

# A47 North Tuddenham to Easton Dualling

**Scheme Number: TR010038**

## **Volume 6** **6.8 Environmental Masterplan**

APFP Regulation 5(2)(a)

Planning Act 2008

Infrastructure Planning (Applications: Prescribed  
Forms and Procedure) Regulations 2009

December 2021

Infrastructure Planning

Planning Act 2008

**The Infrastructure Planning  
(Applications: Prescribed Forms and  
Procedure) Regulations 2009**

The A47 North Tuddenham to Easton  
Development Consent Order 202[x]

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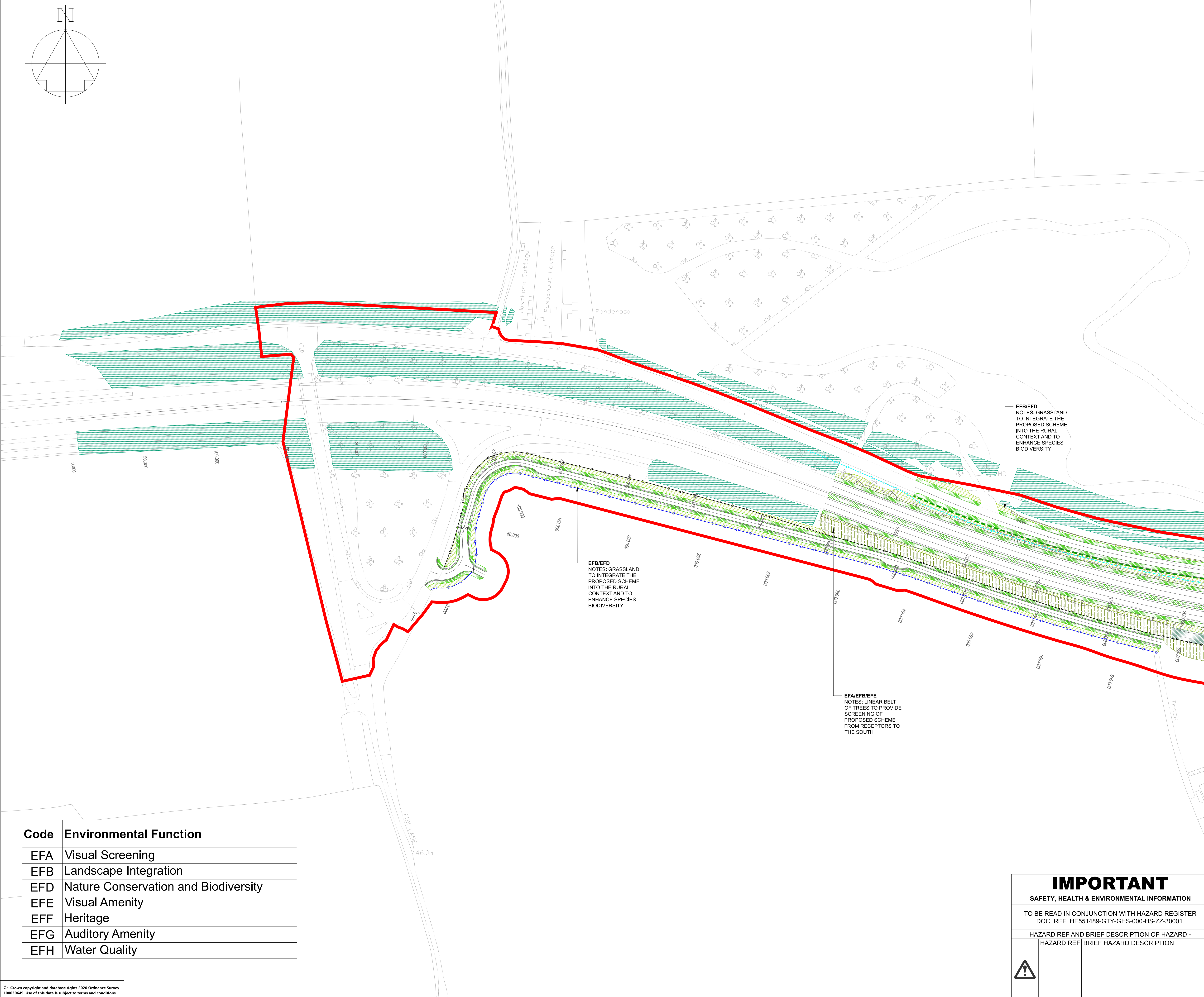
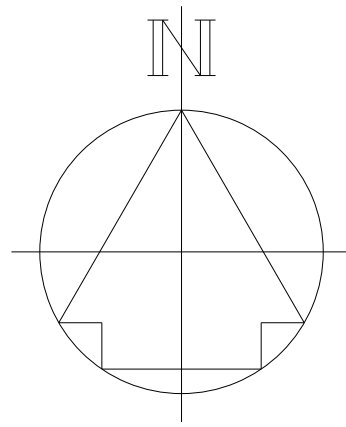
**ENVIRONMENTAL MASTERPLAN**

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<b>Regulation Number:</b>	5(2)(a)
<b>Planning Inspectorate Scheme Reference</b>	TR010038
<b>Application Document Reference</b>	TR010038/APP/6.8
<b>BIM Document Reference</b>	HE551489-GTY-ELS-000-DR-LX-30003-C03
<b>Author:</b>	A47 North Tuddenham to Easton Dualling Project Team, Highways England

<b>Version</b>	<b>Date</b>	<b>Status of Version</b>
Rev 0	March 2021	Application Issue
Rev 1	June 2021	S51 Advice and S55 Checklist Amendment
Rev 2	October 2021	Deadline 3 Issue
Rev 3	December 2021	Deadline 6 Non-Material DCO Change Request





Code	Environmental Function
EFA	Visual Screening
EFB	Landscape Integration
EFD	Nature Conservation and Biodiversity
EFE	Visual Amenity
EFF	Heritage
EFG	Auditory Amenity
EFH	Water Quality

- NOTES**
- A MAINTENANCE STRIP OF 1M (MINIMUM) WILL BE REQUIRED ON THE HIGHWAY SIDE OF ALL PROPOSED FENCING. TO BE PLANTED WITH SPECIES RICH GRASSLAND/AMENITY GRASS, WHERE APPROPRIATE. DETAILING WILL BE PROVIDED AT STAGE 5.
  - ALL AREAS OF PROPOSED WOODLAND, LINEAR BELTS OF SHRUBS AND TREES, SHRUBS WITH INTERMITTENT TREES, AND SHRUBS TO BE PLANTED WITH SPECIES RICH GRASSLAND. ALL AREAS OF RIPARIAN WOODLAND TO BE PLANTED WITH RIPARIAN SEEDING MIX. SEE PLANTING SCHEDULE FOR FURTHER DETAILS.
  - ALL STAFF CORRIDORS ARE INDICATIVE ONLY AND WILL BE FINALISED AT THE DETAILED DESIGN STAGE.
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  - ALL DIMENSION IN METRES (m) UNLESS OTHERWISE STATED.
  - DO NOT SCALE FROM THIS DRAWING.
  - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH:
    - HE551489-GTY-ELS-000-DR-LX-30004
    - HE551489-GTY-ELS-000-DR-LX-30005
    - HE551489-GTY-ELS-000-DR-LX-30006
    - HE551489-GTY-ELS-000-DR-LX-30007
    - HE551489-GTY-ELS-000-DR-LX-30008
    - HE551489-GTY-ELS-000-DR-LX-30009
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    - HE551489-GTY-ELS-000-DR-LX-30011
    - HE551489-GTY-ELS-000-DR-LX-30012
    - HE551489-GTY-ELS-000-DR-LX-30013
    - HE551489-GTY-ELS-000-DR-LX-30014
    - HE551489-GTY-ELS-000-DR-LX-30015
    - HE551489-GTY-ELS-000-DR-LX-30016
  - FOR LANDSCAPE ELEMENT CODES REFER TO DMRB LD117 LANDSCAPE DESIGN DOCUMENT.

**KEY TO SYMBOLS**

DCO BOUNDARY	LE1.1 INDIVIDUAL TREES
ORSTED HORNSEA WIND FARM	LE1.4 INDIVIDUAL TREES - SMALL TO LARGE SPECIES PLANTED AS EXTRA HEAVY STANDARD SPECIMENS
EXISTING VEGETATION	LE2.2 BANKS AND DITCHES (RIPARIAN SEEDING MIX)
EXISTING VEGETATION TO BE RETAINED	PROPOSED ELEMENTS - OTHER
PROPOSED ENVIRONMENTAL ELEMENTS	PROPOSED LIGHTING COLUMN LOCATION
E2.1 WATER POLLUTION CONTROL MEASURES - ATTENUATION/FILTRATION PONDS	HIGHWAY BOUNDARY - MCHW VOL. 3 SECT.1 H3 TIMBER POST AND RAIL
PROPOSED COMPENSATORY FLOOD STORAGE AREA	MAMMAL FENCING - SPECIFICATION TO BE CONFIRMED
LISTED MILESTONE	LOCAL AUTHORITY ACCOMMODATION WORKS FENCING - H13 POST AND STRAINED WIRE
PROPOSED LANDSCAPE ELEMENTS	8M RIPARIAN FENCING - SPECIFICATION TO BE CONFIRMED
LE1.1 AMENITY GRASS AREAS	2m HIGH NOISE AND VISUAL SCREEN
LE1.3 SPECIES RICH GRASSLAND	3m HIGH NOISE BARRIER
LE2.1 WOODLAND	BASIN FENCING - MCHW HCD H13 POST AND STRAINED WIRE
LE2.1 WOODLAND RIV (RIPARIAN WOODLAND)	ANTI GLARE SCREEN - MCHW VOL3 SECT.1 H17 STEEL SINGLE FIELD GATE
LE2.4 LINEAR BELTS OF SHRUBS AND TREES	4.5m WIDE SINGLE HEAVY DUTY TIMBER PALISADE GATE, 40T. BOLT.
LE2.5 SHRUBS WITH INTERMITTENT TREES	
LE2.6 SHRUBS	
LE4.3 NATIVE SPECIES HEDGEROWS	
LE4.4 NATIVE HEDGEROWS WITH TREES	

REV	DATE	REVISION NOTE	ORG	CHKD	APPD
P01	26/02/21	FOR ISSUE	LS	ECo	BJon
P02	03/03/21	FINAL	SWR	ECo	BJon
C01	03/03/21	FINAL	SWR	ECo	BJon
P03	04/03/21	FINAL	LS	JMee	BJon
C02	04/03/21	FINAL	LS	JMee	BJon
P04	24/06/21	S55 CHECKLIST AMENDMENT	LS	JMee	MR
C03	24/06/21	S55 CHECKLIST AMENDMENT	LS	JMee	MR
P05	05/10/21	DEADLINE 3	LS	JMee	MR

DESIGNER

**SWECO**

CONTRACTOR

**GallifordTry**

CLIENT

**highways england**

PROJECT TITLE

**A47 NORTH TUDDENHAM TO EASTON DUALLING**

PROJECT STAGE

**PCF STAGE 4**

DRAWING TITLE

**Environmental Masterplan Sheet 1 of 14 TR010038/APP/6.8**

**IMPORTANT**

**SAFETY, HEALTH & ENVIRONMENTAL INFORMATION**

TO BE READ IN CONJUNCTION WITH HAZARD REGISTER DOC. REF: HE551489-GTY-GHS-000-HS-ZZ-30001.

HAZARD REF AND BRIEF DESCRIPTION OF HAZARD:-

HAZARD REF	BRIEF HAZARD DESCRIPTION

SUITABILITY

**SUITABLE FOR STAGE APPROVAL**

SHEET SIZE	SCALE	STATUS	REVISION
A1	1:1250	S4	P05

DRAWING NUMBER

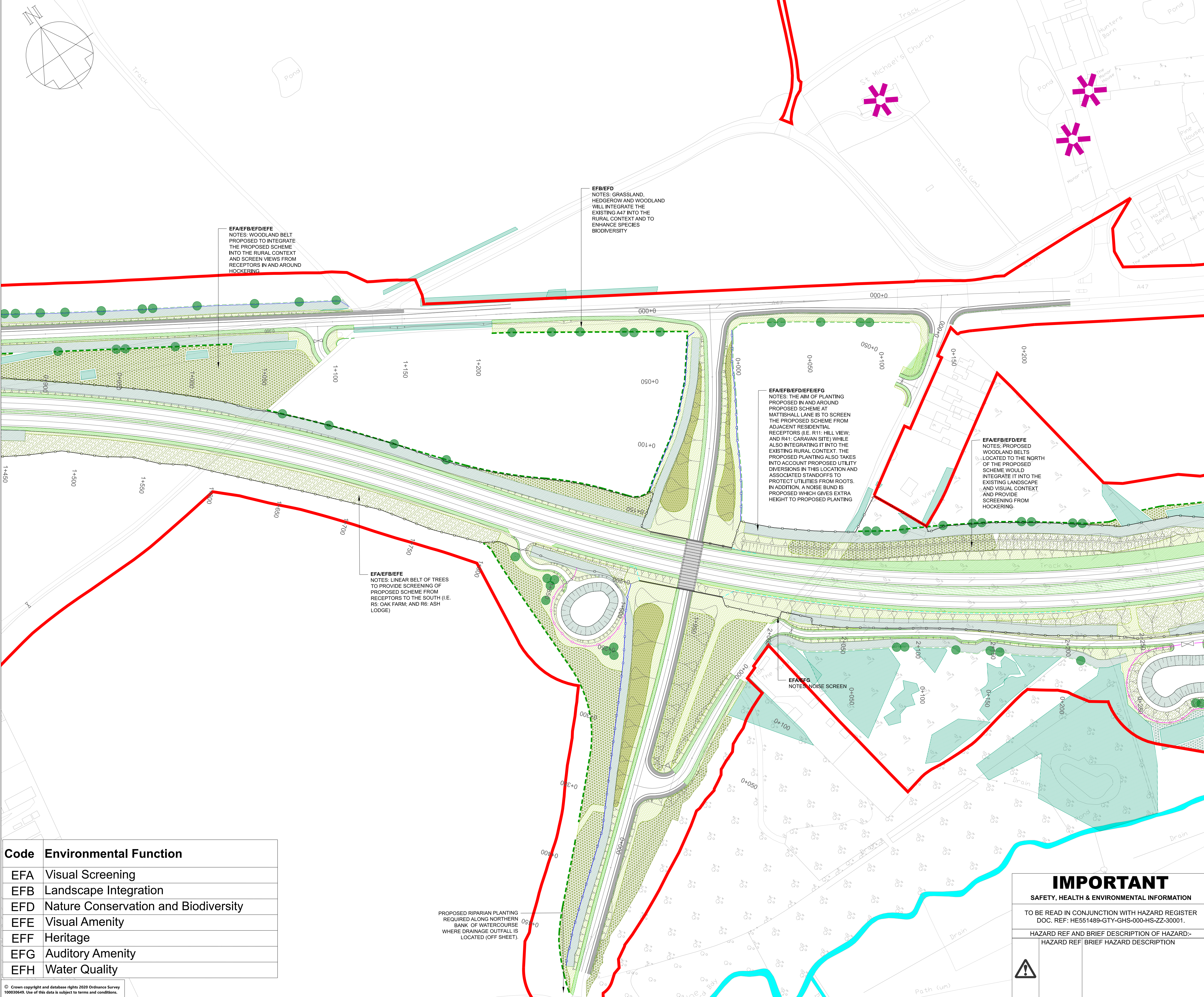
**HE551489-GTY-ELS-000-DR-LX-30003**







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- NOTES**
1. A MAINTENANCE STRIP OF 1M (MINIMUM) WILL BE REQUIRED ON THE HIGHWAY SIDE OF ALL PROPOSED FENCING. TO BE PLANTED WITH SPECIES RICH GRASSLAND/AMENITY GRASS, WHERE APPROPRIATE. DETAILING WILL BE PROVIDED AT STAGE 5.
  2. ALL AREAS OF PROPOSED WOODLAND, LINEAR BELTS OF SHRUBS AND TREES, SHRUBS WITH INTERMITTENT TREES, AND SHRUBS TO BE PLANTED WITH SPECIES RICH GRASSLAND. ALL AREAS OF RIPARIAN WOODLAND TO BE PLANTED WITH RIPARIAN SEEDING MIX. SEE PLANTING SCHEDULE FOR FURTHER DETAILS.
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HE551489-GTY-ELS-000-DR-LX-30003  
HE551489-GTY-ELS-000-DR-LX-30004  
HE551489-GTY-ELS-000-DR-LX-30006  
HE551489-GTY-ELS-000-DR-LX-30007  
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HE551489-GTY-ELS-000-DR-LX-30014  
HE551489-GTY-ELS-000-DR-LX-30015  
HE551489-GTY-ELS-000-DR-LX-30016
  8. FOR LANDSCAPE ELEMENT CODES REFER TO DMRB LD117 LANDSCAPE DESIGN DOCUMENT.

**KEY TO SYMBOLS**

DDO BOUNDARY	LE1.1 INDIVIDUAL TREES
CRISTED HORNGRASS WIND FARM	LE1.4 INDIVIDUAL TREES - SMALL TO LARGE SPECIES PLANTED AS EXTRA HEAVY STANDARD SPECIMENS
EXISTING VEGETATION	LE2 BANKS AND DITCHES (RIPARIAN SEEDING MIX)
EXISTING VEGETATION TO BE RETAINED	PROPOSED ELEMENTS - OTHER
PROPOSED ENVIRONMENTAL ELEMENTS	PROPOSED LIGHTING COLUMN LOCATION
E2.1 WATER POLLUTION CONTROL MEASURES - ATTENUATION/FILTRATION PONDS	HIGHWAY BOUNDARY - MCHW VOL. 3 SECT.1 H3 TIMBER POST AND RAIL
FLOOD STORAGE/COMPENSATORY FLOOD STORAGE AREA	MAMMAL FENCING - SPECIFICATION TO BE CONFIRMED
LISTED MILESTONE	LOCAL AUTHORITY / ACCOMMODATION WORKS FENCING -H3 POST AND STRAINED WIRE
PROPOSED LANDSCAPE ELEMENTS	BAT MITIGATION FENCING - SPECIFICATION TO BE CONFIRMED
LE1.1 AMENITY GRASS AREAS	BAT MITIGATION FENCING ON STRUCTURE - SPECIFICATION TO BE CONFIRMED
LE1.3 SPECIES RICH GRASSLAND	2m HIGH NOISE AND VISUAL SCREEN
LE2.1 WOODLAND	3m HIGH NOISE BARRIER
LE2.1 WOODLAND RW (RIPARIAN WOODLAND)	BASKET FENCING - MCHW HCD H13 POST AND STRAINED WIRE
LE2.4 LINEAR BELTS OF SHRUBS AND TREES	ANTI GLARE SCREEN - 2m HIGH CLOSE BOARDED FENCE
LE2.5 SHRUBS WITH INTERMITTENT TREES	FIELD ACCESS GATE - MCHW VOL.3 SECT.1 H17 STEEL SINGLE FIELD GATE
LE2.6 SHRUBS	4.5m WIDE SINGLE HEAVY DUTY TIMBER PALISADE GATE, ART BOLT.
LE4.3 NATIVE SPECIES HEDGEROWS	
LE4.4 NATIVE HEDGEROWS WITH TREES	

P01	26/02/21	P01		LS	ECoo	BJon
P02	03/03/21	FINAL		SWR	ECoo	BJon
C01	03/03/21	FINAL		SWR	ECoo	BJon
P03	04/03/21	FINAL		LS	JMee	BJon
C02	04/03/21	FINAL		LS	JMee	BJon
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C03	24/06/21	S55 CHECKLIST AMENDMENT		LS	JMee	MR
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P06	14/12/21	DEADLINE 6 ISSUE		LS	JMee	BArt
C04	14/12/21	DEADLINE 6 ISSUE		LS	JMee	BArt
REV	DATE	REVISION NOTE		ORG	CHKD	APPD

DESIGNER

**SWECO**

CONTRACTOR

**GallifordTry**

CLIENT

**highways england**

PROJECT TITLE

**A47 NORTH TUDDENHAM TO EASTON DUALLING**

PROJECT STAGE

**PCF STAGE 4**

DRAWING TITLE

**Environmental Masterplan Sheet 3 of 14 TR010038/APP/6.8**

SUITABILITY

**AUTHORISED AS STAGE 3 COMPLETED**

SHEET SIZE	SCALE	STATUS	REVISION
A1	1:1250	A3	C04

DRAWING NUMBER

**HE551489-GTY-ELS-000-DR-LX-30005**

Code	Environmental Function
EFA	Visual Screening
EFB	Landscape Integration
EFD	Nature Conservation and Biodiversity
EFE	Visual Amenity
EFF	Heritage
EFG	Auditory Amenity
EFH	Water Quality

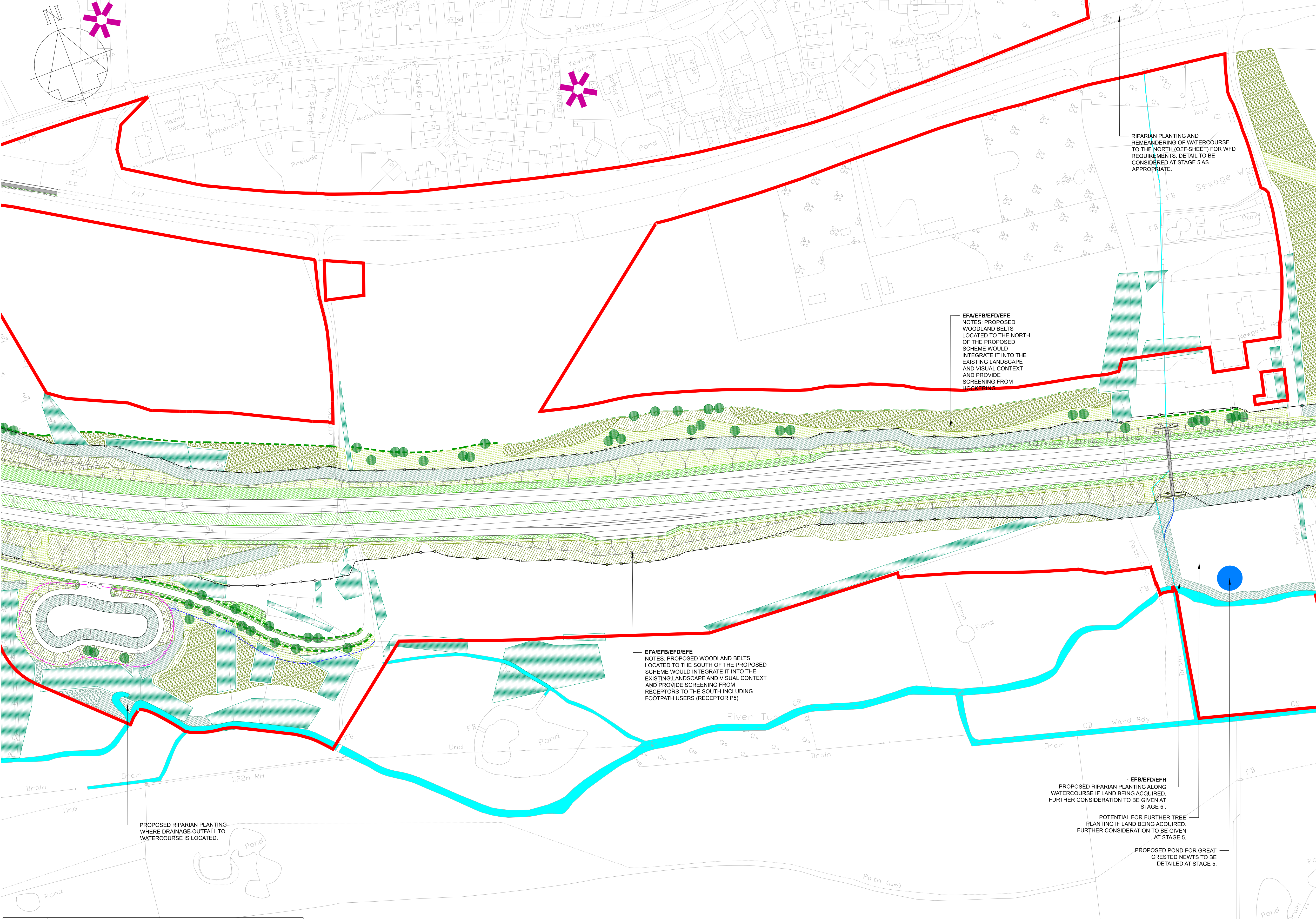
**IMPORTANT**

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HAZARD REF AND BRIEF DESCRIPTION OF HAZARD:-  
HAZARD REF: BRIEF HAZARD DESCRIPTION





- NOTES**
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HE551489-GTY-ELS-000-DR-LX-30003  
HE551489-GTY-ELS-000-DR-LX-30004  
HE551489-GTY-ELS-000-DR-LX-30005  
HE551489-GTY-ELS-000-DR-LX-30007  
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HE551489-GTY-ELS-000-DR-LX-30009  
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HE551489-GTY-ELS-000-DR-LX-30014  
HE551489-GTY-ELS-000-DR-LX-30015  
HE551489-GTY-ELS-000-DR-LX-30016
  - FOR LANDSCAPE ELEMENT CODES REFER TO DMRB LD117 LANDSCAPE DESIGN DOCUMENT.

**KEY TO SYMBOLS**

DOO BOUNDARY	EXISTING VEGETATION	PROPOSED ENVIRONMENTAL ELEMENTS	PROPOSED LANDSCAPE ELEMENTS	LE1.1 AMENITY GRASS AREAS	LE1.2 SPECIES RICH GRASSLAND	LE2.1 WOODLAND	LE2.2 WOODLAND WITH RIPARIAN WOODLAND	LE2.3 LINEAR BELTS OF SHRUBS AND TREES	LE2.4 SHRUBS WITH INTERMITTENT TREES	LE2.5 SHRUBS	LE2.6 SHRUBS	LE4.3 NATIVE SPECIES HEDGEROWS	LE4.4 NATIVE HEDGEROWS WITH TREES	LE5.1 INDIVIDUAL TREES	LE5.2 INDIVIDUAL TREES - SMALL TO LARGE SPECIES PLANTED AS EXTRA HEAVY STANDARD SPECIMENS	LE5.3 BANKS AND DITCHES (RIPARIAN SEEDING MIX)	PROPOSED ELEMENTS - OTHER	
EXISTING VEGETATION TO BE RETAINED	PROPOSED COMPENSATORY FLOOD STORAGE AREA	LISTED MILESTONE	LE1.3 SPECIES RICH GRASSLAND	LE2.1 WOODLAND	LE2.2 WOODLAND WITH RIPARIAN WOODLAND	LE2.3 LINEAR BELTS OF SHRUBS AND TREES	LE2.4 SHRUBS WITH INTERMITTENT TREES	LE2.5 SHRUBS	LE2.6 SHRUBS	LE4.3 NATIVE SPECIES HEDGEROWS	LE4.4 NATIVE HEDGEROWS WITH TREES	PROPOSED LIGHTING COLUMN LOCATION	PROPOSED LIGHTING COLUMN LOCATION	PROPOSED LIGHTING COLUMN LOCATION	PROPOSED LIGHTING COLUMN LOCATION	PROPOSED LIGHTING COLUMN LOCATION	PROPOSED LIGHTING COLUMN LOCATION	PROPOSED LIGHTING COLUMN LOCATION

REV	DATE	REVISION NOTE	ORG	CHKD	APPD
P01	26/02/21	P01	LS	ECo0	BJon
P02	03/03/21	FINAL	SWR	ECo0	BJon
C01	03/03/21	FINAL	SWR	ECo0	BJon
P03	04/03/21	FINAL	LS	JMee	BJon
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P05	05/10/21	DEADLINE 3	LS	JMee	MR
P06	14/12/21	DEADLINE 6 ISSUE	LS	JMee	BArt
C04	14/12/21	DEADLINE 6 ISSUE	LS	JMee	BArt

DESIGNER

**SWECO**

CONTRACTOR

**GallifordTry**

CLIENT

**highways england**

PROJECT TITLE

**A47 NORTH TUDDENHAM TO EASTON DUALLING**

PROJECT STAGE

**PCF STAGE 4**

DRAWING TITLE

Environmental Masterplan Sheet 4 of 14  
TR010038/APP/6.8

SUITABILITY

**AUTHORISED AS STAGE 3 COMPLETED**

SHEET SIZE	SCALE	STATUS	REVISION
A1	1:1250	A3	C04

DRAWING NUMBER

**HE551489-GTY-ELS-000-DR-LX-30006**

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EFB	Landscape Integration
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**IMPORTANT**

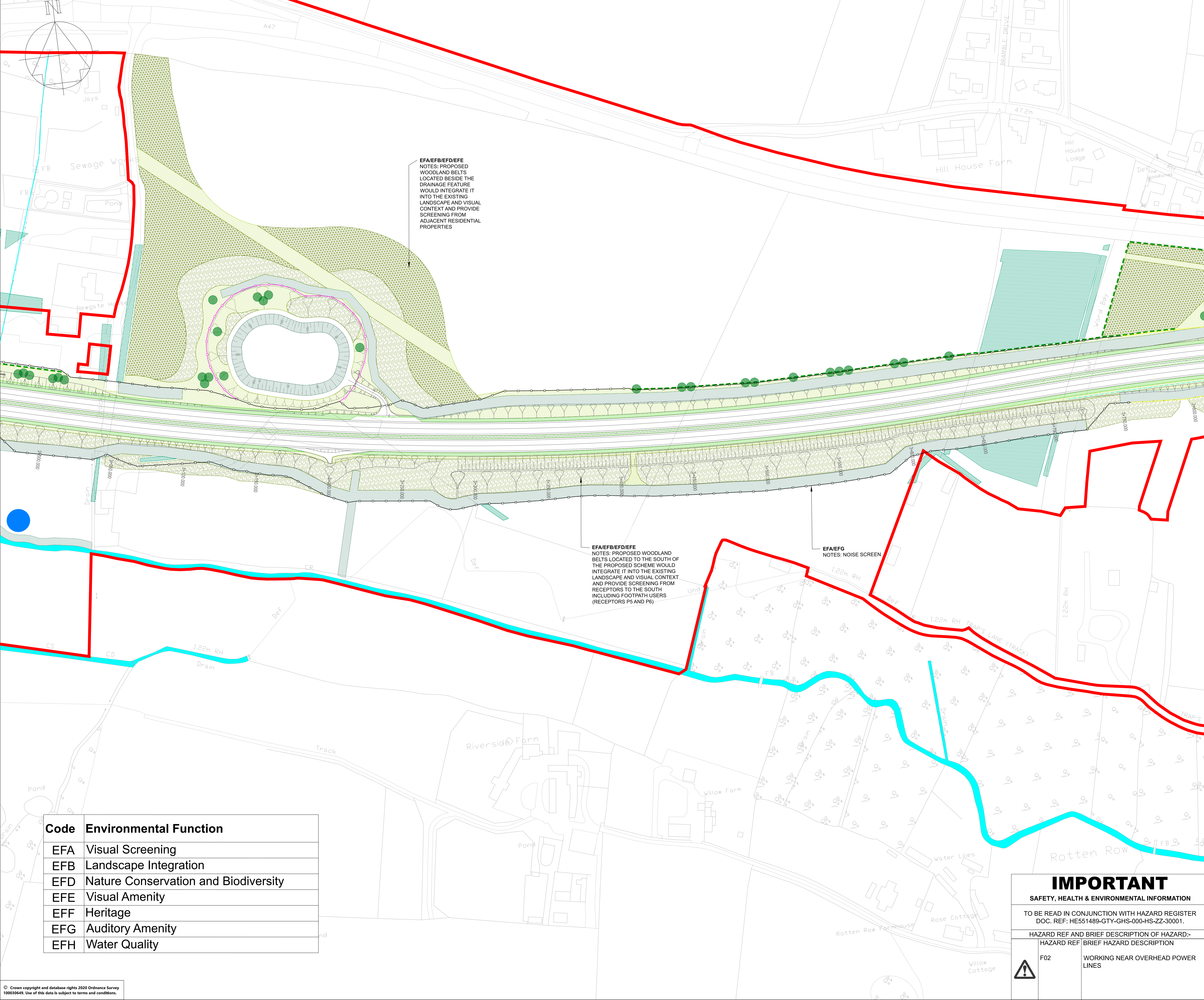
SAFETY, HEALTH & ENVIRONMENTAL INFORMATION

TO BE READ IN CONJUNCTION WITH HAZARD REGISTER  
DOC. REF: HE551489-GTY-GHS-000-HS-ZZ-30001.

HAZARD REF AND BRIEF DESCRIPTION OF HAZARD:-  
HAZARD REF: F02 BRIEF HAZARD DESCRIPTION: WORKING NEAR OVERHEAD POWER LINES



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EFA/EFB/EFD/EFE  
 NOTES: PROPOSED WOODLAND BELTS LOCATED BESIDE THE DRAINAGE FEATURE WOULD INTEGRATE IT INTO THE EXISTING LANDSCAPE AND VISUAL CONTEXT AND PROVIDE SCREENING FROM ADJACENT RESIDENTIAL PROPERTIES

EFA/EFB/EFD/EFE  
 NOTES: PROPOSED WOODLAND BELTS LOCATED TO THE SOUTH OF THE PROPOSED SCHEME WOULD INTEGRATE IT INTO THE EXISTING LANDSCAPE AND VISUAL CONTEXT AND PROVIDE SCREENING FROM RECEPTORS TO THE SOUTH INCLUDING FOOTPATH USERS (RECEPTORS P5 AND P6)

EFA/EFG  
 NOTES: NOISE SCREEN

Code	Environmental Function
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EFD	Nature Conservation and Biodiversity
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 HE551489-GTY-ELS-000-DR-LX-30014  
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**KEY TO SYMBOLS**

DDO BOUNDARY	EXISTING VEGETATION	PROPOSED ENVIRONMENTAL ELEMENTS	PROPOSED LANDSCAPE ELEMENTS	LE1.1 AMENITY GRASS AREAS	LE1.3 SPECIES RICH GRASSLAND	LE2.1 WOODLAND	LE2.1 WOODLAND RW (RIPARIAN WOODLAND)	LE2.2 SHRUBS WITH INTERMITTENT TREES	LE2.2 SHRUBS	LE2.3 NATIVE SPECIES HEDGEROWS	LE2.4 NATIVE HEDGEROWS WITH TREES	LE3.1 INDIVIDUAL TREES	LE3.1.4 INDIVIDUAL TREES - SMALL TO LARGE SPECIES PLANTED AS EXTRA HEAVY STANDARD SPECIMENS	LE3.2 BANKS AND DITCHES (RIPARIAN SEEDING MIX)	PROPOSED ELEMENTS - OTHER
CRISTED HORNEBUSH WIND FARM	EXISTING VEGETATION TO BE RETAINED	E2.1 WATER POLLUTION CONTROL MEASURES - ATTENUATION/FILTRATION PONDS	LISTED MILESTONE	LE1.2 WOODLAND	LE2.1 WOODLAND RW (RIPARIAN WOODLAND)	LE2.2 SHRUBS WITH INTERMITTENT TREES	LE2.2 SHRUBS	LE2.3 NATIVE SPECIES HEDGEROWS	LE2.4 NATIVE HEDGEROWS WITH TREES	PROPOSED LIGHTING COLUMN LOCATION	PROPOSED LIGHTING COLUMN LOCATION	PROPOSED LIGHTING COLUMN LOCATION	PROPOSED LIGHTING COLUMN LOCATION	PROPOSED LIGHTING COLUMN LOCATION	PROPOSED LIGHTING COLUMN LOCATION
		E2.2 WATER POLLUTION CONTROL MEASURES - STORAGE AREA													

REV	DATE	REVISION NOTE	ORG	CHKD	APPD
P01	26/02/21	FOR ISSUE	LS	ECo	BJon
P02	03/03/21	FINAL	SWR	ECo	BJon
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P03	04/03/21	FINAL	LS	JMee	BJon
C02	04/03/21	FINAL	LS	JMee	BJon
P04	24/06/21	S55 CHECKLIST AMENDMENT	LS	JMee	MR
C03	24/06/21	S55 CHECKLIST AMENDMENT	LS	JMee	MR
P05	05/10/21	DEADLINE 3	LS	JMee	MR

DESIGNER  
**SWECO**

CONTRACTOR  
**GallifordTry**

CLIENT  
**highways england**

PROJECT TITLE  
**A47 NORTH TUDDENHAM TO EASTON DUALLING**

PROJECT STAGE  
**PCF STAGE 4**

DRAWING TITLE  
**Environmental Masterplan Sheet 5 of 14 TR010038/APP/6.8**

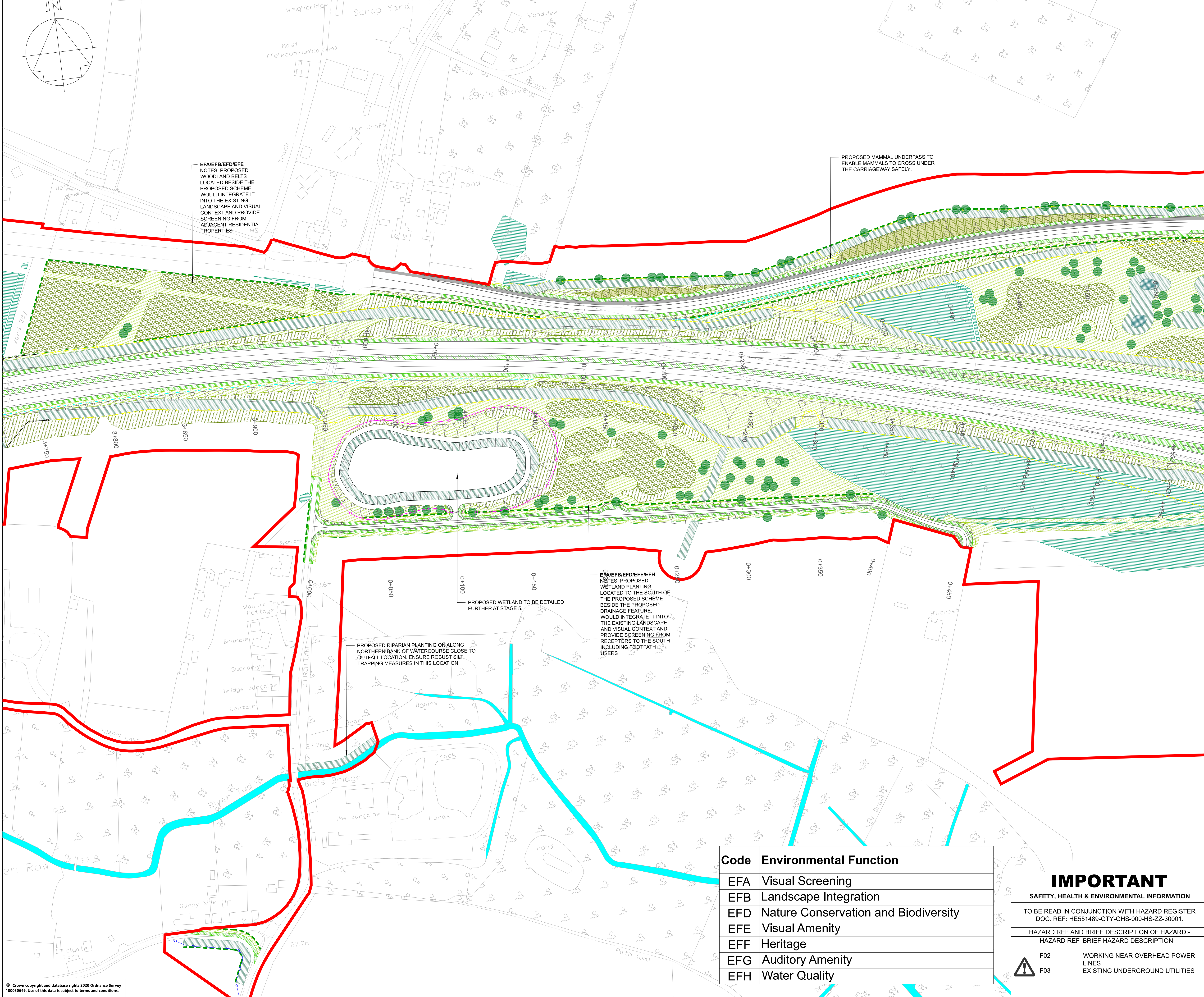
SUITABILITY  
**SUITABLE FOR STAGE APPROVAL**

SHEET SIZE	SCALE	STATUS	REVISION
A1	1:1250	S4	P05

DRAWING NUMBER  
**HE551489-GTY-ELS-000-DR-LX-30007**

**IMPORTANT**  
 SAFETY, HEALTH & ENVIRONMENTAL INFORMATION  
 TO BE READ IN CONJUNCTION WITH HAZARD REGISTER DOC. REF: HE551489-GTY-GHS-000-HS-ZZ-30001.  
 HAZARD REF AND BRIEF DESCRIPTION OF HAZARD- HAZARD REF BRIEF HAZARD DESCRIPTION  
 F02 WORKING NEAR OVERHEAD POWER LINES





**EFA/EFB/EFD/EFE**  
 NOTES: PROPOSED WOODLAND BELTS LOCATED BESIDE THE PROPOSED SCHEME WOULD INTEGRATE IT INTO THE EXISTING LANDSCAPE AND VISUAL CONTEXT AND PROVIDE SCREENING FROM ADJACENT RESIDENTIAL PROPERTIES

PROPOSED MAMMAL UNDERPASS TO ENABLE MAMMALS TO CROSS UNDER THE CARRIAGEWAY SAFELY.

PROPOSED WETLAND TO BE DETAILED FURTHER AT STAGE 5.

PROPOSED RIPARIAN PLANTING ON ALONG NORTHERN BANK OF WATERCOURSE CLOSE TO OUTFALL LOCATION. ENSURE ROBUST SILT TRAPPING MEASURES IN THIS LOCATION.

**EFD/EFB/EFD/EFH**  
 NOTES: PROPOSED WETLAND PLANTING LOCATED TO THE SOUTH OF THE PROPOSED SCHEME, BESIDE THE PROPOSED DRAINAGE FEATURE, WOULD INTEGRATE IT INTO THE EXISTING LANDSCAPE AND VISUAL CONTEXT AND PROVIDE SCREENING FROM RECEPTORS TO THE SOUTH INCLUDING FOOTPATH USERS

Code	Environmental Function
EFA	Visual Screening
EFB	Landscape Integration
EFD	Nature Conservation and Biodiversity
EFE	Visual Amenity
EFF	Heritage
EFG	Auditory Amenity
EFH	Water Quality

**IMPORTANT**  
 SAFETY, HEALTH & ENVIRONMENTAL INFORMATION  
 TO BE READ IN CONJUNCTION WITH HAZARD REGISTER DOC. REF: HE551489-GTY-GHS-000-HS-ZZ-30001.  
 HAZARD REF AND BRIEF DESCRIPTION OF HAZARD:-  
 HAZARD REF: F02 WORKING NEAR OVERHEAD POWER LINES  
 HAZARD REF: F03 EXISTING UNDERGROUND UTILITIES

- NOTES**
- A MAINTENANCE STRIP OF 1M (MINIMUM) WILL BE REQUIRED ON THE HIGHWAY SIDE OF ALL PROPOSED FENCING. TO BE PLANTED WITH SPECIES RICH GRASSLAND/AMENITY GRASS, WHERE APPROPRIATE. DETAILING WILL BE PROVIDED AT STAGE 5.
  - ALL AREAS OF PROPOSED WOODLAND, LINEAR BELTS OF SHRUBS AND TREES, SHRUBS WITH INTERMITTENT TREES, AND SHRUBS TO BE PLANTED WITH SPECIES RICH GRASSLAND. ALL AREAS OF RIPARIAN WOODLAND TO BE PLANTED WITH RIPARIAN SEEDING MIX. SEE PLANTING SCHEDULE FOR FURTHER DETAILS.
  - ALL STAGS CORRIDORS ARE INDICATIVE ONLY AND WILL BE FINALISED AT THE DETAILED DESIGN STAGE.
  - THIS DRAWING SHALL ONLY BE USED FOR THE DESIGN ELEMENT STATED IN THE DRAWING TITLE.
  - ALL DIMENSION IN METRES (m) UNLESS OTHERWISE STATED.
  - DO NOT SCALE FROM THIS DRAWING.
  - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH:  
 HE551489-GTY-ELS-000-DR-LX-30003  
 HE551489-GTY-ELS-000-DR-LX-30004  
 HE551489-GTY-ELS-000-DR-LX-30005  
 HE551489-GTY-ELS-000-DR-LX-30006  
 HE551489-GTY-ELS-000-DR-LX-30007  
 HE551489-GTY-ELS-000-DR-LX-30009  
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 HE551489-GTY-ELS-000-DR-LX-30011  
 HE551489-GTY-ELS-000-DR-LX-30012  
 HE551489-GTY-ELS-000-DR-LX-30013  
 HE551489-GTY-ELS-000-DR-LX-30014  
 HE551489-GTY-ELS-000-DR-LX-30015  
 HE551489-GTY-ELS-000-DR-LX-30016
  - FOR LANDSCAPE ELEMENT CODES REFER TO DMRB LD117 LANDSCAPE DESIGN DOCUMENT.

**KEY TO SYMBOLS**

DCO BOUNDARY	LE1.1 INDIVIDUAL TREES
CRISTED HORNSHEA WIND FARM	LE1.4 INDIVIDUAL TREES - SMALL TO LARGE SPECIES PLANTED AS EXTRA HEAVY STANDARD SPECIMENS
EXISTING VEGETATION	LE2.2 BANKS AND DITCHES (RIPARIAN SEEDING MIX)
EXISTING VEGETATION TO BE RETAINED	PROPOSED ELEMENTS - OTHER
PROPOSED ENVIRONMENTAL ELEMENTS	PROPOSED LIGHTING COLUMN LOCATION
E2.1 WATER POLLUTION CONTROL MEASURES - ATTENUATION/FILTRATION PONDS	HIGHWAY BOUNDARY - MCHW VOL. 3 SECT.1 H3 TIMBER POST AND RAIL
PROPOSED COMPENSATORY FLOOD	MAMMAL FENCING - SPECIFICATION TO BE CONFIRMED
LISTED MILESTONE	LOCAL AUTHORITY / ACCOMMODATION WORKS FENCING - H3 POST AND STRAINED WIRE
PROPOSED LANDSCAPE ELEMENTS	BAT MITIGATION FENCING - SPECIFICATION TO BE CONFIRMED
LE1.1 AMENITY GRASS AREAS	BAT MITIGATION FENCING ON STRUCTURE - SPECIFICATION TO BE CONFIRMED
LE1.3 SPECIES RICH GRASSLAND	2m HIGH NOISE AND VISUAL SCREEN
LE2.1 WOODLAND	3m HIGH NOISE BARRIER
LE2.1 WOODLAND RIV (RIPARIAN WOODLAND)	BASIN FENCING - MCHW HDC H13 POST AND STRAINED WIRE
LE2.4 LINEAR BELTS OF SHRUBS AND TREES	ANTI GLARE SCREEN - 2m HIGH CLOSE BOARDED FENCE
LE2.5 SHRUBS WITH INTERMITTENT TREES	FIELD ACCESS GATE - MCHW VOL.3 SECT.1 H7 STEEL SINGLE FIELD GATE
LE2.6 SHRUBS	4.5m WIDE SINGLE HEAVY DUTY TIMBER PALISADE GATE, GA BOLT.
LE2.3 NATIVE SPECIES HEDGEROWS	
LE2.4 NATIVE HEDGEROWS WITH TREES	

REV	DATE	REVISION NOTE	ORG	CHKD	APPD
P01	26/02/21	P01	LS	ECoo	BJon
P02	03/03/21	FINAL	SWRt	ECoo	BJon
C01	03/03/21	FINAL	SWRt	ECoo	BJon
P03	04/03/21	FINAL	LS	JMee	BJon
C02	04/03/21	FINAL	LS	JMee	BJon
P04	24/06/21	S55 CHECKLIST AMENDMENT	LS	JMee	MR
C03	24/06/21	S55 CHECKLIST AMENDMENT	LS	JMee	MR
P05	05/10/21	DEADLINE 3	LS	JMee	MR
P06	14/12/21	DEADLINE 6 ISSUE	LS	JMee	BArt
C04	14/12/21	DEADLINE 6 ISSUE	LS	JMee	BArt

DESIGNER

CONTRACTOR

CLIENT

PROJECT TITLE  
**A47 NORTH TUDDENHAM TO EASTON DUALLING**

PROJECT STAGE  
**PCF STAGE 4**

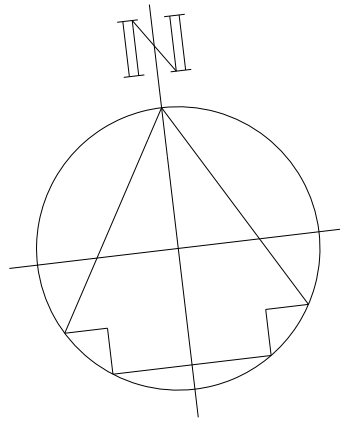
DRAWING TITLE  
 Environmental Masterplan Sheet 6 of 14  
 TR010038/APP/6.8

SUITABILITY  
**AUTHORISED AS STAGE 3 COMPLETED**

SHEET SIZE	SCALE	A3	REVISION
A1	1:1250	A3	C04

DRAWING NUMBER  
**HE551489-GTY-ELS-000-DR-LX-30008**





Code	Environmental Function
EFA	Visual Screening
EFB	Landscape Integration
EFD	Nature Conservation and Biodiversity
EFE	Visual Amenity
EFF	Heritage
EFG	Auditory Amenity
EFH	Water Quality

- NOTES**
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  - ALL AREAS OF PROPOSED WOODLAND, LINEAR BELTS OF SHRUBS AND TREES, SHRUBS WITH INTERMITTENT TREES, AND SHRUBS TO BE PLANTED WITH SPECIES RICH GRASSLAND. ALL AREAS OF RIPARIAN WOODLAND TO BE PLANTED WITH RIPARIAN SEEDING MIX. SEE PLANTING SCHEDULE FOR FURTHER DETAILS.
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HE551489-GTY-ELS-000-DR-LX-30003  
HE551489-GTY-ELS-000-DR-LX-30004  
HE551489-GTY-ELS-000-DR-LX-30005  
HE551489-GTY-ELS-000-DR-LX-30006  
HE551489-GTY-ELS-000-DR-LX-30007  
HE551489-GTY-ELS-000-DR-LX-30008  
HE551489-GTY-ELS-000-DR-LX-30010  
HE551489-GTY-ELS-000-DR-LX-30011  
HE551489-GTY-ELS-000-DR-LX-30012  
HE551489-GTY-ELS-000-DR-LX-30013  
HE551489-GTY-ELS-000-DR-LX-30014  
HE551489-GTY-ELS-000-DR-LX-30015  
HE551489-GTY-ELS-000-DR-LX-30016
  - FOR LANDSCAPE ELEMENT CODES REFER TO DMRB LD117 LANDSCAPE DESIGN DOCUMENT.

**KEY TO SYMBOLS**

DDD BOUNDARY	LES.1 INDIVIDUAL TREES
CRISTED HORNESEA WIND FARM	LES.1.4 INDIVIDUAL TREES - SMALL TO LARGE SPECIES PLANTED AS EXTRA HEAVY STANDARD SPECIMENS
EXISTING VEGETATION	LES.2 BANKS AND DITCHES (RIPARIAN SEEDING MIX)
EXISTING VEGETATION TO BE RETAINED	PROPOSED ELEMENTS - OTHER
PROPOSED ENVIRONMENTAL ELEMENTS	PROPOSED LIGHTING COLUMN LOCATION
LE1 WATER POLLUTION CONTROL MEASURES - ATTENUATION/RETENTION POND	HIGHWAY BOUNDARY - MCHV VOL. 3, SECT. 1 H3 TRIMMER POST AND RAIL
PROPOSED COMPENSATORY FLOOD STORAGE AREA	MAMMAL FENCING - SPECIFICATION TO BE CONFIRMED
LISTED MILESTONE	LOCAL AUTHORITY / ACCOMMODATION WORKS FENCING - H13 POST AND STRAINED WIRE
PROPOSED LANDSCAPE ELEMENTS	BAT MITIGATION FENCING - SPECIFICATION TO BE CONFIRMED
LE1.1 AMENITY GRASS AREAS	BAT MITIGATION FENCING ON STRUCTURE - SPECIFICATION TO BE CONFIRMED
LE1.3 SPECIES RICH GRASSLAND	2m HIGH NOISE AND VISUAL SCREEN
LE2.1 WOODLAND	3m HIGH NOISE BARRIER
LE2.1 WOODLAND RIV (RIPARIAN WOODLAND)	BASH FENCING - MCHV HCD H13 POST AND STRAINED WIRE
LE2.4 LINEAR BELTS OF SHRUBS AND TREES	ANTI GLARE SCREEN - 2m HIGH CLOSE BOARDED FENCE
LE2.5 SHRUBS WITH INTERMITTENT TREES	FIELD ACCESS GATE - MCHV VOL.3 SECT.1 H17 STEEL SINGLE FIELD GATE
LE2.6 SHRUBS	4.5m WIDE SINGLE HEAVY DUTY TIMBER PALISADE GATE, 60% WOOD
LE4.3 NATIVE SPECIES HEDGEROWS	
LE4.4 NATIVE HEDGEROWS WITH TREES	

REV	DATE	REVISION NOTE	ORG	CHK'D	APP'D
P01	26/02/21	P01	LS	ECo	BJon
P02	03/03/21	FINAL	SWR	ECo	BJon
C01	03/03/21	FINAL	SWR	ECo	BJon
P03	04/03/21	FINAL	LS	JMee	BJon
C02	04/03/21	FINAL	LS	JMee	BJon
P04	24/06/21	S55 CHECKLIST AMENDMENT	LS	JMee	MR
C03	24/06/21	S55 CHECKLIST AMENDMENT	LS	JMee	MR
P05	05/10/21	DEADLINE 3	LS	JMee	MR
P06	14/12/21	DEADLINE 6 ISSUE	LS	JMee	BArt
C04	14/12/21	DEADLINE 6 ISSUE	LS	JMee	BArt

DESIGNER

**SWECO**

CONTRACTOR

**GallifordTry**

CLIENT

**highways england**

PROJECT TITLE

**A47 NORTH TUDDENHAM TO EASTON DUALLING**

PROJECT STAGE

**PCF STAGE 4**

DRAWING TITLE

**Environmental Masterplan Sheet 7 of 14  
TR010038/APP/6.8**

SUITABILITY

**AUTHORISED AS STAGE 3 COMPLETED**

SHEET SIZE	SCALE	STATUS	REVISION
A1	1:1250	A3	C04

DRAWING NUMBER

**HE551489-GTY-ELS-000-DR-LX-30009**

EFA/EFB/EFD/EFE  
NOTES: PROPOSED WOODLAND BELTS LOCATED BESIDE THE PROPOSED SCHEME WOULD INTEGRATE IT INTO THE EXISTING LANDSCAPE AND VISUAL CONTEXT AND PROVIDE SCREENING FROM VISUAL RECEPTORS IN THE VICINITY OF THE WOOD LANE JUNCTION

EFA/EFB/EFD/EFE  
NOTES: PROPOSED WOODLAND BELTS LOCATED BESIDE THE WOOD LANE JUNCTION PROVIDES SPACE FOR A PROPOSED PEDESTRIAN ROUTE WHILE SCREENING VIEWS FROM ADJACENT RECEPTORS

**IMPORTANT**

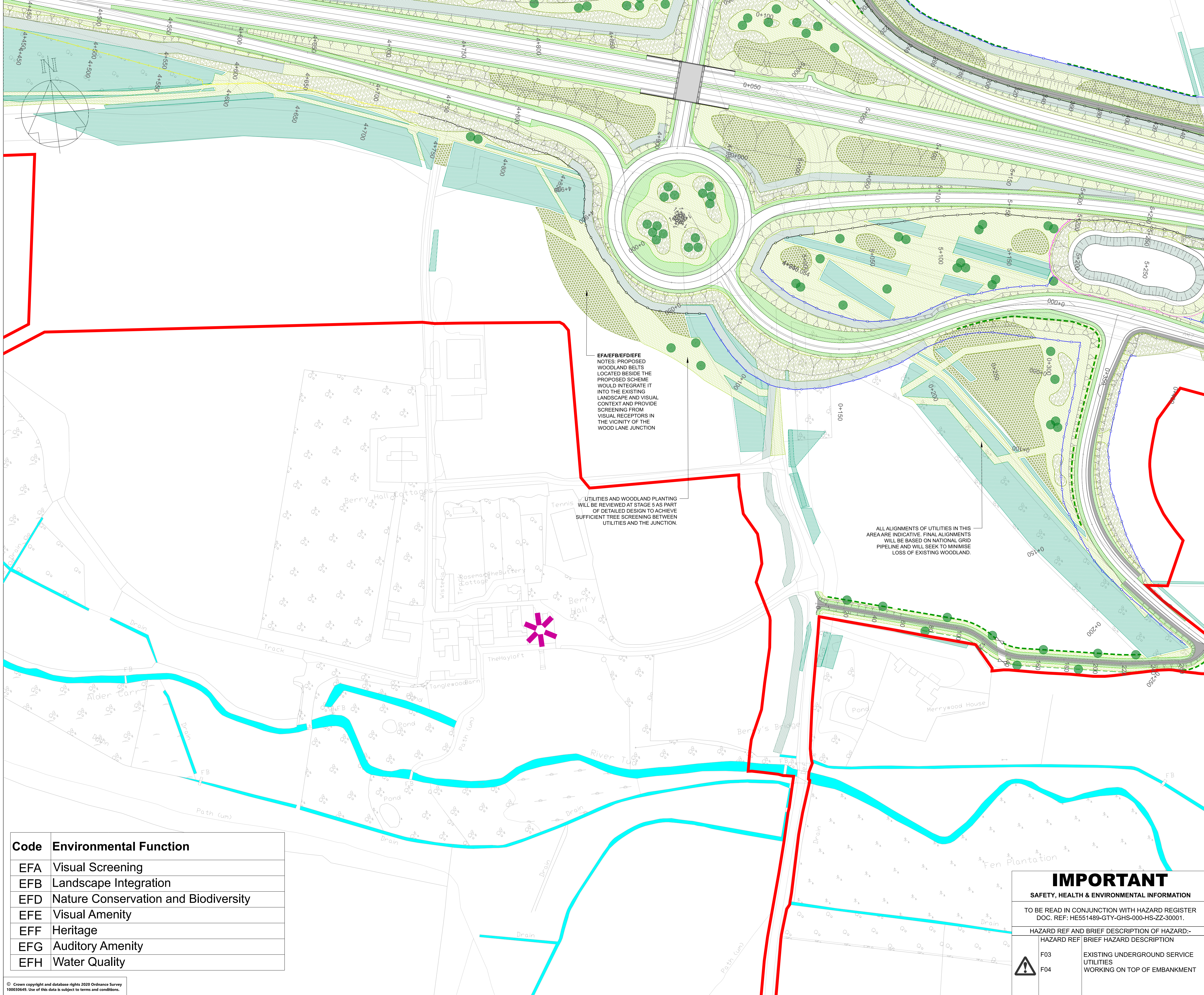
SAFETY, HEALTH & ENVIRONMENTAL INFORMATION

TO BE READ IN CONJUNCTION WITH HAZARD REGISTER DOC. REF: HE551489-GTY-GHS-000-HS-ZZ-30001.

HAZARD REF AND BRIEF DESCRIPTION OF HAZARD:-  
HAZARD REF: BRIEF HAZARD DESCRIPTION



This drawing should not be relied on or used in circumstances other than those for which it was originally prepared and for which Sweco UK Ltd was commissioned. Sweco UK Ltd accepts no responsibility for the consequences of this drawing being used for a purpose other than the purpose for which it was commissioned. Any person using or relying on this drawing for such other purpose agrees, and will by such use of reliance be taken to confirm their agreement, to indemnify Sweco UK Ltd for all loss or damage resulting therefrom.



- NOTES**
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 HE551489-GTY-ELS-000-DR-LX-30004  
 HE551489-GTY-ELS-000-DR-LX-30005  
 HE551489-GTY-ELS-000-DR-LX-30006  
 HE551489-GTY-ELS-000-DR-LX-30007  
 HE551489-GTY-ELS-000-DR-LX-30008  
 HE551489-GTY-ELS-000-DR-LX-30009  
 HE551489-GTY-ELS-000-DR-LX-30010  
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 HE551489-GTY-ELS-000-DR-LX-30014  
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 HE551489-GTY-ELS-000-DR-LX-30016  
 FOR LANDSCAPE ELEMENT CODES REFER TO DMRB LD117 LANDSCAPE DESIGN DOCUMENT.

**KEY TO SYMBOLS**

DDO BOUNDARY	EXISTING VEGETATION	PROPOSED ENVIRONMENTAL ELEMENTS	PROPOSED LANDSCAPE ELEMENTS	LE1.1 AMENITY GRASS AREAS	LE1.3 SPECIES RICH GRASSLAND	LE2.1 WOODLAND	LE2.2 WOODLAND RW (RIPARIAN WOODLAND)	LE2.4 LINEAR BELTS OF SHRUBS AND TREES	LE2.5 SHRUBS WITH INTERMITTENT TREES	LE2.6 SHRUBS	LE3.3 NATIVE SPECIES HEDGEROWS	LE4.4 NATIVE HEDGEROWS WITH TREES	LE1.1 INDIVIDUAL TREES	LE1.2 INDIVIDUAL TREES - SMALL TO LARGE SPECIES PLANTED AT EXTRA HEAVY STANDARD SPECIFICATIONS	LE2.2 BANKS AND DITCHES (RIPARIAN SEEDING MIX)	PROPOSED ELEMENTS - OTHER	PROPOSED LIGHTING COLUMN LOCATION	HIGHWAY BOUNDARY - MCHW VOL.3 SECT.1 H3 TIMBER POST AND RAIL	MAMMAL FENCING - SPECIFICATION TO BE CONFIRMED	LOCAL AUTHORITY / ACCOMMODATION WORKS FENCING - H13 POST AND STRAINED WIRE	BAT MITIGATION FENCING - SPECIFICATION TO BE CONFIRMED	BAT MITIGATION FENCING ON STRUCTURE - SPECIFICATION TO BE CONFIRMED	2m HIGH NOISE AND VISUAL SCREEN	3m HIGH NOISE BARRIER	BASIN FENCING - MCHW HCD H13 POST AND STRAINED WIRE	ANTI GLARE SCREEN - 2m HIGH CLOSE BOARDED FENCE	FIELD ACCESS GATE - MCHW VOL.3 SECT.1 H17 STEEL SINGLE FIELD GATE	8.5m WIDE SINGLE HEAVY DUTY TIMBER PALISADE GATE, GATE
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**EFA/EFB/EFD/EFE**  
 NOTES: PROPOSED WOODLAND BELTS LOCATED BESIDE THE PROPOSED SCHEME WOULD INTEGRATE IT INTO THE EXISTING LANDSCAPE AND VISUAL CONTEXT AND PROVIDE SCREENING FROM VISUAL RECEPTORS IN THE VICINITY OF THE WOOD LANE JUNCTION

UTILITIES AND WOODLAND PLANTING WILL BE REVIEWED AT STAGE 5 AS PART OF DETAILED DESIGN TO ACHIEVE SUFFICIENT TREE SCREENING BETWEEN UTILITIES AND THE JUNCTION.

ALL ALIGNMENTS OF UTILITIES IN THIS AREA ARE INDICATIVE. FINAL ALIGNMENTS WILL BE BASED ON NATIONAL GRID PIPELINE AND WILL SEEK TO MINIMISE LOSS OF EXISTING WOODLAND.

REV	DATE	REVISION NOTE	ORG	CHKD	APPD
P01	26/02/21	P01	LS	ECoo	BJon
P02	03/03/21	FINAL	SWR	ECoo	BJon
C01	03/03/21	FINAL	SWR	ECoo	BJon
P03	04/03/21	FINAL	LS	JMee	BJon
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P06	14/12/21	DEADLINE 6 ISSUE	LS	JMee	Bart
C04	14/12/21	DEADLINE 6 ISSUE	LS	JMee	Bart

DESIGNER

CONTRACTOR

CLIENT

PROJECT TITLE  
**A47 NORTH TUDDENHAM TO EASTON DUALLING**

PROJECT STAGE  
**PCF STAGE 4**

DRAWING TITLE  
 Environmental Masterplan Sheet 8 of 14  
 TR010038/APP/6.8

SUITABILITY  
**AUTHORISED AS STAGE 3 COMPLETED**

SHEET SIZE	SCALE	A3	REVISION
A1	1:1250	A3	C04

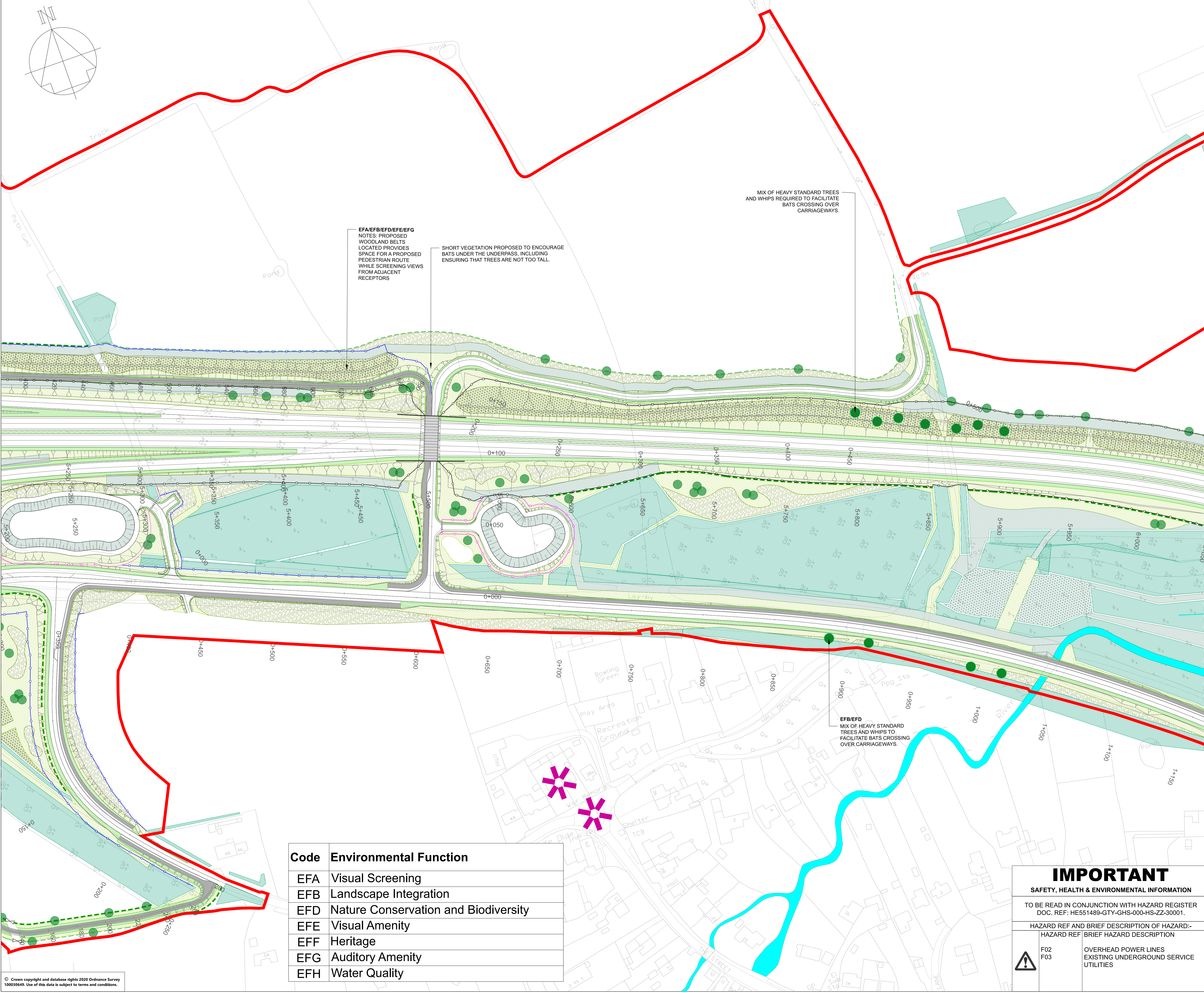
DRAWING NUMBER  
**HE551489-GTY-ELS-000-DR-LX-30010**

Code	Environmental Function
EFA	Visual Screening
EFB	Landscape Integration
EFD	Nature Conservation and Biodiversity
EFE	Visual Amenity
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EFG	Auditory Amenity
EFH	Water Quality

**IMPORTANT**  
 SAFETY, HEALTH & ENVIRONMENTAL INFORMATION  
 TO BE READ IN CONJUNCTION WITH HAZARD REGISTER DOC. REF: HE551489-GTY-GHS-000-HS-ZZ-30001.

HAZARD REF	BRIEF HAZARD DESCRIPTION
F03	EXISTING UNDERGROUND SERVICE UTILITIES WORKING ON TOP OF EMBANKMENT
F04	EXISTING UNDERGROUND SERVICE UTILITIES WORKING ON TOP OF EMBANKMENT





- NOTES**
- A MAINTENANCE STRIP OF 1M (MINIMUM) WILL BE REQUIRED ON THE HIGHWAY SIDE OF ALL PROPOSED FENCING. TO BE PLANTED WITH SPECIES RICH GRASSLAND/AMENITY GRASS, WHERE APPROPRIATE. DETAILING WILL BE PROVIDED AT STAGE 5.
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FOR LANDSCAPE ELEMENT CODES REFER TO DMRB LD117 LANDSCAPE DESIGN DOCUMENT.

**KEY TO SYMBOLS**

DCO BOUNDARY	EXISTING VEGETATION	EXISTING VEGETATION TO BE RETAINED	PROPOSED ENVIRONMENTAL ELEMENTS	PROPOSED LANDSCAPE ELEMENTS	PROPOSED LIGHTING COLUMN LOCATION
ORSTED HORNSEA WIND FARM	PROPOSED WATER POLLUTION CONTROL MEASURES - ATTENUATION/INTEGRATION PONDS	PROPOSED COMPENSATORY FLOOD STORAGE AREA	PROPOSED LANDSCAPE ELEMENTS	LE1.1 AMENITY GRASS AREAS	LE1.3 SPECIES RICH GRASSLAND
LE1.1 INDIVIDUAL TREES	LE1.4 INDIVIDUAL TREES - SMALL TO LARGE SPECIES PLANTED AS EXTRA HEAVY STANDARD SPECIMENS	LE2.2 SHRUBS WITH INTERMITTENT TREES	LE2.1 WOODLAND	LE2.1 WOODLAND RIV (RIPARIAN WOODLAND)	LE2.2 SHRUBS WITH INTERMITTENT TREES
LE2.2 BANKS AND DITCHES (RIPARIAN SEEDING MIX)	PROPOSED ELEMENTS - OTHER	LE3.4 NATIVE SPECIES HEDGEROWS WITH TREES	LE3.1 WATER POLLUTION CONTROL MEASURES - ATTENUATION/INTEGRATION PONDS	LE3.3 SPECIES RICH GRASSLAND	LE3.4 NATIVE SPECIES HEDGEROWS
PROPOSED LIGHTING COLUMN LOCATION	PROPOSED ENVIRONMENTAL ELEMENTS	PROPOSED LANDSCAPE ELEMENTS	LE4.1 WATER POLLUTION CONTROL MEASURES - ATTENUATION/INTEGRATION PONDS	LE4.2 SHRUBS WITH INTERMITTENT TREES	LE4.3 NATIVE SPECIES HEDGEROWS
PROPOSED ENVIRONMENTAL ELEMENTS	PROPOSED LANDSCAPE ELEMENTS	PROPOSED LANDSCAPE ELEMENTS	LE4.3 NATIVE SPECIES HEDGEROWS	LE4.4 NATIVE SPECIES HEDGEROWS WITH TREES	LE4.4 NATIVE SPECIES HEDGEROWS WITH TREES
PROPOSED LANDSCAPE ELEMENTS	PROPOSED LANDSCAPE ELEMENTS	PROPOSED LANDSCAPE ELEMENTS	LE4.4 NATIVE SPECIES HEDGEROWS WITH TREES	LE4.4 NATIVE SPECIES HEDGEROWS WITH TREES	LE4.4 NATIVE SPECIES HEDGEROWS WITH TREES

REV	DATE	REVISION NOTE	ORG	CHKD	APPD
P01	26/02/21	P01	LS	Ecoo	BJon
P02	03/03/21	FINAL	SWR	Ecoo	BJon
C01	03/03/21	FINAL	SWR	Ecoo	BJon
P03	04/03/21	FINAL	LS	JMee	BJon
C02	04/03/21	FINAL	LS	JMee	BJon
P04	24/06/21	S55 CHECKLIST AMENDMENT	LS	JMee	MR
C03	24/06/21	S55 CHECKLIST AMENDMENT	LS	JMee	MR
P05	05/10/21	DEADLINE 3	LS	JMee	MR
P06	14/12/21	DEADLINE 6 ISSUE	LS	JMee	BArt
C04	14/12/21	DEADLINE 6 ISSUE	LS	JMee	BArt

DESIGNER

**SWECO**

CONTRACTOR

**GallifordTry**

CLIENT

**highways england**

PROJECT TITLE

**A47 NORTH TUDDENHAM TO EASTON DUALLING**

PROJECT STAGE

**PCF STAGE 4**

DRAWING TITLE

**Environmental Masterplan Sheet 9 of 14 TR010038/APP/6.8**

SUITABILITY

**AUTHORISED AS STAGE 3 COMPLETED**

SHEET SIZE	SCALE	STATUS	REVISION
A1	1:1250	A3	C04

DRAWING NUMBER

**HE551489-GTY-ELS-000-DR-LX-30011**

Code	Environmental Function
EFA	Visual Screening
EFB	Landscape Integration
EFD	Nature Conservation and Biodiversity
EFE	Visual Amenity
EFF	Heritage
EFG	Auditory Amenity
EFH	Water Quality

**IMPORTANT**

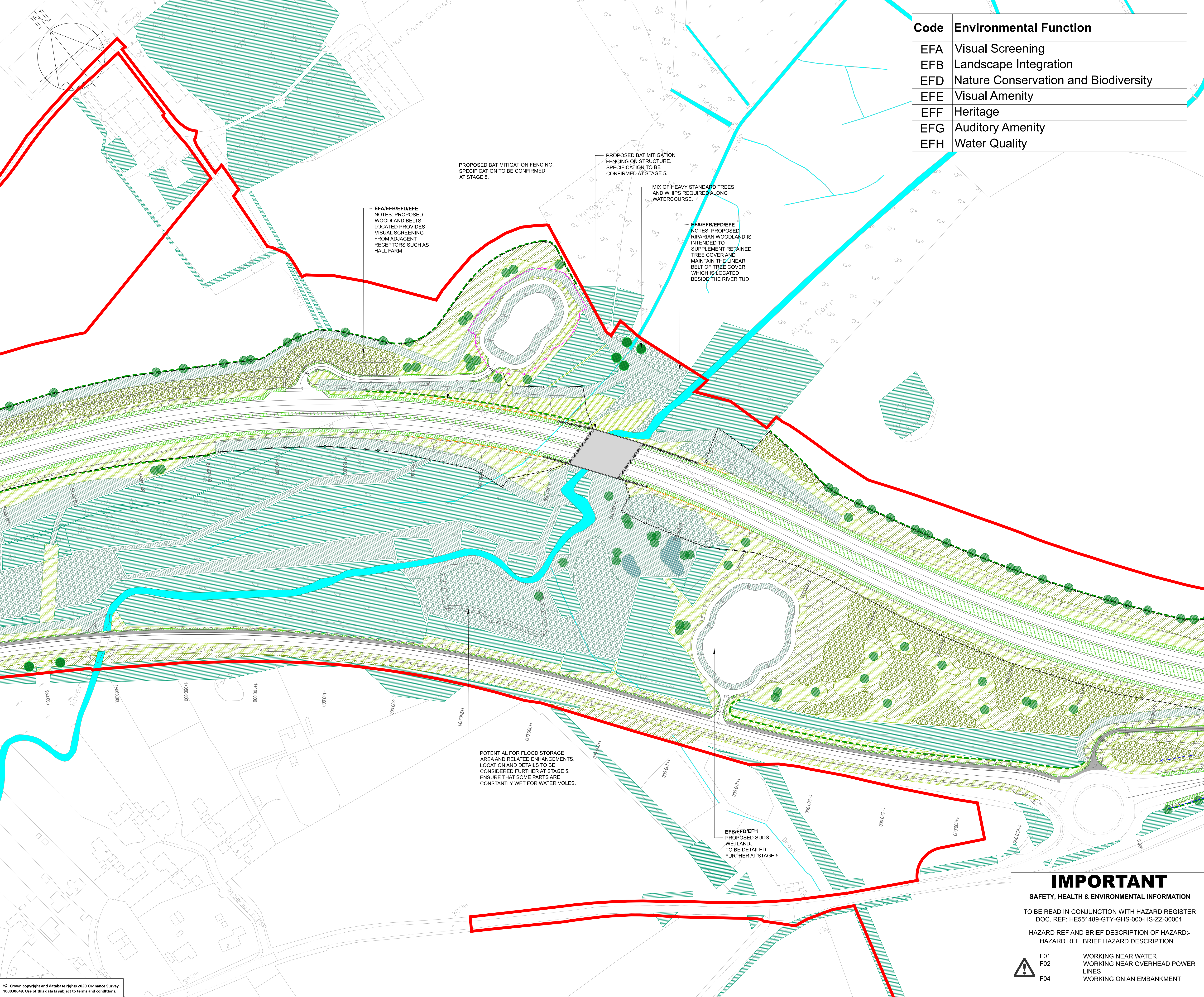
**SAFETY, HEALTH & ENVIRONMENTAL INFORMATION**

TO BE READ IN CONJUNCTION WITH HAZARD REGISTER DOC. REF: HE551489-GTY-GHS-000-HS-ZZ-30001.

HAZARD REF AND BRIEF DESCRIPTION OF HAZARD- HAZARD REF/ BRIEF HAZARD DESCRIPTION

F02	OVERHEAD POWER LINES
F03	EXISTING UNDERGROUND SERVICE UTILITIES





Code	Environmental Function
EFA	Visual Screening
EFB	Landscape Integration
EFD	Nature Conservation and Biodiversity
EFE	Visual Amenity
EFF	Heritage
EFG	Auditory Amenity
EFH	Water Quality

- NOTES**
- A MAINTENANCE STRIP OF 1M (MINIMUM) WILL BE REQUIRED ON THE HIGHWAY SIDE OF ALL PROPOSED FENCING. TO BE PLANTED WITH SPECIES RICH GRASSLAND/AMENITY GRASS, WHERE APPROPRIATE. DETAILING WILL BE PROVIDED AT STAGE 5.
  - ALL AREAS OF PROPOSED WOODLAND, LINEAR BELTS OF SHRUBS AND TREES, SHRUBS WITH INTERMITTENT TREES, AND SHRUBS TO BE PLANTED WITH SPECIES RICH GRASSLAND. ALL AREAS OF RIPARIAN WOODLAND TO BE PLANTED WITH RIPARIAN SEEDING MIX. SEE PLANTING SCHEDULE FOR FURTHER DETAILS.
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  - ALL DIMENSION IN METRES (m) UNLESS OTHERWISE STATED.
  - DO NOT SCALE FROM THIS DRAWING.
  - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH:  
HE551489-GTY-ELS-000-DR-LX-30003  
HE551489-GTY-ELS-000-DR-LX-30004  
HE551489-GTY-ELS-000-DR-LX-30005  
HE551489-GTY-ELS-000-DR-LX-30006  
HE551489-GTY-ELS-000-DR-LX-30007  
HE551489-GTY-ELS-000-DR-LX-30008  
HE551489-GTY-ELS-000-DR-LX-30009  
HE551489-GTY-ELS-000-DR-LX-30010  
HE551489-GTY-ELS-000-DR-LX-30011  
HE551489-GTY-ELS-000-DR-LX-30013  
HE551489-GTY-ELS-000-DR-LX-30014  
HE551489-GTY-ELS-000-DR-LX-30015  
HE551489-GTY-ELS-000-DR-LX-30016  
FOR LANDSCAPE ELEMENT CODES REFER TO DMRB LD117 LANDSCAPE DESIGN DOCUMENT.

**KEY TO SYMBOLS**

	DCO BOUNDARY		LES.1 INDIVIDUAL TREES
	CRISTED HORSESHOE FARM		LES.4 INDIVIDUAL TREES - SMALL TO LARGE SPECIES PLANTED AS EXTRA HEAVY SEEDING SPECIMENS
	EXISTING VEGETATION		LES.2 BANKS AND DITCHES (RIPARIAN SEEDING MIX)
	EXISTING VEGETATION TO BE RETAINED		PROPOSED ELEMENTS - OTHER
	PROPOSED ENVIRONMENTAL ELEMENTS		PROPOSED LIGHTING COLUMN LOCATION
	E4.1 WATER POLLUTION CONTROL MEASURES - ATTENUATION/FILTERING POOLS		HIGHWAY BOUNDARY - MCHW VOL.3 SECT.1 H3 TRIMMER POST AND RAIL
	PROPOSED COMPENSATORY FLOOD STORAGE AREA		MAMMAL FENCING - SPECIFICATION TO BE CONFIRMED
	LISTED MILESTONE		LOCAL AUTHORITY ACCOMMODATION WORKS FENCING - H13 POST AND STRAINED WIRE
	PROPOSED LANDSCAPE ELEMENTS		BAT MITIGATION FENCING - SPECIFICATION TO BE CONFIRMED
	LE1.1 AMENITY GRASS AREAS		BAT MITIGATION FENCING ON STRUCTURE - SPECIFICATION TO BE CONFIRMED
	LE1.3 SPECIES RICH GRASSLAND		2m HIGH NOSE AND VISUAL SCREEN
	LE2.1 WOODLAND		3m HIGH NOSE BARRIER
	LE2.1 WOODLAND RW (RIPARIAN WOODLAND)		BASIN FENCING - MCHW HCD H13 POST AND STRAINED WIRE
	LE2.4 LINEAR BELTS OF SHRUBS AND TREES		ANTI GLARE SCREEN - 2m HIGH CLOSE BOARDED FENCE
	LE2.5 SHRUBS WITH INTERMITTENT TREES		FIELD ACCESS GATE - MCHW VOL.3 SECT.1 H17 STEEL SINGLE FIELD GATE
	LE2.6 SHRUBS		4.5m WIDE SINGLE HEAVY DUTY TIMBER PALISADE GATE, GAT BOLT
	LE4.3 NATIVE SPECIES HEDGEROWS		
	LE4.4 NATIVE HEDGEROWS WITH TREES		

REV	DATE	REVISION NOTE	ORG	CHKD	APPD
P01	26/02/21	FOR ISSUE	LS	ECoo	BJon
P02	03/03/21	FINAL	SWR	ECoo	BJon
C01	03/03/21	FINAL	SWR	ECoo	BJon
P03	04/03/21	FINAL	LS	JMee	BJon
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P04	24/06/21	S55 CHECKLIST AMENDMENT	LS	JMee	MR
C03	24/06/21	S55 CHECKLIST AMENDMENT	LS	JMee	MR
P05	05/10/21	DEADLINE 3	LS	JMee	MR

DESIGNER  
**SWECO**

CONTRACTOR  
**GallifordTry**

CLIENT  
**highways england**

PROJECT TITLE  
**A47 NORTH TUDDENHAM TO EASTON DUALLING**

PROJECT STAGE  
**PCF STAGE 4**

DRAWING TITLE  
**Environmental Masterplan Sheet 10 of 14 TR010038/APP/6.8**

SUITABILITY  
**SUITABLE FOR STAGE APPROVAL**

SHEET SIZE	SCALE	STATUS	REVISION
A1	1:1250	S4	P05

DRAWING NUMBER  
**HE551489-GTY-ELS-000-DR-LX-30012**

**IMPORTANT**  
SAFETY, HEALTH & ENVIRONMENTAL INFORMATION

TO BE READ IN CONJUNCTION WITH HAZARD REGISTER DOC. REF: HE551489-GTY-GHS-000-HS-ZZ-30001.

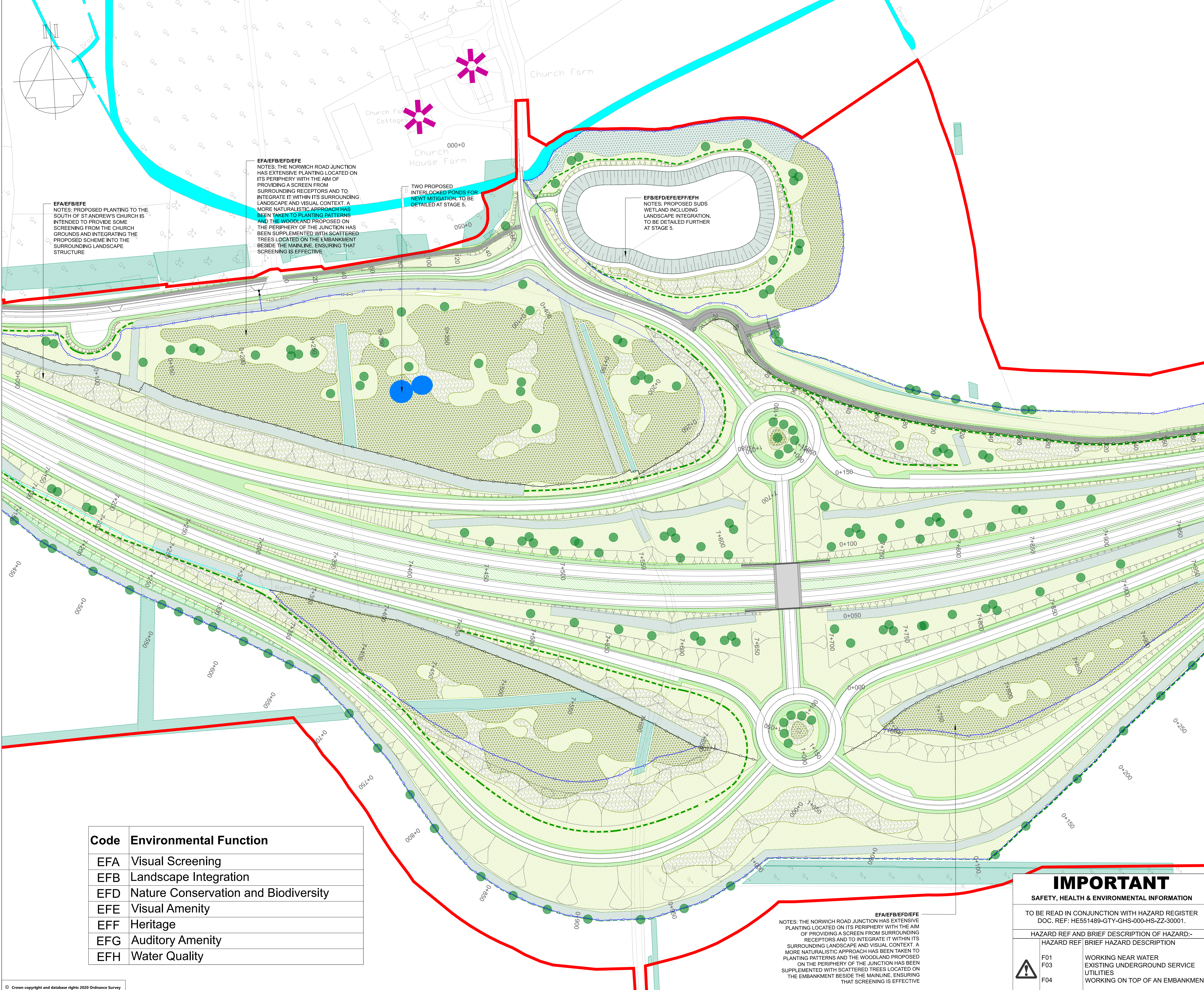
HAZARD REF	BRIEF DESCRIPTION OF HAZARD-
F01	WORKING NEAR WATER
F02	WORKING NEAR OVERHEAD POWER LINES
F04	WORKING ON AN EMBANKMENT







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 HE551489-GTY-ELS-000-DR-LX-30009  
 HE551489-GTY-ELS-000-DR-LX-30010  
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 HE551489-GTY-ELS-000-DR-LX-30012  
 HE551489-GTY-ELS-000-DR-LX-30013  
 HE551489-GTY-ELS-000-DR-LX-30016
  8. FOR LANDSCAPE ELEMENT CODES REFER TO DMRB LD117 LANDSCAPE DESIGN DOCUMENT.

**KEY TO SYMBOLS**

DDD BOUNDARY	LE1.1 INDIVIDUAL TREES
EXISTING VEGETATION	LE1.4 INDIVIDUAL TREES - SMALL TO LARGE SPECIES PLANTED AS EXTRA HIGH STANDARD SPECIMENS
EXISTING VEGETATION TO BE RETAINED	LE1.2 BANKS AND DITCHES (RIPARIAN SEEDING MIX)
PROPOSED ENVIRONMENTAL ELEMENTS	PROPOSED LIGHTING COLUMN LOCATION
E2.1 WATER POLLUTION CONTROL MEASURES - ATTENUATION/INFILTRATION PONDS	HIGHWAY BOUNDARY - MCHW VOL.3 SECT.1 H3 TIMBER POST AND RAIL
PROPOSED COMPENSATORY FLOOD STORAGE AREA	MAMMAL FENCING - SPECIFICATION TO BE CONFIRMED
LISTED MILESTONE	LOCAL AUTHORITY / ACCOMMODATION WORKS FENCING - H17 POST AND STRAINED WIRE
PROPOSED LANDSCAPE ELEMENTS	BAT MITIGATION FENCING - SPECIFICATION TO BE CONFIRMED
LE1.1 AMENITY GRASS AREAS	BAT MITIGATION FENCING ON STRUCTURE - SPECIFICATION TO BE CONFIRMED
LE1.3 SPECIES RICH GRASSLAND	2m HIGH NOISE AND VISUAL SCREEN
LE1.2 WOODLAND	3m HIGH NOISE BARRIER
LE2.1 WOODLAND RW (RIPARIAN WOODLAND)	3m HIGH NOISE AND VISUAL SCREEN
LE2.4 LINEAR BELTS OF SHRUBS AND TREES	BASIN FENCING - MCHW HCD H13 POST AND STRAINED WIRE
LE2.5 SHRUBS WITH INTERMITTENT TREES	ANTI GLARE SCREEN - 2m HIGH CLOSE BOARDED FENCE
LE2.6 SHRUBS	FIELD ACCESS GATE - MCHW VOL.3 SECT.1 H17 STEEL SINGLE FIELD GATE
LE2.3 NATIVE SPECIES HEDGEROWS	4.5m WIDE SINGLE HEAVY DUTY TIMBER PALISADE GATE, G4 BOLT.
LE2.4 NATIVE HEDGEROWS WITH TREES	

REV	DATE	REVISION NOTE	ORG	CHK'D	APP'D
P01	26/02/21		LS	ECoo	BJon
P02	03/03/21	FINAL	SWR	ECoo	BJon
C01	03/03/21	FINAL	SWR	ECoo	BJon
P03	04/03/21	FINAL	LS	JMee	BJon
C02	04/03/21	FINAL	LS	JMee	BJon
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P06	14/12/21	DEADLINE 6 ISSUE	LS	JMee	BArt
C04	14/12/21	DEADLINE 6 ISSUE	LS	JMee	BArt

DESIGNER

**SWECO**

CONTRACTOR

**GallifordTry**

CLIENT

**highways**  
england

PROJECT TITLE

**A47 NORTH TUDDENHAM TO EASTON DUALLING**

PROJECT STAGE

**PCF STAGE 4**

DRAWING TITLE

**Environmental Masterplan Sheet 12 of 14  
TR010038/APP/6.8**

**IMPORTANT**  
SAFETY, HEALTH & ENVIRONMENTAL INFORMATION

TO BE READ IN CONJUNCTION WITH HAZARD REGISTER DOC. REF: HE551489-GTY-GHS-000-HS-ZZ-30001.

HAZARD REF	BRIEF HAZARD DESCRIPTION
F01	WORKING NEAR WATER
F03	EXISTING UNDERGROUND SERVICE UTILITIES
F04	WORKING ON TOP OF AN EMBANKMENT

SUITABILITY

**AUTHORISED AS STAGE 3 COMPLETED**

SHEET SIZE	SCALE	STATUS	REVISION
A1	1:1250	A3	C04

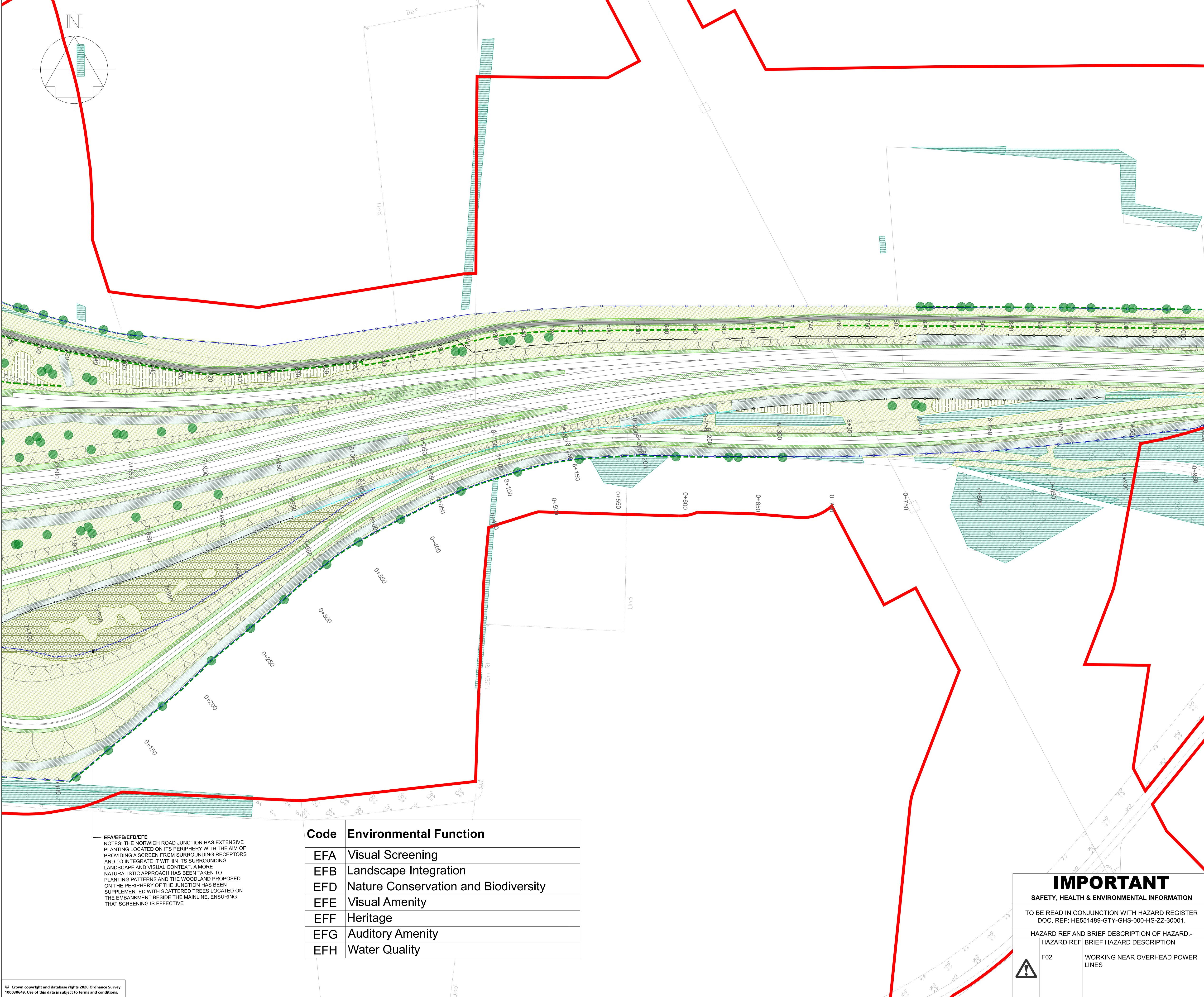
DRAWING NUMBER

**HE551489-GTY-ELS-000-DR-LX-30014**

Code	Environmental Function
EFA	Visual Screening
EFB	Landscape Integration
EFD	Nature Conservation and Biodiversity
EFE	Visual Amenity
EFF	Heritage
EFG	Auditory Amenity
EFH	Water Quality



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 HE551489-GTY-ELS-000-DR-LX-30016
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**KEY TO SYMBOLS**

DCO BOUNDARY	LES.1 INDIVIDUAL TREES
ORSTED HORSEWEAVING FARM	LES.1.4 INDIVIDUAL TREES - SMALL TO LARGE SPECIES PLANTED AS EXTRA HEAVY STANDARD SPECIMENS
EXISTING VEGETATION	LES.2 BANKS AND DITCHES (RIPARIAN SEEDING MIX)
EXISTING VEGETATION TO BE RETAINED	PROPOSED ELEMENTS - OTHER
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PROPOSED LANDSCAPE ELEMENTS	B&T MITIGATION FENCING - SPECIFICATION TO BE CONFIRMED
LE1.1 AMENITY GRASS AREAS	B&T MITIGATION FENCING ON STRUCTURE - SPECIFICATION TO BE CONFIRMED
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LE2.6 SHRUBS	4.5m WIDE SINGLE HEAVY DUTY TIMBER PALISADE GATE, G&BOLT.
LE4.3 NATIVE SPECIES HEDGEROWS	
LE4.4 NATIVE HEDGEROWS WITH TREES	

P01	26/02/21	P01		LS	ECoo	BJon
P02	03/03/21	FINAL		SWR	ECoo	BJon
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REV	DATE	REVISION NOTE		ORG	CHK'D	APP'D

DESIGNER

**SWECO**

CONTRACTOR

**GallifordTry**

CLIENT

**highways england**

PROJECT TITLE

**A47 NORTH TUDDENHAM TO EASTON DUALLING**

PROJECT STAGE

**PCF STAGE 4**

DRAWING TITLE

**Environmental Masterplan Sheet 13 of 14  
TR010038/APP/6.8**

SUITABILITY

**AUTHORISED AS STAGE 3 COMPLETED**

SHEET SIZE	SCALE	STATUS	REVISION
A1	1:1250	A3	C04

DRAWING NUMBER

**HE551489-GTY-ELS-000-DR-LX-30015**

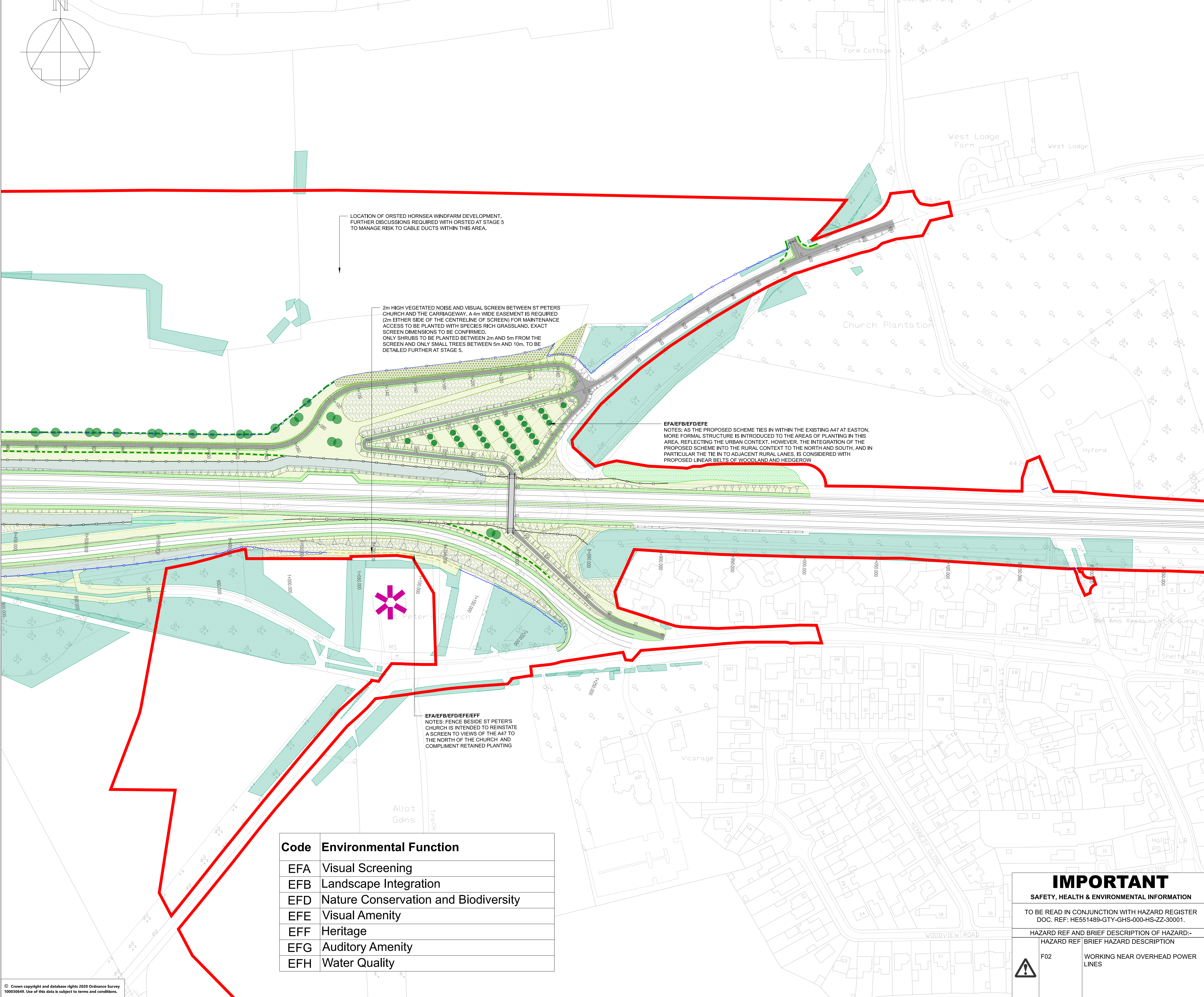
Code	Environmental Function
EFA	Visual Screening
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EFF	Heritage
EFG	Auditory Amenity
EFH	Water Quality

EFA/EFB/EFD/EFE  
 NOTES: THE NORWICH ROAD JUNCTION HAS EXTENSIVE PLANTING LOCATED ON ITS PERIPHERY WITH THE AIM OF PROVIDING A SCREEN FROM SURROUNDING RECEPTORS AND TO INTEGRATE IT WITHIN ITS SURROUNDING LANDSCAPE AND VISUAL CONTEXT. A MORE NATURALISTIC APPROACH HAS BEEN TAKEN TO PLANTING PATTERNS AND THE WOODLAND PROPOSED ON THE PERIPHERY OF THE JUNCTION HAS BEEN SUPPLEMENTED WITH SCATTERED TREES LOCATED ON THE EMBANKMENT BESIDE THE MAINLINE, ENSURING THAT SCREENING IS EFFECTIVE.

**IMPORTANT**  
 SAFETY, HEALTH & ENVIRONMENTAL INFORMATION  
 TO BE READ IN CONJUNCTION WITH HAZARD REGISTER DOC. REF: HE551489-GTY-GHS-000-HS-ZZ-30001.

HAZARD REF	BRIEF HAZARD DESCRIPTION
F02	WORKING NEAR OVERHEAD POWER LINES





LOCATION OF ORSTED HORNSEA WINDFARM DEVELOPMENT. FURTHER DISCUSSIONS REQUIRED WITH ORSTED AT STAGE 5 TO MANAGE RISK TO CABLE DUCTS WITHIN THIS AREA.

2m HIGH VEGETATED NOISE AND VISUAL SCREEN BETWEEN ST PETERS CHURCH AND THE CARRIAGEWAY. A 4m WIDE EASEMENT IS REQUIRED (2m EITHER SIDE OF THE CENTRELINE OF SCREEN) FOR MAINTENANCE ACCESS TO BE PLANTED WITH SPECIES RICH GRASSLAND. EXACT SCREEN DIMENSIONS TO BE CONFIRMED. ONLY SHRUBS TO BE PLANTED BETWEEN 2m AND 5m FROM THE SCREEN AND ONLY SMALL TREES BETWEEN 5m AND 10m. TO BE DETAILED FURTHER AT STAGE 5.

EFA/EFB/efd/efe  
NOTES: AS THE PROPOSED SCHEME TIES IN WITHIN THE EXISTING A47 AT EASTON, MORE FORMAL STRUCTURE IS INTRODUCED TO THE AREAS OF PLANTING IN THIS AREA, REFLECTING THE URBAN CONTEXT. HOWEVER, THE INTEGRATION OF THE PROPOSED SCHEME INTO THE RURAL CONTEXT TO THE NORTH AND SOUTH, AND IN PARTICULAR THE TIE IN TO ADJACENT RURAL LANES, IS CONSIDERED WITH PROPOSED LINEAR BELTS OF WOODLAND AND HEDGEROW.

EFA/EFB/efD/efe/eff  
NOTES: FENCE BESIDE ST PETER'S CHURCH IS INTENDED TO REINSTATE A SCREEN TO VIEWS OF THE A47 TO THE NORTH OF THE CHURCH AND COMPLEMENT RETAINED PLANTING

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  - FOR LANDSCAPE ELEMENT CODES REFER TO DMRB LD117 LANDSCAPE DESIGN DOCUMENT.

**KEY TO SYMBOLS**

DCO BOUNDARY	EXISTING VEGETATION	PROPOSED ENVIRONMENTAL ELEMENTS	PROPOSED LANDSCAPE ELEMENTS	EXISTING VEGETATION TO BE RETAINED	PROPOSED ENVIRONMENTAL ELEMENTS	PROPOSED LANDSCAPE ELEMENTS	PROPOSED ELEMENTS - OTHER
ORSTED HORNSEA WIND FARM	PROPOSED VEGETATION TO BE PLANTED	E2.1 WATER POLLUTION CONTROL MEASURES - ATTENUATION/FILTRATION PONDS	PROPOSED COMPENSATORY FLOOD STORAGE AREA	LISTED MILESTONE	E2.1 WATER POLLUTION CONTROL MEASURES - ATTENUATION/FILTRATION PONDS	PROPOSED COMPENSATORY FLOOD STORAGE AREA	PROPOSED LIGHTING COLUMN LOCATION
LE1.1 AMENITY GRASS AREAS	LE1.2 SPECIES RICH GRASSLAND	LE1.3 WOODLAND	LE1.4 WOODLAND RW (RIPARIAN WOODLAND)	LE1.5 LINEAR BELTS OF SHRUBS AND TREES	LE1.6 SHRUBS WITH INTERMITTENT TREES	LE1.7 SHRUBS	LE1.8 NATIVE SPECIES HEDGEROWS
LE1.9 NATIVE SPECIES HEDGEROWS WITH TREES	LE2.1 INDIVIDUAL TREES	LE2.2 INDIVIDUAL TREES - SMALL TO LARGE SPECIES PLANTED AS EXTRA HEAVY STANDARD SPECIMENS	LE2.3 BANKS AND DITCHES (RIPARIAN SEEDING MIX)	PROPOSED ELEMENTS - OTHER	HIGHWAY BOUNDARY - MCHW VOL. 3 SECT. 1 H3 TIMBER POST AND RAIL	MAMMAL FENCING - SPECIFICATION TO BE CONFIRMED	LOCAL AUTHORITY / ACCOMMODATION WORKS FENCING - H3 POST AND STRAINED WIRE
					BAT MITIGATION FENCING - SPECIFICATION TO BE CONFIRMED	SAT MITIGATION FENCING ON STRUCTURE - SPECIFICATION TO BE CONFIRMED	2m HIGH NOISE AND VISUAL SCREEN
					3m HIGH NOISE BARRIER	ANTI GLARE SCREEN - MCHW HCD H13 POST AND STRAINED WIRE	FIELD ACCESS GATE - MCHW VOL.3 SECT. 1 H7 STEEL SINGLE FIELD GATE
							4.5m WIDE SINGLE HEAVY DUTY TIMBER PALISADE GATE, GAT BOLT.

REV	DATE	REVISION NOTE	ORG	CHKD	APPD
P01	26/02/21	FOR ISSUE	LS	ECoo	BJon
P02	03/03/21	FINAL	SWII	ECoo	BJon
C01	03/03/21	FINAL	SWII	ECoo	BJon
P03	04/03/21	FINAL	LS	JMee	BJon
C02	04/03/21	FINAL	LS	JMee	BJon
P04	24/06/21	S55 CHECKLIST AMENDMENT	LS	JMee	MR
C03	24/06/21	S55 CHECKLIST AMENDMENT	LS	JMee	MR
P05	05/10/21	DEADLINE 3	LS	JMee	MR

DESIGNER

CONTRACTOR

CLIENT

PROJECT TITLE  
**A47 NORTH TUDDENHAM TO EASTON DUALLING**

PROJECT STAGE  
**PCF STAGE 4**

DRAWING TITLE  
**Environmental Masterplan Sheet 14 of 14 TR010038/APP/6.8**

**SUITABILITY**  
**SUITABLE FOR STAGE APPROVAL**

SHEET SIZE	SCALE	S4	REVISION
A1	1:1250	S4	P05

DRAWING NUMBER  
**HE551489-GTY-ELS-000-DR-LX-30016**

**IMPORTANT**  
SAFETY, HEALTH & ENVIRONMENTAL INFORMATION  
TO BE READ IN CONJUNCTION WITH HAZARD REGISTER DOC. REF: HE551489-GTY-GHS-000-HS-ZZ-30001.

HAZARD REF AND BRIEF DESCRIPTION OF HAZARD:-  
HAZARD REF: F02  
BRIEF HAZARD DESCRIPTION: WORKING NEAR OVERHEAD POWER LINES