

## **APPENDIX 7.8**

### **HEDGEROW SURVEY**

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### Introduction

Table 7.8A below summarises the results of the hedgerow surveys undertaken for all hedgerows crossed by the pipeline route, and those within the Assessment Site (i.e. within c. 250 m of the pipeline route).

The hedgerows have been assessed in accordance with the criteria published in the Hedgerow Regulations 1997 (the 'Regulations'), to determine whether they are classified as 'important' under the Regulations. This has also enabled any species-rich habitats to be identified, since 'Ancient/ Species-rich Hedgerow' is a Ryedale BAP habitat type and is therefore of importance in the local context.

A total of 39 hedgerows have been assessed, of which 22 are crossed by the Proposed Development (highlighted in **bold text** in the table).

### Hedgerow Regulations 1997

Subject to Regulation 8(4), hedgerows are important for the purposes of the Regulations if:

- They have been in existence for 30 years or more; and
- They satisfy at least one of the criteria set out in Part II Schedule 1 to the Regulations.

Only criteria relevant to 'wildlife value' have been used in the Hedgerow Regulations Assessment for this chapter i.e. Paragraphs 6 to 8 of Part II Schedule 1 to the Regulations. No assessment has been undertaken for 'heritage value' i.e. Paragraphs 1 to 5 of the Regulations in this chapter.

The 'wildlife value' criteria listed in the Regulations include the number of woody species (the qualifying number is reduced by one for counties in the North of England to six species); and associated features such as a bank or wall, few gaps (< 10%), standard trees, ditch, connections with woodland and/ or ponds, parallel hedgerow and ground flora listed in Schedule 2 to the Regulations.

The most species-rich hedgerows within the Assessment Site are H27, H34 and H37, and therefore these three hedgerows have been subject to more detailed assessment against the Regulations.

### Hedgerow 27

H27 is approximately 350 m in length, and the total number of woody species identified in the hedgerow is 6 (hawthorn, blackthorn, ash, sycamore, dog-rose, wych elm). In accordance with Paragraph 7(3) of the Regulations an aggregate of the number of species in the central 30 m stretch of each third of the hedgerow is used to determine the number of woody species:

Central 30 m section one: hawthorn, blackthorn, ash (3 species)

Central 30 m section two: hawthorn, blackthorn, ash, sycamore, dog-rose (5 species)

Central 30 m section three: hawthorn, blackthorn, ash (3 species)

Aggregate H27: 4.3 woody species

For a hedgerow exceeding 100 m, to be included within the qualifying features the hedgerow must have at least one standard tree per 50 m:

Number of standard trees H27: 0 (0 trees per 50 m)

For a hedgerow containing at least 5 woody species (as per the Regulations calculation), to qualify as important the hedgerow must have at least 4 qualifying features:

Qualifying associated features H27:

- ditch
- parallel hedgerow within 15 m

Assessment H27: Not important

### Hedgerow 34

H34 is approximately 200 m in length, and the total number of woody species identified in the hedgerow is 6 (hawthorn, *Rosa* sp., elder, alder, crack-willow, ash). In accordance with Paragraph 7(3) of the Regulations a count of the number of species in central 30 m stretch of each half of the hedgerow is used to determine the number of woody species:

Central 30 m section one: hawthorn, elder, alder, ash (4 species)

Central 30 m section two: crack-willow, elder, alder, ash, hawthorn (5 species)

Aggregate H34: 4.5 woody species

For a hedgerow exceeding 100 m but not exceeding 200 m, to be included within the qualifying features the hedgerow must have at least one standard tree per 50 m:

Number of standard trees H34: 3 (0.75 trees per 50 m)

For a hedgerow containing at least 5 woody species (as per the Regulations calculation), to qualify as important the hedgerow must have at least 4 qualifying features:

Qualifying associated features H34:

- 1 (ditch)

Assessment H34: Not important

Hedgerow 37

H37 is approximately 250 m in length, and the total number of woody species identified in the hedgerow is 7 (hawthorn, dog-rose, goat willow, wych elm, ash, pedunculate oak, sycamore). In accordance with Paragraph 7(3) of the Regulations an aggregate of the number of species in the central 30 m stretch of each third of the hedgerow is used to determine the number of woody species:

Central 30 m section one: hawthorn, dog-rose, goat willow, wych elm (5 species)

Central 30 m section two: hawthorn, dog-rose, ash, pedunculate oak (4 species)

Central 30 m section three: hawthorn, dog-rose, sycamore (3 species)

Aggregate H37: 4 woody species

For a hedgerow exceeding 100, to be included within the qualifying features the hedgerow must have at least one standard tree per 50 m:

Number of standard trees H37: 1 (0.02 trees per 50 m)

For a hedgerow containing at least 5 woody species (as per the Regulations calculation), to qualify as important the hedgerow must have at least 4 qualifying features:

Qualifying associated features H37:

- connections scoring 4 or more points (2 points for hedgerow and 2 points for woodland connection) (ditch)
- ditch
- gaps < 10%

Assessment H37: Not important

### Conclusion

None of the hedgerows included within the assessment achieve the criteria for important hedgerows in terms of their 'wildlife value'.

**Table 7.8A: Summary of Hedgerow Survey**

Ref	Type	Dimensions	Description	Woody Species	Associated Features
H1	Field boundary (m)	c.1.2 m high	Newly planted.	Beech	None
H2	Field boundary (m)	c. 1.5 m high	Gappy	Hawthorn	None
H3	Field boundary (um)	c. 4 m high, 3 m wide	Degraded hedgerow comprising broad band of overgrown mature hedgerow shrubs.	blackthorn (d), ash, elder, hawthorn	1 connection to hedgerow Hedge bank Ditch (dry)
H4	Roadside (m)	c. 1.5 m	Mature roadside hedgerow with good structural integrity	Hawthorn (d), elder, ash, bramble	<b>Gaps &lt; 10%</b> <b>Ditch (dry)</b> <b>Hedge bank</b> <b>Parallel hedgerow within 15 m</b>
H5	Roadside (um)	c. 5 m	Mature overgrown roadside hedgerow	Hawthorn (d), elder	<b>Gaps &lt; 10%</b> <b>1 connection to hedgerow</b> <b>Parallel hedgerow within 15 m</b>
H6	Field boundary (m)	c.1.5 m	Mature boundary hedgerow with several standard trees	Hawthorn (d), elder, ash, blackthorn, crab apple	Ditch (D2) 2 connections to hedgerow
H7	Defunct		Scattered scrub along line of former hedgerow		
H8	Field boundary (um)	c. 2 m	Gappy, species-poor field boundary hedgerow with overgrown canopy	Hawthorn, elder, blackthorn	Ditch (D4) 2 connections to hedgerow
H9	Roadside (m)	c. 1.5 m	Species-poor roadside hedgerow	Hawthorn (d), blackthorn	<b>2 connections to hedgerow</b> <b>Parallel hedgerow within 15 m</b>
H10	Roadside (m)	c. 1.5 m	Species-poor roadside hedgerow	Hawthorn (d), elder, blackthorn	<b>2 connections to hedgerow</b> <b>Parallel hedgerow within 15 m</b>
H11	Field boundary	c. 4 m	Gappy line of overgrown	Hawthorn, elder, crack willow,	<b>2 connections to hedgerow</b>

Ref	Type	Dimensions	Description	Woody Species	Associated Features
	(um)		hedgerow shrubs forming row of trees between field boundaries adjacent to Friar Dike (D5)	sycamore, oak	Ditch (D5)
H12	Field boundary (m)	c. 2 m	Mature field boundary hedgerow	Blackthorn (d), elder, hawthorn, ash, goat willow, field maple	2 connections to hedgerow Ditch (D6) Gaps < 10%
H13	Field boundary (m)	c. 2 m	Species-poor mature field boundary hedgerow with large 10 m gap in central section	Blackthorn and hawthorn (d)	2 connections to hedgerow
H14	Field boundary (m)	c. 1.5 – 2 m	Species-poor mature field boundary hedgerow	Hawthorn	2 connections to hedgerow
H15	Roadside (m)	c. 1 m	Species-poor mature roadside boundary hedgerow	Hawthorn (d), blackthorn	2 connections to hedgerow Gaps < 10% Parallel hedgerow within 15 m
H16	Roadside (m)	c. 1.5 m	Species-poor mature roadside boundary hedgerow	Hawthorn (d), blackthorn	2 connections to hedgerow Gaps < 10% Parallel hedgerow within 15 m
H17	Field boundary (m)	c. 2 m	Species-poor field boundary hedgerow	Hawthorn	2 connections to hedgerow Gaps < 10%
H18	Field boundary (um)	c. 4 m	Species-poor, gappy overgrown hedgerow	Hawthorn	2 connections to hedgerow
H19	Field boundary (m)	c. 1.2 m	Species-poor gappy hedgerow	Hawthorn (d), elder, ash, pedunculate oak, blackthorn	2 connections to hedgerow Ditch (D9)
H20	Field boundary (m)	c. 1.5 m	Species-poor gappy hedgerow	Hawthorn (d), ash, dog-rose, elder	2 connections to hedgerow Ditch (dry)
H21	Field boundary (m)	c. 1.5 m	Species-poor gappy hedgerow	Hawthorn	2 connections to hedgerow Ditch (dry)

Ref	Type	Dimensions	Description	Woody Species	Associated Features
H22	Field boundary (m)	c. 1.5 m	Species-poor hedgerow	Hawthorn (d), pedunculate oak	<b>2 connections to hedgerow</b> <b>Gaps &lt; 10%</b> <b>Ditch (D12)</b>
H23	Field boundary (m)	c. 1.5 m	Species-poor, gappy hedgerow	Hawthorn (d), ash, goat willow	2 connections to hedgerow Ditch (dry)
H24	Field boundary (m)	c. 1.5 m	Species-poor hedgerow	Hawthorn (d), dog-rose, elder, pedunculate oak	<b>2 connections to hedgerow</b> <b>Gaps &lt; 10%</b> <b>Ditch (D13)</b>
H25	Field boundary (m)	c. 1.5 m	Species-poor, gappy hedgerow	Hawthorn (d), pedunculate oak	<b>2 connections to hedgerow</b>
H26	Field boundary (m)	c. 1.5 m	Species-poor, gappy hedgerow	Hawthorn (d), pedunculate oak	1 connection to hedgerow 1 connection to woodland (2 points)
H27	Roadside (m)	c. 1 m	<b>Gappy hedgerow along B1258 with broad 5 m road verge</b>	<b>Hawthorn and blackthorn (d), ash, sycamore, dog-rose, wych elm</b>	<b>1 connection to hedgerow</b> <b>1 connection to woodland (2 points)</b> <b>Ditch (dry)</b> <b>Parallel hedgerow within 15 m</b>
H28	Roadside (um)	c. 1.5 – 2 m	<b>Species-poor hedgerow with overgrown canopy along B1258</b>	<b>Hawthorn and blackthorn (d)</b>	<b>1 connection to hedgerow</b> <b>Parallel hedgerow within 15 m</b>
H29	Field boundary (um)	c. 1.5 – 2 m	Species-poor, gappy hedgerow with overgrown canopy	Hawthorn (d), bramble abundant throughout	2 connections to hedgerow Ditch
H30	Field boundary (m)	c. 1.5 m	Species-poor hedgerow	Hawthorn (d), elder, silver birch	<b>1 connection to hedgerow</b> <b>Ditch (D16)</b>
H31	Field boundary (m)	c. 1.5 m	Species-poor hedgerow	Hawthorn (d), sycamore, dog-rose, ash	1 connection to hedgerow Ditch (dry)
H32	Field boundary (m)	c. 1.5 m	Species-poor hedgerow	Hawthorn (d), wych elm, dog-rose	<b>2 connections to hedgerow</b> <b>Ditch (D17)</b>
H33	Field boundary (m)	c. 1.5 m	Species-poor hedgerow	Hawthorn (d), ash	<b>1 connection to hedgerow</b> <b>Ditch (D18)</b>



Ref	Type	Dimensions	Description	Woody Species	Associated Features
H34	Field boundary (m)	c. 1.5 m	Hedgerow with greater species-diversity in comparison with others in local area	Hawthorn, blackthorn, Rosa sp., elder, alder, ash, crack-willow	1 connection to hedgerow Ditch (D19)
H35	Field boundary (m)	c. 1.5 m	Species-poor hedgerow	Hawthorn (d), elder	1 connection to hedgerow 1 connection to woodland (2 points) Ditch (dry) Gaps < 10%
H36	Field boundary (m)	c. 1.5 m	Species-poor gappy hedgerow	Hawthorn (d), ash	2 connections to hedgerow
H37	Field boundary (m)	c. 1.5 m	Substantial mature hedgerow	Hawthorn (d), dog-rose, goat willow, wych elm, ash, pedunculate oak, sycamore	2 connections to hedgerow 1 connection to woodland (2 points) Ditch (dry) Gaps < 10%
H38	Field boundary (m)	c. 1.5 m	Mature hedgerow, mainly hawthorn but northern section is dominated by alder	Hawthorn (d), sycamore, alder	2 connections to hedgerow Ditch (dry)
H39	Field boundary (m)	c. 1.5 m	Species-poor hedgerow	Hawthorn (d), pedunculate oak	2 connections to hedgerow Gaps < 10 %

## Key

m - managed

um – unmanaged

d - dominant