Lower Thames Crossing
Map book 3: engineering plans
The three map books contain plans of the proposed project under the following headings:
- Map book 1 – General Arrangements (layout plans)
- Map book 2 – land use
- Map book 3 – engineering

These plans show our current proposals and are published for the purposes of consultation on the project. The proposals are therefore subject to change due to consultation feedback and further design development.

The plans run from the A2 in the south to the M25 in the north. Identically numbered sheets in the different map books show the same area, for example sheet 3 shows the A2/LTC junction in map books 1, 2 and 3.

**Map book 1 - General Arrangements**
The General Arrangements show the proposed details of the project including:
- Engineering & construction
- Environment
- Utilities
- Development boundary

**Map book 2 - land use plans**
The land use plans show the areas we may need to purchase or require temporary rights to use, in order to construct and operate the project.

Temporary works
Temporary use of land is needed for the project’s construction works and to provide sufficient space to do so safely. The plans show land that may be required temporarily for the main construction compounds at the tunnel entrances north and south of the River Thames and at various locations along the route. We will also require rights over land to divert utilities such as gas pipelines, electricity cables and water pipes. Any land that is only required temporarily will be returned to its previous use wherever possible once construction has been completed.

Compensation land
Compensation land may include environmental protection measures such as habitat creation and for flood compensation. This land may also need to be acquired permanently.

**Map book 3 - engineering plans**
This book contains engineering drawings in the following order:
- The plan and profile drawings which detail the vertical and horizontal road alignment
- The junction arrangements showing the proposed layout
- The cross sections throughout the route showing the lanes and earthworks

The plan and profile drawings show the highway details of the route in plan and profile. The drawings are split into two views with the plan on the top and profile underneath.

The profile gives the road level in relation to existing ground at a given chainage*. An exaggerated scale is used in the profile to help show the differences in levels and gradients of the design. The profile also shows where existing roads and public rights of way cross over or under the route.

All levels are given in relation to the ordnance datum level** which might be different on each drawing.

* Chainage measures the distance along the route in metres
** Above Ordnance Datum level (AOD) is a measurement above mean sea level

**Large maps**
Large maps that cover a greater area have also been produced which detail the same information.

These are:
- Environmental constraints – 1 sheet
- Land use – 1 sheet
- Project profile – 1 sheet
- General Arrangements – 5 sheets (larger coverage)
LEGEND - PLAN

Structure

LEGEND - PROFILE

LTC Vertical Alignment
Existing Ground Profile
Structure - Bridge
Structure - Underpass

DATUM = +64.00

NOTES
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2. All dimensions are in metres unless stated otherwise.
3. All levels are in metres relative to the Ordnance Datum.
4. For scheme location refer to Plan and Profile General Plan.
5. Profile uses an exaggerated scale of 1 horizontal : 10 vertical.

PROPOSALS FOR CONSULTATION
LEGEND - PLAN

- LTC Vertical Alignment
- Existing Ground Profile
- Structure - Bridge
- Structure - Underpass

LEGEND - PROFILE

- Proposed Levels
- Natural
- Vertical
- Structure - Bridge
- Structure - Underpass

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DATUM = +79.00

PROFILES

- Proposed Levels
- Natural
- Vertical
- Structure - Bridge
- Structure - Underpass

PROPOSALS FOR CONSULTATION

LOWER THAMES CROSSING
STATUTORY CONSULTATION

PLAN AND PROFILE
SHEET 2
NOTES
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NOTES
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5. Profile uses an exaggerated scale of 1 horizontal : 10 vertical.

LEGEND - PLAN
- Structure

LEGEND - PROFILE
- LTC Vertical Alignment
- Existing Ground Profile

Structure - Bridge
Structure - Underpass

DATUM = +60.00

Proposed Levels

Horizontal
R=2880.0  L=43.5
R=2895.0  L=86.8
R=3000.0  L=69.4
R=3000.0  L=69.4

Vertical
P=1.2%  L=489.48
R=18400.0  L=434.6
R=6000.0  L=246.1
R=10650.0  L=527.6

Ground Levels

Change

PROPOSALS FOR CONSULTATION
LOWER THAMES CROSSING STATUTORY CONSULTATION
PLANN AND PROFILE SHEET 4
Thong Lane

Proposed Levels

Horizontal

Vertical

Ground Levels

Chainage

LEGEND - PLAN

Structure

LEGEND - PROFILE

LTC Vertical Alignment

Existing Ground Profile

Structure - Bridge

Structure - Underpass

DATUM = +30.00

Thong Lane

Public Footpath NG7 diverted

Thong Lane green bridge

Removable barrier for crossover

Thong

NOTES

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5. Profile uses an exaggerated scale of 1 horizontal : 10 vertical

PROPOSALS FOR CONSULTATION
NOTES

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4. For scheme location refer to Plan and Profile General Plan.
5. Profile uses an exaggerated scale of 1 horizontal : 5 vertical

Removable barrier for emergency purposes.
North Kent Railway and Medway Canal

LEGEND - PLAN
- Structure
- LTC Vertical Alignment
- Existing Ground Profile
- Structure - Bridge
- Structure - Underpass

LEGEND - PROFILE
- LTC northbound tunnel 3 Lanes
- LTC southbound tunnel 3 Lanes

**NOTES**
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5. Profile uses an exaggerated scale of 1 horizontal:10 vertical

**DATUM = -49.00**

**PROPOSALS FOR CONSULTATION**

**PLAN AND PROFILE**

**SHEET 7**
LEGEND - PLAN

- Structure

LEGEND - PROFILE

- LTC Vertical Alignment
- Existing Ground Profile
- Structure - Bridge
- Structure - Underpass

PLAN

Tunnel control building and access
Tunnel Portal at CH 6+477
Removable barrier for emergency purposes
Flood bunding 4m above existing ground level
Retaining walls to tunnel portal

River Thames
MHWS 3.47m

NOTES

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5. Profile uses an exaggerated scale of 1 horizontal : 10 vertical

HORIZONTAL SCALE

VERTICAL SCALE

0 10 20 30 40 50 0 10 20 30 40 50

SCALE 1:250 (A1)
SCALE 1:500 (A3)
SCALE 1:5000 (A3)

SCALE 1:250 (A1)
SCALE 1:500 (A3)
SCALE 1:2500 (P)

DATUM = -44.5

Tunnel

Tunnel Portal at CH 6+477

Flood bunding 4m above existing ground level

Existing water course to be diverted

Removable barrier for emergency purposes

PROPOSALS FOR CONSULTATION

SHEET 8

LOWER THAMES CROSSING
STATUTORY CONSULTATION

0 5 10 15 0 20

0 50 100 150 0 200

0 5 10

0 10 20

0 50 100

0 5 10
Indicative bridleway
BR 58 and Coal Road diversion

Main River to be diverted

Station Road diversion

Tilbury Junction Roundabout

Tilbury Loop Railway

Viaduct over Tilbury Junction and railway

Watercourse to be diverted

Removable barrier for crossover

Flood bunding 4m above existing ground level

Flood bunding 6-4m above existing ground level

Access to tunnel control building

Access to depot

Watercourse to be diverted

Road service and access road

Flood bunding 6-4m above existing ground level

Tilbury Junction Roundabout

Tilbury Loop Railway

Viaduct

Viaduct

Low Street Lane diverted

NOTES
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3. All levels are in metres relative to the Ordnance Datum.
4. For scheme location refer to Plan and Profile General Plan.
5. Profile uses an exaggerated scale of 1 horizontal : 10 vertical.
LEGEND - PLAN
<table>
<thead>
<tr>
<th>Line Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structure</td>
<td>Muckingford Road structure</td>
</tr>
<tr>
<td>EA</td>
<td>Emergency Area</td>
</tr>
</tbody>
</table>

LEGEND - PROFILE
<table>
<thead>
<tr>
<th>Line Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LTC Vertical Align</td>
<td>Existing Ground Profile</td>
</tr>
<tr>
<td>Structure - Bridge</td>
<td>False cutting 2m above LTC</td>
</tr>
<tr>
<td>Structure - Underpass</td>
<td>False cutting 2m above LTC</td>
</tr>
</tbody>
</table>

NOTES
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5. Profile uses an exaggerated scale of 1 horizontal : 10 vertical.

DATUM = -10.0

Profile Sheet

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PLAN AND PROFILE SHEET 10
NOTES

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3. All levels are in metres relative to the Ordnance Datum.
4. For scheme location refer to Plan and Profile General Plan.
5. Profile uses an exaggerated scale of 1 horizontal : 10 vertical.

LEGEND - PLAN
- Structure
- EA Emergency Area

LEGEND - PROFILE
- LTC Vertical Alignment
- Existing Ground Profile
- Structure - Bridge
- Structure - Underpass

PLAN

PROFILE

SCALE 1:250 (A1)
SCALE 1:500 (A3)
SCALE 1:5000 (A3)

DATUM = -10.0

High House Lane diverted through Brentwood Road
False cutting 4m above LTC
High House Lane connects with Brentwood Road at new junction to maintain property access

LEGEND - PLAN
- Structure
- EA Emergency Area

LEGEND - PROFILE
- LTC Vertical Alignment
- Existing Ground Profile
- Structure - Bridge
- Structure - Underpass

PLAN

PROFILE

SCALE 1:250 (A1)
SCALE 1:500 (A3)
SCALE 1:5000 (A3)

DATUM = -10.0

High House Lane diverted through Brentwood Road
False cutting 4m above LTC
High House Lane connects with Brentwood Road at new junction to maintain property access

NOTES

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3. All levels are in metres relative to the Ordnance Datum.
4. For scheme location refer to Plan and Profile General Plan.
5. Profile uses an exaggerated scale of 1 horizontal : 10 vertical.
Proposed Levels

Horizontal

Vertical

Ground Levels

Chainage

| CH 3+000 | 33.5 |
| CH 3+500 | 33.7 |
| CH 4+000 | 3+250 |
| CH 4+500 | 3+750 |
| CH 4+700 | 4+250 |

L = 825.298m

L = 539.793m

L = 106.173m

L = 170.000m

R = -1640.000m

P = -5.0%

L = 1051.714m

R = -11700.000m

L = 1170.001m

NOTES

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3. All levels are in metres relative to the Ordnance Datum.
4. For scheme location refer to Plan and Profile General Plan.
5. Profile uses an exaggerated scale of 1 horizontal:15 vertical.

LEGEND - PLAN

Structure

Emergency Area

LEGEND - PROFILE

LTC Vertical Alignment

Existing Ground Profile

Structure - Bridge

Structure - Underpass

MATCH LINE

MATCH LINE

DATUM = 24.00

PROPOSALS FOR CONSULTATION

LOWER THAMES CROSSING

STATUTORY CONSULTATION
LEGEND - PLAN
- Structure
- Emergency Area

LEGEND - PROFILE
- LTC Vertical Alignment
- Existing Ground Profile
- Structure - Bridge
- Structure - Underpass

NOTES
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2. All dimensions are in metres unless stated otherwise.
3. All levels are in metres relative to the Ordnance Datum.
4. For scheme location refer to Plan and Profile General Plan.
5. Profile uses an exaggerated scale of 1 horizontal : 10 vertical

DATUM = +5.00

PLAN

PROFILE

PROPOSALS FOR CONSULTATION
PLAN AND PROFILE
SHEET 14
NOTES
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3. All levels are in metres relative to the Ordnance Datum.
4. For scheme location refer to Plan and Profile General Plan.
5. Profile uses an exaggerated scale of 1 horizontal : 10 vertical.

LEGEND - PLAN
- Structure
- Emergency Area

LEGEND - PROFILE
- LTC Vertical Alignment
- Existing Ground Profile
- Structure - Bridge
- Structure - Underpass

DATUM = -6.00

PROPOSALS FOR CONSULTATION
LOWER THAMES CROSSING
STATUTORY CONSULTATION

PLAN AND PROFILE
SHEET 15
NOTES
1. Do not scale from this drawing.
2. All dimensions are in metres unless stated otherwise.
3. All levels are in metres relative to the Ordnance Datum.
4. For scheme location refer to Plan and Profile General Plan.
5. Profile uses an exaggerated scale of 1 horizontal : 10 vertical.

LEGEND - PLAN
- Structure
- EA Emergency Area

LEGEND - PROFILE
- LTC Vertical Alignment
- Existing Ground Profile
- Structure - Bridge
- Structure - Underpass

PLAN

PROFILE

DATUM = +5.00
Proposed Levels
Horizontal
Vertical
Ground Levels
Chainage

Indicative Footpath FP 151
Ockendon Road
M25

16.6
14.7
16.4
R=1020.0
L=210.2
A=349.9
R=720.0
A=349.9
R=25000.0
L=490.2
P=-1.5%
L=291.3
R=10000.0
L=96.4
L=1004.1
R

LEGEND - PLAN
Structure
Emergency Area

LEGEND - PROFILE
LTC Vertical Alignment
Existing Ground Profile
Structure - Bridge
Structure - Underpass

Match Line

DATUM = 0.00
Proposed Levels

NOTES
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4. For scheme location refer to Plan and Profile General Plan.
5. Profile uses an exaggerated scale of 1 horizontal:10 vertical.

Lower Thames Crossing
Statutory Consultation
Proposals for Consultation
Plan and Profile
Sheet 18

Scale: 1:250 (A1)
Scale: 1:500 (A3)
Scale: 1:5000 (A3)
Metres

Ordnance Survey 100030649
NOTES
1. Do not scale from this drawing.
2. All distances are in metres unless stated otherwise.
3. All levels are in metres relative to the Ordnance Datum.
4. For scheme location refer to Plan and Profile General Plan.
5. Profile uses an exaggerated scale of 1 horizontal : 10 vertical.
LTC southbound splits to join A2 westbound or M2 eastbound

LTC southbound access to local network

A2 eastbound traffic exits to join LTC northbound

A2 parallel road to A289 and Rochester

M2 eastbound

LTC joins A2 eastbound

Thong

LTC joins M2 eastbound

LTC traffic to A2 eastbound parallel road or M2 eastbound

A2 westbound traffic splits to continue on existing A2 alignment or join LTC northbound

HS1

LTC southbound access to local network

A2 parallel road joins onto A2 westbound

A2 westbound traffic joins LTC northbound

M2 access to local network

Local road linking Brewers road and Gravesend East junction.

LTC northbound

A2 parallel road to A289 and Rochester

M2 eastbound

A2 to M25 and Dartford

LTC southbound traffic joins A2 westbound

A2 to M25 and Dartford

LTC southbound to A2 and M2 eastbound

LTC joins A2 eastbound

LTC joins M2 eastbound

LTC southbound

A2 parallel road to A289 and Rochester

M2 eastbound

A2 westbound traffic joins LTC northbound

M2 access to local network

Local road linking Brewers road and Gravesend East junction.

LTC northbound

A2 parallel road to A289 and Rochester

M2 eastbound

A2 westbound traffic joins LTC northbound

M2 access to local network

Local road linking Brewers road and Gravesend East junction.

LTC northbound

A2 parallel road to A289 and Rochester

M2 eastbound

A2 westbound traffic joins LTC northbound

M2 access to local network

Local road linking Brewers road and Gravesend East junction.

LTC northbound

A2 parallel road to A289 and Rochester

M2 eastbound

A2 westbound traffic joins LTC northbound

M2 access to local network

Local road linking Brewers road and Gravesend East junction.

LTC northbound

A2 parallel road to A289 and Rochester

M2 eastbound

A2 westbound traffic joins LTC northbound

M2 access to local network

Local road linking Brewers road and Gravesend East junction.

LTC northbound

A2 parallel road to A289 and Rochester

M2 eastbound

A2 westbound traffic joins LTC northbound

M2 access to local network

Local road linking Brewers road and Gravesend East junction.

LTC northbound

A2 parallel road to A289 and Rochester

M2 eastbound

A2 westbound traffic joins LTC northbound

M2 access to local network

Local road linking Brewers road and Gravesend East junction.

LTC northbound

A2 parallel road to A289 and Rochester

M2 eastbound

A2 westbound traffic joins LTC northbound

M2 access to local network

Local road linking Brewers road and Gravesend East junction.

LTC northbound

A2 parallel road to A289 and Rochester

M2 eastbound

A2 westbound traffic joins LTC northbound

M2 access to local network

Local road linking Brewers road and Gravesend East junction.

LTC northbound

A2 parallel road to A289 and Rochester

M2 eastbound

A2 westbound traffic joins LTC northbound

M2 access to local network

Local road linking Brewers road and Gravesend East junction.
Removable barrier
for crossover
Retaining walls
To tunnel portal
Flood protection for tunnel
Northbound exit to LTC
To Kent
Tunnel Portal
LTC in tunnel
Removable barrier
for emergency tunnel access
Roundabout circulatory 2 lanes
Flood protection for junction
Northbound exit to rest and service area
Southbound entry to LTC
Tunnel control building access road
Maintenance depot and access
Access to rest and service area
Station Road stopped up, access to properties maintained
Rest and Service Area
Station road realigned

LEGEND:
- Structures
- Removable barrier


Drawing title
Client
Project
LOWER THAMES CROSSING
STATUTORY CONSULTATION
PROPOSALS FOR CONSULTATION
TILBURY JUNCTION

SCALE 1:2500 (A1)
SCALE 1:5000 (A3)
METRES
MATCH LINE
MATCH LINE
MATCH LINE

M25 dual 4 lanes
LTC southbound 3 lanes
LTC northbound 3 lanes

M25 northbound to Junction 29
LTC northbound to Junction 29

LTC joins M25 northbound

Ockendon road realigned, existing bridge to be demolished

LTC traffic exits M25 southbound
LTC southbound 3 lanes

To M25 J30
To M25 J29

PROPOSALS FOR CONSULTATION
M25 JUNCTION

LEGEND:

Structures

Public right of way diversion


Ordnance Survey 100030649

SCALE 1:2500 (A1)
SCALE 1:5000 (A3)
METRES
LTC northbound and M25 northbound traffic join on connector road to access M25 Junction 29 (A127)

Existing M25 northbound retained as 4 lanes with hard shoulder

2 lane J29 connector road

M25 southbound widened to 5 lanes with hard shoulder

To LTC and M25 J30

To M25 J29
TYPICAL CROSS SECTION IN CHALK CUTTING

LEGEND:
- Proposed ground level
- Existing ground level

NOTES
1. All dimensions are in metres unless stated otherwise.
1. All dimensions are in metres unless stated otherwise.
TYPICAL CROSS SECTION AT M25 WITH LINK ROAD

NOTES

1. All dimensions are in metres unless stated otherwise.
TYPICAL CROSS SECTION ALONG A13

LEGEND:
- Proposed ground level
- Existing ground level

NOTES
1. All dimensions are in metres unless stated otherwise.

Scale 1:250 (A3)
Scale 1:125 (A1)
METRES

LOWER THAMES CROSSING
STATUTORY CONSULTATION

PROPOSALS FOR CONSULTATION
CROSS SECTION A13
These plans show current project proposals and are published for the purposes of consultation on the project. The proposals are therefore subject to change as a result of responses to the consultation, and as result of further design development.