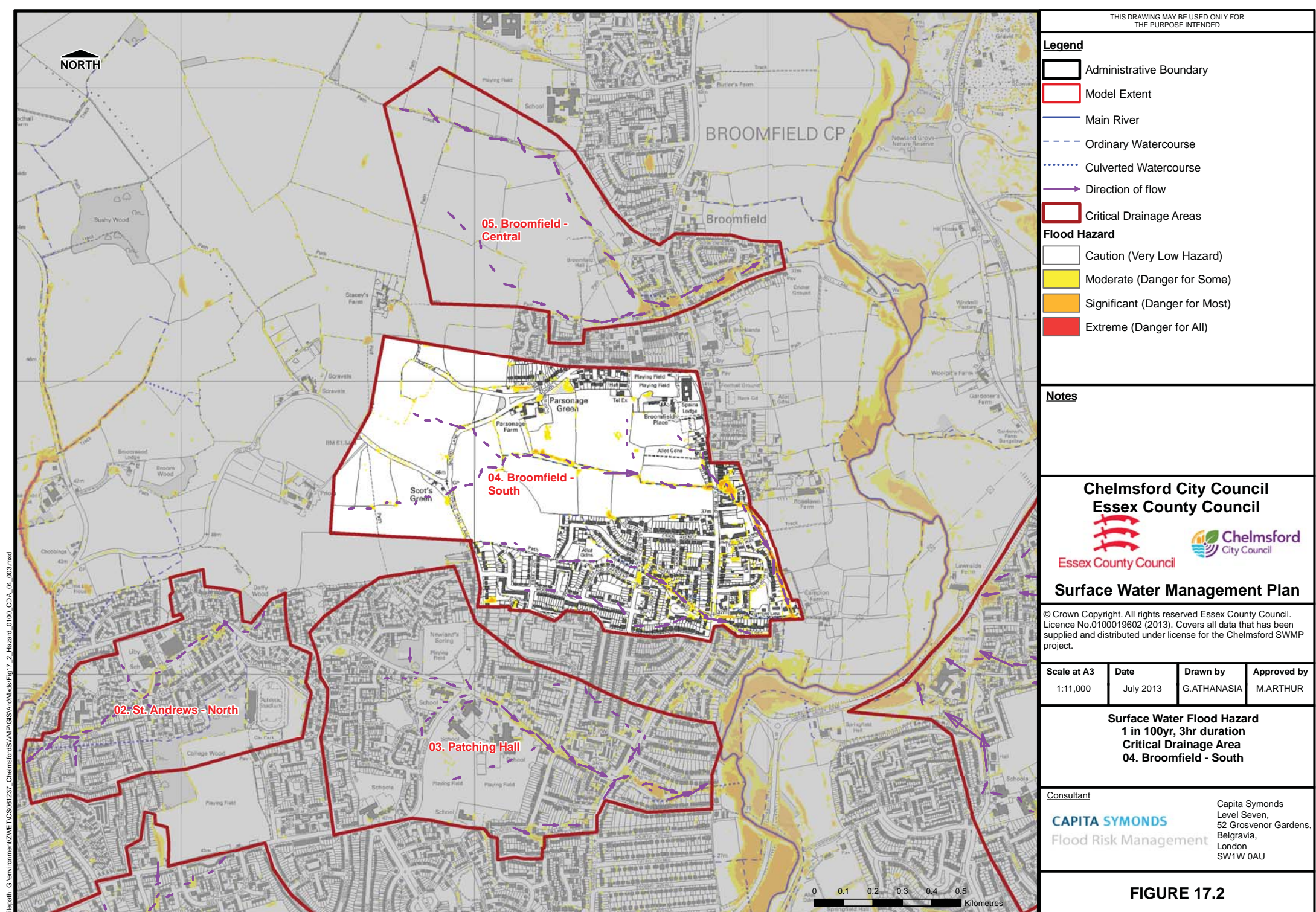
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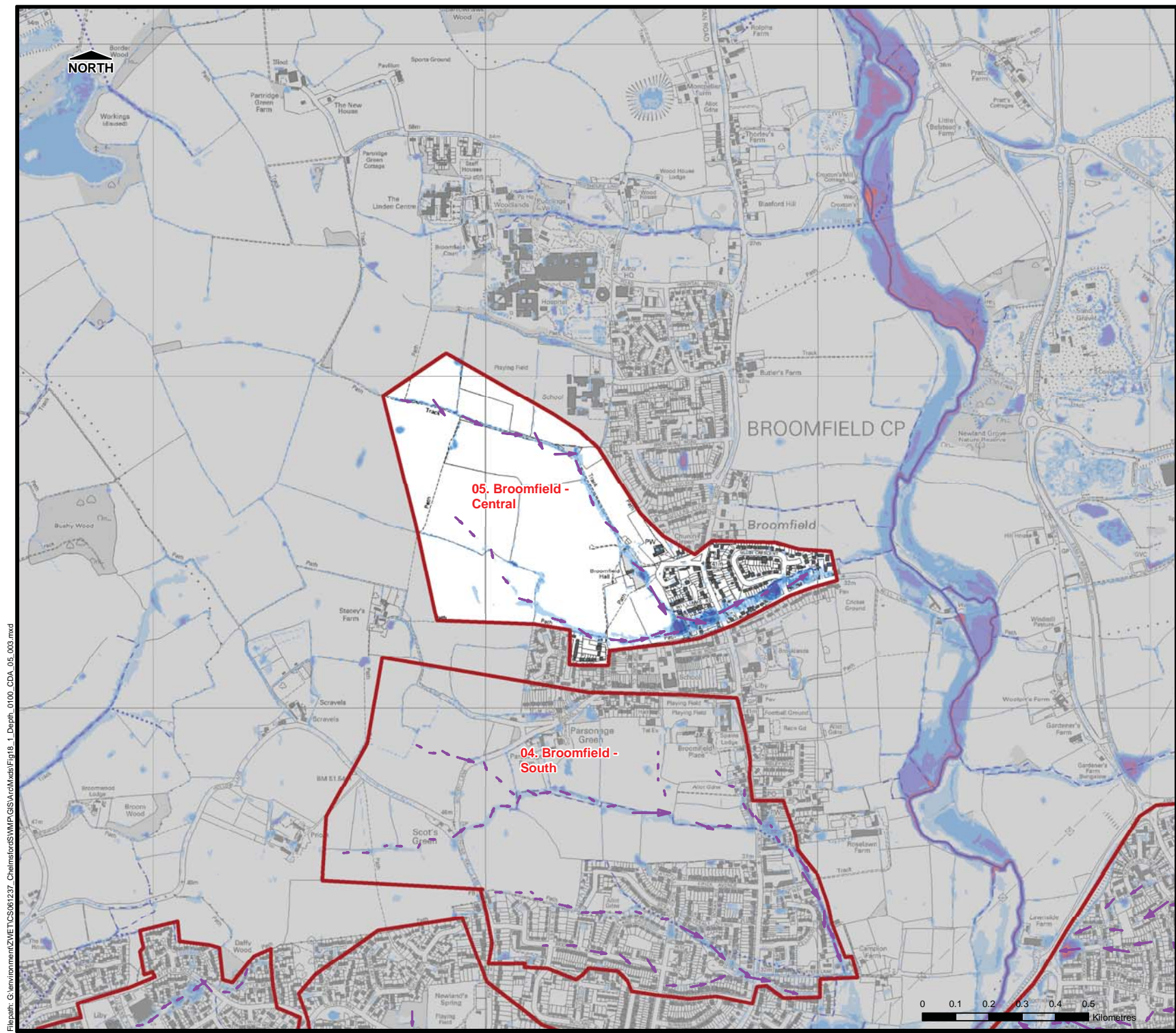
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FIGURE 17.1

Filepath: G:\environment\2WE\TCS061237 - Chelmsford\SWMP\GIS\ArcMxds\Fig17_2_Hazard_0100_CDA_04_003.mxd



Filepath: G:\environment\2WE\TICS061237 - ChelmsfordSWMP\GIS\ArcMxds\Fig18.1_Depth_0100_CDA_05_003.mxd



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Legend

- Administrative Boundary
- Model Extent
- Main River
- Ordinary Watercourse
- Culverted Watercourse
- Direction of flow
- Critical Drainage Areas

Flood Depth (m)

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

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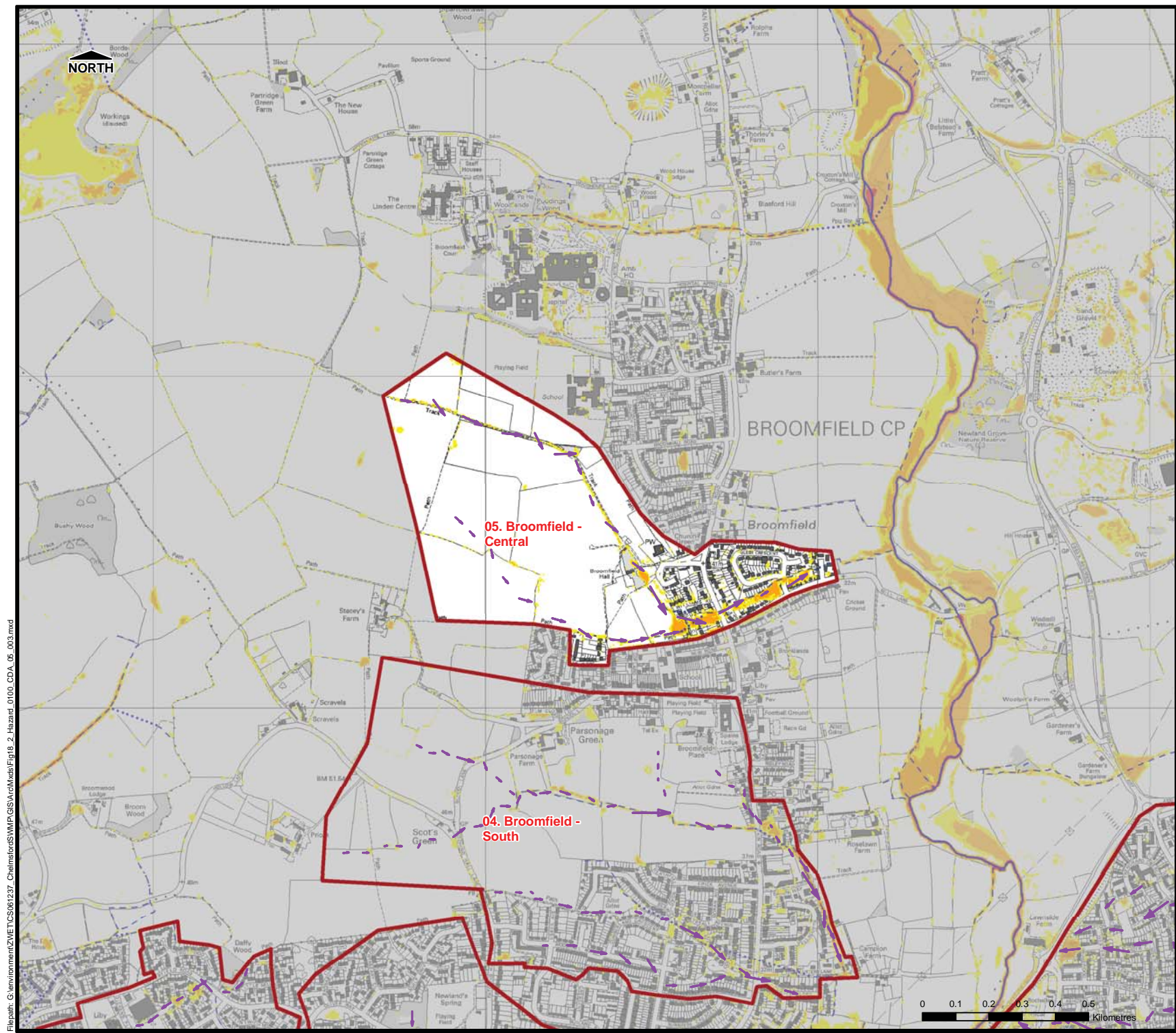
**Surface Water Flood Depth
1 in 100yr, 3hr duration
Critical Drainage Area
05. Broomfield - Central**

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FIGURE 18.1

Filepath: G:\environment\2WE\TCS061237 - Chelmsford\SWMP\GIS\ArcMxds\Fig18_2_Hazard_0100_CDA_05_003.mxd




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Legend

- Administrative Boundary
- Model Extent
- Main River
- Ordinary Watercourse
- Culverted Watercourse
- Direction of flow
- Critical Drainage Areas
- Flood Hazard**
 - Caution (Very Low Hazard)
 - Moderate (Danger for Some)
 - Significant (Danger for Most)
 - Extreme (Danger for All)

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Surface Water Flood Hazard
1 in 100yr, 3hr duration
Critical Drainage Area
05. Broomfield - Central

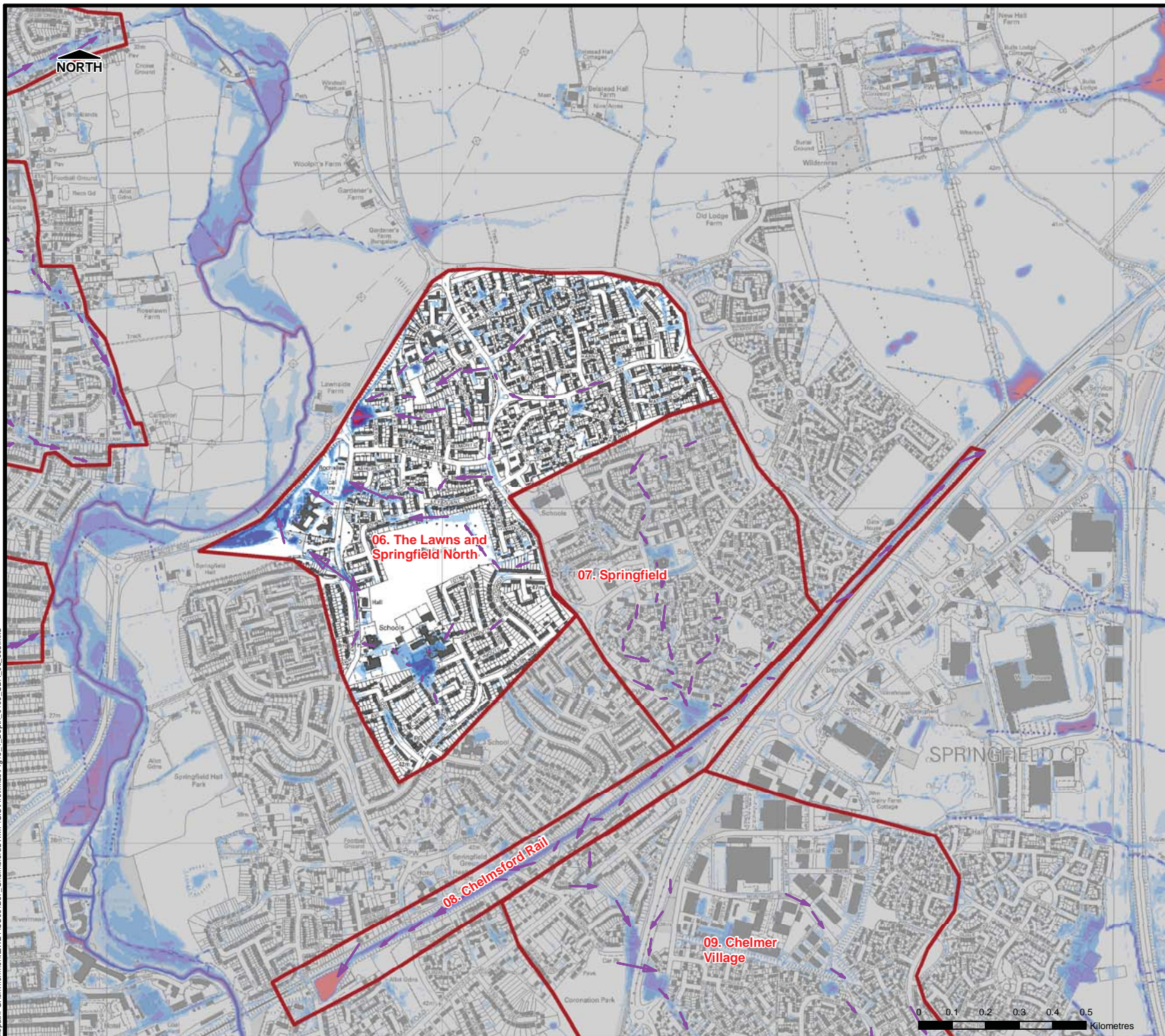
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FIGURE 18.2

Filepath: G:\environment\2WE\TCS061237-ChelmsfordSWMP\GIS\ArcMxds\Fig19_1_Depth_0100_CDA_06_003.mxd



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Legend

- Administrative Boundary
- Model Extent
- Main River
- Ordinary Watercourse
- Culverted Watercourse
- Direction of flow
- Critical Drainage Areas

Flood Depth (m)

- < 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

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**Surface Water Flood Depth
1 in 100yr, 3hr duration
Critical Drainage Area
06. The Lawns and Springfield North**

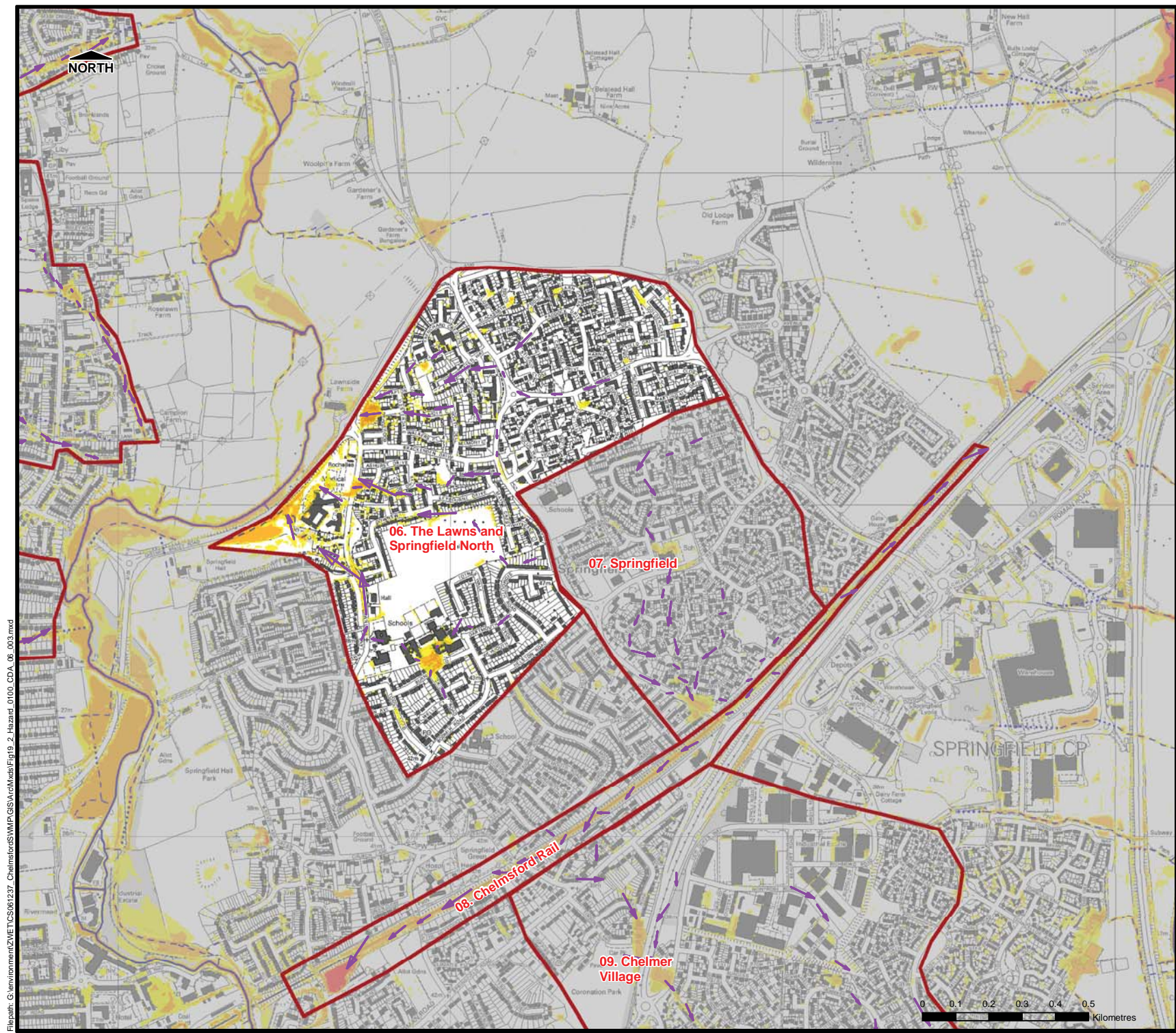
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FIGURE 19.1

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Legend

- Administrative Boundary
- Model Extent
- Main River
- Ordinary Watercourse
- Culverted Watercourse
- Direction of flow
- Critical Drainage Areas

Flood Hazard

- Caution (Very Low Hazard)
- Moderate (Danger for Some)
- Significant (Danger for Most)
- Extreme (Danger for All)

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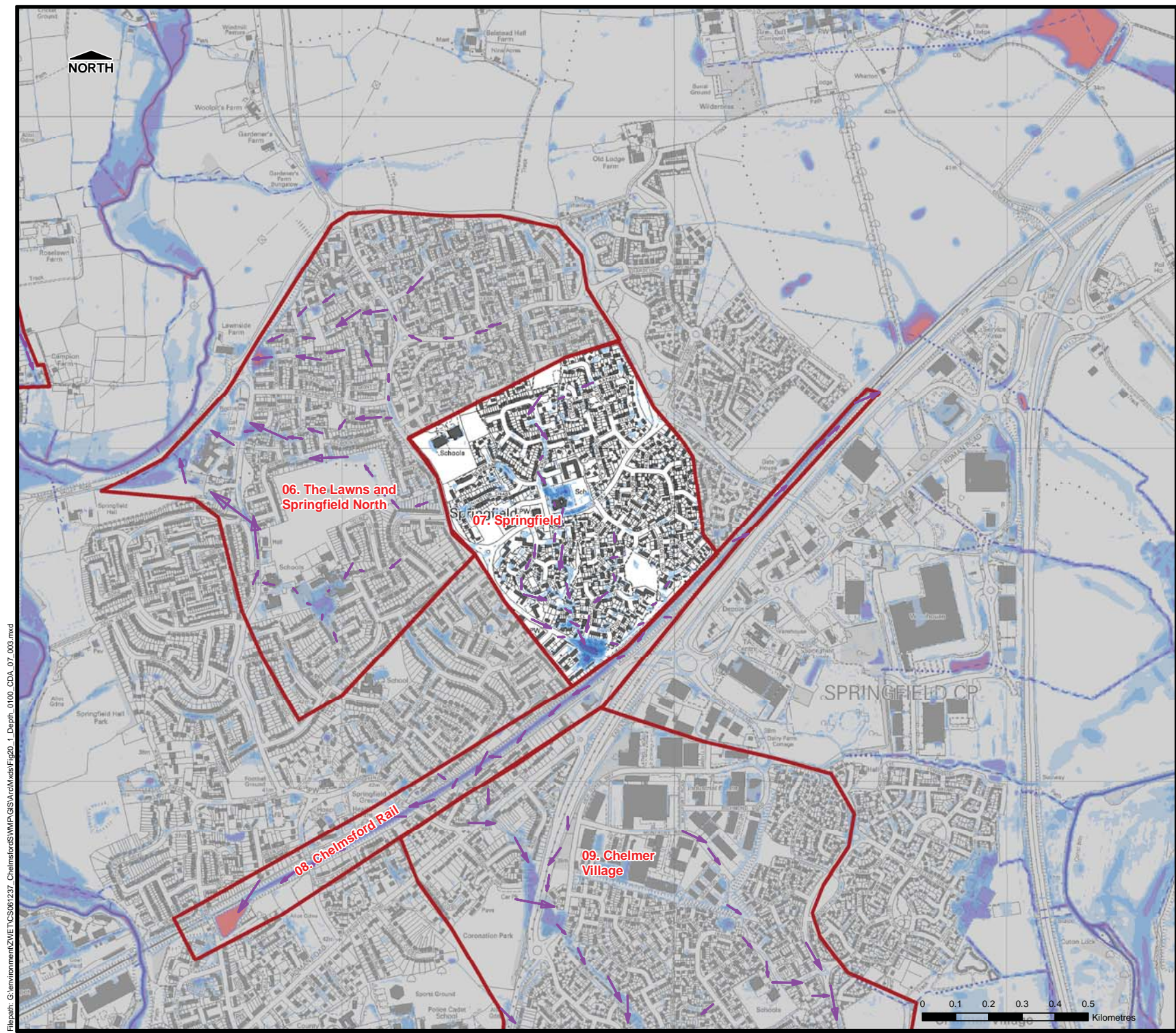
**Surface Water Flood Hazard
1 in 100yr, 3hr duration
Critical Drainage Area
06. The Lawns and Springfield North**

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FIGURE 19.2

Filepath: G:\environment\2WE\TICS061237 ChelmsfordSWMP\GIS\ArcMxds\Fig20_1_Depth_0100_CDA_07_003.mxd



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Legend

- Administrative Boundary
- Model Extent
- Main River
- Ordinary Watercourse
- Culverted Watercourse
- Direction of flow
- Critical Drainage Areas

Flood Depth (m)

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

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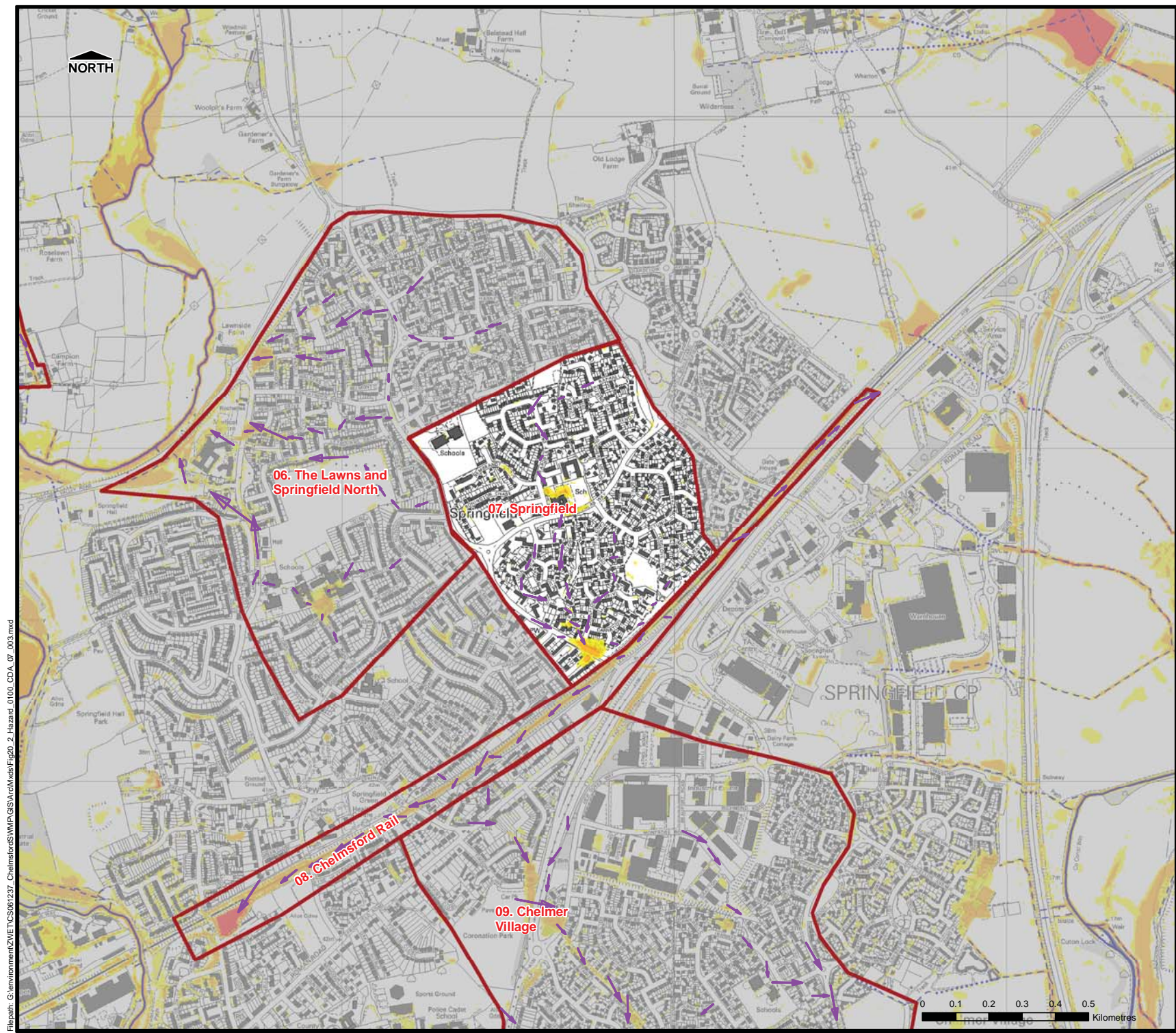
**Surface Water Flood Depth
1 in 100yr, 3hr duration
Critical Drainage Area
07. Springfield**

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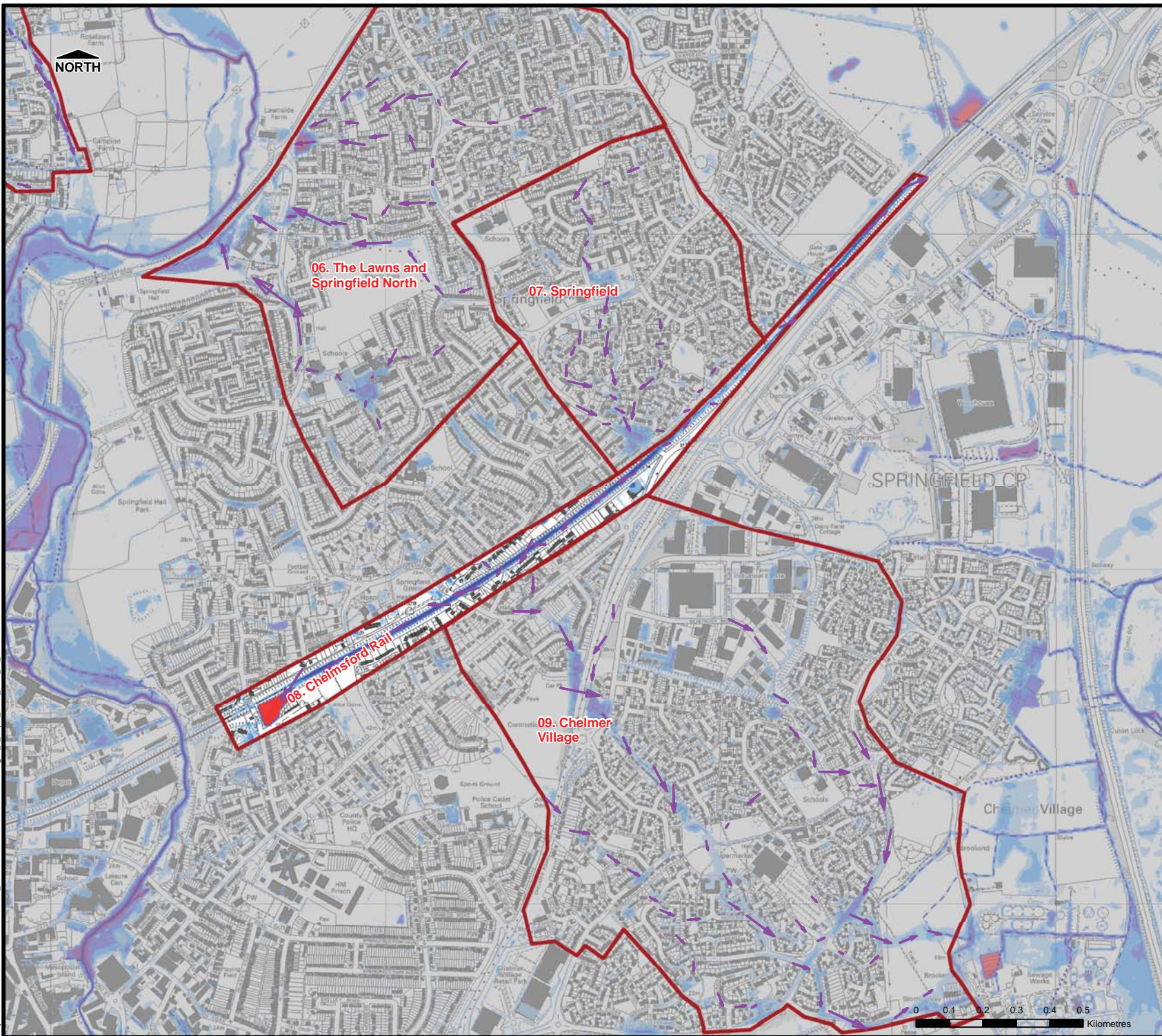
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Belgravia,
London
SW1W 0AU

FIGURE 20.1

Filepath: G:\environment\2WE\TCS061237 - Chelmsford\SWMP\GIS\ArcMxds\Fig20_2_Hazard_0100_CDA_07_003.mxd



Filepath: G:\environment\2WE\TCS061237 - Chelmsford\SWMP\GIS\ArcMxds\Fig21_1_Depth_0100_CDA_08_003.mxd



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Legend

- Administrative Boundary
- Model Extent
- Main River
- Ordinary Watercourse
- Culverted Watercourse
- Direction of flow
- Critical Drainage Areas
- Flood Depth (m)**
 - < 0.1m
 - 0.1m to 0.25m
 - 0.25m to 0.5m
 - 0.5m to 1.0m
 - 1.0m to 1.5m
 - > 1.5m

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**Surface Water Flood Depth
1 in 100yr, 3hr duration
Critical Drainage Area
08. Chelmsford Rail**

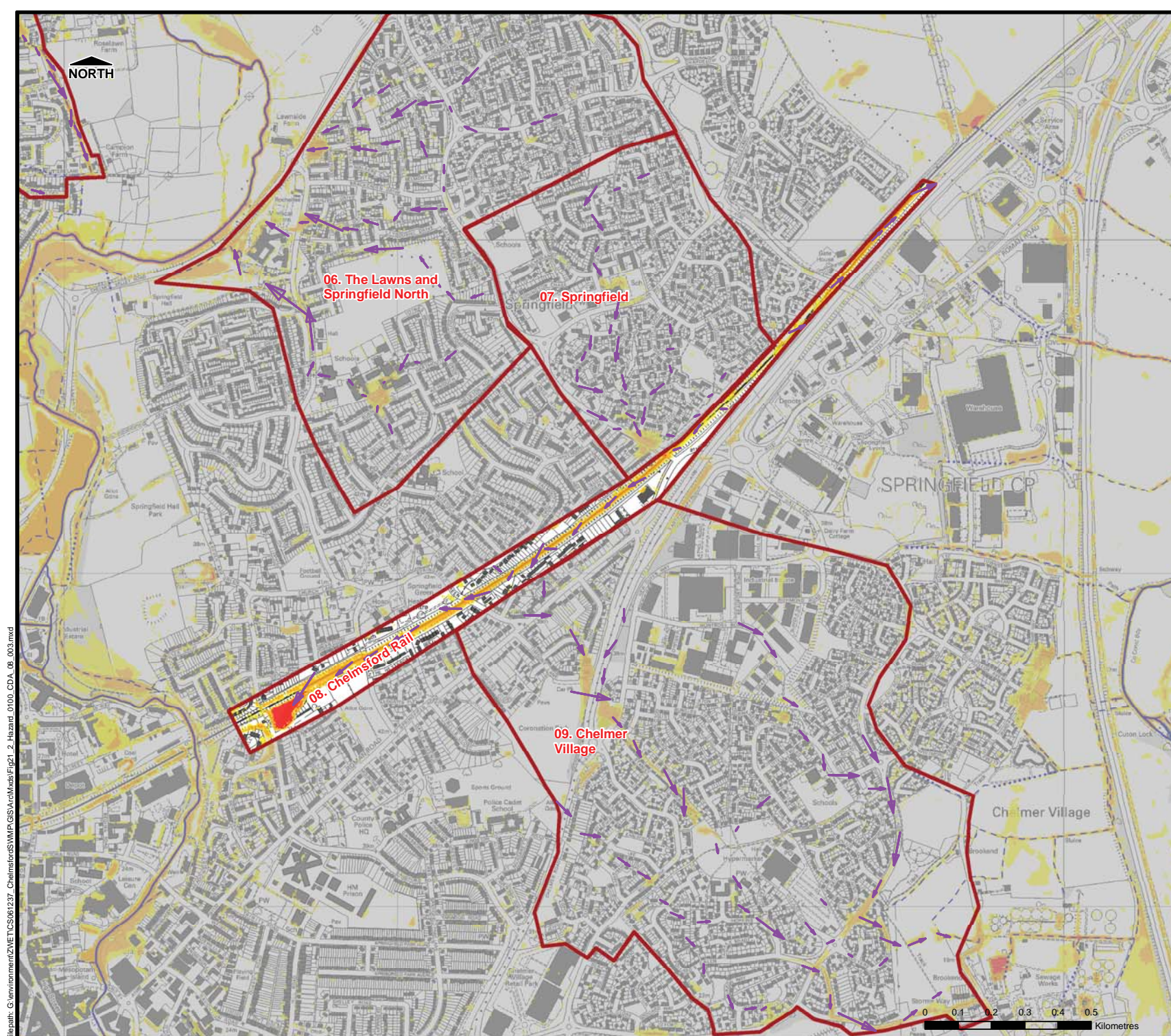
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FIGURE 21.1

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Legend

- Administrative Boundary
- Model Extent
- Main River
- Ordinary Watercourse
- Culverted Watercourse
- Direction of flow
- Critical Drainage Areas

Flood Hazard

- Caution (Very Low Hazard)
- Moderate (Danger for Some)
- Significant (Danger for Most)
- Extreme (Danger for All)

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Scale at A3	Date	Drawn by	Approved by
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**Surface Water Flood Hazard
1 in 100yr, 3hr duration
Critical Drainage Area
08. Chelmsford Rail**

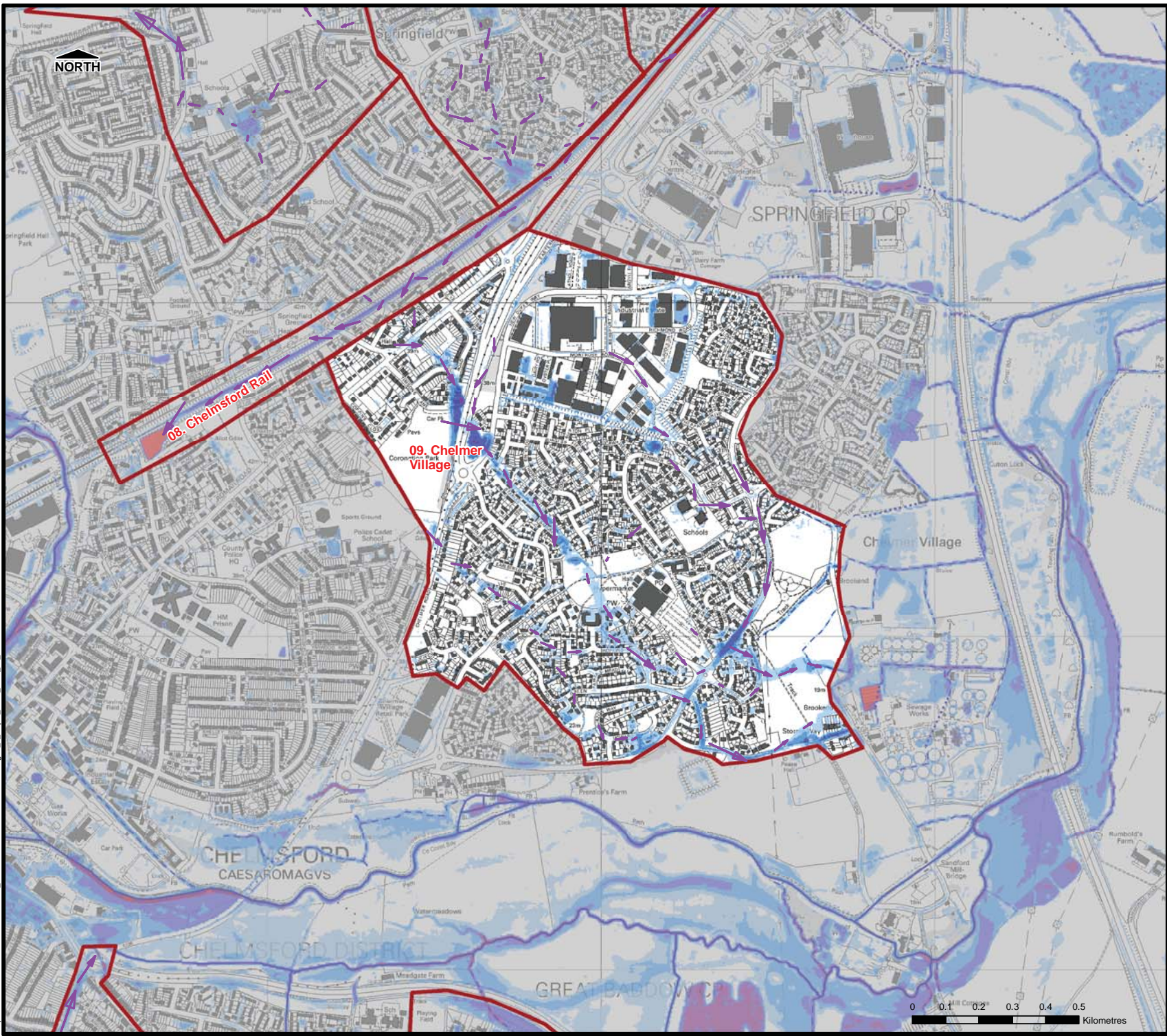
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FIGURE 21.2

Filepath: G:\environment\2WET\CS061237 - Chelmsford SWMP\GIS\ArcMxds\Fig22_1_Depth_0100_CDA_09_003.mxd



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Legend

- Administrative Boundary
 - Model Extent
 - Main River
 - Ordinary Watercourse
 - Culverted Watercourse
 - Direction of flow
 - Critical Drainage Areas
- Flood Depth (m)**
- < 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

**Chelmsford City Council
Essex County Council**



Surface Water Management Plan

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Scale at A3	Date	Drawn by	Approved by
1:11,000	July 2013	G.ATHANASIA	M.ARTHUR

**Surface Water Flood Depth
1 in 100yr, 3hr duration
Critical Drainage Area
09. Chelmer Village**

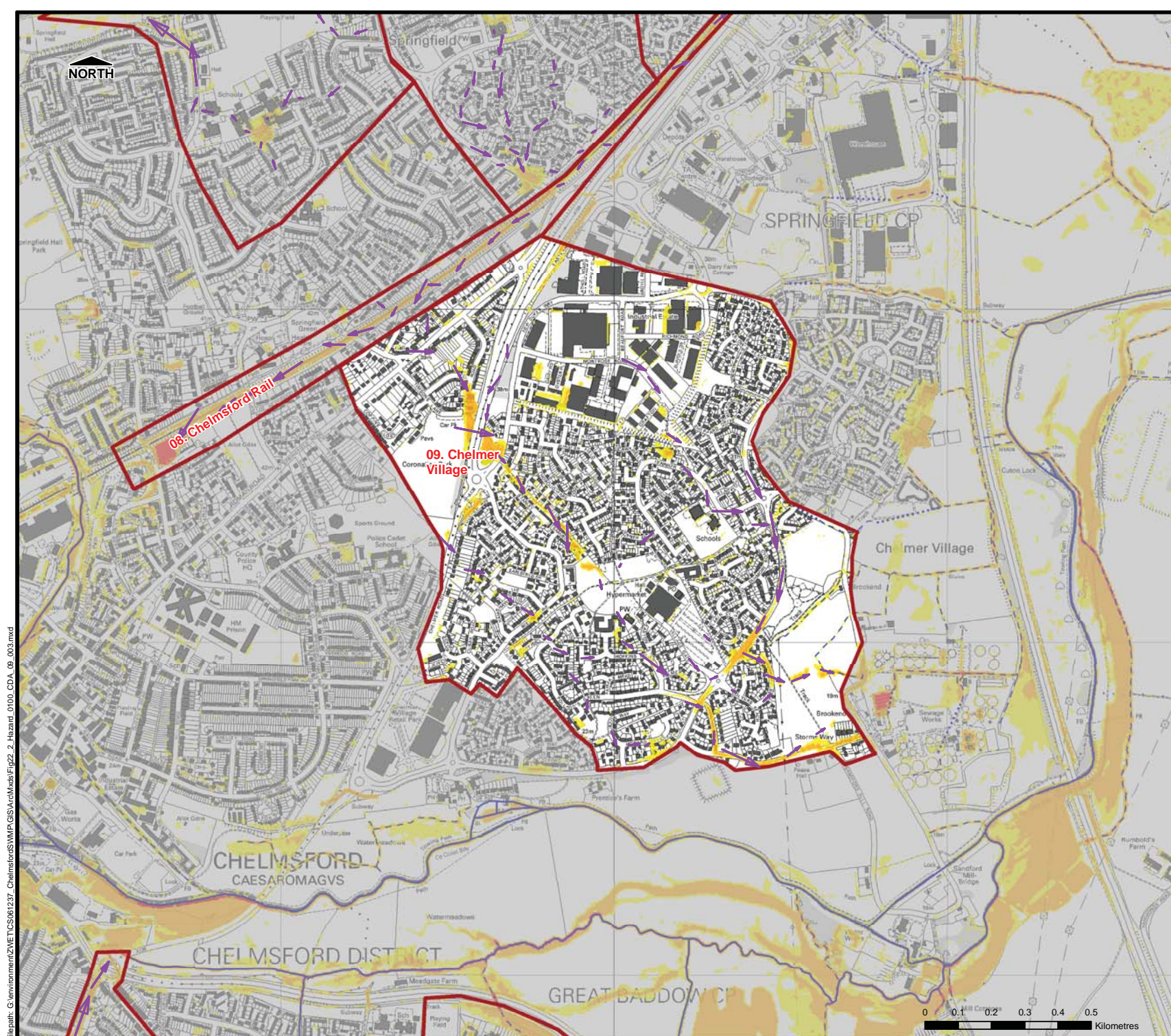
Consultant

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Flood Risk Management

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Level Seven,
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Belgravia,
London
SW1W 0AU

FIGURE 22.1

Filepath: G:\environment\2WE\TCS061237 - ChelmsfordSWMP\GIS\ArcMxds\Fig22_2_Hazard_0100_CDA_09_003.mxd



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Legend

- Administrative Boundary
- Model Extent
- Main River
- Ordinary Watercourse
- Culverted Watercourse
- Direction of flow
- Critical Drainage Areas

Flood Hazard

- Caution (Very Low Hazard)
- Moderate (Danger for Some)
- Significant (Danger for Most)
- Extreme (Danger for All)

Notes

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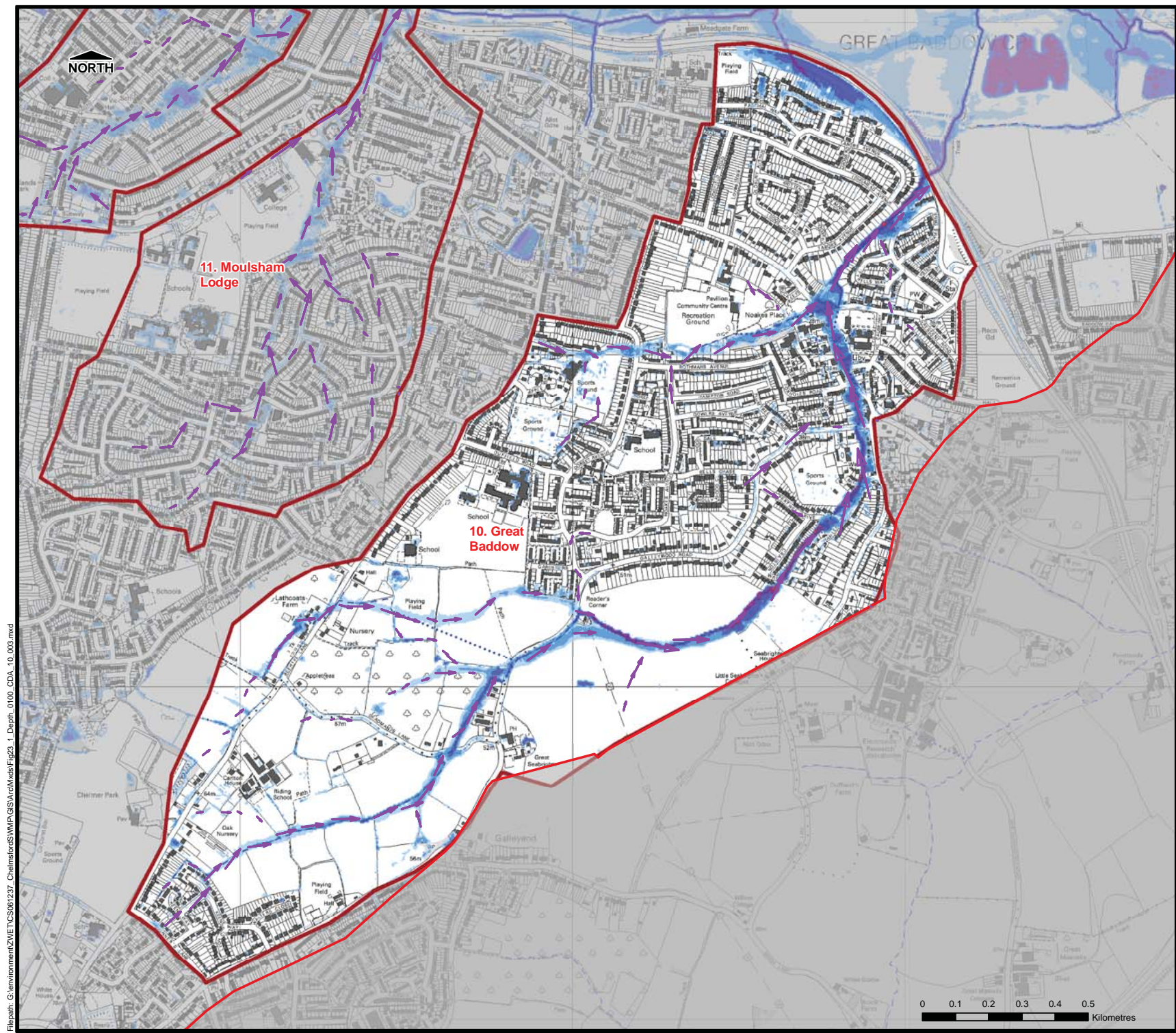
**Surface Water Flood Hazard
1 in 100yr, 3hr duration
Critical Drainage Area
09. Chelmer Village**

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London
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FIGURE 22.2

Filepath: G:\environment\2WE\TCS061237 - Chelmsford\SWMP\GIS\ArcMxds\Fig23_1_Depth_0100_CDA_10_003.mxd



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Legend

Administrative Boundary

Model Extent

Main River

Ordinary Watercourse

Culverted Watercourse

Direction of flow

Critical Drainage Areas

Flood Depth (m)

< 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

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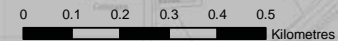
**Surface Water Flood Depth
1 in 100yr, 3hr duration
Critical Drainage Area
10. Great Baddow**

Consultant

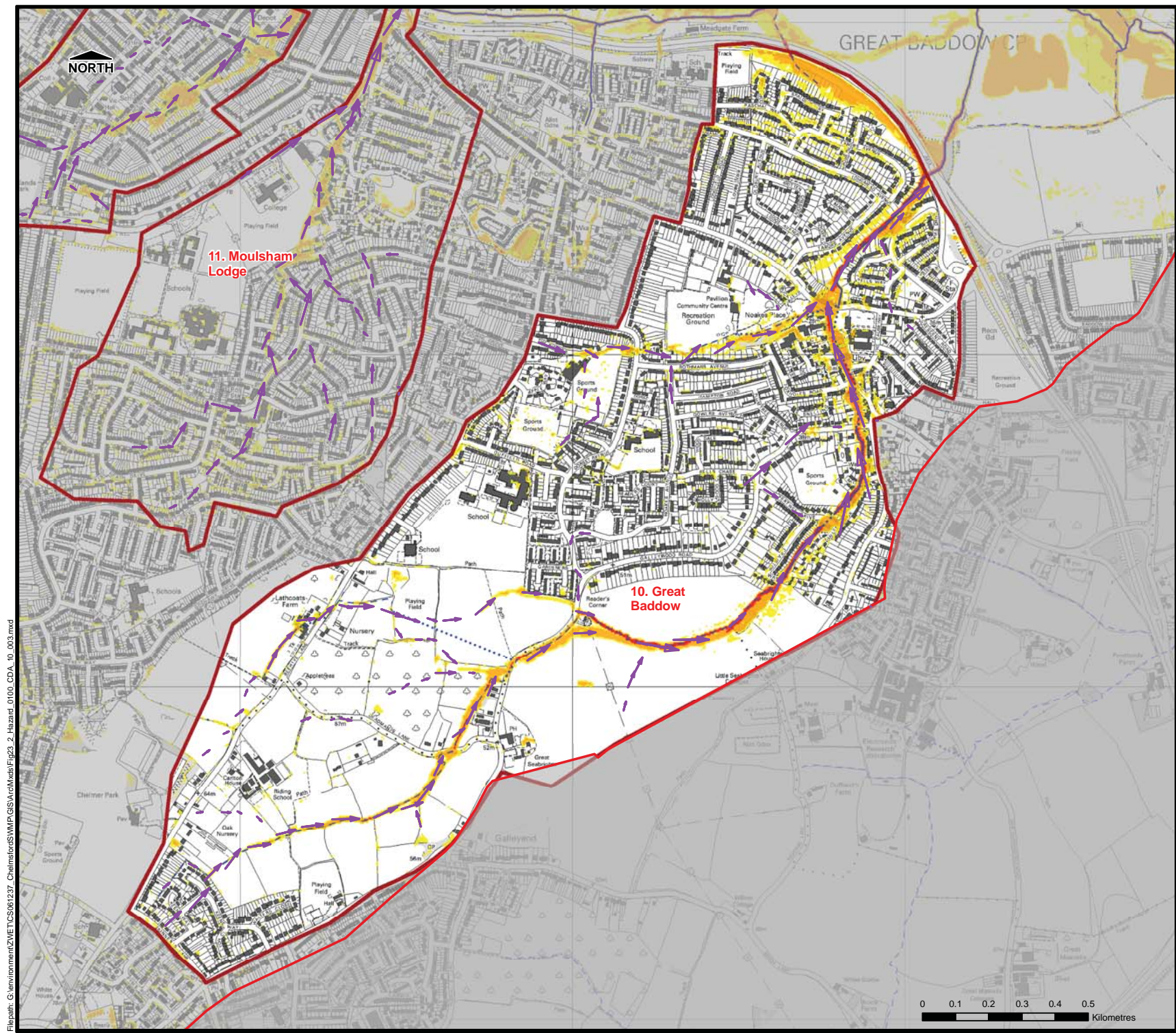
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FIGURE 23.1



Filepath: G:\environment\2WE\TCS061237 - Chelmsford\SWMP\GIS\ArcMxds\Fig23_2_Hazard_0100_CDA_10_003.mxd



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Legend

- Administrative Boundary
 - Model Extent
 - Main River
 - Ordinary Watercourse
 - Culverted Watercourse
 - Direction of flow
 - Critical Drainage Areas
- Flood Hazard**
- Caution (Very Low Hazard)
 - Moderate (Danger for Some)
 - Significant (Danger for Most)
 - Extreme (Danger for All)

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Surface Water Flood Hazard
1 in 100yr, 3hr duration
Critical Drainage Area
10. Great Baddow

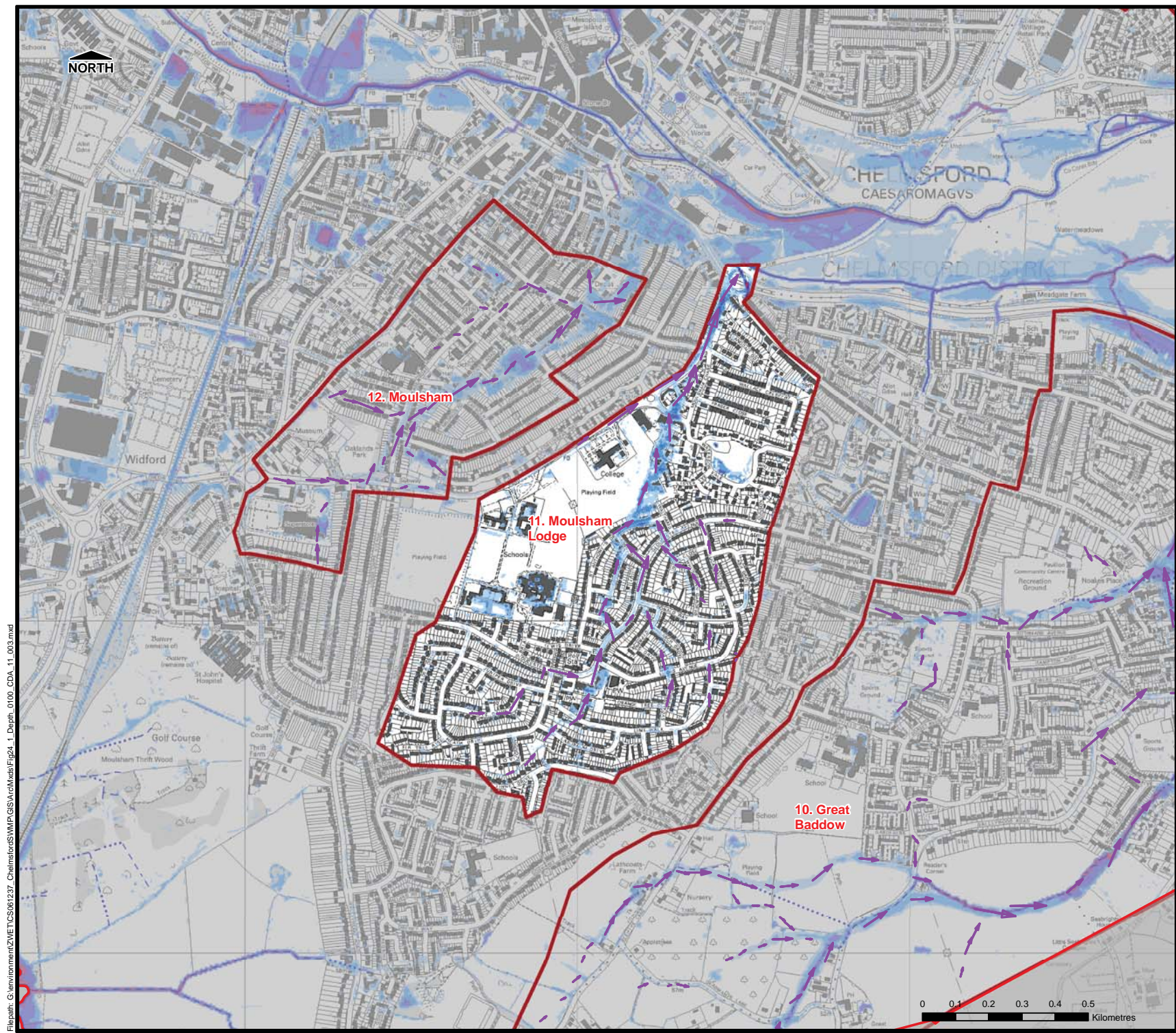
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FIGURE 23.2

Filepath: G:\environment\2WE\TCS061237-Chelmsford\SWMP\GIS\ArcMxds\Fig24_1_Depth_0100_CDA_11_003.mxd



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Legend

- Administrative Boundary
- Model Extent
- Main River
- Ordinary Watercourse
- Culverted Watercourse
- Direction of flow
- Critical Drainage Areas

Flood Depth (m)

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

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**Surface Water Flood Depth
1 in 100yr, 3hr duration
Critical Drainage Area
11. Moulsham Lodge**

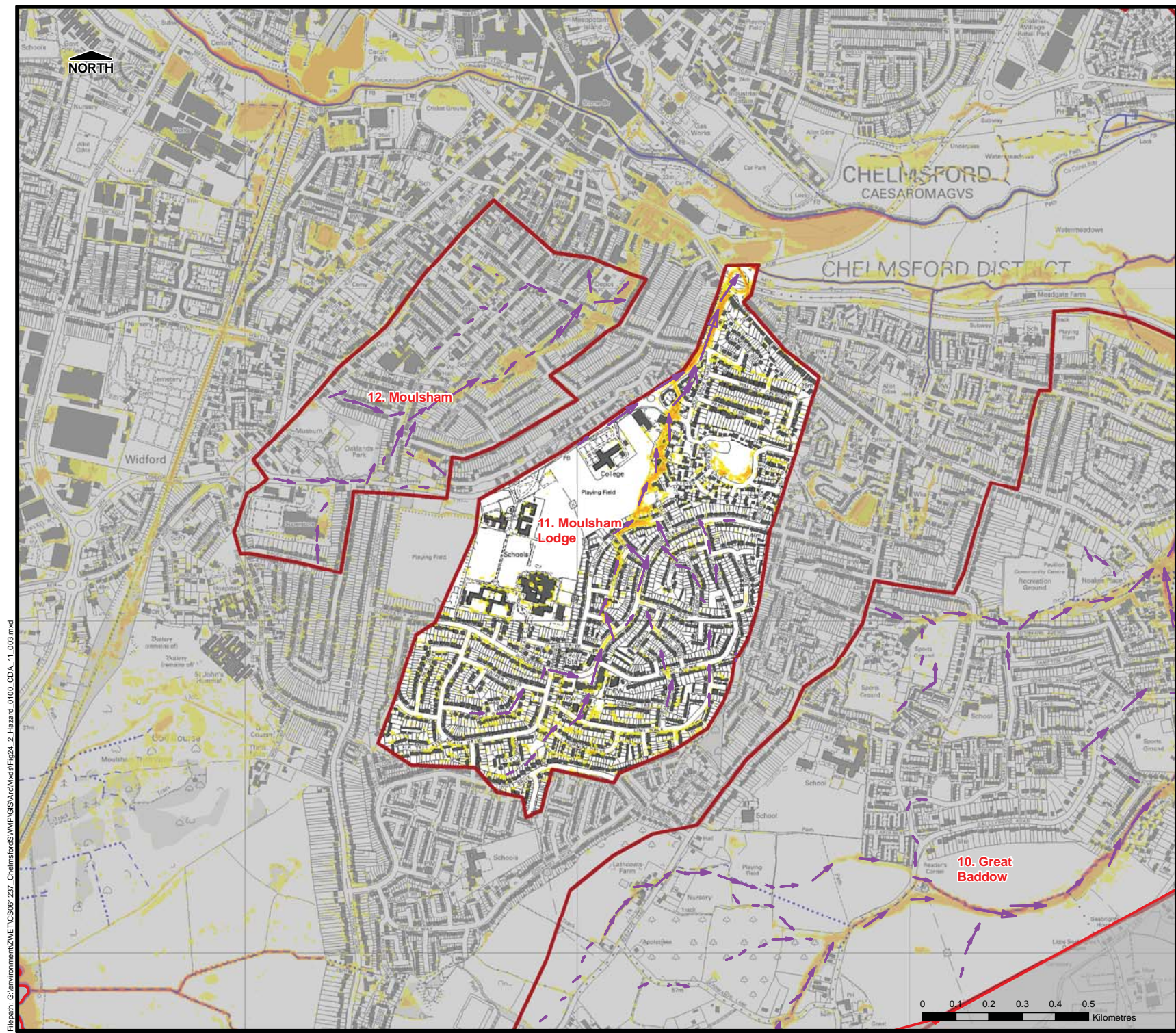
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FIGURE 24.1

Filepath: G:\environment\2WE\TCS061237_ChelmsfordSWMP\GIS\ArcMap\Fig24_2_Hazard_0100_CDA_11_003.mxd



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Legend

- Administrative Boundary
- Model Extent
- Main River
- Ordinary Watercourse
- Culverted Watercourse
- Direction of flow
- Critical Drainage Areas

Flood Hazard

- Caution (Very Low Hazard)
- Moderate (Danger for Some)
- Significant (Danger for Most)
- Extreme (Danger for All)

Notes

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Scale at A3	Date	Drawn by	Approved by
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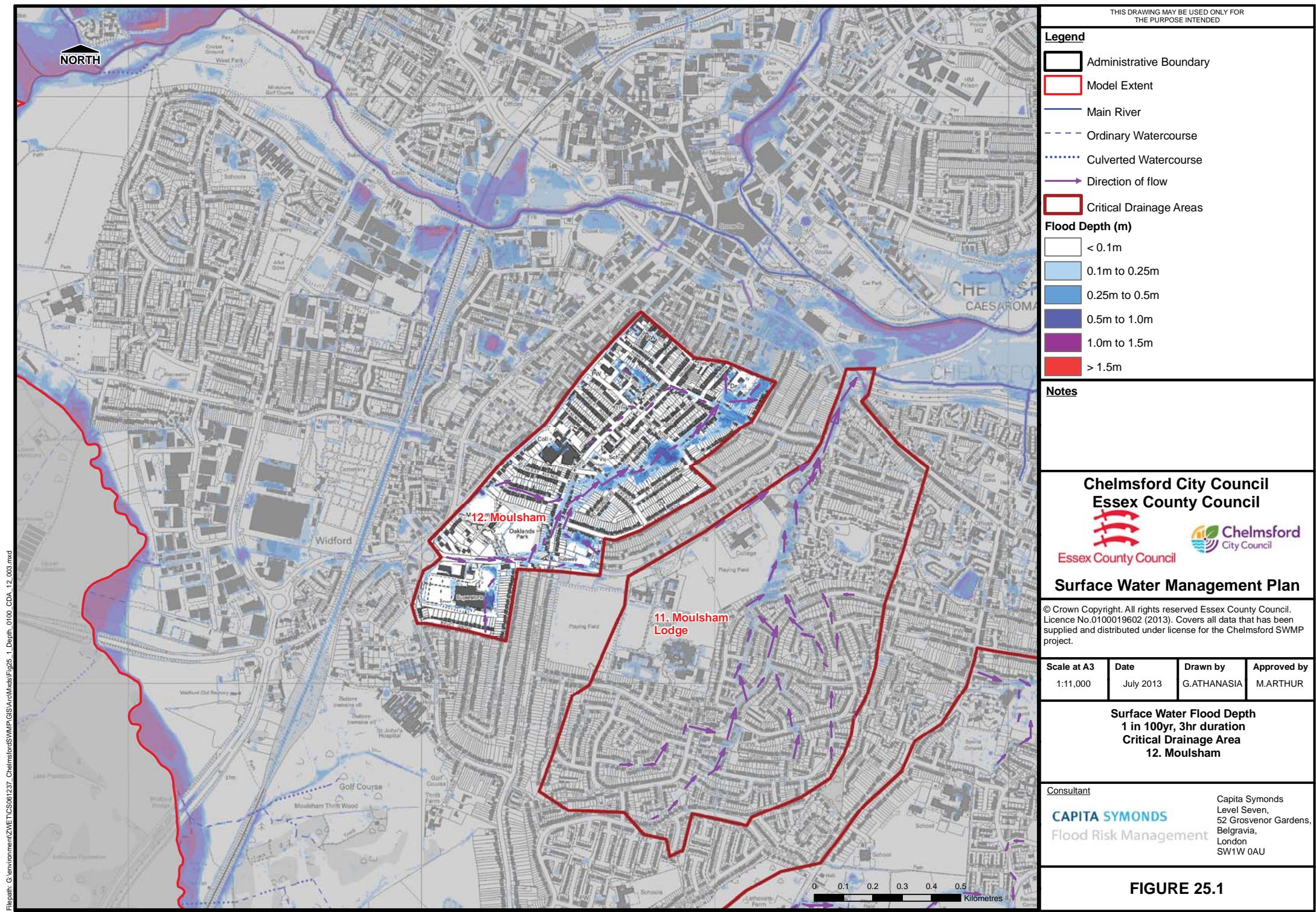
**Surface Water Flood Hazard
1 in 100yr, 3hr duration
Critical Drainage Area
11. Moulsham Lodge**

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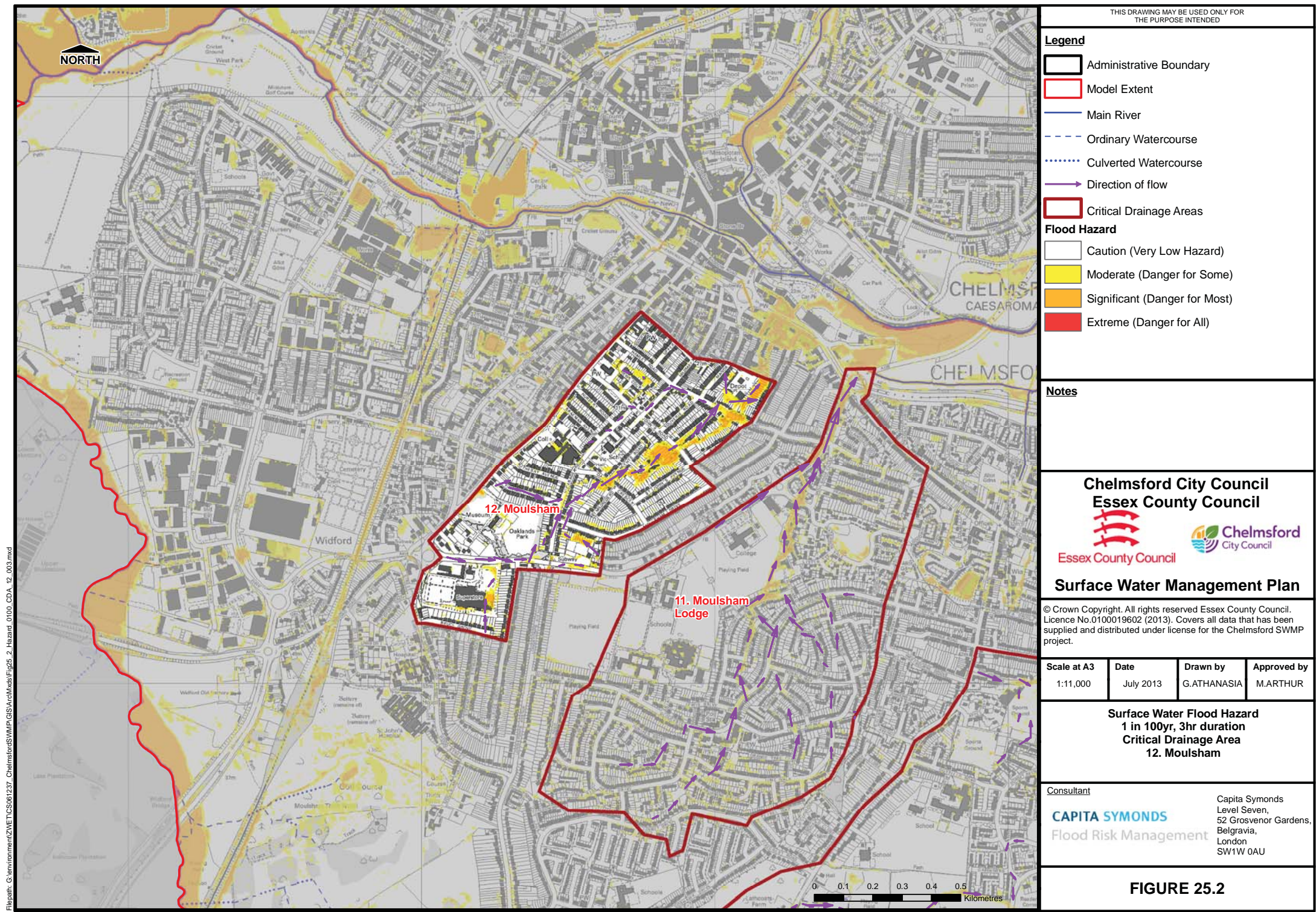
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FIGURE 24.2

Filepath: G:\environment\2WE\TICS061237 - ChelmsfordSWMP\GIS\ArcMads\Fig25_1_Depth_0100_CDA_12_003.mxd



Filepath: G:\environment\2WE\TCS061237 - ChelmsfordSWMP\GIS\ArcMxds\Fig25_2_Hazard_0100_CDA_12_003.mxd



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Legend



- Administrative Boundary
- Model Extent
- Main River
- Ordinary Watercourse
- Culverted Watercourse
- Direction of flow
- Critical Drainage Areas

Flood Hazard

- Caution (Very Low Hazard)
- Moderate (Danger for Some)
- Significant (Danger for Most)
- Extreme (Danger for All)

Notes

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**Surface Water Flood Hazard
1 in 100yr, 3hr duration
Critical Drainage Area
12. Moulsham**

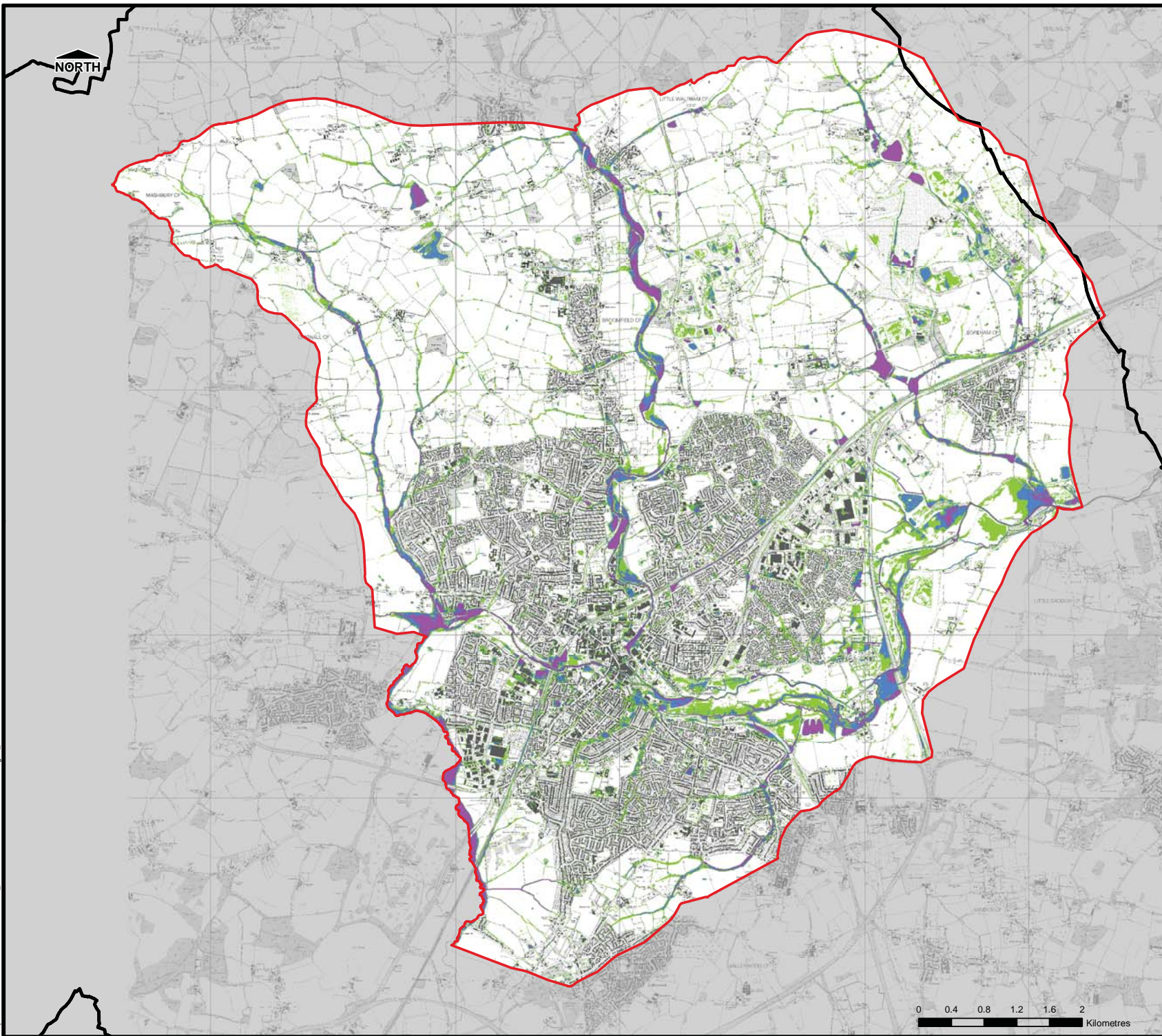
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FIGURE 25.2

Filepath: G:\environment\2WE\TICS061237 - ChelmsfordSWMP\GIS\ArcMxds\Fig26_ResistanceAdvice.mxd



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Legend

Administrative Boundary

Model Extent

Resistance/ Resilience

< 0.1m

Resistance*

Resilience*

Water Entry Strategy*

* Resistance = Design water depth
up to 0.3m
Resilience = Design water depth
from 0.3m to 0.6m
Water Entry Strategy = Design water
depth above 0.6m

Notes

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1:45,000

Date
July 2013

Drawn by
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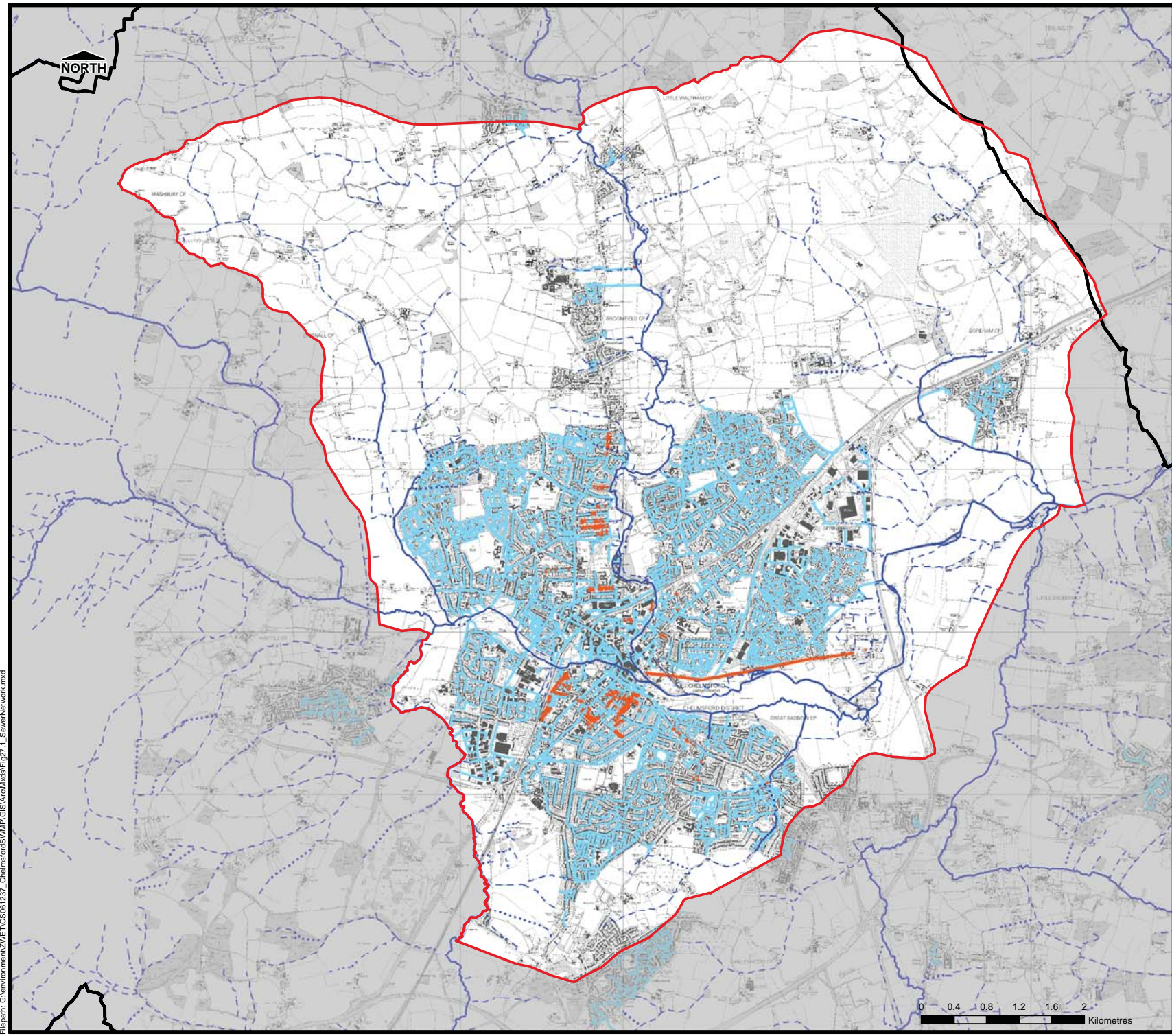
Resistance/ Resilience Advice

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FIGURE 26



THIS DRAWING MAY BE USED ONLY FOR
THE PURPOSE INTENDED

Legend

- Administrative Boundary
- Model Extent
- Main River
- Ordinary Watercourse
- Culverted Watercourse
- Surface Water Sewer
- Combined Sewer

Notes

1. Anglian Water network only.

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Sewer Network

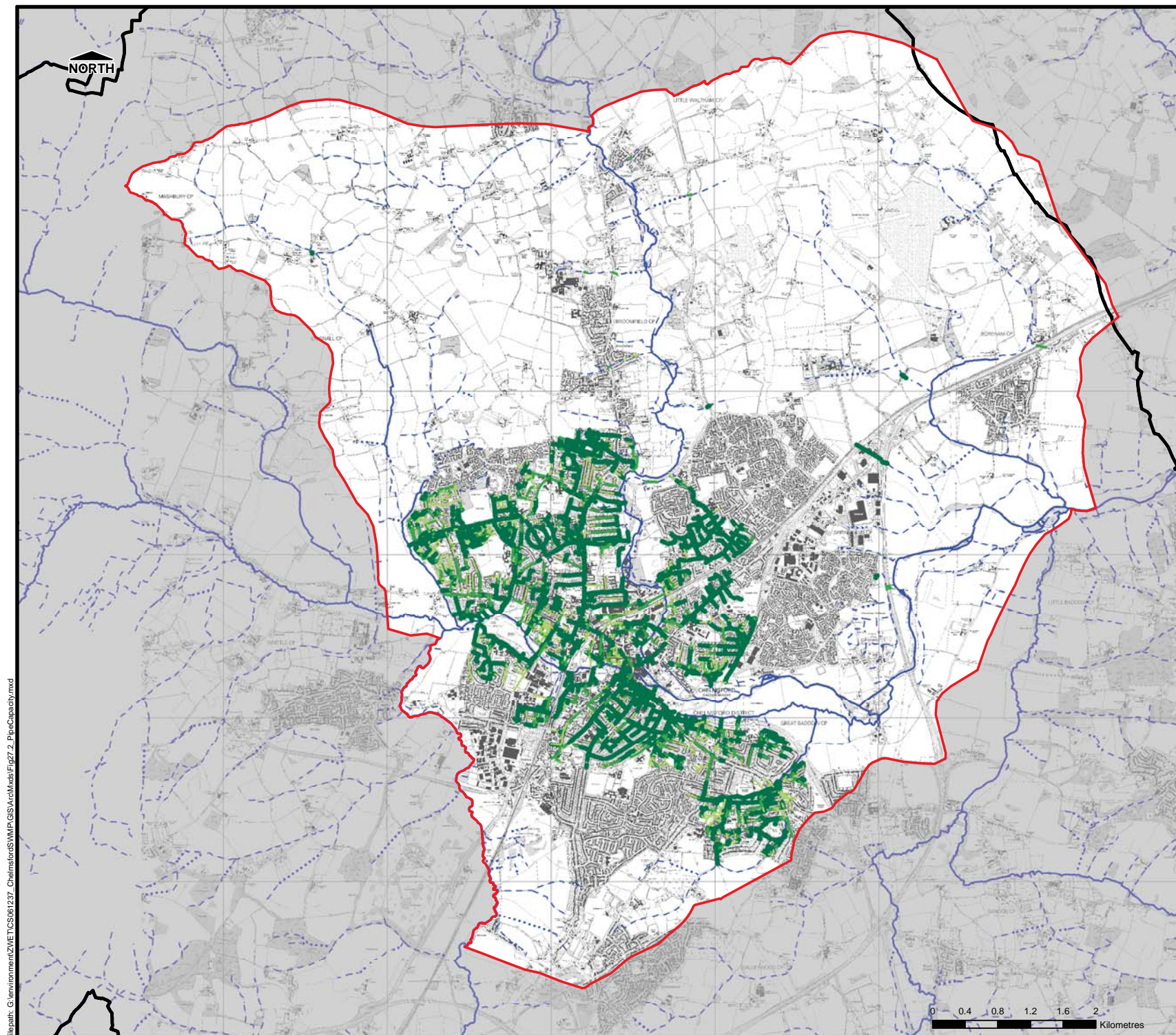
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FIGURE 27.1

Filepath: G:\environment\2WE\TICS\061237 - Chelmsford\SWMP\GIS\ArcMxds\Fig27.2_PipeCapacity.mxd



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Legend

- Administrative Boundary
- Model Extent
- Main River
- Ordinary Watercourse
- Culverted Watercourse
- Pipe Capacity Percentage Full**
 - 0 - 25 %
 - 25 - 75 %
 - 75 - 100 %

Notes

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**Pipe Capacity Percentage Full
1 in 100yr, 3hr duration**

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FIGURE 27.2