



THE  
ENVIRONMENT  
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## Haweswater Aqueduct Resilience Programme

Chapter 9A - Appendix 9A.3

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United Utilities

Environmental Statement



Water for the North West



## Haweswater Aqueduct Resilience Programme

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# 1. Hedgerows Technical Appendix

## 1.1 Introduction

- 1) TEP was appointed by United Utilities to complete an Ecological Impact Assessment (EclA) for the Haweswater Aqueduct Resilience Programme - Proposed Bowland Section. The EclA is required to inform an Environmental Impact Assessment (EIA) and support production of the Environmental Statement (ES).
- 2) A series of ecological surveys was undertaken to complete the EclA. This Appendix is one of a series of Ecological Technical Reports (ETRs) produced to support the EclA. This ETR documents the methods and findings of the Hedgerow surveys undertaken by Bowland Ecology.


## 1.2 Summary of Findings



- 3) The hedgerows present within the Newton-in-Bowland Compound and the Lower Houses Compound and within 50 m of these compound areas are illustrated at Figure LCC\_RVBC-BO-FIG-009-01-06.
- 4) A wider area was surveyed than will be potentially impacted by the proposed works within the Bowland Section. Consequently only some of the hedgerows surveyed and presented within the following Technical Appendix will be used to inform the EclA.
- 5) The hedgerows which fall within influencing distance of the proposed works, including the Newton-in-Bowland Compound and the Lower Houses Compound and all construction access areas, including the Wray Compound which will be included within the EclA are:
  - Hedgerow 31 (intact species poor hedge with trees) - north of Docker Lane at Newton-in-Bowland Compound
  - Hedgerow 32 (intact species poor) - south of Docker Lane at Newton-in-Bowland Compound
  - Hedgerow 33 (intact species rich) - adjacent to construction access area associated with Newton-in-Bowland Compound
  - Hedgerow 35 (intact species poor) - within construction access area associated with Newton-in-Bowland Compound
  - Hedgerow WH1 (intact species rich) – along southern boundary of the Wray Compound
- 6) Hedgerow 31 was found to be species-poor with trees, however it classified as 'important' under the Hedgerow Regulations 1997 due to the presence of bluebell *Hyacinthoides non-scripta* within the base. None of the other hedgerows classified as 'important' under the Hedgerow Regulations 1997.

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## Appendix A. Bowland Ecology Hedgerow Assessment Report



1 Project Details			
Project Name:	Haweswater Aqueduct Resilience Programme	Project Number:	80061155
Written:	Ellen Milner, <i>Principal Ecologist</i> Alice Helyar, <i>Principal Ecologist</i>	Approved:	Claire Wilson, <i>Principal Ecologist</i> Eve Loxham, <i>Ecologist</i>
Report reference:	TR3 Hedgerow Survey Report V1 TR3 Hedgerow Survey Report V2	Date:	22/10/2019 19/06/2020
2 Project Drawings			
TR3 Hedgerow Plans Proposed Bowland Section Sheets 1 to 8		BOW167_HARP_9.5_HEDGEROWS_TR3	
3 Ecology Surveys			
Surveyors:	Eve Loxham MBiolSci (Hons), GradCIEEM Ellen Milner MA, MRes, CEnv, MCIEEM Heather Whalley BSc (Hons) Sophie King MSc, BSc Sabina Ostalowska MSc, BSc, ACIEEM Abi Hamer BSc (Hons) Catrin Watkin MRes, BSc (Hons)		
Survey date(s):	01/04/2019, 02/04/2019, 03/04/2019, 09/04/2019, 10/04/2019, 01/05/2019, 07/05/2019, 08/05/2019, 14/05/2019, 15/05/2019, 21/05/2019, 22/05/2019, 29/05/2019, 30/05/2019, 31/05/2019, 10/06/2019, 11/06/2019, 19/06/2019, 26/06/2019, 04/12/2019, 12/12/2019, 23/01/2020, 29/01/2020,30/01/2020, 12/02/2020, 01/05/2020, 21/05/2020.		
Survey Method:	Hedgerows were assessed in accordance with The Hedgerow Regulations 1997.  This report details all hedgerows currently identified in TR3, all of which have been subject to full assessment against the Hedgerow Regulations 1997.		
Weather Conditions:	01/04/2019 – Cloud cover 6/8, Wind Beaufort F1, 8°C, no precipitation. 02/04/2019 – Cloud cover 8/8, Wind Beaufort F1, 8°C, intermittent showers. 03/04/2019 – Cloud cover 8/8, Wind Beaufort F1, 3°C, some sleet. 09/04/2019 – Cloud cover 4/8, Wind Beaufort F3, 8°C, dry. 10/04/2019 – Cloud cover 1/8, Wind Beaufort F2, 10°C, dry. 01/05/2019 – Cloud cover 4/8, Wind Beaufort F2, 10°C, mostly dry (occasional light rain). 07/05/2019 – Cloud cover 5/8, Wind Beaufort 0, 9°C, light rain, some sunny spells. 08/05/2019 – Cloud cover 7/8, Wind Beaufort F4, 9°C, patchy rain. 14/05/2019 – Cloud cover 1/8, Wind Beaufort F1, 22°C, dry, sunny. 15/05/2019 – Cloud cover 3/8, Wind Beaufort F3, 19°C, dry, sunny. 21/05/2019 – Cloud cover 1/8, Wind Beaufort F3, 15°C, no precipitation. 22/05/2019 – Cloud cover 1/8, Wind Beaufort F2, 13°C, no precipitation. 29/05/2019 – Cloud cover 8/8, Wind Beaufort F2, 11°C, no precipitation. 30/05/2019 – Cloud cover 6/8, Wind Beaufort F2, 15°C, intermittent light rain.		



	<p>31/05/2019 – Cloud cover 8/8, Wind Beaufort F3, 19°C, intermittent heavy rain.</p> <p>10/06/2019 – Cloud cover 7/8, Wind Beaufort F1, 16°C, light rain.</p> <p>11/06/2019 – Cloud cover 8/8, Wind Beaufort F3, 14°C, patchy rain.</p> <p>19/06/2019 – Cloud cover 2/8, Wind Beaufort F1, 17°C, no precipitation.</p> <p>26/06/2019 – Cloud cover 8/8, Wind Beaufort F2, 17°C, no precipitation.</p> <p>04/12/2019 - Cloud cover 3/8, Wind Beaufort F1, 6°C, no precipitation.</p> <p>12/12/2019 - Cloud cover 8/8, Wind Beaufort F1, 5°C, light rain.</p> <p>23/01/2020 - Cloud cover 2/8, Wind Beaufort F1, 8°C, dry.</p> <p>29/01/2020 - Cloud cover 8/8, Wind Beaufort F2, 8°C, moderate rain.</p> <p>30/01/2020 - Cloud cover 8/8, Wind Beaufort F2, 8°C, dry.</p> <p>12/02/2020 - Cloud cover 4/8, Wind Beaufort F3, 6°C, no precipitation.</p> <p>01/05/2020 - Cloud cover 3/8, Wind Beaufort F3, 10°C, dry.</p> <p>21/05/2020 - Cloud cover 1/8, Wind Beaufort F1, 14°C, dry.</p>
Limitations to the survey:	<p>Whilst some surveys were undertaken late in the season which could mean that some ground flora species were missed, this was not considered to affect the assessment against The Hedgerow Regulations, as those hedgerows that classify as not 'Important' do so due to being less than 30 years in age, or with species poor canopies.</p> <p>At the edge of access boundaries, surveys of hedgerows were only possible from one elevation. Once the development boundary/route option is finalised further survey may be required.</p>
4 Survey Results	
TR3.H1	
<p>This hedgerow is 55 m in length and 1 m wide and located along a public road. The northern end of the hedgerow is located on top of a stone wall and appears to form the boundary of a residential dwelling - the height of the hedgerow above the top of the wall is approximately 1.5 m. The southern end of the hedgerow is located on a bank. There are no connections with other hedgerows. It is fenced from the adjacent field and appears to have been recently trimmed/flailed. The hedgerow is established and mature and therefore obviously more than 30 years in age.</p> <p>The hedgerow has one associated sycamore mature tree (<i>Acer pseudoplatanus</i>), and no gaps. There is no associated ditch. The canopy comprises frequent hazel (<i>Corylus avellana</i>) and hawthorn (<i>Crataegus monogyna</i>) with occasional holly (<i>Ilex aquifolium</i>) and more rarely yew (<i>Taxus baccata</i>) (four canopy species). There are several notable (Schedule 2) ground flora species as follows: lords-and-ladies (<i>Arum maculatum</i>), dog's mercury (<i>Mercurialis perennis</i>), hart's tongue (<i>Asplenium scolopendrium</i>) and polypody (<i>Polypodium vulgare</i>). Other ground flora noted includes ivy (<i>Hedera helix</i>), cleavers (<i>Galium aparine</i>), red campion (<i>Silene dioica</i>), common chickweed (<i>Stellaria media</i>), common nettle (<i>Urtica dioica</i>), lesser celandine (<i>Ranunculus ficaria</i>), hedge mustard (<i>Alliaria petiolata</i>) and bramble (<i>Rubus fruticosus</i> agg.). No Wildlife &amp; Countryside Act protected species have been identified to be present.</p> <p><b>The hedgerow classifies under ecological criteria as 'Important' under The Hedgerow Regulations 1997, however, as it appears to form the boundary of a residential dwelling the Regulations may not apply in this case.</b></p>	



TR3.H2	
<p>This roadside hedgerow is 30 m in length and 1 m in height. It is 1.5 m wide and has one associated mature tree (sycamore). There is no associated ditch and no gaps but one connection to another hedgerow. There is an associated hedge bank. The hedgerow is of significant age (not less than 30 years).</p> <p>The canopy comprises holly, hazel, hawthorn and elder (four canopy species). Notable (Schedule 2) ground flora species are frequent and comprise: lords-and-ladies, broad buckler fern (<i>Dryopteris dilatata</i>), male-fern (<i>Dryopteris filix-mas</i>), herb Robert (<i>Geranium robertianum</i>), dog's mercury, hart's tongue, barren strawberry (<i>Potentilla sterilis</i>) and primrose (<i>Primula vulgaris</i>). Other ground flora present includes ivy, cleavers, red campion, common chickweed, common nettle, lesser celandine, hedge mustard, bramble, meadowsweet (<i>Filipendula ulmaria</i>), greater stitchwort (<i>Stellaria holostea</i>), bush vetch (<i>Vicia sepium</i>) and cow parsley (<i>Anthriscus sylvestris</i>). No Wildlife &amp; Countryside Act protected species have been identified to be present.</p> <p><b>This hedgerow classifies under ecological criteria as 'Important' under The Hedgerow Regulations 1997.</b></p>	
TR3.H3	
<p>This roadside hedgerow is 90 m in length, 1.5 m wide and 2.5 m in height. It is a roadside hedgerow with no gaps and one associated mature tree (sycamore). There is no associated ditch but an associated hedge bank. There is a connection to one other hedgerow. The hedgerow is mature and established has been historically laid and is over 30 years in age.</p> <p>The canopy is dominated by holly with hazel, ash (<i>Fraxinus excelsior</i>) and rose (<i>Rosa</i> sp.), with smaller amounts of blackthorn (<i>Prunus spinosa</i>) (five canopy species). Notable (Schedule 2) ground flora species are lords-and-ladies, dog's mercury and barren strawberry. Other ground flora present at the time of survey was ivy, foxglove (<i>Digitalis purpurea</i>), cow parsley, meadowsweet, cleavers, dock (<i>Rumex</i> sp.), creeping buttercup (<i>Ranunculus repens</i>), soft rush (<i>Juncus effusus</i>), hogweed (<i>Heracleum sphondylium</i>) and dandelion (<i>Taraxacum officinale</i> agg.). No Wildlife &amp; Countryside Act protected species have been identified to be present.</p> <p><b>This hedgerow classifies under ecological criteria as 'Important' under The Hedgerow Regulations 1997.</b></p>	






TR3.H4	
	<p>A roadside hedgerow 145 m in length, 1 m in height and 1.5 m wide. It has no gaps, no ditch and five associated mature trees (sycamore). There are connections to two other hedgerows. It has been historically laid and is more than 30 years in age. It has been recently flailed and is fenced from the adjacent sheep grazed field. There is an associated hedge bank on the roadside.</p> <p>The canopy comprises hawthorn, holly and elder, with additional blackthorn more rarely (four canopy species). The notable (Schedule 2) ground flora species are lords-and-ladies, dog's mercury and primrose. Other climbers and ground flora noted comprises honeysuckle (<i>Lonicera periclymenum</i>), cleavers, rosebay willowherb (<i>Chamerion angustifolium</i>), common nettle, ivy, bracken (<i>Pteridium aquilinum</i>) and abundant bramble. No Wildlife &amp; Countryside Act protected species have been identified to be present.</p> <p>This hedgerow does not classify under ecological criteria as 'Important' under The Hedgerow Regulations 1997.</p>
TR3.H5	
	<p>A roadside hedgerow 100 m in length, 2 m in height and 2 m wide. There are no gaps or ditches and no associated mature trees. There is a connection to one other hedgerow. It has been recently trimmed/flailed and is a mature established hedgerow which is more than 30 years old. It is fenced from the adjacent sheep grazed field to the west. There is a small associated hedge bank.</p> <p>The canopy is dominated by holly with hawthorn and more rarely hazel and elder (four canopy species). The notable (Schedule 2) ground flora species are lords-and-ladies, broad buckler fern, male-fern, polypody and barren strawberry. Other climbers and ground flora noted include honeysuckle, cleaves, greater stitchwort, bracken, foxglove, bush vetch and garlic mustard. No Wildlife &amp; Countryside Act protected species have been identified to be present.</p> <p><b>This hedgerow classifies under ecological criteria as 'Important' under The Hedgerow Regulations 1997.</b></p>

TR3.H7	
	<p>A roadside hedgerow which is 170 m in length, 1.5 m in height and 1.5 m wide. There are a small number of gaps totalling around 2% of the total length of the hedgerow, and no associated mature trees or ditches. The hedgerow has been historically laid in some sections and is more than 30 years old. It has been recently flailed/trimmed. There are no connected hedgerows but it connects to a block of broadleaved woodland.</p> <p>The canopy is composed of dominant hazel and abundant hawthorn and ash with smaller amounts of holly, blackthorn and gooseberry (<i>Ribes uva-crispa</i>; six canopy species). Notable (Schedule 2) ground flora species are relatively few and comprise lords-and-ladies and dog's mercury. Additional ground flora species are red campion, cleavers, common nettle, bramble, cow parsley, ivy, honeysuckle and garlic mustard. No Wildlife &amp; Countryside Act protected species have been identified to be present.</p> <p>This hedgerow does not classify under ecological criteria as 'Important' under The Hedgerow Regulations 1997.</p>
TR3.H8	
	<p>This roadside hedgerow is 450 m in length, 2 m in height and 1.5 m wide. There is one gap of approximately 10 m which is less than 5% of the overall length of the hedgerow. There are three associated mature trees (sycamore). There is no associated ditch but the hedgerow has a bank of approximately 1 m for much of its length. There is one connection to another hedgerow. It is fenced from the adjacent sheep grazed field and has been historically laid (more than 30 years old).</p> <p>The canopy is mixed and has no clear dominant with the following species noted: hazel, hawthorn, ash, holly, blackthorn, rose species, elder, rowan and gorse (nine canopy species). Notable (Schedule 2) ground flora species are abundant and comprise lords-and-ladies, broad buckler fern, male-fern, wood avens (<i>Geum urbanum</i>), wild strawberry (<i>Fragaria vesca</i>), herb Robert, polypody and primrose. Other climber and ground flora species noted include greater stitchwort, honeysuckle (abundant), foxglove, bush vetch, cleavers and dock species. No Wildlife &amp; Countryside Act protected species have been identified to be present.</p> <p><b>This hedgerow classifies under ecological criteria as 'Important' under The Hedgerow Regulations 1997.</b></p>

TR3.H9	
	<p>This roadside hedgerow is 380 m in length, 1.5 m in height and 2 m wide. There is only one small gap which is less than 1% of the total length of the hedgerow. There is no associated ditch or hedge bank. There are nine associated mature trees (predominantly oak (<i>Quercus</i> sp.)). It has been recently trimmed/flailed and is more than 30 years old.</p> <p>The canopy is extremely mixed and comprises abundant holly and hawthorn with hazel, ash, blackthorn, pedunculate oak (<i>Quercus robur</i>), rose species, gooseberry, elder (<i>Sambucus nigra</i>), and rowan (<i>Sorbus aucuparia</i>) (ten canopy species). Notable (Schedule 2) ground flora species are also abundant and diverse and comprise lords-and-ladies, male-fern, wild strawberry, wood avens, dog's mercury, hart's tongue, polypody, barren strawberry, wood sage (<i>Teucrium scorodonia</i>) and common dog violet (<i>Viola riviniana</i>). Other climbers and ground flora are honeysuckle, cleavers, garlic mustard, ivy, common nettle, cow parsley, greater stitchwort, herb Robert, lesser celandine, meadowsweet, bush vetch, red campion and creeping buttercup. No Wildlife &amp; Countryside Act protected species have been identified to be present.</p> <p><b>This hedgerow classifies under ecological criteria as 'Important' under The Hedgerow Regulations 1997.</b></p>
TR3.H10	
	<p>A roadside hedgerow 800 m in length, 1.5 in height and 1.5 wide. It has recently been flailed/trimmed and is a mature established hedgerow more than 30 years old. There are four gaps, totalling no more than 1% of the overall hedgerow length. There is one associated mature tree (sycamore), no ditches and no hedge bank. There is a connection to one other hedgerow (across a road gap).</p> <p>The canopy is extremely diverse with no clear dominant species with abundant holly and hawthorn and additional hazel, ash, blackthorn, rose species, willow (<i>Salix</i> sp.), elder and rowan (nine canopy species). Notable (Schedule 2) ground flora species are as follows: ramsons (<i>Allium ursinum</i>), broad buckler fern, male-fern, wood avens, barren strawberry, primrose and wood sage. Other climbers and ground flora species noted include greater stitchwort, lesser celandine, ground elder, bush vetch, common bird's-foot trefoil (<i>Lotus corniculatus</i>), snowdrop (<i>Galanthus nivalis</i>), common knapweed (<i>Centaurea nigra</i>), red campion, yarrow (<i>achillea millefolium</i>) and hedge woundwort (<i>Stachys sylvatica</i>). No Wildlife &amp; Countryside Act protected species have been identified to be present.</p> <p><b>This hedgerow classifies under ecological criteria as 'Important' under The Hedgerow Regulations 1997.</b></p>

TR3.H11	
	<p>A roadside hedgerow 700 m in length, 1.5 m in height and 1.5 m wide. There is one associated mature tree (ash), no associated ditch or hedge bank. There are three connections with other hedgerows. The hedgerow has been recently trimmed/flailed and is more than 30 years old.</p> <p>The canopy is diverse and mixed with dominant holly. Other canopy species are: hazel, hawthorn, ash, blackthorn, rose species, willow species, elder, rowan and gorse (<i>Ulex europaeus</i>; ten canopy species). Notable (Schedule 2) ground flora species are lords-and-ladies, broad buckler fern, male-fern and wood avens. Additional climbers and ground flora species are black bryony (<i>Tamus communis</i>), greater stitchwort, honeysuckle, hedge woundwort with significant bracken cover. No Wildlife &amp; Countryside Act protected species have been identified to be present.</p> <p><b>This hedgerow classifies under ecological criteria as 'Important' under The Hedgerow Regulations 1997.</b></p>
TR3.H12	
	<p>This hedgerow is 80 m in length, average 3 m in height and 1.5 m wide. There are five associated mature trees (oak), a marshy ditch to the east of the hedgerow and no hedge bank or connections to other hedgerows. There is no evidence of recent management and the hedgerow is overgrown. The central section has additional plantings which still have tree guards present but the majority of the hedgerow is mature and established and more than 30 years in age. The base of the hedgerow is marshy.</p> <p>The canopy comprises abundant hawthorn with smaller amounts of alder (<i>Alnus glutinosa</i>), blackthorn and willow species (four canopy species). Notable (Schedule 2) ground flora is limited to broad buckler fern and wood sorrel (<i>Oxalis acetosella</i>). Other ground flora noted includes meadowsweet, greater stitchwort, cleavers, field horsetail (<i>Equisetum arvense</i>) and reed canary grass (<i>Phalaris arundinacea</i>). No Wildlife &amp; Countryside Act protected species have been identified to be present.</p> <p><b>This hedgerow does not classify under ecological criteria as 'Important' under The Hedgerow Regulations 1997.</b></p>



TR3.H13	
	<p>This hedgerow is 250 m in length, and approximately 1.5 m high and 2 m wide. There is no associated ditch or hedge bank, and five associated mature trees. The hedgerow is more than 30 years old has been previously laid, and there are some areas of newly planted whips with tree guards still present.</p> <p>The canopy comprises dominant hawthorn with small amounts of hazel, blackthorn and rowan (four canopy species). The only notable (Schedule 2) ground flora species was English bluebell (<i>Hyacinthoides non-scripta</i>). Other ground flora comprises abundant foxglove, with bracken, bramble, common nettle, cleavers, hogweed, reed canary grass and small amounts of greater stitchwort. Bluebell is a species present which is listed on the Wildlife &amp; Countryside Act.</p> <p><b>This hedgerow classifies under ecological criteria as 'Important' under The Hedgerow Regulations 1997.</b></p>
TR3.H14	
	<p>A roadside hedgerow which is 80 m long, 1.5 m wide and 1.5 m in height. It has one associated mature tree (oak) and no associated ditches or hedge banks. There are no gaps and the hedgerow is mature and established and is more than 30 years old. This is a small section of existing hedgerow which has recently been extended with new plantings (assessed separately as TR3.H15).</p> <p>The canopy is mixed, comprising hawthorn, ash, holly, rose species and rowan (five canopy species). The only notable (Schedule 2) ground flora species is broad buckler fern. Other climber and ground flora species noted include abundant honeysuckle, common nettle, cleavers, field horsetail, cow parsley, bush vetch, common hogweed, soft rush, cuckooflower (<i>Cardamine pratensis</i>) and greater stitchwort. No Wildlife &amp; Countryside Act protected species have been identified to be present.</p> <p>This hedgerow does not classify under ecological criteria as 'Important' under The Hedgerow Regulations 1997.</p>
TR3.H15	

A roadside hedgerow 100 m in length and forming a recently planted extension to the more established hedgerow at TR3.H14. It is approximately 1.5 m in height and 1 m wide. It is fenced to both sides, and has no associated mature trees, ditches or hedge banks. There are no gaps.

The canopy is species-poor, comprising hawthorn, blackthorn and rarely, an apple species (three canopy species). The only notable ground flora species is herb Robert. The remaining species comprise ruderal species and coarse grasses (tufted hair grass (*Deschampsia cespitosa*), meadow fescue (*Festuca pratensis*)), cow parsley, broad leaved dock, common hogweed, common sorrel (*Rumex acetosa*) and ribwort plantain (*Plantago lanceolata*). No Wildlife & Countryside Act protected species have been identified to be present.

This hedgerow does not classify under ecological criteria as 'Important' under The Hedgerow Regulations 1997.

TR3.H16



A roadside hedgerow 150 m in length, 1.5 m in height and 2 m in width. There are no associated mature trees, ditches or hedge banks and no gaps. The hedgerow appears to be subject to some management in the form of trimming/flailing. It is dense and stock proof to ground level. It is an established hedgerow over 30 years in age and is fenced to both sides.

The canopy comprises a mixture of species, dominated by hawthorn with additional downy birch (*Betula pubescens*), hazel, holly, willow species and rowan (six canopy species). Notable (Schedule 2) ground flora is limited to broad buckler fern and bluebell (native), with other ground flora noted to include bramble, honeysuckle, broad-leaved dock, bracken, soft rush, cleavers and common nettle. Bluebell is a species present which is listed on the Wildlife & Countryside Act.

**This hedgerow classifies under ecological criteria as 'Important' under The Hedgerow Regulations 1997.**



TR3.H17





A hedgerow 90 m in length, tall (3-4 m in height) and 1.5 m wide. There are three associated mature trees (willow, oak), but no ditches or hedge banks. The hedgerow is overgrown and shows no signs of recent management. It is fenced to both sides and tree guards are still present despite the hawthorn being in excess of 3 m. This appears to be supplementary planting as some of the more mature hawthorn have been laid and therefore are older than 30 years. The hedgerow is connected to another hedgerow and to a block of woodland.

The canopy comprises dominant hawthorn with blackthorn, rose and willow species (four canopy species). Notable (Schedule 2) ground flora is limited to male-fern and wood sage. Other ground flora noted is as follows: cleavers, foxglove, Yorkshire fog (*Holcus lanatus*), soft rush, common sorrel, broad-leaved dock and wood horsetail (*Equisetum sylvaticum*). No Wildlife & Countryside Act protected species have been identified to be present.



This hedgerow does not classify under ecological criteria as 'Important' under The Hedgerow Regulations 1997.



TR3.H18	
	<p>A roadside hedgerow which is 235 m long, 3 m in height and 2 m wide. It has 19 associated mature trees (alder, ash, holly, silver birch, hawthorn, hazel), and gaps that constitute less than 1% of the overall hedgerow length. There is no associated ditch but there is a small hedge bank.</p> <p>The canopy comprises dominant holly and hawthorn with additional alder, ash, blackthorn and rose species (six canopy species). Notable (Schedule 2) ground flora includes bugle, pignut, tormentil (<i>Potentilla erecta</i>), broad buckler fern, herb Robert, bluebell (native), wood sorrel and common dog violet. Other climber and ground flora species include Yorkshire fog, common nettle, hogweed, cleavers, bush vetch, bramble, honeysuckle, cow parsley, greater stitchwort, creeping thistle (<i>Cirsium arvense</i>), horsetail species, broad-leaved dock, garlic mustard, ribwort plantain, ivy, foxglove, creeping buttercup, germander speedwell (<i>Veronica chamaedrys</i>) and Bluebell is a species present which is listed on the Wildlife &amp; Countryside Act.</p> <p><b>This hedgerow classifies under ecological criteria as 'Important' under The Hedgerow Regulations 1997.</b></p>
TR3.H19	
	<p>A hedgerow 100 m in length, 1.5 m in height and 1 m wide, with no gaps and no associated ditch or hedge bank. This is a relatively new section of hedgerow (less than 30 years old) and forms an extension to TR3.H14.</p> <p>The canopy is relatively species-poor, comprising hawthorn, blackthorn and rarely an apple species (three canopy species). No notable (Schedule 2) ground floras was noted. The ground flora is grassy (tufted hair grass, meadow fescue and sweet vernal-grass (<i>Anthoxanthum odoratum</i>)), with additional cow parsley, broad-leaved dock, common hogweed, bush vetch and common sorrel. No Wildlife &amp; Countryside Act protected species have been identified to be present.</p> <p><b>This hedgerow does not classify under ecological criteria as 'Important' under The Hedgerow Regulations 1997.</b></p>



TR3.H20	
	<p>A roadside hedgerow 20 m in length, 1 m high and 0.5 m wide. This is a young sparse hedgerow, with tree guards still present, but older sections are evident and have been laid. There are no associated mature trees, ditches or hedge bank. It is a small section of hedgerow at the entrance to a private property.</p> <p>The canopy is species poor, comprising hawthorn and hazel (two canopy species). Notable (Schedule 2) ground flora is restricted to broad buckler fern and herb Robert. Also noted within the ground flora is common nettle, cleavers, ivy, bush vetch, meadow buttercup (<i>Ranunculus acris</i>), greater stitchwort and Yorkshire fog. No Wildlife &amp; Countryside Act protected species have been identified to be present.</p> <p>This hedgerow does not classify under ecological criteria as 'Important' under The Hedgerow Regulations 1997.</p>
TR3.H21	
	<p>A hedgerow bordering the access road of a private property with an associated grassy hedge bank. The hedgerow is 40 m long, 2 m high and 2 m wide. There are three associated mature trees and five gaps totalling approximately 30 % of the overall length.</p> <p>The canopy comprises guelder rose with hawthorn, holly and more rarely hazel and rowan (five canopy species). Notable (Schedule 2) ground flora is as follows: pignut, broad buckler fern and herb Robert. Other ground flora species include bracken, foxglove, Yorkshire fog, cleavers, soft rush, sheep's fescue (<i>Festuca rubra</i>), greater stitchwort, sweet vernal-grass, garlic mustard, bramble, common sorrel, meadow buttercup, cock's-foot (<i>Dactylis glomerata</i>) and creeping buttercup. No Wildlife &amp; Countryside Act protected species have been identified to be present.</p> <p><b>The hedgerow classifies under ecological criteria as 'Important' under The Hedgerow Regulations 1997, however, as it appears to form the boundary of a residential dwelling the Regulations may not apply in this case.</b></p>






TR3.H22	
	<p>A 50 m long hedgerow, which is up to 4 m in height and 3 m wide. It has two associated mature trees (ash), but no ditches or hedge bank. It is a mature overgrown hedgerow bordering the garden of a private residential property. There are no gaps.</p> <p>The canopy comprises dominant hawthorn, holly, blackthorn and guelder rose (<i>Viburnum opulus</i>) (four canopy species). Notable (Schedule 2) ground flora is restricted to herb Robert. Other ground flora noted includes creeping buttercup, cleavers, soft rush, Yorkshire fog, honeysuckle, cock's-foot and germander speedwell. No Wildlife &amp; Countryside Act protected species have been identified to be present.</p> <p>This hedgerow does not classify under ecological criteria as 'Important' under The Hedgerow Regulations 1997.</p>
TR3.H23	
	<p>A 50 m long hedgerow which is 2.5 m in height and 2 m in width. It is a roadside hedgerow with three associated mature trees, one gap totalling 10% of the overall hedgerow length and no associated ditch. There is a small hedge bank. The growth in the hedgerow is uneven, with some areas of dense growth and some areas which are very sparse. There are no connections to other hedgerows.</p> <p>The canopy is fairly species poor comprising dominant holly with small amounts of hawthorn and rose species (three canopy species). Two notable (Schedule 2) ground flora species were recorded; male-fern and herb Robert. Other ground flora species noted include meadow buttercup, common nettle, broadleaved dock, germander speedwell, cleavers, cock's-foot, garlic mustard, ivy, bush vetch and bramble. No Wildlife &amp; Countryside Act protected species have been identified to be present.</p> <p>This hedgerow does not classify under ecological criteria as 'Important' under The Hedgerow Regulations 1997.</p>

TR3.H24	
	<p>A roadside hedgerow which is in excess of 100 m long, 2.5 m in height and 1 m wide. It is fenced to both sides. It has three associated mature trees (alder, ash) (other trees are immature and less than 20 cm at chest height) and an associated ditch to the east which is fast flowing and well vegetated. This hedgerow is fenced to both sides and relatively recent in origin, with timber stakes and tree guards still in place. This is an established hedgerow of greater than 30 years age which has been subject to some supplementary planting. A section of the hedgerow has been recently laid. There is a small hedge bank and gaps, but they do not total more than 10% of the hedgerow.</p> <p>The canopy is mixed, with dominant hawthorn throughout but with additional ash and blackthorn and occasionally hazel, holly and rowan (six canopy species). No notable (Schedule 2) ground flora species were noted, as the ground flora is dominated by cleavers, marsh thistle (<i>Cirsium palustre</i>), curled dock (<i>Rumex crispus</i>), cock's-foot and Yorkshire fog. No Wildlife &amp; Countryside Act protected species have been identified to be present.</p> <p><b>This hedgerow classifies under ecological criteria as 'Important' under The Hedgerow Regulations 1997.</b></p>
TR3.H25	
	<p>A roadside hedgerow 150 m in length, 1 m in height and less than 1 m wide. It has nine associated mature trees (ash, sycamore), two gaps which total approximately 10% of the overall length and a wet ditch to the east. There is no associated hedge bank. New planting (tree guards still present) appears to supplement an existing hedgerow which is more than 30 years old. There has also been some trimming of the associated mature trees. It has connections to two other hedgerows.</p> <p>The canopy is dominated by hawthorn, with all other species occurring rarely including hazel, ash, holly, blackthorn and pedunculate oak (six canopy species). Only one notable (Schedule 2) ground flora species was noted; pignut (<i>Conopodium majus</i>). No Wildlife &amp; Countryside Act protected species have been identified to be present.</p> <p><b>This hedgerow classifies under ecological criteria as 'Important' under The Hedgerow Regulations 1997.</b></p>

TR3.H26	
	<p>A roadside hedgerow 200 m in length, 1.5 m in height and 1 m wide. It has a wide grassy verge adjacent but no associated hedge bank or ditch. There are 14 associated mature trees (ash, rowan, alder). The hedgerow is more than 30 years old and has been previously laid.</p> <p>The canopy comprises dominant hawthorn and frequent ash, with all other species occurring occasionally (hazel, holly, wild cherry (<i>Prunus avium</i>), rose species and rowan (seven canopy species. Notable (Schedule 2) ground flora recorded is as follows: male-fern, herb Robert, wood avens, dog's mercury, barren strawberry and common dog violet. Other climber and ground flora species include meadowsweet, cleavers, common chickweed, germander speedwell, tufted-hair grass, hedge woundwort, spear thistle (<i>Cirsium vulgare</i>) and bittercress (<i>Cardamine</i> sp.). No Wildlife &amp; Countryside Act protected species have been identified to be present.</p> <p><b>This hedgerow classifies under ecological criteria as 'Important' under The Hedgerow Regulations 1997.</b></p>
TR3.H27	
	<p>A roadside hedgerow 413 m in length, 2.5 m in height and 2 m wide. It has a wide grassy verge adjacent but no associated hedge bank or ditch. There are 7 associated mature trees (willow, ash, rowan). The hedgerow is more than 30 years old and has been previously laid.</p> <p>The canopy comprises abundant hawthorn and blackthorn, with all other species occurring occasionally (hazel, holly, rose species (five woody species)). The ground flora comprises Schedule 2 species including broad buckler fern. Other climber and ground flora species include; common nettle, creeping thistle, tufted hair grasses. Japanese rose (Schedule 9 species) is frequent along the road and the hedgerow has been previously laid. It is fenced on both sides, one side has rabbit proof fencing. Roadside section is laid and has some new planting. No other Wildlife &amp; Countryside Act protected species have been identified to be present.</p> <p>This hedgerow does not classify under ecological criteria as 'Important' under The Hedgerow Regulations 1997.</p>



TR3.H28	
	<p>A roadside hedgerow 168 m in length, 2.5 m in height and 2 m wide. It does not have any gaps or an associated hedge bank or ditch. There are no mature trees within the hedgerow. The hedgerow is more than 30 years old.</p> <p>The canopy comprises dominant hawthorn, frequent blackthorn and rose species and, rare or occasional holly, rowan and hazel (six woody species). Schedule 2 species present within the ground flora includes broad buckler fern. Other climber and ground flora species include; common nettle, foxglove, creeping thistle, cock's foot and holly saplings. The hedgerow has previously been laid and is fenced on both sides. No other Wildlife &amp; Countryside Act protected species have been identified to be present.</p> <p>This hedgerow does not classify under ecological criteria as 'Important' under The Hedgerow Regulations 1997.</p>
TR3.H29	
	<p>A hedgerow 87 m in length, 2 m in height and 3 m wide. It is located on an east facing bank and has an associated wet ditch on the eastern side. There are no associated mature trees. The hedgerow is less than 30 years old; it has recently been planted with tree guards present and is fenced on both sides.</p> <p>The canopy comprises dominant hawthorn, with all other species occurring rarely (hazel, blackthorn, holly, rose species and rowan) (six canopy species). There are no Schedule 2 species associated with the hedgerow. Tufted-hair grass dominates the ground flora. No Wildlife &amp; Countryside Act protected species have been identified to be present.</p> <p>This hedgerow does not classify under ecological criteria as 'Important' under The Hedgerow Regulations 1997.</p>
TR3.H30	
	<p>A roadside hedgerow 160 m in length, 3 m in height and 1.5 m wide with no gaps or connections. It has a wide grassy verge adjacent and an associated hedge bank or ditch. There are eight associated mature trees (ash, rowan). The hedgerow is more than 30 years old and has been previously laid.</p>

The canopy comprises dominant hawthorn and hazel, with all other species occurring occasionally or rarely (ash, holly, blackthorn, rose species and rowan (seven woody species)). No Schedule 2 species were recorded in the ground flora. Other climber and ground flora species include; yarrow, cleavers, germander speedwell and tufted hair grass. Japanese rose, a Schedule 9 is present. The hedgerow has previously been laid and it is fenced on both sides. No Wildlife & Countryside Act protected species have been identified to be present.

This hedgerow does not classify under ecological criteria as 'Important' under The Hedgerow Regulations 1997.

TR3.H31



A roadside hedgerow 500 m in length, 2 m in height and on average 2 m wide. It has a narrow grassy verge adjacent and a supporting hedge bank or wall along at least half of its length. There is no associated ditch. There are five associated mature trees (ash, sycamore). The hedgerow is more than 30 years old and has been previously laid. The hedgerow has 2 gaps that make up 5% of the total length.

The canopy comprises dominant hawthorn and frequent hazel, with all other species occurring rarely (rose and sycamore (three qualifying woody species)). Schedule 2 species present within the ground flora include; lords-and-ladies, broad buckler fern, English bluebell, Hart's tongue fern and common dog violet. Other climber and ground flora species include; ivy, common nettle, cleavers, abundant mosses and lichens, herb Bennett, bracken, common daisy, foxglove, red campion, lesser celandine and cow parsley. The hedgerow has previously been laid and is now cut each year.

**This hedgerow classifies under ecological criteria as 'Important' under The Hedgerow Regulations 1997.**


TR3.H32



A roadside hedgerow 476 m in length, 2 m in height and 2 m wide. It has an associated hedge bank but no ditch. There are no associated mature trees. The hedgerow is considered to be less than 30 years old.

The canopy comprises dominant hawthorn, with no other species (one canopy species). Three Schedule 2 species are present in the ground flora including; barren strawberry, Lord's-and-ladies and wild strawberry. Other climber and ground flora species include; cow parsley, willowherb sp., tufted hair grass, cleavers, cock's foot, herb Bennett, bracken, common nettle, creeping thistle, vetch species, lesser celandine, yarrow, meadow grass and creeping cinquefoil. No other Wildlife & Countryside Act protected species have been identified to be present.

This hedgerow does not classify under ecological criteria as 'Important' under The Hedgerow Regulations 1997.

TR3.H33	
<p>A roadside hedgerow 313 m in length, 2.5 m in height and 2 m wide. It has an associated wet ditch along the northern bank. There are 2 associated mature trees (willow and birch). The hedgerow is more than 30 years old but recent re-planting has been carried out to fill up gaps.</p> <p>The canopy comprises a mix of species, with willow being dominant in sections, crab apple abundant and hawthorn being frequent or occasional. Blackthorn, rose sp. and elder occur rarely (six canopy species). Schedule 2 species present within the ground flora include; bugle, Lord's-and-ladies, pignut, herb Robert, wood avens, dog's mercury and primrose. Other climber and ground flora species include; meadowsweet, tufted hair grass, hedge woundwort, cleavers, lesser celandine, ground elder, germander speedwell, bramble, vetch sp., common nettle, creeping thistle, Yorkshire fog, foxtail and speedwell. No other Wildlife &amp; Countryside Act protected species have been identified to be present.</p> <p>This hedgerow does not classify under ecological criteria as 'Important' under The Hedgerow Regulations 1997.</p>	
TR3.H34	No photo.
<p>A hedgerow that is 150 m in length, 4 m in height and 1.5 m wide. It has an associated hedge bank with no ditch. There is one associated mature tree (ash). The hedgerow is less than 30 years old.</p> <p>The canopy comprises dominant hawthorn, with all other species occurring occasionally or rarely (hazel, holly, blackthorn, rose species and willow). Schedule 2 species occurring within the ground flora include common dog violet. Other climber and ground flora species include common nettle, cuckoo flower, Yorkshire fog, sweet vernal grass, cleavers, creeping thistle, mouse ear chickweed, soft rush, wood rush sp., spear thistle, common sorrel, yarrow, woundwort, germander speedwell and primrose. No Wildlife &amp; Countryside Act protected species have been identified to be present.</p> <p>This hedgerow does not classify under ecological criteria as 'Important' under The Hedgerow Regulations 1997.</p>	
<b>5 Hedgerow Summary</b>	
<p>There are many hedgerows in TR3 which are historical in origin with species-rich diverse canopies, and numerous notable ground flora species. These hedgerows tend to be roadside hedgerows which have been laid and are managed by trimming/flailing. As such, many of the hedgerows classify as 'Important' under The Hedgerow Regulations 1997. The most diverse examples have up to ten woody species per 30 m section and ten notable ground flora species – for example TR3.H9 supports holly, hazel, hawthorn, ash, holly, blackthorn, pedunculate oak, rose species, elder and rowan with lords-and-ladies, male-fern, wild strawberry, wood avens, dog's mercury, hart's tongue, polypody, barren strawberry, wood sage and common dog violet. Some of the historical hedgerows have had fairly recent supplementary planting to fill in gaps, this has been undertaken with a range of native species.</p> <p>There are two hedgerows, which, whilst meeting the criteria as 'Important' based on their ecological value, form the curtilage of residential dwellings and therefore the Regulations may not apply.</p> <p>There are other hedgerows which have less diverse canopies, which are often dominated by hawthorn with only a few associated species encountered rarely within the hedgerow. These hedgerows tend to have grassy and ruderal dominated ground floras, with only one or two notable species. Lack of management has likely resulted in these hedgerows becoming overgrown and gappy, therefore they offer an opportunity for biodiversity gain through supplementary planting. At the southern end, several hedgerows are young, replanted or have been 'gapped up' with supplementary planting.</p> <p>Japanese rose (Schedule 9, Wildlife and Countryside Act, 1981 (as amended)) was noted to be present within a small</p>	

number of hedgerows in the southern section. The hedgerows provide bird nesting habitat and commuting routes for bats. The base of the hedgerows also provide a refuge for small mammals and amphibians. Some of the associated mature trees also have potential to support roosting bats (assessed separately).



Hedgerows are listed as a Habitat of Principal Importance under the Natural Environment and Rural Communities Act, 2006.


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## **Appendix B. Bowland Ecology Hedgerow Assessment Report – Wray Compound**




1 Project Details			
Project Name:	Haweswater Aqueduct Resilience Programme	Project Number:	80061155
Written:	Eve Loxham, <i>Ecologist</i>	Approved:	Alice Helyar, <i>Principal Ecologist</i>
Report reference:	TR3 Wray Compound Hedgerow Survey Report V1	Date:	20/11/2020
2 Project Drawings			
TR3 Wray Compound Hedgerow Plans Proposed Bowland Section		BOW167_HARP_9.5_HEDGEROWS_TR3_WRAY_COMPOUND	
3 Ecology Surveys			
Surveyors:	Eve Loxham MBiolSci (Hons), GradCIEEM Mark Breaks BSc (Hons)		
Survey date:	13/11/2020		
Survey Method:	Hedgerows were assessed in accordance with The Hedgerow Regulations 1997.  This report details all hedgerows currently identified in TR3 Wray Compound, all of which have been subject to full assessment against the Hedgerow Regulations 1997.		
Weather Conditions:	13/11/2020 – Cloud cover 4/8, Wind Beaufort F2, 8°C, dry.		
Limitations to the survey:	The survey season for hedgerows is from April to October, with June and July being the most suitable months. Surveys undertaken outside the optimal survey season may be limited by a reduced view of ground floral species and may require re-visiting within the optimal survey season to further establish their importance. If a hedgerow does not classify as important but is likely to classify as important with the inclusion of additional Schedule 2 ground flora species, this is noted in the description.  Hedgerows at the survey boundary were viewed from one elevation due to lack of access to the other side.		

4 Survey Results		
TR3.WH1		<p>This roadside hedge is approximately 500 m in length, 2 m wide and 2-3 m tall. There are no associated trees or ditch, and the hedgerow is situated on a bank. There is one gap in the hedgerow which accounts for &lt;5% of the total length. Outside the survey area there are connections with two other hedgerows (scoring two connection points), and there are two parallel hedgerows (TR3.WH3 and TR3.WH4) within 15 m.</p> <p>The canopy is overall species-rich and includes dominant blackthorn (<i>Prunus spinosa</i>), with additional hazel (<i>Corylus avellana</i>), hawthorn (<i>Crataegus monogyna</i>), ash (<i>Fraxinus excelsior</i>), elder (<i>Sambucus nigra</i>) and sessile oak (<i>Quercus petraea</i>) (total six woody species). Schedule 2 ground flora recorded along the length of the hedgerow includes lady fern (<i>Athyrium filix-femina</i>), dog's mercury (<i>Mercurialis perennis</i>) and wood avens (<i>Geum urbanum</i>). Other ground flora recorded includes; cleavers (<i>Galium aparine</i>), perennial rye grass (<i>Lolium perenne</i>), Yorkshire fog (<i>Holcus lanatus</i>), garlic mustard (<i>Alliaria petiolata</i>), red campion (<i>Silene dioica</i>), bramble (<i>Rubus fruticosus agg.</i>), ivy (<i>Hedera helix</i>) and cock's foot grass (<i>Dactylis glomerata</i>). The hedgerow is established and mature and therefore obviously more than 30 years in age. It has previously been laid and recently cut / maintained.</p> <p>No Wildlife &amp; Countryside Act protected species have been identified to be present.</p> <p>The hedgerow does not classify under ecological criteria as 'Important' under The Hedgerow Regulations 1997.</p>
TR3.WH2		<p>This hedgerow is along a field boundary, is approximately 60 m in length, 3 m tall and 2 m wide. There are no associated trees or ditch, and the hedgerow is situated on a tall bank which slopes steeply down towards the north. There are no gaps along the hedgerow length. There are no connections to other hedgerows, ponds or woodland, and there are no parallel hedgerows within 15 m.</p> <p>The canopy comprises dominant blackthorn and rare hawthorn (total two woody species). Schedule 2 ground flora species recorded include dog's mercury and lady fern. Additional ground flora species recorded include; red campion, common hogweed (<i>Heracleum sphondylium</i>), cock's foot grass, common nettle (<i>Urtica dioica</i>) and meadow grass (<i>Poa sp.</i>). There were signs of use of the hedgerow by nesting birds and rabbit (<i>Oryctolagus cuniculus</i>). The hedgerow is established and mature and therefore obviously more than 30 years in age. Some parts of the hedgerow are growing out and becoming "leggy".</p> <p>No Wildlife &amp; Countryside Act protected species have been identified to be present.</p> <p>This hedgerow does not classify under ecological criteria as 'Important' under The Hedgerow Regulations 1997.</p>

TR3.WH3	
	<p>This roadside hedgerow is approximately 310 m in length, 3 m tall and 2 to 3 m wide. There are no associated trees or ditch, and the hedgerow is situated on a bank. There are no gaps within the hedgerow. Outside the survey area there are connections to three other hedgerows. This hedgerow is parallel within 15 m of two others (TR3.WH1 and TR3.WH4).</p> <p>The canopy is dominated by blackthorn, with additional species recorded including hazel, hawthorn, ash, rose species (<i>Rosa</i> sp.) and elder (total six woody species). Schedule 2 ground flora species recorded include dog's mercury, male fern (<i>Dryopteris filix-mas</i>) and wood avens. Additional ground flora species recorded include; cock's foot, common nettle, cleavers, meadow grass, foxglove (<i>Digitalis purpurea</i>), ivy, bracken (<i>Pteridium aquilinum</i>), creeping thistle (<i>Cirsium arvense</i>), garlic mustard, bramble, creeping buttercup (<i>Ranunculus repens</i>). It has previously been laid and recently cut / maintained.</p> <p>No Wildlife &amp; Countryside Act protected species have been identified to be present.</p> <p><b>This hedgerow classifies under ecological criteria as 'Important' under The Hedgerow Regulations 1997.</b></p>
TR3.WH4	
	<p>This roadside hedgerow is approximately 526 m in length, 3 m in height and 2 to 3 m wide. There are two gaps within the hedgerow accounting for &lt;5% of the length. There are no associated trees or ditch, and the hedgerow is situated on a bank. There are connections to two other hedgerows (TR3.WH6 and TR3.WH7), and it is also parallel within 15 m to two hedgerows (TR3.WH1 and TR3.WH3).</p> <p>The canopy is dominated by blackthorn, with additional species recorded including hazel, hawthorn, rose species and elder (total five woody species). Schedule 2 ground flora species recorded include dog's mercury, herb Robert (<i>Geranium robertianum</i>), male fern, lady fern and wood avens. Additional ground flora species include; common nettle, ivy, garlic mustard, creeping thistle, common mouse ear (<i>Cerastium fontanum</i>), common hogweed, yarrow (<i>Achillea millefolium</i>), cleavers, red campion, bracken and cock's foot. Sections of the hedge have become out grown and "leggy". It has been previously laid, is fenced on one side and has also been recently cut / maintained. The hedgerow is established and mature and therefore obviously more than 30 years in age.</p> <p>No Wildlife &amp; Countryside Act protected species have been identified to be present.</p> <p><b>This hedgerow classifies under ecological criteria as 'Important' under The Hedgerow Regulations 1997.</b></p>

TR3.WH5	
	<p>This hedgerow delineates a field boundary and is approximately 100 m in length, 3 m in height and 2 m wide. There are no gaps along the length of the hedgerow. There are no associated trees or a ditch, and the hedgerow is not situated on a bank. This hedgerow does not connect to and is not parallel to any other hedgerows.</p> <p>The canopy is dominated by blackthorn, with additional species recorded including hazel, hawthorn, ash and willow (<i>Salix</i> sp.) (total five woody species). Schedule 2 ground flora species were absent. Other ground flora species recorded include cock's foot grass, common nettle, meadow grass and foxglove. The hedgerow has been previously laid, and recently flailed. It is established and mature and therefore obviously more than 30 years in age.</p> <p>No Wildlife &amp; Countryside Act protected species have been identified to be present.</p> <p>This hedgerow does not classify under ecological criteria as 'Important' under The Hedgerow Regulations 1997, however, it is possible that additional Schedule 2 ground flora species may be present during the optimal time period and this may incur a change in classification to 'Important'.</p>
TR3.WH6	
	<p>This hedgerow delineates a field boundary and is approximately 110 m in length, 2 m in height and 2 m wide. There are two gaps along the length of the hedgerow, accounting for approximately 10% of the length. There are no associated trees or a ditch, and the hedgerow is not situated on a bank. This hedgerow connects to one other hedgerow (TR3.WH4).</p> <p>The canopy is dominated by hawthorn, with additional species recorded including blackthorn (total two woody species). Schedule 2 ground flora species were absent. Other ground flora species recorded include; cock's foot grass, common nettle, meadow grass, bittercress species (<i>Cardamine</i> sp.) and common mouse ear. The hedgerow is tall and "leggy" and is fenced on both sides. There are signs of use by nesting birds. It appears to be less than 30 years old.</p> <p>No Wildlife &amp; Countryside Act protected species have been identified to be present.</p> <p>This hedgerow does not classify under ecological criteria as 'Important' under The Hedgerow Regulations 1997.</p>



TR3.WH7	
	<p>This hedgerow follows a field boundary and is approximately 140 m in length, 2 m in height and 2 m wide. There are two gaps along the length of the hedgerow, accounting for approximately 10% of the length. There are no associated trees or a ditch. The hedgerow is situated on a bank. This hedgerow connects to one other hedgerow (TR3.WH4).</p> <p>The canopy is dominated by elder, with additional species recorded including blackthorn, rose species and hazel (total four woody species). Schedule 2 ground flora species present include lady fern and male fern. Other ground flora species recorded include; bramble, common nettle, meadow grass, red campion, cock's foot grass, cleavers and foxglove. The hedgerow has previously been laid, has recently been cut and is fenced. It is established and mature and therefore obviously more than 30 years in age.</p> <p>No Wildlife &amp; Countryside Act protected species have been identified to be present.</p> <p>This hedgerow does not classify under ecological criteria as 'Important' under The Hedgerow Regulations 1997.</p>
<b>5 Hedgerow Summary</b>	
	<p>Overall, there are abundant hedgerows within the TR3 Wray compound survey area and buffer, generally lining roads or occasional field boundaries. Two of the seven hedgerows classify as important under ecological criteria; TR3.WH3 and TR3.WH4. Of those that do not classify as important, this is either due to the age being less than 30 years, or due to the lack of species diversity in the woody species and lacking additional qualifying features (e.g. Schedule 2 ground flora). One hedgerow, TR3.WH5, may qualify as being 'Important' if resurveyed during the optimal period when Schedule 2 ground flora is present. It may need to be re-visited in the optimum survey period if it is to be impacted by the proposals. None of the hedgerows had associated trees, however, banks supporting the hedgerows were common. The dominant woody species is blackthorn, with elder and hawthorn also noted as a dominant species.</p> <p>No Schedule 9, Wildlife and Countryside Act, 1981 (as amended) species were noted to be present within the hedgerows.</p> <p>The hedgerows provide bird nesting habitat and commuting routes for bats. The base of the hedgerows also provide refuges for small mammals and amphibians.</p> <p>Hedgerows are listed as a Habitat of Principal Importance under the Natural Environment and Rural Communities Act, 2006.</p>