

Appendix F – Figures



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 CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User
 Community

1:6000
 0 300 600 900 METRES

LTC Route Alignment
 Development Area Boundary

Client: **highways england**
 Lower Thames Crossing
 5th Floor, 15 St. Dunstons
 London EC3A 7DT

Project: **LOWER THAMES CROSSING DEVELOPMENT PHASE**
 Drawing No: S2

Figure 1.1
 Aerial View of
 Project Location
 Sheet 1 of 5

Drawn	R MILLMAN	Date	11/10/2017
Checked	S RIVELL	Date	11/10/2017
Approved	C SCUDJERY-SMITH	Date	11/10/2017
Drawing number	HE540039-CIV-GEN-SZP_EGNE000000-DRL-0001		

Drawn	R MILLMAN	Date	11/10/2017
Checked	S RIVELL	Date	11/10/2017
Approved	C SCUDJERY-SMITH	Date	11/10/2017

Drawn	R MILLMAN	Date	11/10/2017
Checked	S RIVELL	Date	11/10/2017
Approved	C SCUDJERY-SMITH	Date	11/10/2017



West Tilbury

River Thames

Gravesend

Chalk

A226



— LTC Route Alignment
 Development Area Boundary

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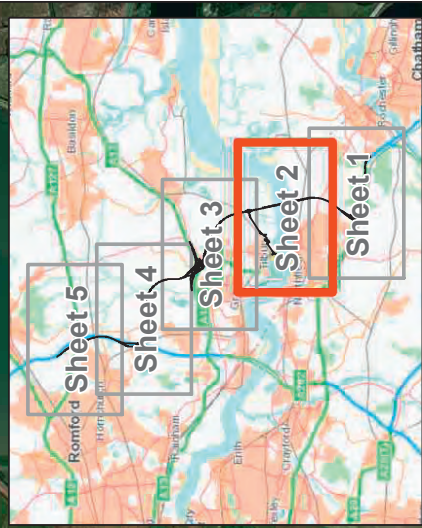
File	S2	11/10/17	For Information	R.M.	SR	C.S.S.
Rev	1	Rev. Date	Description of revision	Drawn	Checked	Verified

Lower Thames Crossing
 5th Floor
 15 St. Paul Street
 London EC4A 3DF

Project: **LOWER THAMES CROSSING DEVELOPMENT PHASE**
 Drawing No:

Drawn	R.MILLMAN	Date	11/10/2017
Checked	S.RWELL	Date	11/10/2017
Approved	C.SCALJURY-SMITH	Date	11/10/2017
Drawing number	HE54/0039-CIV-GEN-SZP_EGNEW/000000-DRL-E-0002		
Sheet	S2	Sheet Date/Revision	A3 / P01
Scale	1:25,000		

Figure 1.1
Aerial View of
Project Location
Sheet 2 of 5





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 CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User
 Community

0 600 1200 METRES

LTC Route Alignment
 Development Area Boundary

Client: **highways** england
 Lower Thames Crossing
 5th Floor, Broadgate House
 15 St. Andrew Place
 London EC3A 7DT

Project: LOWER THAMES CROSSING DEVELOPMENT PHASE
 Drawing No: S2

Figure 1.1
 Aerial View of
 Project Location
 Sheet 3 of 5

Drawn	R MULLMAN	Date	10/10/2017
Checked	S RIVELL	Date	10/10/2017
Approved	C.SCOJIBRY-SMITH	Date	10/10/2017
Drawing number	HE540039-CIV-GEN-SZF_EGNEW000000-DRL-00003		

Drawn	P01
Scale	1:25,000



Client

 Lower Thames Crossing
 5th Floor
 15 St. Bride Street
 London EC4A 3DF

Project
 LOWER THAMES CROSSING
 DEVELOPMENT PHASE

Drawing No
 S2

Figure 1.1
 Aerial View of
 Project Location
 Sheet 4 of 5

Drawn
 R.MILLMAN

Checked
 S.RIWELL

Approved
 C.SCALJURY-SMITH

Date
 11/10/2017

Date
 11/10/2017

Drawing Number
 HE4-0039-CIV-GEN-S2P_EGNE0000000-DRLE-0004

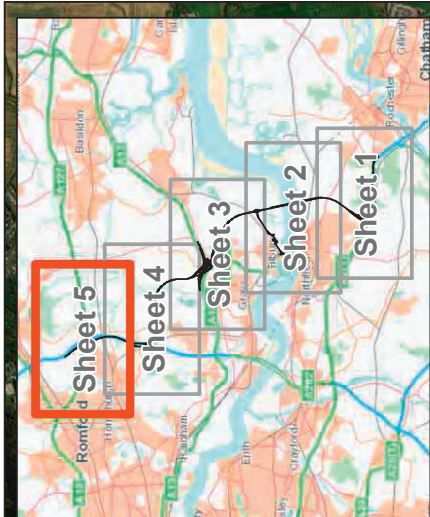
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Revision
 A3

Sheet
 P01

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File: S2_11/10/17
For Information: R.M. SR C.S.S.
Rev: 1/1/1/17
Rev. Date: 11/10/2017
Project: Lower Thames Crossing



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Scale: 1:25,000

Date: 11/10/2017

Drawn: S.R.MILLMAN

Checked: S.R.MILLMAN

Approved: C.SQUJERRY-SMITH

Drawing number: HIE440039-CIV-GEN-SZP_EGNE0000000-DRL-00005

Client: **highways**
 Lower Thames Crossing
 5th Floor
 15 St. Paul Street
 London EC4A 3DF

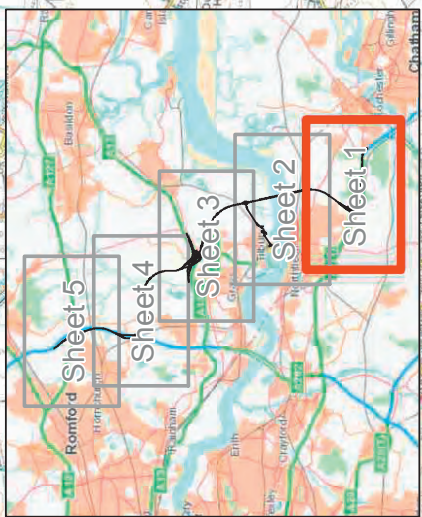
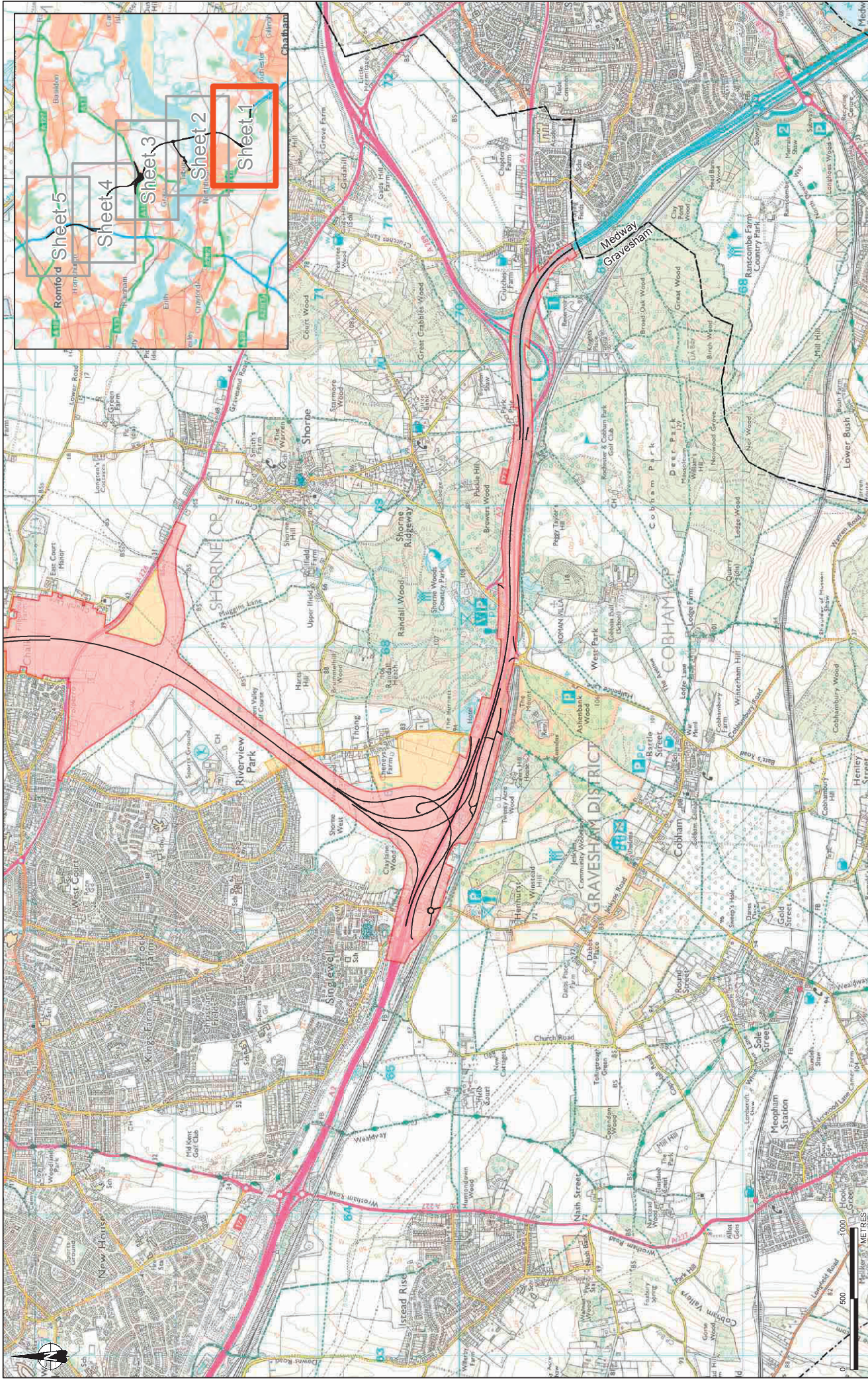
Project: LOWER THAMES CROSSING
 DEVELOPMENT PHASE

Figure 1.1
 Aerial View of
 Project Location
 Sheet 5 of 5

Legend:
 LTC Route Alignment
 Development Area Boundary

0 500 1000 METRES

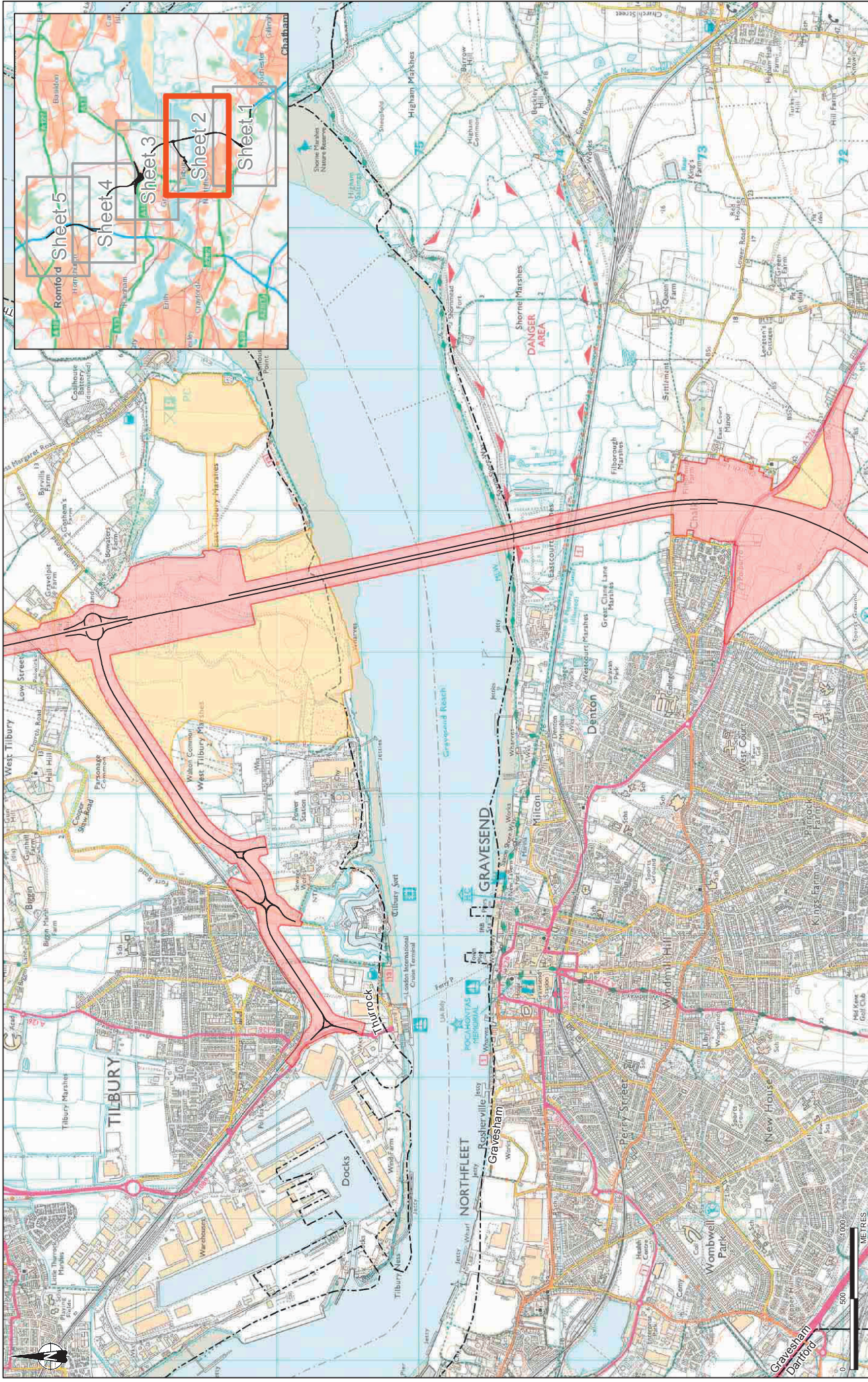
Rev: 02 Date: 11/10/17 For Information: R.M. SR: C.S.S.
 Drawn: S.R.M. Checked: S.R.M. Approved: C.S.S. Drawing number: HIE440039-CIV-GEN-SZP_EGNE0000000-DRL-00005



<p>Client</p> <p>Lower Thames Crossing 5th to 8th Stage London EC3A 7DT</p>		<p>Project</p> <p>LOWER THAMES CROSSING DEVELOPMENT PHASE</p>		<p>Status</p> <p>S2</p>		<p>Drawn</p> <p>R.MILLMAN</p>		<p>Drawn Date/Revision</p> <p>A3 1/25/2017</p>	
<p>Checked</p> <p>S.MILLMAN</p>		<p>Approved</p> <p>C.SCALJURY-SMITH</p>		<p>Checked Date/Revision</p> <p>A3 1/25/2017</p>		<p>Approved Date/Revision</p> <p>A3 1/25/2017</p>		<p>Scale</p> <p>1:25,000</p>	
<p>Drawn number</p> <p>HE4/0039-CIV-GEN-SZF_EGNEW/000000-DRL4-00006</p>		<p>Figure 2.1 Application Site Location Plan Sheet 1 of 5</p>		<p>Scale</p> <p>1:50,000</p>		<p>Drawn</p> <p>R.MILLMAN</p>		<p>Drawn Date/Revision</p> <p>A3 1/25/2017</p>	
<p>Checked</p> <p>S.MILLMAN</p>		<p>Approved</p> <p>C.SCALJURY-SMITH</p>		<p>Checked Date/Revision</p> <p>A3 1/25/2017</p>		<p>Approved Date/Revision</p> <p>A3 1/25/2017</p>		<p>Scale</p> <p>1:25,000</p>	

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 Checked: S.MILLMAN
 Approved: C.SCALJURY-SMITH

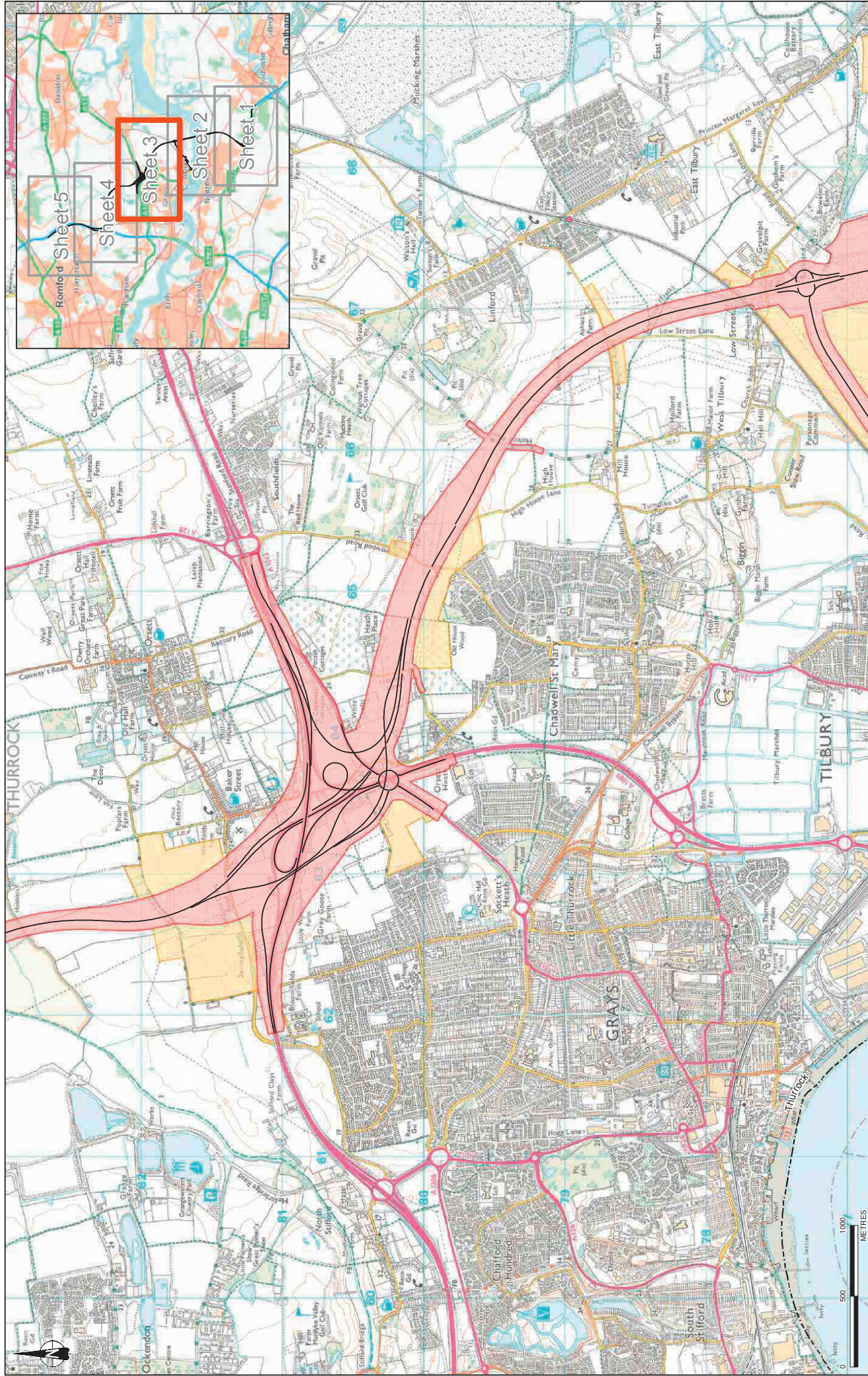


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Lower Thames Crossing <small>Shoeburyness IS 18 to IS 21 London EC3A 7DT</small>		Drawing title Figure 2.1 Application Site Location Plan Sheet 2 of 5		Drawn S.R.MILLMAN	Date: 11/10/2017
				Checked S.R.MILLMAN	Date: 11/10/2017
				Approved C.SQUJERRY-SMITH	Date: 11/10/2017
				Drawing number HE540039-CIV-GEN-SZF_EGNEW000000-DRL-00007	

— LTC Route Alignment
 Permanent Land Requirement
 Temporary Land Requirement

Scale: 1:50,000
 Date: 11/10/17
 Drawing title: Application Site Location Plan
 Drawing number: HE540039-CIV-GEN-SZF_EGNEW000000-DRL-00007

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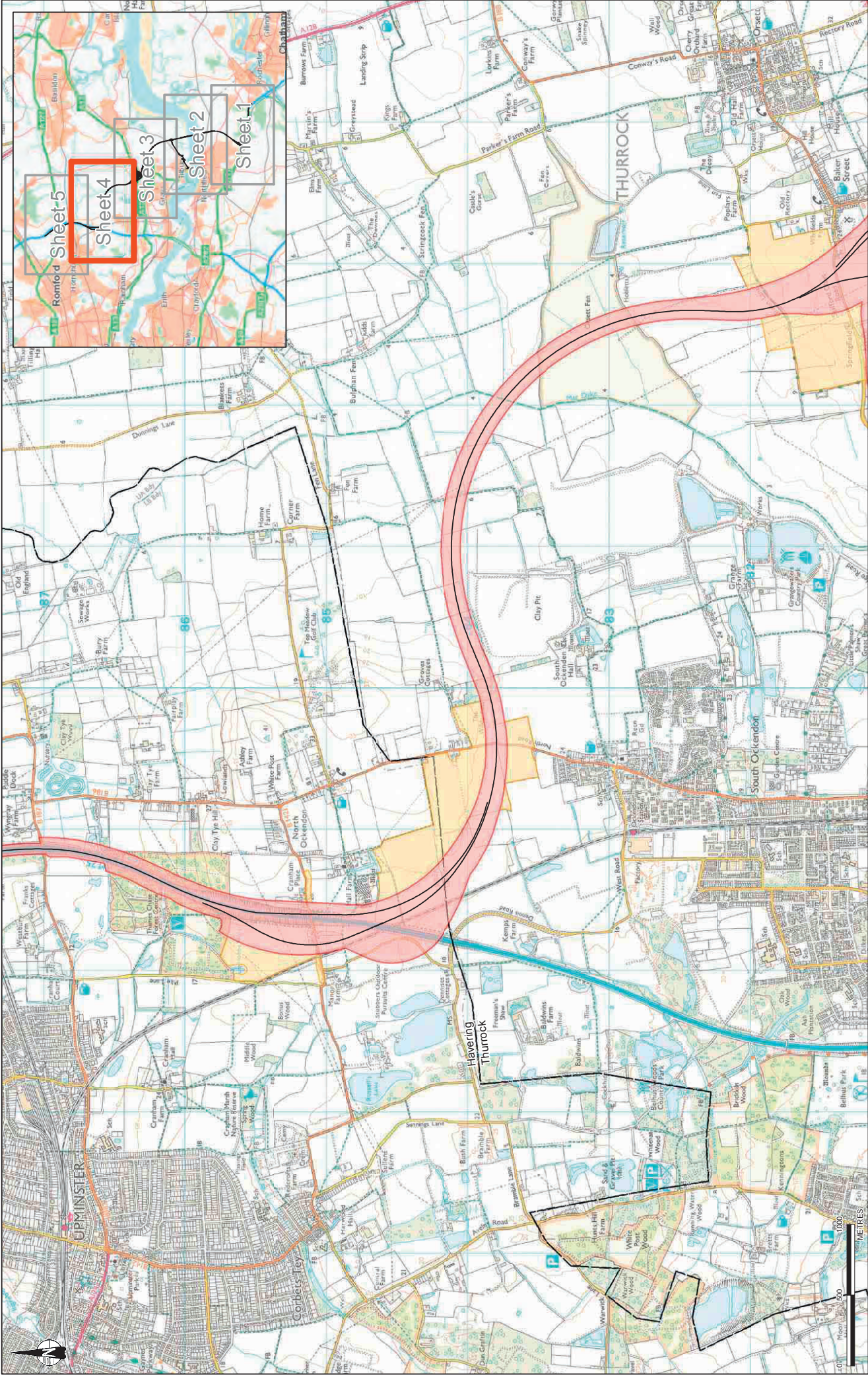
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Lower Thames Crossing 5th Stifford Way London EC3A 7DT		Client S2	Project LOWER THAMES CROSSING DEVELOPMENT PHASE	Status S2	Drawn R.MILLMAN	Date 11/10/2017	Drawn Date Revision AS P01 Scale: 1:25,000	Checked S.MWELL	Date 11/10/2017
Lower Thames Crossing 5th Stifford Way London EC3A 7DT		Client S2	Project LOWER THAMES CROSSING DEVELOPMENT PHASE	Status S2	Checked S.MWELL	Date 11/10/2017	Drawn Date Revision AS P01 Scale: 1:25,000	Approved C.SOUBRY-SMITH	Date 11/10/2017
Lower Thames Crossing 5th Stifford Way London EC3A 7DT		Client S2	Project LOWER THAMES CROSSING DEVELOPMENT PHASE	Status S2	Drawing number HE4/0039-CIV-GEN-SZF_EGNEW000000-DRL4-00008	Figure 2.1 Application Site Location Plan Sheet 3 of 5	Drawing number HE4/0039-CIV-GEN-SZF_EGNEW000000-DRL4-00008	Drawing number HE4/0039-CIV-GEN-SZF_EGNEW000000-DRL4-00008	Drawing number HE4/0039-CIV-GEN-SZF_EGNEW000000-DRL4-00008

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0 500 1000 METRES
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LTC Route Alignment
 Permanent Land Requirement
 Temporary Land Requirement

01/11/2017 11:10:17
 11/10/2017 11:10:17
 11/10/2017 11:10:17



		Lower Thames Crossing <small>Shovelton House 51 St Albans Street London EC3A 7DT</small>	Project: LOWER THAMES CROSSING DEVELOPMENT PHASE Drawing No:	Status: S2 Date: 1/25/2017
Client:		Design: R MILLMAN Checked: S RIVELL Approved: C SCUDJERY-SMITH Drawing number: HE540039-CIV-GEN-SZP_EGNEW000000-DRL4-00009	Date: 11/10/2017 Date: 11/10/2017 Date: 11/10/2017	Date: 1/25/2017
Scale Layer Credits. Contains OS data © Crown Copyright and database right 2017. Ordnance Survey 100009049		Figure 2.1 Application Site Location Plan Sheet 4 of 5	Scale: 1:25,000	
File: S2_111017	Date: 11/10/17	Scale: 1:25,000	Scale: 1:25,000	



<p>Client</p> <p>Lower Thames Crossing <small>Shoeburyness S15 8PQ</small> <small>London EC2A 7DT</small></p>		<p>Project</p> <p>LOWER THAMES CROSSING DEVELOPMENT PHASE</p>		<p>Status</p> <p>S2</p>	<p>Drawn</p> <p>R.MILLMAN</p>	<p>Date</p> <p>11/10/2017</p>	<p>Drawn</p> <p>C.SCALIBURY-SMITH</p>	<p>Date</p> <p>11/10/2017</p>	<p>Drawn</p> <p>HIE540039-CIV-GEN-SZF_EGNEW000000-DRL-00010</p>
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<p>Project</p> <p>LOWER THAMES CROSSING DEVELOPMENT PHASE</p>		<p>Figure 2.1</p> <p>Application Site Location Plan</p> <p>Sheet 5 of 5</p>		<p>Drawn</p> <p>R.MILLMAN</p>		<p>Date</p> <p>11/10/2017</p>		<p>Checked</p> <p>S.MRWELL</p>	
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<p>Project</p> <p>LOWER THAMES CROSSING DEVELOPMENT PHASE</p>		<p>Figure 2.1</p> <p>Application Site Location Plan</p> <p>Sheet 5 of 5</p>		<p>Drawn</p> <p>R.MILLMAN</p>		<p>Date</p> <p>11/10/2017</p>		<p>Checked</p> <p>S.MRWELL</p>	
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<p>Project</p> <p>LOWER THAMES CROSSING DEVELOPMENT PHASE</p>		<p>Figure 2.1</p> <p>Application Site Location Plan</p> <p>Sheet 5 of 5</p>		<p>Drawn</p> <p>R.MILLMAN</p>		<p>Date</p> <p>11/10/2017</p>		<p>Checked</p> <p>S.MRWELL</p>	
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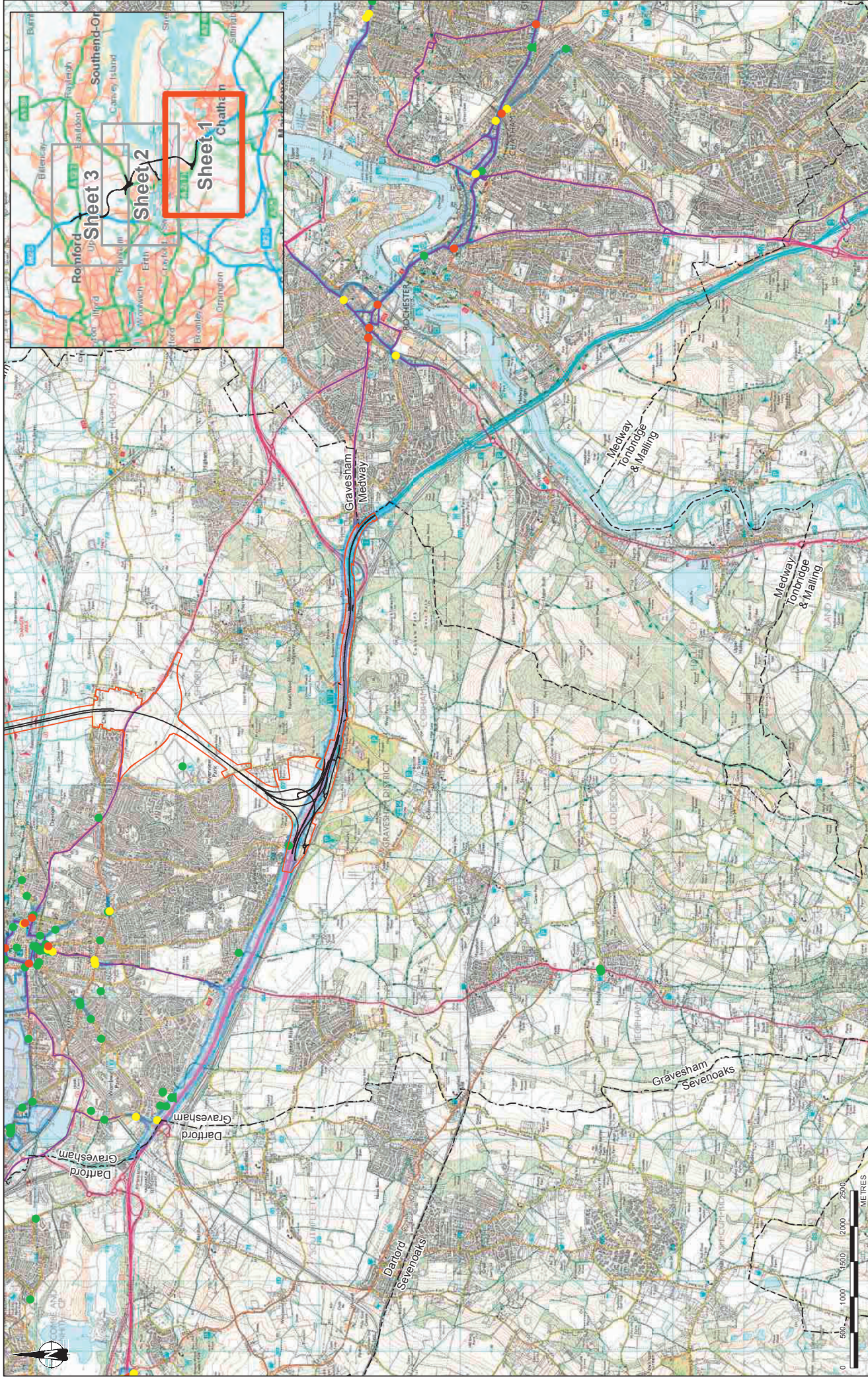
LRTC Route Alignment
 Permanent Land Requirement
 Temporary Land Requirement

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11/10/17
 11/10/17
 11/10/17
 11/10/17

R.M. SR. C.S.S.
 R.M. SR. C.S.S.
 R.M. SR. C.S.S.
 R.M. SR. C.S.S.

11/10/17
 11/10/17
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 11/10/17



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Scale: 1:50,000

Date: 11/10/2017

Author: S.R.M.I.

Checker: C.S.

Approver: C.S.

Drawn by: S.R.M.I.

Checked by: C.S.

Approved by: C.S.

Working number: HE54/0039-CJVEAQ-SZP_EGNE/00000000-D/RL-E-0001

Station: S2

Drawn: R.MILLMAN

Checked: S.R.M.I.

Approved: C.S.

Working number: HE54/0039-CJVEAQ-SZP_EGNE/00000000-D/RL-E-0001

- Legend:**
- 2015 Nitrogen dioxide automatic monitoring concentration less than 36 µg/m³
 - 2015 Nitrogen dioxide automatic monitoring concentration 36 - 40 µg/m³
 - 2015 Nitrogen dioxide automatic monitoring concentration greater than 40 µg/m³
 - 2015 Nitrogen dioxide diffusion tube concentration less than 36 µg/m³
 - 2015 Nitrogen dioxide diffusion tube concentration 36 - 40 µg/m³
 - 2015 Nitrogen dioxide diffusion tube concentration greater than 40 µg/m³

- Boundary Lines:**
- Development Area Boundary
 - Local Authority Boundary
 - Air Quality Management Area
 - Gravesham Severnoaks
 - Medway Torbridge & Malling
 - Dartford Severnoaks

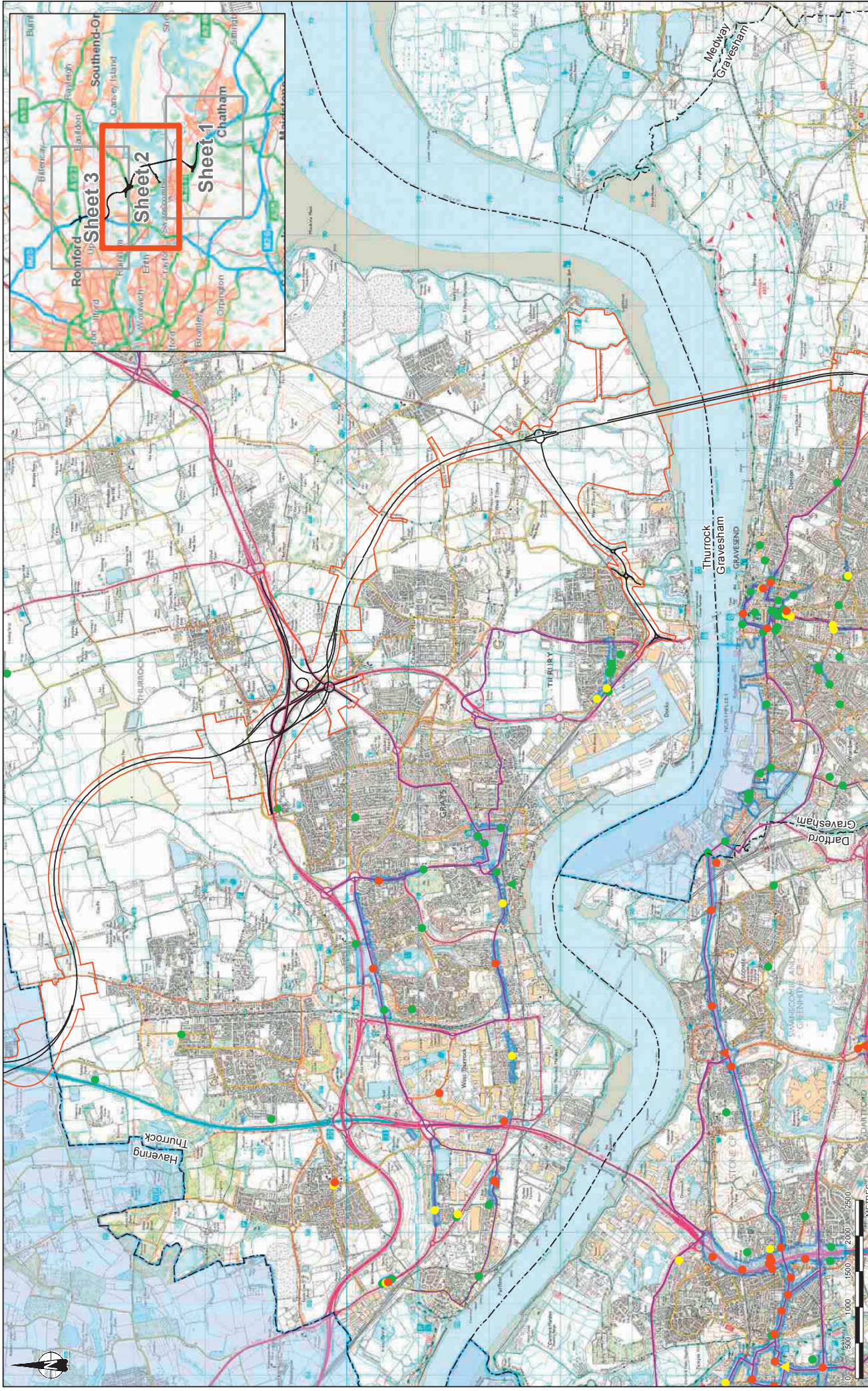
Client: **highways england**
 Sibley House
 15 St. Dunstons
 London EC3A 7DT

Project: LOWER THAMES CROSSING DEVELOPMENT PHASE
Client: **highways england**
 Sibley House
 15 St. Dunstons
 London EC3A 7DT

Project: LOWER THAMES CROSSING DEVELOPMENT PHASE
Client: **highways england**
 Sibley House
 15 St. Dunstons
 London EC3A 7DT

Figure 6.1
Air Quality - Air Quality Management Areas and Air Quality Monitoring
Sheet 1 of 3

Sheet	S2
Drawn	R.MILLMAN
Checked	S.R.M.I.
Approved	C.S.
Working number	HE54/0039-CJVEAQ-SZP_EGNE/00000000-D/RL-E-0001



LOWER THAMES CROSSING DEVELOPMENT PHASE

Client: **Client House:** 15 St Giles, London EC4A 3DF

Project: Lower Thames Crossing

Project Number: HE540039-CV-EAQ-S2P_EGNE0000000-DR-LE-0002

Drawn: R. MILLMAN

Checked: S. RIVELL

Approved: C. SCURRY-SMITH

Date: 11/10/2017

Scale: 1:50,000

Revision: A3

Sheet: S2

Figure 6.1
Air Quality - Air Quality Management Areas and Air Quality Monitoring
Sheet 2 of 3

Legend:

- ▲ 2015 Nitrogen dioxide automatic monitoring concentration less than 36 µg/m³
- ▲ 2015 Nitrogen dioxide automatic monitoring concentration 36 - 40 µg/m³
- ▲ 2015 Nitrogen dioxide automatic monitoring concentration greater than 40 µg/m³
- 2015 Nitrogen dioxide diffusion tube concentration less than 36 µg/m³
- 2015 Nitrogen dioxide diffusion tube concentration 36 - 40 µg/m³
- 2015 Nitrogen dioxide diffusion tube concentration greater than 40 µg/m³

Other Legend:

- LTC Route Alignment
- Development Area Boundary
- Defra's National Pollution Climate Mapping (PCM) Model Network
- Air Quality Management Area
- Local Authority Boundary

Scale: METRES: 0, 500, 1000, 1500, 2000, 2500

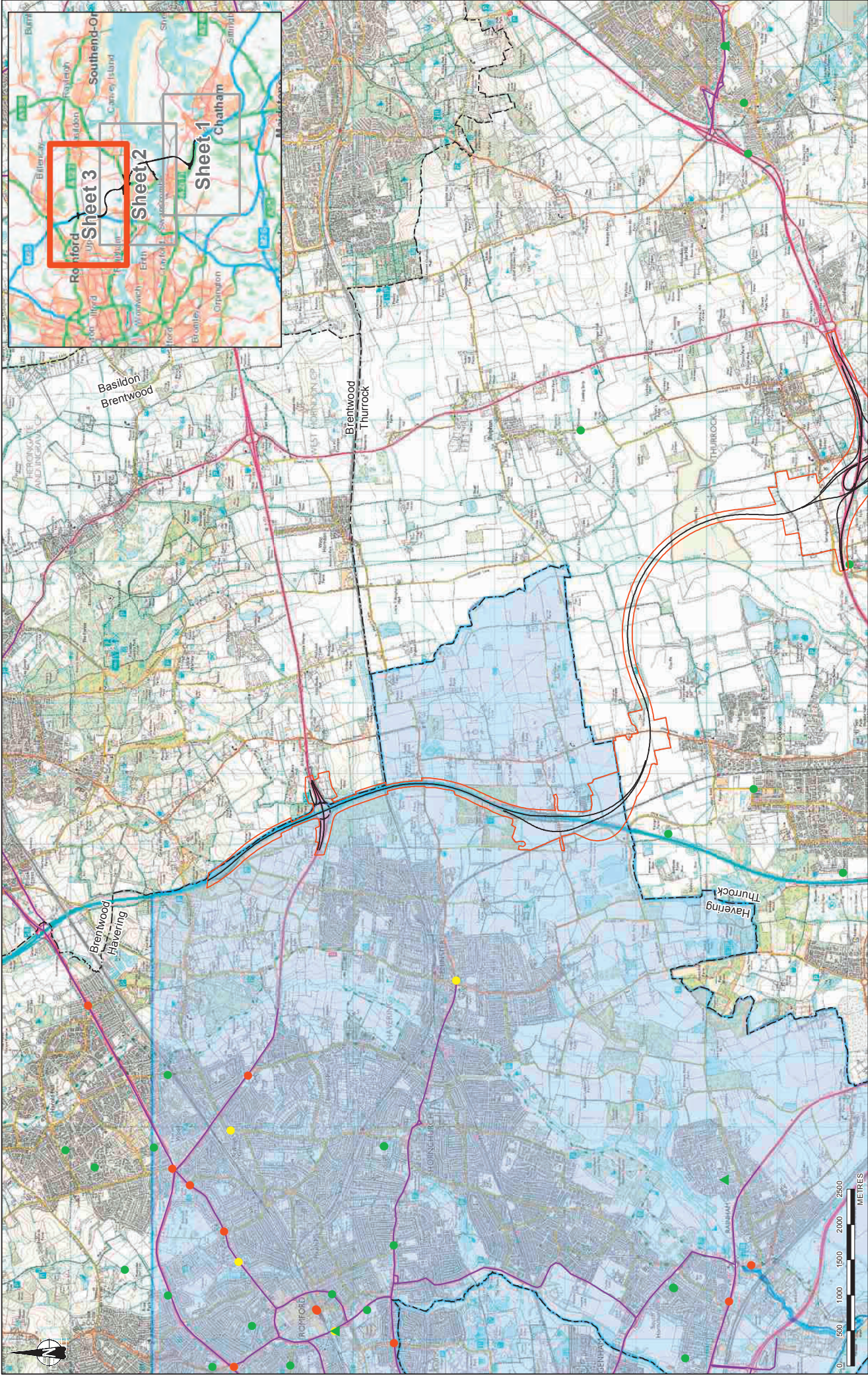
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Page: 52 of 52

Date: 11/10/17

Scale: 1:50,000

Revision: A3



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Scale: 1:50,000

Drawn: R MILLMAN
Checked: S RIVELL
Drawing number: HE540039-CIV-FAQ-S2P_EGNE00000000-DR-LE-00003

Project: LOWER THAMES CROSSING DEVELOPMENT PHASE
Client: highways england
Drawing title: Air Quality - Air Quality Management Areas and Air Quality Monitoring
Sheet 3 of 3

2015 Nitrogen dioxide automatic monitoring concentration less than 36 $\mu\text{g}/\text{m}^3$ (Green triangle)
2015 Nitrogen dioxide automatic monitoring concentration 36 - 40 $\mu\text{g}/\text{m}^3$ (Yellow triangle)
2015 Nitrogen dioxide diffusion tube monitoring concentration 36 - 40 $\mu\text{g}/\text{m}^3$ (Orange triangle)
2015 Nitrogen dioxide diffusion tube monitoring concentration greater than 40 $\mu\text{g}/\text{m}^3$ (Red triangle)
2015 Nitrogen dioxide automatic monitoring concentration greater than 40 $\mu\text{g}/\text{m}^3$ (Red triangle)
2015 Nitrogen dioxide diffusion tube concentration less than 30 $\mu\text{g}/\text{m}^3$ (Green circle)

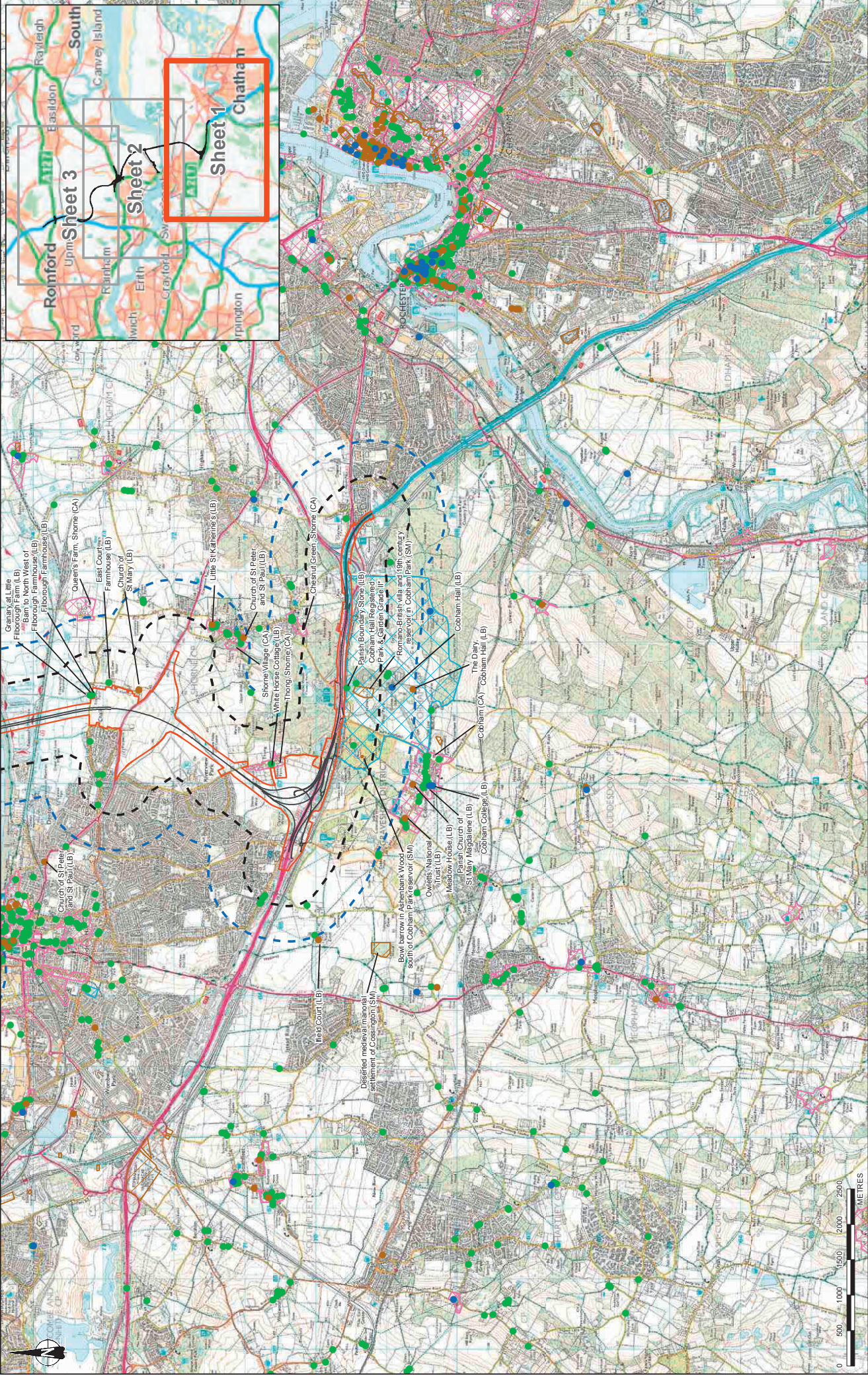
Legend:
 - LITC Route Alignment
 - Development Area Boundary
 - Defra's National Pollution Climate Mapping (PCM) Model Network
 - Air Quality Management Area
 - Local Authority Boundary

Scale: 0 500 1000 1500 2000 2500 METRES

Revision: P01
Date: 11/10/2017
Checked: S RIVELL
Drawing number: HE540039-CIV-FAQ-S2P_EGNE00000000-DR-LE-00003

Client: Lower Thames Crossing
5th Floor
15 St Bride Street
London EC4A 3DF

Figure 6.1
Air Quality - Air Quality Management Areas
and Air Quality Monitoring
Sheet 3 of 3



		Client Lower Thames Crossing <small>50000000</small> 15 St Albans Road London EC3A 7DT	Project LOWER THAMES CROSSING DEVELOPMENT PHASE	Sheet S2	Drawn R.MILLMAN	Digital Date A3	Revision P01
Scale 1:50,000		Checked S.BRIWELL	Date 11/10/2017	Drawn R.MILLMAN	Date 11/10/2017	Scale 1:50,000	Revision P01
Approved C.SCOJIBRY-SMITH		Checked S.BRIWELL	Date 11/10/2017	Drawn R.MILLMAN	Date 11/10/2017	Scale 1:50,000	Revision P01
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Approved HE54/0039-CJV-HER-SSP_GNE00000000-DR-LE-00001		Checked S.BRIWELL	Date 11/10/2017	Drawn R.MILLMAN	Date 11/10/2017	Scale 1:50,000	Revision P01

Figure 7.1
 Cultural Heritage -
 Designated Heritage Assets
 Sheet 1 of 3

0 500 1000 1500 2000 2500 METRES

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Rev: 02 11/10/17 For information R.M. SR C.S.S. C.S.S. C.S.S.

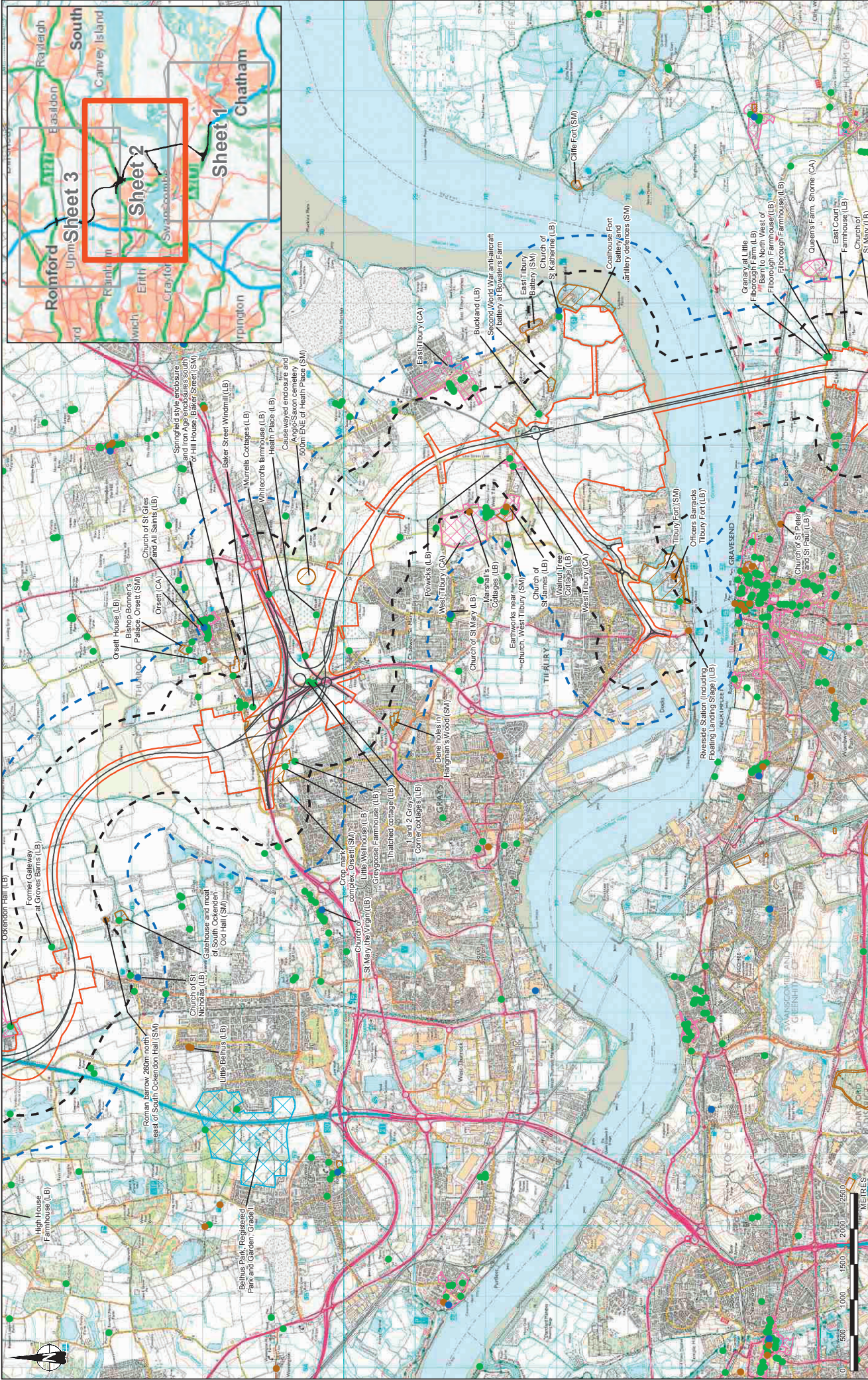
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Checked: S.BRIWELL

Approved: C.SCOJIBRY-SMITH

Drawing number: HE54/0039-CJV-HER-SSP_GNE00000000-DR-LE-00001



Client: **Project:** LOWER THAMES CROSSING DEVELOPMENT PHASE

Drawn: R MILLMAN **Checked:** S R W I E L L **Approved:** C S C O U B R Y - S M I T H

Date: 11/10/2017 **Date:** 11/10/2017 **Date:** 11/10/2017

Scale: 1:50,000

Sheet: S2

Figure 7.1
Cultural Heritage - Designated Heritage Assets
Sheet 2 of 3

Lower Thames Crossing
5100m
S16 to S18
London EC3A 7DT

Legend:

- LTC Route Alignment
- Development Area Boundary
- 500m buffer
- 1km buffer
- Listed Buildings (LB)
 - Grade I
 - Grade II*
 - Grade II
- Scheduled Monument (SM)
- Registered Park and Garden
- Conservation Area (CA)

Scale: METRES
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Rev: S2 **Date:** 11/10/17 **For Information:** R.M. SR C.S.S. **Scale:** 1:50,000

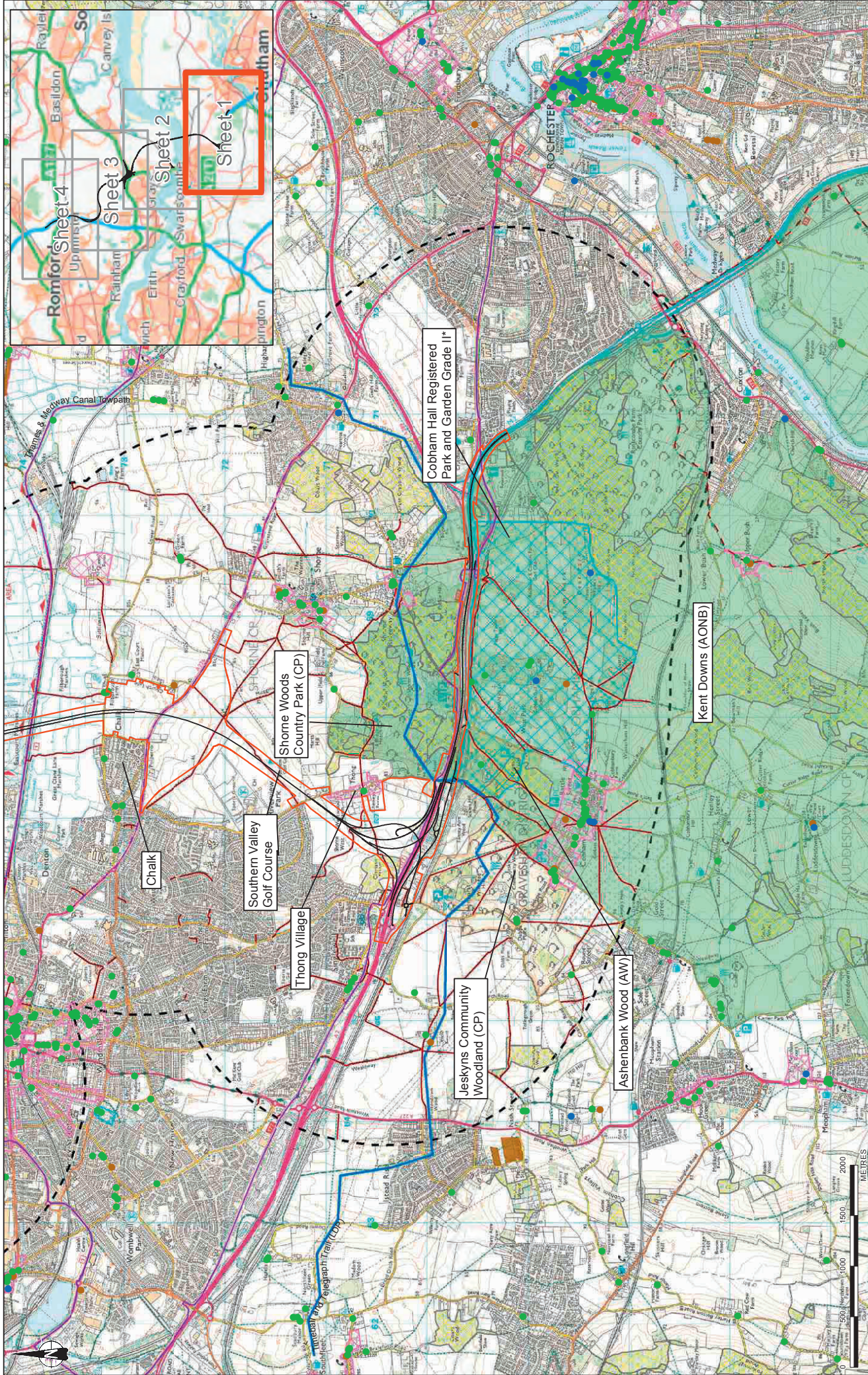


		LOWER THAMES CROSSING DEVELOPMENT PHASE	
Lower Thames Crossing <small>Site S18 EC&A T01</small>		Figure 7.1 Cultural Heritage Assets Sheet 3 of 3	
Client: Blondel House <small>15 St Albans Road, London EC2A 4DT</small>		Status: S2	
Project: Lower Thames Crossing		Drawing number: HE540335-CIV-HER-SNP_GNED0000000-DRLE-00001	
Drawing title: Lower Thames Crossing		Date: 11/10/2017	
Checked by: S.R.MILLMAN		Date: 11/10/2017	
Approved by: C.SCALDARY-SMITH		Date: 11/10/2017	
Scale: 1:50,000		Drawing title: Lower Thames Crossing	
Drawing number: HE540335-CIV-HER-SNP_GNED0000000-DRLE-00001		Date: 11/10/2017	

- Legend**
- LTC Route Alignment
 - Development Area Boundary
 - 500m buffer
 - 1km buffer
 - Scheduled Monument (SM)
 - Registered Park and Garden
 - Conservation Area (CA)
 - Listed Buildings (LB)
 - Grade I
 - Grade II*
 - Grade II

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File: S2_111017_01-Information
 Date: 11/10/17
 Scale: 1:50,000
 Sheet: 3 of 3



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Drawn: RAILLMAN Date: 10/10/2017

Checked: S RIVELL Date: 10/10/2017

Approved: C. SCOURBY-SMITH Date: 10/10/2017

Drawing number: HE54/03/9-CIVELS-SZP_EGNE0000000-DR-LE-00001

Client: **highways england**

Project: **LOWER THAMES CROSSING DEVELOPMENT PHASE**

Sheet: **S2**

Figure 8.1
Landscape - Statutory Designations and Visual Amenity Receptors
Sheet 1 of 4

Client:
Lower Thames Crossing
5th Floor
15 St Giles
London EC4A 3DF

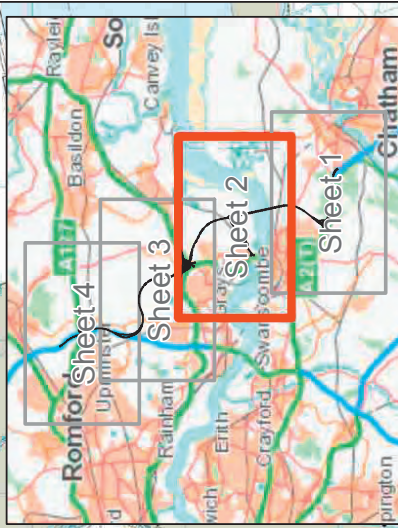
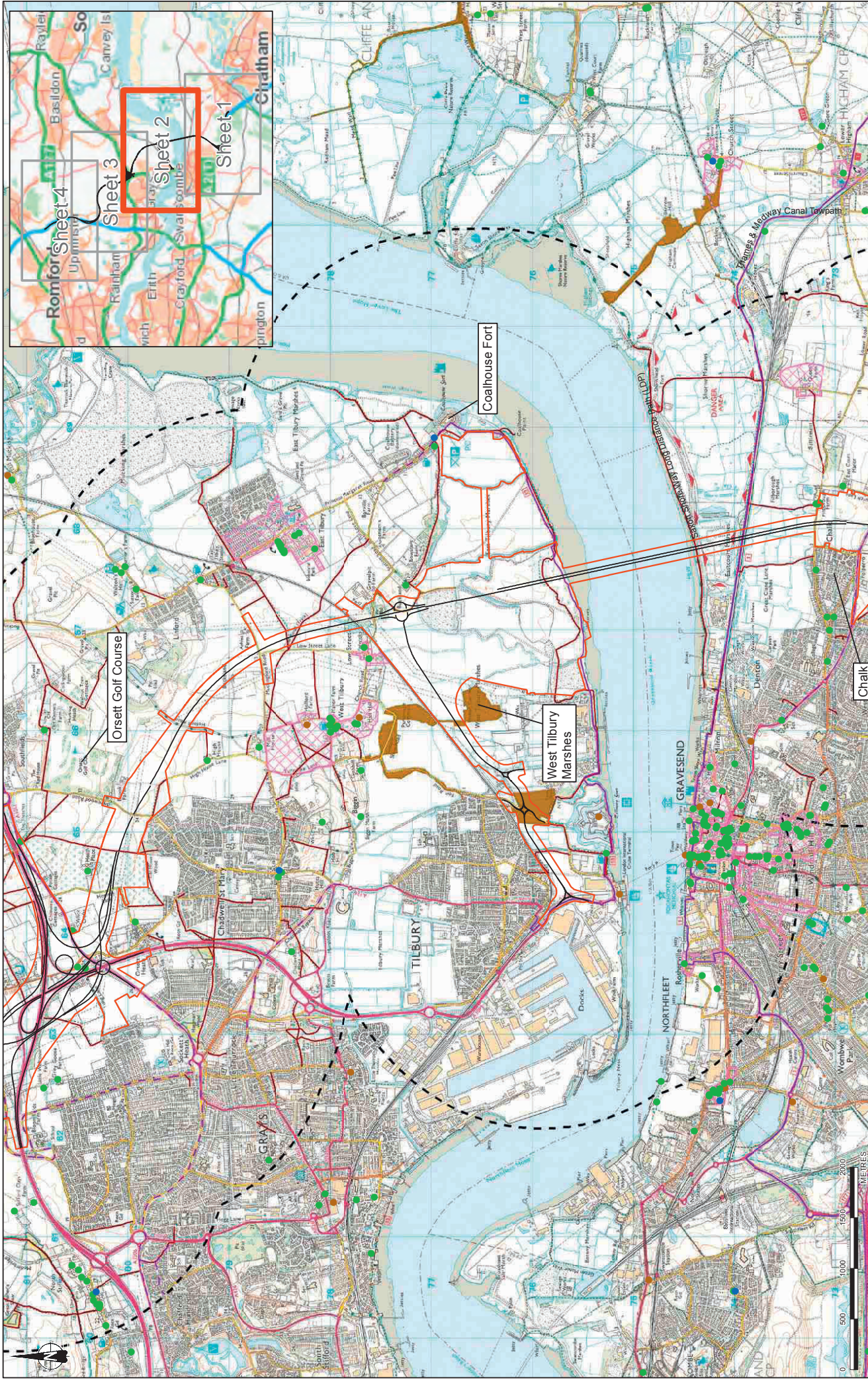
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- Grade II
- Open Access Land
- Sustrans National Cycle Network
- Local Cycle Route
- Public Rights of Way
- LTC Route Alignment
- Development Area
- Boundary
- Listed Buildings
- Grade I
- Grade II*
- National Trail
- Timeball & Telegraph Trail
- Registered Park and Garden
- Conservation Area
- Ancient Woodland (AW)
- Area of Outstanding Natural Beauty (AONB)
- Country Park (CP)
- 2km study area

Scale: 0 500 1000 1500 2000 METRES

Rev: S2 Date: 10/10/17 For information

Rev: S2 Date: 10/10/17 For information

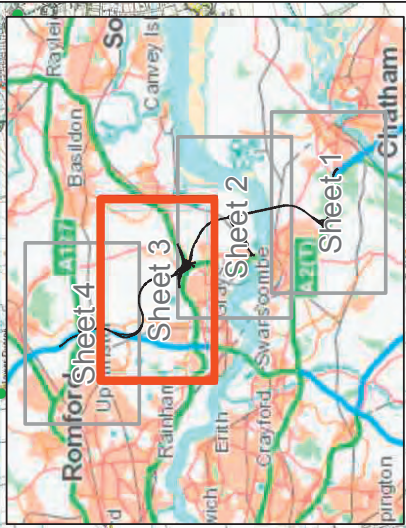
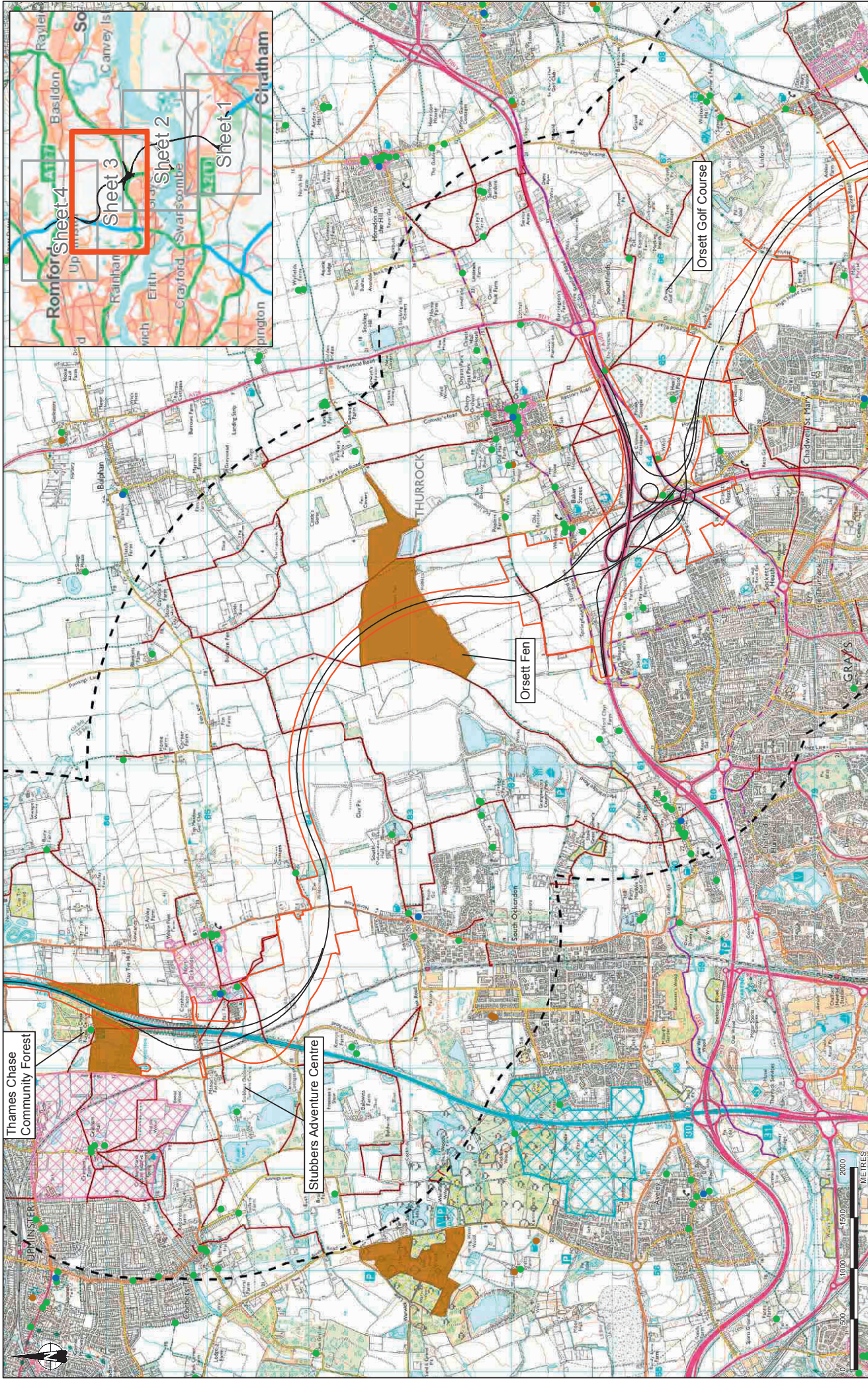


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Client: Statutory Receptors <small>IS & ISR London EC&A 701</small>		Project: LOWER THAMES CROSSING DEVELOPMENT PHASE		Drawn: R.MILLMAN Checked: S.RIWELL Approved: C.SCOJIBRY-SMITH Drawing number: HE54/0039-CV&VLS-SZP_EGNE00000000-DR-LE-00002
Project: Lower Thames Crossing <small>Statutory Receptors IS & ISR London EC&A 701</small>		Drawing title: Figure 8.1 Landscape - Statutory Designations and Visual Amenity Receptors Sheet 2 of 4		Date: 10/10/2017 Date: 10/10/2017 Date: 10/10/2017

- LEGEND**
- Grade II
 - Development Area
 - Boundary
 - Listed Buildings
 - Grade I
 - Grade II*
 - Open Access Land
 - Sustains National Cycle Network
 - Local Cycle Route
 - Public Rights of Way
 - National Trail
 - Timeball & Telegraph Trail
 - Registered Park and Garden
 - Conservation Area
 - Ancient Woodland (AW)
 - Area of Outstanding Natural Beauty (AONB)
 - Country Park (CP)
 - 2km study area

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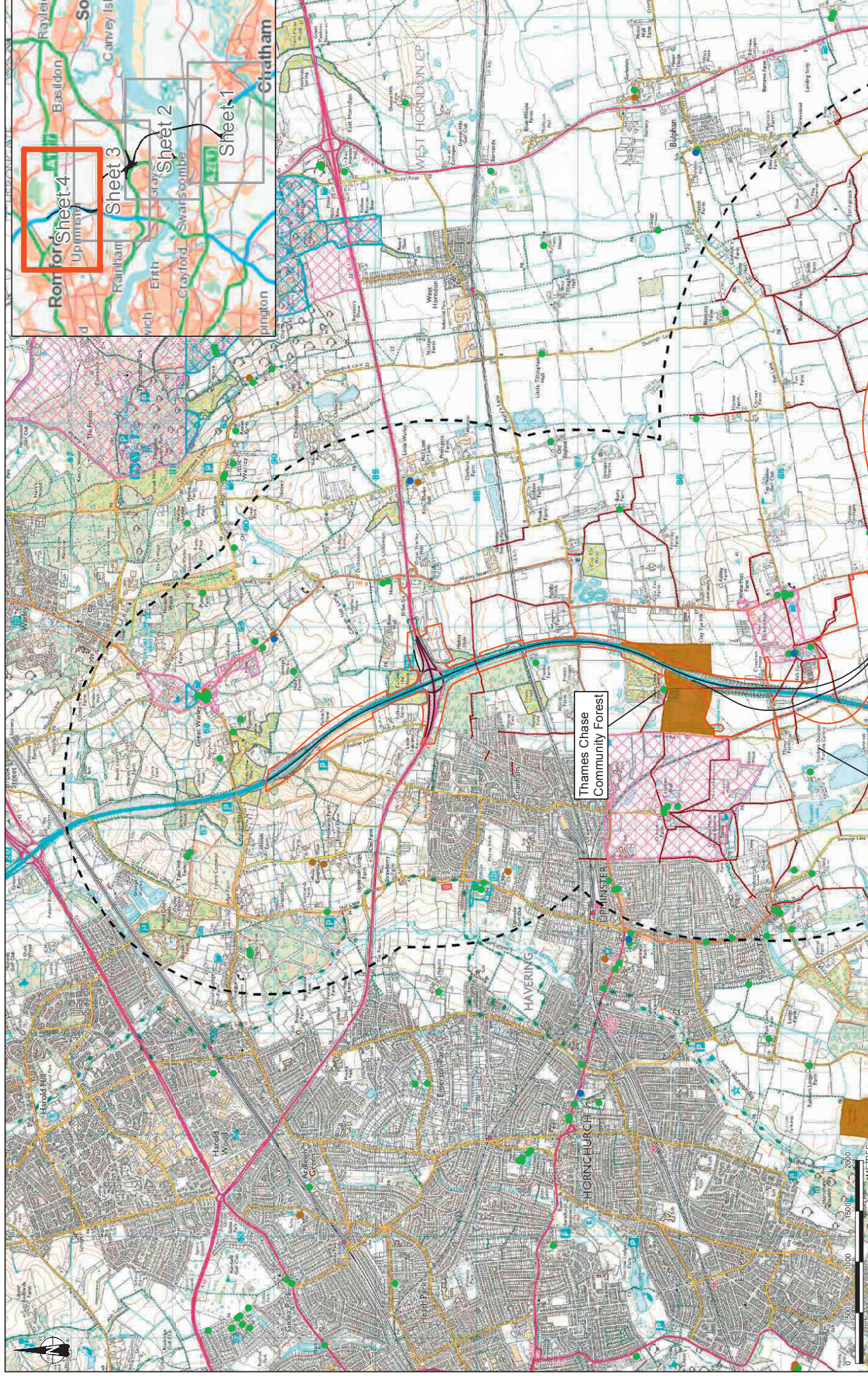
Rev: 01
 Date: 10/10/17
 Drawn: R.M.
 Date: 10/10/17
 Checked: S.R.
 Date: 10/10/17
 Approved: C.S.
 Date: 10/10/17



		Lower Thames Crossing <small>Sturminster House 15 St Giles London EC4A 3DT</small>	Project: LOWER THAMES CROSSING DEVELOPMENT PHASE Drawing No:	Status: S2 Date: 13/02/2017 Drawn: R MILLMAN Checked: S RIVELL Approved: C.SCOJIBRY-SMITH Drawing number: HE54/03/9-CJVELS-SZP-EGNE0000000-00-DR-LE-00003
Client:		Figure 8.1 Landscape - Statutory Designations and Visual Amenity Receptors Sheet 3 of 4	Date: 13/02/2017 Scale: 1:35,000	Date: 13/02/2017 Scale: 1:35,000

Area of Outstanding Natural Beauty (AONB)	National Trail	Grade II	LTC Route Alignment
Country Park (CP)	Timeball & Telegraph Trail	Open Access Land	Development Area
2km study area	Registered Park and Garden	Statutory National Cycle Network	Boundary
Conservation Area	Conservation Area	Local Cycle Route	Listed Buildings
Ancient Woodland (AW)	Accent Woodland (AW)	Public Rights of Way	Grade I
			Grade II*

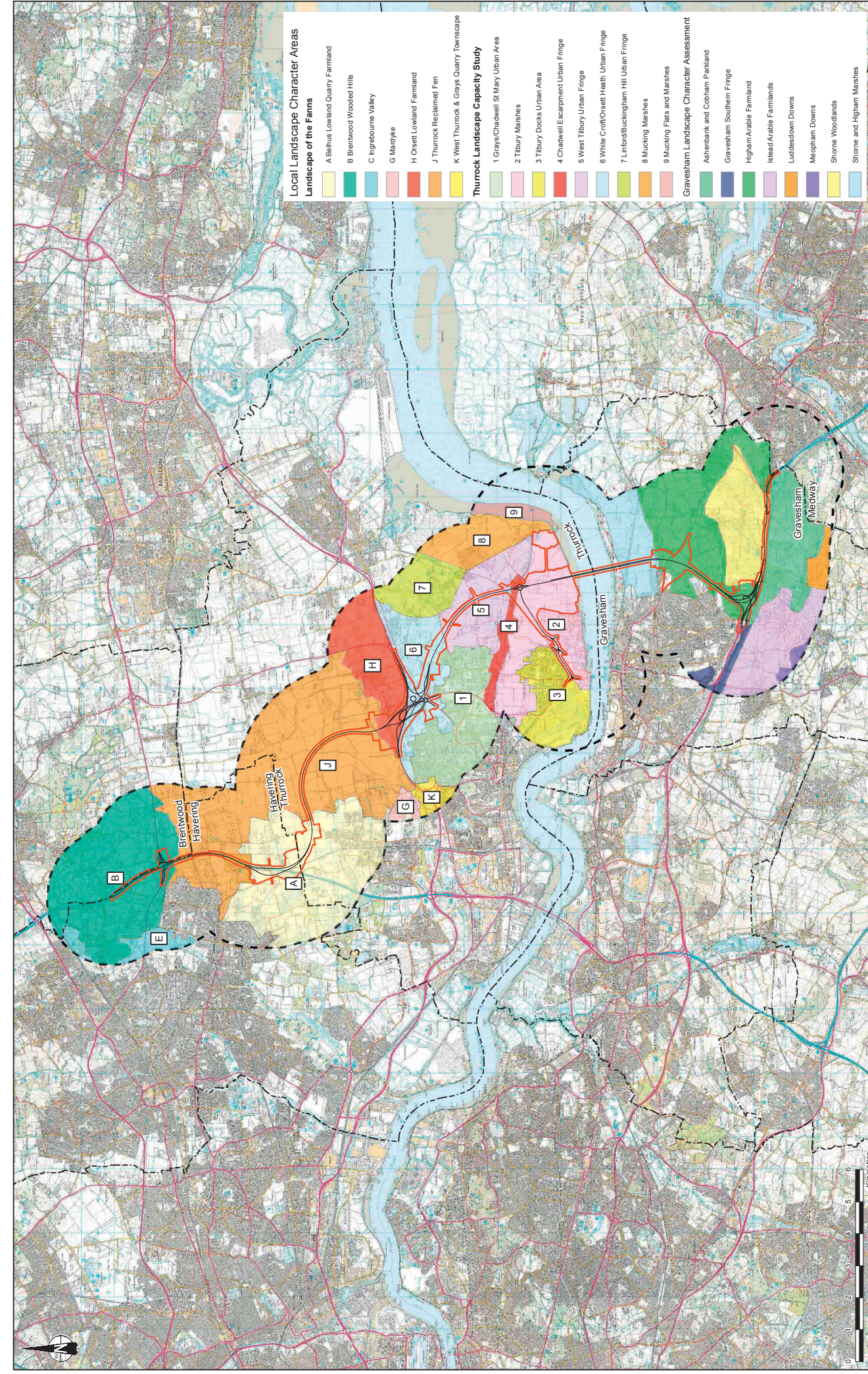
Service Layer Credits: Contains OS data © Crown Copyright and database right 2017. Ordnance Survey 100030649	Date: 13/02/2017	Scale: 1:35,000	Drawing number: HE54/03/9-CJVELS-SZP-EGNE0000000-00-DR-LE-00003
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- Grade II
- Open Access Land
- National Trail
- Timeball & Telegraph Trail
- Area of Outstanding Natural Beauty (AONB)
- Registered Park and Garden
- 2km study area
- Conservation Area
- Ancient Woodland (AW)

- LTC Route Alignment
- Development Area
- Boundary
- Listed Buildings
- Grade I
- Grade II*
- National Cycle Network
- Local Cycle Route
- Public Rights of Way



- Local Landscape Character Areas**
- Landscape of the Fanns**
- A Behus Lowland Quarry Farmland
 - B Brentwood Wooded Hills
 - C Ingrebourne Valley
 - G Mardye
 - H Orsett Lowland Farmland
 - J Thurrock Reclaimed Fen
 - K West Thurrock & Grays Quarry Townscape
- Thurrock Landscape Capacity Study**
- 1 Grays/Chadwell St Mary Urban Area
 - 2 Tibury Marshes
 - 3 Tibury Docks Urban Area
 - 4 Chadwell Escarpment Urban Fringe
 - 5 West Tibury Urban Fringe
 - 6 White Cross/Orsett Heath Urban Fringe
 - 7 Linford/Buckingham Hill Urban Fringe
 - 8 Mucking Marshes
 - 9 Mucking Flats and Marshes
- Gravesham Landscape Character Assessment**
- Ashenbank and Cobham Parkland
 - Gravesham Southern Fringe
 - Higham Arable Farmland
 - Isleard Arable Farmlands
 - Luddesdown Downs
 - Meppham Downs
 - Shorne Woodlands
 - Shorne and Higham Marshes

Client: **highways england**

Project: **LOWER THAMES CROSSING DEVELOPMENT PHASE**

Figure 8.2
Landscape - Landscape Character Areas (LCA)

Lower Thames Crossing
5th to 6th Milestones
15.5 to 16.5 Miles
London EC3A 7DT

Scale: 1:110,000

Drawn: R.MILLMAN Date: 12/10/2017

Checked: S.RIWELL Date: 12/10/2017

Approved: C.SCALDARY-SMITH Date: 12/10/2017

Drawing number: HE4-0039-CIVELS-S2P_EGNE0000000-DR-LE-00005

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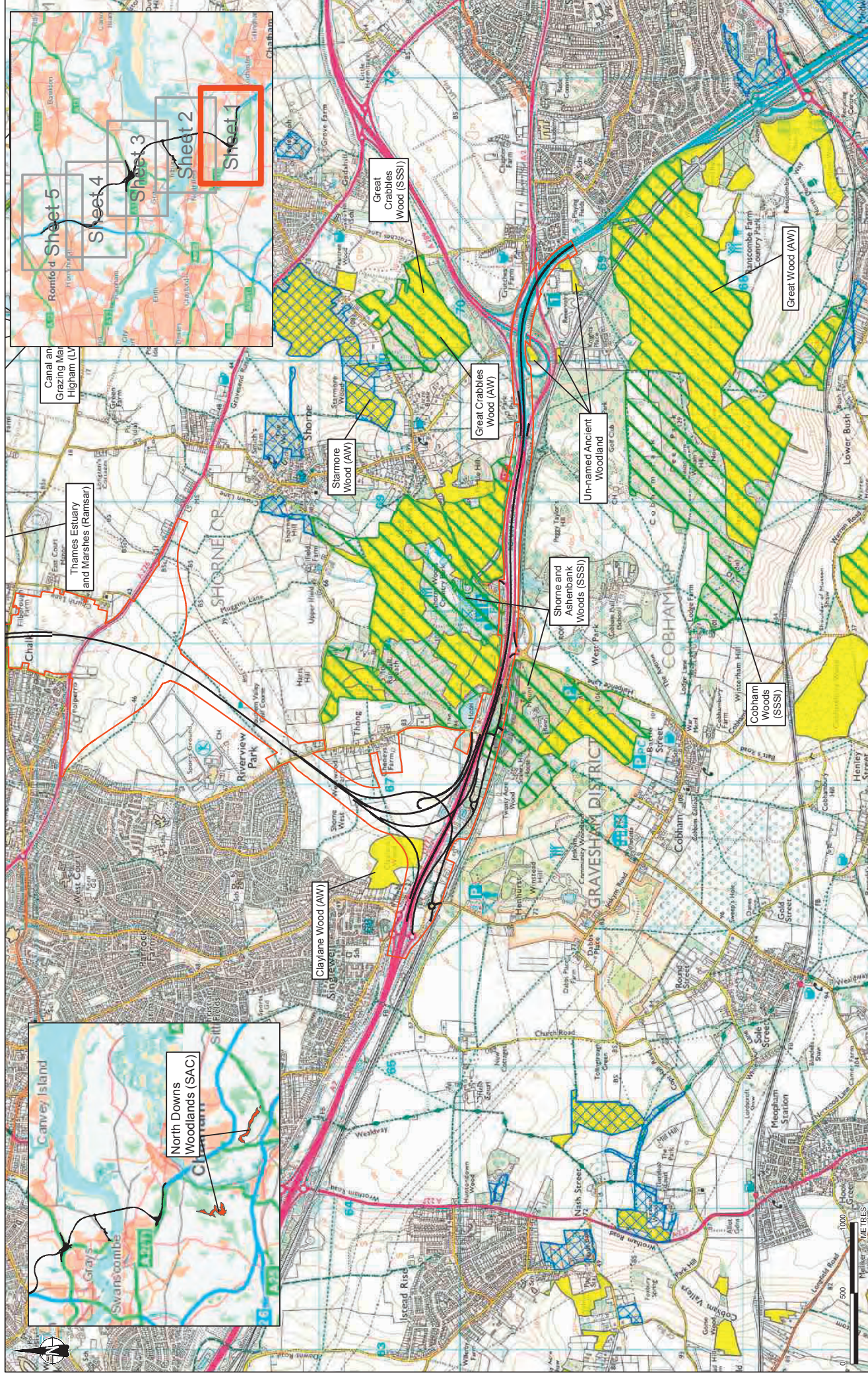
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Drawn: R.MILLMAN Date: 12/10/2017

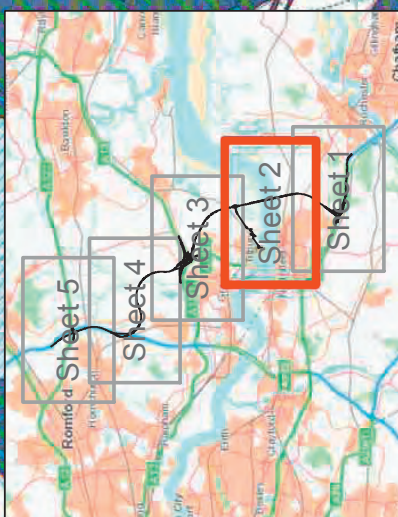
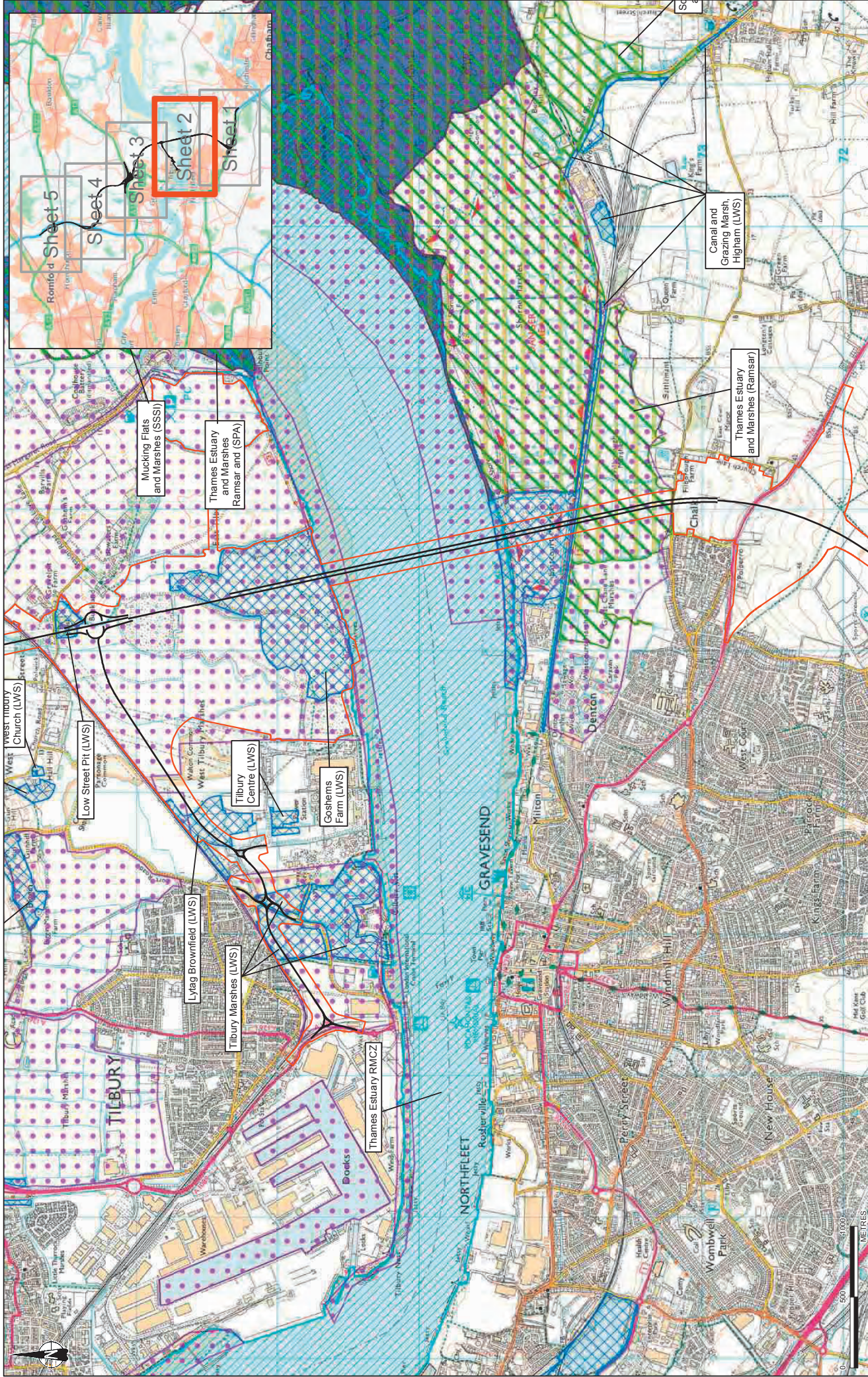
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Approved: C.SCALDARY-SMITH Date: 12/10/2017

Drawing number: HE4-0039-CIVELS-S2P_EGNE0000000-DR-LE-00005



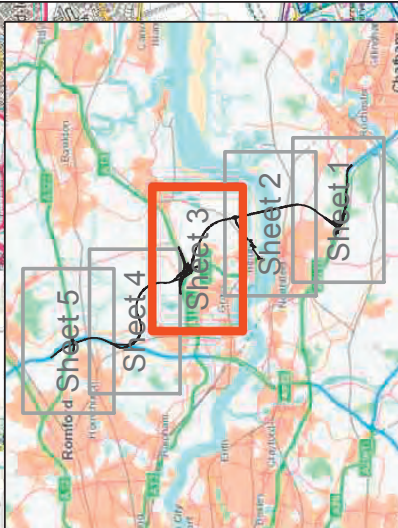
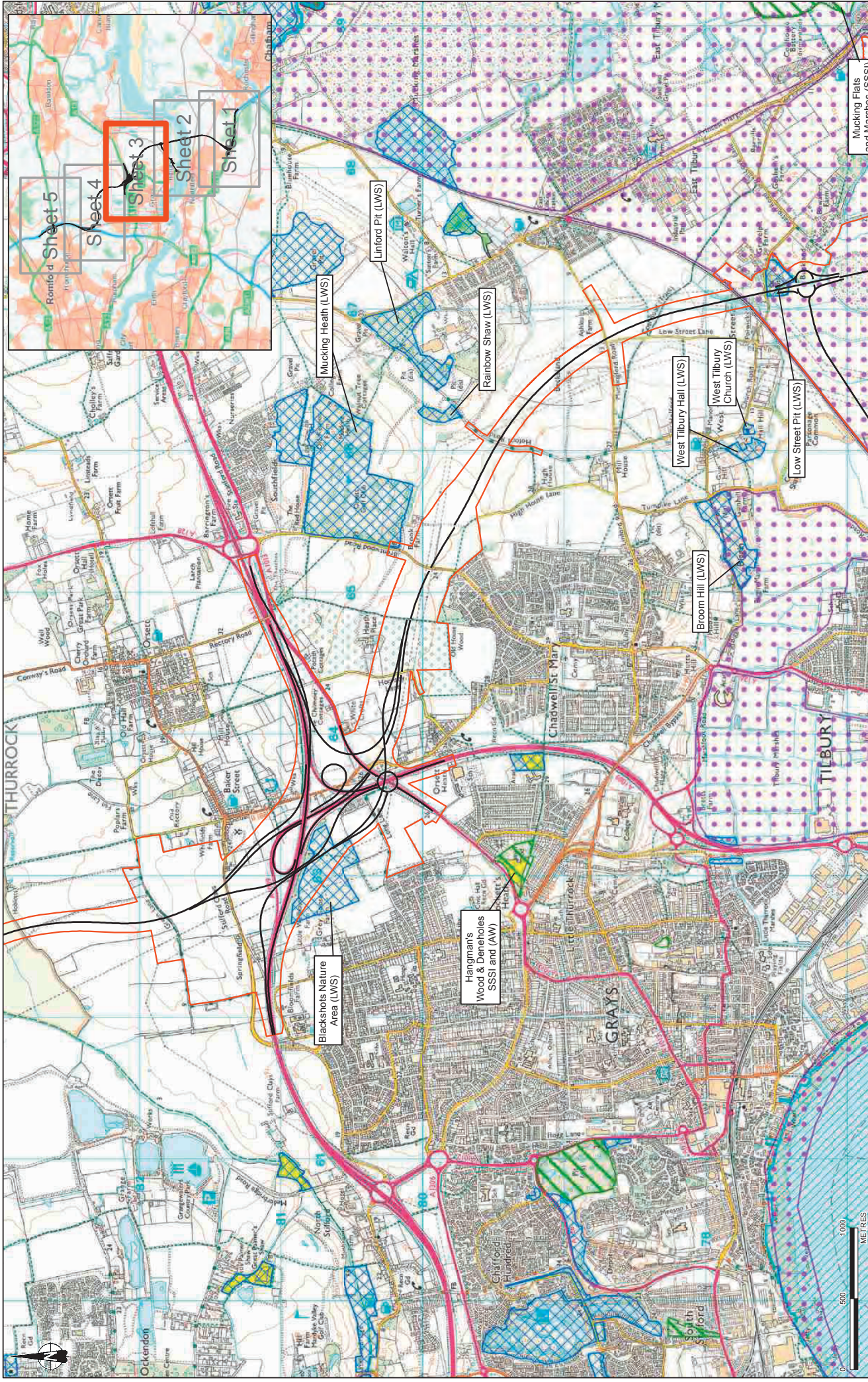
		LOWER THAMES CROSSING DEVELOPMENT PHASE	
Lower Thames Crossing <small>Shoreline House 51 St Albans Road London EC3A 7DT</small>		Project Status: S2 Date: 1/25/2017 Drawn: R.MILLMAN Checked: S.RIWELL Approved: C.SCALJURY-SMITH Drawing number: HE54/0339-CIV/EBD-SZP_EGNE/00000000-DR-LE-00004	
Figure 9.1 Biodiversity - Designated Sites and Potential Functional Habitat Sheet 1 of 5			
LTC Route Alignment Development Area Boundary Potential Functional Habitat Ramsar	Recommended Marine Conservation Zone (RM CZ) Site of Special Scientific Interest (SSSI) Local Wildlife Site (LWS) Special Protection Area (SPA)	Ancient Woodland (AW) Local Nature Reserve (LNR) Special Area of Conservation (SAC) on inset map	Client: highways england Project: LOWER THAMES CROSSING DEVELOPMENT PHASE Drawing No: S2 Date: 1/25/2017 Drawn: R.MILLMAN Checked: S.RIWELL Approved: C.SCALJURY-SMITH Drawing number: HE54/0339-CIV/EBD-SZP_EGNE/00000000-DR-LE-00004



		LOWER THAMES CROSSING DEVELOPMENT PHASE	Status: S2 Scale: 1:25,000
Lower Thames Crossing <small>Stations House 15 St Albans Road London EC3A 7DT</small>		Project: Lower Thames Crossing Drawing No:	Date: 11/10/2017 Checked: S. RIVELL Approved: C. SCULLERY-SMITH Drawing number: HE4/0039-CIV-EBD-SZP_EGNE0000000-DR-LE-00005
Figure 9.1 Biodiversity - Designated Sites and Potential Functional Habitat Sheet 2 of 5		Date: 11/10/2017 Scale: 1:25,000	

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11/10/17
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 11/10/17
 11/10/17



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Fig 9.1
Bodiversity - Designated Sites
and Potential Functional Habitat
Sheet 3 of 5

Client: **highways england**
Lower Thames Crossing
5th to 8th Stages
London EC3A 7DT

Project: LOWER THAMES CROSSING DEVELOPMENT PHASE

Drawn: R MILLMAN
Checked: S RIMWELL
Approved: C SCULLERY-SMITH

Date: 11/10/2017
Date: 11/10/2017
Date: 11/10/2017

Scale: 1:25,000

Sheet: S2

Drawing number: HE540039-CIV-EBD-SZP_EGNE0000000-DR-LE-00006

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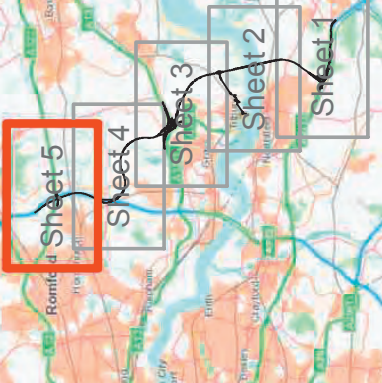
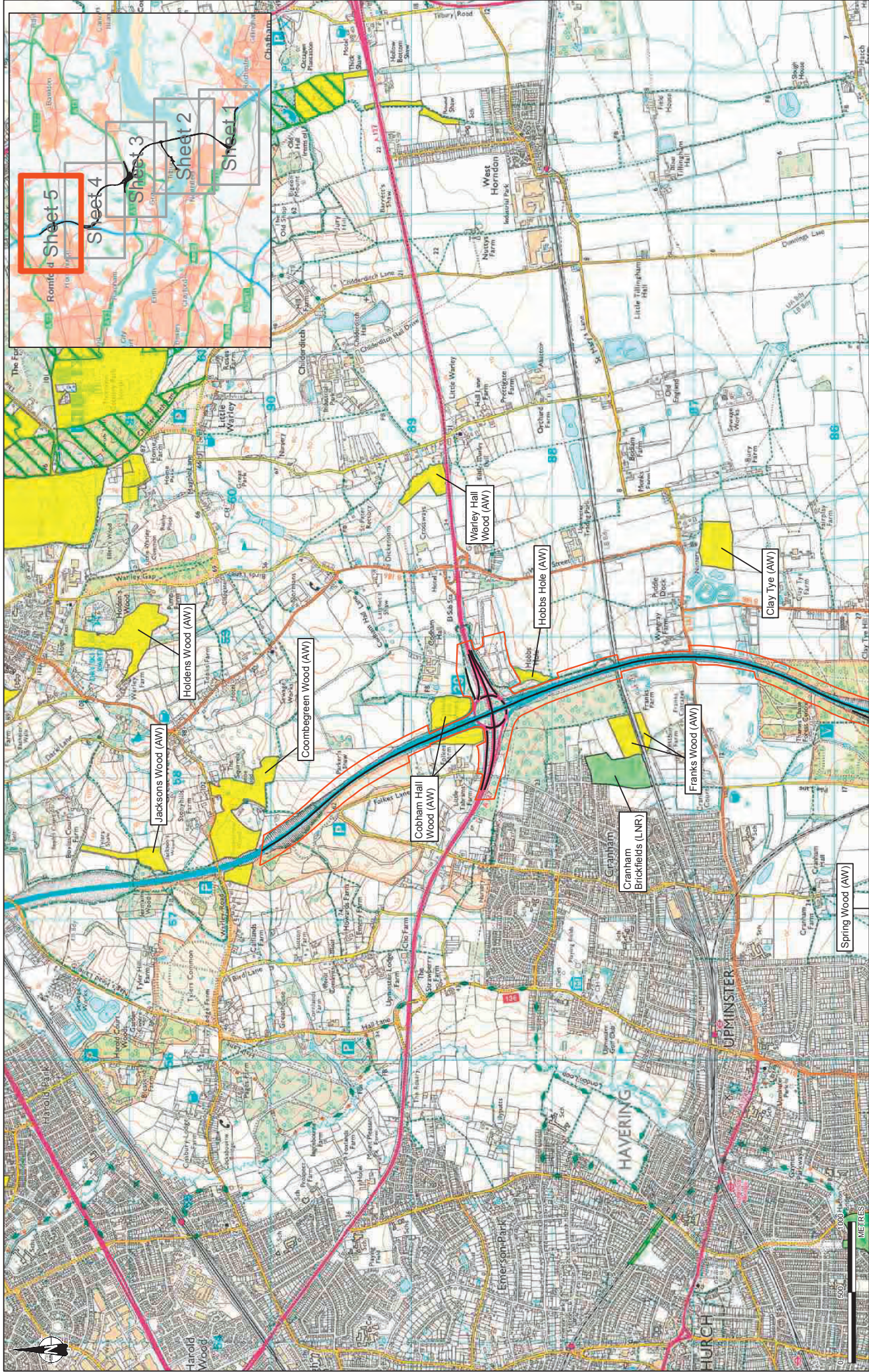
- LTC Proposed Route
- Development Area Boundary
- Potential Functional Habitat
- Ramsar
- Ancient Woodland (AW)
- Recommended Marine Conservation Zone (RMCZ)
- Site of Special Scientific Interest (SSSI)
- Local Wildlife Site (LWS)
- Special Protection Area (SPA)
- Local Nature Reserve (LNR)
- Special Area of Conservation (SAC)

Rev: 01
Date: 11/10/17
Rev: 02
Date: 11/10/17
Rev: 03
Date: 11/10/17



		Lower Thames Crossing <small>Shoeburyness to South Ockendon</small> <small>London EC3A 7DT</small>		LOWER THAMES CROSSING DEVELOPMENT PHASE		Status: S2		Drawn: R MILLMAN Date: 11/10/2017		Date of Issue/Revision: A3 Issue: 1/25/2000	
Checked: S RIVELL Date: 11/10/2017		Approved: C.S. O'BRYEN-SMITH Date: 11/10/2017		Drawing number: HE54/0039-CIV/EBD-SZP_EGNE/0000000-DR/LE-00007		Figure 9.1 Biodiversity - Designated Sites and Potential Functional Habitat Sheet 4 of 5					
LTC Proposed Route		Recommended Marine Conservation Zone (RM CZ)		Ancient Woodland (AW)		Site of Special Scientific Interest (SSSI)		Local Nature Reserve (LNR)		Special Area of Conservation (SAC)	
Development Area Boundary		Potential Functional Habitat		Local Wildlife Site (LWS)		Special Protection Area (SPA)		Ramsar			

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 P01 S2 11/10/17 For information E.A. SR C.S.S.
 Date Issue Date Date of revision



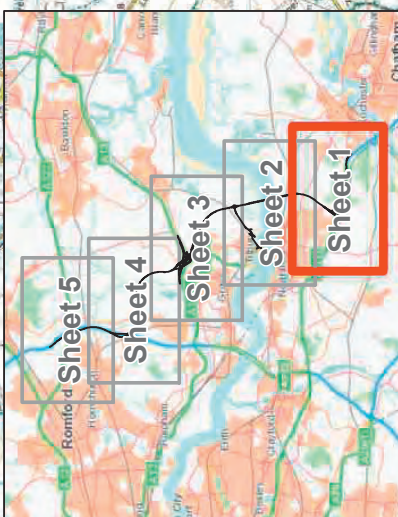
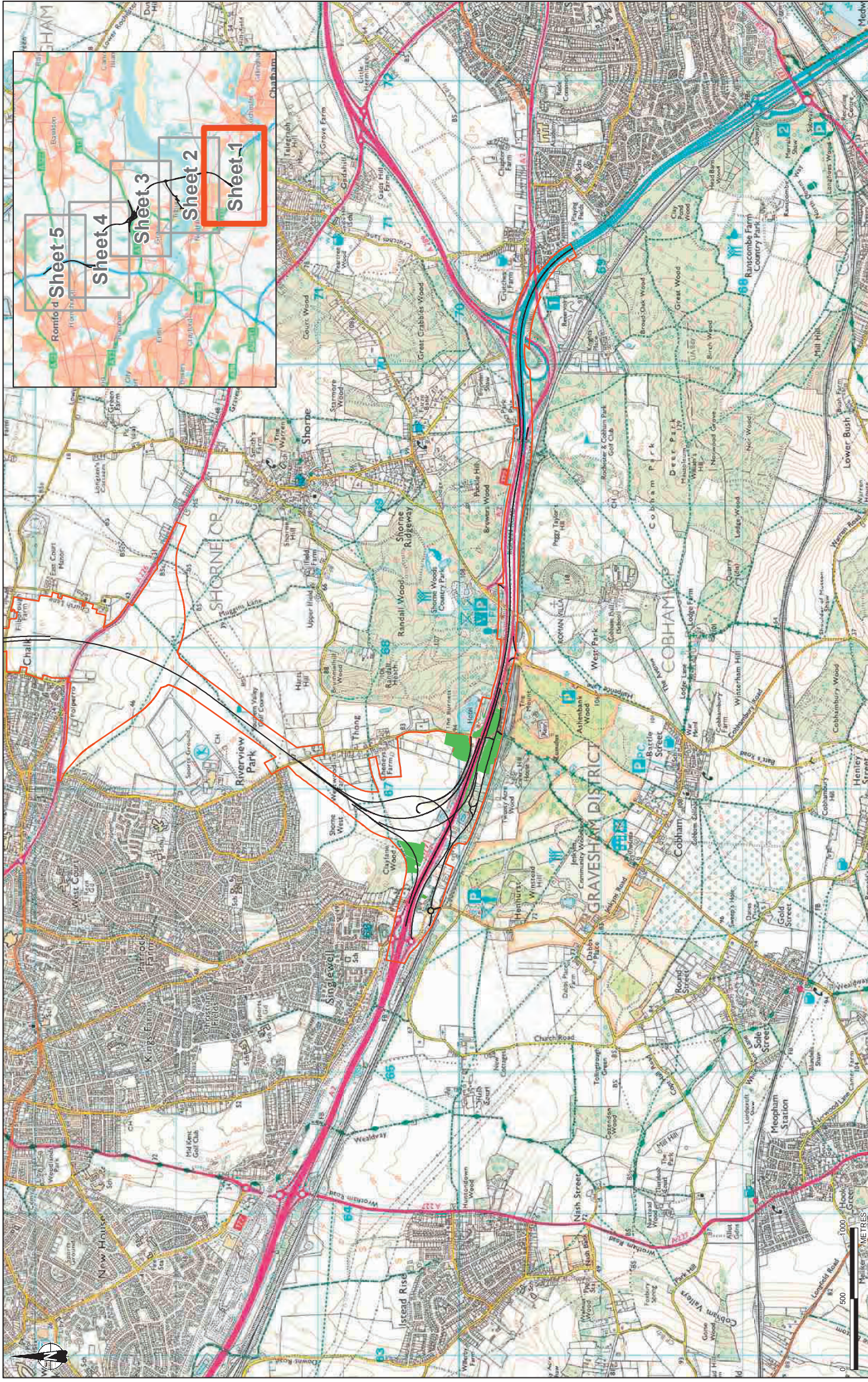
		LOWER THAMES CROSSING DEVELOPMENT PHASE	Sheet: S2 Date: 11/10/2017 Scale: 1:25,000
Lower Thames Crossing <small>Stratford House 15 St Albans Road London EC2A 7DT</small>		Project Drawing No:	Drawn: R.MILLMAN Checked: S.RIWELL Approved: C.SCALJURY-SMITH Drawing number: HIE540039-CIV-EBD-SZP_EGNE00000000-DR-LE-000008
Legend		Figure 9.1 Biodiversity - Designated Sites and Potential Functional Habitat Sheet 5 of 5	
LTC Proposed Route Development Area Boundary Potential Functional Habitat Ramsar	Recommended Marine Conservation Zone (RM CZ) Site of Special Scientific Interest (SSSI) Local Wildlife Site (LWS) Special Protection Area (SPA)	Ancient Woodland (AW) Local Nature Reserve (LNR) Special Area of Conservation (SAC)	
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1. Rainham Marsh (includes River Thames to Eirith)
2. Dartford to Littlebrook
3. Littlebrook Pits and Stone Marsh
4. Stone Pond Cottons Farm
5. River Thames – QE11 Bridge (Dartford to Swancombe)
6. Purfleet to Greys
7. Thames to West Thurrock
8. Purfleet Chalk Pit
9. Margate Valley
10. Alexandra Lake
11. Thurrock Services Pit
12. Hangman's Wood Fishing Lakes
13. Betnus Woods Country Park
14. Stubbess Complex
15. Little Mollands Farm Pits
16. South Ockenden GPs
17. Hall Farm South Ockenden
18. Warren and Lion Gorges
19. South Stifford GPs
20. Tilbury Docks
21. Filborough Marshes
22. Shorne Marshes (Offshore)
23. Shorne Marshes (Offshore)
24. Thameside Nature Park Mucking (includes East Tilbury GPs)
25. Higham Blight
26. Higham Marsh
27. Thames Estuary and Marshes (includes Tilbury to Mucking inc. Mucking Gravel Pits)
28. Brooklands Lake
29. Darenth Gravel Pits
30. Sutton Gravel Pits
31. Horton Kirby Gravel Pits

		Lower Thames Crossing <small>Shire Street House 15 St. Dunstons London EC3A 7DT</small>	
Project LOWER THAMES CROSSING DEVELOPMENT PHASE		Client Biodiversity - British Trust for Ornithology (BTO) WeBS Data	
Drawn S RILLMAN		Checked S RILLMAN	
Approved C. SCUDJERY-SMITH		Drawn Date/Revision Date: 11/10/2017 Scale: 1:50,000	
Drawn Number HE54/0039-CIV-EBD-SZP		Drawn Date/Revision Date: 11/10/2017 Scale: 1:50,000	

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 LTC Proposed Route
 Development Area Boundary
 WeBS Count Area - Data Obtained from BTO
 WeBS Count Area - Data Not Obtained - No Recent Count Data Available



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Scale: 1:25,000

Date: 11/10/2017

Checked: S.R.MILLMAN

Approved: C.SCOJIBRY-SMITH

Drawing number: HE454039-CIV-EBD-S2P_EGNE0000000-DR-LE-00010

Project: LOWER THAMES CROSSING DEVELOPMENT PHASE

Client: **highways england**

Lower Thames Crossing
 5th & 6th Floors
 15 Abchurch Lane
 London EC4A 3DF

Figure 9.3
 Biodiversity - UK Biodiversity
 Action Plan Priority Habitat
 Sheet 1 of 5

LTC Route Alignment
 Development Area Boundary
 Coastal and Floodplain Grazing Marsh
 Intertidal Substrate Foreshore
 Reedbeds
 Mudflats
 Traditional Orchards
 Deciduous Woodland
 Indicative Area of Thames Terrace Grassland

Date: 11/10/17
 Scale: 1:25,000
 Drawn: S.R.MILLMAN
 Checked: S.R.MILLMAN
 Approved: C.SCOJIBRY-SMITH
 Drawing number: HE454039-CIV-EBD-S2P_EGNE0000000-DR-LE-00010



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Scale: 1:25,000

North Arrow

Scale: 0 300 600 900 METRES

Project: LOWER THAMES CROSSING DEVELOPMENT PHASE

Client: **highways** england

Drawn: R MILLMAN

Checked: S RIVELL

Approved: C.SQUJERRY-SMITH

Drawn Date: 11/10/2017

Checked Date: 11/10/2017

Approved Date: 11/10/2017

Drawing number: HE540039-CJVEB-SZP_EGNE0000000-DR-LE-00011

Figure 9.3
Biodiversity - UK Biodiversity Action Plan Priority Habitat
Sheet 2 of 5

Lower Thames Crossing
5th to 8th Mile
London EC3A 7DT

Indicative Area of Thames Terrace Grassland

LTC Route Alignment

Development Area Boundary

Coastal and Floodplain Grazing Marsh

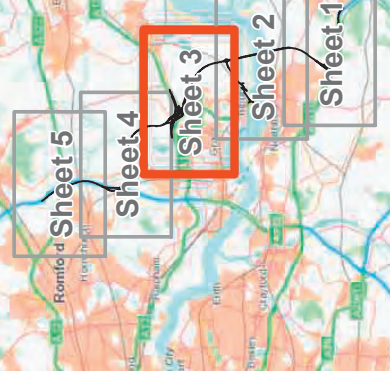
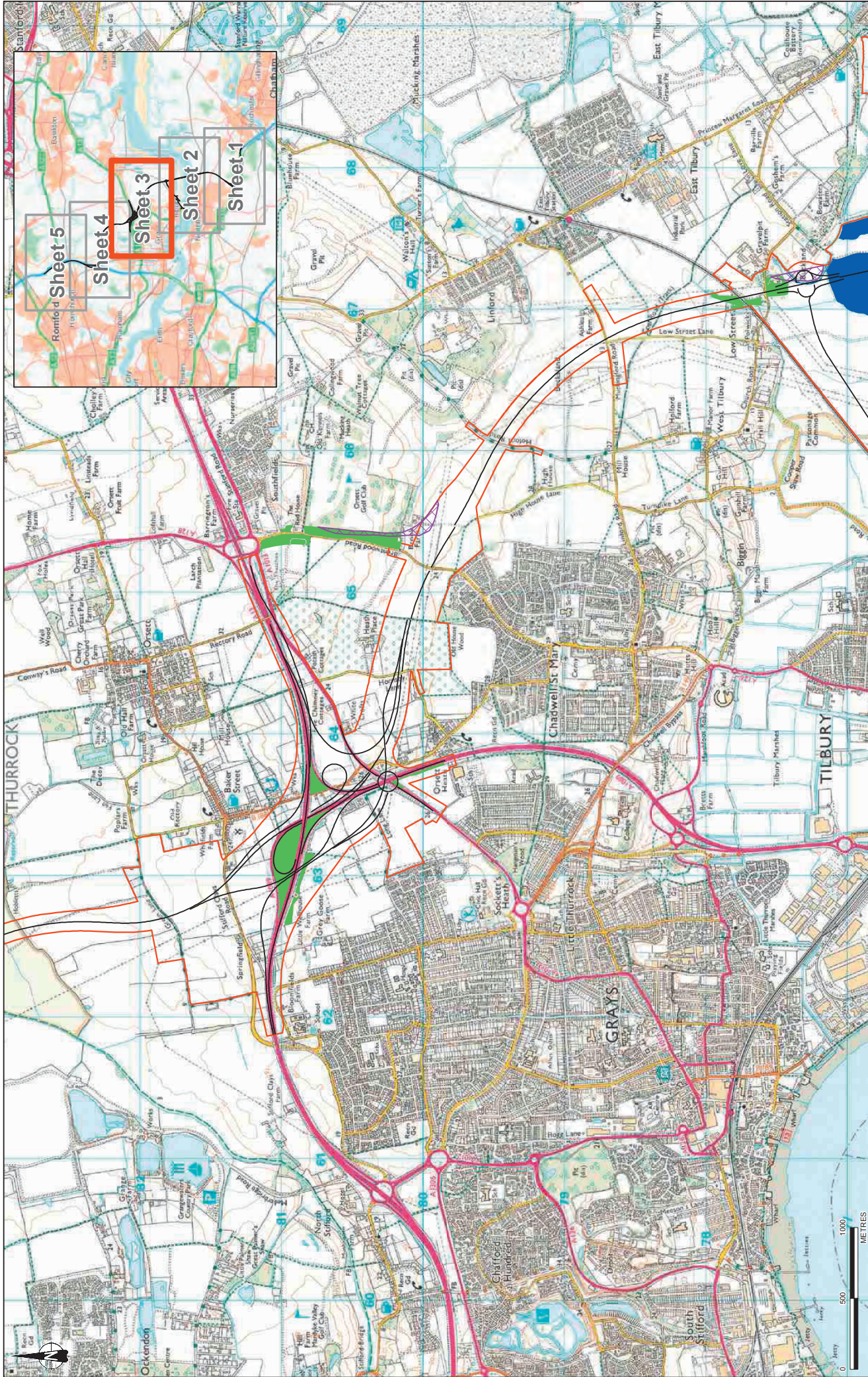
Intertidal Substrate Foreshore

Reedbeds

Mudflats

Traditional Orchards

Deciduous Woodland



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Drawing number: HE44039-CJ-VEBD-SZP_EGNE0000000-DR-LE-00012

Project: LOWER THAMES CROSSING DEVELOPMENT PHASE

Client: **highways england**

Lower Thames Crossing
5th to 8th Mile of the A166
London EC2A 7DT

Figure 9.3
Biodiversity - UK Biodiversity
Action Plan Priority Habitat
Sheet 3 of 5

0 500 1000 METRES

LTC Route Alignment

Development Area Boundary

Coastal and Floodplain Grazing Marsh

Inter-tidal Substrate Foreshoreshore

Reeds

Mudflats

Traditional Orchards

Deciduous Woodland

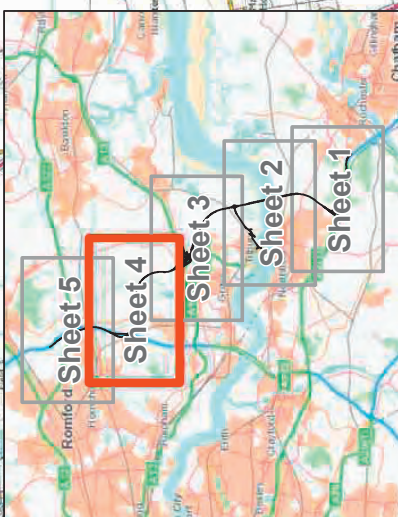
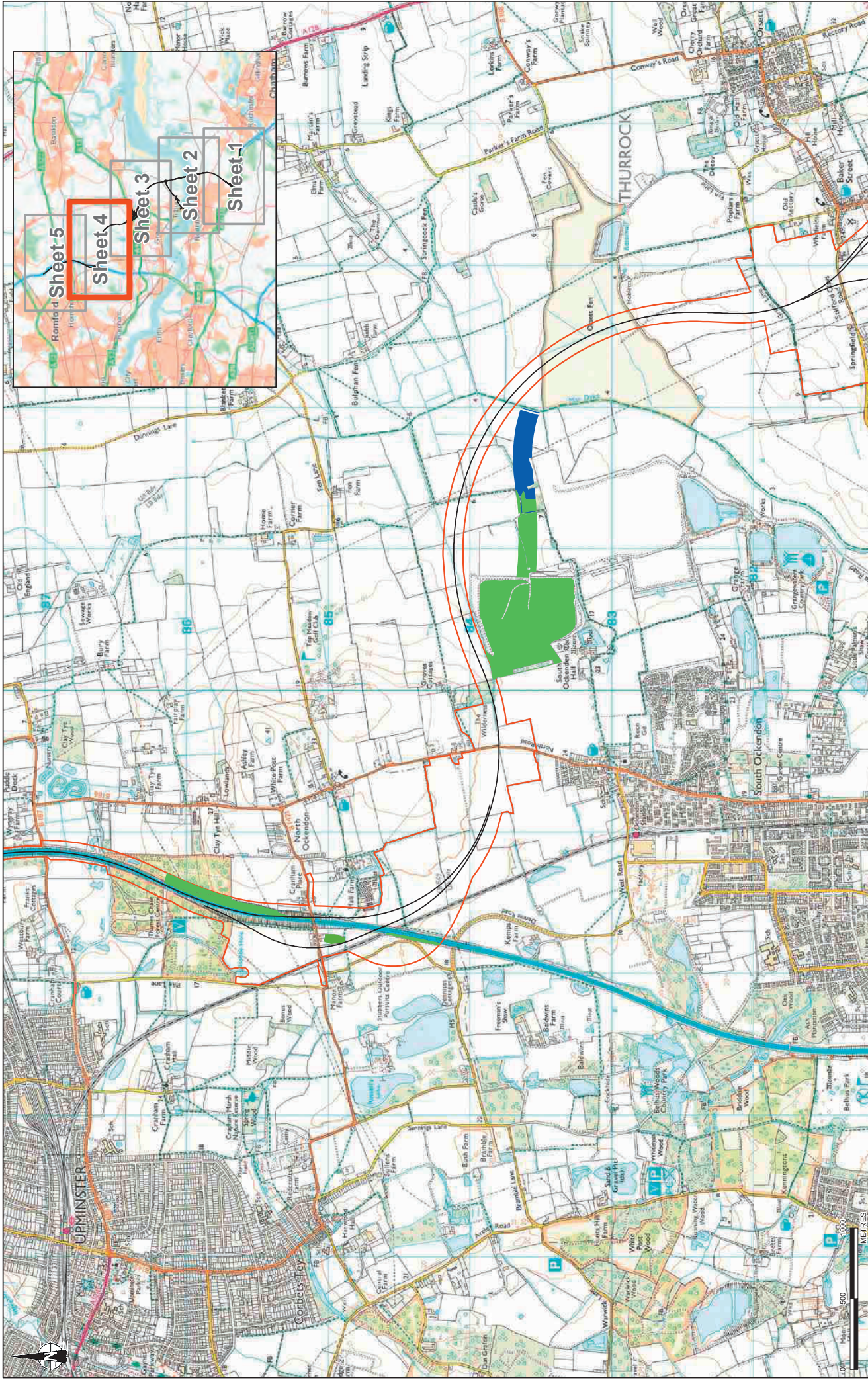
Indicative Area of Thames Terrace Grassland

Drawn: RIMMELL Date: 11/10/2017

Checked: S RIMMELL Date: 11/10/2017

Approved: C SCOURBY-SMITH Date: 11/10/2017

Drawing number: HE44039-CJ-VEBD-SZP_EGNE0000000-DR-LE-00012



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Scale: 1:25,000

Date: 11/10/2017

Drawn by: R.MILLMAN

Checked by: S.RIVELL

Approved by: C.SOUJRY-SMITH

Drawing number: HES40039-CJVEBD-SZP_EGNE0000000-DRLE-00013

Project: LOWER THAMES CROSSING DEVELOPMENT PHASE

Client: **highways england**

Lower Thames Crossing
 5th & 6th Floors
 15 St. Dunstons
 London EC3A 7DT

Figure 9.3
 Biodiversity - UK Biodiversity
 Action Plan Priority Habitat
 Sheet 4 of 5

Legend:

- Reeds
- Mudflats
- Traditional Orchards
- Deciduous Woodland
- LTC Route Alignment
- Development Area Boundary
- Coastal and Floodplain Grazing Marsh
- Intertidal Substrate Foreshore
- Indicative Area of Thames Terrace Grassland

Scale: 1:25,000

Date: 11/10/17

For information

Drawn by: R.MILLMAN

Checked by: S.RIVELL

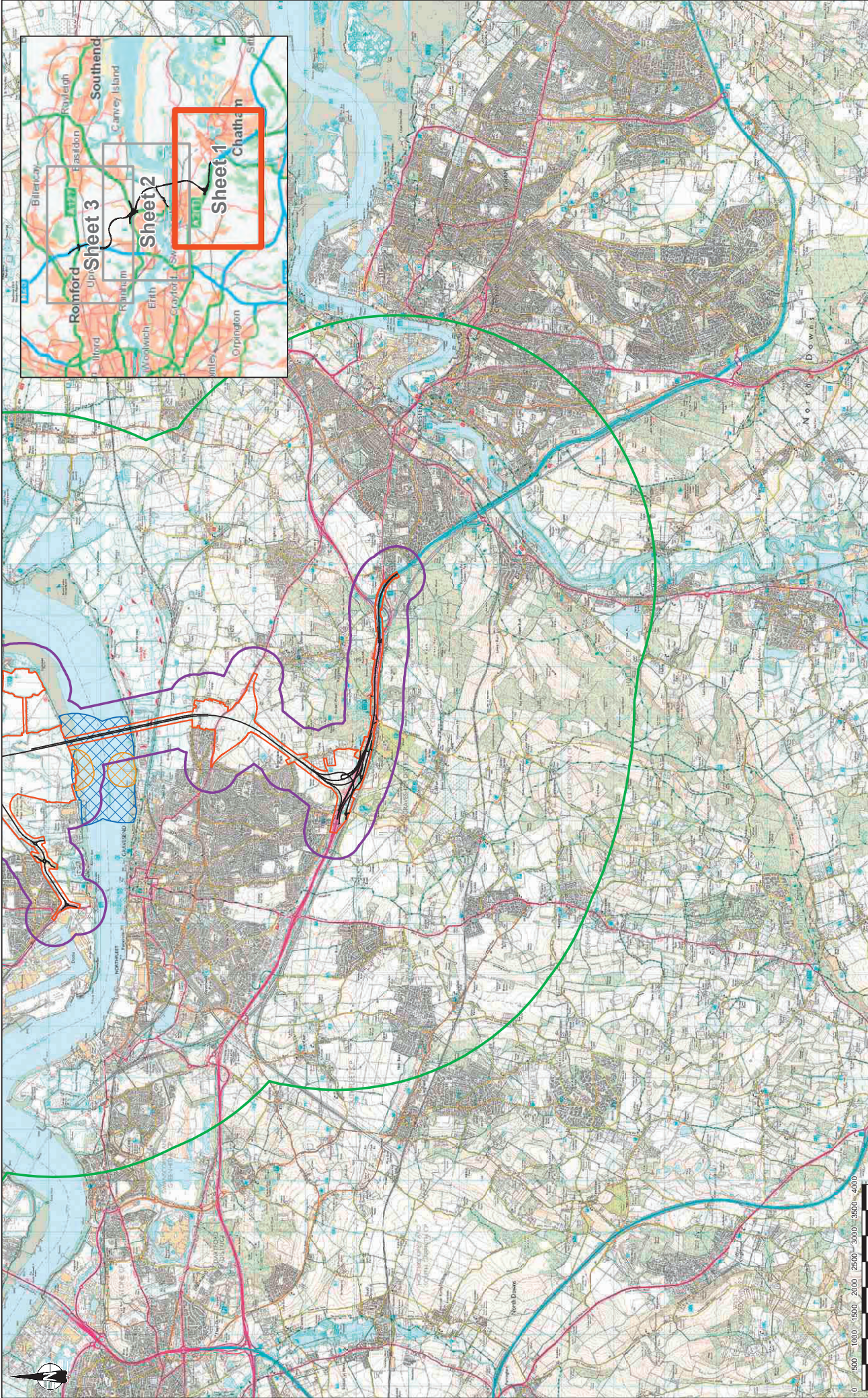
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Drawing number: HES40039-CJVEBD-SZP_EGNE0000000-DRLE-00013



		LOWER THAMES CROSSING DEVELOPMENT PHASE	Sheet: S2 Date: 11/10/2017 Drawn: S.MILLMAN Checked: S.MILLMAN Approved: C.SQUJRY-SMITH Drawing number: HIE54039-CJ-VEBD-SZP_EGNE0000000-DR-LE-00014
Lower Thames Crossing <small>Greater London Authority London EC3A 7DT</small>		Project Lower Thames Crossing Biodiversity - UK Biodiversity Action Plan Priority Habitat Sheet 5 of 5	Drawing number: HIE54039-CJ-VEBD-SZP_EGNE0000000-DR-LE-00014
Client Greater London Authority London EC3A 7DT		Project Lower Thames Crossing Biodiversity - UK Biodiversity Action Plan Priority Habitat Sheet 5 of 5	Drawing number: HIE54039-CJ-VEBD-SZP_EGNE0000000-DR-LE-00014
Legend		Indicative Area of Thames Terrace Grassland	
LTC Route Alignment	Reeds	Mudflats	
Development Area Boundary	Traditional Orchards	Deciduous Woodland	
Coastal and Floodplain Grazing Marsh	Intertidal Substrate Foreshore		
Intertidal Substrate Foreshore			

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 Scale: 1:25,000
 Project: S2
 Drawing number: HIE54039-CJ-VEBD-SZP_EGNE0000000-DR-LE-00014



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Client: **highways england**
 Lower Thames Crossing
 5th & 6th Floor
 15 St. Bride Street
 London EC4A 3DF

Project: **LOWER THAMES CROSSING DEVELOPMENT PHASE**

Sheet: **S2**

Figure 9.4
 Biodiversity - Survey Areas
 Sheet 1 of 3

Drawn	R MULLMAN	Date	11/10/2017
Checked	S RIVELL	Date	11/10/2017
Approved	C SCURRY-SMITH	Date	11/10/2017
Drawing number	HE4/0039-CIV/EBD-S2P_EGNE/0000000-DR-LE-00015		

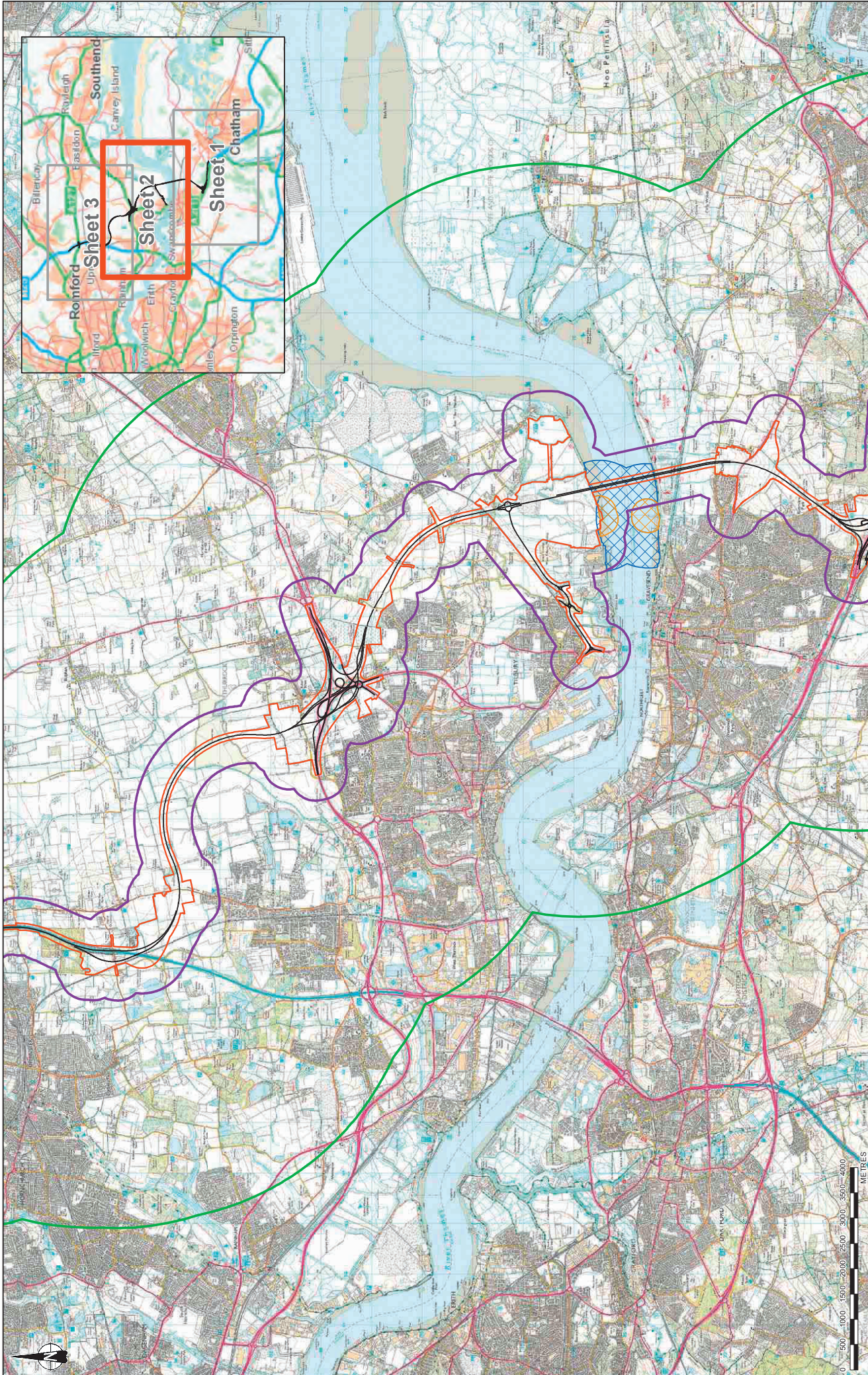
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LTC Route Alignment
 Development Area Boundary
 Minimum Survey Area for Terrestrial Ecology (500m)
 Maximum Survey Area for Terrestrial Ecology (5km)
 Minimum Provisional Survey Area for Marine Ecology (300m)
 Maximum Provisional Survey Area for Marine Ecology (1km)

[Orange Box] Minimum Provisional Survey Area for Marine Ecology (300m)
 [Blue Box] Maximum Provisional Survey Area for Marine Ecology (1km)
 [Purple Box] Minimum Survey Area for Terrestrial Ecology (500m)
 [Green Box] Maximum Survey Area for Terrestrial Ecology (5km)

Rev: 02 11/10/17 For Information R.M. SR CS.S.L.
 Date: 11/10/17 Date of revision: 02/11/17



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Scale: 1:70,000

0 500 1000 1500 2000 2500 3000 3500 4000 METRES

— LTC Route Alignment
 — Development Area Boundary
 — Minimum Survey Area for Terrestrial Ecology (500m)
 — Maximum Survey Area for Terrestrial Ecology (5km)

— Minimum Provisional Survey Area for Marine Ecology (300m)
 — Maximum Provisional Survey Area for Marine Ecology (1km)

Client: **highways england**
 Lower Thames Crossing
 5th Floor
 15 St. Bride Street
 London EC4A 3DF

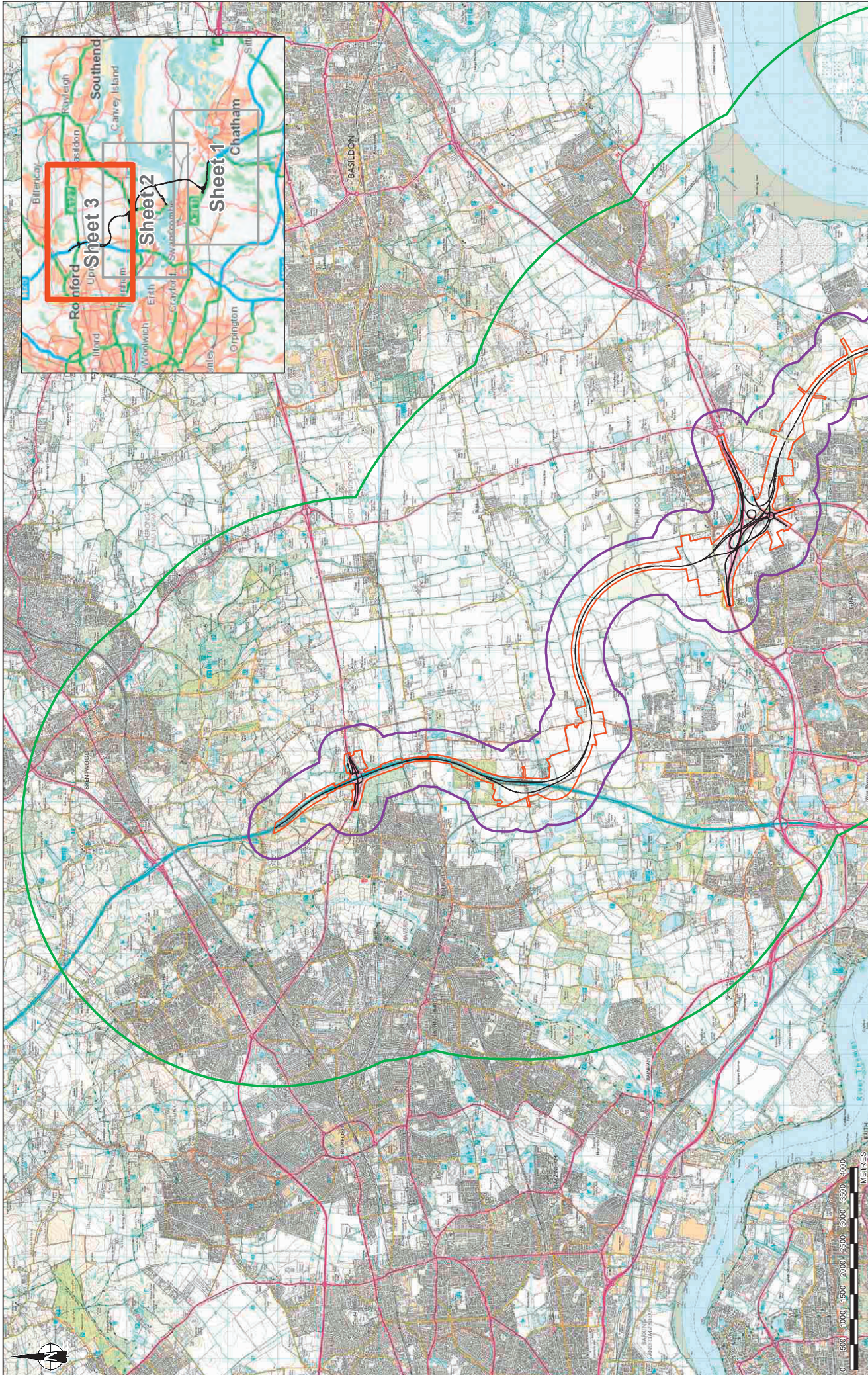
Project: **LOWER THAMES CROSSING DEVELOPMENT PHASE**
 Drawing No: S2

Status: **AS**
 Date: 11/10/2017
 Checked: **S RIMMEL**
 Approved: **C. SCURRY-SMITH**

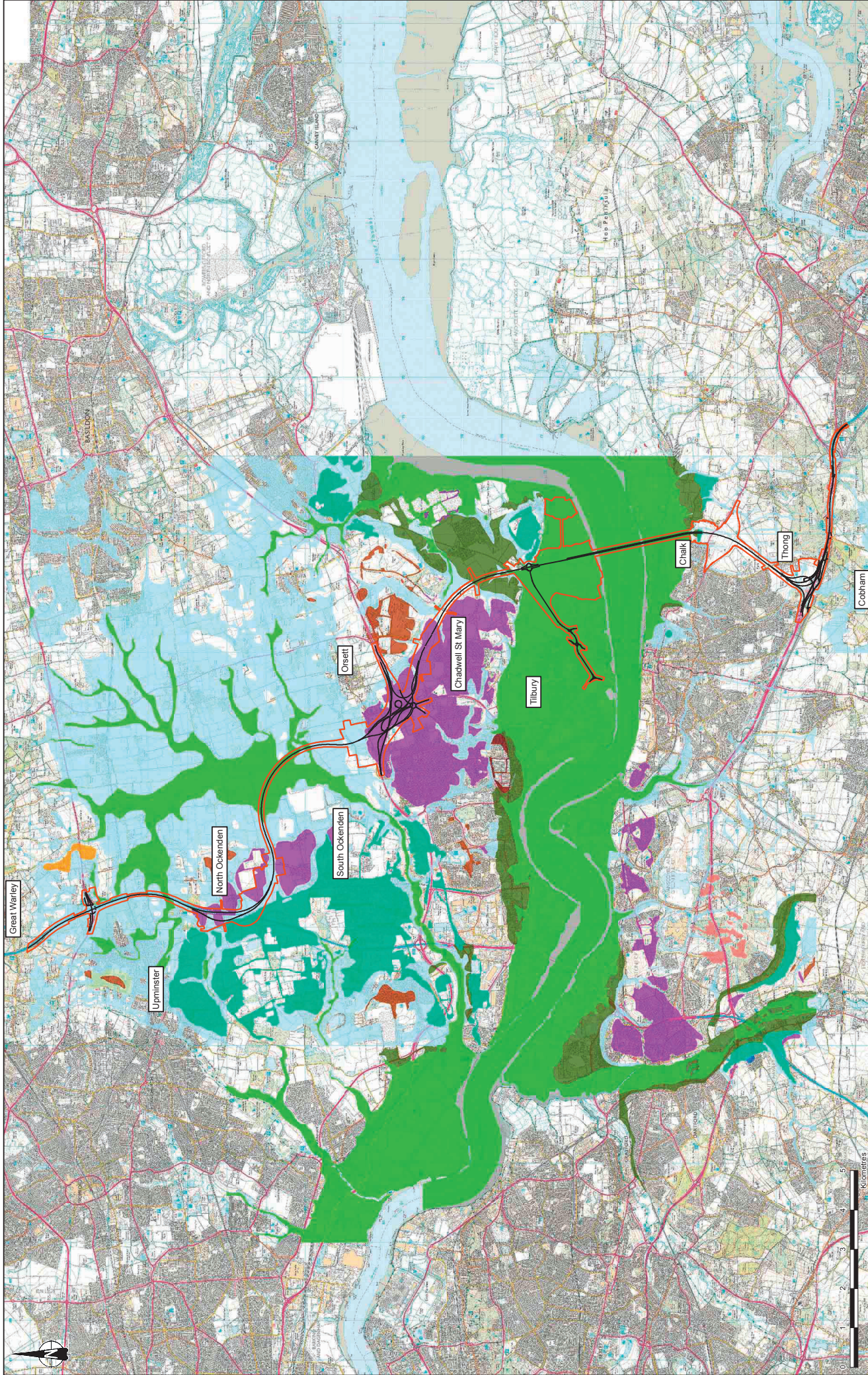
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Figure 9.4
 Biodiversity - Survey Areas
 Sheet 2 of 3

Rev: 02
 Date: 11/10/17
 Description: **Information**
 Drawn: **Information**
 Scale: **1:70,000**
 Status: **AS**

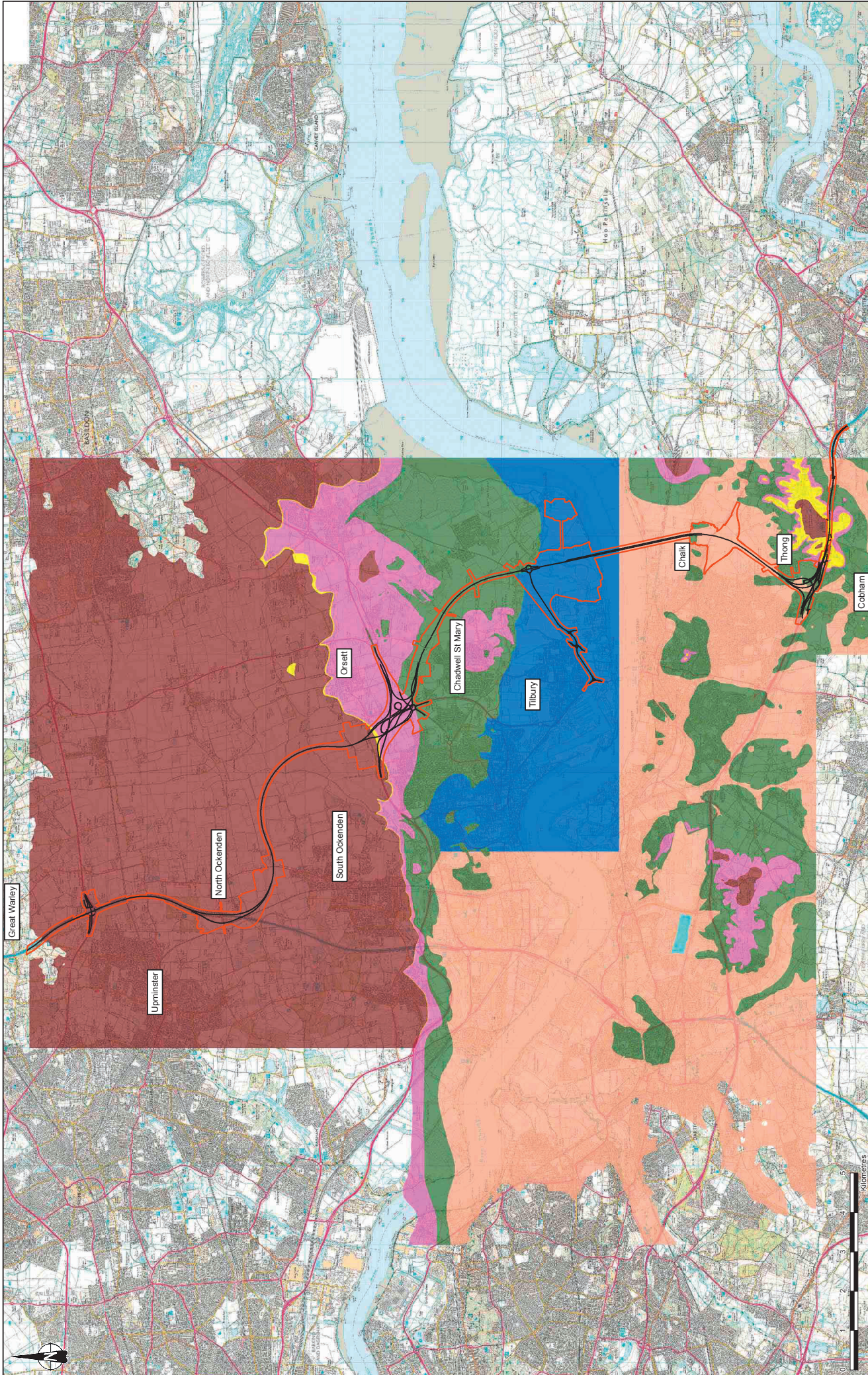


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Client:		Project:	Date: 11/10/2017 Date: 11/10/2017 Date: 11/10/2017
Minimum Provisional Survey Area for Marine Ecology (300m) Maximum Provisional Survey Area for Marine Ecology (1km)		Project:	Date: 11/10/2017 Date: 11/10/2017 Date: 11/10/2017
Development Area Boundary Minimum Survey Area for Terrestrial Ecology (500m) Maximum Survey Area for Terrestrial Ecology (5km)		Project:	Date: 11/10/2017 Date: 11/10/2017 Date: 11/10/2017
LTC Route Alignment		Project:	Date: 11/10/2017 Date: 11/10/2017 Date: 11/10/2017



<p>Client: highways england</p> <p>Project: LOWER THAMES CROSSING DEVELOPMENT PHASE</p>		<p>Drawn: S2</p> <p>Checked: R MILLMAN</p> <p>Approved: S RIVELL</p> <p>Drawn Date: 11/10/2017</p> <p>Checked Date: 11/10/2017</p> <p>Approved Date: 11/10/2017</p>
<p>Client: Lower Thames Crossing <small>Stratford House 15 St Albans Road London EC3A 7DT</small></p>		<p>Scale: 1:50,000</p> <p>Drawn: 11/10/2017</p> <p>Checked: 11/10/2017</p> <p>Approved: 11/10/2017</p>
<p>Client: Cobham</p>		<p>Project: LOWER THAMES CROSSING DEVELOPMENT PHASE</p> <p>Figure 10.1 Geology and Soils - Superficial Deposits</p>
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<p>Rev: S2 11/10/17 For Information E.M. SR C.S.S. 11/10/17</p>		
<p>Rev: S2 11/10/17 For Information E.M. SR C.S.S. 11/10/17</p>		

- Legend**
- ITC Route Alignment
 - Development Area Boundary
 - Alluvium
 - Boyn Hill Gravel Member
 - Black Park Gravel Member
 - Dartford Silt Member
 - Glacial/Fluvial Deposits
 - Glaciolacustrine Deposits
 - Head Deposits
 - Ilford Silt Member
 - Kempston Park Gravel Formation
 - Lynch Hill Gravel Member
 - Peat
 - River Terrace Deposits
 - Sand and Gravel of Unknown Age
 - Till
 - Taplow Gravel Formation
 - Tidal River or Creek Deposits



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1/1 52 11/10/17 11/10/17 11/10/17 11/10/17
 Rev. Date Issue Date For Information
 1/1 52 11/10/17 11/10/17 11/10/17 11/10/17
 Rev. Date Issue Date For Information

0 1 2 3 4 5
 Kilometres

ITC Route Alignment
 Development Area Boundary
 Chalk Group
 Harwich Formation (HWH-GRAV)
 Harwich Formation (HWH-SAGR)
 Harwich Formation
 London Clay Formation
 Leves Nodular Chalk Formation
 Lambeth Group
 New Pt Chalk Formation
 Seaford Chalk Formation
 Thanet Sand Formation

Client: **highways england**
 Lower Thames Crossing
 5th Floor House
 15 St Albans Road
 London EC3A 7DT

Project: **LOWER THAMES CROSSING DEVELOPMENT PHASE**
 Drawing No: **HE4-0039-CIV-EGT-SZP_EGNE0000000-DRLE-00002**

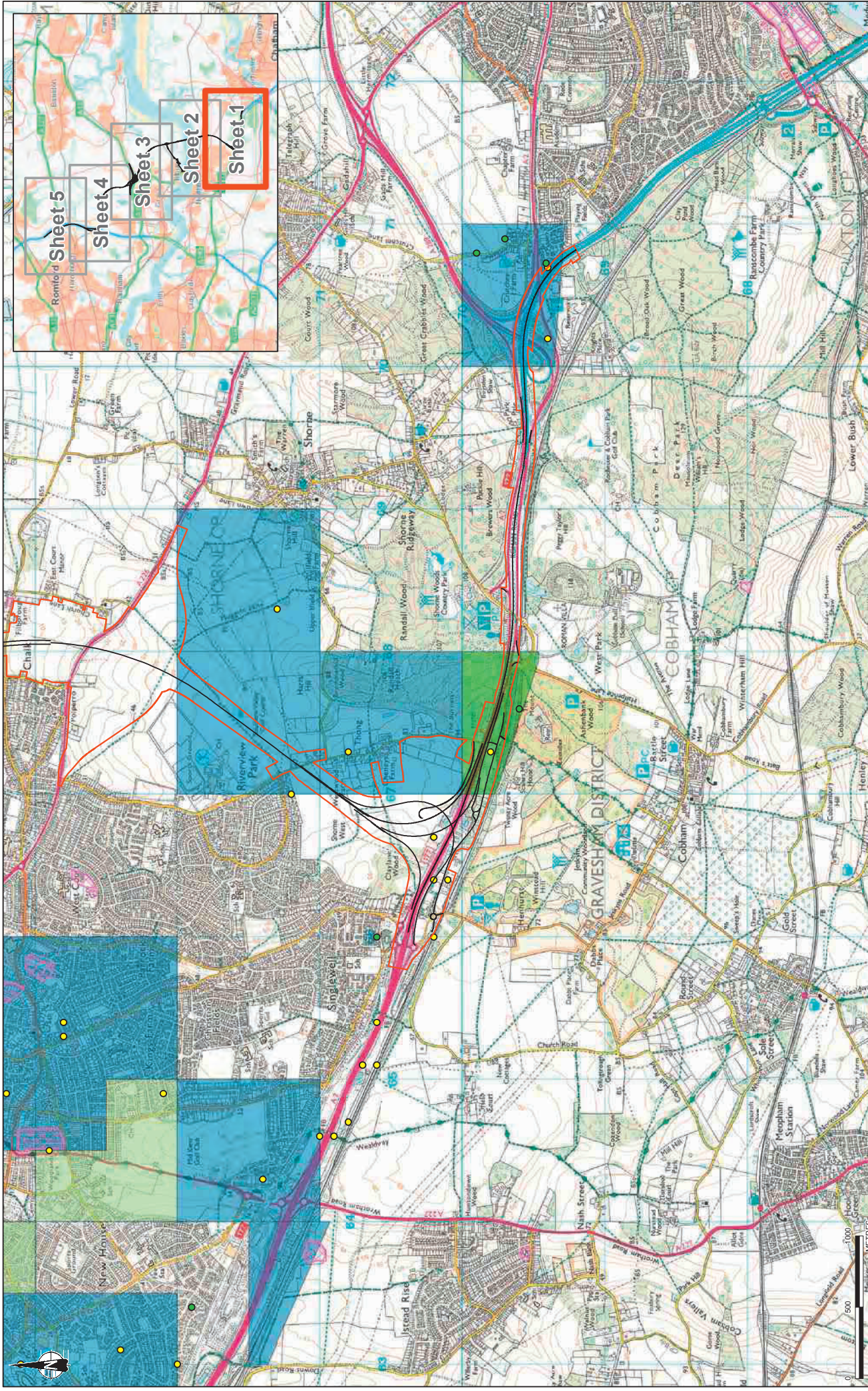
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 Drawn: **R MILLMAN**
 Checked: **S RIVELL**
 Approved: **C SCOURBY-SMITH**

Date: **11/10/2017**
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 Date: **11/10/2017**

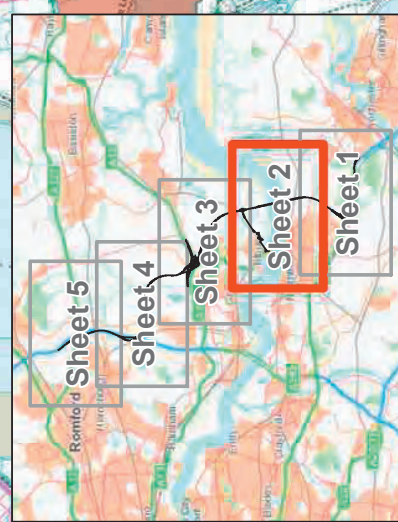
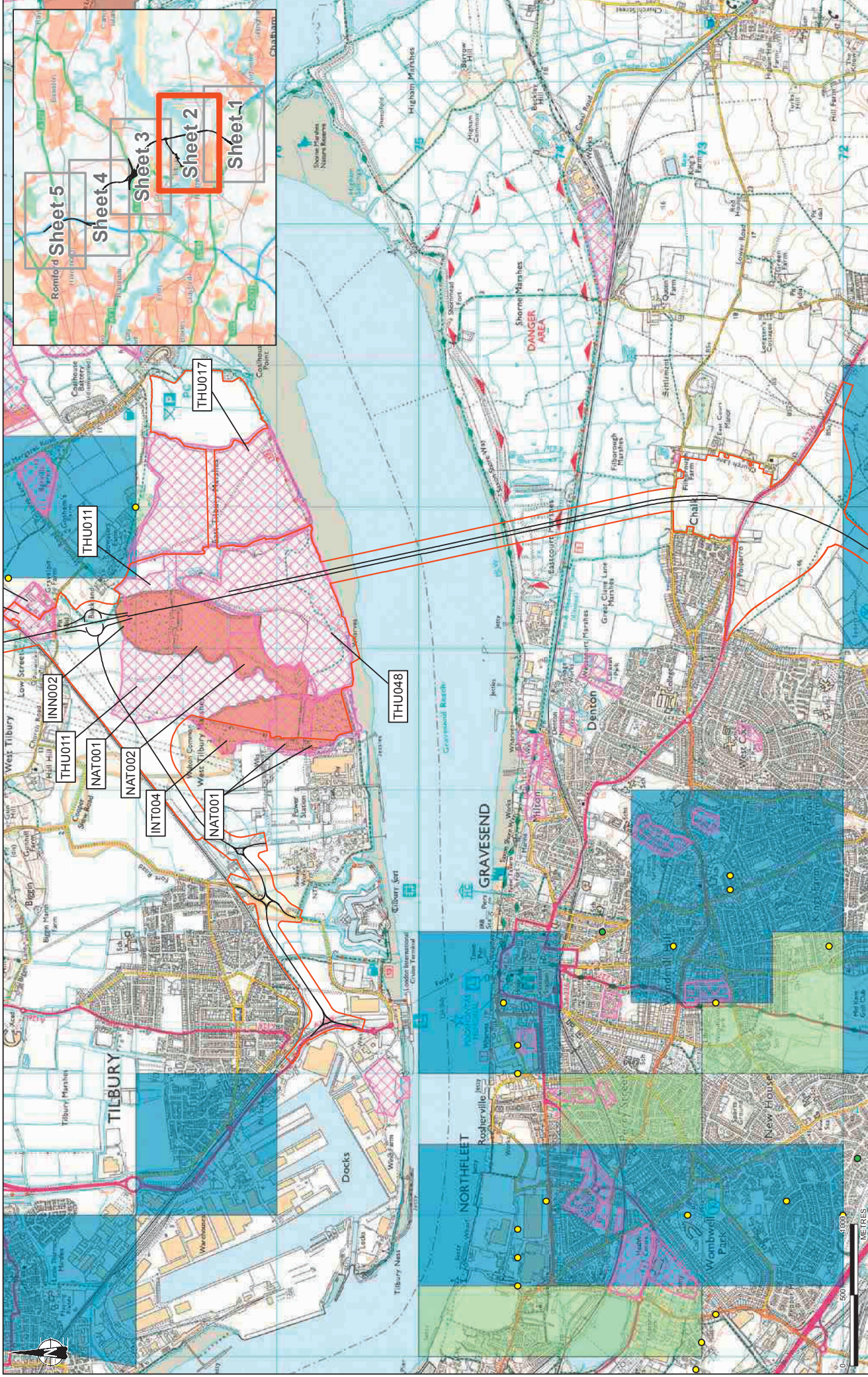
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Drawing number: **HE4-0039-CIV-EGT-SZP_EGNE0000000-DRLE-00002**

Figure 10.2
 Geology and Soils - Bedrock Composition

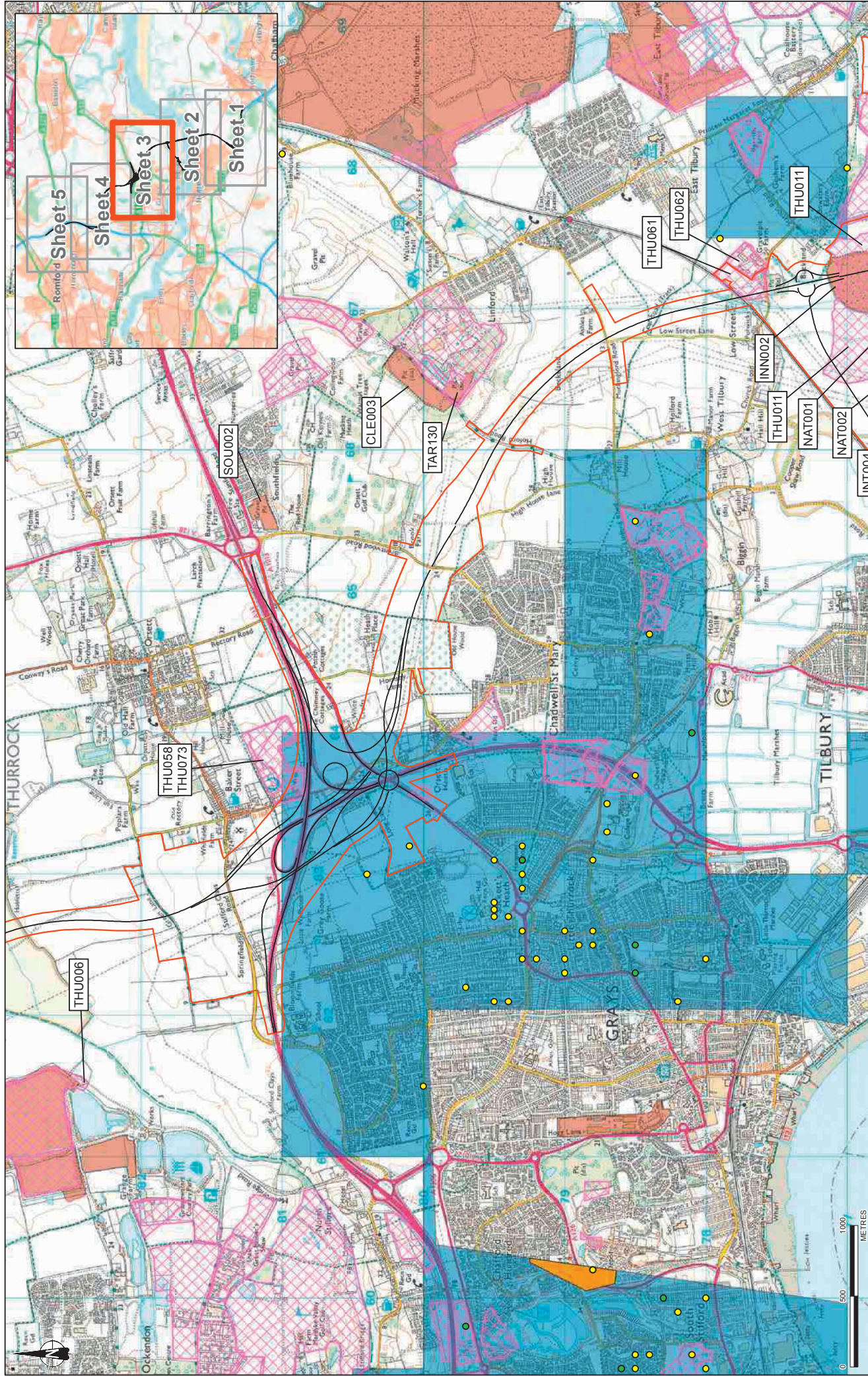


		<p>Client Lower Thames Crossing 51 St Albans Road London EC2A 7DT</p>	<p>Project LOWER THAMES CROSSING DEVELOPMENT PHASE</p>	<p>Drawn S2</p>	<p>Drawn Date / Revision A3 Date: 1/25/2017</p>
<p>Legend</p> <ul style="list-style-type: none"> LTC Route Alignment Development Area Boundary Authorised Landfill Area Natural Cavity Conclusive Rock Mining (only available as 1km files) Inconclusive Rock Mining (only available as 1km files) Historic Landfill Area Natural Cavity Conclusive Coal Mining (only available as 1km files) 		<p>Checked S.R.MILLMAN</p>	<p>Checked Date 11/10/2017</p>	<p>Approved C.SCOJIBRY-SMITH</p>	<p>Approved Date 11/10/2017</p>
<p>Scale 1:25,000</p>		<p>Figure 10.3 Geology and Soils - Location of Landfill Sites, Mining and Natural / Man Made Cavities</p>		<p>Drawing number HE540039-CV-EGT-SZP_EGNE00000000-DRLE-00003</p>	
<p>Service Layer Credits: Contains OS data © Crown Copyright and database right 2017. Ordnance Survey 100050649</p>		<p>Scale: 1:25,000</p>		<p>Scale: 1:25,000</p>	
<p>File: S2_111017_10.3 - Information</p>		<p>Scale: 1:25,000</p>		<p>Scale: 1:25,000</p>	



		LOWER THAMES CROSSING DEVELOPMENT PHASE		Status: S2 Scale: 1:25,000	
Lower Thames Crossing <small>Shoeburyness S15 8 5R London EC3A 7DT</small>		Figure 10.3 Geology and Soils - Location of Landfill Sites, Mining and Natural / Man Made Cavities Sheet 2 of 5		Date/Issue/Revision: AS 11/10/2017 DR: 11/10/2017 SR: 11/10/2017 SM: 11/10/2017 Drawing number: HE4/0039-CV-EGT-SZP_EGNE00000000-DR-LE-00004	
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highways england

Lower Thames Crossing
 5th and 6th Interchanges
 A166, A167, A168, A169, A170, A171, A172, A173, A174, A175, A176, A177, A178, A179, A180, A181, A182, A183, A184, A185, A186, A187, A188, A189, A190, A191, A192, A193, A194, A195, A196, A197, A198, A199, A200

Project: LOWER THAMES CROSSING DEVELOPMENT PHASE
Drawing No: Figure 10.3
Geology and Soils - Location of Landfill Sites, Mining and Natural / Man Made Cavities
Sheet 3 of 5

Client: Lower Thames Crossing
 5th and 6th Interchanges
 A166, A167, A168, A169, A170, A171, A172, A173, A174, A175, A176, A177, A178, A179, A180, A181, A182, A183, A184, A185, A186, A187, A188, A189, A190, A191, A192, A193, A194, A195, A196, A197, A198, A199, A200

Scale: 1:25,000
Date: 11/10/2017
Checked: S.R.MILLMAN
Drawn: S.R.MILLMAN
Approved: C.SQUIBBY-SMITH
Drawn Number: HE54/0039-CIV-EGT-SZP_EGNE00000000-DR-LE-00005

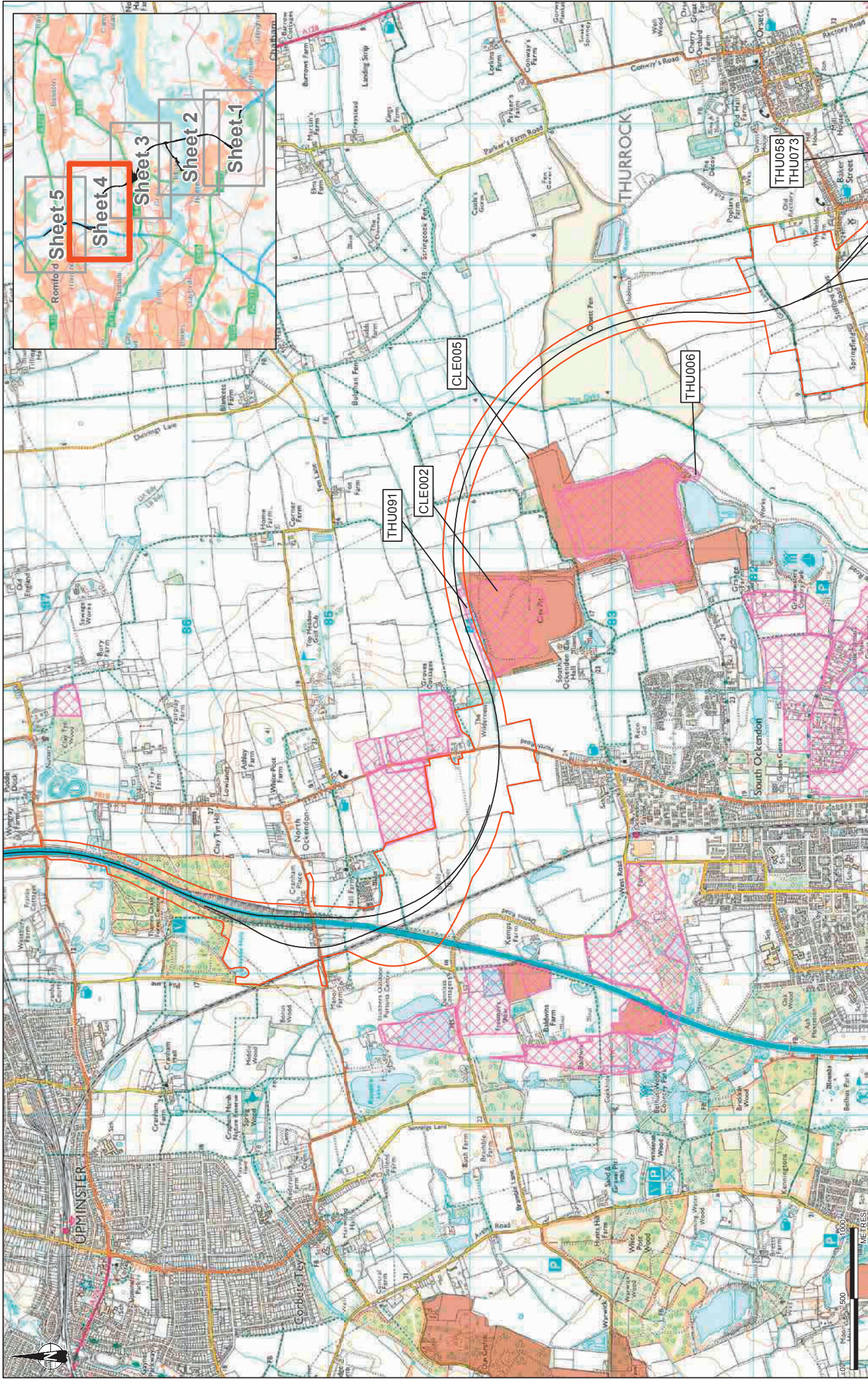
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- LTC Route Alignment
- Development Area Boundary
- Authorised Landfill Area
- Natural Cavity
- Man Made Mining Cavity
- Historic Landfill Area
- Natural Cavity
- Conclusive Coal Mining (only available as 1km files)
- Conclusive Rock Mining (only available as 1km files)
- Inconclusive Rock Mining (only available as 1km files)

Scale: 0 500 1000 METRES

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File: 02_11/10/17
Rev: 02
Date: 11/10/2017
Drawn: S.R.MILLMAN
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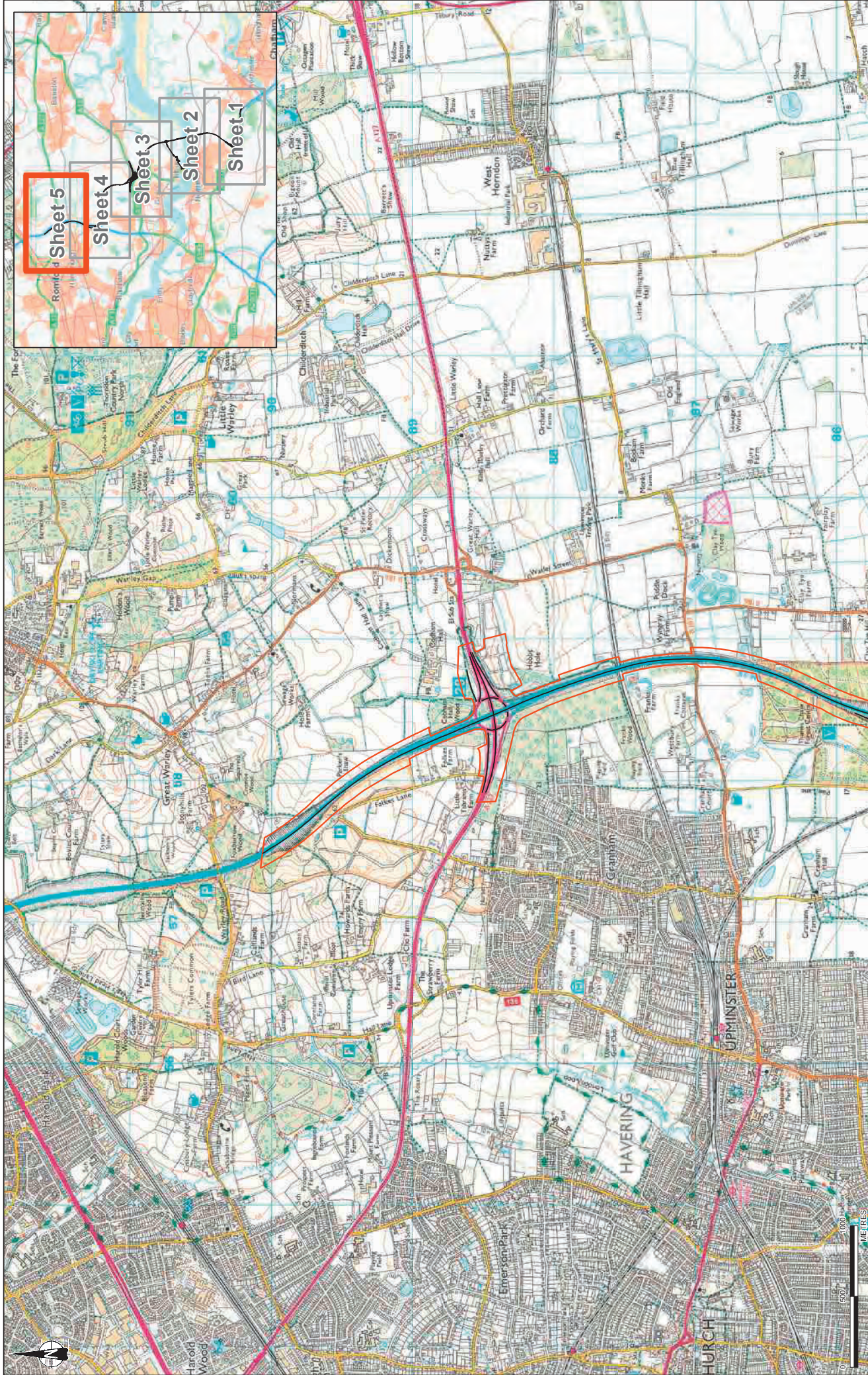
Rev: 01 | Date: 11/10/2017 | For Information: E.A. SR | C.S.S. | Drawn: [] | Checked: [] | Approved: [] | Date of revision: []

Client: **highways england**
 Lower Thames Crossing
 5th Floor
 15 St. Bride Street
 London EC4A 3DF

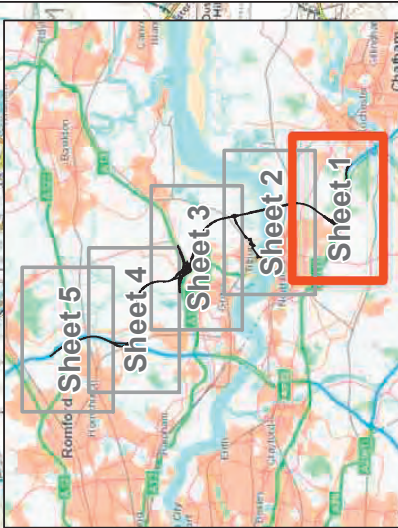
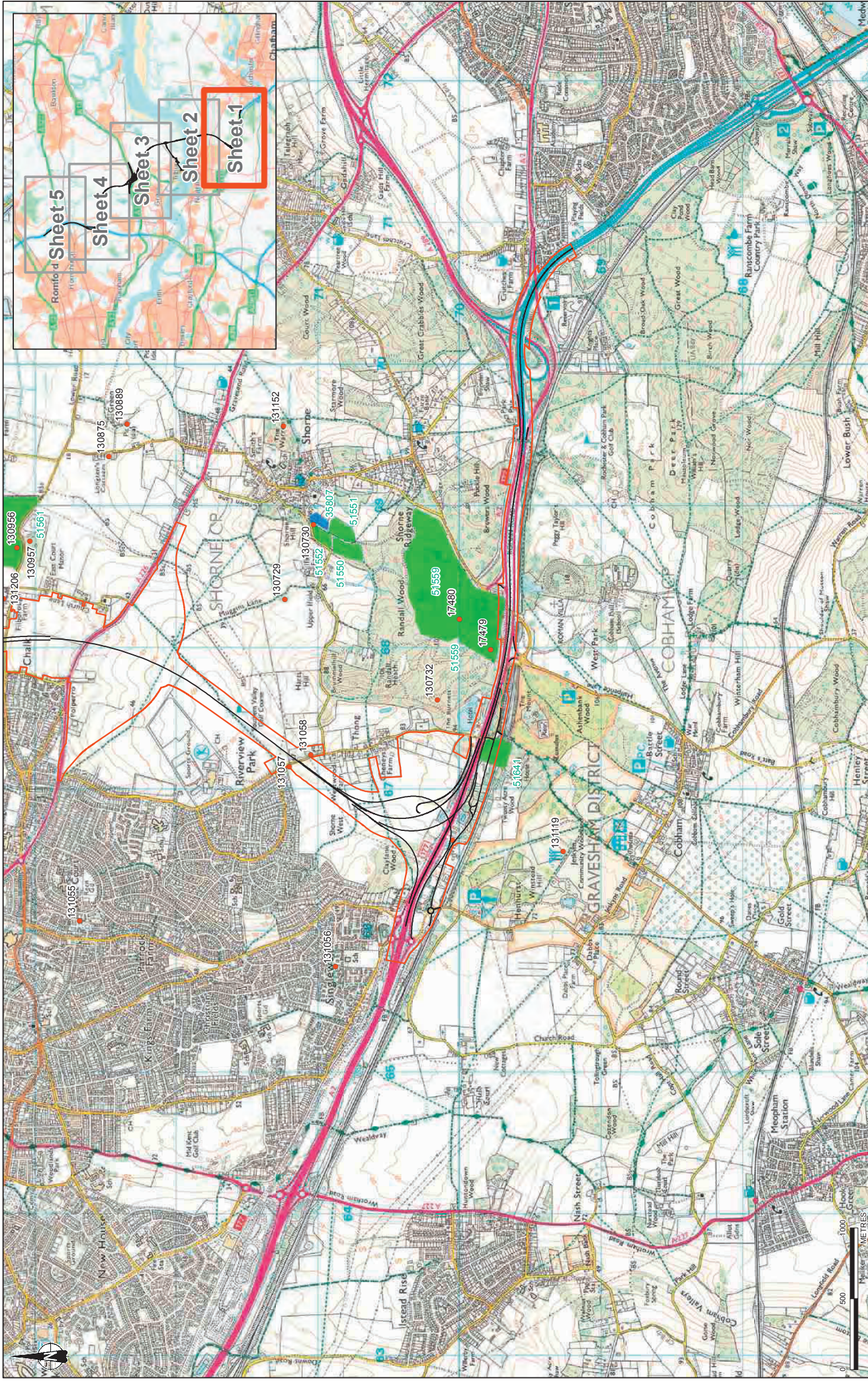
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 Drawing No: Figure 10.3
 Geology and Soils - Location of Landfill Sites, Mining and Natural / Man Made Cavities
 Sheet 4 of 5

Status: S2
 Date of Issue/Revision: A3 | Issue: 125/000
 Drawn: R.MILLMAN | Date: 11/10/2017
 Checked: S.R.WELLS | Date: 11/10/2017
 Approved: C.SOUJRY-SMITH | Date: 11/10/2017
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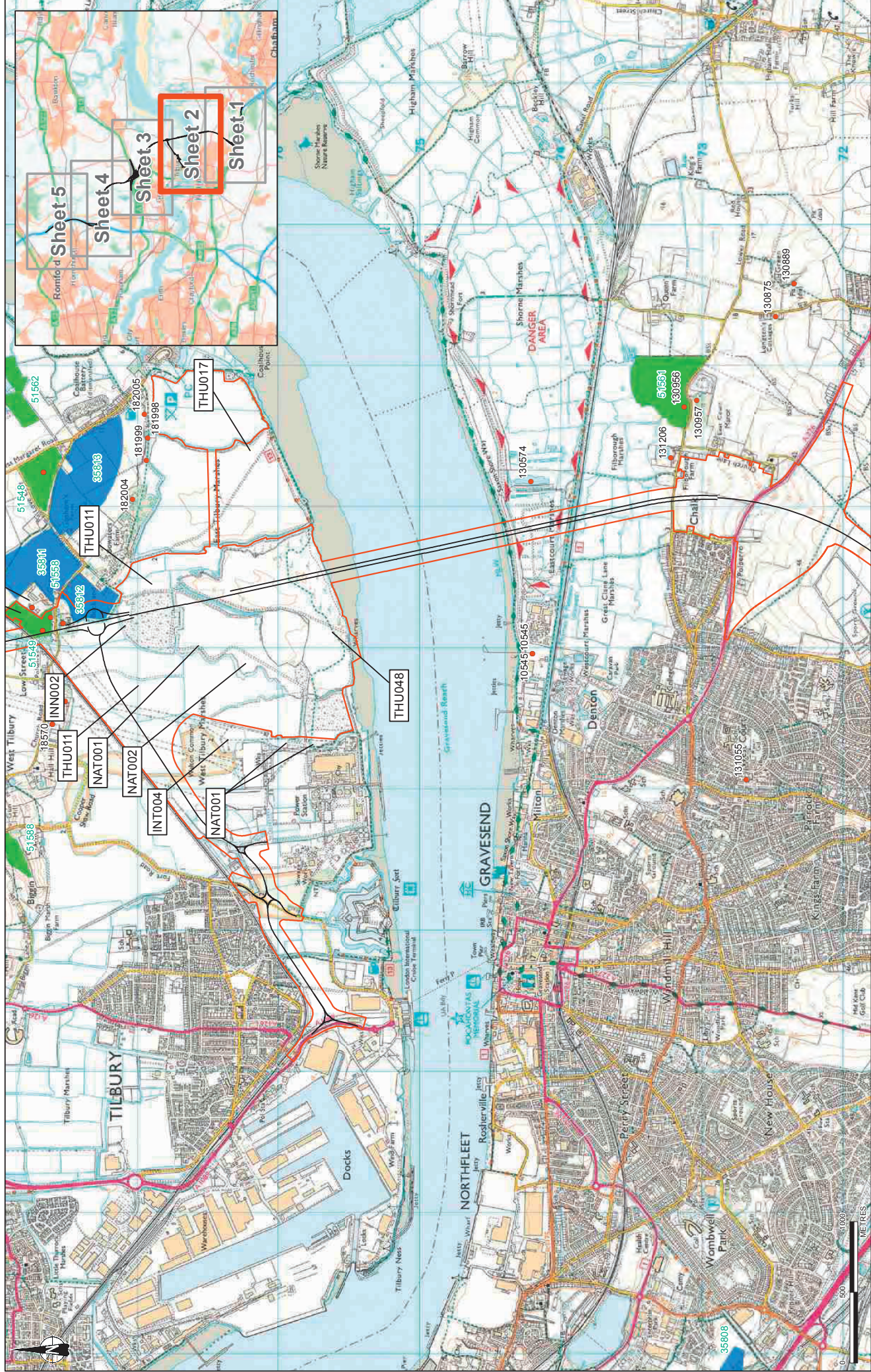
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 Development Area Boundary
 Authorised Landfill Area
 Natural Cavity
 Man Made Mining Cavity
 Historic Landfill Area
 Natural Cavity
 Conclusive Coal Mining (only available as 1km files)
 Conclusive Rock Mining (only available as 1km files)
 Inconclusive Rock Mining (only available as 1km files)



		LOWER THAMES CROSSING DEVELOPMENT PHASE Project: S2 Drawing No: RAILLMAN	Date Issue: Revision Date: 1/25/2017 Issue: P01
Lower Thames Crossing <small>Sturminster Heath S15 8JG London EC3A 7DT</small>		Figure 10.3 Geology and Soils - Location of Landfill Sites, Mining and Natural / Man Made Cavities Sheet 5 of 5	Drawn: S.R.MILLMAN Checked: S.R.MILLMAN Approved: C.SQUIBBY-SMITH Drawing number: HIE44039-CJ-V-EGT-SZP_EGNE00000000-DR-LE-00007
Conclusive Rock Mining (only available as 1km files)	Inconclusive Rock Mining (only available as 1km files)	Man Made Mining Cavity	Development Area Boundary
Conclusive Coal Mining (only available as 1km files)	Historic Landfill Area	Natural Cavity	Authorised Landfill Area
Inconclusive Coal Mining (only available as 1km files)	Natural Cavity	Natural Cavity	Natural Cavity



<p>Client: highways england</p> <p>Project: LOWER THAMES CROSSING DEVELOPMENT PHASE</p>		<p>Drawn: R MILLMAN</p> <p>Checked: S RIMMELL</p> <p>Approved: C SCUDJURY-SMITH</p> <p>Drawing number: HE54/0039-CIV-EGT-S2P_EGNE00000000-DR-LE-000008</p>
<p>Client: Lower Thames Crossing <small>5th to 8th Floor London EC3A 7DT</small></p>		<p>Scale: 1:25,000</p> <p>Date: 11/10/2017</p> <p>Date: 11/10/2017</p> <p>Date: 11/10/2017</p>
<p>Refused Planning Permission for Mineral Extraction</p> <p>BRITPITS</p> <p>Development Area Boundary</p> <p>Approved Planning Permission for Mineral Extraction</p>		<p>Figure 10.4 Historical Mineral Planning Permission Sheet 1 of 5</p>
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Refused Planning Permission for Mineral Extraction
 LTC Route Alignment
 BRITPITS
 Development Area Boundary
 Approved Planning Permission for Mineral Extraction

Client: **highways england**
 Project: **LOWER THAMES CROSSING DEVELOPMENT PHASE**
 Drawing No: **S2**

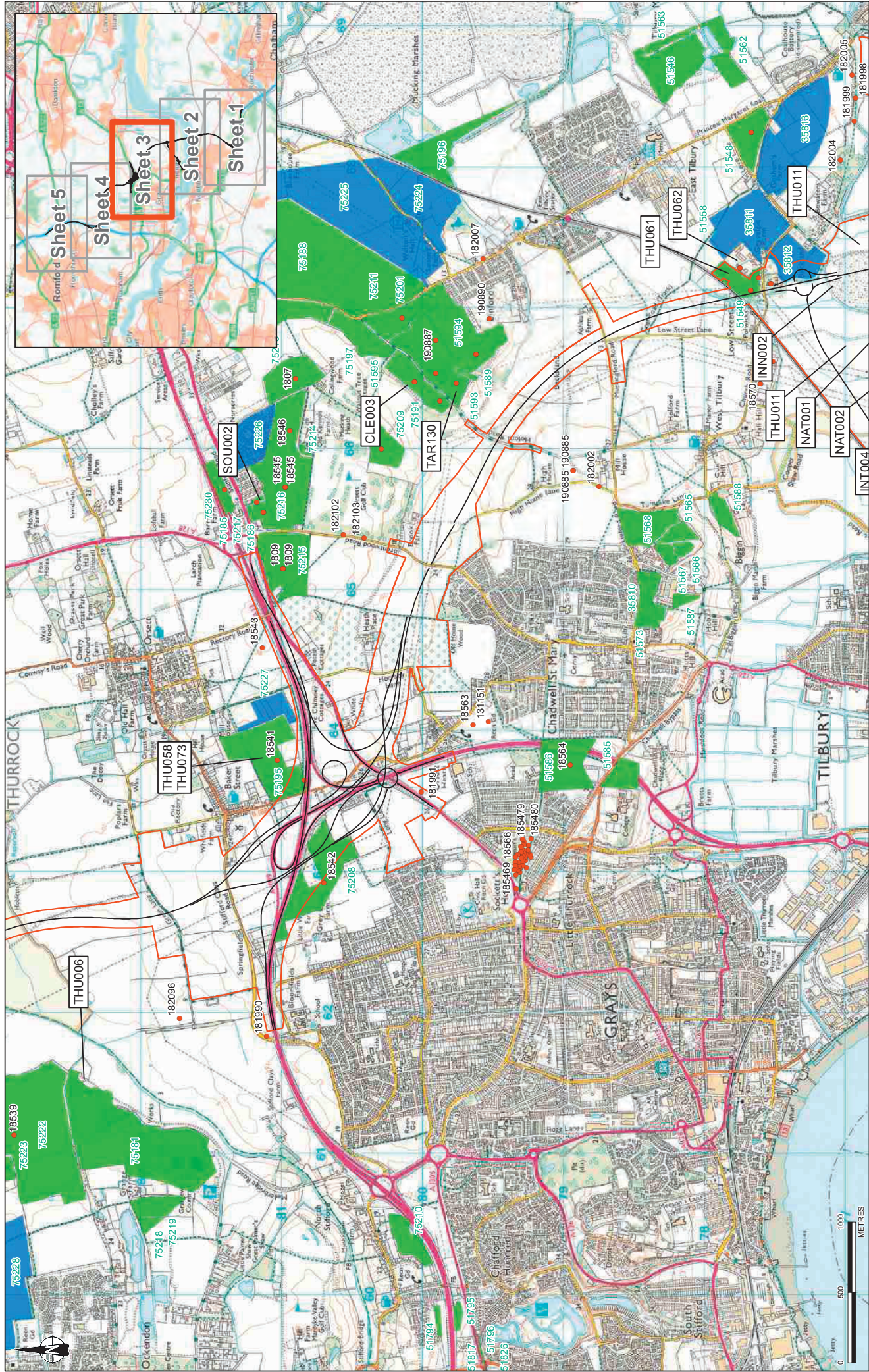
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Drawn: **R.MILLMAN**
 Checked: **S.RWELL**
 Approved: **C.SCOJIBRY-SMITH**
 Drawing number: **HE4-0039-C-VEGET-S2P_EGNE00000000-DR-LE-00009**

Figure 10.4
 Historical Mineral Planning Permission
 Sheet 2 of 5

Lower Thames Crossing
 5th and 6th Avenues
 London EC3A 7DT

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 Drawn: **R.M.** | Checked: **S.R.** | Approved: **C.S.**



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Client: **highways england**
 Lower Thames Crossing
 5th to 8th Floor
 London EC3A 7DT

Project: **LOWER THAMES CROSSING DEVELOPMENT PHASE**
 Drawing No: S2

Figure 10.4
 Historical Mineral Planning Permission
 Sheet 3 of 5

Refused Planning Permission for Mineral Extraction

LTC Route Alignment

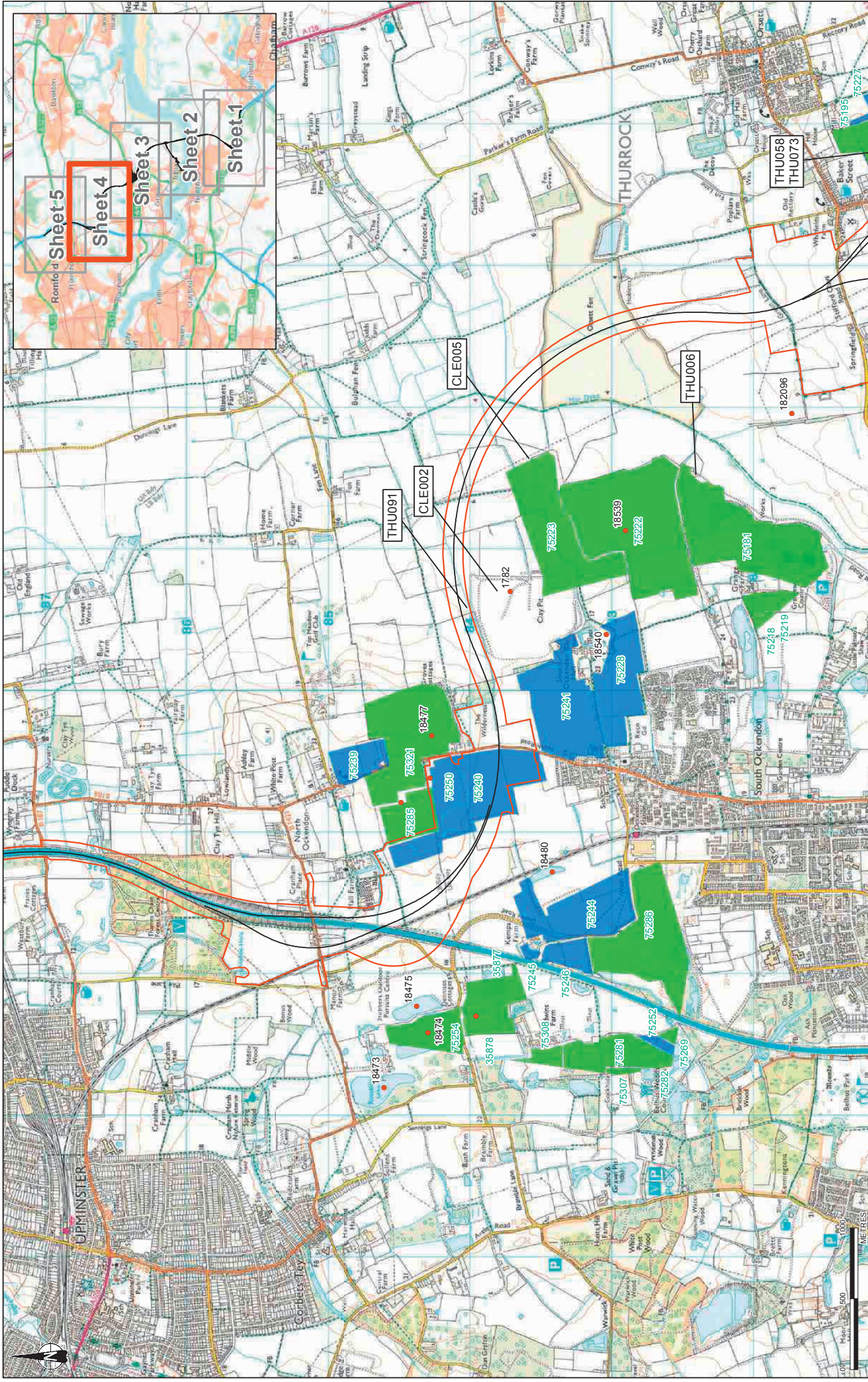
BRITPITS

Development Area Boundary

Approved Planning Permission for Mineral Extraction

Scale: 1:25,000
 Date: 11/10/2017
 Checked: S.R.MILLMAN
 Approved: C.SOUBRY-SMITH
 Drawing number: HE4-0039-CIV-EGT-SZP_EGNE0000000-DR-LE-00010

Rev: 02
 Date: 11/10/17
 For information
 Rev: 01
 Date: 11/10/17
 Approved for revision



Refused Planning Permission for Mineral Extraction
 BRITPITS
 Development Area Boundary
 Approved Planning Permission for Mineral Extraction

LTC Route Alignment
 BRITPITS
 Development Area Boundary
 Approved Planning Permission for Mineral Extraction

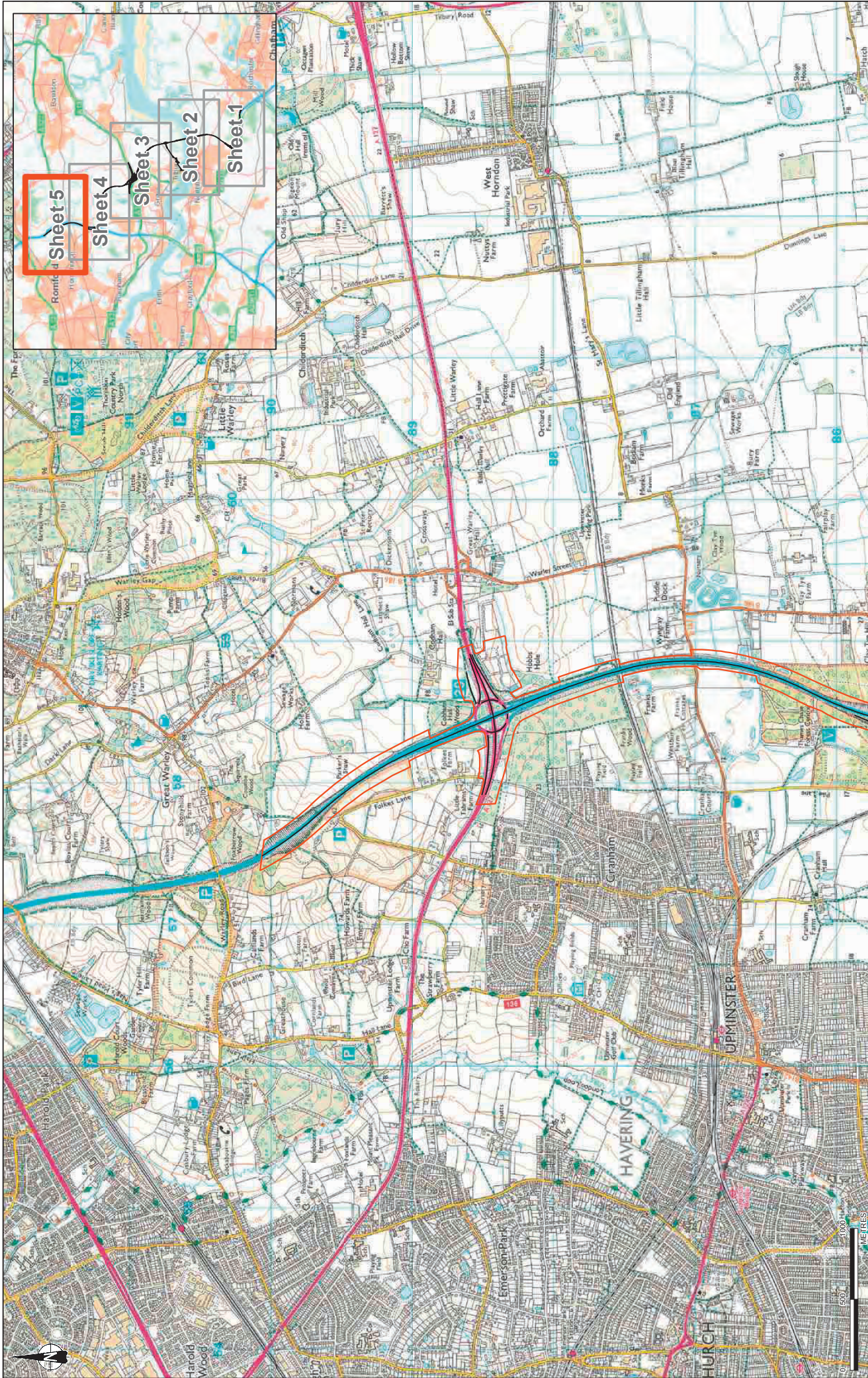
Client: **highways england**
 Lower Thames Crossing
 5th to 8th House
 15 St Albans Road
 London EC3A 7DT

Project: **LOWER THAMES CROSSING DEVELOPMENT PHASE**
 Drawing No:

Status: S2
 Date: 12/05/2017
 Drawn: R.MILLMAN
 Checked: S.MWELL
 Approved: C.SQUJRY-SMITH
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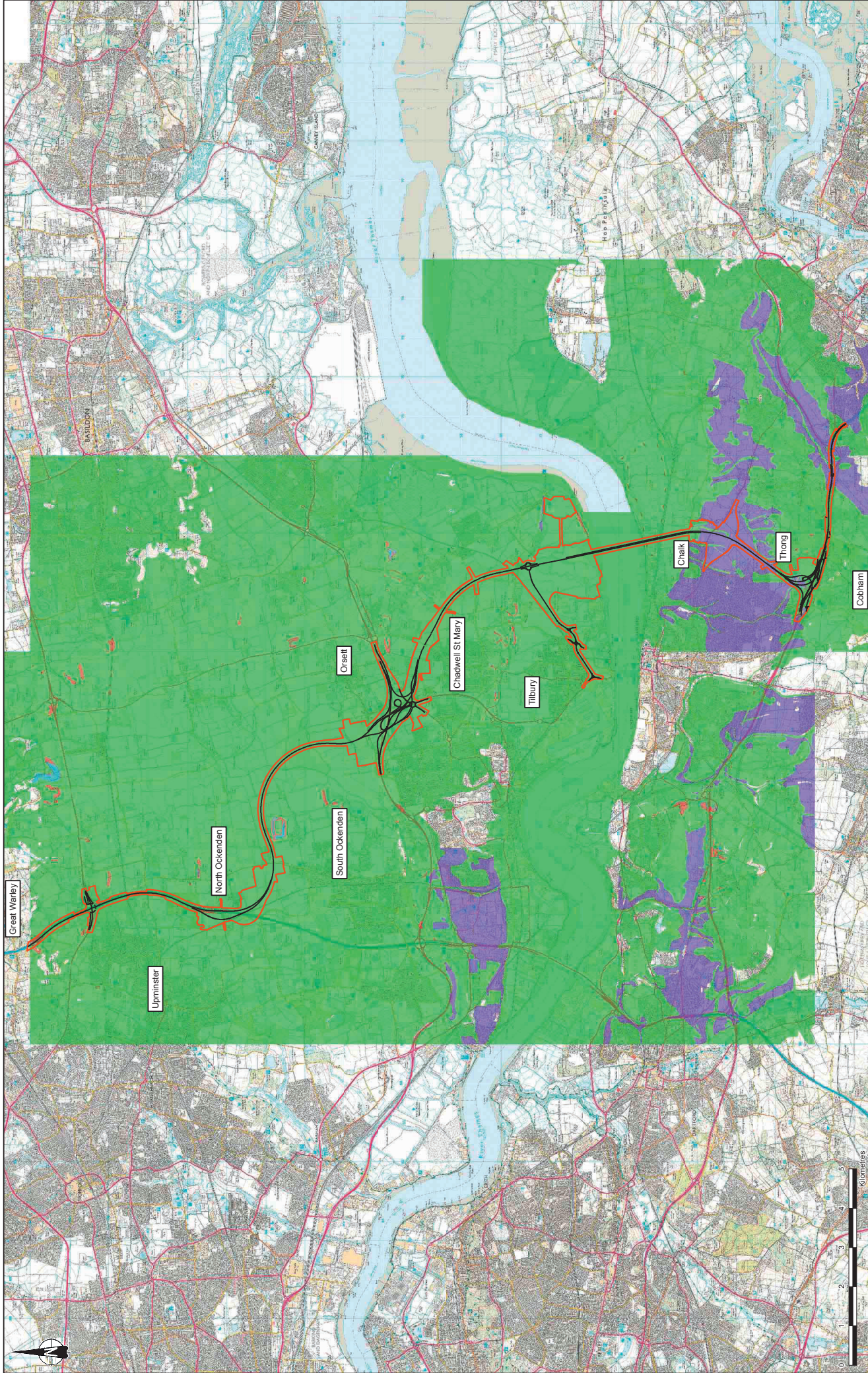
Figure 10.4
 Historical Mineral Planning Permission
 Sheet 4 of 5

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 File: S2_11/10/17_01-Information
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 Approved: S2
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<p>LOWER THAMES CROSSING DEVELOPMENT PHASE</p> <p>Project: S2 Drawing No: HIE540039-CAJVEGT-SZP_EGNE0000000-DR-LE-00012</p>	
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<p>Revised Planning Permission for Mineral Extraction</p> <p>Legend: LTC Route Alignment BRITPITS Development Area Boundary Approved Planning Permission for Mineral Extraction</p>	
<p>Drawn Date: 11/10/2017 Checked: S. RYMER-LLMAN Approved: C. SQUYRE-SMITH</p>	<p>Date Issue Revision AS 101 Date: 11/10/2017 Scale: 1:25,000</p>
<p>Services Layer Credits: Contains OS data © Crown Copyright and database right 2017. Ordnance Survey 100030949</p> <p>Map Scale: 1:25,000 Date: 11/10/2017 Project: Lower Thames Crossing Sheet: 5 of 5</p>	

Figure 10.4
 Historical Mineral Planning Permission
 Sheet 5 of 5



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Rev: 01 Date: 11/10/2017 For Information: E.A. SR C.B.S. Green Green Green

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Checked: S.RIVELL Date: 11/10/2017

Approved: C.SQUJRY-SMITH Date: 11/10/2017

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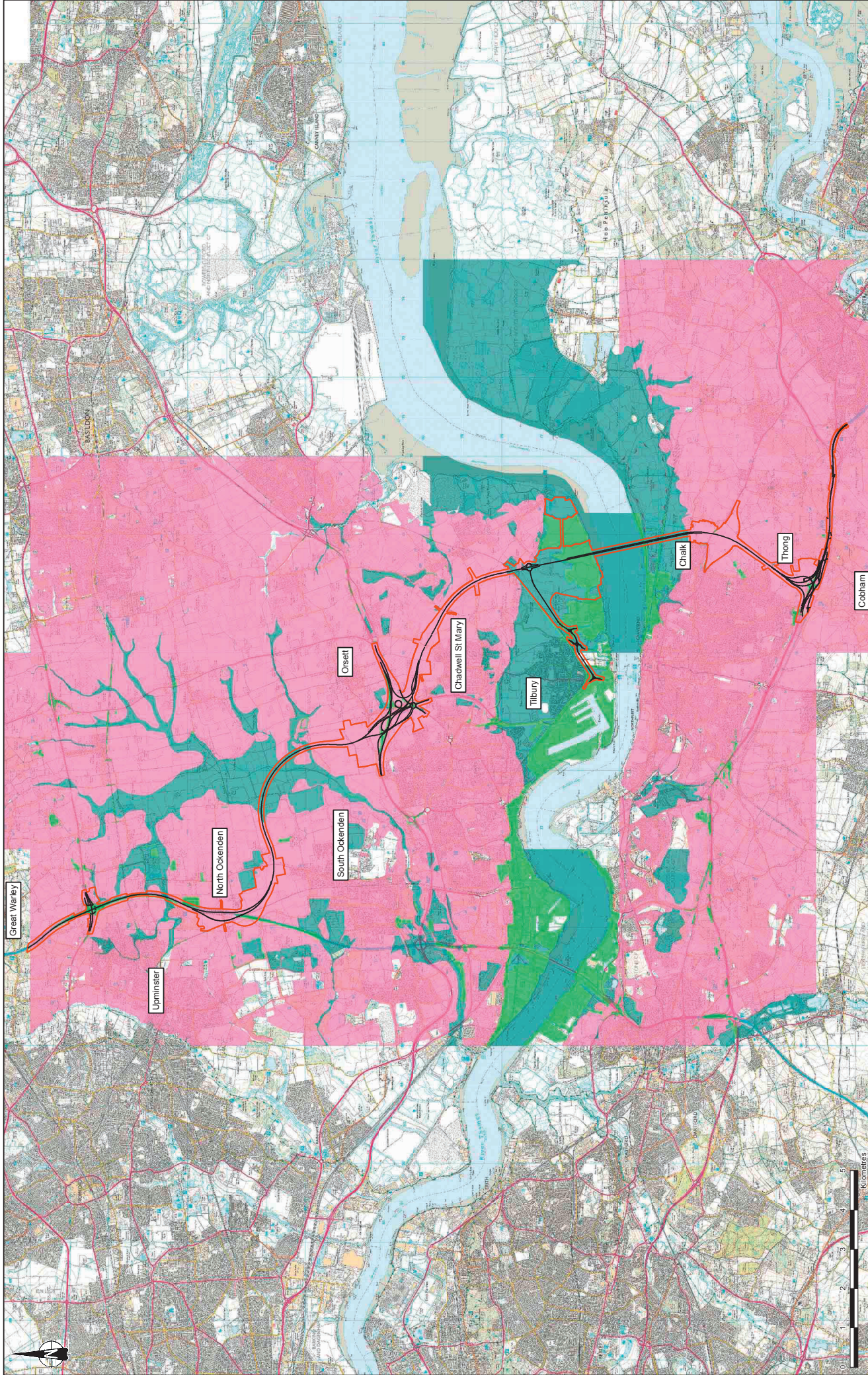
Client: **highways england**
 Lower Thames Crossing
 Slough House
 15 St Albans Road
 London EC3A 7DT

Project: **LOWER THAMES CROSSING DEVELOPMENT PHASE**

Sheet: **S2**

Figure 10.5
 Geology and Soils - Slope Instability

LTC Route Alignment
 Development Area Boundary
 Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered
 Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site
 Slope instability problems are present or have occurred in the past. Land use should consider specifically the stability of the site



<p>Service Layer Credits - Ordnance Survey 100030649</p> <p>Scale: 1:50,000</p> <p>Map Date: 11/10/2017</p> <p>Drawn: S2</p> <p>Checked: S.R.MILLMAN</p> <p>Approved: C.SQUJRY-SMITH</p> <p>Drawing number: HE54/0039-CIV-EGT-SZP_EGNE/00000000-DR-LE-00014</p>		<p>Project: LOWER THAMES CROSSING DEVELOPMENT PHASE</p> <p>Client: Cobham</p> <p>highways england</p> <p>Lower Thames Crossing</p> <p>5th and 6th House 15 St. Paul Street London EC4A 3DF</p>	<p>Figure 10.6 Geology and Soils - Compressible Deposits</p>
<p>Compressible and uneven settlement hazards are probably present. Land use compressibility and variability of the site</p> <p>Highly compressible strata present. Significant constraint on land use depending on thickness</p> <p>Compressible strata are not thought to occur</p> <p>Compressibility and uneven settlement problems are not likely to be significant on the site for most land uses</p>		<p>Legend:</p> <ul style="list-style-type: none"> LTC Route Alignment Development Area Boundary Compressible and uneven settlement hazards are probably present. Land use compressibility and variability of the site Highly compressible strata present. Significant constraint on land use depending on thickness Compressible strata are not thought to occur Compressibility and uneven settlement problems are not likely to be significant on the site for most land uses 	