

Hallgates to Elms Farm Pipeline Route, Leicestershire/Preliminary Ecological Assessment

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	Name	CIEEM grade	Date of action taken
Field surveyor	RT	Qualifying Member	07/05/2024
			08/05/2024
			09/05/2024
			10/05/2024
	PD	Qualifying Member	07/05/2024
			08/05/2024
			09/05/2024
			10/05/2024
			21/05/2024
			22/05/2024
			28/05/2024
	CG	ACIEEM	15/05/2024
			16/05/2024
			17/05/2024
	CC	Qualifying Member	15/05/2024
			16/05/2024
			17/05/2024
Author of the Report	CC	Qualifying Member	27/06/2024
Peer Reviewer	ACP	MCIEEM	11/07/2024

1. Introduction and Brief

TEP was commissioned by Severn Trent Water to undertake a Preliminary Ecological Assessment (PEA) of a proposed pipeline route to the north-west of Leicester, located between Bradgate Park, near Cropston (approximate grid reference SK 53423 11450) and fields to the west of the A46 road near Groby (approximate grid reference SK 52651 05979) (Figure 1).

A UKHAB habitat survey¹ and habitat condition assessment of the proposed pipeline route and a 50 m buffer (hereafter referred to as “the site”) was undertaken in May 2024 to inform the assessment. A desktop search was also undertaken of the Multi Agency Geographic Information for the Countryside (MAGIC) website for statutory designated wildlife sites, priority habitats, and protected species licences located within influencing distance of the site. Details of non-statutory designated sites and records of protected and notable species within 1 km of the site were also obtained from Leicestershire and Rutland Environmental Records Centre (LRERC).

The PEA was undertaken in accordance with the best practice methodology, as detailed by the Chartered Institute of Ecology and Environmental Management (CIEEM)², and the British Standard BS42020:2013.

The purpose of the PEA is to provide a record of habitats that are present on site. During the survey, the presence, or potential presence, of protected species was also noted. Recommendations for any further ecological survey work and mitigation needed to ensure compliance with wildlife legislation and relevant planning policy are made. A desk study using information from MAGIC and LRERC was

¹ UKHab Ltd (2023) UK Habitat Classification Version 2.0

² CIEEM (2017) Guidelines for Preliminary Ecological Appraisal, 2nd Edition. Chartered Institute of Ecology and Environmental Management.

completed to place the site and the findings of the survey in a wider context. The results of the PEA will be used to inform proposals for the site.

Unless stated otherwise in the Recommendations section of this report, the survey findings are considered valid for a 12-month period from the date of survey.

Proposals

The PEA was requested to inform proposals for the laying of 13km of 1000mm nb trunk main from the existing Hallgates DSR complex to Elms Farm DBS. As some sections of the pipeline route are still to be finalised, three route options have been assessed (Figure 2).

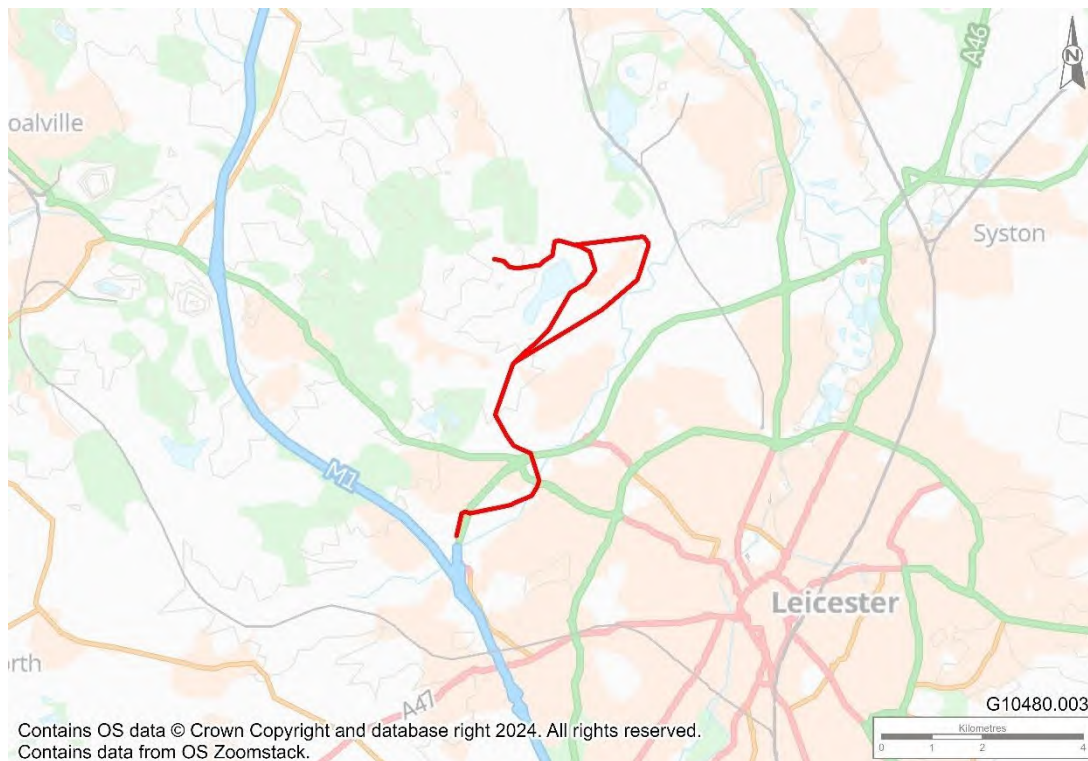


Figure 1: Site location and local context

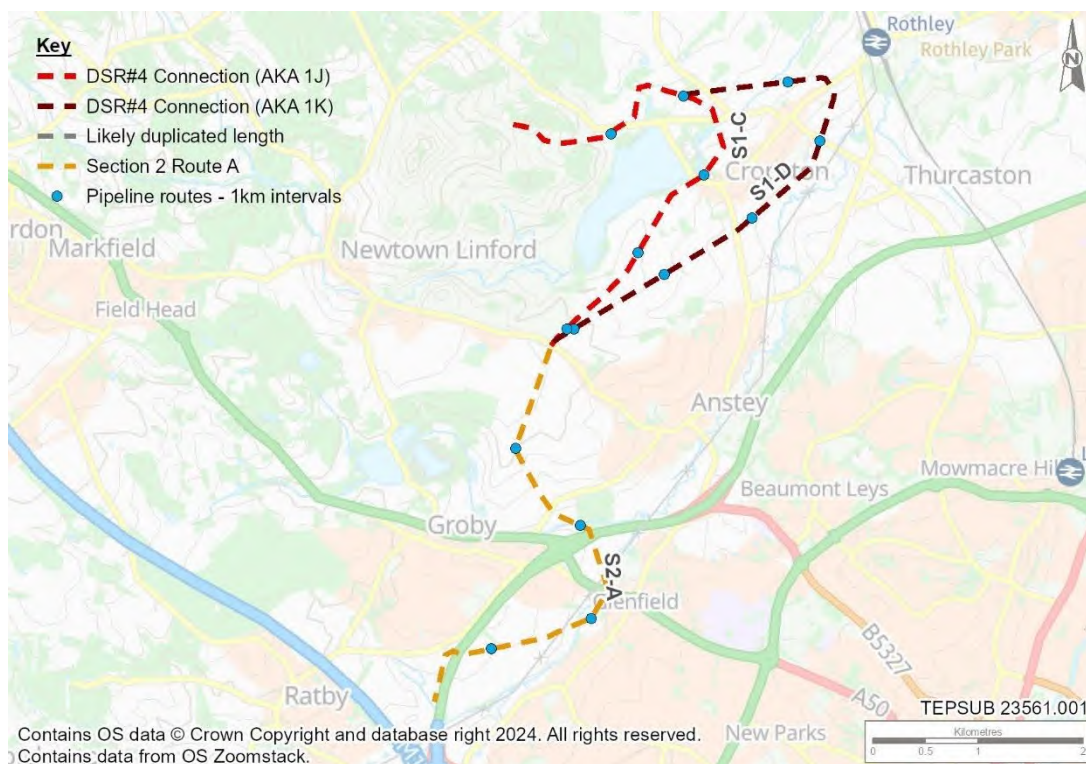


Figure 2: Location of the three route options subject to survey

2. Recommendations Summary

Criteria used in the table below- Needs to be actioned:

Before the work can proceed – (a licence/permission is required which means that the project can only proceed when obtained)

ECOW input during the project to ensure compliance. or prior to the works to check for changes, or may require additional advice during the works

Best practice guidance in delivery of the work

Ecological Feature	Timing of any actions	Section	Risk
1. Habitats – National Vegetation Classification survey	May to August (grasslands)	5	
2. Habitats – Hedgerow Regulations Assessment	May to early June	5	
3. Habitats – Arboricultural Survey	Anytime	5	
4. Watercourses – River Condition Assessment	May/June or September (low flow conditions)	5	
5. Badger – Badger survey	Anytime (winter is optimum)	5	
6. Badger – Badger licence application and implementation, if required	Prior to works commencing (post-planning approval)	5	

7. Bats – Ground Level Tree Assessment	Any time (winter is optimum)	5	
8. Bats – Daytime/Nocturnal Roost Surveys	May – August, with visits spread throughout this period (minimum 3 weeks between survey visits)	5	
9. Bats – Bat licence application and implementation, if required	Prior to works commencing (post-planning approval)	5	
10. Bats – nighttime bat walkover and static detector deployment	Spread across bat active season from April to October	5	
11. Otter – Otter survey	Any time (winter is optimum)	5	
12. Otter – Otter licence application and implementation, if required	Prior to works commencing (post-planning approval)	5	
13. Water vole – Water vole survey	One visit between mid-April and June; and one visit between July to September; with visits spaced 2 months apart	5	
14. Water vole – Water vole licence application and implementation, if required	Prior to works commencing (post-planning approval)	5	
15. White-clawed crayfish – White clawed crayfish survey	July to September	5	
16. White-clawed crayfish – White clawed crayfish licence application and implementation, if required	Prior to works commencing (post-planning approval)	5	
17. Birds – Breeding Bird Surveys	Mid-March to early July, with visits spread across this period	5	
18. Birds – Wintering Bird Scoping Visit and Surveys (if required)	October to April, with visits spread across this period	5	
19. Amphibians – Great Crested Newt eDNA Survey	Mid-April to mid-June	5	
20. Amphibians – GCN licence application and implementation, if required	Prior to works commencing (following planning approval)	5	
21. Notable Plants – Bluebell survey	April/May	5	

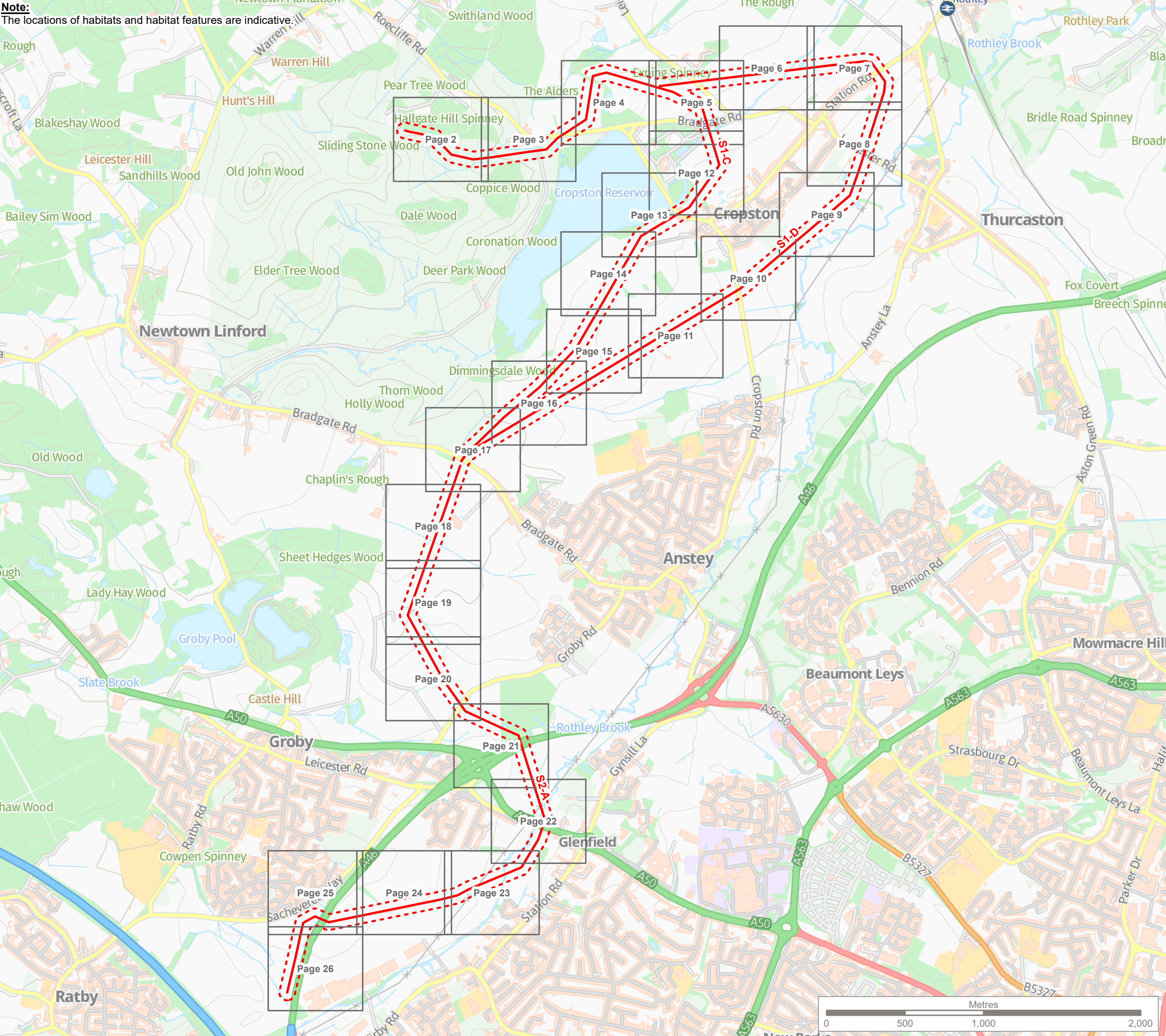
22. Notable Plants – Bluebell translocation if required	April/May	5	
23. Designated Sites – Consultation with Natural England regarding SSSI's and SSSI IRZ's; the LPA regarding notified/candidate/potential LWS's; and Historic England regarding Bradgate Park.	Prior to works commencing	5	
24. Bradgate Park and Cropston Reservoir SSSI Assent	Prior to works commencing	5	
25. Badger – Badger PWMS (production and implementation)	Prior to works commencing	4	
26. Bats – Sensitive Lighting Strategy	Prior to works commencing	4	
27. Brown Hare – Brown Hare PWMS (production and implementation)	Prior to works commencing	4	
28. Hedgehog – Hedgehog PWMS (production and implementation)	Prior to works commencing	4	
29. Polecat – Polecat PWMS (production and implementation)	Prior to works commencing	4	
30. Amphibians – Amphibian PWMS (production and implementation)	Prior to works commencing	4	
31. Reptiles – Reptile PWMS (production and implementation)	Prior to works commencing	4	
32. Notable Plants – Bluebell Translocation Method Statement	Prior to works commencing	4	
33. Invasive Non-Native Plants – Invasive Non-Native Species Method Statement (production and implementation)	Prior to works commencing	4	
34. Habitats and Designated Sites – Production and implementation of a Construction Environment Management Plan	Prior to works commencing	4	
35. Birds – Nesting Bird Check	Generally required between March and August inclusive, although some species can nest outside of this period	4	

3. Maps

UK Hab Habitat Map

Using the UK Habitat Classification Field Key 2020 *Authors: PETE CAREY, BILL BUTCHER*

Note:
The locations of habitats and habitat features are indicative.

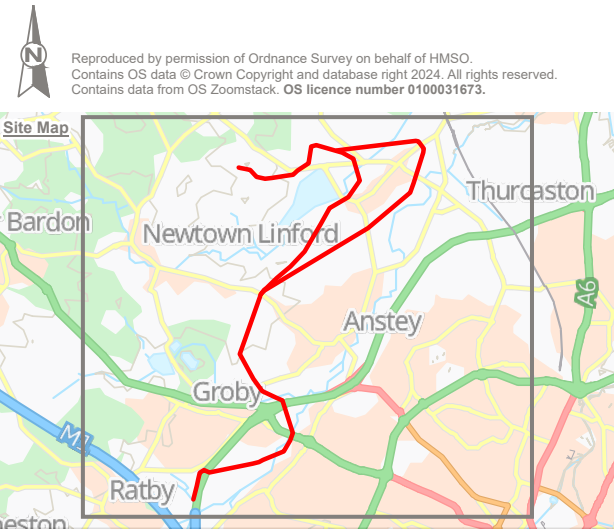


KEY

Pipeline route

Page and page number

Pipeline - 50m buffer



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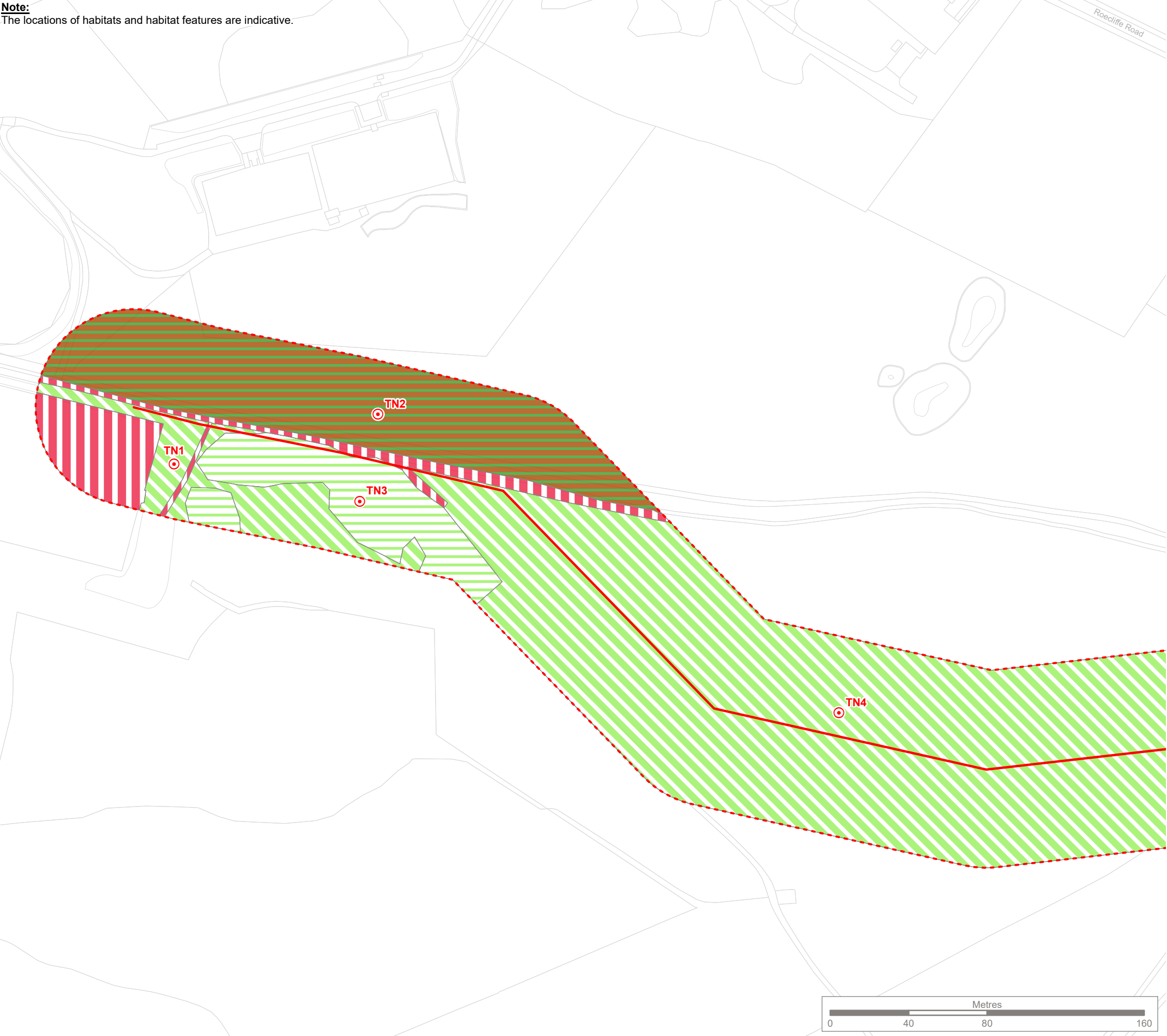
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Overview

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Note:
The locations of habitats and habitat features are indicative.



KEY

Pipeline route

Pipeline - 50m buffer

Target note

Grassland

Bracken

Lowland dry acid grassland

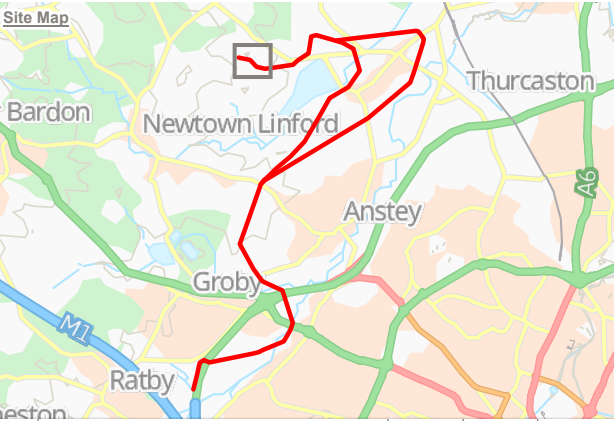
Woodland and Forest

Lowland mixed deciduous woodland

Urban

Developed land, sealed surface

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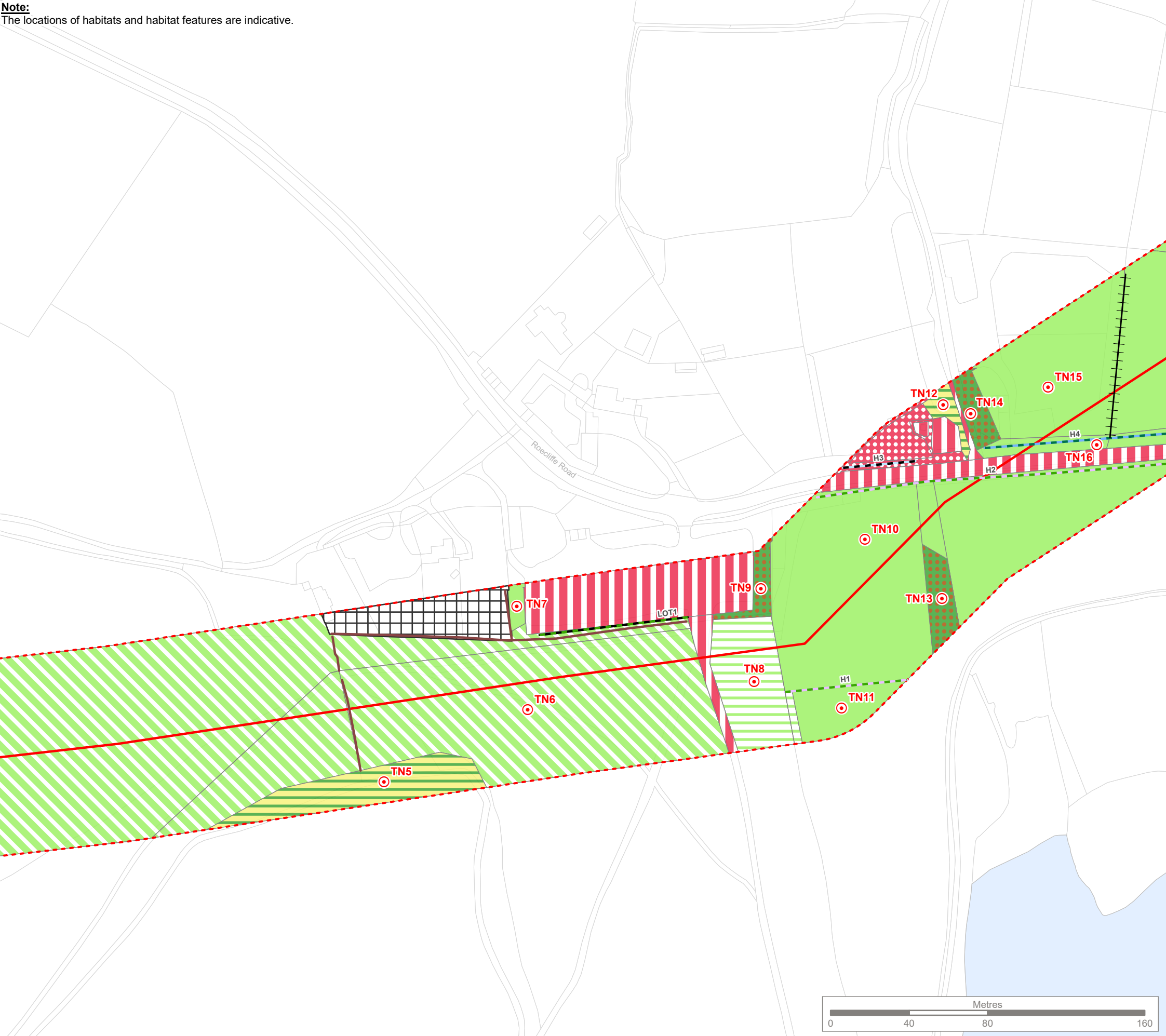
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Note:
The locations of habitats and habitat features are indicative.



KEY

Pipeline route

Pipeline - 50m buffer

Target note

Hedgerows

Native hedgerow

Line of trees

Native hedgerow - associated with bank or ditch

Species-rich native hedgerow with trees - associated with bank or ditch

Built Linear Features

Fence

Wall

Grassland

Bracken

Lowland dry acid grassland

Modified grassland

Woodland and Forest

Other coniferous woodland

Other woodland, broadleaved

Urban

Artificial unvegetated, unsealed surface

Developed land, sealed surface

Not Surveyed

No access

Off-Site Habitat

Reservoir

N

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Site Map

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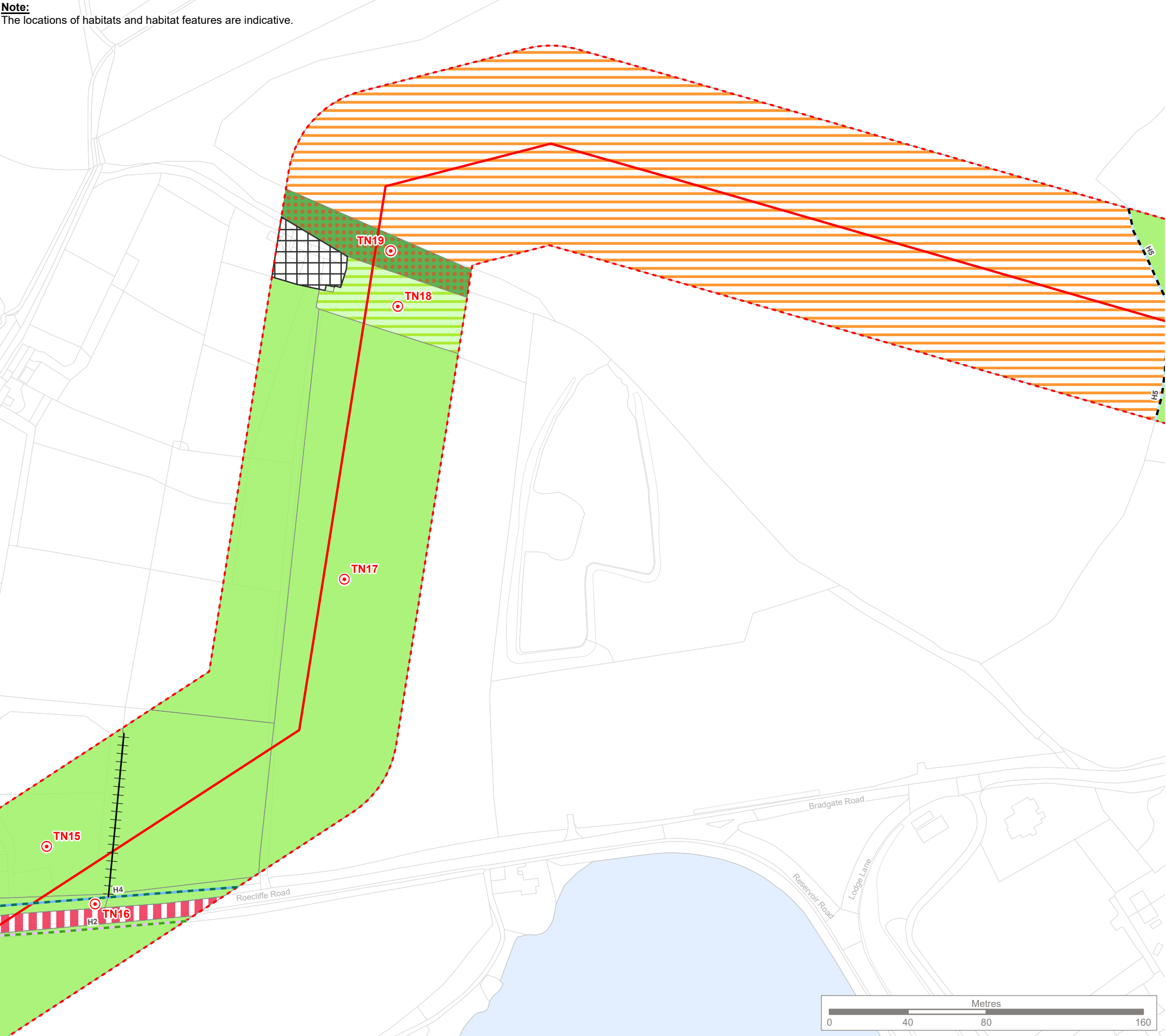
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Note:
The locations of habitats and habitat features are indicative.



KEY

Pipeline route

Pipeline - 50m buffer

Target note

Rural tree

Native hedgerow

Native hedgerow - associated with bank or ditch

Species-rich native hedgerow with trees - associated with bank or ditch

Fence

Cereal crops

Modified grassland

Other neutral grassland

Other woodland, broadleaved

Developed land, sealed surface

No access

Reservoir

Cereal crops

Modified grassland

Other neutral grassland

Other woodland, broadleaved

Developed land, sealed surface

No access

Reservoir

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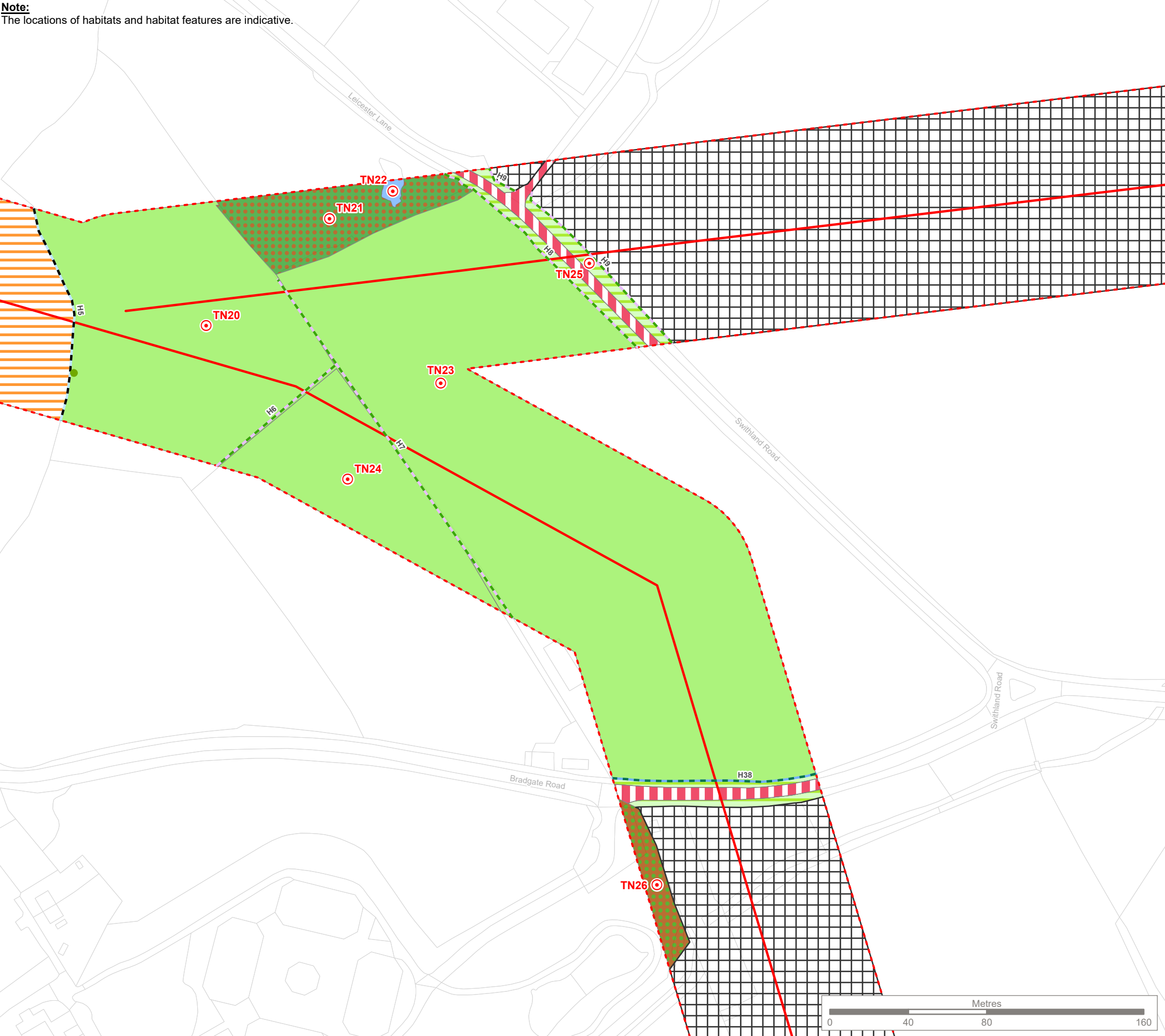
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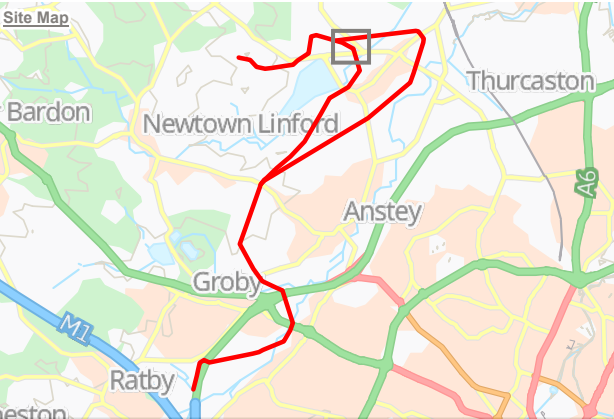
Note:
The locations of habitats and habitat features are indicative.



KEY

- Pipeline route
- Pipeline - 50m buffer
- Target note
- Rural tree
- Native hedgerow
- Native hedgerow - associated with bank or ditch
- Species-rich native hedgerow with trees - associated with bank or ditch
- Cereal crops
- Grassland
 - Modified grassland
 - Other neutral grassland
- Lakes
 - Ponds (non-priority habitat)
- Woodland and Forest
 - Other woodland, broadleaved
 - Other woodland, mixed
- Urban
 - Developed land, sealed surface
- Not Surveyed
 - No access

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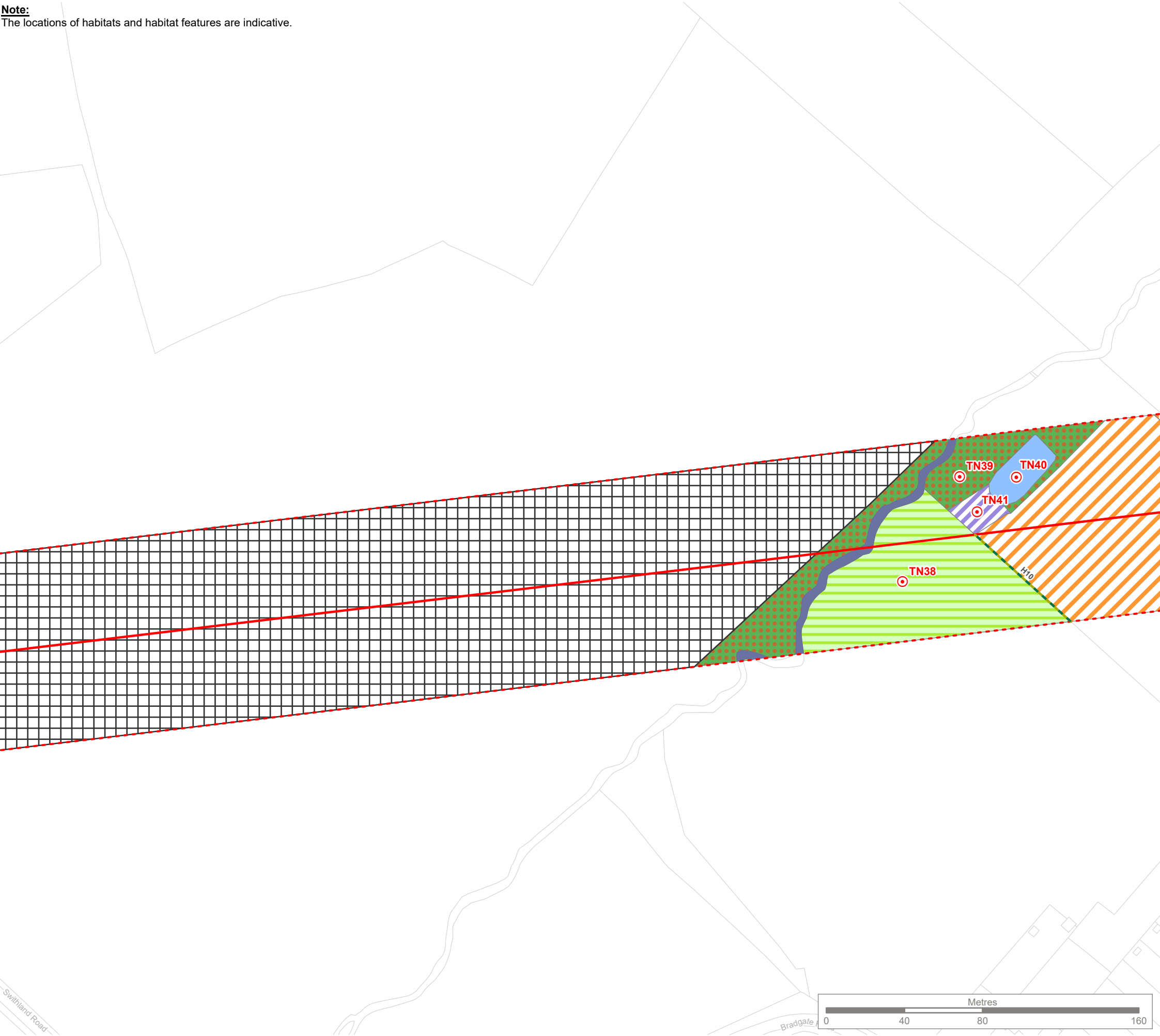
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Note:
The locations of habitats and habitat features are indicative.



KEY

- Pipeline route

Pipeline - 50m buffer

Target note

Hedgerows

Native hedgerow - associated with bank or ditch

Native hedgerow with trees

Cropland

Arable field margins

Winter stubble

Grassland

Other neutral grassland
- Heathland and Shrub**

Bramble scrub

Lakes

Ponds (non-priority habitat)

Woodland and Forest

Other woodland, broadleaved

Watercourse Footprint

Watercourse footprint

Not Surveyed

No access

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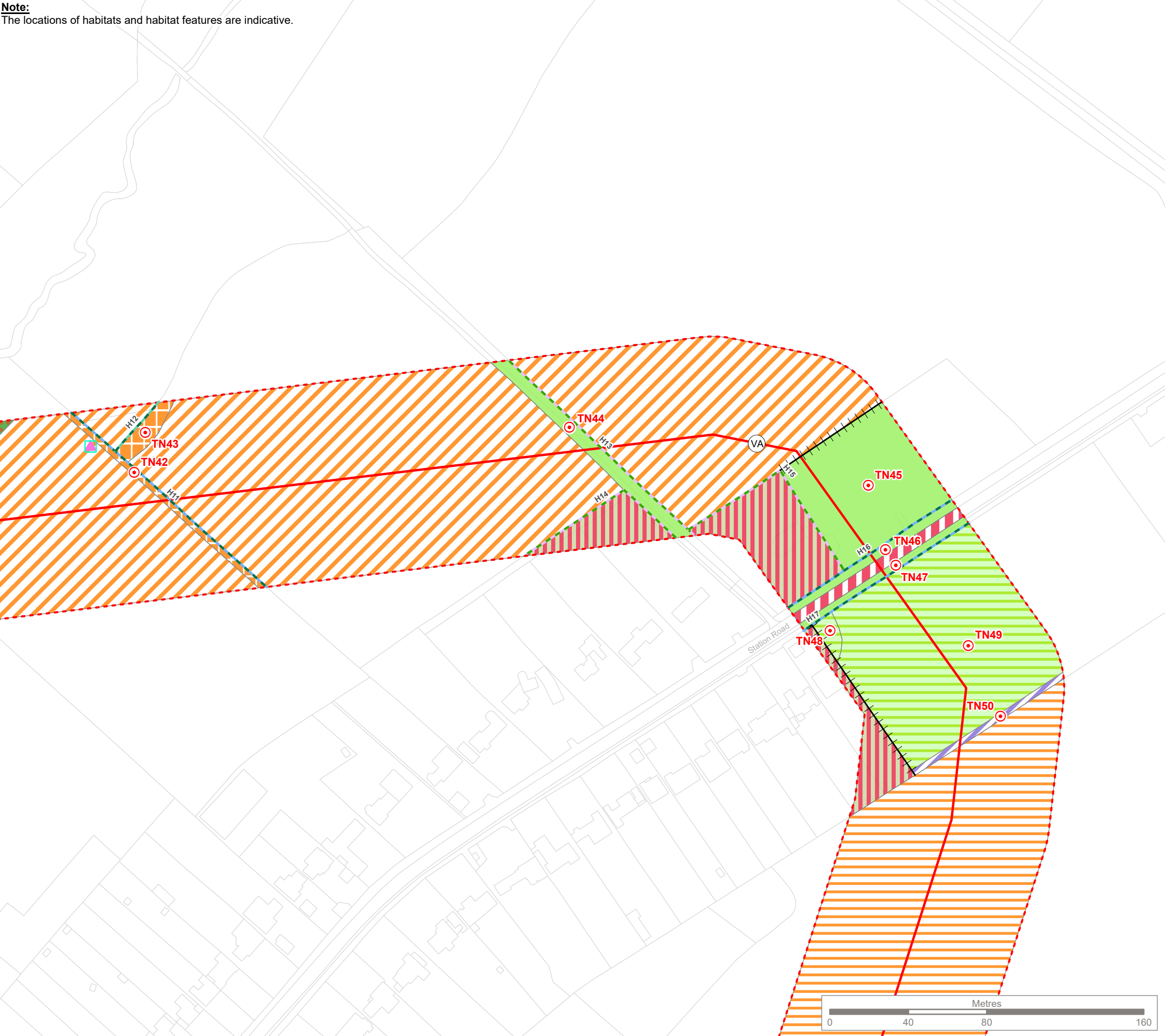
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Note:
The locations of habitats and habitat features are indicative.



KEY

Pipeline route

Pipeline - 50m buffer

Target note

Mammal Evidence

Badger dung pit

Mammal path

Habitat Features

Variegated archangel

Hedgerows

Native hedgerow

Native hedgerow - associated with bank or ditch

Native hedgerow with trees - associated with bank or ditch

Built Linear Features

Fence

Cropland

Arable field margins

Cereal crops

Winter stubble

Grassland

Modified grassland

Other neutral grassland

Heathland and Shrub

Bramble scrub

Woodland and Forest

Other woodland, broadleaved

Urban

Developed land, sealed surface

Vegetated garden

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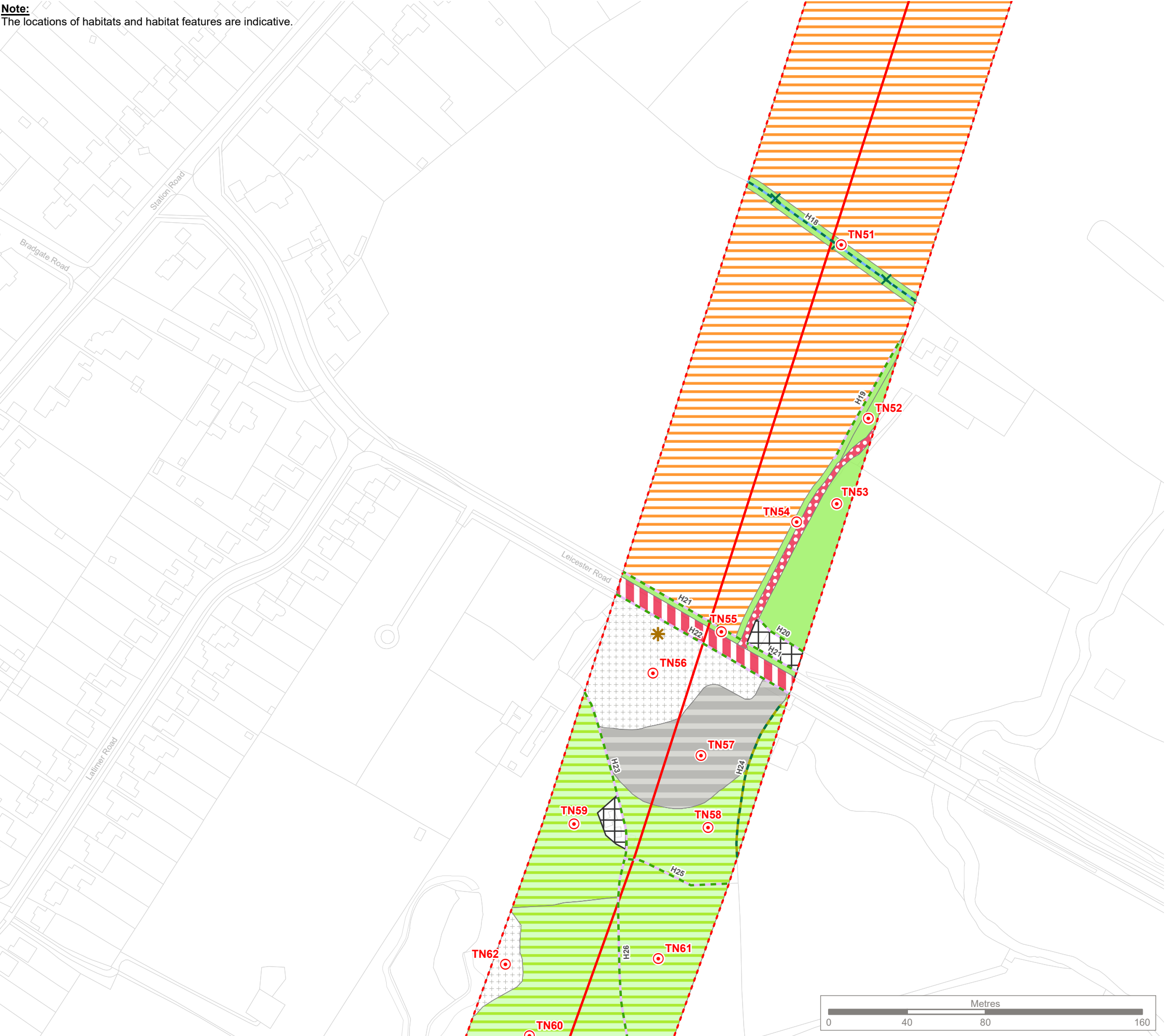
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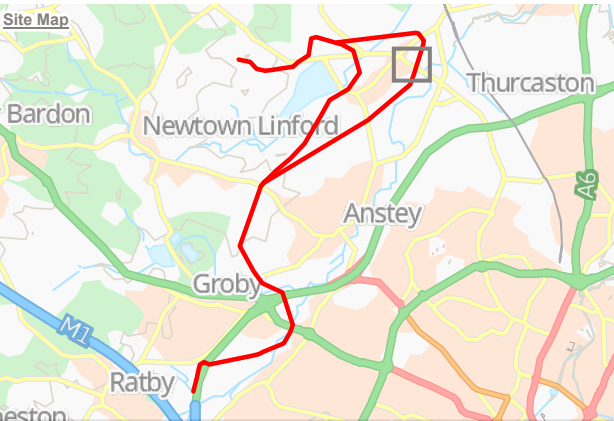
Note:
The locations of habitats and habitat features are indicative.



KEY

- Pipeline route
- Pipeline - 50m buffer
- Target note
- Habitat Features**
 - Scattered scrub
 - Log pile
- Hedgerows**
 - Native hedgerow
 - Native hedgerow - associated with bank or ditch
 - Native hedgerow with trees
- Cropland**
 - Cereal crops
- Grassland**
 - Modified grassland
 - Other neutral grassland
- Sparsely Vegetated Land**
 - Ruderal/ephemeral
 - Tall forbs
- Urban**
 - Artificial unvegetated, unsealed surface
 - Developed land, sealed surface
- Not Surveyed**
 - No access

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Note:
The locations of habitats and habitat features are indicative.



KEY

- Pipeline route
- Pipeline - 50m buffer
- Target note
- Hedgerows**
 - Native hedgerow
 - Native hedgerow - associated with bank or ditch
- Cropland**
 - Arable field margins cultivated annually
- Cereal crops
- Grassland**
 - Modified grassland
 - Other neutral grassland
- Sparsely Vegetated Land**
 - Ruderal/ephemeral
- Surveyed from Aerial Imagery**
 - No access

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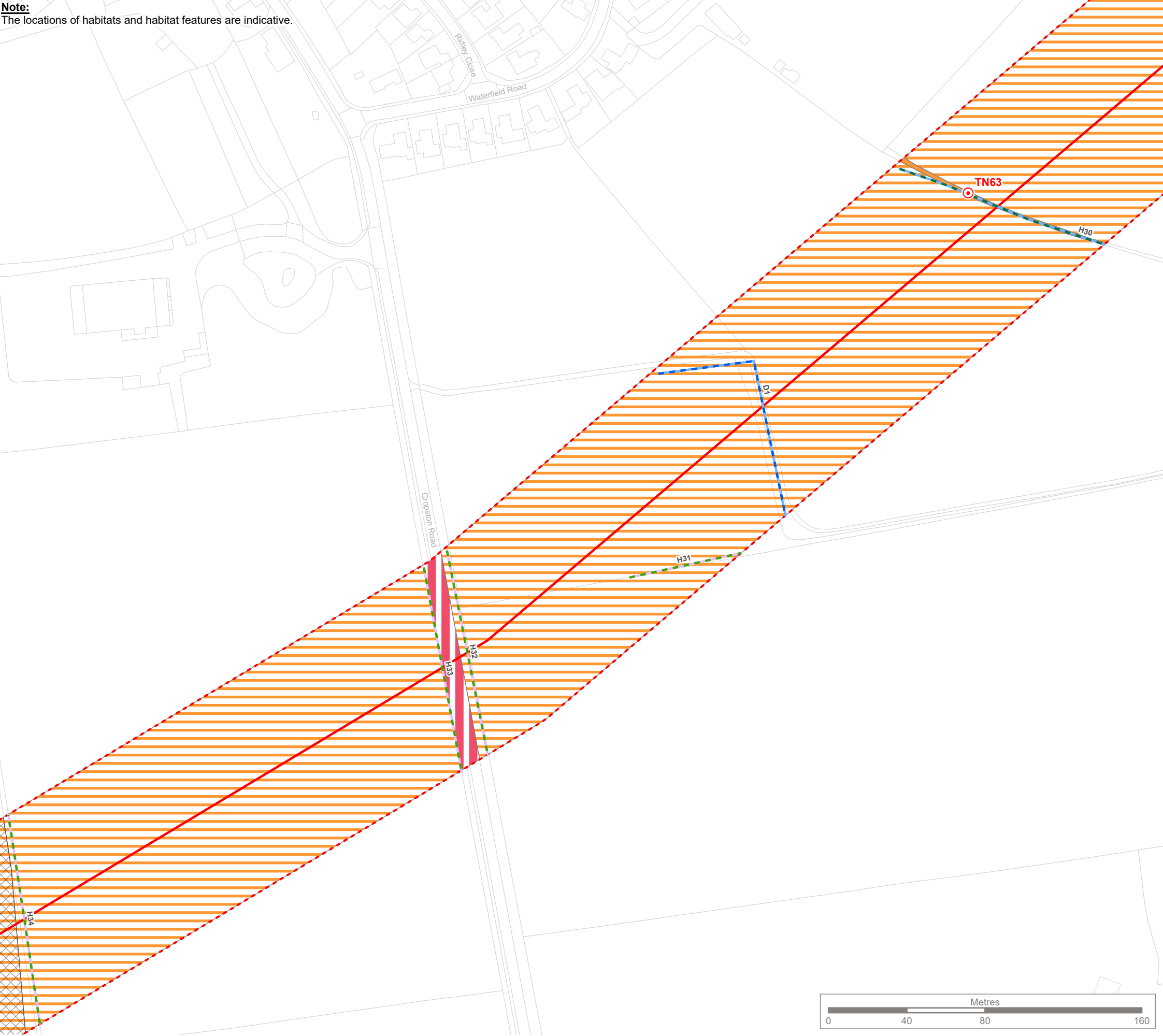
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Note:
The locations of habitats and habitat features are indicative.



KEY

Pipeline route

Pipeline - 50m buffer

Target note

Hedgerows

Native hedgerow

Native hedgerow - associated with bank or ditch

Watercourses

Ditch

Cropland

Arable field margins cultivated annually

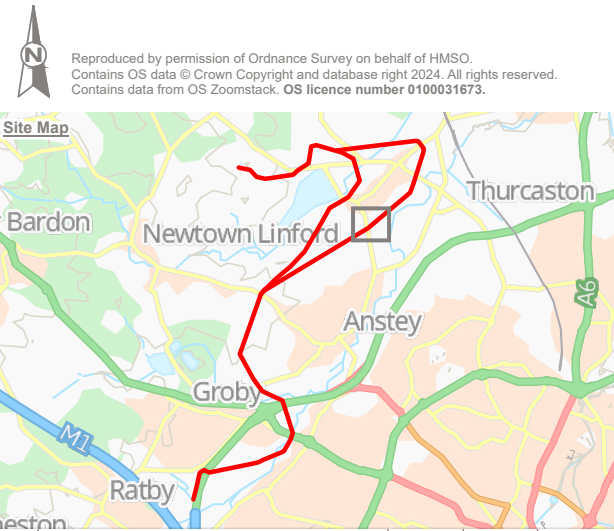
Cereal crops

Urban

Developed land, sealed surface

Surveyed from Aerial Imagery

No access



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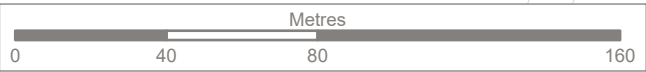
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Note:
The locations of habitats and habitat features are indicative.



KEY

Pipeline route

Pipeline - 50m buffer

Hedgerows

Native hedgerow

Cropland

Cereal crops

Surveyed from Aerial Imagery

No access



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Project

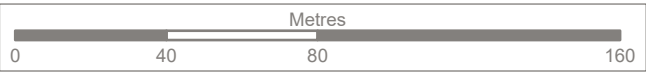
Hallgates to Elms Farm Pipeline, Leicestershire

Title

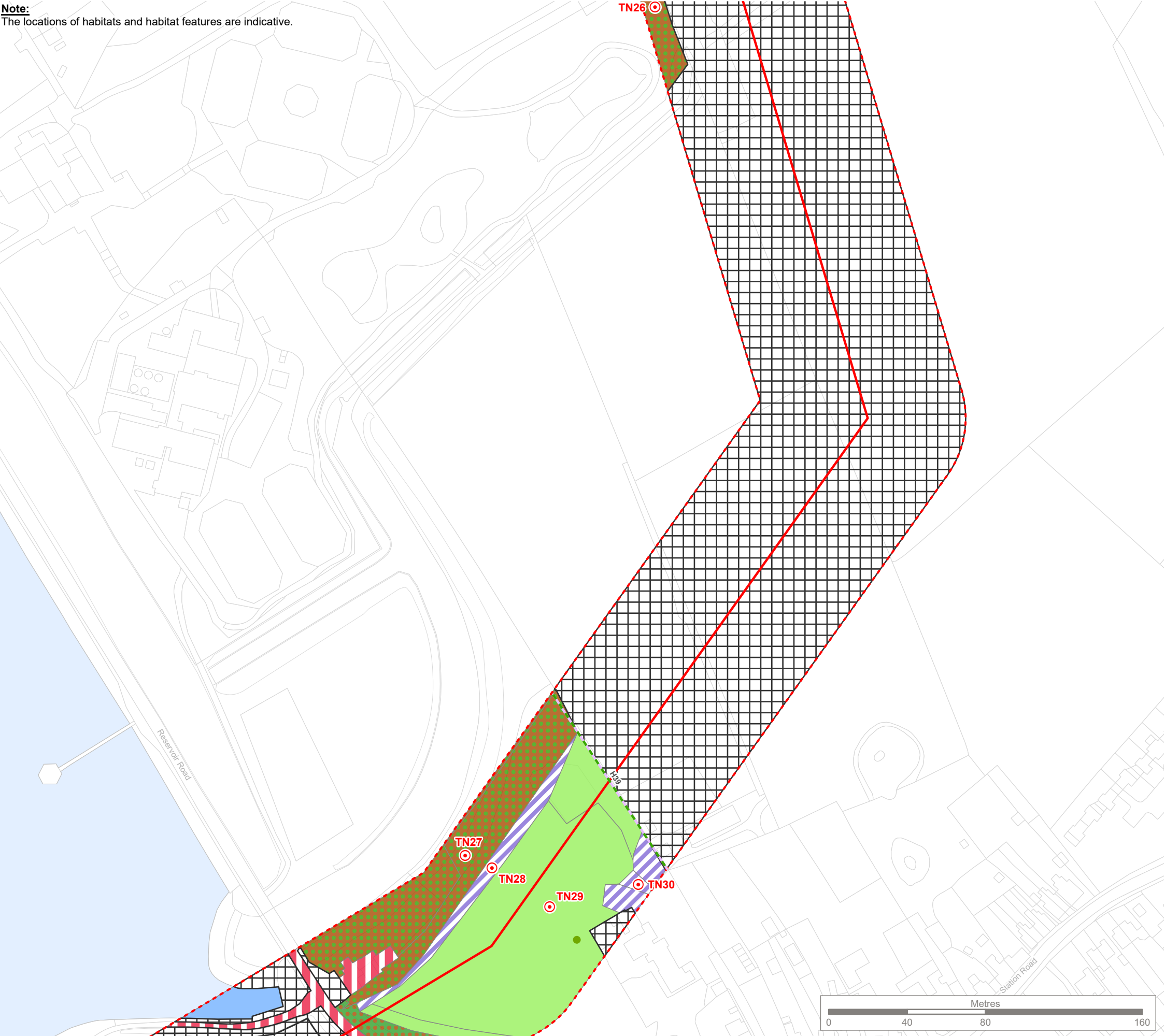
Baseline UK Habitat Plan
Page 11

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Drawn MC/IJ	Checked CW	Approved CC	Scale 1:2,000 @ A3	Date 12/07/2024
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Note:
The locations of habitats and habitat features are indicative.



KEY

Pipeline route

Pipeline - 50m buffer

Target note

Habitat Features

Rural tree

Hedgerows

Native hedgerow

Grassland

Modified grassland

Heathland and Shrub

Bramble scrub

Lakes

Ponds (non-priority habitat)

Woodland and Forest

Other woodland, broadleaved

Other woodland, mixed

Urban

Developed land, sealed surface

Not Surveyed

No access

Off-Site Habitat

Reservoir

The site map shows the project area highlighted in red, situated within a larger regional context. Surrounding areas include Bardon, Newtown Linford, Anstey, Groby, Ratby, and Thurcaston. The map shows major roads like the A6 and M1, and a reservoir. A north arrow is present in the top left corner.

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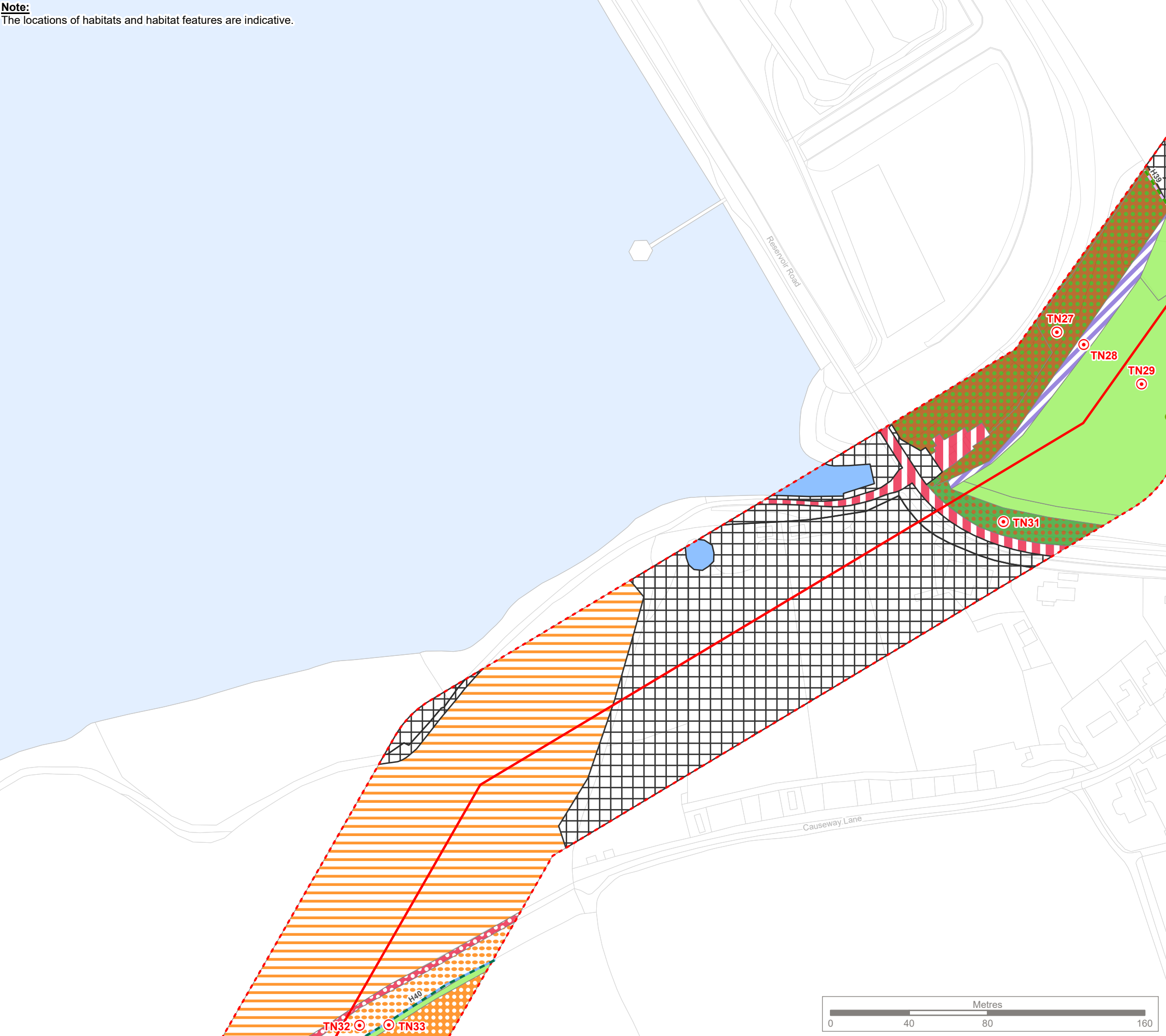
Title
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G10480.010.12

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Drawn	Checked	Approved	Scale	Date
MC/IJ	CW	CC	1:2,000 @ A3	12/07/2024

Note:
The locations of habitats and habitat features are indicative.



KEY

Pipeline route

Pipeline - 50m buffer

Target note

Habitat Features

Rural tree

Hedgerows

Native hedgerow

Native hedgerow - associated with bank or ditch

Cropland

Arable field margins tussocky

Cereal crops

Non-cereal crops

Grassland

Modified grassland

Heathland and Shrub

Bramble scrub

Lakes

Ponds (non-priority habitat)

Woodland and Forest

Other woodland, broadleaved

Other woodland, mixed

Urban

Artificial unvegetated, unsealed surface

Developed land, sealed surface

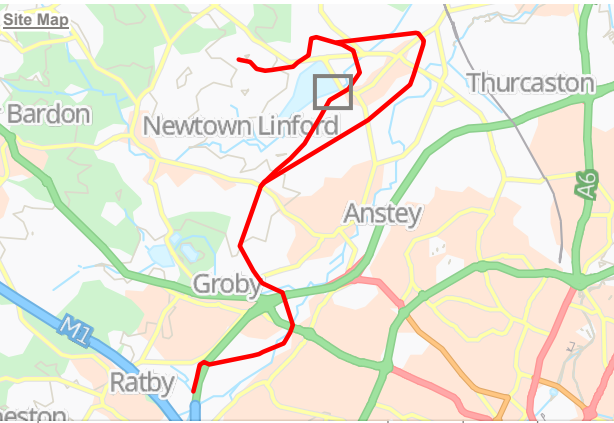
Not Surveyed

No access

Off-Site Habitat

Reservoir

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Drawn	Checked	Approved	Scale	Date
MC/IJ	CW	CC	1:2,000 @ A3	12/07/2024

Note:
The locations of habitats and habitat features are indicative.



KEY

Pipeline route

Pipeline - 50m buffer

Target note

Hedgerows

Native hedgerow - associated with bank or ditch

Native hedgerow with trees

Cropland

Arable field margins

Arable field margins tussocky

Cereal crops

Non-cereal crops

Grassland

Modified grassland

Heathland and Shrub

Blackthorn scrub

Urban

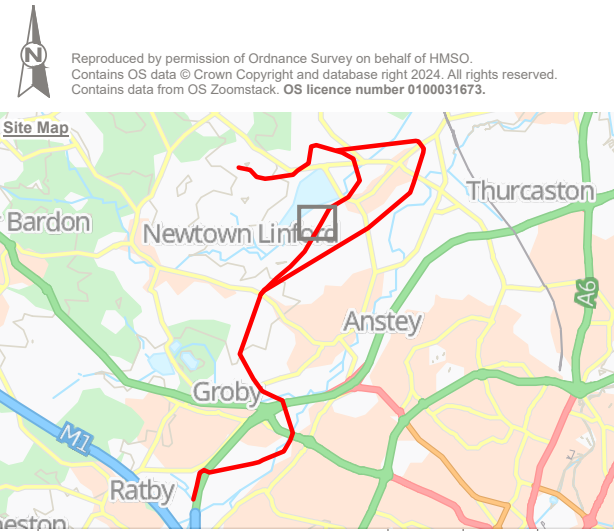
Artificial unvegetated, unsealed surface

Not Surveyed

No access

Off-Site Habitat

Reservoir



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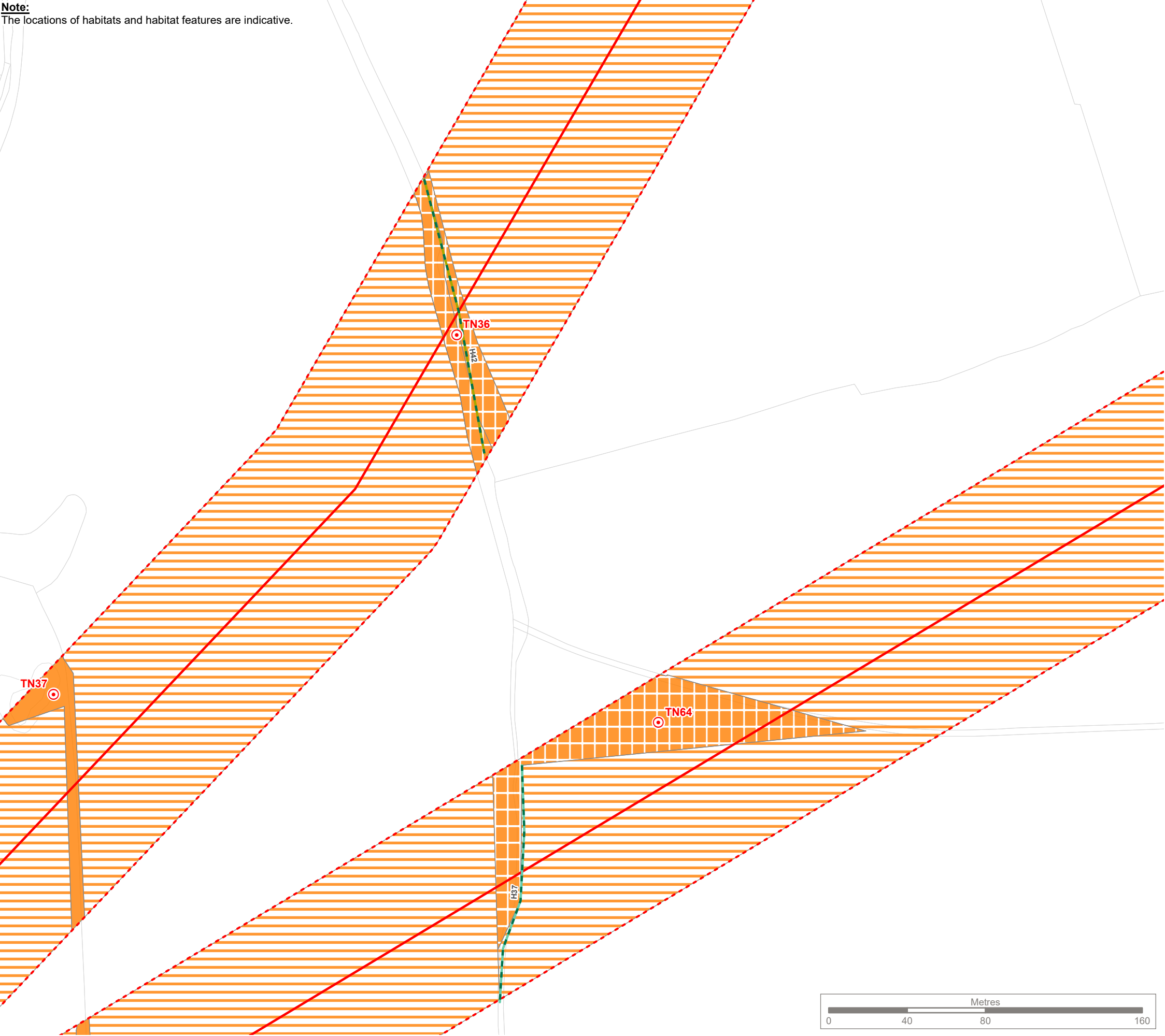
Project
Hallgates to Elms Farm Pipeline, Leicestershire

Title
Baseline UK Habitat Plan
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Drawn	Checked	Approved	Scale	Date
MC/IJ	CW	CC	1:2,000 @ A3	12/07/2024

Note:
The locations of habitats and habitat features are indicative.



KEY

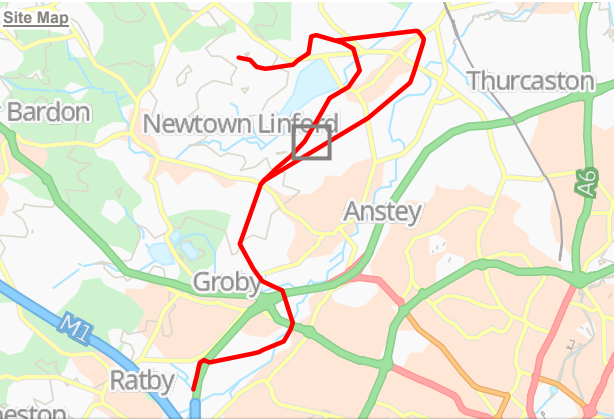
Pipeline route
Pipeline - 50m buffer
Target note

Hedgerows
Native hedgerow with trees

Native hedgerow with trees - associated with bank or ditch

Cropland
Arable field margins
Arable field margins cultivated annually
Cereal crops

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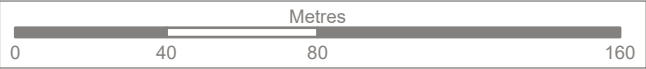
Project
Hallgates to Elms Farm Pipeline, Leicestershire

Title
Baseline UK Habitat Plan
Page 15

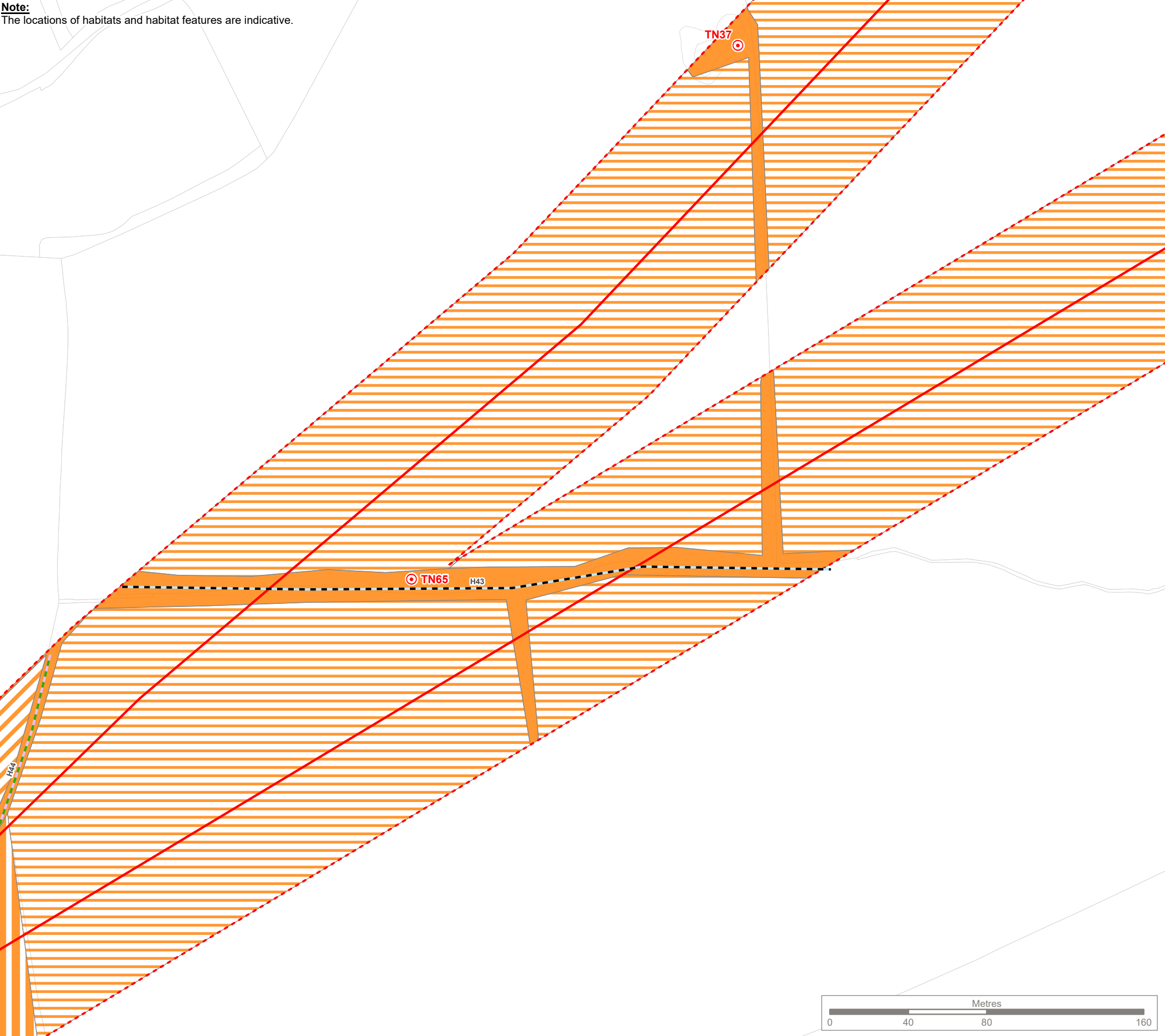
Drawing Number
G10480.010.15

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Drawn	Checked	Approved	Scale	Date
MC/IJ	CW	CC	1:2,000 @ A3	12/07/2024



Note:
The locations of habitats and habitat features are indicative.



KEY

Pipeline route
Pipeline - 50m buffer
Target note

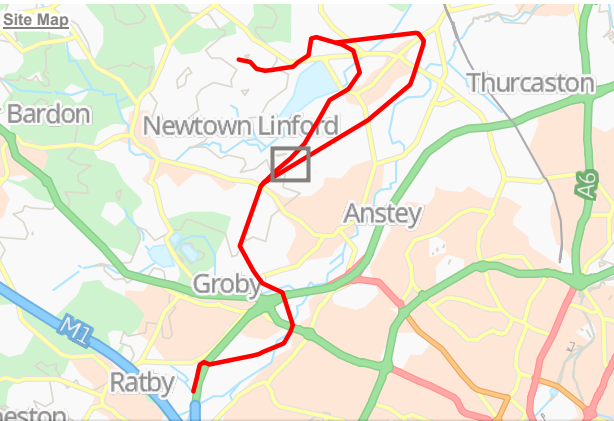
Hedgerows

Native hedgerow
Species-rich native hedgerow with trees - associated with bank or ditch

Cropland

Arable field margins cultivated annually
Cereal crops
Winter stubble
Temporary grass and clover leys

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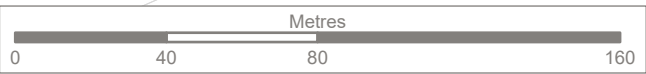
Project
Hallgates to Elms Farm Pipeline, Leicestershire

Title
Baseline UK Habitat Plan
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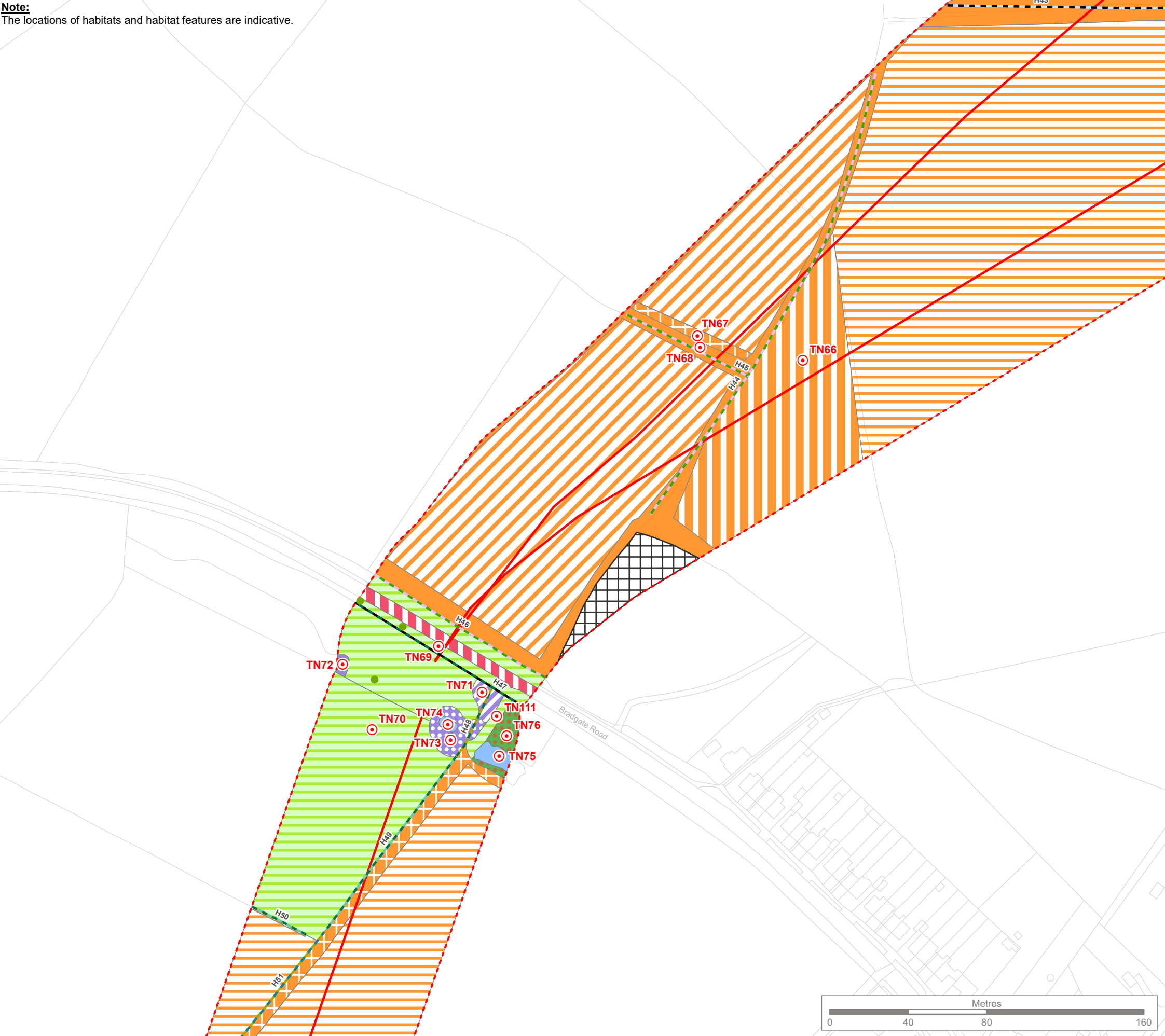
Drawing Number
G10480.010.16

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Drawn	Checked	Approved	Scale	Date
MC/IJ	CW	CC	1:2,000 @ A3	12/07/2024



Note:
The locations of habitats and habitat features are indicative.



KEY

Pipeline route

Pipeline - 50m buffer

Target note

Habitat Features

Rural tree

Hedgerows

Native hedgerow

Native hedgerow with trees

Native hedgerow with trees - associated with bank or ditch

Species-rich native hedgerow - associated with bank or ditch

Species-rich native hedgerow with trees

Species-rich native hedgerow with trees - associated with bank or ditch

Cropland

Arable field margins

Arable field margins cultivated annually

Cereal crops

Winter stubble

Temporary grass and clover leys

Grassland

Other neutral grassland

Heathland and Shrub

Blackthorn scrub

Bramble scrub

Mixed scrub

Lakes

Ponds (non-priority habitat)

Woodland and Forest

Other woodland, broadleaved

Urban

Developed land, sealed surface

Not Surveyed

No access

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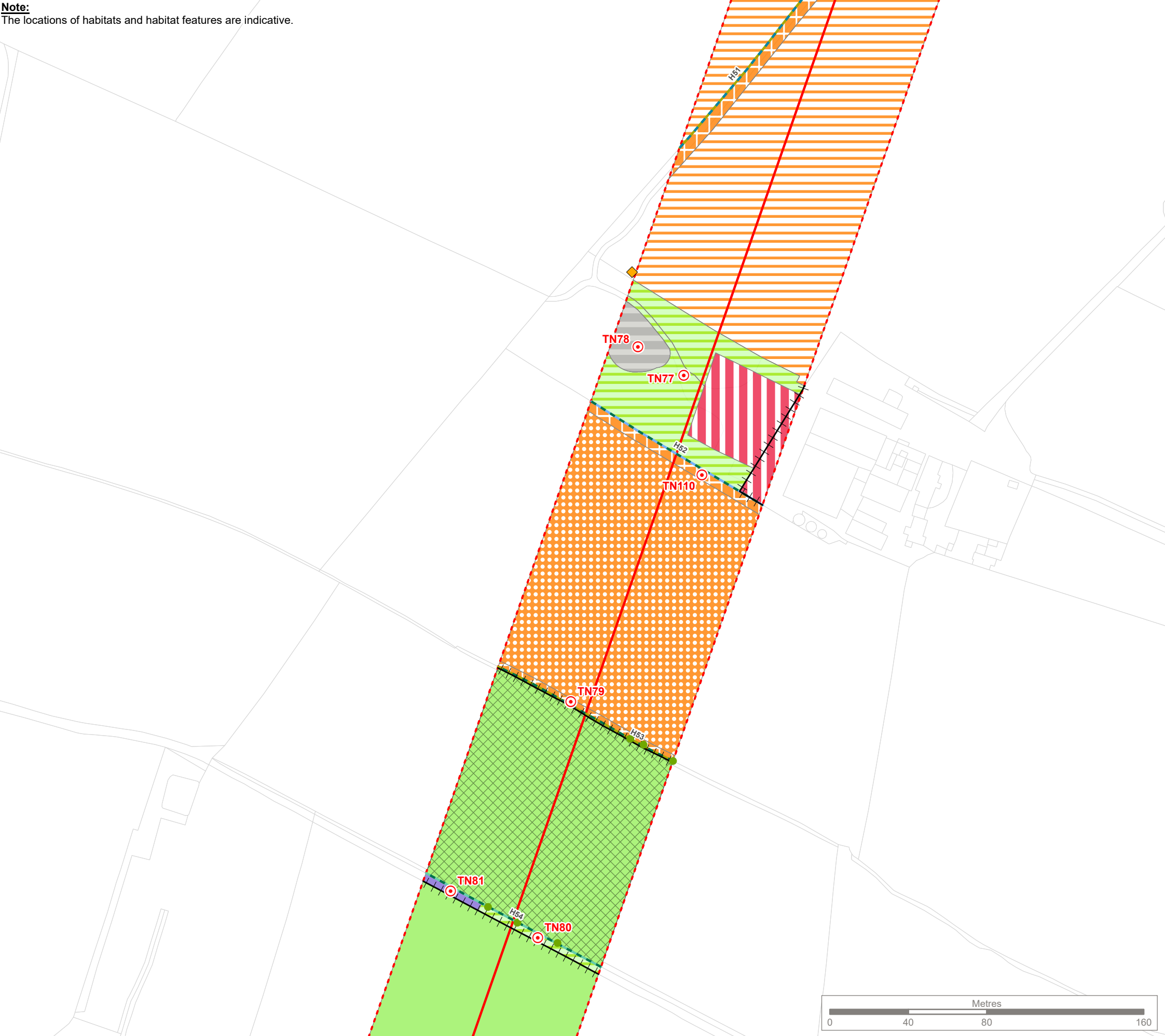
Title
Baseline UK Habitat Plan
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Note:
The locations of habitats and habitat features are indicative.



KEY

Pipeline route

Pipeline - 50m buffer

Target note

Mammal Evidence

Possible outlier sett

Habitat Features

Rural tree

Hedgerows

Native hedgerow - associated with bank or ditch

Native hedgerow with trees

Native hedgerow with trees - associated with bank or ditch

Species-rich native hedgerow - associated with bank or ditch

Built Linear Features

Fence

Cropland

Arable field margins

Cereal crops

Non-cereal crops

Grassland

Modified grassland

Other neutral grassland

Heathland and Shrub

Blackthorn scrub

Sparsely Vegetated Land

Tall forbs

Urban

Developed land, sealed surface

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The site map shows the project area (indicated by a red outline) within a larger regional context. The map includes labels for various locations: Bardon, Newtown Linford, Thurcaston, Anstey, Groby, Ratby, and Weston. The M1 motorway is also shown. A small inset map shows the project area's location within the broader region of Leicestershire.

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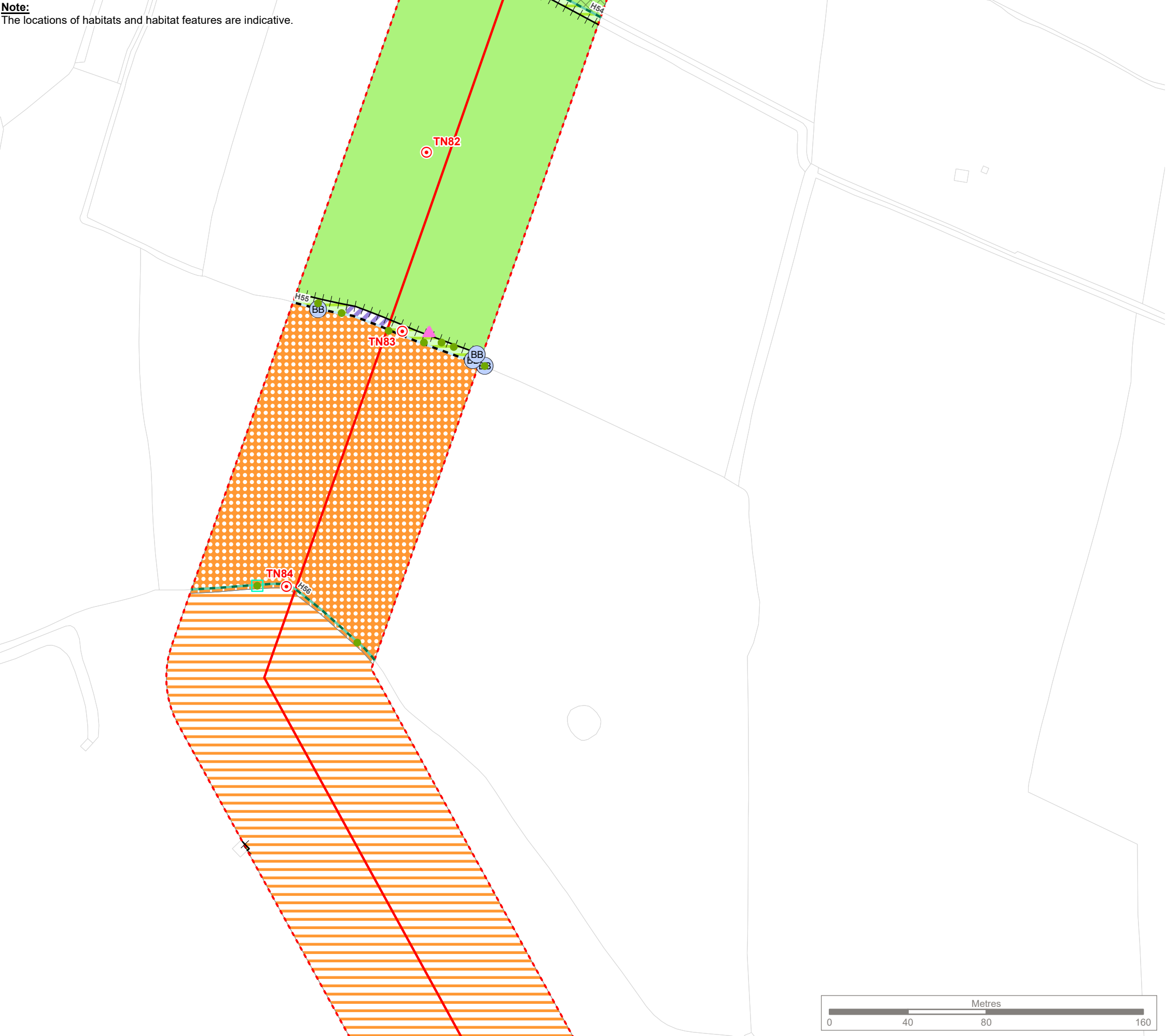
Title
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Drawn	Checked	Approved	Scale	Date
MC/IJ	CW	CC	1:2,000 @ A3	12/07/2024

Note:
The locations of habitats and habitat features are indicative.



KEY

Pipeline route

Pipeline - 50m buffer

Target note

Mammal Evidence

Badger dung pit

Mammal path

Habitat Features

Rural tree

Bluebell

Hedgerows

Native hedgerow with trees - associated with bank or ditch

Species-rich native hedgerow with trees - associated with bank or ditch

Built Linear Features

Fence

Cropland

Arable field margins

Cereal crops

Non-cereal crops

Grassland

Modified grassland

Other neutral grassland

Heathland and Shrub

Bramble scrub

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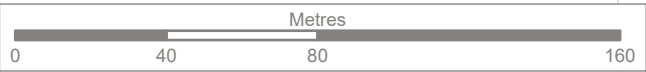
Project
Hallgates to Elms Farm Pipeline, Leicestershire

Title
Baseline UK Habitat Plan
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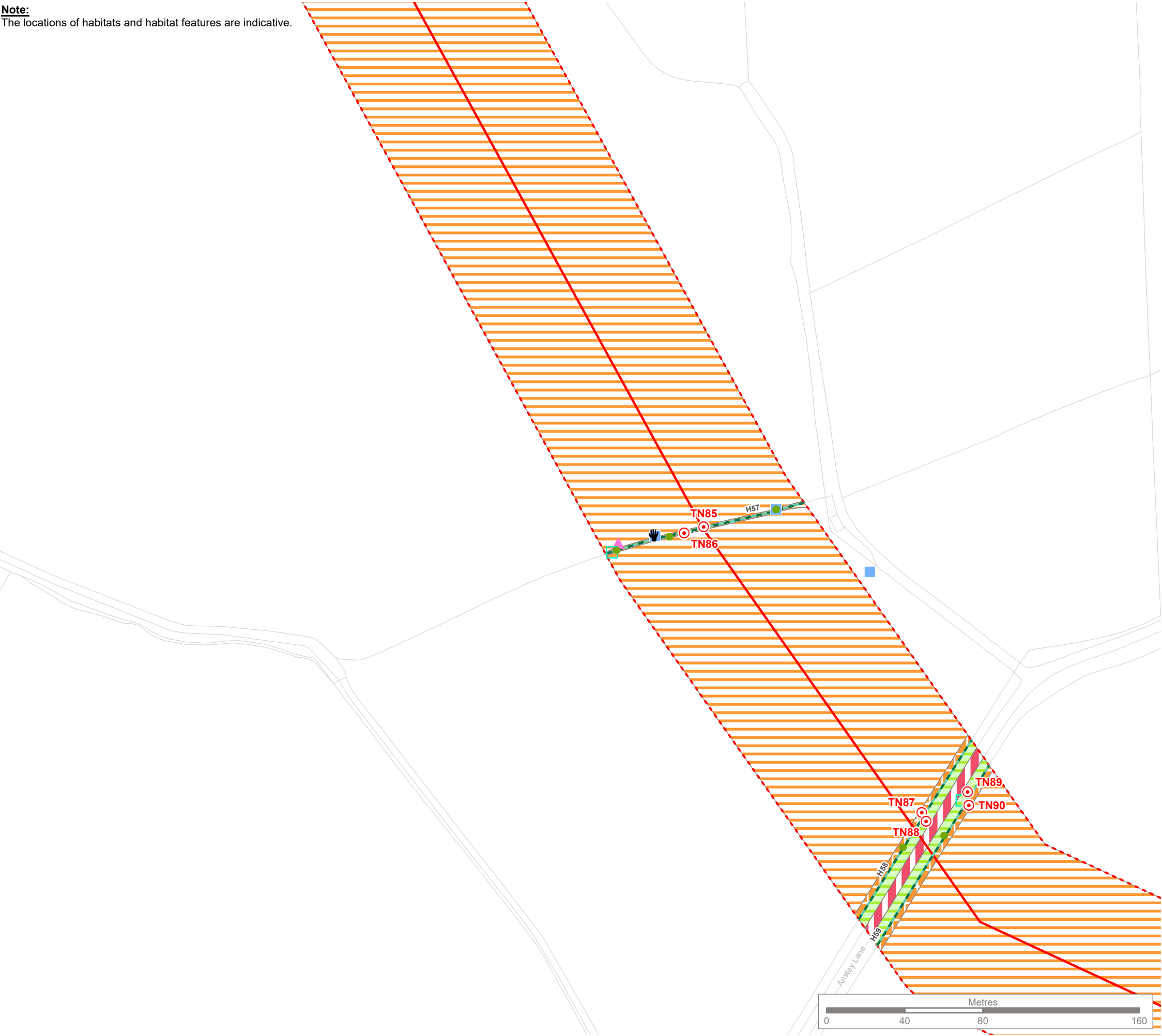
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G10480.010.19

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Drawn	Checked	Approved	Scale	Date
MC/IJ	CW	CC	1:2,000 @ A3	12/07/2024



Note:
The locations of habitats and habitat features are indicative.



KEY

- Pipeline route

Pipeline - 50m buffer

Target note

Badger dung pit

Badger feeding remains

Mammal path

Badger print

Habitat Features

Rural tree
- Hedgerows

Native hedgerow with trees - associated with bank or ditch

Cropland

Arable field margins

Cereal crops

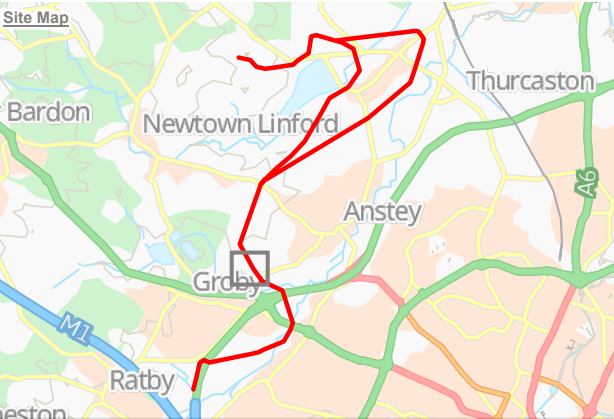
Grassland

Other neutral grassland

Urban

Developed land, sealed surface

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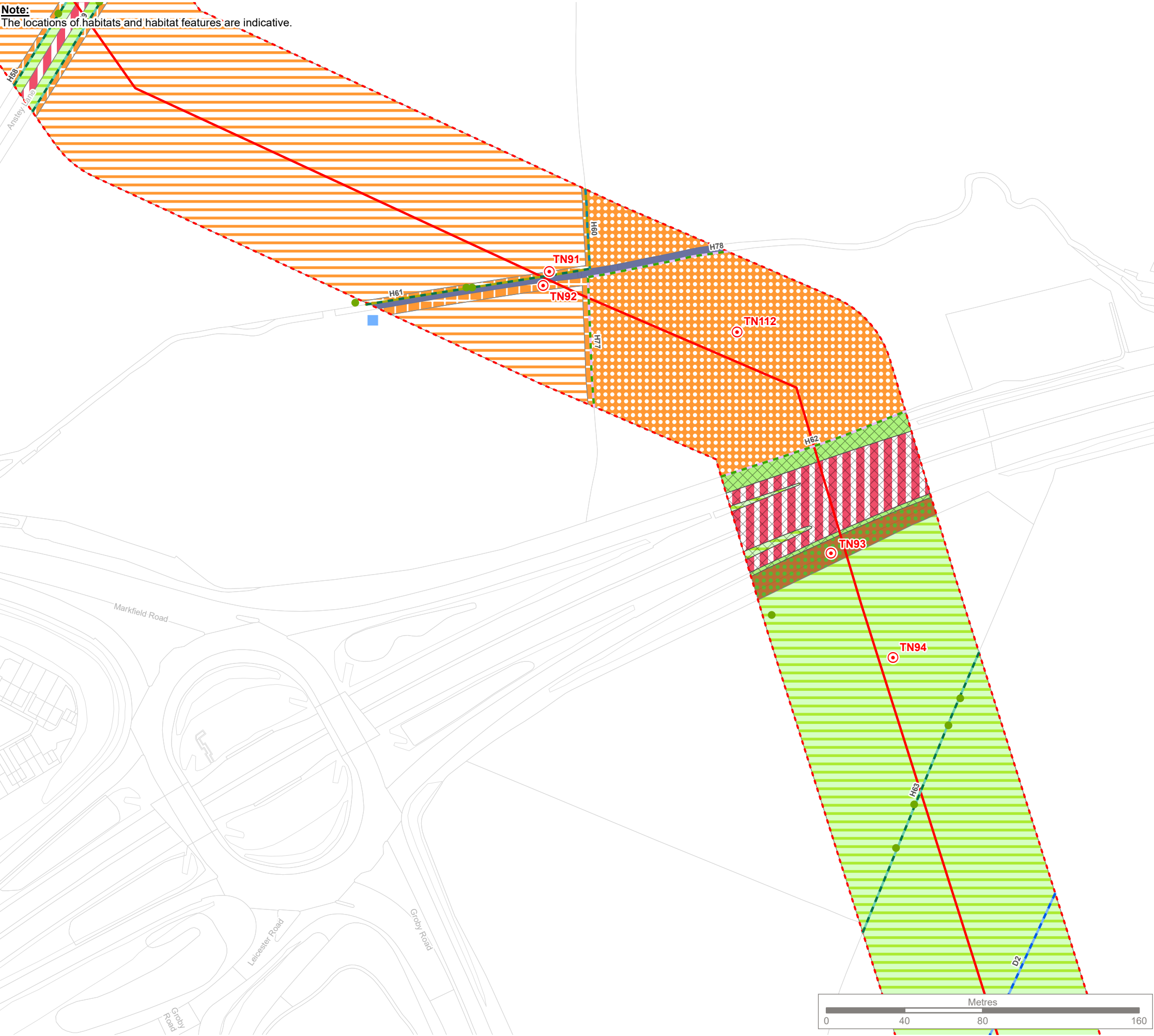
Title
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G10480.010.20

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Drawn	Checked	Approved	Scale	Date
MC/IJ	CW	CC	1:2,000 @ A3	12/07/2024

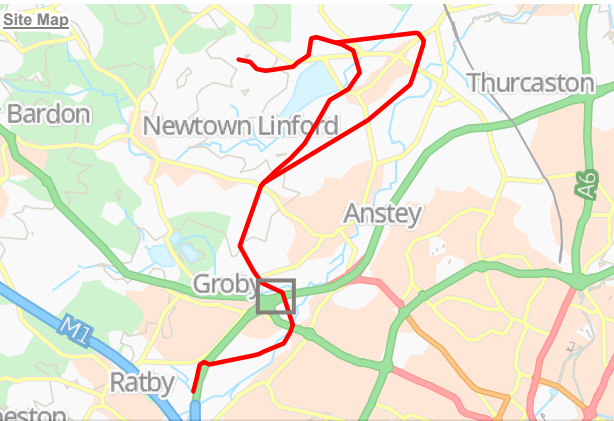
Note:
The locations of habitats and habitat features are indicative.



KEY

- Pipeline route
- Pipeline - 50m buffer
- Target note
- Badger feeding remains
- Rural tree
- Native hedgerow
- Native hedgerow with trees
- Native hedgerow with trees - associated with bank or ditch
- Species-rich native hedgerow - associated with bank or ditch
- Ditch
- Cropland**
 - Arable field margins
 - Cereal crops
 - Non-cereal crops
- Grassland**
 - Modified grassland
 - Other neutral grassland
- Woodland and Forest**
 - Other woodland, mixed
- Urban**
 - Developed land, sealed surface
- Watercourse Footprint**
 - Watercourse footprint
- Surveyed from Aerial Imagery**
 - No access

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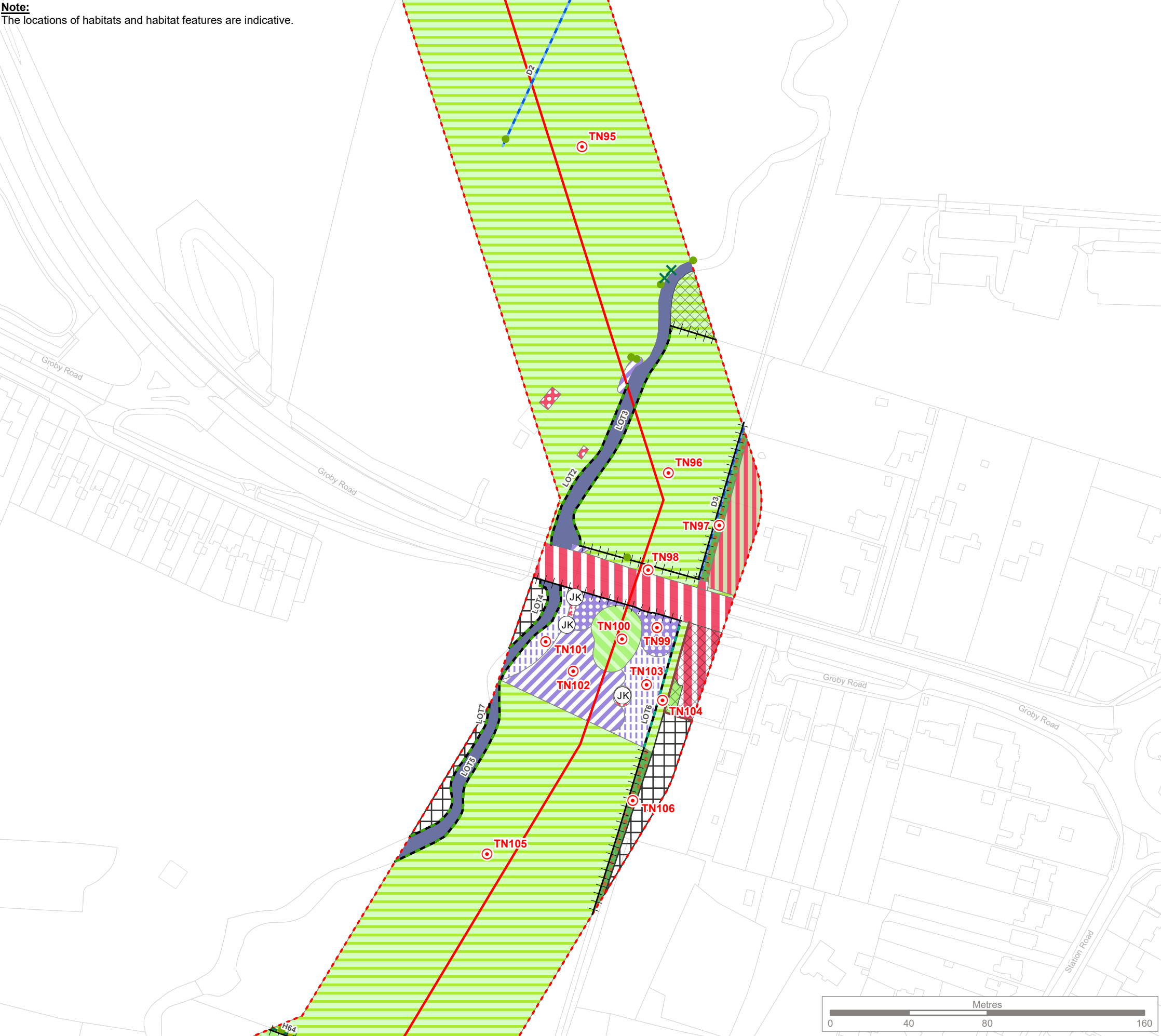
Title
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MC/IJ	CW	CC	1:2,000 @ A3	12/07/2024

Note:
The locations of habitats and habitat features are indicative.



KEY

Pipeline route

Pipeline - 50m buffer

Target note

Rural tree

Scattered scrub

Japanese knotweed

Line of trees

Line of trees - associated with bank or ditch

Native hedgerow with trees

Ditch

Fence

Wall

Lowland meadows

Modified grassland

Heathland and Shrub

Bramble scrub

Hawthorn scrub

Mixed scrub

Woodland and Forest

Other woodland, broadleaved

Urban

Artificial unvegetated, unsealed surface

Developed land, sealed surface

Introduced shrub

Vegetated garden

Watercourse Footprint

Watercourse footprint

Not Surveyed

No access

Surveyed from Aerial Imagery

No access

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Site Map

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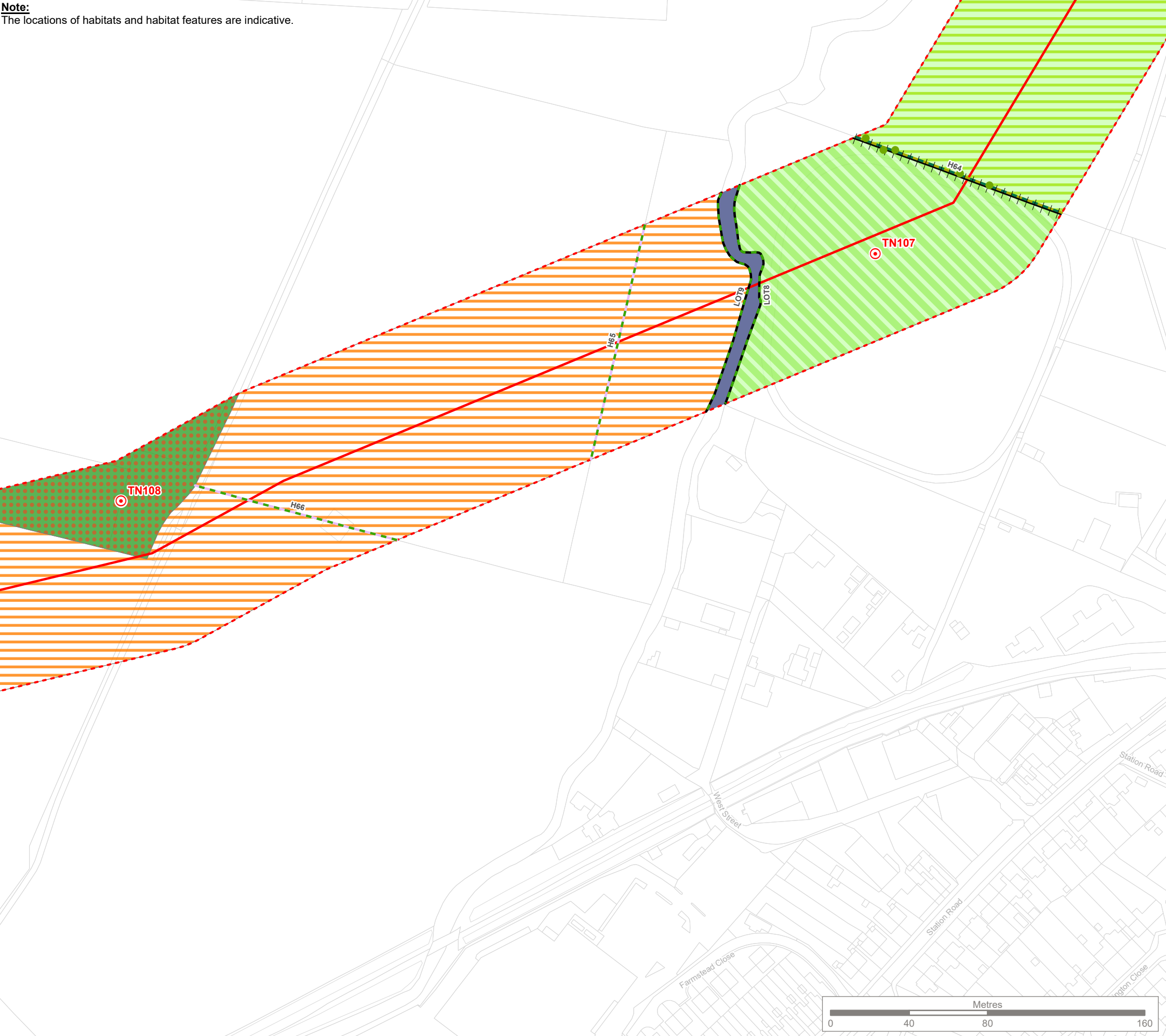
Title
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Drawn	Checked	Approved	Scale	Date
MC/IJ	CW	CC	1:2,000 @ A3	12/07/2024

Note:
The locations of habitats and habitat features are indicative.



KEY

Pipeline route

Pipeline - 50m buffer

Target note

Habitat Features

Rural tree

Hedgerows

Native hedgerow

Line of trees

Native hedgerow with trees

Built Linear Features

Fence

Cropland

Cereal crops

Grassland

Lowland meadows

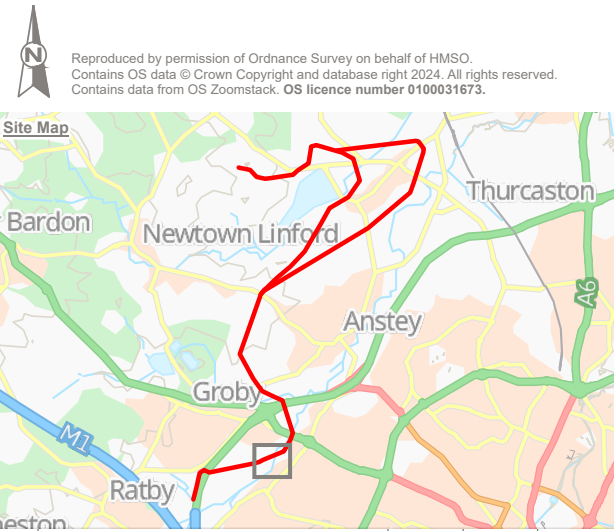
Other neutral grassland

Woodland and Forest

Other woodland, broadleaved

Watercourse Footprint

Watercourse footprint



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Drawn MC/IJ	Checked CW	Approved CC	Scale 1:2,000 @ A3	Date 12/07/2024
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Note:
The locations of habitats and habitat features are indicative.



KEY

- Pipeline route
 - Pipeline - 50m buffer
 - Target note
 - Native hedgerow
 - Native hedgerow - associated with bank or ditch
- Cropland**
- Arable field margins
 - Cereal crops
- Grassland**
- Modified grassland
- Woodland and Forest**
- Other woodland, broadleaved

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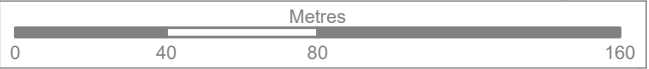
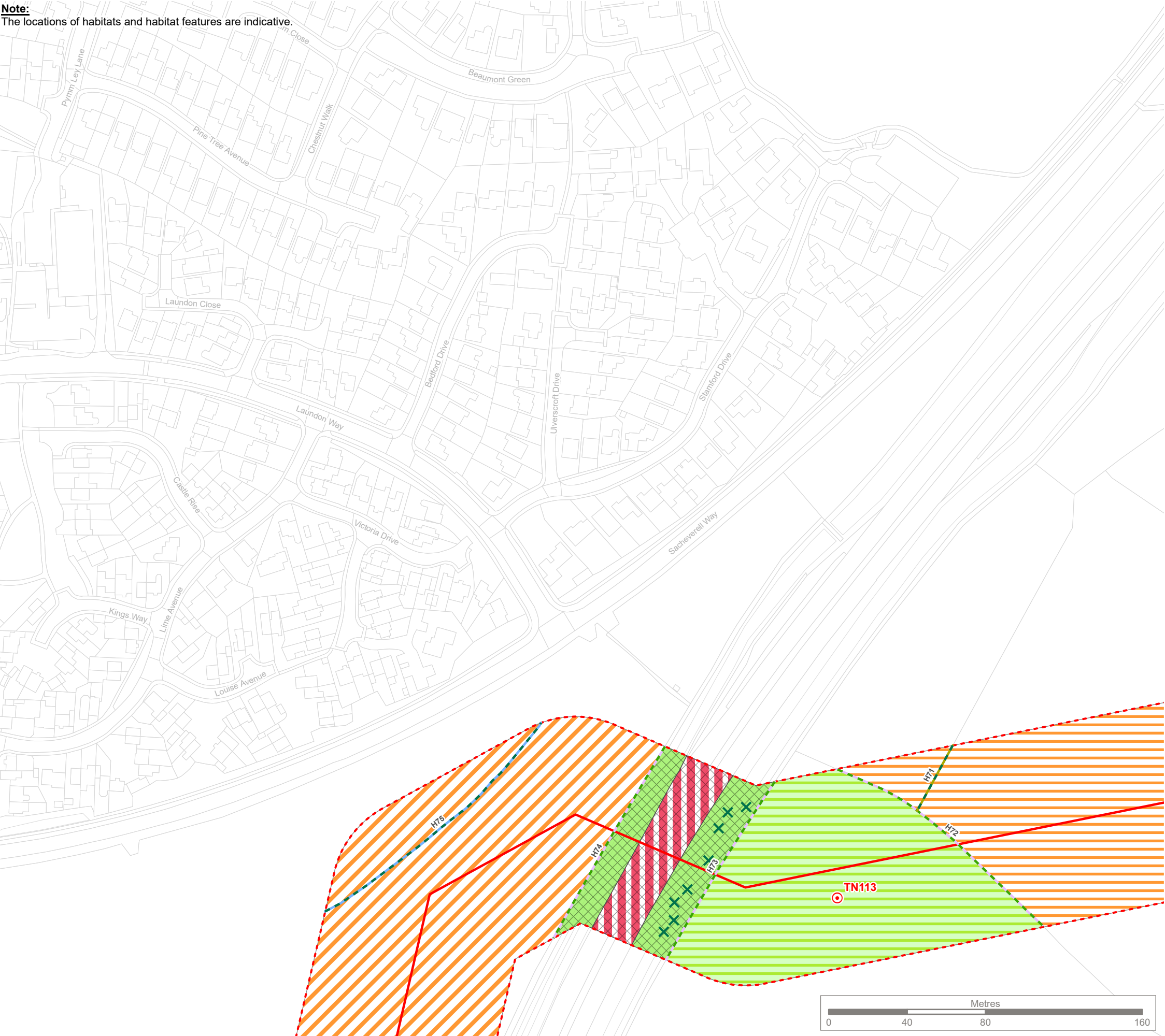
Title
Baseline UK Habitat Plan
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G10480.010.24

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Drawn MC/IJ	Checked CW	Approved CC	Scale 1:2,000 @ A3	Date 12/07/2024
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Note:
The locations of habitats and habitat features are indicative.



KEY

- Pipeline route
- Pipeline - 50m buffer
- Target note
- Habitat Features**
 - Scattered scrub
- Hedgerows**
 - Native hedgerow
 - Native hedgerow - associated with bank or ditch
 - Native hedgerow with trees
- Cropland**
 - Cereal crops
 - Winter stubble
- Grassland**
 - Modified grassland
 - Other neutral grassland
- Urban**
 - Developed land, sealed surface
- Surveyed from Aerial Imagery**
 - No access

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Drawn	Checked	Approved	Scale	Date
MC/IJ	CW	CC	1:2,000 @ A3	12/07/2024

Note:
The locations of habitats and habitat features are indicative.



KEY

Pipeline route
Pipeline - 50m buffer
Target note

Hedgerows

Native hedgerow
Line of trees
Native hedgerow with trees

Watercourses

Ditch

Cropland

Winter stubble

Grassland

Modified grassland
Other neutral grassland

Urban

Bare ground
Developed land, sealed surface

Surveyed from Aerial Imagery

No access

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MC/IJ	CW	CC	1:2,000 @ A3	12/07/2024

4. Evaluation of the combined field survey findings & desk-based research, with project specific advice.

Table 1 Summary of UK habitats and their areas

Habitats main code	Secondary codes	Amount (Ha)
c1a – Arable field margins		1.33
c1a7 – Arable field margins cultivated annually		1.22
c1a5 – Arable field margins tussocky		0.28
c1c/c1c7 – Cereal crops		69.11
c1d – Non-cereal crops		5.40
c1b5 – Temporary grass and clover leys		0.73
c1c5 – Winter stubble	600	9.41
g1c – Bracken	104	0.73
g1a6 – Lowland dry acid grassland	12, 14, 32, 104, 106	6.67
g3a6 – Other lowland hay meadow	10, 13, 16, 109, 124, 128, 202	1.35
g4 – Modified grassland	10, 16, 101, 103, 106, 108	16.35
g3c – Other neutral grassland	14, 16, 32, 103, 128	16.04
h3a/h3a6 – Blackthorn scrub		0.04
h3d – Bramble scrub		0.42
h3f – Hawthorn scrub	202, 521	0.12
h3h – Mixed scrub	41, 202, 320, 521	0.10
h3 – Introduced shrub	524	0.01
r1f – Ponds (non-priority habitat)	41, 503	0.17
s1a – Ruderal/ephemeral	81	0.39
s1a – Tall forbs	16	0.42
u1c – Artificial unvegetated, unsealed surface	511, 839, 840	0.21
500 – Bare ground		0.10
u1b, u1b5, u1b6 – Developed land; sealed surface	81, 800, 804, 839, 840	2.84
u1d – Vegetated garden	828	0.55
r2b – Other rivers and streams	16, 33	0.43
w1f7 – Lowland mixed deciduous woodland	30, 104	1.24
w1g – Other broad-leaved woodland	29, 30, 31, 33, 41, 50, 60, 202, 203, 204, 320, 521	1.63
w1h5 – Other mixed woodland	29, 60, 202, 203	0.70
w2c – Other coniferous woodland	29, 200	0.24
<i>Not surveyed</i>		13.12
TOTAL		151.35

Table 2 Summary of Linear UK habitats and lengths

Habitats main code	Secondary codes	Amount (Km)
h2/h2a6 – Native hedgerow	116	4.81
h2/h2a6 – Native hedgerow – associated with bank or ditch	50, 116	1.39
h2/h2a/h2a6 – Native hedgerow with trees	11, 116	0.93
h2/h2a/h2a5/h2a6 – Native hedgerow with trees – associated with bank or ditch	11, 50, 116	0.98
h2a5 – Species-rich native hedgerow – associated with bank or ditch	50	0.15
h2a5 – Species-rich native hedgerow with trees		0.10
h2a5 - Species-rich native hedgerow with trees – associated with bank or ditch	11, 50, 116, 203	0.61
Line of Trees	33	0.99
Line of Trees – associated with bank or ditch	33, 50	0.06
Ditches	50	0.38
TOTAL		10.41

Habitats

The survey area comprised the proposed pipeline route in Sections 1-C, 1-D and 2-A and a surrounding 50m buffer.

Habitats within the survey area are described briefly below and are shown on the Baseline UK Habitat Plan in Section 3 of this report (TEP Drawing Ref: G10480.010). Due to the large numbers of different habitat features, only summaries of each habitat have been provided.

Distinct habitat parcels have been identified by Target Note (TN) numbers and linear features including ditches, hedges and lines of trees have been noted by ditch number (D), hedge number (H), and line of tree (LOT) numbers respectively.

Supplementary maps obtained during the desk study search are included within Appendix 1 of this report. Photographs of some of the habitats recorded during the site survey are included in a separate Appendix 2. Lists of species recorded within each habitat parcel, ditch, hedgerow and line of trees are displayed within Appendix 3.

Detailed survey methods, including survey limitations, are provided in Appendix 4. The legislative protection afforded to protected and notable species which may be present on site are summarised in Appendix 5.

Desk Study

According to MAGIC Maps, the proposed pipeline route crosses through the following notable habitats within the Bradgate Park section of the route (S1-C):

- Lowland fens (S41)
- Lowland heathland (S41)
- Purple moor grass and rush pastures (S41)
- Wood pasture and parkland (S41)

The UK Habitat survey assessed that the areas within the site identified on MAGIC Maps as lowland fen; lowland heathland; purple moor grass and rush pastures; and wood pasture and parkland actually comprise lowland dry acid grassland. It is therefore considered unlikely that the habitats within this area meet the definition of lowland fens or lowland heathland. However, further investigation will be required to assess whether the S41 habitat purple moor grass and rush pastures; and wood pasture and parkland is present within the site, given the presence of indicator species within the grassland samples and as Bradgate Park is designated an English Heritage Grade II listed historic park and garden and as a Site of Special Scientific Interest (SSSI).

Parcels of deciduous woodland (S41) and Ancient Woodland were also identified on MAGIC Maps within 50 m of the route, including a block of woodland located immediately to the north of the proposed S1-C route within Bradgate Park. The UK Habitat Survey confirmed the presence of other lowland mixed deciduous woodland within this location. Measures to protect this woodland should therefore be incorporated within the scheme design.

Rothley Brook is identified as a Statutory Main River. The proposed pipeline route crosses this watercourse in two places within Section 2-A, to the east of the main A46 road. A licence from the Environment Agency will be required to permit works within 8 m of this watercourse.

Field Survey – Area-based habitats

Woodland

All areas of woodland should be retained, where possible. Where this is not possible, habitat removal should be kept to an absolute minimum. Compensatory woodland creation would be required for any losses.

All retained woodland on and adjacent to the site will be protected from incidental damage and disturbance during construction in accordance with current standards (BS5837:2012 Trees in relation to design, demolition and construction – recommendations).

Lowland mixed deciduous woodland – w1f7, 30, 104

One parcel of lowland mixed deciduous woodland is located within the site. This is located immediately to the north of the start of the pipeline route within Section 1-C and corresponds with the location of an identified area of lowland mixed deciduous woodland and ancient woodland on MAGIC Maps. The woodland contains frequent oak *Quercus robur*, silver birch *Betula pendula* and hazel *Corylus avellana*, with occasional hornbeam *Carpinus betulus* and beech *Fagus sylvatica*. Scot's pine *Pinus sylvestris* is rare. Ground flora includes frequent creeping soft grass *Holcus mollis*, ivy *Hedera helix*, bracken *Pteridium aquilinum* and occasional bluebell *Hyacinthoides non-scripta* (TN2).

Other broadleaved woodland – w1g, 29, 30, 31, 33, 41, 50, 60, 202, 203, 204 320, 521

Several small parcels of other broadleaved woodland are located throughout the site. These are generally parts of larger woodland blocks which fall within the survey area. These blocks are generally located on the edge of arable or grassland fields in the north of the route (TN9, TN13, TN14, TN21, TN39), with smaller parcels also present in the south (TN76, TN97, TN106).

The proposed pipeline route crosses directly through several parcels of other broadleaved woodland. Within Section 1-C, two parcels of other broadleaved woodland are intersected. The first is located to the north of Roecliffe Road (TN19), whilst the second is located to the north-east of Cropston Reservoir (TN31). Sycamore *Acer pseudoplatanus* and hawthorn *Crataegus monogyna* are frequent within this woodland, with occasional ash *Fraxinus excelsior* and rare yew *Taxus baccata* and English elm *Ulmus procera*. Bramble *Rubus fruticosus* agg. and nettle *Urtica dioica* are frequent amongst the ground flora, with occasional cow parsley *Anthriscus sylvestris* and cleavers *Galium aparine*.

An additional parcel of woodland is crossed in Section 2-A, immediately to the south of the main A46 road. This woodland acts as screening for the road and comprises abundant hawthorn and ivy, with frequent bramble and elder *Sambucus nigra*. Ground-elder *Aegopodium podagraria* and meadow grasses *Poa* sp. are abundant amongst the ground flora (TN93).

In the south of the site, the corner of a small area of woodland is also intersected by the route (TN108).

Other mixed woodland - w1h5, 29, 60, 202, 203

A small parcel of mixed woodland is also located within the site in Section 1-C, immediately to the south of Bradgate Road (TN26). Cherry laurel *Prunus laurocerasus* is abundant, with frequent beech *Fagus sylvatica* and cleavers and occasional garlic mustard *Alliaria petiolata*. Coastal redwood *Sequoia sempervirens* is rare.

To the north of Cropston Reservoir in Section 1-C there is a larger area of mixed woodland which is located within the site (TN27).

Other coniferous woodland - w2c, 29, 200

The northern extent of an area of plantation coniferous woodland, associated with Bradgate Park, falls within the site in Section 1-C, near the start of the route. Scot's pine is abundant, with rare oak and rowan *Sorbus aucuparia* (TN5). The ground flora comprises abundant bramble, with frequent creeping soft grass, perennial ryegrass *Lolium perenne*, heath wood-rush *Luzula multiflora* and bluebell.

A further small parcel of coniferous woodland is located to the north of Roecliffe Road, between a caravan site and an unnamed farm track. Scot's pine and bramble are also abundant within this woodland, with occasional hawthorn, elder and ivy, as well as garlic mustard and nettle (TN12).

Heathland and Shrub

All areas of native scrub should be retained, where possible. Where this is not possible, habitat removal should be kept to a minimum. Compensatory scrub creation would be required for any losses.

All retained scrub on and adjacent to the site will be protected from incidental damage and disturbance during construction in accordance with current standards (BS5837:2012 Trees in relation to design, demolition and construction – recommendations).

Blackthorn scrub – h3a

Three small parcels of dense blackthorn *Prunus spinosa* scrub is located within the site. These are primarily associated with boundaries of arable fields or where hedgerows have outgrown (TN34, TN81), with the exception of an area of blackthorn scrub immediately to the south of the Bradgate Road within Section 2-A, which forms part of a wider habitat mosaic (TN72).

Hawthorn scrub – h3b, 202, 521

Two parcels of dense hawthorn scrub are located on land immediately to the south of the main A50 Groby Road (TN101, TN103). Bramble is frequent within the scrub, with occasional Japanese knotweed *Reynoutria japonica* and rare blackthorn and elder.

Bramble scrub – h3d

Several areas of dense bramble scrub are located throughout the route. In Section 1-C there is a parcel of dense bramble scrub between an area of mixed woodland and adjacent grassland field (TN28). A smaller area of dense bramble scrub is located in the north-west corner of the same grassland field, with nettle and cow parsley occasionally present (TN30).

In Section 1-D, there is a parcel of dense bramble scrub between an unnamed watercourse and an area of woodland (TN41). A strip of dense bramble scrub also forms a field boundary to the south of Station Road (TN50).

Bramble is also located within the habitat mosaic immediately to the south of Bradgate Road in Section 2-A (TN71).

Immediately to the south of the main A50 Groby Road within Section 2-A there is a large area of dense bramble scrub which is intersected by the site (TN102).

Mixed scrub – h3h, 41, 202, 320, 521

There are two parcels of mixed scrub within the site, both of which are located in Section 2-A. The most northerly section of mixed scrub is situated to the south of Bradgate Road, and surrounds a small, fully shaded pond. Grey willow *Salix caprea* is abundant, with frequent hawthorn, ivy and bramble (TN73).

Another parcel of mixed scrub of similar species composition is located to the south of the main A50 Groby Road (TN99).

Introduced shrub – h3, 524

Two large stands of Japanese knotweed are located within the habitat mosaic located immediately to the south of Groby Road.

Grassland

Lowland dry acid grassland – g1a, 12, 14, 32, 104, 106

Section 1-C of the proposed pipeline route crosses through a large area of lowland acid grassland within Bradgate Park and Cropston Reservoir SSSI. Common bent *Agrostis capillaris* is frequent, along with sweet vernal-grass *Anthoxanthus odoratum*, sheep's fescue *Festuca ovina* and mat-grass *Nardus stricta* (TN1, TN4, TN6). Yorkshire fog and heath wood-rush are occasional. Red fescue *Festuca rubra* and purple-moor grass *Molinia caerulea* also becomes frequent further to the east of the grassland, with occasional heath bedstraw *Galium saxatile* and tormentil *Potentilla erecta*. Bristle bent *Agrostis curtisii* and bulbous rush *Juncus bulbosus* were also occasionally recorded. Daisy *Bellis perennis*, heath milkwort *Polygala serpyllifolia* and hop trefoil *Trifolium campestre* are also occasional. Bracken *Pteridium aquilinum* is also frequent in places, with creeping bent *Agrostis stolonifera* frequent in the east.

Every effort should be made to reduce the impacts on this grassland habitat given its location within a SSSI. It is recommended that further detailed botanical survey (see section 5) is undertaken to identify habitat parcels, species composition and condition in order to inform mitigation.

Bracken – g1c, 104

Small parcels of continuous bracken are located within Bradgate Park within Section 1-C at the start of the route. Common bent, Yorkshire fog *Holcus lanatus*, soft rush *Juncus effusus*, heath wood-rush and bluebell are occasionally present within the bracken stands (TN3, TN8).

Other lowland hay meadow – g3a6, 10, 13, 16, 109, 124, 128, 202

To the south of the main A50 Groby Road within Section 2-A of the pipeline route there is a small enclosed area of lowland hay meadow, with a wide variety of forbs. Grass species present include abundant red fescue, mosses and smooth meadow grass *Poa pratensis*, with frequent knapweed *Centaurea nigra*, common mouse-ear *Cerastium fontanum*, hairy tare *Ervilla hirsuta*, creeping cinquefoil *Potentilla reptans*, lesser trefoil *Trifolium dubium* and common vetch *Vicia sativa* (TN100).

At the southern end of the route, immediately to the east of Rothley Brook, there is a large square field with a ploughed strip around the edge, which is used as a hay crop. Meadow foxtail *Alopecurus pratensis* and meadow buttercup *Ranunculus acris* are abundant, with frequent meadowsweet *Filipendula ulmaria*, smooth meadow grass and creeping buttercup *Ranunculus repens* and occasional common bent, creeping bent, sweet vernal grass *Anthoxanthum odoratum*, great burnet *Sanguisorba officinalis* and red clover *Trifolium pratense* (TN107).

There is the potential that these grasslands could qualify as a priority habitat. Every effort should be made to reduce the impacts of construction within these areas. Further detailed botanical survey (see section 5) is recommended to confirm whether these habitats qualify as a priority habitat and to inform further mitigation.

Other neutral grassland – g3c, 14, 16, 32, 103, 128

The pipeline route crosses through several large parcels of other neutral grassland. Full reinstatement to pre-existing conditions should take place upon completion of the works.

One such parcel is located to the north of Bradgate Road in Section 1-C, which comprises abundant sweet vernal-grass, and frequent meadow buttercup and red fescue. Yorkshire fog, perennial ryegrass, and meadow foxtail are occasional (TN18).

To the east of this area, within Section 1-D, the route crosses through a large area of other neutral grassland, which is a grazed pasture field with a relatively short sward (TN38). Field wood-rush, sedge species *Carex* sp. and salad burnet *Poterium sanguisorba* are abundant, with frequent sweet vernal grass, creeping buttercup and meadow foxtail and rare pignut *Conopodium majus*.

A further species-poor, ridge and furrow pasture field is located to the south-east of this area, beyond Station Road. Species present includes abundant meadow foxtail with frequent dandelion *Taraxacum officinalis*, common sorrel *Rumex acetosa*, creeping buttercup, sheep's sorrel *Rumex acetosella*, daisy, bulbous buttercup *Ranunculus bulbosus* and ribwort plantain *Plantago lanceolata* and greater birds foot trefoil *Lotus corniculatus*, with heath wood-rush, marsh foxtail *Alopecurus geniculatus* and green-ribbed

sedge *Carex binervis* also present (TN49). The field has been recently grazed by livestock, with evidence of nutrient enrichment and heavy poaching towards the southern end of the field.

To the south of Leicester Road there are a series of large other neutral grassland fields, with an unmanaged tall grassland sward. Timothy *Phleum pratense* is dominant, with frequent rough meadow-grass *Poa trivialis*, sweet vernal grass and flax species *Linum sp.* and occasional meadow buttercup, creeping buttercup, common sorrel and cuckooflower *Cardamine pratensis* (TN58). Adjacent fields have a ridge and furrow structure, with signs of disturbance and damaged ground from heavy machinery in places. Species include crested dog's-tail *Cynosurus cristatus*, sweet vernal grass, cock's-foot *Dactylis glomerata*, heath wood-rush, timothy and common mouse-ear (TN59, TN60, TN61).

To the south of Bradgate Road in Section 2-A there are two adjacent fields comprised of unmanaged other neutral grassland, with a mixed sward height. Meadow foxtail, soft brome *Bromus hordeaceus*, cock's-foot and red clover are frequent, with occasional common bent, sweet vernal-grass, cow parsley, crested dog's-tail, meadow vetchling *Lathyrus pratensis* and creeping cinquefoil (TN70).

A large area of unmanaged other neutral grassland is located to the south of these fields, to the west of a farmyard in the centre of the site. Broad-leaved dock *Rumex obtusifolius* is abundant, with frequent ragwort *Jacobaea vulgaris*, ribwort plantain and meadow-grass species, and occasional meadow foxtail, sterile brome *Bromus sterilis*, perennial ryegrass and lesser trefoil *Trifolium dubium* (TN77).

To the south of the main A46 dual carriageway there are several large other neutral grassland fields, through which the pipeline route crosses. Immediately to the south of the A46 is an unmanaged field, which is slightly damper in the south-eastern corner. Species present within the field include meadow foxtail, sweet vernal-grass, soft brome, Yorkshire fog, soft rush, rough meadow-grass, bulbous buttercup, lesser trefoil and cut-leaved cranesbill *Geranium dissectum* (TN94).

The field adjoins another larger other neutral grassland field, which is likely to be used for livestock grazing at times, although it was not grazed at the time of survey and had a long sward. Meadow foxtail and Yorkshire fog are abundant, with frequent sweet vernal-grass, common mouse-ear, perennial ryegrass, meadow buttercup and creeping buttercup (TN95).

Two horse-grazed fields are also crossed by the pipeline route. These are both located on opposite sides of the main A50 Groby Road and were observed from the edge of the habitat parcel. Meadow buttercup is abundant in both fields, with frequent common bent, rough meadow-grass and broad-leaved dock in the northern most field (TN96) and frequent rough meadow-grass, perennial ryegrass and smooth meadow-grass in the southern field (TN105).

At the southern end of the route there are two large other neutral grassland fields (TN113, TN114). Perennial ryegrass is abundant, with frequent crested dog's tail, cock's foot and Yorkshire fog. Forbs are also present within the grassland including abundant silverweed *Potentilla anserina* and white clover *Trifolium repens* and frequent knapweed, common ragwort, creeping cinquefoil and selfheal *Prunella vulgaris*.

Two fenced off parcels of other neutral grassland are also located within Section 2-A. These are narrow, approximately 1 m wide field margins with fencing installed to protect them from grazing. Meadow foxtail, cock's-foot and meadow grasses are frequent in one of the grassland parcels, with frequent cow parsley and occasional cleavers and cut-leaved cranesbill (TN80). A similar fenced strip of grassland is located on the south side of the field, with abundant smooth meadow-grass, frequent cow parsley and occasional sterile brome, garlic mustard and great willowherb *Epilobium hirsutum* (TN83).

Road verges along the route typically comprise other neutral grassland (TN25, TN69, TN88, TN89, TN98). A public right of way to the south of the main A50 Groby Road in Section 2-A also comprises other neutral grassland (TN104).

Modified grassland – g4, 10, 16, 101, 103, 106, 108

The proposed pipeline route crosses through several large, modified grassland fields. Full reinstatement to pre-existing conditions should take place upon completion of the works.

Immediately to the east of Bradgate Park within Section 1-C there are several such fields, which are likely used for grazing or silage (TN7, TN10, TN11, TN15, TN17, TN20, TN23, TN24). A single modified grassland field is also intersected by the route to the north-east of Cropston Reservoir (TN29). Within Section 2-A there is a single modified grassland field with a public footpath running across the northern end of the field (TN82).

Smaller areas of modified grassland also form field margins, including to the south-east of Cropston Reservoir (TN33) and to the north of residential properties along Station Road (TN44) and Leicester Road in Section 1-D (TN51), and to the east of the main A46 road in Section 2-A (TN109). The verges of Roecliffe Road, Station Road and Leicester Road also comprise modified grassland (TN16, TN46, TN47, TN55). Modified grassland fields are also located to the north of these roads, and are likely associated with residential gardens (TN45, TN52, TN53, TN54).

Rivers and Lakes

Ponds (non-priority ponds) – r1f, 41, 503

Five ponds are located within the site, within all three sections of the route. Pond numbers relate to the number allocated for eDNA surveys and are shown within the separate great crested newt eDNA report (TEP Report Ref: 10480.004).

Within Section 1-C, there is a small pond located within a woodland (TN22 (P33)). Access to a further pond (P31) in Section 1-C was not possible. Within section 1-D, there is a larger woodland pond to the north of an unnamed watercourse (TN40 (P41)).

The ponds within Section 2-A are both located to the south of Bradgate Road. One of the ponds is located within a woodland and dominated by grey willow (TN74 (P13a)), whilst the other supports frequent lesser duckweed *Lemna minor* and rare yellow flag iris *Iris pseudacorus* (TN75 (P13)).

Ponds should be retained and buffered in the proposals. Measures should be incorporated into site works to avoid accidental pollution.

Cropland

Arable field margins – c1a

Many of the arable fields planted as cereal crops, winter stubble or non-cereal crops are bordered by grass arable field margins. These typically vary in between 0.5 m and 4 m in width across the route, and generally comprise modified or other neutral grassland. Occasional scattered bramble scrub is present within these margins.

Although arable field margins are generally defined as a priority habitat, as the margins within the site are not managed specifically to benefit wildlife it is considered that these habitats do not meet the priority habitat definition.

Cereal crops – c1c

Many of the large agricultural fields across the route are currently planted with cereal crops.

Winter stubble – c1c5

Some of the arable fields along the route currently comprise winter stubble.

Non-cereal crops – c1d

Some of the agricultural fields along the route contain non-cereal crops, with some grasses occasionally present within these fields. To the north of the main A46 road, the non-cereal crop comprises young Norway spruce *Picea abies* trees (TN112).

Urban

Developed land; sealed surface – u1b, 800, 804, 839, 840

The site is intersected by various hardstanding roads, including Roecliffe Road, Leicester Road, Bradgate Road, Reservoir Road, Cropston Road, Anstey Lane, Groby Road and the main A46 dual carriageway.

Other areas of developed land include the car park at Bradgate Park, an area of hardstanding associated with High Leys Farm, and a petrol station off the main A50 Groby Road.

Artificial unvegetated; unsealed surface – u1c

A small area of artificial unvegetated; unsealed surface is located near to the start of the route, at the entrance to a caravan park.

Ruderal/ephemeral – u1f, 81

Immediately to the south of Leicester Road within Section 1-D there are two areas of ruderal/ephemeral vegetation. Broad-leaved dock and nettle are abundant, while sterile brome, creeping thistle and creeping buttercup are frequent (TN56, TN62). A log pile is located within the northern-most area.

Tall forbs – u1f, 16

Immediately to the south of the ruderal/ephemeral parcel there is a larger area of tall forb. Broad-leaved dock and common nettle are abundant, with frequent creeping thistle, spear thistle *Cirsium vulgare*, bristly ox-tongue *Helminthotheca echioides*, nettle and field speedwell *Veronica agrestis* (TN57).

Within an area of unmanaged land to the west of West Leys Farm, there is a small area dominated by tall forbs (TN78).

Vegetated garden –u1f, 828

Several private residential gardens are present within the 50 m survey buffer. These areas were not accessed for survey, and it is anticipated that works areas will be adjusted to avoid impacting these habitats.

Individual Trees

Rural trees – 32

Several individual rural trees are located across the site. Many of the trees on site are associated with hedgerows, as described below. However, individual trees are located within fields at TN20, TN29, TN70, TN94 and TN95.

All trees should be retained, where possible. Where this is not possible, habitat removal should be kept to a minimum. Compensatory tree planting would be required for any losses.

All retained trees on and adjacent to the site will be protected from incidental damage and disturbance during construction in accordance with current standards (BS5837:2012 Trees in relation to design, demolition and construction – recommendations).

Field Survey – Linear habitats

Hedgerows are a Habitat of Principal Importance (HPI). Additionally, the hedgerows and lines of trees may qualify as 'important' under the Hedgerow Regulations 1997. A detailed Hedgerow Regulations Assessment will be required to determine this.

Where possible, all hedgerows and lines of trees should be retained. Where this is not possible, removal should be kept to a minimum. Hedgerows and lines of trees should be reinstated following completion of the works, with compensatory planting completed where reinstatement is not possible.

Line of Trees – 33

There are eleven lines of broad-leaved trees throughout the survey area. LOT1 is located within Section 1-C and forms a boundary along the edge of a grassland field. LOT2, LOT3, LOT8 and LOT9 border the banks of Rothley Brook within Section 2-A of the site. Other lines of trees fall within the survey area on the eastern bank of the brook, between the main A50 Groby Road and LOT9, however these could not be accessed for survey owing to the presence of livestock (LOT4, LOT5, LOT7).

LOT6 is a line of broad-leaved trees located along a ditch and public footpath, immediately adjacent to the south of the main A50 Groby Road, forming a boundary between the path and an adjacent area of scrub.

LOT10 and LOT11 border a bare ground track which extends into a grassland field in the south of the site.

Hedgerows – h2, 11, 16, 50, 116, 202, 203, 204, 516, 521, 522, 524

Hawthorn is generally the dominant or abundant species within hedgerows along the pipeline route. Other regularly recorded species include blackthorn, elder and field maple *Acer campestre* with ash, pedunculate oak or sycamore as standard trees. Other hedgerow species found more often in species-rich hedgerows include crab-apple *Malus sylvestris*, English elm *Ulmus procera*, holly *Ilex aquifolium* and hazel *Corylus avellana*.

There are 80 hedgerows across the site. 41 of these are solely classified as native hedgerows (H1, H2, H6, H7, H8, H9, H13, H14, H15, H19, H20, H21, H22, H23, H25, H26, H27, H28, H29, H31, H32, H33, H34, H35, H36, H39, H44, H45, H46, H62, H65, H66, H67, H68, H72, H73, H74, H77, H78, H79, H80). An additional 11 native hedgerows contain trees (H10, H24, H37, H41, H42, H48, H53, H61, H64, H71, H76).

A further 21 native hedgerows are associated with a bank or ditch (H4, H11, H16, H17, H18, H30, H38, H40, H52, H69, H70, H75), of which nine also contain trees (H12, H49, H50, H54, H56, H57, H58, H59, H63).

There are seven species-rich native hedgerows within the site. Four of these hedgerows include trees and are associated with a bank or ditch (H3, H5, H43, H55). Two of the hedgerows associated with a bank or ditch do not contain trees (H51, H60). One hedgerow contains trees but is not associated with a bank or ditch (H47).

Field Survey - Watercourse habitats

Where watercourses meet the description of being an artificially created linear conveyancing water feature which are likely wet for more than four months of the year these have been categorised as a ditch.

Watercourses which do not appear to be artificially created or are not linear water-conveyancing features have been categorised as other rivers and stream.

All watercourses should be retained and buffered where possible, with crossings completed using horizontal directional drilling. If this is not possible, crossing points should be kept to a minimum. Construction methods will need to incorporate measures to prevent pollution of watercourses.

Other rivers and streams – r2b, 16, 33

An unnamed watercourse is crossed by the pipeline route in the north of the site, to the north of Bradgate Road.

In the south of the route, between Anstey Road and the main A46 dual carriageway another small watercourse is crossed by the route. This watercourse is approximately 2 m wide with slow, steady flow. No emergent, floating or submerged plants are present. The banks are steep and comprise a continuation of the bankside grassland and tall forb habitats.

The proposed pipeline route additionally crosses Rothley Brook in two locations. Rothley Brook is approximately 4 m wide with relatively fast flow. The banks of the brook are steep and almost vertical in places. Vegetation on the banks is dominated by tall forbs, including nettle, great willowherb and creeping thistle *Cirsium arvense*. Lines of trees fringe the banks meaning most of the watercourse within the site is subject to shading. No obvious submerged or floating vegetation is present, but there are occasional emergent species including yellow flag iris.

Ditch – 50

There are a number of ditches within the site, the majority of which are associated with hedgerows described above. However, there are four standalone ditches within the site.

D1 is located within Section 1-C of the route and forms the boundary between two arable fields. This ditch holds some water. No submerged, floating or emergent vegetation was recorded during the survey, with the exception of rare yellow flag iris.

D2 is an open ditch within a grassland field in Section 2-A of the route, which starts near to the centre of the field and extends off-site in a north-easterly direction. This ditch held some water in places, and vegetation within the channel comprised abundant soft rush, with rare duckweed *Lemna sp.* and brooklime *Veronica beccabunga*.

D3 is a woodland ditch with flowing water, located on either side of the main A50 Groby Road. The northern aspect of this ditch is located between a strip of grassland and a horse-grazed field, whilst the southern aspect is located between an area of hawthorn scrub and a public right of way. It is heavily shaded with no emergent, marginal or floating vegetation. Pendulous sedge *Carex pendula*, bracken and nettles are occasionally present on the banks.

D4 is a drainage ditch with good water quality located near the south of the route within Section 2-A. Vegetation bordering the ditch includes abundant creeping buttercup and rough meadowgrass, with frequent meadowsweet and silverweed. Water mint *Mentha aquatica* is rare.

Habitat Condition Assessment

A habitat condition assessment of habitats was undertaken, in line with the methods for the Biodiversity Net Gain (BNG) Statutory Metric³. Results are provided in Appendix 6. For certain habitats, such as cropland, a condition assessment is not applicable as the condition is auto assigned within the metric. Given the number of individual trees present across the site and as it is currently unknown which trees will be impacted by the proposals, condition assessments of trees have not been reported.

In order to assess the condition of a river or stream a separate comprehensive River Condition Assessment/Modular River Physical (MoRPh) survey is required. Therefore, no condition assessment of the brooks on site has been undertaken as part of this assessment.

Biodiversity Net Gain

It is understood that Severn Trent Water target 15% Biodiversity Net Gain (BNG) for all capital projects. If that is required for this project, in order to achieve this the results of the PEA will need to be developed further into a BNG Assessment report. This would likely initially take the form of a BNG Feasibility report, including recommendations on how a 15% net gain could be achieved. Once final proposals are available, a BNG Design-stage report will be required as well as a Habitat Management and Monitoring Plan (HMMP) to ensure BNG targets are met.

If BNG is required for this project, a River Condition Assessment of the on-site streams would be required (see section 5 for further details).

³ DEFRA (2023) The Statutory Biodiversity Metric – Technical Annex 1: Condition Assessment Sheets and Methodology. [Online] Available at: https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fassets.publishing.service.gov.uk%2Fmedia%2F6565d39762180b000dce82e0%2FStatutory_Biodiversity_Metric_Condition_Assessments.xlsx&wdOrigin=BRQ_WSELINK

Protected and Notable Species

Badger (This section and maps (see annex 1) are confidential and can only be released to a third party with Severn Trent Biodiversity & Ecology Team approval)

Multiple records of badger *Meles meles* (PBA) were returned within the 1 km data search from Leicestershire & Rutland Environmental Records Centre (LRERC). Evidence of badger activity was also recorded during the site surveys, with a badger dung pit and mammal pathway recorded within Section 1-D. Several dung pits and badger feeding signs were also recorded within Section 2-A. A single mammal hole, resembling a potential outlier badger sett, was also identified within this area. Mammal pathways were also recorded although there was no evidence to definitively link these to badger. These features are displayed on the UK Hab Habitat Map in Section 3 of this report.

The woodland, scrub, hedgerow and agricultural fields offer suitable habitat for badger foraging, commuting and sett-building. There is potential for direct impacts to occur to badger if any active setts are located within 30 m of the proposed pipeline route. There is also a risk that badgers ranging across the site may be harmed or injured during construction. However, given the small scale and temporary nature of the proposed works, it is considered the loss of badger foraging and commuting habitat will be negligible.

Otter, Water Vole and White-clawed Crayfish

Several watercourses intersect the site, including an unnamed watercourse flowing from Cropston Reservoir in Section 1-D (the proposed pipeline route intersects this watercourse twice); a tributary of Rothley Brook in Section 2-A; and Rothley Brook itself (the proposed pipeline route intersects this watercourse twice), also in Section 2-A.

Otter

Several records of otter *Lutra lutra* (EPS, WCA5, S41, LBAP) activity were returned within the 1 km data search from LRERC. The closest record to site was located approximately 0.06km to the west of the site, on a tributary of Rothley Brook located within Section 2-A. An otter footprint was incidentally identified in pond P19 during great crested newt environmental DNA surveys undertaken by TEP in June 2024; this pond is located approximately 300 m to the east of the proposed pipeline route in Section 2-A, to the north of a tributary of Rothley Brook.

All three watercourses offer suitable foraging and commuting habitat for otter. There is also potential for otter resting places to be present along these watercourses. There is potential for direct impacts to occur to otter if any holts or resting places are located within 200 m of the point where the pipeline will cross these watercourses. Indirect impacts to otter may also occur as a result of pollution run-off during construction, or through direct disturbance from noise and machinery.

Water vole

There are no records of water vole *Arvicola amphibius* (WCA5, S41, LBAP) within 1 km of the site.

The watercourses are generally considered to be unsuitable for supporting water voles, given their open nature, fast flow and limited foraging and sheltering opportunities. However, there may be areas within each watercourse that offer suitable water vole habitat. Some of the field ditches may also offer suitable habitat for this species. Many of the ditches associated with the hedgerows on site were found to be dry; however those holding water including standalone field ditches could offer suitable foraging and sheltering opportunities for water vole.

It is anticipated that these features will be retained during construction of the pipeline and as such no loss of potential water vole habitat is expected to occur. However, there is potential for direct impacts to occur to water vole if works fall within 3-5 m of the toe of the bank of these ditches. There is also the potential for indirect impacts to occur to this species as a result of pollution run-off during construction.

White-clawed crayfish

There are two records of white-clawed crayfish *Austropotamobius pallipes* (WCA5, S41, LBAP) within 1 km of the site; the closest record to site is associated with Rothley Brook and is located approximately 0.6 km to the south of the site near Ratby. These records are all from 2014. Three more recent records of the invasive non-native species signal crayfish *Pacifastacus leniusculus* were also returned in the dataset, upstream in the same watercourse.

Further assessment of these three watercourses is required to assess the suitability of the habitat for white-clawed crayfish and likelihood of presence. There is the potential for direct impacts on white-clawed crayfish, if present, as a result of construction across the watercourses. There may also be indirect impacts on this species as a result of pollution run-off during construction.

Bats

Records of the following bat species were returned within the 1 km data search:

- Unspecified bat (EPS, WCA5, LBAP)
- Brown-long eared bat *Plecotus auratus* (EPS, WCA5, S41, LBAP)
- Common pipistrelle *Pipistrellus pipistrellus* (EPS, WCA5, LBAP)
- Daubenton's bat *Myotis daubentonii* (EPS, WCA5, LBAP)
- Leisler's bat *Nyctalus leisleri* (EPS, WCA5, LBAP)
- Myotis bat species *Myotis sp.* (EPS, WCA5, LBAP)
- Nathusius' pipistrelle *Pipistrellus nathusii* (EPS, WCA5, LBAP)
- Noctule *Nyctalus noctule* (EPS, WCA5, S41, LBAP)
- Nyctalus bat species *Nyctalus sp.* (EPS, WCA5, LBAP)
- Pipistrelle species *Pipistrellus sp.* (EPS, WCA5, LBAP)
- Soprano pipistrelle *Pipistrellus pygmaeus* (EPS, WCA5, S41, LBAP)
- Whiskered bat *Myotis mystacinus* (EPS, WCA5, LBAP)

Common pipistrelle, brown long-eared, *Myotis* bat species, Noctule, *Nyctalus* bat species and soprano pipistrelle have all been recorded within 0.1 km of the site. It is unclear from the data returned by LRERC if these are all field records or if any of these relate to roosts.

Two historic EPS bat licences have been granted within 1 km of the site, for the destruction of a common pipistrelle resting place and breeding site and the destruction of a brown long-eared bat resting place.

Several trees within the site are of an age and size that have potential to support roosting bats. The pipeline route should therefore be adjusted to avoid impacting trees. If this is not possible and works to trees are required, there is potential for direct impacts to occur to roosting bats. A detailed ground level tree assessment of all trees to be impacted by the proposed works would initially be required to determine the likelihood of roosting bats being present within the site.

The large agricultural and grassland fields, hedgerows, lines of trees, watercourses, ditches and woodland edge habitats on site offer suitable foraging and commuting habitat for bats. It is likely that some of the hedgerows and lines of trees crossed by the proposed pipeline route will be temporarily lost to facilitate the development, which will lead to potential impacts on bats through fragmentation of their foraging and commuting routes. It is considered that habitats within Sections 1-C, 1-D and 2-A to the north of the main A46 road have High suitability for foraging and commuting bats, whilst the remainder in Section 2-A to the south of this road have Moderate suitability.

Nighttime Bat Walkovers will be required across the route in order to assess the potential impacts of the scheme on foraging and commuting bats and identify any mitigation measures that will be required. Surveys should particularly focus on hedgerows and lines of trees that will be impacted by the proposals, and should be supplemented with automated static bat detector surveys.

It is expected that construction will be undertaken within daylight hours and no permanent lighting of the pipeline route will be required following completion of the works. However, if nighttime works or permanent lighting is required, a sensitive lighting strategy will be required to ensure no adverse impacts occur to any nocturnal or crepuscular species using the site.

Other Mammals

Brown Hare

Several records of brown hare *Lepus europaeus* (S41) were returned within the 1 km data search. The closest record of brown hare is approximately 0.01 km to the south of the site, to the west of Cropston

Reservoir. An individual brown hare was sited within the 50 m survey buffer on agricultural land within Section 2-A during the site survey.

The agricultural and grassland fields within the site offer suitable foraging, commuting and sheltering habitat for brown hare. Given the proposed pipeline route will cross through these habitats, there is potential for brown hare ranging across the site to be killed or injured during construction. There is also potential for temporary fragmentation effects to occur, where construction works cross through the centre of suitable habitats.

Precautionary Working Methods should therefore be adopted during construction to ensure no harm occurs to this species, if present within the site during construction. Consideration should also be given to constructing the pipeline in stages across individual land parcels, to limit potential fragmentation effects.

Hedgehog

Multiple records of hedgehog *Erinaceus europaeus* (S41) have also been returned within the 1 km data search. The closest live record of hedgehog is located near Groby, approximately 0.17 km to the east of the site near Cropston Reservoir.

The woodland, scrub, hedgerows, grassland and residential gardens within the site offer suitable sheltering, foraging and ranging habitat for hedgehogs. There may also be hibernation opportunities for hedgehog within the woodland and scrub habitats. As such, there is potential for hedgehog individuals to be killed or injured if construction works directly impact these habitats. There is also potential for temporary fragmentation effects to occur, where construction works cross through the centre of suitable habitats.

Precautionary Working Methods should therefore be adopted during construction to ensure no harm occurs to this species, if present within the site during construction.

Polecat

One record of polecat *Mustela putorius* (S41) was returned within the 1 km data search, within allotments to the east of Cropston Reservoir.

No evidence of polecat was recorded on site. Polecat are found across a range of habitats, including farmland and woodland, and populations have been recorded in central and southern England. As such, the farmland and woodland habitats within the site offer potential foraging and denning habitat for this species.

Given there is potential for polecat individuals to be killed or injured during construction works, Precautionary Working Methods should be adopted to ensure no harm or injuries occurs to individual polecat, if present within the site during construction.

Birds

The following records of birds were returned within the 1 km data search:

- | | |
|--|---|
| • Barn owl <i>Tyto alba</i> (WCA1, LBAP) | • Crossbill <i>Loxia curvirostra</i> (WCA1) |
| • Black restart <i>Phoenicurus ochruros</i> (WCA1, BAm) | • Cuckoo <i>Cuculus canorus</i> (S41, BRd) |
| • Black tern <i>Chlidonias niger</i> (WCA1) | • Curlew <i>Numenius arquata</i> (S41, BRd) |
| • Black-necked grebe <i>Podiceps nigricollis</i> (WCA1, BAm) | • Dunnock <i>Prunella modularis</i> (S41, BAm) |
| • Black-tailed godwit <i>Limosa limosa</i> (WCA1, S41, BRd) | • Fieldfare <i>Turdus pilaris</i> (WCA1, BRd) |
| • Brambling <i>Fringilla montifringilla</i> (WCA1) | • Firecrest <i>Regulus ignicapillus</i> (WCA1) |
| • Bullfinch <i>Pyrrhula pyrrhula</i> (S41, BAm) | • Garganey <i>Anas querquedula</i> (WCA1, BAm) |
| • Common scoter <i>Melanitta nigra</i> (WCA1, S41, BRd) | • Goldeneye <i>Bucephala clangula</i> (WCA1, BRd) |

- Grasshopper warbler *Locustella naevia* (S41, BRd)
- Green sandpiper *Tringa ochropus* (WCA1, BAm)
- Greenshank *Tringa nebularia* (WCA1, BAm)
- Grey partridge *Perdix perdix* (S41, BRd)
- Greylag goose *Anser anser* (WCA1, BAm)
- Hawfinch *Coccothraustes coccothraustes* (S41, BRd)
- Hen harrier *Circus cyaneus* (WCA1, S41, BRd)
- Herring gull *Larus argentatus* (S41, BRd)
- Hobby *Falco subbuteo* (WCA1)
- House martin *Delichon urbica* (BRd, LBAP)
- House sparrow *Passer domesticus* (S41, BRd)
- Unknown harrier sp. (WCA1)
- Kingfisher *Alcedo atthis* (WCA1, BAm)
- Lapland bunting *Calcarius lapponicus* (WCA1, BAm)
- Lapwing *Vanellus vanellus* (S41, BRd)
- Lesser redpoll *Acanthis cabaret* (S41, BRd)
- Lesser spotted woodpecker *Dendrocopos minor* (S41, BRd)
- Linnet *Carduelis cannabina* (S41, BRd)
- Little gull *Hydrocoloeus minutus* (WCA1)
- Little ringed plover *Charadrius dubius* (WCA1)
- Little tern *Sternula albifrons* (WCA1, BAm)
- Marsh harrier *Circus aeruginosus* (WCA1, BAm)
- Marsh tit *Poecile palustris* (S41, BRd)
- Mediterranean gull *Larus melanocephalus* (WCA1, BAm)
- Merlin *Falco columbarius* (WCA1, BRd)
- Osprey *Pandion haliaetus* (WCA1, BAm)
- Peregrine *Falco peregrinus* (WCA1)
- Pintail *Anas acuta* (WCA1, BAm)
- Red kite *Milvus milvus* (WCA1)
- Redstart *Phoenicurus phoenicurus* (BAm, LBAP)
- Redwing *Turdus iliacus* (WCA1, BAm)
- Reed bunting *Emberiza schoeniclus* (S41, BAm)
- Ring ouzel *Turdus torquatus* (S41, BRd)
- Ruff *Philomachus pugnax* (WCA1, BRd)
- Sand martin *Riparia riparia* (LBAP)
- Scaup *Aythya marila* (WCA1, S41, BRd)
- Shore lark *Eremophila alpestris* (WCA1, BAm)
- Skylark *Alauda arvensis* (S41, BRd)
- Slavonian grebe *Podiceps auritus* (WCA1, BRd)
- Song thrush *Turdus philomelos* (S41, BAm)
- Spoonbill *Platalea leucorodia* (WCA1, BAm)
- Spotted flycatcher *Muscicapa striata* (S41, BRd)
- Starling *Sturnus vulgaris* (S41, BRd)
- Swallow *Hirundo rustica* (LBAP)
- Swift *Apus apus* (BRd, LBAP)
- Tree pipit *Anthus trivialis* (S41, BRd)
- Whimbrel *Numenius phaeopus* (WCA1, BRd)
- Whooper swan *Cygnus cygnus* (WCA1, BAm)
- Willow tit *Poecile montanus* (S41, BRd)
- Woodlark *Lullula arborea* (WCA1, S41)
- Yellow wagtail *Motacilla flava* (S41, BRd)
- Yellowhammer *Emberiza citrinella* (S41, BRd)

Notable bird species observed on site during the surveys include mistle thrush, blackcap, dunnock, wren, chiffchaff, buzzard, whitethroat, greenfinch, swallow.

The woodland, scrub, hedgerow and individual trees within the site provide suitable nesting and foraging habitat for a range of common and widespread bird species. Some of the longer grassland swards within fields, or those forming the margins of agricultural fields, also offer potential nesting habitat for ground-nesting birds. It is anticipated that there will be a small temporary loss of these habitats to facilitate the pipeline installation works.

The site additionally offers suitable nesting and foraging habitat for the Schedule 1 bird species barn owl. The large arable and grassland fields and field margins offer suitable foraging opportunities for this species, with mature trees and farm outbuildings providing potential nesting habitat. Barn owl are additionally protected from disturbance, meaning there is a greater risk of indirect impacts occurring to this species during construction.

Full breeding bird surveys will be required to identify the bird species utilising the habitats within the site for breeding; the potential impacts on these species which may arise from the works; and any mitigation that may be required.

There is potential for nests to be destroyed or damaged if vegetation clearance works occurs during the bird nesting season (generally taken to be 1st March to 31st August inclusive, although some species can nest outside this period). As such, there will be implications for the proposals with regard to nesting birds. Vegetation clearance should therefore be timed to avoid this period if possible.

Replacement planting of any habitats to be permanently lost should be undertaken to ensure there is no overall loss of bird nesting and foraging habitat.

The arable fields on site may offer suitable foraging opportunities for winter bird species. Given the abundance of arable habitat on site, as well as proximity of the proposed route in Sections 1-C and 1-D to Cropston Reservoir and Buddon Wood and Smithland Reservoir SSSI, which is partially notified for the presence of wintering waterfowl, there is potential for winter birds to utilise the site and be impacted by construction. Further survey will therefore be required to determine the potential impacts that are likely to arise from the works on winter birds.

Amphibians

Several records of great crested newt *Triturus cristatus* (EPS, WCA5, S41) were returned within the 1 km data search. The closest record is approximately 0.2 km to the north of the site, between the A46 and A50 roads in Groby.

Multiple records of common toad *Bufo bufo* (S41) were returned within the 1 km data search, with the closest record located approximately 0.05 km to the south of the site near the start of the route within Section 1-C.

There are two active and two historic EPS licences for great crested newt within 1 km of the site. The active licences relate to damage of a resting place and destruction of a resting place. There have also been seven great crested newt class licence returns within 1 km of the site between 2017 and 2019.

A review of Ordnance Survey mapping shows there are 47 ponds within 500 m of the proposed pipeline route. Four of these waterbodies fall within 50 m of the pipeline route, 28 fall between 50 m and 300 m of the site and 15 fall within 300 m and 500 m of the route. It is likely that some of these ponds offer suitable breeding habitat for amphibians, including great crested newt. Detailed Habitat Suitability Index Assessments and environmental DNA (eDNA) surveys have been undertaken by TEP in June 2024 to assess the suitability of these waterbodies for supporting breeding great crested newts and to determine the presence or absence of GCN in these ponds respectively. The results of these surveys will be reported separately.

The core foraging range of great crested newts is 250 m. As such, if a positive eDNA result is returned for any of the ponds within 250 m of the proposed works areas, there is potential for GCN to be present on site. Works within these areas would only be able to proceed under a licence from Natural England.

The woodland, scrub, tall forb, hedgerow, arable field margins and areas of grassland within the site provide potential foraging, commuting, sheltering and hibernation opportunities for a range of amphibian species such as common toad. Several large rubble piles on land within Section 1-D may also offer potential sheltering and hibernation opportunities for amphibians (TN56). The off-site ponds are also likely to offer suitable breeding habitat for these species. As such, there is potential for amphibians to be killed or injured during construction works. Precautionary Working Methods will therefore need to be adopted to avoid impacts occurring to common amphibians.

Reptiles

Four reptile species were returned within the 1 km data search, including the following:

- Adder *Vipera berus* (WCA5, S41)
- Common lizard *Zootoca vivipara* (WCA5, S41)
- Grass snake *Natrix helvetica* (WCA5, S41)
- Slow-worm *Anguis fragilis* (WCA5, S41)

The closest reptile record for the site was for adder, common lizard and slow-worm, all of which have been recorded within 0.02 km of the site near the start of the route within Section 1-C.

The woodland, scrub, hedgerow, grassland and arable field margin habitats on site offer suitable foraging, commuting and sheltering habitat for a range of common reptile species. Habitats adjacent to watercourses also provide potential reptile habitat, whilst areas of bare ground and ephemeral/short perennial may offer basking opportunities. As such, there is potential for reptiles to be killed or injured during construction works. Precautionary Working Methods will therefore need to be adopted to avoid impacts occurring to reptiles.

Fish

Three records of brown/sea trout (S41) were returned within 1km of the site, all from watercourses in Bradgate Park.

The watercourses in Bradgate Park are indirectly connected via Cropston Reservoir to a small watercourse that will be crossed by the pipeline route in Section 1-C or Section 1-D.

No fish records are directly connected to Rothley Brook and its tributaries.

Precautionary working methods will be required when crossing watercourses using open-cut techniques to ensure water quality is maintained and fish are protected from injury.

Notable and Invasive Non-Native Species/Plants

Notable and Protected Plant Species

Records of the protected and notable plant species bluebell *Hyacinthoides non-scripta* (WCA8) and violet helleborine *Epipactis purpurata* (LBAP) were returned within the 1 km data search.

Violet helleborine was not recorded within the site during the surveys.

Native bluebell was recorded in various locations across the site. This species was recorded within the following areas:

- Woodland at TN2, TN5, TN21 and TN26
- Within a stand of bracken at TN8
- Within hedgerow H55
- Along line of trees LOT1

If any native bluebell bulbs are to be impacted by the proposed works, they should be translocated to another location within the same hedgerow but away from the works areas.

Invasive Non-Native Plant Species

Records of the following invasive non-native plant species were returned within the 1 km data search:

- Curly waterweed *Lagarosiphon major* (WCA9, IAS)
- Himalayan balsam *Impatiens glandulifera* (WCA9, IAS)
- Japanese knotweed *Reynoutria japonica* (WCA9)
- Japanese rose *Rosa rugosa* (WCA9)
- Montbretia *Crocasmia x crocosmiiflora* (WCA9)
- New Zealand pygmyweed *Crassula helmsii* (WCA9)
- Nuttall's waterweed *Elodea nuttallii* (WCA9, IAS)
- Rhododendron *Rhododendron ponticum* (WCA9)
- Three-cornered garlic *Alium triquetrum* (WCA9)
- Variegated yellow archangel *Lamium galeobdolon* subsp. *argentatum* (WCA9)
- Wall cotoneaster *Cotoneaster horizontalis* (WCA9)
- Water fern *Azolla filiculoides* (WCA9)

Two stands of Japanese knotweed were recorded within the site, on a parcel of land immediately to the south of the main A50 Groby Road in Section 2-A (TN101 and TN103). A stand of variegated yellow archangel was also recorded within Section 1-D in hedgerow H15.

It is an offence to cause invasive non-native species to spread in the wild. As such, an Invasive Non-Native Species (INNS) Method Statement to outline the approach for dealing with the invasive species on-site will therefore be required prior to works commencing. This may include on-site treatment, burial or off-site disposal.

Designated Sites

Statutory Designated Sites

There are no statutory internationally designated sites (Ramsar, SPA, SAC) within 10 km of the site.

There are 13 statutory nationally designated sites (SSSI or NNR) within 5 km of the site. Part of the site falls within Bradgate Park and Cropston Reservoir SSSI, which is designated for its ancient parkland, wet heath and aquatic habitats, as well as its geological interest. The pipeline route intersects the SSSI in the north, where habitats include woodland, bracken, lowland dry acid grassland and developed land sealed surface. Lowland dry acid grassland within the SSSI is noted within the site citation.

While the woodland is unlikely to be directly affected as it lies to the north of the access road, the lowland dry acid grassland and bracken habitats will be directly affected by construction activities which could lead to impacts on the on the SSSI designation. Detailed botanical surveys should be undertaken to confirm the status and quality of habitats likely to be affected. Consultation with Natural England will also be required to determine whether works can proceed via a SSSI Assent.

Sheet Hedges Wood SSSI is located approximately 0.28 km to the west of the site and is designated for its woodland habitat. The proposed development is unlikely to result in any direct impacts on this designation, however there is potential for indirect impacts to occur on this designation through windblown dust during construction.

Swithland Wood and the Brand SSSI is located approximately 0.35 km to the north of the site and is also designated for its woodland habitat. No direct impacts on this designation are anticipated to arise from the proposals, but indirect impacts from wind blown-dust could occur during construction.

Buddon Wood and Swithland Reservoir SSSI is located approximately 0.86 km to the north of the site and is designated for its woodland habitats as well as its populations of overwintering waterfowl. No direct impacts are anticipated to arise on this designation, however given the site crosses an unnamed watercourse which flows into this SSSI, there is potential for indirect impacts from pollution run-off to occur during construction and impact the qualifying features of this designation. There is also a low risk of indirect impacts from windblown dust and noise disturbance occurring.

Grobby Pool and Wood SSSI, Roecliffe Manor Lawns SSSI, Benscliffe Wood SSSI, Ulverscroft Valley SSSI, Main Quarry, Mountsorrel SSSI, Johnsons' Meadows SSSI, Beacon Hill, Hangingstone and Out Woods SSSI, Botcheston Bog SSSI and Barrow Gravel Pits SSSI are all located over 1 km from the site. Given their distance, no direct or indirect impacts are anticipated to arise on these designations as a result of the proposed works, given the relatively small scale and temporary nature of the works proposed. However if the site boundary changes during detailed design of the scheme this conclusion will need to be reviewed.

The site is intersected by 20 Natural England SSSI Impact Risk Zones. The proposed pipeline development is listed as a category of concern in 18 of these zones (A, B, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S and T). As such, the LPA is required to consult with Natural England with regard to the proposals where it crosses these zones. In addition, if the proposals will result in discharges of water to ground or surface water in zones C, F, G, H, I, J, K, L, M, N, O, P, Q, R, S or T, additional consultation with Natural England will be required. The discharge levels that would prompt consultation varies between zones and are outlined in Appendix 1.

There are two statutory locally designated sites within 2 km of the site. Goss Meadows LNR is located approximately 1.89 km to the east of the site, while Kirby Frith LNR is located approximately 1.94 km to the east. Both designations are located beyond the main A46 road. Given their distance, no direct or indirect impacts are anticipated to arise on these designations as a result of the proposed works, given the relatively small scale and temporary nature of the works proposed.

Table 3: Statutory Designated Sites within influencing distance of the site

Site Names.	Designations	Distance from site	Interests Features
Statutory Internationally Designated Sites within 10 km of the site			
No sites returned within 10 km search area			
Statutory Nationally Designated Sites within 5 km of the site			
Bradgate Park and Cropston Reservoir	SSSI	0 km (within site)	Bradgate Park is one of the finest remaining examples of ancient parkland in Leicestershire. It contains some of the last remaining fragments of wet heathland in the County. Cropston Reservoir exhibits unusual marginal plant communities. Both areas support diverse breeding bird communities. Several nationally important geological features are located in the Park.
Sheet Hedges Wood	SSSI	0.28 km	The site comprises one of the best remaining examples of ash and alder woodland in Leicestershire and is representative of ancient woodland developed on clay soils in Central and Eastern England.
Swithland Wood and the Brand	SSSI	0.35 km	The site includes some of the best remaining examples of oak-lime and alder woodland in Leicestershire and is representative of ancient woodland on somewhat acid, loamy soils in the English Midlands.
Buddon Wood and Swithland Reservoir	SSSI	0.86 km	Buddon Wood remains one of the best birch-oak woodlands in Leicestershire of a type not found elsewhere in the East Midlands. The reservoir is important as a roosting and

					feeding area for waterfowl during winter months.
Grobby Wood	Pool and	SSSI	1.1 km		The site comprises a complex of habitats and includes fine examples of alder wood, dry and wet grassland, marsh, reedswamp and open water. The plant communities are representative of those developed on neutral or slightly acid soils in the North Midlands.
Roecliffe Lawns	Manor	SSSI	1.16 km		The site supports an unusually diverse community of fungi associated with old unimproved grassland, including a number of species listed in the provisional Red Data List for fungi which are restricted in their distribution in England to such habitats. This type of habitat and its associated rich fungal assemblage is a rare feature in Leicestershire and is generally scarce in the United Kingdom and across much of western Europe.
Benscliffe Wood		SSSI	1.98 km		Benscliffe Wood contains outcrops of siliceous rocks which support one of the richest Saxicolous lichen floras in the East Midlands.
Ulverscroft Valley		SSSI	2.56 km		The site supports a series of semi-natural habitats representative of those formerly more widespread on the siliceous clay soils or Charnwood Forest. These include permanent grassland, heath, woodland and wetlands. While each habitat is important on its own, the combination produces one of the best wildlife Sites in Leicestershire. The wet grasslands have no equivalent in the County. Over 200 plant species have been recorded, some rare in Leicestershire, and there are mammals, insects and birds of note.
Main Mountsorrel	Quarry,	SSSI	2.99 km		Main Quarry (Castle Hill Quarry) provides a fine example of granite related, temperature-controlled mineralisation characterised by molybdenite, allanite and topaz, modified by a later introduction of dolomite, sulphides and crystallised chlorites. The quarry also displays what is probably the most dramatic and well-developed occurrence of asphaltite in Britain upon which international research into the origin of life on Earth has been carried out.
Johnsons' Meadows		SSSI	3.08 km		Johnsons' Meadows SSSI is of special interest for its nationally rare species-rich neutral grassland.

Beacon Hangingstone Out Woods	Hill, and	SSSI	3.19 km	Beacon Hill and Outwoods provide some of the best habitat in Leicestershire for breeding birds. The Outwoods support one of the most interesting stands of ancient semi natural alder woodland in the County. The Hangingstone Hills and Outwoods area includes some important geological exposures that have yielded coelenterate impression fossils unique in the British Isles and of world-wide significance in the study of early life forms.
Botcheston Bog		SSSI	4.15 km	The site contains one of the best remaining areas of marshy grassland in Leicestershire and is representative of grazed marsh communities on peaty soils.
Barrow Gravel Pits		SSSI	4.34 km	The site comprises one of the best remaining complexes of open water, grassland, scrub and woodland in Leicestershire and possesses a rich flora and fauna representative of flood plain habitats in the English Midlands.

Statutory Locally Designated Sites within 2 km of the site

Goss Meadows		LNR	1.89 km	Strip of species-rich grassland that supports several unusual wild flowers, such as Spiny Restharrow
Kirby Frith		LNR	1.94 km	Rich wildflower grassland in Leicestershire. It is also supports several grassland butterflies.

Non-Statutory Designated Sites

There are eight notified non-statutory locally designated wildlife sites within 1 km of the site.

Hallgates Covered Reservoirs LWS is located approximately 0.04 km to the north-west of the site and is designated for its acid grassland habitats. No direct impacts are anticipated to arise on this site as a result of the proposals, but there is potential for pollution from run-off and wind-blown dust to occur during construction.

Rothley Brook in Charnwood Borough LWS is located approximately 0.07 km to the east of the proposed pipeline route in Section 1-D and approximately 0.2 km to the east of the route in Section 2-A. It is designated for its aquatic and mature tree habitat. No direct impacts are anticipated, but there is potential for indirect impacts from pollution run-off during construction could occur, particularly as there is connectivity to the site via a small stream.

Swithland Hall Estate LWS is located approximately 0.07 km to the north of the site and is designated for its mesotrophic grassland, wet grassland, wet woodland and stream habitats. No direct impacts are anticipated to arise on this designation, however there is potential for wind-blown dust to cause indirect impacts during construction.

Puddledyke Wood LWS is located approximately 0.09 km to the south of the proposed route and is associated with Bradgate Park and Cropston Reservoir SSSI. Woodland is the qualifying feature of the

woodland, and as such there is potential for indirect impacts on this habitat to occur as a result of pollution run-off or windblown dust during construction.

No direct or indirect impacts are anticipated to occur to Crow Wood LWS, Great Central Railway, Thurcaston to Birstall LWS, The County Hall Oak LWS or Groby Nature Area and Gun Club LWS as a result of the proposals, due to their distance from the site. However, if the route options change during development of the site's detailed design, there is potential for these sites to be impacted.

There are nine candidate LWS's and eleven potential LWS's within 1 km of the site. While these are not current designations, these sites contain features that could enable them to qualify as LWS's in the future. Three potential LWS's cross the proposed pipeline route in Section 2-A: Groby/Glenfield Parish Boundary Hedge potential LWS; Groby, Rothley Brook tributary potential LWS; and Groby, Anstey Lane hedge (south) potential LWS. Glenfield, 15 Groby Rd Trees candidate LWS also falls within 30 m of the proposed pipeline route in Section 2-A.

Works should aim to avoid impacting these candidate or potential LWS sites. Where impacts are unavoidable, consultation with the LPA will be required to determine whether the works can proceed and what mitigation measures will need to be provided.

Given all other candidate and potential LWS sites are located off-site, but within influencing distance of the site, pollution prevention measures should be employed to reduce potential indirect impacts. However, if the site boundary changes during detailed development of the site and direct impacts to these sites is possible, further consultation with the LPA will be necessary.

Table 4: Non-Statutory Designated Sites within influencing distance of the site

Site Names.		Designations	Distance from site	Interests Features
Notified				
Hallgates Reservoirs	Covered	LWS	0.04 km	Acid grassland
Rothley Brook	in Charnwood Borough	LWS	0.07 km	Brook and mature trees
Swithland Estate	Hall	LWS	0.07 km	Mesotrophic grassland, wet grassland, wet woodland and stream
Puddledryke Wood		LWS	0.09 km	Woodland and scrub adjacent to a SSSI
Crow Wood		LWS	0.37 km	Ancient semi-natural woodland
Great Central Railway, Thurcaston to Birstall		LWS	0.62 km	Mesotrophic grassland with scrub and early successional habitats
The County Hall Oak		LWS	0.87 km	Mature tree
Groby Nature Area and Gun Club		LWS	0.90 km	Mesotrophic grassland
Candidate				
Glenfield, 15 Groby Rd Trees		LWS (Candidate)	0.03 km	Mature trees

Ratby flood meadow	LWS (Candidate)	0.10 km	Mesotrophic grassland in flood meadow
Glenfield, A50 Flood Relief Basin	LWS (Candidate)	0.15 km	Mesotrophic grassland
Glen Park Avenue Mature Tree	LWS (Candidate)	0.22 km	Mature tree
Anstey, Bradgate Road Grassland	LWS (Candidate)	0.28 km	Mesotrophic grassland
Gynsill Field	LWS (Candidate)	0.32 km	Mesotrophic grassland
The Brant Inn Oak	LWS (Candidate)	0.49 km	Mature tree
Ratby, Church Ponds Close open space	LWS (Candidate)	0.66 km	Mesotrophic grassland
Glenfield Oak 2 Hospital	LWS (Candidate)	0.92 km	Mature tree
Potential			
Groby, Anstey Lane hedge (south)	LWS (Potential)	0 km	Hedgerow
Groby, Rothley Brook tributary	LWS (Potential)	0 km	Small river or stream
Groby/Glenfield Parish boundary hedge	LWS (Potential)	0 km	Hedgerow
Meadow at Glenfield	LWS (Potential)	0.07 km	Mesotrophic grassland
Cropston, field by brook under Bradgate Road	LWS (Potential)	0.10 km	Mesotrophic grassland
Thurcaston, field at Sandham Bridge	LWS (Potential)	0.19 km	Mesotrophic grassland
Rothley Brook, southern boundary of Mill Lane industrial estate	LWS (Potential)	0.21 km	Small river or stream
Anstey, Hedgerows in Groby Road area	LWS (Potential)	0.32 km	Hedgerow

Kirby Brook adjacent to Kirby Road	LWS (Potential)	0.58 km	Small river or stream
Groby, Laurel Farm grassland and SW hedge	LWS (Potential)	0.60 km	Mesotrophic grassland
M1/A41 slip road verge	LWS (Potential)	0.67 km	Mesotrophic grassland

It is recommended that measures to protect nearby designated sites are incorporated into a Construction and Environmental Management Plan (CEMP). The CEMP should include industry standard, best-practice methods on how site run-off will be controlled, how site waste will be managed, how fuel and other spillages will be prevented and will include emergency procedures in the event of a pollution incident.

Landscape Character Area

The majority of the site is located within Landscape Character Area 73 – Charnwood, which covers land to the north-west of Leicester. This area comprises woodland, including ancient woodland, country parks and agricultural land divided by hedgerows and stone walls. Given the small scale of the works relative to the size of the landscape character area, as well as the temporary nature of the works, no adverse impacts on the character of this area are anticipated to arise.

The southern extent of the site falls within Landscape Character Area 94 – Leicestershire Vales, which extends to the west and south of Leicester. Key habitats in this area are river valleys, riverside meadows, waterside trees and shrubs; small woods; mature trees; and mixed farming. Given the small area of the site that falls within this NCA, the small scale of the works relative to the size of the landscape character area, as well as the temporary nature of the works, no adverse impacts on the character of this area are anticipated to arise.

Registered Parks & Gardens

Bradgate Park is a Grade II listed Park and Garden located in the north of the site, within Section 1-C. Consultation with Historic England will be required with regard to potential impacts that may arise from the proposed works that fall within the park and the mitigation that will be required.

5. Further Survey Methods for Protected Species, Notable Species and Habitats if highlighted as being required (red risk).

Habitats

A National Vegetation Classification (NVC) survey of all habitats within the site that fall within Bradgate Park and Cropston Reservoir SSSI should be undertaken to determine whether qualifying habitats and species associated with the SSSI are present within the site. In addition, NVC surveys of the other lowland hay meadow grasslands (TN100 and TN107) is also recommended, to determine if they might qualify as priority habitat. NVC surveys of grassland are best undertaken between May and August.

If hedgerows or lines of trees are proposed to be removed or affected, it is recommended that a Hedgerow Regulations Assessment is undertaken of the hedgerows or lines of trees in question to assess whether any qualify as 'important' under the Hedgerow Regulations 1997. Hedgerow Regulations Assessments are required to be undertaken in May to early June.

It is recommended an arboricultural survey is undertaken of all trees across the route, so potential impacts on trees can be appropriately assessed.

A River Condition Assessment (RCA) of the three watercourses that are crossed by the proposed pipeline route will be required to inform any future Biodiversity Net Gain assessment. This would entail a MoRPh survey undertaken by an accredited surveyor to assess the condition of the watercourse. RCA surveys must be undertaken during periods of low water flow, and when vegetation does not obscure the river channel. In practice, this is generally late spring or autumn.

Badger

Given the evidence obtained during the PEA survey, that badger are present in the area, a detailed badger survey of habitats within the site and a 30 m buffer of the site is required, to determine the presence of badger and badger setts within influencing distance of the site. Badger surveys can be undertaken at any time of year, but are best undertaken in winter when vegetation has died back. The results of badger surveys are typically valid for six months.

If any evidence of badger is identified during the badger survey, further surveys may be required. If any active badger setts are identified, and works will be undertaken within 30 m of the sett, the sett must be monitored for a period of 28 days to assess whether it is being used by badger and to verify the level of activity. If confirmed to be active during the monitoring period and it is not possible to avoid direct or indirect impacts to the sett during construction works, a licence application to Natural England will be required. Works under a badger licence can only take place between 1st July and 30th November inclusive.

Bats

Due to the number of trees present within the survey area, an assessment of the suitability of trees to support roosting bats was not undertaken. It is therefore recommended that a Ground Level Tree Assessment (GLTA) of trees is undertaken, ideally only those proposed to be felled or pruned, to assess potential impacts on roosting bats. A GLTA can be undertaken at any time of year but is best undertaken during the winter months (November to March) where vegetation is less likely to obscure potential features.

If any trees to be impacted by the works are identified as having suitability to support roosting bats, further surveys will be required. In line with the Bat Conservation Trust Good Practice Guidelines 4th Edition (2023), trees with PRF-M suitability may support multiple bats, including maternity colonies. Three presence/absence surveys, spaced at least three weeks apart between May and August inclusive will be required. Surveys should ideally be undertaken in the daytime by aerial tree climbers however if this is not possible for health and safety reasons, nocturnal surveys are permitted. If any bats are identified, a licence from Natural England must be obtained prior to works on the tree. Mitigation for the loss of roost habitat will also need to be provided.

Trees with PRF-I suitability are likely to support individual or small numbers of bats due to size or lack of suitable surrounding habitats. No further survey of trees with PRF-I suitability are required beyond the initial GLTA, however any works to trees such as pruning or felling must be undertaken under

supervision of a licenced bat ecologist. If bats are identified during the course of works on PRF-I trees, works must cease immediately and a licence from Natural England must be obtained. Three surveys undertaken by May to August will also be required to inform the licence application.

Bat activity surveys at targeted locations, comprising nighttime bat walkover surveys and static detector deployments are recommended. These would need to be spread across the bat active season from April to October. Nighttime bat walkover surveys would comprise at least one visit per season in Spring, Summer and Autumn. Static detector surveys would comprise monthly deployments for a period of at least five nights between April and October inclusive.

Otter, Water Vole and White-clawed Crayfish

Otter

Otter surveys of the three watercourses that intersect the site are required. The survey should extend 200 m upstream and downstream of the proposed crossing point of the pipeline route on each of the watercourses, to assess whether otter are present. Otter surveys can be undertaken at any time of year.

If otter are found to be present and works cannot be micrositied to avoid impacting the watercourses, a mitigation licence from Natural England will be required before works can proceed. Mitigation for the loss of otter habitat will also need to be provided.

Water vole

Water vole surveys of the watercourses on site should be undertaken concurrently with the otter surveys recommended above. Ditches holding water within the site that are not subject to heavy shading should also be subject to further survey.

If any watercourses or ditches are deemed to be suitable for supporting water vole, water vole surveys should be undertaken. The survey should extend 200 m upstream and downstream of the proposed crossing point of the pipeline route on each suitable watercourse or ditch, to assess whether water vole are present. Each water vole survey comprises two visits: the first should be undertaken between mid-April and the end of June, with the second between July and September. Visits should be spaced two months apart.

If evidence of water vole is identified and works cannot avoid the watercourse or ditch, a mitigation licence from Natural England will be required before works can proceed. Mitigation for the loss of water vole habitat will also need to be provided.

White-clawed crayfish

White-clawed crayfish surveys should be undertaken on the three watercourses which intersect the site in Section S2-A. If evidence of white-clawed crayfish is found, a mitigation licence from Natural England will be required to allow works to proceed. White-clawed crayfish surveys can only take place between July and September inclusive.

Birds

It is recommended that breeding bird surveys are undertaken at targeted locations to assess the use of the site by breeding birds and to inform mitigation requirements. The default position for breeding bird surveys is six visits across the period mid-March to early-July.

Winter bird surveys may also be required. A scoping survey of the site should initially be undertaken by an experienced ornithologist to determine the need for winter bird surveys. If winter bird surveys are deemed as required, a targeted approach is likely to be taken so that specific areas would be subject to survey. The winter bird survey season is September to April, with surveys spread throughout this period.

Amphibians

Environmental DNA surveys of waterbodies within 250 m of the site have been undertaken to determine the presence or absence of GCN within these ponds, and the likelihood of GCN being present on site. eDNA surveys can only be undertaken by licenced surveyors between 15th April and 30th June inclusive.

If any ponds return a positive eDNA result, there may be opportunities to join the Leicestershire and Rutland District Level Licencing (DLL) scheme. Under the scheme, an 'agreement in principle' must be

obtained from Natural England through an Impact Assessment and Conservation Payment Certificate with associated enquiry fee. A conservation payment will need to be made as outlined in the agreement enquiry and a licence fee payment will also need to be made. Works can commence once the DLL has been issued.

If any pond in this area returns a positive eDNA result and it is not possible to join the DLL scheme, a traditional EPS licence must be applied for. Six traditional surveys of ponds with a positive eDNA result would need to be undertaken between mid-March and mid-June to calculate a population size estimate, which would inform the licence application to Natural England. Once granted, a trapping scheme will need to be established on site prior to construction commencing. Replacement of suitable terrestrial habitat being lost will also be required, either onsite or within land adjacent to the site that is under the same control. If traditional EPS licencing is to be used, a GCN Mitigation Strategy will need to be prepared and submitted with any future planning application.

Notable and Invasive Non-Native Species/Plants

Once detailed proposals are known, a detailed bluebell survey should be undertaken between April and May inclusive to determine the locations of native bluebell. A method statement should then be prepared detailing the translocation measures required.

Designated Sites

Consultation with Natural England regarding potential impacts on Bradgate Park and Cropston Reservoir SSSI, priority habitats and ancient woodland is recommended. Historic England will also need to be consulted regarding potential impacts on Bradgate Park.

The LPA will also be required to consult with Natural England regarding the scheme, given the development proposals fall within 20 SSSI Impact Risk Zones.

Consultation with the LPA regarding potential impacts on notified, candidate and potential Local Wildlife Sites will also be required.

6. References and Abbreviations

References

CIEEM, 2017. *Guidelines for Preliminary Ecological Appraisal, 2nd edition*. Chartered Institute of Ecology and Environmental Management.

Abbreviations

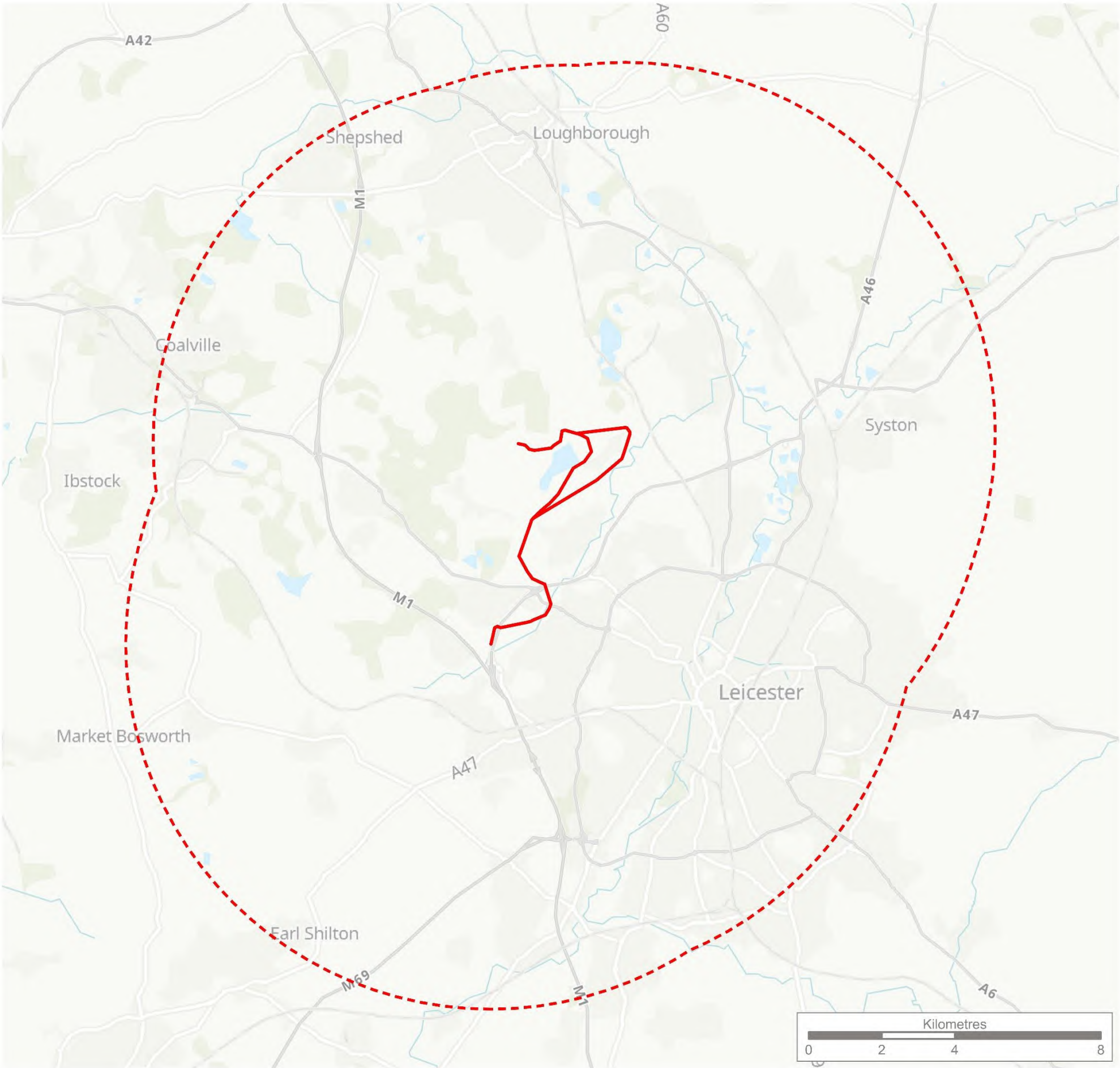
BAm	Amber listed Birds of Conservation Concern
BRd	Red listed Birds of Conservation Concern
CEMP	Construction Environment Management Plan
CIEEM	Chartered Institute of Ecology and Environmental Management
DLL	District Level Licencing
eDNA	Environmental DNA
EPS	European Protected Species listed under Schedule 2 (animals) or Schedule 5 (plants) of the Conservation of Habitats and Species Regulations 2017
FISC	Field Identification Skills Certificate (issued by Botanical Society of Britain and Ireland)
IAS	Invasive non-native plant species under the Invasive Alien Species (Enforcement and Permitting) Order 2019
INNS	Invasive Non-Native Species
IRZ	Impact Risk Zone
LBAP	Species with action plans listed under the Leicester, Leicestershire and Rutland Biodiversity Action Plan 2016 - 2026
LNR	Local Nature Reserve
LPA	Local Planning Authority
LWS	Local Wildlife Site
PBA	Protection of Badgers Act 1992
PEA	Preliminary Ecological Appraisal
PWMS	Precautionary Working Method Statement
S41	Species of principal importance listed by requirements under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006;
SSSI	Site of Special Scientific Interest
WCA1	Protected bird species under Schedule 1 of the Wildlife and Countryside Act 1981, as amended
WCA5	Protected animal species under Schedule 5 of the Wildlife and Countryside Act 1981, as amended
WCA8	Protected plant species under Schedule 8 of the Wildlife and Countryside Act 1981, as amended
WCA9	Invasive non-native plant species under Schedule 9 of the Wildlife and Countryside Act 1981, as amended

APPENDIX 1

Additional Maps

Desk-Based Assessment

- G10480.005 – Internationally Designated Sites within 10 km of the site
- G10480.006 – Nationally Designated Sites within 10 km of the site
- G10480.007 – Statutory Locally Designated Sites within 2 km of the site
- G10480.008 – SSSI Impact Risk Zones
 - Interpretation of SSSI Impact Risk Zone
- G10480.009 – Notable Habitats within and adjacent to the site
- G10480.010 – Non-Statutory Locally Designated Sites within 1 km of the site



Key

Pipeline route

Pipeline route - 10km buffer

Sites searched for were as follows:

- Ramsar
- Special Protection Areas (SPA)
- Special Areas of Conservation (SAC)

No records found.

TEP

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401 Faraday Street, Birchwood Park, Warrington, WA3 6GA
Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

Project

STW Hallgates to Elms Farm Pipeline

Title

Internationally Designated Sites Within a 10km Buffer

Drawing Number

G10480.005

Scale

1:150,000 @ A4

Date

22/05/2024

Drawn

ET

Checked

SP

Approved

CC

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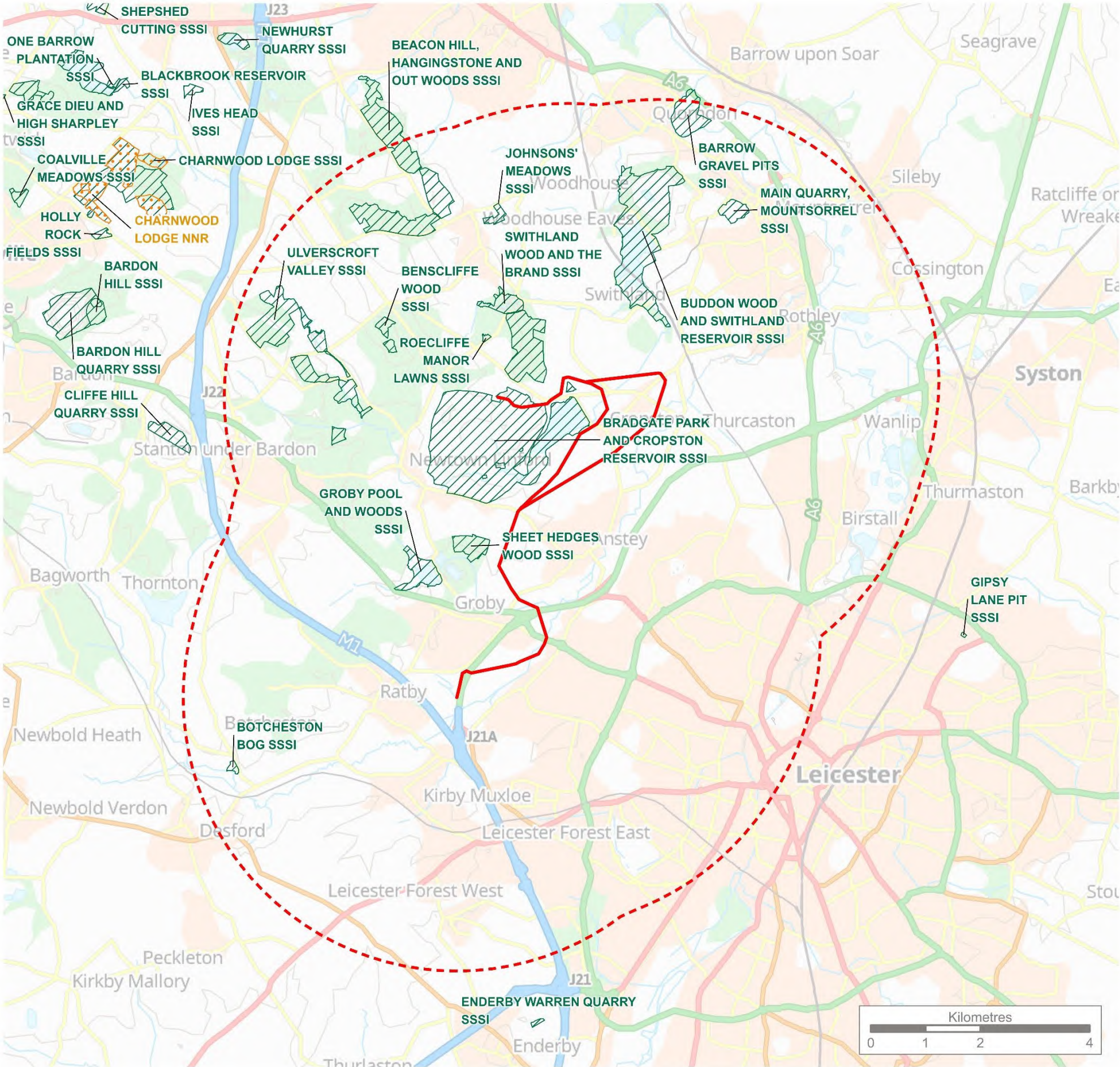
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- Key**
- Pipeline route
 - Pipeline route - 5km buffer
 - National Nature Reserve (NNR)
 - Sites of Special Scientific Interest (SSSI)

Sites searched for were as follows:

- Sites of Special Scientific Interest (SSSI)
- National Nature Reserve (NNR)
- Area of Outstanding Natural Beauty (AONB)

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Project
STW Hallgates to Elms Farm Pipeline

Title
Nationally Designated Sites Within a 5km Buffer

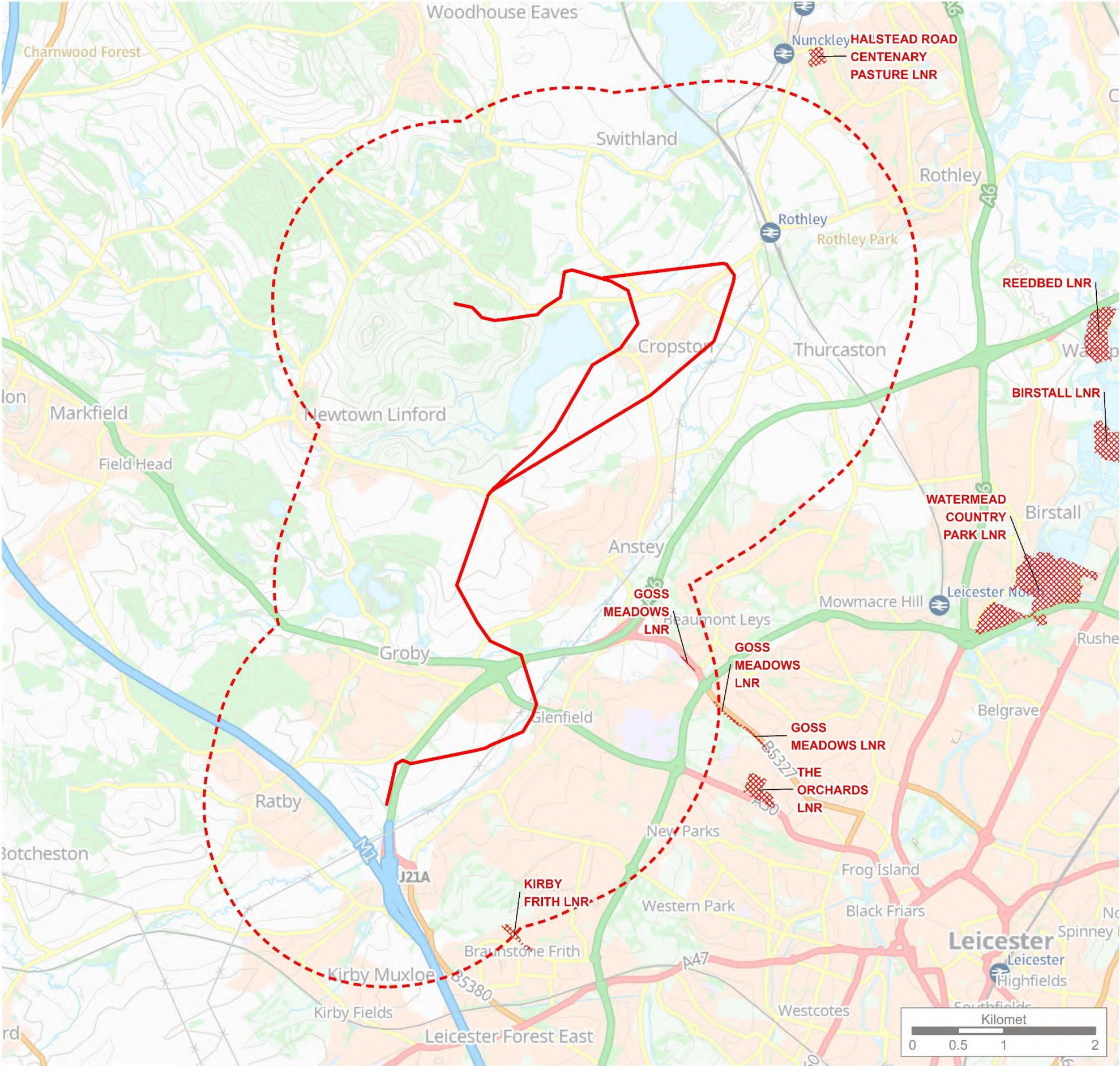
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Key

- Pipeline route
- Pipeline route - 2km buffer
- Local Nature Reserve

Sites searched for were as follows:
- Local Nature Reserves

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Project

STW Hallgates to Elms Farm Pipeline

Title

Statutory Locally Designated Sites Within a 2km Buffer

Drawing Number

G10480.007

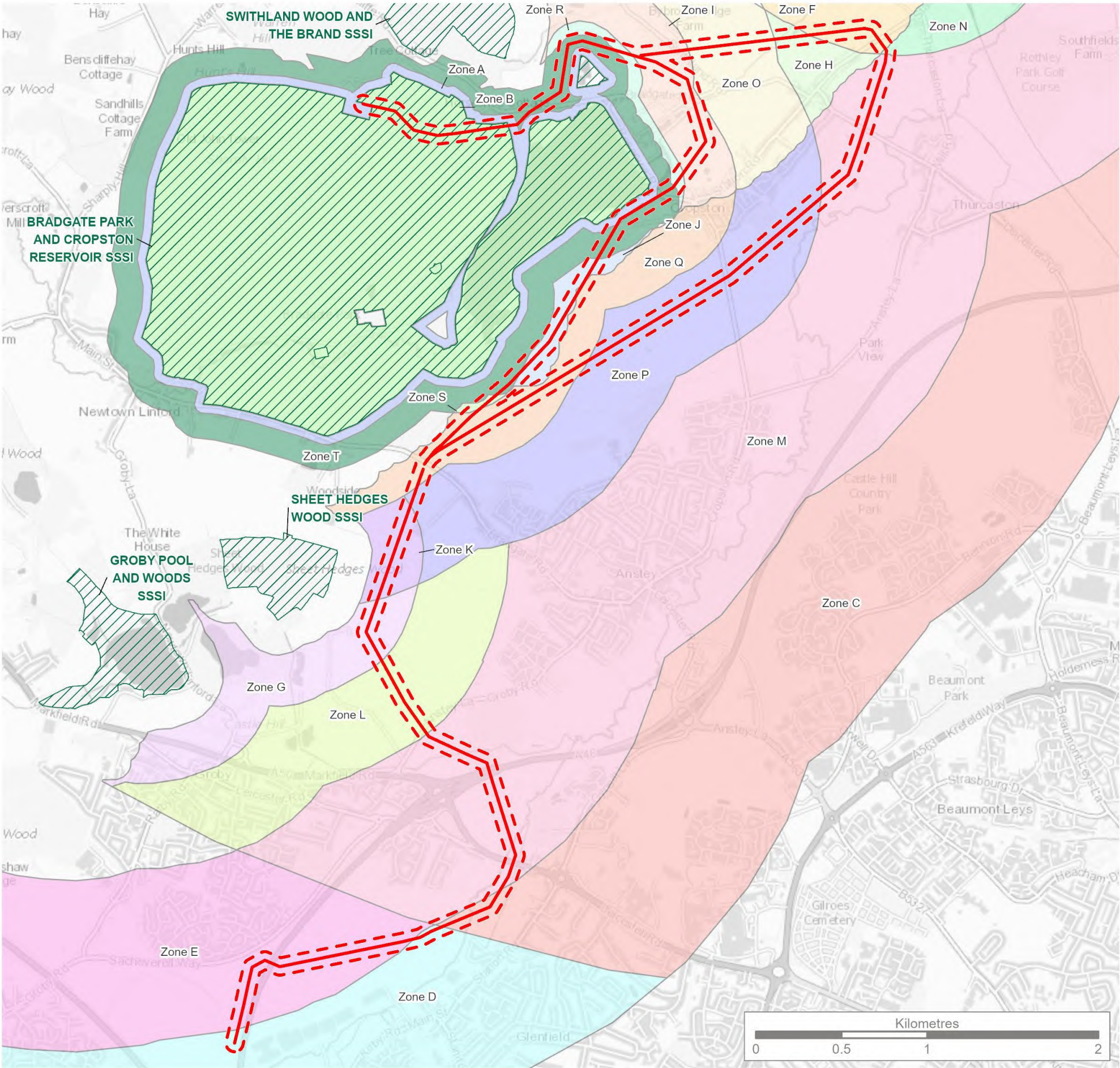
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1:60,000 @ A4	22/05/2024	
Drawn	Checked	Approved
ET	SP	CC

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Key

Pipeline route

Pipeline route - 50m buffer

Sites of Special Scientific Interest (SSSI)

IRZ

Zone A

Zone B

Zone C

Zone D

Zone E

Zone F

Zone G

Zone H

Zone I

Zone J

Zone K

Zone L

Zone M

Zone N

Zone O

Zone P

Zone Q

Zone R

Zone S

Zone T

TEP

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Project
STW Hallgates to Elms Farm Pipeline

Title
Sites of Special Scientific Interest - Impact Risk Zone

Drawing Number
G10480.008

Scale
1:32,000 @ A4

Date
06/06/2024

Drawn
ET

Checked
BJ

Approved
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N

SSSI Impact Risk Zones crossed by the Site

1. DOES PLANNING PROPOSAL FALL INTO ONE OR MORE OF THE CATEGORIES BELOW? (N.B CATEGORY HAS BEEN HIGHLIGHTED IN YELLOW BELOW IF YES)
2. IF YES, CHECK THE CORRESPONDING DESCRIPTION(S) BELOW. LPA SHOULD CONSULT NATURAL ENGLAND ON LIKELY RISKS FROM THE FOLLOWING:

1 PROPOSAL	2 LPA SHOULD CONSULT NATURAL ENGLAND ON LIKELY RISKS FROM THE FOLLOWING:						
IRZ*	A	B	C	D	E	F	G
All Planning Applications	ALL PLANNING APPLICATIONS - EXCEPT HOUSEHOLDER APPLICATIONS.	ALL PLANNING APPLICATIONS.	N/A	N/A	N/A	N/A	N/A
Infrastructure	N/A	N/A	Airports, helipads and other aviation proposals.	Airports, helipads and other aviation proposals.	Pipelines and underground cables, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals.	Pipelines and underground cables, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals.	Pipelines and underground cables, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals.
Wind & Solar Energy	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Minerals, Oil & Gas	N/A	N/A	Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.	Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.	Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.	Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.	Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.
Rural Non-Residential	N/A	N/A	N/A	N/A	N/A	Large non residential developments outside existing settlements/urban areas where net additional gross internal floorspace is > 1,000m² or footprint exceeds 0.2ha.	
Residential	N/A	N/A	N/A	N/A	N/A	Residential development of 100 units or more.	Residential development of 100 units or more.
Rural Residential	N/A	N/A	N/A	N/A	N/A	Any residential development of 50 or more houses outside existing settlements/urban areas.	Any residential development of 50 or more houses outside existing settlements/urban areas.
Air Pollution	N/A	N/A	Livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 750m², manure stores > 3500t.	Livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 750m², manure stores > 3500t.	Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 200m², manure stores > 250t).	Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 200m², manure stores > 250t).	Any development that could cause AIR POLLUTION (incl: industrial/commercial processes, livestock & poultry units, slurry lagoons & digestate stores, manure stores).
Combustion	N/A	N/A	N/A	N/A	General combustion processes >20MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.	General combustion processes >20MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.	All general combustion processes. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.
Waste	N/A	N/A	N/A	N/A	Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill.	Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill.	Mechanical and biological waste treatment, inert landfill, non-hazardous landfill, hazardous landfill, household civic amenity recycling facilities construction, demolition and excavation waste, other waste management.
Composting	N/A	N/A	N/A	N/A	Any composting proposal with more than 75000 tonnes maximum annual operational throughput. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management.	Any composting proposal with more than 500 tonnes maximum annual operational throughput. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management.	Any composting proposal. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management.
Discharges	N/A	N/A	Any discharge of water or liquid waste of more than 20m³/day to ground (ie to seep away) or to surface water, such as a beck or stream.	N/A	N/A	Any discharge of water or liquid waste of more than 2m³/day to ground (ie to seep away) or to surface water, such as a beck or stream.	Any discharge of water or liquid waste of more than 20m³/day to ground (ie to seep away) or to surface water, such as a beck or stream.
Water Supply	N/A	N/A	N/A	N/A	Large infrastructure such as warehousing / industry where total net additional gross internal floorspace following development is 1,000m² or more.	Large infrastructure such as warehousing / industry where net additional gross internal floorspace is > 1,000m² or any development needing its own water supply .	Large infrastructure such as warehousing / industry where net additional gross internal floorspace is > 1,000m² or any development needing its own water supply .
GUIDANCE	https://magic.defra.gov.uk/Metadata_for_magic/SSSI%20IRZ%20User%20Guidance%20MAGIC.pdf						

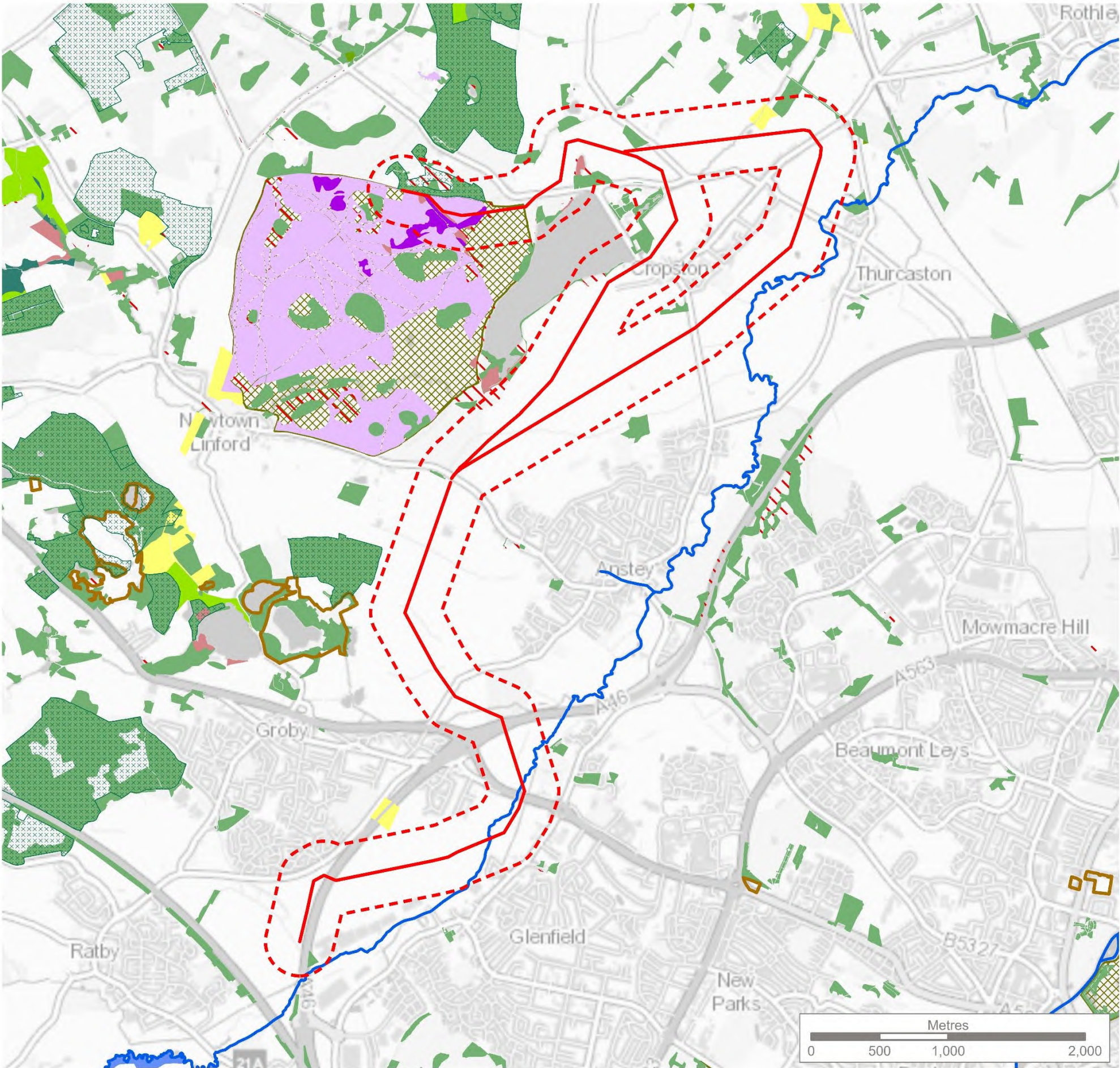
*Please refer to Drawing G10480.008 for IRZ locations in relation to the site

1 PROPOSAL	2 LPA SHOULD CONSULT NATURAL ENGLAND ON LIKELY RISKS FROM THE FOLLOWING:						
IRZ*	H	I	J	K	L	M	N
All Planning Applications	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Infrastructure	Pipelines and underground cables, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals.	Pipelines and underground cables, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals.	Pipelines and underground cables, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals.	Pipelines and underground cables, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals.	Pipelines and underground cables, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals.	Pipelines and underground cables, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals.	Pipelines and underground cables, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals.
Wind & Solar Energy	N/A	Solar schemes with footprint > 0.5ha, all wind turbines.	Solar schemes with footprint > 0.5ha, all wind turbines.	Wind turbines.			
Minerals, Oil & Gas	Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.	Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.	Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.	Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.	Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.	Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.	Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.
Rural Non-Residential	Large non residential developments outside existing settlements/urban areas where footprint exceeds 1ha.	Large non residential developments outside existing settlements/urban areas where net additional gross internal floorspace is > 1,000m² or footprint exceeds 0.2ha.	Large non residential developments outside existing settlements/urban areas where net additional gross internal floorspace is > 1,000m² or footprint exceeds 0.2ha.	N/A	N/A	N/A	N/A
Residential	N/A	Residential development of 100 units or more.	Residential development of 100 units or more.	Residential development of 100 units or more.	Residential development of 100 units or more.	N/A	Residential development of 100 units or more.
Rural Residential	Any residential development of 100 or more houses outside existing settlements/urban areas.	Any residential development of 10 or more houses outside existing settlements/urban areas.	Any residential development of 10 or more houses outside existing settlements/urban areas.	Any residential development of 50 or more houses outside existing settlements/urban areas.	Any residential development of 50 or more houses outside existing settlements/urban areas.	N/A	Any residential development of 50 or more houses outside existing settlements/urban areas.
Air Pollution	Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 200m², manure stores > 250t).	Any development that could cause AIR POLLUTION (incl: industrial/commercial processes, livestock & poultry units, slurry lagoons & digestate stores, manure stores).	Any development that could cause AIR POLLUTION (incl: industrial/commercial processes, livestock & poultry units, slurry lagoons & digestate stores, manure stores).	Any development that could cause AIR POLLUTION (incl: industrial/commercial processes, livestock & poultry units, slurry lagoons & digestate stores, manure stores).	Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 200m², manure stores > 250t).	Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 200m², manure stores > 250t).	Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 200m², manure stores > 250t).
Combustion	General combustion processes >20MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.	All general combustion processes. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.	All general combustion processes. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.	All general combustion processes. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.	General combustion processes >20MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.	General combustion processes >20MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.	General combustion processes >20MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.
Waste	Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill.	Mechanical and biological waste treatment, inert landfill, non-hazardous landfill, hazardous landfill, household civic amenity recycling facilities construction, demolition and excavation waste, other waste management.	Mechanical and biological waste treatment, inert landfill, non-hazardous landfill, hazardous landfill, household civic amenity recycling facilities construction, demolition and excavation waste, other waste management.	Mechanical and biological waste treatment, inert landfill, non-hazardous landfill, hazardous landfill, household civic amenity recycling facilities construction, demolition and excavation waste, other waste management.	Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill.	Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill.	Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill.
Composting	Any composting proposal with more than 75000 tonnes maximum annual operational throughput. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management.	Any composting proposal. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management.	Any composting proposal. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management.	Any composting proposal. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management.	Any composting proposal with more than 500 tonnes maximum annual operational throughput. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management.	Any composting proposal with more than 75000 tonnes maximum annual operational throughput. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management.	Any composting proposal with more than 500 tonnes maximum annual operational throughput. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management.
Discharges	Any discharge of water or liquid waste of more than 5m³/day to ground (ie to seep away) or to surface water, such as a beck or stream.	Any discharge of water or liquid waste of more than 5m³/day to ground (ie to seep away) or to surface water, such as a beck or stream.	Any discharge of water or liquid waste that is discharged to ground (ie to seep away) or to surface water, such as a beck or stream.	Any discharge of water or liquid waste of more than 20m³/day to ground (ie to seep away) or to surface water, such as a beck or stream.	Any discharge of water or liquid waste of more than 20m³/day to ground (ie to seep away) or to surface water, such as a beck or stream.	Any discharge of water or liquid waste of more than 20m³/day to ground (ie to seep away) or to surface water, such as a beck or stream.	Any discharge of water or liquid waste of more than 20m³/day to ground (ie to seep away) or to surface water, such as a beck or stream.
Water Supply	Large infrastructure such as warehousing / industry where total net additional gross internal floorspace following development is 1,000m² or more.	Large infrastructure such as warehousing / industry where net additional gross internal floorspace is > 1,000m² or any development needing its own water supply .	Large infrastructure such as warehousing / industry where net additional gross internal floorspace is > 1,000m² or any development needing its own water supply .	Large infrastructure such as warehousing / industry where net additional gross internal floorspace is > 1,000m² or any development needing its own water supply .	Large infrastructure such as warehousing / industry where net additional gross internal floorspace is > 1,000m² or any development needing its own water supply .	Large infrastructure such as warehousing / industry where total net additional gross internal floorspace following development is 1,000m² or more.	Large infrastructure such as warehousing / industry where net additional gross internal floorspace is > 1,000m² or any development needing its own water supply .
GUIDANCE	https://magic.defra.gov.uk/Metadata_for_magic/SSSI%20IRZ%20User%20Guidance%20MAGIC.pdf						

*Please refer to Drawing G10480.008 for IRZ locations in relation to the site

1 PROPOSAL	2 LPA SHOULD CONSULT NATURAL ENGLAND ON LIKELY RISKS FROM THE FOLLOWING:					
IRZ*	O	P	Q	R	S	T
All Planning Applications	N/A	N/A	N/A	All planning applications (except householder) outside or extending outside existing settlements/urban areas affecting greenspace, farmland, semi natural habitats or landscape features such as trees, hedges, streams, rural buildings/structures.	All planning applications (except householder) outside or extending outside existing settlements/urban areas affecting greenspace, farmland, semi natural habitats or landscape features such as trees, hedges, streams, rural buildings/structures.	All planning applications (except householder) outside or extending outside existing settlements/urban areas affecting greenspace, farmland, semi natural habitats or landscape features such as trees, hedges, streams, rural buildings/structures.
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Wind & Solar Energy	Wind turbines.	Wind turbines.	Solar schemes with footprint > 0.5ha, all wind turbines.	Solar schemes with footprint > 0.5ha, all wind turbines.	Solar schemes with footprint > 0.5ha, all wind turbines.	Solar schemes with footprint > 0.5ha, all wind turbines.
Minerals, Oil & Gas	Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.	Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.	Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.	Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.	Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.	Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.
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Residential	Residential development of 100 units or more.	Residential development of 100 units or more.	Residential development of 100 units or more.	Residential development of 10 units or more.	Residential development of 10 units or more.	Residential development of 10 units or more.
Rural Residential	Any residential development of 50 or more houses outside existing settlements/urban areas.	Any residential development of 50 or more houses outside existing settlements/urban areas.	Any residential development of 10 or more houses outside existing settlements/urban areas.	Any residential developments outside of existing settlements/urban areas with a total net gain in residential units.	Any residential developments outside of existing settlements/urban areas with a total net gain in residential units.	Any residential developments outside of existing settlements/urban areas with a total net gain in residential units.
Air Pollution	Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 200m², manure stores > 250t).	Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 200m², manure stores > 250t).	Any development that could cause AIR POLLUTION (incl: industrial/commercial processes, livestock & poultry units, slurry lagoons & digestate stores, manure stores).	Any development that could cause AIR POLLUTION or DUST either in its construction or operation (incl: industrial/commercial processes, livestock & poultry units, slurry lagoons & digestate stores, manure stores).	Any development that could cause AIR POLLUTION or DUST either in its construction or operation (incl: industrial/commercial processes, livestock & poultry units, slurry lagoons & digestate stores, manure stores).	Any development that could cause AIR POLLUTION or DUST either in its construction or operation (incl: industrial/commercial processes, livestock & poultry units, slurry lagoons & digestate stores, manure stores).
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Waste	Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill.	Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill.	Mechanical and biological waste treatment, inert landfill, non-hazardous landfill, hazardous landfill, household civic amenity recycling facilities construction, demolition and excavation waste, other waste management.	Mechanical and biological waste treatment, inert landfill, non-hazardous landfill, hazardous landfill, household civic amenity recycling facilities construction, demolition and excavation waste, other waste management.	Mechanical and biological waste treatment, inert landfill, non-hazardous landfill, hazardous landfill, household civic amenity recycling facilities construction, demolition and excavation waste, other waste management.	Mechanical and biological waste treatment, inert landfill, non-hazardous landfill, hazardous landfill, household civic amenity recycling facilities construction, demolition and excavation waste, other waste management.
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GUIDANCE	https://magic.defra.gov.uk/Metadata_for_magic/SSSI%20IRZ%20User%20Guidance%20MAGIC.pdf					

*Please refer to Drawing G10480.008 for IRZ locations in relation to the site



- Key**
- Pipeline route
 - Pipeline route - 250m buffer
- Notable Habitats**
- Ancient Woodland
 - Coastal and floodplain grazing marsh
 - Deciduous woodland
 - Lowland fens
 - Lowland heathland
 - Lowland meadows
 - Purple moor grass and rush pastures
 - Reedbeds
 - Traditional orchard
 - Good quality semi improved grassland
 - No main habitat but additional habitats present
 - Wood pasture and parkland
 - Open mosaic habitats on previously developed land
- Notable Watercourses**
- Statutory main rivers (England)



THE ENVIRONMENT PARTNERSHIP

401 Faraday Street, Birchwood Park, Warrington, WA3 6GA
Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

Project

STW Hallgates to Elms Farm Pipeline

Title

Notable Habitats Within and Adjacent to the Site

Drawing Number

G10480.009

Scale	Date	
1:40,000 @ A4	22/05/2024	
Drawn	Checked	Approved
ET	SP	CC

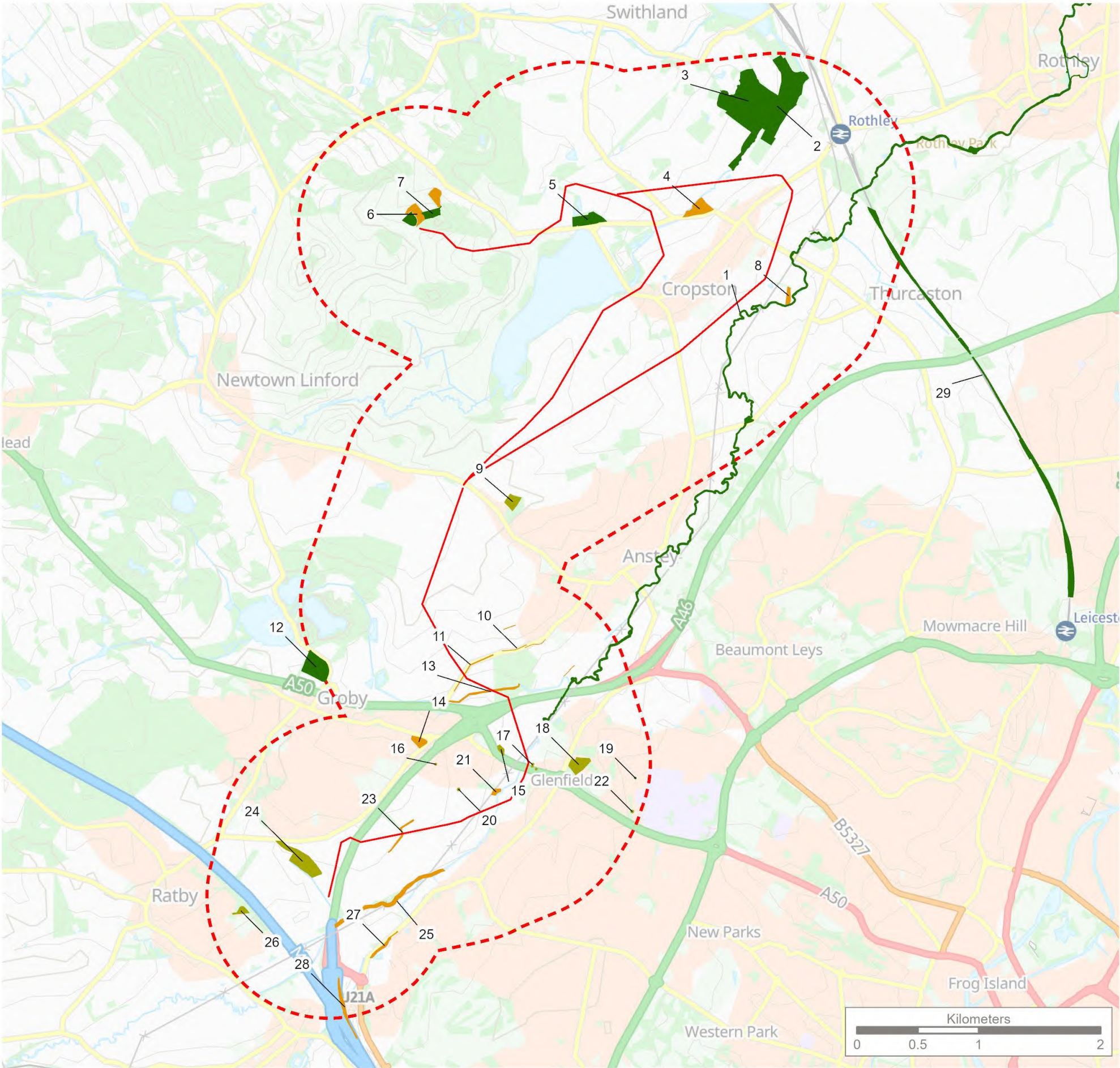
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Key

Pipeline route

 Pipeline route - 1km buffer

Local Wildlife Sites

Notified site

Candidate site

Potential site

1. Rothley Brook in Charnwood Borough

2. Swithland Hall Estate

3. Crow Wood

4. Cropston, field by brook under Bradgate Rd

5. Puddleyke Wood

6. Hallgate Hall spinney

7. Hallgates Covered Reservoirs

8. Thurcaston, field at Sandham Bridge

9. Anstey, Bradgate Road Grassland

10. Anstey, Hedgerows in Groby Road Area

11. Groby, Anstey Lane hedge (south)

12. Groby Nature Area and Gun Club

13. Groby, Rothley Brook tributary

14. Groby, Laurel Farm grassland and SW hedge

15. Glenfield, A50 flood relief basin

16. The Brant Inn Oak

17. Glenfield, 15 Groby Rd trees

18. Gynsill Field

19. The County Hall Oak

20. Glen Park Avenue mature tree

21. Meadow at Glenfield

22. Glenfield Hospital Oak 2

23. Groby/Glenfield Parish boundary hedge

24. Ratby flood meadow

25. Rothley Brook, southern boundary of Mill Lane industrial estate

26. Ratby, Church Ponds Close open space

27. Kirby Brook adj to Kirby Road

28. M1/A46 slip road verge

29. Great Central Railway, Thurcaston to Birstall

TEP

THE ENVIRONMENT PARTNERSHIP

401 Faraday Street, Birchwood Park, Warrington, WA3 6GA
Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

Project

STW Hallgates to Elms Farm Pipeline

Title

Non-Statutory Locally Designated Sites Within 1km Buffer

Drawing Number

G10480.011

Scale

1:45,000 @ A4

Date

27/06/2024

Drawn

MC

Checked

CW

Approved

CC

Ordnance Survey Data

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Local Record Centre Data

Contains public sector information licensed under the Open Government Licence v3.0.

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APPENDIX 2

Photographs (provided as a separate appendix)

APPENDIX 3

Botanical Species List

Target Notes Report – Area-Based Habitats

Target Notes for area-based habitats along the proposed pipeline route are provided below. Due to differing methods of data capture used by different surveyors in the field, the format of the target note output varies, although the information contained within each target note is the same: a species list with, where available, an associated abundance score using the DAFOR scale:

D – Dominant; **A** – Abundant; **F** – Frequent; **O** – Occasional; **R** – Rare.

TN1 – Lowland dry acid grassland

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22743486	frequent_25_33	Anthoxanthum odoratum (Sweet Vernal-grass)
22743486	occasional_10_25	Luzula multiflora (Heath Wood-rush)
22743486	frequent_25_33	Festuca ovina (Sheep's-fescue)
22743486	rare_0_1_10	Plantago lanceolata (Ribwort Plantain)
22743486	rare_0_1_10	Ranunculus repens (Creeping Buttercup)
22743486	rare_0_1_10	Ranunculus bulbosus (Bulbous Buttercup)
22743486	rare_0_1_10	Ficaria verna (Lesser celandine)
22743486	occasional_10_25	Holcus lanatus (Yorkshire-fog)
22743486	rare_0_1_10	Lotus corniculatus (Common Bird's-foot-trefoil)
22743486	rare_0_1_10	Vicia sativa (Common Vetch)
22743486	frequent_25_33	Nardus stricta (Mat-grass)
22743486	frequent_25_33	Agrostis capillaris (Common Bent)
22743499	frequent_25_33	Festuca rubra (Red Fescue)
22743499	frequent_25_33	Nardus stricta (Mat-grass)
22743499	occasional_10_25	Anthoxanthum odoratum (Sweet Vernal-grass)
22743499	frequent_25_33	Agrostis stolonifera (Creeping Bent)
22743499	rare_0_1_10	Ranunculus bulbosus (Bulbous Buttercup)
22743499	occasional_10_25	Luzula multiflora (Heath Wood-rush)
22743499	rare_0_1_10	Juncus effusus (Soft-rush)
22743499	occasional_10_25	Holcus lanatus (Yorkshire-fog)
22743499	rare_0_1_10	Bellis perennis (Daisy)
22743499	rare_0_1_10	Trifolium dubium (Lesser Trefoil)
22743597	occasional_10_25	Anthoxanthum odoratum (Sweet Vernal-grass)
22743597	frequent_25_33	Festuca ovina (Sheep's-fescue)
22743597	occasional_10_25	Galium saxatile (Heath Bedstraw)
22743597	occasional_10_25	Potentilla erecta (Tormentil)
22743597	rare_0_1_10	Polygala serpyllifolia (Heath Milkwort)
22743597	rare_0_1_10	Rumex acetosella (Sheep's Sorrel)
22743605	occasional_10_25	Luzula multiflora (Heath Wood-rush)
22743605	occasional_10_25	Molinia caerulea (Purple Moor-grass)
22743605	occasional_10_25	Polygala serpyllifolia (Heath Milkwort)
22743605	occasional_10_25	Pteridium aquilinum (Bracken)
22743605	occasional_10_25	Galium saxatile (Heath Bedstraw)

22743664	occasional_10_25	<i>Juncus effusus</i> (Soft-rush)
22743664	frequent_25_33	<i>Luzula multiflora</i> (Heath Wood-rush)
22743664	frequent_25_33	<i>Holcus lanatus</i> (Yorkshire-fog)
22743664	frequent_25_33	<i>Anthoxanthum odoratum</i> (Sweet Vernal-grass)
22743664	occasional_10_25	<i>Agrostis capillaris</i> (Common Bent)
22743664	rare_0_1_10	<i>Cerastium fontanum</i> (Common Mouse-ear)
22743565	occasional_10_25	<i>Juncus effusus</i> (Soft-rush)
22743565	occasional_10_25	<i>Luzula multiflora</i> (Heath Wood-rush)
22743565	frequent_25_33	<i>Molinia caerulea</i> (Purple Moor-grass)
22743565	occasional_10_25	<i>Anthoxanthum odoratum</i> (Sweet Vernal-grass)
22743565	occasional_10_25	<i>Agrostis stolonifera</i> (Creeping Bent)
22743565	occasional_10_25	<i>Agrostis curtisii</i> (Bristle Bent)
22743565	occasional_10_25	<i>Juncus bulbosus</i> (Bulbous Rush)
22743565	rare_0_1_10	<i>Conopodium majus</i> (Pignut)
22743565	rare_0_1_10	<i>Achillea millefolium</i> (Yarrow)
22743565	rare_0_1_10	<i>Leontodon hispidus</i> (Rough Hawkbit)
22743565	rare_0_1_10	<i>Cirsium arvense</i> (Creeping Thistle)
22743612	occasional_10_25	<i>Lolium perenne</i> (Perennial Rye-grass)
22743612	occasional_10_25	<i>Molinia caerulea</i> (Purple Moor-grass)
22743612	occasional_10_25	<i>Agrostis capillaris</i> (Common Bent)
22743612	frequent_25_33	<i>Pteridium aquilinum</i> (Bracken)
22743612	frequent_25_33	<i>Rumex acetosella</i> (Sheep's Sorrel)
22743618	frequent_25_33	<i>Festuca ovina</i> (Sheep's-fescue)
22743618	occasional_10_25	<i>Lolium perenne</i> (Perennial Rye-grass)
22743618	occasional_10_25	<i>Rumex acetosella</i> (Sheep's Sorrel)
22743618	occasional_10_25	<i>Nardus stricta</i> (Mat-grass)
22743671	rare_0_1_10	<i>Galium saxatile</i> (Heath Bedstraw)
22743671	frequent_25_33	<i>Luzula multiflora</i> (Heath Wood-rush)
22743671	frequent_25_33	<i>Potentilla erecta</i> (Tormentil)
22743671	occasional_10_25	<i>Festuca ovina</i> (Sheep's-fescue)
22743671	occasional_10_25	<i>Lolium perenne</i> (Perennial Rye-grass)
22743671	rare_0_1_10	<i>Holcus lanatus</i> (Yorkshire-fog)
22743664	occasional_10_25	<i>Juncus effusus</i> (Soft-rush)
22743664	frequent_25_33	<i>Luzula multiflora</i> (Heath Wood-rush)
22743664	frequent_25_33	<i>Holcus lanatus</i> (Yorkshire-fog)
22743664	frequent_25_33	<i>Anthoxanthum odoratum</i> (Sweet Vernal-grass)
22743664	occasional_10_25	<i>Agrostis capillaris</i> (Common Bent)
22743664	rare_0_1_10	<i>Cerastium fontanum</i> (Common Mouse-ear)
22743625	frequent_25_33	<i>Luzula multiflora</i> (Heath Wood-rush)
22743625	occasional_10_25	<i>Juncus effusus</i> (Soft-rush)
22743625	frequent_25_33	<i>Agrostis stolonifera</i> (Creeping Bent)
22743625	rare_0_1_10	<i>Potentilla erecta</i> (Tormentil)
22743625	occasional_10_25	<i>Holcus lanatus</i> (Yorkshire-fog)

KEY: D – Dominant; A – Abundant; F – Frequent; O – Occasional; R - Rare

22743585	frequent_25_33	<i>Nardus stricta</i> (Mat-grass)
22743585	occasional_10_25	<i>Bellis perennis</i> (Daisy)
22743585	rare_0_1_10	<i>Ranunculus bulbosus</i> (Bulbous Buttercup)
22743585	frequent_25_33	<i>Festuca ovina</i> (Sheep's-fescue)
22743585	occasional_10_25	<i>Trifolium campestre</i> (Hop Trefoil)
22743585	occasional_10_25	<i>Polygala serpyllifolia</i> (Heath Milkwort)
22743585	occasional_10_25	<i>Anthoxanthum odoratum</i> (Sweet Vernal-grass)
22743585	rare_0_1_10	<i>Hypochaeris glabra</i> (Smooth Cat's-ear)
22743585	rare_0_1_10	<i>Pilosella officinarum</i> (Mouse-ear-hawkweed)
22743585	rare_0_1_10	<i>Trifolium dubium</i> (Lesser Trefoil)
22743577	occasional_10_25	<i>Luzula multiflora</i> (Heath Wood-rush)
22743577	frequent_25_33	<i>Molinia caerulea</i> (Purple Moor-grass)
22743577	occasional_10_25	<i>Bellis perennis</i> (Daisy)
22743577	rare_0_1_10	<i>Leontodon hispidus</i> (Rough Hawkbit)
22743577	occasional_10_25	<i>Anthoxanthum odoratum</i> (Sweet Vernal-grass)
22743577	occasional_10_25	<i>Trifolium campestre</i> (Hop Trefoil)
22743577	frequent_25_33	<i>Festuca ovina</i> (Sheep's-fescue)

TN2 – Lowland mixed deciduous woodland

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22743524	frequent_25_33	Quercus robur (Pedunculate Oak)
22743524	frequent_25_33	Betula pendula (Silver Birch)
22743524	frequent_25_33	Corylus avellana (Hazel)
22743524	frequent_25_33	Pteridium aquilinum (Bracken)
22743524	occasional_10_25	Holcus mollis (Creeping Soft-grass)
22743524	frequent_25_33	Bare ground (use if 0% plant cover)
22743524	rare_0_1_10	Hyacinthoides non-scripta (Bluebell)
22743524	rare_0_1_10	Sorbus aucuparia (Rowan)
22743524	occasional_10_25	Ilex aquifolium (Holly)
22743524	occasional_10_25	Fagus sylvatica (Beech)
22743511	frequent_25_33	Quercus robur (Pedunculate Oak)
22743511	frequent_25_33	Betula pendula (Silver Birch)
22743511	rare_0_1_10	Sorbus aucuparia (Rowan)
22743511	rare_0_1_10	Salix caprea (Goat Willow)
22743511	occasional_10_25	Carpinus betulus (Hornbeam)
22743511	frequent_25_33	Holcus mollis (Creeping Soft-grass)
22743511	frequent_25_33	Pteridium aquilinum (Bracken)
22743511	occasional_10_25	Hyacinthoides non-scripta (Bluebell)
22743511	frequent_25_33	Hedera helix (Common Ivy)
22743511	occasional_10_25	Carex pendula (Pendulous Sedge)
22743511	occasional_10_25	Rubus fruticosus agg. (Bramble)
22743511	rare_0_1_10	Ficaria verna (Lesser celandine)
22743536	rare_0_1_10	Pinus sylvestris (Scots Pine)
22743536	frequent_25_33	Quercus robur (Pedunculate Oak)
22743536	rare_0_1_10	Quercus ilex (Evergreen Oak)
22743536	occasional_10_25	Fagus sylvatica (Beech)
22743536	occasional_10_25	Corylus avellana (Hazel)
22743536	occasional_10_25	Betula pendula (Silver Birch)
22743536	frequent_25_33	Pteridium aquilinum (Bracken)
22743536	frequent_25_33	Holcus mollis (Creeping Soft-grass)
22743536	rare_0_1_10	Hyacinthoides non-scripta (Bluebell)
22743536	rare_0_1_10	Stellaria holostea (Greater Stitchwort)

TN3 – Bracken

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22743549	dominant_50	Pteridium aquilinum (Bracken)
22743549	rare_0_1_10	Ficaria verna (Lesser celandine)
22743549	occasional_10_25	Luzula multiflora (Heath Wood-rush)
22743549	rare_0_1_10	Schedonorus arundinaceus (Tall Fescue)
22743549	occasional_10_25	Juncus effusus (Soft-rush)
22743549	rare_0_1_10	Jacobaea vulgaris (Common ragwort)
22743549	rare_0_1_10	Rubus fruticosus agg. (Bramble)
22743549	rare_0_1_10	Urtica dioica (Common Nettle)
22743559	dominant_50	Pteridium aquilinum (Bracken)
22743559	occasional_10_25	Agrostis capillaris (Common Bent)
22743559	occasional_10_25	Holcus lanatus (Yorkshire-fog)
22743559	rare_0_1_10	Urtica dioica (Common Nettle)

TN4 – Lowland dry acid grassland

See *TN1*

TN5 – Other coniferous woodland

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22743637	abundant_33_50	Pinus sylvestris (Scots Pine)
22743637	rare_0_1_10	Sorbus aucuparia (Rowan)
22743637	abundant_33_50	Rubus fruticosus agg. (Bramble)
22743637	occasional_10_25	Hyacinthoides non-scripta (Bluebell)
22743637	occasional_10_25	Pteridium aquilinum (Bracken)
22743637	rare_0_1_10	Quercus robur (Pedunculate Oak)
22743637	frequent_25_33	Holcus mollis (Creeping Soft-grass)
22743646	frequent_25_33	Hyacinthoides non-scripta (Bluebell)
22743646	rare_0_1_10	Anemone nemorosa (Wood Anemone)
22743646	frequent_25_33	Luzula multiflora (Heath Wood-rush)
22743646	occasional_10_25	Potentilla erecta (Tormentil)
22743646	frequent_25_33	Lolium perenne (Perennial Rye-grass)
22743646	occasional_10_25	Molinia caerulea (Purple Moor-grass)
22743646	occasional_10_25	Nardus stricta (Mat-grass)
22743646	occasional_10_25	Festuca ovina (Sheep's-fescue)
22743646	occasional_10_25	Agrostis capillaris (Common Bent)
22743646	rare_0_1_10	Holcus lanatus (Yorkshire-fog)

TN6 – Lowland dry acid grassland

See *TN1*

TN7 – Modified grassland

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22730273	occasional_10_25	Dactylis glomerata (Cock's-foot)
22730273	occasional_10_25	Plantago lanceolata (Ribwort Plantain)
22730273	rare_0_1_10	Poa annua (Annual Meadow-grass)

KEY: D – Dominant; A – Abundant; F – Frequent; O – Occasional; R - Rare

22730273	frequent_25_33	Ranunculus repens (Creeping Buttercup)
22730273	rare_0_1_10	Rumex obtusifolius (Broad-leaved Dock)
22730273	abundant_33_50	Lolium perenne (Perennial Rye-grass)

TN8 – Bracken

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22743679	dominant_50	Pteridium aquilinum (Bracken)
22743679	occasional_10_25	Hyacinthoides non-scripta (Bluebell)
22743679	occasional_10_25	Holcus lanatus (Yorkshire-fog)
22743679	rare_0_1_10	Juncus effusus (Soft-rush)
22743684	dominant_50	Pteridium aquilinum (Bracken)
22743684	occasional_10_25	Hyacinthoides non-scripta (Bluebell)
22743684	rare_0_1_10	Stellaria graminea (Lesser Stitchwort)

TN9 – Other broadleaved woodland

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22743698	occasional_10_25	Quercus robur (Pedunculate Oak)
22743698	frequent_25_33	Betula pendula (Silver Birch)
22743698	rare_0_1_10	Sorbus aucuparia (Rowan)
22743698	frequent_25_33	Anisantha sterilis (Barren Brome)
22743698	occasional_10_25	Taraxacum spp. (Dandelions)
22743698	frequent_25_33	Anthriscus sylvestris (Cow Parsley)
22743698	frequent_25_33	Galium aparine (Cleavers)
22743698	occasional_10_25	Bellis perennis (Daisy)
22743698	rare_0_1_10	Sonchus arvensis (Perennial Sow-thistle)
22743698	frequent_25_33	Dactylis glomerata (Cock's-foot)
22743698	abundant_33_50	Lolium perenne (Perennial Rye-grass)
22743698	occasional_10_25	Rubus fruticosus agg. (Bramble)
22743698	occasional_10_25	Urtica dioica (Common Nettle)
22743698	rare_0_1_10	Crataegus monogyna (Hawthorn)
22743698	rare_0_1_10	Chelidonium majus (Greater Celandine)
22743698	occasional_10_25	Veronica chamaedrys (Germander Speedwell)
22743698	rare_0_1_10	Sonchus oleraceus (Smooth Sow-thistle)
22743698	occasional_10_25	Pteridium aquilinum (Bracken)

TN10 – Modified grassland

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22743745	abundant_33_50	Lolium perenne (Perennial Rye-grass)
22743745	occasional_10_25	Festuca rubra (Red Fescue)
22743745	frequent_25_33	Holcus lanatus (Yorkshire-fog)
22743745	frequent_25_33	Ranunculus repens (Creeping Buttercup)
22743745	rare_0_1_10	Ranunculus acris (Meadow Buttercup)
22743745	occasional_10_25	Taraxacum spp. (Dandelions)
22743745	rare_0_1_10	Heracleum sphondylium (Hogweed)
22743745	occasional_10_25	Rumex obtusifolius (Broad-leaved Dock)
22743745	rare_0_1_10	Urtica dioica (Common Nettle)

KEY: D – Dominant; A – Abundant; F – Frequent; O – Occasional; R - Rare

22743755	abundant_33_50	<i>Lolium perenne</i> (Perennial Rye-grass)
22743755	occasional_10_25	<i>Holcus lanatus</i> (Yorkshire-fog)
22743755	rare_0_1_10	<i>Poa annua</i> (Annual Meadow-grass)
22743755	occasional_10_25	<i>Poa compressa</i> (Flattened Meadow-grass)
22743755	occasional_10_25	<i>Trifolium repens</i> (White Clover)
22743755	frequent_25_33	<i>Taraxacum</i> spp. (Dandelions)
22743755	rare_0_1_10	<i>Heracleum sphondylium</i> (Hogweed)
22743755	rare_0_1_10	<i>Anthriscus sylvestris</i> (Cow Parsley)
22752301	abundant_33_50	<i>Lolium perenne</i> (Perennial Rye-grass)
22752301	occasional_10_25	<i>Holcus lanatus</i> (Yorkshire-fog)
22752301	occasional_10_25	<i>Anthriscus sylvestris</i> (Cow Parsley)
22752301	occasional_10_25	<i>Taraxacum</i> spp. (Dandelions)
22752301	rare_0_1_10	<i>Silene dioica</i> (Red Campion)
22752301	frequent_25_33	<i>Crataegus monogyna</i> (Hawthorn)
22752301	occasional_10_25	<i>Prunus spinosa</i> (Blackthorn)
22752301	rare_0_1_10	<i>Corylus avellana</i> (Hazel)
22752301	rare_0_1_10	<i>Acer campestre</i> (Field Maple)
22743734	abundant_33_50	<i>Lolium perenne</i> (Perennial Rye-grass)
22743734	occasional_10_25	<i>Holcus lanatus</i> (Yorkshire-fog)
22743734	occasional_10_25	<i>Dactylis glomerata</i> (Cock's-foot)
22743734	occasional_10_25	<i>Festuca rubra</i> (Red Fescue)
22743734	occasional_10_25	<i>Anthriscus sylvestris</i> (Cow Parsley)
22743734	frequent_25_33	<i>Taraxacum</i> spp. (Dandelions)
22743734	rare_0_1_10	<i>Heracleum sphondylium</i> (Hogweed)
22743734	frequent_25_33	<i>Ranunculus repens</i> (Creeping Buttercup)
22743734	rare_0_1_10	<i>Geranium dissectum</i> (Cut-leaved Crane's-bill)
22743734	occasional_10_25	<i>Bellis perennis</i> (Daisy)

TN11 – Modified grassland

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22743718	abundant_33_50	<i>Lolium perenne</i> (Perennial Rye-grass)
22743718	occasional_10_25	<i>Poa trivialis</i> (Rough Meadow-grass)
22743718	occasional_10_25	<i>Holcus lanatus</i> (Yorkshire-fog)
22743718	occasional_10_25	<i>Phleum pratense</i> (Timothy)
22743718	occasional_10_25	<i>Trifolium repens</i> (White Clover)
22743718	occasional_10_25	<i>Dactylis glomerata</i> (Cock's-foot)
22743718	occasional_10_25	<i>Taraxacum</i> spp. (Dandelions)
22743718	occasional_10_25	<i>Ranunculus repens</i> (Creeping Buttercup)
22743718	rare_0_1_10	<i>Cirsium vulgare</i> (Spear Thistle)
22743718	rare_0_1_10	<i>Cerastium fontanum</i> (Common Mouse-ear)
22743718	occasional_10_25	<i>Bellis perennis</i> (Daisy)
22743718	rare_0_1_10	<i>Plantago lanceolata</i> (Ribwort Plantain)
22743718	rare_0_1_10	<i>Heracleum sphondylium</i> (Hogweed)
22743718	rare_0_1_10	<i>Anthriscus sylvestris</i> (Cow Parsley)

TN12 – Other coniferous woodland

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22752340	abundant_33_50	Pinus sylvestris (Scots Pine)
22752340	occasional_10_25	Sambucus nigra (Elder)
22752340	occasional_10_25	Crataegus monogyna (Hawthorn)
22752340	rare_0_1_10	Cupressus lawsoniana
22752340	abundant_33_50	Rubus fruticosus agg. (Bramble)
22752340	occasional_10_25	Hedera helix (Common Ivy)
22752340	rare_0_1_10	Arum maculatum (Lords-and-Ladies)
22752340	occasional_10_25	Urtica dioica (Common Nettle)
22752340	occasional_10_25	Alliaria petiolata (Garlic Mustard)
22752340	rare_0_1_10	Geranium robertianum (Herb-Robert)

TN13 – Other broadleaved woodland

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22752312	frequent_25_33	Acer campestre (Field Maple)
22752312	occasional_10_25	Crataegus monogyna (Hawthorn)
22752312	occasional_10_25	Salix caprea (Goat Willow)
22752312	dominant_50	Rubus fruticosus agg. (Bramble)

TN14 – Other broadleaved woodland

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22752352	abundant_33_50	Fagus sylvatica (Beech)
22752352	occasional_10_25	Prunus avium (Wild Cherry)
22752352	rare_0_1_10	Sambucus nigra (Elder)
22752352	occasional_10_25	Urtica dioica (Common Nettle)
22752352	frequent_25_33	Galium aparine (Cleavers)
22752352	occasional_10_25	Arum maculatum (Lords-and-Ladies)
22752352	frequent_25_33	Hedera helix (Common Ivy)
22752352	rare_0_1_10	Cupressus lawsoniana

TN15 – Modified grassland

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22752375	frequent_25_33	Holcus lanatus (Yorkshire-fog)
22752375	abundant_33_50	Lolium perenne (Perennial Rye-grass)
22752375	occasional_10_25	Taraxacum spp. (Dandelions)
22752375	frequent_25_33	Ranunculus repens (Creeping Buttercup)
22752375	occasional_10_25	Dactylis glomerata (Cock's-foot)
22752375	occasional_10_25	Agrostis capillaris (Common Bent)
22752375	occasional_10_25	Cirsium arvense (Creeping Thistle)
22752383	abundant_33_50	Lolium perenne (Perennial Rye-grass)
22752383	frequent_25_33	Holcus lanatus (Yorkshire-fog)
22752383	occasional_10_25	Anthoxanthum odoratum (Sweet Vernal-grass)
22752383	frequent_25_33	Ranunculus repens (Creeping Buttercup)
22752383	frequent_25_33	Taraxacum spp. (Dandelions)
22752383	rare_0_1_10	Cirsium arvense (Creeping Thistle)

KEY: D – Dominant; A – Abundant; F – Frequent; O – Occasional; R - Rare

22752383	occasional_10_25	Poa annua (Annual Meadow-grass)
22752391	abundant_33_50	Lolium perenne (Perennial Rye-grass)
22752391	frequent_25_33	Holcus lanatus (Yorkshire-fog)
22752391	frequent_25_33	Heracleum sphondylium (Hogweed)
22752391	rare_0_1_10	Ranunculus acris (Meadow Buttercup)
22752391	occasional_10_25	Taraxacum spp. (Dandelions)
22752391	occasional_10_25	Cirsium arvense (Creeping Thistle)

TN16 – Modified grassland

No species recorded

TN17 – Modified grassland

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22752399	abundant_33_50	Lolium perenne (Perennial Rye-grass)
22752399	frequent_25_33	Holcus lanatus (Yorkshire-fog)
22752399	rare_0_1_10	Cerastium fontanum (Common Mouse-ear)
22752399	rare_0_1_10	Taraxacum spp. (Dandelions)
22752399	rare_0_1_10	Heracleum sphondylium (Hogweed)
22752399	occasional_10_25	Festuca rubra (Red Fescue)
22752399	rare_0_1_10	Ranunculus acris (Meadow Buttercup)
22752407	abundant_33_50	Lolium perenne (Perennial Rye-grass)
22752407	frequent_25_33	Holcus lanatus (Yorkshire-fog)
22752407	frequent_25_33	Ranunculus acris (Meadow Buttercup)
22752407	occasional_10_25	Festuca rubra (Red Fescue)
22752407	rare_0_1_10	Cerastium fontanum (Common Mouse-ear)
22752407	rare_0_1_10	Taraxacum spp. (Dandelions)
22752407	rare_0_1_10	Heracleum sphondylium (Hogweed)
22752416	abundant_33_50	Lolium perenne (Perennial Rye-grass)
22752416	frequent_25_33	Holcus lanatus (Yorkshire-fog)
22752416	frequent_25_33	Festuca rubra (Red Fescue)
22752416	occasional_10_25	Ranunculus acris (Meadow Buttercup)
22752416	rare_0_1_10	Anthoxanthum odoratum (Sweet Vernal-grass)
22752422	abundant_33_50	Lolium perenne (Perennial Rye-grass)
22752422	frequent_25_33	Holcus lanatus (Yorkshire-fog)
22752422	occasional_10_25	Anthoxanthum odoratum (Sweet Vernal-grass)
22752422	occasional_10_25	Festuca rubra (Red Fescue)
22752422	rare_0_1_10	Cerastium fontanum (Common Mouse-ear)
22752422	rare_0_1_10	Ranunculus acris (Meadow Buttercup)
22752429	abundant_33_50	Lolium perenne (Perennial Rye-grass)
22752429	frequent_25_33	Holcus lanatus (Yorkshire-fog)
22752429	occasional_10_25	Alopecurus pratensis (Meadow Foxtail)
22752429	rare_0_1_10	Festuca rubra (Red Fescue)
22752429	rare_0_1_10	Cerastium fontanum (Common Mouse-ear)

KEY: D – Dominant; A – Abundant; F – Frequent; O – Occasional; R - Rare

22752429	rare_0_1_10	Ranunculus acris (Meadow Buttercup)
22752437	abundant_33_50	Lolium perenne (Perennial Rye-grass)
22752437	occasional_10_25	Festuca rubra (Red Fescue)
22752437	occasional_10_25	Ranunculus repens (Creeping Buttercup)
22752437	frequent_25_33	Rumex obtusifolius (Broad-leaved Dock)
22752437	occasional_10_25	Taraxacum spp. (Dandelions)
22752437	occasional_10_25	Plantago lanceolata (Ribwort Plantain)
22752437	rare_0_1_10	Prunus spinosa (Blackthorn)

TN18 – Other neutral grassland

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22752446	abundant_33_50	Anthoxanthum odoratum (Sweet Vernal-grass)
22752446	occasional_10_25	Holcus lanatus (Yorkshire-fog)
22752446	frequent_25_33	Ranunculus acris (Meadow Buttercup)
22752446	occasional_10_25	Taraxacum spp. (Dandelions)
22752446	occasional_10_25	Agrostis capillaris (Common Bent)
22752446	occasional_10_25	Festuca rubra (Red Fescue)
22752446	occasional_10_25	Alopecurus pratensis (Meadow Foxtail)
22752454	frequent_25_33	Anthoxanthum odoratum (Sweet Vernal-grass)
22752454	frequent_25_33	Festuca rubra (Red Fescue)
22752454	occasional_10_25	Lolium perenne (Perennial Rye-grass)
22752454	occasional_10_25	Holcus lanatus (Yorkshire-fog)
22752454	occasional_10_25	Rumex acetosella (Sheep's Sorrel)
22752454	occasional_10_25	Ranunculus acris (Meadow Buttercup)

TN19 – Other broadleaved woodland

No species recorded

TN20 – Modified grassland

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22763023	frequent_25_33	Cirsium arvense (Creeping Thistle)
22763023	frequent_25_33	Lolium perenne (Perennial Rye-grass)
22763023	occasional_10_25	Festuca rubra (Red Fescue)
22763023	rare_0_1_10	Ranunculus acris (Meadow Buttercup)
22763023	rare_0_1_10	Achillea millefolium (Yarrow)
22763023	rare_0_1_10	Cynosurus cristatus (Crested Dog's-tail)
22763023	rare_0_1_10	Alopecurus pratensis (Meadow Foxtail)
22763031	abundant_33_50	Lolium perenne (Perennial Rye-grass)
22763031	occasional_10_25	Alopecurus pratensis (Meadow Foxtail)
22763031	occasional_10_25	Festuca rubra (Red Fescue)
22763031	occasional_10_25	Holcus lanatus (Yorkshire-fog)
22763031	rare_0_1_10	Arrhenatherum elatius (False Oat-grass)
22763031	rare_0_1_10	Ranunculus acris (Meadow Buttercup)

TN21 – Other broadleaved woodland

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22752596	occasional_10_25	Hyacinthoides non-scripta (Bluebell)
22752596	frequent_25_33	Geranium robertianum (Herb-Robert)
22752596	frequent_25_33	Corylus avellana (Hazel)
22752596	occasional_10_25	Fagus sylvatica (Beech)
22752596	occasional_10_25	Quercus robur (Pedunculate Oak)
22752596	occasional_10_25	Ilex aquifolium (Holly)
22752596	frequent_25_33	Fraxinus excelsior (Ash)
22752596	frequent_25_33	Crataegus monogyna (Hawthorn)
22752596	abundant_33_50	Urtica dioica (Common Nettle)
22752596	occasional_10_25	Rubus fruticosus agg. (Bramble)
22752596	frequent_25_33	Acer pseudoplatanus (Sycamore)

TN22 – Pond (non-priority habitat)

No species recorded

TN23 – Modified grassland

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22763003	abundant_33_50	Holcus lanatus (Yorkshire-fog)
22763003	occasional_10_25	Lolium perenne (Perennial Rye-grass)
22763003	occasional_10_25	Cirsium arvense (Creeping Thistle)
22763003	rare_0_1_10	Plantago lanceolata (Ribwort Plantain)
22763003	occasional_10_25	Festuca rubra (Red Fescue)
22763003	rare_0_1_10	Rumex acetosella (Sheep's Sorrel)

TN24 – Modified grassland

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22762987	abundant_33_50	Lolium perenne (Perennial Rye-grass)
22762987	frequent_25_33	Festuca rubra (Red Fescue)
22762987	occasional_10_25	Agrostis capillaris (Common Bent)
22762987	rare_0_1_10	Holcus lanatus (Yorkshire-fog)
22762987	occasional_10_25	Ranunculus repens (Creeping Buttercup)
22762987	rare_0_1_10	Rumex obtusifolius (Broad-leaved Dock)
22762978	abundant_33_50	Lolium perenne (Perennial Rye-grass)
22762978	frequent_25_33	Festuca rubra (Red Fescue)
22762978	occasional_10_25	Holcus lanatus (Yorkshire-fog)
22762978	occasional_10_25	Agrostis capillaris (Common Bent)
22762978	occasional_10_25	Anthoxanthum odoratum (Sweet Vernal-grass)
22762978	rare_0_1_10	Cerastium fontanum (Common Mouse-ear)
22762978	rare_0_1_10	Plantago lanceolata (Ribwort Plantain)
22762978	rare_0_1_10	Ranunculus repens (Creeping Buttercup)
22762995	abundant_33_50	Lolium perenne (Perennial Rye-grass)
22762995	frequent_25_33	Trifolium pratense (Red Clover)
22762995	frequent_25_33	Holcus lanatus (Yorkshire-fog)
22762995	rare_0_1_10	Cerastium fontanum (Common Mouse-ear)

KEY: D – Dominant; A – Abundant; F – Frequent; O – Occasional; R - Rare

22762995	rare_0_1_10	Taraxacum spp. (Dandelions)
22762995	occasional_10_25	Ranunculus repens (Creeping Buttercup)
22762995	occasional_10_25	Festuca rubra (Red Fescue)

TN25 – Other neutral grassland

No species recorded

TN26 – Mixed woodland

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22752578	frequent_25_33	Fagus sylvatica (Beech)
22752578	occasional_10_25	Unidentified Species A
22752578	rare_0_1_10	Sequoia sempervirens (Coastal Redwood)
22752578	abundant_33_50	Prunus laurocerasus (Cherry Laurel)
22752578	frequent_25_33	Galium aparine (Cleavers)
22752578	occasional_10_25	Alliaria petiolata (Garlic Mustard)
22752578	rare_0_1_10	Geranium robertianum (Herb-Robert)
22752578		Hyacinthoides non-scripta (Bluebell)

TN27 – Mixed woodland

No species recorded

TN28 – Bramble scrub

No species recorded

TN29 – Modified grassland

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22752532	frequent_25_33	Rubus fruticosus agg. (Bramble)
22752532	rare_0_1_10	Crataegus monogyna (Hawthorn)
22752532	occasional_10_25	Urtica dioica (Common Nettle)
22752532	occasional_10_25	Lamium album (White Dead-nettle)
22752532	occasional_10_25	Anthriscus sylvestris (Cow Parsley)
22752532	rare_0_1_10	Sambucus nigra (Elder)
22752532	occasional_10_25	Heracleum sphondylium (Hogweed)
22752532	frequent_25_33	Holcus lanatus (Yorkshire-fog)
22752532	rare_0_1_10	Veronica chamaedrys (Germander Speedwell)
22752532	occasional_10_25	Cirsium arvense (Creeping Thistle)
22752532	rare_0_1_10	Conium maculatum (Hemlock)
22752532	rare_0_1_10	Schedonorus arundinaceus (Tall Fescue)
22752532	rare_0_1_10	Myosotis arvensis (Field Forget-me-not)
22752532	occasional_10_25	Dactylis glomerata (Cock's-foot)
22752506	dominant_50	Lolium perenne (Perennial Rye-grass)
22752506	occasional_10_25	Poa compressa (Flattened Meadow-grass)
22752506	occasional_10_25	Festuca rubra (Red Fescue)
22752506	occasional_10_25	Trifolium repens (White Clover)
22752506	occasional_10_25	Ranunculus repens (Creeping Buttercup)
22752506	occasional_10_25	Alopecurus pratensis (Meadow Foxtail)

KEY: D – Dominant; A – Abundant; F – Frequent; O – Occasional; R - Rare

22752484	dominant_50	Lolium perenne (Perennial Rye-grass)
22752484	occasional_10_25	Poa compressa (Flattened Meadow-grass)
22752484	occasional_10_25	Festuca rubra (Red Fescue)
22752484	occasional_10_25	Trifolium repens (White Clover)
22752484	occasional_10_25	Ranunculus repens (Creeping Buttercup)
22752484	occasional_10_25	Alopecurus pratensis (Meadow Foxtail)
22752491	abundant_33_50	Lolium perenne (Perennial Rye-grass)
22752491	occasional_10_25	Festuca rubra (Red Fescue)
22752491	occasional_10_25	Alopecurus pratensis (Meadow Foxtail)
22752491	frequent_25_33	Trifolium repens (White Clover)
22752491	rare_0_1_10	Rumex acetosella (Sheep's Sorrel)
22752491	occasional_10_25	Rumex obtusifolius (Broad-leaved Dock)
22752513	abundant_33_50	Lolium perenne (Perennial Rye-grass)
22752513	occasional_10_25	Festuca rubra (Red Fescue)
22752513	occasional_10_25	Alopecurus pratensis (Meadow Foxtail)
22752513	frequent_25_33	Trifolium repens (White Clover)
22752513	rare_0_1_10	Rumex acetosella (Sheep's Sorrel)
22752513	occasional_10_25	Rumex obtusifolius (Broad-leaved Dock)
22752499	occasional_10_25	Dactylis glomerata (Cock's-foot)
22752499	frequent_25_33	Lolium perenne (Perennial Rye-grass)
22752499	frequent_25_33	Poa compressa (Flattened Meadow-grass)
22752499	occasional_10_25	Agrostis capillaris (Common Bent)
22752499	occasional_10_25	Holcus lanatus (Yorkshire-fog)
22752499	frequent_25_33	Alopecurus pratensis (Meadow Foxtail)
22752477	occasional_10_25	Dactylis glomerata (Cock's-foot)
22752477	frequent_25_33	Lolium perenne (Perennial Rye-grass)
22752477	frequent_25_33	Poa compressa (Flattened Meadow-grass)
22752477	occasional_10_25	Agrostis capillaris (Common Bent)
22752477	occasional_10_25	Holcus lanatus (Yorkshire-fog)
22752477	frequent_25_33	Alopecurus pratensis (Meadow Foxtail)
22752521	dominant_50	Acer campestre (Field Maple)

TN30 – Bramble scrub

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22752527	dominant_50	Rubus fruticosus agg. (Bramble)
22752527	occasional_10_25	Urtica dioica (Common Nettle)
22752527	occasional_10_25	Anthriscus sylvestris (Cow Parsley)

TN31 – Other broadleaved woodland

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22752559	frequent_25_33	Acer pseudoplatanus (Sycamore)
22752559	frequent_25_33	Crataegus monogyna (Hawthorn)

KEY: D – Dominant; A – Abundant; F – Frequent; O – Occasional; R - Rare

22752559	rare_0_1_10	Rosa canina (Dog-rose)
22752559	frequent_25_33	Rubus fruticosus agg. (Bramble)
22752559	frequent_25_33	Urtica dioica (Common Nettle)
22752559	occasional_10_25	Galium aparine (Cleavers)
22752559	occasional_10_25	Fraxinus excelsior (Ash)
22752559	occasional_10_25	Anthriscus sylvestris (Cow Parsley)
22752559	rare_0_1_10	Heracleum sphondylium (Hogweed)

22752569	frequent_25_33	Crataegus monogyna (Hawthorn)
22752569	abundant_33_50	Rubus fruticosus agg. (Bramble)
22752569	occasional_10_25	Acer pseudoplatanus (Sycamore)
22752569	rare_0_1_10	Unidentified Species A
22752569	rare_0_1_10	Taxus baccata (Yew)
22752569	rare_0_1_10	Ulmus procera (English Elm)

TN32 – Arable field margins

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22763067	abundant_33_50	Lolium perenne (Perennial Rye-grass)
22763067	occasional_10_25	Festuca rubra (Red Fescue)
22763067	rare_0_1_10	Dactylis glomerata (Cock's-foot)
22763067	rare_0_1_10	Rumex obtusifolius (Broad-leaved Dock)
22763067	rare_0_1_10	Vicia cracca (Tufted Vetch)
22763073	frequent_25_33	Holcus lanatus (Yorkshire-fog)
22763073	frequent_25_33	Lolium perenne (Perennial Rye-grass)
22763073	occasional_10_25	Cirsium arvense (Creeping Thistle)
22763073	occasional_10_25	Festuca rubra (Red Fescue)
22763073	occasional_10_25	Heracleum sphondylium (Hogweed)
22763073	rare_0_1_10	Taraxacum spp. (Dandelions)
22763073	rare_0_1_10	Stachys sylvatica (Hedge Woundwort)
22763073	rare_0_1_10	Vicia cracca (Tufted Vetch)

TN33 – Modified grassland

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22763094	abundant_33_50	Lolium perenne (Perennial Rye-grass)
22763094		Holcus lanatus (Yorkshire-fog)
22763094	occasional_10_25	Festuca rubra (Red Fescue)
22763094	frequent_25_33	Anthriscus sylvestris (Cow Parsley)
22763094	rare_0_1_10	Jacobaea vulgaris (Common ragwort)
22763094	rare_0_1_10	Anisantha sterilis (Barren Brome)
22763094	rare_0_1_10	Geum urbanum (Wood Avens)
22763102	abundant_33_50	Lolium perenne (Perennial Rye-grass)
22763102	rare_0_1_10	Geum urbanum (Wood Avens)
22763102	rare_0_1_10	Galium aparine (Cleavers)
22763102	frequent_25_33	Holcus lanatus (Yorkshire-fog)
22763102	occasional_10_25	Dactylis glomerata (Cock's-foot)

TN34 – Blackthorn scrub

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22763109	frequent_25_33	Prunus spinosa (Blackthorn)
22763109	frequent_25_33	Lolium perenne (Perennial Rye-grass)
22763109	occasional_10_25	Holcus lanatus (Yorkshire-fog)
22763109	occasional_10_25	Anthriscus sylvestris (Cow Parsley)
22763109	rare_0_1_10	Cirsium vulgare (Spear Thistle)
22763109	rare_0_1_10	Geum urbanum (Wood Avens)
22763109	rare_0_1_10	Dactylis glomerata (Cock's-foot)
22763109	rare_0_1_10	Geranium dissectum (Cut-leaved Crane's-bill)

TN35 – Arable field margins c

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22763120	frequent_25_33	Lolium perenne (Perennial Rye-grass)
22763120	occasional_10_25	Rubus fruticosus agg. (Bramble)
22763120	frequent_25_33	Anthriscus sylvestris (Cow Parsley)
22763120	occasional_10_25	Heracleum sphondylium (Hogweed)
22763120	occasional_10_25	Rumex obtusifolius (Broad-leaved Dock)
22763120	occasional_10_25	Dactylis glomerata (Cock's-foot)

TN36 – Arable field margins

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22763174	frequent_25_33	Lolium perenne (Perennial Rye-grass)
22763174	frequent_25_33	Holcus lanatus (Yorkshire-fog)
22763174	occasional_10_25	Dactylis glomerata (Cock's-foot)
22763174	occasional_10_25	Rubus fruticosus agg. (Bramble)
22763174	rare_0_1_10	Trifolium repens (White Clover)
22763174	rare_0_1_10	Centaurea nigra (Common Knapweed)

TN37 – Arable field margins

No species recorded

TN38 – Other neutral grassland

<i>Carex sp.</i>	Sedge species	A
<i>Luzula campestris</i>	Field Woodrush	A
<i>Poterium sanguisorba</i>	Salad Burnet	A
<i>Alopecurus pratensis</i>	Meadow Foxtail	F
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	F
<i>Ranunculus repens</i>	Creeping Buttercup	F
<i>Bellis perennis</i>	Daisy	O
<i>Cardamine pratensis</i>	Cuckooflower	O
<i>Cerastium fontanum</i>	Common Mouse-ear	O
<i>Lolium perenne</i>	Perennial Ryegrass	O
<i>Taraxacum officinale agg.</i>	Dandelion	O
<i>Conopodium majus</i>	Pignut	R
<i>Heracleum sphondylium</i>	Hogweed	R
<i>Juncus effusus</i>	Soft Rush	R
<i>Lamium album</i>	White Dead-nettle	R
<i>Rumex obtusifolius</i>	Broad-leaved Dock	R
<i>Stellaria holostea</i>	Greater Stitchwort	R

KEY: D – Dominant; A – Abundant; F – Frequent; O – Occasional; R - Rare

TN39 – Other broad-leaved woodland

<i>Alnus glutinosa</i>	Alder	D
<i>Salix fragilis</i>	Crack Willow	A
<i>Urtica dioica</i>	Nettle	A
<i>Galium aparine</i>	Cleavers	F
<i>Rubus fruticosus agg.</i>	Bramble	F
<i>Rumex sanguineus</i>	Wood Dock	F
<i>Agrimonia eupatoria</i>	Agrimony	O
<i>Nasturtium officinale</i>	Watercress	O
<i>Tamus communis</i>	Black Bryony	O
<i>Chamaenerion angustifolium</i>	Rosebay Willowherb	R
<i>Geranium robertianum</i>	Herb-Robert	R
<i>Jacobaea vulgaris</i>	Common Ragwort	R
<i>Juncus effusus</i>	Soft Rush	R
<i>Quercus robur</i>	English Oak	R

TN40 – Pond (non-priority habitat)

<i>Juncus effusus</i>	Soft rush
<i>Rubus fruticosus agg.</i>	Bramble

TN41 – Bramble scrub

<i>Cirsium arvense</i>	Creeping Thistle
<i>Epilobium hirsutum</i>	Great Willowherb
<i>Holcus lanatus</i>	Yorkshire-fog
<i>Jacobaea vulgaris</i>	Common Ragwort
<i>Poa trivialis</i>	Rough Meadow-grass
<i>Rumex crispus</i>	Curled Dock
<i>Rumex obtusifolius</i>	Broad-leaved Dock

TN42 – Arable field margins

See H11

TN43 – Arable field margins

See H12

TN44 – Modified grassland

<i>Trifolium repens</i>	White Clover	A
<i>Plantago lanceolata</i>	Ribwort Plantain	F
<i>Poa trivialis</i>	Rough Meadow-grass	F
<i>Taraxacum sp.</i>	Dandelion species	F
<i>Cerastium fontanum</i>	Common Mouse-ear	O
<i>Lamium album</i>	White Dead-nettle	O
<i>Urtica dioica</i>	Nettle	O
<i>Dactylis glomerata</i>	Cock's-foot	R
<i>Jacobaea vulgaris</i>	Common Ragwort	R
<i>Plantago major</i>	Greater Plantain	R
<i>Veronica arvensis</i>	Wall Speedwell	R

TN45 – Modified grassland

<i>Lolium perenne</i>	Perennial Ryegrass	D
<i>Bellis perennis</i>	Daisy	A
<i>Trifolium repens</i>	White Clover	A

KEY: D – Dominant; A – Abundant; F – Frequent; O – Occasional; R - Rare

<i>Ranunculus repens</i>	Creeping Buttercup	F
<i>Taraxacum</i> sp.	Dandelion species	F
<i>Jacobaea vulgaris</i>	Common Ragwort	O
<i>Veronica arvensis</i>	Wall Speedwell	R

TN46 – Modified grassland

<i>Lolium perenne</i>	Perennial Ryegrass	D
<i>Taraxacum</i> sp.	Dandelion species	D
<i>Trifolium repens</i>	White Clover	F
<i>Bellis perennis</i>	Daisy	R
<i>Cerastium fontanum</i>	Common Mouse-ear	R
<i>Cirsium arvense</i>	Creeping Thistle	R

TN47 – Modified grassland

See TN46

TN48 – Awaiting habitat data

TN49 – Other neutral grassland

<i>Alopecurus pratensis</i>	Meadow Foxtail	A
<i>Bellis perennis</i>	Daisy	F
<i>Lotus pedunculatus</i>	Marsh Bird's-foot Trefoil	F
<i>Plantago lanceolata</i>	Ribwort Plantain	F
<i>Ranunculus bulbosus</i>	Bulbous Buttercup	F
<i>Ranunculus repens</i>	Creeping Buttercup	F
<i>Rumex acetosa</i>	Common Sorrel	F
<i>Rumex acetosella</i>	Sheep's Sorrel	F
<i>Taraxacum officinale</i> agg.	Dandelion	F
<i>Luzula campestris</i>	Field Woodrush	O
<i>Rumex obtusifolius</i>	Broad-leaved Dock	O
<i>Urtica dioica</i>	Nettle	O
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	R
<i>Cirsium vulgare</i>	Spear Thistle	R
<i>Helminthotheca echioides</i>	Bristly Oxtongue	R
<i>Lolium perenne</i>	Perennial Ryegrass	R
<i>Alopecurus geniculatus</i>	Marsh Foxtail	
<i>Carex binervis</i>	Green-ribbed Sedge	
<i>Luzula multiflora</i>	Heath Woodrush	

TN50 – Bramble scrub

<i>Rubus fruticosus</i> agg.	Bramble	A
<i>Alopecurus pratensis</i>	Meadow Foxtail	O
<i>Rosa</i> sp.	Rose species	O
<i>Betula pendula</i>	Silver Birch	R
<i>Ranunculus repens</i>	Creeping Buttercup	R
<i>Rumex obtusifolius</i>	Broad-leaved Dock	R

TN51 – Modified grassland

<i>Urtica dioica</i>	Nettle	A
<i>Epilobium hirsutum</i>	Great Willowherb	F
<i>Heracleum sphondylium</i>	Hogweed	F
<i>Lolium perenne</i>	Perennial Ryegrass	F
<i>Rubus fruticosus</i> agg.	Bramble	F
<i>Achillea millefolium</i>	Yarrow	O
<i>Chamaenerion angustifolium</i>	Rosebay Willowherb	O

KEY: D – Dominant; A – Abundant; F – Frequent; O – Occasional; R - Rare

<i>Cirsium arvense</i>	Creeping Thistle	O
<i>Galium aparine</i>	Cleavers	O
<i>Ranunculus repens</i>	Creeping Buttercup	O
<i>Rosa sp.</i>	Rose species	O
<i>Rumex obtusifolius</i>	Broad-leaved Dock	O
<i>Sisymbrium officinale</i>	Hedge Mustard	O
<i>Hypericum sp.</i>	St John's-wort	R
<i>Prunus spinosa</i>	Blackthorn	R
<i>Tamus communis</i>	Black Bryony	R

TN52 – Modified grassland

<i>Lolium perenne</i>	Perennial Ryegrass	D
<i>Bellis perennis</i>	Daisy	A
<i>Trifolium repens</i>	White Clover	A
<i>Cirsium arvense</i>	Creeping Thistle	F
<i>Cirsium vulgare</i>	Spear Thistle	F
<i>Plantago lanceolata</i>	Ribwort Plantain	F
<i>Ranunculus repens</i>	Creeping Buttercup	F
<i>Taraxacum officinale agg.</i>	Dandelion	F
<i>Taraxacum sp.</i>	Dandelion species	F
<i>Cerastium fontanum</i>	Common Mouse-ear	O
<i>Jacobaea vulgaris</i>	Common Ragwort	O
<i>Anthriscus sylvestris</i>	Cow Parsley	R
<i>Geranium dissectum</i>	Cut-leaved Cranesbill	R
<i>Heracleum sphondylium</i>	Hogweed	R
<i>Veronica agrestis</i>	Field Speedwell	R
<i>Veronica arvensis</i>	Wall Speedwell	R

TN53 – Modified grassland

<i>Lolium perenne</i>	Perennial Ryegrass	D
<i>Ranunculus repens</i>	Creeping Buttercup	A
<i>Cirsium arvense</i>	Creeping Thistle	F
<i>Trifolium repens</i>	White Clover	F
<i>Bellis perennis</i>	Daisy	O

TN54 – Modified grassland

<i>Lolium perenne</i>	Perennial Ryegrass	D
<i>Ranunculus repens</i>	Creeping Buttercup	A
<i>Cirsium arvense</i>	Creeping Thistle	F
<i>Trifolium repens</i>	White Clover	F
<i>Bellis perennis</i>	Daisy	O

TN55 – Modified grassland

<i>Achillea millefolium</i>	Yarrow
<i>Anthriscus sylvestris</i>	Cow Parsley
<i>Galium aparine</i>	Cleavers
<i>Glechoma hederacea</i>	Ground-ivy
<i>Hedera helix</i>	Ivy
<i>Heracleum sphondylium</i>	Hogweed
<i>Lamium album</i>	White Dead-nettle
<i>Lolium perenne</i>	Perennial Ryegrass
<i>Plantago lanceolata</i>	Ribwort Plantain
<i>Poa trivialis</i>	Rough Meadow-grass
<i>Taraxacum sp.</i>	Dandelion species
<i>Trifolium repens</i>	White Clover

KEY: D – Dominant; A – Abundant; F – Frequent; O – Occasional; R - Rare

<i>Tussilago farfara</i>	Colt's-foot
<i>Urtica dioica</i>	Nettle
<i>Veronica hederifolia hederifolia</i>	Ivy-leaved Speedwell

TN56 – Ruderal/ephemeral

<i>Rumex obtusifolius</i>	Broad-leaved Dock	A
<i>Urtica dioica</i>	Nettle	A
<i>Anisanthera sterilis</i>	Sterile Brome	F
<i>Cirsium arvense</i>	Creeping Thistle	F
<i>Geum urbanum</i>	Wood Avens	F
<i>Phleum pratense</i>	Timothy	F
<i>Ranunculus repens</i>	Creeping Buttercup	F
<i>Achillea millefolium</i>	Yarrow	O
<i>Calystegia sp.</i>	Bindweed species	O
<i>Galium aparine</i>	Cleavers	O
<i>Lamium album</i>	White Dead-nettle	O
<i>Lapsana communis</i>	Nipplewort	O
<i>Myosotis arvensis</i>	Field Forget-me-not	O
<i>Plantago lanceolata</i>	Ribwort Plantain	O
<i>Potentilla reptans</i>	Creeping Cinquefoil	O
<i>Tamus communis</i>	Black Bryony	O
<i>Trifolium repens</i>	White Clover	O
<i>Veronica agrestis</i>	Field Speedwell	O
<i>Centaurea nigra</i>	Knapweed	R
<i>Chamaenerion angustifolium</i>	Rosebay Willowherb	R
<i>Chelidonium majus</i>	Greater Celandine	R
<i>Cirsium vulgare</i>	Spear Thistle	R
<i>Geranium dissectum</i>	Cut-leaved Cranesbill	R
<i>Geranium robertianum</i>	Herb-Robert	R
<i>Helminthotheca echioides</i>	Bristly Oxtongue	R
<i>Hypericum sp.</i>	St John's-wort	R
<i>Lysimachia arvensis</i>	Scarlet Pimpernel	R
<i>Ranunculus acris</i>	Meadow Buttercup	R
<i>Rubus fruticosus agg.</i>	Bramble	R
<i>Vicia sepium</i>	Bush Vetch	R

TN57 - Tall forbs

<i>Rumex obtusifolius</i>	Broad-leaved Dock	D
<i>Cirsium arvense</i>	Creeping Thistle	F
<i>Cirsium vulgare</i>	Spear Thistle	F
<i>Helminthotheca echioides</i>	Bristly Oxtongue	F
<i>Urtica dioica</i>	Nettle	F
<i>Veronica agrestis</i>	Field Speedwell	F
<i>Plantago major</i>	Greater Plantain	O
<i>Ranunculus repens</i>	Creeping Buttercup	O
<i>Cerastium fontanum</i>	Common Mouse-ear	R
<i>Chamaenerion angustifolium</i>	Rosebay Willowherb	R
<i>Glechoma hederacea</i>	Ground-ivy	R
<i>Myosotis arvensis</i>	Field Forget-me-not	R
<i>Poa trivialis</i>	Rough Meadow-grass	R
<i>Trifolium repens</i>	White Clover	R
<i>Tussilago farfara</i>	Colt's-foot	R

TN58 - Other neutral grassland

<i>Phleum pratense</i>	Timothy	D
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	F
<i>Linum sp.</i>	Flax species	F

KEY: D – Dominant; A – Abundant; F – Frequent; O – Occasional; R - Rare

<i>Poa trivialis</i>	Rough Meadow-grass	F
<i>Cardamine pratensis</i>	Cuckooflower	O
<i>Ranunculus acris</i>	Meadow Buttercup	O
<i>Ranunculus repens</i>	Creeping Buttercup	O
<i>Rumex acetosa</i>	Common Sorrel	O
<i>Rumex obtusifolius</i>	Broad-leaved Dock	O
<i>Cirsium vulgare</i>	Spear Thistle	R
<i>Epilobium hirsutum</i>	Great Willowherb	R
<i>Juncus inflexus</i>	Hard Rush	R
<i>Lamium album</i>	White Dead-nettle	R
<i>Rubus fruticosus</i> agg.	Bramble	R
<i>Rumex crispus</i>	Curled Dock	R
<i>Taraxacum</i> sp.	Dandelion species	R
<i>Urtica dioica</i>	Nettle	R

TN59 - Other neutral grassland

<i>Achillea millefolium</i>	Yarrow
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass
<i>Cerastium fontanum</i>	Common Mouse-ear
<i>Cynosurus cristatus</i>	Crested Dog's-tail
<i>Dactylis glomerata</i>	Cock's-foot
<i>Glechoma hederacea</i>	Ground-ivy
<i>Luzula multiflora</i>	Heath Woodrush
<i>Phleum pratense</i>	Timothy
<i>Plantago lanceolata</i>	Ribwort Plantain
<i>Ranunculus acris</i>	Meadow Buttercup
<i>Ranunculus repens</i>	Creeping Buttercup
<i>Rumex acetosa</i>	Common Sorrel
<i>Rumex acetosella</i>	Sheep's Sorrel
<i>Rumex obtusifolius</i>	Broad-leaved Dock
<i>Taraxacum</i> sp.	Dandelion species
<i>Urtica dioica</i>	Nettle

TN60 - Other neutral grassland

<i>Achillea millefolium</i>	Yarrow
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass
<i>Cerastium fontanum</i>	Common Mouse-ear
<i>Cynosurus cristatus</i>	Crested Dog's-tail
<i>Dactylis glomerata</i>	Cock's-foot
<i>Glechoma hederacea</i>	Ground-ivy
<i>Luzula multiflora</i>	Heath Woodrush
<i>Phleum pratense</i>	Timothy
<i>Plantago lanceolata</i>	Ribwort Plantain
<i>Ranunculus acris</i>	Meadow Buttercup
<i>Ranunculus repens</i>	Creeping Buttercup
<i>Rumex acetosa</i>	Common Sorrel
<i>Rumex acetosella</i>	Sheep's Sorrel
<i>Rumex obtusifolius</i>	Broad-leaved Dock
<i>Taraxacum officinale</i> agg.	Dandelion
<i>Taraxacum</i> sp.	Dandelion species
<i>Urtica dioica</i>	Nettle

TN61 - Other neutral grassland

<i>Phleum pratense</i>	Timothy	D
<i>Rumex obtusifolius</i>	Broad-leaved Dock	D
<i>Juncus effusus</i>	Soft Rush	F
<i>Juncus inflexus</i>	Hard Rush	F

KEY: D – Dominant; A – Abundant; F – Frequent; O – Occasional; R - Rare

<i>Lolium perenne</i>	Perennial Ryegrass	F
<i>Ranunculus bulbosus</i>	Bulbous Buttercup	F
<i>Ranunculus repens</i>	Creeping Buttercup	F
<i>Taraxacum sp.</i>	Dandelion species	F
<i>Cirsium arvense</i>	Creeping Thistle	O
<i>Lotus pedunculatus</i>	Marsh Bird's-foot Trefoil	O
<i>Rumex acetosa</i>	Common Sorrel	O
<i>Rumex acetosella</i>	Sheep's Sorrel	O
<i>Trifolium repens</i>	White Clover	O
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	R
<i>Bellis perennis</i>	Daisy	R
<i>Ranunculus acris</i>	Meadow Buttercup	R
<i>Rubus fruticosus agg.</i>	Bramble	R
<i>Urtica dioica</i>	Nettle	R

TN62 – Ruderal/ephemeral

No species recorded

TN63 – Arable field margins

No species recorded

TN64 – Arable field margins

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22763144	frequent_25_33	<i>Lolium perenne</i> (Perennial Rye-grass)
22763144	frequent_25_33	<i>Festuca rubra</i> (Red Fescue)
22763144	occasional_10_25	<i>Dactylis glomerata</i> (Cock's-foot)
22763144	frequent_25_33	<i>Taraxacum</i> spp. (Dandelions)
22763144	occasional_10_25	<i>Plantago lanceolata</i> (Ribwort Plantain)
22763144	rare_0_1_10	<i>Centaurea nigra</i> (Common Knapweed)
22763144	rare_0_1_10	<i>Lotus corniculatus</i> (Common Bird's-foot-trefoil)
22763144	rare_0_1_10	<i>Leucanthemum vulgare</i> (Oxeye Daisy)
22763165	frequent_25_33	<i>Festuca rubra</i> (Red Fescue)
22763165	frequent_25_33	<i>Lolium perenne</i> (Perennial Rye-grass)
22763165	occasional_10_25	<i>Holcus lanatus</i> (Yorkshire-fog)
22763165	occasional_10_25	<i>Dactylis glomerata</i> (Cock's-foot)
22763165	occasional_10_25	<i>Plantago lanceolata</i> (Ribwort Plantain)
22763165	occasional_10_25	<i>Centaurea nigra</i> (Common Knapweed)

TN65 – Arable field margins

No species recorded

TN66 – Temporary grass and clover leys

No species recorded

TN67 – Arable field margins

No species recorded

TN68 – Arable field margins

No species recorded

TN69 - Other neutral grassland

<i>Poa trivialis</i>	Rough Meadow-grass	A
<i>Alopecurus pratensis</i>	Meadow Foxtail	F
<i>Anthriscus sylvestris</i>	Cow Parsley	F
<i>Galium aparine</i>	Cleavers	F
<i>Heracleum sphondylium</i>	Hogweed	F
<i>Holcus lanatus</i>	Yorkshire-fog	F
<i>Urtica dioica</i>	Nettle	F
<i>Alliaria petiolata</i>	Garlic Mustard	O
<i>Anisanthera sterilis</i>	Sterile Brome	O
<i>Calystegia sp.</i>	Bindweed species	O
<i>Dactylis glomerata</i>	Cock's-foot	O
<i>Geum urbanum</i>	Wood Avens	O
<i>Mercurialis perennis</i>	Dog's Mercury	O
<i>Plantago lanceolata</i>	Ribwort Plantain	O
<i>Potentilla reptans</i>	Creeping Cinquefoil	O
<i>Prunus spinosa</i>	Blackthorn	O
<i>Ranunculus repens</i>	Creeping Buttercup	O
<i>Rubus fruticosus agg.</i>	Bramble	O
<i>Rumex crispus</i>	Curled Dock	O
<i>Rumex obtusifolius</i>	Broad-leaved Dock	O
<i>Silene dioica</i>	Red Campion	O
<i>Stachys sylvatica</i>	Hedge Woundwort	R
<i>Taraxacum officinale agg.</i>	Dandelion	R

TN70 – Other neutral grassland

<i>Alopecurus pratensis</i>	Meadow Foxtail	F
<i>Bromus hordeaceus</i>	Soft Brome	F
<i>Dactylis glomerata</i>	Cock's-foot	F
<i>Trifolium pratense</i>	Red Clover	F
<i>Agrostis capillaris</i>	Common Bent	O
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	O
<i>Anthriscus sylvestris</i>	Cow Parsley	O
<i>Cirsium arvense</i>	Creeping Thistle	O
<i>Cynosurus cristatus</i>	Crested Dog's-tail	O
<i>Equisetum arvense</i>	Field Horsetail	O
<i>Festuca rubra</i>	Red Fescue	O
<i>Holcus lanatus</i>	Yorkshire-fog	O
<i>Lathyrus pratensis</i>	Meadow Vetchling	O
<i>Poa annua</i>	Annual Meadow-grass	O
<i>Potentilla reptans</i>	Creeping Cinquefoil	O
<i>Ranunculus acris</i>	Meadow Buttercup	O
<i>Ranunculus repens</i>	Creeping Buttercup	O
<i>Rubus fruticosus agg.</i>	Bramble	O
<i>Rumex crispus</i>	Curled Dock	O
<i>Trifolium dubium</i>	Lesser Trefoil	O
<i>Vicia cracca</i>	Tufted Vetch	O
<i>Vicia sativa</i>	Common Vetch	O
<i>Bellis perennis</i>	Daisy	R
<i>Calystegia sp.</i>	Bindweed species	R
<i>Galium aparine</i>	Cleavers	R
<i>Geranium dissectum</i>	Cut-leaved Cranesbill	R
<i>Helminthotheca echioides</i>	Bristly Oxtongue	R
<i>Heracleum sphondylium</i>	Hogweed	R
<i>Jacobaea vulgaris</i>	Common Ragwort	R
<i>Juncus inflexus</i>	Hard Rush	R
<i>Malus sylvestris</i>	Crab-apple	R
<i>Prunus spinosa</i>	Blackthorn	R
<i>Rumex obtusifolius</i>	Broad-leaved Dock	R

KEY: D – Dominant; A – Abundant; F – Frequent; O – Occasional; R - Rare

<i>Sonchus asper</i>	Prickly Sow-thistle	R
<i>Urtica dioica</i>	Nettle	R

TN71 – Bramble scrub

<i>Rubus fruticosus</i> agg.	Bramble
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TN72 – Blackthorn scrub

<i>Prunus spinosa</i>	Blackthorn
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TN73 – Mixed scrub

<i>Salix cinerea</i>	Grey Willow	A
<i>Crataegus monogyna</i>	Hawthorn	F
<i>Hedera helix</i>	Ivy	F
<i>Rubus fruticosus</i> agg.	Bramble	F
<i>Tamus communis</i>	Black Bryony	O
<i>Ilex aquifolium</i>	Holly	R
<i>Prunus spinosa</i>	Blackthorn	R
<i>Ulmus procera</i>	English Elm	R

TN74 – Pond (non-priority)

<i>Salix cinerea</i>	Grey Willow	D
<i>Crataegus monogyna</i>	Hawthorn	A

TN75 – Pond (non-priority)

<i>Lemna minor</i>	Lesser duckweed	F
<i>Iris pseudacorus</i>	Yellow Flag Iris	R

TN76 – Other broadleaved woodland

<i>Crataegus monogyna</i>	Hawthorn	F
<i>Fraxinus excelsior</i>	Ash	F
<i>Rubus fruticosus</i> agg.	Bramble	F
<i>Salix cinerea</i>	Grey Willow	F
<i>Urtica dioica</i>	Nettle	F
<i>Alliaria petiolata</i>	Garlic Mustard	O
<i>Brachypodium sylvaticum</i>	False Brome	O
<i>Galium aparine</i>	Cleavers	O
<i>Prunus spinosa</i>	Blackthorn	O
<i>Quercus</i> sp.	Oak species	O
<i>Rumex conglomeratus</i>	Clustered Dock	O
<i>Ulmus procera</i>	English Elm	O
<i>Ilex aquifolium</i>	Holly	R
<i>Prunus padus</i>	Bird Cherry	R

TN77 – Other neutral grassland

<i>Rumex obtusifolius</i>	Broad-leaved Dock	A
<i>Jacobaea vulgaris</i>	Common Ragwort	F
<i>Plantago lanceolata</i>	Ribwort Plantain	F
<i>Poa</i> sp.	Meadow-grass species	F
<i>Alopecurus pratensis</i>	Meadow Foxtail	O
<i>Anisanthera sterilis</i>	Sterile Brome	O
<i>Cirsium vulgare</i>	Spear Thistle	O
<i>Geranium molle</i>	Dove's-foot Cranesbill	O
<i>Lolium perenne</i>	Perennial Ryegrass	O

KEY: D – Dominant; A – Abundant; F – Frequent; O – Occasional; R - Rare

<i>Ranunculus repens</i>	Creeping Buttercup	O
<i>Rubus fruticosus</i> agg.	Bramble	O
<i>Taraxacum officinale</i> agg.	Dandelion	O
<i>Trifolium dubium</i>	Lesser Trefoil	O
<i>Urtica dioica</i>	Nettle	O
<i>Alliaria petiolata</i>	Garlic Mustard	R
<i>Helminthotheca echioides</i>	Bristly Oxtongue	R
<i>Trifolium pratense</i>	Red Clover	R
<i>Vicia</i> sp.	Vetch species	R

TN78 – Tall forb

<i>Cirsium arvense</i>	Creeping Thistle	D
<i>Urtica dioica</i>	Nettle	D
<i>Lolium perenne</i>	Perennial Ryegrass	F
<i>Rumex obtusifolius</i>	Broad-leaved Dock	F
<i>Galium aparine</i>	Cleavers	O

TN79– Arable field margin

<i>Alopecurus pratensis</i>	Meadow Foxtail	A
<i>Heracleum sphondylium</i>	Hogweed	A
<i>Prunus spinosa</i>	Blackthorn	A
<i>Holcus mollis</i>	Creeping Soft-grass	F
<i>Rumex obtusifolius</i>	Broad-leaved Dock	F
<i>Anisanthera sterilis</i>	Sterile Brome	O
<i>Geranium molle</i>	Dove's-foot Cranesbill	O
<i>Geum urbanum</i>	Wood Avens	O
<i>Holcus lanatus</i>	Yorkshire-fog	O
<i>Salix cinerea</i>	Grey Willow	O
<i>Urtica dioica</i>	Nettle	O
<i>Cirsium vulgare</i>	Spear Thistle	R
<i>Ranunculus acris</i>	Meadow Buttercup	R
<i>Ranunculus repens</i>	Creeping Buttercup	R
<i>Rosa</i> sp.	Rose species	R

TN80 – Other neutral grassland

<i>Prunus spinosa</i>	Blackthorn	A
<i>Alopecurus pratensis</i>	Meadow Foxtail	F
<i>Anthriscus sylvestris</i>	Cow Parsley	F
<i>Dactylis glomerata</i>	Cock's-foot	F
<i>Poa</i> sp.	Meadow-grass species	F
<i>Bromus</i> sp.	Brome species	O
<i>Galium aparine</i>	Cleavers	O
<i>Geranium dissectum</i>	Cut-leaved Cranesbill	O
<i>Rubus fruticosus</i> agg.	Bramble	O
<i>Ranunculus repens</i>	Creeping Buttercup	R

TN81 – Blackthorn scrub

<i>Prunus spinosa</i>	Blackthorn
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TN82 – Modified grassland

<i>Lolium perenne</i>	Perennial Ryegrass	D
<i>Trifolium repens</i>	White Clover	A
<i>Ranunculus repens</i>	Creeping Buttercup	O
<i>Taraxacum officinale</i> agg.	Dandelion	O

TN83 – Other neutral grassland

<i>Poa pratensis</i>	Smooth Meadow-grass	A
<i>Anthriscus sylvestris</i>	Cow Parsley	F
<i>Alliaria petiolata</i>	Garlic Mustard	O
<i>Anisanthera sterilis</i>	Sterile Brome	O
<i>Epilobium hirsutum</i>	Great Willowherb	O
<i>Galium aparine</i>	Cleavers	O
<i>Heracleum sphondylium</i>	Hogweed	O
<i>Rubus fruticosus</i> agg.	Bramble	O
<i>Salix cinerea</i>	Grey Willow	O
<i>Silene dioica</i>	Red Campion	O
<i>Urtica dioica</i>	Nettle	O
<i>Geum urbanum</i>	Wood Avens	R
<i>Prunus spinosa</i>	Blackthorn	R
<i>Ranunculus acris</i>	Meadow Buttercup	R
<i>Ranunculus repens</i>	Creeping Buttercup	R
<i>Rumex obtusifolius</i>	Broad-leaved Dock	R

TN84 – Arable margin

<i>Alopecurus pratensis</i>	Meadow Foxtail	F
<i>Heracleum sphondylium</i>	Hogweed	F
<i>Poa trivialis</i>	Rough Meadow-grass	F
<i>Anthriscus sylvestris</i>	Cow Parsley	O
<i>Galium aparine</i>	Cleavers	O
<i>Geranium dissectum</i>	Cut-leaved Cranesbill	O
<i>Geranium robertianum</i>	Herb-Robert	O
<i>Geum urbanum</i>	Wood Avens	O
<i>Hedera helix</i>	Ivy	O
<i>Holcus lanatus</i>	Yorkshire-fog	O
<i>Jacobaea vulgaris</i>	Common Ragwort	O
<i>Ranunculus repens</i>	Creeping Buttercup	O
<i>Rosa</i> sp.	Rose species	O
<i>Rubus fruticosus</i> agg.	Bramble	O
<i>Rumex crispus</i>	Curled Dock	O
<i>Urtica dioica</i>	Nettle	O
<i>Alliaria petiolata</i>	Garlic Mustard	R
<i>Anisanthera sterilis</i>	Sterile Brome	R
<i>Myosotis</i> sp.	Forget-me-not species	R
<i>Prunus spinosa</i>	Blackthorn	R
<i>Quercus</i> sp.	Oak species	R
<i>Ranunculus acris</i>	Meadow Buttercup	R
<i>Senecio vulgaris</i>	Groundsel	R

TN85 – Arable margin

Similar to G2 with the addition of:

<i>Lolium perenne</i>	Perennial Ryegrass	A
<i>Poa pratensis</i>	Smooth Meadow-grass	F
<i>Alliaria petiolata</i>	Garlic Mustard	O
<i>Galium aparine</i>	Cleavers	O

KEY: D – Dominant; A – Abundant; F – Frequent; O – Occasional; R - Rare

<i>Poa annua</i>	Annual Meadow-grass	O
<i>Silene dioica</i>	Red Campion	R

TN86 – Arable field margin

<i>Anisanthera sterilis</i>	Sterile Brome	F
<i>Anthriscus sylvestris</i>	Cow Parsley	F
<i>Galium aparine</i>	Cleavers	F
<i>Urtica dioica</i>	Nettle	F
<i>Geranium dissectum</i>	Cut-leaved Cranesbill	O
<i>Heracleum sphondylium</i>	Hogweed	O
<i>Poa trivialis</i>	Rough Meadow-grass	O
<i>Rubus fruticosus</i> agg.	Bramble	O
<i>Arrhenatherum elatius</i>	False Oat-grass	R
<i>Cirsium arvense</i>	Creeping Thistle	R
<i>Equisetum</i> sp.	Horsetail species	R
<i>Festuca rubra</i>	Red Fescue	R
<i>Rumex obtusifolius</i>	Broad-leaved Dock	R

TN87 – Other neutral grassland

<i>Arrhenatherum elatius</i>	False Oat-grass
<i>Bromus</i> sp.	Brome species
<i>Geranium dissectum</i>	Cut-leaved Cranesbill
<i>Geranium robertianum</i>	Herb-Robert
<i>Geum urbanum</i>	Wood Avens

TN88 – Other neutral grassland

<i>Alopecurus pratensis</i>	Meadow Foxtail	A
<i>Anthriscus sylvestris</i>	Cow Parsley	A
<i>Dactylis glomerata</i>	Cock's-foot	F
<i>Epilobium hirsutum</i>	Great Willowherb	F
<i>Calystegia</i> sp.	Bindweed species	O
<i>Cirsium arvense</i>	Creeping Thistle	O
<i>Equisetum arvense</i>	Field Horsetail	O
<i>Filipendula ulmaria</i>	Meadowsweet	O
<i>Galium aparine</i>	Cleavers	O
<i>Hedera helix</i>	Ivy	O
<i>Heracleum sphondylium</i>	Hogweed	O
<i>Lamium album</i>	White Dead-nettle	O
<i>Poa trivialis</i>	Rough Meadow-grass	O
<i>Rumex obtusifolius</i>	Broad-leaved Dock	O
<i>Urtica dioica</i>	Nettle	O
<i>Potentilla reptans</i>	Creeping Cinquefoil	R
<i>Ranunculus repens</i>	Creeping Buttercup	R
<i>Silene dioica</i>	Red Campion	R
<i>Taraxacum officinale</i> agg.	Dandelion	R

TN89 – Other neutral grassland

<i>Alopecurus pratensis</i>	Meadow Foxtail	A
<i>Poa trivialis</i>	Rough Meadow-grass	A
<i>Anthriscus sylvestris</i>	Cow Parsley	F
<i>Arrhenatherum elatius</i>	False Oat-grass	F
<i>Dactylis glomerata</i>	Cock's-foot	F
<i>Heracleum sphondylium</i>	Hogweed	F
<i>Urtica dioica</i>	Nettle	F
<i>Cirsium arvense</i>	Creeping Thistle	O

KEY: D – Dominant; A – Abundant; F – Frequent; O – Occasional; R - Rare

<i>Galium aparine</i>	Cleavers	O
<i>Plantago lanceolata</i>	Ribwort Plantain	O
<i>Ranunculus repens</i>	Creeping Buttercup	O
<i>Rubus fruticosus</i> agg.	Bramble	O
<i>Taraxacum officinale</i> agg.	Dandelion	O
<i>Epilobium hirsutum</i>	Great Willowherb	R
<i>Equisetum</i> sp.	Horsetail species	R
<i>Filipendula ulmaria</i>	Meadowsweet	R
<i>Lamium album</i>	White Dead-nettle	R
<i>Potentilla reptans</i>	Creeping Cinquefoil	R
<i>Poterium sanguisorba</i>	Salad Burnet	R
<i>Ranunculus acris</i>	Meadow Buttercup	R

TN90 – Arable field margin

<i>Bromus hordeaceus</i>	Soft Brome	A
<i>Anisanthera sterilis</i>	Sterile Brome	F
<i>Alopecurus pratensis</i>	Meadow Foxtail	O
<i>Cirsium arvense</i>	Creeping Thistle	O
<i>Dactylis glomerata</i>	Cock's-foot	O
<i>Filipendula ulmaria</i>	Meadowsweet	O
<i>Galium aparine</i>	Cleavers	O
<i>Geranium dissectum</i>	Cut-leaved Cranesbill	O
<i>Heracleum sphondylium</i>	Hogweed	O
<i>Rumex obtusifolius</i>	Broad-leaved Dock	O
<i>Urtica dioica</i>	Nettle	O
<i>Anthriscus sylvestris</i>	Cow Parsley	R
<i>Epilobium hirsutum</i>	Great Willowherb	R
<i>Scrophularia nodosa</i>	Common Figwort	R

TN91 – Arable margin

<i>Avenella flexuosa</i>	Wavy Hair-grass	A
<i>Epilobium hirsutum</i>	Great Willowherb	A
<i>Anisanthera sterilis</i>	Sterile Brome	F
<i>Poa trivialis</i>	Rough Meadow-grass	F
<i>Anthriscus sylvestris</i>	Cow Parsley	O
<i>Bromus hordeaceus</i>	Soft Brome	O
<i>Galium aparine</i>	Cleavers	O
<i>Heracleum sphondylium</i>	Hogweed	O
<i>Holcus lanatus</i>	Yorkshire-fog	O
<i>Ranunculus acris</i>	Meadow Buttercup	O
<i>Rubus fruticosus</i> agg.	Bramble	O
<i>Rumex conglomeratus</i>	Clustered Dock	O
<i>Rumex obtusifolius</i>	Broad-leaved Dock	O
<i>Silene dioica</i>	Red Campion	O
<i>Urtica dioica</i>	Nettle	O
<i>Convolvulus arvensis</i>	Field Bindweed	R
<i>Dactylis glomerata</i>	Cock's-foot	R
<i>Equisetum arvense</i>	Field Horsetail	R
<i>Filipendula ulmaria</i>	Meadowsweet	R
<i>Geranium dissectum</i>	Cut-leaved Cranesbill	R
<i>Lamium album</i>	White Dead-nettle	R
<i>Stachys sylvatica</i>	Hedge Woundwort	R

TN92 – Arable margin

<i>Dactylis glomerata</i>	Cock's-foot	A
<i>Heracleum sphondylium</i>	Hogweed	A
<i>Alopecurus pratensis</i>	Meadow Foxtail	F
<i>Galium aparine</i>	Cleavers	F

KEY: D – Dominant; A – Abundant; F – Frequent; O – Occasional; R - Rare

<i>Poa trivialis</i>	Rough Meadow-grass	F
<i>Anisanthera sterilis</i>	Sterile Brome	O
<i>Anthriscus sylvestris</i>	Cow Parsley	O
<i>Cirsium vulgare</i>	Spear Thistle	O
<i>Epilobium hirsutum</i>	Great Willowherb	O
<i>Geranium dissectum</i>	Cut-leaved Cranesbill	O
<i>Helminthotheca echioides</i>	Bristly Oxtongue	O
<i>Urtica dioica</i>	Nettle	O
<i>Alliaria petiolata</i>	Garlic Mustard	R
<i>Arrhenatherum elatius</i>	False Oat-grass	R
<i>Myosotis</i> sp.	Forget-me-not species	R
<i>Ranunculus acris</i>	Meadow Buttercup	R
<i>Ranunculus repens</i>	Creeping Buttercup	R
<i>Silene dioica</i>	Red Campion	R
<i>Vicia</i> sp.	Vetch species	R

TN93 – Other broadleaved woodland

<i>Pinus sylvestris</i>	Scots Pine	A
<i>Anthriscus sylvestris</i>	Cow Parsley	F
<i>Betula pendula</i>	Silver Birch	F
<i>Corylus avellana</i>	Hazel	F
<i>Crataegus monogyna</i>	Hawthorn	F
<i>Hedera helix</i>	Ivy	F
<i>Rubus fruticosus</i> agg.	Bramble	F
<i>Urtica dioica</i>	Nettle	F
<i>Acer campestre</i>	Field Maple	O
<i>Geum urbanum</i>	Wood Avens	O
<i>Prunus</i> sp.	Cherry species	O
<i>Sorbus aucuparia</i>	Rowan	O
<i>Acer pseudoplatanus</i>	Sycamore	R
<i>Fraxinus excelsior</i>	Ash	R
<i>Quercus</i> sp.	Oak species	R
<i>Salix cinerea</i>	Grey Willow	R

TN94 – Other neutral grassland

<i>Alopecurus pratensis</i>	Meadow Foxtail
<i>Anisanthera sterilis</i>	Sterile Brome
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass
<i>Anthriscus sylvestris</i>	Cow Parsley
<i>Arrhenatherum elatius</i>	False Oat-grass
<i>Avenella flexuosa</i>	Wavy Hair-grass
<i>Bellis perennis</i>	Daisy
<i>Bromus hordeaceus</i>	Soft Brome
<i>Cerastium fontanum</i>	Common Mouse-ear
<i>Cirsium arvense</i>	Creeping Thistle
<i>Cirsium vulgare</i>	Spear Thistle
<i>Equisetum arvense</i>	Field Horsetail
<i>Festuca rubra</i>	Red Fescue
<i>Galium aparine</i>	Cleavers
<i>Geranium dissectum</i>	Cut-leaved Cranesbill
<i>Geranium molle</i>	Dove's-foot Cranesbill
<i>Geum urbanum</i>	Wood Avens
<i>Heracleum sphondylium</i>	Hogweed
<i>Holcus lanatus</i>	Yorkshire-fog
<i>Hypochaeris radicata</i>	Common Cat's-ear
<i>Jacobaea vulgaris</i>	Common Ragwort
<i>Juncus effusus</i>	Soft Rush
<i>Lapsana communis</i>	Nipplewort

KEY: D – Dominant; A – Abundant; F – Frequent; O – Occasional; R - Rare

<i>Leontodon hispidus</i>	Rough Hawkbit
<i>Lolium perenne</i>	Perennial Ryegrass
<i>Plantago lanceolata</i>	Ribwort Plantain
<i>Poa trivialis</i>	Rough Meadow-grass
<i>Ranunculus bulbosus</i>	Bulbous Buttercup
<i>Ranunculus repens</i>	Creeping Buttercup
<i>Rosa arvensis</i>	Field Rose
<i>Rubus fruticosus agg.</i>	Bramble
<i>Rumex obtusifolius</i>	Broad-leaved Dock
<i>Silene dioica</i>	Red Campion
<i>Trifolium dubium</i>	Lesser Trefoil
<i>Trifolium pratense</i>	Red Clover
<i>Veronica chamaedrys</i>	Germander Speedwell
<i>Vicia sativa</i>	Common Vetch

TN95 – Other neutral grassland

<i>Alopecurus pratensis</i>	Meadow Foxtail	A
<i>Holcus lanatus</i>	Yorkshire-fog	A
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	F
<i>Cerastium fontanum</i>	Common Mouse-ear	F
<i>Lolium perenne</i>	Perennial Ryegrass	F
<i>Poa pratensis</i>	Smooth Meadow-grass	F
<i>Ranunculus acris</i>	Meadow Buttercup	F
<i>Ranunculus repens</i>	Creeping Buttercup	F
<i>Anisanthera sterilis</i>	Sterile Brome	O
<i>Anthriscus sylvestris</i>	Cow Parsley	O
<i>Bromus hordeaceus</i>	Soft Brome	O
<i>Cardamine pratensis</i>	Cuckooflower	O
<i>Cirsium vulgare</i>	Spear Thistle	O
<i>Cynosurus cristatus</i>	Crested Dog's-tail	O
<i>Dactylis glomerata</i>	Cock's-foot	O
<i>Geranium dissectum</i>	Cut-leaved Cranesbill	O
<i>Heracleum sphondylium</i>	Hogweed	O
<i>Juncus effusus</i>	Soft Rush	O
<i>Rumex obtusifolius</i>	Broad-leaved Dock	O
<i>Urtica dioica</i>	Nettle	O
<i>Arrhenatherum elatius</i>	False Oat-grass	R
<i>Galium aparine</i>	Cleavers	R
<i>Helminthotheca echioides</i>	Bristly Oxtongue	R
<i>Jacobaea vulgaris</i>	Common Ragwort	R
<i>Poterium sanguisorba</i>	Salad Burnet	R
<i>Trifolium pratense</i>	Red Clover	R

TN96 – Other neutral grassland

<i>Ranunculus acris</i>	Meadow Buttercup	A
<i>Agrostis capillaris</i>	Common Bent	F
<i>Poa trivialis</i>	Rough Meadow-grass	F
<i>Rumex obtusifolius</i>	Broad-leaved Dock	F
<i>Anthriscus sylvestris</i>	Cow Parsley	O
<i>Lolium perenne</i>	Perennial Ryegrass	O
<i>Rumex conglomeratus</i>	Clustered Dock	O
<i>Rumex crispus</i>	Curled Dock	O
<i>Senecio vulgaris</i>	Groundsel	O
<i>Silene dioica</i>	Red Campion	O
<i>Urtica dioica</i>	Nettle	O
<i>Cerastium fontanum</i>	Common Mouse-ear	R
<i>Fraxinus excelsior</i>	Ash	R
<i>Geranium robertianum</i>	Herb-Robert	R

KEY: D – Dominant; A – Abundant; F – Frequent; O – Occasional; R - Rare

<i>Lamium album</i>	White Dead-nettle	R
<i>Ranunculus repens</i>	Creeping Buttercup	R
<i>Rumex acetosa</i>	Common Sorrel	R
<i>Taraxacum officinale</i> agg.	Dandelion	R

TN97 – Other broadleaved woodland

<i>Urtica dioica</i>	Nettle	A
<i>Acer pseudoplatanus</i>	Sycamore	F
<i>Anthriscus sylvestris</i>	Cow Parsley	F
<i>Crataegus monogyna</i>	Hawthorn	F
<i>Hedera helix</i>	Ivy	F
<i>Rubus fruticosus</i> agg.	Bramble	F
<i>Allium ursinum</i>	Ramsons	O
<i>Fraxinus excelsior</i>	Ash	O
<i>Geranium robertianum</i>	Herb-Robert	O
<i>Geum urbanum</i>	Wood Avens	O
<i>Heracleum sphondylium</i>	Hogweed	O
<i>Prunus</i> sp.	Cherry species	O
<i>Salix</i> species	Willow species	O
<i>Calystegia</i> sp.	Bindweed species	R
<i>Ilex aquifolium</i>	Holly	R
<i>Sambucus nigra</i>	Elder	R
<i>Silene dioica</i>	Red Campion	R

TN98 – Other neutral grassland

<i>Achillea millefolium</i>	Yarrow	F
<i>Anisanthera sterilis</i>	Sterile Brome	F
<i>Arrhenatherum elatius</i>	False Oat-grass	F
<i>Galium aparine</i>	Cleavers	F
<i>Rubus fruticosus</i> agg.	Bramble	F
<i>Urtica dioica</i>	Nettle	F
<i>Cirsium arvense</i>	Creeping Thistle	O
<i>Dactylis glomerata</i>	Cock's-foot	O
<i>Fraxinus excelsior</i>	Ash	O
<i>Lamium album</i>	White Dead-nettle	O
<i>Poa</i> sp.	Meadow-grass species	O
<i>Alopecurus pratensis</i>	Meadow Foxtail	R
<i>Anthriscus sylvestris</i>	Cow Parsley	R
<i>Crataegus monogyna</i>	Hawthorn	R
<i>Equisetum</i> sp.	Horsetail species	R
<i>Hedera helix</i>	Ivy	R
<i>Melilotus officinalis</i>	Ribbed Melilot	R
<i>Potentilla reptans</i>	Creeping Cinquefoil	R
<i>Taraxacum officinale</i> agg.	Dandelion	R
<i>Vicia</i> sp.	Vetch species	R

TN99 – Mixed scrub

See TN73

TN100 – Other lowland meadow

<i>Festuca rubra</i>	Red Fescue	A
<i>Moss</i> sp.	Moss species	A
<i>Poa pratensis</i>	Smooth Meadow-grass	A
<i>Centaurea nigra</i>	Knapweed	F
<i>Cerastium fontanum</i>	Common Mouse-ear	F
<i>Ervilla hirsuta</i>	Hairy Tare	F

KEY: D – Dominant; A – Abundant; F – Frequent; O – Occasional; R - Rare

<i>Potentilla reptans</i>	Creeping Cinquefoil	F
<i>Trifolium dubium</i>	Lesser Trefoil	F
<i>Vicia sativa</i>	Common Vetch	F
<i>Agrostis capillaris</i>	Common Bent	O
<i>Anisanthera sterilis</i>	Sterile Brome	O
<i>Calamagrostis epigejos</i>	Wood Small-reed	O
<i>Carex spicata</i>	Spiked Sedge	O
<i>Chamaenerion angustifolium</i>	Rosebay Willowherb	O
<i>Dactylis glomerata</i>	Cock's-foot	O
<i>Geranium dissectum</i>	Cut-leaved Cranesbill	O
<i>Glechoma hederacea</i>	Ground-ivy	O
<i>Holcus lanatus</i>	Yorkshire-fog	O
<i>Jacobaea vulgaris</i>	Common Ragwort	O
<i>Lathyrus pratensis</i>	Meadow Vetchling	O
<i>Leucanthemum vulgare</i>	Oxeye daisy	O
<i>Myosotis arvensis</i>	Field Forget-me-not	O
<i>Plantago lanceolata</i>	Ribwort Plantain	O
<i>Rubus fruticosus agg.</i>	Bramble	O
<i>Scorzoneroide autumnalis</i>	Autumn Hawkbit	O
<i>Trifolium pratense</i>	Red Clover	O
<i>Arrhenatherum elatius</i>	False Oat-grass	R
<i>Cirsium arvense</i>	Creeping Thistle	R
<i>Cirsium palustre</i>	Marsh Thistle	R
<i>Geranium molle</i>	Dove's-foot Cranesbill	R
<i>Geum urbanum</i>	Wood Avens	R
<i>Heracleum sphondylium</i>	Hogweed	R
<i>Lamium album</i>	White Dead-nettle	R
<i>Senecio vulgaris</i>	Groundsel	R
<i>Taraxacum officinale agg.</i>	Dandelion	R

TN101 – Hawthorn scrub

<i>Crataegus monogyna</i>	Hawthorn	D
<i>Rubus fruticosus agg.</i>	Bramble	F
<i>Reynoutria japonica</i>	Japanese Knotweed	O
<i>Prunus spinosa</i>	Blackthorn	R
<i>Sambucus nigra</i>	Elder	R

TN102 – Bramble scrub

<i>Rubus fruticosus agg.</i>	Bramble
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TN103 – Introduced shrub

<i>Reynoutria japonica</i>	Japanese knotweed
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TN104 – Other neutral grassland

<i>Urtica dioica</i>	Nettle	A
<i>Aegopodium podagraria</i>	Ground-elder	F
<i>Geranium robertianum</i>	Herb-Robert	F
<i>Arrhenatherum elatius</i>	False Oat-grass	O
<i>Calystegia sp.</i>	Bindweed species	O
<i>Dactylis glomerata</i>	Cock's-foot	O
<i>Filipendula ulmaria</i>	Meadowsweet	O
<i>Galium aparine</i>	Cleavers	O
<i>Geum urbanum</i>	Wood Avens	O
<i>Plantago major</i>	Greater Plantain	O
<i>Poa pratensis</i>	Smooth Meadow-grass	O

KEY: D – Dominant; A – Abundant; F – Frequent; O – Occasional; R - Rare

<i>Poa sp.</i>	Meadow-grass species	O
<i>Ranunculus repens</i>	Creeping Buttercup	O
<i>Rubus fruticosus agg.</i>	Bramble	O
<i>Silene dioica</i>	Red Campion	O
<i>Anthriscus sylvestris</i>	Cow Parsley	R

TN105 – Other neutral grassland

<i>Ranunculus acris</i>	Meadow Buttercup	A
<i>Lolium perenne</i>	Perennial Ryegrass	F
<i>Poa pratensis</i>	Smooth Meadow-grass	F
<i>Poa trivialis</i>	Rough Meadow-grass	F
<i>Rubus fruticosus agg.</i>	Bramble	O
<i>Rumex conglomeratus</i>	Clustered Dock	O
<i>Rumex crispus</i>	Curled Dock	O
<i>Rumex obtusifolius</i>	Broad-leaved Dock	O
<i>Taraxacum officinale agg.</i>	Dandelion	O
<i>Calystegia sp.</i>	Bindweed species	R
<i>Cerastium fontanum</i>	Common Mouse-ear	R
<i>Filipendula ulmaria</i>	Meadowsweet	R
<i>Lamium album</i>	White Dead-nettle	R
<i>Scrophularia nodosa</i>	Common Figwort	R
<i>Urtica dioica</i>	Nettle	R

TN106 – Other broadleaved woodland

<i>Aegopodium podagraria</i>	Ground-elder	A
<i>Crataegus monogyna</i>	Hawthorn	A
<i>Hedera helix</i>	Ivy	A
<i>Poa sp.</i>	Meadow-grass species	A
<i>Galium aparine</i>	Cleavers	F
<i>Geranium robertianum</i>	Herb-Robert	F
<i>Rubus fruticosus agg.</i>	Bramble	F
<i>Sambucus nigra</i>	Elder	F
<i>Urtica dioica</i>	Nettle	F
<i>Alliaria petiolata</i>	Garlic Mustard	O
<i>Anthriscus sylvestris</i>	Cow Parsley	O
<i>Cirsium arvense</i>	Creeping Thistle	O
<i>Heracleum sphondylium</i>	Hogweed	O
<i>Carex pendula</i>	Pendulous Sedge	R
<i>Equisetum sp.</i>	Horsetail species	R
<i>Rosa sp.</i>	Rose species	R
<i>Salix fragilis</i>	Crack Willow	R

TN107 – Other lowland meadow

<i>Alopecurus pratensis</i>	Meadow Foxtail	A
<i>Ranunculus acris</i>	Meadow Buttercup	A
<i>Equisetum sp.</i>	Horsetail species	F
<i>Filipendula ulmaria</i>	Meadowsweet	F
<i>Poa pratensis</i>	Smooth Meadow-grass	F
<i>Ranunculus repens</i>	Creeping Buttercup	F
<i>Agrostis capillaris</i>	Common Bent	O
<i>Agrostis stolonifera</i>	Creeping Bent	O
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	O
<i>Cerastium fontanum</i>	Common Mouse-ear	O
<i>Holcus lanatus</i>	Yorkshire-fog	O
<i>Sanguisorba officinalis</i>	Great Burnet	O
<i>Trifolium dubium</i>	Lesser Trefoil	O
<i>Trifolium pratense</i>	Red Clover	O

KEY: D – Dominant; A – Abundant; F – Frequent; O – Occasional; R - Rare

<i>Cardamine pratensis</i>	Cuckooflower	R
<i>Carex hirta</i>	Hairy Sedge	R
<i>Heracleum sphondylium</i>	Hogweed	R
<i>Lathyrus pratensis</i>	Meadow Vetchling	R
<i>Lotus corniculatus</i>	Bird's-foot Trefoil	R
<i>Poa trivialis</i>	Rough Meadow-grass	R
<i>Rumex acetosa</i>	Common Sorrel	R
<i>Taraxacum officinale</i> agg.	Dandelion	R

TN108 – Other broadleaved woodland

No species recorded

TN109 – Modified grassland

<i>Anthriscus sylvestris</i>	Cow Parsley
<i>Bellis perennis</i>	Daisy
<i>Epilobium hirsutum</i>	Great Willowherb
<i>Galium aparine</i>	Cleavers
<i>Helminthotheca echioides</i>	Bristly Oxtongue
<i>Lolium perenne</i>	Perennial Ryegrass
<i>Phleum pratense</i>	Timothy
<i>Plantago major</i>	Greater Plantain
<i>Poa trivialis</i>	Rough Meadow-grass
<i>Ranunculus repens</i>	Creeping Buttercup
<i>Rumex crispus</i>	Curled Dock
<i>Schedonorus giganteus</i>	Giant Fescue
<i>Trifolium repens</i>	White Clover

TN110 - Arable margin

<i>Lolium perenne</i>	Perennial Ryegrass	A
<i>Poa trivialis</i>	Rough Meadow-grass	F
<i>Holcus lanatus</i>	Yorkshire-fog	O
<i>Ranunculus repens</i>	Creeping Buttercup	O
<i>Rosa</i> sp.	Rose species	O
<i>Rubus fruticosus</i> agg.	Bramble	O
<i>Rumex crispus</i>	Curled Dock	O
<i>Salix repens</i> var. <i>argentea</i>	Creeping Willow	O
<i>Geranium molle</i>	Dove's-foot Cranesbill	R

TN111 – Arable margin

<i>Agrostis capillaris</i>	Common Bent
<i>Agrostis stolonifera</i>	Creeping Bent
<i>Alopecurus pratensis</i>	Meadow Foxtail
<i>Anthriscus sylvestris</i>	Cow Parsley
<i>Cirsium arvense</i>	Creeping Thistle
<i>Cirsium vulgare</i>	Spear Thistle
<i>Epilobium hirsutum</i>	Great Willowherb
<i>Geranium dissectum</i>	Cut-leaved Cranesbill
<i>Heracleum sphondylium</i>	Hogweed
<i>Holcus lanatus</i>	Yorkshire-fog
<i>Plantago lanceolata</i>	Ribwort Plantain
<i>Poa annua</i>	Annual Meadow-grass
<i>Poa trivialis</i>	Rough Meadow-grass
<i>Potentilla reptans</i>	Creeping Cinquefoil
<i>Prunus spinosa</i>	Blackthorn
<i>Ranunculus repens</i>	Creeping Buttercup
<i>Rubus fruticosus</i> agg.	Bramble

KEY: D – Dominant; A – Abundant; F – Frequent; O – Occasional; R - Rare

Curled Dock
Broad-leaved Dock
Dandelion

Norway Spruce

Picea abies

D

No species recorded

Lolium perenne
Potentilla anserina
Tamus communis
Trifolium repens
Centaurea nigra
Cynosurus cristatus
Dactylis glomerata
Holcus lanatus
Jacobaea vulgaris
Potentilla reptans
Prunella vulgaris
Ranunculus acris
Ranunculus repens
Rumex obtusifolius
Trifolium pratense
Phleum pratense
Plantago lanceolata

Perennial Ryegrass
Silverweed
Black Bryony
White Clover
Knapweed
Crested Dog's-tail
Cock's-foot
Yorkshire-fog
Common Ragwort
Creeping Cinquefoil
Selfheal
Meadow Buttercup
Creeping Buttercup
Broad-leaved Dock
Red Clover
Timothy
Ribwort Plantain

A
A
A
A
F
F
F
F
F
F
F
F
F
F
F
F
O
O

Target Notes Report – Linear Habitats

Target Notes for linear habitats along the proposed pipeline route are provided below. Due to differing methods of data capture used by different surveyors in the field, the format of the target note output varies, although the information contained within each target note is the same: a species list with, where available, an associated abundance score using the DAFOR scale:

D – Dominant; **A** – Abundant; **F** – Frequent; **O** – Occasional; **R** – Rare.

Hedgerows

H1 – Native hedgerow

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22743692	frequent_25_33	Crataegus monogyna (Hawthorn)
22743692	occasional_10_25	Prunus spinosa (Blackthorn)
22743692	occasional_10_25	Acer campestre (Field Maple)
22743692	rare_0_1_10	Ilex aquifolium (Holly)

H2 – Native hedgerow

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22743765	abundant_33_50	Crataegus monogyna (Hawthorn)
22743765	rare_0_1_10	Acer campestre (Field Maple)
22743765	rare_0_1_10	Clematis vitalba (Traveller's-joy)
22743765	rare_0_1_10	Sambucus nigra (Elder)
22743765	rare_0_1_10	Quercus robur (Pedunculate Oak)
22743765	abundant_33_50	Urtica dioica (Common Nettle)
22743765	occasional_10_25	Lamium album (White Dead-nettle)
22743765	occasional_10_25	Alliaria petiolata (Garlic Mustard)
22743765	frequent_25_33	Galium aparine (Cleavers)
22743765	abundant_33_50	Lolium perenne (Perennial Rye-grass)

H3 – Species-rich native hedgerow with trees – associated with bank or ditch

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22752318	dominant_50	Crataegus monogyna (Hawthorn)
22752318	rare_0_1_10	Ulmus procera (English Elm)
22752318	occasional_10_25	Fraxinus excelsior (Ash)
22752318	occasional_10_25	Quercus robur (Pedunculate Oak)
22752318	rare_0_1_10	Sorbus aucuparia (Rowan)
22752318	frequent_25_33	Rubus fruticosus agg. (Bramble)
22752318	frequent_25_33	Urtica dioica (Common Nettle)
22752318	occasional_10_25	Carex pendula (Pendulous Sedge)
22752318	occasional_10_25	Cirsium arvense (Creeping Thistle)
22752318	frequent_25_33	Holcus lanatus (Yorkshire-fog)
22752318	occasional_10_25	Achillea millefolium (Yarrow)
22752318	rare_0_1_10	Heracleum sphondylium (Hogweed)
22752318	occasional_10_25	Taraxacum spp. (Dandelions)

22752318	occasional_10_25	<i>Anthriscus sylvestris</i> (Cow Parsley)
22752318	frequent_25_33	<i>Festuca rubra</i> (Red Fescue)
22752318	frequent_25_33	<i>Lolium perenne</i> (Perennial Rye-grass)

H4 – Native hedgerow associated with bank or ditch

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22752362	dominant_50	<i>Crataegus monogyna</i> (Hawthorn)
22752362	occasional_10_25	<i>Sambucus nigra</i> (Elder)
22752362	rare_0_1_10	<i>Prunus spinosa</i> (Blackthorn)
22752362	abundant_33_50	<i>Rubus fruticosus</i> agg. (Bramble)
22752362	abundant_33_50	<i>Lolium perenne</i> (Perennial Rye-grass)
22752362	occasional_10_25	<i>Urtica dioica</i> (Common Nettle)
22752362	rare_0_1_10	<i>Lamium album</i> (White Dead-nettle)
22752362	rare_0_1_10	<i>Alopecurus pratensis</i> (Meadow Foxtail)
22752362	rare_0_1_10	<i>Taraxacum</i> spp. (Dandelions)
22752362	rare_0_1_10	<i>Heracleum sphondylium</i> (Hogweed)

H5 – Species-rich native hedgerow with trees associated with bank or ditch

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22763049	frequent_25_33	<i>Prunus spinosa</i> (Blackthorn)
22763049	frequent_25_33	<i>Fagus sylvatica</i> (Beech)
22763049	occasional_10_25	<i>Rosa canina</i> (Dog-rose)
22763049	occasional_10_25	<i>Fraxinus excelsior</i> (Ash)
22763049	rare_0_1_10	<i>Quercus robur</i> (Pedunculate Oak)
22763049	occasional_10_25	<i>Rubus fruticosus</i> agg. (Bramble)
22763049	occasional_10_25	<i>Acer campestre</i> (Field Maple)
22763049	rare_0_1_10	<i>Tamus communis</i> (Black Bryony)
22763059	abundant_33_50	<i>Fraxinus excelsior</i> (Ash)
22763059	abundant_33_50	<i>Quercus robur</i> (Pedunculate Oak)
22763039	frequent_25_33	<i>Prunus spinosa</i> (Blackthorn)
22763039	occasional_10_25	<i>Quercus robur</i> (Pedunculate Oak)
22763039	occasional_10_25	<i>Corylus avellana</i> (Hazel)
22763039	abundant_33_50	<i>Crataegus monogyna</i> (Hawthorn)
22763039	occasional_10_25	<i>Rosa canina</i> (Dog-rose)
22763039	occasional_10_25	<i>Rubus fruticosus</i> agg. (Bramble)
22763039	rare_0_1_10	<i>Crataegus laevigata</i> (Midland Hawthorn)
22763039	rare_0_1_10	<i>Fraxinus excelsior</i> (Ash)
22763039	rare_0_1_10	<i>Acer campestre</i> (Field Maple)

H6 – Native hedgerow

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22763016	abundant_33_50	<i>Crataegus monogyna</i> (Hawthorn)
22763016	occasional_10_25	<i>Rubus fruticosus</i> agg. (Bramble)
22763016	occasional_10_25	<i>Rosa canina</i> (Dog-rose)
22763016	occasional_10_25	<i>Tamus communis</i> (Black Bryony)
22763016	rare_0_1_10	<i>Sambucus nigra</i> (Elder)

KEY: D – Dominant; A – Abundant; F – Frequent; O – Occasional; R - Rare

H7 – Native hedgerow

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22763011	dominant_50	<i>Crataegus monogyna</i> (Hawthorn)
22763011	rare_0_1_10	<i>Rubus fruticosus</i> agg. (Bramble)
22763011	rare_0_1_10	<i>Rosa canina</i> (Dog-rose)

H8 – Native hedgerow

No species recorded.

H9 – Native hedgerow

No species recorded.

H10 – Native hedgerow with trees

<i>Crataegus monogyna</i>	Hawthorn
<i>Fraxinus excelsior</i>	Ash
<i>Lonicera periclymenum</i>	Honeysuckle
<i>Prunus spinosa</i>	Blackthorn
<i>Rubus fruticosus</i> agg.	Bramble

H11 – Native hedgerow – associated with bank or ditch

(N.B. Species list also incorporates species identified within the adjacent arable field margin)

<i>Crataegus monogyna</i>	Hawthorn	D
<i>Holcus lanatus</i>	Yorkshire-fog	D
<i>Lolium perenne</i>	Perennial Ryegrass	A
<i>Alopecurus pratensis</i>	Meadow Foxtail	F
<i>Galium aparine</i>	Cleavers	F
<i>Quercus robur</i>	English Oak	F
<i>Urtica dioica</i>	Nettle	F
<i>Anthriscus sylvestris</i>	Cow Parsley	O
<i>Cirsium arvense</i>	Creeping Thistle	O
<i>Heracleum sphondylium</i>	Hogweed	O
<i>Prunus spinosa</i>	Blackthorn	O
<i>Rubus fruticosus</i> agg.	Bramble	O
<i>Taraxacum officinale</i> agg.	Dandelion	O
<i>Geranium dissectum</i>	Cut-leaved Cranesbill	R
<i>Ilex aquifolium</i>	Holly	R

H12 – Native hedgerow with trees – associated with bank or ditch

<i>Crataegus monogyna</i>	Hawthorn
<i>Quercus robur</i>	English Oak

H13 – Native hedgerow

<i>Crataegus monogyna</i>	Hawthorn	D
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H14 – Native hedgerow

No species recorded

H15 – Native hedgerow

<i>Crataegus monogyna</i>	Hawthorn	D
<i>Dactylis glomerata</i>	Cock's-foot	A
<i>Rubus fruticosus</i> agg.	Bramble	A
<i>Aquilegia vulgaris</i>	Columbine	F
<i>Hedera helix</i>	Ivy	F
<i>Lolium perenne</i>	Perennial Ryegrass	F
<i>Urtica dioica</i>	Nettle	F
<i>Bellis perennis</i>	Daisy	O
<i>Cerastium fontanum</i>	Common Mouse-ear	O
<i>Cirsium arvense</i>	Creeping Thistle	O
<i>Geranium robertianum</i>	Herb-Robert	O
<i>Lapsana communis</i>	Nipplewort	O
<i>Brassica</i> sp.	Mustard/Cress species	R
<i>Chamaenerion angustifolium</i>	Rosebay Willowherb	R
<i>Festuca rubra</i>	Red Fescue	R
<i>Fraxinus excelsior</i>	Ash	R
<i>Geum urbanum</i>	Wood Avenas	R
<i>Jacobaea vulgaris</i>	Common Ragwort	R
<i>Lamium album</i>	White Dead-nettle	R
<i>Silene dioica</i>	Red Campion	R
<i>Stachys sylvatica</i>	Hedge Woundwort	R

H16 – Native hedgerow– associated with bank or ditch

<i>Crataegus monogyna</i>	Hawthorn	D
<i>Urtica dioica</i>	Nettle	A
<i>Rubus fruticosus</i> agg.	Bramble	F
<i>Brassica</i> sp.	Mustard/Cress species	O
<i>Anthriscus sylvestris</i>	Cow Parsley	R
<i>Cirsium vulgare</i>	Spear Thistle	R
<i>Jacobaea vulgaris</i>	Common Ragwort	R
<i>Lamium album</i>	White Dead-nettle	R
<i>Silene dioica</i>	Red Campion	R
<i>Stachys sylvatica</i>	Hedge Woundwort	R

H17 – Native hedgerow– associated with bank or ditch

<i>Crataegus monogyna</i>	Hawthorn	D
<i>Urtica dioica</i>	Nettle	A
<i>Rubus fruticosus</i> agg.	Bramble	F
<i>Brassica</i> sp.	Mustard/Cress species	O
<i>Anthriscus sylvestris</i>	Cow Parsley	R
<i>Cirsium vulgare</i>	Spear Thistle	R
<i>Jacobaea vulgaris</i>	Common Ragwort	R
<i>Lamium album</i>	White Dead-nettle	R
<i>Silene dioica</i>	Red Campion	R
<i>Stachys sylvatica</i>	Hedge Woundwort	R

H18 – Native hedgerow– associated with bank or ditch

<i>Crataegus monogyna</i>	Hawthorn	F
<i>Prunus spinosa</i>	Blackthorn	F
<i>Rosa</i> sp.	Rose species	O
<i>Lonicera periclymenum</i>	Honeysuckle	R

H19 – Native hedgerow

<i>Chamaenerion angustifolium</i>	Rosebay Willowherb
<i>Cirsium arvense</i>	Creeping Thistle
<i>Heracleum sphondylium</i>	Hogweed
<i>Lolium perenne</i>	Perennial Ryegrass
<i>Prunus spinosa</i>	Blackthorn
<i>Rubus fruticosus</i> agg.	Bramble
<i>Rumex obtusifolius</i>	Broad-leaved Dock
<i>Urtica dioica</i>	Nettle

H20 – Native hedgerow

<i>Prunus domestica</i>	Plum	D
<i>Galium aparine</i>	Cleavers	F
<i>Urtica dioica</i>	Nettle	F
<i>Crataegus monogyna</i>	Hawthorn	O
<i>Ranunculus repens</i>	Creeping Buttercup	O
<i>Rumex obtusifolius</i>	Broad-leaved Dock	O
<i>Agrostis stolonifera</i>	Creeping Bent	
<i>Equisetum arvense</i>	Field Horsetail	
<i>Geranium robertianum</i>	Herb-Robert	
<i>Heracleum sphondylium</i>	Hogweed	
<i>Lolium perenne</i>	Perennial Ryegrass	
<i>Myosotis arvensis</i>	Field Forget-me-not	
<i>Stachys sylvatica</i>	Hedge Woundwort	
<i>Taraxacum officinale</i> agg.	Dandelion	
<i>Taraxacum</i> sp.	Dandelion species	

H21 – Native hedgerow

No species recorded

H22 - Native hedgerow

No species recorded

H23 – Native hedgerow

<i>Crataegus monogyna</i>	Hawthorn
<i>Galium aparine</i>	Cleavers
<i>Ilex aquifolium</i>	Holly
<i>Lamium album</i>	White Dead-nettle
<i>Lonicera periclymenum</i>	Honeysuckle
<i>Phleum pratense</i>	Timothy
<i>Prunus spinosa</i>	Blackthorn
<i>Rubus fruticosus</i> agg.	Bramble
<i>Rumex obtusifolius</i>	Broad-leaved Dock
<i>Urtica dioica</i>	Nettle

H24 – Native hedgerow with trees

<i>Betula pendula</i>	Silver Birch
<i>Crataegus monogyna</i>	Hawthorn
<i>Hedera helix</i>	Ivy
<i>Prunus spinosa</i>	Blackthorn
<i>Salix fragilis</i>	Crack Willow

H25 – Native hedgerow

Crataegus monogyna
Prunus spinosa

Hawthorn
Blackthorn

H26 – Native hedgerow

Crataegus monogyna
Prunus spinosa

Hawthorn
Blackthorn

H27 – Native hedgerow

No species recorded

H28 – Native hedgerow

No species recorded

H29 – Native hedgerow

Sample ID	Abundance	Species
22798444	abundant_33_50	<i>Crataegus monogyna</i> (Hawthorn)
22798444	rare_0_1_10	<i>Clematis vitalba</i> (Traveller's-joy)
22798444	rare_0_1_10	<i>Rosa canina</i> (Dog-rose)
22798444	frequent_25_33	<i>Rubus fruticosus</i> agg. (Bramble)
22798444	occasional_10_25	<i>Sambucus nigra</i> (Elder)
22798444	rare_0_1_10	<i>Quercus robur</i> (Pedunculate Oak)
22798444	abundant_33_50	<i>Galium aparine</i> (Cleavers)

H30 – Native hedgerow associated with bank or ditch

Sample ID	Abundance	Species
22798433	abundant_33_50	<i>Crataegus monogyna</i> (Hawthorn)
22798433	occasional_10_25	<i>Sambucus nigra</i> (Elder)
22798433	rare_0_1_10	<i>Corylus avellana</i> (Hazel)
22798433	occasional_10_25	<i>Rubus fruticosus</i> agg. (Bramble)
22798433	abundant_33_50	<i>Galium aparine</i> (Cleavers)
22798433	occasional_10_25	<i>Urtica dioica</i> (Common Nettle)
22798433	rare_0_1_10	<i>Silene dioica</i> (Red Campion)

H31 – Native hedgerow

Sample ID	Abundance	Species
22798428	dominant_50	<i>Crataegus monogyna</i> (Hawthorn)
22798428	rare_0_1_10	<i>Prunus spinosa</i> (Blackthorn)
22798428	rare_0_1_10	<i>Sambucus nigra</i> (Elder)

H32 – Native hedgerow

Sample ID	Abundance	Species
22798466	dominant_50	<i>Crataegus monogyna</i> (Hawthorn)
22798466	rare_0_1_10	<i>Fraxinus excelsior</i> (Ash)
22798466	occasional_10_25	<i>Rubus fruticosus</i> agg. (Bramble)
22798466	occasional_10_25	<i>Anthriscus sylvestris</i> (Cow Parsley)
22798466	abundant_33_50	<i>Lolium perenne</i> (Perennial Rye-grass)

KEY: D – Dominant; A – Abundant; F – Frequent; O – Occasional; R – Rare

22798466	occasional_10_25	Alopecurus pratensis (Meadow Foxtail)
22798466	occasional_10_25	Cirsium arvense (Creeping Thistle)
22798466	occasional_10_25	Urtica dioica (Common Nettle)
22798466	occasional_10_25	Galium aparine (Cleavers)
22798466	rare_0_1_10	Plantago lanceolata (Ribwort Plantain)
22798466	rare_0_1_10	Lamium album (White Dead-nettle)

H33 – Native hedgerow

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22798453	frequent_25_33	Crataegus monogyna (Hawthorn)
22798453	frequent_25_33	Sambucus nigra (Elder)
22798453	occasional_10_25	Rubus fruticosus agg. (Bramble)
22798453	rare_0_1_10	Prunus spinosa (Blackthorn)
22798453	abundant_33_50	Urtica dioica (Common Nettle)
22798453	frequent_25_33	Anthriscus sylvestris (Cow Parsley)
22798453	occasional_10_25	Cirsium arvense (Creeping Thistle)
22798453	occasional_10_25	Plantago lanceolata (Ribwort Plantain)
22798453	occasional_10_25	Holcus lanatus (Yorkshire-fog)
22798453	frequent_25_33	Lolium perenne (Perennial Rye-grass)
22798453	rare_0_1_10	Geum urbanum (Wood Avens)

H34 – Native hedgerow

No species recorded

H35 – Native hedgerow

No species recorded

H36 – Native hedgerow

No species recorded

H37 – Native hedgerow with trees

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22763154	frequent_25_33	Crataegus monogyna (Hawthorn)
22763154	abundant_33_50	Prunus spinosa (Blackthorn)
22763154	occasional_10_25	Fraxinus excelsior (Ash)
22763154	rare_0_1_10	Quercus robur (Pedunculate Oak)
22763154	rare_0_1_10	Rosa canina (Dog-rose)
22763154	rare_0_1_10	Hedera helix (Common Ivy)

H38 – Native hedgerow associated with bank or ditch

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22752588	frequent_25_33	Corylus avellana (Hazel)
22752588	frequent_25_33	Prunus spinosa (Blackthorn)
22752588	frequent_25_33	Crataegus monogyna (Hawthorn)
22752588	rare_0_1_10	Quercus robur (Pedunculate Oak)
22752588	abundant_33_50	Urtica dioica (Common Nettle)
22752588	occasional_10_25	Anthriscus sylvestris (Cow Parsley)

H39 – Native hedgerow

No species recorded

H40 – Native hedgerow associated with bank or ditch

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22763083	abundant_33_50	Crataegus monogyna (Hawthorn)
22763083	frequent_25_33	Prunus spinosa (Blackthorn)
22763083	occasional_10_25	Hedera helix (Common Ivy)
22763083	rare_0_1_10	Sambucus nigra (Elder)
22763083	rare_0_1_10	Rosa canina (Dog-rose)
22763083	rare_0_1_10	Salix cinerea (Grey Willow)
22763083	frequent_25_33	Urtica dioica (Common Nettle)
22763083	frequent_25_33	Chamaenerion angustifolium (Rosebay Willowherb)+B1122
22763083	rare_0_1_10	Silene dioica (Red Campion)

H41 – Native hedgerow with trees

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22763128	frequent_25_33	Rubus fruticosus agg. (Bramble)
22763128	occasional_10_25	Rosa canina (Dog-rose)
22763128	occasional_10_25	Acer pseudoplatanus (Sycamore)
22763128	dominant_50	Crataegus monogyna (Hawthorn)
22763128	rare_0_1_10	Fraxinus excelsior (Ash)

H42 – Native hedgerow with trees

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22763136	rare_0_1_10	Prunus spinosa (Blackthorn)
22763136	rare_0_1_10	Quercus robur (Pedunculate Oak)
22763136	frequent_25_33	Rubus fruticosus agg. (Bramble)
22763136	abundant_33_50	Crataegus monogyna (Hawthorn)
22763136	rare_0_1_10	Acer pseudoplatanus (Sycamore)

H43 – Species-rich native hedgerow with trees – associated with bank or ditch

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22763218	frequent_25_33	Crataegus monogyna (Hawthorn)
22763218	frequent_25_33	Corylus avellana (Hazel)
22763218	occasional_10_25	Fraxinus excelsior (Ash)
22763218	frequent_25_33	Rubus fruticosus agg. (Bramble)
22763218	occasional_10_25	Cirsium arvense (Creeping Thistle)
22763218	occasional_10_25	Galium aparine (Cleavers)
22763218	occasional_10_25	Salix caprea (Goat Willow)
22763218	occasional_10_25	Rosa canina (Dog-rose)
22763218	rare_0_1_10	Ilex aquifolium (Holly)
22763228	frequent_25_33	Prunus spinosa (Blackthorn)
22763228	frequent_25_33	Rubus fruticosus agg. (Bramble)
22763228	frequent_25_33	Crataegus monogyna (Hawthorn)

KEY: D – Dominant; A – Abundant; F – Frequent; O – Occasional; R - Rare

22763228	rare_0_1_10	Quercus robur (Pedunculate Oak)
22763228	occasional_10_25	Sambucus nigra (Elder)
22763228	occasional_10_25	Corylus avellana (Hazel)
22763228	rare_0_1_10	Silene dioica (Red Campion)

H44 – Native hedgerow

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22763195	occasional_10_25	Acer campestre (Field Maple)
22763195	frequent_25_33	Prunus spinosa (Blackthorn)
22763195	frequent_25_33	Crataegus monogyna (Hawthorn)
22763195	abundant_33_50	Rubus fruticosus agg. (Bramble)
22763209	abundant_33_50	Prunus spinosa (Blackthorn)
22763209	occasional_10_25	Crataegus monogyna (Hawthorn)
22763209	rare_0_1_10	Fraxinus excelsior (Ash)
22763209	rare_0_1_10	Acer campestre (Field Maple)
22763189	frequent_25_33	Prunus spinosa (Blackthorn)
22763189	abundant_33_50	Crataegus monogyna (Hawthorn)
22763189	abundant_33_50	Rubus fruticosus agg. (Bramble)
22763189	occasional_10_25	Clematis vitalba (Traveller's-joy)
22763189	rare_0_1_10	Acer campestre (Field Maple)

H45 – Native hedgerow

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22763202	frequent_25_33	Prunus spinosa (Blackthorn)
22763202	abundant_33_50	Rubus fruticosus agg. (Bramble)
22763202	frequent_25_33	Lolium perenne (Perennial Rye-grass)
22763202	frequent_25_33	Ranunculus repens (Creeping Buttercup)
22763202	frequent_25_33	Allium nigrum (Broad-leaved Leek)

H46 – Native hedgerow

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22763183	rare_0_1_10	Quercus robur (Pedunculate Oak)
22763183	rare_0_1_10	Fraxinus excelsior (Ash)
22763183	frequent_25_33	Prunus spinosa (Blackthorn)
22763183	abundant_33_50	Crataegus monogyna (Hawthorn)

H47 – Species-rich native hedgerow with trees

<i>Crataegus monogyna</i>	Hawthorn	A
<i>Galium aparine</i>	Cleavers	F
<i>Alliaria 9etiolate</i>	Garlic Mustard	O
<i>Fraxinus excelsior</i>	Ash	O
<i>Geum urbanum</i>	Wood Avens	O
<i>Mercurialis perennis</i>	Dog's Mercury	O
<i>Rosa arvensis</i>	Field Rose	O
<i>Rubus fruticosus agg.</i>	Bramble	O
<i>Stachys sylvatica</i>	Hedge Woundwort	O
<i>Ulmus procera</i>	English Elm	O

KEY: D – Dominant; A – Abundant; F – Frequent; O – Occasional; R - Rare

<i>Corylus avellana</i>	Hazel	R
<i>Hyacinthoides hispanica</i>	Spanish Bluebell	R
<i>Hyacinthoides x massartiana</i>	Hybrid Bluebell	R
<i>Quercus sp.</i>	Oak species	R
<i>Rosa canina</i> agg.	Dog Rose	R
<i>Salix cinerea</i>	Grey Willow	R
<i>Sambucus nigra</i>	Elder	R
<i>Urtica dioica</i>	Nettle	R

H48 – Native hedgerow with trees

<i>Anthriscus sylvestris</i>	Cow Parsley	F
<i>Crataegus monogyna</i>	Hawthorn	F
<i>Rubus fruticosus</i> agg.	Bramble	F
<i>Rumex obtusifolius</i>	Broad-leaved Dock	O
<i>Salix cinerea</i>	Grey Willow	O
<i>Sambucus nigra</i>	Elder	O
<i>Silene dioica</i>	Red Campion	O
<i>Malus sylvestris</i>	Crab-apple	R
<i>Quercus robur</i>	English Oak	R
<i>Ulmus procera</i>	English Elm	R

H49 – Native hedgerow with trees – associated with bank or ditch

(N.B. Associated ditch is dry)

<i>Crataegus monogyna</i>	Hawthorn	A
<i>Rubus fruticosus</i> agg.	Bramble	A
<i>Anthriscus sylvestris</i>	Cow Parsley	F
<i>Calystegia sp.</i>	Bindweed species	O
<i>Fraxinus excelsior</i>	Ash	O
<i>Galium aparine</i>	Cleavers	O
<i>Heracleum sphondylium</i>	Hogweed	O
<i>Lonicera periclymenum</i>	Honeysuckle	O
<i>Prunus spinosa</i>	Blackthorn	O
<i>Ranunculus repens</i>	Creeping Buttercup	O
<i>Rosa arvensis</i>	Field Rose	O
<i>Rosa rubiginosa</i>	Sweet Briar	O
<i>Rumex conglomeratus</i>	Clustered Dock	O
<i>Stachys sylvatica</i>	Hedge Woundwort	O
<i>Urtica dioica</i>	Nettle	O
<i>Vicia sativa</i>	Common Vetch	O
<i>Malus sylvestris</i>	Crab-apple	R
<i>Sambucus nigra</i>	Elder	R
<i>Ulmus procera</i>	English Elm	R

H50 – Native hedgerow with trees – associated with bank or ditch

(N.B. Associated ditch is dry)

<i>Crataegus monogyna</i>	Hawthorn	A
<i>Anthriscus sylvestris</i>	Cow Parsley	O
<i>Rosa rubiginosa</i>	Sweet Briar	O
<i>Ulmus procera</i>	English Elm	O
<i>Urtica dioica</i>	Nettle	O
<i>Fraxinus excelsior</i>	Ash	R
<i>Heracleum sphondylium</i>	Hogweed	R
<i>Malus sylvestris</i>	Crab-apple	R

H51 – Species-rich native hedgerow – associated with bank or ditch

<i>Crataegus monogyna</i>	Hawthorn	A
<i>Rubus fruticosus</i> agg.	Bramble	F

KEY: D – Dominant; A – Abundant; F – Frequent; O – Occasional; R - Rare

<i>Anthriscus sylvestris</i>	Cow Parsley	O
<i>Fraxinus excelsior</i>	Ash	O
<i>Geranium robertianum</i>	Herb-Robert	O
<i>Hedera helix</i>	Ivy	O
<i>Ilex aquifolium</i>	Holly	O
<i>Lonicera periclymenum</i>	Honeysuckle	O
<i>Rosa arvensis</i>	Field Rose	O
<i>Geranium molle</i>	Dove's-foot Cranesbill	R
<i>Heracleum sphondylium</i>	Hogweed	R
<i>Malus sylvestris</i>	Crab-apple	R
<i>Quercus robur</i>	English Oak	R
<i>Rosa canina</i> agg.	Dog Rose	R
<i>Salix aurita</i>	Eared Willow	R
<i>Sambucus nigra</i>	Elder	R
<i>Tamus communis</i>	Black Bryony	R
<i>Ulmus procera</i>	English Elm	R

Species associated with ditch:

<i>Epilobium hirsutum</i>	Great Willowherb
<i>Juncus effusus</i>	Soft Rush
<i>Juncus inflexus</i>	Hard Rush

H52 – Native hedgerow – associated with bank or ditch

<i>Crataegus monogyna</i>	Hawthorn	D
<i>Rubus fruticosus</i> agg.	Bramble	A
<i>Anthriscus sylvestris</i>	Cow Parsley	O
<i>Epilobium hirsutum</i>	Great Willowherb	O
<i>Hedera helix</i>	Ivy	O
<i>Heracleum sphondylium</i>	Hogweed	O
<i>Rosa</i> sp.	Rose species	O
<i>Ilex aquifolium</i>	Holly	R
<i>Sambucus nigra</i>	Elder	R

H53 – Native hedgerow with trees

<i>Prunus spinosa</i>	Blackthorn	A
<i>Heracleum sphondylium</i>	Hogweed	F
<i>Urtica dioica</i>	Nettle	F
<i>Fraxinus excelsior</i>	Ash	O
<i>Galium aparine</i>	Cleavers	O
<i>Hedera helix</i>	Ivy	O
<i>Rubus fruticosus</i> agg.	Bramble	O
<i>Rumex obtusifolius</i>	Broad-leaved Dock	O
<i>Crataegus monogyna</i>	Hawthorn	R
<i>Quercus</i> sp.	Oak species	R

H54 – Native hedgerow with trees – associated with bank or ditch

<i>Prunus spinosa</i>	Blackthorn	A
<i>Crataegus monogyna</i>	Hawthorn	F
<i>Fraxinus excelsior</i>	Ash	F
<i>Rubus fruticosus</i> agg.	Bramble	F
<i>Anthriscus sylvestris</i>	Cow Parsley	O
<i>Galium aparine</i>	Cleavers	O
<i>Heracleum sphondylium</i>	Hogweed	O
<i>Quercus</i> sp.	Oak species	O
<i>Rosa</i> sp.	Rose species	O

KEY: D – Dominant; A – Abundant; F – Frequent; O – Occasional; R - Rare

<i>Silene dioica</i>	Red Campion	O
<i>Sambucus nigra</i>	Elder	R
<i>Tamus communis</i>	Black Bryony	R

Species associated with ditch:

<i>Epilobium hirsutum</i>	Great Willowherb	O
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H55 – Species-rich native hedgerow with trees - associated with bank or ditch

(N.B. Associated ditch is dry)

<i>Galium aparine</i>	Cleavers	A
<i>Prunus spinosa</i>	Blackthorn	A
<i>Senecio vulgaris</i>	Groundsel	A
<i>Acer campestre</i>	Field Maple	O
<i>Alliaria petiolata</i>	Garlic Mustard	O
<i>Corylus avellana</i>	Hazel	O
<i>Crataegus monogyna</i>	Hawthorn	O
<i>Dactylis glomerata</i>	Cock's-foot	O
<i>Digitalis purpurea</i>	Foxglove	O
<i>Hedera helix</i>	Ivy	O
<i>Hyacinthoides non-scripta</i>	Bluebell	O
<i>Poa annua</i>	Annual Meadow-grass	O
<i>Quercus sp.</i>	Oak species	O
<i>Rosa sp.</i>	Rose species	O
<i>Rubus fruticosus agg.</i>	Bramble	O
<i>Sambucus nigra</i>	Elder	O
<i>Silene dioica</i>	Red Campion	O
<i>Geranium dissectum</i>	Cut-leaved Cranesbill	R
<i>Ilex aquifolium</i>	Holly	R

Species associated with ditch:

<i>Rubus fruticosus agg.</i>	Bramble	A
<i>Epilobium hirsutum</i>	Great Willowherb	O
<i>Silene dioica</i>	Red Campion	O
<i>Urtica dioica</i>	Nettle	O

H56 – Native hedgerow with trees – associated with bank or ditch

<i>Crataegus monogyna</i>	Hawthorn	F
<i>Galium aparine</i>	Cleavers	F
<i>Hedera helix</i>	Ivy	F
<i>Prunus spinosa</i>	Blackthorn	F
<i>Acer campestre</i>	Field Maple	O
<i>Alliaria petiolata</i>	Garlic Mustard	O
<i>Fraxinus excelsior</i>	Ash	O
<i>Rosa sp.</i>	Rose species	O
<i>Rubus fruticosus agg.</i>	Bramble	O
<i>Silene dioica</i>	Red Campion	O
<i>Geranium robertianum</i>	Herb-Robert	R
<i>Sambucus nigra</i>	Elder	R
<i>Tamus communis</i>	Black Bryony	R

Species associated with ditch:

<i>Epilobium hirsutum</i>	Great Willowherb	A
<i>Galium aparine</i>	Cleavers	F
<i>Rubus fruticosus agg.</i>	Bramble	F
<i>Urtica dioica</i>	Nettle	O

KEY: D – Dominant; A – Abundant; F – Frequent; O – Occasional; R - Rare

<i>Arum maculatum</i>	Lords-and-Ladies	R
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H57 – Native hedgerow with trees – associated with bank or ditch

<i>Crataegus monogyna</i>	Hawthorn	A
<i>Galium aparine</i>	Cleavers	A
<i>Anthriscus sylvestris</i>	Cow Parsley	O
<i>Corylus avellana</i>	Hazel	O
<i>Prunus spinosa</i>	Blackthorn	O
<i>Urtica dioica</i>	Nettle	O
<i>Acer platanoides</i>	Norway Maple	R
<i>Fraxinus excelsior</i>	Ash	R
<i>Hedera helix</i>	Ivy	R
<i>Ilex aquifolium</i>	Holly	R
<i>Malus/Prunus/Pyrus sp.</i>	Fruit Tree (unknown species)	R
<i>Prunus sp.</i>	Cherry species	R

Species associated with ditch:

<i>Epilobium hirsutum</i>	Great Willowherb	O
<i>Galium aparine</i>	Cleavers	O

H58 – Native hedgerow with trees – associated with bank or ditch

<i>Crataegus monogyna</i>	Hawthorn	F
<i>Malus domestica</i>	Apple	F
<i>Prunus spinosa</i>	Blackthorn	F
<i>Rosa sp.</i>	Rose species	F
<i>Galium aparine</i>	Cleavers	O
<i>Rubus fruticosus agg.</i>	Bramble	O
<i>Silene dioica</i>	Red Campion	O
<i>Urtica dioica</i>	Nettle	O

Species associated with ditch:

<i>Epilobium hirsutum</i>	Great Willowherb	A
<i>Galium aparine</i>	Cleavers	O
<i>Rubus fruticosus agg.</i>	Bramble	R
<i>Silene dioica</i>	Red Campion	R
	White dead-nettle	O

H59 – Native hedgerow with trees – associated with bank or ditch

<i>Crataegus monogyna</i>	Hawthorn	A
<i>Prunus spinosa</i>	Blackthorn	A
<i>Calystegia sp.</i>	Bindweed species	F
<i>Rubus fruticosus agg.</i>	Bramble	F
<i>Silene dioica</i>	Red Campion	O
<i>Urtica dioica</i>	Nettle	O
<i>Malus domestica</i>	Apple	R
<i>Rosa sp.</i>	Rose species	R

Species associated with ditch:

<i>Epilobium hirsutum</i>	Great Willowherb	O
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H60 – Species-rich hedgerow associated with bank or ditch

<i>Crataegus monogyna</i>	Hawthorn	D
<i>Epilobium hirsutum</i>	Great Willowherb	F
<i>Hedera helix</i>	Ivy	F

KEY: D – Dominant; A – Abundant; F – Frequent; O – Occasional; R - Rare

<i>Prunus spinosa</i>	Blackthorn	F
<i>Rubus fruticosus</i> agg.	Bramble	F
<i>Rumex conglomeratus</i>	Clustered Dock	F
<i>Acer campestre</i>	Field Maple	O
<i>Galium aparine</i>	Cleavers	O
<i>Geum urbanum</i>	Wood Avens	O
<i>Heracleum sphondylium</i>	Hogweed	O
<i>Sambucus nigra</i>	Elder	O
<i>Silene dioica</i>	Red Campion	O
<i>Urtica dioica</i>	Nettle	O
<i>Geranium robertianum</i>	Herb-Robert	R
<i>Malus sylvestris</i>	Crab-apple	R
<i>Rosa arvensis</i>	Field Rose	R
<i>Stachys sylvatica</i>	Hedge Woundwort	R

Species associated with ditch:

<i>Epilobium hirsutum</i>	Great Willowherb	D
<i>Glyceria maxima</i>	Reed Sweet-grass	F
<i>Rumex conglomeratus</i>	Clustered Dock	F
<i>Equisetum arvense</i>	Field Horsetail	O
<i>Heracleum sphondylium</i>	Hogweed	O
<i>Juncus inflexus</i>	Hard Rush	O
<i>Silene dioica</i>	Red Campion	O
<i>Carex pendula</i>	Pendulous Sedge	R
<i>Helosciadium nodiflorus</i>	Fool's Watercress	R

H61 – Native hedgerow with trees

<i>Crataegus monogyna</i>	Hawthorn	D
<i>Urtica dioica</i>	Nettle	A
<i>Epilobium hirsutum</i>	Great Willowherb	O
<i>Fraxinus excelsior</i>	Ash	O
<i>Galium aparine</i>	Cleavers	O
<i>Hedera helix</i>	Ivy	O
<i>Heracleum sphondylium</i>	Hogweed	O
<i>Rosa</i> sp.	Rose species	O
<i>Salix</i> sp.	Willow species	O
<i>Sambucus nigra</i>	Elder	O
<i>Solanum dulcamara</i>	Bittersweet	R

H62 – Native hedgerow

<i>Crataegus monogyna</i>	Hawthorn	F
<i>Fagus sylvatica</i>	Beech	F
<i>Rubus fruticosus</i> agg.	Bramble	O
<i>Ulmus</i> sp.	Elm species	O
<i>Rubus idaeus</i>	Raspberry	R

H63 – Native hedgerow with trees – associated with bank or ditch

(N.B. Associated ditch is dry)

<i>Crataegus monogyna</i>	Hawthorn	D
<i>Equisetum arvense</i>	Field Horsetail	O
<i>Galium aparine</i>	Cleavers	O
<i>Geum urbanum</i>	Wood Avens	O
<i>Hedera helix</i>	Ivy	O
<i>Rubus fruticosus</i> agg.	Bramble	O
<i>Silene dioica</i>	Red Campion	O
<i>Stachys sylvatica</i>	Hedge Woundwort	O

KEY: D – Dominant; A – Abundant; F – Frequent; O – Occasional; R - Rare

<i>Urtica dioica</i>	Nettle	O
<i>Cirsium vulgare</i>	Spear Thistle	R
<i>Epilobium sp.</i>	Willowherb species	R
<i>Fraxinus excelsior</i>	Ash	R
<i>Quercus robur</i>	English Oak	R
<i>Rumex obtusifolius</i>	Broad-leaved Dock	R
<i>Sambucus nigra</i>	Elder	R

Species associated with ditch:

<i>Rubus fruticosus agg.</i>	Bramble	F
<i>Silene dioica</i>	Red Campion	F
<i>Urtica dioica</i>	Nettle	F
<i>Cirsium vulgare</i>	Spear Thistle	O
<i>Galium aparine</i>	Cleavers	O
<i>Rosa sp.</i>	Rose species	O
<i>Cornus sanguinea</i>	Dogwood	R

H64 – Native hedgerow with trees

<i>Crataegus monogyna</i>	Hawthorn	D
<i>Rubus fruticosus agg.</i>	Bramble	A
<i>Equisetum sp.</i>	Horsetail species	F
<i>Urtica dioica</i>	Nettle	F
<i>Filipendula ulmaria</i>	Meadowsweet	O
<i>Fraxinus excelsior</i>	Ash	O
<i>Hedera helix</i>	Ivy	O
<i>Pilosella officinarum</i>	Mouse-ear Hawkweed	O
<i>Poa trivialis</i>	Rough Meadow-grass	O
<i>Rosa sp.</i>	Rose species	O
<i>Silene dioica</i>	Red Campion	O
<i>Acer pseudoplatanus</i>	Sycamore	R
<i>Arrhenatherum elatius</i>	False Oat-grass	R
<i>Geum urbanum</i>	Wood Avens	R
<i>Lamium album</i>	White Dead-nettle	R
<i>Poterium sanguisorba</i>	Salad Burnet	R
<i>Quercus sp.</i>	Oak species	R

H65 – Native hedgerow

No species recorded

H66 – Native hedgerow

No species recorded

H67 – Native hedgerow

<i>Crataegus monogyna</i>	Hawthorn	D
<i>Galium aparine</i>	Cleavers	D
<i>Lolium perenne</i>	Perennial Ryegrass	A
<i>Anthriscus sylvestris</i>	Cow Parsley	F
<i>Rosa canina agg.</i>	Dog Rose	F
<i>Rubus fruticosus agg.</i>	Bramble	F
<i>Urtica dioica</i>	Nettle	F
<i>Arrhenatherum elatius</i>	False Oat-grass	O
<i>Sambucus nigra</i>	Elder	O
<i>Phleum pratense</i>	Timothy	R

H68 – Native hedgerow

<i>Crataegus monogyna</i>	Hawthorn	D
<i>Lolium perenne</i>	Perennial Ryegrass	A

KEY: D – Dominant; A – Abundant; F – Frequent; O – Occasional; R - Rare

<i>Urtica dioica</i>	Nettle	A
<i>Anthriscus sylvestris</i>	Cow Parsley	F
<i>Galium aparine</i>	Cleavers	F
<i>Prunus spinosa</i>	Blackthorn	F
<i>Rubus fruticosus agg.</i>	Bramble	F
<i>Fraxinus excelsior</i>	Ash	R
<i>Ranunculus acris</i>	Meadow Buttercup	R
<i>Rumex obtusifolius</i>	Broad-leaved Dock	R

H69 – Native hedgerow – associated with bank or ditch

<i>Prunus sp.</i>	Cherry species	D
<i>Heracleum sphondylium</i>	Hogweed	F
<i>Prunus spinosa</i>	Blackthorn	F
<i>Crataegus monogyna</i>	Hawthorn	O
<i>Lolium perenne</i>	Perennial Ryegrass	O
<i>Rubus fruticosus agg.</i>	Bramble	O
<i>Acer campestre</i>	Field Maple	R
<i>Ballota nigra</i>	Black Horehound	R
<i>Chamaenerion angustifolium</i>	Rosebay Willowherb	R
<i>Cirsium arvense</i>	Creeping Thistle	R
<i>Epilobium hirsutum</i>	Great Willowherb	R
<i>Geum urbanum</i>	Wood Avens	R
<i>Quercus robur</i>	English Oak	R
<i>Rosa sp.</i>	Rose species	R
<i>Sambucus nigra</i>	Elder	R
<i>Silene dioica</i>	Red Campion	R

H70 – Native hedgerow - associated with bank or ditch

<i>Prunus sp.</i>	Cherry species	D
<i>Heracleum sphondylium</i>	Hogweed	F
<i>Prunus spinosa</i>	Blackthorn	F
<i>Crataegus monogyna</i>	Hawthorn	O
<i>Lolium perenne</i>	Perennial Ryegrass	O
<i>Rubus fruticosus agg.</i>	Bramble	O
<i>Acer campestre</i>	Field Maple	R
<i>Ballota nigra</i>	Black Horehound	R
<i>Chamaenerion angustifolium</i>	Rosebay Willowherb	R
<i>Cirsium arvense</i>	Creeping Thistle	R
<i>Epilobium hirsutum</i>	Great Willowherb	R
<i>Geum urbanum</i>	Wood Avens	R
<i>Quercus robur</i>	English Oak	R
<i>Rosa sp.</i>	Rose species	R
<i>Sambucus nigra</i>	Elder	R
<i>Silene dioica</i>	Red Campion	R

H71 – Native hedgerow with trees

<i>Prunus sp.</i>	Cherry species	D
<i>Anthriscus sylvestris</i>	Cow Parsley	F
<i>Arrhenatherum elatius</i>	False Oat-grass	F
<i>Chamaenerion angustifolium</i>	Rosebay Willowherb	O
<i>Geum urbanum</i>	Wood Avens	O
<i>Poa trivialis</i>	Rough Meadow-grass	O
<i>Rubus fruticosus agg.</i>	Bramble	O
<i>Anisanthera sterilis</i>	Sterile Brome	R
<i>Geranium dissectum</i>	Cut-leaved Cranesbill	R
<i>Heracleum sphondylium</i>	Hogweed	R
<i>Lolium perenne</i>	Perennial Ryegrass	R

KEY: D – Dominant; A – Abundant; F – Frequent; O – Occasional; R - Rare

<i>Prunus spinosa</i>	Blackthorn	R
<i>Rumex acetosa</i>	Common Sorrel	R
<i>Rumex crispus</i>	Curled Dock	R

H72 – Native hedgerow

<i>Acer campestre</i>	Field Maple
<i>Crataegus monogyna</i>	Hawthorn
<i>Fraxinus excelsior</i>	Ash
<i>Prunus sp.</i>	Cherry species
<i>Ulmus sp.</i>	Elm species

H73 – Native hedgerow

<i>Ulmus procera</i>	English Elm	D
<i>Rubus fruticosus agg.</i>	Bramble	F
<i>Sambucus nigra</i>	Elder	O
<i>Acer campestre</i>	Field Maple	R
<i>Quercus robur</i>	English Oak	R
<i>Rosa canina agg.</i>	Dog Rose	R
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	
<i>Carex flacca</i>	Glaucous Sedge	
<i>Carex sp.</i>	Sedge species	
<i>Chamaenerion angustifolium</i>	Rosebay Willowherb	
<i>Cirsium arvense</i>	Creeping Thistle	
<i>Cirsium vulgare</i>	Spear Thistle	
<i>Crataegus monogyna</i>	Hawthorn	
<i>Digitalis purpurea</i>	Foxglove	
<i>Epilobium parviflorum</i>	Hoary Willowherb	
<i>Epilobium sp.</i>	Willowherb species	
<i>Equisetum arvense</i>	Field Horsetail	
<i>Ervilla hirsuta</i>	Hairy Tare	
<i>Geranium dissectum</i>	Cut-leaved Cranesbill	
<i>Geum urbanum</i>	Wood Avens	
<i>Helminthotheca echioides</i>	Bristly Oxtongue	
<i>Juncus effusus</i>	Soft Rush	
<i>Juncus inflexus</i>	Hard Rush	
<i>Poa trivialis</i>	Rough Meadow-grass	
<i>Potentilla reptans</i>	Creeping Cinquefoil	
<i>Ranunculus acris</i>	Meadow Buttercup	
<i>Ranunculus repens</i>	Creeping Buttercup	
<i>Rumex obtusifolius</i>	Broad-leaved Dock	
<i>Stellaria media</i>	Chickweed	
<i>Tamus communis</i>	Black Bryony	
<i>Trifolium pratense</i>	Red Clover	
<i>Veronica agrestis</i>	Field Speedwell	
<i>Vicia sativa</i>	Common Vetch	
<i>Vicia sepium</i>	Bush Vetch	

H74 – Native hedgerow

No species recorded

H75 – Native hedgerow – associated with bank or ditch

<i>Crataegus monogyna</i>	Hawthorn	D
<i>Epilobium hirsutum</i>	Great Willowherb	A
<i>Rubus fruticosus agg.</i>	Bramble	A
<i>Chamaenerion angustifolium</i>	Rosebay Willowherb	F
<i>Dactylis glomerata</i>	Cock's-foot	F
<i>Heracleum sphondylium</i>	Hogweed	F
<i>Rosa canina agg.</i>	Dog Rose	F
<i>Urtica dioica</i>	Nettle	F

KEY: D – Dominant; A – Abundant; F – Frequent; O – Occasional; R - Rare

<i>Atropa bella-donna</i>	Deadly Nightshade	O
<i>Cirsium arvense</i>	Creeping Thistle	O
<i>Geum urbanum</i>	Wood Aven	O
<i>Sambucus nigra</i>	Elder	O
<i>Anisanthera sterilis</i>	Sterile Brome	R
<i>Fraxinus excelsior</i>	Ash	R
<i>Geranium robertianum</i>	Herb-Robert	R
<i>Poa trivialis</i>	Rough Meadow-grass	R

H76 – Native hedgerow with trees

No species recorded

H77 – Native hedgerow

<i>Crataegus monogyna</i>	Hawthorn	D
<i>Prunus spinosa</i>	Blackthorn	F
<i>Rubus fruticosus agg.</i>	Bramble	O

H78 – Native hedgerow

<i>Crataegus monogyna</i>	Hawthorn	D
<i>Prunus spinosa</i>	Blackthorn	F
<i>Rubus fruticosus agg.</i>	Bramble	O

H79 – Native hedgerow

No species recorded

H80 – Native hedgerow

No species recorded

Lines of Trees

LOT1 – Line of Trees

<u>Sample ID</u>	<u>Abundance</u>	<u>Species</u>
22730259	frequent_25_33	Betula pendula (Silver Birch)
22730259	frequent_25_33	Fagus sylvatica (Beech)
22730259	rare_0_1_10	Acer campestre (Field Maple)
22730259	occasional_10_25	Pteridium aquilinum (Bracken)
22730259	rare_0_1_10	Conopodium majus (Pignut)
22730259	occasional_10_25	Dactylis glomerata (Cock's-foot)
22730259	rare_0_1_10	Ranunculus repens (Creeping Buttercup)
22730259	frequent_25_33	Poa compressa (Flattened Meadow-grass)
22730259	frequent_25_33	Festuca rubra (Red Fescue)
22730259	rare_0_1_10	Ficaria verna (Lesser celandine)
22730259	rare_0_1_10	Hyacinthoides non-scripta (Bluebell)
22730259	rare_0_1_10	Viola riviniana (Common Dog-violet)

LOT2 – Line of Trees

<i>Crataegus monogyna</i>	Hawthorn	A
<i>Salix fragilis</i>	Crack Willow	A
<i>Urtica dioica</i>	Nettle	A
<i>Galium aparine</i>	Cleavers	F
<i>Geranium robertianum</i>	Herb-Robert	F
<i>Anthriscus sylvestris</i>	Cow Parsley	O
<i>Rubus fruticosus agg.</i>	Bramble	O
<i>Alnus glutinosa</i>	Alder	R
<i>Hedera helix</i>	Ivy	R
<i>Ilex aquifolium</i>	Holly	R

LOT3 – Line of Trees

No species recorded

LOT4 – Line of Trees

No species recorded

LOT5 – Line of Trees

No species recorded

LOT6 – Line of Trees

<i>Crataegus monogyna</i>	Hawthorn	A
<i>Hedera helix</i>	Ivy	A
<i>Rubus fruticosus agg.</i>	Bramble	A
<i>Asplenium scolopendrium</i>	Hart's-tongue	O
<i>Rosa sp.</i>	Rose species	O
<i>Alnus glutinosa</i>	Alder	R
<i>Fraxinus excelsior</i>	Ash	R
<i>Ilex aquifolium</i>	Holly	R

LOT7 – Line of Trees

No species recorded

LOT8 – Line of Trees

KEY: D – Dominant; A – Abundant; F – Frequent; O – Occasional; R - Rare

<i>Alnus glutinosa</i>	Alder	A
<i>Anthriscus sylvestris</i>	Cow Parsley	F
<i>Bromus hordeaceus</i>	Soft Brome	O
<i>Crataegus monogyna</i>	Hawthorn	O
<i>Fraxinus excelsior</i>	Ash	O
<i>Hedera helix</i>	Ivy	O
<i>Silene dioica</i>	Red Campion	O
<i>Fagus sylvatica</i>	Beech	R

LOT9 – Line of Trees

<i>Populus sp.</i>	Poplar species	A
<i>Fraxinus excelsior</i>	Ash	F
<i>Acer campestre</i>	Field Maple	O
<i>Crataegus monogyna</i>	Hawthorn	O
<i>Salix x chrysocoma</i>	Weeping Willow	O
<i>Alnus glutinosa</i>	Alder	R

LOT10 – Line of Trees

<i>Fraxinus excelsior</i>	Ash	A
<i>Quercus robur</i>	English Oak	A
<i>Acer campestre</i>	Field Maple	F
<i>Crataegus monogyna</i>	Hawthorn	F

LOT11 – Line of Trees

<i>Fraxinus excelsior</i>	Ash	A
<i>Quercus robur</i>	English Oak	A
<i>Acer campestre</i>	Field Maple	F
<i>Crataegus monogyna</i>	Hawthorn	F

Ditches

D1 – Ditch

Sample ID	Abundance	Species
22763942	rare_0_1_10	Iris pseudacorus (Yellow Iris)
22763942	occasional_10_25	Equisetum arvense (Field Horsetail)
22763942	frequent_25_33	Heracleum sphondylium (Hogweed)
22763942	occasional_10_25	Rubus fruticosus agg. (Bramble)
22763942	abundant_33_50	Lolium perenne (Perennial Rye-grass)
22763942	occasional_10_25	Festuca rubra (Red Fescue)
22763942	rare_0_1_10	Lamium album (White Dead-nettle)
22763950	frequent_25_33	Lolium perenne (Perennial Rye-grass)
22763950	occasional_10_25	Holcus lanatus (Yorkshire-fog)
22763950	occasional_10_25	Urtica dioica (Common Nettle)
22763950	occasional_10_25	Heracleum sphondylium (Hogweed)
22763950	rare_0_1_10	Silene dioica (Red Campion)
22763950	rare_0_1_10	Iris pseudacorus (Yellow Iris)
22763950	occasional_10_25	Myosotis scorpioides (Water Forget-me-not)
22763950	rare_0_1_10	Equisetum arvense (Field Horsetail)
22763950	occasional_10_25	Helosciadium nodiflorum

D2 – Ditch

<i>Juncus effusus</i>	Soft Rush	A
<i>Carex sp.</i>	Sedge species	R
<i>Lemna minor</i>	Common Duckweed	R
<i>Veronica beccabunga</i>	Brooklime	R

D3 – Ditch

<i>Carex pendula</i>	Pendulous sedge
<i>Pteridium aquilinum</i>	Bracken
<i>Urtica dioica</i>	Nettle

D4 – Ditch

<i>Poa trivialis</i>	Rough Meadow-grass	A
<i>Ranunculus repens</i>	Creeping Buttercup	A
<i>Cynosurus cristatus</i>	Crested Dog's-tail	F
<i>Filipendula ulmaria</i>	Meadowsweet	F
<i>Phleum pratense</i>	Timothy	F
<i>Potentilla anserina</i>	Silverweed	F
<i>Rumex crispus</i>	Curled Dock	F
<i>Trifolium repens</i>	White Clover	F
<i>Lapsana communis</i>	Nipplewort	O
<i>Plantago lanceolata</i>	Ribwort Plantain	O
<i>Urtica dioica</i>	Nettle	O
<i>Mentha aquatica</i>	Water Mint	R

APPENDIX 4

Detailed Survey Methods used

Desk Study

Information regarding designated sites, notable habitats and existing protected and notable species records of the past decade, within a 1 km minimum radius of the site was collated and reviewed to inform this Preliminary Ecological Assessment.

In brief, key data sources included Natural England (open source data), Environment Agency (open source data); the Leicestershire and Rutland Environmental Records Centre (LRERC); the Leicester, Leicestershire and Rutland Biodiversity Action Plan 2016 - 2026; and a review of relevant species records from the last 10 years.

Statutory designated wildlife sites were searched for as follows:

- Ramsar sites within 10 km of the site;
- National Sites Network sites (including Special Areas of Conservation (SAC) and Special Protection Areas (SPA)) within 10 km of the site;
- Site of Special Scientific Interest (SSSI) within 5 km of the site;
- National Nature Reserve (NNR) within 5 km of the site; and
- Local Nature Reserves (LNR) within 2 km of the site.

Non-statutory designated wildlife sites were searched for within 1 km of the site. Within Leicestershire and Rutland, these include Local Wildlife Sites (LWS).

Notable habitats were searched for within 0.25 km of the Scheme. Notable habitats may include those listed under any of the following:

- Ancient woodland;
- Main rivers;
- Habitats of principal importance (HPI) as listed by the requirements of Section 41 (S41) of the Natural Environment and Rural Communities (NERC) Act 2006; and
- Local Biodiversity Action Plan Habitats (LBAP).

Pre-existing records for notable species were reviewed from the combined data sources, where found from within approximately 1 km of the site. Notable species include those listed under any of the following:

- Protected animal species under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (EPS);
- Protected bird species under Schedule 1 of the Wildlife and Countryside Act 1981, as amended (WCA1);
- Protected animal species under Schedule 5 of the Wildlife and Countryside Act 1981, as amended (WCA5);
- Protected plant species under Schedule 8 of the Wildlife and Countryside Act 1981, as amended (WCA8);
- Invasive non-native plant species under Schedule 9 of the Wildlife and Countryside Act 1981, as amended (WCA9);
- Invasive non-native species under the Invasive Alien Species (Enforcement and Permitting) Order 2019 (IAS);
- Species of principal importance (SPI) as listed by the requirements of S41 of NERC;
- Protection of Badgers Act 1992 (PBA);
- Red and Amber listed Birds of Conservation Concern (BRd/BAm); and
- Leicestershire and Rutland Biodiversity Action Plan Species (LBAP).

Limitations

Species records can provide a useful indication of the species present within the search area, although the absence of a given species from the dataset cannot be taken to represent actual absence.

Habitat Survey

An extended UK Habitat Classification Survey of the site was completed by suitably experienced TEP ecologists across several dates in May 2024.

The survey was carried out in accordance with UK Habitat Classification (UKHab) assessment method and Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017b). The method records the habitat types present, within the survey route, based on the JNCC/UKHab descriptions. Plant species were identified in accordance with the New Flora of the British Isles (Stace, 2019) and recorded as target notes using the DAFOR scale, where relevant.

The survey was expanded to include habitats within 50 m of the proposed pipeline route in order to provide context.

Limitations

Any ecological survey represents a snapshot of ecological conditions at the time of survey; ecological conditions may change over time. Efforts to identify dominant plant species for the purposes of characterising broad habitat types do not constitute a detailed botanical survey.

The optimum survey period for UK Habitat Surveys and Habitat Condition Assessment are April to mid-October. Given the site surveys were undertaken in May, when invasive non-native and protected plant species such as bluebell *Hyacinthoides non-scripta* would have been visible, this is not considered to be a significant constraint. Therefore there are no limitations with regard to seasonality.

Access was prohibited to some of the land parcels within the site. Where access was granted but land parcels could not be safely accessed, for example due to livestock or traffic, a review of aerial imagery was undertaken to identify the habitats present. As such, detailed species lists or condition assessment information are not available for these habitats. Parcels surveyed from aerial imagery are identified with a cross hatch on the Baseline UK Habitat Plan (Section 3).

Parcels where detailed data collection was not possible will be subject to further survey in future, to obtain the information required to inform the development proposals.

Fauna

Ordnance Survey maps and aerials were reviewed to identify potentially suitable habitats offsite within influence (e.g. dispersal distances for mobile species) of the Scheme. The Ecological Desk Study identified any pre-existing records for protected and notable species within at least 1km of the site.

The habitat survey included an extended assessment of the habitats present for their potential to support notable or protected wildlife species. Any signs indicating the presence of these species were recorded.

Limitations

The surveys will only identify habitats and species present within the site at the time of surveys. Additionally, the species investigated are mobile and will move into and out of areas over time. For these reasons a precautionary approach has been taken in the prediction of impacts. Specific species surveys, where recommended in the report, will be undertaken to inform any future impact assessment once development proposals are known.

Constraints or limitations upon survey methods or interpretation of survey findings will be discussed in the relevant Ecological Technical Report.

APPENDIX 5

Relevant Species Legislation

Amphibians

Killing or injury to GCN or damage to their hibernation sites is a criminal offence under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (as amended). It is an offence to handle GCN without either a survey licence or a development licence obtained from Natural England.

Common toad *Bufo bufo* is a Section 41 Species of Principal Importance under the Natural Environment and Rural Communities (NERC) Act 2006 and is a material consideration for planning applications.

Badger

Badger *Meles meles* and their setts are protected under the Protection of Badgers Act 1992, which makes it illegal to kill, injure or take badgers or to interfere with a badger sett. Interference with a sett includes blocking tunnels or damaging the sett in any way.

Setts are defined in the Act as 'any structure or place which displays signs indicating current use by badger.' Setts are therefore only protected under the Act when they display such signs.

Section 3(e) of the Act makes it an offence for a person to interfere with a badger sett by disturbing a badger that is occupying the sett.

Bats

All bats, their breeding and resting places are internationally protected under The Conservation of Habitats and Species Regulations 2017 (as amended). In England bats are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Installing lighting which illuminates commuting or foraging habitat can affect bats.

Birds

All nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy its nest whilst in use or being built, or intentionally take or destroy its eggs.

Hedgehog

Hedgehog *Erinaceus europeaus* is a Section 41 Species of Principal Importance under the Natural and Environmental Rural Communities (NERC) Act 2006 and is a material consideration for planning applications.

Reptiles

All reptiles are given protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). These include adder *Vipera berus*, grass snake *Natrix helvetica*, common lizard *Zootoca vivipara* and slow-worm *Anguis fragilis*. Reptiles are protected from intentional or reckless killing and injury, and trade.

Invasive Plant Species

Plants listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) are identified as invasive species. It is an offence to allow Schedule 9 plants to spread onto adjacent land or to plant or allow the spread of these species in the wild.

Additionally, eight plant species are listed on the Invasive Alien Species Order 2019. Management must be put in place in order to prevent and reduce the spread of these species.

Habitats of Principal Importance

Lowland Dry Acid Grassland and Hedgerows are Section 41 Habitat of Principal Importance under the Natural Environment and Rural Communities (NERC) Act 2006 and are material considerations for planning applications.

APPENDIX 6

Habitat Condition Assessment

Baseline

Site Name: STW Hallgates to Elms Farm
Metric Version: Statutory Metric

	07/05/24	07/05/24	15/05/2024	15/05/2024
	08/05/24	08/05/24	16/05/2024	16/05/2024
	09/05/24	09/05/24	17/05/2024	17/05/2024
	10/05/24	10/05/24	CG	CG
Date of Survey:	07/05/24	21/05/24		
Surveyor:	08/05/24	22/05/24		
	09/05/24	28/05/24		
	10/05/24	PD		
	RT			

Habitats				Criteria														Number of Passes	Woodland Score	
Habitat Reference	UK Habitat Classification	Metric Classification	Condition Criteria Sheet Used	Condition	A	B	C	D	E	F	G	H	I	J	K	L	M			
Habitats																				
TN1 (Sample 1)	Other lowland dry acid grassland	Grassland - Lowland dry acid grassland	Grassland Medium/High/Very High distinctiveness	Moderate	Pass	Fail	Pass	Fail	Pass									3	0	
TN1 (Sample 2)	Other lowland dry acid grassland	Grassland - Lowland dry acid grassland	Grassland Medium/High/Very High distinctiveness	Moderate	Pass	Fail	Pass	Pass	Pass									4	0	
TN2	Other lowland mixed deciduous woodland	Woodland and forest - Lowland mixed deciduous woodland	Woodland	Good	3	2	2	3	3	3	3	3	3	2	2	3	2	3	0	34
TN3	Bracken	Grassland - Bracken	N/A	N/A														0	0	
TN4	Other lowland dry acid grassland	Grassland - Lowland dry acid grassland	Grassland Medium/High/Very High distinctiveness	Moderate	Pass	Pass	Fail	Fail	Pass									3	0	
TN5	Other coniferous woodland	Woodland and forest - Other coniferous woodland	Woodland	Moderate	2	2	3	1	3	1	2	3	3	1	1	1	1	3	0	26
TN6	Other lowland dry acid grassland	Grassland - Lowland dry acid grassland	Grassland Medium/High/Very High distinctiveness	Moderate	Fail	Pass	Pass	Pass	Pass									4	0	
TN7	Modified grassland	Grassland - Modified grassland	Grassland Low distinctiveness	Poor	Fail	Pass	Pass	Fail	Fail	Pass	Pass							4	0	
TN8	Bracken	Grassland - Bracken	N/A	N/A														0	0	
TN9	Other broadleaved woodland	Woodland and forest - Other woodland; broadleaved	Woodland	No data														0	0	
TN10	Modified grassland	Grassland - Modified grassland	Grassland Low distinctiveness	Poor	Fail	Fail	Pass	Pass	Fail	Pass	Pass							4	0	
TN11	Modified grassland	Grassland - Modified grassland	Grassland Low distinctiveness	No data														0	0	
TN12	Other coniferous woodland	Woodland and forest - Other coniferous woodland	Woodland	Poor	1	3	3	1	3	1	1	3	1	1	1	1	1	3	0	23
TN13	Other broadleaved woodland	Woodland and forest - Other woodland; broadleaved	Woodland	Poor	1	3	3	2	3	1	1	3	1	1	1	1	1	3	0	24
TN14	Other broadleaved woodland	Woodland and forest - Other woodland; broadleaved	Woodland	Moderate	3	3	3	1	3	1	3	3	1	2	1	1	1	1	0	26
TN15	Modified grassland	Grassland - Modified grassland	Grassland Low distinctiveness	No data														0	0	
TN16	Modified grassland	Grassland - Modified grassland	Grassland Low distinctiveness	No data														0	0	
TN17	Modified grassland	Grassland - Modified grassland	Grassland Low distinctiveness	No data														0	0	
TN18	Other neutral grassland	Grassland - Other neutral grassland	Grassland Medium/High/Very High distinctiveness	Poor	Fail	Pass	Pass	Pass	Pass	Fail								4	0	
TN19	Other broadleaved woodland	Woodland and forest - Other woodland; broadleaved	Woodland	Poor	2	2	3	2	3	1	2	3	1	1	1	1	1	2	0	24
TN20	Modified grassland	Grassland - Modified grassland	Grassland Low distinctiveness	Good	Pass	Pass	Pass	Pass	Pass	Pass	Pass							7	0	
TN21	Other broadleaved woodland	Woodland and forest - Other woodland; broadleaved	Woodland	Poor	2	3	3	2	3	1	2	1	1	1	1	1	1	3	0	24
TN22	Pond - non-priority habitat	Lakes - Ponds (non-priority habitat)	Ponds	No data														0	0	
TN23	Modified grassland	Grassland - Modified grassland	Grassland Low distinctiveness	No data														0	0	
TN24	Modified grassland	Grassland - Modified grassland	Grassland Low distinctiveness	Poor	Fail	Pass	Pass	Pass	Pass	Pass	Pass							6	0	
TN25	Other neutral grassland	Grassland - Other neutral grassland	Grassland Medium/High/Very High distinctiveness	No data														0	0	
TN26	Other woodland - mixed - mainly broadleaved	Woodland and forest - Other woodland; mixed	Woodland	Poor	1	3	1	1	1	1	1	1	3	1	1	1	1	3	0	19
TN27	Other woodland - mixed - mainly broadleaved	Woodland and forest - Other woodland; mixed	Woodland	No data														0	0	
TN28	Bramble scrub	Heathland and shrub - Bramble scrub	N/A	N/A														0	0	
TN29 (Sample 1)	Modified grassland	Grassland - Modified grassland	Grassland Low distinctiveness	Poor	Fail	Fail	Pass	Pass	Pass	Pass	Pass							5	0	
TN29 (Sample 2)	Modified grassland	Grassland - Modified grassland	Grassland Low distinctiveness	Poor	Fail	Fail	Pass	Pass	Pass	Pass	Pass							5	0	
TN29 (Sample 3)	Modified grassland	Grassland - Modified grassland	Grassland Low distinctiveness	Poor	Fail	Fail	Pass	Pass	Fail	Pass	Pass							4	0	
TN30 (Sample 1)	Bramble scrub	Heathland and shrub - Bramble scrub	N/A	N/A														0	0	
TN30 (Sample 2)	Bramble scrub	Heathland and shrub - Bramble scrub	N/A	N/A														0	0	
TN31	Other broadleaved woodland	Woodland and forest - Other woodland; broadleaved	Woodland	Poor	2	3	3	2	3	1	1	1	1	1	1	1	1	3	0	23
TN32	Arable field margin	Cropland - Arable field margins tussocky	N/A	N/A														0	0	
TN33	Modified grassland	Grassland - Modified grassland	Grassland Low distinctiveness	Poor	Fail	Fail	Pass	Pass	Pass	Pass	Pass							5	0	
TN34	Other blackthorn scrub	Heathland and shrub - Blackthorn scrub	Scrub	Poor	Fail	Fail	Pass	Fail	Fail									1	0	
TN35	Arable field margins	Cropland - Arable field margins tussocky	N/A	N/A														0	0	
TN36	Arable field margins	Cropland - Arable field margins tussocky	N/A	N/A														0	0	
TN37	Arable field margins	Cropland - Arable field margins tussocky	N/A	N/A														0	0	
TN38	Other neutral grassland	Grassland - Other neutral grassland	Grassland Medium/High/Very High distinctiveness	Poor	Pass	Pass	Fail	Pass	Pass	Fail								4	0	
TN39	Other broadlaved woodland	Woodland and forest - Other woodland; broadleaved	Woodland	Poor	1	3	3	1	3	2	2	3	1	2	1	1	2	1	0	25
TN40	Pond - non-priority habitat	Lakes - Ponds (non-priority habitat)	Ponds		Pass	Fail	Pass	Fail	Pass	Fail	Fail	Fail	Fail					3	0	
TN41	Bramble scrub	Heathland and shrub - Bramble scrub	N/A	N/A														0	0	
TN42	Arable field margins	Cropland - Arable field margins tussocky	N/A	N/A														0	0	
TN43	Arable field margins	Cropland - Arable field margins tussocky	N/A	N/A														0	0	
TN44	Modified grassland	Grassland - Modified grassland	Grassland Low distinctiveness	Poor	Fail	Fail	Pass	Fail	Fail	Pass	Pass							3	0	
TN45	Modified grassland	Grassland - Modified grassland	Grassland Low distinctiveness	Moderate	Fail	Fail	Pass	Pass	Pass	Pass	Pass							5	0	
TN46	Modified grassland	Grassland - Modified grassland	Grassland Low distinctiveness	Moderate	Fail	Fail	Pass	Pass	Fail	Pass	Pass							4	0	
TN47	Modified grassland	Grassland - Modified grassland	Grassland Low distinctiveness	Moderate	Fail	Fail	Pass	Pass	Fail	Pass	Pass							4	0	
TN48	Other neutral grassland	Grassland - Other neutral grassland	Grassland Medium/High/Very High distinctiveness	No data														0	0	
TN49	Other neutral grassland	Grassland - Other neutral grassland	Grassland Medium/High/Very High distinctiveness	Moderate	Pass	Pass	Pass	Pass	failf	Fail								4	0	
TN50	Bramble scrub	Heathland and shrub - Bramble scrub	N/A	N/A														0	0	
TN51	Modified grassland	Grassland - Modified grassland	Grassland Low distinctiveness	Moderate	Fail	Fail	Fail	Pass	Pass	Pass	Pass							4	0	

TN52	Modified grassland	Grassland - Modified grassland	Grassland Low distinctiveness	Good	Pass	Fail	Pass	Pass	Pass	Pass	Pass										6	0
TN53	Modified grassland	Grassland - Modified grassland	Grassland Low distinctiveness	Poor	Fail	Fail	Pass	Pass	Pass	Pass	Pass										5	0
TN54	Modified grassland	Grassland - Modified grassland	Grassland Low distinctiveness	Poor	Fail	Fail	Pass	Fail	Pass	Pass	Pass										4	0
TN55	Modified grassland	Grassland - Modified grassland	Grassland Low distinctiveness	Moderate	Fail	Fail	Pass	Pass	Pass	Pass	Pass										5	0
TN56	Ruderal/ephemeral	Sparsely vegetated land - Ruderal/Ephemeral	Urban	Good	Pass	Pass	Pass	Pass													4	0
TN57	Tall forbs	Sparsely vegetated land – Tall forbs	Urban	Moderate	Fail	Pass	Pass														2	0
TN58	Other neutral grassland	Grassland - Other neutral grassland	Grassland Medium/High/Very High distinctiveness	Moderate	Pass	Fail	Pass	Pass	Pass	Fail											4	0
TN59	Other neutral grassland	Grassland - Other neutral grassland	Grassland Medium/High/Very High distinctiveness	Moderate	Pass	Pass	Pass	Pass	Pass	Fail											5	0
TN60	Other neutral grassland	Grassland - Other neutral grassland	Grassland Medium/High/Very High distinctiveness	Moderate	Pass	Pass	Pass	Pass	Pass	Fail											5	0
TN61	Other neutral grassland	Grassland - Other neutral grassland	Grassland Medium/High/Very High distinctiveness	Poor	Fail	Fail	Pass	Pass	Fail	Fail											2	0
TN62	Tall forbs	Sparsely vegetated land – Tall forbs	Urban	No data																	0	0
TN63	Arable field margins	Cropland - Arable field margins tussocky	N/A	N/A																	0	0
TN64	Arable field margins	Cropland - Arable field margins tussocky	N/A	N/A																	0	0
TN65	Arable field margins	Cropland - Arable field margins tussocky	N/A	N/A																	0	0
TN66	Temporary grass and clover leys	Cropland - Temporary grass and clover leys	N/A	N/A																	0	0
TN67	Arable field margins	Cropland - Arable field margins tussocky	N/A	N/A																	0	0
TN68	Arable field margins	Cropland - Arable field margins tussocky	N/A	N/A																	0	0
TN69	Other neutral grassland	Grassland - Other neutral grassland	Grassland Medium/High/Very High distinctiveness	No data																	0	0
TN70	Other neutral grassland	Grassland - Other neutral grassland	Grassland Medium/High/Very High distinctiveness	No data																	0	0
TN71	Heathland and Shrub - Bramble Scrub	Heathland and shrub - Bramble scrub	N/A	N/A																	0	0
TN72	Heathland and Shrub - Blackthorn Scrub	Heathland and shrub - Blackthorn scrub	Scrub	No data																	0	0
TN73	Heathland and Shrub - Mixed Shurb	Heathland and shrub - Mixed scrub	Scrub	Moderate	Fail	Pass	Pass	Pass	Pass												4	0
TN74	Pond - non-priority habitat	Lakes - Ponds (non-priority habitat)	Ponds	Moderate	Fail	Pass	Pass	Pass	Pass	Pass	Pass										6	0
TN75	Pond - non-priority habitat	Lakes - Ponds (non-priority habitat)	Ponds	Poor	Fail	Fail	Fail	Pass	Pass	Pass	Pass										4	0
TN76	Other Broadleaved Woodland	Woodland and forest - Other woodland; broadleaved	Woodland	Good	3	3	3	3	3	3	3	3	3	1	3	2	2	3			0	35
TN77	Other neutral grassland	Grassland - Other neutral grassland	Grassland Medium/High/Very High distinctiveness	Moderate	Pass	Fail	Pass	Pass	Fail	Fail											3	0
TN78	Tall forb	Sparsely vegetated land – Tall forbs	Urban	Moderate	Fail	Fail	Pass														1	0
TN79	Arable field margins	Cropland - Arable field margins tussocky	N/A	N/A	Pass	Fail	Pass	Pass	Pass	Fail											4	0
TN80	Other neutral grassland	Grassland - Other neutral grassland	Grassland Medium/High/Very High distinctiveness	Poor	Pass	Fail	Pass	Fail	Fail	Fail											2	0
TN81	Blackthorn scrub	Heathland and shrub - Blackthorn scrub	Scrub	Poor	Fail	Fail	Pass	Pass	Fail												2	0
TN82	Modified grassland	Grassland - Modified grassland	Grassland Low distinctiveness	Poor	Fail	Fail	Pass	Pass	Pass	Pass	Pass										5	0
TN83	Other neutral grassland	Grassland - Other neutral grassland	Grassland Medium/High/Very High distinctiveness	Poor	Pass	Fail	Fail	Fail	Fail	Fail											1	0
TN84	Arable field margins	Cropland - Arable field margins tussocky	N/A	N/A																	0	0
TN85	Arable field margins	Cropland - Arable field margins tussocky	N/A	N/A																	0	0
TN86	Arable field margins	Cropland - Arable field margins tussocky	N/A	N/A																	0	0
TN87	Other neutral grassland	Grassland - Other neutral grassland	Grassland Medium/High/Very High distinctiveness	Poor	Pass	Fail	Fail	Pass	Fail	Fail											2	0
TN88	Other neutral grassland	Grassland - Other neutral grassland	Grassland Medium/High/Very High distinctiveness	Poor	Pass	Fail	Fail	Pass	Fail	Fail											2	0
TN89	Other neutral grassland	Grassland - Other neutral grassland	Grassland Medium/High/Very High distinctiveness	Moderate	Pass	Fail	Pass	Pass	Fail	Fail											3	0
TN90	Arable field margins	Cropland - Arable field margins tussocky	N/A	N/A																	0	0
TN91	Arable field margins	Cropland - Arable field margins tussocky	N/A	N/A																	0	0
TN92	Arable field margins	Cropland - Arable field margins tussocky	N/A	N/A																	0	0
TN93	Other mixed woodland	Woodland and forest - Other woodland; mixed	Woodland	Moderate	2	3	3	3	2	3	2	3	1	2	1	2	1	2	3		0	30
TN94	Other neutral grassland	Grassland - Other neutral grassland	Grassland Medium/High/Very High distinctiveness	Moderate	Pass	Pass	Fail	Pass	Pass	Fail											4	0
TN95	Other neutral grassland	Grassland - Other neutral grassland	Grassland Medium/High/Very High distinctiveness	Moderate	Pass	Fail	Pass	Pass	Fail	Fail											3	0
TN96	Other neutral grassland	Grassland - Other neutral grassland	Grassland Medium/High/Very High distinctiveness	Poor	Fail	Pass	Pass	Pass	Fail	Fail											3	0
TN97	Other broadleaved woodland	Woodland and forest - Other woodland; broadleaved	Woodland	Poor	2	3	3	2	2	1	2	3	1	2	1	1	1	1		0	24	
TN98	Other neutral grassland	Grassland - Other neutral grassland	Grassland Medium/High/Very High distinctiveness	Poor	Fail	Fail	Pass	Fail	Fail	Fail											1	0
TN99	Mixed scrub	Heathland and shrub - Mixed scrub	Scrub	Moderate	Fail	Pass	Pass	Pass	Pass												4	0
TN100	Other lowland meadow	Grassland - Lowland meadows	Grassland Medium/High/Very High distinctiveness	Good	Pass	Pass	Pass	Pass	Pass	Pass											6	0
TN101	Hawthorn scrub	Heathland and shrub - Hawthorn scrub	Scrub	Moderate	Fail	Pass	Fail	Pass	Pass												3	0
TN102	Bramble scrub	Heathland and shrub - Bramble scrub	N/A	N/A																	0	0
TN103	Introduced shrub	Urban - Introduced shrub	N/A	N/A																	0	0
TN104	Other neutral grassland	Grassland - Other neutral grassland	Grassland Medium/High/Very High distinctiveness	Poor	Fail	Fail	Fail	Pass	Fail	Fail											1	0
TN105	Other neutral grassland	Grassland - Other neutral grassland	Grassland Medium/High/Very High distinctiveness	Poor	Fail	Pass	Pass	Pass	Fail	Fail											3	0
TN106	Other broadleaved woodland	Woodland and forest - Other woodland; broadleaved	Woodland	Poor	1	3	3	2	2	1	1	3	1	2	1	1	1		0	22		
TN107	Other lowland meadow	Grassland - Other neutral grassland	Grassland Medium/High/Very High distinctiveness	Moderate	Pass	Pass	Pass	Pass	Fail	Fail											4	0
TN108	Other broadleaved woodland	Woodland and forest - Other woodland; broadleaved	Woodland	No data																	0	0
TN109	Modified grassland	Grassland - Modified grassland	Grassland Low distinctiveness	Poor	Fail	Pass	Pass	Fail	Fail	Pass	Pass										4	0
TN110	Arable field margins	Cropland - Arable field margins tussocky	N/A	N/A																	0	0
TN111	Other neutral grassland	Grassland - Other neutral grassland	Grassland Medium/High/Very High distinctiveness	No data																	0	0
TN112	Non-cereal crop	Cropland - Non-cereal crops	N/A	N/A																	0	0
TN113	Other neutral grassland	Grassland - Other neutral grassland	Grassland Medium/High/Very High distinctiveness	No data																	0	0

TN114	Other neutral grassland	Grassland - Other neutral grassland	Grassland Medium/High/Very High distinctiveness	Moderate	Pass	Pass	Pass	Pass	Fail	Fail								4	0
Lines of Trees																			
LOT1	Line of Trees	Hedgerows and lines of trees - Line of trees	Line of trees	No data														0	0
LOT2	Line of Trees	Hedgerows and lines of trees - Line of trees	Line of trees	Poor	Pass	Fail	Pass	Fail	Pass									3	0
LOT3	Line of Trees	Hedgerows and lines of trees - Line of trees	Line of trees	Not surveyed														0	0
LOT4	Line of Trees	Hedgerows and lines of trees - Line of trees	Line of trees	Not surveyed														0	0
LOT5	Line of Trees	Hedgerows and lines of trees - Line of trees	Line of trees	Not surveyed														0	0
LOT6	Line of Trees	Hedgerows and lines of trees - Line of trees	Line of trees	Poor	Pass	Fail	Fail	Fail	Pass									2	0
LOT7	Line of Trees	Hedgerows and lines of trees - Line of trees	Line of trees	Not surveyed														0	0
LOT8	Line of Trees	Hedgerows and lines of trees - Line of trees	Line of trees	Poor	Pass	Fail	Pass	Fail	Pass									3	0
LOT9	Line of Trees	Hedgerows and lines of trees - Line of trees	Line of trees	Moderate	Pass	Fail	Pass	Pass	Pass									4	0
LOT10	Line of Trees	Hedgerows and lines of trees - Line of trees	Line of trees	Moderate	Pass	Pass	Fail	Fail	Pass									3	0
LOT11	Line of Trees	Hedgerows and lines of trees - Line of trees	Line of trees	Moderate	Pass	Pass	Fail	Fail	Pass									3	0
Ditches																			
D1	Ditch	Watercourse – Ditches	Ditch	Poor	Pass	Fail	Pass	Pass	Fail	Fail	Pass	Pass						5	0
D2	Ditch	Watercourse – Ditches	Ditch	Poor	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Pass						5	0
D3	Ditch	Watercourse – Ditches	Ditch	Poor	Pass	Fail	Pass	Fail	Pass	Pass	Fail	Pass						5	0
D4	Ditch	Watercourse – Ditches	Ditch	Moderate	Pass	Fail	Pass	Pass	Fail	Pass	Pass	Pass						6	0

Baseline

Site Name: STW Hallgates to Elms Farm
Metric Version: Statutory Metric

		07/05/24			
		08/05/24			
		09/05/24			
	07/05/24	10/05/24			
	08/05/24	21/05/24	15/05/2024	15/05/2024	
Date of Survey:	09/05/24	22/05/24	16/05/2024	16/05/2024	
	10/05/24	28/05/24	17/05/2024	17/05/2024	
Surveyor:	RT	PD	CG	CC	

Hedgerows					Criteria										No. of Failures
Hedge Reference	UK Habitat Classification	Metric Classification	Condition		A1	A2	B1	B2	C1	C2	D1	D2	E1	E2	
H1	Native hedgerow	Native hedgerow	No data												0
H2	Native hedgerow	Native hedgerow	Good		Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass			0
H3	Species-rich native hedgerow with trees - associated with bank or ditch	Species-rich native hedgerow with trees - associated with bank or ditch	Good		Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Fail	Pass	2
H4	Native hedgerow - associated with bank or ditch	Native hedgerow - associated with bank or ditch	Good		Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass			1
H5	Species-rich native hedgerow with trees - associated with bank or ditch	Species-rich native hedgerow with trees - associated with bank or ditch	Good		Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Fail	1
H6	Native hedgerow	Native hedgerow	Good		Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass			0
H7	Native hedgerow	Native hedgerow	Good		Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass			0
H8	Native hedgerow	Native hedgerow	No data												0
H9	Native hedgerow	Native hedgerow	No data												0
H10	Native hedgerow with trees	Native hedgerow with trees	Good		Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Fail	Pass	2
H11	Native hedgerow - associated with bank or ditch	Native hedgerow - associated with bank or ditch	Good		Pass	Pass	Pass	Fail	Pass	Fail	Pass	Pass			2
H12	Native hedgerow with trees - associated with bank or ditch	Native hedgerow with trees - associated with bank or ditch	Good		Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Fail	Pass	2
H13	Native hedgerow	Native hedgerow	Good		Pass	Pass	Pass	Fail	Pass	Fail	Pass	Pass			2
H14	Native hedgerow	Native hedgerow	No data												0
H15	Native hedgerow	Native hedgerow	Good		Fail	Pass	Pass	Pass	Pass	Fail	Fail	Pass			3
H16	Native hedgerow - associated with bank or ditch	Native hedgerow - associated with bank or ditch	No data												0
H17	Native hedgerow - associated with bank or ditch	Native hedgerow - associated with bank or ditch	No data												0
H18	Native hedgerow - associated with bank or ditch	Native hedgerow - associated with bank or ditch	Good		Pass	Pass	Pass	Pass	Fail	Fail	Pass	Pass			2
H19	Native hedgerow	Native hedgerow	Moderate		Pass	Fail	Fail	Pass	Fail	Pass	Pass	Fail			4
H20	Native hedgerow	Native hedgerow	Moderate		Pass	Pass	Pass	Pass	Fail	Fail	Pass	Pass			2
H21	Native hedgerow	Native hedgerow	Moderate		Fail	Pass	Pass	Pass	Fail	Pass	Pass	Fail			3
H22	Native hedgerow	Native hedgerow	Good		Pass	Pass	Fail	Pass	Pass	Fail	Pass	Pass			2
H23	Native hedgerow	Native hedgerow	Moderate		Pass	Pass	Fail	Pass	Pass	Fail	Pass	Fail			3
H24	Native hedgerow with trees	Native hedgerow with trees	Moderate		Pass	Pass	Fail	Pass	Pass	Fail	Pass	Pass	Fail	Pass	3
H25	Native hedgerow	Native hedgerow	Moderate		Pass	Pass	Fail	Fail	Pass	Fail	Pass	Pass			3
H26	Native hedgerow	Native hedgerow	Good		Pass	Pass	Fail	Pass	Pass	Fail	Pass	Pass			2
H27	Native hedgerow	Native hedgerow	No data												0
H28	Native hedgerow	Native hedgerow	No data												0
H29	Native hedgerow	Native hedgerow	Poor		Pass	Pass	Fail	Fail	Fail	Fail	Pass	Fail			5
H30	Native hedgerow - associated with bank or ditch	Native hedgerow - associated with bank or ditch	Poor		Pass	Pass	Pass	Pass	Fail	Fail	Pass	Fail			3
H31	Native hedgerow	Native hedgerow	Moderate		Pass	Pass	Fail	Fail	Fail	Pass	Pass	Fail			4
H32	Native hedgerow	Native hedgerow	Good		Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass			1
H33	Native hedgerow	Native hedgerow	Good		Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass			1
H34	Native hedgerow	Native hedgerow	No data												0
H35	Native hedgerow	Native hedgerow	No data												0
H36	Native hedgerow	Native hedgerow	No data												0
H37	Native hedgerow with trees	Native hedgerow with trees	Moderate		Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Pass	1
H38	Native hedgerow - associated with bank or ditch	Native hedgerow - associated with bank or ditch	Good		Pass	Pass	Pass	Pass	Pass	Pass	Pass	Fail			1
H39	Native hedgerow	Native hedgerow	No data												0
H40	Native hedgerow - associated with bank or ditch	Native hedgerow - associated with bank or ditch	Good		Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass			1
H41	Native hedgerow with trees	Native hedgerow with trees	Moderate		Pass	Pass	Pass	Pass	Pass	Fail	Pass	Fail	Fail	Fail	4
H42	Native hedgerow with trees	Native hedgerow with trees	Good		Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Pass	1
H43	Species-rich native hedgerow with trees - associated with bank or ditch	Species-rich native hedgerow with trees - associated with bank or ditch	Good		Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Pass	1

[illegible]