

# **A46 Newark Bypass**

**TR010065/APP/6.2**

## **6.2 Environmental Statement**

### **Figure 2.3 Environmental Masterplan**

APFP Regulation 5(2)(a)

Planning Act 2008

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

Volume 6

April 2024

Infrastructure Planning

Planning Act 2008

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

A46 Newark Bypass

Development Consent Order 202[x]

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**ENVIRONMENTAL STATEMENT**

**Figure 2.3 Environmental Masterplan**

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<b>Regulation Number:</b>	Regulation 5(2)(a)
<b>Planning Inspectorate Scheme Reference</b>	TR010065
<b>Application Document Reference</b>	TR010065/APP/6.2
<b>Author:</b>	A46 Newark Bypass Project Team, National Highways

<b>Version</b>	<b>Date</b>	<b>Status of Version</b>
Rev 1	April 2024	DCO Application



LE2.1 WOODLAND INDICATIVE MIX			
BOTANICAL NAME	COMMON NAME	HEIGHT (cm)	DENSITY (m)
<b>TREES (70%)</b>			
<i>Acer campestre</i>	Field Maple	60-80	4m Centres
<i>Alnus glutinosa</i>	Alder	60-80	
<i>Betula pendula</i>	Silver Birch	60-80	
<i>Betula pubescens</i>	Downy Birch	60-80	
<i>Carpinus betulus</i>	Hornbeam	60-80	
<i>Fagus sylvatica</i>	Beech	60-80	
<i>Pinus sylvestris</i>	Scots Pine	60-80	
<i>Populus tremula</i>	Aspen	60-80	
<i>Populus nigra</i>	Black Poplar	60-80	
<i>Prunus padus</i>	Bird Cherry	60-80	
<i>Quercus petraea</i>	Sessile Oak	60-80	
<i>Quercus robur</i>	English Oak	60-80	
<i>Salix alba</i>	White Willow	60-80	
<i>Salix caprea</i>	Goat Willow	60-80	
<i>Salix fragilis</i>	Crack Willow	60-80	
<i>Sorbus aria</i>	Whitebeam	60-80	
<i>Sorbus torminalis</i>	Wild Service Tree	60-80	
<i>Tilia cordata</i>	Small-leaved Lime	60-80	
<b>SHRUBS (30%)</b>			
<i>Cornus sanguinea</i>	Dogwood	60-80	1.5m Centres
<i>Corylus avellana</i>	Hazel	60-80	
<i>Crataegus monogyna</i>	Hawthorn	60-80	
<i>Ilex aquifolium</i>	Holly	40-60	
<i>Ligustrum vulgare</i>	Wild Privet	60-80	
<i>Sambucus nigra</i>	Common Elder	60-80	

LE2.4 LINEAR BELTS OF SHRUBS AND TREES INDICATIVE MIX				
BOTANICAL NAME	COMMON NAME	HEIGHT (cm)	DENSITY (m)	
<b>FEATHERED TREES (60%)</b>				
<i>Acer campestre</i>	Field Maple	125-150	4m Centres	
<i>Betula pendula</i>	Silver Birch	125-150		
<i>Malus sylvestris</i>	Crab Apple	125-150		
<i>Prunus avium</i>	Wild Cherry	125-150		
<i>Prunus padus</i>	Bird Cherry	125-150		
<i>Populus tremula</i>	Aspen	125-150		
<i>Salix caprea</i>	Goat Willow	125-150		
<i>Salix fragilis</i>	Crack Willow	125-150		
<i>Sorbus aucuparia</i>	Rowan	125-150		
<i>Sorbus aria</i>	Whitebeam	150-175		
<i>Sorbus torminalis</i>	Wild Service Tree	175-200		
<b>SHRUBS (40%)</b>				
<i>Cornus sanguinea</i>	Dogwood	60-80		1.5m Centres
<i>Corylus avellana</i>	Hazel	60-80		
<i>Crataegus monogyna</i>	Hawthorn	60-80		
<i>Ilex aquifolium</i>	Holly	40-60		
<i>Ligustrum vulgare</i>	Wild Privet	60-80		
<i>Sambucus nigra</i>	Common Elder	60-80		

LE2.5 SHRUBS WITH INTERMITTENT TREES INDICATIVE MIX			
BOTANICAL NAME	COMMON NAME	HEIGHT (cm)	DENSITY (m)
<b>FEATHERED TREES (35%)</b>			
<i>Acer campestre</i>	Field Maple	125-150	6m Centres
<i>Populus tremula</i>	Aspen	125-150	
<i>Prunus padus</i>	Bird Cherry	125-150	
<i>Salix caprea</i>	Goat Willow	125-150	
<i>Sorbus aucuparia</i>	Rowan	125-150	
<b>SHRUBS (65%)</b>			
<i>Cornus sanguinea</i>	Dogwood	60-80	1.5m Centres
<i>Corylus avellana</i>	Hazel	60-80	
<i>Ilex aquifolium</i>	Holly	40-60	
<i>Ligustrum vulgare</i>	Wild Privet	60-80	
<i>Sambucus nigra</i>	Common Elder	60-80	
<i>Viburnum lantana</i>	Wayfaring Tree	60-80	

LE4.3 NATIVE SPECIES HEDGEROWS INDICATIVE MIX (Double staggered row at 0.4m offset)			
BOTANICAL NAME	COMMON NAME	HEIGHT (cm)	DENSITY (m)
<b>SHRUBS (100%)</b>			
<i>Acer campestre</i>	Field Maple	60-80	0.3m Centres
<i>Crataegus laevigata</i>	Midland Hawthorn	60-80	
<i>Crataegus monogyna</i>	Hawthorn	60-80	
<i>Cornus sanguinea</i>	Dogwood	60-80	
<i>Corylus avellana</i>	Hazel	60-80	
<i>Ilex aquifolium</i>	Holly	40-60	
<i>Ligustrum vulgare</i>	Wild Privet	60-80	
<i>Sambucus nigra</i>	Common Elder	60-80	
<i>Rhamnus Cathartica</i>	Common Buckthorn	60-80	

LE4.4 NATIVE SPECIES HEDGEROWS WITH TREES INDICATIVE MIX (Double staggered row at 0.4m offset)					
BOTANICAL NAME	COMMON NAME	GIRTH (cm)	HEIGHT (cm)	DENSITY (m)	
<b>TREES</b>					
<i>Malus sylvestris</i>	Crab Apple	8-10	250-300	Spot Planted	
<i>Quercus robur</i>	English Oak	8-10	250-300		
<i>Salix alba</i>	White Willow	8-10	250-300		
<i>Salix fragilis</i>	Crack Willow	8-10	250-300		
<i>Sorbus aucuparia</i>	Rowan	8-10	250-300		
<i>Tilia cordata</i>	Small-leaved Lime	8-10	250-300		
<b>SHRUBS (100%)</b>					
<i>Acer campestre</i>	Field Maple	N/A	60-80		
<i>Crataegus monogyna</i>	Hawthorn	N/A	60-80		
<i>Corylus avellana</i>	Hazel	N/A	60-80		
<i>Cornus sanguinea</i>	Dogwood	N/A	60-80		
<i>Sambucus nigra</i>	Common Elder	N/A	60-80		

LE5.1 INDICATIVE INDIVIDUAL TREES				
BOTANICAL NAME	COMMON NAME	GIRTH (cm)	HEIGHT (cm)	DENSITY (m)
<i>Acer campestre</i>	Field Maple	8-10	250-300	Spot Planted
<i>Alnus glutinosa</i>	Alder	8-10	250-300	
<i>Carpinus betulus</i>	Hornbeam 'Frans Fontaine'	8-10	250-300	
<i>Aesculus hippocastanum</i>	Horse Chestnut	8-10	200-250	
<i>Fagus sylvatica</i>	Beech	8-10	250-300	
<i>Quercus ilex</i>	Holm Oak	8-10	250-300	
<i>Quercus robur</i>	English Oak	8-10	250-300	
<i>Quercus robur fastigata</i>	Cypress Oak	8-10	250-300	
<i>Prunus x schmittii</i>	Ornamental Hybrid Cherry	8-10	250-300	
<i>Salix alba</i>	White Willow	8-10	250-300	
<i>Salix caprea</i>	Goat Willow	8-10	250-300	
<i>Salix fragilis</i>	Crack Willow	8-10	250-300	
<i>Pinus sylvestris</i>	Scots Pine	N/A	250-300	
<i>Sorbus aucuparia</i>	'Streetwise'	8-10	250-300	
<i>Tilia cordata</i>	Small-leaved Lime	8-10	250-300	
<i>Tilia cordata</i>	'Greenspire'	8-10	250-300	
<i>Ulmus 'new horizon'</i>	Elm 'New Horizon'	8-10	250-300	

LE6.1 WATER BODIES AND ASSOCIATED PLANTS INDICATIVE MIX		
BOTANICAL NAME	COMMON NAME	DENSITY (m)
<b>FLOATING AQUATIC PLANTS 500mm-3m DEPTH</b>		
<i>Nuphar lutea</i>	Brandy Bottle Lily	2 per m <sup>2</sup>
<i>Nymphaea alba</i>	White Water Lily	
<i>Hydrocharis morsus-ranae</i>	Frogbit	
<b>OXYGENATOR AQUATIC PLANTS</b>		
<i>Potamogeton natans</i>	Broad-leaved Pondweed	5 per m <sup>2</sup>
<b>MARGINAL AQUATIC PLANTS UP TO 300mm DEPTH</b>		
<i>Filipendula ulmaria</i>	Meadowsweet	5 per m <sup>2</sup>
<i>Lythrum salicaria</i>	Purple Loosestrife	
<i>Myosotis scorpioides</i>	Water Forget-me-not	
<i>Mentha aquatica</i>	Water Mint	
<b>EMERGENT AQUATIC PLANTS 100-600mm DEPTH</b>		
<i>Alisma plantago-aquatica</i>	Water Plantain	5 per m <sup>2</sup>
<i>Apium nodiflorum</i>	Food's Watercress	
<i>Butomus umbellatus</i>	Flowering Rush	
<i>Nasturtium aquaticum</i>	Watercress	

LE6.3 REED BEDS INDICATIVE MIX		
BOTANICAL NAME	COMMON NAME	DENSITY
<i>Cirsium palustre</i>	Marsh Thistle	5 per m <sup>2</sup>
<i>Juncus effusus</i>	Soft Rush	
<i>Juncus inflexus</i>	Hard Rush	
<i>Iris pseudacorus</i>	Yellow Flag Iris	
<i>Lythrum salicaria</i>	Purple Loosestrife	
<i>Persicaria amphibia</i>	Amphibious Bistort	
<i>Phalaris arundinacea</i>	Reed Canary Grass	
<i>Phragmites australis</i>	Common Reed	

**KEY:**

- ORDER LIMITS
- LAND NOT INCLUDED IN ORDER LIMITS
- RIVER
- RAILWAY LINE
- EXISTING VEGETATION TO BE RETAINED
- PROPOSED RETAINING WALL
- PROPOSED EMBANKMENT
- PROPOSED CUTTING
- PROPOSED FLOODPLAIN COMPENSATION AREA
- REINSTATED TO PREVIOUS LAND USE
- PROPOSED SPECIES RICH GRASSLAND (LE1.3)
- PROPOSED SPECIES RICH GRASSLAND (LE1.3) - LOWLAND MEADOW CREATION / ENHANCEMENT
- PROPOSED WOODLAND (LE2.1)
- PROPOSED LINEAR BELTS OF SHRUBS AND TREES (LE2.4)
- PROPOSED SHRUBS WITH INTERMITTENT TREES (LE2.5)
- PROPOSED SHRUBS (LE2.6)
- PROPOSED NATIVE SPECIES HEDGEROWS TO BE GAPPED UP (LE4.3)
- PROPOSED NATIVE SPECIES HEDGEROWS (LE4.3)
- PROPOSED NATIVE SPECIES HEDGEROWS WITH TREES (LE4.4)
- PROPOSED INDIVIDUAL TREES (LE5.1)
- PROPOSED WATER BODIES AND ASSOCIATED PLANTS (LE6.1) - SEE NOTE 4
- PROPOSED REED BEDS (LE6.3) - SEE NOTE 4
- PROPOSED MARSH AND WET GRASSLAND (LE6.4)
- PROPOSED MARSH AND WET GRASSLAND (LE6.4) - COASTAL FLOODPLAIN GRAZING MARSH REINSTATEMENT
- PROPOSED MARSH AND WET GRASSLAND (LE6.4) - COASTAL FLOODPLAIN GRAZING MARSH CREATION
- PROPOSED NOISE BARRIER (E1.2)
- PROPOSED NOISE MITIGATION (E1.2) - SOLID INFILL TO BRIDGE PARAPETS
- PROPOSED FISH PASSAGE INDICATIVE LOCATION (E3.2)
- PROPOSED DITCH / SCRAPES INDICATIVE LOCATION - WATER VOLE HABITAT CREATION (LE3.2)
- PROPOSED BAT BOX INDICATIVE LOCATION (E3.2)
- PROPOSED KESTREL BOX INDICATIVE LOCATION (E3.2) - SEE NOTES 9 AND 10
- PROPOSED REPTILE HIBERNACULA INDICATIVE LOCATION (E3.2)
- PROPOSED BARN OWL BOX INDICATIVE LOCATION (E3.2) - SEE NOTES 8 AND 10
- INVASIVE NON-NATIVE SPECIES MANAGEMENT - HIMALAYAN BALSAM INDICATIVE LOCATION (E4.1)
- DIVERSION OF DYKE
- PROPOSED LAKE

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FARNDON

ENVIRONMENTAL PROPOSALS WITHIN FARNDON WEST FLOODPLAIN COMPENSATION AREA ARE SHOWN INDICATIVELY

EXISTING FLOOD DEFENCE  
NEW STRUCTURE PROPOSED PARALLEL TO EXISTING BRIDGE OVER RIVER TRENT

BRIDLEWAY TO BE TEMPORARILY DIVERTED DURING CONSTRUCTION

FARNDON UNDERPASS

FARNDON ROUNDABOUT PARTIALLY SIGNALISED, AND SLIGHTLY MODIFIED TO IMPROVE FLOWS.

FARNDON ROUNDABOUT

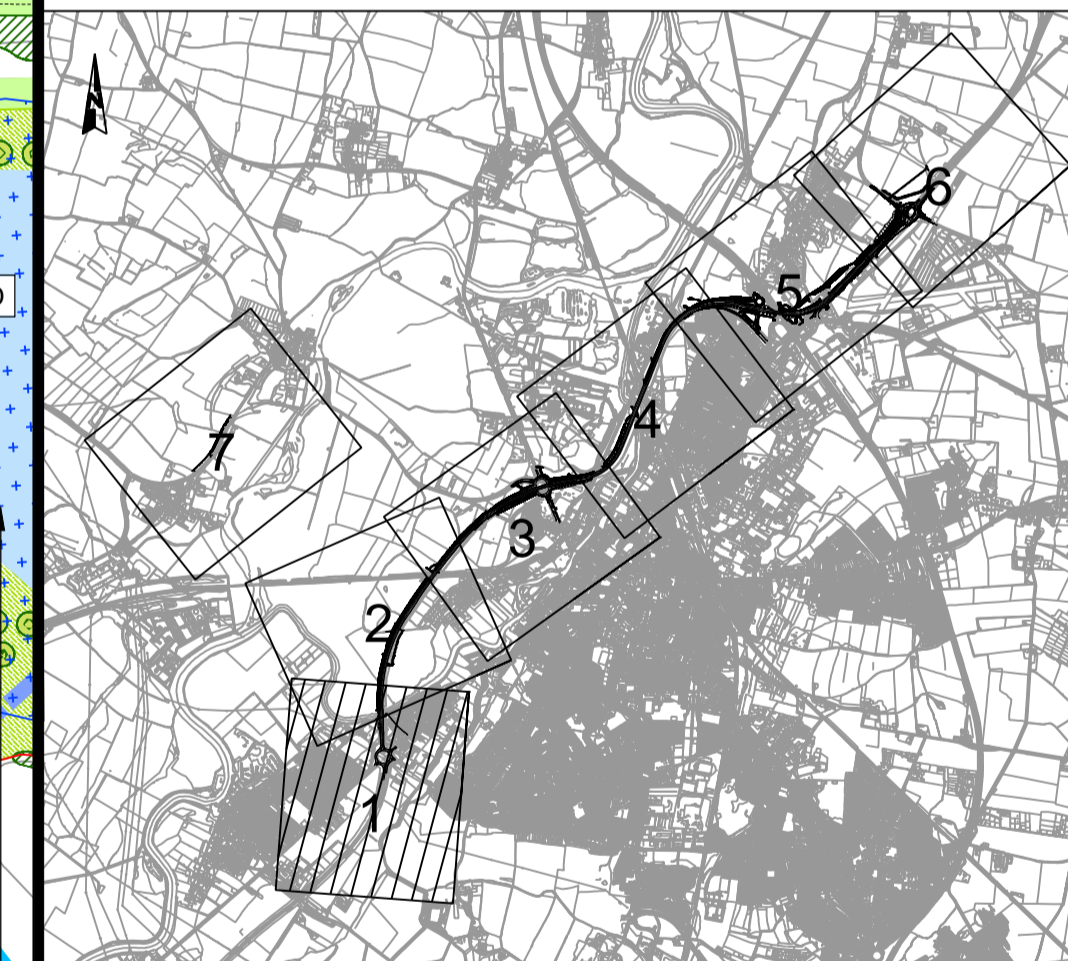
EXISTING FARNDON UNDERPASS RETAINED. ACCESS MAINTAINED THROUGHOUT WORKS

ENVIRONMENTAL PROPOSALS WITHIN FARNDON EAST FLOODPLAIN COMPENSATION AREA ARE SHOWN INDICATIVELY

- NOTES**
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE DRAFT DEVELOPMENT CONSENT ORDER AND ACCOMPANYING APPLICATION DOCUMENTATION. (TR010065/APP/3.1)
  - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE FIRST ITERATION ENVIRONMENTAL MANAGEMENT PLAN (TR010065/APP/8.5).
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  - PLANTING AND SEEDING MIXES ARE INDICATIVE ONLY AND WILL BE REFINED DURING DETAILED DESIGN, INCLUDING THE PROVISION OF SUB MIXES REFLECTIVE OF LOCAL CHARACTER, HABITAT AND GROWING CONDITIONS (i.e. POPULAR AND WILLOW SPECIES ONLY TO BE USED AWAY FROM CARRIAGEWAY).
  - FOR LANDSCAPE AND ENVIRONMENTAL ELEMENT CODES (i.e. LE1.1 AND E1.1) SEE DESIGN MANUAL FOR ROADS AND BRIDGES (DMRB) LD 117 LANDSCAPE DESIGN, TABLES 4.2B AND 4.2C.
  - PROTECTED SPECIES MITIGATION: TWO BARN OWL BOXES WILL BE INSTALLED AT EACH INDICATIVE LOCATION WITHIN APPROXIMATELY 100m - 150m OF EACH OTHER (i.e. ONE TERRITORY).
  - PROTECTED SPECIES MITIGATION: TWO KESTREL BOXES WILL BE INSTALLED WITHIN APPROXIMATELY 100m - 150m OF EACH OTHER (i.e. ONE TERRITORY).
  - PROTECTED SPECIES MITIGATION: PAIRED KESTREL BOXES AND PAIRED BARN OWL BOXES WILL BE LOCATED APPROXIMATELY 500m - 1000m BETWEEN TERRITORIES OF THE SAME SPECIES (NEARER IF CLOSURE OF CONFIRMED NEST SITES ARE CLOSER THAN 500m).
  - NOISE MITIGATION: WHERE EXISTING ROADS WOULD BE MODIFIED TO CONNECT WITH NEW SECTIONS OF ROAD, OR WHERE IMPROVEMENTS TO ACCOMMODATE FUTURE TRAFFIC GROWTH ARE REQUIRED, A NEW SURFACE COURSE WILL BE APPLIED. LOW NOISE SURFACING (E1.1) WILL BE PROVIDED ALONG THE PROPOSED DUAL CARRIAGEWAY, SLIP ROADS AND THE FRIENDLY FARMER LINK, WHERE EXISTING PAVEMENTS ARE RETAINED ALONG THE EXISTING A46 THEN THESE WILL BE RE-SURFACED WITH LOW NOISE SURFACING (E1.1) IF NOT ALREADY PRESENT.
  - INDICATIVE SEED MIXES:
    - PROPOSED WOODLAND (LE2.1), LINEAR BELTS OF SHRUBS AND TREES (LE2.4), SHRUBS WITH INTERMITTENT TREES (LE2.5) AND SHRUBS (LE2.6) AREAS TO BE UNDERSEEDED WITH EM1 WOODLAND MIXTURE - SOWING RATE 4g/m<sup>2</sup>.
    - DEPENDING ON GROWING CONDITIONS, PROPOSED SPECIES RICH GRASSLAND (LE1.3) AND NATIVE SPECIES HEDGEROWS WITH TREES (LE4.4) ARE TO BE SOWN WITH EITHER EMS SPECIAL GENERAL PURPOSE MEADOW MIXTURE OR EM7 MEADOW MIXTURE FOR SANDY SOILS - SOWING RATE 4g/m<sup>2</sup>.
    - PROPOSED MARSH AND WET GRASSLAND (LE6.4) AREAS TO BE SEEDED WITH EM8 MEADOW MIXTURE FOR WETLANDS - SOWING RATE 4g/m<sup>2</sup>.

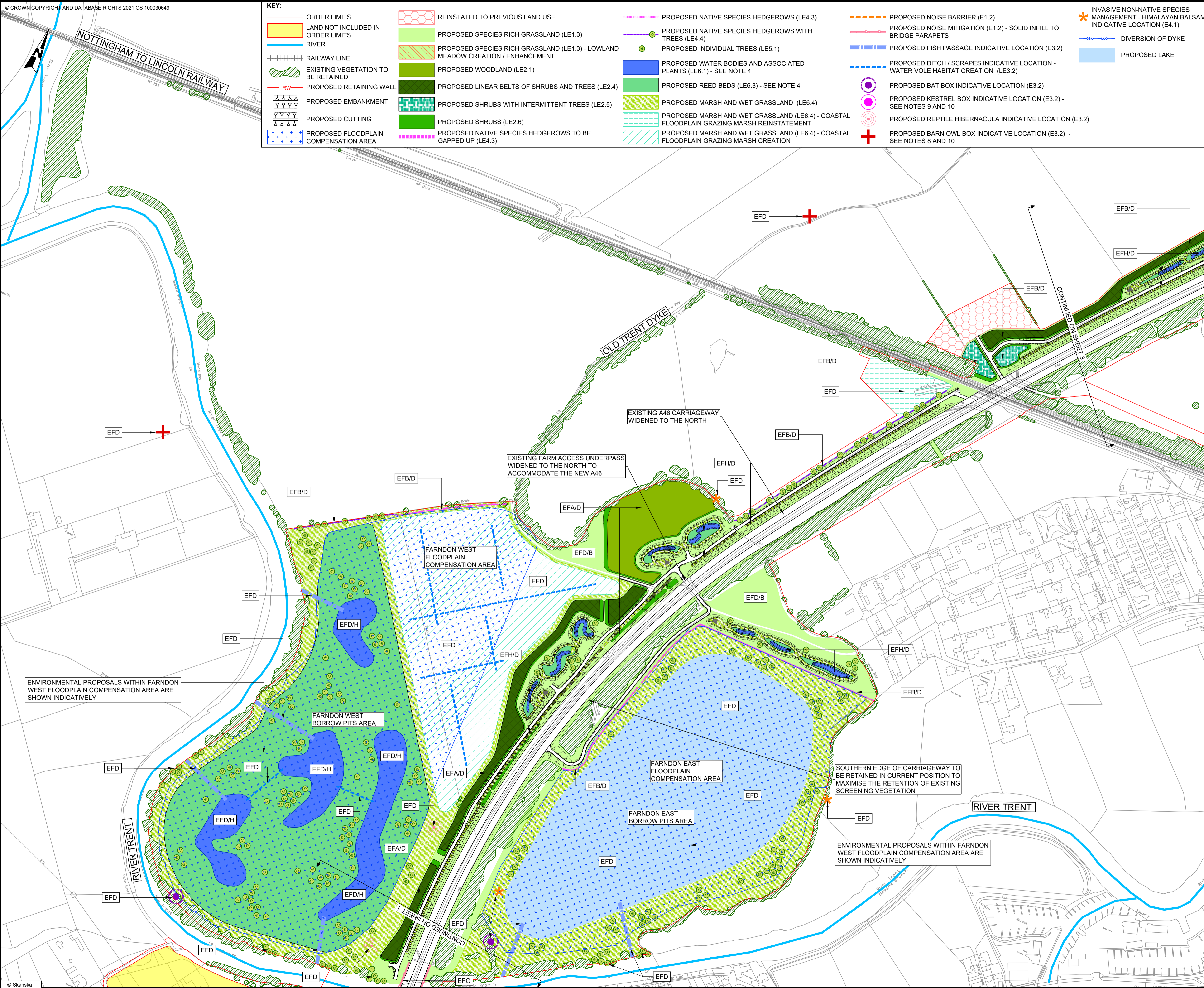
REFERENCE	ENVIRONMENTAL FUNCTION
EFA	VISUAL SCREENING
EFB	LANDSCAPE INTEGRATION
EFC	ENHANCING THE BUILT ENVIRONMENT
EFD	NATURE CONSERVATION AND BIODIVERSITY
EFE	VISUAL AMENITY
EFF	HERITAGE
EFG	AUDITORY AMENITY
EFH	WATER QUALITY

Source: DMRB LD 117 Landscape Design



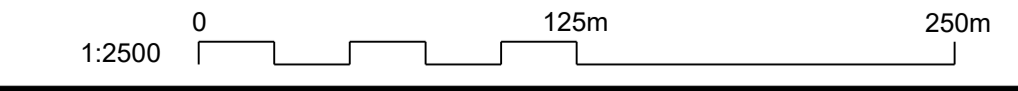
C01	06/03/24	DCO APPLICATION	PFMDC	CU	HF
REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D
CLIENT					
national highways			PURPOSE OF ISSUE		
DCO APPLICATION			DEVELOPMENT CONSENT ORDER NUMBER		
TR010065			PROJECT TITLE		
A46 NEWARK BYPASS			DRAWING TITLE		
FIGURE 2.3			ENVIRONMENTAL MASTERPLAN		
SHEET 1 OF 7			ORIGINAL SIZE		
A1			SCALE		
1:2500			DRAWING NUMBER		
HE551478			ORIGINATOR		
SKAG			VOLUME		
ELS			PROJECT REF NO.		
HE551478			REVISION		
CONWI_CONW			LOCATION		
DR			I TYPE		
LS			ROLE		
03001			NUMBER		
C01			REVISION		





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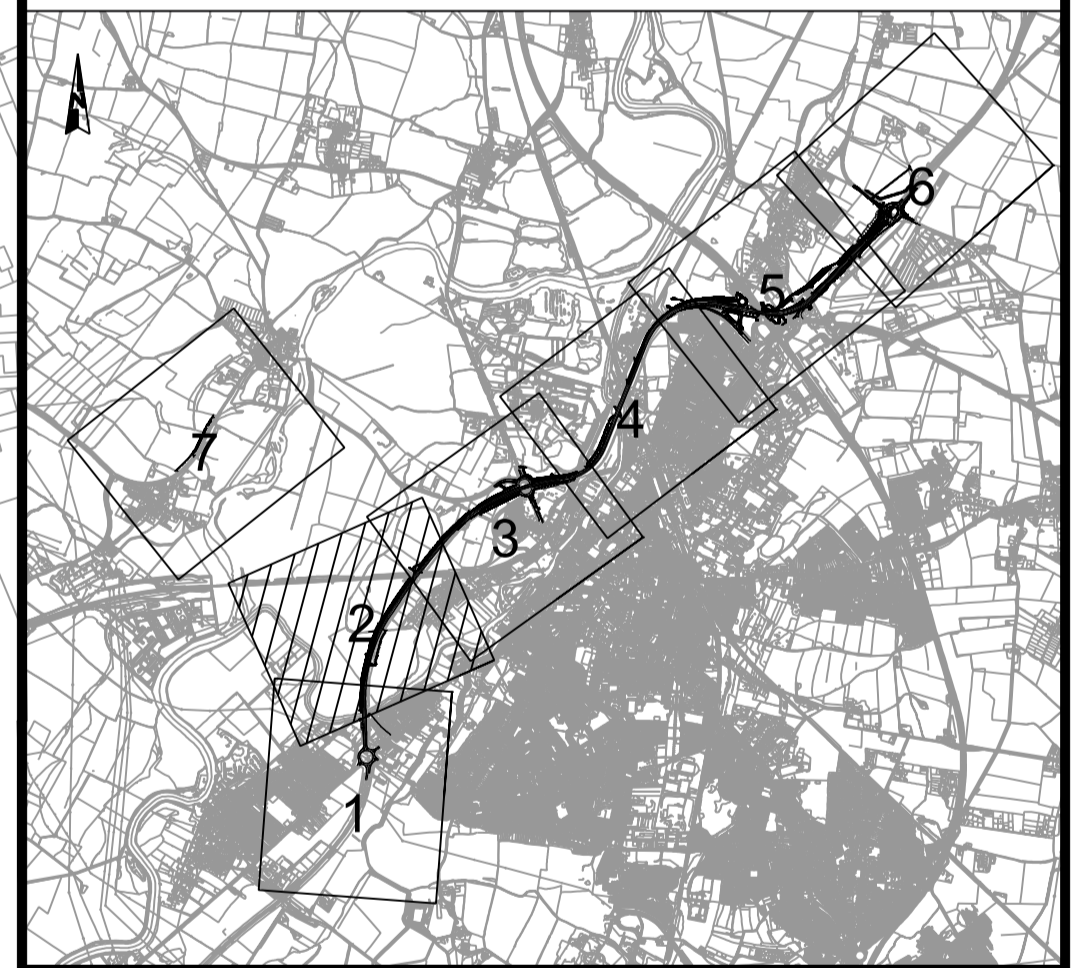


KEY:	
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	INVASIVE NON-NATIVE SPECIES MANAGEMENT - HIMALAYAN BALSAM INDICATIVE LOCATION (E4.1)
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EFD	NATURE CONSERVATION AND BIODIVERSITY
EFE	VISUAL AMENITY
EFF	HERITAGE
EFG	AUDITORY AMENITY
EFH	WATER QUALITY

Source: DMRB LD 117 Landscape Design



C01	06/03/24	DCO APPLICATION	PFMDC	CU	HF
REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D

CLIENT  
**national highways**

PURPOSE OF ISSUE  
**DCO APPLICATION**

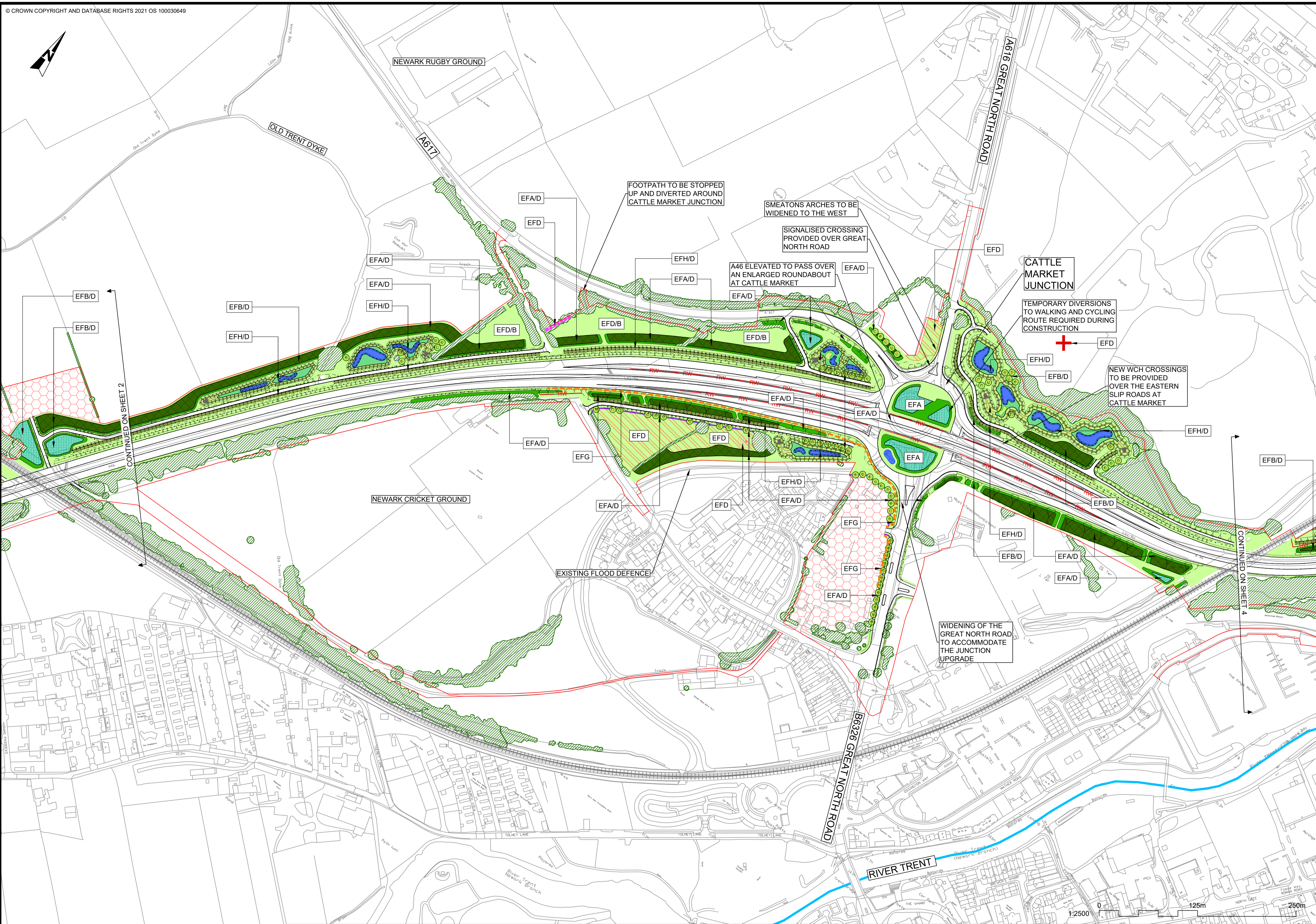
DEVELOPMENT CONSENT ORDER NUMBER  
**TR010065**

PROJECT TITLE  
**A46 NEWARK BYPASS**

DRAWING TITLE  
**FIGURE 2.3 ENVIRONMENTAL MASTERPLAN SHEET 2 OF 7**

ORIGINAL SIZE	A1	SCALE	1:2500
DRAWING NUMBER	HE551478	ORIGINATOR	SKAG
HE PIN	HE551478	VOLUME	ELS
CONWI_CONW	DR	LS	03002
LOCATION	DR	LS	03002
PROJECT REF NO.	HE551478	REVISION	C01





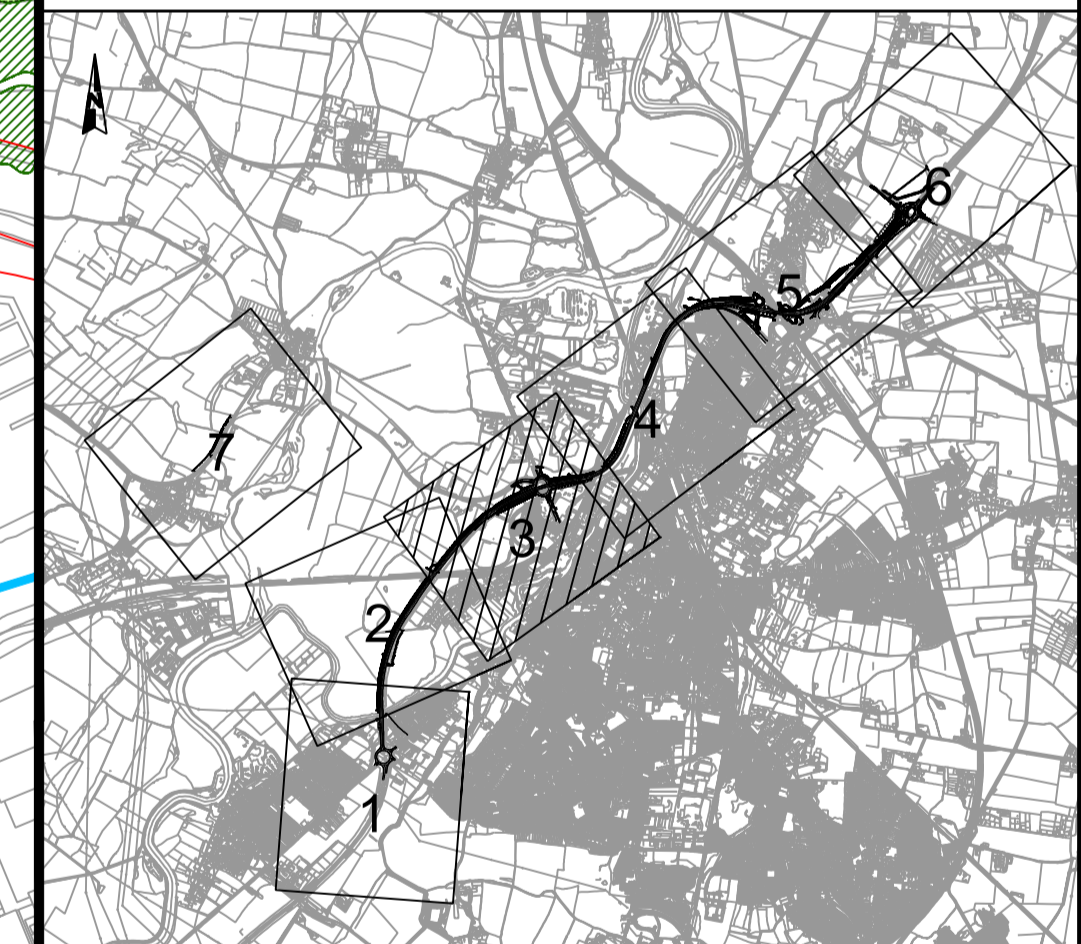
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REFERENCE	ENVIRONMENTAL FUNCTION
EFA	VISUAL SCREENING
EFB	LANDSCAPE INTEGRATION
EFC	ENHANCING THE BUILT ENVIRONMENT
EFD	NATURE CONSERVATION AND BIODIVERSITY
EFE	VISUAL AMENITY
EFF	HERITAGE
EFG	AUDITORY AMENITY
EFH	WATER QUALITY

Source: DMRB LD 117 Landscape Design

**KEY:**

ORDER LIMITS	REINSTATED TO PREVIOUS LAND USE	PROPOSED NATIVE SPECIES HEDGEROWS (LE4.3)	PROPOSED NOISE BARRIER (E1.2)	INVASIVE NON-NATIVE SPECIES MANAGEMENT - HIMALAYAN BALSAM INDICATIVE LOCATION (E4.1)
LAND NOT INCLUDED IN ORDER LIMITS	PROPOSED SPECIES RICH GRASSLAND (LE1.3)	PROPOSED NATIVE SPECIES HEDGEROWS WITH TREES (LE4.4)	PROPOSED NOISE MITIGATION (E1.2) - SOLID INFILL TO BRIDGE PARAPETS	DIVERSION OF DYKE
RIVER	PROPOSED SPECIES RICH GRASSLAND (LE1.3) - LOWLAND MEADOW CREATION / ENHANCEMENT	PROPOSED INDIVIDUAL TREES (LE5.1)	PROPOSED FISH PASSAGE INDICATIVE LOCATION (E3.2)	PROPOSED LAKE
RAILWAY LINE	PROPOSED WOODLAND (LE2.1)	PROPOSED WATER BODIES AND ASSOCIATED PLANTS (LE6.1) - SEE NOTE 4	PROPOSED DITCH / SCRAPES INDICATIVE LOCATION - WATER VOLE HABITAT CREATION (LE3.2)	
EXISTING VEGETATION TO BE RETAINED	PROPOSED LINEAR BELTS OF SHRUBS AND TREES (LE2.4)	PROPOSED REED BEDS (LE6.3) - SEE NOTE 4	PROPOSED BAT BOX INDICATIVE LOCATION (E3.2)	
PROPOSED RETAINING WALL	PROPOSED SHRUBS WITH INTERMITTENT TREES (LE2.5)	PROPOSED MARSH AND WET GRASSLAND (LE6.4)	PROPOSED KESTREL BOX INDICATIVE LOCATION (E3.2) - SEE NOTES 9 AND 10	
PROPOSED EMBANKMENT	PROPOSED SHRUBS (LE2.6)	PROPOSED MARSH AND WET GRASSLAND (LE6.4) - COASTAL FLOODPLAIN GRAZING MARSH REINSTATEMENT	PROPOSED REPTILE HIBERNACULA INDICATIVE LOCATION (E3.2)	
PROPOSED CUTTING	PROPOSED NATIVE SPECIES HEDGEROWS TO BE GAPPED UP (LE4.3)	PROPOSED MARSH AND WET GRASSLAND (LE6.4) - COASTAL FLOODPLAIN GRAZING MARSH CREATION	PROPOSED BARN OWL BOX INDICATIVE LOCATION (E3.2) - SEE NOTES 8 AND 10	
PROPOSED FLOODPLAIN COMPENSATION AREA				



C01	06/03/24	DCO APPLICATION	PFMDC	CU	HF
REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D

CLIENT  
 national highways

PURPOSE OF ISSUE  
 DCO APPLICATION

DEVELOPMENT CONSENT ORDER NUMBER  
 TR010065

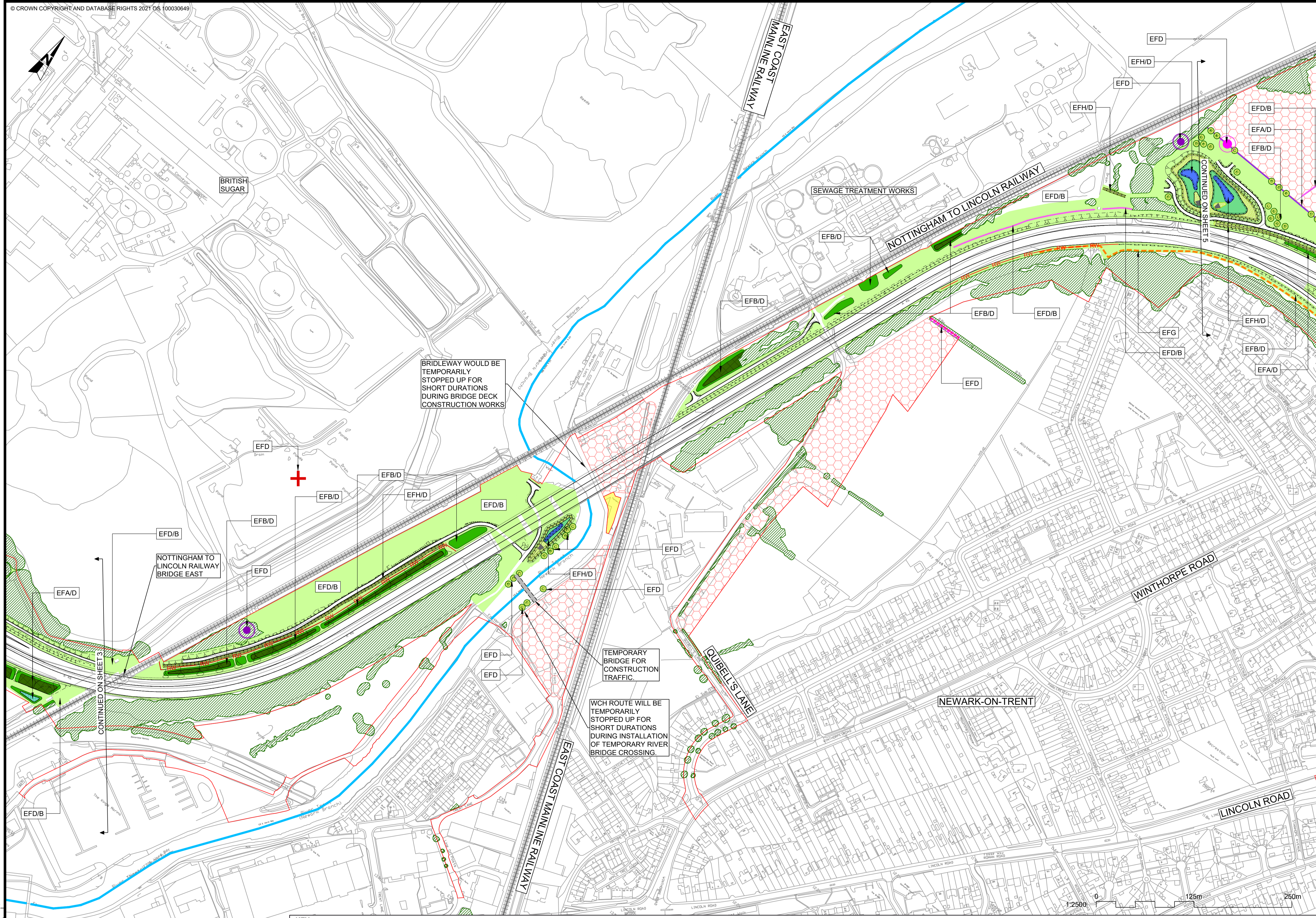
PROJECT TITLE  
 A46 NEWARK BYPASS

DRAWING TITLE  
 FIGURE 2.3 ENVIRONMENTAL MASTERPLAN SHEET 3 OF 7

ORIGINAL SIZE A1	SCALE 1:2500	PROJECT REF NO. HE551478
DRAWING NUMBER HE551478	ORIGINATOR SKAG	VOLUME ELS
LOCATION CONWI_CONW	TYPE DR	REVISION C01
	ROLE LS	NUMBER 03003

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KEY:	
	ORDER LIMITS
	LAND NOT INCLUDED IN ORDER LIMITS
	RIVER
	RAILWAY LINE
	EXISTING VEGETATION TO BE RETAINED
	PROPOSED RETAINING WALL
	PROPOSED EMBANKMENT
	PROPOSED CUTTING
	PROPOSED FLOODPLAIN COMPENSATION AREA
	REINSTATED TO PREVIOUS LAND USE
	PROPOSED SPECIES RICH GRASSLAND (LE1.3)
	PROPOSED SPECIES RICH GRASSLAND (LE1.3) - LOWLAND MEADOW CREATION / ENHANCEMENT
	PROPOSED WOODLAND (LE2.1)
	PROPOSED LINEAR BELTS OF SHRUBS AND TREES (LE2.4)
	PROPOSED SHRUBS WITH INTERMITTENT TREES (LE2.5)
	PROPOSED SHRUBS (LE2.6)
	PROPOSED NATIVE SPECIES HEDGEROWS TO BE GAPPED UP (LE4.3)
	PROPOSED NATIVE SPECIES HEDGEROWS (LE4.3)
	PROPOSED NATIVE SPECIES HEDGEROWS WITH TREES (LE4.4)
	PROPOSED INDIVIDUAL TREES (LE5.1)
	PROPOSED WATER BODIES AND ASSOCIATED PLANTS (LE6.1) - SEE NOTE 4
	PROPOSED REED BEDS (LE6.3) - SEE NOTE 4
	PROPOSED MARSH AND WET GRASSLAND (LE6.4)
	PROPOSED MARSH AND WET GRASSLAND (LE6.4) - COASTAL FLOODPLAIN GRAZING MARSH REINSTATEMENT
	PROPOSED MARSH AND WET GRASSLAND (LE6.4) - COASTAL FLOODPLAIN GRAZING MARSH CREATION
	PROPOSED NOISE BARRIER (E1.2)
	PROPOSED NOISE MITIGATION (E1.2) - SOLID INFILL TO BRIDGE PARAPETS
	PROPOSED FISH PASSAGE INDICATIVE LOCATION (E3.2)
	PROPOSED DITCH / SCRAPES INDICATIVE LOCATION - WATER VOLE HABITAT CREATION (LE3.2)
	PROPOSED BAT BOX INDICATIVE LOCATION (E3.2)
	PROPOSED KESTREL BOX INDICATIVE LOCATION (E3.2) - SEE NOTES 9 AND 10
	PROPOSED REPTILE HIBERNACULA INDICATIVE LOCATION (E3.2)
	PROPOSED BARN OWL BOX INDICATIVE LOCATION (E3.2) - SEE NOTES 8 AND 10
	INVASIVE NON-NATIVE SPECIES MANAGEMENT - HIMALAYAN BALSAM INDICATIVE LOCATION (E4.1)
	DIVERSION OF DYKE
	PROPOSED LAKE

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EFE	VISUAL AMENITY
EFF	HERITAGE
EFG	AUDITORY AMENITY
EFH	WATER QUALITY

Source: DMRB LD 117 Landscape Design

C01	24/01/24	DCO APPLICATION	PFMDC	CU	HF
REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D

CLIENT  
 national highways

PURPOSE OF ISSUE  
 DCO APPLICATION

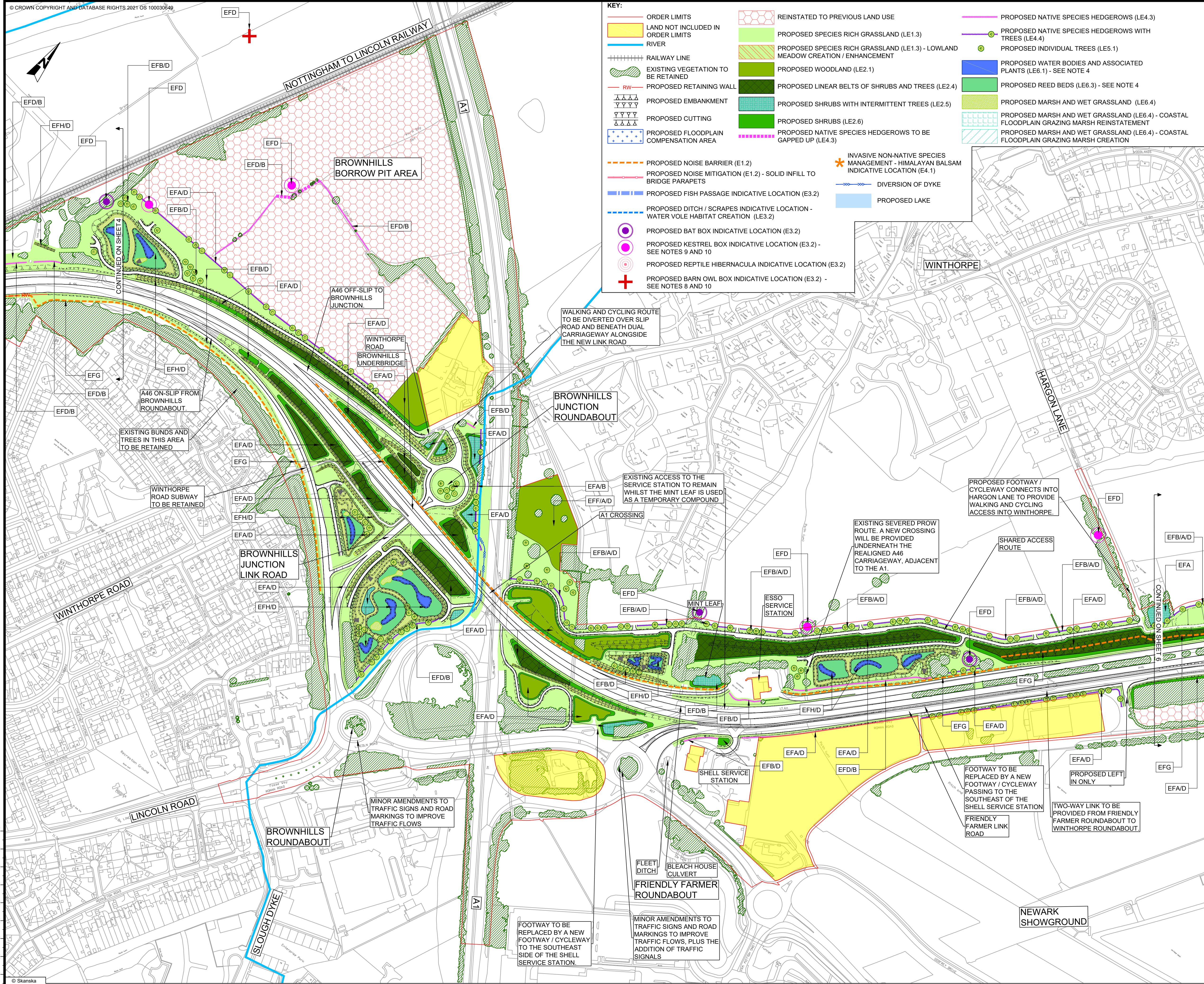
DEVELOPMENT CONSENT ORDER NUMBER  
 TR010065

PROJECT TITLE  
 A46 NEWARK BYPASS

DRAWING TITLE  
 FIGURE 2.3 ENVIRONMENTAL MASTERPLAN SHEET 4 OF 7

ORIGINAL SIZE	A1	SCALE	1:2500
DRAWING NUMBER	HE PIN	ORIGINATOR	VOLUME
HE551478	SKAG	ELS	
PROJECT REF NO.	HE551478	REVISION	C01
CONWI_CONW	DR	LS	03004
LOCATION	TYPE	ROLE	NUMBER





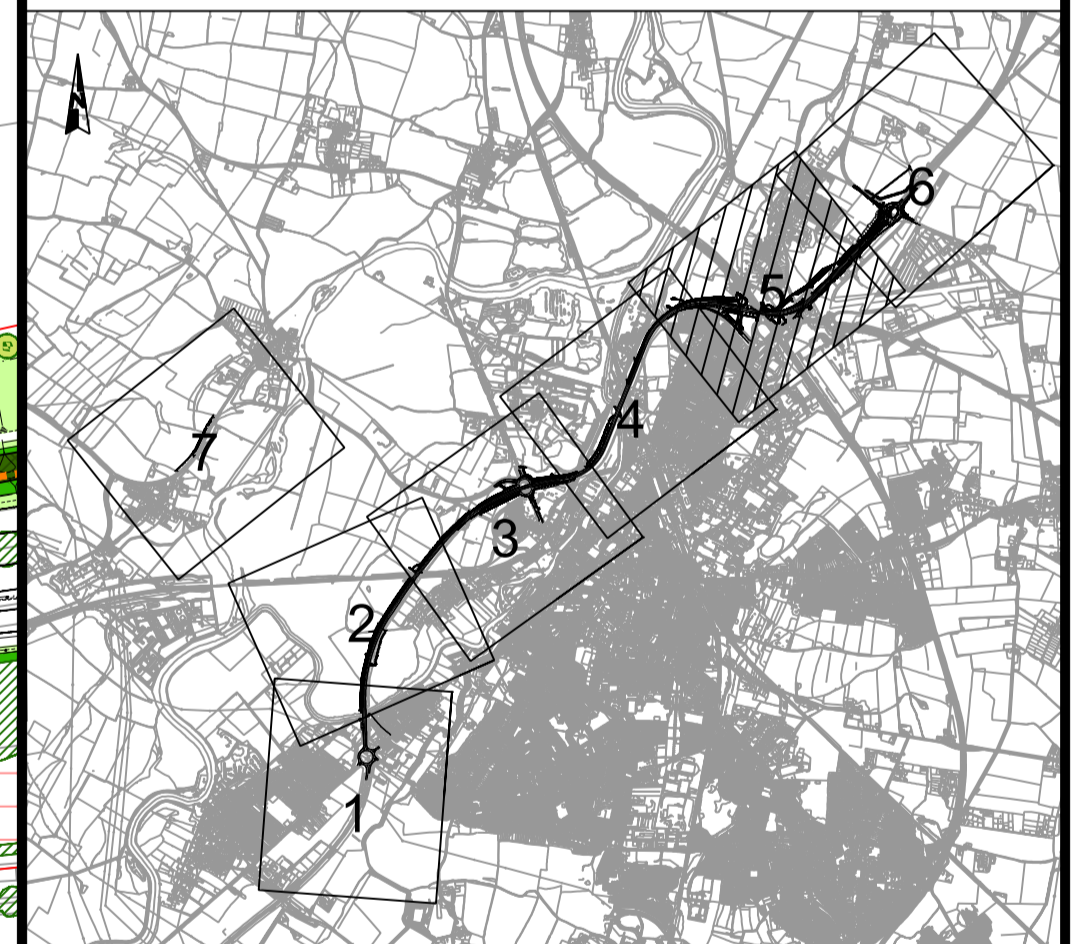
**KEY:**

- ORDER LIMITS
- LAND NOT INCLUDED IN ORDER LIMITS
- RIVER
- RAILWAY LINE
- EXISTING VEGETATION TO BE RETAINED
- PROPOSED RETAINING WALL
- PROPOSED EMBANKMENT
- PROPOSED CUTTING
- PROPOSED FLOODPLAIN COMPENSATION AREA
- PROPOSED NOISE BARRIER (E1.2)
- PROPOSED SPECIES MITIGATION (E1.2) - SOLID INFILL TO BRIDGE PARAPETS
- PROPOSED FISH PASSAGE INDICATIVE LOCATION (E3.2)
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- DIVERSION OF DYKE
- PROPOSED LAKE
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- PROPOSED REED BEDS (LE6.3) - SEE NOTE 4
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- PROPOSED MARSH AND WET GRASSLAND (LE6.4) - COASTAL FLOODPLAIN GRAZING MARSH REINSTATEMENT
- PROPOSED MARSH AND WET GRASSLAND (LE6.4) - COASTAL FLOODPLAIN GRAZING MARSH CREATION

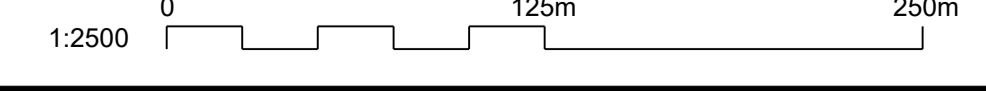
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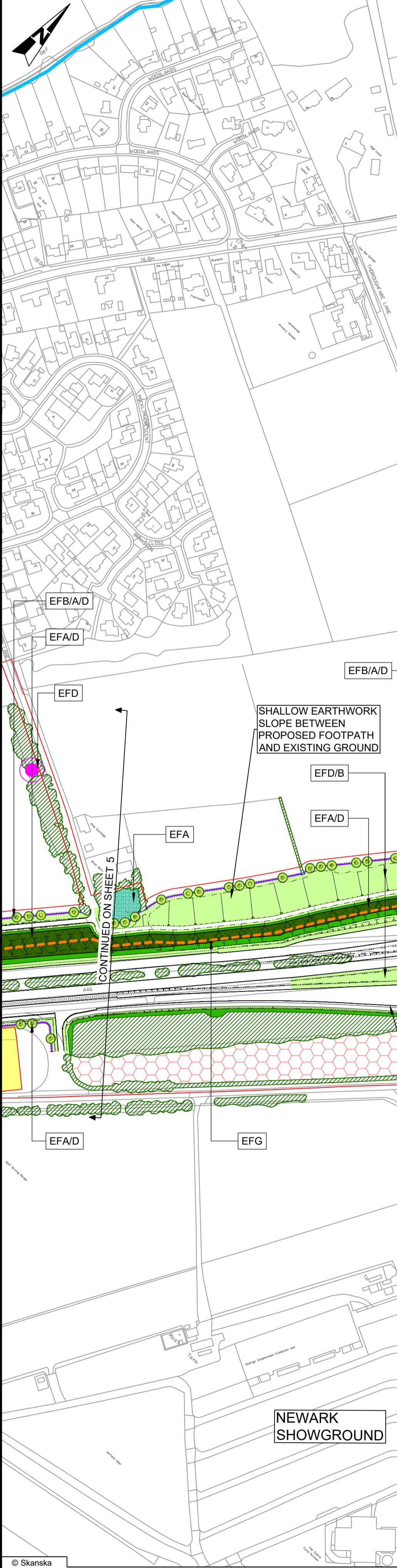
Source: DMRB LD 117 Landscape Design



C01	06/03/24	DCO APPLICATION	PFMDC	CU	HF
REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D
CLIENT <b>national highways</b>					
PURPOSE OF ISSUE DCO APPLICATION					
DEVELOPMENT CONSENT ORDER NUMBER TR010065					
PROJECT TITLE A46 NEWARK BYPASS					
DRAWING TITLE FIGURE 2.3 ENVIRONMENTAL MASTERPLAN SHEET 5 OF 7					
ORIGINAL SIZE	A1	SCALE	1:2500		
DRAWING NUMBER	HE551478	ORIGINATOR	SKAG	VOLUME	ELS
PROJECT REF NO.	HE551478				
CONWI_CONW	DR	LS	03005	REVISION	C01
LOCATION	TYPE	ROLE	NUMBER		





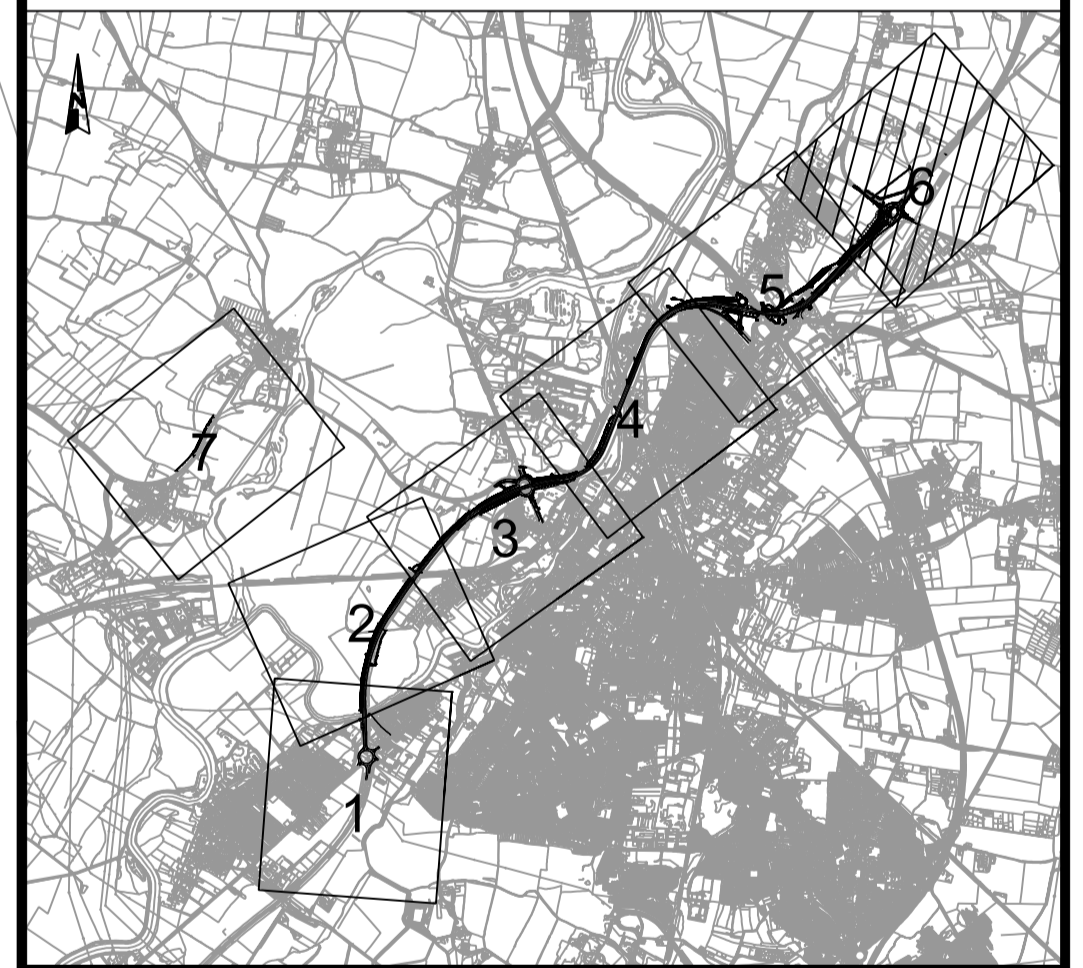


KEY:	
	ORDER LIMITS
	LAND NOT INCLUDED IN ORDER LIMITS
	RIVER
	RAILWAY LINE
	EXISTING VEGETATION TO BE RETAINED
	PROPOSED RETAINING WALL
	PROPOSED EMBANKMENT
	PROPOSED CUTTING
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	PROPOSED SPECIES RICH GRASSLAND (LE1.3)
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	PROPOSED WATER BODIES AND ASSOCIATED PLANTS (LE6.1) - SEE NOTE 4
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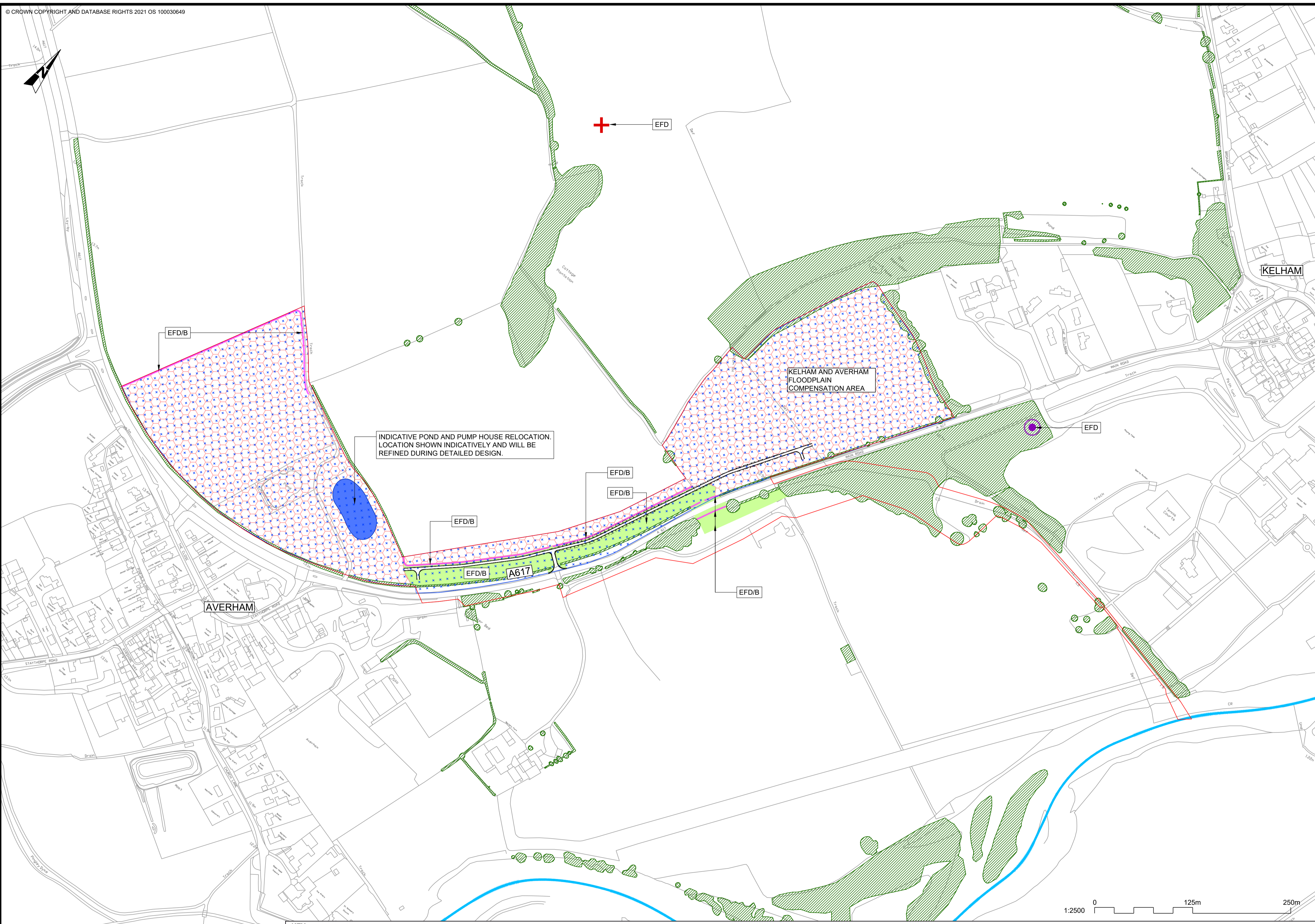
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Source: DMRB LD 117 Landscape Design



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national highways					
PURPOSE OF ISSUE					
DCO APPLICATION					
DEVELOPMENT CONSENT ORDER NUMBER					
TR010065					
PROJECT TITLE					
A46 NEWARK BYPASS					
DRAWING TITLE					
FIGURE 2.3 ENVIRONMENTAL MASTERPLAN SHEET 6 OF 7					
ORIGINAL SIZE			SCALE		
A1			1:2500		
DRAWING NUMBER		ORIGINATOR	VOLUME	PROJECT REF NO.	
HE551478		SKAG	ELS	HE551478	
CONWI_CONW		DR	LS	03006	REVISION
LOCATION		I TYPE I ROLE		NUMBER	
				C01	

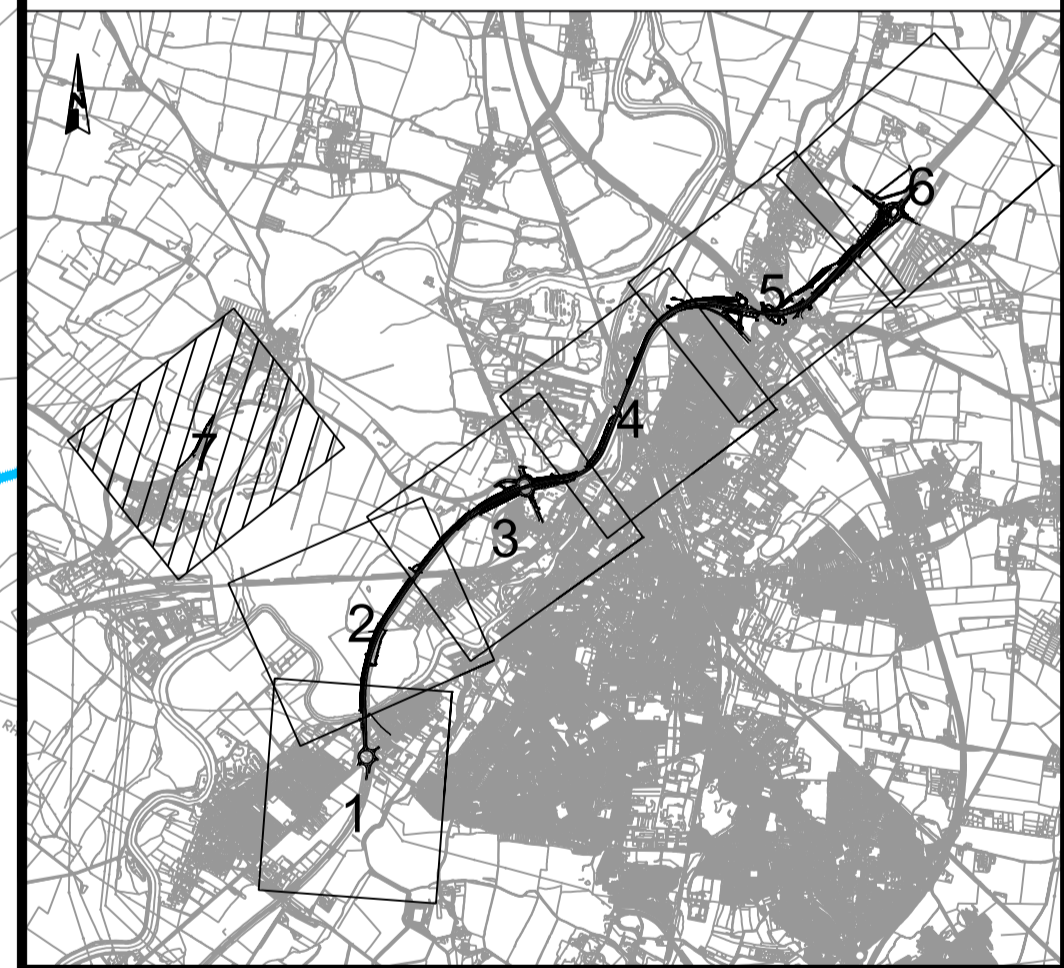




- NOTES**
1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE DRAFT DEVELOPMENT CONSENT ORDER AND ACCOMPANYING APPLICATION DOCUMENTATION. (TR010065/APP/3.1).
  2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE FIRST ITERATION ENVIRONMENTAL MANAGEMENT PLAN (TR010065/APP/6.5).
  3. DO NOT SCALE FROM THIS DRAWING, USE ONLY PRINTED DIMENSIONS.
  4. ALL DIMENSIONS ARE IN METRES UNLESS DEFINED OTHERWISE.
  5. PROPOSED REED BEDS AND WATER BODIES AND ASSOCIATED PLANTS - EXTENTS TO BE REFINED DURING DETAILED DESIGN.
  6. PLANTING AND SEEDING MIXES ARE INDICATIVE ONLY AND WILL BE REFINED DURING DETAILED DESIGN, INCLUDING THE PROVISION OF SUB MIXES REFLECTIVE OF LOCAL CHARACTER, HABITAT AND GROWING CONDITIONS (i.e. POPLAR AND WILLOW SPECIES ONLY TO BE USED AWAY FROM CARRIAGEWAY).
  7. FOR LANDSCAPE AND ENVIRONMENTAL ELEMENT CODES (i.e. LE1.1 AND E1.1) SEE DESIGN MANUAL FOR ROADS AND BRIDGES (DMRB) LD 117 LANDSCAPE DESIGN, TABLES 4.2B AND 4.2C.
  8. PROTECTED SPECIES MITIGATION: TWO BARN OWL BOXES WILL BE INSTALLED AT EACH INDICATIVE LOCATION WITHIN APPROXIMATELY 100m - 150m OF EACH OTHER (i.e. ONE TERRITORY).
  9. PROTECTED SPECIES MITIGATION: TWO KESTREL BOXES WILL BE INSTALLED WITHIN APPROXIMATELY 100m - 150m OF EACH OTHER (i.e. ONE TERRITORY).
  10. PROTECTED SPECIES MITIGATION: PAIRED KESTREL BOXES AND PAIRED BARN OWL BOXES WILL BE LOCATED APPROXIMATELY 500m - 1000m BETWEEN TERRITORIES OF THE SAME SPECIES (NEARER IF CLOSURE OF CONFIRMED NEST SITES ARE CLOSER THAN 500m).
  11. NOISE MITIGATION: WHERE EXISTING ROADS WOULD BE MODIFIED TO CONNECT WITH NEW SECTIONS OF ROAD, OR WHERE IMPROVEMENTS TO ACCOMMODATE FUTURE TRAFFIC GROWTH ARE REQUIRED, A NEW SURFACE COURSE WILL BE APPLIED. LOW NOISE SURFACING (E1.1) WILL BE PROVIDED ALONG THE PROPOSED DUAL CARRIAGEWAY, SLIP ROADS AND THE FRIENDLY FARMER LINK, WHERE EXISTING PAVEMENTS ARE RETAINED ALONG THE EXISTING A46 THEN THESE WILL BE RE-SURFACED WITH LOW NOISE SURFACING (E1.1) IF NOT ALREADY PRESENT.

REFERENCE	ENVIRONMENTAL FUNCTION
EFA	VISUAL SCREENING
EFB	LANDSCAPE INTEGRATION
EFC	ENHANCING THE BUILT ENVIRONMENT
EFD	NATURE CONSERVATION AND BIODIVERSITY
EFE	VISUAL AMENITY
EFF	HERITAGE
EFG	AUDITORY AMENITY
EFH	WATER QUALITY

Source: DMRB LD 117 Landscape Design



CD1	06/03/24	DCO APPLICATION	PFMDC	CU	HF
REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D

CLIENT

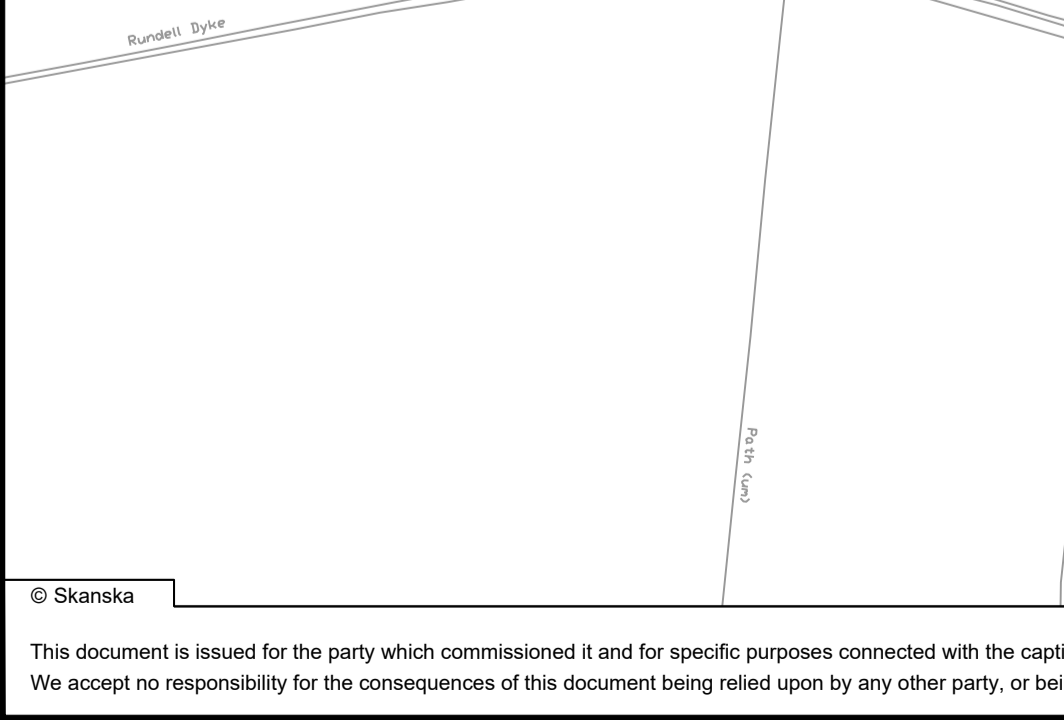
PURPOSE OF ISSUE  
**DCO APPLICATION**

DEVELOPMENT CONSENT ORDER NUMBER  
**TR010065**

PROJECT TITLE  
**A46 NEWARK BYPASS**

DRAWING TITLE  
**FIGURE 2.3 ENVIRONMENTAL MASTERPLAN SHEET 7 OF 7**

ORIGINAL SIZE	A1	SCALE	1:2500	PROJECT REF NO.	HE551478
DRAWING NUMBER	HE PIN	ORIGINATOR	VOLUME	REVISION	
HE551478	SKAG	ELS			
CONWI_CONW	DR	LS	03007		
LOCATION	TYPE	ROLE	NUMBER		



**KEY:**

ORDER LIMITS	REINSTATED TO PREVIOUS LAND USE	PROPOSED NATIVE SPECIES HEDGEROWS (LE4.3)	PROPOSED NOISE BARRIER (E1.2)	INVASIVE NON-NATIVE SPECIES MANAGEMENT - HIMALAYAN BALSAM INDICATIVE LOCATION (E4.1)
LAND NOT INCLUDED IN ORDER LIMITS	PROPOSED SPECIES RICH GRASSLAND (LE1.3)	PROPOSED NATIVE SPECIES HEDGEROWS WITH TREES (LE4.4)	PROPOSED NOISE MITIGATION (E1.2) - SOLID INFILL TO BRIDGE PARAPETS	DIVERSION OF DYKE
RIVER	PROPOSED SPECIES RICH GRASSLAND (LE1.3) - LOWLAND MEADOW CREATION / ENHANCEMENT	PROPOSED INDIVIDUAL TREES (LE5.1)	PROPOSED FISH PASSAGE INDICATIVE LOCATION (E3.2)	PROPOSED LAKE
RAILWAY LINE	PROPOSED WOODLAND (LE2.1)	PROPOSED WATER BODIES AND ASSOCIATED PLANTS (LE6.1) - SEE NOTE 4	PROPOSED DITCH / SCRAPES INDICATIVE LOCATION - WATER VOLE HABITAT CREATION (LE3.2)	
EXISTING VEGETATION TO BE RETAINED	PROPOSED LINEAR BELTS OF SHRUBS AND TREES (LE2.4)	PROPOSED REED BEDS (LE6.3) - SEE NOTE 4	PROPOSED BAT BOX INDICATIVE LOCATION (E3.2)	
PROPOSED RETAINING WALL	PROPOSED SHRUBS WITH INTERMITTENT TREES (LE2.5)	PROPOSED MARSH AND WET GRASSLAND (LE6.4)	PROPOSED KESTREL BOX INDICATIVE LOCATION (E3.2) - SEE NOTES 9 AND 10	
PROPOSED EMBANKMENT	PROPOSED SHRUBS (LE2.6)	PROPOSED MARSH AND WET GRASSLAND (LE6.4) - COASTAL FLOODPLAIN GRAZING MARSH REINSTATEMENT	PROPOSED REPTILE HIBERNACULA INDICATIVE LOCATION (E3.2)	
PROPOSED CUTTING	PROPOSED NATIVE SPECIES HEDGEROWS TO BE GAPPED UP (LE4.3)	PROPOSED MARSH AND WET GRASSLAND (LE6.4) - COASTAL FLOODPLAIN GRAZING MARSH CREATION	PROPOSED BARN OWL BOX INDICATIVE LOCATION (E3.2) - SEE NOTES 8 AND 10	
PROPOSED FLOODPLAIN COMPENSATION AREA				

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