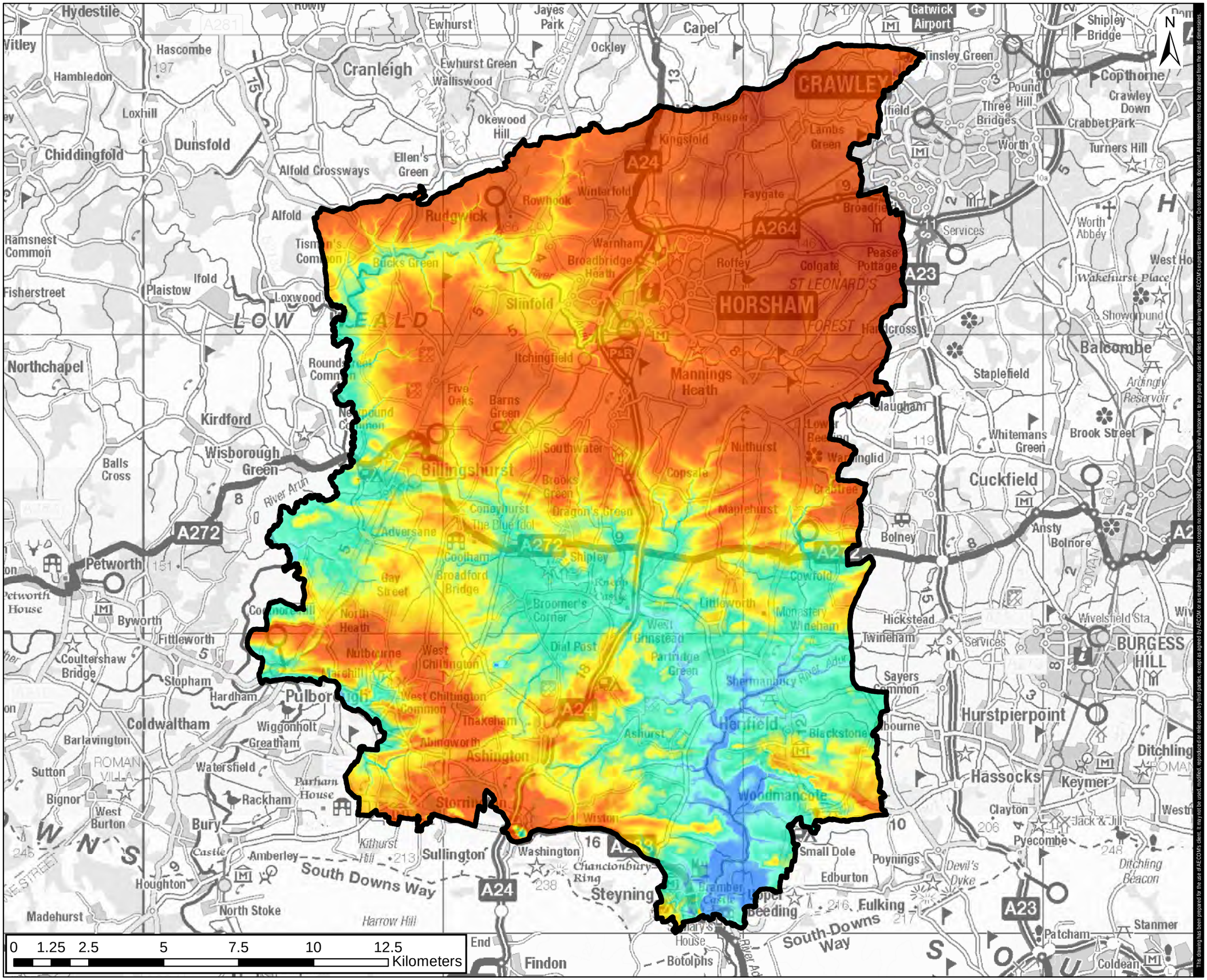
Revision: 1 Drawn: AH Checked: LM/EC Approved: RM Date: 2024-08-05

Filename: Q:\60730513_Horsham_SFRA\900_CAD_GIS\920_GIS\mxds\HSFRA_L1_Figure1_Topography_02.mxd



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PROJECT

Horsham District Council
Level 1 Strategic Flood Risk Assessment

CLIENT

Horsham District Council

CONSULTANT

AECOM Limited
3rd Floor Portwall Place
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Bristol, United Kingdom
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LEGEND

Horsham District Boundary

LiDAR Topographic Survey (mAOD)

- <5
- 10
- 20
- 30
- 50
- 70
- >100

NOTES

1: Light Detection and Ranging (LIDAR) is an airborne mapping technique which uses laser to measure the distance between the aircraft and the ground.
2: This dataset has a spatial resolution of 1m and contains digital elevation data derived from surveys carried out between 2000 and 2020

ISSUE PURPOSE

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PROJECT NUMBER

60730513

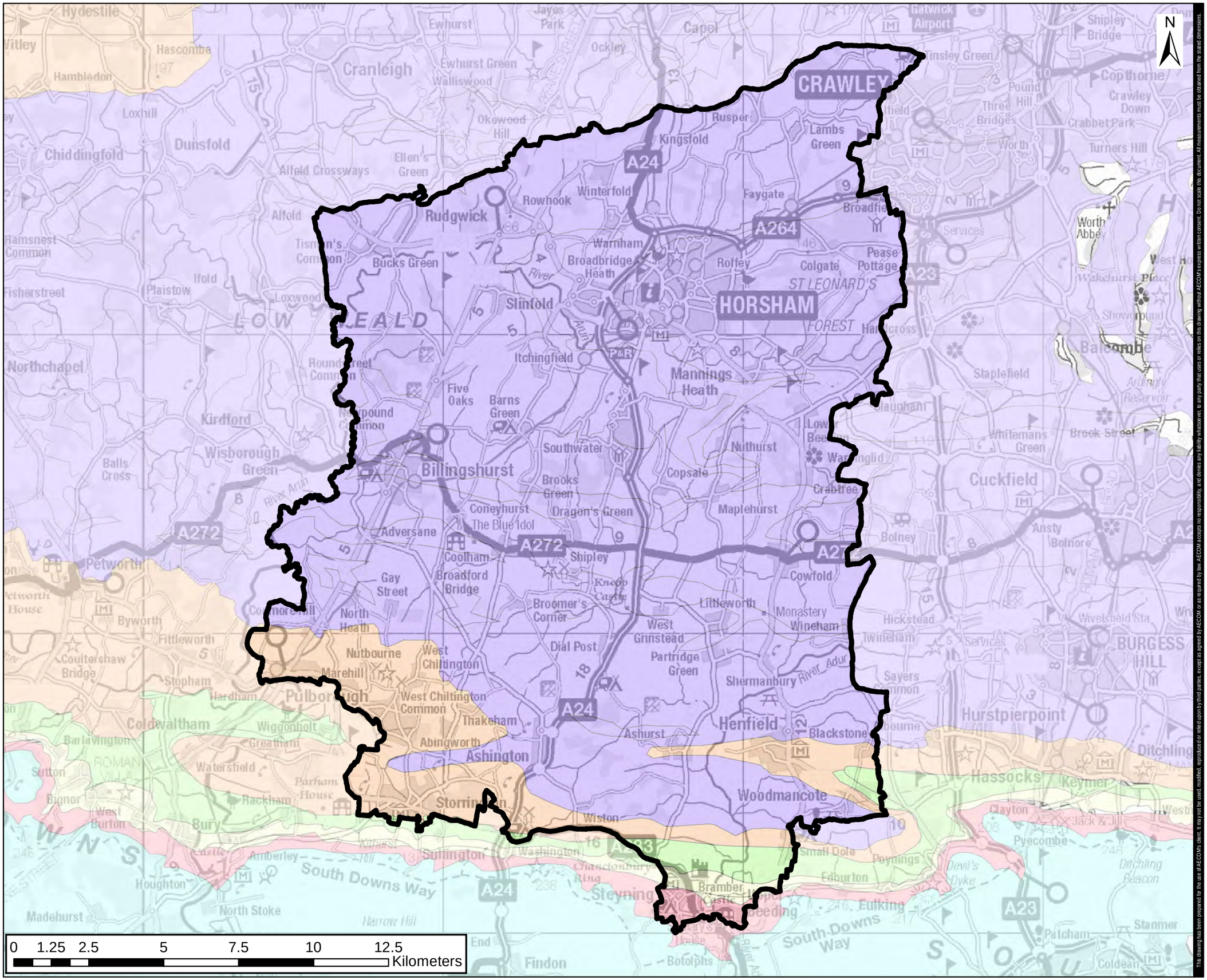
FIGURE TITLE

Topography

FIGURE NUMBER

Figure A1

Revision: 1 Drawn: AH Checked: LM/EC Approved: RM Date: 2024-08-05



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Horsham District Council
Level 1 Strategic Flood Risk Assessment

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LEGEND

Horsham District Boundary

Bedrock Geology

- GAULT FORMATION
- GREY CHALK SUBGROUP
- LAMBETH GROUP
- LOWER GREENSAND GROUP
- UPPER GREENSAND FORMATION
- WEALDEN GROUP
- WHITE CHALK SUBGROUP

NOTES

1: This map shows the bands of Bedrock Geology as provided by the Horsham District Council.

2: Superficial Deposits data was requested from the Horsham District Council however this has not been provided.

3: This map is intended to provide a strategic overview of the geology and should not be used to assess the flood risk for individual properties.

ISSUE PURPOSE

FINAL

PROJECT NUMBER

60730513

FIGURE TITLE

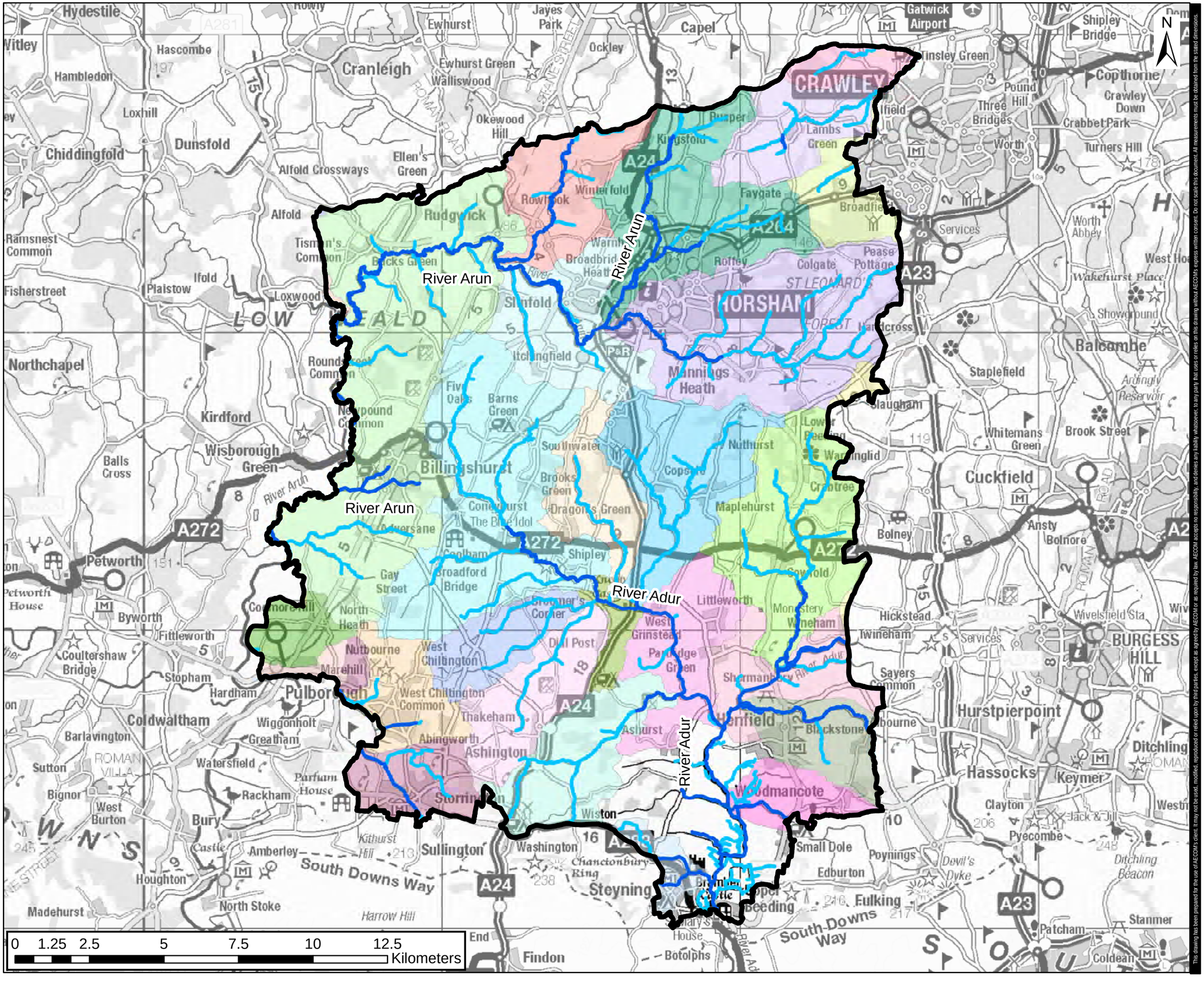
Bedrock Geology

FIGURE NUMBER

Figure A2

Filename: Q:\60730513_Horsham_SFRA\900_CAD_GIS\920_GIS\mxd\HSFRA_L1_Figure2_Bedrock_Geology_And_Superficial_Deposits01.mxd

Revision: 1 Drawn: AH Checked: LM/EC Approved: RM Date: 2024-08-05



Filename: Q:\60730513_Horsham_SFRA1800_CAD_GIS\02D_GIS\mxds\HSFRA_L1_Figure3_Watercourses_And_River_Catchments_01.mxd

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Horsham District Council Level 1 Strategic Flood Risk Assessment

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LEGEND

- Horhsam District Boundary
- Main Rivers
- Ordinary Watercourses
- Adur (East)
- Adur (Hammer pond)
- Adur (Knepp)
- Adur (Lancing brook)
- Adur (Lockbridge)
- Adur East (Sakeham)
- Adur West
- Arun (U/S Pallingham)
- Arun Horsham
- Arun Source
- Arun downstream Pallingham Weir
- Baldhorns Brook
- Black Sewer
- Blakes Gill
- Boldings Brook
- Bolney Sewer
- Chess Stream
- Chilt
- Cowfold Stream
- Cranleigh Waters
- Deanoak Brook
- Honeybridge Stream
- Ifield Brook
- Knepp Mill Stream
- Loxwood Stream
- Mole upstream of Horley
- North River
- Ouse from Slaugham to Ardingly Resevoir
- Stor
- Western Rother
- Woodsmill Stream

NOTES

1:This map shows the WFD river waterbody catchments. Catchments are defined as as an area of land from which all surface run-off flows through a series of streams, rivers and, possibly, lakes to a particular point in the watercourse such as a river confluence. The WFD Catchments are provided on the Defra Data Services website (https://environment.data.gov.uk)

ISSUE PURPOSE

FINAL

PROJECT NUMBER

60730513

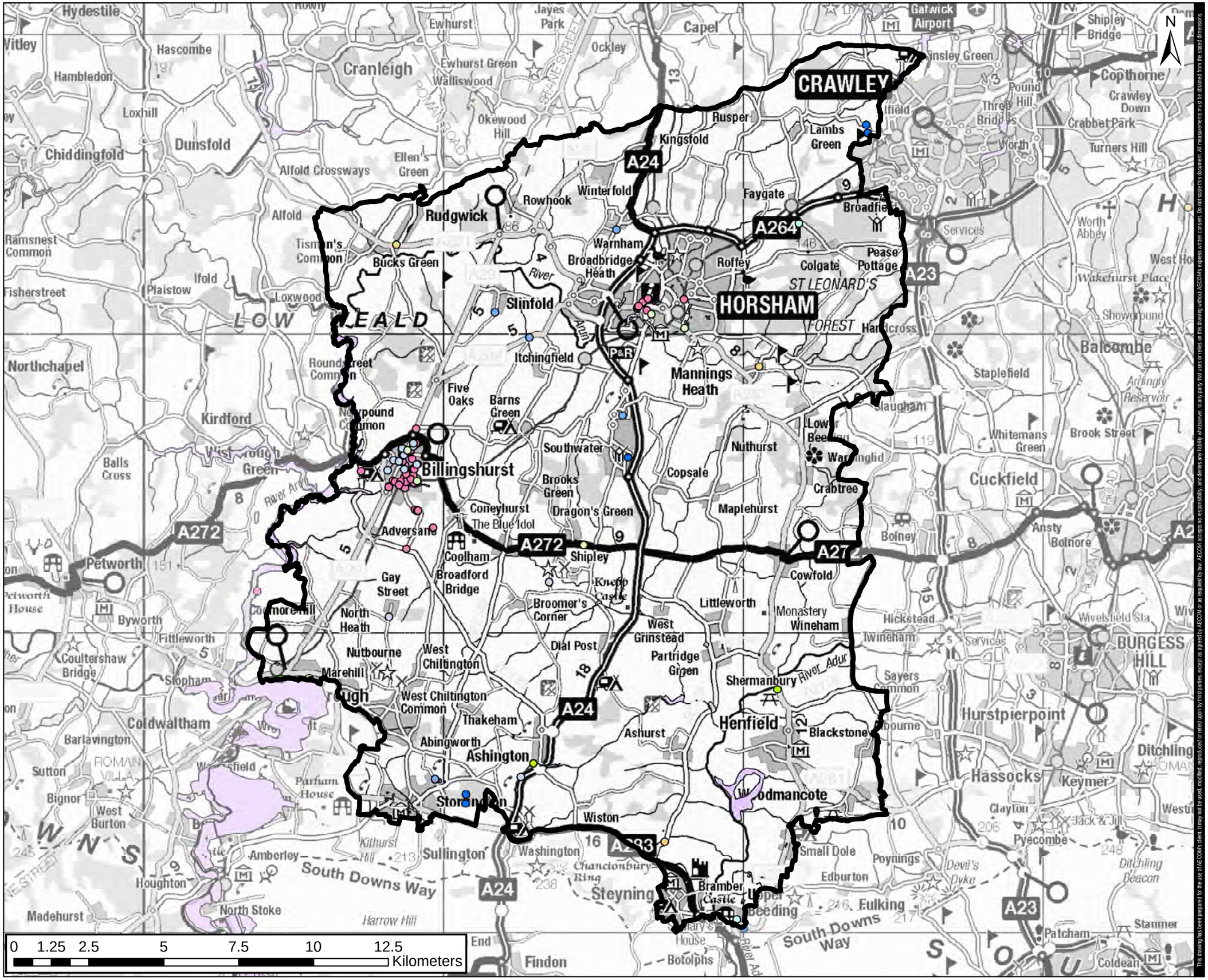
FIGURE TITLE

Watercourses and River Catchments

FIGURE NUMBER

Figure A3

Revision: 1 Drawn: AH Checked: LM/EC Approved: RM Date: 2024-08-05



Filename: Q:\60730513_Horsham_SFRA\900_CAD_GIS\920_GIS\mxds\HSFRA_L1_Figure4_Environment_Agency_Recorded_Flood_Outlines.mxd

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PROJECT

Horsham District Council
Level 1 Strategic Flood Risk Assessment

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Horsham District Council

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LEGEND

- Horsham District Boundary
- Recorded Flood Outlines

West Sussex Historic Flooding Incidents

- 2014
- 2015
- 2016
- 2017
- 2018
- 2019
- 2020
- 2021
- 2022
- 2023

NOTES

1: This map shows all historic flooding from rivers, the sea, groundwater, and surface water since 1894 in the Horsham District Council area based on the Environment Agency's Recorded Flood Outlines GIS layer. The Recorded Flood Outlines GIS layer is provided on the Defra Data Services Platform: https://environment.data.gov.uk/.

2: This map shows the West Sussex County Council recorded flood events register which covers 2014-2023. It should be noted that this dataset only includes records where flooding has been reported to WSCC.

3: This map is intended to provide a strategic overview of historic flooding and should not be used to assess the flood risk for individual properties.

ISSUE PURPOSE

FINAL

PROJECT NUMBER

60730513

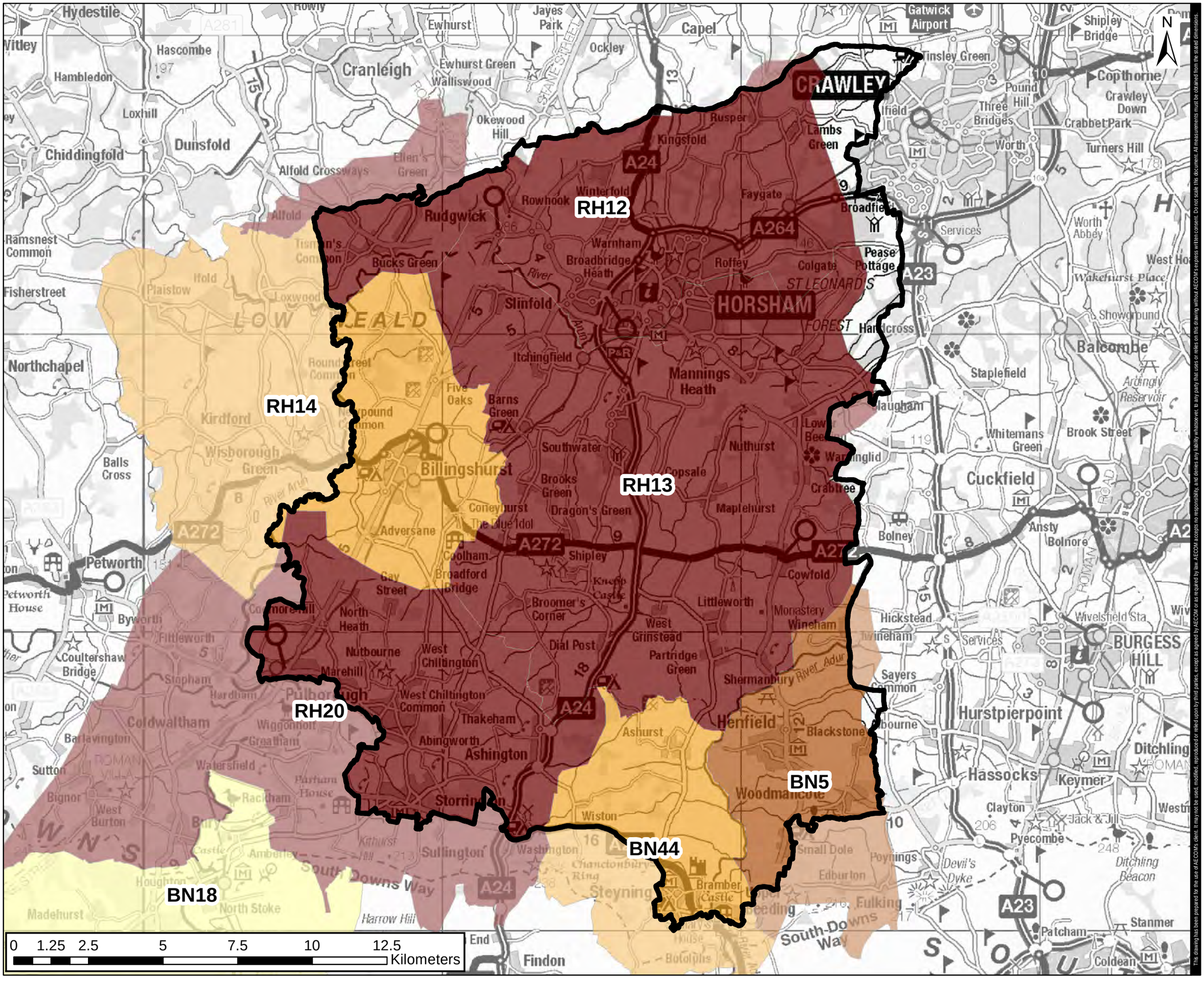
FIGURE TITLE

Recorded Flood Outlines

FIGURE NUMBER

Figure A4

Revision: 1 Drawn: AH Checked: LM/EC Approved: RM Date: 2024-08-05



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Horsham District Council
Level 1 Strategic Flood Risk Assessment

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LEGEND

Horsham District Boundary

No. of sewer flooding incidents by postcode

- 2 - 10
- 11 - 20
- 21 - 30
- 31 - 40
- 41 - 120

NOTES

1: Southern Water have provided records of sewer flooding incidents in the Horsham District Council area over the 10 year period 2014-2024. For confidentiality reasons, the records have been reported at the postal district level, as reflected in the figure here.

ISSUE PURPOSE

FINAL

PROJECT NUMBER

60730513

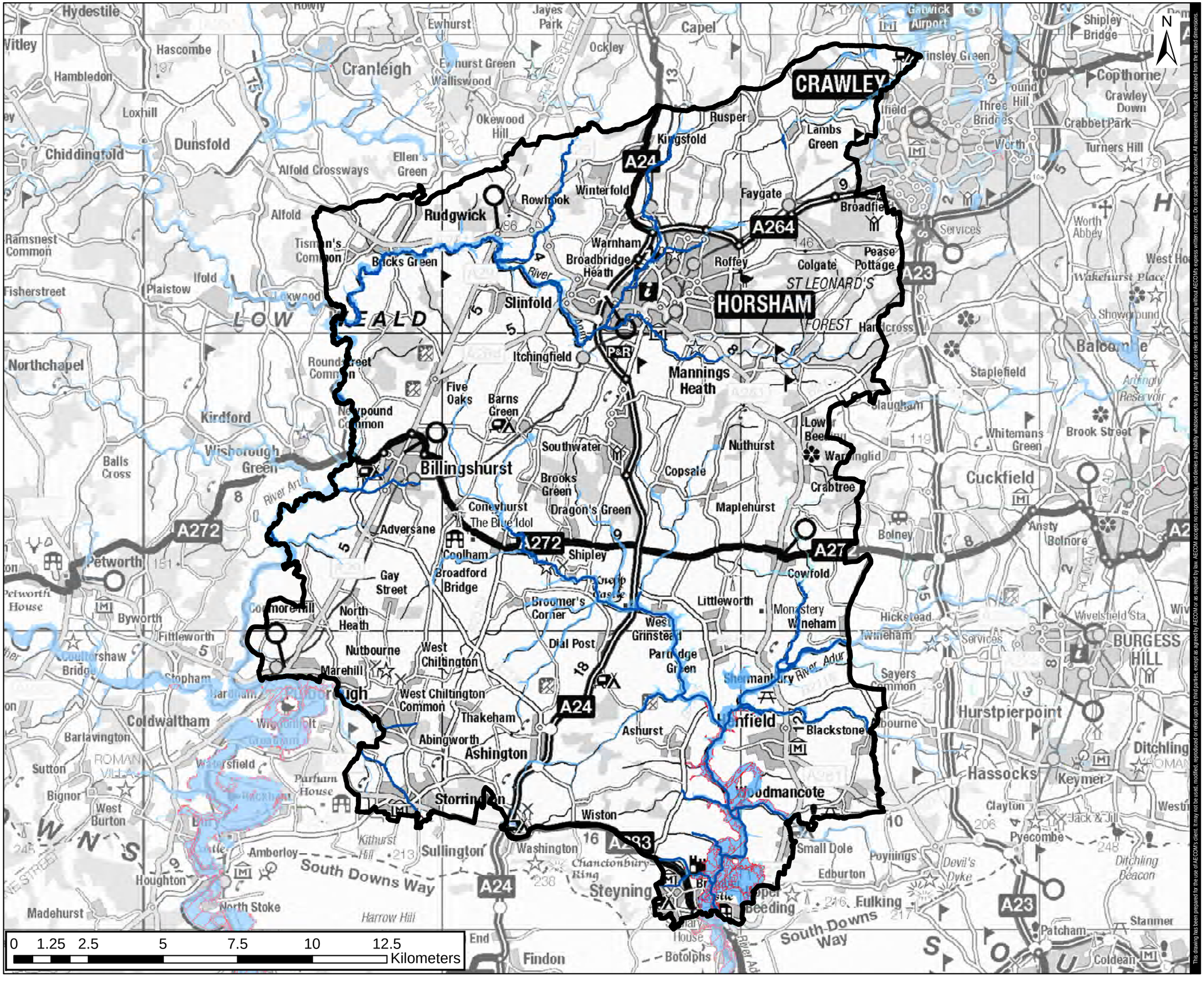
FIGURE TITLE

Sewer Flooding Incidents (2014-2024)

FIGURE NUMBER

Figure A5

Filename: Q:\60730513_Horsham_SFRA\900_CAD_GIS\020_GIS\mxd\sHSFRA_L1_Figure5_Sewer_Flooding_Incidents.mxd



Revision: 1 Drawn: AH Checked: LM/EC Approved: RM Date: 2024-08-05

Filename: Q:\60730513_Horsham_SFRA\900_CAD_GIS\920_GIS\mxd\HSFRA_L1_Figure6_Environment_Agency_Flood_Zones.mxd

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Horsham District Council
Level 1 Strategic Flood Risk Assessment

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LEGEND

- Horsham District Boundary
- Main Rivers
- Reduction in Risk of Flooding from Rivers and Sea due to Defences
- Flood Zone 3
- Flood Zone 2

NOTES

1: This map shows the predicted likelihood of fluvial flooding based on the Environment Agency's Flood Map for Planning (Rivers and the Sea) and catchment modelling studies, which may be subject to revision in the future. The Flood Map for Planning is provided on the Environment Agency website (https://flood-map-for-planning.service.gov.uk/).

2: The probability of fluvial flooding is divided into the following four categories: Flood Zone 1, Flood Zone 2, Flood Zone 3a and Flood Zone 3b. Refer to the SFRA Report for further detail on Flood Zones and how they have been defined.

3: A conservative approach has been taken in agreement with the Environment Agency and Horsham District Council where Flood Zone 3a has been used to represented Flood Zone 3b.

4: The Flood Zones shown on this figure do not take into account of the possible impact of climate change and consequent change in the future probability of flooding. They also ignore the effect of any flood defences.

5: This map is intended to provide a strategic overview of fluvial flood risk and should not be used to assess the flood risk for individual properties.

ISSUE PURPOSE

FINAL

PROJECT NUMBER

60730513

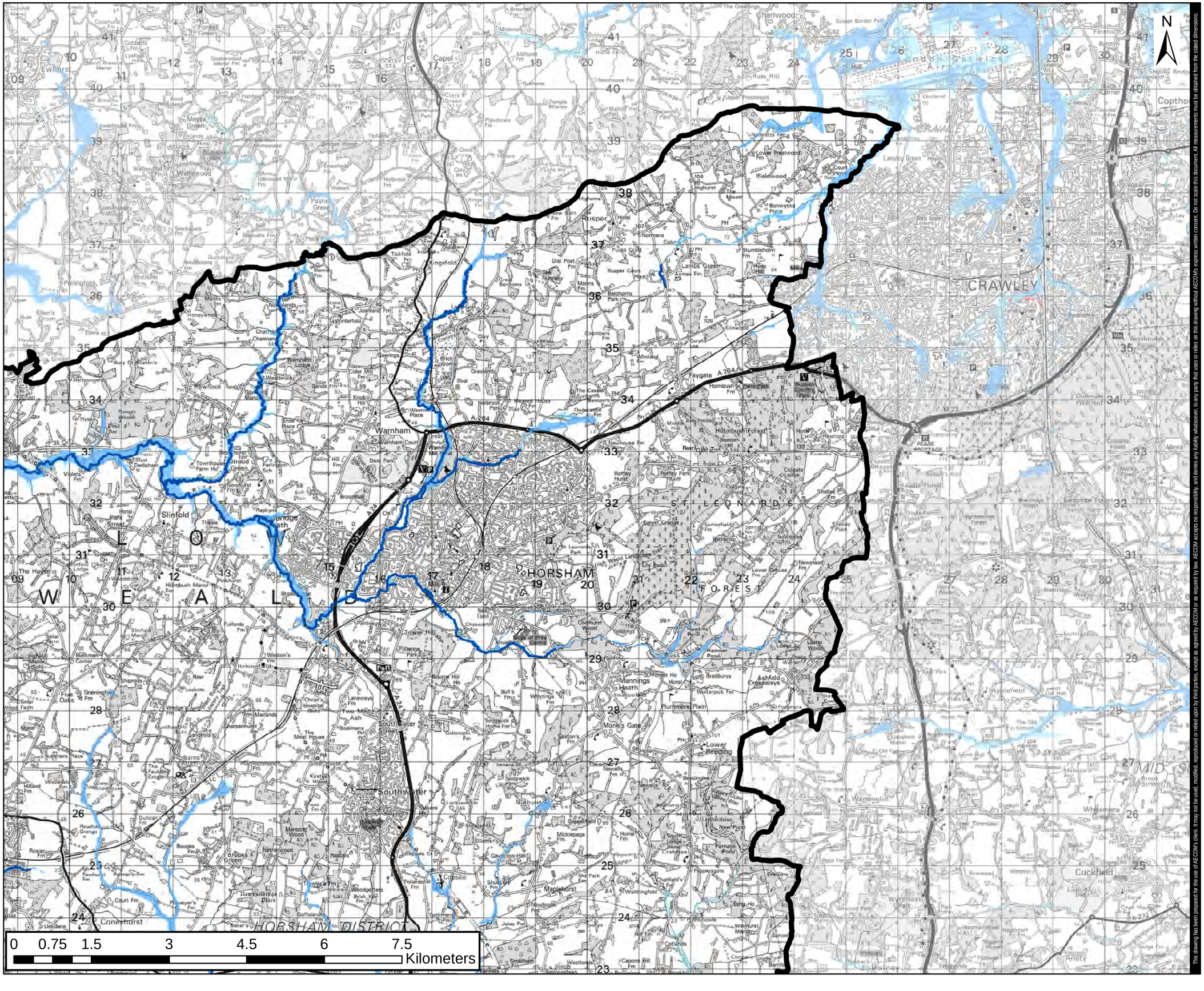
FIGURE TITLE

Flood Zones and Reduction in Risk of Flooding from Rivers and Sea due to Defences

FIGURE NUMBER

Figure A6

Revision: 1 Drawn: AH Checked: LM/EC Approved: RM Date: 2024-08-05



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Horsham District Council Level 1 Strategic Flood Risk Assessment

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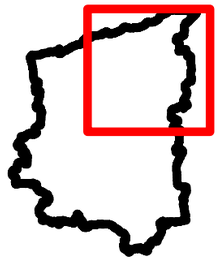
LEGEND

- Horsham District Boundary
- Main Rivers
- Reduction in Risk of Flooding from Rivers and Sea due to Defences
- Flood Zone 3
- Flood Zone 2



NOTES

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5: This map is intended to provide a strategic overview of fluvial flood risk and should not be used to assess the flood risk for individual properties.

ISSUE PURPOSE

FINAL

PROJECT NUMBER

60730513

FIGURE TITLE

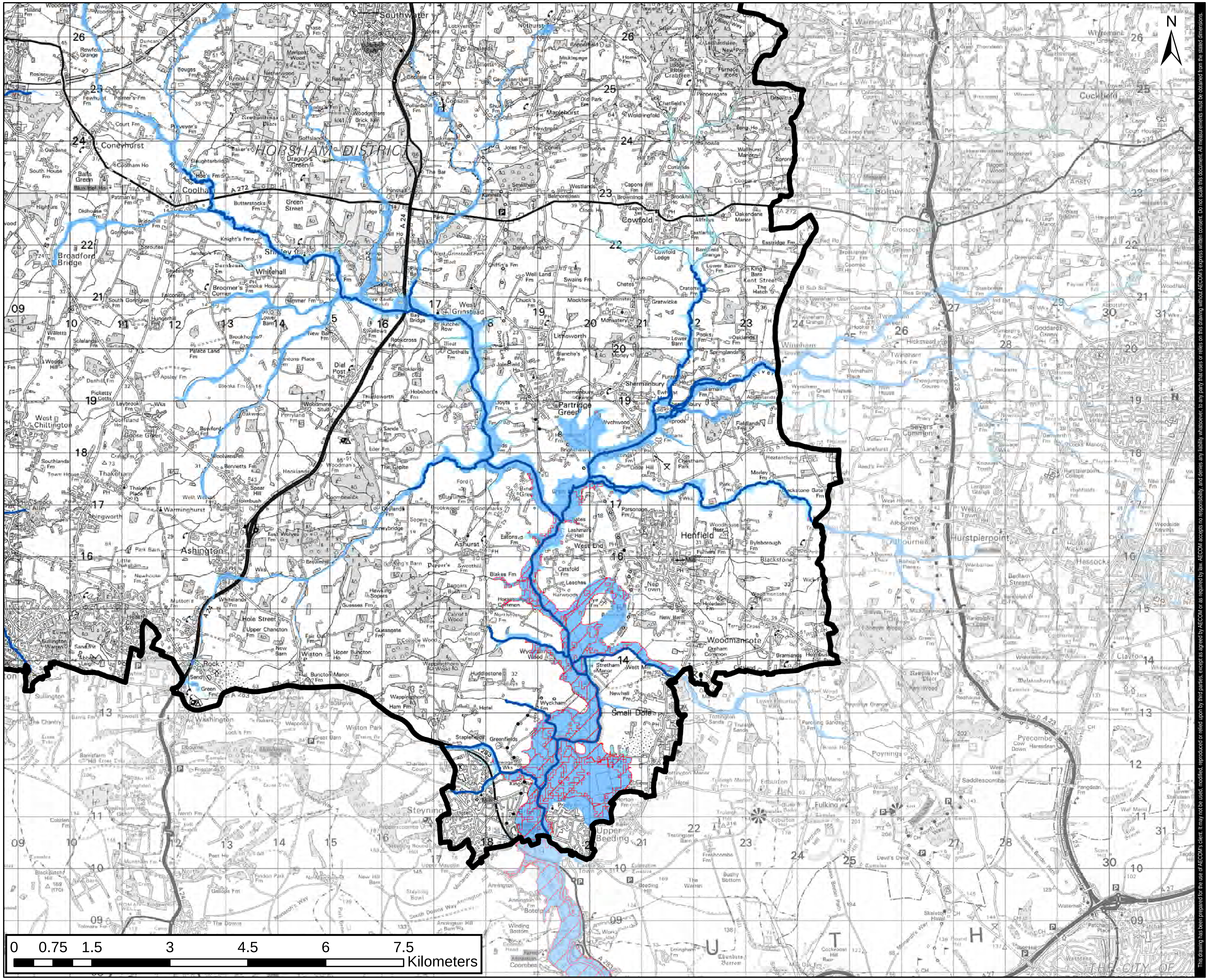
Flood Zones and Reduction in Risk of Flooding from Rivers and Sea due to Defences

FIGURE NUMBER

Figure A6-B

Filename: Q:\60730513_Horsham_SFRA\900_CAD_GIS\920_GIS\mxds\HSFRA_L1_Figure6X_Environment_Agency_Flood_Zones_02.mxd

Revision: 1 Drawn: AH Checked: LM/EC Approved: RM Date: 2024-08-05



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Horsham District Council Level 1 Strategic Flood Risk Assessment

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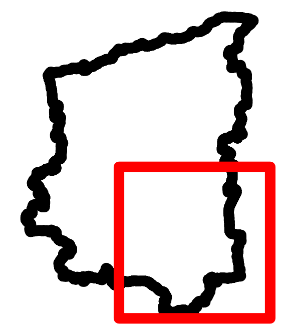
T +44 (0)117 315 0700

LEGEND

- Horsham District Boundary
- Main Rivers
- Reduction in Risk of Flooding from Rivers and Sea due to Defences
- Flood Zone 3
- Flood Zone 2



NOTES

1: This map shows the predicted likelihood of fluvial flooding based on the Environment Agency's Flood Map for Planning (Rivers and the Sea) and catchment modelling studies, which may be subject to revision in the future. The Flood Map for Planning is provided on the Environment Agency website (https://flood-map-for-planning.service.gov.uk/).

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4: The Flood Zones shown on this figure do not take into account of the possible impact of climate change and consequent change in the future probability of flooding. They also ignore the effect of any flood defences.

5: This map is intended to provide a strategic overview of fluvial flood risk and should not be used to assess the flood risk for individual properties.

ISSUE PURPOSE

FINAL

PROJECT NUMBER

60730513

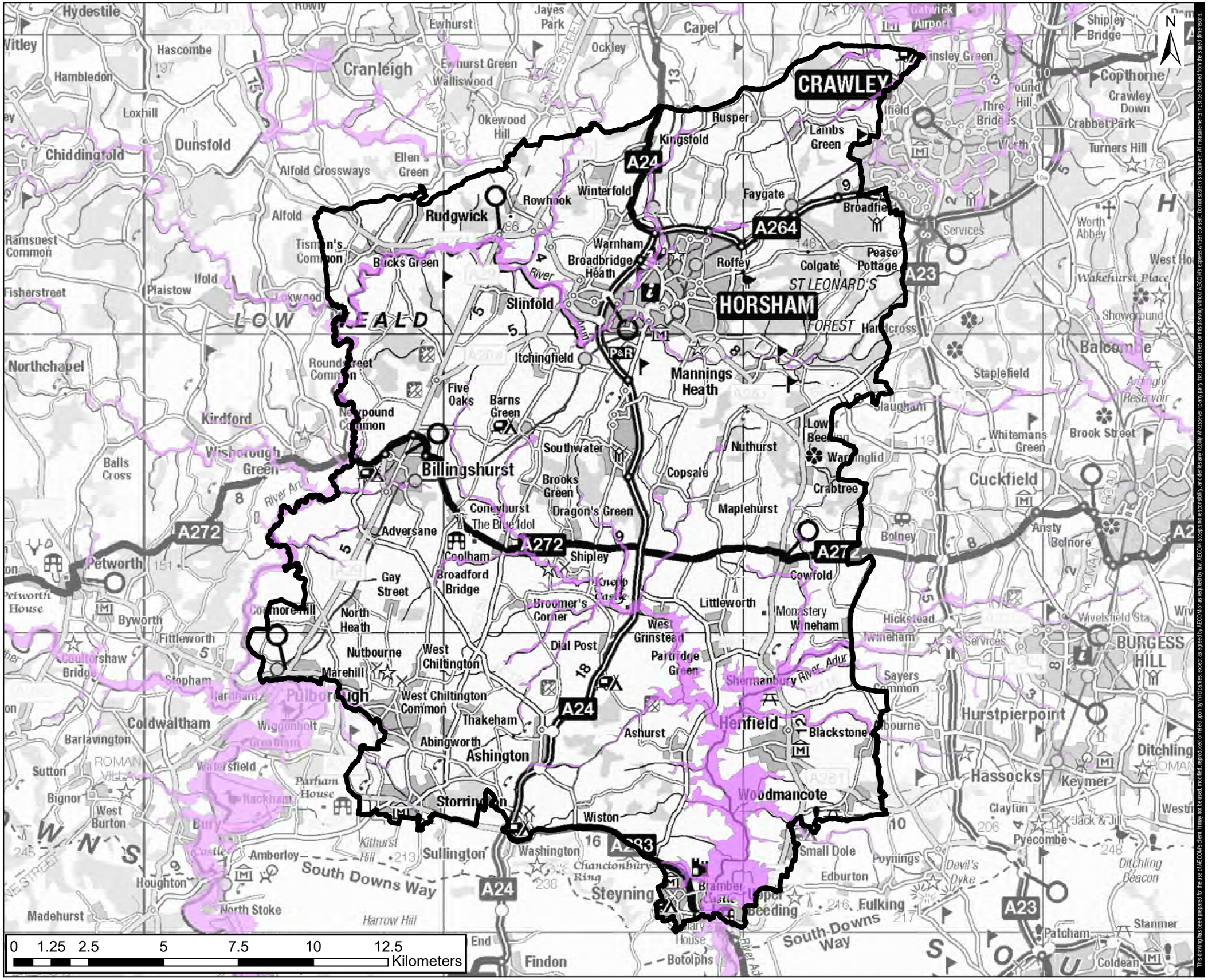
FIGURE TITLE

Flood Zones and Reduction in Risk of Flooding from Rivers and Sea due to Defences

FIGURE NUMBER

Figure A6-D

Revision: 1 Drawn: AH Checked: LM/EC Approved: RM Date: 2024-08 -05



Filename: Q:\60730513_Horsham_SFRA\900_CAD_GIS\920_GIS\mxds\HSFRA_L1_Figure7_Modelled_Fluvial_Extents.mxd

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Horsham District Council Level 1 Strategic Flood Risk Assessment

CLIENT

Horsham District Council

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LEGEND

Horsham District Boundary

Combined Fluvial and Tidal Climate Change extent (Higher Central, 2080s)

NOTES

1: It was agreed with the Environment Agency that the existing modelling results for the River Adur and River Arun catchments, as provided by the Environment Agency, would be combined with the Environment Agency's Flood Zone 2, to create a flood extent demonstrating future flood risk from fluvial and tidal sources. For more information, refer to the SFRA report.

2: For fluvial flood risk the following models and allowances were utilised: Upper Adur 1% AEP + 45%CC, Steyning 1% AEP + 45%CC, 2022 Adur Intertidal Fluvial Undefended 1% + 55% CC, SFRM Fluvial Undefended 1% AEP + 20%CC, Upper Arun 1% AEP + 45%CC, Horsham 1% AEP + 45%CC, Billinghurst 1% AEP + 45%CC.

3: For tidal flood risk the following models and allowances were utilised: 2022 Adur Intertidal Tidal Undefended 200 year HC.

4: Should any development sites come forward which coincide with this flood extent, a detailed hydraulic modelling exercise will be required which assesses the latest Environment Agency climate change allowances.

ISSUE PURPOSE

FINAL

PROJECT NUMBER

60730513

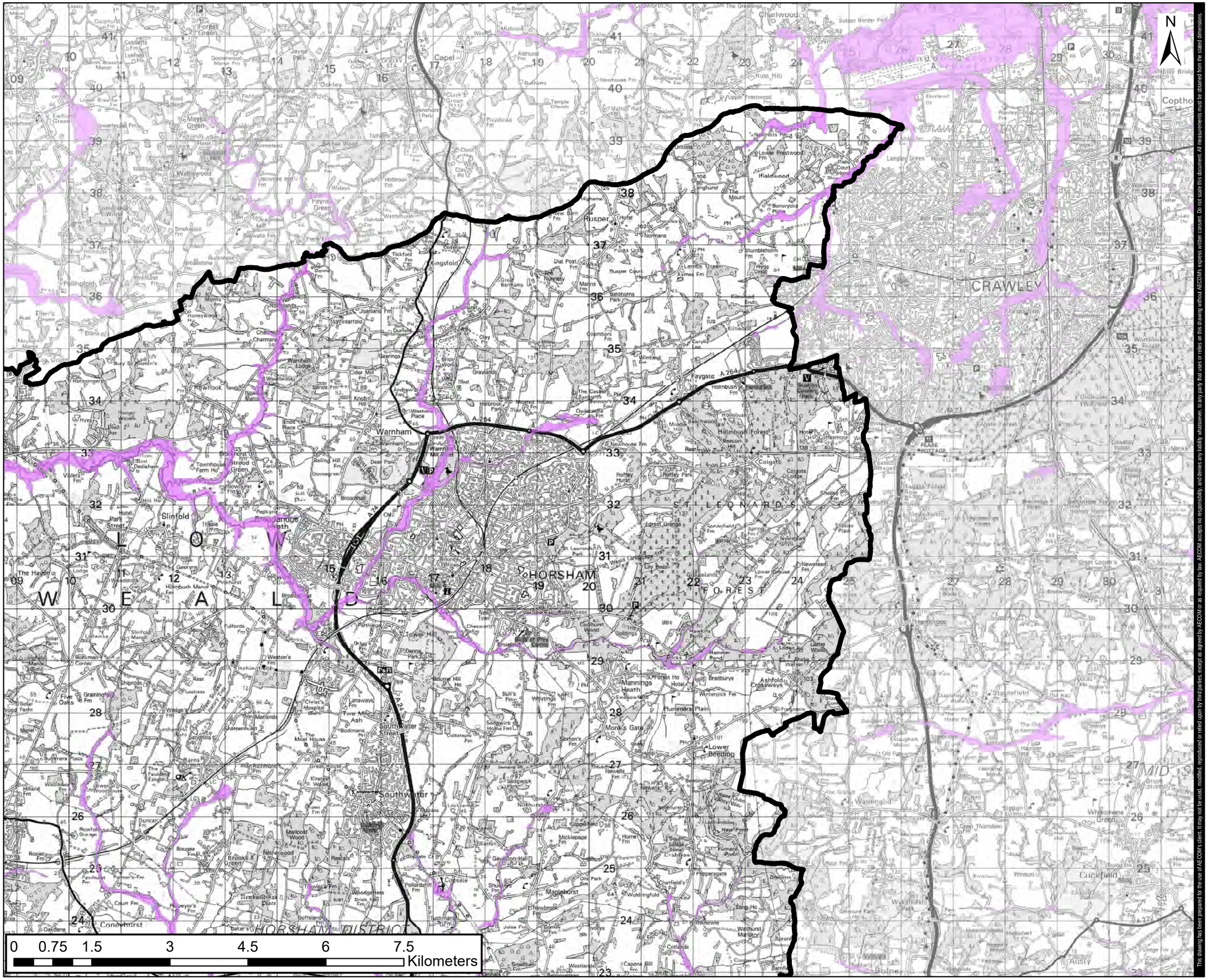
FIGURE TITLE

Future Fluvial and Tidal Flood Extent

FIGURE NUMBER

Figure A7

Revision: 1 Drawn: AH Checked: LM/EC Approved: RM Date: 2024-08 -05



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Horsham District Council Level 1 Strategic Flood Risk Assessment

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Bristol, United Kingdom
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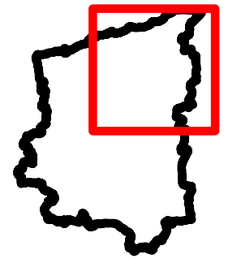
LEGEND

Horsham District Boundary

Combined Fluvial and Tidal Climate Change extent (Higher Central, 2080s)



NOTES

1: It was agreed with the Environment Agency that the existing modelling results for the River Adur and River Arun catchments, as provided by the Environment Agency, would be combined with the Environment Agency's Flood Zone 2, to create a flood extent demonstrating future flood risk from fluvial and tidal sources. For more information, refer to the SFRA report.

2: For fluvial flood risk the following models and allowances were utilised: Upper Adur 1% AEP + 45%CC, Steyning 1% AEP + 45%CC, 2022 Adur Intertidal Fluvial Undefended 1% + 55% CC, SFRM Fluvial Undefended 1% AEP + 20%CC, Upper Arun 1% AEP + 45%CC, Horsham 1% AEP + 45%CC, Billinghurst 1% AEP + 45%CC.

3: For tidal flood risk the following models and allowances were utilised: 2022 Adur Intertidal Tidal Undefended 200 year HC.

4: Should any development sites come forward which coincide with this flood extent, a detailed hydraulic modelling exercise will be required which assesses the latest Environment Agency climate change allowances.

ISSUE PURPOSE

FINAL

PROJECT NUMBER

60730513

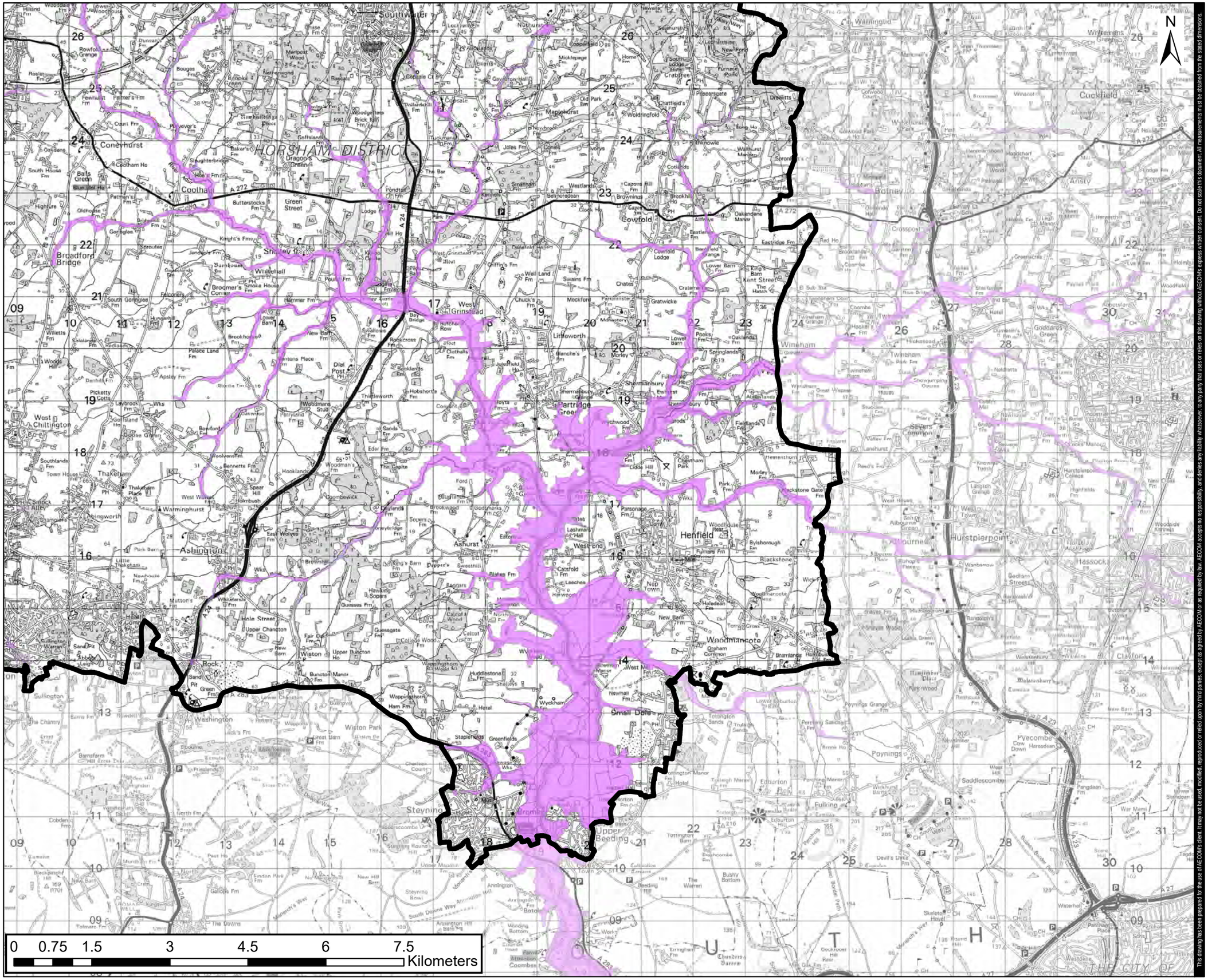
FIGURE TITLE

Future Fluvial and Tidal Flood Extent

FIGURE NUMBER

Figure A7-B

Revision: 1 Drawn: AH Checked: LM/EC Approved: RM Date: 2024-08 -05



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Horsham District Council Level 1 Strategic Flood Risk Assessment

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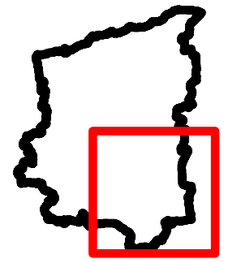
LEGEND

Horsham District Boundary

Combined Fluvial and Tidal Climate Change extent (Higher Central, 2080s)



NOTES

1: It was agreed with the Environment Agency that the existing modelling results for the River Adur and River Arun catchments, as provided by the Environment Agency, would be combined with the Environment Agency's Flood Zone 2, to create a flood extent demonstrating future flood risk from fluvial and tidal sources. For more information, refer to the SFRA report.

2: For fluvial flood risk the following models and allowances were utilised: Upper Adur 1% AEP + 45%CC, Steyning 1% AEP + 45%CC, 2022 Adur Intertidal Fluvial Undefended 1% + 55% CC, SFRM Fluvial Undefended 1% AEP + 20%CC, Upper Arun 1% AEP + 45%CC, Horsham 1% AEP + 45%CC, Billinghurst 1% AEP + 45%CC.

3: For tidal flood risk the following models and allowances were utilised: 2022 Adur Intertidal Tidal Undefended 200 year HC.

4: Should any development sites come forward which coincide with this flood extent, a detailed hydraulic modelling exercise will be required which assesses the latest Environment Agency climate change allowances.

ISSUE PURPOSE

FINAL

PROJECT NUMBER

60730513

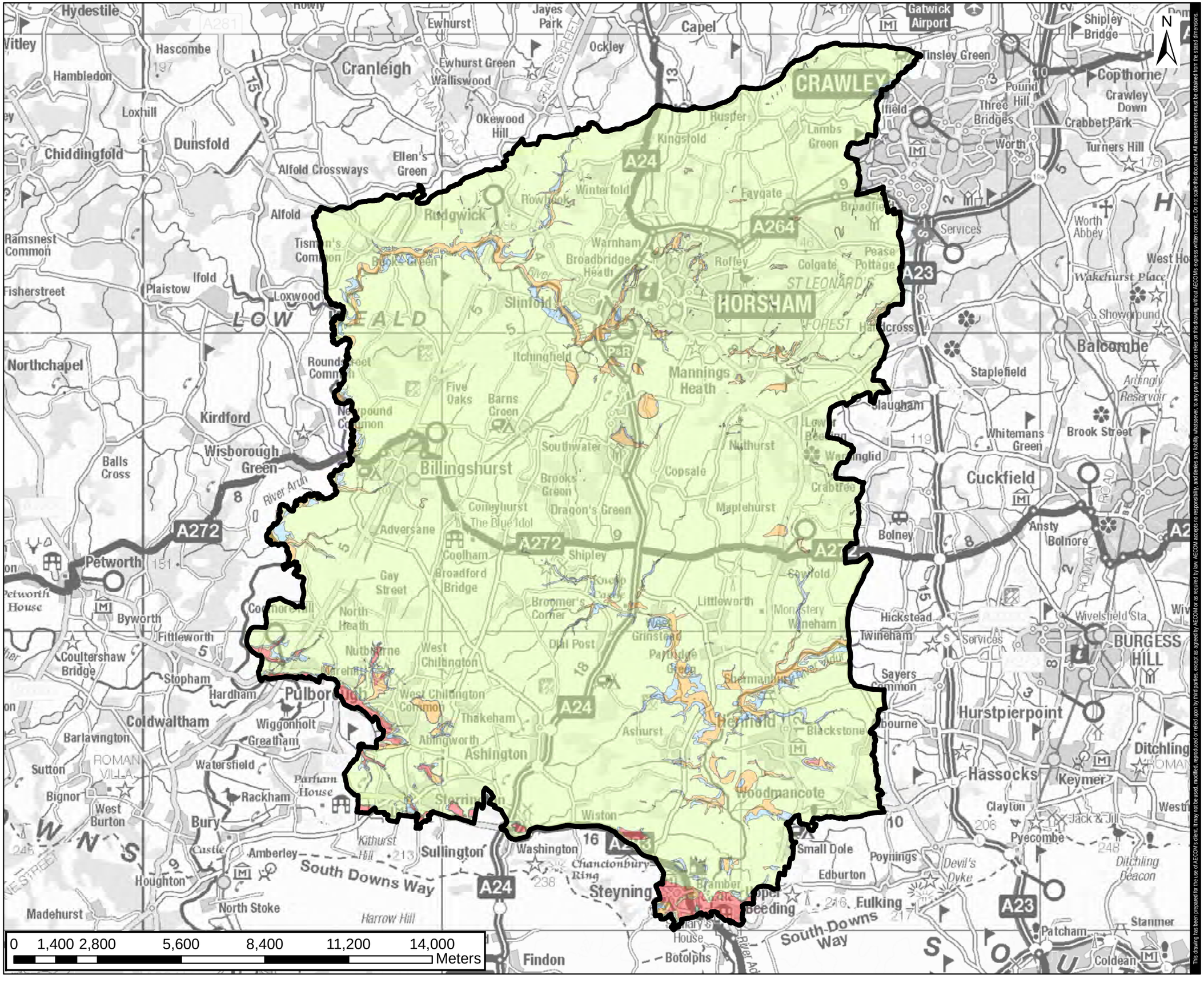
FIGURE TITLE

Future Fluvial and Tidal Flood Extent

FIGURE NUMBER

Figure A7-D

Revision: 1 Drawn: AH Checked: LM/EC Approved: RM Date: 2024-08-05



Filename: Q:\60730513_Horsham_SFRA\800_CAD_GIS\920_GIS\mxds\HSFRA_L1_Figure8_Groundwater_Flooding.mxd

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Horsham District Council
Level 1 Strategic Flood Risk Assessment

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LEGEND

- Horsham Boundary
- Class 1
- Class 2
- Class 3
- Class 4

NOTES

1:This map shows the 2019 GeoSmart Groundwater Flood Risk dataset which covers the UK in a 5m grid resolution.

2. There are four classes of risk: Class 4 - Negligable, Class 3 - Low, Class 2 - Moderate, Class 1 - High. Refer to the SFRA Report for further detail on the classes and how they have been defined.

3: This map is a general purpose indicative screening tool, and is intended to provide a useful initial view for a wide variety of applications. However, it does not provide an alternative to a proper site-specific assessment, and a detailed risk assessment should be used for any site where the impact of groundwater flooding would have significant adverse consequences

ISSUE PURPOSE

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PROJECT NUMBER

60730513

FIGURE TITLE

Groundwater Flooding

FIGURE NUMBER

Figure A8