

LE2.1 WOODLAND INDICATIVE MIX

BOTANICAL NAME	COMMON NAME	HEIGHT (cm)	DENSITY (m)
TREES (70%)			
<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	
SHRUBS (30%)			
<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>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	
<i>Sambucus nigra</i>	Common Elder	60-80	
<i>Viburnum lantana</i>	Wayfaring Tree	60-80	

LE2.4 LINEAR BELTS OF SHRUBS AND TREES INDICATIVE MIX

BOTANICAL NAME	COMMON NAME	HEIGHT (cm)	DENSITY (m)
FEATHERED TREES (60%)			
<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	
SHRUBS (40%)			
<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>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)	
FEATHERED TREES (35%)				
<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		
SHRUBS (65%)				
<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>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		

LE4.3 NATIVE SPECIES HEDGEROWS INDICATIVE MIX (Double staggered row at 0.4m offset)

BOTANICAL NAME	COMMON NAME	HEIGHT (cm)	DENSITY (m)
SHRUBS (100%)			
<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)	
TREES					
<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		
SHRUBS (100%)					
<i>Acer campestre</i>	Field Maple	N/A	60-80		0.3m Centres
<i>Crataegus monogyna</i>	Hawthorn	N/A	60-80		
<i>Corylus avellana</i>	Hazel	N/A	60-80		
<i>Sorbus aucuparia</i>	Rowan	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)
FLOATING AQUATIC PLANTS 500mm-3m DEPTH		
<i>Nuphar lutea</i>	Brandy Bottle Lily	2 per m²
<i>Nymphaea alba</i>	White Water Lily	
<i>Hydrocharis morsus-ranae</i>	Frogbit	
OXYGENATOR AQUATIC PLANTS		
<i>Potamogeton natans</i>	Broad-leaved Pondweed	5 per m²
MARGINAL AQUATIC PLANTS UP TO 300mm DEPTH		
<i>Filipendula ulmaria</i>	Meadowsweet	5 per m²
<i>Lythrum salicaria</i>	Purple Loosestrife	
<i>Myosotis scorpioides</i>	Water Forget-me-not	
<i>Mentha aquatica</i>	Water Mint	
EMERGENT AQUATIC PLANTS 100-600mm DEPTH		
<i>Alisma plantago-aquatica</i>	Water Plantain	5 per m²
<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 m²
<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 (E3.2)
- 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.

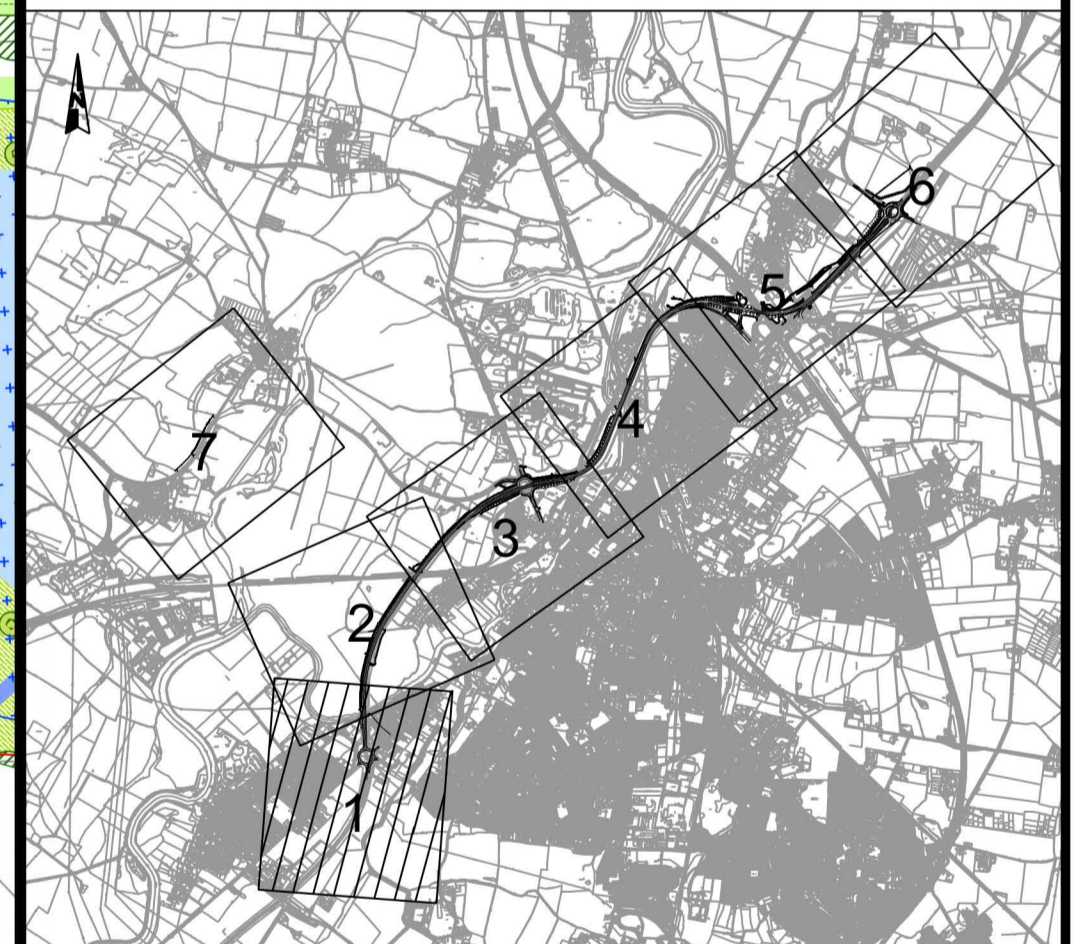
EXISTING FARNDON UNDERPASS RETAINED ACCESS MAINTAINED THROUGHOUT WORKS

ENVIRONMENTAL PROPOSALS WITHIN FARNDON EAST FLOODPLAIN COMPENSATION AREA ARE SHOWN INDICATIVELY

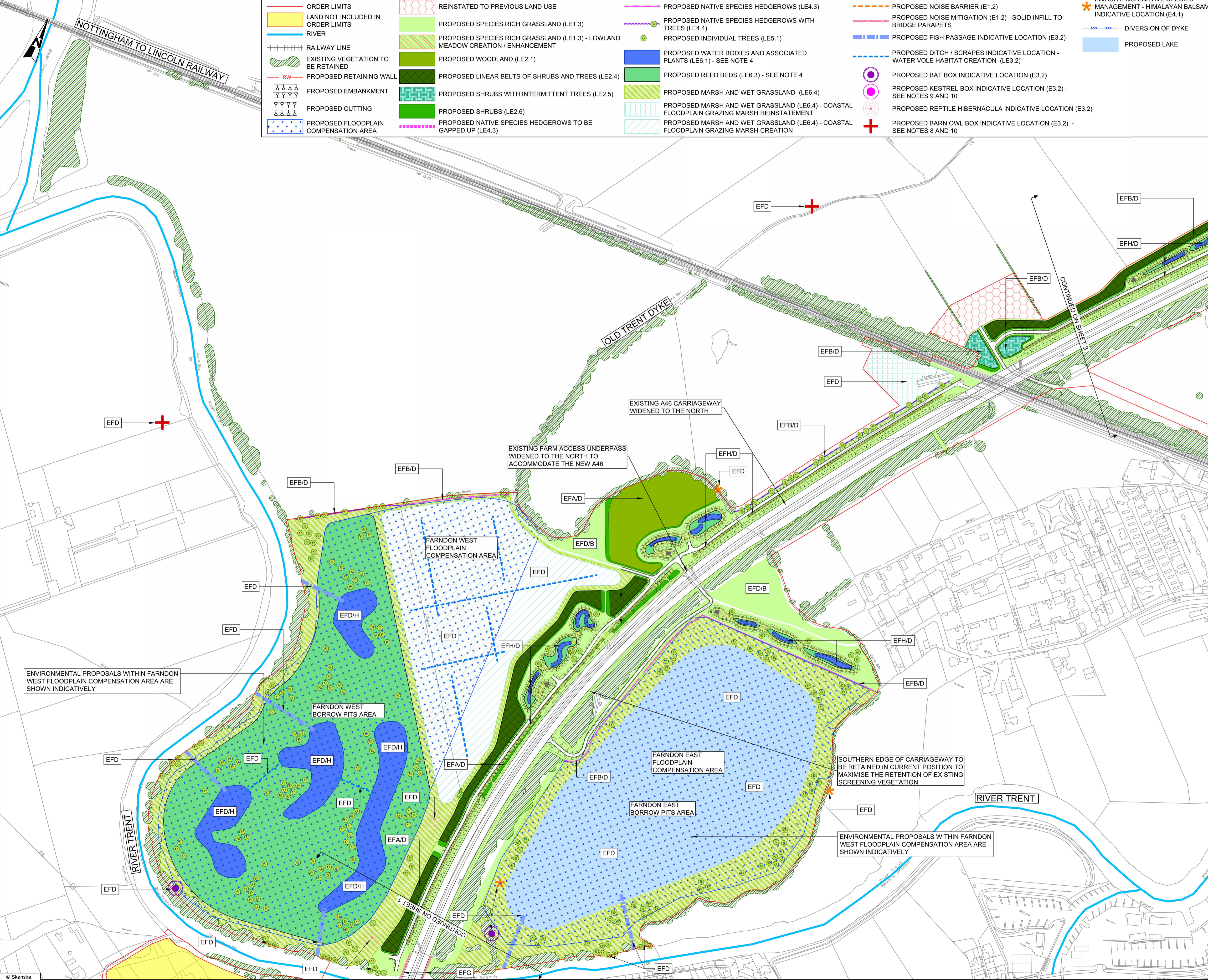
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 - FOR LANDSCAPE AND ENVIRONMENTAL ELEMENT CODES (i.e. LE1.1 AND E1.1) SEE DESIGN MANUAL FOR ROADS AND BRIDGES (DMRB) LD 117 LANDSCAPE DESIGN, TABLES 4.2B AND 4.2C.
 - PROTECTED SPECIES MITIGATION: TWO BARN OWL BOXES WILL BE INSTALLED AT EACH INDICATIVE 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 EM7 WOODLAND MIXTURE - SOWING RATE 4g/m².
 - DEPENDING ON GROWING CONDITIONS, PROPOSED SPECIES RICH GRASSLAND (LE1.3) AREAS INCLUDING UNDERSEEDING OF NATIVE SPECIES HEDGEROWS (LE4.3) 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 SPECIAL SOILS - SOWING RATE 4g/m².
 - PROPOSED MARSH AND WET GRASSLAND (LE6.4) AREAS TO BE SEEDED WITH EM8 MEADOW MIXTURE FOR WETLANDS - SOWING RATE 4g/m².

REFERENCE	ENVIRONMENTAL FUNCTION
EFA	VISUAL SCREENING
EFB	LANDSCAPE INTEGRATION
EFK	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	24/01/24	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 1 OF 7					
ORIGINAL SIZE			SCALE		
A1			1:2500		
DRAWING NUMBER		ORIGINATOR	VOLUME	PROJECT REF. NO.	
HE551478		SKAG	ELS	HE551478	
CONWI_CONW		DR	LS	03001	REVISION
					C01



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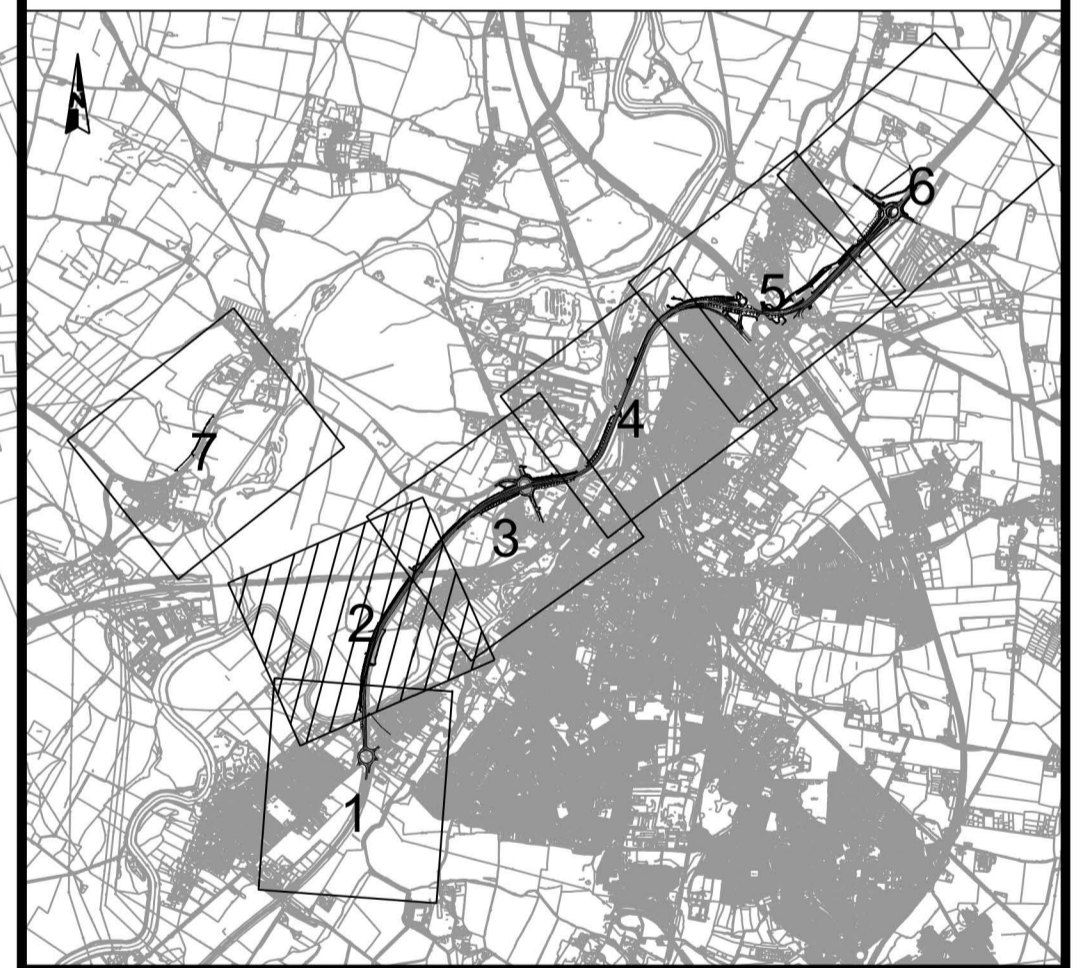
KEY:

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				

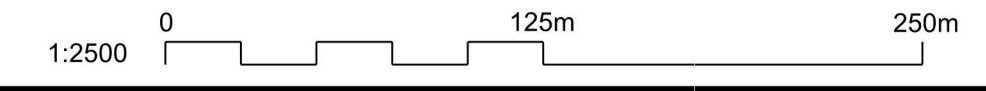
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 - PROTECTED SPECIES MITIGATION: TWO BARN OWL BOXES WILL BE INSTALLED AT EACH INDICATIVE LOCATION WITHIN APPROXIMATELY 100m - 150m OF EACH OTHER (i.e. ONE TERRITORY).
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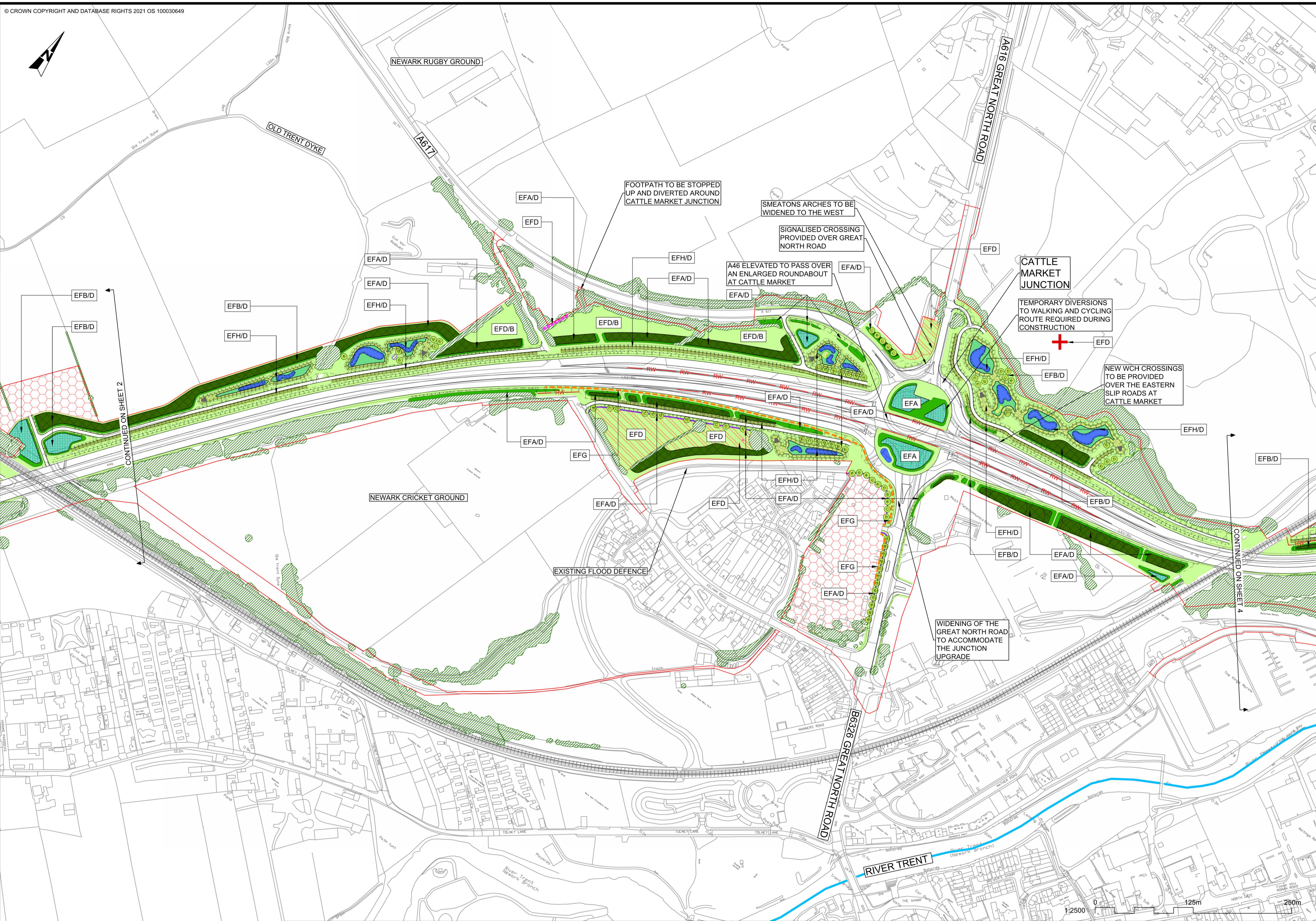
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EFH	WATER QUALITY

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					
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PROJECT TITLE					
A46 NEWARK BYPASS					
DRAWING TITLE					
FIGURE 2.3 ENVIRONMENTAL MASTERPLAN SHEET 2 OF 7					
ORIGINAL SIZE			SCALE		
A1			1:2500		
DRAWING NUMBER		ORIGINATOR	VOLUME	PROJECT REF NO.	
HE551478		SKAG	ELS	HE551478	
LOCATION		TYPE	ROLE	NUMBER	REVISION
CONWI_CONW		DR	LS	03002	C01

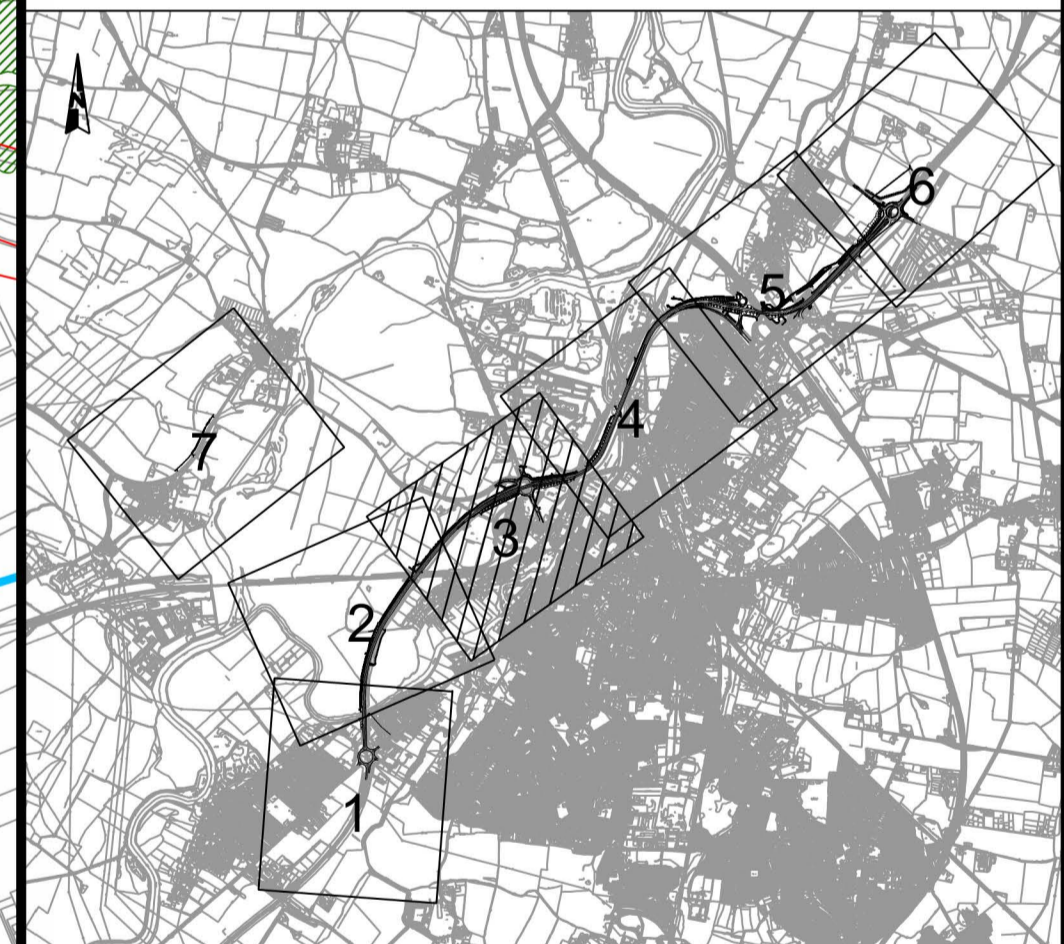




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REFERENCE	ENVIRONMENTAL FUNCTION
EFA	VISUAL SCREENING
EFB	LANDSCAPE INTEGRATION
EFC	ENHANCING THE BUILT ENVIRONMENT
EFD	NATURE CONSERVATION AND BIODIVERSITY
EFE	VISUAL AMENITY
EFF	HERITAGE
EFG	AUDITORY AMENITY
EFH	WATER QUALITY

Source: DMRB LD 117 Landscape Design



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

CLIENT
 national highways

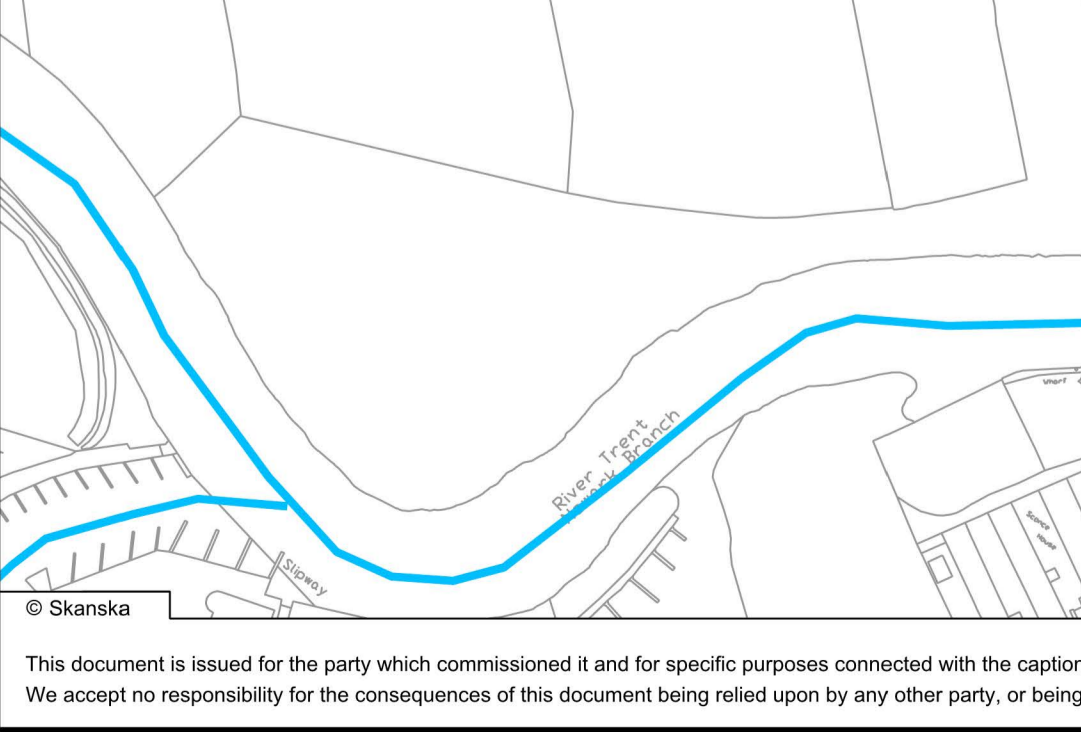
PURPOSE OF ISSUE
 DCO APPLICATION

DEVELOPMENT CONSENT ORDER NUMBER
 TR010065

PROJECT TITLE
 A46 NEWARK BYPASS

DRAWING TITLE
 FIGURE 2.3 ENVIRONMENTAL MASTERPLAN SHEET 3 OF 7

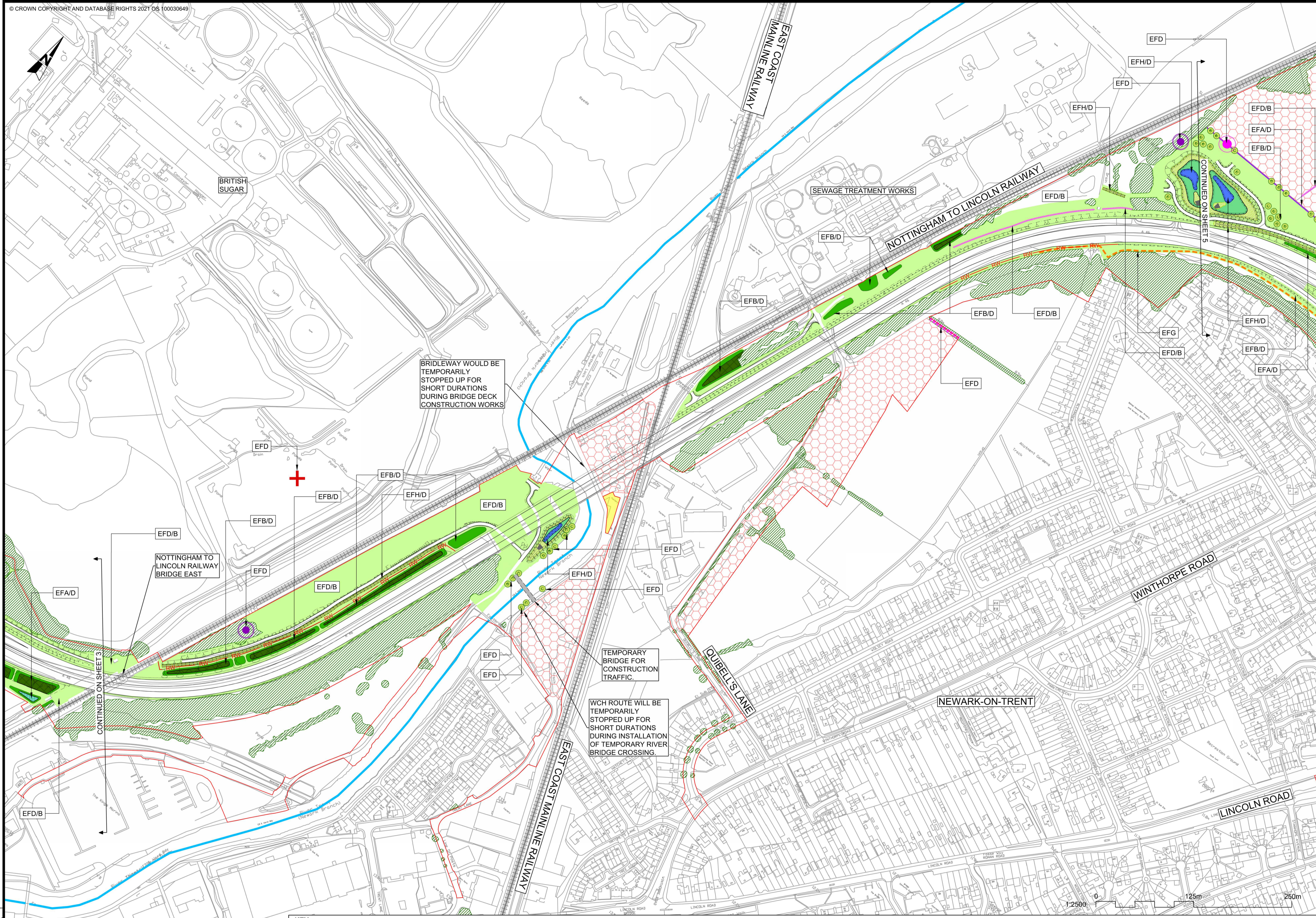
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DRAWING NUMBER	HE551478	ORIGINATOR	SKAG	VOLUME	ELS
LOCATION	CONWI_CONW	TYPE	DR	ROLE	LS
		NUMBER	03003	REVISION	C01



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				

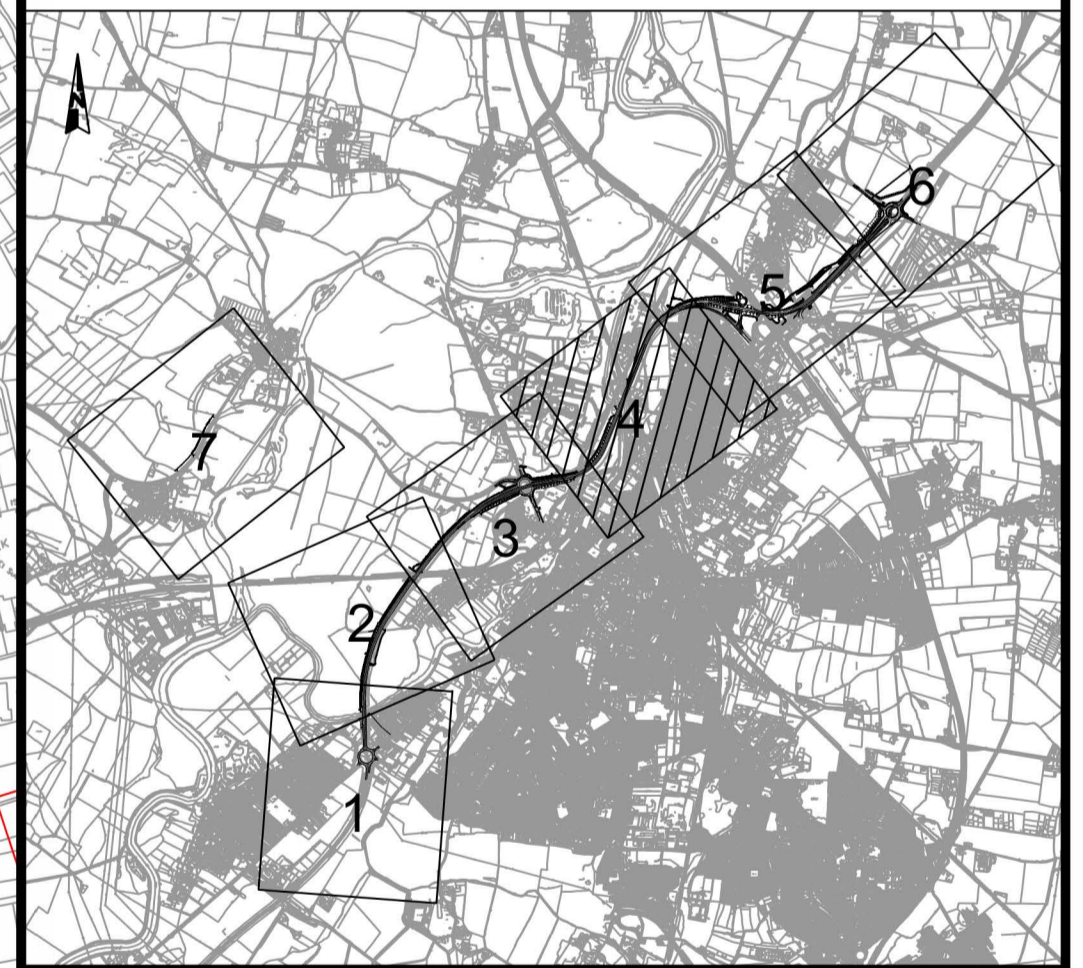
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EFF	HERITAGE
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EFH	WATER QUALITY

Source: DMRB LD 117 Landscape Design



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REV.	DATE	AMENDMENT DETAILS	ORIG	CHK'D	APP'D

CLIENT
national highways

PURPOSE OF ISSUE
DCO APPLICATION

DEVELOPMENT CONSENT ORDER NUMBER
TR010065

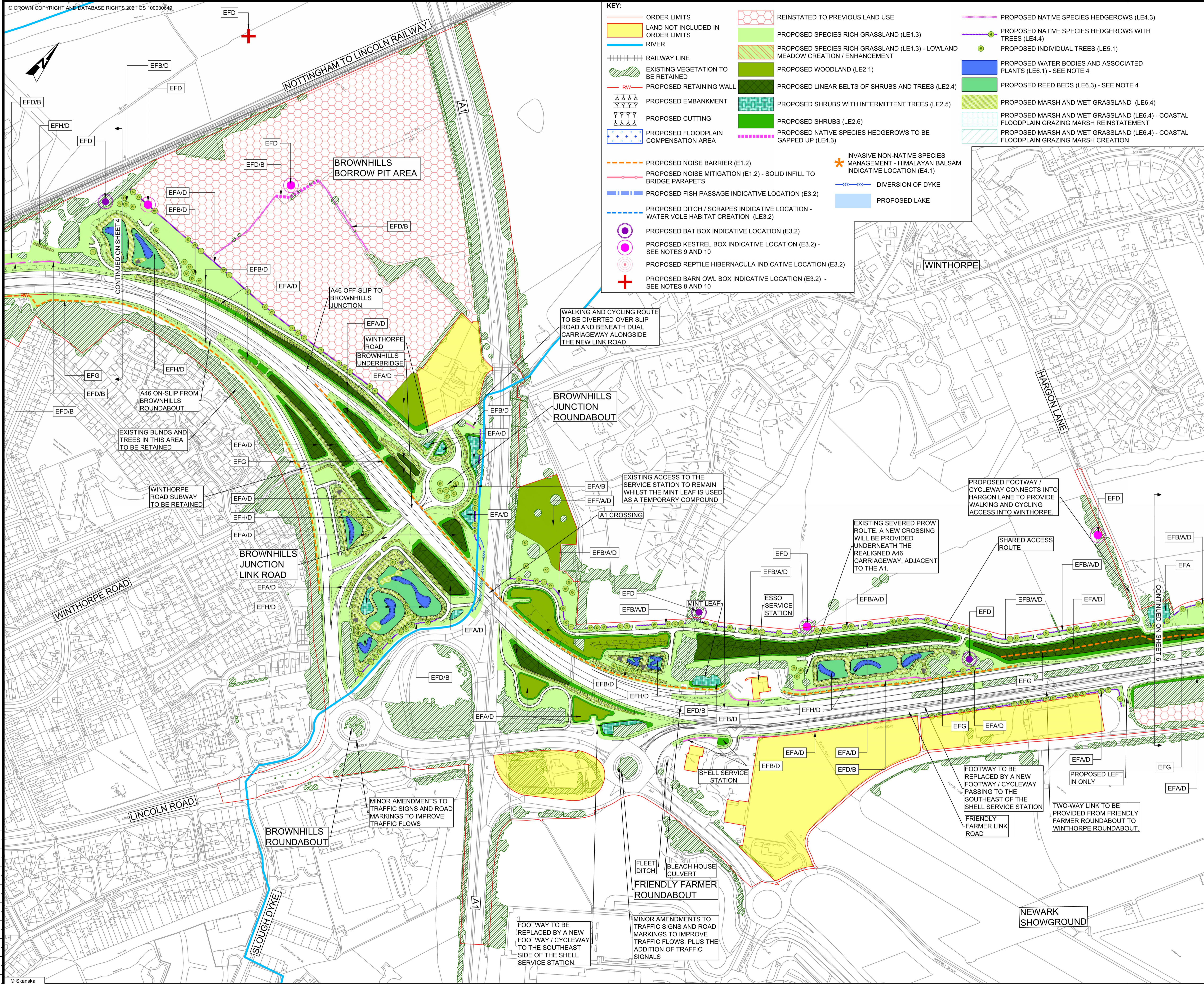
PROJECT TITLE
A46 NEWARK BYPASS

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	
LOCATION	DR	LS	03004
	TYPE	ROLE	NUMBER
PROJECT REF NO.	HE551478		
REVISION	C01		

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				



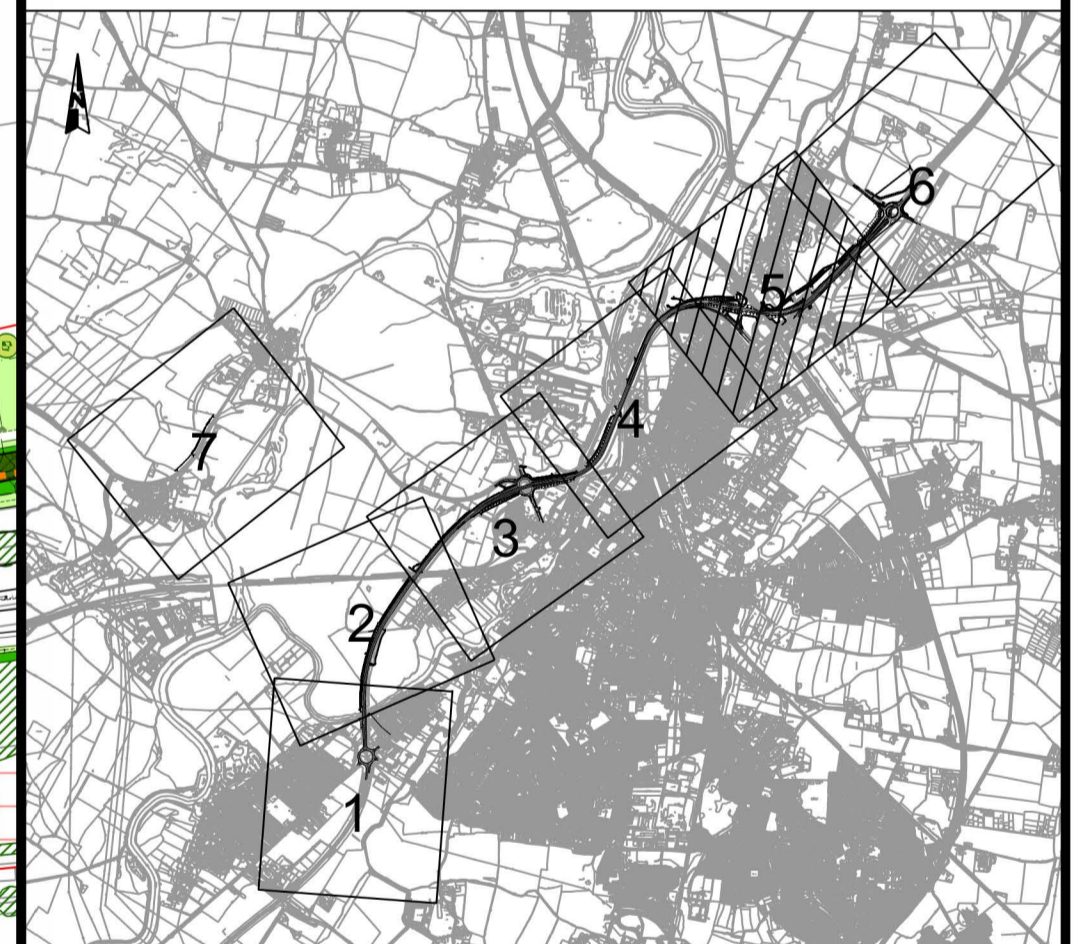
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- ORDER LIMITS
- LAND NOT INCLUDED IN ORDER LIMITS
- RIVER
- RAILWAY LINE
- EXISTING VEGETATION TO BE RETAINED
- PROPOSED RETAINING WALL
- PROPOSED EMBANKMENT
- PROPOSED CUTTING
- PROPOSED FLOODPLAIN COMPENSATION AREA
- PROPOSED NOISE BARRIER (E1.2)
- PROPOSED 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)
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- PROPOSED KESTREL BOX INDICATIVE LOCATION (E3.2) - SEE NOTES 9 AND 10
- PROPOSED REPTILE HIBERNACULA INDICATIVE LOCATION (E3.2)
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- 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)
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- DIVERSION OF DYKE
- PROPOSED LAKE

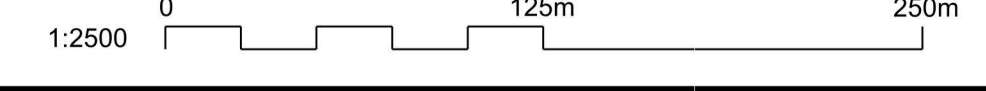
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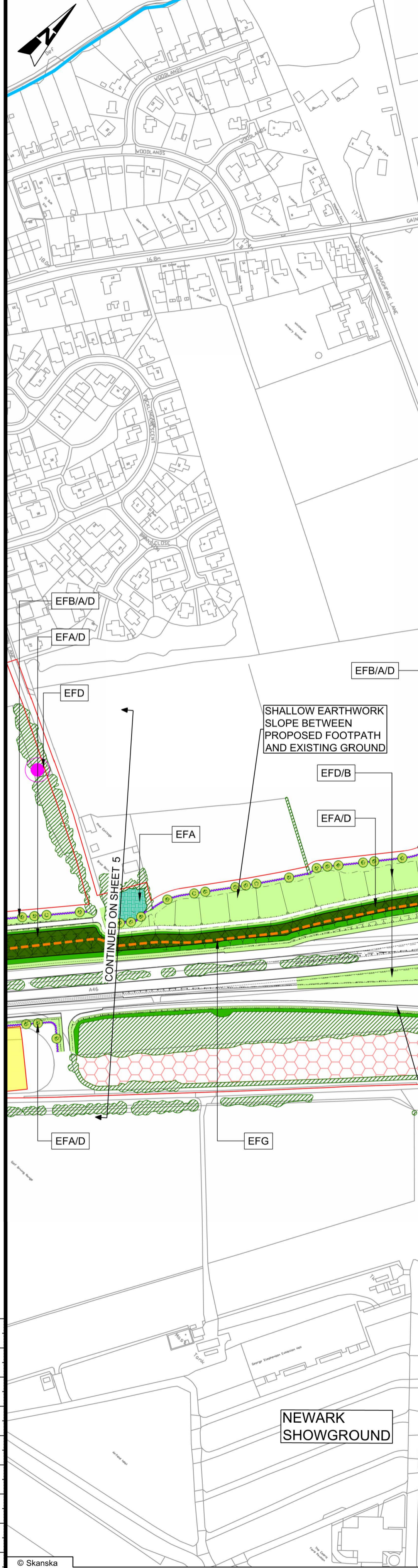
REFERENCE	ENVIRONMENTAL FUNCTION
EFA	VISUAL SCREENING
EFB	LANDSCAPE INTEGRATION
EFC	ENHANCING THE BUILT ENVIRONMENT
EFD	NATURE CONSERVATION AND BIODIVERSITY
EFE	VISUAL AMENITY
EFF	HERITAGE
EFG	AUDITORY AMENITY
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Source: DMRB LD 117 Landscape Design



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 5 OF 7					
ORIGINAL SIZE			SCALE		
A1			1:2500		
DRAWING NUMBER		ORIGINATOR	VOLUME	PROJECT REF. NO.	
HE551478		SKAG	ELS	HE551478	
CONWI_CONW		DR	LS	03005	REVISION
LOCATION		TYPE	ROLE	NUMBER	C01



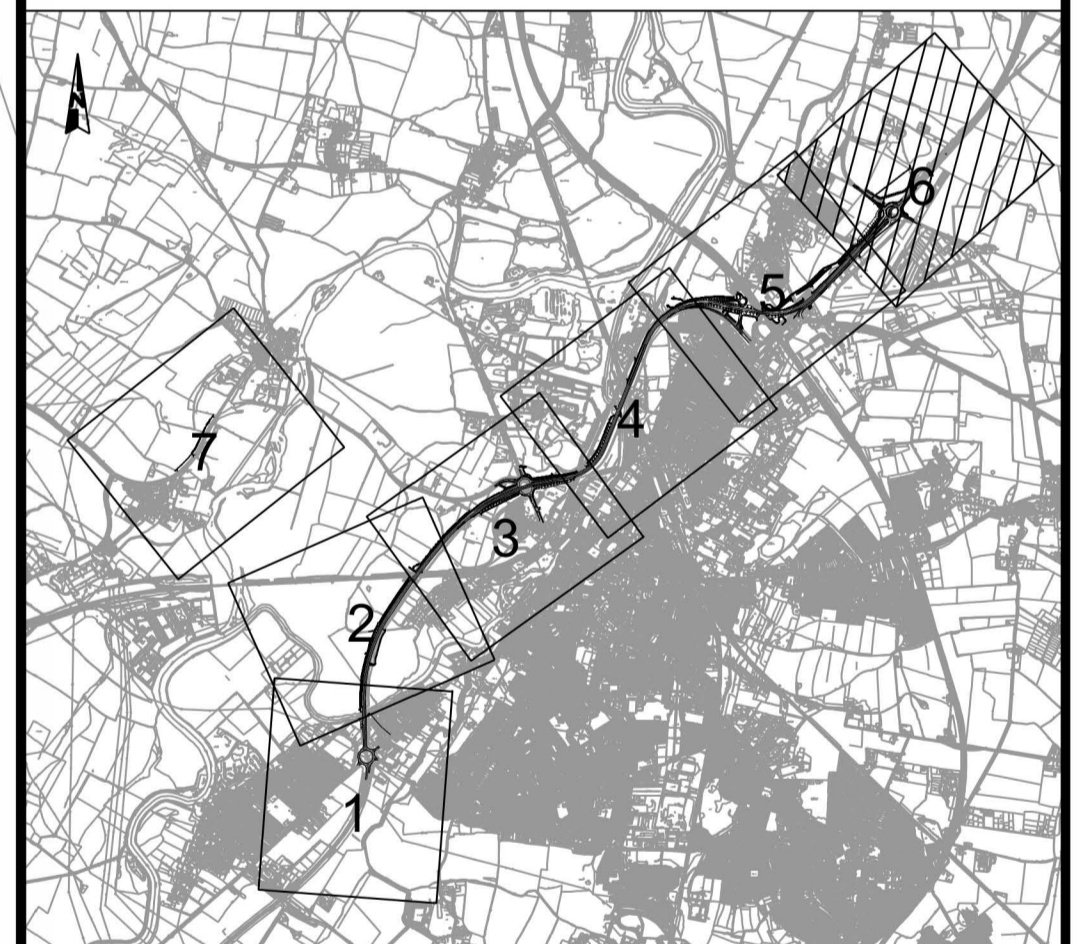


KEY:	
	ORDER LIMITS
	LAND NOT INCLUDED IN ORDER LIMITS
	RIVER
	RAILWAY LINE
	EXISTING VEGETATION TO BE RETAINED
	PROPOSED RETAINING WALL
	PROPOSED EMBANKMENT
	PROPOSED CUTTING
	PROPOSED FLOODPLAIN COMPENSATION AREA
	REINSTATED TO PREVIOUS LAND USE
	PROPOSED SPECIES RICH GRASSLAND (LE1.3)
	PROPOSED SPECIES RICH GRASSLAND (LE1.3) - LOWLAND MEADOW CREATION / ENHANCEMENT
	PROPOSED WOODLAND (LE2.1)
	PROPOSED LINEAR BELTS OF SHRUBS AND TREES (LE2.4)
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	PROPOSED SHRUBS (LE2.6)
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	PROPOSED REED BEDS (LE6.3) - SEE NOTE 4
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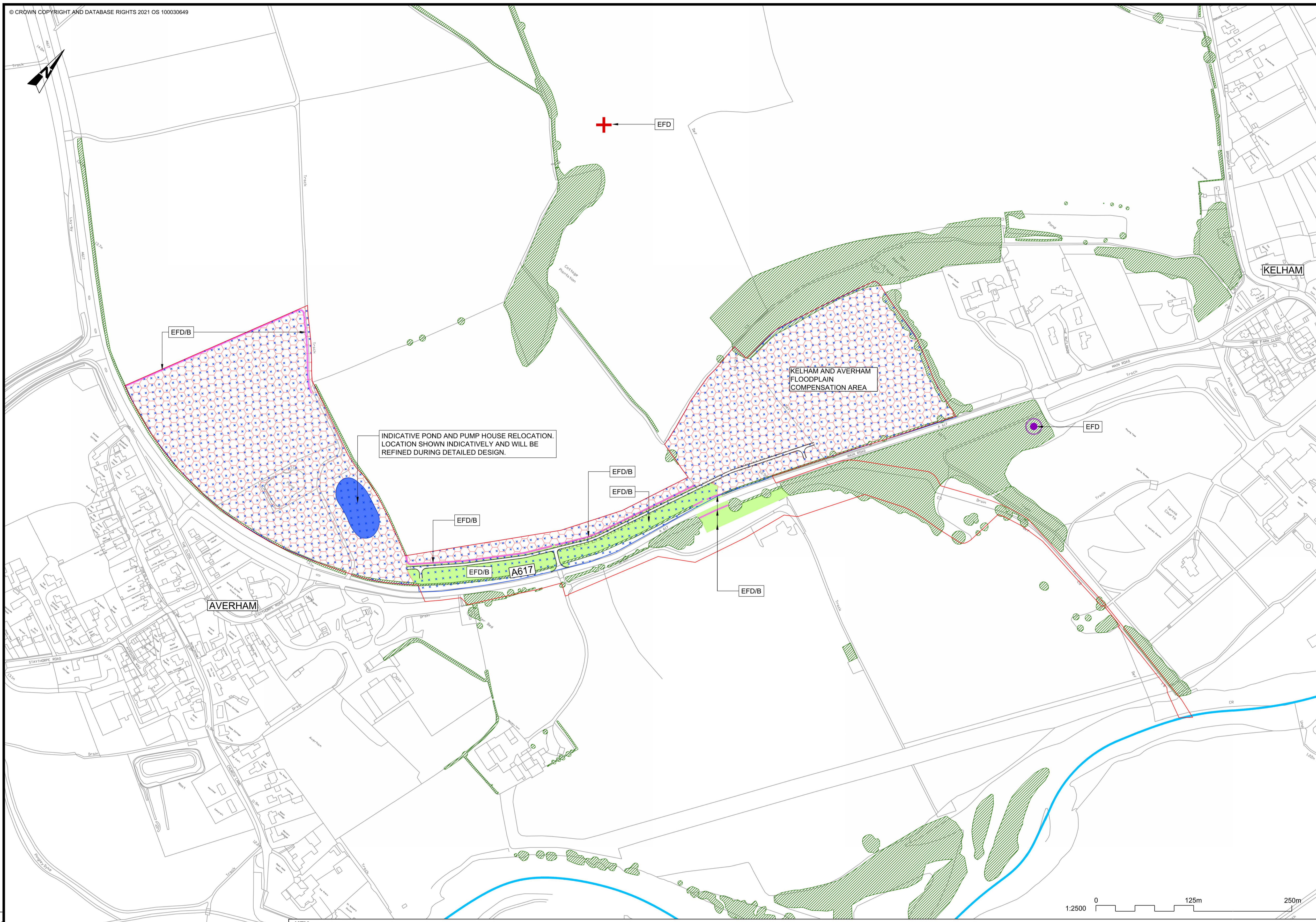
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Source: DMRB LD 117 Landscape Design



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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 6 OF 7					
ORIGINAL SIZE	A1	SCALE	1:2500		
DRAWING NUMBER	HE PIN	ORIGINATOR	VOLUME	PROJECT REF NO.	
HE551478	SKAG	ELS		HE551478	
CONWI_CONW	DR	LS	03006	REVISION	
				C01	



- 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/6.5).
 - DO NOT SCALE FROM THIS DRAWING, USE ONLY PRINTED DIMENSIONS.
 - ALL DIMENSIONS ARE IN METRES UNLESS DEFINED OTHERWISE.
 - PROPOSED REED BEDS AND WATER BODIES AND ASSOCIATED PLANTS - EXTENTS TO BE REFINED DURING DETAILED DESIGN.
 - 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).
 - 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.

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				

CD1	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 7 OF 7

ORIGINAL SIZE	A1	SCALE	1:2500
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DRAWING NUMBER	ORIGINATOR	VOLUME	PROJECT REF NO.
HE551478	SKAG	ELS	HE551478
CONWI_CONW	DR	LS	REVISION
		03007	C01

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