

Appendix C: Modelling Outputs for Broad Areas for Regeneration & Exception Test Assessment for Site Allocations

February 2010

Prepared for:

Contents

Aveley Urban Area	Flood Zones (2009) Flood Zones (2109)
Chadwell St Mary Urban Area	Flood Zones (2009) Flood Zones (2109) Site Allocations Exception Test Assessment
East Tilbury	Flood Zones (2009) Flood Zones (209) Maximum Flood Depth during the 1 in 100 Year Fluvial Event or 1 in 200 Year Tidal Event (2109) Maximum Flood Depth during the 1 in 1000 Year Fluvial Event or 1 in 1000 Year Tidal Event (2109) Hazard Rating during the 1 in 100 Year Fluvial Event or 1 in 200 Year Tidal Event (2009) Hazard Rating during the 1 in 1000 Year Fluvial Event or 1 in 1000 Year Tidal Event (2009) Hazard Rating during the 1 in 100 Year Fluvial Event or 1 in 200 Year Tidal Event (2109) Hazard Rating during the 1 in 1000 Year Fluvial Event or 1 in 1000 Year Tidal Event (2109) Time to Inundation during the 1 in 100 Year Fluvial Event or 1 in 200 Year Tidal Event (2109) Time to Inundation during the 1 in 1000 Year Fluvial Event or 1 in 1000 Year Tidal Event (2109)
Grays Urban Area	Flood Zones (2009) Flood Zones (2109) Maximum Flood Depth during the 1 in 100 Year Fluvial Event or 1 in 200 Year Tidal Event (2109) Maximum Flood Depth during the 1 in 1000 Year Fluvial Event or 1 in 1000 Year Tidal Event (2109) Hazard Rating during the 1 in 100 Year Fluvial Event or 1 in 200 Year Tidal Event (2009) Hazard Rating during the 1 in 1000 Year Fluvial Event or 1 in 1000 Year Tidal Event (2009) Hazard Rating during the 1 in 100 Year Fluvial Event or 1 in 200 Year Tidal Event (2109) Hazard Rating during the 1 in 1000 Year Fluvial Event or 1 in 1000 Year Tidal Event (2109) Time to Inundation during the 1 in 100 Year Fluvial Event or 1 in 200 Year Tidal Event (2109) Time to Inundation during the 1 in 1000 Year Fluvial Event or 1 in 1000 Year Tidal Event (2109)
London Gateway	Flood Zones (2009) Flood Zones (2109) Maximum Flood Depth during the 1 in 100 Year Fluvial Event or 1 in 200 Year Tidal Event (2109) Maximum Flood Depth during the 1 in 1000 Year Fluvial Event or 1 in 1000 Year Tidal Event (2109) Hazard Rating during the 1 in 100 Year Fluvial Event or 1 in 200 Year Tidal Event (2009) Hazard Rating during the 1 in 1000 Year Fluvial Event or 1 in 1000 Year Tidal Event (2009) Hazard Rating during the 1 in 100 Year Fluvial Event or 1 in 200 Year Tidal Event (2109) Hazard Rating during the 1 in 1000 Year Fluvial Event or 1 in 1000 Year Tidal Event (2109) Time to Inundation during the 1 in 100 Year Fluvial Event or 1 in 200 Year Tidal Event (2109) Time to Inundation during the 1 in 1000 Year Fluvial Event or 1 in 1000 Year Tidal Event (2109)
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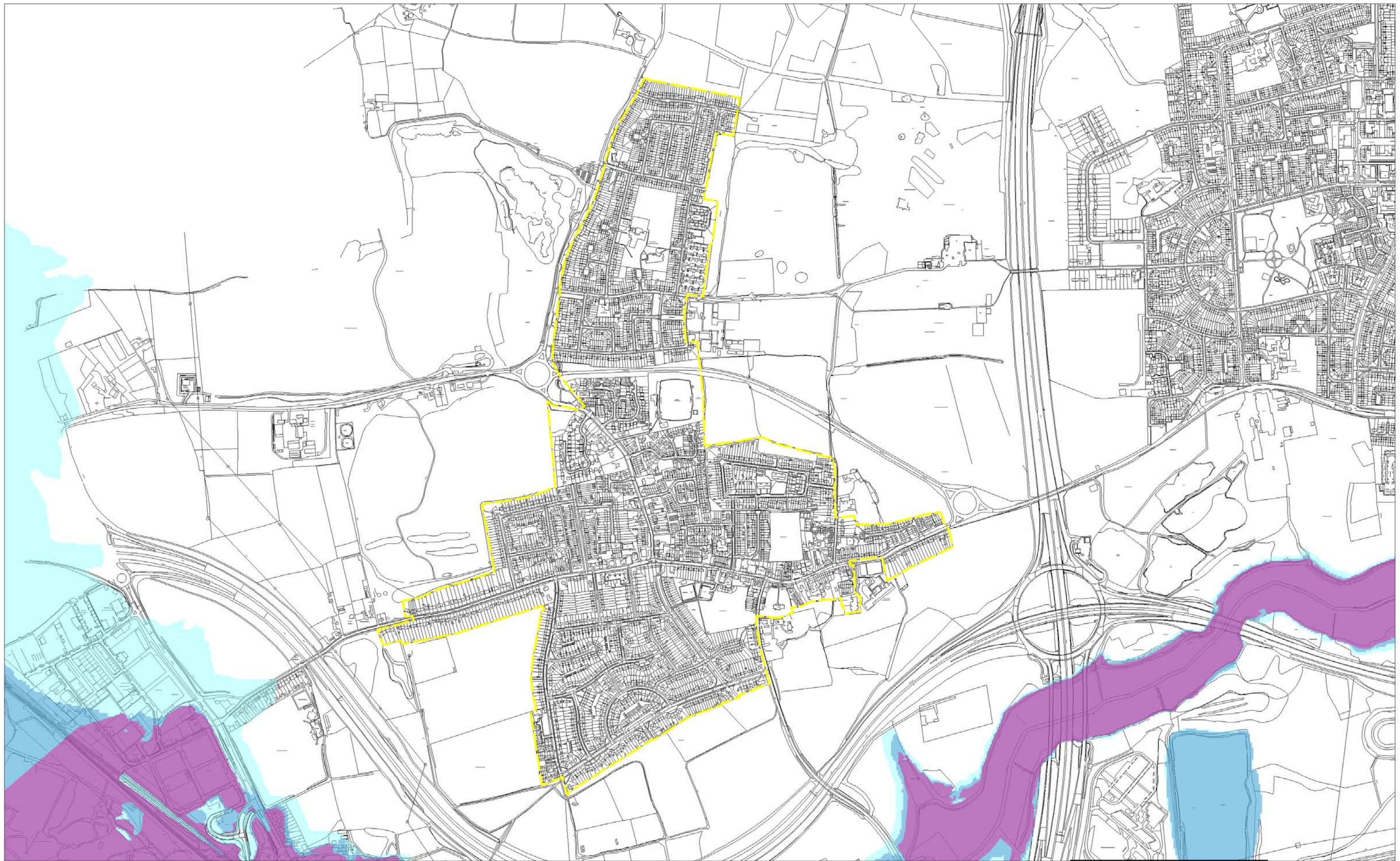
Thurrock Council

Thurrock Level 2 Strategic Flood Risk Assessment: Appendix C

	Hazard Rating during the 1 in 1000 Year Fluvial Event or 1 in 1000 Year Tidal Event (2109)
	Time to Inundation during the 1 in 100 Year Fluvial Event or 1 in 200 Year Tidal Event (2109)
	Time to Inundation during the 1 in 1000 Year Fluvial Event or 1 in 1000 Year Tidal Event (2109)
South Ockendon Urban Area	Flood Zones (2009)
	Flood Zones (2109)
Stanford-le-Hope & Corringham	Flood Zones (2009)
	Flood Zones (2109)
	Maximum Flood Depth during the 1 in 100 Year Fluvial Event or 1 in 200 Year Tidal Event (2109)
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	Site Allocations Exception Test Assessment
Stifford Clays / North Grays	Flood Zones (2009)
	Flood Zones (2109)
	Site Allocations Exception Test Assessment
Tilbury Urban Area	Flood Zones (2009)
	Flood Zones (2109)
	Maximum Flood Depth during the 1 in 100 Year Fluvial Event or 1 in 200 Year Tidal Event (2109)
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Villages	Flood Zones (2009)
	Flood Zones (2109)
West Thurrock	Flood Zones (2009)
	Flood Zones (2109)
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AVELEY URBAN AREA

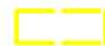


Project:

Thurrock Borough
Council SFRA Level 2

Title:

Aveley Urban Area
Flood Zones
(2009)



Broad Regeneration Area

- Flood Zone 3b
- Flood Zone 3a
- Flood Zone 2

Tilbury Flood Storage
Area - designated 3b

AVELEY URBAN AREA

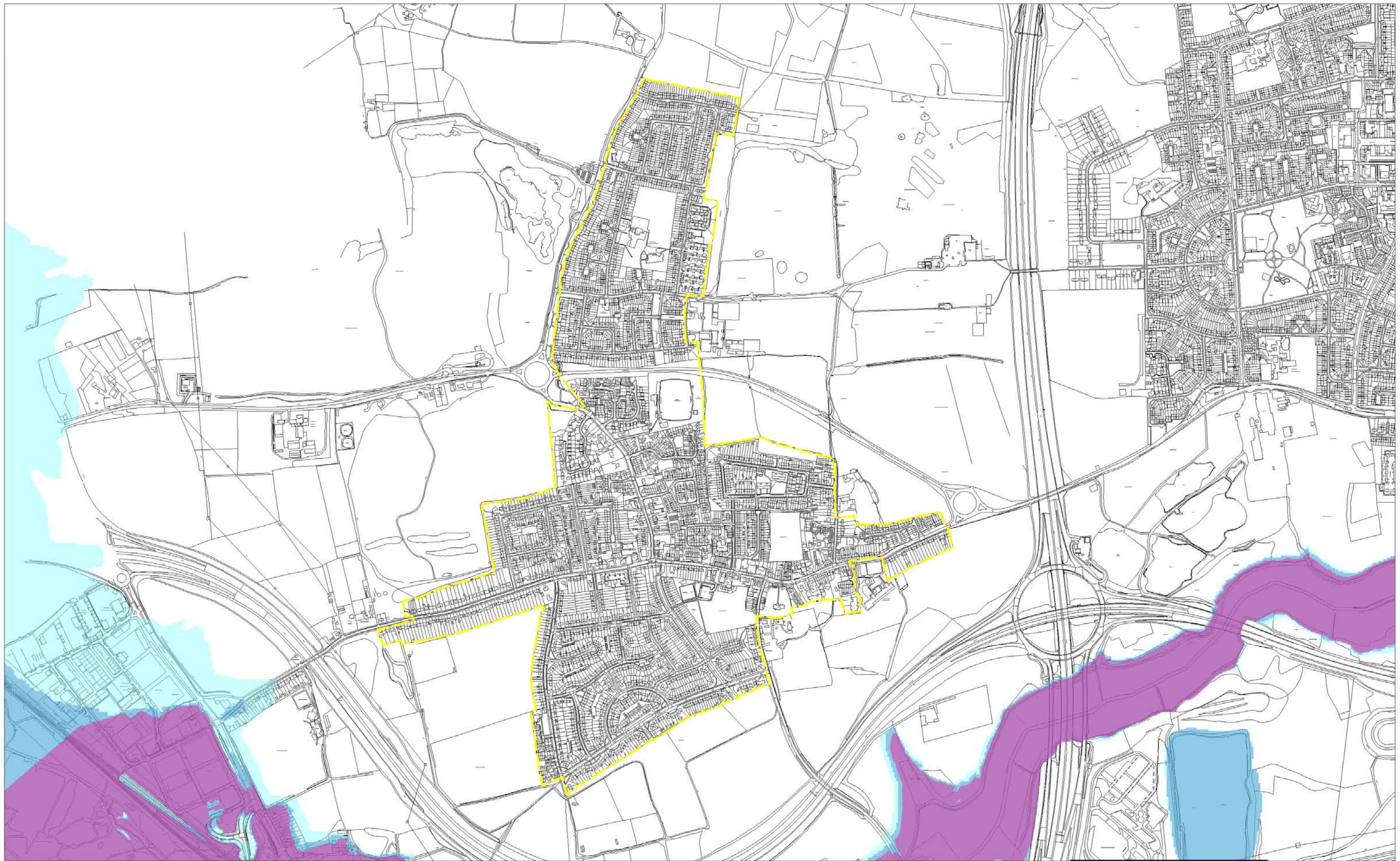
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Drw MV

Date 02/10



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Project:

Thurrock Borough
Council SFRA Level 2

Title:

Aveley Urban Area
Flood Zones
(2109)



Broad Regeneration Area

Flood Zone 3b

Flood Zone 3a

Flood Zone 2

Tilbury Flood Storage
Area - designated 3b

AVELEY URBAN AREA

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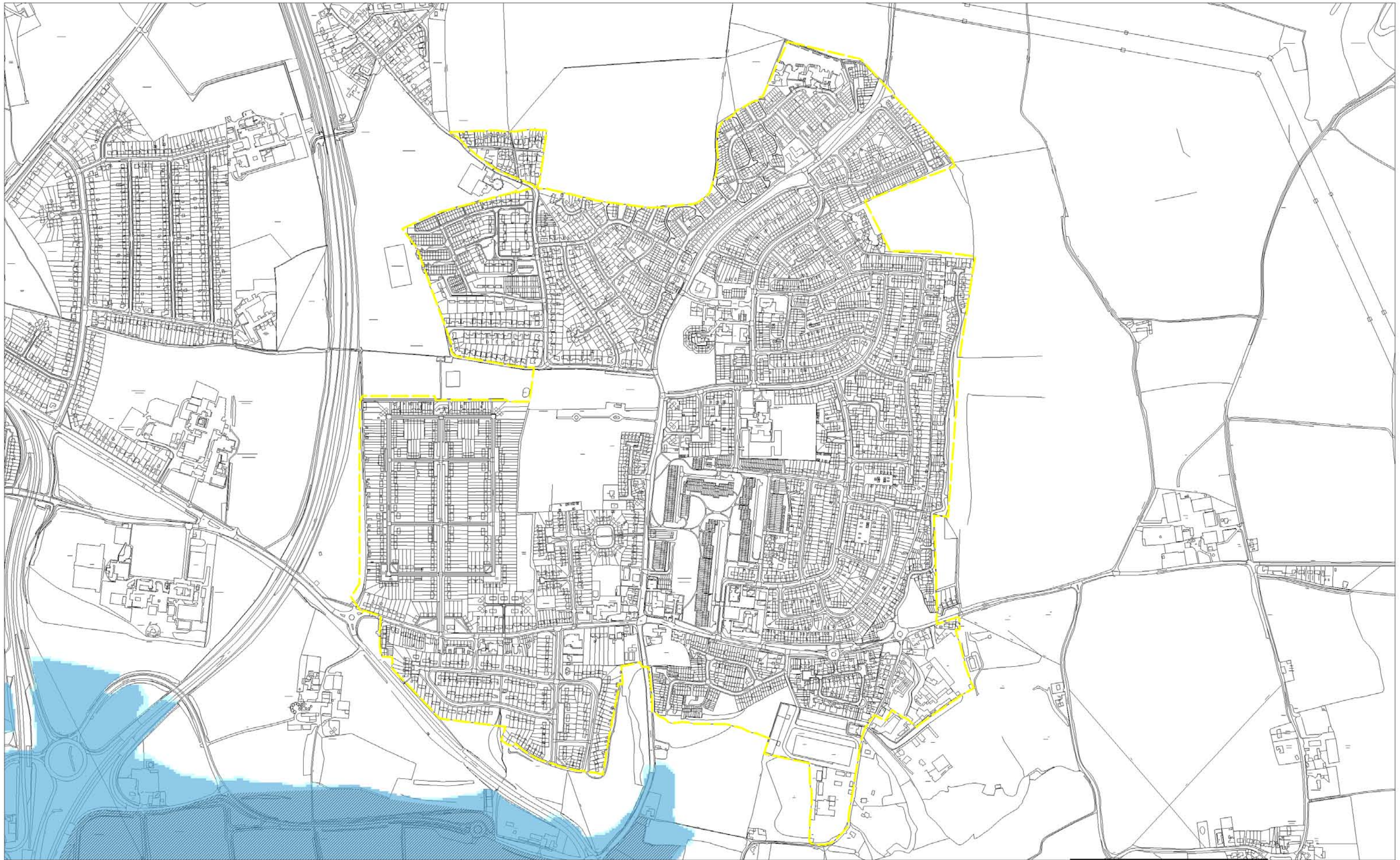
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CHADWELL ST MARY URBAN AREA

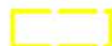


Project:

Title:

Thurrock Borough
Council SFRA Level 2

Chadwell St Mary Urban Area
Flood Zones
(2009)



Broad Regeneration Area



Flood Zone 3b



Flood Zone 3a



Flood Zone 2



Tilbury Flood Storage
Area - designated 3b

CHADWELL ST MARY

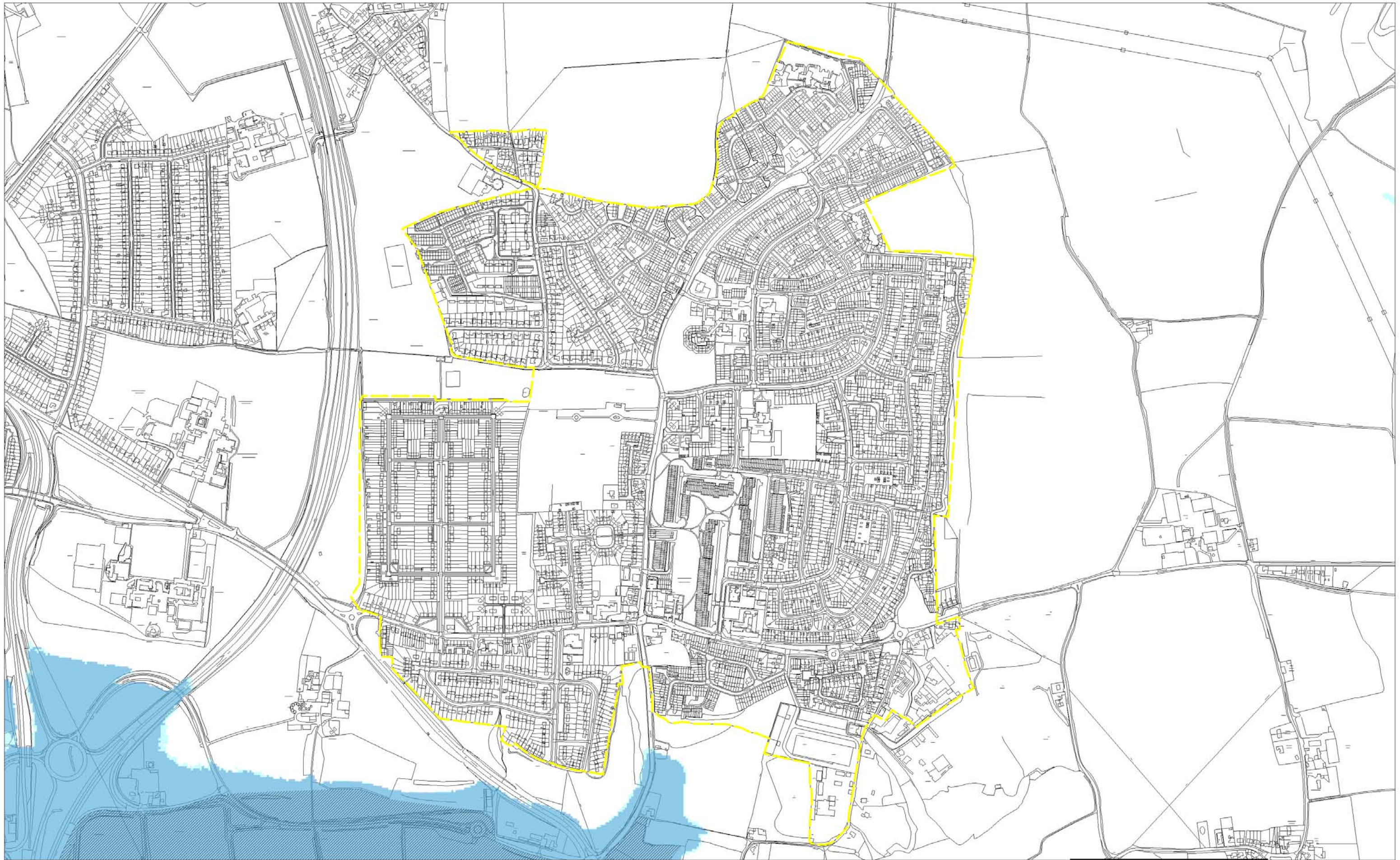
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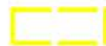


Project:

Title:

Thurrock Borough
Council SFRA Level 2

Chadwell St Mary Urban Area
Flood Zones
(2109)



Broad Regeneration Area



Flood Zone 3b



Flood Zone 3a



Flood Zone 2



Tilbury Flood Storage
Area - designated 3b

CHADWELL ST MARY

Scale 1:10,000 @ A3

Drw MV

Date 02/10



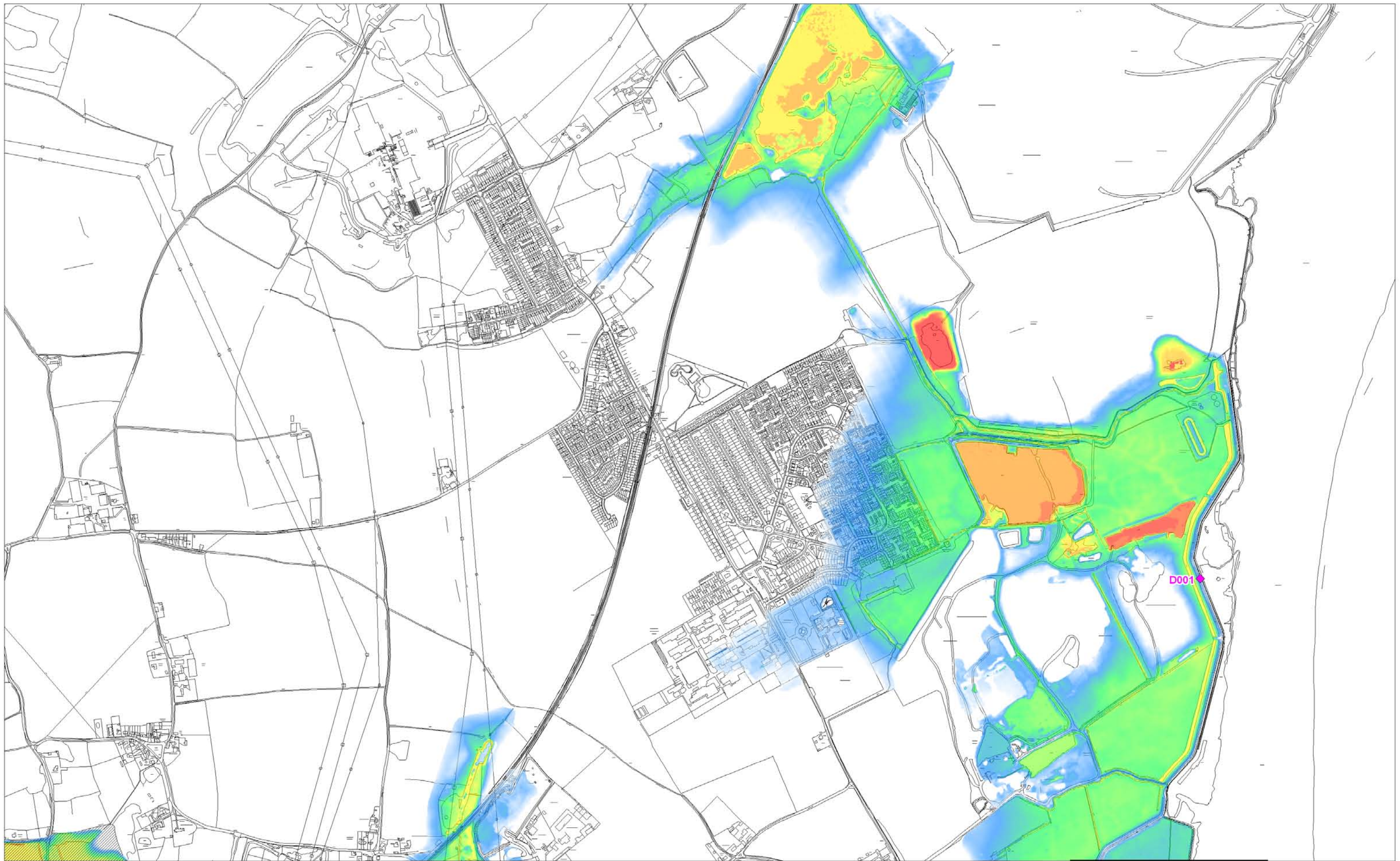
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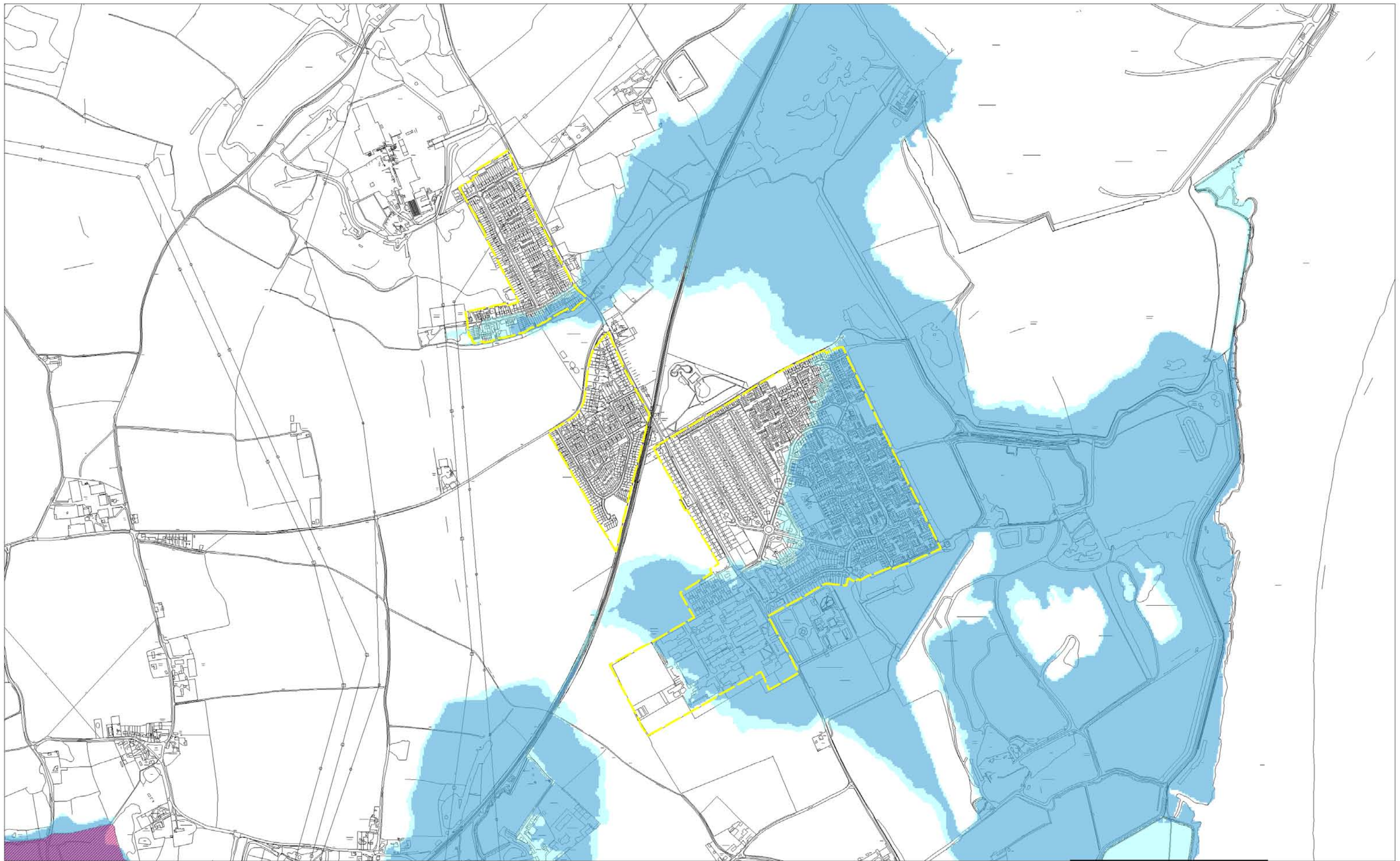
EAST TILBURY



<p>Project:</p> <p>Thurrock Borough Council SFRA Level 2</p>	<p>Title:</p> <p>East Tilbury Maximum Flood Depth 1 in 200 Year Tidal / 1 in 100 Year Fluvial Event (2109)</p>	<p>◆ A001 Breach Location and Label</p>	<p>Maximum Flood Depth (m)</p> <p>0.00 1.00 2.00 3.00 4.00 5.00</p>	<table border="1"><tr><td colspan="2">EAST TILBURY</td></tr><tr><td>Scale</td><td>1:30,000 @ A3</td></tr><tr><td>Drw</td><td>MV</td></tr><tr><td>Date</td><td>02/10</td></tr></table>	EAST TILBURY		Scale	1:30,000 @ A3	Drw	MV	Date	02/10	<p>N</p>	<p>www.scottwilson.com</p>
EAST TILBURY														
Scale	1:30,000 @ A3													
Drw	MV													
Date	02/10													



<p>Project:</p> <p>Thurrock Borough Council SFRA Level 2</p>	<p>Title:</p> <p>East Tilbury Maximum Flood Depth 1 in 1000 Year Tidal / 1 in 1000 Year Fluvial Event (2109)</p>	<p>◆ A001 Breach Location and Label</p>	<p>Maximum Flood Depth (m)</p> <p>0.00 1.00 2.00 3.00 4.00 5.00</p>	<table border="1"><tr><th colspan="2">EAST TILBURY</th></tr><tr><td>Scale</td><td>1:30,000 @ A3</td></tr><tr><td>Drw</td><td>MV</td></tr><tr><td>Date</td><td>02/10</td></tr></table> <div><p>N</p></div>	EAST TILBURY		Scale	1:30,000 @ A3	Drw	MV	Date	02/10	<p>www.scottwilson.com</p>
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Drw	MV												
Date	02/10												



Project:

Title:

Thurrock Borough
Council SFRA Level 2

East Tilbury
Flood Zones
(2009)



Broad Regeneration Area



Flood Zone 3b



Tilbury Flood Storage
Area - designated 3b



Flood Zone 3a



Flood Zone 2

EAST TILBURY

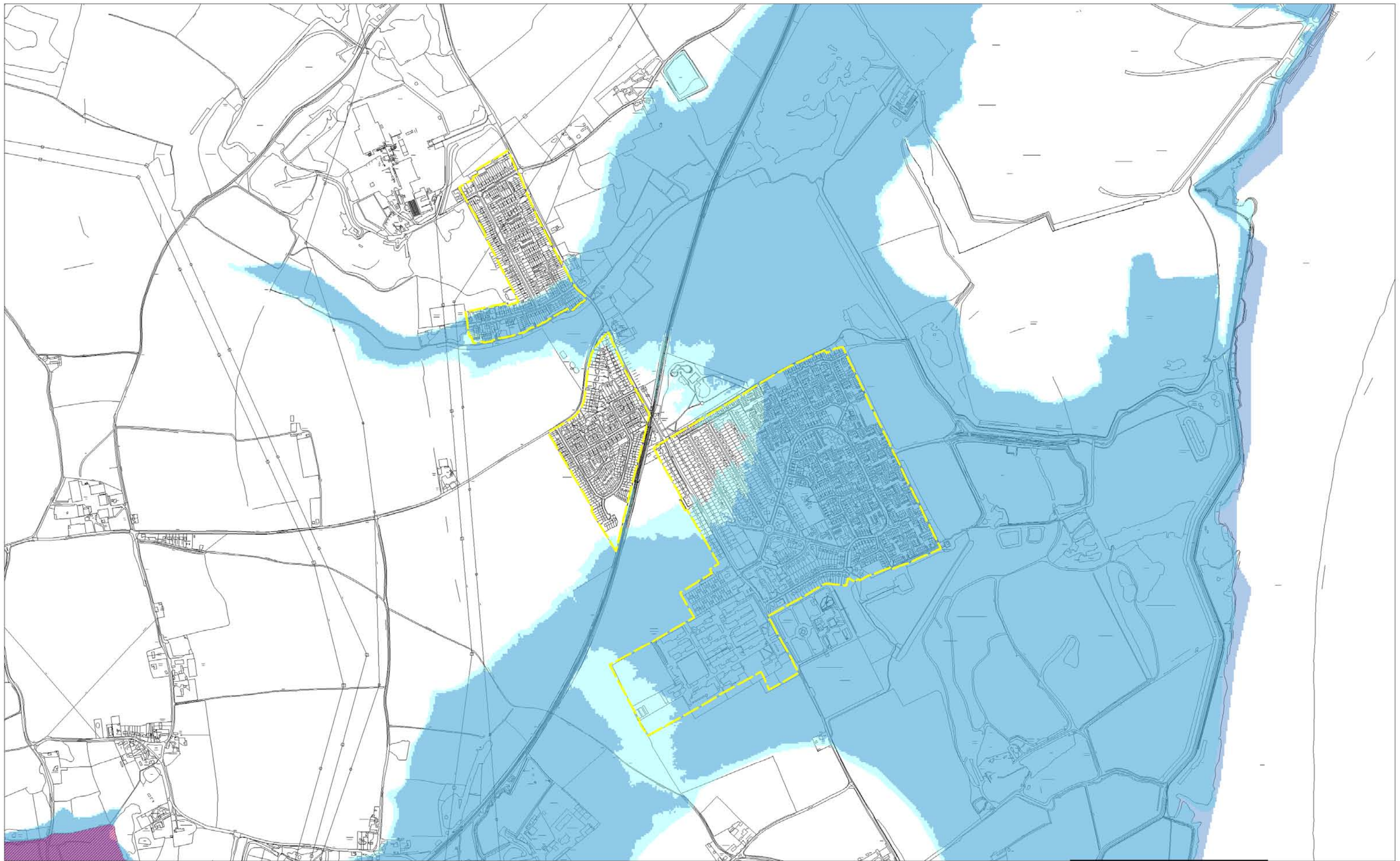
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Date 02/10



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Project:

Title:

Thurrock Borough
Council SFRA Level 2

East Tilbury
Flood Zones
(2109)



Broad Regeneration Area



Flood Zone 3b



Flood Zone 3a



Flood Zone 2



Tilbury Flood Storage
Area - designated 3b

EAST TILBURY

Scale 1:10,000 @ A3

Drw MV

Date 02/10



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Project:

Title:

Thurrock Borough
Council SFRA Level 2

East Tilbury
Hazard Rating
1 in 200 Year Tidal / 1 in 100
Year Fluvial Event (2009)

◆ A001

Breach Location and Label

Flood Hazard Rating

Extreme Hazard

Significant Hazard

Moderate Hazard

Low Hazard

EAST TILBURY

Scale 1:16,000 @ A3

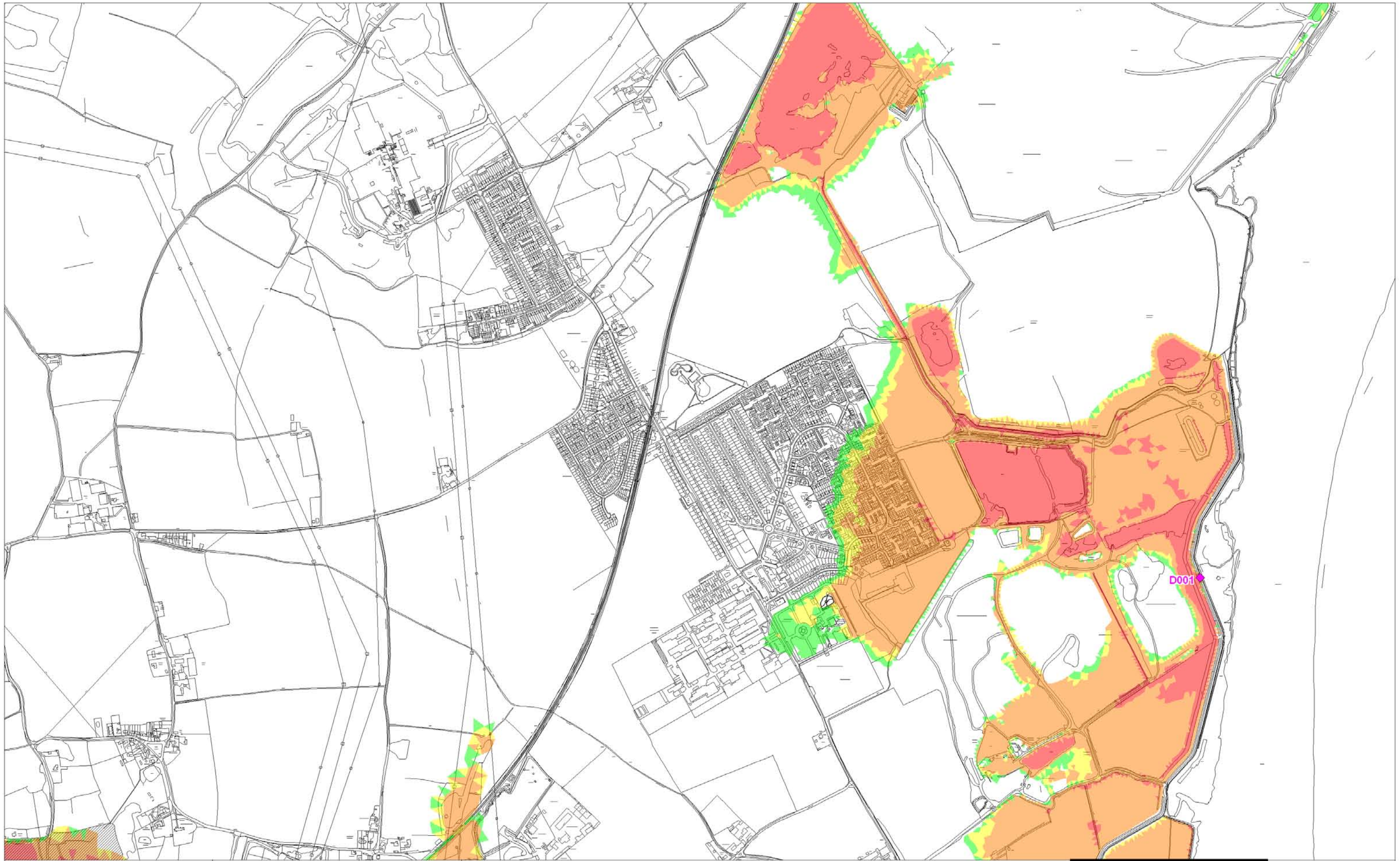
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Date 02/10



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Project:

Title:

Thurrock Borough
Council SFRA Level 2

East Tilbury
Hazard Rating
1 in 200 Year Tidal / 1 in 100
Year Fluvial Event (2109)

◆ A001

Breach Location and Label

Flood Hazard Rating

Extreme Hazard

Significant Hazard

Moderate Hazard

Low Hazard

EAST TILBURY

Scale 1:16,000 @ A3

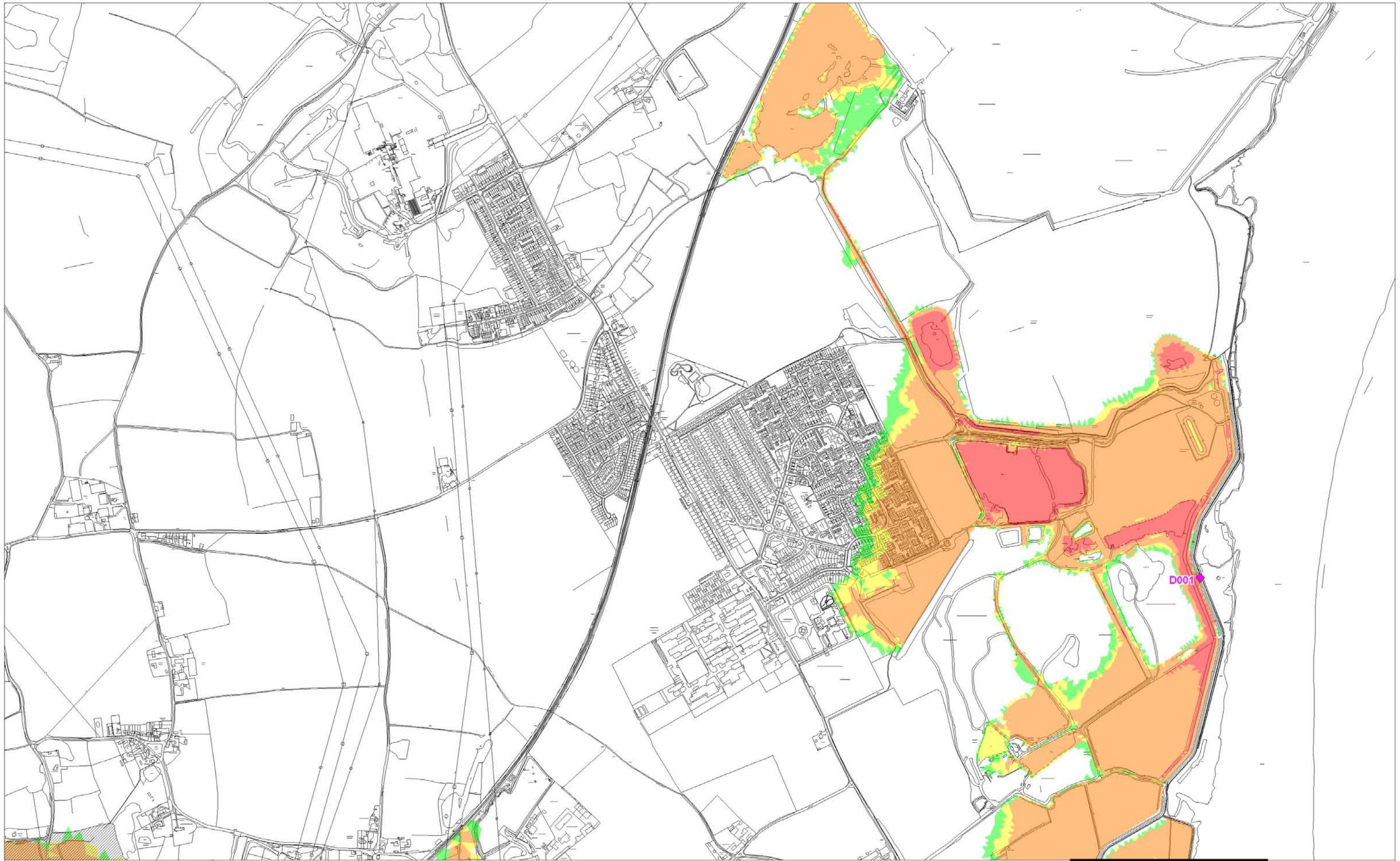
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Date 02/10

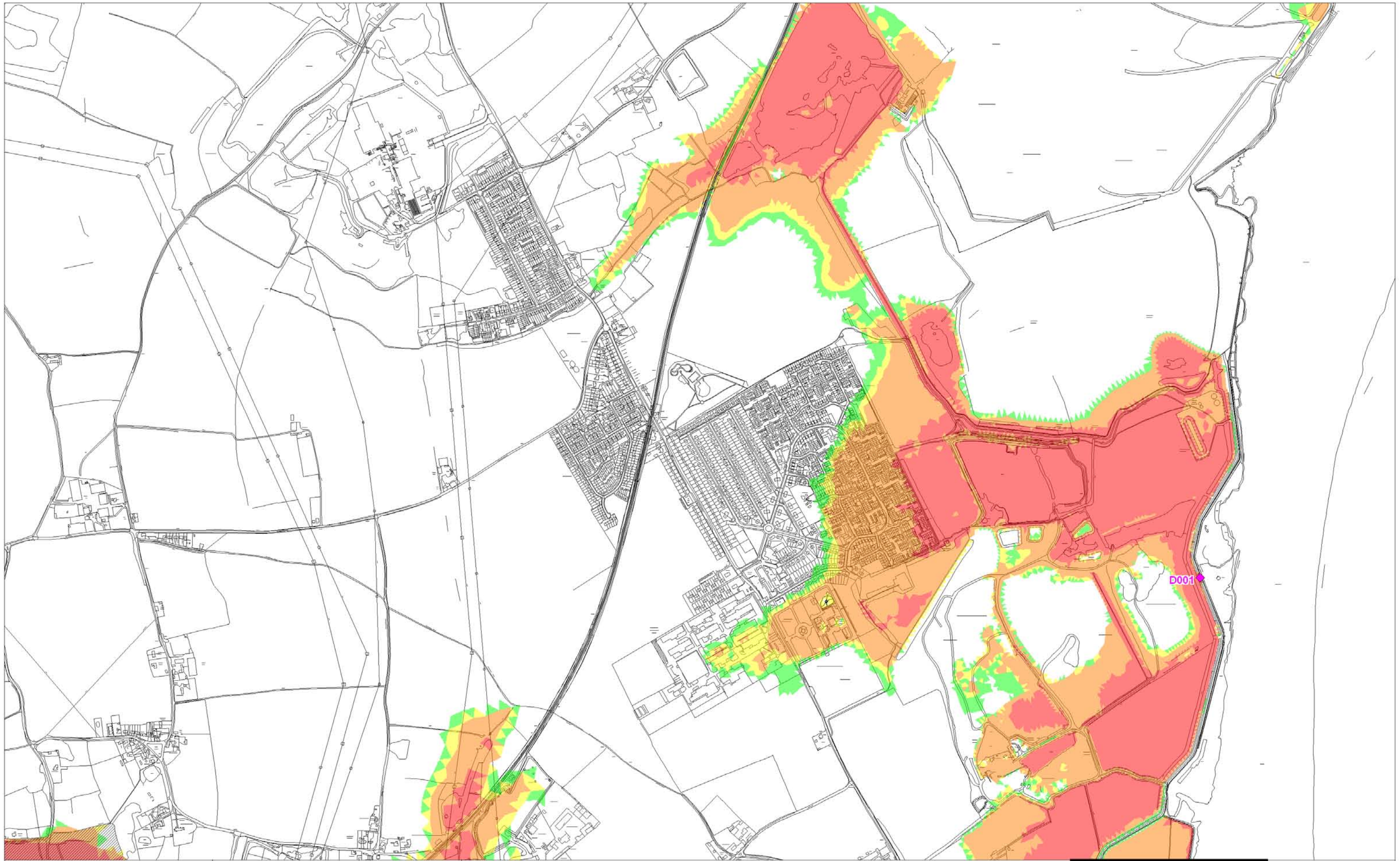


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Project: Thurrock Borough Council SFRA Level 2	Title: East Tilbury Hazard Rating 1 in 1000 Year Tidal / 1 in 1000 Year Fluvial Event (2009)	 A001 Breach Location and Label	Flood Hazard Rating  Extreme Hazard  Significant Hazard  Moderate Hazard  Low Hazard	<table border="1"><tr><td colspan="2">EAST TILBURY</td></tr><tr><td>Scale</td><td>1:16,000 @ A3</td></tr><tr><td>Drw</td><td>MV</td></tr><tr><td>Date</td><td>02/10</td></tr></table> 	EAST TILBURY		Scale	1:16,000 @ A3	Drw	MV	Date	02/10	 www.scottwilson.com
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Drw	MV												
Date	02/10												



Project:

Title:

Thurrock Borough
Council SFRA Level 2

East Tilbury
Hazard Rating
1 in 1000 Year Tidal / 1 in 1000
Year Fluvial Event (2109)

◆ A001

Breach Location and Label

Flood Hazard Rating

Extreme Hazard

Significant Hazard

Moderate Hazard

Low Hazard

EAST TILBURY

Scale 1:16,000 @ A3

Drw MV

Date 02/10



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Project:

Title:

Thurrock Borough
Council SFRA Level 2

East Tilbury
Time to Inundation
1 in 200 Year Tidal Event (2109)

◆ A001 Breach Location and Label

Time to Inundation (hours)

< 1 hour	8 - 12 hours	20 - 24 hours
1 - 4 hours	12 - 16 hours	24 - 28 hours
4 - 8 hours	16 - 20 hours	28 - 32 hours

EAST TILBURY

Scale 1:16,000 @ A3

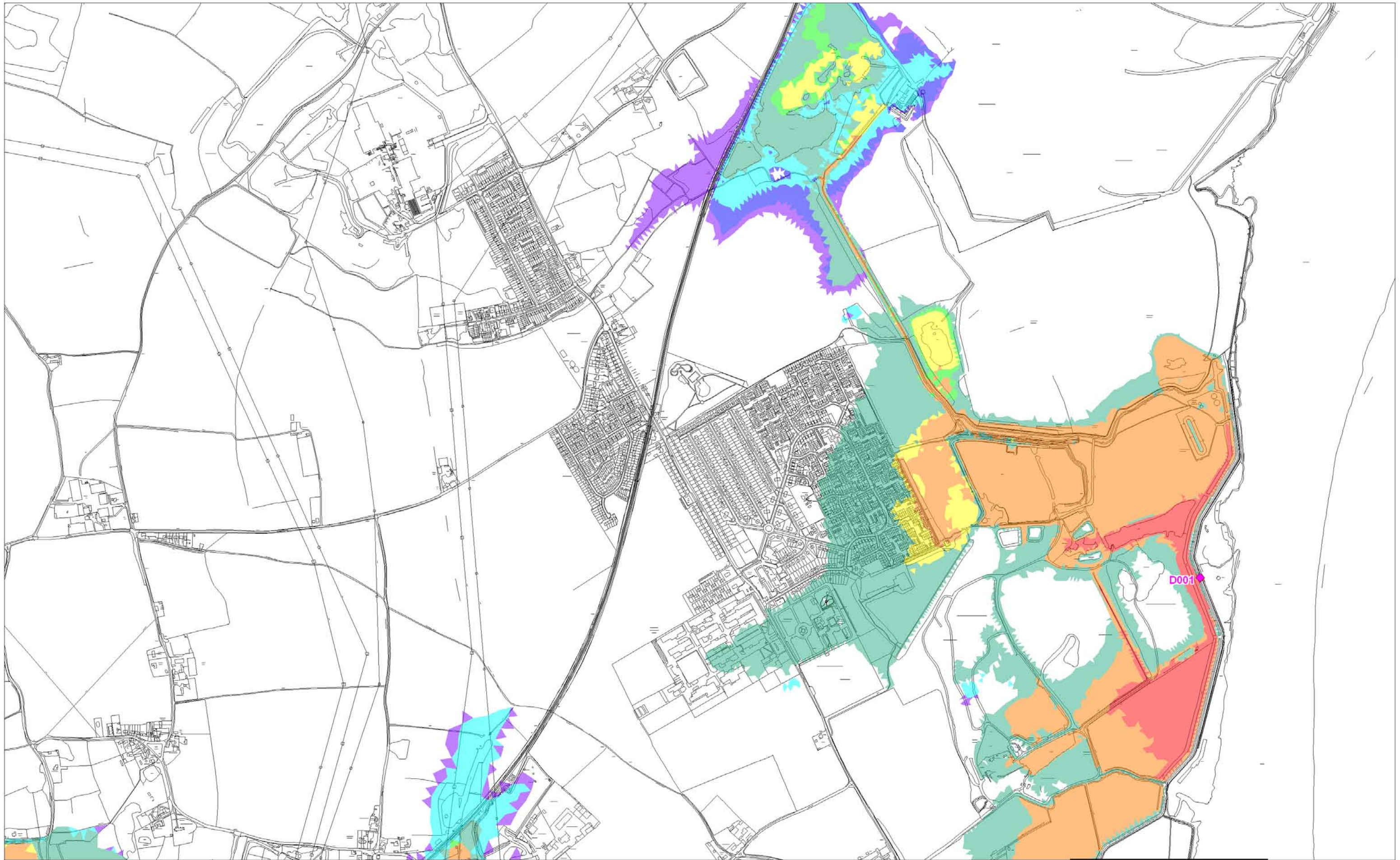
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Date 02/10



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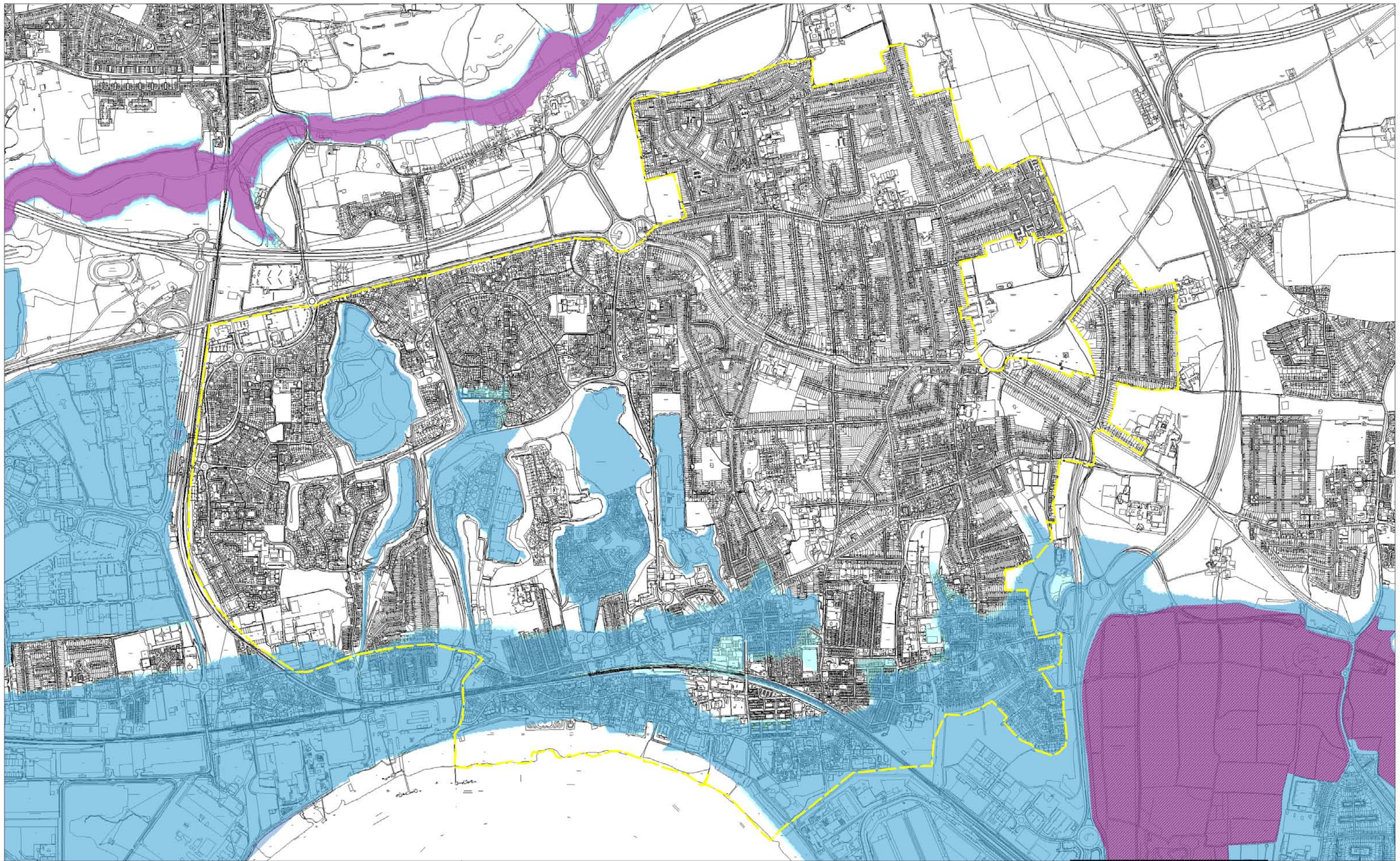
Project: Thurrock Borough Council SFRA Level 2	Title: East Tilbury Time to Inundation 1 in 1000 Year Tidal Event (2109)	 A001 Breach Location and Label	Time to Inundation (hours) <table border="0"><tr><td> < 1 hour</td><td> 8 - 12 hours</td><td> 20 - 24 hours</td></tr><tr><td> 1 - 4 hours</td><td> 12 - 16 hours</td><td> 24 - 28 hours</td></tr><tr><td> 4 - 8 hours</td><td> 16 - 20 hours</td><td> 28 - 32 hours</td></tr></table>	 < 1 hour	 8 - 12 hours	 20 - 24 hours	 1 - 4 hours	 12 - 16 hours	 24 - 28 hours	 4 - 8 hours	 16 - 20 hours	 28 - 32 hours	<table border="1"><tr><td colspan="2">EAST TILBURY</td></tr><tr><td>Scale</td><td>1:16,000 @ A3</td></tr><tr><td>Drw</td><td>MV</td></tr><tr><td>Date</td><td>02/10</td></tr></table> <div><p>N</p></div>	EAST TILBURY		Scale	1:16,000 @ A3	Drw	MV	Date	02/10	 www.scottwilson.com
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EAST TILBURY																						
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Drw	MV																					
Date	02/10																					



GRAYS URBAN AREA



<p>Project:</p> <p>Thurrock Borough Council SFRA Level 2</p>	<p>Title:</p> <p>Grays Urban Area Flood Zones (2009)</p>	<div style="display: flex; justify-content: space-between;"> <div> <p> Broad Regeneration Area</p> </div> <div> <p> Flood Zone 3b</p> <p> Flood Zone 3a</p> <p> Flood Zone 2</p> </div> <div> <p> Tilbury Flood Storage Area - designated 3b</p> </div> </div>	<div style="text-align: center;"> <p>GRAYS</p> <table border="1"> <tr> <td>Scale</td> <td>1:30,000 @ A3</td> </tr> <tr> <td>Drw</td> <td>CA</td> </tr> <tr> <td>Date</td> <td>02/10</td> </tr> </table> </div> <div style="text-align: center;"> <p>N</p> </div>	Scale	1:30,000 @ A3	Drw	CA	Date	02/10	<div style="text-align: center;"> <p>www.scottwilson.com</p> </div>
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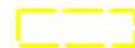


Project:

Thurrock Borough
Council SFRA Level 2

Title:


Grays Urban Area
Flood Zones
(2109)




Broad Regeneration Area

 Flood Zone 3b

 Flood Zone 3a

 Flood Zone 2

 Tilbury Flood Storage
Area - designated 3b

GRAYS

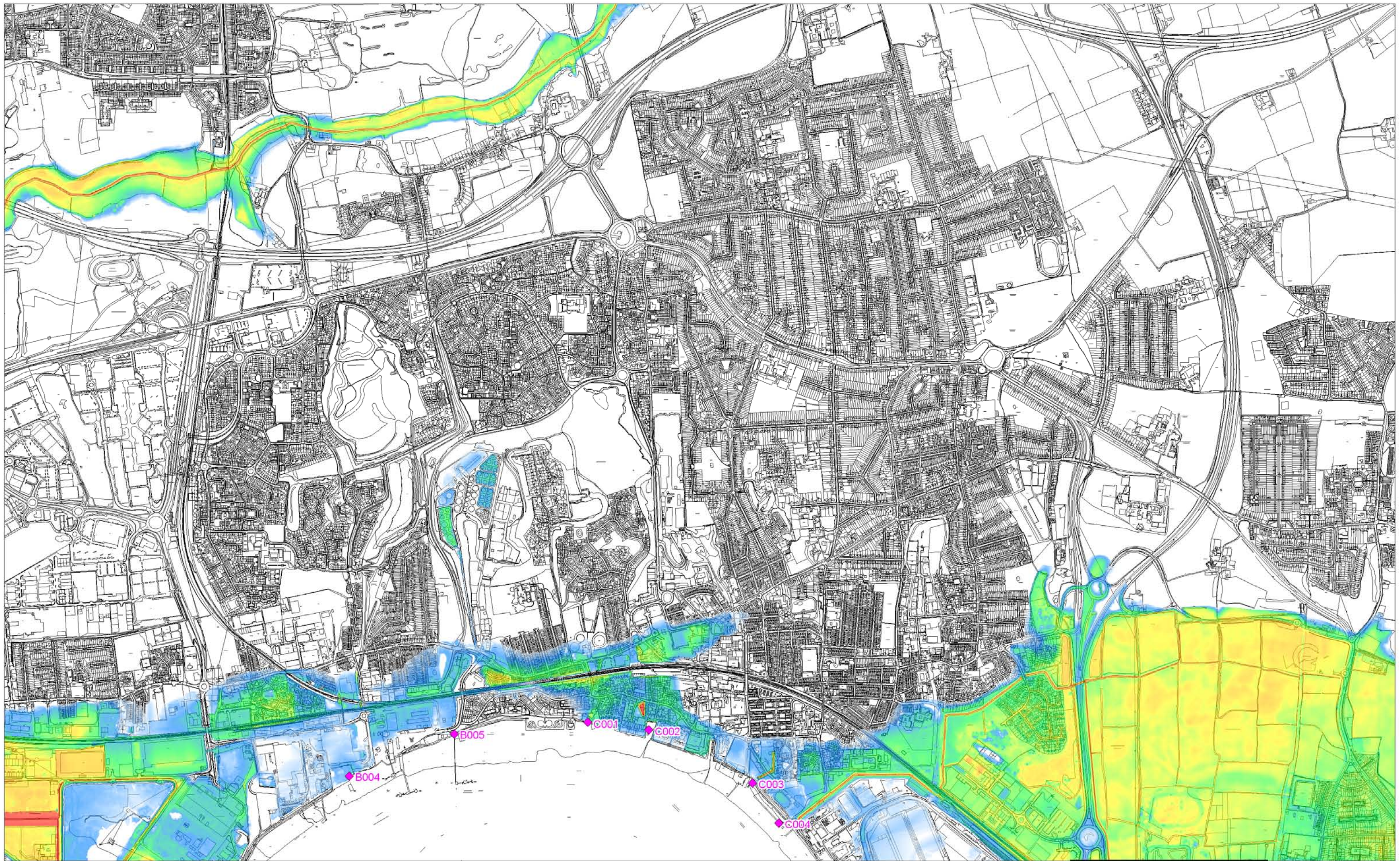
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Drw CA

Date 02/10



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Project:

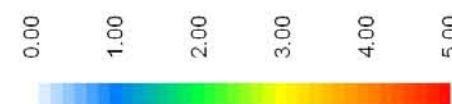
Title:

Thurrock Borough
Council SFRA Level 2

Grays Urban Area
Maximum Flood Depth
1 in 200 Year Tidal / 1 in 100
Year Fluvial Event (2109)

◆ A001 Breach Location and Label

Maximum Flood Depth (m)



GRAYS

Scale 1:30,000 @ A3

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Date 02/10



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<p>Project:</p> <p>Thurrock Borough Council SFRA Level 2</p>	<p>Title:</p> <p>Grays Urban Area Maximum Flood Depth 1 in 1000 Year Tidal / 1 in 1000 Year Fluvial Event (2109)</p>	<p>◆ A001 Breach Location and Label</p>	<p>Maximum Flood Depth (m)</p> <p>0.00 1.00 2.00 3.00 4.00 5.00</p>	<table border="1"> <tr> <th colspan="2">GRAYS</th> </tr> <tr> <td>Scale</td> <td>1:30,000 @ A3</td> </tr> <tr> <td>Drw</td> <td>CA</td> </tr> <tr> <td>Date</td> <td>02/10</td> </tr> </table>	GRAYS		Scale	1:30,000 @ A3	Drw	CA	Date	02/10	<div style="text-align: center;"> <p>N</p> </div> <div style="text-align: right;"> <p>www.scottwilson.com</p> </div>
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Date	02/10												



Project:

Thurrock Borough
Council SFRA Level 2

Title:

Grays Urban Area
Hazard Rating
1 in 200 Year Tidal / 1 in 100
Year Fluvial Event (2009)

◆ A001

Breach Location and Label

Flood Hazard Rating

Extreme Hazard

Significant Hazard

Moderate Hazard

Low Hazard

GRAYS

Scale 1:30,000 @ A3

Drw CA

Date 02/10

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Project:

Thurrock Borough
Council SFRA Level 2

Title:

Grays Urban Area
Hazard Rating
1 in 200 Year Tidal / 1 in 100
Year Fluvial Event (2109)

◆ A001

Breach Location and Label

Flood Hazard Rating

Extreme Hazard
Significant Hazard

Moderate Hazard
Low Hazard

GRAYS

Scale 1:30,000 @ A3

Drw CA

Date 02/10



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<p>Project:</p> <p>Thurrock Borough Council SFRA Level 2</p>	<p>Title:</p> <p>Grays Urban Area Hazard Rating 1 in 1000 Year Tidal / 1 in 1000 Year Fluvial Event (2009)</p>	<p>◆ A001 Breach Location and Label</p>	<p>Flood Hazard Rating</p> <table border="0"> <tr> <td>Extreme Hazard</td> <td>Moderate Hazard</td> </tr> <tr> <td>Significant Hazard</td> <td>Low Hazard</td> </tr> </table>	Extreme Hazard	Moderate Hazard	Significant Hazard	Low Hazard	<table border="1"> <tr> <th colspan="2">GRAYS</th> </tr> <tr> <td>Scale</td> <td>1:30,000 @ A3</td> </tr> <tr> <td>Drw</td> <td>CA</td> </tr> <tr> <td>Date</td> <td>02/10</td> </tr> </table>	GRAYS		Scale	1:30,000 @ A3	Drw	CA	Date	02/10	<p>www.scottwilson.com</p>
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Project: Thurrock Borough Council SFRA Level 2	Title: Grays Urban Area Hazard Rating 1 in 1000 Year Tidal / 1 in 1000 Year Fluvial Event (2109)	 A001 Breach Location and Label	Flood Hazard Rating  Extreme Hazard  Significant Hazard  Moderate Hazard  Low Hazard	<table border="1"><tr><td colspan="2">GRAYS</td></tr><tr><td>Scale</td><td>1:30,000 @ A3</td></tr><tr><td>Drw</td><td>CA</td></tr><tr><td>Date</td><td>02/10</td></tr></table> <div><div>Scot+ Wilson www.scottwilson.com</div></div>	GRAYS		Scale	1:30,000 @ A3	Drw	CA	Date	02/10
GRAYS												
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Drw	CA											
Date	02/10											



Project:

Thurrock Borough
Council SFRA Level 2

Title:

Grays Urban Area
Time to Inundation
1 in 200 Year Event (2109)

Time to Inundation (hours)



GRAYS

Scale 1:30,000 @ A3

Drw CA

Date 02/10



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Project:

Thurrock Borough
Council SFRA Level 2

Title:

Grays Urban Area
Time to Inundation
1 in 1000 Year Event (2109)

◆ A001 Breach Location and Label

Time to Inundation (hours)

Red	< 1 hour	Green	8 - 12 hours	Blue	20 - 24 hours
Orange	1 - 4 hours	Dark Green	12 - 16 hours	Purple	24 - 28 hours
Yellow	4 - 8 hours	Cyan	16 - 20 hours	Pink	28 - 32 hours

GRAYS

Scale 1:30,000 @ A3

Drw MV

Date 02/10



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