

Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.

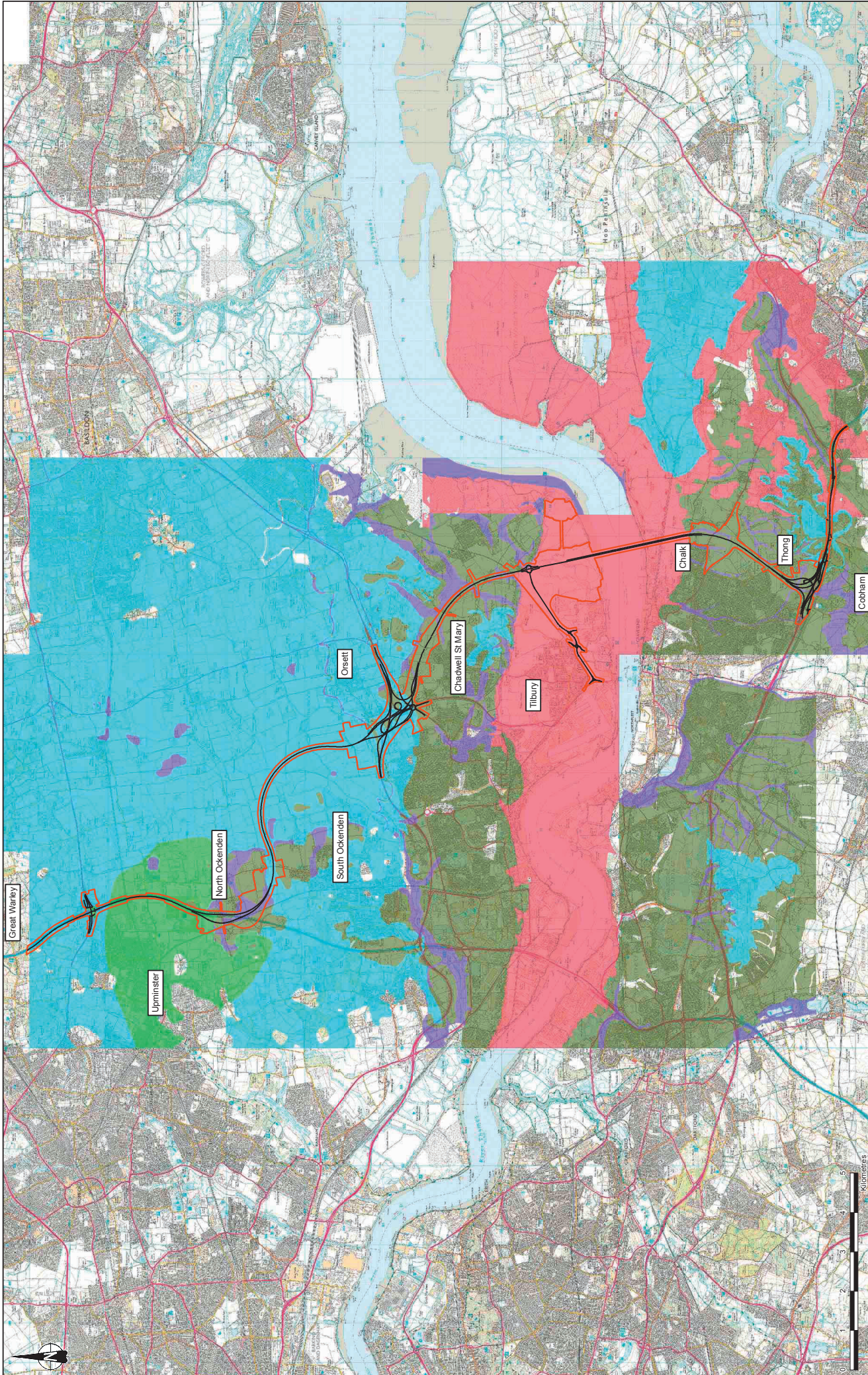
Soluble rocks are present within the ground. Few dissolution features may be present. Potential for difficult ground conditions are localised. Subsidence is at a level where they need not be considered.

Soluble rocks are present within the ground. Numerous dissolution features may be present. Potential for difficult ground conditions are at a level where they should be considered, except in exceptional circumstances.

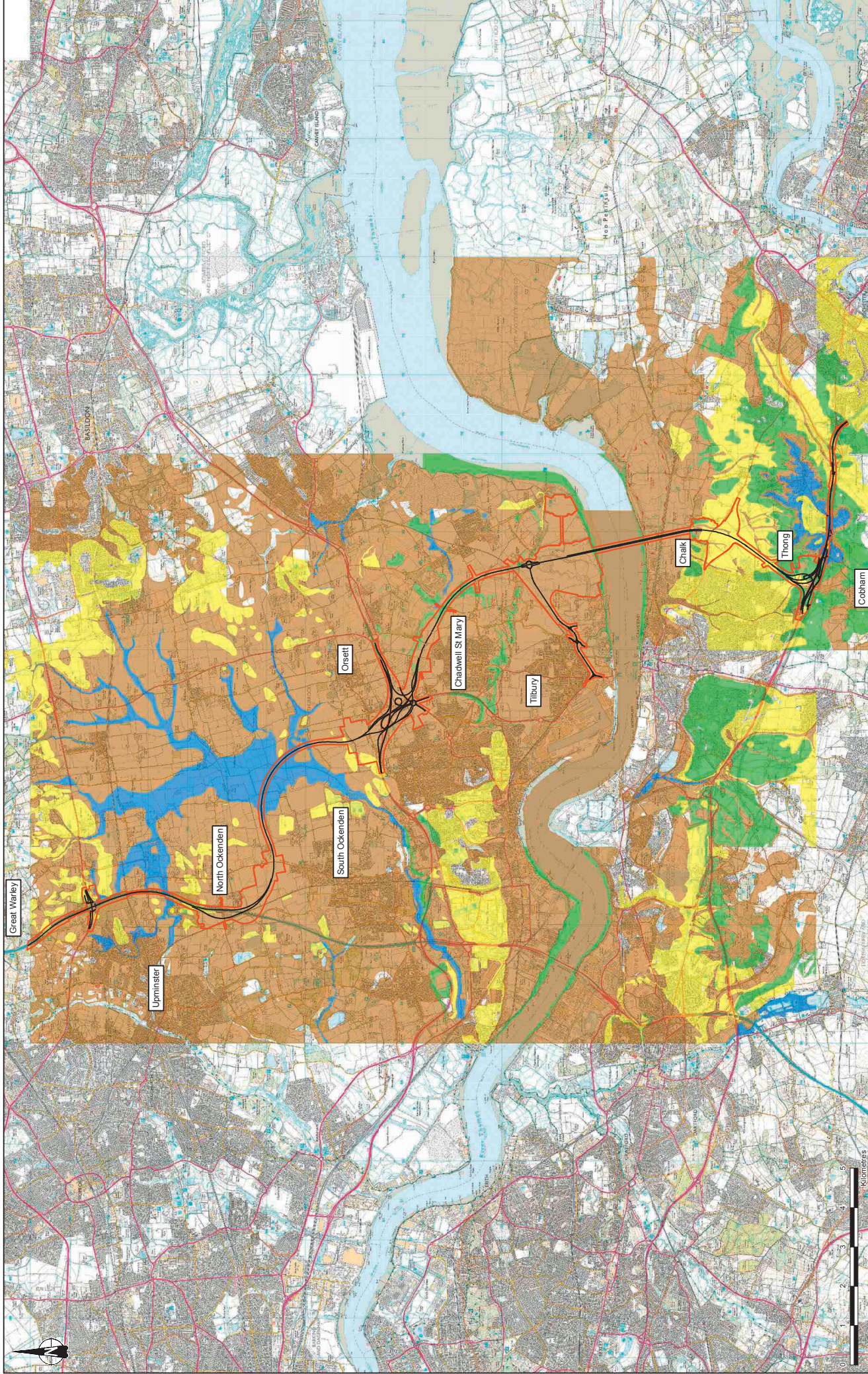
Soluble rocks are present within the ground. Many dissolution features may be present. Potential for difficult ground conditions are at a level where they should be considered. Potential for subsidence is at a level where it may need to be considered.

Soluble rocks are present within the ground. Numerous dissolution features may be present. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered.

Project: LOWER THAMES CROSSING DEVELOPMENT PHASE Drawing No:		Status: S2 Drawn: R MILLMAN Checked: S RIVELL Approved: C.SQUIBBY-SMITH Drawing number: HE4-0039-CIV-EGT-S2P_EGNE0000000-DR-LE-00015	
Client: highways england Lower Thames Crossing 5th Floor 15 St. Peter Street London EC3A 7DT		Figure 10.7 Geology and Soils - Soluble Rocks	
Service Layer Credits: Ordnance Survey 100030649 Scale: 1:50,000		Date: 11/10/2017 Date: 11/10/2017	
Date: 11/10/17 For information Drawn: [] Checked: [] Approved: []		Date: 11/10/17 Date: 11/10/17	



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<p>Client: highways england</p> <p>Lower Thames Crossing</p> <p>5th and 6th Floors 15 St. Paul Street London EC4A 3DF</p>	<p>Figure 10.8A Geology and Soils - Shrink Swell Deposits - Plasticity</p>	<p>Check: S RIVELL</p>	<p>Scale: 1:50,000</p>	
<p>Draw: 11/10/2017</p>	<p>Checked: C. SCURRY-SMITH</p>	<p>Drawn: 11/10/2017</p>	<p>Drawn: 11/10/2017</p>	
<p>Sheet: S2</p>	<p>Drawing number: HE44039-CIV-EGT-SZP_EGNE0000000-DR-LE-00016</p>	<p>Sheet: S2</p>	<p>Sheet: P01</p>	



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Draw		Print
Save		Close
Date	11/10/17	View
File	S2	Print
Draw		Close
Save		View

- LTC Route Alignment
 - Development Area Boundary
- Running sand conditions are unlikely, No identified constraints on land use due to rapid running conditions unless water table rises
- Running sand conditions are probably present, Constraints may apply to land uses involving excavation or the addition or removal of water
- Running sand conditions may be present, Constraints may apply to land uses involving excavation or the addition or removal of water

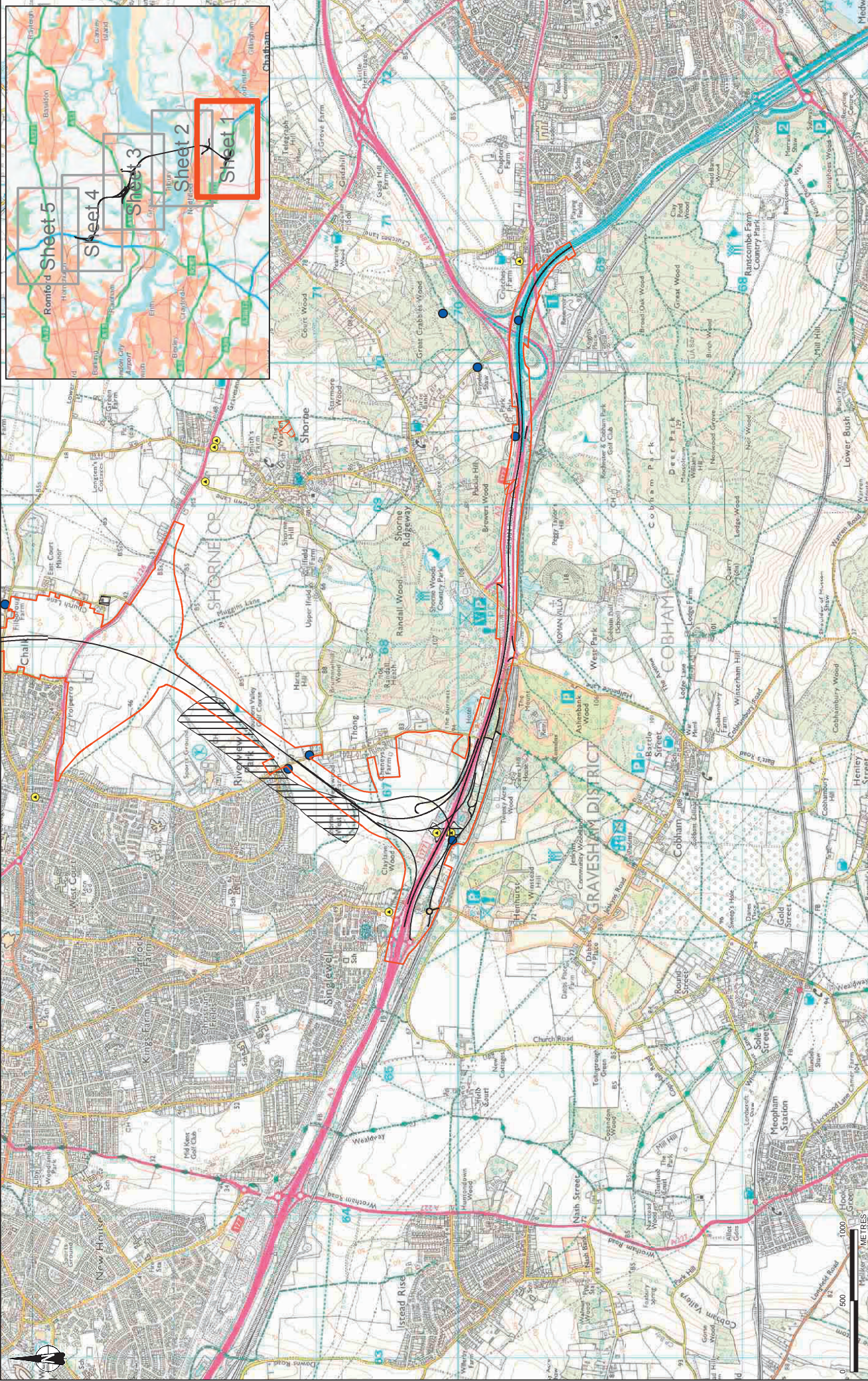
Client

 Lower Thames Crossing
 5th & 6th House
 15 St Giles
 London EC4A 3DF

Project
 LOWER THAMES CROSSING
 DEVELOPMENT PHASE

Figure 10.8B
 Geology and Soils - Shrink
 Swell Deposits - Running Sand

Status	
Design Date	Revision
A3	P01
Scale	1:50,000
Drawn	Checked
R MILLMAN	S RIMELL
11/10/2017	11/10/2017
Approved	Checked
C.SQUJBY-SMITH	C.SQUJBY-SMITH
11/10/2017	11/10/2017
Drawing Number	
HE440039-CV-EGT-S2P_EGNE0000000-DR-LE-00017	



<p>highways england</p> <p>Lower Thames Crossing 5th & 6th Embankment 15 St Albans Road London EC2A 7DT</p>		<p>Project: LOWER THAMES CROSSING DEVELOPMENT PHASE</p> <p>Client: highways england</p>	<p>Drawn: R MILLMAN</p> <p>Checked: S RIMMELL</p> <p>Approved: C SCULLERY-SMITH</p> <p>Drawing number: HE4/0039-CV-E-GT-SZP_EGNE0000000-DRLE-00018</p>
<p>Figure 10.9 Geology and Soils - Historic Contaminative Land Uses Page 1 of 5</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>Sheet: S2</p> <p>Revision: P01</p>

- LTC Route Alignment
- Development Area Boundary
- Industrial
- Other
- Quarrying
- Mineral railway
- Pipeline (transport wa)
- Railways
- Sewage
- Quarrying
- Other
- Historic Tanks

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Date: 11/10/17

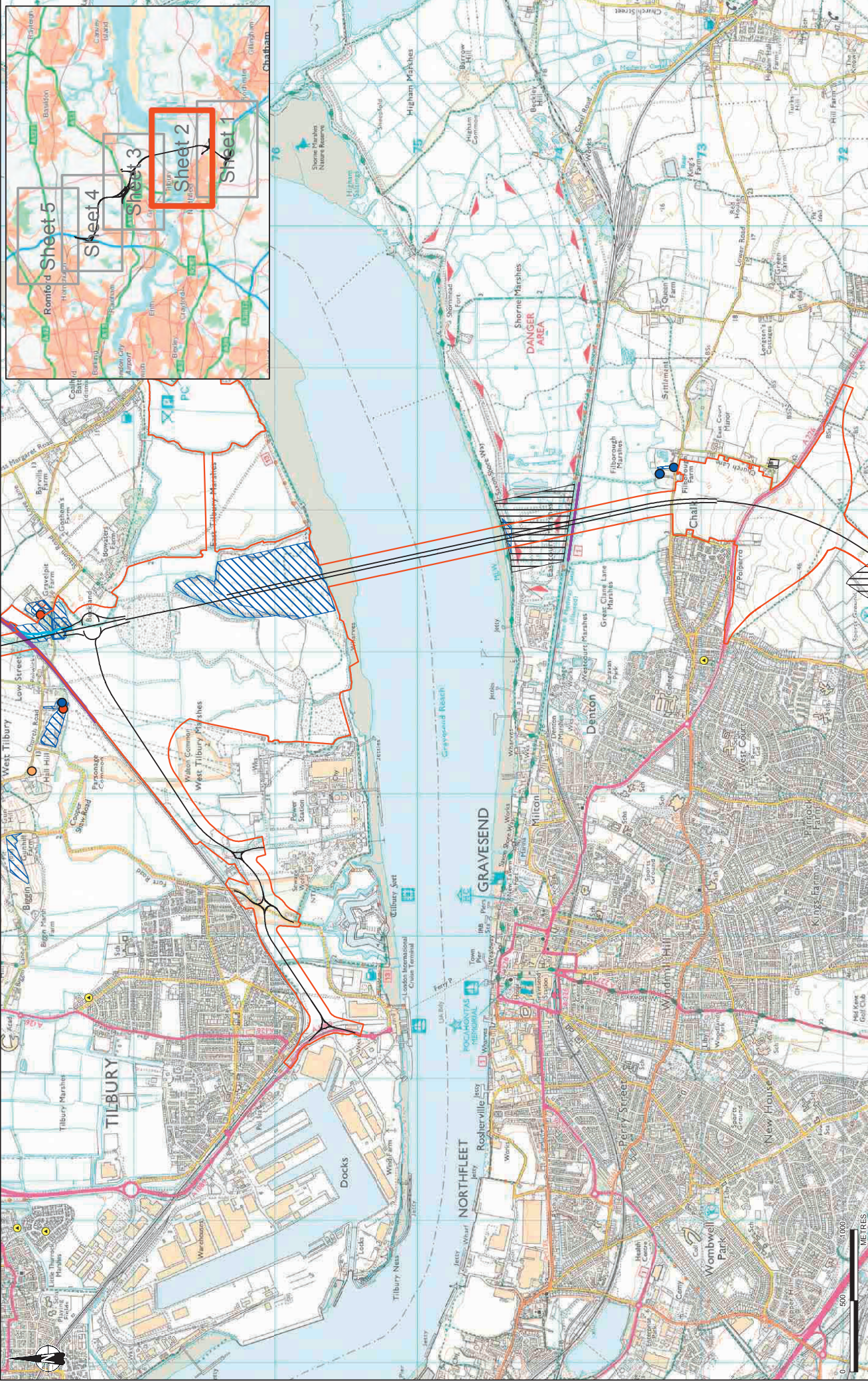
For information

Drawn: R MILLMAN

Checked: S RIMMELL

Approved: C SCULLERY-SMITH

Drawing number: HE4/0039-CV-E-GT-SZP_EGNE0000000-DRLE-00018



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Client:		Checked: S.RIVELL Date: 11/10/2017		Approved: C.SCALJURY-SMITH Date: 11/10/2017	
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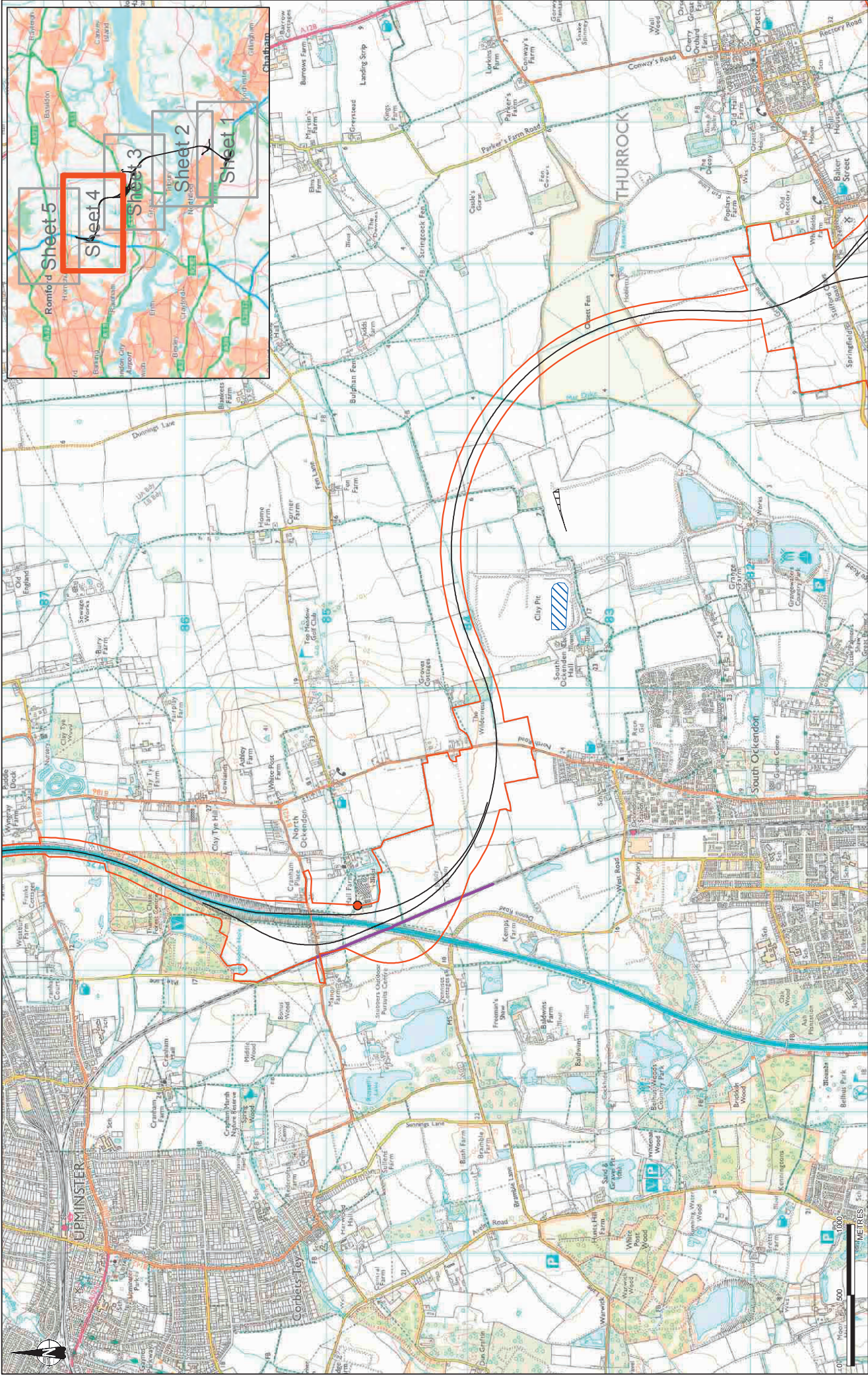
Figure 10.9
Geology and Soils - Historic
Contaminative Land Uses
Page 2 of 5

- LEGEND**
- LTC Route Alignment
 - Development Area Boundary
 - Industrial
 - Other
 - Quarrying
 - Mineral railway
 - Pipeline (transport wa)
 - Railways
 - Sewage
 - Historic Tanks

File	Sheet	Date	Revision	Scale	Drawn	Checked	Approved
HE54	S2	11/10/17	01	E.A.	S.R.	C.S.	C.S.



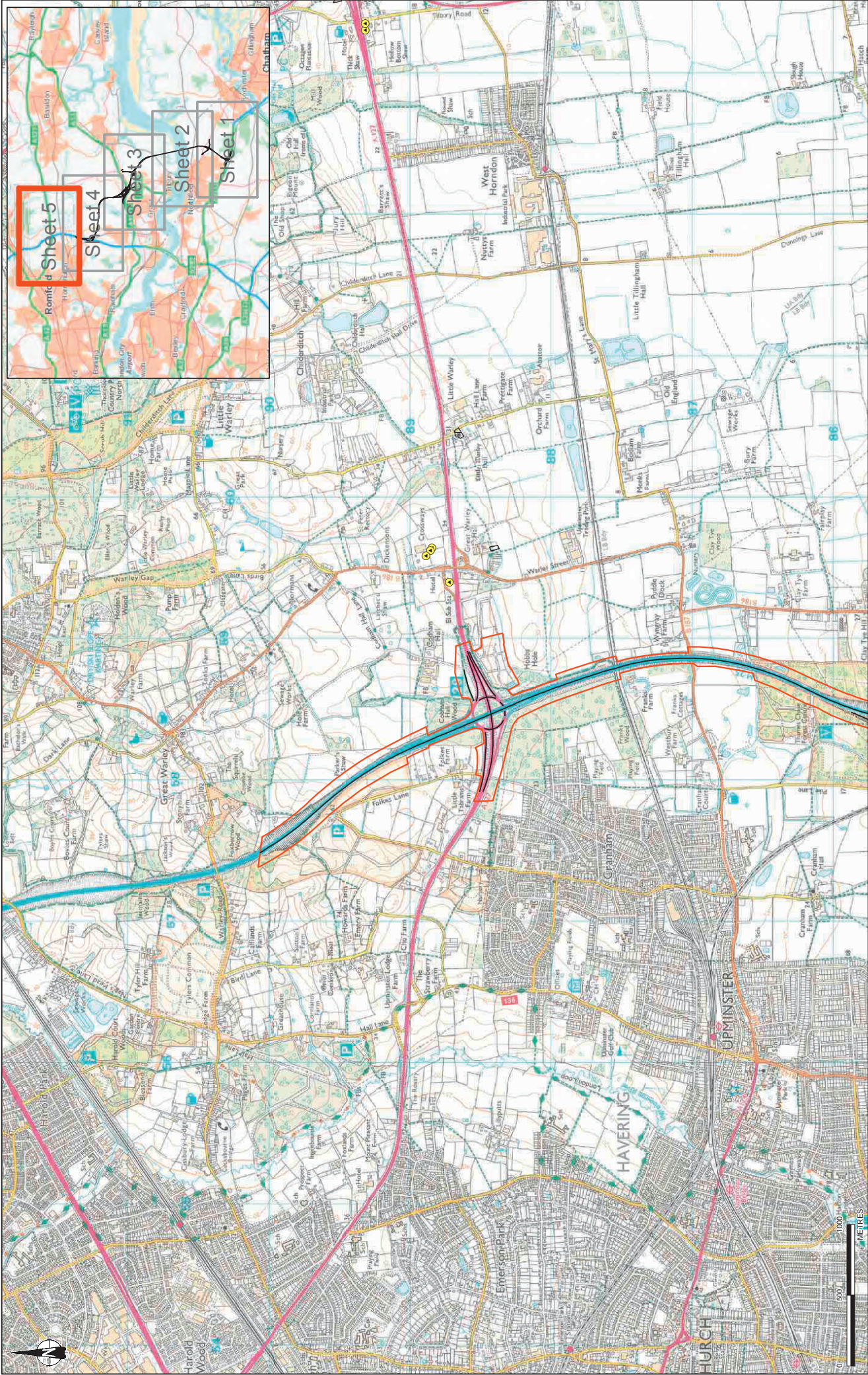
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<p>Client:</p> <p>highways england</p> <p>Lower Thames Crossing</p> <p>5th & 6th Interchanges J5 & J6 London EC3A 7DT</p>	<p>Project:</p> <p>LOWER THAMES CROSSING DEVELOPMENT PHASE</p>
<p>Figure 10.9 Geology and Soils - Historic Contaminative Land Uses Page 3 of 5</p>	
<p>Legend:</p> <ul style="list-style-type: none"> LTC Route Alignment Development Area Boundary Industrial Other Quarrying Mineral railway Pipeline (transport wa) Railways Sewage Other Historic Tanks 	
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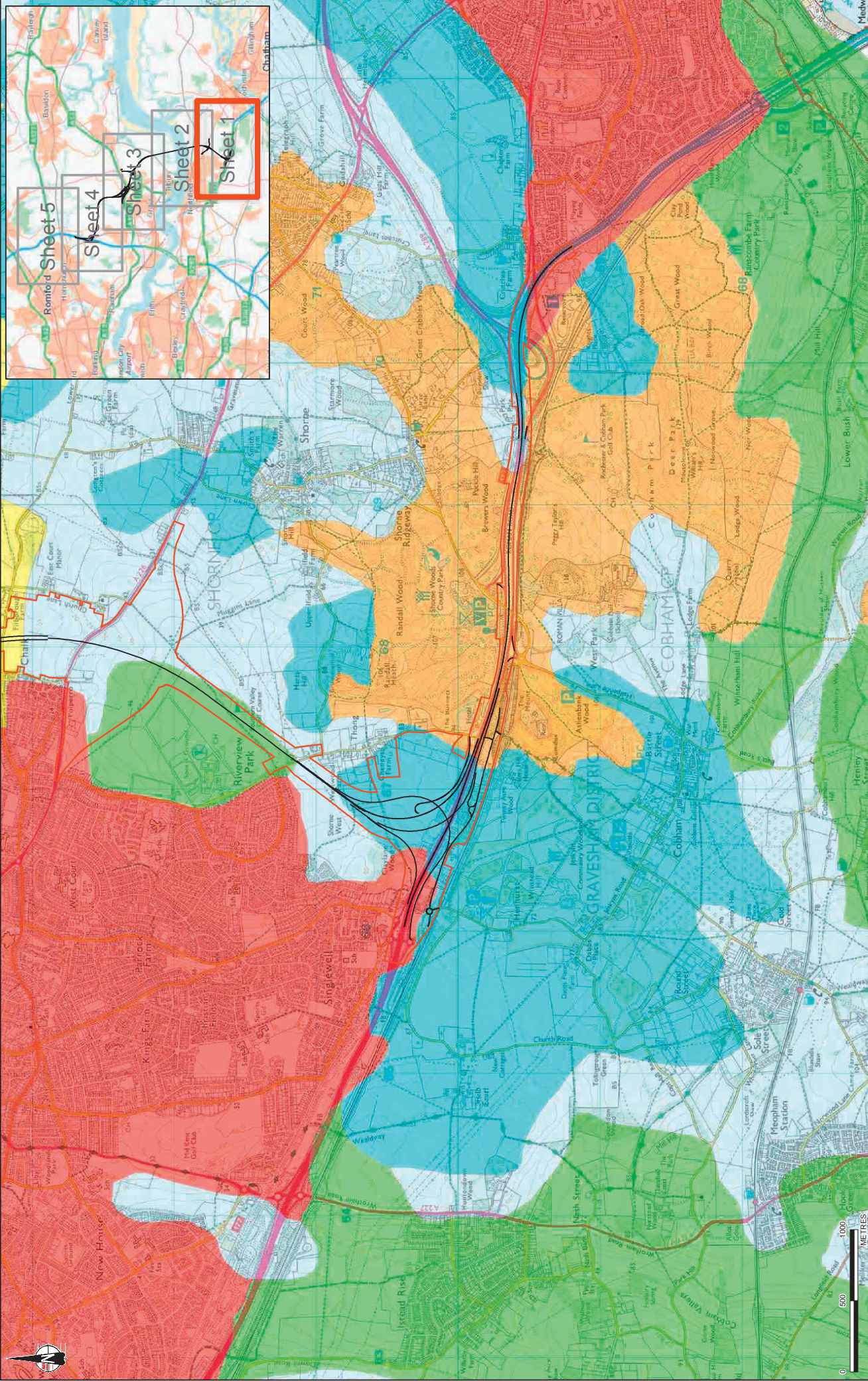
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		Client Lower Thames Crossing 5th & 6th Floor 15 St. Dunstons London EC3A 7DT	Project LOWER THAMES CROSSING DEVELOPMENT PHASE	Checked S.RWELL	Date 11/10/2017
		Client Lower Thames Crossing 5th & 6th Floor 15 St. Dunstons London EC3A 7DT	Project LOWER THAMES CROSSING DEVELOPMENT PHASE	Approved C.SOUJRY-SMITH	Date 11/10/2017
		Client Lower Thames Crossing 5th & 6th Floor 15 St. Dunstons London EC3A 7DT	Project LOWER THAMES CROSSING DEVELOPMENT PHASE	Drawn S2	Date 12/5/2000

Figure 10.9
 Geology and Soils - Historic
 Contaminative Land Uses
 Page 4 of 5

- LTC Route Alignment
 — Development Area Boundary
 — Industrial
 — Other
 — Quarrying
 — Mineral railway
 — Pipelines (transport wa)
 — Railways
 — Sewage
 — Historic Tanks
 — Other

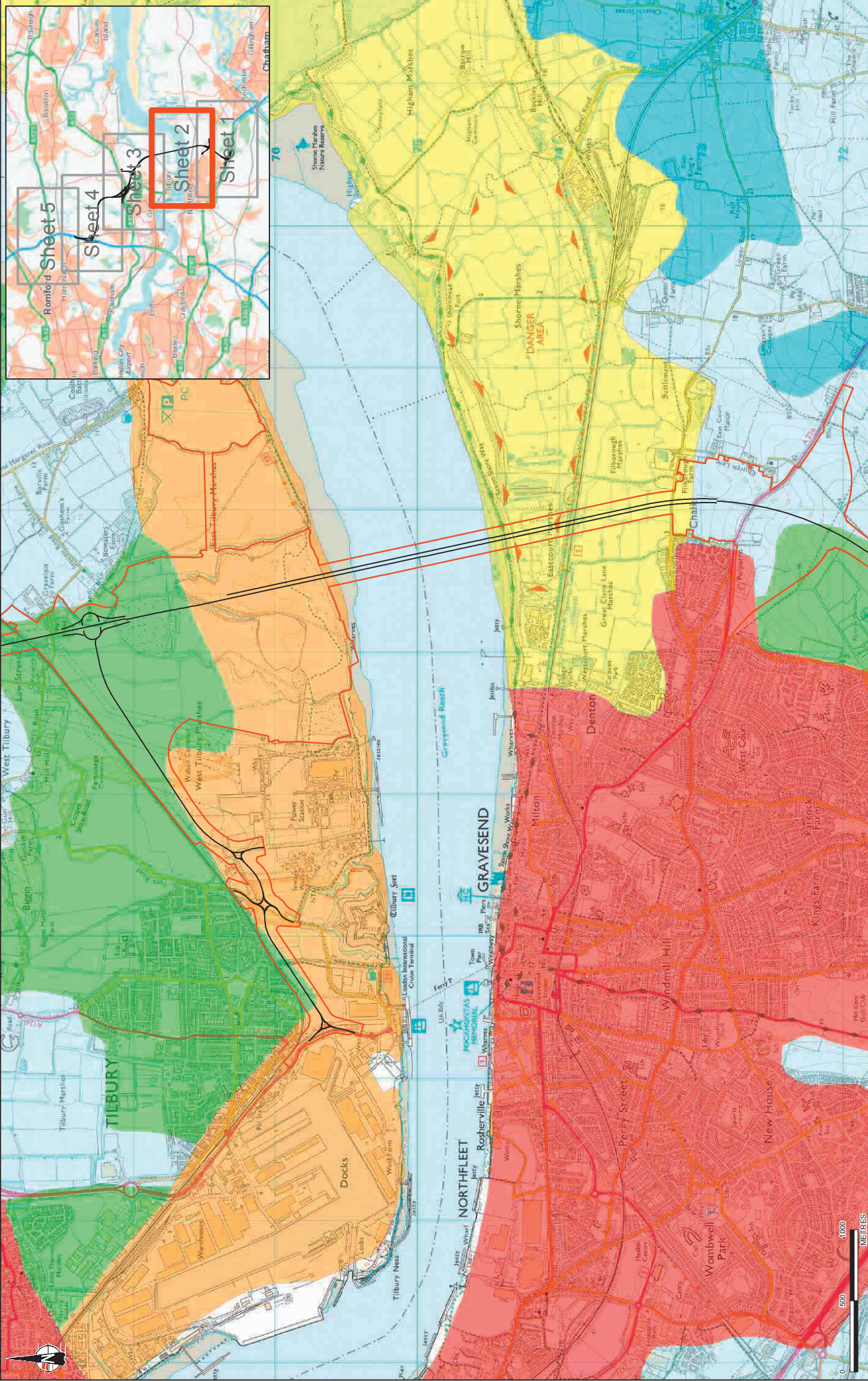


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<p>Approved</p> <p>C.SQUJERY-SMITH</p>		<p>Date</p> <p>11/10/2017</p>		<p>Drawn</p> <p>11/10/2017</p>		<p>Drawn Date / Revision</p> <p>A3 / P01</p>	
<p>Drawing number</p> <p>HIE540039-CIV-VEGT-SZP_EGNE0000000-DRLK-00022</p>		<p>Figure 10.9 Geology and Soils - Historic Contaminative Land Uses Page 5 of 5</p>					



		Client Lower Thames Crossing <small>5th & 6th Floor, 15 St. Paul Street, London EC4A 3DF</small>	Project LOWER THAMES CROSSING DEVELOPMENT PHASE	Drawn S2	Drawn Date/Revision AS P01
Lower Thames Crossing <small>5th & 6th Floor, 15 St. Paul Street, London EC4A 3DF</small>		Checked S2	Checked S2	Checked S2	Checked S2
Figure 10.10 Provisional Agricultural Land Classification Mapping Page 1 of 5		Approved S2	Approved S2	Approved S2	Approved S2
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Drawn Date 11/10/2017		Drawn Date 11/10/2017	Drawn Date 11/10/2017	Drawn Date 11/10/2017	Drawn Date 11/10/2017
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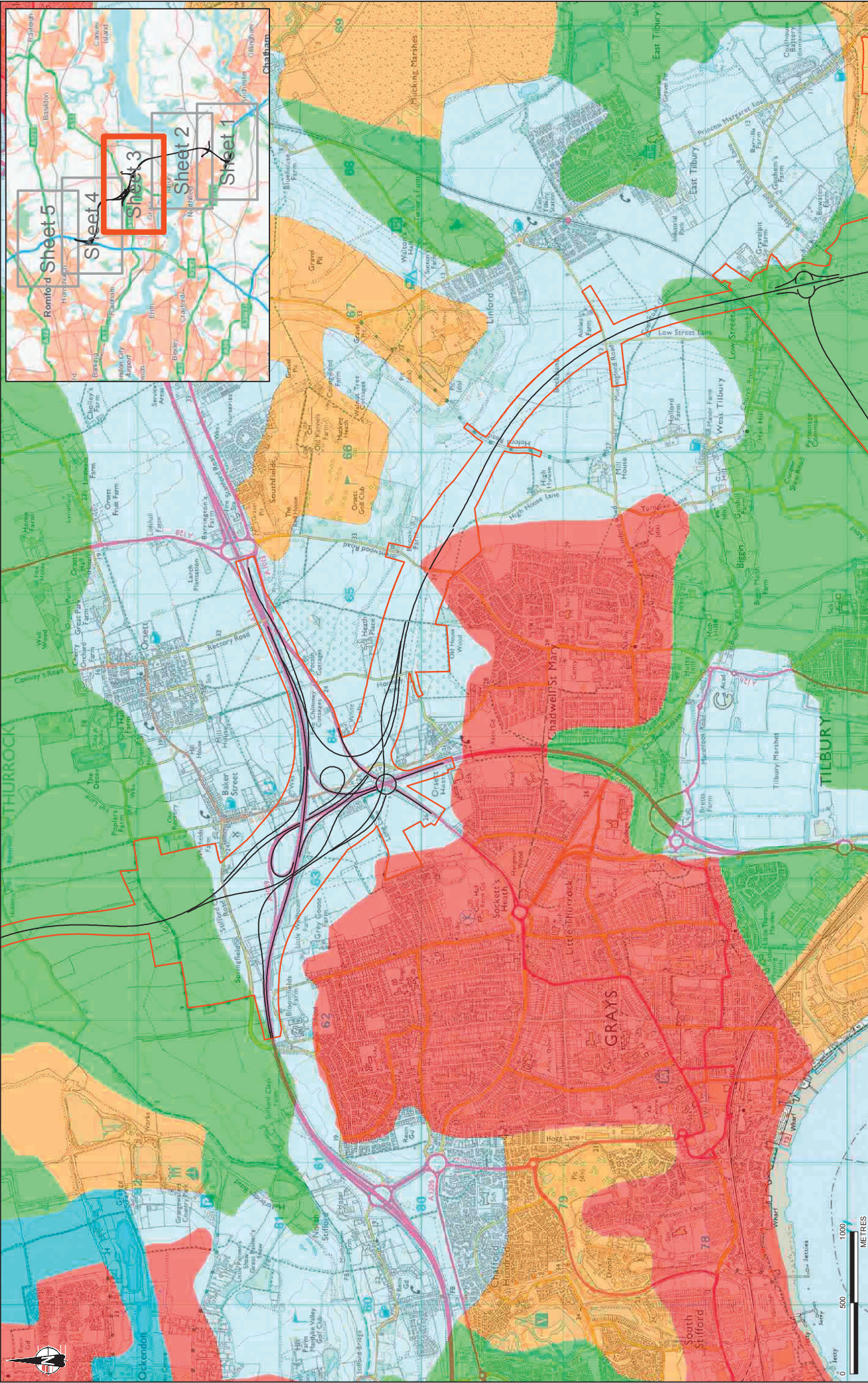
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 Project: Lower Thames Crossing



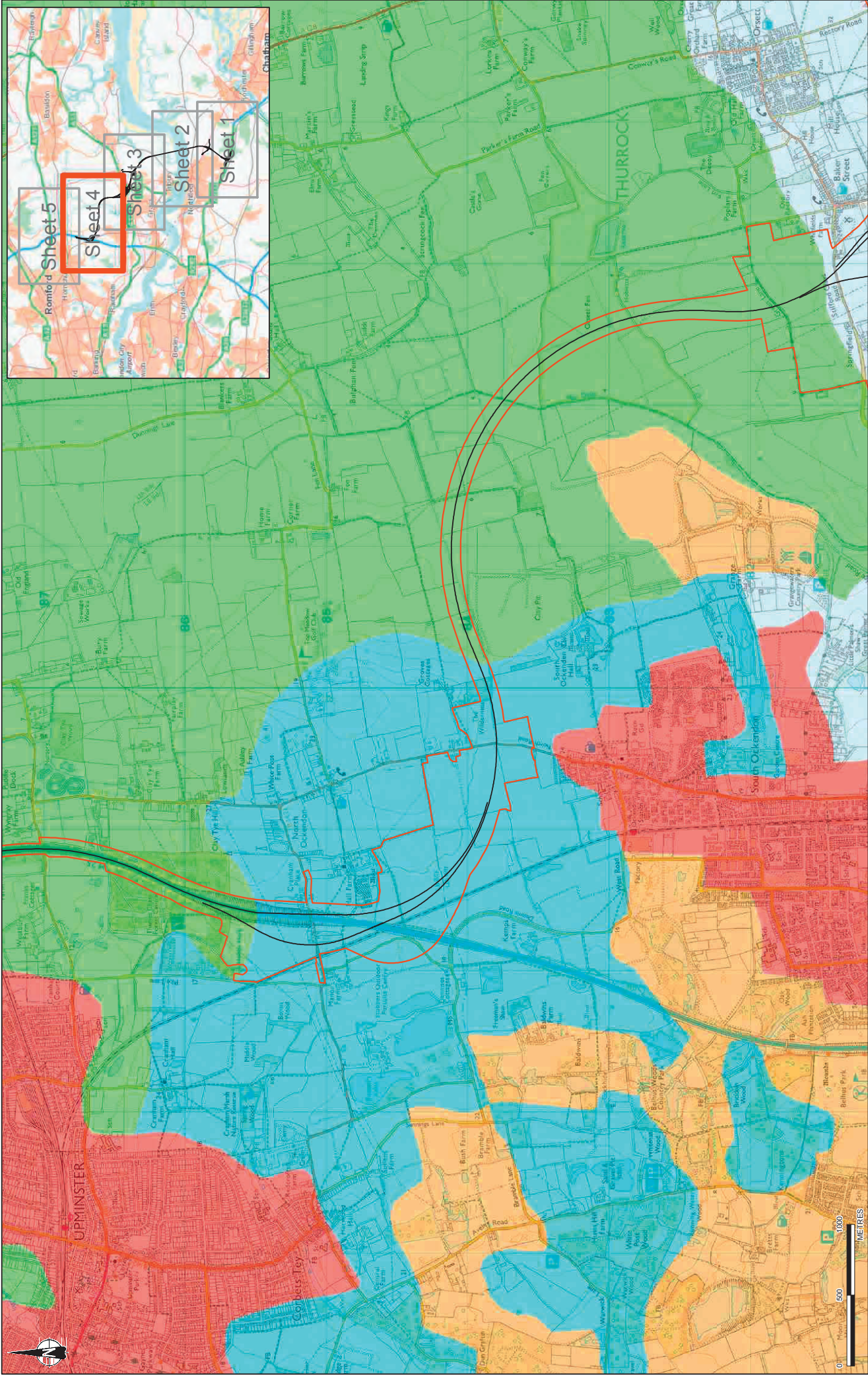
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Client Highways England	Project LOWER THAMES CROSSING DEVELOPMENT PHASE	Drawn S RIVELL	Checked C. SCULIBRY-SMITH	Approved HES4/0039-CJ-VEGT-SZP_EGNE00000000-DRLE-00024	Scale 1:25,000	Drawn Date/Revision 11/10/2017 / A3
Figure 10.10 Provisional Agricultural Land Classification Mapping Page 2 of 5						

- Urban
- Grade 2
- Grade 3
- Grade 4
- Non-Agricultural
- LTC Route Alignment
- Development Area Boundary
- Agricultural Land Classification
- Grade 1

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 Checked: C. SCULIBRY-SMITH
 Approved: HES4/0039-CJ-VEGT-SZP_EGNE00000000-DRLE-00024



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<p>Client: Lower Thames Crossing <small>5th & 6th Floors 15 St. Paul Street London EC4A 3DF</small></p>		<p>Checked: S.RIWELL <small>Date: 11/10/2017</small></p> <p>Approved: C.SQUJURY-SMITH <small>Date: 11/10/2017</small></p>		<p>Drawing number: HE4/0039-CIV-EGT-S2P_EGNET0000000-DRL-00025</p>	
<p>Figure 10.10 Provisional Agricultural Land Classification Mapping Page 3 of 5</p>		<p>Drawn: R.MILLMAN <small>Date: 11/10/2017</small></p>		<p>Drawn: R.MILLMAN <small>Date: 11/10/2017</small></p>	
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<p>Project: LOWER THAMES CROSSING DEVELOPMENT PHASE</p> <p>Client: highways england</p> <p>Client Address: 5th Floor, 15 St. Andrew's Place, London EC4A 3DF</p>		<p>Drawn: S2</p> <p>Checked: S2</p> <p>Approved: S2</p> <p>Drawn Date: 11/10/2017</p> <p>Checked Date: 11/10/2017</p> <p>Approved Date: 11/10/2017</p>	
<p>Figure 10.10 Provisional Agricultural Land Classification Mapping Page 4 of 5</p>		<p>Scale: 1:25,000</p> <p>Drawn: S2</p> <p>Checked: S2</p> <p>Approved: S2</p> <p>Drawn Date: 11/10/2017</p> <p>Checked Date: 11/10/2017</p> <p>Approved Date: 11/10/2017</p>	
<p>Project: LOWER THAMES CROSSING DEVELOPMENT PHASE</p> <p>Client: highways england</p> <p>Client Address: 5th Floor, 15 St. Andrew's Place, London EC4A 3DF</p>		<p>Drawn: S2</p> <p>Checked: S2</p> <p>Approved: S2</p> <p>Drawn Date: 11/10/2017</p> <p>Checked Date: 11/10/2017</p> <p>Approved Date: 11/10/2017</p>	
<p>Figure 10.10 Provisional Agricultural Land Classification Mapping Page 4 of 5</p>		<p>Scale: 1:25,000</p> <p>Drawn: S2</p> <p>Checked: S2</p> <p>Approved: S2</p> <p>Drawn Date: 11/10/2017</p> <p>Checked Date: 11/10/2017</p> <p>Approved Date: 11/10/2017</p>	

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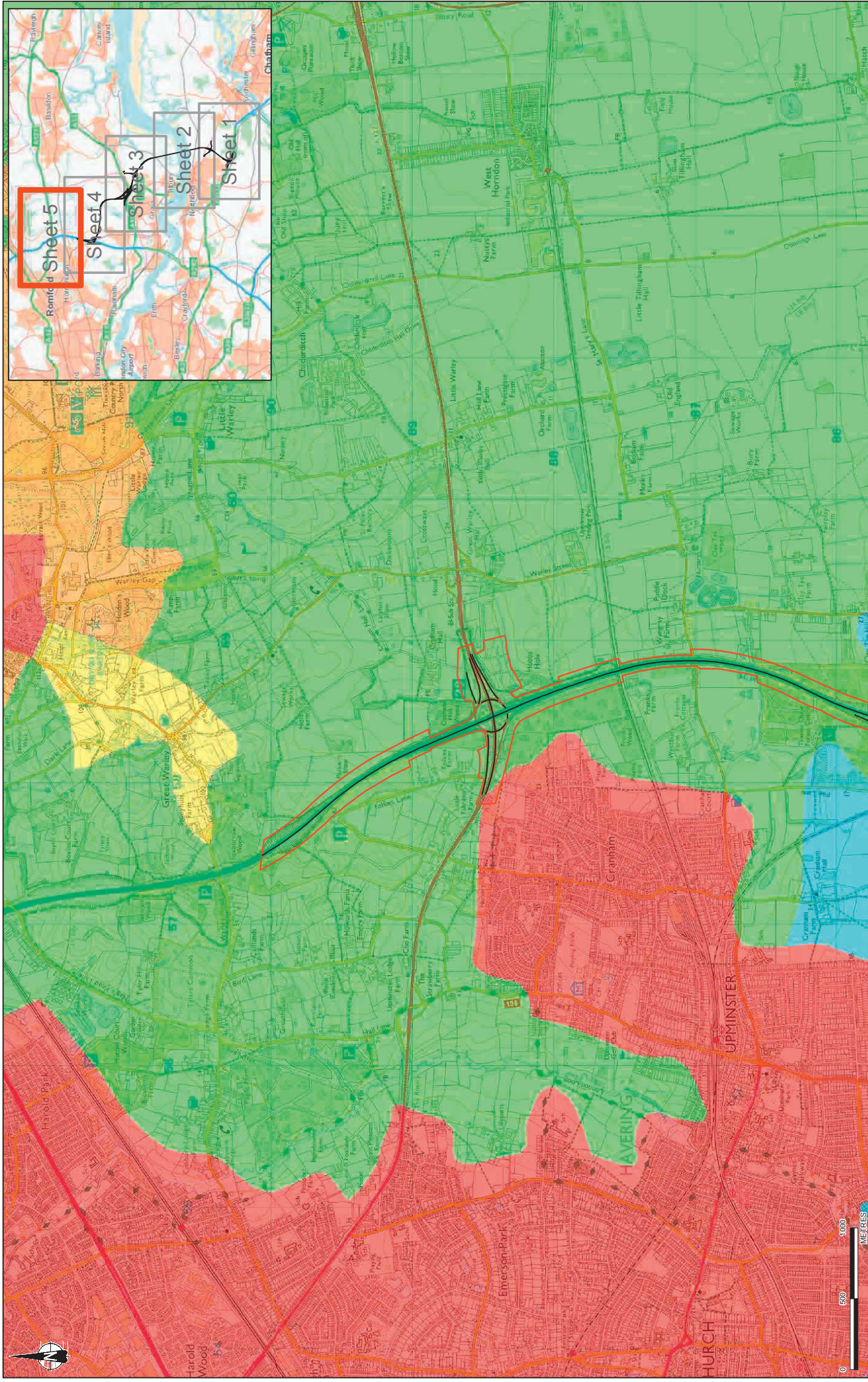
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Checked Date: 11/10/2017

Approved Date: 11/10/2017



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Revision: P01

Sheet: S2

Drawn: R.MILLMAN

Checked: S.RWELL

Approved: C.SQUIBBY-SMITH

Date: 10/10/2017

Date: 10/10/2017

Date: 10/10/2017

Drawing number: HIE4/0039-CIV-EGT-SZP_EGNE00000000-DRLE-00027

Client: **highways england**

Project: **LOWER THAMES CROSSING DEVELOPMENT PHASE**

Drawing title: **Figure 10.10 Provisional Agricultural Land Classification Mapping Page 5 of 5**

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

Legend:

- LTC Route Alignment
- Development Area Boundary
- Agricultural Land Classification: Grade 1, Grade 2, Grade 3, Grade 4, Non-Agricultural
- Urban

Scale: 0 600 1200 METRES

Rev: S2 10/10/17 10/10/17 10/10/17

Drawn: R.MILLMAN

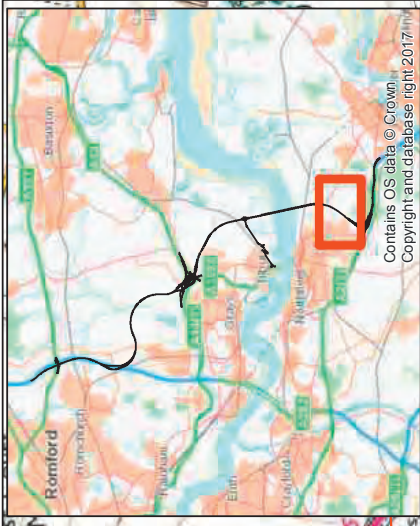
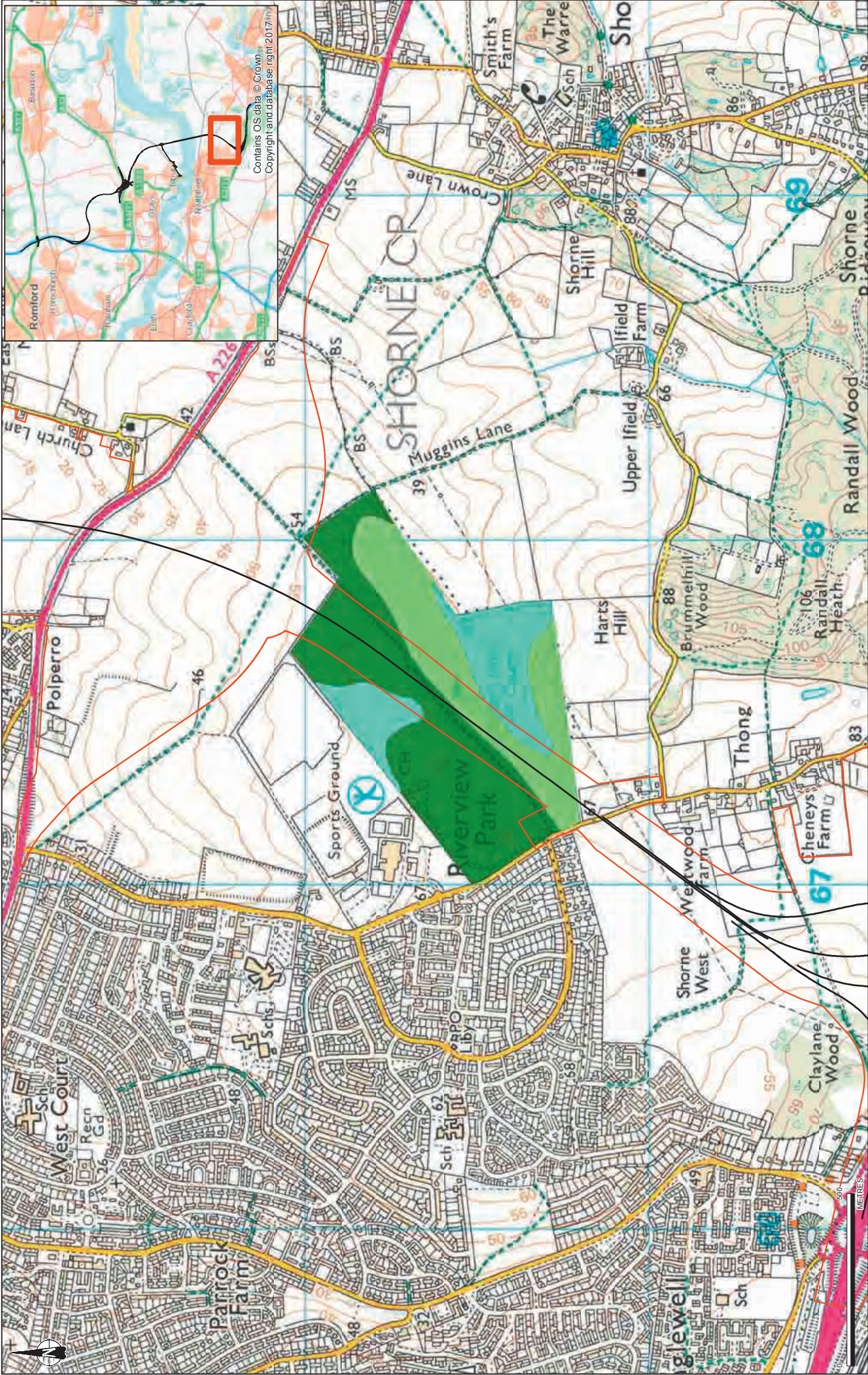
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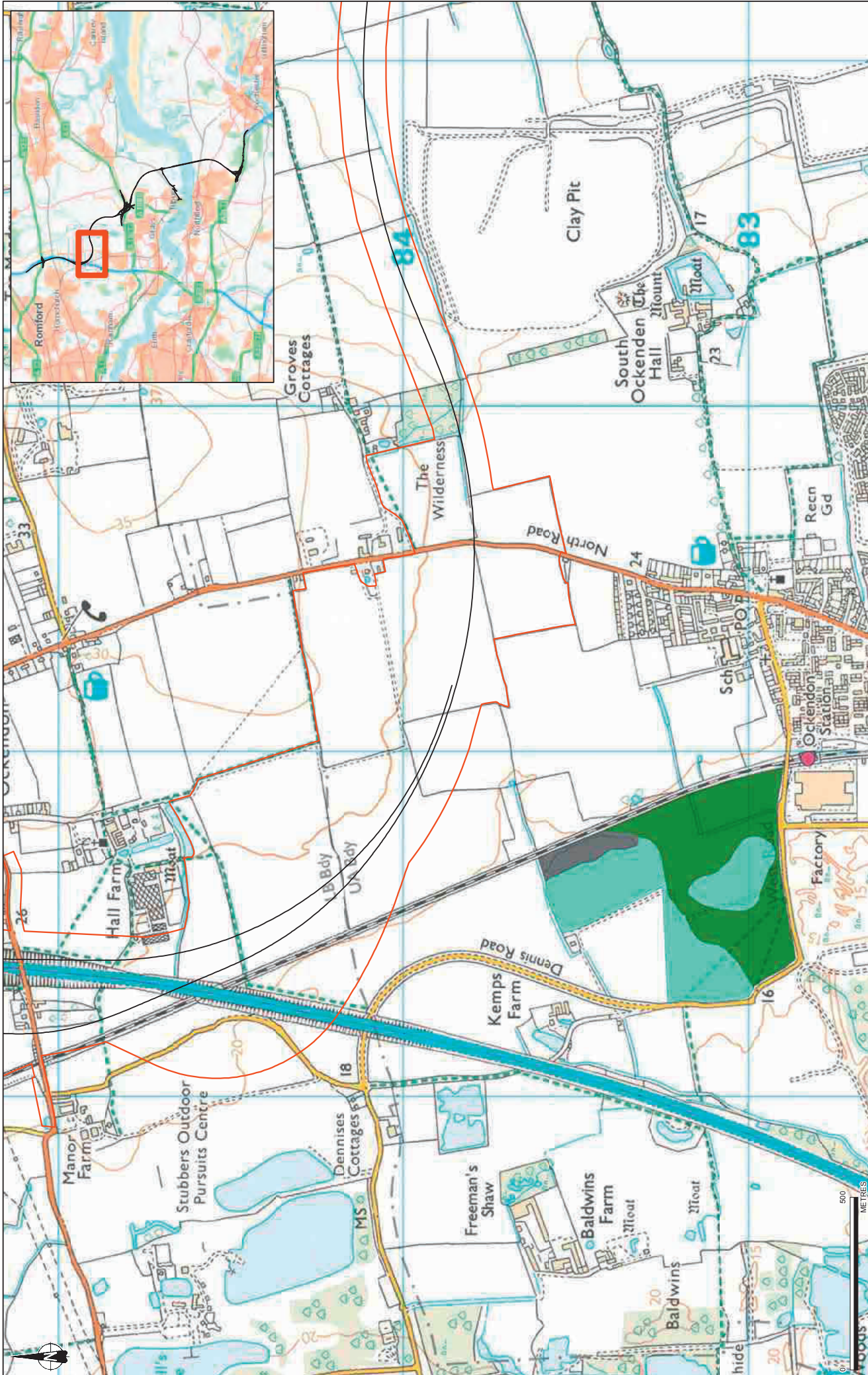


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		Client Lower Thames Crossing <small>5th & 6th Interchanges 15.5 to 16.5 km London EC3A 7DT</small>	Project LOWER THAMES CROSSING DEVELOPMENT PHASE	Status S2
Drawing No. 110.257	Date 11/10/2017	Drawn R MILLMAN	Checked S RIVELL	Date 11/10/2017
Approved C.SOUBRY-SMITH	Date 11/10/2017	Drawing number HE4-0039-CV-E-GT-SZP_EGNE0000000-DRLE-00028		

Figure 10.11A
 Geology and Soils -
 Post 1986 ALC Mapping A

- LTC Route Alignment
- Development Area Boundary
- Grade 2
- Grade 3a
- Grade 3b



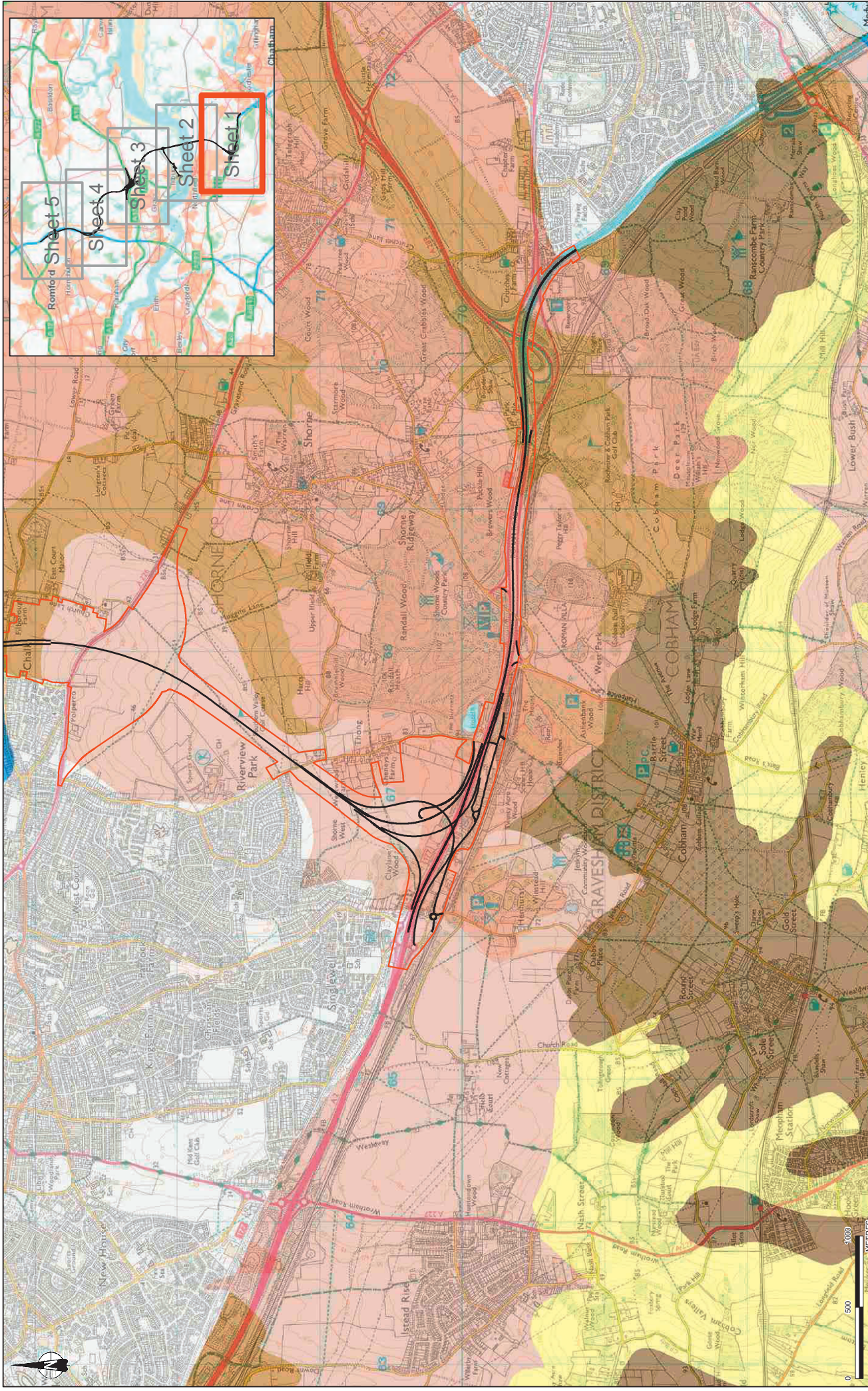
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Figure 10.11B Geology and Soils - Post 1988 ALC Mapping B		Approved: C.SCOBURY-SMITH Date: 11/10/2017	Drawing number: HE54/0039-CVJ-EGT-SZP_EGNE00000000-DRLE-00029

LITC Route Alignment
 Development Area Boundary
 Grade 2
 Grade 3a
 Other

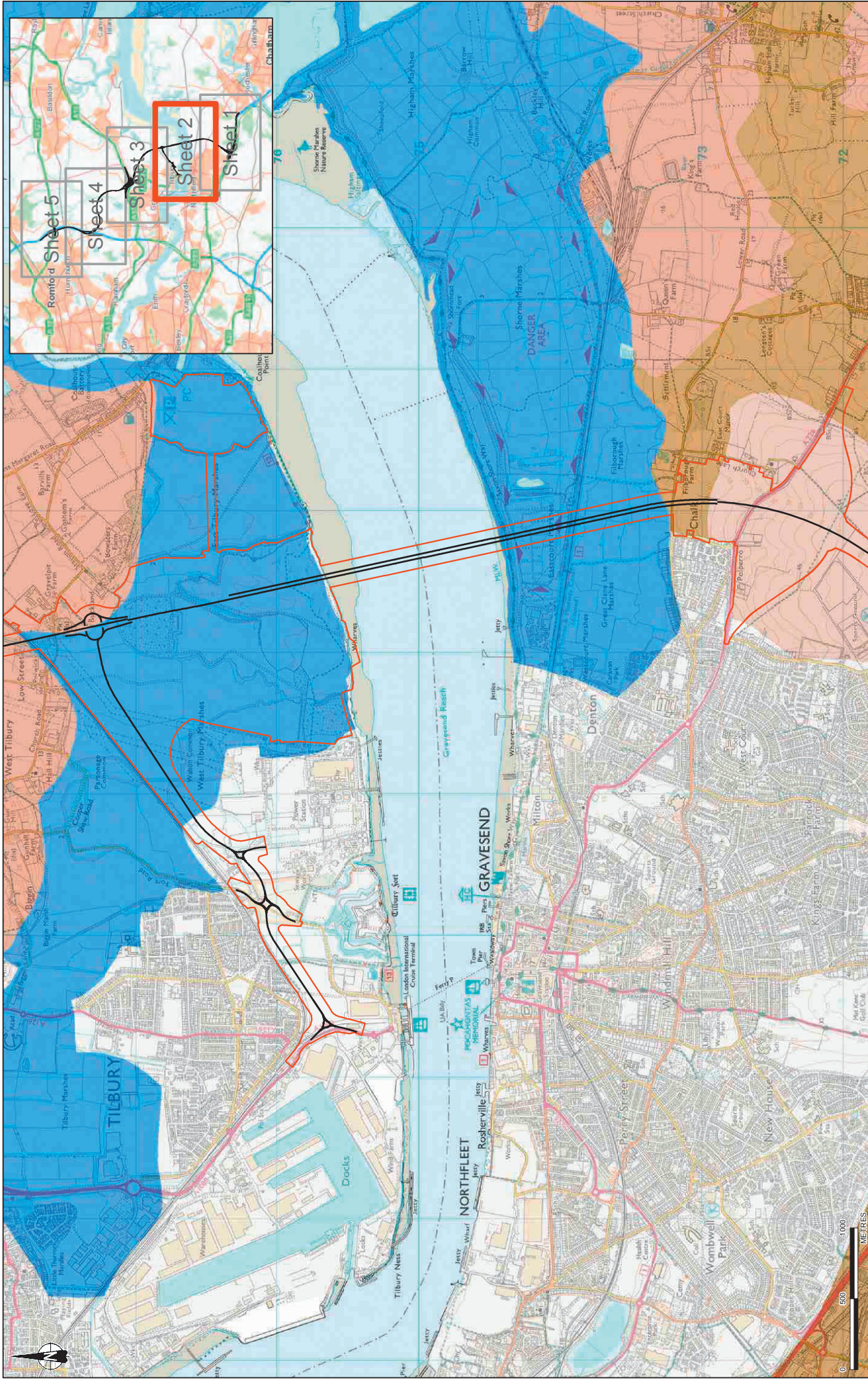
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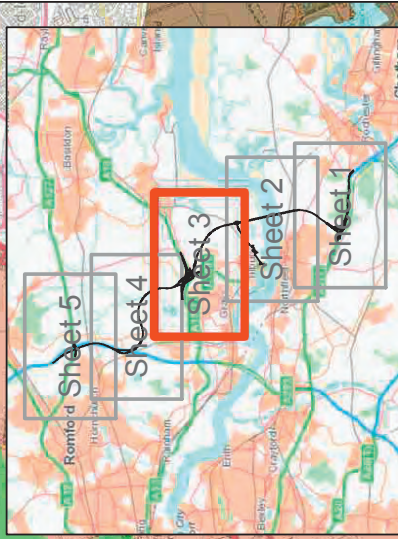
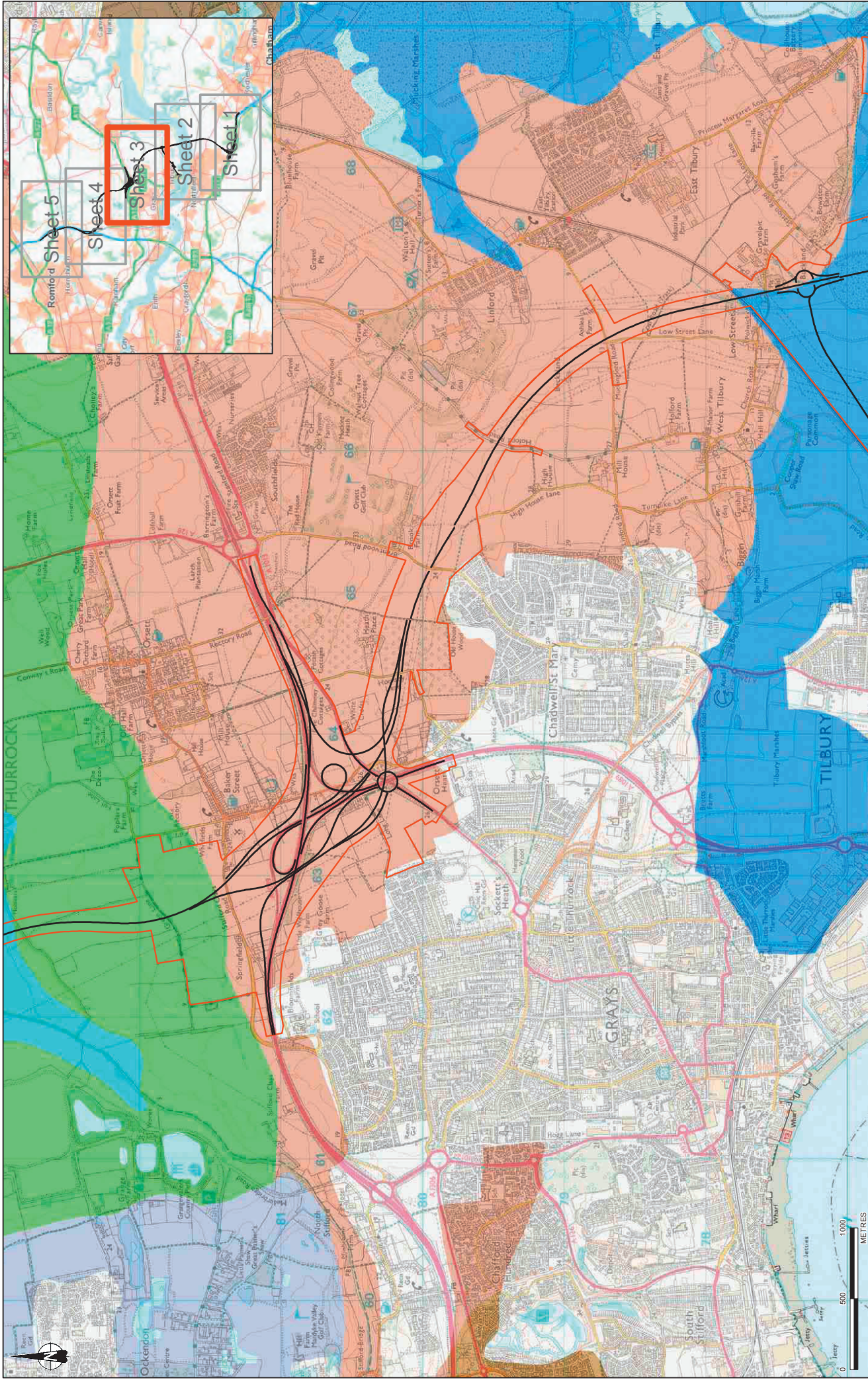
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 Approved: C.SCOBURY-SMITH



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<p>Legend:</p> <ul style="list-style-type: none"> LTC Route Alignment Development Area Boundary Loamy and clayey, fescue-rich soils with naturally high groundwater Loamy soils with naturally high groundwater Slightly acid loamy and clayey soils with impeded drainage Freely draining, slightly acid loamy soils over chalk or limestone Water Freely draining, slightly acid but base-rich soils Freely draining, slightly lime-rich bannary soils Slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils Loamy and clayey soils of coastal flats with naturally high groundwater 		<p>Figure 10.12 Geology and Soils - Soilscape Mapping Page 1 of 5</p>	
<p>Scale: 0 500 1000 METRES</p>		<p>Drawn: R. MILLMAN Date: 11/10/2017</p>	



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<p>Client: highways england</p>		<p>Drawn: R.MILLMAN</p>	
<p>Lower Thames Crossing</p>		<p>Checked: S.RIWELL</p>	
<p>5th Staircase House 15 St. James 70T London EC3A 7DT</p>		<p>Approved: C.SQUJRY-SMITH</p>	
<p>Figure 10.12 Geology and Soils - Soilscape Mapping Page 2 of 5</p>		<p>Drawing number: HES4/0039-CIV-EGT-S2P_EGNET0000000-DR-LE-00031</p>	
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<p>Info: Sheet: S2 Date: 11/10/2017 For information: R.M. SR: C.S.S. Drawn: R.M. SR: C.S.S. Checked: S.R. Approved: C.S. Drawing number: HES4/0039-CIV-EGT-S2P_EGNET0000000-DR-LE-00031</p>		<p>Scale: 1:25,000</p>	



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Drawn: 11/10/2017

Checked: 11/10/2017

Approved: 11/10/2017

Drawn by: R.MILLMAN

Checked by: S.RIWELL

Approved by: C.SCALDARY-SMITH

Drawing number: HE4/0039-CIV-EGT-SZP_EGNE00000000-DRLE-000032

Client: **highways** england
 Lower Thames Crossing
 5th & 6th Stages
 London EC3A 7DT

Project: **LOWER THAMES CROSSING DEVELOPMENT PHASE**

Figure 10.12
 Geology and Soils - Soilscape Mapping
 Page 3 of 5

Soils:

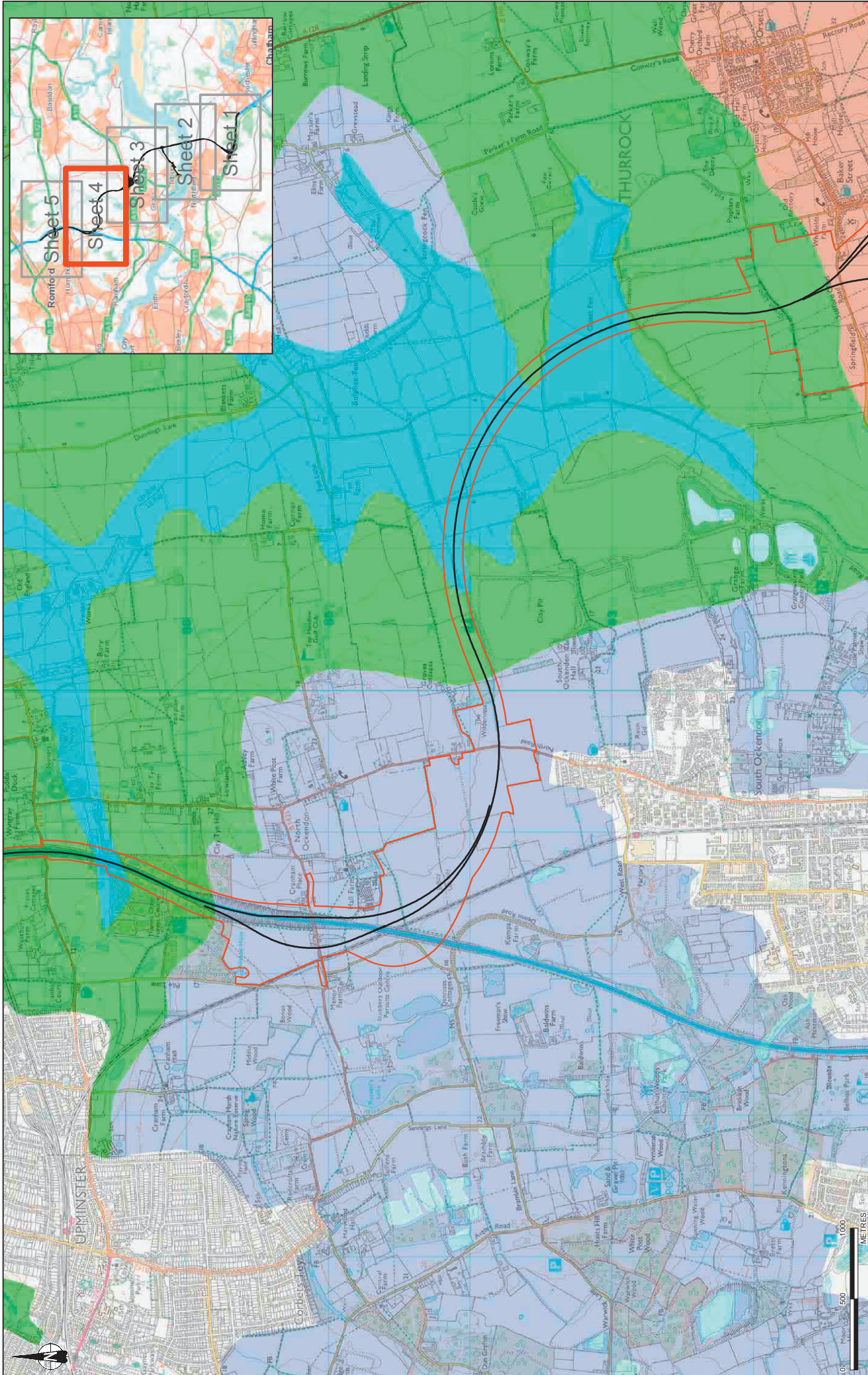
- Shallow lime-rich soils over chalk or limestone
- Water
- Freely draining slightly acid loamy soils
- Freely draining slightly acid but base-rich soils
- Freely draining slightly lime-rich bannoy soils
- Slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils
- Loamy soils with naturally high groundwater
- Slightly acid loamy and clayey soils with impeded drainage

LTC Route Alignment

- Development Area Boundary
- Loamy and clayey floodplain soils with naturally high groundwater
- Loamy soils with naturally high groundwater
- Slightly acid loamy and clayey soils with impeded drainage

0 500 1000 METRES

Rev: 02 Date: 11/10/17 For Information: R.M. SR: C.S.S. Drawn: 11/10/17 Checked: 11/10/17 Approved: 11/10/17



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Scale: 1:25,000

Drawn: 11/10/2017
Checked: 11/10/2017
Approved: 11/10/2017

Drawn by: R.MILLMAN
Checked by: S.RIWELL
Approved by: C.SQUJRY-SMITH

Drawing number: HE54/0039-CIV-EGT-SZP_EGNE0000000-DRLE-000033

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

Project: **LOWER THAMES CROSSING DEVELOPMENT PHASE**

Sheet: S2

Figure 10.12
Geology and Soils - Soilscape Mapping
Page 4 of 5

LTC Route Alignment

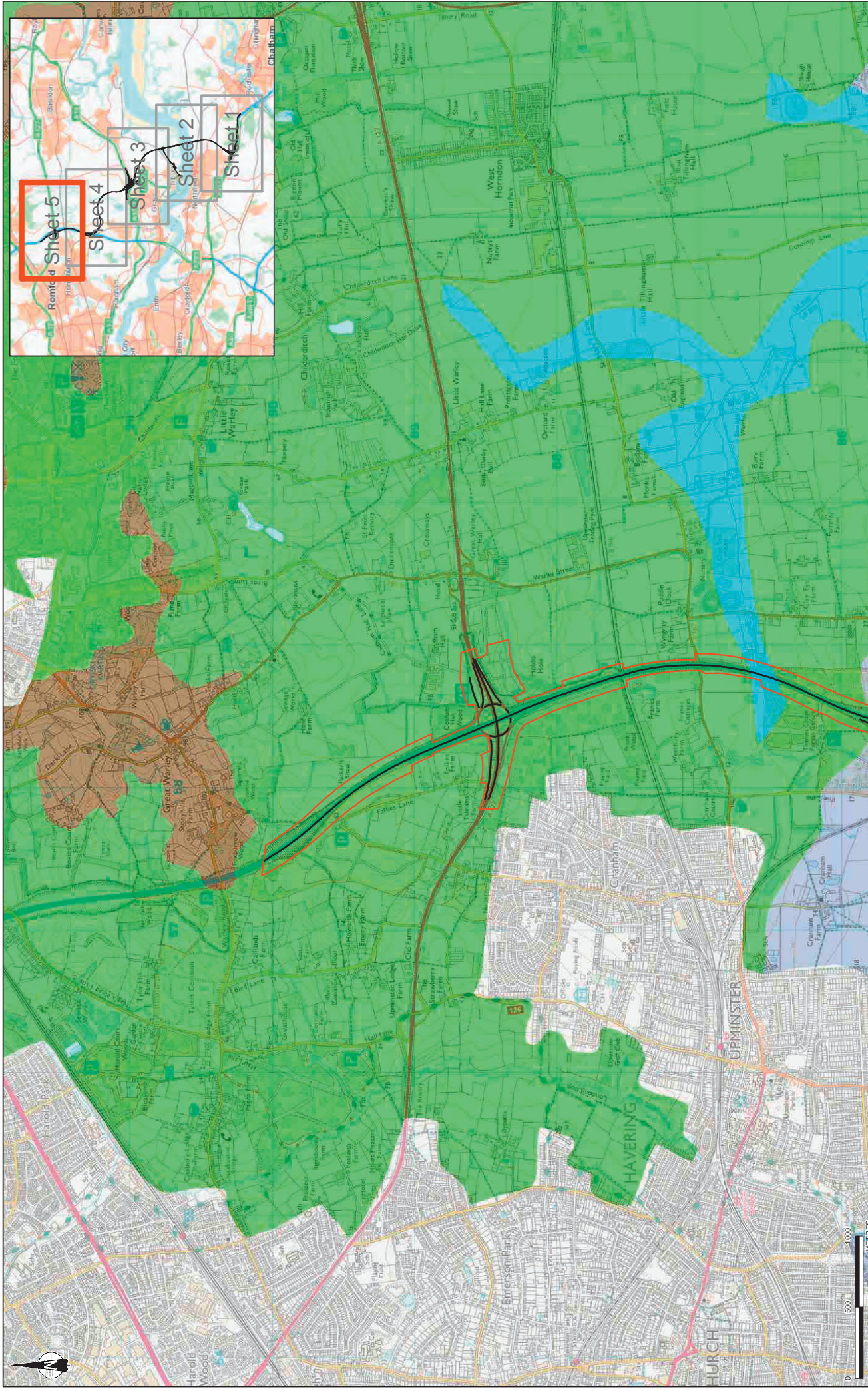
- Development Area Boundary
- Loamy and clayey floodplain soils with naturally high groundwater
- Loamy soils with naturally high groundwater
- Slightly acid loamy and clayey soils with impeded drainage

Soil Types

- Shallow lime-rich soils over chalk or limestone
- Water
- Freely draining slightly acid loamy soils
- Freely draining slightly acid but base-rich soils
- Freely draining slightly lime-rich loamy soils
- Slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils
- Loamy and clayey soils of coastal flats with naturally high groundwater

0 500 1000 METRES

Rev: 02 Date: 11/10/17 For Information: R.M. SR: C.S.S. Drawn by: R.MILLMAN Checked by: S.RIWELL Approved by: C.SQUJRY-SMITH



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<p>Figure 10.12 Geology and Soils - Soilscape Mapping Page 5 of 5</p>				
<p>LTC Route Alignment</p> <ul style="list-style-type: none"> Development Area Boundary Loamy and clayey floodplain soils with naturally high groundwater Loamy soils with naturally high groundwater Slightly acid loamy and clayey soils with impeded drainage 		<p>Shallow lime-rich soils over chalk or limestone</p> <p>Water</p>		
<p>Freely draining slightly acid loamy soils</p> <p>Freely draining slightly acid but base-rich soils</p> <p>Freely draining slightly lime-rich loamy soils</p> <p>Slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils</p> <p>Slightly acid loamy and clayey soils with naturally high groundwater</p>				



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Scale: 1:50,000

Client: **highways england**
 Lower Thames Crossing
 5th & 6th Stages
 London EC3A 7DT

Project: LOWER THAMES CROSSING DEVELOPMENT PHASE

Figure 11.1
 Materials - Active Waste Transfer Stations and Landfill Sites
 Sheet 1 of 3

Revision: P01
 Date: 09/10/2017
 Checked: S RIVILLMAN
 Approved: C SCOURBY-SMITH
 Drawing number: HE44039-CJVEGN-SZP_EGNEW000000-DRL4-0001

Scale: 0 500 1000 1500 2000 2500 METRES

Legend:
 LTC Route Alignment
 Development Area Boundary
 Authorised Landfill Site
 Active Waste Transfer Station

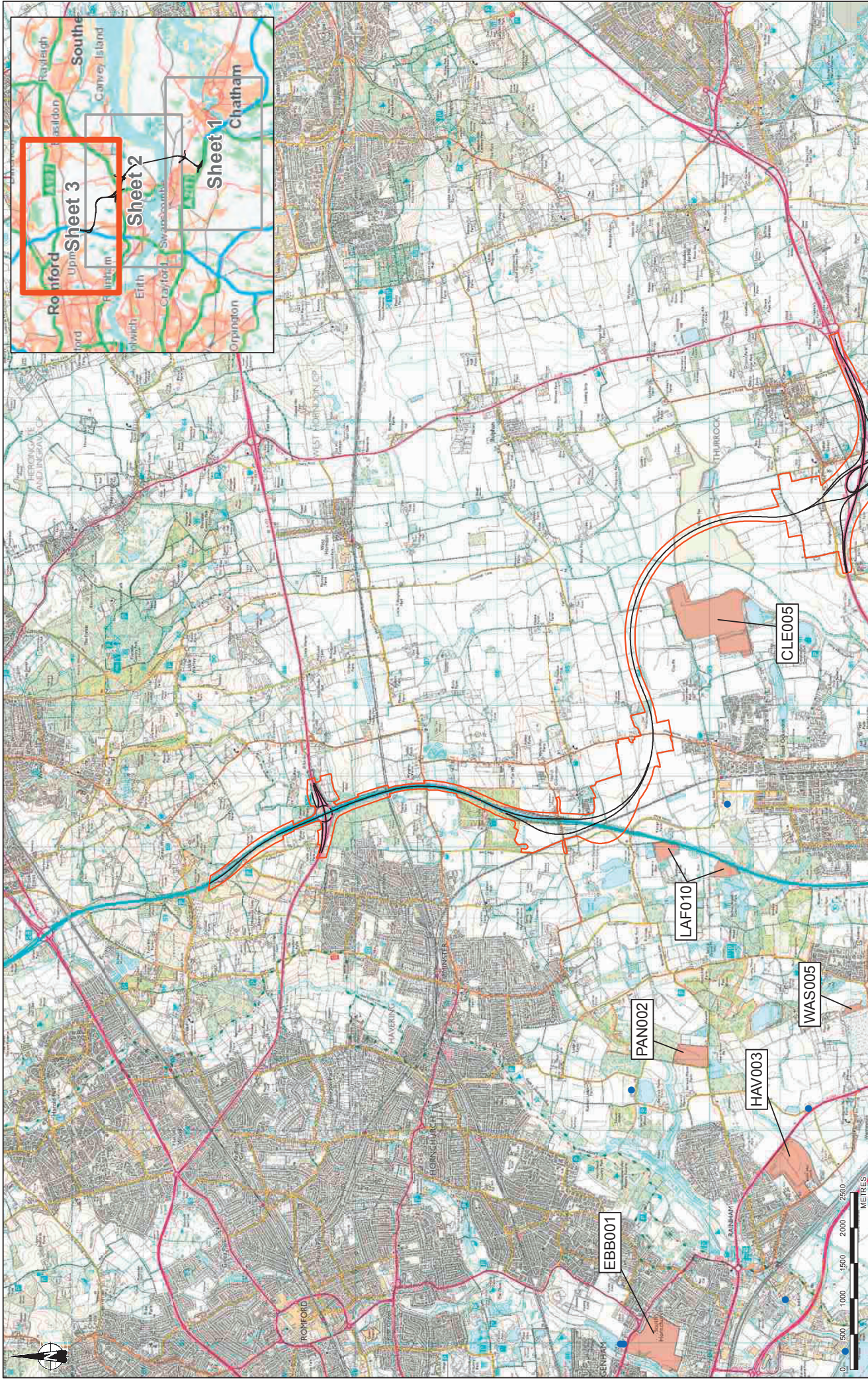
Sheet 1 of 3



		Client Lower Thames Crossing 5th & 6th Floors 15 St. Paul Street London EC4A 3DF	Project LOWER THAMES CROSSING DEVELOPMENT PHASE	Sheet S2	Drawn R MILLMAN Date: 09/10/2017	Drawn Date/Revision A3 Date: 09/10/2017
Scale 1:50,000		Checked S RIVELL Date: 09/10/2017	Checked C SCULIBRY-SMITH Date: 09/10/2017	Approved Date: 09/10/2017	Drawing Number HE440039-CIV-EGN-SZF_EGNEW000000-DRL-0002	
Figure 11.1 Materials - Active Waste Transfer Stations and Landfill Sites Sheet 2 of 3						

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File: S2_091017
 Date: 09/10/17
 Scale: 1:50,000
 Drawn: R Millman
 Checked: S Rivell
 Approved: C Sculibry-Smith

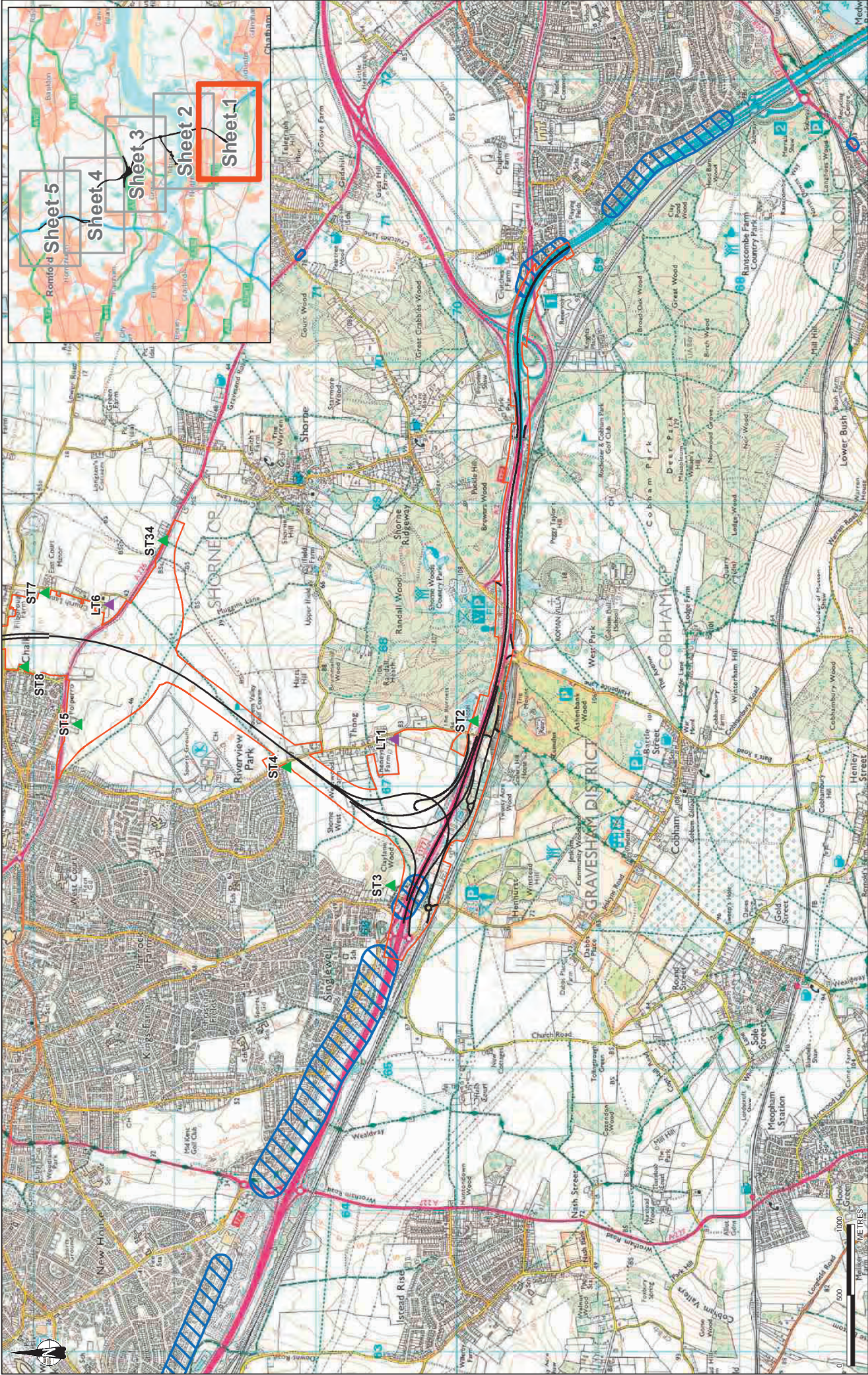


		Client Lower Thames Crossing <small>5th & 6th Floor</small> 15 St Paul Street London EC4A 3DF	Project LOWER THAMES CROSSING DEVELOPMENT PHASE	Sheet S2	Drawn R MILLMAN Checked S RWEILL Approved C SCURRY-SMITH	Drawn Date 09/12/2017 Checked Date 09/12/2017 Approved Date 09/12/2017	Drawn Number HE540039-CIV-EGN-SZP	Revision P01 Scale: 1:50,000
Figure 11.1 Materials - Active Waste Transfer Stations and Landfill Sites Sheet 3 of 3		<small>Service Layer Credits: Contains OS data © Crown Copyright and database right 2017. Ordnance Survey 100050649</small>						
File 11.1	Sheet S2	Date 09/12/2017	Drawn R MILLMAN	Checked S RWEILL	Approved C SCURRY-SMITH	Drawn Date 09/12/2017	Checked Date 09/12/2017	Approved Date 09/12/2017

- LTC Router Alignment
- Development Area Boundary
- Authorised Landfill Site
- Active Waste Transfer Station

0 500 1000 1500 2000 2500 METRES

File 11.1
 Sheet S2
 Date 09/12/2017
 Drawn R MILLMAN
 Checked S RWEILL
 Approved C SCURRY-SMITH
 Drawn Date 09/12/2017
 Checked Date 09/12/2017
 Approved Date 09/12/2017



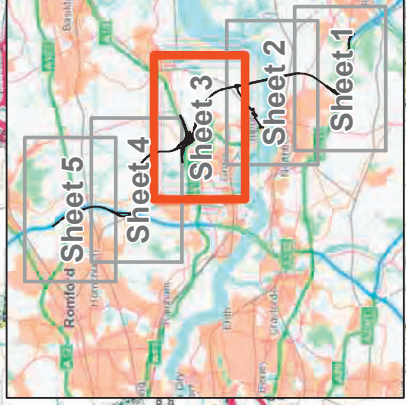
		Project: LOWER THAMES CROSSING DEVELOPMENT PHASE Drawing No: S2	Date: 11/10/2017 Scale: 1:25,000
Client: Lower Thames Crossing 51 St Albans Road London EC3A 7DT		Design: R.MILLMAN Checked: S.MRIEHL Approved: C.SCALDARY-SMITH	Date: 11/10/2017 Date: 11/10/2017 Date: 11/10/2017
Project Description: Lower Thames Crossing Development Phase Figure 12.1 Noise and Vibration - Noise Important Areas and Proposed Monitoring Locations Sheet 1 of 5		Drawing Number: HE54039-CJ-VEN-SZP_EGNE00000000-DRLE-00001	

Proposed Monitoring Location - to be confirmed through consultation	Short Term Monitoring Point (ST)
LTC Route Alignment	Long Term Monitoring Point (LT)
Development Area Boundary	
Noise Important Area	

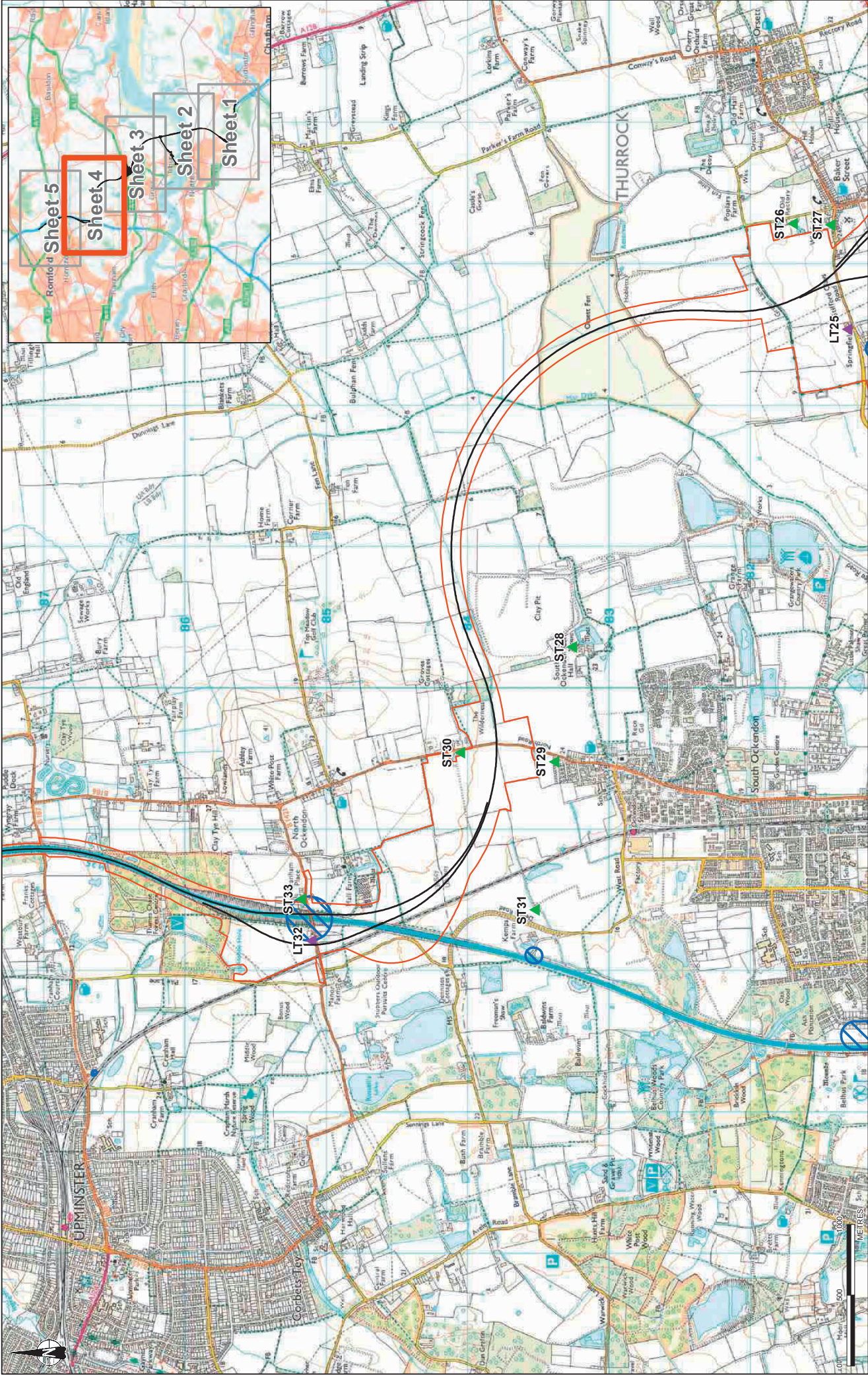
Service Layer Credits: Contains OS data © Crown Copyright and database right 2017. Ordnance Survey 100030549	Project: HE54039-CJ-VEN-SZP_EGNE00000000-DRLE-00001
Date: 11/10/2017	Scale: 1:25,000
Drawn: S.MRIEHL	Checked: S.MRIEHL
Approved: C.SCALDARY-SMITH	Date: 11/10/2017



<p>Client: highways england</p> <p>Project: LOWER THAMES CROSSING DEVELOPMENT PHASE</p> <p>Drawing No: S2</p>		<p>Status: P01</p> <p>Date: 1/25/2017</p>
<p>Client: Lower Thames Crossing <small>Stamford House 15 St Albans Road London EC3A 7DT</small></p>		<p>Drawn: R MILLMAN</p> <p>Checked: S RIVELL</p> <p>Approved: C.SQUJERY-SMITH</p> <p>Drawing number: HE4/0039-CJ-ENV-SZP_EGNE0000000-DR-LE-00002</p>
<p>Figure 12.1 Noise and Vibration - Noise Important Areas and Proposed Monitoring Locations Sheet 2 of 5</p>		
<p>Processed Monitoring Location - to be confirmed through consultation</p> <ul style="list-style-type: none"> Short Term Monitoring Point (ST) ▲ Long Term Monitoring Point (LT) ▲ 		
<p>LTC Route Alignment</p> <p>Development Area Boundary</p> <p>Noise Important Area</p>		
<p>Service Layer Credits: Contains OS data © Crown Copyright and database right 2017. Ordnance Survey 100009549</p> <p>Scale: 1:25,000</p> <p>North Arrow</p> <p>Scale Bar: 0, 300, 600 METRES</p>		



<p>Service Layer Credits: Contains OS data © Crown Copyright and database right 2017. Ordnance Survey 100030649</p> <p>Scale: 1:25,000</p> <p>0 500 1000 METRES</p>		<p>Project: LOWER THAMES CROSSING DEVELOPMENT PHASE</p> <p>Client: highways england</p> <p>Contract: Lower Thames Crossing</p> <p>Drawn: RAILLMAN</p> <p>Checked: S RIVELL</p> <p>Approved: C. SCOURBY-SMITH</p> <p>Issue: 01/10/2017</p> <p>Issue: 11/10/2017</p> <p>Issue: 11/10/2017</p> <p>Issue: 11/10/2017</p>
<p>Processed Monitoring Location - to be confirmed through consultation</p> <p>Short Term Monitoring Point (ST) ▲</p> <p>Long Term Monitoring Point (LT) ▲</p> <p>LTC Route Alignment</p> <p>Development Area Boundary</p> <p>Noise Important Area</p>		<p>Figure 12.1 Noise and Vibration - Noise Important Areas and Proposed Monitoring Locations Sheet 3 of 5</p>
<p>Drawn: 11/10/17</p> <p>Checked: 11/10/17</p> <p>Approved: 11/10/17</p> <p>Issue: 11/10/17</p> <p>Issue: 11/10/17</p> <p>Issue: 11/10/17</p> <p>Issue: 11/10/17</p>		<p>Drawn: 11/10/2017</p> <p>Checked: 11/10/2017</p> <p>Approved: 11/10/2017</p> <p>Issue: 11/10/2017</p>
<p>Drawn: 11/10/17</p> <p>Checked: 11/10/17</p> <p>Approved: 11/10/17</p> <p>Issue: 11/10/17</p> <p>Issue: 11/10/17</p> <p>Issue: 11/10/17</p> <p>Issue: 11/10/17</p>		<p>Drawn: 11/10/2017</p> <p>Checked: 11/10/2017</p> <p>Approved: 11/10/2017</p> <p>Issue: 11/10/2017</p>



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<p>Legend:</p> <ul style="list-style-type: none"> L2C Route Alignment Development Area Boundary Noise Important Area Processed Monitoring Location - to be confirmed through consultation Short Term Monitoring Point (ST) Long Term Monitoring Point (LT) 	<p>Scale: 1:25,000</p> <p>Drawn: 11/10/2017</p> <p>Checked: 11/10/2017</p> <p>Approved: 11/10/2017</p> <p>Drawn by: R.MILLMAN</p> <p>Checked by: S.RWELL</p> <p>Approved by: C.SOUJRY-SMITH</p> <p>Drawing number: HE54/0039-CJ-ENV-SZP_EGNE00000000-DRLE-00004</p>	<p>Project: LOWER THAMES CROSSING DEVELOPMENT PHASE</p> <p>Client: highways england</p> <p>Project Name: Lower Thames Crossing</p> <p>Site: S18 to S21</p> <p>Location: EC3A 7DT</p>	<p>Figure 12.1 Noise and Vibration - Noise Important Areas and Proposed Monitoring Locations Sheet 4 of 5</p>



<p>Project: LOWER THAMES CROSSING DEVELOPMENT PHASE</p> <p>Client: highways england</p> <p>Contract: Lower Thames Crossing <small>Slender House 51 St Albans Street London EC3A 7DT</small></p>		<p>Drawn: R.MILLMAN</p> <p>Checked: S.RHWEILL</p> <p>Approved: C.SQUIBBY-SMITH</p> <p>Drawn Date: 11/10/2017</p> <p>Checked Date: 11/10/2017</p> <p>Approved Date: 11/10/2017</p> <p>Drawing number: HE540039-CJ-VENW-SZP_EGNE0000000-DR-LE-00005</p>	
<p>Scale: 1:25,000</p>		<p>Sheet: S2</p>	
<p>Drawn Date: Revision</p> <p>A3</p>		<p>P01</p>	

Figure 12.1
 Noise and Vibration - Noise Important
 Areas and Proposed Monitoring Locations
 Sheet 5 of 5

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Scale: 1:25,000

Drawn: R.M. 11/10/17

Checked: S.R. 11/10/17

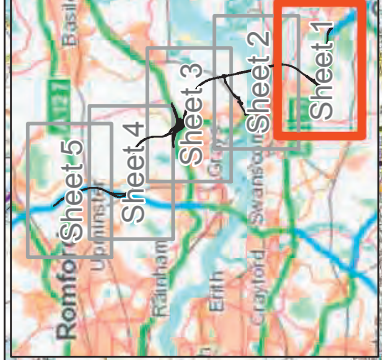
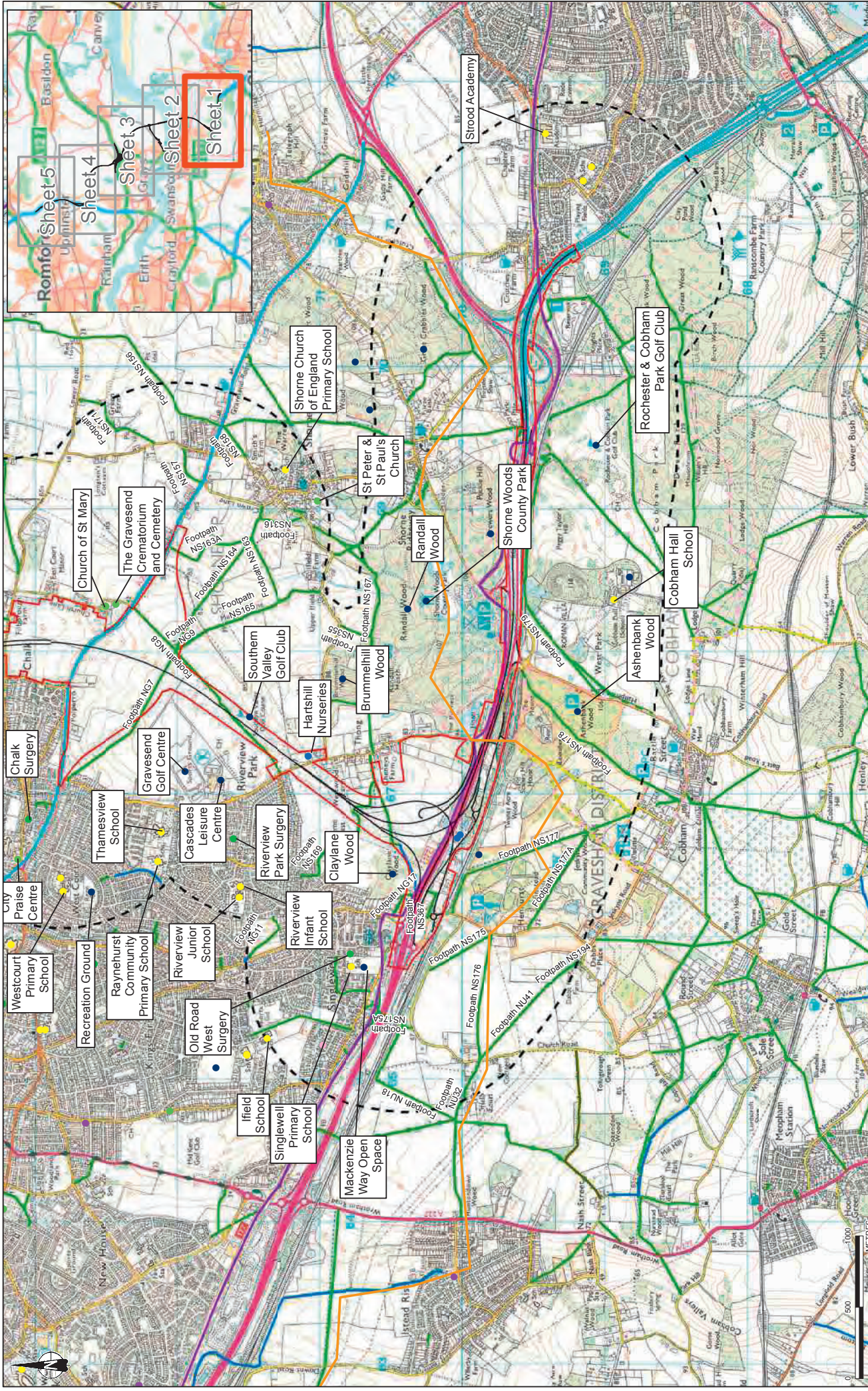
Approved: C.S. 11/10/17

Drawn Date: 11/10/17

Checked Date: 11/10/17

Approved Date: 11/10/17

Drawing number: HE540039-CJ-VENW-SZP_EGNE0000000-DR-LE-00005



Project: LOWER THAMES CROSSING DEVELOPMENT PHASE
 Client: highways england
 Drawing No: S2
 Figure 13.1
 People and Communities - Local Settlements, Community Receptors and Public Rights of Way
 Page 1 of 5

Date: 11/10/2017
 Drawn: R.MILLMAN
 Checked: S.RIWELL
 Approved: C.SCOJIBRY-SMITH
 Drawing number: HE54/0039-CV-EGSN-SZP_EGNEG0000000-DRALE-00004

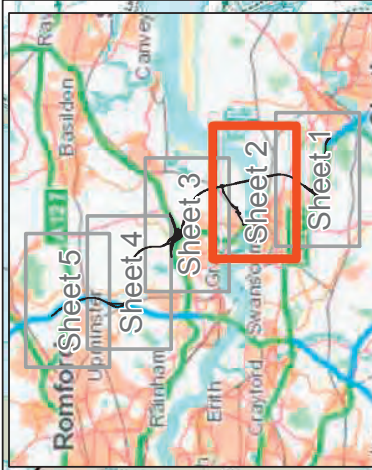
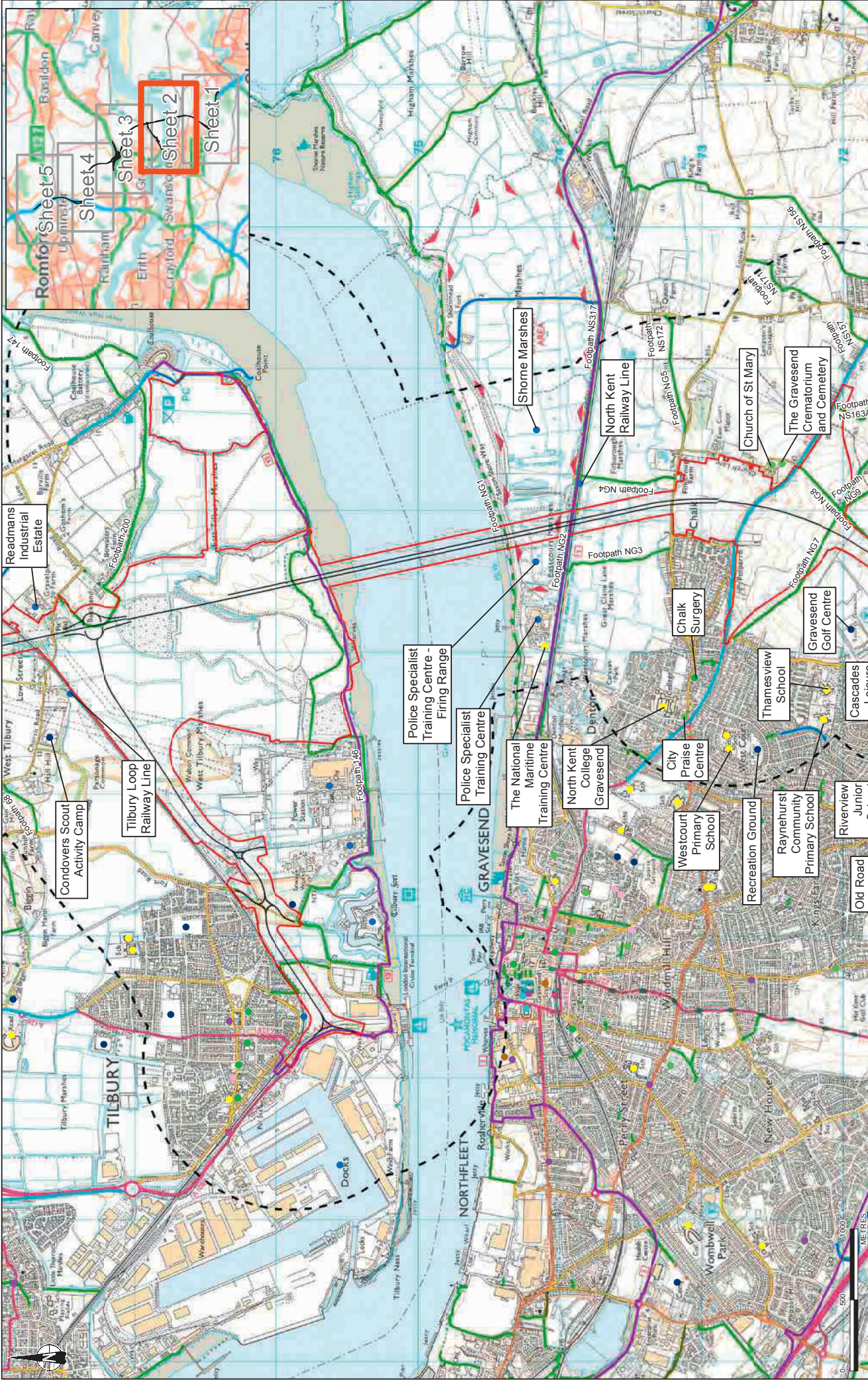
Scale: 1:25,000
 Date: 11/10/2017
 Date: 11/10/2017
 Date: 11/10/2017

Additional Receptors for that have not been categorised:
 • Park, play areas, sport centres
 • Places of Worship
 • Post Office
 • School
 • Shopping Centre
 • Hospitals
 • Aged Persons Homes
 • GP Surgery

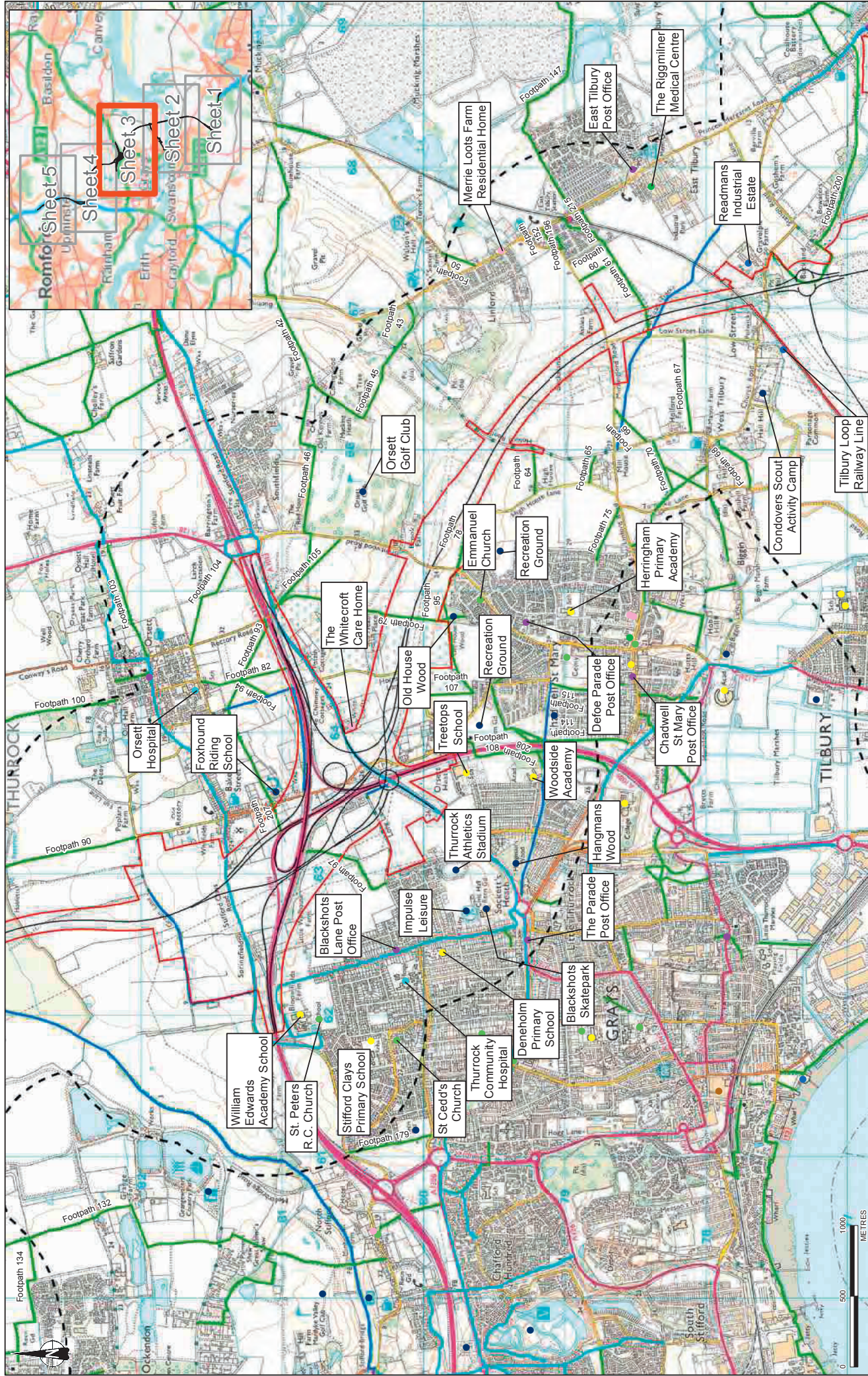
LTC Route Alignment
 • Development Area Boundary
 • 1km Study Area
 • Aged Persons Homes
 • GP Surgery
 • Hospitals

Public Footpath
 • Public Footpath
 • Public Footway
 • Byway Open to All
 • Resurfaced Byway
 • Local Cycle Routes
 • Local Trails

Additional Receptors for that have not been categorised:
 • Time Ball & Telegraph Trail
 • Sustans National Cycle Network
 • Local Cycle Routes
 • Local Trails



		LOWER THAMES CROSSING DEVELOPMENT PHASE	
Client: Lower Thames Crossing <small>Shoeburgh House 15 St Leonards Road London EC3A 7DT</small>		Project: LOWER THAMES CROSSING Drawing No: S2	
Additional Receptors for which we have not been categorised: <ul style="list-style-type: none"> ● Park, play areas, sport centres ● Places of Worship ● Post Office ● School ● Shopping Centre ● Hospitals 		Figure 13.1 People and Communities - Local Settlements, Community Receptors and Public Rights of Way	
LTC Route Alignment Development Area Boundary 1km Study Area Aged Persons Homes GP Surgery Hospitals		Legend: <ul style="list-style-type: none"> Public Footpath Public Bridleway Byway Open to All Resurfaced Byway Time Bail & Telegraph Trail Sustans National Cycle Network Local Cycle Routes Local Trails 	
Services Layer Credits: Contains OS data © Crown Copyright and database right 2017. Ordnance Survey 100009549		Date: 11/10/2017 Scale: 1:25,000	
Rev: 02 Date: 11/10/2017 Drawn: S.R.MILLMAN Checked: S.R.MILLMAN Approved: C.SOUJRY-SMITH Drawing number: HE54/0039-CJVE/EGN-SZF_EGNE/0000000-D/RL-00/005		Date: 11/10/2017 Scale: 1:25,000	



LOWER THAMES CROSSING DEVELOPMENT PHASE

Project: Lower Thames Crossing
 Client: Highways England
 Drawing No: S2

Figure 13.1
 People and Communities - Local Settlements, Community Receptors and Public Rights of Way

Scale: 1:25,000
 Date: 11/10/2017
 Checked: S. RIVILLMAN
 Approved: C. SCUDLERY-SMITH
 Drawing Number: HE54/0039-CIV-EGN-SZF_EGNEW/000000-D/RL-00006

Additional Receptors - for categorised

- Public Footpath
- Public Brideway
- Byway Open to All
- Resurfaced Byway
- Time Bar & Telegraph Trail
- Sustans National Cycle Network
- Local Cycle Routes
- Local Trails

LTC Route Alignment

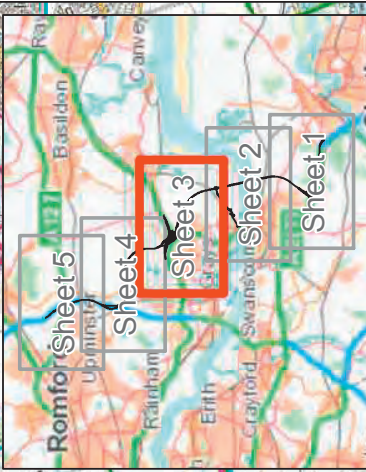
- Park, play areas, sport centres
- Places of Worship
- Post Office
- School
- Shopping Centre
- Hospitals

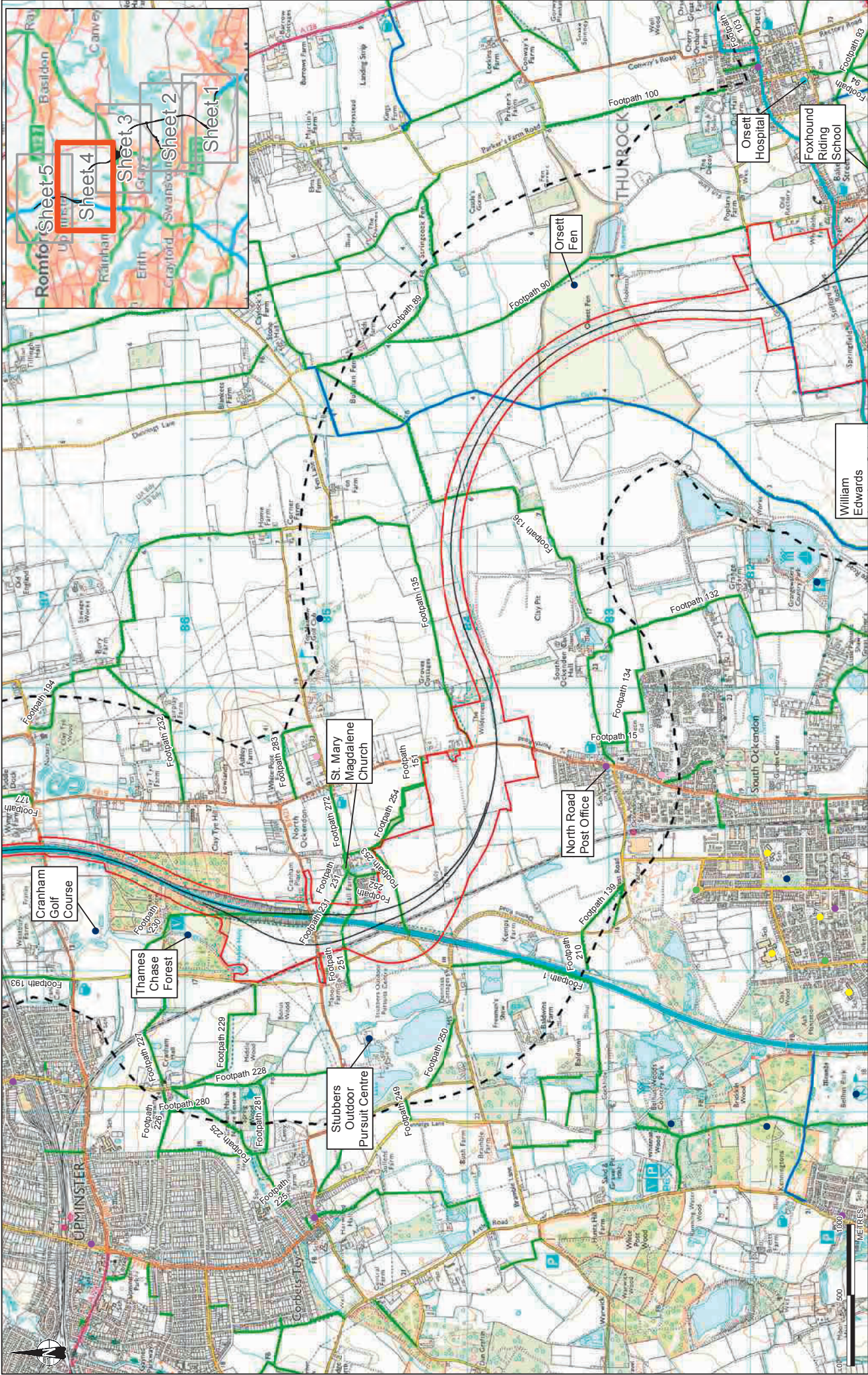
Development Area Boundary

- 1km Study Area
- Agled Pensions Homes
- GP Surgery
- Hospitals

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



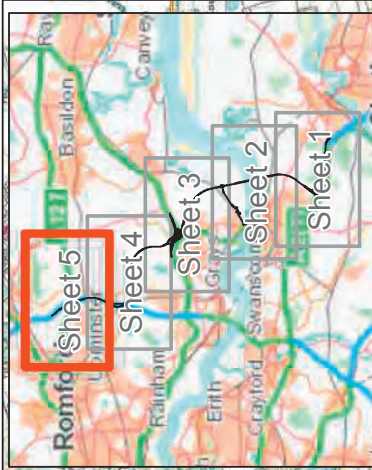


William Edwards
highways england
 Lower Thames Crossing
 5th Floor House
 15 St. Giles
 London EC4A 3DF

Project: LOWER THAMES CROSSING DEVELOPMENT PHASE
Client: William Edwards
Drawn by: S2
Scale: 1:25,000
Date: 11/10/2017
Checked by: S2
Date: 11/10/2017
Approved by: S2
Date: 11/10/2017
Drawing number: HE4-0039-CV-E-IGN-SZP_EGNEW000000-DRALE-0007

Figure 13.1
 People and Communities - Local Settlements, Community Receptors and Public Rights of Way
 Page 4 of 5

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 Date: 11/10/17
 Scale: 1:25,000
 Drawing number: HE4-0039-CV-E-IGN-SZP_EGNEW000000-DRALE-0007



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

Client Address: 5th Floor, 100 Broad Street, London EC2A 7DT

Figure 13.1
People and Communities - Local Settlements, Community Receptors and Public Rights of Way
 Page 5 of 5

Scale: 1:25,000

Drawn: S2

Checked: S2

Approved: S2

Drawn Date: 11/10/2017

Checked Date: 11/10/2017

Approved Date: 11/10/2017

Drawn Name: S.MILLMAN

Checked Name: S.MILLMAN

Approved Name: C.SCALFORD-SMITH

Drawn Number: HES4/0039-CJVE/EGN-SZF_EGNEG0000000-D/RLA-00008

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Scale: 1:25,000

Drawn: S2

Checked: S2

Approved: S2

Drawn Date: 11/10/2017

Checked Date: 11/10/2017

Approved Date: 11/10/2017

Drawn Name: S.MILLMAN

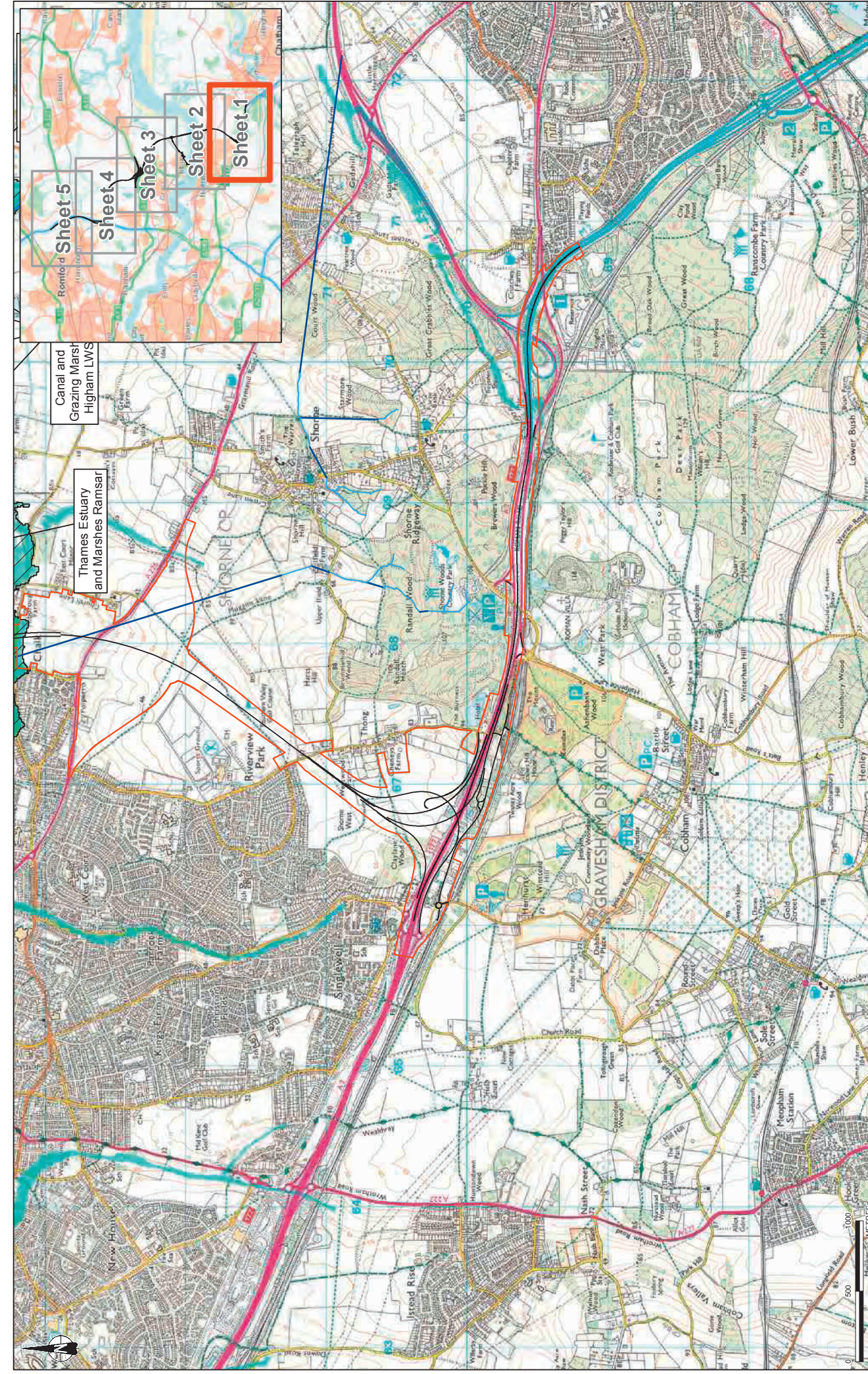
Checked Name: S.MILLMAN

Approved Name: C.SCALFORD-SMITH

Drawn Number: HES4/0039-CJVE/EGN-SZF_EGNEG0000000-D/RLA-00008

Legend:

- Additional Receptors for categorised
- LTC Route Alignment
- Development Area Boundary
- 1km Study Area
- Aged Persons Homes
- GP Surgery
- Hospitals
- Park, play areas, sport centres
- Places of Worship
- Post Office
- School
- Shopping Centre
- Public Footpath
- Public Bridleway
- Byway Open to All
- Resurfaced Byway
- Time Bar & Telegraph Trail
- Sustans National Cycle Network
- Local Cycle Routes
- Local Trails



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

Drawn: S2 **Checked:** S2 **Scale:** 1:25,000

Drawn: R.MILLMAN **Checked:** S.RIWELL **Date:** 10/10/2017

Drawn: C.SCALDARY-SMITH **Checked:** C.SCALDARY-SMITH **Date:** 10/10/2017

Drawn: H.E.4.0039-CJ-VEWE-SZF **Checked:** H.E.4.0039-CJ-VEWE-SZF **Date:** 10/10/2017

Figure 14.1
Road Drainage and the Water Environment - Surface Water Features, Flood Risk and Defences
Sheet 1 of 5

Lower Thames Crossing
 5th & 6th Floor
 15 St Giles
 London EC4A 3DF

Legend:

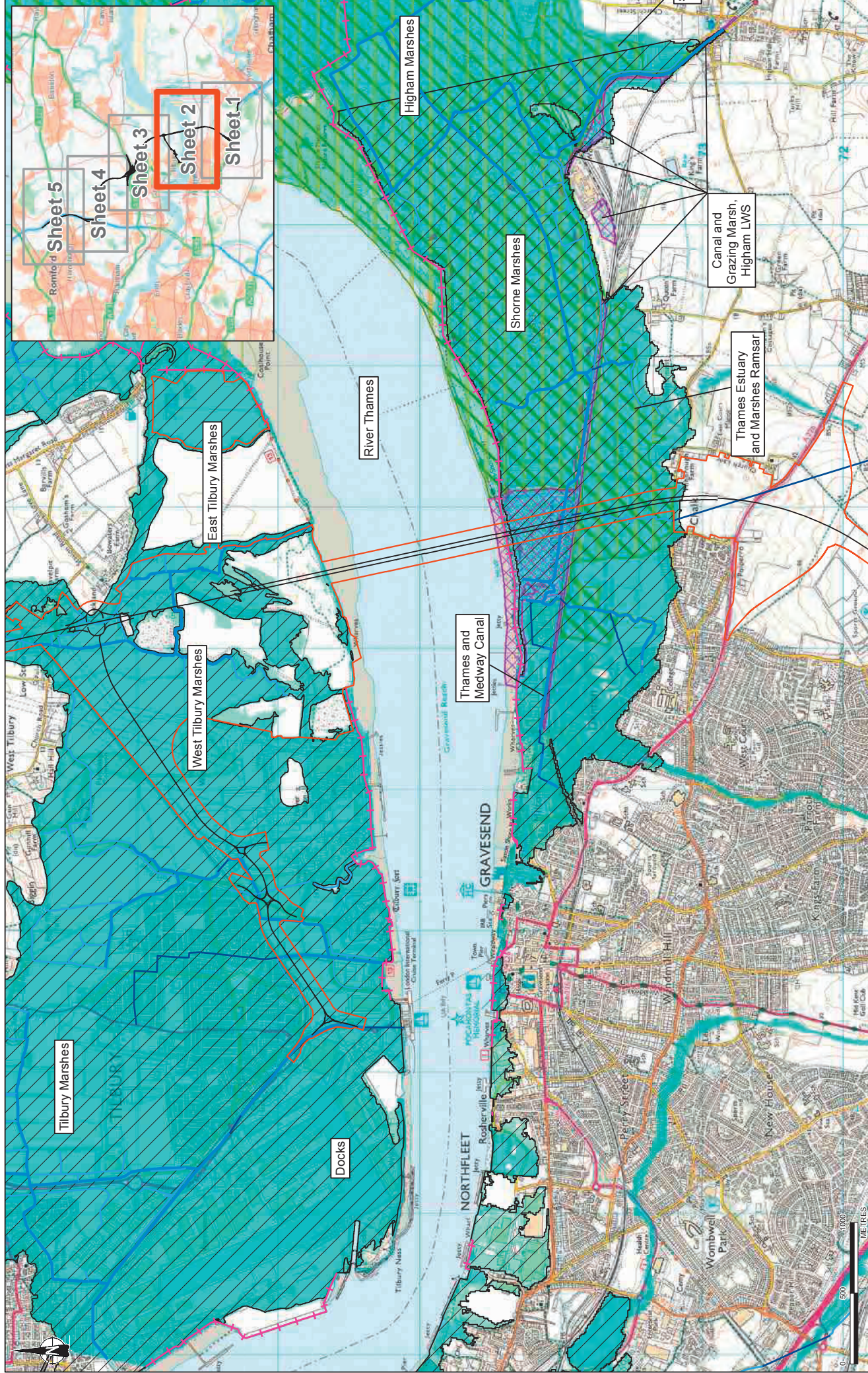
- LTC Route Alignment
- Development Area Boundary
- Primary River
- Secondary River
- Tertiary River
- Extended Culvert (greater than 50m)
- Laker/Reservoir
- Downstream of High Water Mark
- Flood Defence
- Areas Benefiting From Flood Defences
- Flood Zone 2
- Flood Zone 3
- Local Wildlife Site
- Site of Special Scientific Interest (SSSI)
- Ramsar

Scale: 0 500 1000 METRES

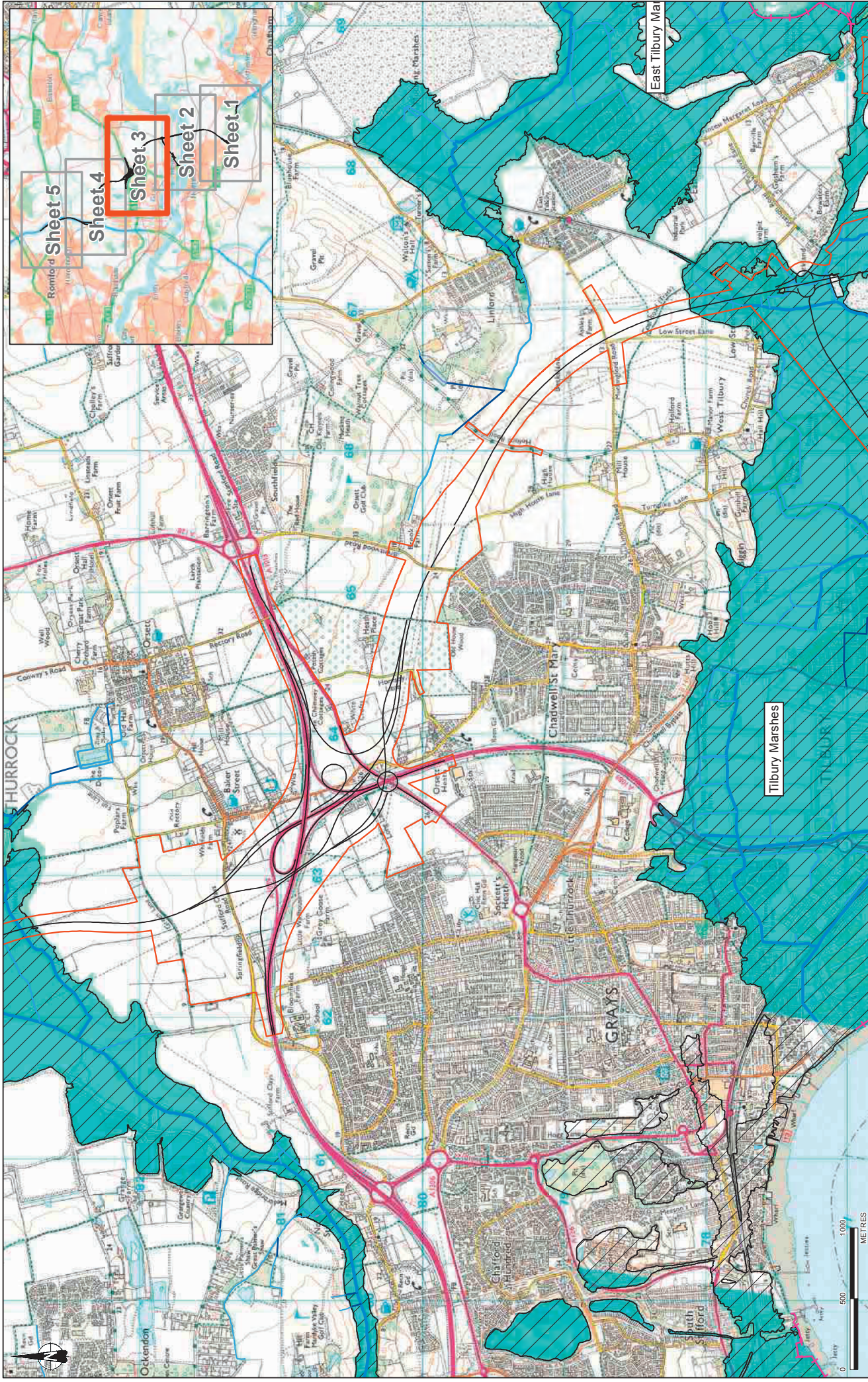
North Arrow

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File: S2_101017_04-Information **Scale:** 1:25,000 **Date:** 10/10/2017 **Drawn:** S2 **Checked:** S2



		LOWER THAMES CROSSING DEVELOPMENT PHASE		Status: S2 Date: 11/10/2017 Drawn: R.MILLMAN Checked: S.RIWELL Approved: C.SCALJURY-SMITH Drawing number: HE54/0039-CJ-VEWE-SZF_EGNE00000000-DRLE-00002	
Lower Thames Crossing <small>Slender House 15 St. Dunstons London EC3A 7DT</small>		Project: Lower Thames Crossing Drawing No:		Figure 14.1 Road Drainage and the Water Environment - Surface Water Features, Flood Risk and Defences Sheet 2 of 5	
Client:		Project:		Status:	
Local Wildlife Site Site of Special Scientific Interest (SSSI) Ramsar		Flood Defence Areas Benefiting From Flood Defences Flood Zone 2 Flood Zone 3		Date: 11/10/2017 Scale: 1:25,000	
Tertiary River Extended Culvert (greater than 50m) Laker/Reservoir Downstream of High Water Mark		UTC Route Alignment Development Area Boundary Primary River Secondary River		Date: 11/10/2017 Scale: 1:25,000	
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File: S2_111017_02-Information Date: 11/10/2017 Scale: 1:25,000 Project: Lower Thames Crossing					



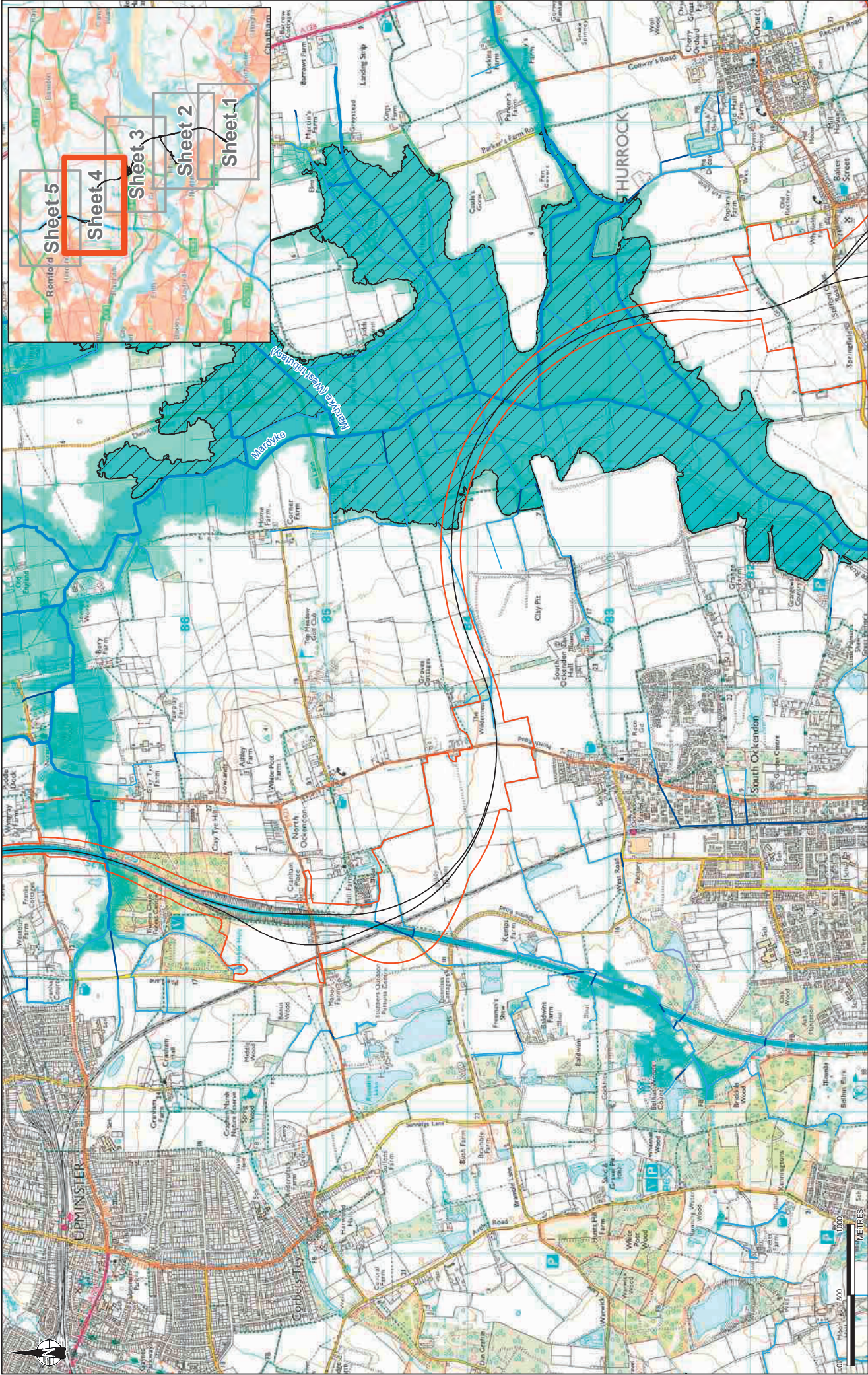
Service Layer Credits: Contains OS data © Crown Copyright and database right 2017. Ordnance Survey 100050649

Rev: 02 Date: 11/10/2017 For Information: R.M. SR: 23.5.5
 Drawn: S2 Date: 11/10/2017
 Checked: S.R.WILLMAN Date: 11/10/2017
 Approved: C.SCOJIBRY-SMITH Date: 11/10/2017
 Drawing number: HE440039-CJ-VIEWE-SZF_EGNE000000-DRL-E-00003

LTC Route Alignment
 Development Area Boundary
 Primary River
 Secondary River
 Tertiary River
 Extended Culvert (greater than 50m)
 Laker/Reservoir
 Downstream of High Water Mark
 Flood Defence
 Areas Benefiting From Flood Defences
 Flood Zone 2
 Flood Zone 3
 Local Wildlife Site
 Site of Special Scientific Interest (SSSI)
 Ramсар
 Downstream of High Water Mark

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

Project: LOWER THAMES CROSSING DEVELOPMENT PHASE
 Drawing No: Figure 14.1
 Road Drainage and the Water Environment - Surface Water Features, Flood Risk and Defences
 Sheet 3 of 5
 Status: S2
 Design: R.WILLMAN Date: 11/10/2017
 Checked: S.R.WILLMAN Date: 11/10/2017
 Approved: C.SCOJIBRY-SMITH Date: 11/10/2017
 Scale: 1:25,000
 Date: 11/10/2017



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Scale: 1:25,000

Drawn: 11/10/2017
Checked: S.R.MILLMAN
Approved: C.SCALJURY-SMITH
Drawing number: HE54/0039-CJ-EWE-SZF_EGNE0000000-DRLE-00004

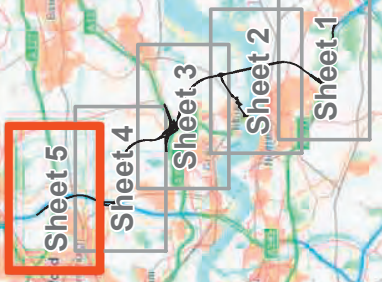
Project: LOWER THAMES CROSSING DEVELOPMENT PHASE
Drawing No: S2

Client: **highways england**
Lower Thames Crossing
Site: South Ockendon
15 St. Nicholas Way
London EC3A 7DT

Figure 14.1
Road Drainage and the Water Environment - Surface Water Features, Flood Risk and Defences
Sheet 4 of 5

LTC Route Alignment
 Boundary
 Primary River
 Secondary River
 Tertiary River
 Extended Culvert (greater than 50m)
 Laker/Reservoir
 Downstream of High Water Mark
 Flood Defence
 Areas Benefiting From Flood Defences
 Flood Zone 2
 Flood Zone 3
 Local Wildlife Site
 Site of Special Scientific Interest (SSSI)
 Ramсар
 Downstream of High Water Mark
 Mark

Date: 11/10/17
 Rev. Date: 11/10/2017
 Rev. No: 1
 Rev. Description:



<p>Project: LOWER THAMES CROSSING DEVELOPMENT PHASE</p> <p>Client: highways england</p> <p>Contract: Lower Thames Crossing</p> <p>515010017 515010017 London EC3A 7DT</p>		<p>Figure 14.1 Road Drainage and the Water Environment - Surface Water Features: Flood Risk and Defences</p> <p>Sheet 5 of 5</p>		<p>Drawn: R.MILLMAN Date: 11/10/2017</p> <p>Checked: S.RWELL Date: 11/10/2017</p> <p>Approved: C.SOUBRY-SMITH Date: 11/10/2017</p> <p>Drawing number: HE44039-CJ-VIEWE-SZF_EGNE0000000-DRLE-00005</p>	
<p>Scale: 1:25,000</p> <p>Date: 11/10/2017</p> <p>Revision: P01</p>		<p>Sheet: S2</p>		<p>Drawn: R.MILLMAN Date: 11/10/2017</p> <p>Checked: S.RWELL Date: 11/10/2017</p> <p>Approved: C.SOUBRY-SMITH Date: 11/10/2017</p> <p>Drawing number: HE44039-CJ-VIEWE-SZF_EGNE0000000-DRLE-00005</p>	

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Scale: 1:25,000

Date: 11/10/2017

Revision: P01

BASELINE GROUNDWATER SUMMARY INFORMATION BLOCK DIAGRAM

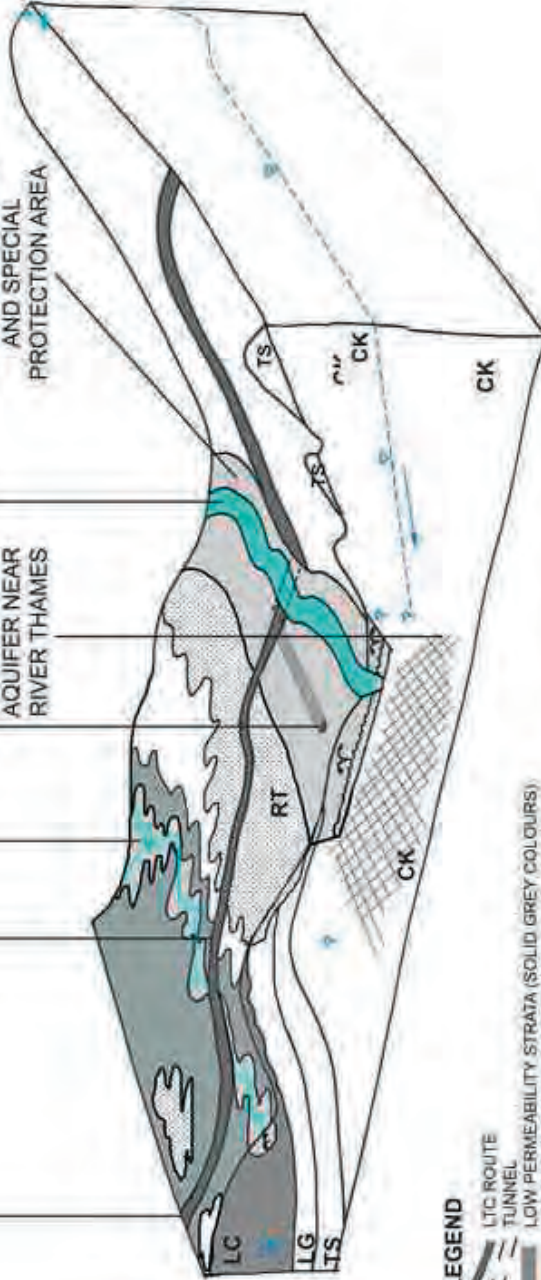
NORTH

SOUTH

M25
TILBURY
LOOP SPUR
A13
MARDYKE

SALINE RIVER
INTRUSION OF CHALK
AQUIFER NEAR
RIVER THAMES

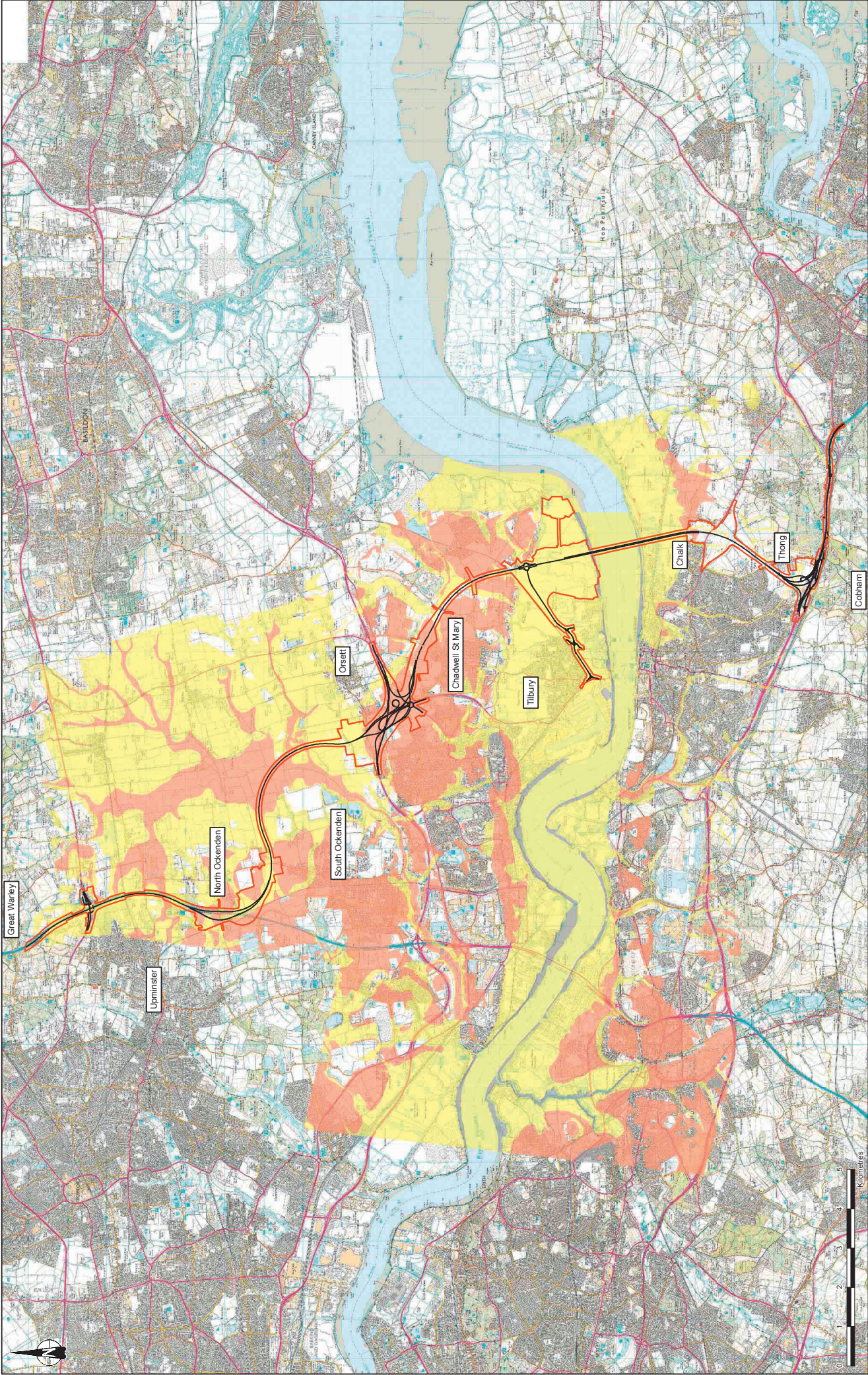
RIVER THAMES
ESTUARY AND
MARSHES, RAMSAR
AND SPECIAL
PROTECTION AREA



LEGEND

- LTC ROUTE TUNNEL
- LOW PERMEABILITY STRATA (SOLID GREY COLOURS)
- GROUNDWATER FLOW DIRECTION
- H HEAD (NOT SHOWN)
- ALLUVIUM (UNDIFFERENTIATED SECONDARY (SUPERFICIAL) AQUIFER (USUALLY OF A LOW PERMEABILITY IN STUDY AREA))
- RT RIVER TERRACE DEPOSITS (SANDS AND GRAVELS) (SECONDARY A (SUPERFICIAL) AQUIFER)
- LC LONDON CLAY FORMATION (UNPRODUCTIVE STRATA) (MAY ACT AS AN AQUIFARD AND CONFINING LAYER)
- LG LAMBETH GROUP (SECONDARY A (BEDROCK) AQUIFER)
- TS THANET FORMATION (SECONDARY A (BEDROCK) AQUIFER)
- CK CHALK GROUP (PRINCIPAL (BEDROCK) AQUIFER)
- WATER TABLE (OR PIEZOMETRIC LEVEL) RELATED TO THE BEDROCK AQUIFER
- POTABLE WATER ABSTRACTION LICENSED WELL (ILLUSTRATIVE LOCATION ONLY) (CHALK AQUIFER)
- MOSTLY GENERAL FARMING GROUNDWATER ABSTRACTIONS (FLUVIAL SANDS AND GRAVELS)

		LOWER THAMES CROSSING DEVELOPMENT PHASE	
Lower Thames Crossing <small>by the M25 and A13</small>	Figure 14.2 Road Drainage and the Water Environment - Groundwater Baseline Summary Block Diagram		
A3	R01	SC	11/12/2017
11/12/2017	11/12/2017	11/12/2017	11/12/2017
11/12/2017			

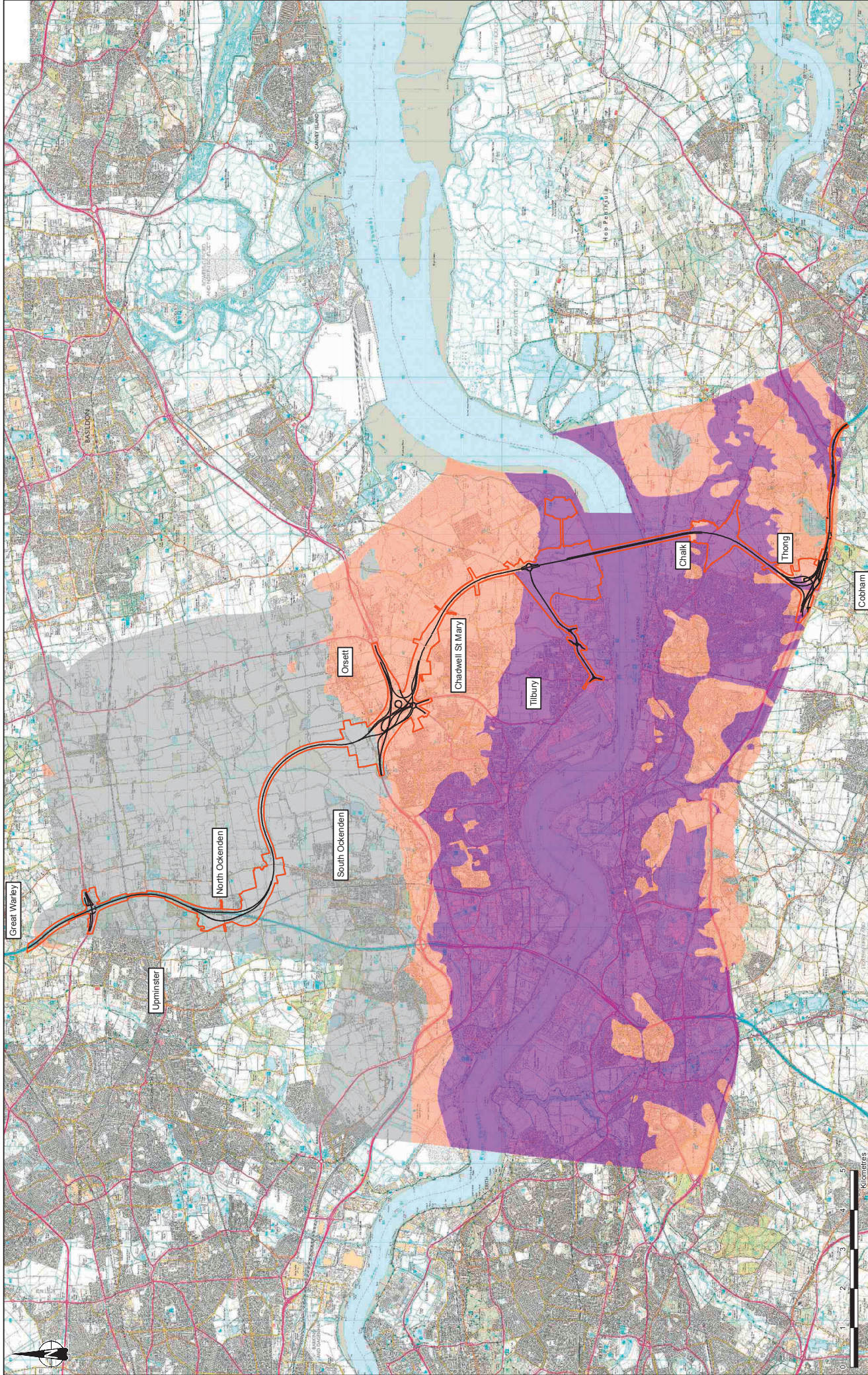


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 Date: 11/10/17
 Scale: 1:50,000
 Project: LOWER THAMES CROSSING DEVELOPMENT PHASE
 Drawing number: HE54/0039-CIV/WE-SZF_EGNE0000000-DRLE-00007
 Client: **highways england**
 Lower Thames Crossing
 5th & 6th Floors
 15 St. Mary Axe
 London EC3A 7DT
 Status: S2
 Design: R MILLMAN
 Checked: S RIVELL
 Approved: C SCOURBY-SMITH
 Date: 11/10/2017
 Date: 11/10/2017
 Date: 11/10/2017

Figure 14.3
 Road Drainage and
 The Water Environment
 Superficial Aquifer Designations

LTC Proposed Route
 Development Area Boundary
 Secondary Aquifer - A
 Secondary Aquifer - Undifferentiated
 Unproductive Strata

0 1 2 3 4 5
 Kilometres



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Scale: 1:50,000

Revision: A3

Sheet: P01

Project: LOWER THAMES CROSSING DEVELOPMENT PHASE

Client: **highways england**

Lower Thames Crossing
 5th & 6th Floors
 15 St Mark Street
 London EC3A 7DT

Figure 14.4
 Road Drainage and the Water Environment -
 Bedrock Aquifer Designations

Drawn: R MULLMAN
 Date: 11/10/2017

Checked: S R WIELL
 Date: 11/10/2017

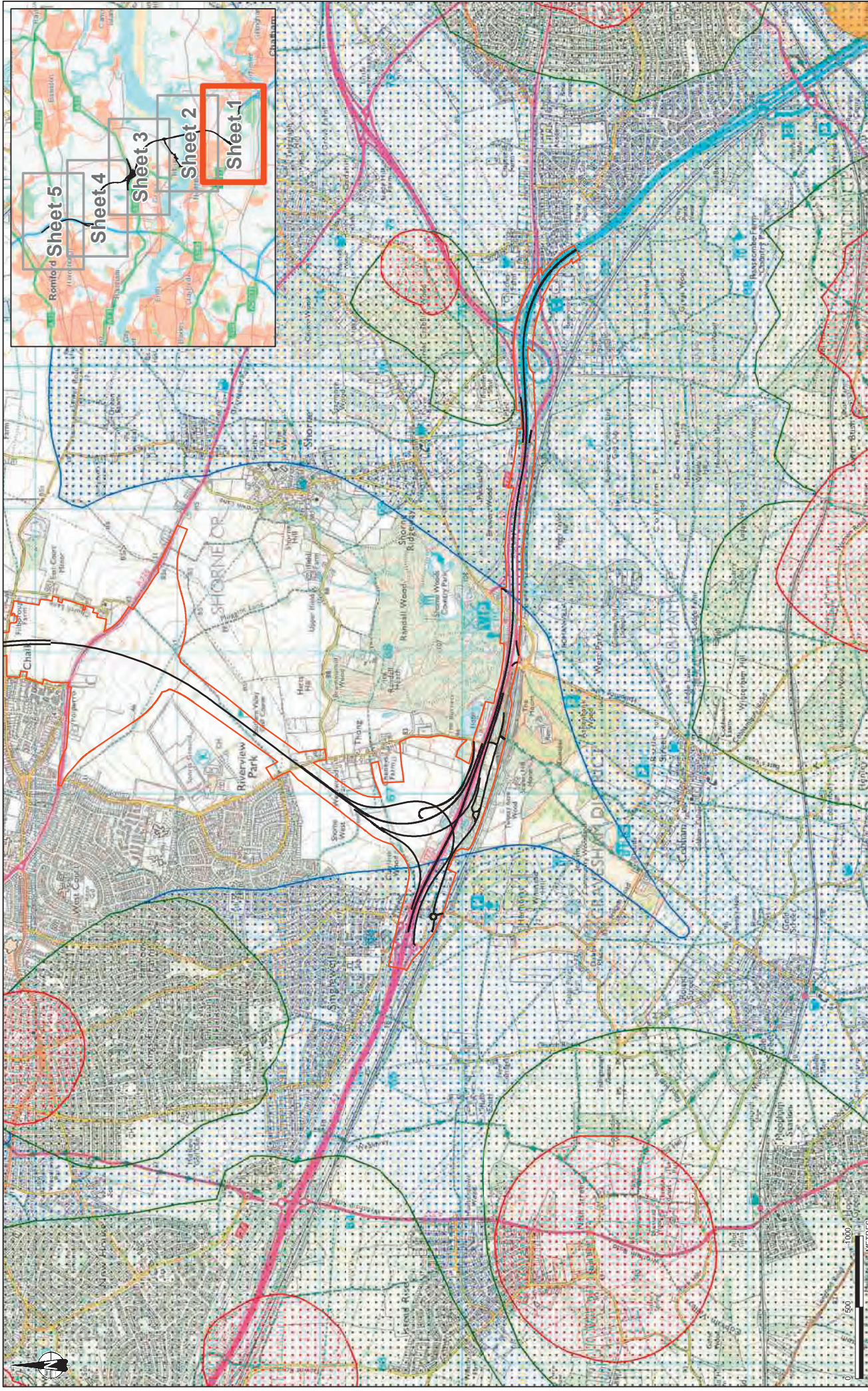
Approved: C SCOURBY-SMITH
 Date: 11/10/2017

Drawing number: HE54/0039-CIV/WE/SZF_EGNE0000000-DRLE-00008

LTC Route Alignment
 Development Area Boundary
 Principal Aquifer
 Secondary Aquifer - A
 Unproductive Strata

0 1 2 3 4 5
 Kilometres

Rev: 02
 Date: 11/10/17
 For information
 E.M. SR C.S.S.
 Drawn: []
 Checked: []
 Approved: []



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Scale: 1:25,000

North Arrow

0 300 600 900 1200 METRES

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

Project: LOWER THAMES CROSSING DEVELOPMENT PHASE

Figure 14.5
 Road Drainage and the Water Environment - Surface Water and Groundwater Bodies - Water Framework Directive Data
 Sheet 1 of 5

Current Ecological Status
 Good (Green)
 Moderate (Yellow)
 Poor (Red)

Groundwater Source Protection Zones
 Zone I - Inner protection zone (Red dotted)
 Zone II - Outer protection zone (Blue dotted)
 Zone III - Total catchment (Blue solid)

LTC Route Alignment
 Development Area Boundary (Red outline)
 Groundwater Abstraction Licence Locations (Green dot)
 Surface Water Abstraction Licence Locations (Blue dot)

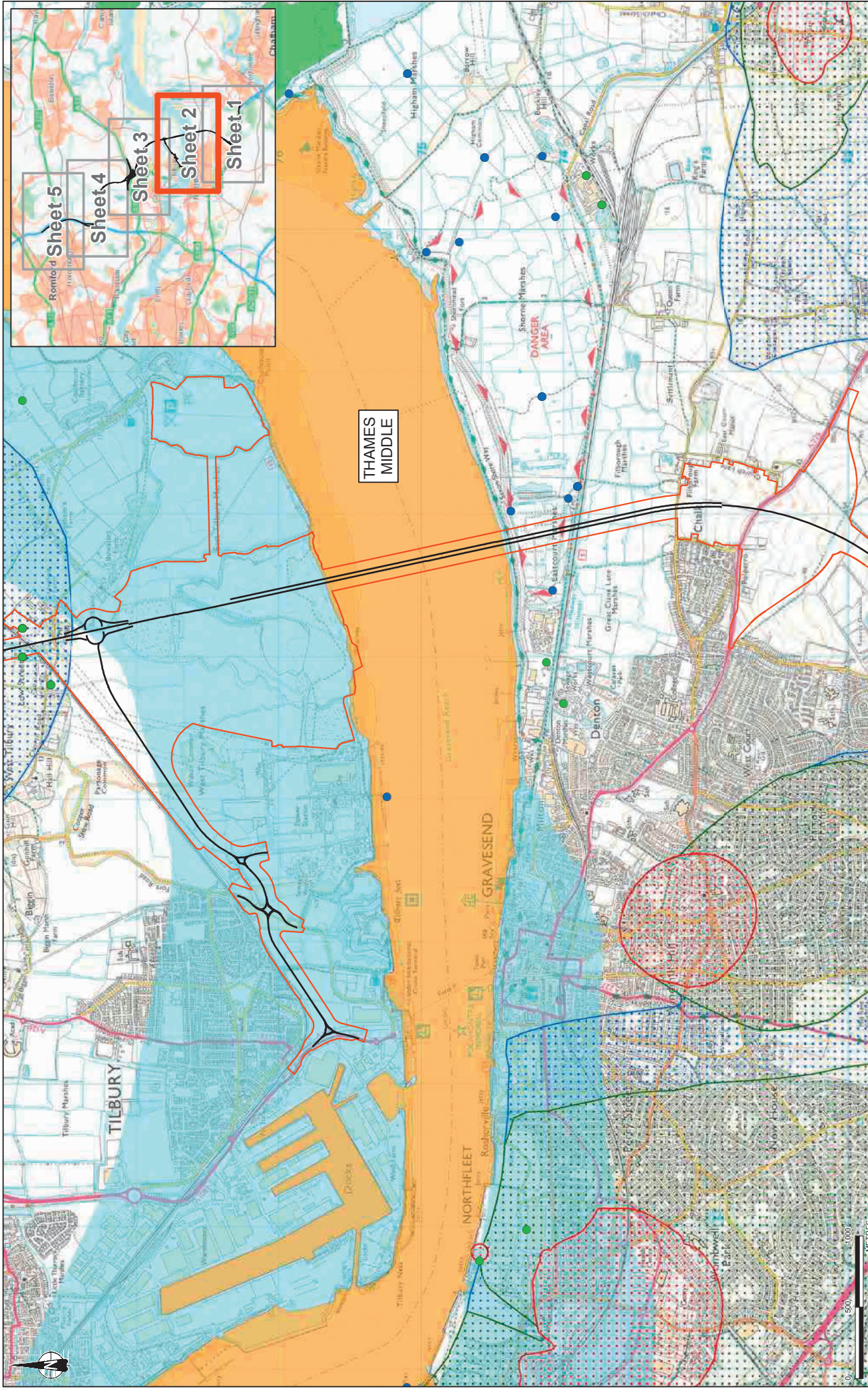
Zone of Special Interest
 Extent of historical (c. 1965) saline intrusion of Chalk aquifer, as defined in the 1972 'Water Resources Bill', 1972, The Hydrogeology of the London Basin (Red dotted)

Drawn	R MILLMAN	Check	S RIVELL
Approved	C SCOURRY-SMITH	Drawn	C SCOURRY-SMITH

Drawn Date: 11/10/2017
 Approved Date: 11/10/2017

Sheet: A3
 Revision: P01

HE54/0039-CIV/WE/SZF_EGNE0000000-DRLE-00009



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Scale: 1:25,000

Drawn: 11/10/2017

Checked: 11/10/2017

Approved: 11/10/2017

Drawing number: HE54-0039-CJ-VEWE-SZF_EGNE0000000-DRLE-00010

Revision: P01

Revision: A3

Scale: 1:25,000

Drawn: 11/10/2017

Checked: 11/10/2017

Approved: 11/10/2017

Drawing number: HE54-0039-CJ-VEWE-SZF_EGNE0000000-DRLE-00010

Project: LOWER THAMES CROSSING DEVELOPMENT PHASE

Figure 14.5
Road Drainage and the Water Environment -
Surface Water and Groundwater
Bodies - Water Framework Directive Data

Sheet 2 of 5

Client: **highways** highland

Project: Lower Thames Crossing

Site: 15 St. Andrew House, 15 St. Andrew House, London EC3A 7DT

Current Ecological Status

Good: Green

Moderate: Orange

Poor: Red

LTC Route Alignment

Development Area Boundary: Red outline

Groundwater Abstraction Licence Locations: Green dots

Surface Water Abstraction Licence Locations: Blue dots

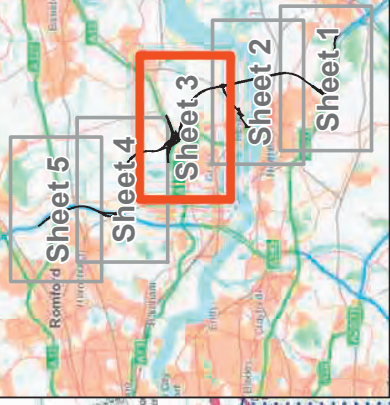
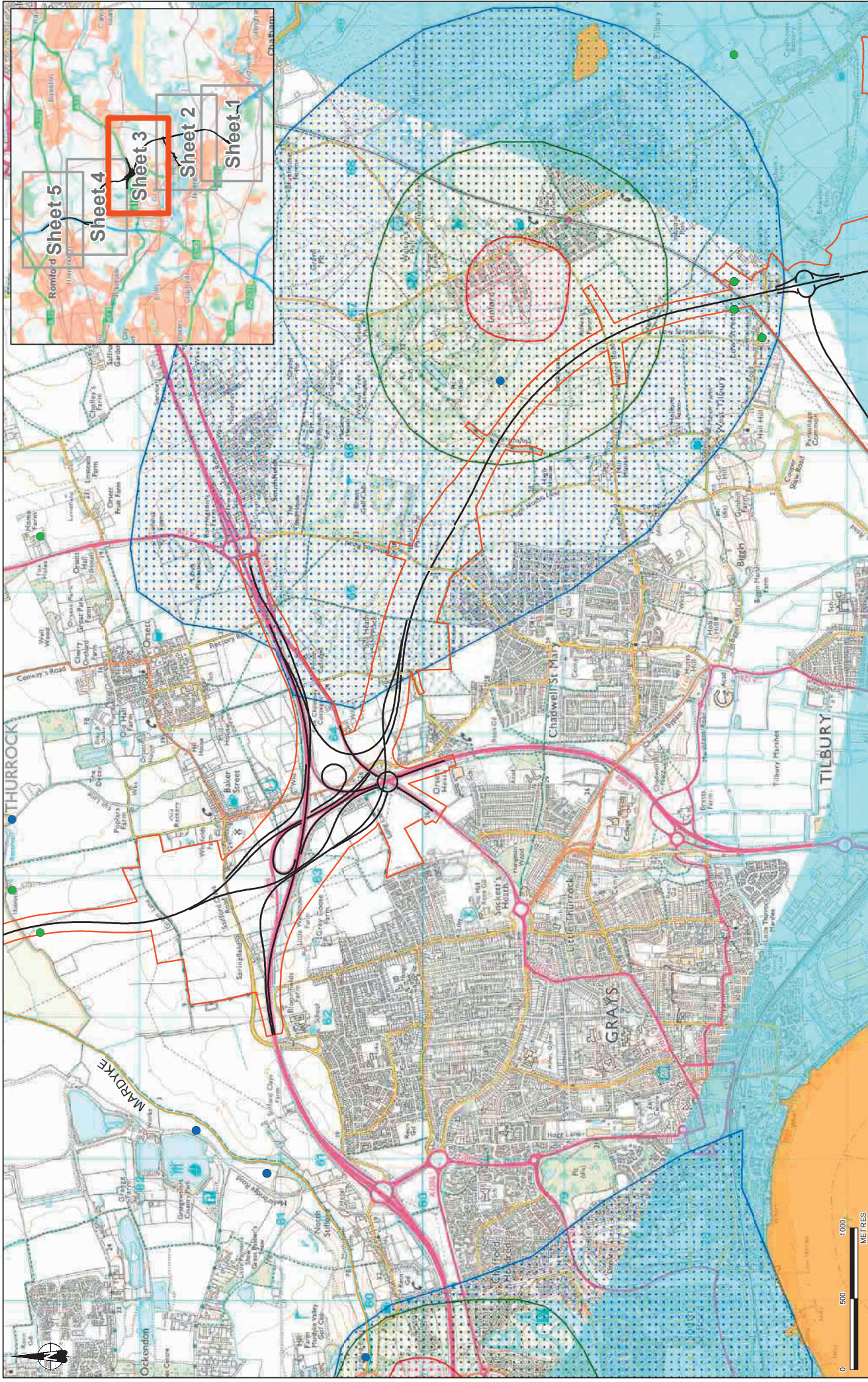
Zones

Zone of Special Interest: Red dashed line

Zone I - Inner protection zone: Orange

Zone II - Outer protection zone: Green

Zone III - Total catchment: Blue



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 Scale: 1:25,000
 Date: 11/10/2017
 Author: S.R.M.I.E.L.L.M.A.N.
 Checker: S.R.M.I.E.L.L.M.A.N.
 Approved: C.S.O.J.B.R.Y.-S.M.I.T.H.
 Drawing number: H/E54/0039-C/1/E/WE/SZF_EGNE0000000-DR/LE-00011

Project	LOWER THAMES CROSSING DEVELOPMENT PHASE
Client	highways england
Station	S2
Drawn	R.M.I.E.L.L.M.A.N.
Checked	S.R.M.I.E.L.L.M.A.N.
Approved	C.S.O.J.B.R.Y.-S.M.I.T.H.
Drawing number	H/E54/0039-C/1/E/WE/SZF_EGNE0000000-DR/LE-00011

Figure 14.5
 Road Drainage and the Water Environment - Surface Water and Groundwater Bodies - Water Framework Directive Data
 Sheet 3 of 5

Lower Thames Crossing
 Site S18
 London EC3A 7DT

LITC Route Alignment
 Development Area Boundary
 Groundwater Abstraction Licence Locations
 Surface Water Abstraction Licence Locations

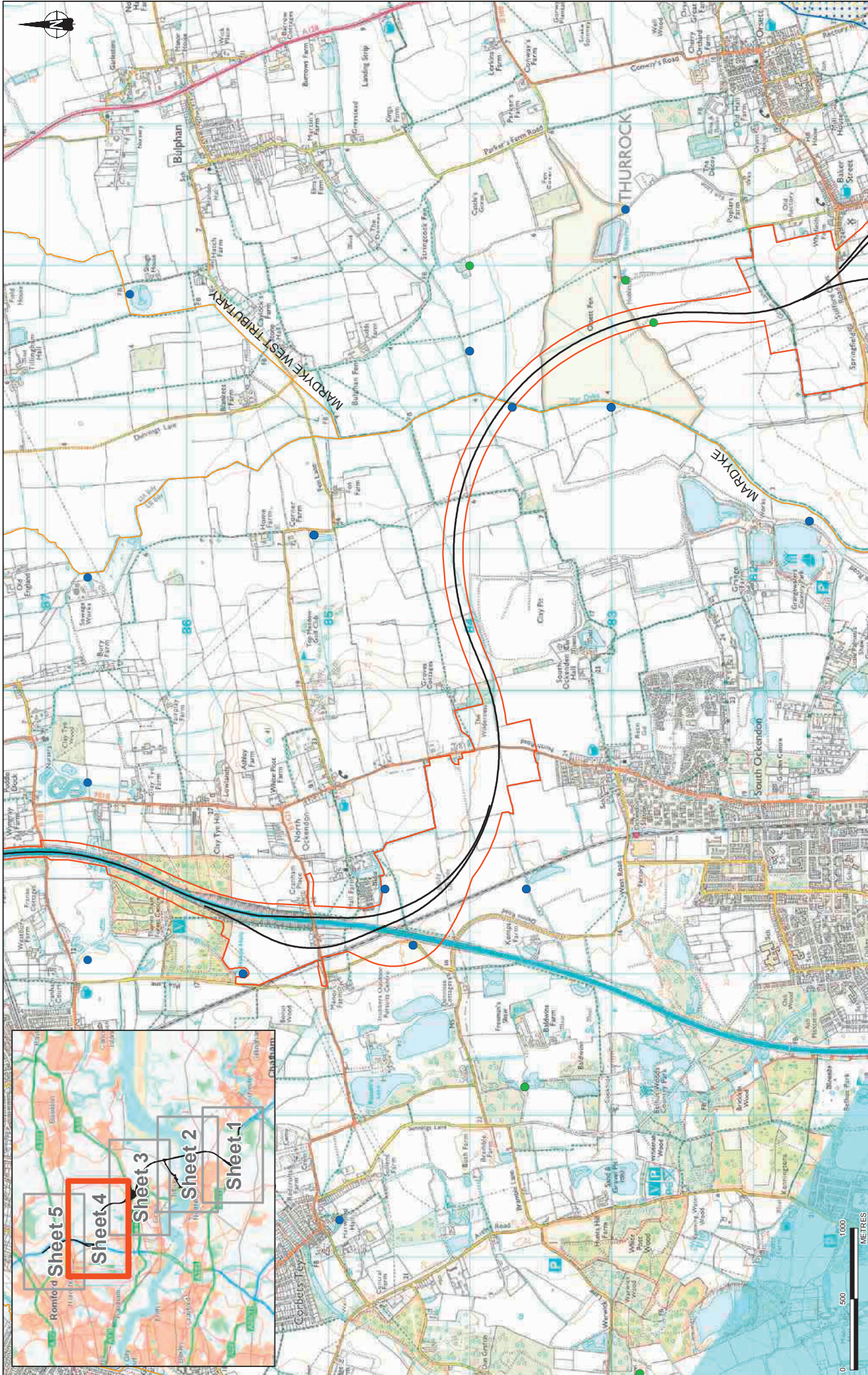
Current Ecological Status
 Good
 Moderate
 Poor

Groundwater Source Protection Zones
 Zone I - Inner protection zone
 Zone II - Outer protection zone
 Zone III - Total catchment

Zone of Special Interest
 Extent of historical (c. 1965) saline intrusion of Chalk aquifer, as defined by the '1965 contour' on the 1972, The Hydrogeology of the London Basin

METRES
 0 500 1000


Date: 11/10/2017
 Author: S.R.M.I.E.L.L.M.A.N.
 Checker: S.R.M.I.E.L.L.M.A.N.
 Approved: C.S.O.J.B.R.Y.-S.M.I.T.H.
 Drawing number: H/E54/0039-C/1/E/WE/SZF_EGNE0000000-DR/LE-00011



Project LOWER THAMES CROSSING DEVELOPMENT PHASE		Status S2	
Client Lower Thames Crossing 5th and 6th Road London EC3A 7DT		Drawn R MILLMAN	
Current Ecological Status Good Moderate Poor		Checked S RIVELL	
Groundwater Source Protection Zone I - Inner protection zone Zone II - Outer protection zone Zone III - Total catchment		Approved C. SCUDJERY-SMITH	
Zone of Special Interest Extent of historical (c. 1965) saline intrusion of Chalk aquifer, as defined in the 1972 London Basin 1972. The Hydrogeology of the London Basin		Drawing number HE4/0039-CJ-AWE-SZF_EGNE0000000-DRLE-00012	
LTC Route Alignment Development Area Boundary Groundwater Abstraction Licence Locations Surface Water Abstraction Licence Locations		Date 11/10/2017	
Scale 1:25,000		Drawn S2	

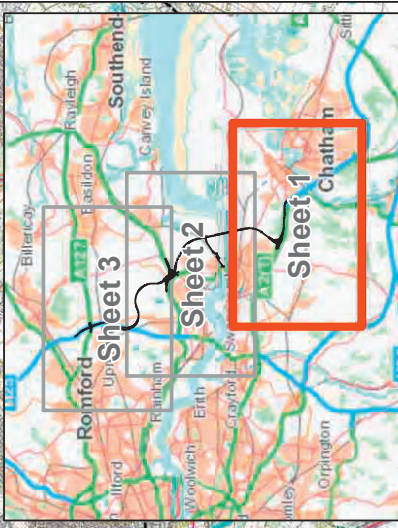
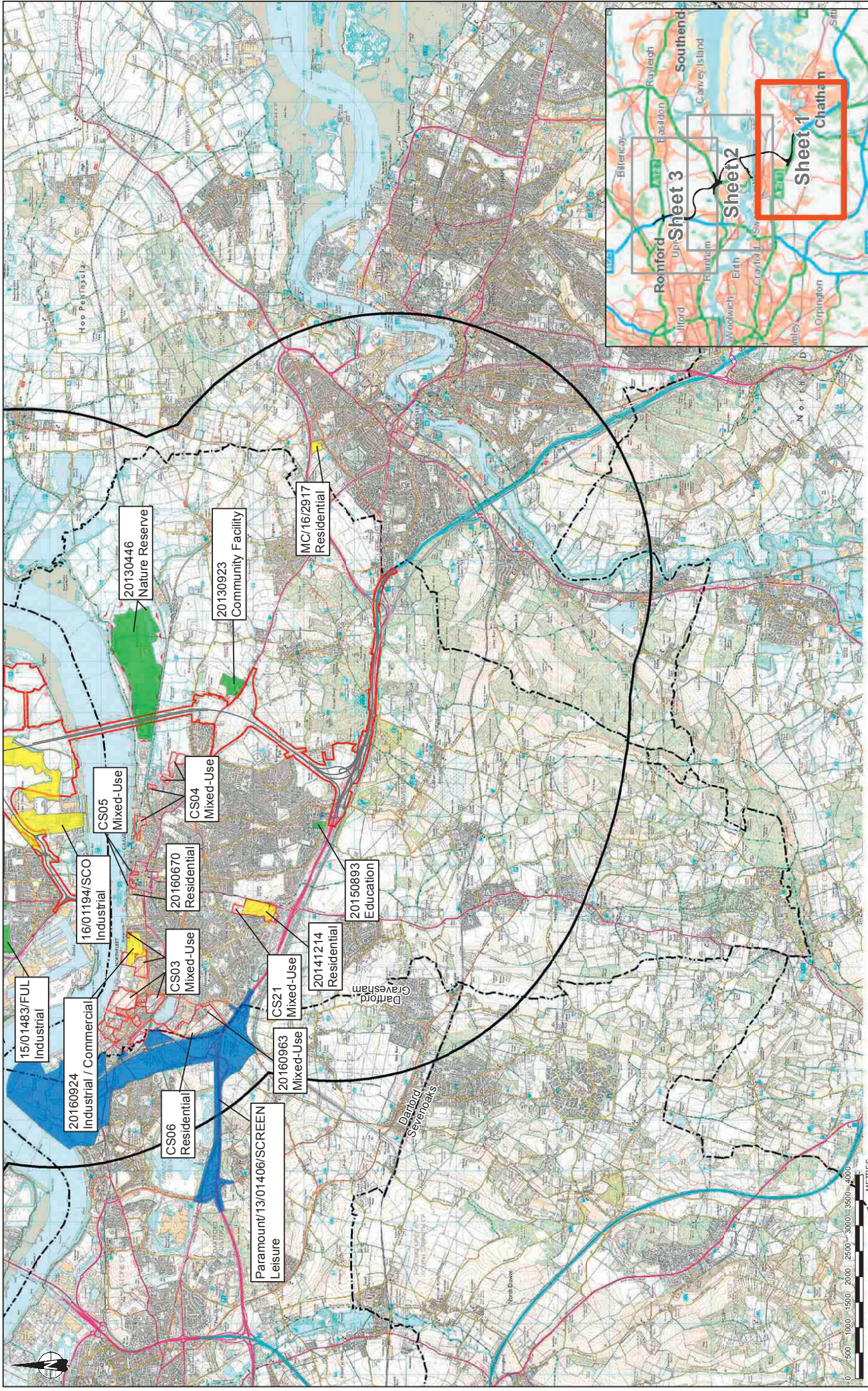
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<p>Client</p>  <p>Lower Thames Crossing S16 S18 S19 London EC3A 7DT</p>		<p>Project</p> <p>LOWER THAMES CROSSING DEVELOPMENT PHASE</p> <p>Figure 14.5 Road Drainage and the Water Environment - Surface Water and Groundwater Bodies - Water Framework Directive Data Sheet 5 of 5</p>		<p>Status</p> <p>S2</p>	
<p>Drawn</p> <p>R MILLMAN</p>		<p>Date</p> <p>10/10/2017</p>		<p>Drawn Date/Revision</p> <p>A3 125,000</p>	
<p>Checked</p> <p>S RIMMELL</p>		<p>Date</p> <p>10/10/2017</p>		<p>Scale</p> <p>1:25,000</p>	
<p>Approved</p> <p>C.SCOJIBRY-SMITH</p>		<p>Date</p> <p>10/10/2017</p>		<p>Scale</p> <p>1:25,000</p>	
<p>Drawing number</p> <p>HE54/0039-CJ-VEWE-SZF_EGNE0000000-DRLE-00013</p>					

<p>Zone of Special Interest</p> <p>Extent of historical (c. 1965) saline intrusion of Chalk aquifer, as defined in the 1972 'Hydrogeology of the London Basin'</p>	<p>Groundwater Source Protection</p> <p>Zone I - Inner protection zone</p> <p>Zone II - Outer protection zone</p> <p>Zone III - Total catchment</p>	<p>Current Ecological Status</p> <p>Good</p> <p>Moderate</p> <p>Poor</p>	<p>LTC Route Alignment</p> <p>Development Area Boundary</p> <p>Groundwater Abstraction Licence Locations</p> <p>Surface Water Abstraction Licence Locations</p>
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<p>Project</p> <p>LOWER THAMES CROSSING DEVELOPMENT PHASE</p>		<p>Client</p> <p>Lower Thames Crossing</p> <p>5th to 8th Mile S15 to S16 London EC3A 7DT</p>		<p>Project</p> <p>LOWER THAMES CROSSING DEVELOPMENT PHASE</p> <p>Figure 16.1 Cumulative Effects - Current Planned 'Other Developments' Within Study Area Sheet 1 of 3</p>		<p>Status</p> <p>S2</p>		<p>Drawn</p> <p>R.MILLMAN</p>		<p>Drawn Date</p> <p>30/10/2017</p>		<p>Drawn Scale</p> <p>1:70,000</p>		<p>Drawn Revision</p> <p>A3</p>		<p>Drawn Date</p> <p>30/10/2017</p>		<p>Drawn Scale</p> <p>1:70,000</p>		<p>Drawn Revision</p> <p>P01</p>	
<p>Project</p> <p>LOWER THAMES CROSSING DEVELOPMENT PHASE</p>		<p>Client</p> <p>Lower Thames Crossing</p> <p>5th to 8th Mile S15 to S16 London EC3A 7DT</p>		<p>Project</p> <p>LOWER THAMES CROSSING DEVELOPMENT PHASE</p> <p>Figure 16.1 Cumulative Effects - Current Planned 'Other Developments' Within Study Area Sheet 1 of 3</p>		<p>Status</p> <p>S2</p>		<p>Drawn</p> <p>R.MILLMAN</p>		<p>Drawn Date</p> <p>30/10/2017</p>		<p>Drawn Scale</p> <p>1:70,000</p>		<p>Drawn Revision</p> <p>A3</p>		<p>Drawn Date</p> <p>30/10/2017</p>		<p>Drawn Scale</p> <p>1:70,000</p>		<p>Drawn Revision</p> <p>P01</p>	

Tier 3: Projects on the Planning Inspectorate's Programme of Projects where a scoping report has not been submitted, or a scoping report has been submitted but not yet determined

Tier 2: Projects on the Planning Inspectorate's Programme of Projects where a scoping report has been submitted (as appropriate)

Note: No Tier 1 (b) applications have been shortlisted within the scope for Cumulative Effects. Therefore only applications in the Tier 1 categories above are present on this drawing.

LTC Route Alignment

Development Area Boundary

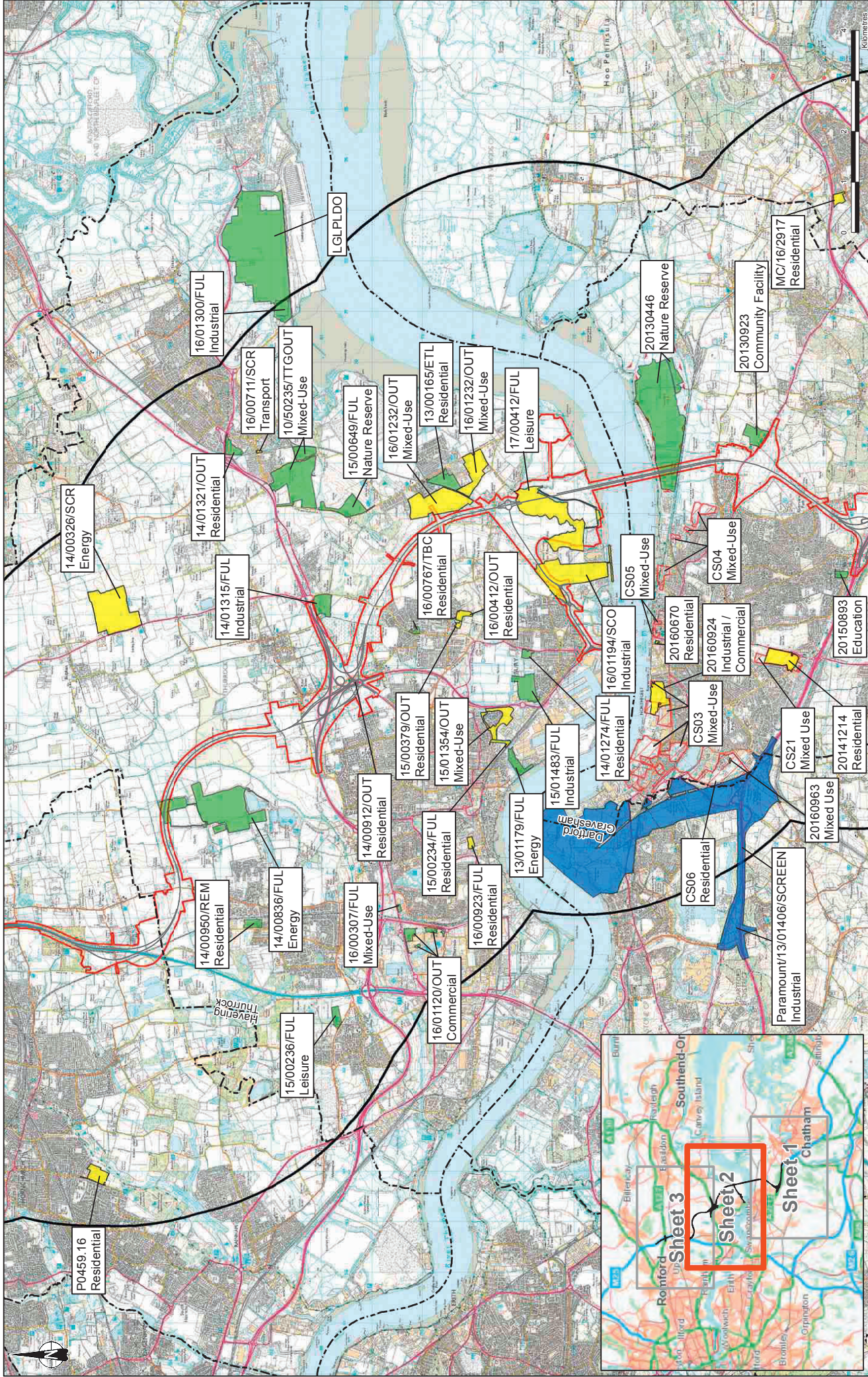
5km Study Area

Tier 1 (b): Permitted applications, whether under the PA2008 or other regimes, but not yet implemented

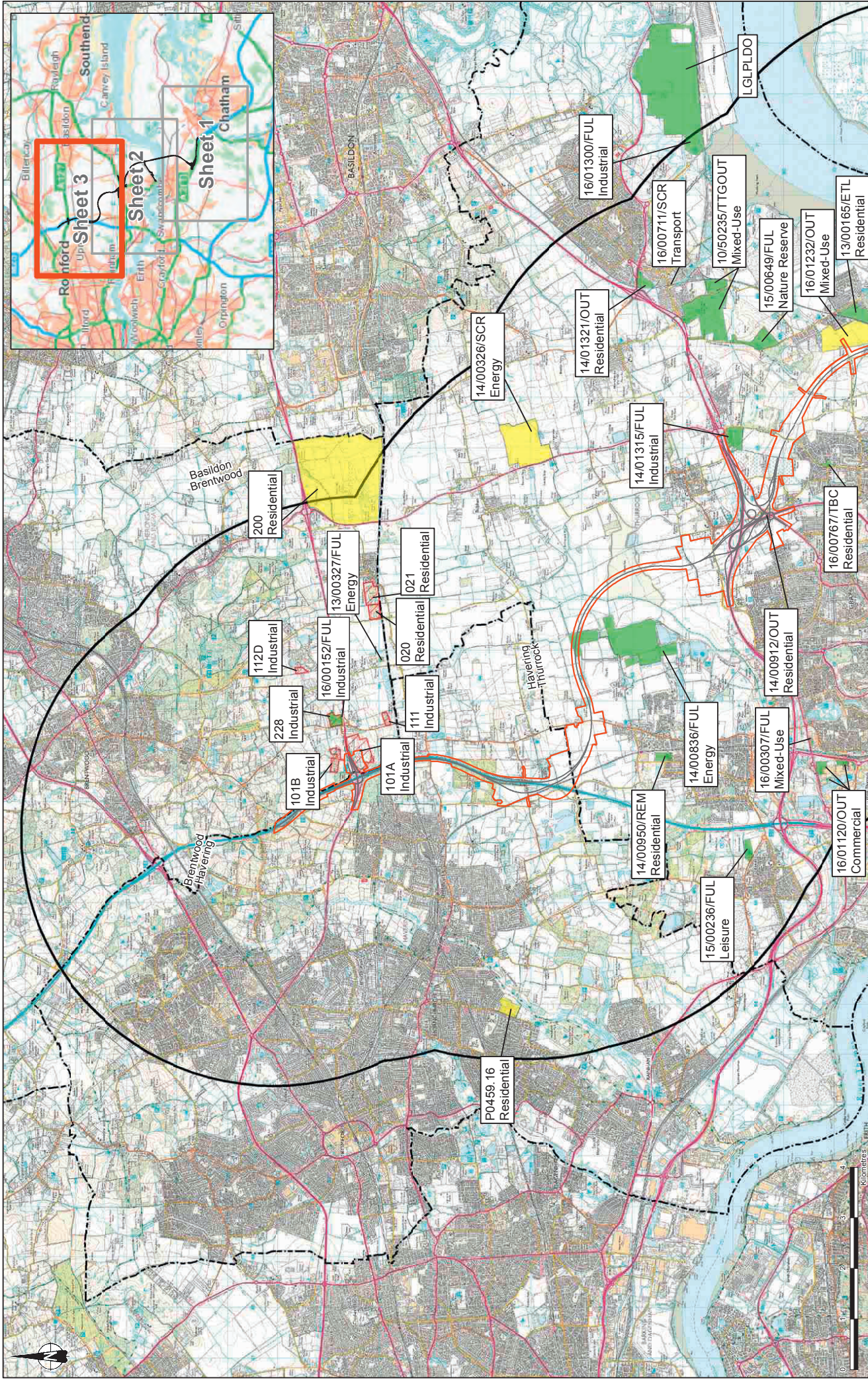
Tier 1 (c): Submitted applications, whether under the PA2008 or other regimes but not yet determined

Tier 2: Projects on the Planning Inspectorate's Programme of Projects where a scoping report has been submitted (as appropriate)

Note: No Tier 1 (b) applications have been shortlisted within the scope for Cumulative Effects. Therefore only applications in the Tier 1 categories above are present on this drawing.



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<p>Client: highways england Lower Thames Crossing 5th to 15th Mile London EC3A 7DT</p>		<p>Project: LOWER THAMES CROSSING DEVELOPMENT PHASE</p>	
<p>Drawn: R.MILLMAN Checked: S.R.MILLMAN Approved: C.SOURJERY-SMITH</p>		<p>Sheet: S2</p>	
<p>Figure 16.1 Cumulative Effects - Current Planned Other Developments - Within Study Area Sheet 2 of 3</p>		<p>Scale: 1:70,000 Date: 30/02/2017 Checked: S.R.MILLMAN Approved: C.SOURJERY-SMITH</p>	
<p>Legend:</p> <ul style="list-style-type: none"> LTC Proposed Route Development Area Boundary 5km Study Area Tier 1 (a): Permitted applications, whether under the PA2008 or other regimes, but not yet implemented Tier 1 (b): Permitted applications, whether under the PA2008 or other regimes, but not yet implemented Tier 1 (c): Submitted applications, whether under the PA2008 or other regimes but not yet determined Inspectorate's Programme of Projects where a scoping report has not been submitted, or Development Plan or Site allocations identified in other plans and programmes (as appropriate) 		<p>Note: No Tier 1 (a) applications have been shortlisted within the scope for Cumulative Effects. Therefore only applications in the Tier 1 categories above are present on this drawing.</p>	
<p>Scale: 1:70,000 Date: 30/02/2017 Checked: S.R.MILLMAN Approved: C.SOURJERY-SMITH</p>		<p>Scale: 1:70,000 Date: 30/02/2017 Checked: S.R.MILLMAN Approved: C.SOURJERY-SMITH</p>	



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Scale: 1:70,000

North Arrow

Scale Bar: 0 1 2 3 4 Kilometres / 0 1 2 3 4 Miles

Legend:

- LTC Route Alignment
- Development Area Boundary
- 5km Study Area
- Tier 1 (c): Submitted applications, whether under the PA2008 or other regimes but not yet determined
- Tier 2: Projects on the Planning Inspectorate's Programme of Projects where a scoping report has not been submitted, or Tier 1 (b): Permitted applications, whether under the PA2008 or other regimes, but not yet implemented
- Tier 1 (b): Permitted applications, whether under the PA2008 or other regimes, but not yet implemented

Client: **Lower Thames Crossing**
5th Floor
15 Abchurch Lane
London EC4A 3DF

Project: LOWER THAMES CROSSING DEVELOPMENT PHASE

Figure 16.1
Cumulative Effects - Current Planned 'Other Developments Within Study Area'
Sheet 3 of 3

Drawn	Checked	Approved
R.MILLMAN	S.RIWELL	C.SOLJURY-SMITH

Date	Revision
17/03/2017	A3

Drawn: R.MILLMAN
Checked: S.RIWELL
Approved: C.SOLJURY-SMITH

Drawing number: HE440039-CJ-VEGN-SZ2_EGNEG000000-DRL4E-00011

Note: No Tier 1 (b) applications have been shortlisted within the scope for Cumulative Effects, therefore only applications in the Tier 1 categories above are present on this drawing.

Tier 3: Projects on the Planning Inspectorate's Programme of Projects where a scoping report has not been submitted, or Site allocations identified in the consultant's Site Specific Assessment (SSA) that are identified in other plans and programmes (as appropriate)