

Lower Thames Crossing

6.3 Environmental Statement Appendices

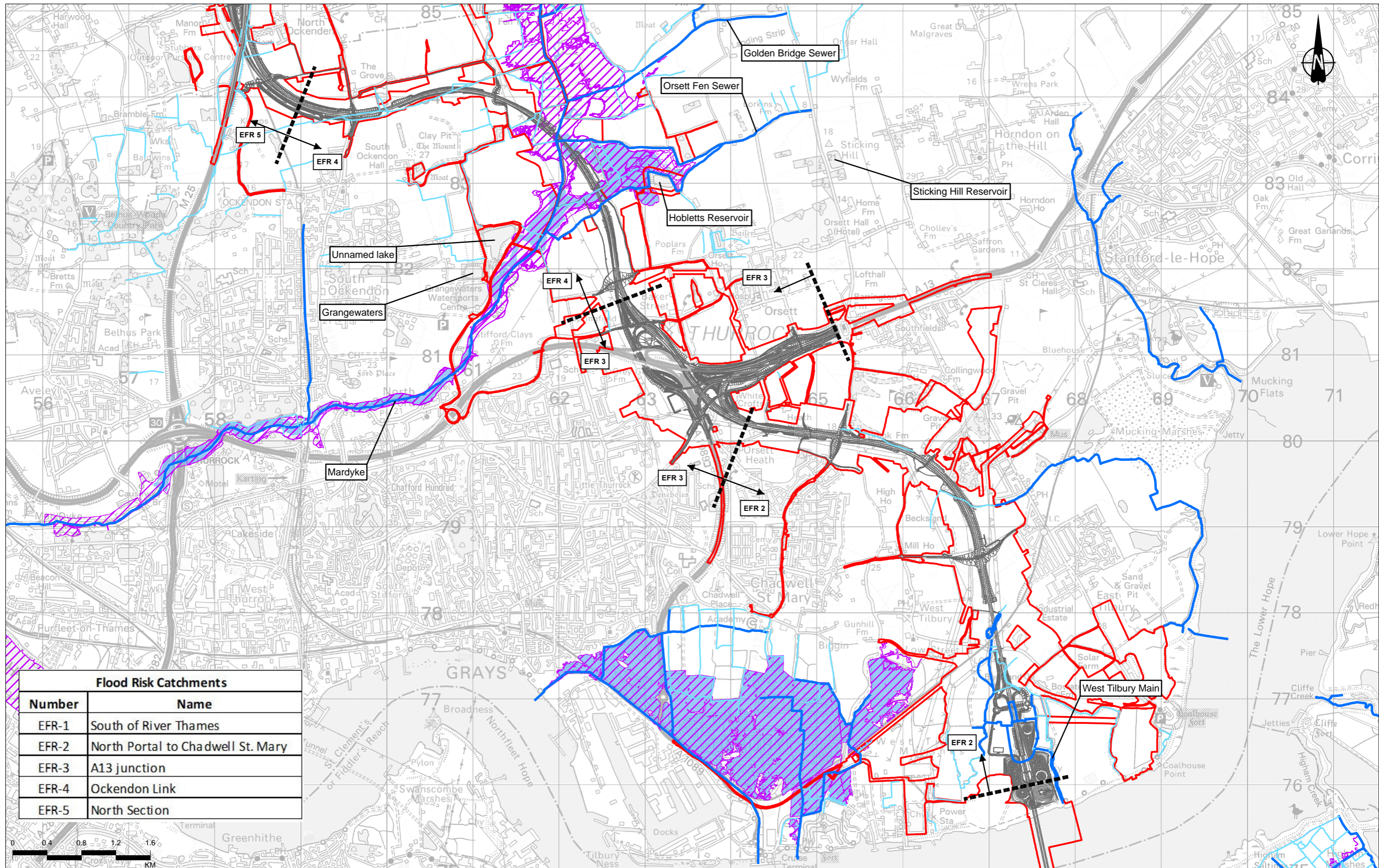
Appendix 14.6 - Flood Risk Assessment - Part 9 Annex C

APFP Regulation 5(2)(a)
Infrastructure Planning
(Applications: Prescribed Forms and Procedure)
Regulations 2009
Volume 6

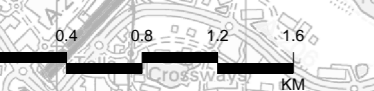
DATE: October 2022

Planning Inspectorate Scheme Ref: TR010032
Application Document Ref: TR010032/APP/6.3

VERSION: 1.0



Flood Risk Catchments	
Number	Name
EFR-1	South of River Thames
EFR-2	North Portal to Chadwell St. Mary
EFR-3	A13 junction
EFR-4	Ockendon Link
EFR-5	North Section

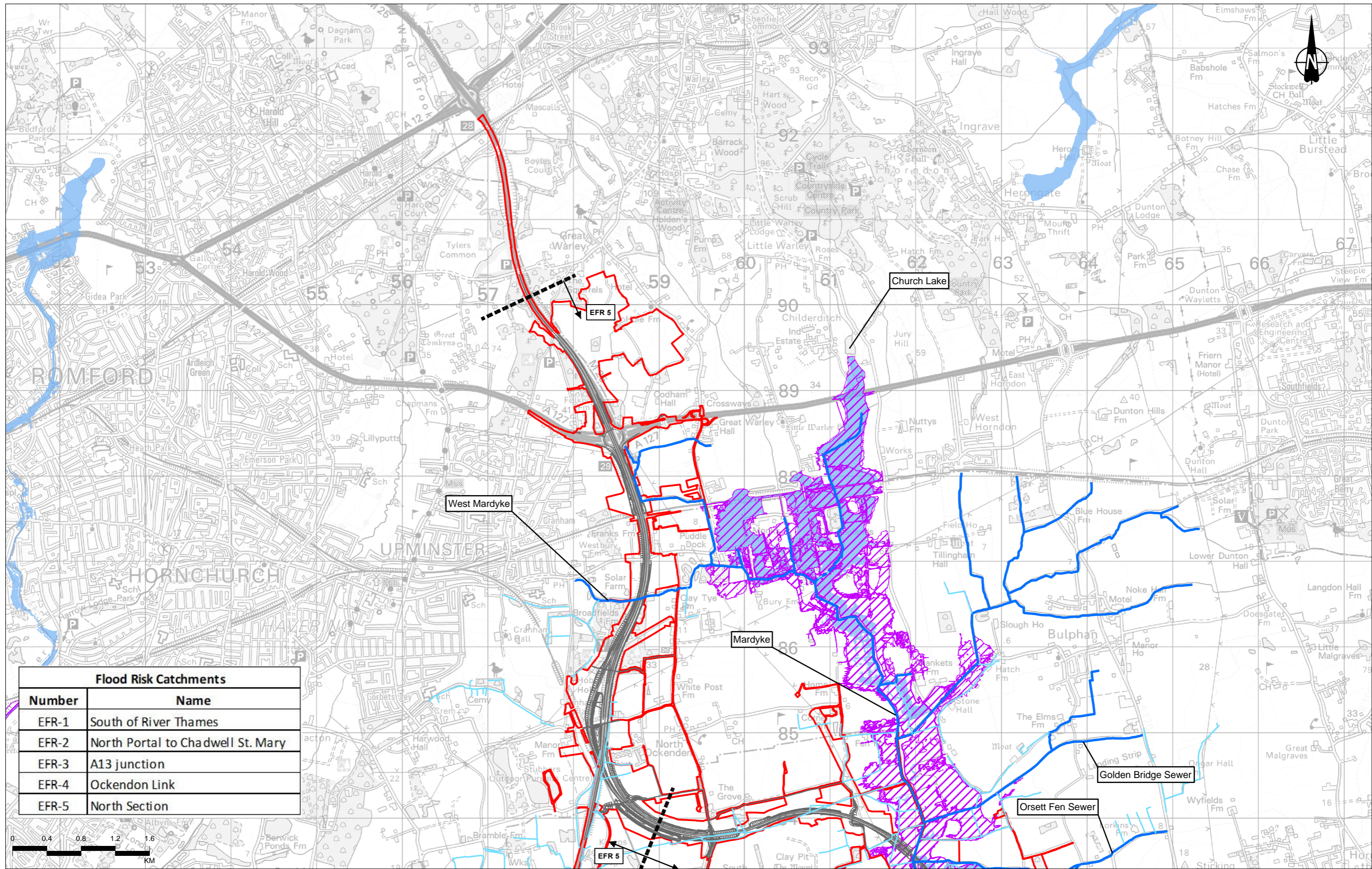


Legend	
	Route alignment and earthworks
	Ordinary watercourse
	Order Limits
	Maximum extent of flooding from reservoirs when river levels are normal
	Maximum extent of flooding from reservoirs when there is also flooding from rivers
	Flood risk catchment
	Main river

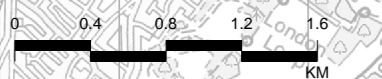
P01	S8	20/10/2022	DCO Application	SW	IF	BF
Rev	Status	Rev. Date	Purpose of revision	Drawn	Chkd	Apprvd

	Client	DCO APPLICATION	Original Size	A3	Revision	P01
	Application Document Number	TR010032/APP/6.3	Scale	1:40,000		
	Drawing Title	Flood Risk Assessment Flood Risk from Reservoirs Page 2 of 3				
	Drawing Number	HE540039-CJV-EFR-SZP_GNZZZZZZZ-DR-LF-00175				

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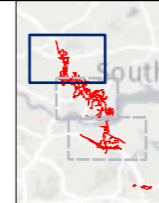


Flood Risk Catchments	
Number	Name
EFR-1	South of River Thames
EFR-2	North Portal to Chadwell St. Mary
EFR-3	A13 junction
EFR-4	Ockendon Link
EFR-5	North Section



P01	S8	20/10/2022	DCO Application	SW	IF	BF
Rev	Status	Rev. Date	Purpose of revision	Drawn	Chkd	Apprvd

Legend	
	Route alignment and earthworks
	Order Limits
	Flood risk catchment
	Main river
	Ordinary watercourse
	Maximum extent of flooding from reservoirs when river levels are normal
	Maximum extent of flooding from reservoirs when there is also flooding from rivers

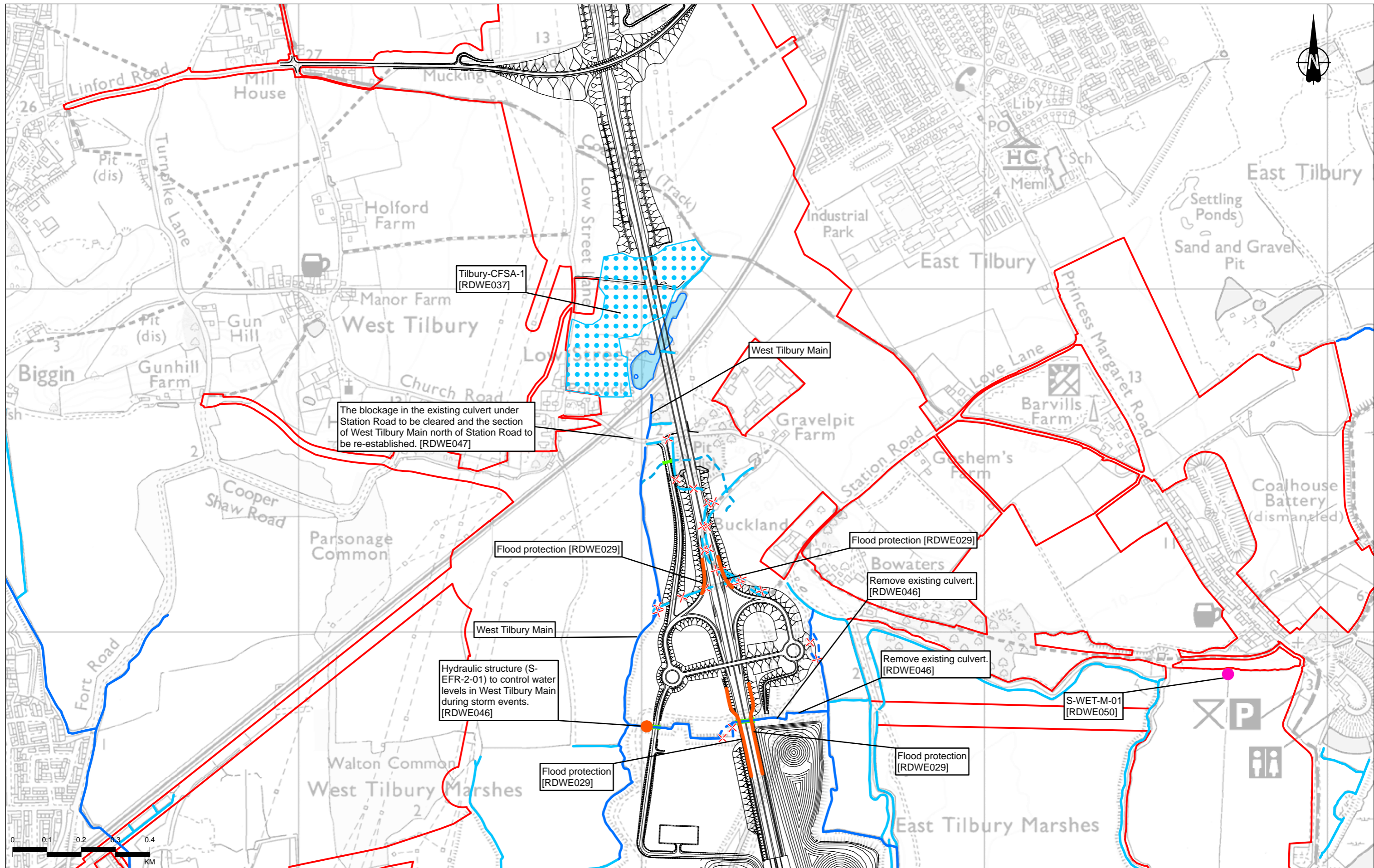


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Project
LOWER THAMES CROSSING

Status	DCO APPLICATION	Original Size	A3	Revision	P01
Application Document Number	TR010032/APP/6.3	Scale	1:40,000		
Drawing Title	Flood Risk Assessment Flood Risk from Reservoirs Page 3 of 3				
Drawing Number	HE540039-CJV-EFR-SZP_GNZZZZZZZ-DR-LF-00176				

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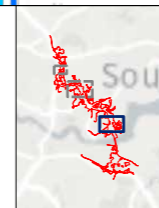


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Rev	Status	Rev. Date	Purpose of revision	Drawn	Chkd	Apprvd

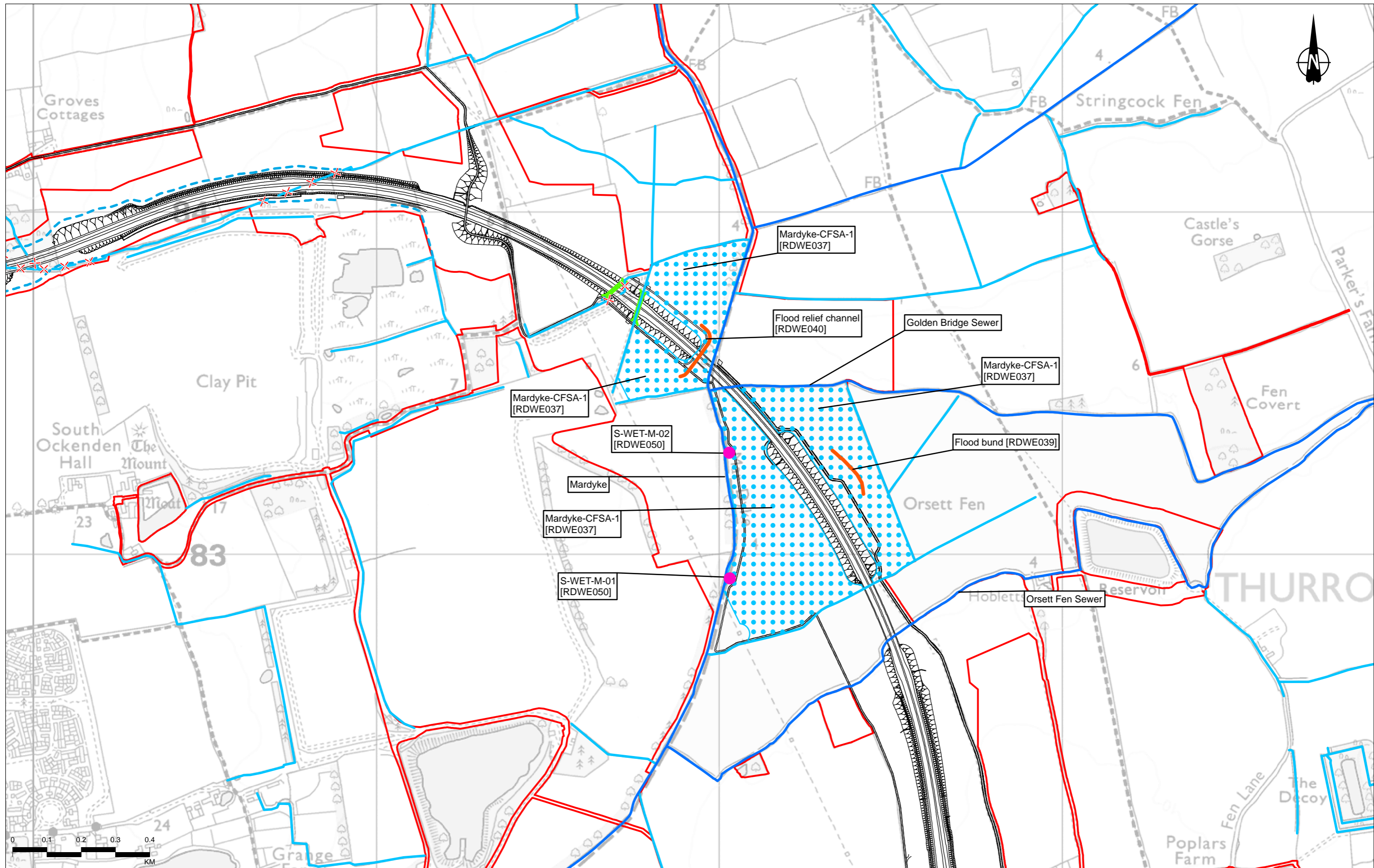
Notes:
 1. The CFSAs shall allow flood water to freely flow into and out of them.
 2. There shall be no isolated depressions in the CFSAs.
 3. The CFSAs need to be formed within, or adjacent to, Flood Zone 2 or Flood Zone 3.
 4. The CFSAs shall be formed within the hatched areas.
 5. To be read in conjunction with Register of Environmental Actions and Commitments (REAC) (Environmental Statement Appendix 2.2, Application Document 6.3).

Order Limits	Proposed culvert
Route alignment and earthworks	Ordinary watercourse/ditch diversion
Main river abandoned	Proposed hydraulic structure
Main river (existing)	Proposed flood alleviation measure - hydraulic structure
Ordinary watercourse/ditch abandoned	Proposed flood alleviation measure
Ordinary watercourse/ditch (existing)	Compensatory flood storage area (CFSAs)
Main river diversion	



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Status	DCO APPLICATION	Original Size	A3	Revision	P01
Application Document Number	TR010032/APP/6.3	Scale	1:10,000		
Drawing Title	Flood Risk Assessment Flood Alleviation Measures Sheet 1 of 3				
Drawing Number	HE540039-CJV-EFR-SZP_GNZZZZZZ-DR-LF-00180				



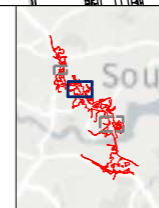
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Rev	Status	Rev. Date	Purpose of revision	Drawn	Checked	Approved

Notes:
 1. The CFSAs shall allow flood water to freely flow into and out of them.
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 3. The CFSAs need to be formed within, or adjacent to, Flood Zone 2 or Flood Zone 3.
 4. The CFSAs shall be formed within the hatched areas.
 5. To be read in conjunction with Register of Environmental Actions and Commitments (REAC) (Environmental Statement Appendix 2.2, Application Document 6.3).

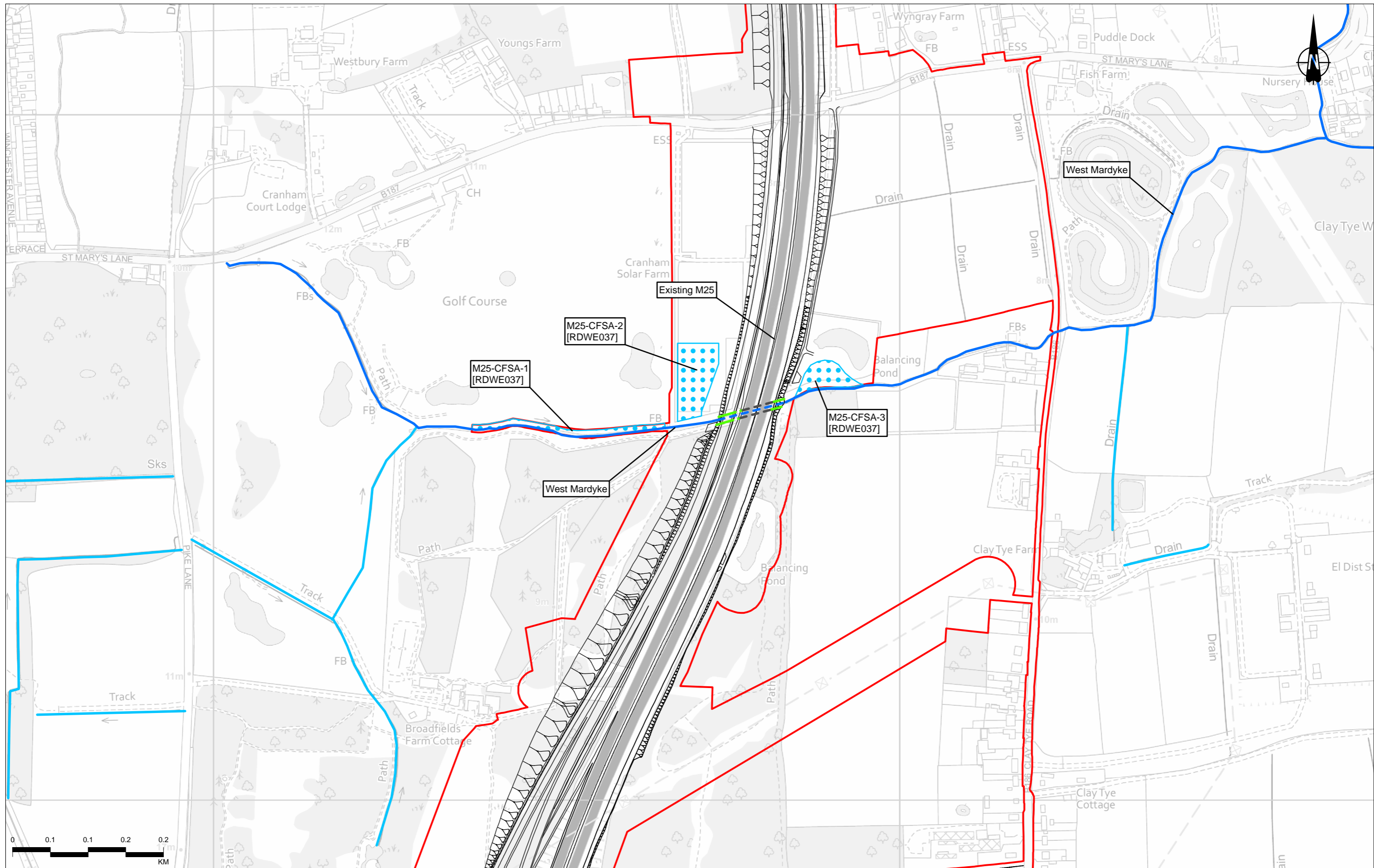
Legend

Order Limits	Proposed culvert
Route alignment and earthworks	Ordinary watercourse/ditch diversion
Main river (existing)	Proposed hydraulic structure
Ordinary watercourse/ditch abandoned	Proposed flood alleviation measure
Ordinary watercourse/ditch (existing)	Compensatory flood storage area (CFSAs)



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Status	DCO APPLICATION	Original Size	A3	Revision	P01
Application Document Number	TR010032/APP/6.3	Scale	1:10,000		
Drawing Title	Flood Risk Assessment Flood Alleviation Measures Sheet 2 of 3				
Drawing Number	HE540039-CJV-EFR-SZP_GNZZZZZZZ-DR-LF-00181				



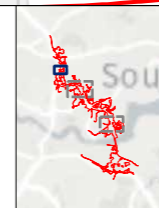
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Rev	Status	Rev. Date	Purpose of revision	Drawn	Chkd	Apprvd

Notes:
 1. The CFSAs shall allow flood water to freely flow into and out of them.
 2. There shall be no isolated depressions in the CFSAs.
 3. The CFSAs need to be formed within, or adjacent to, Flood Zone 2 or Flood Zone 3.
 4. The CFSAs shall be formed within the hatched areas.
 5. To be read in conjunction with Register of Environmental Actions and Commitments (REAC) (Environmental Statement Appendix 2.2, Application Document 6.3).

Legend

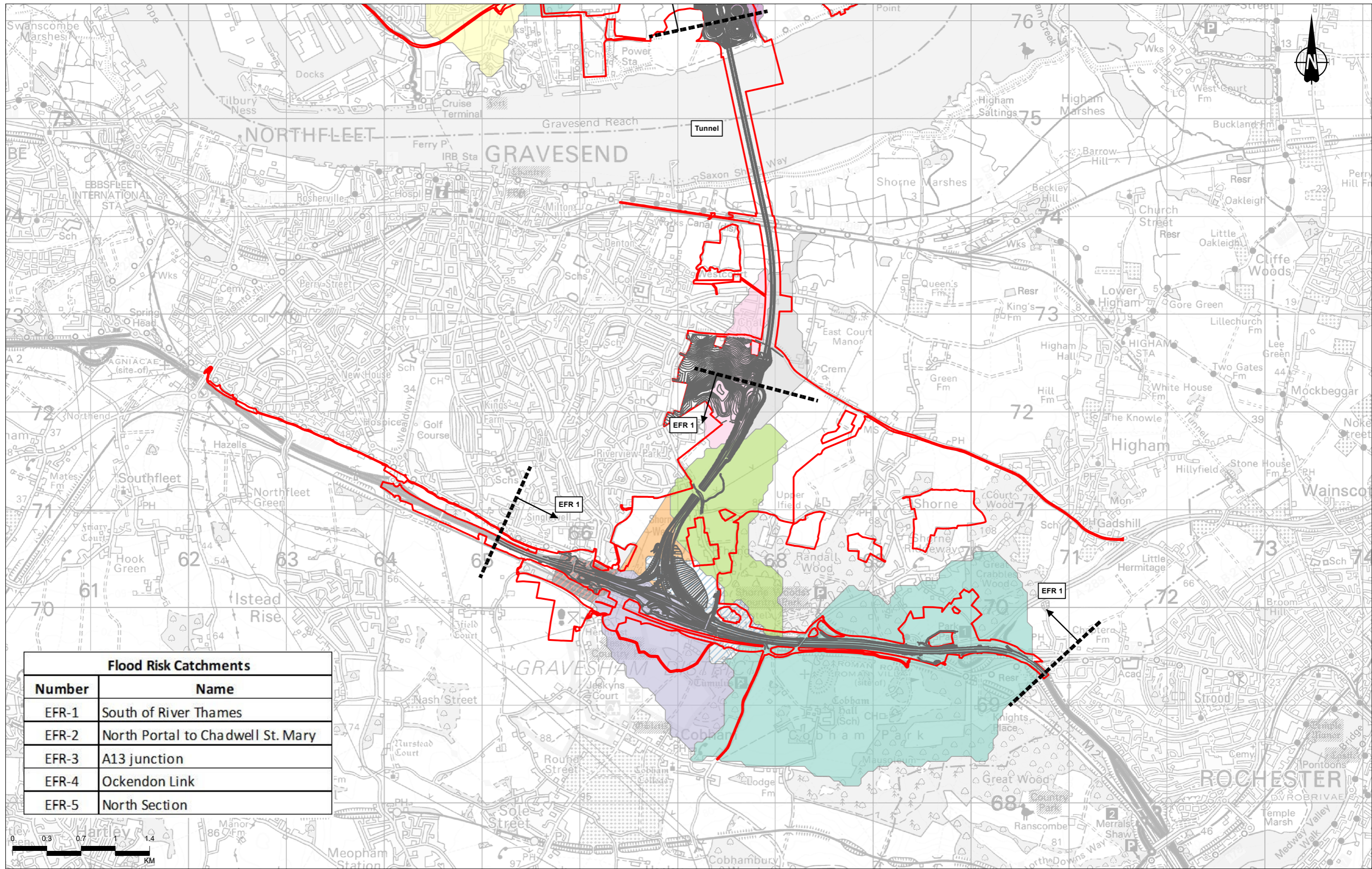
	Order Limits		Ordinary watercourse/ditch (existing)
	Route alignment and earthworks		Main river diversion
	Culvert		Proposed culvert
	Main river (existing)		Compensatory flood storage area (CFSA)



Client: national highways

Project: LOWER THAMES CROSSING

Status	DCO APPLICATION	Original Size	A3	Revision	P01
Application Document Number	TR010032/APP/6.3	Scale	1:5,000		
Drawing Title	Flood Risk Assessment Flood Alleviation Measures Sheet 3 of 3				
Drawing Number	HE540039-CJV-EFR-SZP_GNZZZZZZZ-DR-LF-00182				



Flood Risk Catchments	
Number	Name
EFR-1	South of River Thames
EFR-2	North Portal to Chadwell St. Mary
EFR-3	A13 junction
EFR-4	Ockendon Link
EFR-5	North Section



Legend					
	Order Limits		Catchment 19		Catchment 4
	Route alignment and earthworks		Catchment 2		Catchment 5
	Flood risk catchment		Catchment 2 - Allocated		Catchment 6
	Catchment 1		Catchment 3		Catchment 7
	Catchment 18 - Allocated		Catchment 3 - Allocated		

Notes:
 1. The Flood Estimation Handbook (FEH) presents hydrological, physical and climatological characteristics for discrete Catchments.
 2. Some parts of the Project do not lie in an FEH Catchment. For the purposes of the Project, the catchment characteristics of an unassigned area are assumed to be same as one of the adjoining catchments. The unassigned areas and the catchment they have been allocated to is shown in the Legend.

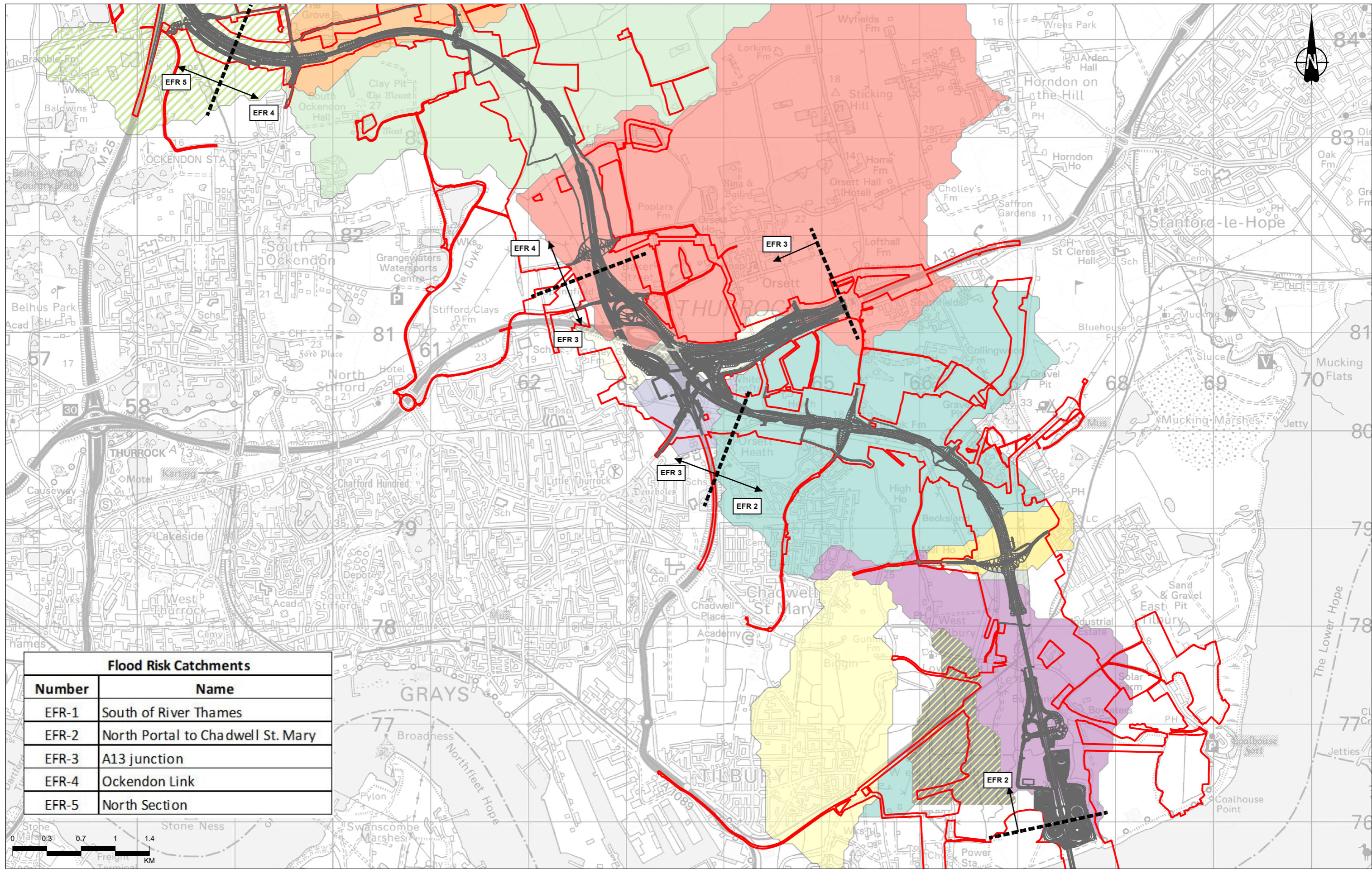


Client: national highways
 Project: LOWER THAMES CROSSING

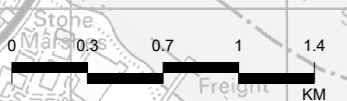
Status	DCO APPLICATION	Original Size	A3	Revision	P01
Application Document Number	TR010032/APP/6.3	Scale	1:35,000		
Drawing Title	Flood Risk Assessment FEH Catchments - Sheet 1 of 3				
Drawing Number	HE540039-CJV-EFR-SZP_GNZZZZZZ-DR-LF-00191				

P01	S8	18/10/2022	DCO Application	SW	IF	BF
Rev	Status	Rev. Date	Purpose of revision	Drawn	Chkd	Apprvd

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Flood Risk Catchments	
Number	Name
EFR-1	South of River Thames
EFR-2	North Portal to Chadwell St. Mary
EFR-3	A13 junction
EFR-4	Ockendon Link
EFR-5	North Section



Rev	Status	Rev. Date	Purpose of revision	Drawn	Chkd	Apprvd
P01	S8	18/10/2022	DCO Application	SW	IF	BF

Legend			
	Order Limits		Catchment 12
	Route alignment and earthworks		Catchment 13
	Flood risk catchment		Catchment 14
	Catchment 10		Catchment 7
	Catchment 10 - Allocated		Catchment 7 - Allocated
	Catchment 11		Catchment 8
	Catchment 12		Catchment 9
	Catchment 13		Catchment 18
	Catchment 14		Catchment 18 - Allocated
	Catchment 17		
	Catchment 18		
	Catchment 19		

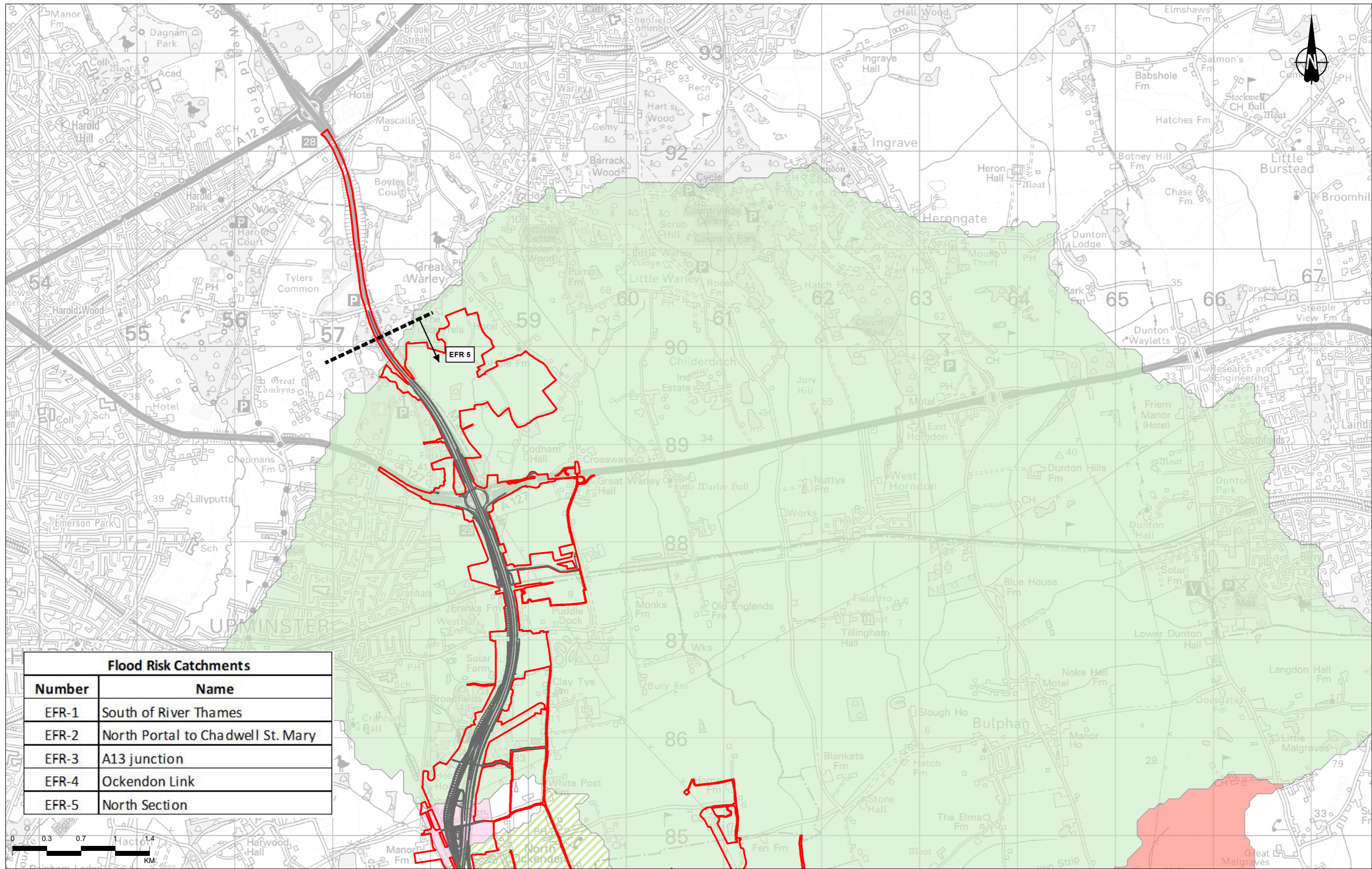
Notes:
 1. The Flood Estimation Handbook (FEH) presents hydrological, physical and climatological characteristics for discrete Catchments.
 2. Some parts of the Project do not lie in an FEH Catchment. For the purposes of the Project, the catchment characteristics of an unassigned area are assumed to be same as one of the adjoining catchments. The unassigned areas and the catchment they have been allocated to is shown in the Legend.



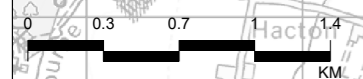
Client: national highways
 Project: LOWER THAMES CROSSING

Status	DCO APPLICATION	Original Size	A3	Revision	P01
Application Document Number	TR010032/APP/6.3	Scale	1:35,000		
Drawing Title	Flood Risk Assessment FEH Catchments - Sheet 2 of 3				
Drawing Number	HE540039-CJV-EFR-SZP_GNZZZZZZ-DR-LF-00192				

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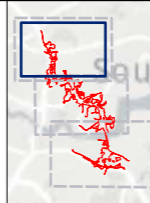
Flood Risk Catchments	
Number	Name
EFR-1	South of River Thames
EFR-2	North Portal to Chadwell St. Mary
EFR-3	A13 junction
EFR-4	Ockendon Link
EFR-5	North Section



Rev	Status	Rev. Date	Purpose of revision	Drawn	Chkd	Apprvd
P01	S8	18/10/2022	DCO Application	SW	IF	BF

Legend	
	Order Limits
	Route alignment and earthworks
	Flood risk catchment
	Catchment 11
	Catchment 14
	Catchment 14 - Allocated
	Catchment 15
	Catchment 16
	Catchment 17

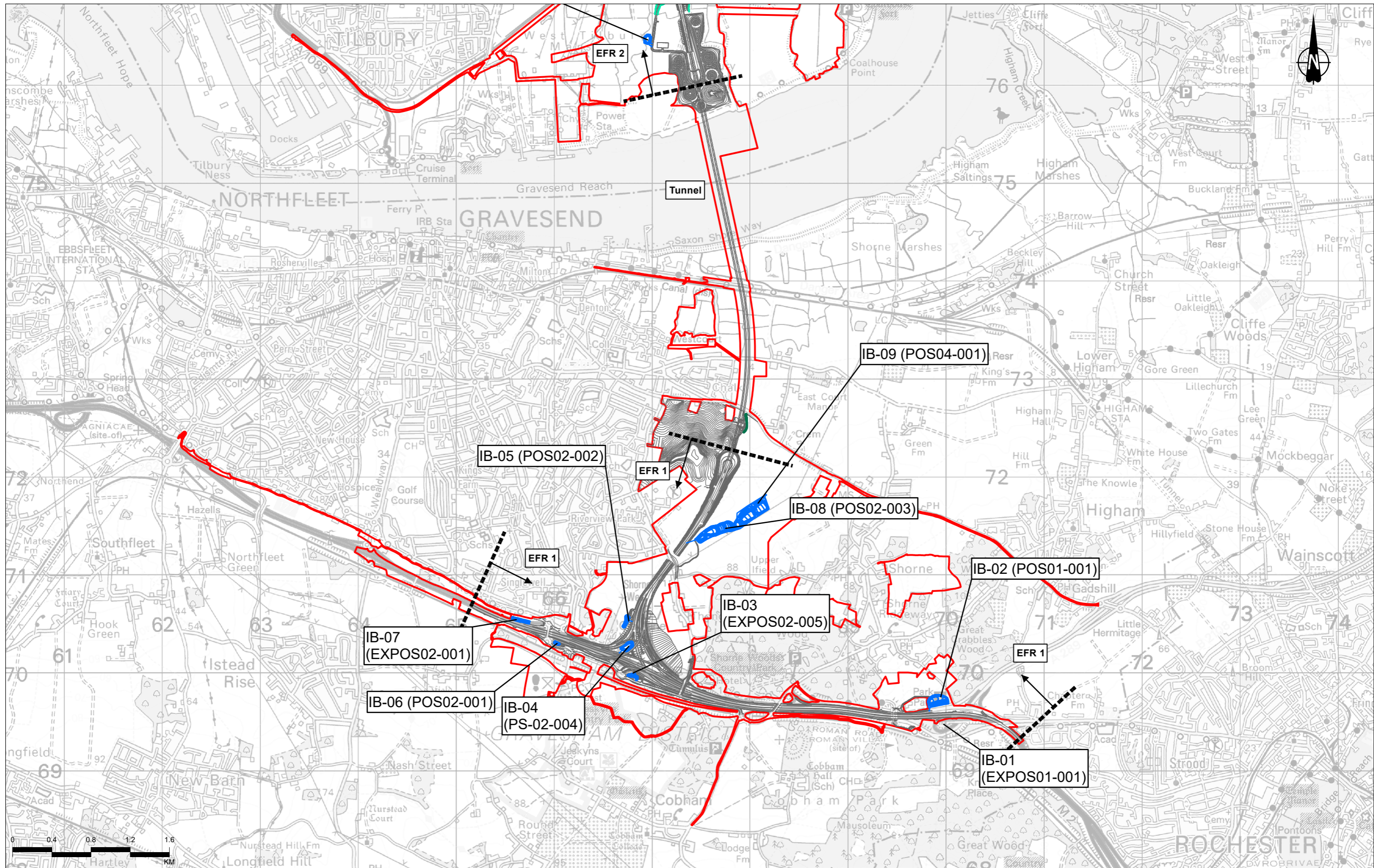
Notes:
 1. The Flood Estimation Handbook (FEH) presents hydrological, physical and climatological characteristics for discrete Catchments.
 2. Some parts of the Project do not lie in an FEH Catchment. For the purposes of the Project, the catchment characteristics of an unassigned area are assumed to be same as one of the adjoining catchments. The unassigned areas and the catchment they have been allocated to is shown in the Legend.



Client: **national highways**
 Project: **LOWER THAMES CROSSING**

Status	DCO APPLICATION	Original Size	A3	Revision	P01
Application Document Number	TR010032/APP/6.3	Scale	1:35,000		
Drawing Title	Flood Risk Assessment FEH Catchments - Sheet 3 of 3				
Drawing Number	HE540039-CJV-EFR-SZP_GNZZZZZZ-DR-LF-00193				

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Rev	Status	Rev. Date	Purpose of revision	Drawn	Chkd	Apprvd
P01	S8	25/10/2022	DCO Application	LK	IF	BF

Legend

	Order Limits		Swales
	Route alignment and earthworks		Ditches
	Flood risk catchment		Proposed water storage feature

	Infiltration basin
	Retention pond
	Detention basin

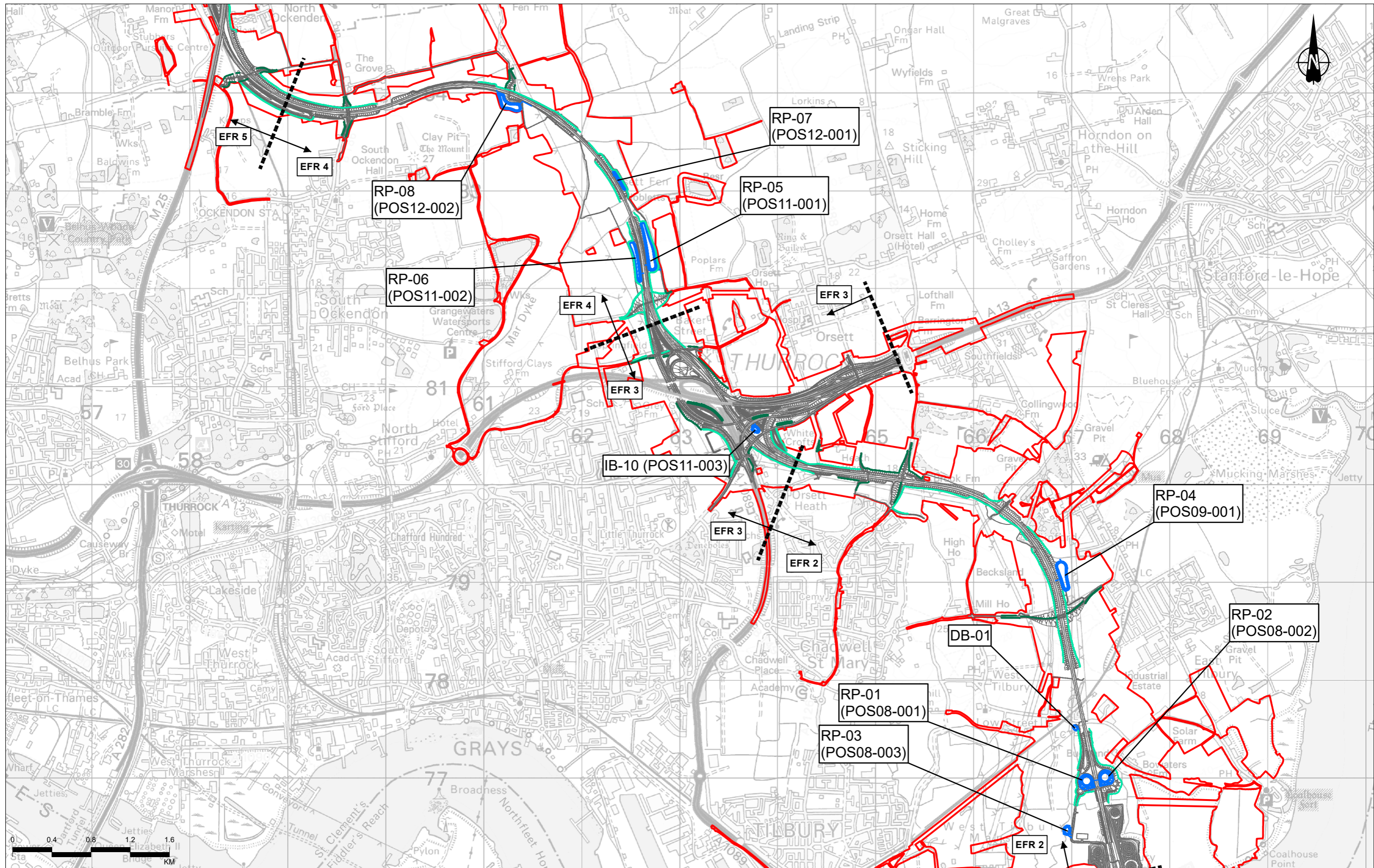
Notes:
 1. Water storage features comprise infiltration basins, retention ponds and detention basins.



Client: **national highways**

Project: **LOWER THAMES CROSSING**

Status	DCO APPLICATION	Original Size	A3	Revision	P01
Application Document Number	TR010032/APP/6.3	Scale	1:35,000		
Drawing Title	Flood Risk Assessment Surface Water Drainage Proposed Assets Sheet 1 of 3				
Drawing Number	HE540039-CJV-EFR-SZP_GNZZZZZZZ-DR-LF-00196				



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Rev	Status	Rev. Date	Purpose of revision	Drawn	Chkd	Apprvd

- Legend**
- Order Limits
 - Route alignment and earthworks
 - Flood risk catchment
 - Swales
 - Ditches
 - Proposed water storage feature

- IB Infiltration basin
- RP Retention pond
- DB Detention basin

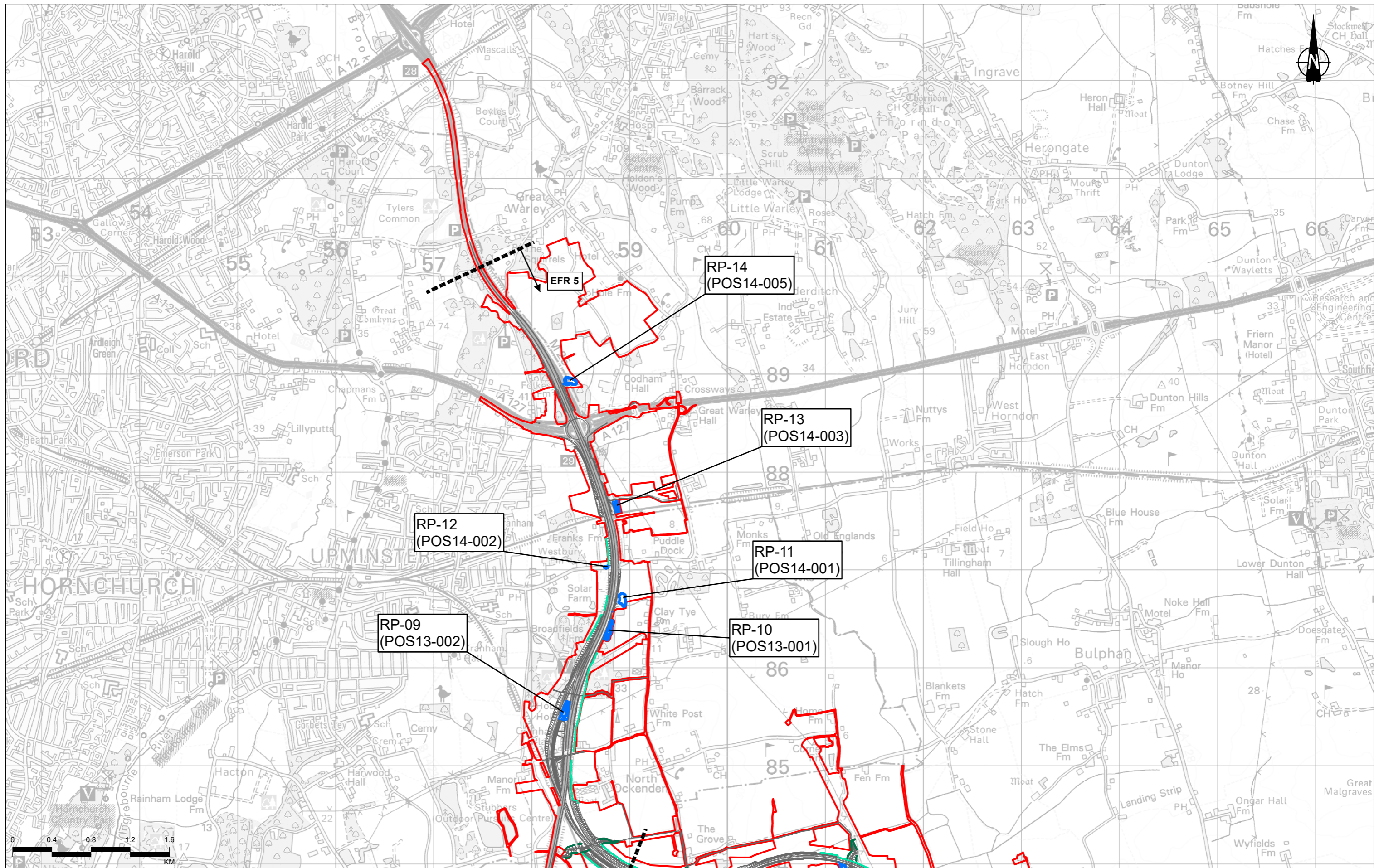
Notes:
1. Water storage features comprise infiltration basins, retention ponds and detention basins.



Client: **national highways**

Project: **LOWER THAMES CROSSING**

Status	DCO APPLICATION	Original Size	A3	Revision	P01
Application Document Number	TR010032/APP/6.3	Scale	1:35,000		
Drawing Title	Flood Risk Assessment Surface Water Drainage Proposed Assets Sheet 2 of 3				
Drawing Number	HE540039-CJV-EFR-SZP_GNZZZZZZZ-DR-LF-00197				



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P01	S8	25/10/2022	DCO Application	LK	IF	BF

- Legend**
- Order Limits
 - Route alignment and earthworks
 - Flood risk catchment
 - Swales
 - Ditches
 - Proposed water storage feature

- IB Infiltration basin
- RP Retention pond
- DB Detention basin

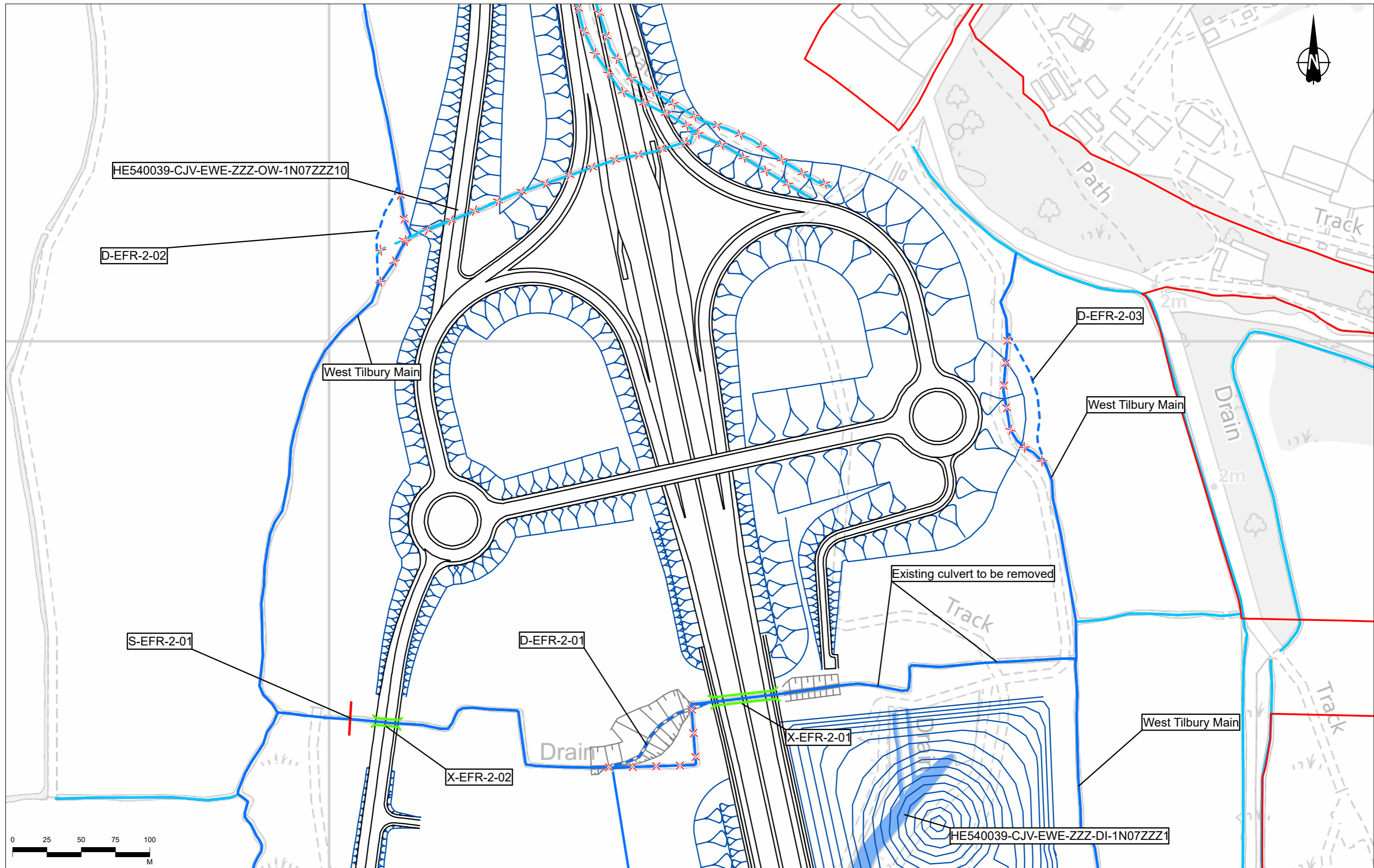
Notes:
1. Water storage features comprise infiltration basins, retention ponds and detention basins.



Client
national highways

Project
LOWER THAMES CROSSING

Status	DCO APPLICATION	Original Size	A3	Revision	P01
Application Document Number	TR010032/APP/6.3	Scale	1:35,000		
Drawing Title	Flood Risk Assessment Surface Water Drainage Proposed Assets Sheet 3 of 3				
Drawing Number	HE540039-CJV-EFR-SZP_GNZZZZZZZ-DR-LF-00198				

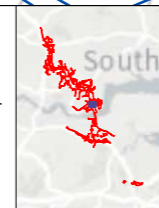


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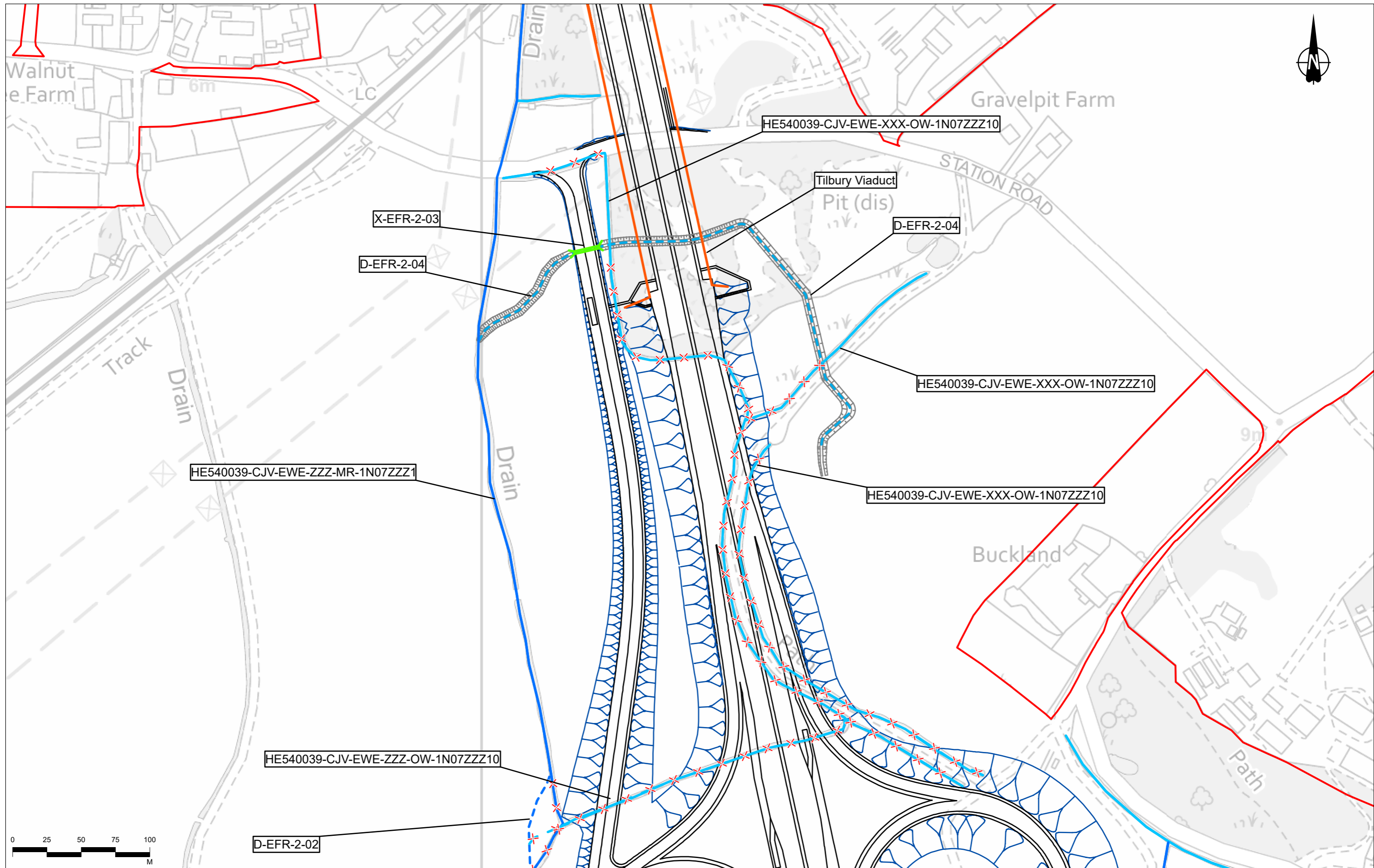
Legend	
	Order Limits
	Route alignment
	Earthworks
	Main river (existing)
	Main river diversion
	Main river abandoned
	Ordinary watercourse/ditch (existing)
	Ordinary watercourse/ditch diversion
	Ordinary watercourse/ditch abandoned
	Watercourse crossing
	Watercourse diversion
	Existing culvert
	Proposed headwall
	Proposed culvert
	Ordinary watercourse diversion in piped culvert
	Culvert manhole
	Proposed flood control device
	Viaducts
	Ponds

Notes:
 1. Culverted watercourses shall be straight. Minor diversions to the watercourse alignment may be required through the culvert and at either end in order to maintain the linearity of the culvert.
 2. Water feature reference numbers have been taken from Water Feature Survey Factual Report included in Appendix 14.2 of the Environmental Statement.
 3. This drawing should be read in conjunction with HE540039-CJV-EFR-SZP_GNZZZZZZZ-DR-LF-00212.



Client: national highways
 Project: LOWER THAMES CROSSING

Status	DCO APPLICATION	Original Size	A3	Revision	P01
Application Document Number	TR010032/APP/6.3	Scale	1:2,500		
Drawing Title	Flood Risk Assessment Watercourse Crossings and Diversions Tilbury Sheet 1 of 2				
Drawing Number	HE540039-CJV-EFR-SZP_GNZZZZZZZ-DR-LF-00211				

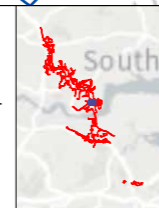


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Rev	Status	Rev. Date	Purpose of revision	Drawn	Chkd	Apprv'd

Legend	
	Order Limits
	Route alignment
	Earthworks
	Main river (existing)
	Main river diversion
	Main river abandoned
	Ordinary watercourse/ditch (existing)
	Ordinary watercourse/ditch diversion
	Ordinary watercourse/ditch abandoned
	Watercourse crossing
	Watercourse diversion
	Existing culvert
	Proposed headwall
	Proposed culvert
	Ordinary watercourse diversion in piped culvert
	Culvert manhole
	Proposed flood control device
	Viaducts
	Ponds

Notes:
 1. Culverted watercourses shall be straight. Minor diversions to the watercourse alignment may be required through the culvert and at either end in order to maintain the linearity of the culvert.
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 3. This drawing should be read in conjunction with HE540039-CJV-EFR-SZP_GNZZZZZZZ-DR-LF-00211.

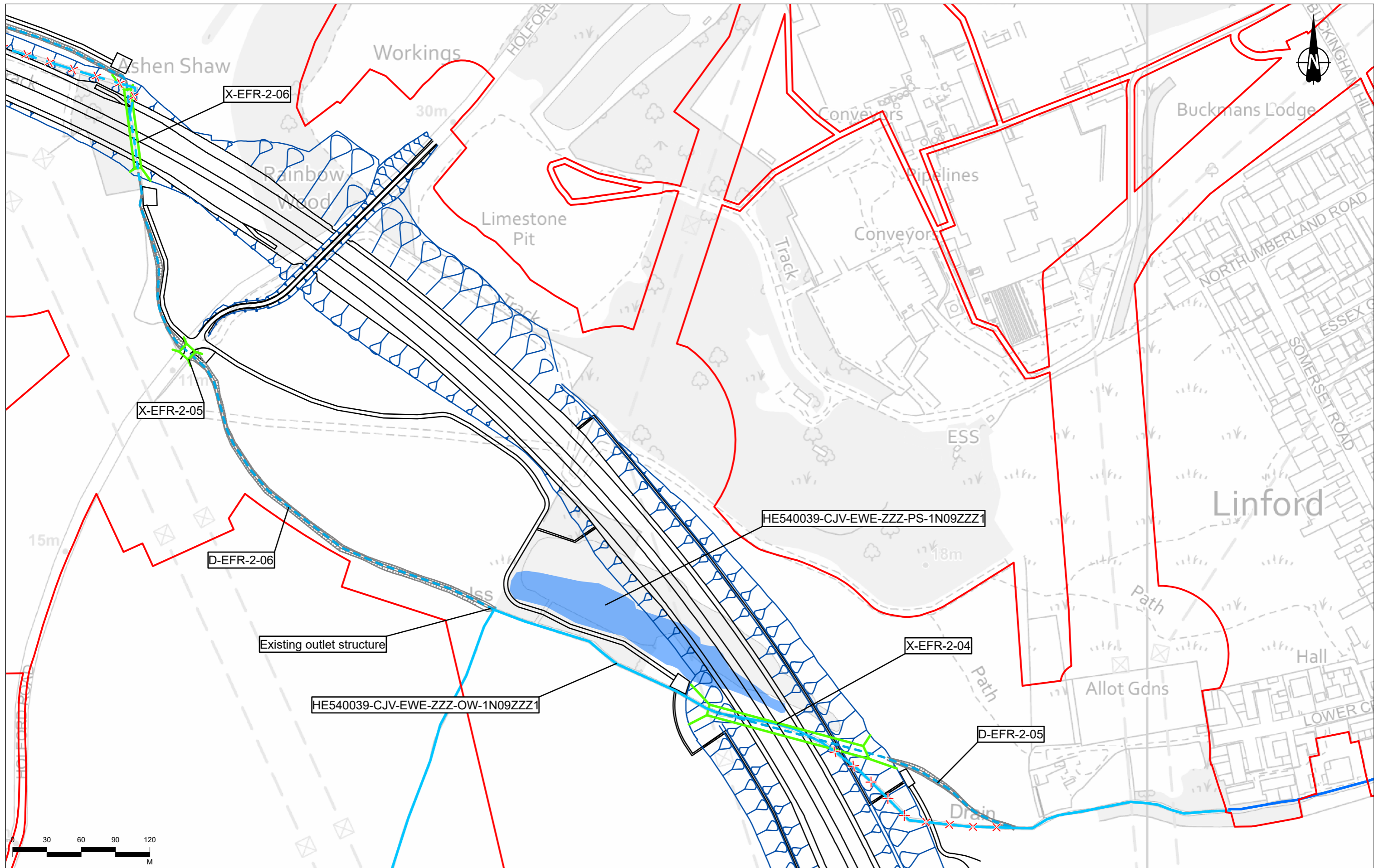


Client: **national highways**

Project: **LOWER THAMES CROSSING**

Status	DCO APPLICATION	Original Size	A3	Revision	P01
Application Document Number	TR010032/APP/6.3	Scale	1:2,500		
Drawing Title	Flood Risk Assessment Watercourse Crossings and Diversions Tilbury Sheet 2 of 2				
Drawing Number	HE540039-CJV-EFR-SZP_GNZZZZZZZ-DR-LF-00212				

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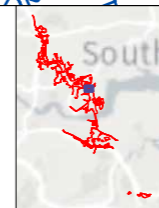


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Rev	Status	Rev. Date	Purpose of revision	Drawn	Chkd	Apprv'd

Legend	
	Order Limits
	Route alignment
	Earthworks
	Main river (existing)
	Main river diversion
	Main river abandoned
	Ordinary watercourse/ditch (existing)
	Ordinary watercourse/ditch diversion
	Ordinary watercourse/ditch abandoned
	Watercourse crossing
	Watercourse diversion
	Existing culvert
	Proposed headwall
	Proposed culvert
	Ordinary watercourse diversion in piped culvert
	Culvert manhole
	Proposed flood control device
	Viaducts
	Ponds

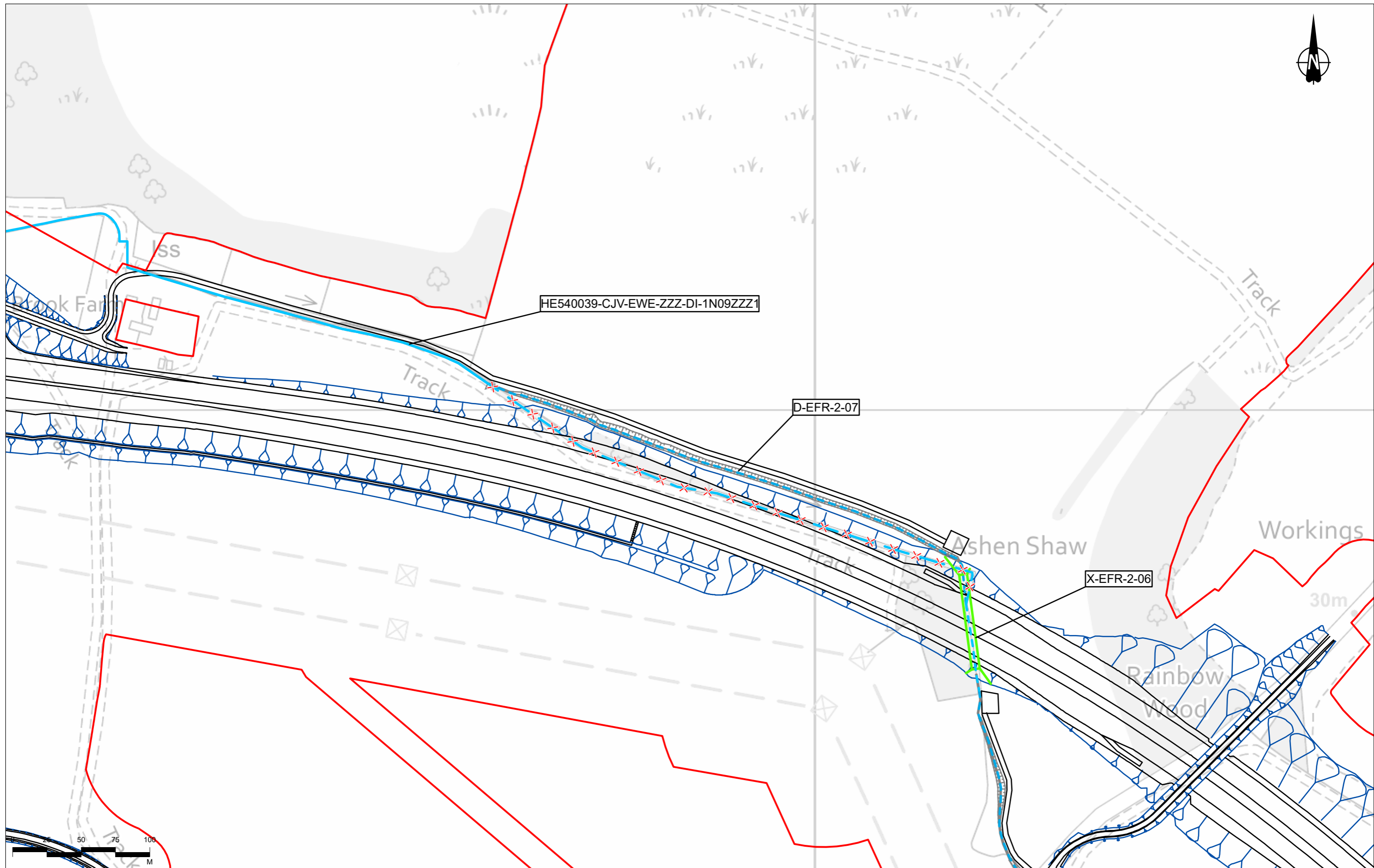
Notes:
 1. Culverted watercourses shall be straight. Minor diversions to the watercourse alignment may be required through the culvert and at either end in order to maintain the linearity of the culvert.
 2. Water feature reference numbers have been taken from Water Feature Survey Factual Report included in Appendix 14.2 of the Environmental Statement.
 This drawing should be read in conjunction with drawing HE540039-CJV-EFR-SZP_GNZZZZZZZ-DR-LF-00214.



Client: **national highways**

Project: **LOWER THAMES CROSSING**

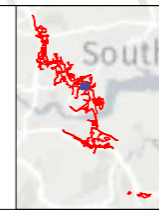
Status	DCO APPLICATION	Original Size	A3	Revision	P01
Application Document Number	TR010032/APP/6.3	Scale	1:3,000		
Drawing Title	Flood Risk Assessment Watercourse Crossings and Diversions Chadwell St Mary - Sheet 1 of 2				
Drawing Number	HE540039-CJV-EFR-SZP_GNZZZZZZZ-DR-LF-00213				



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Legend	
Order Limits	Ordinary watercourse/ditch diversion
Route alignment	Ordinary watercourse/ditch abandoned
Earthworks	Ordinary watercourse diversion in piped culvert
Main river (existing)	Culvert manhole
Main river diversion	Proposed flood control device
Main river abandoned	Viaducts
Ordinary watercourse/ditch (existing)	Ponds
Watercourse crossing	Existing culvert
Watercourse diversion	Proposed headwall
Proposed culvert	

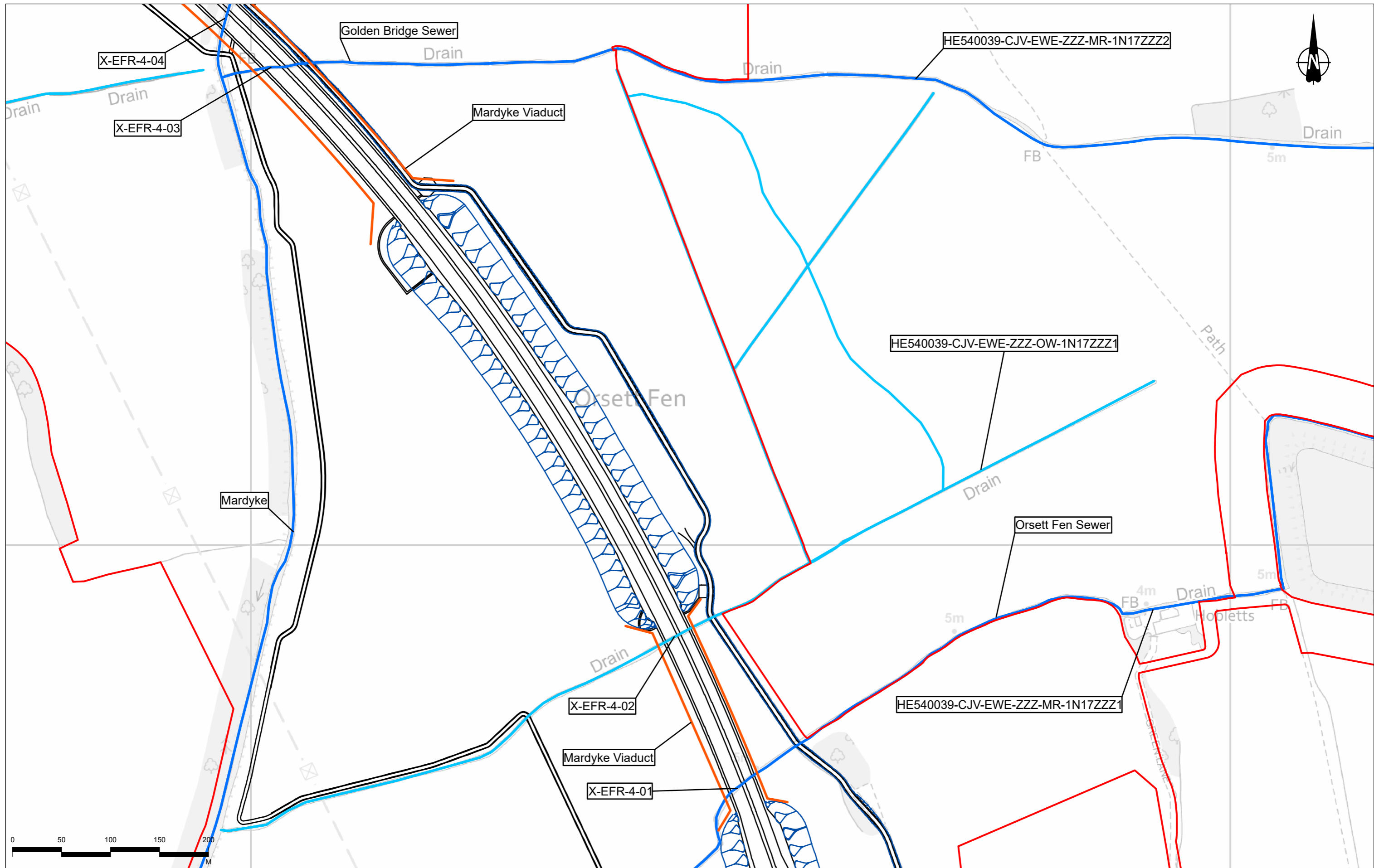
Notes:
 1. Culverted watercourses shall be straight. Minor diversions to the watercourse alignment may be required through the culvert and at either end in order to maintain the linearity of the culvert.
 2. Water feature reference numbers have been taken from Water Feature Survey Factual Report included in Appendix 14.2 of the Environmental Statement.
 This drawing should be read in conjunction with drawing HE540039-CJV-EFR-SZP_GNZZZZZZZ-DR-LF-00213.



Client: national highways

Project: LOWER THAMES CROSSING

Status	DCO APPLICATION	Original Size	A3	Revision	P01
Application Document Number	TR010032/APP/6.3	Scale	1:2,500		
Drawing Title	Flood Risk Assessment Watercourse Crossings and Diversions Chadwell St Mary - Sheet 2 of 2				
Drawing Number	HE540039-CJV-EFR-SZP_GNZZZZZZZ-DR-LF-00214				



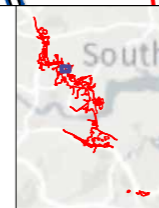
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Rev	Status	Rev. Date	Purpose of revision	Drawn	Chkd	Apprv'd
P01	S8	20/10/2022	DCO Application	SW	IF	MW

Legend	
	Order Limits
	Route alignment
	Earthworks
	Main river (existing)
	Main river diversion
	Main river abandoned
	Ordinary watercourse/ditch (existing)
	Ordinary watercourse/ditch diversion
	Ordinary watercourse/ditch abandoned
	Watercourse crossing
	Watercourse diversion
	Existing culvert
	Proposed headwall
	Proposed culvert
	Ordinary watercourse diversion in piped culvert
	Culvert manhole
	Proposed flood control device
	Viaducts
	Ponds

Notes:

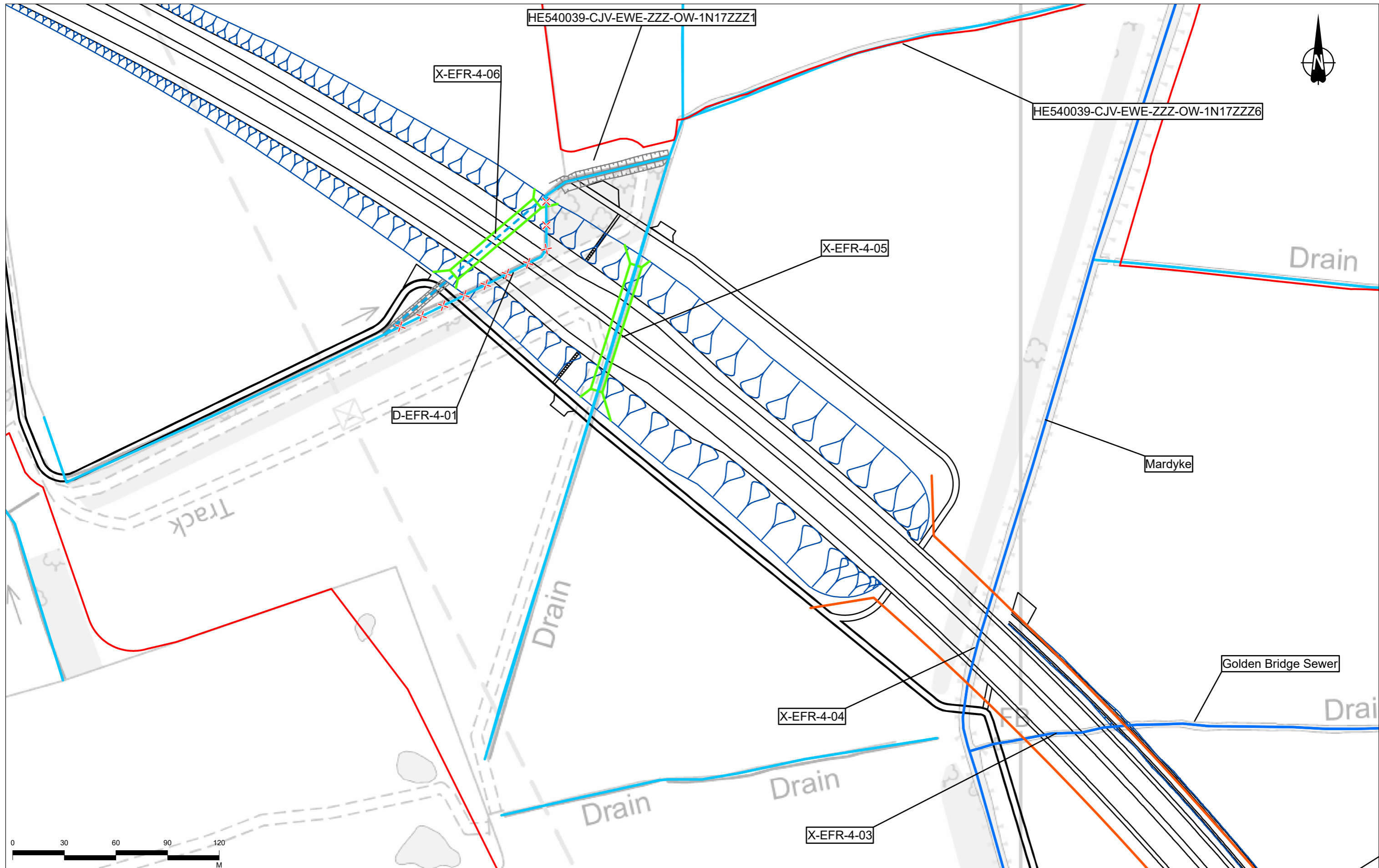
- Culverted watercourses shall be straight. Minor diversions to the watercourse alignment may be required through the culvert and at either end in order to maintain the linearity of the culvert.
- Water feature reference numbers have been taken from Water Feature Survey Factural Report included in Appendix 14.2 of the Environmental Statement.
- This drawing should be read in conjunction with HE540039-CJV-EFR-SZP_GNZZZZZZZ-DR-LF-00216, 00217 and 00218.



Client: national highways

Project: LOWER THAMES CROSSING

Status	DCO APPLICATION	Original Size	A3	Revision	P01
Application Document Number	TR010032/APP/6.3	Scale	1:3,500		
Drawing Title	Flood Risk Assessment Watercourse Crossings and Diversions Ockendon Link - Sheet 1 of 4				
Drawing Number	HE540039-CJV-EFR-SZP_GNZZZZZZZ-DR-LF-00215				



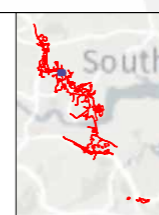
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P01	S8	20/10/2022	DCO Application	SW	IF	MW
Rev	Status	Rev. Date	Purpose of revision	Drawn	Chkd	Apprv'd

Legend	
	Order Limits
	Route alignment
	Earthworks
	Main river (existing)
	Main river diversion
	Main river abandoned
	Ordinary watercourse/ditch (existing)
	Ordinary watercourse/ditch diversion
	Ordinary watercourse/ditch abandoned
	Watercourse crossing
	Watercourse diversion
	Existing culvert
	Proposed headwall
	Proposed culvert
	Ordinary watercourse diversion in piped culvert
	Culvert manhole
	Proposed flood control device
	Viaducts
	Ponds

Notes:

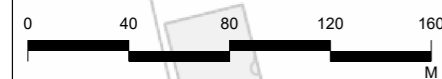
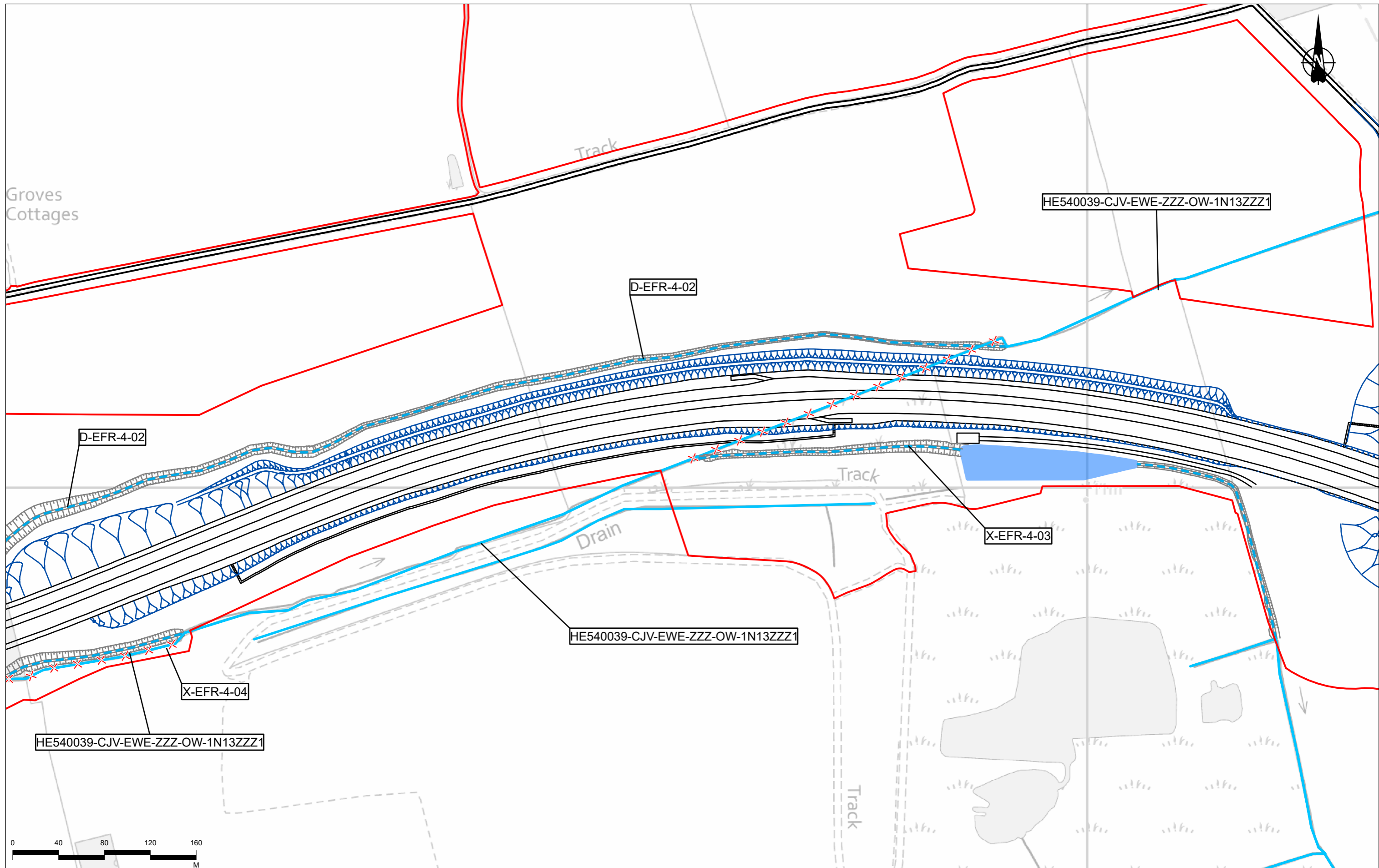
1. Culverted watercourses shall be straight. Minor diversions to the watercourse alignment may be required through the culvert and at either end in order to maintain the linearity of the culvert.
2. Water feature reference numbers have been taken from Water Feature Survey Factural Report included in Appendix 14.2 of the Environmental Statement.
3. This drawing should be read in conjunction with HE540039-CJV-EFR-SZP_GNZZZZZZZ-DR-LF-00215, 00217 and 00218.



Client: national highways

Project: LOWER THAMES CROSSING

Status	DCO APPLICATION	Original Size	A3	Revision	P01
Application Document Number	TR010032/APP/6.3	Scale	1:2,000		
Drawing Title	Flood Risk Assessment Watercourse Crossings and Diversions Ockendon Link - Sheet 2 of 4				
Drawing Number	HE540039-CJV-EFR-SZP_GNZZZZZZZ-DR-LF-00216				

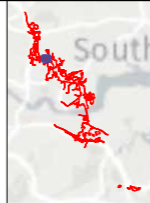


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Rev	Status	Rev. Date	Purpose of revision	Drawn	Chkd	Apprv'd
P01	S8	20/10/2022	DCO Application	SW	IF	MW

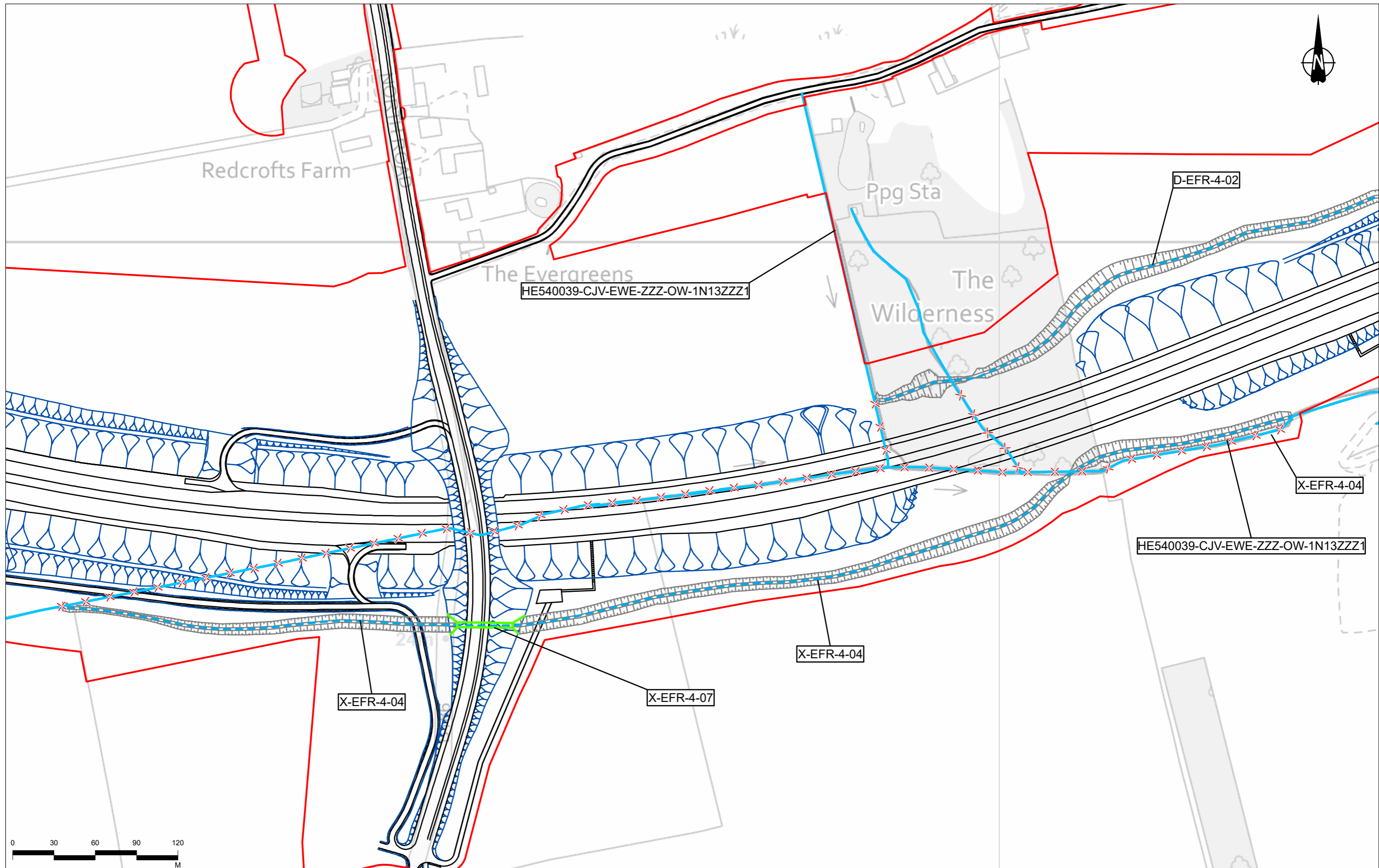
Legend	
	Order Limits
	Route alignment
	Earthworks
	Main river (existing)
	Main river diversion
	Main river abandoned
	Ordinary watercourse/ditch (existing)
	Ordinary watercourse/ditch diversion
	Ordinary watercourse/ditch abandoned
	Ordinary watercourse diversion in piped culvert
	Culvert manhole
	Proposed flood control device
	Viaducts
	Ponds
	Watercourse crossing
	Watercourse diversion
	Existing culvert
	Proposed headwall
	Proposed culvert

Notes:
 1. Culverted watercourses shall be straight. Minor diversions to the watercourse alignment may be required through the culvert and at either end in order to maintain the linearity of the culvert.
 2. Water feature reference numbers have been taken from Water Feature Survey Factural Report included in Appendix 14.2 of the Environmental Statement.
 3. This drawing should be read in conjunction with HE540039-CJV-EFR-SZP_GNZZZZZZZ-DR-LF-00215, 00216 and 00218.



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Status	DCO APPLICATION	Original Size	A3	Revision	P01
Application Document Number	TR010032/APP/6.3	Scale	1:3,000		
Drawing Title	Flood Risk Assessment Watercourse Crossings and Diversions Ockendon Link - Sheet 3 of 4				
Drawing Number	HE540039-CJV-EFR-SZP_GNZZZZZZZ-DR-LF-00217				



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Legend

- ▭ Order Limits
- Route alignment
- Earthworks
- Main river (existing)
- Main river diversion
- X Main river abandoned
- Ordinary watercourse/ditch (existing)
- - - Ordinary watercourse/ditch diversion
- X Ordinary watercourse/ditch abandoned
- X-EFR-5-XX Watercourse crossing
- D-EFR-5-XX Watercourse diversion
- - - Existing culvert
- - - Proposed headwall
- - - Proposed culvert
- Ordinary watercourse diversion in piped culvert
- Culvert manhole
- Proposed flood control device
- Viaducts
- Ponds

Notes:

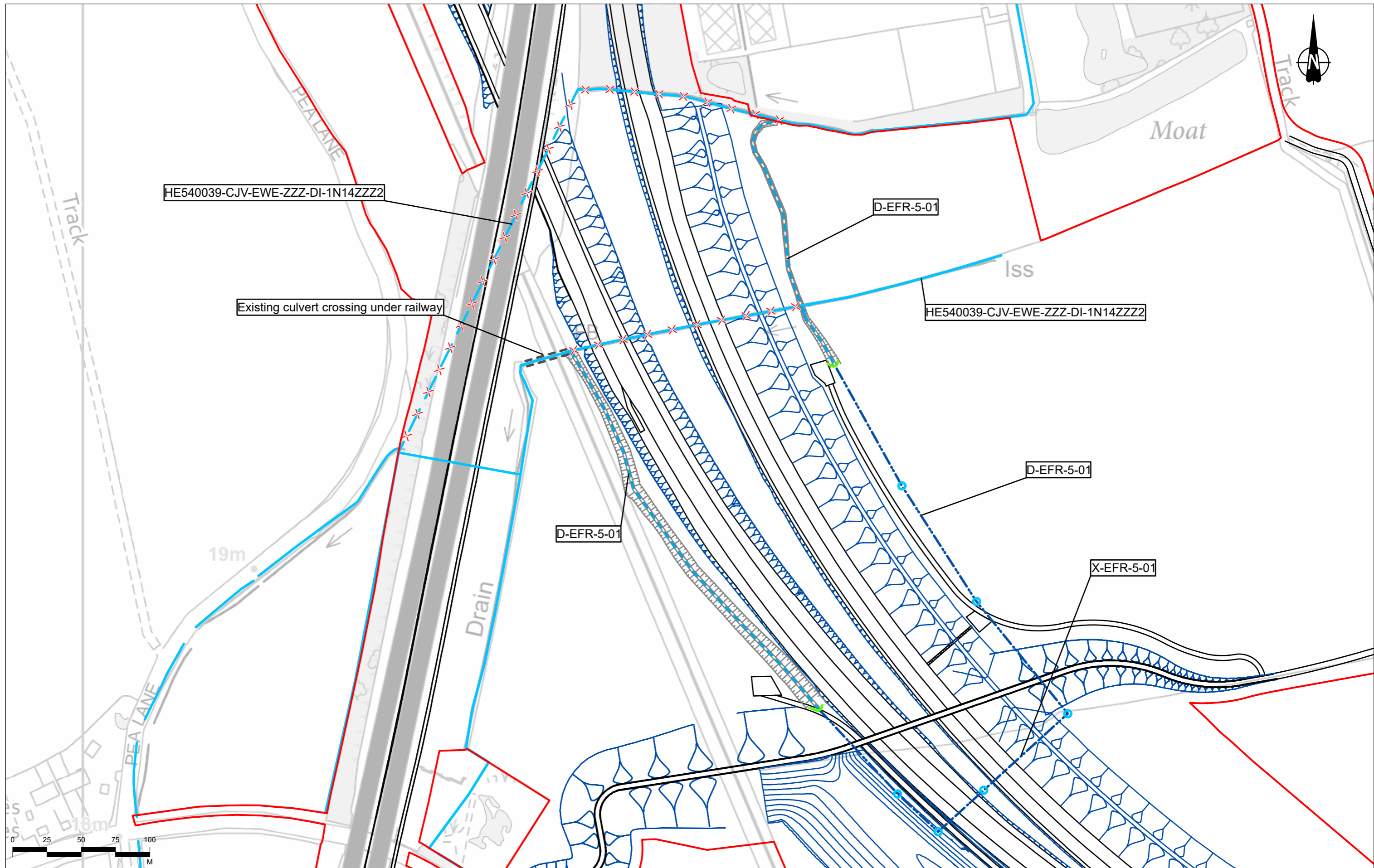
1. Culverted watercourses shall be straight. Minor diversions to the watercourse alignment may be required through the culvert and at either end in order to maintain the linearity of the culvert.
2. Water feature reference numbers have been taken from Water Feature Survey Factural Report included in Appendix 14.2 of the Environmental Statement.
3. This drawing should be read in conjunction with HE540039-CJV-EFR-SZP_GNZZZZZZZ-DR-LF-00215, 00216 and 00217.



Client: **national highways**

Project: **LOWER THAMES CROSSING**

Status: DCO APPLICATION		Original Size: A3	Revision: P01
Application Document Number: TR010032/APP/6.3		Scale: 1:2,500	
Drawing Title: Flood Risk Assessment Watercourse Crossings and Diversions Ockendon Link - Sheet 4 of 4			
Drawing Number: HE540039-CJV-EFR-SZP_GNZZZZZZZ-DR-LF-00218			



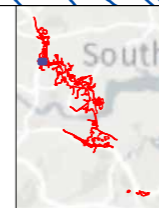
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P01	S8	20/10/2022	DCO Application	SW	IF	MW
Rev	Status	Rev. Date	Purpose of revision	Drawn	Chkd	Apprv'd

Legend	
	Order Limits
	Route alignment
	Earthworks
	Main river (existing)
	Main river diversion
	Main river abandoned
	Ordinary watercourse/ditch (existing)
	Ordinary watercourse/ditch diversion
	Ordinary watercourse/ditch abandoned
	Watercourse crossing
	Watercourse diversion
	Existing culvert
	Proposed headwall
	Proposed culvert
	Ordinary watercourse diversion in piped culvert
	Culvert manhole
	Proposed flood control device
	Viaducts
	Ponds

Notes:

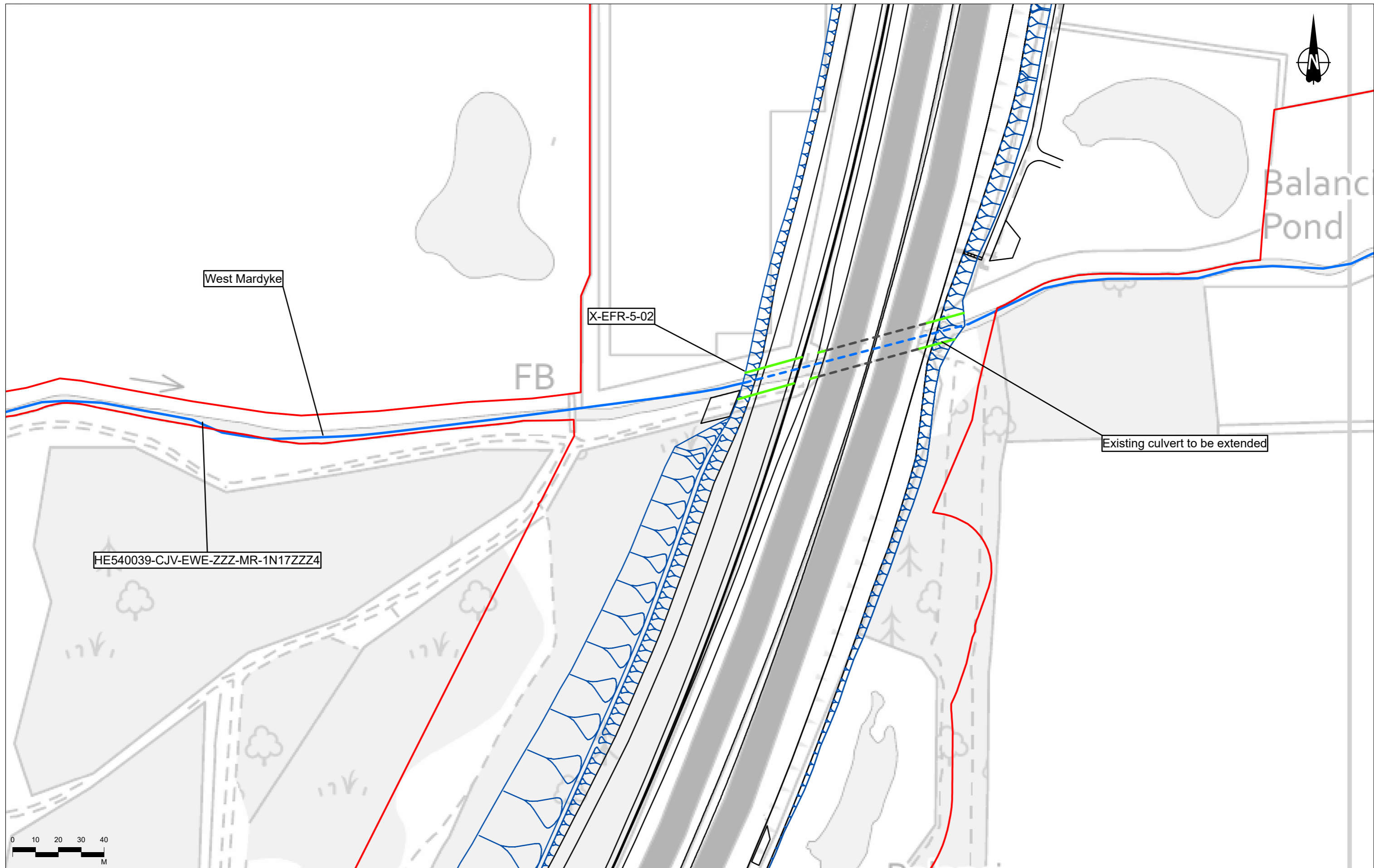
1. Culverted watercourses shall be straight. Minor diversions to the watercourse alignment may be required through the culvert and at either end in order to maintain the linearity of the culvert.
2. Water feature reference numbers have been taken from Water Feature Survey Factural Report included in Appendix 14.2 of the Environmental Statement.
3. This drawing should be read in conjunction with HE540039-CJV-EFR-SZP_GNZZZZZZZ-DR-LF-00220.



Client:

Project: **LOWER THAMES CROSSING**

Status	DCO APPLICATION	Original Size	A3	Revision	P01
Application Document Number	TR010032/APP/6.3	Scale	1:2,500		
Drawing Title	Flood Risk Assessment Watercourse Crossings and Diversions M25 Junction - Sheet 1 of 2				
Drawing Number	HE540039-CJV-EFR-SZP_GNZZZZZZZ-DR-LF-00219				



HE540039-CJV-EWE-ZZZ-MR-1N17ZZZ4

X-EFR-5-02

Existing culvert to be extended



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Rev	Status	Rev. Date	Purpose of revision	Drawn	Chkd	Apprv'd
P01	S8	20/10/2022	DCO Application	SW	IF	MW

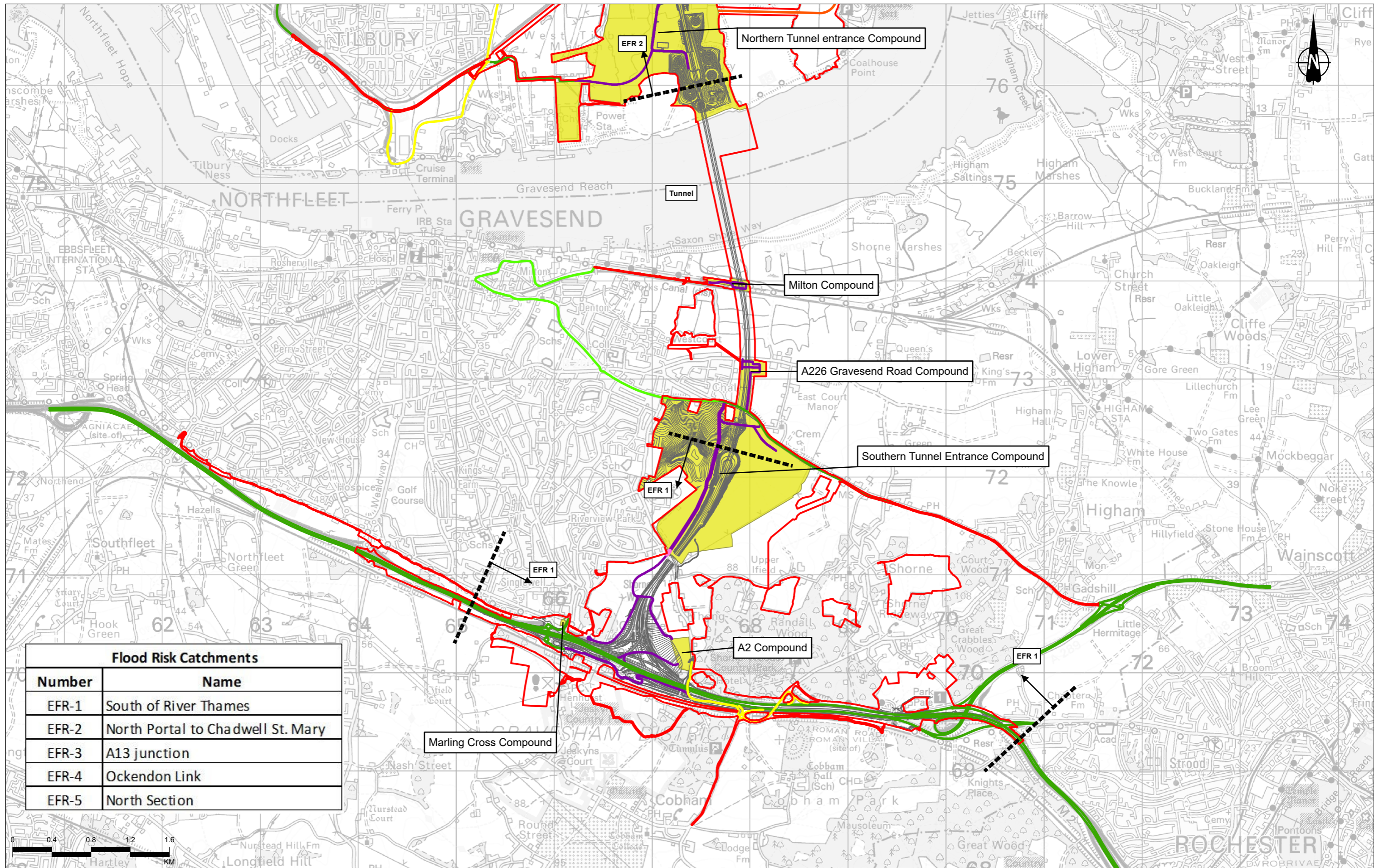
Legend	
	Order Limits
	Route alignment
	Earthworks
	Main river (existing)
	Main river diversion
	Main river abandoned
	Ordinary watercourse/ditch (existing)
	Ordinary watercourse/ditch diversion
	Ordinary watercourse/ditch abandoned
	Watercourse crossing
	Watercourse diversion
	Existing culvert
	Proposed headwall
	Proposed culvert
	Ordinary watercourse diversion in piped culvert
	Culvert manhole
	Proposed flood control device
	Viaducts
	Ponds

Notes:
 1. Culverted watercourses shall be straight. Minor diversions to the watercourse alignment may be required through the culvert and at either end in order to maintain the linearity of the culvert.
 2. Water feature reference numbers have been taken from Water Feature Survey Factural Report included in Appendix 14.2 of the Environmental Statement.
 3. This drawing should be read in conjunction with HE540039-CJV-EFR-SZP_GNZZZZZZZ-DR-LF-00219.

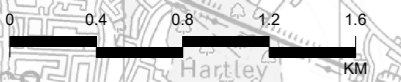


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LOWER THAMES CROSSING

Status	DCO APPLICATION	Original Size	A3	Revision	P01
Application Document Number	TR010032/APP/6.3	Scale	1:1,500		
Drawing Title	Flood Risk Assessment Watercourse Crossings and Diversions M25 Junction - Sheet 2 of 2				
Drawing Number	HE540039-CJV-EFR-SZP_GNZZZZZZZ-DR-LF-00220				



Flood Risk Catchments	
Number	Name
EFR-1	South of River Thames
EFR-2	North Portal to Chadwell St. Mary
EFR-3	A13 junction
EFR-4	Ockendon Link
EFR-5	North Section



- Legend**
- Order Limits
 - Road used for construction traffic - long term
 - Main works access route
 - Construction vehicle emergency turning point
 - Construction vehicle crossing point
 - Route alignment and earthworks
 - Road used for secondary access
 - Main and satellite construction compounds
 - Flood risk catchment



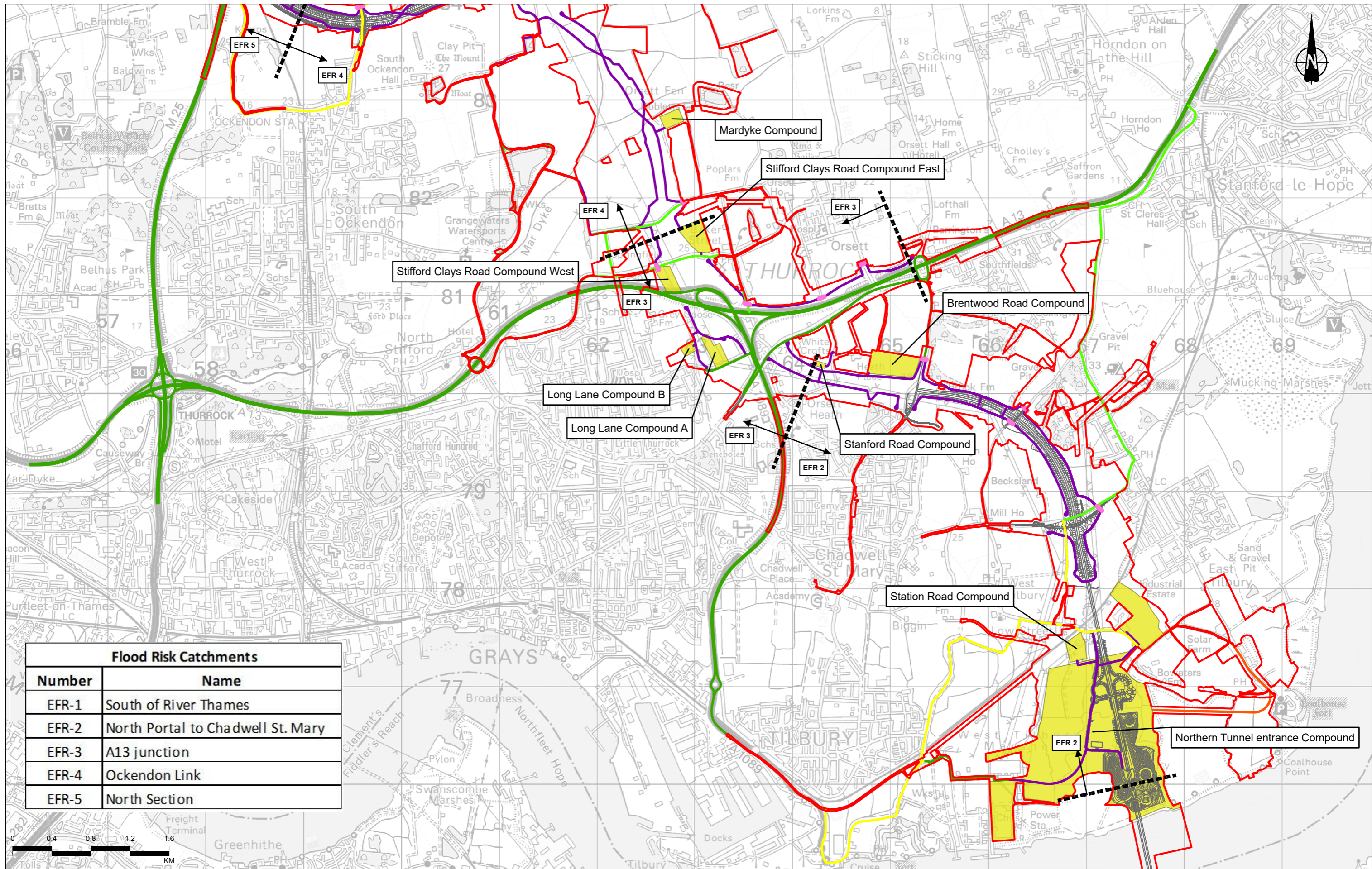
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Project
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Status	DCO APPLICATION	Original Size	A3	Revision	P01
Application Document Number	TR010032/APP/6.3	Scale	1:35,000		
Drawing Title	Flood Risk Assessment Construction Phase Compounds Sheet 1 of 3				
Drawing Number	HE540039-CJV-EFR-SZP_GNZZZZZZZ-DR-LF-00250				

P01	S8	18/10/2022	DCO Application	LK	IF	BF
Rev	Status	Rev. Date	Purpose of revision	Drawn	Chkd	Apprvd

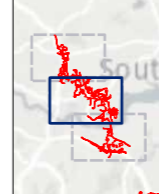
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Flood Risk Catchments	
Number	Name
EFR-1	South of River Thames
EFR-2	North Portal to Chadwell St. Mary
EFR-3	A13 junction
EFR-4	Ockendon Link
EFR-5	North Section



- Legend**
- Order Limits
 - Road used for construction traffic - long term
 - Main works access route
 - Construction vehicle emergency turning point
 - Construction vehicle crossing point
 - Road used for secondary access
 - Main and satellite construction compounds
 - - - Flood risk catchment
 - Road used for construction traffic - short term

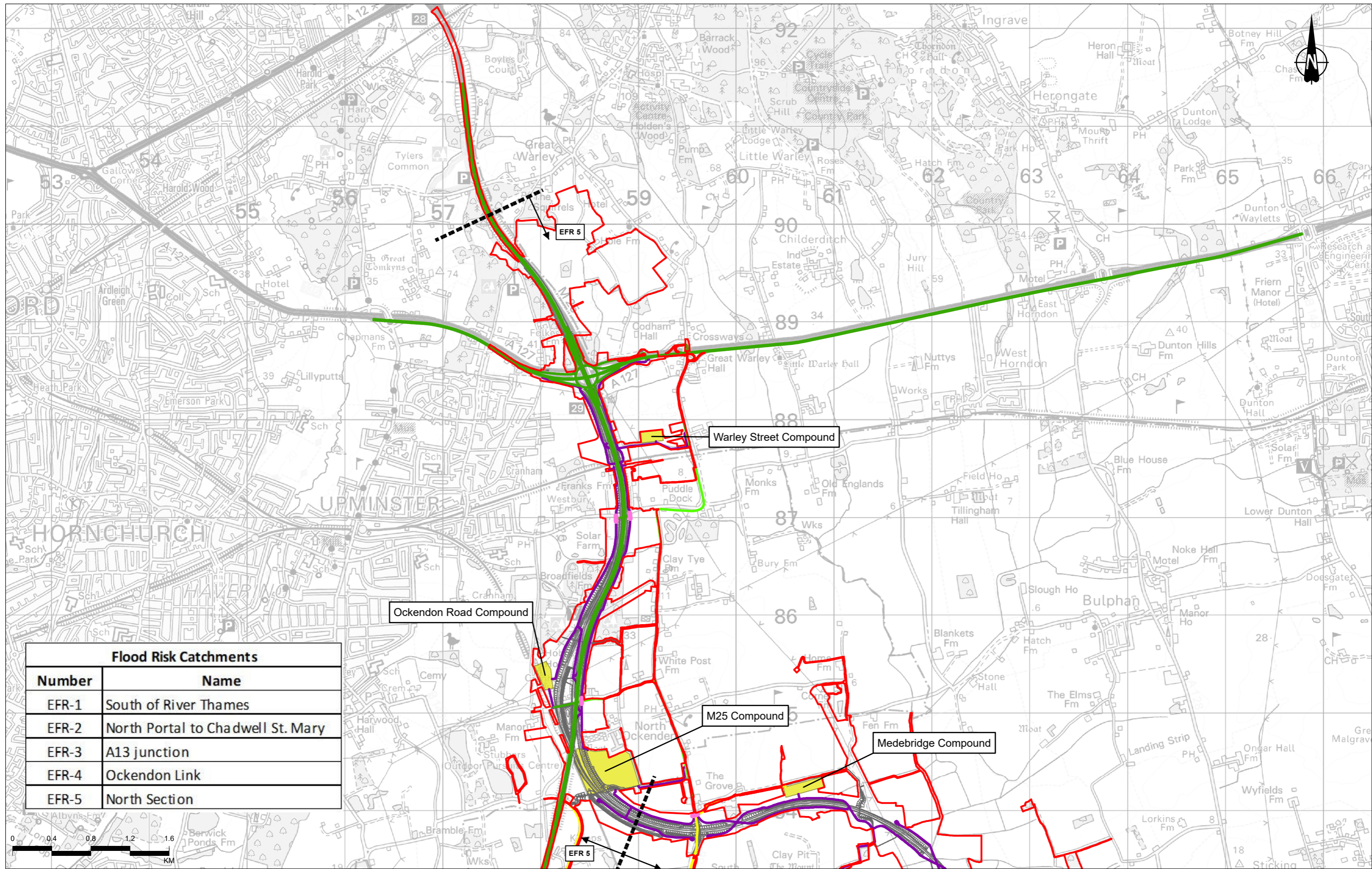


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LOWER THAMES CROSSING

Status	DCO APPLICATION	Original Size	A3	Revision	P01
Application Document Number	TR010032/APP/6.3	Scale	1:35,000		
Drawing Title	Flood Risk Assessment Construction Phase Compounds Sheet 2 of 3				
Drawing Number	HE540039-CJV-EFR-SZP_GNZZZZZZZ-DR-LF-00251				

P01	S8	18/10/2022	DCO Application	LK	IF	BF
Rev	Status	Rev. Date	Purpose of revision	Drawn	Chkd	Apprvd

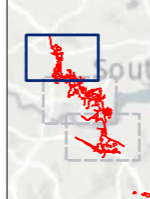
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Flood Risk Catchments	
Number	Name
EFR-1	South of River Thames
EFR-2	North Portal to Chadwell St. Mary
EFR-3	A13 junction
EFR-4	Ockendon Link
EFR-5	North Section



- Legend**
- Order Limits
 - Road used for construction traffic - short term
 - Road used for construction traffic - long term
 - Road used for secondary access
 - Construction vehicle crossing point
 - Main works access route
 - Flood risk catchment
 - Main and satellite construction compounds



Project LOWER THAMES CROSSING

Status	DCO APPLICATION	Original Size	A3	Revision	P01
Application Document Number	TR010032/APP/6.3	Scale	1:35,000		
Drawing Title	Flood Risk Assessment Construction Phase Compounds Sheet 3 of 3				
Drawing Number	HE540039-CJV-EFR-SZP_GNZZZZZZZ-DR-LF-00252				

P01	S8	18/10/2022	DCO Application	LK	IF	BF
Rev	Status	Rev. Date	Purpose of revision	Drawn	Chkd	Apprvd

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