LANDSCAPE AND VISUAL IMPACT APPRAISAL

PROPOSED WESTERN RELIEF ROAD

June 2019

LANDSCAPE AND VISUAL IMPACT APPRIASAL: PROPOSED WESTERN RELIEF ROAD

Contents

Appendices

2019 Update: schedule of changes

Date	*Section*	*Title*	*Changes*
<u>Landscape and Visual impact Appraisal</u>			
June 2019	Contents	-	Revised to include Figures 6a & 6b.
June 2019	1.1	Introduction	Revised to refer to June 2019 update.
June 2019	2.3.2	Local Landscape Designations	Baseline updated to reflect Areas of Higher Landscape Value (AHLV) proposed in the CDP Submission Draft and the emerging Local List of Historic Parks, Gardens and Designed Landscapes of Local Interest.
June 2019	4.3	Designated landscapes (including non-designated but locally listed landscapes)	Assessment updated to reflect AHLV proposed in the CDP Submission Draft and the emerging Local List of Historic Parks, Gardens and Designed Landscapes of Local Interest.
June 2019	4.3.1	Areas of High / Higher Landscape Value	
June 2019	4.3.2	Historic Parks & gardens	
June 2019	7	Conclusions	Conclusions updated to reflect AHLV proposed in the CDP Submission Draft and the emerging Local List of Historic Parks, Gardens and Designed Landscapes of Local Interest.
<u>Appendix 2: Figures</u>			
June 2019	Figure 6	Landscape designations	Revised to show only Parks & Gardens of Historic or Landscape Value identified in City of Durham Plan.
June 2019	Figure 6a	Areas of Higher Landscape Value	New figure added to show AHLV proposed in the CDP Submission Draft.
June 2019	Figure 6b	Historic Parks & Gardens	New Figure added to show Historic Parks, Gardens and Designed Landscapes of Local Interest identified in the emerging Local List.
<u>Appendix 5: Schedule of potential landscape and visual effects</u>			
June 2019		Designated Landscapes (including non-designated bit locally listed landscapes)	Assessment updated to reflect AHLV proposed in the CDP Submission Draft and the emerging Local List of Historic Parks, Gardens and Designed Landscapes of Local Interest.
June 2019		Areas of Higher Landscape Value	
June 2019		Historic Parks, Gardens and Designed Landscapes of Local Interest	

1 Introduction

1.1 Scope and purpose of the appraisal

This appraisal has been undertaken to identify the potential landscape and visual effects of the proposed Western Relief Road to inform the allocation process and the development of detailed proposals.

The appraisal was carried out in 2014 and updated in 2019 to capture relevant changes to the landscape and visual baseline or development options and add any further clarifications considered necessary.

The appraisal was further updated in June 2019 to capture the change in the approach taken in the County Durham Plan to the designation of Areas of Higher Landscape Value and to reflect the evidence base of the emerging Local List of Historic Parks, Gardens and Designed Landscapes of Local Interest (see 2019 Update: schedule of changes above).

1.2 Methodology

The appraisal is intended to meet the requirements of a Stage 2 Landscape Report described in the Design Manual for Roads and Bridges Volume 11: Environmental Assessment (DOT 1991). It is not a full Landscape and Visual Impact Assessment which would be carried out as part of an Environmental Impact Assessment should a detailed proposal be brought forward. It is nevertheless informed by the guidance set out in Guidelines for Landscape and Visual Impact Assessment: Third Edition (Landscape Institute and Institute of Environmental Management and Assessment 2013). The Design Manual for Roads and Bridges (DMRB) and the Guidelines for Landscape and Visual Impact Assessment (GLVIA) use slightly different methodologies for assessing landscape and visual effects. The approach and terminology of the more recent GLVIA have been generally used in this appraisal.

The methodology used for the appraisal is given in Appendix 1.

The appraisal focuses on a study area of 2km from the proposed route as being the area within which significant landscape and visual effects would be likely to occur. Some development options could potentially have visual effects beyond that distance. These would be unlikely to be significant in respect of landscape character and visual amenity but could affect the significance of heritage assets including Durham Castle and Cathedral World Heritage Site. These effects are assessed in a separate study: Heritage Assets Impact Assessment.

2. Landscape and visual baseline

2.1 Landscape character

2.1.1 National Character Areas / County Character Areas

The road corridor lies within National Character Area (NCA) 14, the *Tyne and Wear Lowlands*, close to its boundary with NCA 16, *The Durham Coalfield Upland Fringe*. NCAs are represented in the County Durham Landscape Character Assessment (CDLCA) (2008) by County Character Areas which are effectively those parts of NCAs lying within the County.

National Character Area	County Character Area
NCA 14 Tyne and Wear Lowlands	*Wear Lowlands* CCA
NCA 16 Durham Coalfield Upland Fringe	*West Durham Coalfield* CCA

The boundaries of County Character Areas are more precisely drawn than those of Countryside Character Areas as they are based on a more detailed level of assessment. The descriptions of County Character Areas given in the CDLCA differ in some respects from those of the larger NCAs as they refer to a more specific landscape. CCA boundaries and descriptions are used for the purposes of this appraisal as they are more informative as to the character of the area.

National Character Areas and County Character Areas are shown on Figure 1.

Key Characteristics of the Wear Lowlands County Character Area are as follows.

- *A broad lowland valley incised by the meandering River Wear and its tributaries.*
- *Carboniferous coal measures of sandstones, shales and coal are overlain by thick layers of glacial boulder clays, sands and gravels.*
- *Gently rolling terraces of open arable and mixed farmland with low hedges and few trees or woodlands occupy much of the valley floor.*
- *The River Wear and its tributaries lie in steep sided wooded gorges and denes, which open up in places into broad floodplains overlooked by steep bluffs.*
- *Ancient oak woods are found in denes and gorges and steep floodplain bluffs.*
- *Parklands and wooded estates surrounding landmark castles and country houses lie along the river corridor.*
- *A settled landscape with the historic city of Durham at its centre and scattered 'green' villages with buildings of local sandstone with roofs of red clay pan tile or slate.*
- *Numerous mining or industrial towns and villages of Victorian terraced housing of brick and slate and later estate housing. Large industrial estates fringe the main settlements.*
- *A long-standing communications corridor carrying major roads, railways and power lines.*
- *Large areas of land have been opencast for coal or reclaimed from former colliery workings and their landscapes lack maturity.*
- *A generally broad scale landscape with panoramic views from higher ground in which Durham Cathedral is a notable landmark. In the incised valley of the River Wear the landscape is more enclosed and the scale more intimate.*
- *A landscape heavily influenced by urban and industrial development with a semi-rural or urban fringe character in places. Elsewhere the landscape has a strongly rural character, often of high scenic value.* (CDLCA 2008 p.151)

Key Characteristics of the West Durham Coalfield County Character Area are as follows.

- *A rolling low upland landscape of ridges and valleys with a strong east-west grain.*
- *Soft and thinly bedded strata of Carboniferous sandstones, shales and coals give rise to gently rounded ridges with occasional steeper bluffs.*
- *Open ridges of pastoral farmland with regular grids of dry stone walls or gappy thorn hedges are crossed by straight enclosure roads and lanes. Fragments of heathland survive on infertile acidic soils.*
- *Valleys are broad with moderate slopes and occasional narrow floodplains. Agricultural land use is mixed with arable fields and improved pastures bounded by hawthorn hedges with scattered hedgerow oak and ash.*
- *Ancient oak woods are found in narrow steep sided denes, and along the banks of rivers and streams. Coniferous plantations are found on higher valley sides and ridges*

- *Old agricultural villages lie on ridge tops or valley floors. Buildings are of local sandstone with roofs of stone or welsh slate.*
- *Mining villages of Victorian terraced housing of brick or stone and welsh slate and later estate housing are scattered across the valleys and ridges.*
- *Occasional parklands and wooded estates surround small country houses.*
- *Relics of the mining industry include disused railway lines and viaducts, old coke ovens and small spoil heaps.*
- *Opencast coal workings are locally prominent features. Extensive areas of land have been opencast or reclaimed and their landscape often lacks maturity.*
- *The landscape is broad in scale, defined within the valleys by the enclosing ridgelines, with panoramic views from higher ridges across adjacent valleys.*
- *A landscape heavily influenced by development with a semi-rural or urban fringe character in places.* (CDLCA 2008 p.115)

2.1.2 Broad Landscape Types and Character Areas

The CDLCA subdivides County Character Areas into *Broad Landscape Types* - landscapes with similar patterns of geology, soils, vegetation, land use, settlement and field patterns – and identifies geographically specific *Broad Character Areas* belonging to these types.

The Wear Lowlands CCA is divided into *Incised Lowland Valley* landscapes which include the steep-sided valleys of the Wear and its tributaries, and *Lowland Valley Terrace* landscapes which include the more gently undulating vale floor into which the incised valleys are cut.

The West Durham Coalfield CCA is divided into *Coalfield Valley* landscapes which include the lower reaches of the valleys which make up the CCA, and *Coalfield Upland Fringe* landscapes which include the higher ridges and valley heads to the west.

The road corridor crosses the following Broad Landscape Types and Broad Character Areas which are shown on Figure 2.

Broad Landscape Type	**Broad Character Area**
Coalfield Valley	Deerness and Hedleyhope Valley
	Browney Valley
Incised Lowland Valley	Lower Browney Valley
Lowland Valley Terraces	Western Valley Terraces

Key Characteristics of the Coalfield Valley landscape type are as follows.

- *Broad, well defined valleys with occasional narrow floodplains and incised denes.*
- *Rounded topography of thinly bedded sandstones, mudstones, shales and coals overlain by glacial boulder clays.*
- *Heavy, seasonally waterlogged, clay soils.*
- *Mixed farmland of improved pasture and arable cropping.*
- *Sub-regular field patterns of old enclosures bounded by thorn hedges. Occasional regular Parliamentary enclosures.*
- *Scattered hedgerow Oak, Ash, Sycamore and Beech.*

- *Variable woodland cover – open in places but wooded elsewhere with ancient oak-birch woods in narrow denes and along watercourses, and blocky conifer plantations on valley sides.*
- *Scattered mining towns and villages connected by busy modern roads.*
- *Occasional older 'green' villages linked by narrow winding roads.*
- *Extensive areas of restored opencast land and reclaimed colliery land – often open and relatively featureless.*
- *Scattered relics of the mining industry - small spoil heaps, coke ovens and railway lines.*
- *Occasional ornamental parklands.*
- *An open landscape, relatively broad in scale but defined by enclosing ridgelines.*
- *A strongly rural landscape in places but with a 'semi-rural' or urban fringe quality in its more settled areas.* (CDLCA p.122)

The Deerness & Hedleyhope Valley and Browney Valley character areas are described as follows:

> **Deerness & Hedleyhope Valley.** *The branching valley of the River Deerness and its tributaries. In its lower reaches the Deerness lies in an incised dene, a mosaic of woodland and pasture, between open gentle slopes of mixed farmland on which lie the mining villages of New Brancepeth and Ushaw Moor, and the parklands of Ushaw College and Eshwood Hall. Upstream, steep wooded bluffs south of the river overlook the village of Esh Winning. The upper reaches of the Deerness are pastoral and heavily wooded with large conifer plantations and a network of old hedges, with frequent oak trees, fragmented in places by opencast mining. The upper reaches of the Hedleyhope valley are also well wooded with mixed farmland of old hedgerows and abundant oak and ash trees interspersed with broadleaved and mixed woodlands.* (CDLCA p.124 /5)
>
> **Browney Valley.** *A broad branching valley in which the Browney and its tributaries lie on narrow floodplains or in narrow, steep-sided denes. Valley sides are moderately sloping with occasional steeper bluffs. Arable and mixed farmland in the lower reaches of the valley gives way to pasture on higher ground. The valley is heavily wooded in places with large blocky conifer plantations, and broadleaved or mixed woodlands in areas of old parkland. Field systems vary in character with older hedges with scattered or abundant hedgerow trees in the valley bottoms, and areas of regular parliamentary enclosure on higher ground. Boundaries are mostly hedgerows with some dry stone walls in the upper reaches. Large villages lie along the valley floor and the lower valley sides. Restored opencast land is found in many places on the upper slopes, and areas of reclaimed colliery land are found around some mining villages.* (CDLCA p.124)

Key Characteristics of the Incised Lowland landscape type are as follows.

- *Incised valley landscape of gorges, denes, river floodplains and steep bluffs.*
- *Carboniferous rocks are masked by thick deposits of glacial drift.*
- *Sandstones, shales and thin coal seams outcrop very occasionally in gorges.*
- *Meandering rivers with alternating riffles and pools.*
- *Varied soils - alluvial soils, brown sands, and heavy clays.*
- *Mixed farmland - pasture on steeper ground and arable cropping on floodplains.*
- *Semi-regular patterns of old enclosures bounded by hawthorn hedges.*

- *Abundant hedgerow oak, ash, sycamore and beech.*
- *Heavily wooded – ancient oak woods in river gorges, denes and bluffs.*
- *Numerous ornamental parklands and areas of wooded estate farmland.*
- *Occasional older 'green villages' of stone and clay pan tile.*
- *Landmark buildings including Durham Cathedral and Castle.*
- *Numerous bridges and viaducts from the ancient to the modern.*
- *An enclosed landscape, intimate in scale, with occasional dramatic vistas.*
- *A settled but tranquil rural landscape of great scenic quality and a rich cultural heritage.* (CDLCA p.154)

The Lower Browney Valley character area is described as follows:

> Lower Browney Valley. *The River Browney carves an incised course in a narrow valley between Durham City and the village of Langley Moor. Steeper valley sides and low bluffs are covered in broadleaved woodlands or pasture with scattered trees and scrub. Tree lines follow the river. Gentler valley slopes and small areas of floodplain are largely arable farmland with low clipped hedges and few hedgerow trees.* (CDLCA p.155)

Key Characteristics of the Lowland Valley Terrace landscape type are as follows.

- *Broad lowland valley floor.*
- *Carboniferous Coal Measures are masked by thick layers of glacial drift.*
- *Gently rolling topography of boulder clay with areas of more undulating terrain of glacial sands and gravels.*
- *Heavy, seasonally waterlogged clay soils and lighter brown earths and brown sands.*
- *Mixed farmland of improved pastures and arable cropping.*
- *Semi-regular patterns of medium and large-scale fields bounded by low hawthorn hedges.*
- *Few trees – thinly scattered hedgerow ash, oak and sycamore.*
- *Isolated fragments of lowland heath and mire.*
- *Sparsely wooded but with some heavily wooded areas of old parkland and estate farmland. Scattered mining towns and villages connected by busy modern roads. Occasional older 'green' villages*
- *Opencast coal sites, clay workings and waste disposal sites locally prominent.*
- *Tracts of immature and relatively featureless reclaimed land. An important communications corridor with motorways, trunk roads, railway lines and overhead transmission lines.*
- *An open landscape, broad in scale, defined by the Limestone Escarpment to the east and the spurs of the West Durham Coalfield to the west.*
- *A settled landscape with a semi-rural or urban fringe quality in places*.(CLDCA p.157)

The Western Valley Terraces character area is described as follows:

> *Gently rolling or undulating farmland between the incised valley of the Wear and the valleys of the West Durham Coalfield. The terraces are incised by steep-sided wooded denes running to the Wear. Glacial sands and gravels are associated with undulating terrain which has been*

worked for sand in places and supports lowland heath at Waldridge Fell. An open landscape of largely arable farmland with sub-regular patterns of old hedges, fragmented in places, with scattered hedgerow trees and few woodlands. There are parklands at Brancepeth and smaller relic parklands at Sniperley, Plawsworth and The Hermitage. The landscape is heavily settled with scattered mining villages and the fringes of the larger settlements of Durham and Chester-le-Street spreading westwards onto the valley terraces. Busy roads and the east coast main line cross the area. (CLDCA p.159)

2.1.3 Local Character Areas

The CDLCA does not identify local character areas. Its Broad Character Areas are large scale units which aren't particularly informative about local character. For the purposes of this assessment Broad Character Areas have been subdivided further into the following local character areas. These are shown on Figure 3.

Broad Character Areas	**Local Character Area**
Browney valley	Bearpark North
	Bearpark South
	Broom Ridge
Deerness & Hedleyhope Valley	Broom Ridge
	Lower Deerness
	Brandon
Lower Browney Valley	Baxterwood and Aldin Grange
	Stonebridge
Western Valley Terraces	Sniperley
	Bearpark Hall, Stotgate and Whitesmocks
	Kimblesworth and Findon
	Merryoaks

Bearpark North. The broad valley of the River Browney is partially blocked in its lower reaches by glacial deposits forming a 'blind' end which terminates in the marshy ground of Bearpark Bog. The northern flanks of the valley are moderately sloping and occupied by open arable farmland bounded by low hawthorn hedges. Most of these date from piecemeal enclosure of the medieval deer park of Bearpark. The route of the park boundary is followed by a continuous hedge and footpath along the northern edge of the valley. Trees and woodlands are sparse. There are scattered hedgerow trees and occasional narrow tree-lined gills. The floor of the valley is poorly drained and contains relics of raised mire, ponds and oxbow lakes. It is drained by a stell, fed by smaller ditches, which feeds into the meandering River Browney. The area is crossed by overhead services on lattice towers close to the road corridor. The landscape is rural in character and visually open with long distance views westwards along the valley.

Bearpark South. The southern slopes of the Browney Valley are gently to moderately sloping and occupied by mixed farmland bounded by hedges and tree lines. Most boundaries date from the piecemeal enclosure of the medieval deer park of Bearpark. Trees and woodlands are relatively abundant with small linear broadleaved woodlands and a large coniferous plantation on the site of the former Bearpark Colliery heaps. The village of Bearpark lies on prominent high ground on the southern ridge. The landscape is rural in character with long distance views westwards. There are areas of a more urban fringe character bordering onto Bearpark.

Broom Ridge. The ridge between the Browney and Deerness valleys forms a low terminal spur defined to the east by the incised valley of the River Browney as it turns to run southwards. The ridge is occupied by open mixed farmland with a heavily fragmented network of field boundaries including

hedges from a variety of periods along with fences and poorly established tree belts dating from opencast mining of the mid C20th. Boundary trees are sparse. The area is crossed by overhead services on lattice towers close to the road corridor. The landscape has a semi-rural character with the settlements of Ushaw Moor and Broompark prominent on the southern flanks of the ridge and Bearpark to the north.

Lower Deerness. The lower slopes of the Deerness valley are moderately to steeply incised. The enclosed valley is occupied by a mosaic of pastoral farmland, woodland and scrub. Field boundaries are largely hedges dating from piecemeal post-medieval enclosure. Relics of rig and furrow survive in old pastures and there are relics of early water mills. Trees and woodlands are abundant with tracts of ancient oak woodland, secondary woodland, scrub and riparian tree lines. The character area is defined along its northern edge by the course of the Deerness branch of the North Eastern Railway which is now a railway path. The landscape is visually enclosed and strongly rural in character although nearby villages are locally prominent in views from its edges.

Brandon. The gentle southern flanks of the lower Deerness Valley are occupied by mixed farmland bounded by low thorn hedges largely dating from post-medieval enclosure of the town fields of Brandon. Trees are sparse, although locally more abundant around Primrose Gill, and woodlands are absent. The landscape is rural in character and visually open with long distance views westwards along the valley and north across the Broom Ridge character area.

Baxterwood and Aldin Grange. The lower slopes of the Browney Valley are moderately to steeply incised. The river follows a meandering course between low steep bluffs opening out into narrow floodplains in places. The valley slopes in the north are divided by a branching dry valley in rolling glacial deposits east of Arbor House. The enclosed valley is occupied by a mosaic of pastoral farmland, woodland and scrub. Field boundaries are largely hedges dating from piecemeal post-medieval enclosures. Trees and woodlands are abundant with tracts of ancient oak woodland, secondary woodland, scrub and riparian tree lines. The river is crossed by medieval and late C19th bridges at Aldin Grange. The area is crossed by overhead services on lattice towers close to the road corridor. The landscape is visually enclosed and strongly rural in character although nearby villages and the edges of Durham City are locally prominent in views from higher ground.

Stonebridge. The lower reaches of the Browney Valley are moderately to steeply incised. The river follows a meandering course between low steep bluffs opening out into narrow floodplains in places. The enclosed valley is occupied by a mosaic of pastoral and arable farmland and woodland. Field boundaries are largely hedges dating from piecemeal post-medieval enclosures. Trees and woodlands are abundant with tracts of ancient oak woodland, coniferous plantations, riparian tree lines and locally abundant hedgerow trees. The area is crossed by overhead services on lattice towers. The landscape is visually enclosed and rural in character with a semi-rural or urban fringe character in places where it is crossed by busy roads and the east coast main lines or where settlement edges are prominent.

Sniperley. Gently rolling valley terraces west of Durham City. Agricultural land-use is predominantly arable. Field boundaries are hedges dating from the early C19th enclosure of Framwelgate Moor. Boundary networks are generally intact. There are scattered, locally abundant hedgerow trees. The small well wooded parkland of Sniperley Hall lies in the south. The modern Earl's House hospital complex lies to the west of the park in wooded surroundings. The area north of the park is allocated for housing in the County Durham Plan Pre-submission draft. The area is crossed by overhead services on lattice towers. There are shallow views northwards along the Wear valley. Views to the east are obstructed by buildings and vegetation along the edge of the city.

Bearpark Hall, Stotgate and Whitesmocks. Gently undulating valley terraces west of Durham City. Agricultural land use is a mixture of arable and pasture. Field boundaries are hedges dating from piecemeal post-medieval enclosures but including older features such as the boundary of the medieval deer park. There are scattered, locally abundant, hedgerow trees and no woodlands other than small

ornamental plantations around Aden Cottage in the north. The remains of the medieval priory and chapel of Beaurepaire lie west of Bearpark Hall Farm on a spur overlooking the Browney Valley. The historic Club Lane which links Beaurepaire to the city runs across the area. The area is crossed by overhead services on lattice towers east of Stotgate Farm which straddles the ridge between the incised valley of the Browney in the south and Bearpark Bog to the north.

Kimblesworth & Findon. Moderately sloping land on the flanks of Findon Hill. Agricultural land-use is predominantly arable. Field boundaries are hedges dating partly from piecemeal early post-medieval enclosures and partly from the early C19th enclosure of Framwelgate Moor. Boundary networks are generally intact. The landscape is visually open with few woodlands or hedgerow trees. There are panoramic views out across the Wear Lowlands and Durham City to the east from higher ground in which the cathedral is a notable landmark.

Merryoaks. Gently rolling valley terraces west of Durham City. A small character area taking in agricultural land to the west of the A167 and part of the former Mount Oswald Golf Course to the east. Areas to the east of the road have outline planning permission for housing and areas to the west are allocated for housing in the County Durham Plan Pre-submission Draft. Views in the east of the site are contained by perimeter vegetation and housing. There are panoramic views out from the west across the Browney and Deerness valleys.

The study area also includes local character areas within the Northern Wear Valley, Southern Wear and Congburn, Southburn and Blackdene County Character Areas (*Kepier & Frankland*, *Mountjoy & Mount Oswald*, and *Blackdene*). No effects are predicted in those areas and they are not assessed further in this report.

2.1.4 Local Landscape Types and Sub-types

The CDLCA subdivides the landscape further into Local Landscape Types and Sub-types. Local Landscape Types are tracts of land which share similar combinations of soils, land use, field boundaries and tree and woodland cover. Local Landscape Sub-types are used to identify variations within a local landscape type.

Local Landscape Types and Sub-types are shown on Figure 4**.**

The road corridor crosses the following landscape types and subtypes:

Local Landscape Type	**Sub-type**
Valley farmland: pasture	Old enclosure
Valley farmland: open pasture	Old enclosure
	Surveyor enclosed
Valley farmland: arable	Old enclosure
Valley farmland: open arable	Reclaimed land
Valley farmland: wooded pasture	Old enclosure
Terrace farmland: pasture	Old enclosure
Terrace farmland: wooded estate pasture	Old enclosure
Lowland woods: denes & bluffs	Ancient woods
Disturbed land	Old railway

Descriptions of Local Landscape Types and Sub-types are as follows.

Valley farmland: pasture. Pastoral farmland of the coalfield valleys. Pastures are mostly improved. Pockets of semi-improved pasture or meadow and wet, rushy pasture occur locally. Field systems are a mixture of early post-medieval enclosures and parliamentary enclosures in regular or sub-regular

patterns and are generally relatively intact. Field boundaries are typically hawthorn dominated hedges. Older hedges tend to be slightly more diverse. Hedgerow oak, ash and sycamore are common.

> *Subtype Old Enclosure. Areas of early, often piecemeal, enclosure. Field systems are generally sub-regular in pattern, occasionally preserving the shape of arable strips. Areas of medieval or later rigg and furrow occur locally.*

Valley farmland: arable. Arable farmland on the heavy clay soils of the valley landscapes of the exposed coal measures. Field systems are sub-regular enclosures of early post-medieval origins and remain largely intact. Field boundaries are clipped hedges, usually dominated by hawthorn. Hedgerow Ash, Oak and Sycamore trees are common.

> *Subtype Old Enclosure. The type.*

Valley farmland: open arable. Open arable farmland on the heavy clay soils of the valley landscapes of the exposed coal measures. Fields are often large and bounded by low clipped thorn hedges, or, more rarely, dry stone walls. Hedgerow trees are absent or infrequent.

> *Subtype Old Enclosure. Areas of early, often piecemeal, enclosure. Field patterns are generally sub-regular but disrupted in places by field amalgamations.*

Valley farmland: open pasture. Open pastoral farmland of the coalfield valleys. Large fields of improved pasture with some pockets of semi-improved pasture or rough grazing, occasionally with patchy gorse or hawthorn scrub. Field boundaries are typically species poor hawthorn hedges, or a mixture of hedges and fences. Hedges are often sparse and overgrown or grazed through and supplemented by wire fences. Hedgerow trees are absent or infrequent. Patches of rigg & furrow survive from medieval agriculture and later periods of improvement. Small field ponds, some being 'subsidence flashes' caused by underground workings, are fairly common.

> *Subtype Old Enclosure. Areas of early, often piecemeal, enclosure. Field systems are generally sub-regular although the pattern has often been disrupted by the removal or decline of hedgerows.*

> *Subtype Surveyor Enclosed. Areas of late, 18th or 19th century enclosure. Field boundaries are straight and field systems regular although the pattern has often been disrupted by the removal or decline of hedgerows.*

Valley farmland: wooded pasture. Wooded pastoral farmland of the valley landscapes of the exposed coal measures. Fields are bounded by hedges, often tall and overgrown, or dry stone walls. The pattern of woodland is very variable, being typically a combination of small ancient broadleaved woodlands in narrow denes and along watercourses, and larger blocky plantation of mixed or coniferous species.

> *Subtype Old Enclosure. Areas of early, often piecemeal, enclosure. Field patterns are generally sub-regular. Field boundaries are hedgerows, usually dominated by hawthorn, or dry stone walls with scattered (locally abundant) hedgerow oak and ash. Areas of rig and furrow may survive in less improved pastures.*

Terrace farmland: pasture. Rolling or gently undulating farmland of improved pasture with some pockets of less improved pasture, often associated with areas of relic rig and furrow. Field systems are generally sub-regular enclosures of early post-medieval origins. Field boundaries are clipped or overgrown hedges, usually dominated by hawthorn, in which hedgerow Ash, Oak and Sycamore trees are common.

> *Subtype Old Enclosure. The type*

Terrace farmland: wooded estate pasture. Rolling wooded pastoral estate farmland of the lowland valley terraces. Fields are bounded by trimmed hedges or estate fencing, or border onto woodlands. Small copses, spinneys and shelterbelts are common along with other elements of the estate

landscape: designed farmsteads, lodges, gatehouses, mortared stone walls and entrance gates. Areas of older rig and furrow may survive in less improved pastures.

> *Subtype Old Enclosure. Areas of early, often piecemeal, enclosure. Field patterns are generally sub-regular. Field boundaries are hedgerows, usually dominated by hawthorn. Mature hedgerow or parkland trees occur locally.*

Disturbed land. A variable type made up largely of abandoned mineral workings and railway lines.

> *Subtype Old railway. Abandoned railway lines survive as narrow linear features running through other landscapes. Most are made up of alternating cuttings and embankments. Many structures survive along their routes including bridges and viaducts, culverts, tipplers and station platforms. Some associated buildings like station houses and railway cottages have been converted to other uses. Most abandoned lines have been colonised by natural regeneration and support a diverse grassland and woodland flora which reflects the range of naturally occurring or imported materials found in cuttings and embankments. Pioneer or ruderal species are particularly characteristic. Many old railway lines have been adopted as recreational multi-user routes.*

Lowland woods: denes, bluffs & river terraces. Woodlands of incised denes and steeply sloping valley-side or escarpment bluffs. Woodland plant communities are diverse and reflect the range of underlying parent rocks and drift materials that occur – often within a single wood.

> *Subtype Ancient Woods. Ancient semi-natural woodlands. On the base-poor glacial drift into which many lowland denes are incised the predominant woodland type is a lowland mixed broadleaved woodland, with Common or Sessile Oak the major canopy species (NVC W10). Similar woodlands occur on river terrace gravels and rocky gorges on carboniferous sandstones and shales. On poorer soils, and particularly in the west, these woodlands may* be *transitional in character with upland Oak woods (NVC W11). On the more acidic strata of the coal measures they often occur along-side Oak-birch (NVC 16) communities. Stands of Alder-Ash woodland (NVC W7) and Alder carr (NVC W5) occur on flushed slopes or waterlogged ground. Some woodlands show signs of having been managed as coppice in the past. Woods on the coal measures often contains relics of drift mining – pit-falls, waggonways and small spoil mounds. Some dene woods also contain relics of small scale quarrying activities.*

2.2 Landscape features

An inventory of landscape features within the road corridor is contained in Appendix 3: Schedule of Landscape Features and mapped in Figure 5.

2.2.1 Landform

The southern part of the road corridor is formed by the gentle to moderate slopes of the ridge and terminal spur between the Browney and Deerness valleys. North of the ridge it crosses the incised valley of the Browney which is made up moderate valley slopes with steeper bluffs which enclose a narrow floodplain. North of the Browney lies an area of gently to moderately undulating glacial terrain containing shallow dry valleys. To the north of this lie the simpler valley slopes of the wider Browney Valley which resolve into a low gently undulating spur north of the A691.

2.2.2 Woodlands and scrub

A small number of woodlands fall within the road corridor. None of these are identified as being ancient semi-natural woodlands on Natural England's Inventory of Ancient Woodland although narrow riparian woods and tree lines along the banks of the River Browney and woods on the upper flanks of Moorsley Banks are shown on the 1st edition OS map and are likely to be of some antiquity and have a degree of naturalness. Other woodlands include areas of C20th plantation at Broom Park,

areas of secondary and planted woodland along the C17 Tollhouse Road / Auton Stile, and areas of dense and open scrub on Moorsley Banks.

2.2.3 Field boundaries and field trees

Field boundaries in the southern part of the road corridor are largely species poor late post-medieval (probably C18th /C19th) thorn hedges with occasional early post-medieval (probably C17th) hedges and some fences dating from late C20th opencast mining restoration. Boundaries are typically straight and field patterns regular. Some individual features are gappy or relict and the network as a whole is heavily fragmented. There are few hedgerow trees in this area although older hedges B4 and B11 contain frequent trees including a number of veterans.

In the northern part of the road corridor field boundaries are largely early post medieval (probably C17th) thorn hedges with some individual features probably following more ancient (medieval) alignments including parish / township boundaries and the Deer Park boundary (B21, B22, B24) and Club Lane (B19). The area contains some late post-medieval hedges dating from late C19th rationalisation of the track north of Moorsley Banks Farm. Boundaries are sinuous and field patterns sub-regular. While some individual features are gappy the network as a whole is largely intact. There are few hedgerow trees in this area although hedges B19 and B21 contain frequent trees including a number of veterans.

2.2.4 Wetlands and watercourses

The road corridor contains a number of small seasonal field ponds and crosses the natural watercourse of the River Browney.

2.2.5 Other features

The road corridor crosses the Lanchester Valley Railway Path – formerly the Lanchester Valley Branch of the North East Railway.

2.3 Landscape value

2.3.1 National landscape designations

The proposals would not affect any nationally designated landscapes.

2.3.2 Local landscape designations and locally listed landscapes.

<u>Areas of High / Higher Landscape Value</u>

The northern part of the road corridor lies within an area identified as an *Area of High Landscape Value* in the City of Durham Local Plan (Policy E10).

This is shown on Figure 6.

A similar, but not entirely co-extensive, area is identified as *Area of Higher Landscape Value* (AHLV) in the County Durham Plan Submission Draft (Policies Map and Policy 40). The <u>County Durham Plan Local Landscape Designations Review 2018</u> subdivides AHLV into local areas. Those lying within the study area include the Middle Browney Valley, Lower Browney Valle, Deerness Valley and Durham City AHLV.

These are shown on Figure 6a

The <u>County Durham Landscape Value Assessment 2018</u> identifies elevated values across a range of attributes for the assessment units within these proposed AHLV. These are shown in the table below.

Character area / Sub-area	Condition	Scenic	Rarity	Represent	CI: natural	CI: historic	Recreation	Perceptual	Cultural
Lower Browney Valley AHLV									
Assessment Units									
12b Lower Browney Valley	MH	MH	MH	MH	H	MH	M	LM	H
13b xii Whitesmocks	MH	MH	MH	MH	MH	H	M	LM	H
Middle Browney Valley AHLV									
Assessment Units									
8c vi Bearpark	MH	MH	MH	MH	H	H	MH	LM	NA
Deerness Valley AHLV									
Assessment Units									
8f vi Lower Deerness	MH	MH	M	MH	H	MH	MH	LM	NA

H = High, MH = Medium-high, M = Medium, LM = Low-medium, L = Low, NA = Not assessed

Parks and gardens of historic or landscape value

The northern part of the road corridor lies within the boundary of the former deer park of Bearpark. Land to the immediate north of the road corridor includes parkland associated with Sniperley Hall. These are both identified as '*parks and gardens of historic or landscape value'* in the City of Durham. Local Plan (Policy E26). Other areas so identified lying within the study area include Mount Oswald and Crook Hall.

These are shown on Figure 6.

Historic Parks, Gardens and Designed Landscapes.

The council is currently preparing a Local List of *Historic Parks, Gardens and Designed Landscapes.* This identifies the former deer park of Bearpark as Beaurepaire (Bearpark) together with an area to the south. The area covers Arbour House Farm (formerly Bearpark Moor) which research identified as being one of the Beaurepaire farms. It has not been established at this stage whether the area formed part of the deer park itself or if it was simply part of the wider estate in that area: the boundary is marked as 'uncertain'. The Local List identifies the park's overall significance as being *of high local interest*.

The Local List also identifies Sniperley Hall and an additional area to the south. This area includes land which may have formed part of a designed view from Sniperley House towards the chapel of Beaurepaire. Further research is identified as being needed on this and the boundary in that area is marked on the local list as 'uncertain'. The Local List identifies its overall significance as follows. *The setting to Sniperley Hall includes a serpentine approach, parkland dotted with single trees and clumps of trees, woodland belts, kitchen garden, pleasure grounds and a ha-ha. There is a possible visual link to the picturesque ruined chapel at Beaurepaire. These features contribute to the park and gardens being of local historic interest.*

The local list identifies gardens at Aldin Grange. It identifies their overall significance as follows. *The residual features of this modest 19th-century landscaped garden are of sufficient significance to be of local historic interest.*

The local list identifies parkland and gardens at Mount Oswald, although reduced in area relative to the City of Durham Local Plan. It identifies their overall significance as follows. *Despite the loss of a lodge and the dominance of the golf course in the parkland, the immediate setting to Mount Oswald has survived. The woodland south west of the house and woodland walk are present and the walled*

garden west of the drive is extant, the boundary plantations remain prominent. These features contribute to the gardens being of local historic interest.

Other entries on the local list within the study area but outside of the highway's potential zone of visual influence include Wharton Park, Crook Hall and Durham Peninsula & River Banks.

These are shown on Figure 6b.

2.3.3 Other designations

The corridor as a whole lies within the County Durham Green Belt.

2.3.4 Local landscape strategies

The southern part of the road corridor lies largely within a *Landscape Improvement Priority Area* identified in the County Durham Landscape Strategy (2008). The northern part of the road corridor lies largely within a *Landscape Conservation Priority Area.* These priority areas and the adopted strategies within these areas are shown on Figure 7**.**

2.3.5 Tree Preservation Orders

None of the trees within the road corridor are covered by a Tree Preservation Order.

2.3.6 Values and attributes

<u>Condition</u>

The condition of the landscape varies along the route being moderate or poor south of the incised Browney valley where field boundary networks have been fragmented by opencast mining and agricultural intensification. The condition of the landscape is good in the valley itself where mature woodlands line the banks of the river, and to the north where field boundary networks are strong and intact.

<u>Scenic quality</u>

The scenic quality of the landscape varies along the route, from moderate in the south where the landform is relatively simple and field boundaries sparse and fragmented, to high in the north where the topography is more varied and the pattern of woodlands, hedges and trees is more intimate and locally picturesque. The area is crossed by overhead services on lattice towers which detract from the quality of some views.

<u>Rarity / representativeness</u>

This varies along the route. South of the Browney Valley the landscape is relatively unremarkable being made up of late post-medieval field systems fragmented by C20th opencast coal mining on a moderate sloping spur. It is neither rare nor strongly representative of its type. North of and including the incised valley of the Browney the landscape is strongly representative of its type, having strong and varied topography, intact field systems and ancient riparian woodlands. It has a relatively high rarity value having a strong sense of place with strong cultural associations (see below).

<u>Conservation value</u>

This varies along the route. South of the Browney Valley the land is open farmland of arable and improved pasture of low to moderate nature conservation value. North of and including the valley of the Browney the land is of higher nature conservation value with pockets of semi-natural habitat and good connectivity in linear and network features. The northern area is richer in features of cultural heritage value including the listed bridge at Aldin Grange, the former Deerpark and the ruined chapel of Beaurepaire.

<u>Recreational value</u>

All of the landscapes affected by the proposals area have a relatively high recreational value being close to residential areas and being accessed from a well-developed network of public rights of way and long distance trails.

Perceptual aspects

All of the landscapes affected by the proposals are of some value as open countryside forming part of the visual environment of the western edge of Durham City and the villages of Bearpark, Broompark and Ushaw Moor.

Cultural associations

Landscapes in the northern part of the route have strong cultural associations with the cathedral and priory of Durham. The northernmost section of the road falls within the medieval deerpark of Bearpark. Land to the immediate south and east of the park contains early post-medieval field systems crossed by historic routes to the retreat and chapel of Beaurepaire including Moorsley Banks and Club Lane. The area north and east of the Browney is the site of the Battle of Neville's Cross and contains topographic features known to have influenced the battle and features associated with it such as the medieval bridge at Aldin Grange. In the south of the route cultural associations are less notable. It is crossed by the Lanchester Valley Branch of the North East Railway which survives as a multi-user route. The Broompark picnic site to the south occupies the site of the former Broompark Colliery.

Overall value

Variations in value along the road corridor broadly reflect the distinction between Landscape Improvement and Landscape Conservation Priority Areas (Figure 7) and the AHLV designation (Figure 6), with landscapes of moderate value south of the incised valley of the Browney and landscapes of high value to the north.

3. Visual baseline

3.1 Visibility

Study area

The potential visibility of the proposals has been assessed within a 2km radius of the road corridor, the area in which it is considered the most significant visual effects would occur.

Zone of Theoretical visibility

Figure 8 shows the Zone of Theoretical Visibility (ZTV) of the road corridor. This was derived by modelling a number of points within the corridor at existing ground level and at 4m above existing ground level to represent the height of vehicles. Only the visibility of the wider road corridor is assessed at this stage. This does not capture the visibility of tall structures (embankments, bridges) but gives a reasonable indication of where a road within the wider corridor would be visible from.

Visibility modelling was undertaken in ArcGis v10.2 using OS Terrain 50m DTM data. The ZTV assumes an eye height of 2m. The modelling was based on bare terrain and does not take into account the screening effects of vegetation or buildings and other structures.

The ZTV shows that the proposed road would be widely visible within the lower reaches of the Browney valley. Visibility would fall off to the north beyond the ridge running broadly parallel with the A691, and to the east beyond the watershed between the Browney and the Wear which runs broadly parallel with the A167. To the south the road would be visible from the opposing flanks of the Lower Deerness valley.

The screening effects of buildings would be strongly influential in controlling visibility inward of the immediate settlement edges of Durham, Ushaw Moor, Broompark, Langley Moor and Brandon. Buildings would also be influential in reducing visibility within Bearpark although as it has a relatively open structure in places, and occupies rising ground, the road corridor would be visible from properties and open spaces elsewhere within the village.

The screening effects of trees and woodlands would be locally influential in controlling visibility and particularly within the immediate valley of the Browney.

3.2 Visual receptors

Residents

The ZTV indicates potential visibility from residential properties and public vantage points in:

- Bearpark
- Aldin Grange
- the western edge of Durham City;
- the eastern edge of Broompark ;
- the eastern edge of Ushaw Moor;
- the northern edge of Brandon / Langley Moor

The ZTV indicates potential visibility from a number of isolated residential properties: these are not assessed in this appraisal.

Walkers, cyclists and horse riders.

The ZTV indicates potential visibility from a number of public rights of way, bridleways and cycle-ways in the vicinity including the nationally promoted Walney to Wear cycle route, the regionally promoted Lanchester Valley Railway Path, Deerness Valley Railway Path and Brandon to Bishop Auckland Railway Path, and the locally promoted Club Lane (the 'Pilgrims Way' Whitesmocks to Beaurepaire). The ZTV also indicates visibility from areas of recently planted and more established community woodlands south of Bearpark.

Motorists

The ZTV indicates potential visibility from the following roads:

- A690
- A691
- A167
- B6302
- C17
- C18
- C98 Lowes Barn Bank
- U19.12 Trout lane
- U26.6 Brandon Lane

3.3 Views and viewpoints

Photographs showing representative views of the locality are contained in Appendix 3.

4. Potential landscape effects

An assessment of potential effects on landscape receptors within the road corridor is given in Appendix 4: Schedule of Potential Landscape and Visual Effects. This shows the sensitivity assigned to landscape receptors and an assessment of the likely nature, magnitude and significance of

potential effects and the potential for mitigation. The assessment is based on route options currently under investigation and can only be indicative at this stage: changes to the route could lead to effects of higher or lower magnitude than assessed. Only the more significant effects are described further below.

4.1 Landscape features

4.1.1 Landform

Sensitivity

Most of the landforms are assessed as being of medium or low sensitivity. Steeply sloping valley sides and flat floodplains are assessed as being of high sensitivity.

Potential effects

On the southern leg of the route the road would pass through the Browney / Deerness ridge in a relatively deep (0 – 9m), asymmetrical cutting. The potential effect is assessed as being medium-high (moderate to moderate –major significance) with some limited potential to mitigate the effect through easing of the western slopes at the northern end of the cutting. On the approach to the bridge the proposals would entail the development of a moderately deep embankment (0.7.5m) to a vertical abutment. The potential effect is assessed as being high (moderate –major and major significance).

The landform north of the Browney would be modified in varying degrees by the different route options. Options 1 (three leg roundabout) would entail substantial modifications to the slopes of Moorsley banks in the form of deep cuttings to accommodate a roundabout platform at the level of Tollhouse Road, and would entail the development of new alignment of Tollhouse road west of the roundabout in a cutting into rising ground. Option 3 would have similar effects and would also entail realignment of Tollhouse Road east of the junction in further cuttings. Option 2 (ghost Island) would entail the development of cuttings of similar character but less complexity due to the simpler junction form. The potential effects are assessed as being generally high (moderate-major and major significance) with limited potential for mitigation.

Option 4 (no junction) with a higher over-bridge would entail the development of a shallow embankment in the south resolving into a moderate cutting through the higher ground of the ridge. This would have a significantly lower impact than Options 1, 2 and 3. The potential effect is assessed as being high (moderate-major and major significance) but with some potential to reduce the effect to medium (moderate and moderate-major significance) though localised ground modelling on the western side of the asymmetrical cutting entry.

The road would cross the gently undulating ridge to the north on moderate cuttings and embankments which are assessed as having effects of a medium magnitude (minor and moderate significance). Towards the northern end of the route the road would cross the moderately sloping valley of The Stell west of Aden Cottage and climb the northern slopes of the valley on a moderately deep to shallow asymmetrical embankment. The potential effect is assessed as being high (moderate –major significance) with limited practical potential for mitigation in the form of modifications to the landform.

4.1.2 Woodlands and scrub

Sensitivity

Areas of younger woodland or scrub are assessed as being of medium sensitivity. Older mature woodlands on the steeper bluffs along the Browney are assessed as being of high sensitivity

Potential effects

The most significant effects would occur in the vicinity of the Browney crossing where the construction of the bridge would entail the removal or coppicing of some trees within the older woods on the south bank of the river (W2) and on the slopes south of Tollhouse Road (W3). The bridge itself would not require substantial areas of woodland to be cleared, but its construction could entail a larger impact. It is difficult to predict the scale of loss in the absence of a detailed working method for the construction of the bridge. The effect is assessed as being potentially medium or high (moderate – major or major significance) but low (minor significance) if mitigated by adopting a low impact construction method.

Options 1,2, and 3 would also entail removal of sections of relatively mature roadside woodland vegetation north of Tollhouse Road (W4). The effect is assessed as being potentially high (moderate –major significance) and not capable of being mitigated.

4.1.3 Field boundaries and trees

Sensitivity

Fences or relict hedges are assessed as being of low sensitivity. Late post-medieval hedges are assessed as being of medium sensitivity. Older hedges including hedges on historic parish boundaries and early post-medieval hedges are assessed as being of high sensitivity

Potential effects

A section of hedge B4 would be removed entailing the loss of some mature trees. The effect is assessed as being potentially high (major significance) but low (moderate significance) if mitigated by design of the SUDS wetland to avoid the loss of trees.

Hedge B11 would be substantially removed including the removal of a veteran Oak. The effect is assessed as being potentially high (major significance) and not capable of being mitigated.

Sections of hedges B14, 16, B18 and B19 would be removed in varying degrees in different options north of the Browney crossing. For Options 1,2 and 3 the effects are assessed as potentially including effects of a medium and high magnitude (moderate –major and major significance) which would not generally be capable of being mitigated. Option 4 would have the lowest impact on boundary features with significant effects only on B19, assessed as being medium (moderate –major significance).

Sections of hedges B20, B21, B22 and B24 would be removed. A number of mature trees would be removed in B21. The effects are assessed as being potentially medium or high (moderate – major or major significance). Those effects are not generally capable of being mitigated although there is potential to gap up adjacent sections of B20 which would reduce impacts on that feature.

The overall effect on the field boundary network could be mitigated in varying degrees by planting new roadside hedges to restore connectivity and by off-site gapping up, restoration and management works in the vicinity. This would require co-operation of adjacent landowners and cannot be quantified at this stage (see mitigation below).

4.1.4 Wetlands and watercourses

Sensitivity

The River Browney is assessed as being of high sensitivity. Field ponds are assessed as being of medium sensitivity.

Potential effects

There would be no effects on the watercourse of the River Browney. Field pond P1 would be crossed by the route. The effect is assessed as being high (moderate-major significance) but low if mitigated by offsite ground modelling to create similar or more extensive features.

4.1.5 Other features

Sensitivity

The Lanchester Valley Railway path is assessed as being of medium sensitivity.

Potential effects

The road would cross the railway path and would entail the loss of a short section of the line where it is at grade and sparsely vegetated, and reconfiguring adjacent areas to form a crossing. The effect on the railway path as an artefact is assessed as being of a low magnitude (minor significance).

4.2 Landscape character

4.2.1 National Character Areas / County Character Areas

Sensitivity

The Tyne and Wear Lowlands and Durham Coalfield Upland Fringe National Character Areas and the Wear Lowlands and the West Durham Coalfield County Character Areas are assessed as being of medium sensitivity to the effects of a new highway. They are settled landscapes where modern infrastructure is relatively commonplace.

Potential effects

The effects of the proposals are assessed as being low (minor significance). While the proposed road would erode the rural character of the landscape in some degree, through the loss of landscape features, the introduction of engineered earthworks and structures, and the visual clutter of moving vehicles and signage, these landscapes cover substantial areas and those effects would be highly localised.

4.2.2 Broad Landscape Types

Sensitivity

The Coalfield Valley, Lowland Valley Terraces and Incised Lowland Valleys are assessed as being of medium sensitivity to the effects of a new highway. They are settled, in places semi-rural, landscapes where modern infrastructure is commonplace. The Lowland Valley Terraces and Incised Lowland Valleys form an important communications corridor and both roads and river crossings are noted as key characteristics of the existing landscape. Busy modern roads connecting towns and villages are noted as a key characteristic of the Coalfield Valleys.

Potential effects

The effects of the proposals are assessed as being low (minor significance). As with County Character Areas, the proposed road would erode the rural character of the landscape to some degree and would erode the tranquillity and scenic quality noted as key characteristics of the Incised Lowland Valleys to some degree. These landscape types cover substantial areas and those effects would be highly localised.

4.2.3 Broad Character Areas.

Sensitivity

The Deerness and Hedleyhope Valley, Browney Valley, Lower Browney Valley and Western Valley Terraces character area are assessed as being of medium sensitivity to the effects of a new highway. They are all semi-rural landscapes typical of their respective types (above).

Potential effects

The effects of the proposals on the Deerness and Hedleyhope Valley, Browney Valley and Western Valley Terraces character areas are assessed as being low (minor significance). These are relatively large character areas and the effects of the proposals would be localised.

The Lower Browney Valley is a relatively small character area and the effects of the proposal's impacts - the loss of landscape features, the introduction of engineered earthworks and structures, and the visual clutter of moving vehicles and signage – would be more widespread in the northern part of the area. The effects of the proposals are assessed as being medium (moderate significance).

4.2.4 Local Landscape Character Areas

Sensitivity

The *Baxterwood & Aldin Grange* , *Bearpark Hall, Stotgate & Whitesmocks* and *Bearpark North* local character areas are assessed as being of high sensitivity to the effects of a new highway.

The *Bearpark South*, *Broom Ridge*, *Brandon*, *Lower Deerness*, *Stonebridge*, *Sniperley*, *Mount Oswald*, *Kimblesworth & Findon* and *Merryoaks* local character areas are assessed as being of medium sensitivity.

Potential effects

Potential effects are assessed as being significant in respect of the *Broom Ridge*, *Baxterwood & Aldin Grange*, *Bearpark Hall, Stotgate & Whitesmocks* and *Bearpark North* local character areas. Effects on other local character areas are assessed in Schedule 2 but are not discussed further here.

Broom Ridge.

Engineering operations and any ancillary features such as site compounds, plant and materials storage would visually intrusive and out of keeping with the area's rural character during the construction phase. The scale of the change to the character of the landscape would be high, relatively widespread but temporary (short term) and the effect is assessed as being of a low magnitude (minor significance).

There would be localised loss of field boundaries and a small number of trees. Engineered highway cuttings and embankments would be intrusive and out of keeping with the area's rural character. In the south of the character areas these would be visible only in shallow views from the west but would be more open to views from adjacent character areas to the east. Traffic movements would be visible in the southern part of the route on and close to the roundabout but would be screened elsewhere by the cutting in typical views. Street lighting columns and lights on the roundabout would be visible and relatively prominent although seen in association with lighting to the existing road. In the north of the character area the bridge and associated earthworks and traffic movements would be open to view. The introduction of moving traffic and traffic noise would erode the tranquillity of the area to a significant degree.

The physical effects of different junction options at Tollhouse road to the north would be relatively low within the Broom Ridge character area, affecting only the height and location of bridge abutments. The higher bridge of Option 4 would be more visually prominent than the lower bridge of Options 1, 2 and 3, but earthworks on Moorsley Banks to the north would be notably more intrusive for Options 1, 2 and 3 than Option 4 which would have the lowest overall impact in this area.

The effects of the proposals without mitigation are assessed as being high (moderate –major significance).

There would be localised opportunities to improve the form of cuttings and embankments but not to a degree that would significantly alter their appearance. Planting within the main southern cutting would help assimilate its engineered form in oblique views. The impact of traffic movements in the shallower cuttings and low embankments in the north could be screened by roadside planting belts.

These would need to be planted off-site increasing the land-take of the road to give a minimum of 15m combined planting width. This would 'outline' the road to some extent. The landscape pattern in the area is weak and fragmented but has a linear grain following the former railway line in views from the east. Structural landscaping associated with the road would not be out of keeping with that pattern and would be the preferred option.

The residual effect of the proposals with mitigation (and after 10years) is assessed as being medium adverse (moderate significance).

Baxterwood & Aldin Grange

Engineering operations and any ancillary features such as site compounds, plant and materials storage would visually intrusive and out of keeping with the area's rural character during the construction phase. The scale of the change to the character of the landscape would be high, widely visible but temporary (short term) and the effect is assessed as being of a low magnitude (moderate significance).

There would be localised loss of field boundaries and a number of trees. It is difficult to quantify the numbers that would be lost in the construction of the bridge at this stage in the absence of a construction method statement. The new bridge would be visually intrusive in views of the immediate vicinity although likely to be screened or filtered by vegetation in views beyond that. This would in turn depend on the extent to which trees in the vicinity were retained in the construction of the bridge.

Engineered highway cuttings and embankments would be intrusive and out of keeping with the area's rural character. The effects of the proposals would vary depending on the junction option adopted at Tollhouse Road. The large scale cuttings required to accommodate Options 1, 2 and 3 would be highly intrusive on Moorsley Banks which is both a sensitive and visually prominent landform. These options would also entail a greater loss of boundary hedges and trees. Street lighting columns and lights would be present in roundabout options 1 and 3. The smaller scale cuttings and low embankments of Option 4 would have a lower, but still notable, impact. Traffic movements would be more visible in Option 4 where the road is raised on a low embankment than in the cutting options. The introduction of moving traffic and traffic noise would erode the relative tranquillity of the area. This would be particularly severe for this option given the elevated position of the road on these slopes.

The effects of the proposals without mitigation are assessed as being high (major significance).

The visual impact of the bridge and its abutments could be reduced in some degree by planting on embankments and offsite on adjacent land. As noted above the potential impact of the SUDS south of the river could be reduced by re-locating on lower ground. The impact of construction activities on trees could be reduced by adopting an appropriate working method. North of the river there would be little opportunity to modify the landform of the large cuttings of Options 1, 2 and 3 to a degree that would significantly alter their appearance. They could be visually assimilated to some extent in the longer term by tree planting within the road corridor and on adjacent land but this would be unlikely to completely disguise their engineered form in views from the west. There would be more opportunity to modify the smaller earthworks of Option 4 where building up ground on the western side of the entrance to the cutting would reduce its impact. An integrated approach to ground modelling west of the road through this area to create a bund or false cutting west of the elevated section of road to screen moving traffic, incorporating any SUDS wetlands required and combined with robust off-site tree planting, would reduce impacts. The planting of native woodland and scrub would be in keeping with the mosaic of land use typical of the area. Ground modelling would need to be naturalistic in character to avoid a substantial impact on the character of Moorsley Banks: this would require land-take outside of the immediate road corridor.

The residual effects of the proposals with mitigation are assessed as being high adverse (major significance) for Options 1, 2 and 3 and medium- high adverse (moderate –major to major significance) for option 4.

Bearpark Hall, Stotgate & Whitesmocks

Engineering operations and any ancillary features such as site compounds, plant and materials storage would visually intrusive and out of keeping with the area's rural character during the construction phase. The scale of the change to the character of the landscape would be high, widely visible but temporary (short term) and the effect is assessed as being of a low magnitude (moderate significance).

There would be localised loss of field boundaries and a small number of mature field boundary trees. Engineered highway cuttings and embankments would be intrusive and out of keeping with the area's rural character. Moving traffic would be visually intrusive where the road was on embankment, at grade or in cutting <4m and particularly in attractive open views to the north-west along the Browney Valley. This, together with traffic noise, would erode the current tranquillity of the area.

The effects of the proposals without mitigation are assessed as being high (major significance).

The visual impact of engineered earthworks and moving traffic could be reduced by planting in the longer term. The impact of traffic movements in the shallower ends of cuttings and embankments could be screened by roadside planting belts. These would need to be planted off-site increasing the land-take of the road to give a minimum of 15m combined planting width. This would 'outline' the road to some extent and obstruct open views to the north-west. A choice would need to be made at the detailed design stage between the benefits of fuller screening and those of maintaining open views in which moving traffic would be visible.

The residual effects of the proposals with mitigation are assessed as being medium–high (moderate – major to major significance).

Bearpark North

Engineering operations and any ancillary features such as site compounds, plant and materials storage would visually intrusive and out of keeping with the area's rural character during the construction phase. The scale of the change to the character of the landscape would be high, localised and temporary (short term). The effect is assessed as being of a low magnitude (moderate significance).

There would be localised loss of sections of field boundaries forming part of the historic deer park boundary. The engineered embankments would be visually intrusive and out of keeping with the area's rural character. Moving traffic would be visually intrusive. The road would be widely visible within the eastern part on the character area but much of it is on low ground and would be a small component in wider views.

The effects of the proposals without mitigation are assessed as being medium (moderate –major significance).

The visual impact of engineered earthworks and moving traffic could be reduced in the longer term by visually dense planting on the embankment. This could be augmented where the embankment is low, and planting within it would by relatively thin, by off-site field-corner planting

The effects of the proposals with mitigation are assessed as being low (moderate significance).

4.3 Designated landscapes (including non-designated but locally listed landscapes).

4.3.1 Areas of High / Higher Landscape Value

The Areas of Higher Landscape Value identified in the County Durham Plan Submission Draft are similar to, but not entirely co-extensive with, the Area of High Landscape Value identified in the City of Durham Local Plan. The CDP Area of Higher Landscape Value (AHLV) is assessed here. No significant difference is anticipated in the effects predicted due to the similarity of the two designated areas.

Sensitivity.

The Middle Browney, Lower Browney Valley and Deerness Valley AHLV are assessed as being of high sensitivity to the effects of a new highway.

Potential effects

Lower Browney Valley AHLV

The effects of the proposals on the character of the landscape are as described above for the *Baxterwood & Aldin Grange* and *Bearpark Hall, Stotgate & Whitesmocks* local character areas which make up the AHLV in the vicinity of the proposed road corridor. The AHLV is assessed as having elevated values for its condition, scenic value, rarity, representativeness, nature conservation interest, historical interest and cultural associations all of which would be likely to be affected in varying degrees by the proposals.

The most notable effects of the proposals arise from the introduction of the operational highway into the otherwise rural landscape, locally eroding its condition, scenic value, rarity/ representativeness and tranquillity. The effects on the contribution of the historic dimension to the experience of the landscape would be substantial in the traversing of Moorsley Banks and the crossing of Club Lane. There would be some effects on the recreational value of the AHLV through the crossing of public rights of way and the railway path, although the new road would potentially increase connectivity.

Effects on the special qualities of the AHLV during the construction period, having regard to their temporary nature, are assessed as being low adverse (moderate significance). The effects post-construction area assessed as being high adverse (major significance) for all junction / bridge options.

Mitigation measures, and in particular ground modelling, tree and hedgerow planting within and outside of the road corridor and careful design of footpath / railway path crossings, could reduce some of those effects in time. The extent to which ground modelling measures could avoid / reduce impacts in the Moorsley Banks area can't be assessed with any certainty without a fully detailed scheme.

The overall residual effects on the special qualities of the AHLV with mitigation are assessed as being high adverse (major significance) for Options 1, 2 and 3 and medium- high adverse (moderate – major to major significance) for option 4. The latter assumes a high levels of mitigation resulting from careful route selection and ground modelling, and would be higher (up to high adverse) if this did not take place or was limited in its effectiveness.

Middle Browney Valley AHLV

The effects of the proposals on the character of the landscape are as described above for the *Bearpark North* local character areas which makes up the Middle Browney Valley AHLV in the vicinity the proposed road corridor. The AHLV is assessed as having elevated values for its condition, scenic value, rarity, representativeness, nature conservation interest, historical interest and recreational value, some of which would be likely to be affected in varying degrees by the proposals.

The most notable effects of the proposals arise from the introduction of the operational highway into the otherwise rural landscape, locally eroding its condition, scenic value, rarity/ representativeness and tranquillity. There would be some effect on the contribution of the historic

dimension to the experience of the landscape in the crossing of the Deer Park boundary. There would be some effects on the recreational value of the AHLV through the crossing of public rights of way.

Effects on the special qualities of the AHLV during the construction period, having regard to their temporary nature, are assessed as being low adverse (moderate significance). The effects post-construction are assessed as being medium adverse (moderate-major significance) having regard to their localised effect on the edge of the wider AHLV. The 'medium' value is therefore partly a consequence of the mapping geography of the AHLV and it would be more accurate to treat the effects in this area as being part of the high adverse (major significance) effects identified for the Lower Browney AHLV.

Mitigation measures, and in particular tree and hedgerow planting within and outside of the road corridor and careful design of footpath crossings, could reduce some of those effects in time.

The overall residual effects on the special qualities of the AHLV with mitigation are assessed as being low adverse (moderate significance). Again this is largely due to the mapping geography of the AHLV and it would be more accurate to treat the effects in this area as being part of the high adverse (major significance) effects identified for the Lower Browney AHLV.

Deerness Valley AHLV

A small part of the *Broom Hill* local character area falls within the edge of the Deerness Valley AHLV. The AHLV is assessed as having elevated values for its condition, scenic value, representativeness, nature conservation interest, historical interest and recreational value. None of these would be likely to be affected to any substantial degree by the proposals.

The effects on the special qualities of the AHLV are assessed as being low adverse (minor significance).

4.3.2 Historic Parks and Gardens of Local Interest

The assets identified in the emerging Local List of *Historic Parks, Gardens and Designed Landscapes* are similar to, but not entirely co-extensive with, those identified as *parks & gardens of historic or local value* in the City of Durham Local Plan (see 2.3.2 above). Assets identified in the Local List are assessed here as they have the most up-to-date evidence base.

<u>Sensitivity.</u>

All of the assets identified on the local list are assessed as being of high sensitivity to the effects of a new highway.

<u>Potential effects</u>

Bearpark

The park covers a large area in the lower and middle reaches of the Browney Valley and is a relatively cryptic feature having been subject to piecemeal enclosure and development from the Middle Ages onwards. While surviving features such as the park boundary are of historical interest it lacks coherence as a landscape in itself. There is some uncertainty as to the boundary of the park in the south and the role of the Arbour House Farm / Bearpark Moor area.

During construction, engineering operations on the northern leg of the highway would be intrusive. The scale of the change to the character of the historic park would be high, localised and temporary (short term). The overall effect, during construction, is assessed as being low (moderate significance).

The proposals would entail the removal of short sections of hedgerow lying on the historic boundary of the park in the north. They would also entail removing sections of hedgerow dating from post medieval enclosures associated with Arbour House Farm on the former Bearpark Moor and parts of

a later, late C19th hedge, above Moorsley Banks. The route would cross the route of Club Lane: the historic route from the City to the deer park and Beaurepaire. Engineered earthworks and moving vehicles would be visually intrusive. Effects would be widely visible within the eastern part of the known park but as a small component in the view. Effects would be widely visible, and more notable in general views, within the area of the former Bearpark Moor / Arbour House Farm enclosures where the road would also create a degree of separation between this area and the known area of the park to the west. Impacts for junction options 1, 2 and 3 would be likely to be slightly higher than those for option 4 due to the higher impact of earthworks in the south of Moorsley Banks. The scale of the change to the character of the historic park would be high, localised and permanent. The overall effect on the park, post construction, is assessed as being medium (moderate-major significance).

Impacts could be reduced in the medium term (5-10 years) by tree and hedgerow planting within and around the highway corridor. This would assimilate the embankments and screen traffic but could locally reinforce the separation between the southern area and the known area of the park to the west. The scale of the change to the character of the historic park would be medium, localised and permanent. The overall effect with potential mitigation is assessed as being low (moderate significance). This reflects the lack of certainty over the role of the southern part of the area in the historic deer dark.

Sniperley Hall

The small park, gardens and planned farmland associated with Sniperley Hall lie on the northern watershed of the Browney Valley. The park and farmland to the north remain legible although the relationship between the hall and the latter has been eroded to some degree by development and garden vegetation. The character of the farmland in the south-east has been further eroded by the development in recent years of the fire station and park & ride.

There would be no physical effects on the park itself. Engineering operations during construction and the operational highway would be visible in some views out from the park of its wider setting to the south.

During construction, engineering operations on the northern leg would be intrusive in some views out from the park to the south. The scale of the change to the character of the historic park in respect of setting would be low, localised and temporary (short term). The overall effect is assessed as being low (minor significance).

Following construction the operational highway would be largely screened in views from the more visually sensitive parkland core south of the hall by intervening vegetation. Parts of the northern section would be visible in views from estate farmland east of the hall and from land south of the A691. The visible elements would be relatively small features in a complex view. The scale of the change to the character of the historic park in respect of setting would be low, localised and permanent. The overall effect is assessed as being low (minor significance).

Visual impacts could be reduced by structure planting within and adjacent to the road. The scale of the change to the character of the historic park would be low, localised and permanent.

The overall effect, with mitigation, is assessed as being low (minor significance).

Aldin Grange

The remains of this modest C19th garden, including a lodge, lawns/paddocks and walled garden lie on the banks of the River Browney close to Aldin Grange Bridge. The gardens are likely to have enjoyed views to the east and to the north along the Browney.

There would be no physical effects on the garden itself. Engineering operations during construction and the operational highway and bridge would be visible in views out from the garden of its immediate setting.

Construction operations on the bridge crossing and adjacent areas would be likely to be visible, in views out from the gardens, screened or filtered in places by vegetation. The effects would be higher for junction option 4 with its more elevated bridge than for options 1, 2 and 3. Construction activities on and to the north of the road east of the existing bridge, including earthworks and removal or trees, would be likely to be prominent and visually intrusive. The effects would be higher for junction options 1, 2 and 3 due to the higher impact of earthworks and tree removal close to the garden. The scale of the change to the character of the gardens in respect of setting would be high, widespread and temporary (short term). The overall effect is assessed as being low (minor significance).

Following construction the new bridge would be visually intrusive though screened or filtered by vegetation. The effects would be higher for junction option 4 with its more elevated bridge than for options 1, 2 and 3. Earthworks to the north and east would be notable as would the loss of mature roadside trees in that area (Options 1, 2 & 3). The scale of the change to the character of the gardens in respect of setting would be medium, widespread and permanent. The overall effect is assessed as being low-medium (moderate significance).

The new bridge would remain locally visually intrusive though screened or filtered by vegetation. The landform of cuttings to the north and east could be screened and assimilated to some degree in the longer term (>10 years) by planting within and outside the highway boundary. The scale of the change to the character of the setting of historic gardens would be medium, localised and permanent. The overall effect, with mitigation, is assessed as being low-medium (moderate significance).

Crook Hall, Mount Oswald, Wharton Park and Durham Peninsula & River Banks.

The assessment predicts no effects.

4.3.3 Green Belt

The whole of the road corridor lies within the County Durham Green Belt. The County Durham Plan follows the National Planning Policy Framework in identifying local transport infrastructure as a not inappropriate form of development in Green Belt provided that it preserves its openness and doesn't conflict with its purpose. Only the issue of openness is considered here.

<u>Openness</u>

Openness is not defined but is commonly taken to be the absence of built development. Most of the features associated with a highway would not fall within that category. Cuttings and embankments would be 'soft' structures seeded to grass or planted with trees and shrubs. Upstanding earthworks would be relatively modest features in respect of both height and lateral extent and would not obstruct important views. The proposed bridge crossing the Browney would be a built structure and could be held to affect openness to some degree. While it would be a notable feature in some views of the immediate locality it would be generally well screened in wider views.

5 Potential visual effects

An assessment of potential effects on visual receptors is given in Appendix 4: Schedule of Potential Landscape and Visual Effects. This shows the sensitivity assigned to visual receptors and an

assessment of the likely nature, magnitude and significance of potential effects and the potential for mitigation. The assessment is based on route options currently under investigation and can only be indicative at this stage: changes to the route could lead to effects of higher or lower magnitude than assessed. Only the more significant effects are described further below.

5.1 Residents

Sensitivity

Residents are assessed as being of high sensitivity to the visual effects of the proposals.

Potential effects

The assessment identifies potentially significant effects on residents in Bearpark, Aldin Grange and the western edge of Durham City.

Residents of Bearpark

The village lies on land falling towards the road corridor. The road would be screened from view from many residential properties by intervening buildings and vegetation but there would be open views towards the road from some properties (including Auton Field and Auton Field Terrace) and views from 1st floor windows and partial or oblique views from others. There would be open views from some public open spaces, including open space to the rear of the Co-operative store, and partial views from a section of the main road through the village (C17).

Construction operations and ancillary activities would be visible from those vantage points at distances of generally >900m. The scale of the change in the view would be large in the more open views but generally small from elsewhere. As a temporary short term effect this is assessed as being of a low magnitude (moderate significance).

Following construction the road north of the Browney bridge would be visible in those views. Engineered earthworks, and particularly those on Moorsley Banks, together with moving traffic on elevated sections would be visually intrusive in otherwise attractive rural views. The scale of the change would be large in open views but small elsewhere. The effect is assessed as ranging up to high in magnitude (major significance). The impact would be higher for junction options 1, 2 and 3 with more extensive earthworks on the prominent upper slopes of Moorsley Banks.

Structural landscaping within and outside of the road corridor would screen and assimilate the road and moving traffic in time (>10 years). The magnitude of the effect in those open views would reduce to medium for junction options 1, 2 and 3 (moderate-major significance) and low for option 4 (moderate significance).

Residents of Aldin Grange

Aldin Grange lies on land falling towards the road corridor. Much of the road corridor would not be visible due to its enclosed valley location but those elements that were visible would be seen at relatively close quarters in an intimate setting. Some construction operations and ancillary activities could be visible in views from residential properties at distances as close as 120m. The scale of the change in the view would depend on the construction method and junction option adopted. The effect could be large: as a temporary (short term) impact this is assessed as being of a low magnitude (moderate significance).

In junction options 1,2 and 3 the reconfigured section of Tollhouse Road from the bridge to the roundabout or junction would be visible at close range (120m) in a prominent cutting on rising ground. The upper slopes of the main cutting would be visible on the skyline. The main cutting on Moorsley Banks would be visible filtered by existing roadside vegetation to the west of the road. The bridge would be visible, filtered in varying degrees by intervening tree canopies**.** The scale of the change in the view would vary but would be typically large and is assessed as being high (major significance). Structural landscaping within the road corridor would assimilate the new landforms to some degree in time (10 years) and the residual effect is assessed as being medium (moderate-major significance).

In junction option 4 the low embankment north of the bridge and moving traffic would be visible on the skyline. The smaller cutting on Moorsley Banks would be visible filtered by existing roadside vegetation. The higher bridge would be visible, filtered in varying degrees by intervening tree canopies. The scale of the change in the view would be typically medium to large and is assessed as being medium-high (major significance). Terrain modelling and structural landscaping west of the road would screen the road and traffic in time (10 years). The scale of the change in the view would decrease to medium. The effect is assessed as being of medium magnitude (moderate-major significance).

Residents on the western edge of Durham City

The road corridor runs parallel with the western edge of Durham City from Stone Bridge to Sniperley and would be visible from residential properties and public vantage points (footways and cycle paths) west of the A167 and from the upper floors of Durham Johnston School. Views towards the site from most properties east of the A167 would be obstructed by intervening buildings but there would be some views from upper floor windows. The effects of the proposals would be highest on properties with open views looking out from the settlement edge.

Construction operations and ancillary activities would be visible at distances as close as 100m but more typically >500m. The scale of the change in the view would be large in open views from properties but small elsewhere. As this effect would be temporary (short term) it is assessed as being of a low magnitude (moderate significance).

The proposed road would be visible in those views as a linear features running across and below the skyline of the Broom ridge above Quarry House and Baxterwood, and as a more intermittent feature in the rolling terrain north of Tollhouse Road. In open views from properties west of the A167 the engineered earthworks and moving traffic would be visually intrusive in otherwise largely rural views and would occupy a large angle of view. The scale of the change would be large in open views from properties but small elsewhere. The effect is assessed as ranging up to high in magnitude (major significance).

Structural landscaping within and outside of the road corridor could screen and assimilate the road and moving traffic in time (10 years). To achieve this, offsite planting would be needed on the eastern side of the carriageway south of the Browney bridge where it is on low embankments / shallow cuttings. The residual effect is assessed as being up to a medium magnitude (moderate - major significance).

Residents in Isolated properties

The effects of the proposals on residents in isolated properties is not assessed in this appraisal.

5.2 Walkers, cyclists and horse riders.

<u>Sensitivity</u>

Walkers, cyclists and horse riders are assessed as being of high sensitivity to the visual effects of the proposals.

Potential effects

The assessment identifies potentially significant effects on Walkers, cyclists and horse riders using the Lanchester Valley Railway Line, the Pilgrim's Way /Club Lane, parts of the footpath network between the road corridor and the western edge of the City, and some footpaths crossing the ridge between Broompark and Bearpark and parts of the Bearpark Colliery woods .

Users of the Lanchester Valley Railway Path

The southern section of the road corridor runs alongside and crosses the railway path. The northern section is visible from parts of the path. Construction operations and ancillary activities would be visible in a variety of views from sections of the route. They would be prominent in views from the line between Baxter Wood and Aldin Grange and from short sections west of Aldin Grange. In other sections the road would often be screened by vegetation. The scale of the change in the view would be large in open views. As a temporary (short term) effect this is assessed as being of a low magnitude (moderate significance).

The new road bridge, engineered landforms and moving traffic would be visible from the sections described above and would erode the rural character of the view and the relative tranquillity of the experience. The road would be crossed at an at-grade crossing. The scale of the change in the view would be large in open views and would be permanent. The effect would be higher for junction options 1, 2 and 3 than option 4 due to the higher visual impact of earthworks north of the bridge in views in that direction. The effect is assessed as being of a high magnitude (major significance).

Structure planting to the east and west of the new road where it is on shallow embankment south of the bridge (minimum 15m overall width), west of the bridge abutment and west of, and within, the highway boundary north of the bridge would screen or assimilate the road and traffic to a significant degree in time (10 years). The effect would be higher for junction options 1, 2 and 3 than option 4. The residual effect is assessed as being of a medium magnitude (moderate-major significance).

Users of Club Lane / Pilgrims Way

The northern section of the road corridor crosses the path. Construction operations and ancillary activities would be visible in close and middle distance views. The scale of the change in the view would be large. As a temporary (short term) effect this is assessed as being of a low magnitude (moderate significance).

The Engineered earthworks and moving traffic of the new road would be visible in close and middle distance views and would erode the rural character of the view and the tranquillity of the user's experience. The route would be physically crossed by the road. The scale of the change in the view would be large and the effect is assessed as being of a high magnitude (major significance).

Structure planting would screen and assimilate the road to some degree but would either not do so fully or would obstruct open views to the north. The scale of the change in the view would remain large and permanent and the effect is assessed as being of a high magnitude (major significance).

Users of Rights of way network between the western edge of Durham City and road corridor.

The road corridor runs though an area west of the city where there is a well-developed and well-used network of public rights of way. Construction operations and ancillary activities would be visible in a variety of close and middle distance views from open sections of the footpath network and particularly those north of Arbour House, on Moorsley Banks, north of Aden Cottage and along Quarry House lane. The road would be typically screened from view by vegetation on lower sections of the network. The scale of the change in the view would vary throughout the network but would

include some large changes. As temporary (short term) effects they are assessed as being of a low magnitude (minor significance).

The engineered earthworks and moving traffic of the new road would be visible in the views described above and would erode the rural character of the view and the tranquillity of the user's experience in varying degrees. The scale of the change in the view would vary throughout the network but would include some large changes. These are assessed as being of a high magnitude (major significance).

Structure planting would screen and assimilate the road to a substantial degree in some views in time (10 years) The scale of the change in the view would be generally low or medium but would remain large on sections of the nearest paths (Moorsley Banks, Arbour house North, Aden Cottage). The residual effect on these paths is assessed as being of a high magnitude (major significance).

Users of the Rights of way network crossing Broom Ridge

The road corridor crosses the open landscape of the Broom ridge which is crossed by a number of public rights of way. Construction operations and ancillary activities would be visible in range of close and middle distance views from paths falling either side of the ridge. The scale of the change in the view would vary from medium to large. As temporary effects these are assessed as being of a low magnitude (moderate significance).

Engineered earthworks and moving traffic would be visible in the views described above. The bridge would be visible from paths north of the ridge. South of the ridge the southern cutting would generally be seen in shallow views and traffic would be hidden within it. In short sections close to the road moving traffic and noise would erode tranquillity. The scale of the change in the view would vary from small to large and are assessed as ranging from low to high magnitude (moderate to major significance).

Structure planting to the east and west of the new road where it is on shallow embankment south of the bridge (minimum 15m overall width), west of the bridge abutment and west of, and within, the highway boundary north of the bridge would screen or assimilate the road and traffic to a significant degree in time (10 years) in views from paths north of the ridge. The residual effect is assessed as varying from low to medium magnitude (moderate to moderate-major significance).

Users of Bearpark Colliery woods

The Moorsley Banks area is visible from some open ground within the woodlands but generally screened from view by trees. This may change over time should the woodlands be managed to create more open spaces or reduce densities.

Construction operations on Moorsley banks would be visible from some open ground within the woods but would be generally screened by trees. The scale of the change in the view would be medium or high in open views. As a short term effect its magnitude is assessed as being low (moderate significance). Following construction engineered earthworks would be visible on Moorsley Banks. The magnitude of the affect is assessed as being medium (moderate-major significance) reducing to low (moderate significance).

5.3 Motorists

<u>Sensitivity</u>

Road users are assessed as being of medium sensitivity to the visual effects of the proposals.

<u>Potential effects</u>

The assessment identifies potentially significant effects on users of the C17.

C17

Construction operations and ancillary activities would be visible in views varying from close views in the immediate vicinity of the junction with the new road to middle distance views from within Bearpark and between Moorsley Banks Farm and the A167, the latter typically filtered by vegetation.. The scale of change in the view would vary from small to large but typically medium or large. As temporary (short term) effects these are assessed as being of a medium magnitude (moderate significance).

The earthworks and moving traffic of the new road would be visible in a variety views from close views at the junction with the new road , where either relatively large scale engineered earthworks or the new bridge would be visible at close proximity, to middle distance views from within Bearpark and adjacent to the A167 where other sections of the road would be visible, in the latter typically filtered by vegetation. The scale of change in the view would be large overall and the effect is assessed as being high (moderate-major significance).

Structural landscaping within the road corridor would help assimilate it in time. The scale of change in the view would remain large compared to its current rural character. The effect is assessed as being high (moderate-major significance) for junction options 1, 2 and 3 and medium high (moderate to moderate –major significance) for junction option 4.

6. Mitigation potential

Route options

Only a single route is currently being considered. Should further alignment options be developed within the study corridor the only area where impacts could be substantially reduced by a change to the route would be Moorsley Banks where an alignment running east of that currently proposed could have lower landscape and visual effects.

Junction options.

Junction option 4 would have substantially lower landscape and visual effects than options 1, 2 and 3.

Mitigation measures.

Potential mitigation measures described below are shown on Figure 8. These are indicative at this stage. The need for individual measures and their effectiveness would need to be assessed as part of any detailed proposal and built into the proposal as primary mitigation measures where necessary. The more significant measures in reducing potential effects would be as follows.

1. Design of southern SUDS pond to avoid loss of mature trees in hedge.
2. Tree planting around southern SUDS to assimilate landform.
3. Planting within the main highway cutting on the southern section to assimilate the landform in views from the east.
4. Restoration of connecting hedgerows.
5. Planting within and adjacent to the road on the section south of the bridge where the road would be on low embankment or shallow cutting to screen traffic movements in views from the east (high priority) and west (medium priority). Planting would need to be designed to visually dense to 5m in height with an overall width of around 15m.
6. Planting adjacent to the southern bridge abutments to screen and assimilate the engineered structures in views from the east and west.
7. Locating the SUDS water-body south of the bridge on lower ground to the east.
8. Adopting a working method for the bridge construction that would minimise impacts on trees.

9. Ground modelling and robust tree planting on Moorsley Banks to assimilate engineered landforms and screen moving traffic.
10. Retention and protection of mature trees at the Club Lane crossing.
11. Planting on and adjacent to embankment north of club lane to assimilate landform and screen traffic on elevated sections.
12. Remodelling of ponds north of Club Lane.
13. Robust tree planting to embankments and cuttings northwards to A691 junction.
14. Restoration of connecting hedgerows.
15. Tree planting in areas adjacent to the embankment crossing the Stell to assimilate the landform.
16. Tree planting in areas adjacent to the embankment in the north to screen traffic and leave practical field shapes.
17. Hedgerow restoration works to field boundaries in the immediate locality of the road.

7 Conclusions

The proposed road would have a number of significant landscape and visual effects.

Many of these are capable of being reduced through mitigation in the longer term (>10years) to a level where the effect would no longer be significant.

There would be a number of residual effects that would remain significant even after mitigation. These include.

- Effects on the character of the local landscape between Durham City and Bearpark in the *Baxterwood & Aldin Grange* and *Bearpark Hall, Stotgate & Whitesmocks* character areas.
- Effects on the special qualities of the Lower Browney Valley Area of Higher Landscape Value which incorporates those local character areas.
- Effects on the visual amenity of local residents in parts of Bearpark, Aldin Grange and the western edge of Durham City.
- Effects on the visual amenity of recreational users of the countryside and particularly users of the Lanchester Valley Railway path, the Pilgrim's Way (Club Lane), footpaths between Durham City and the road corridor and across the Broom ridge.
- Effects on views from the C17 Tollhouse Road – Auton Stile.

These will need to be considered carefully in the balance of considerations.

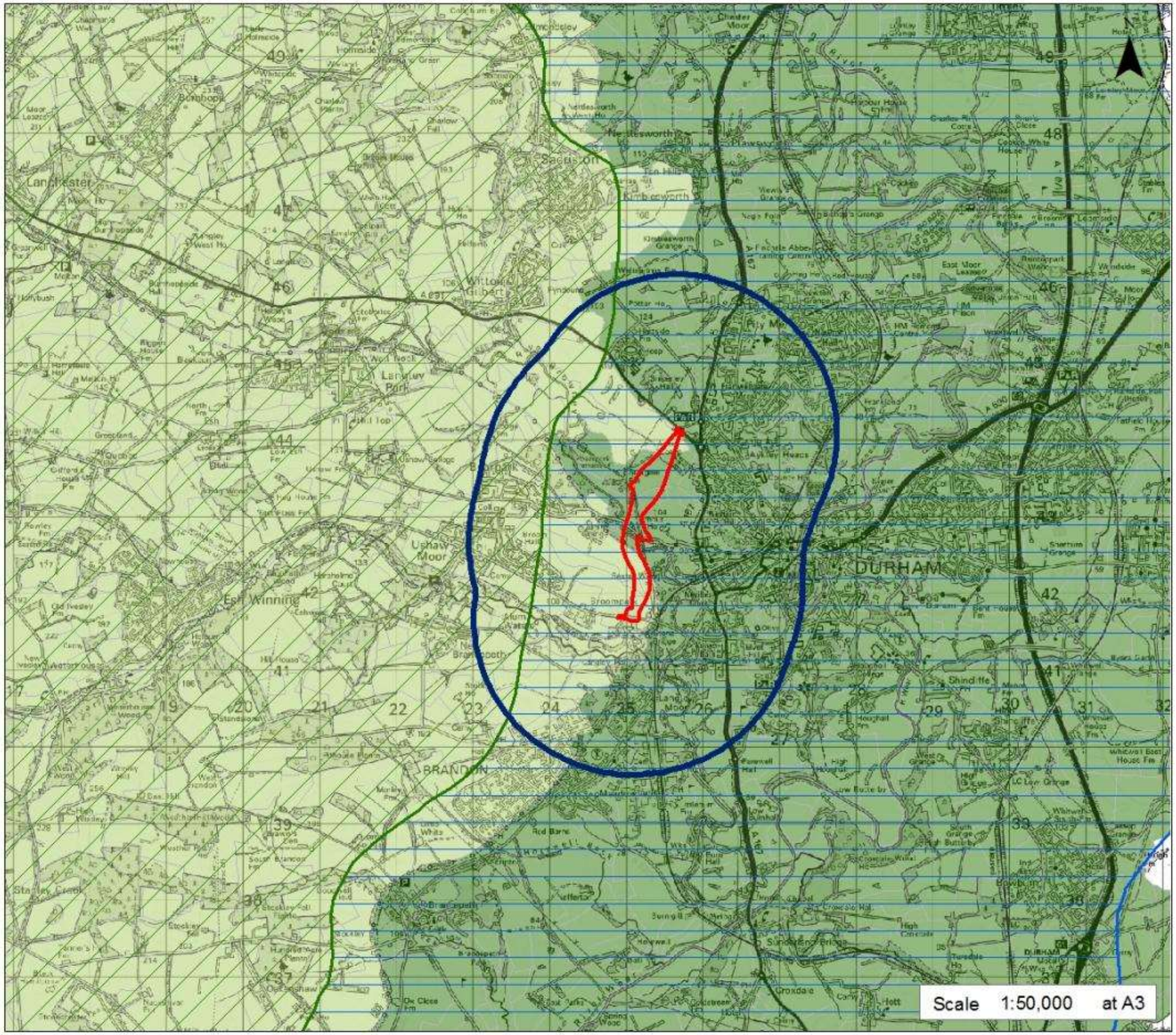
LANDSCAPE AND VISUAL IMPACT APPRAISAL

PROPOSED WESTERN RELIEF ROAD

APPENDIX 2

Figures

June 2019



Durham County Council

Landscape and Visual Appraisal
Proposed Western Relief Road

Figure 1: National Character Areas and County Character Areas

Study area
Road_corridor

National Character Areas

Tyne and Wear Lowlands
Durham Coalfield Pennine Fringe

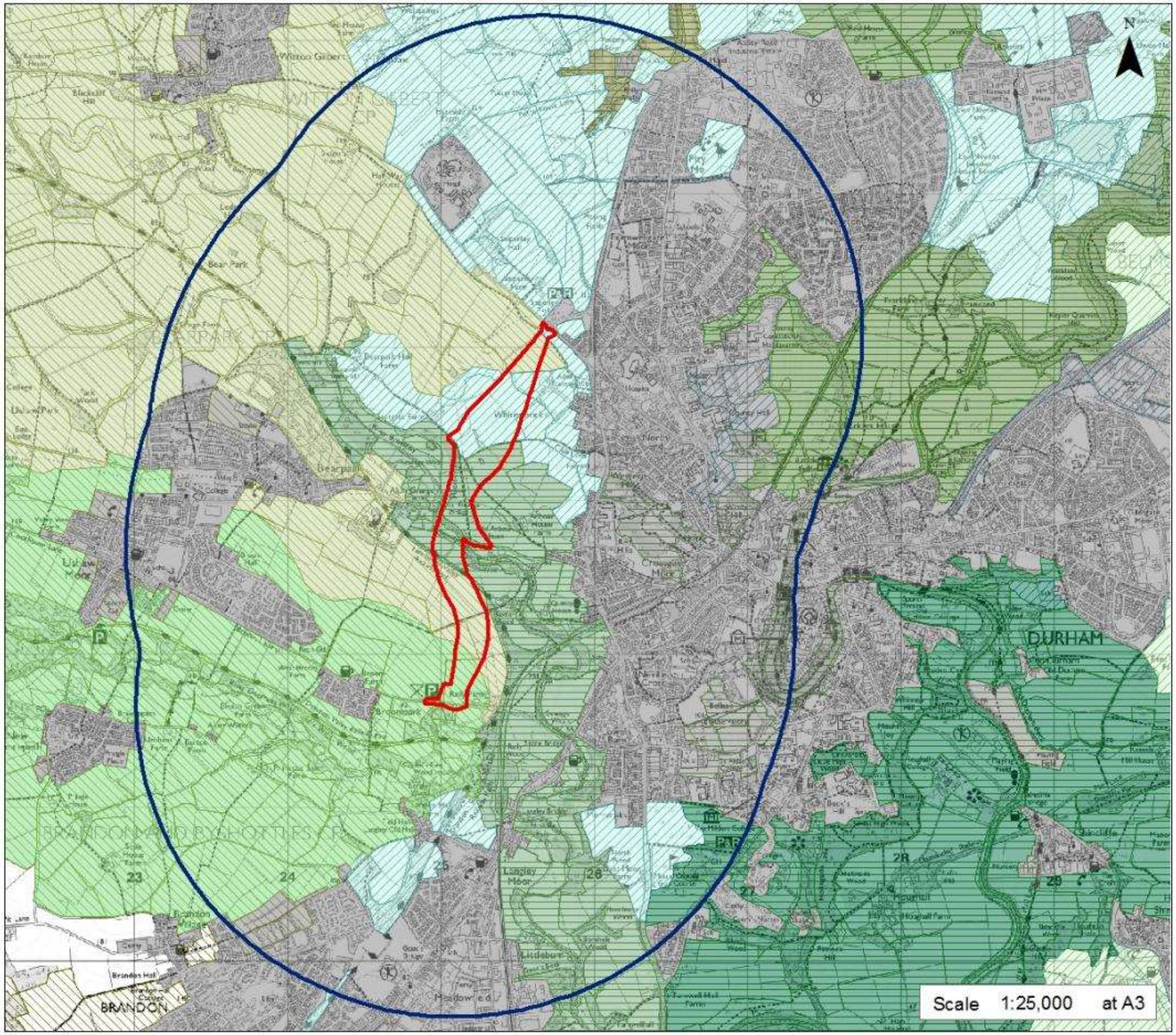
County Character Areas

Wear Lowlands
West Durham Coalfield

Durham County Council

Landscape and Visual Appraisal
Proposed Western Relief Road

Figure 2: Broad LandscapeTypes and Character Areas



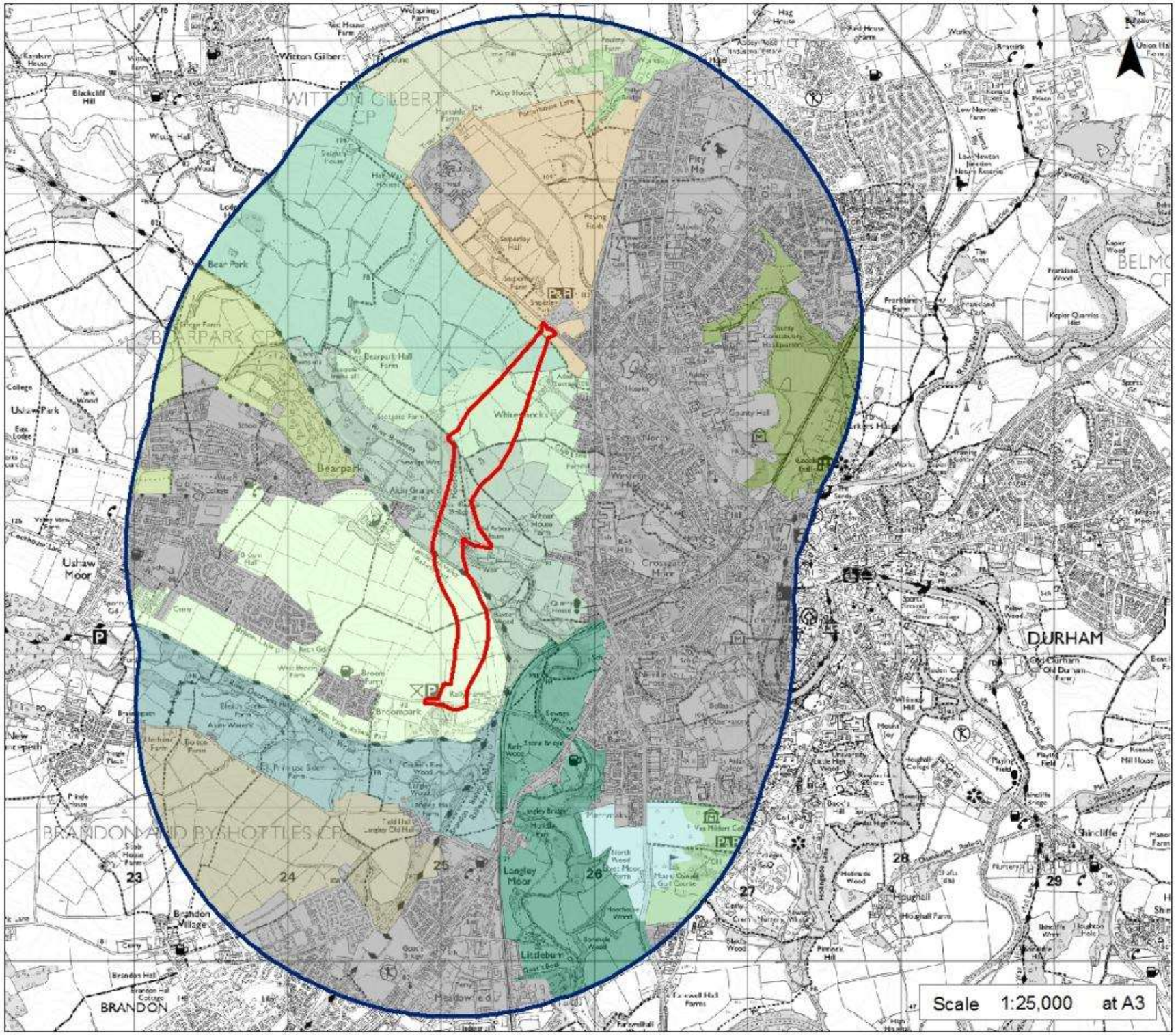
Road_corridor
Study area

Broad Landscape Types

- Coalfield Valley
- Incised Lowland Valley
- Lowland Valley Terraces

Broad Character Areas

- Deerness & Hedleyhope Valleys
- Browney Valley
- Lower Browney Valley
- Eastern Valley Terraces
- Western Valley Terraces
- Northern Wear Valley
- Southern Wear Valley
- Congburn, Southburn & Blackdene
- Urban



Scale 1:25,000 at A3

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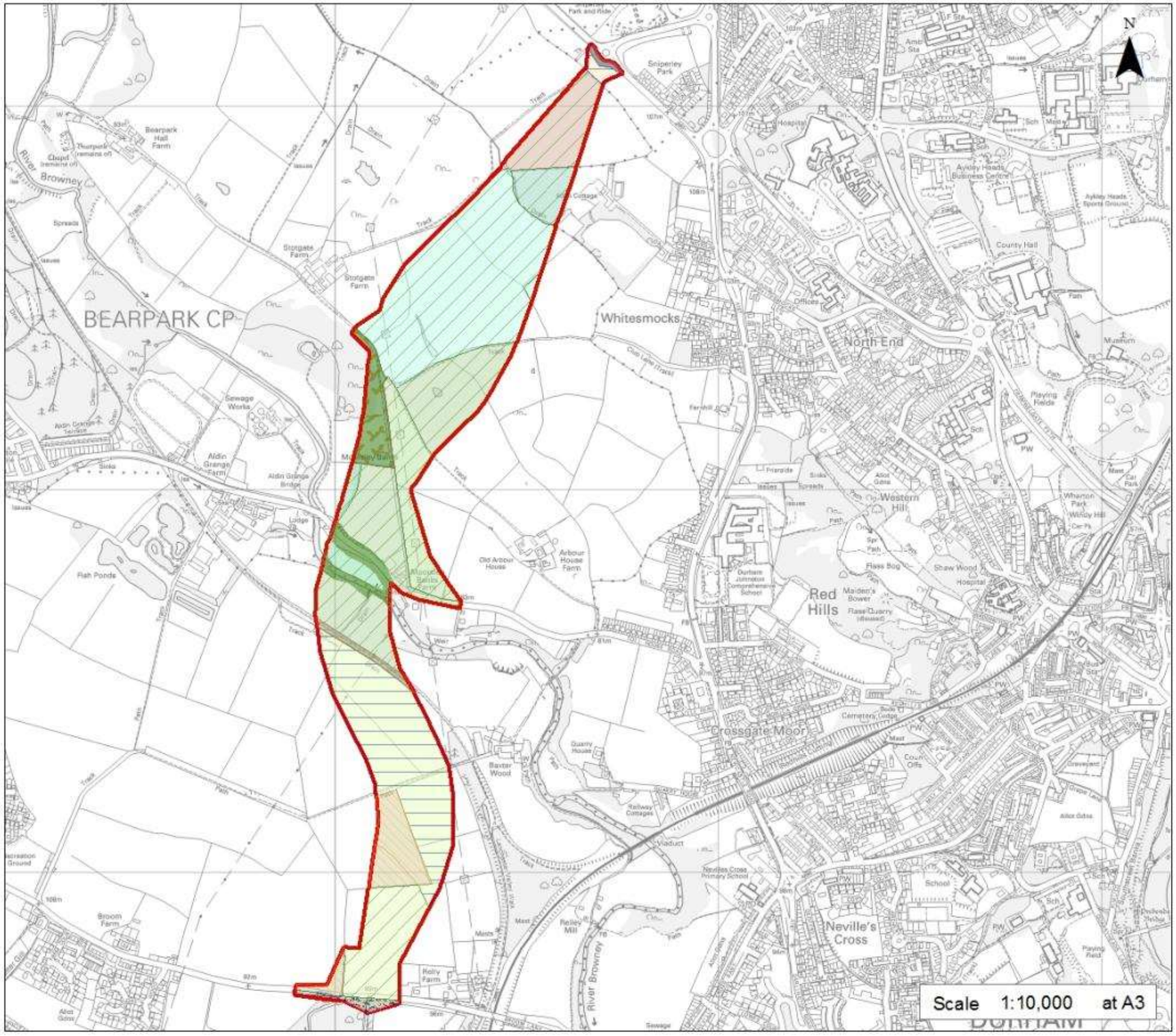
Proposed Western Relief Road

Figure 3: Local Character Areas

Road_corridor
Study area

Local Character Areas

- Sniperley
- Bearpark North
- Bearpark Hall, Stotgate and Whitesmocks
- Baxterwood and Aldin Grange
- Broom Ridge
- Bearpark South
- Lower Deerness
- Brandon
- Stonebridge
- Merryoaks
- Kimblesworth and Findon
- Kepier and Frankland
- Blackdene
- Mountjoy and Mount Oswald
- Urban



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Proposed Western Relief Road

Figure 4: Local Landscape Types and Sub-types

Road_corridor

Local Landscape Sub-types

- Ancient woods
- Old enclosure
- Old railway
- Plantation
- Reclaimed land
- Secondary woods & wood pasture
- Surveyor enclosed
- Urban

Local Landscape Types

- Dene pastures
- Disturbed land
- Lowland woods
- Lowland woods: denes & bluffs
- Terrace farmland: open arable
- Terrace farmland: pasture
- Terrace farmland: wooded estate pasture
- Valley farmland: arable
- Valley farmland: open arable
- Valley farmland: open pasture
- Valley farmland: pasture
- Valley farmland: wooded pasture
- Urban

Map produced by Landscape Section, Regeneration and Economic Development, Durham County Council, County Hall, DH1 5UQ. © Crown Copyright and database rights 2013. Ordnance Survey LA 100049055

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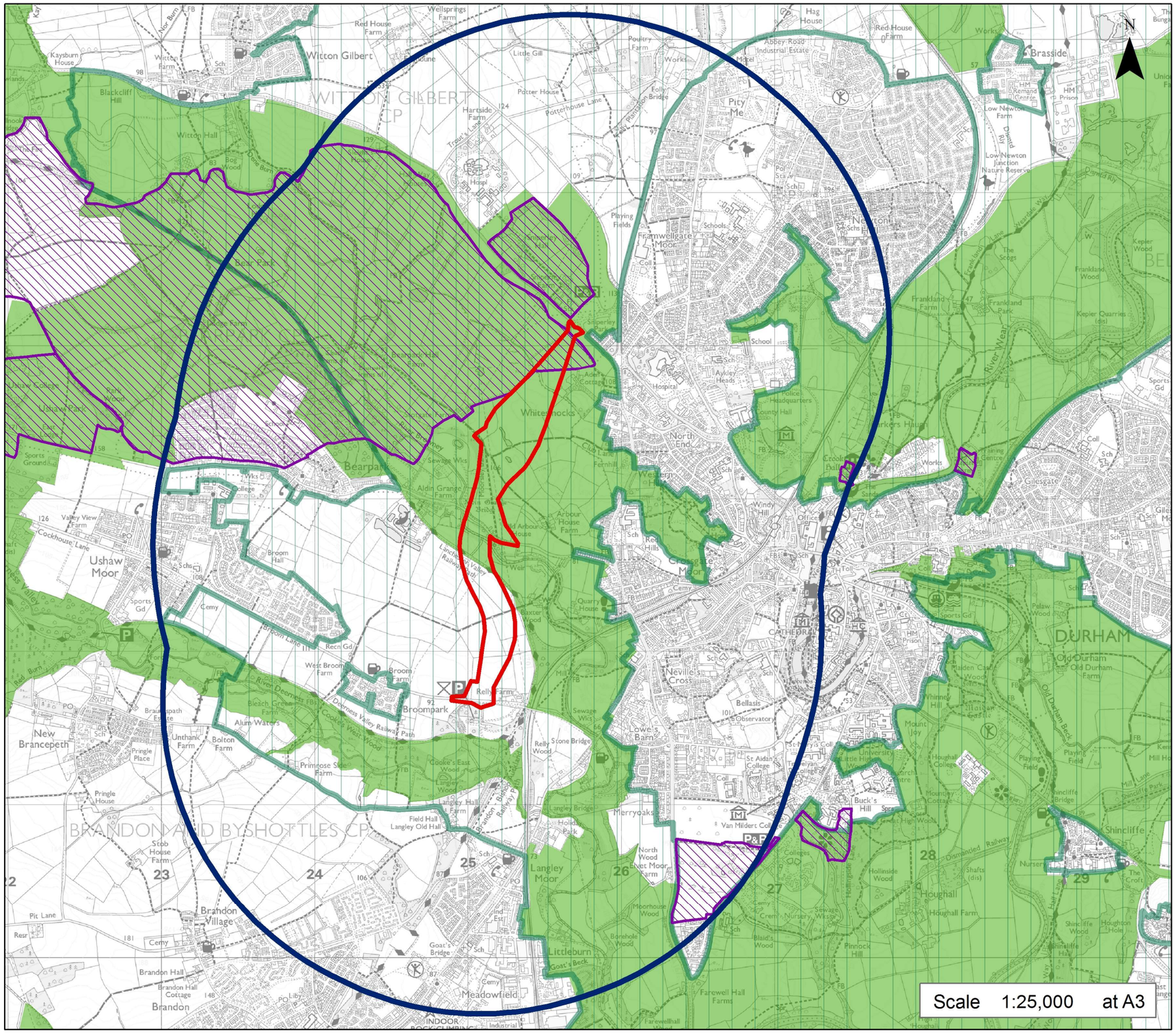
Landscape and Visual Appraisal
Proposed Western Relief Road

Figure 5: Landscape Features

Landform

- Gentle valley side
- Moderate valley side
- Steep valley side
- Gently undulating ridge
- Moderately undulating ridge
- Flat valley floor
- Road_corridor_mask

Numbers refer to features listed in Appendix 3; Schedule 1 Landscape Features



Scale 1:25,000 at A3

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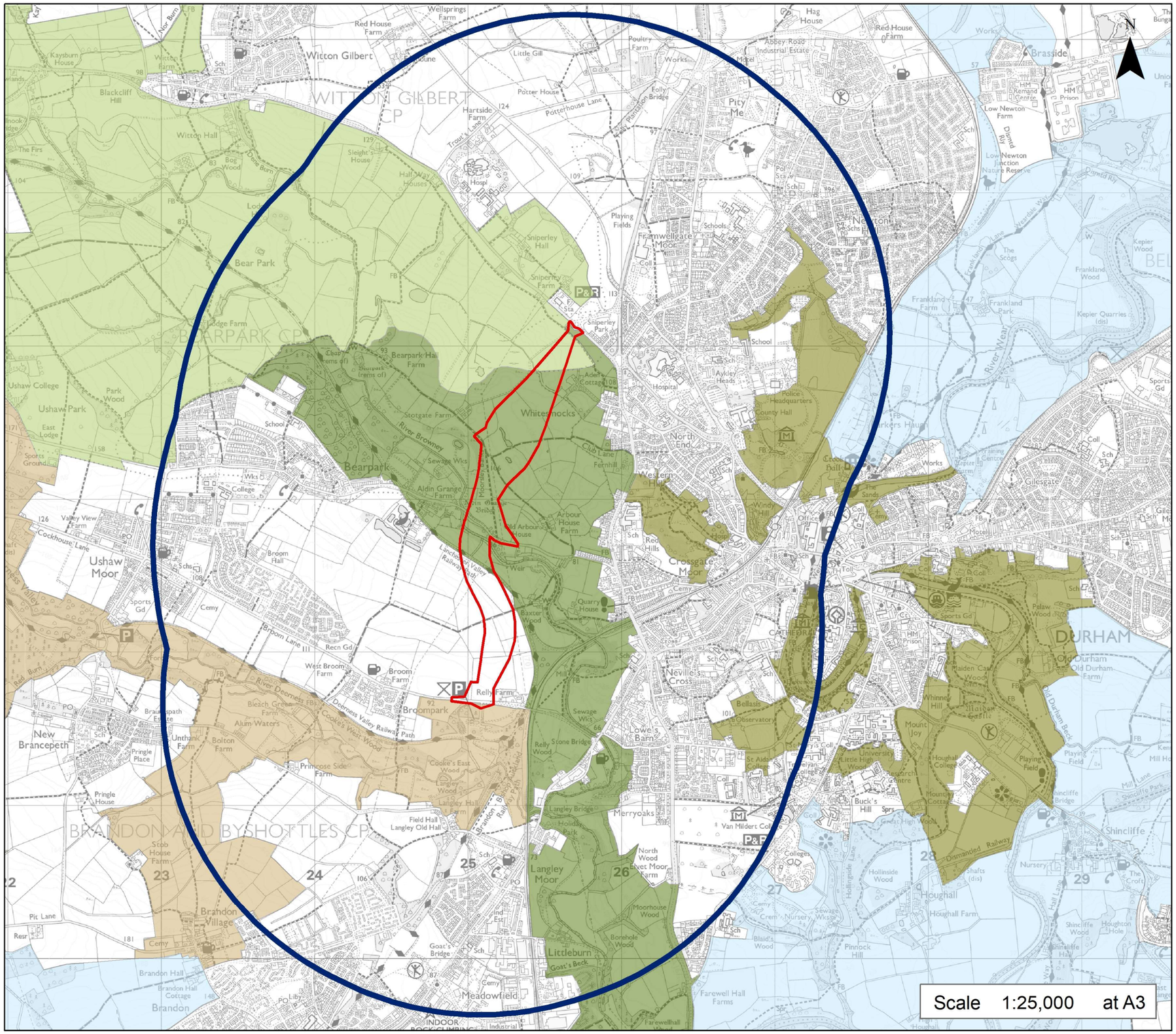
Figure 6: Landscape Designations

▭ Study area
▭ Road corridor
▨ Parks & Gardens of Historic or Landscape Value
▭ Green Belt
🟩 Areas of High Landscape Value

Map produced by Landscape Section, Regeneration and Economic Development, Durham County Council, County Hall, DH1 5UQ.



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Proposed Western Relief Road

Figure 6a: Areas of Higher Landscape Value

Road corridor

Study area

Areas of Higher Landscape Value

- Other AHLV
- Middle Browney Valley
- Lower Browney Valley
- Deerness Valley
- Durham City

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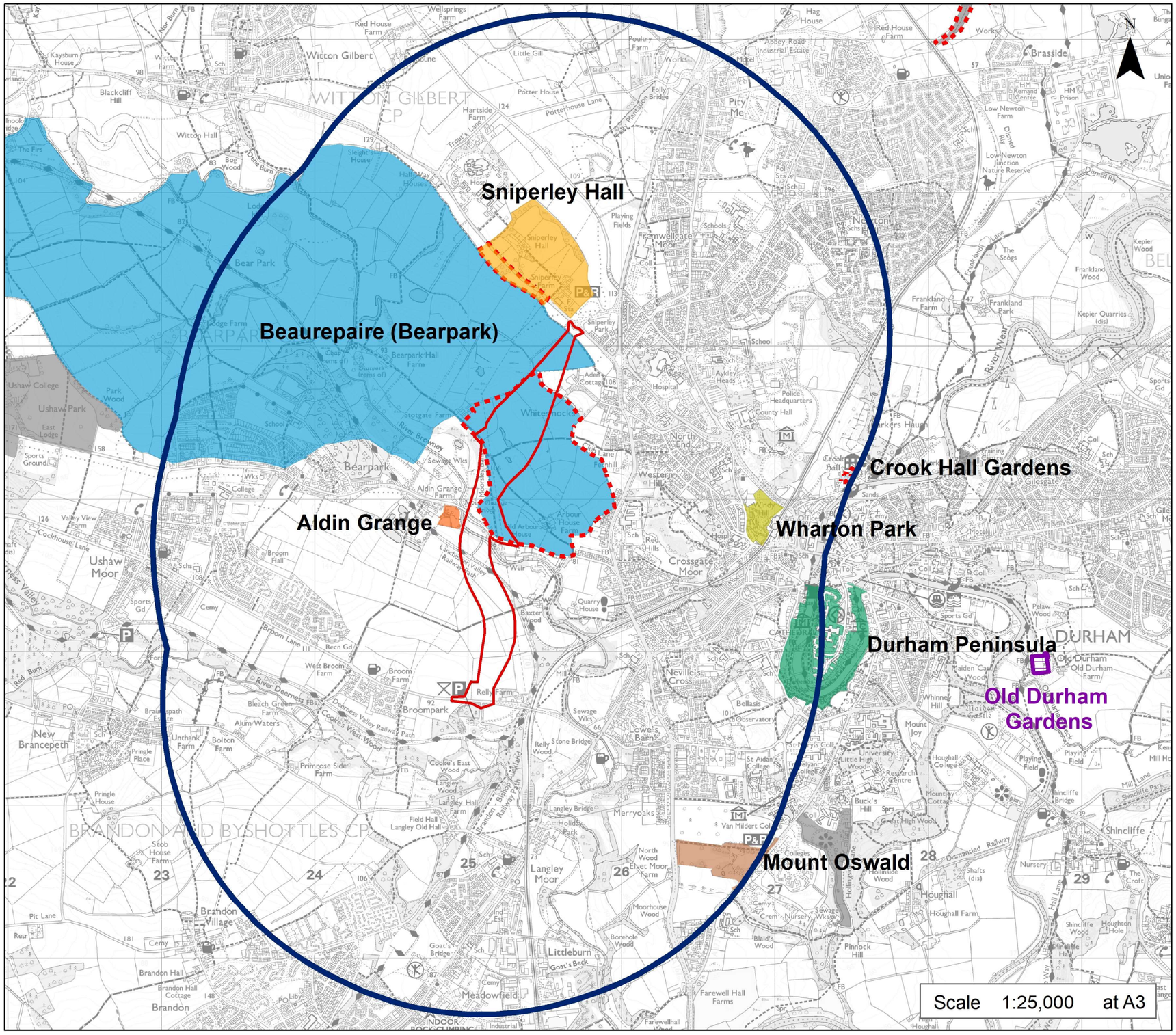
Proposed Western Relief Road

Figure 6b: Historic Parks & Gardens



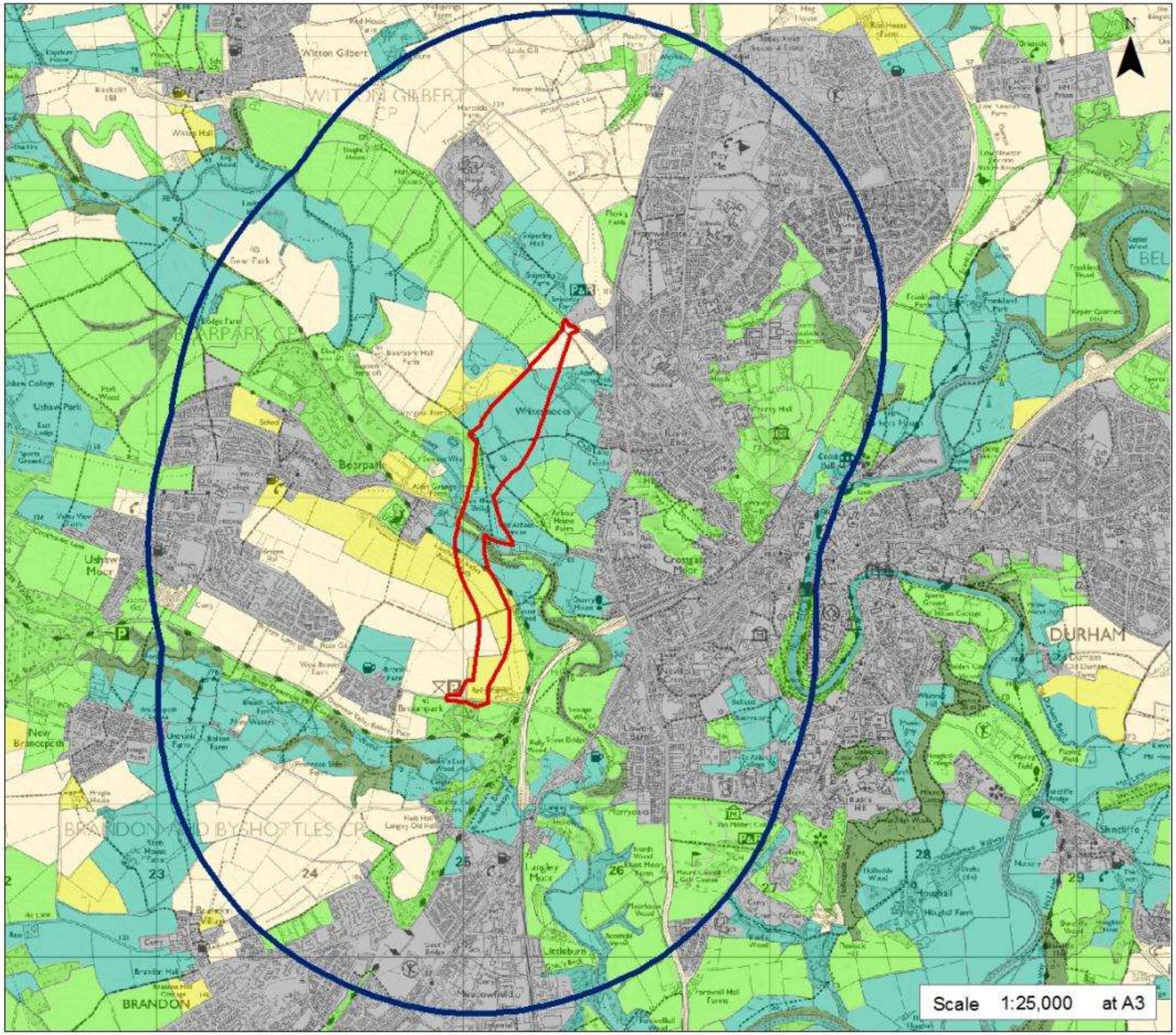
Road corridor
Study area

Parks & Gardens of Special Interest

Old Durham Gardens

Parks & Gardens of Local Interest

Other sites
Aldin Grange
Beaurepaire (Bearpark)
Crook Hall Gardens
Durham Peninsula 1 Castle Precincts
Durham Peninsula 2 Cathedral Precincts
Durham Peninsula 3 Peninsula Gardens
Durham Peninsula 4 Riverbanks
Mount Oswald
Sniperley Hall
Wharton Park
Boundary uncertain



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Proposed Western Relief Road

Figure 7: Landscape Strategy

Study area
Road corridor

Landscape Strategy

Landscape Conservation Priority Area

- Conserve & enhance
- Conserve & restore
- Conserve

Landscape Improvement Priority Area

- Enhance
- Restore or enhance
- Restore

Other

- Developed

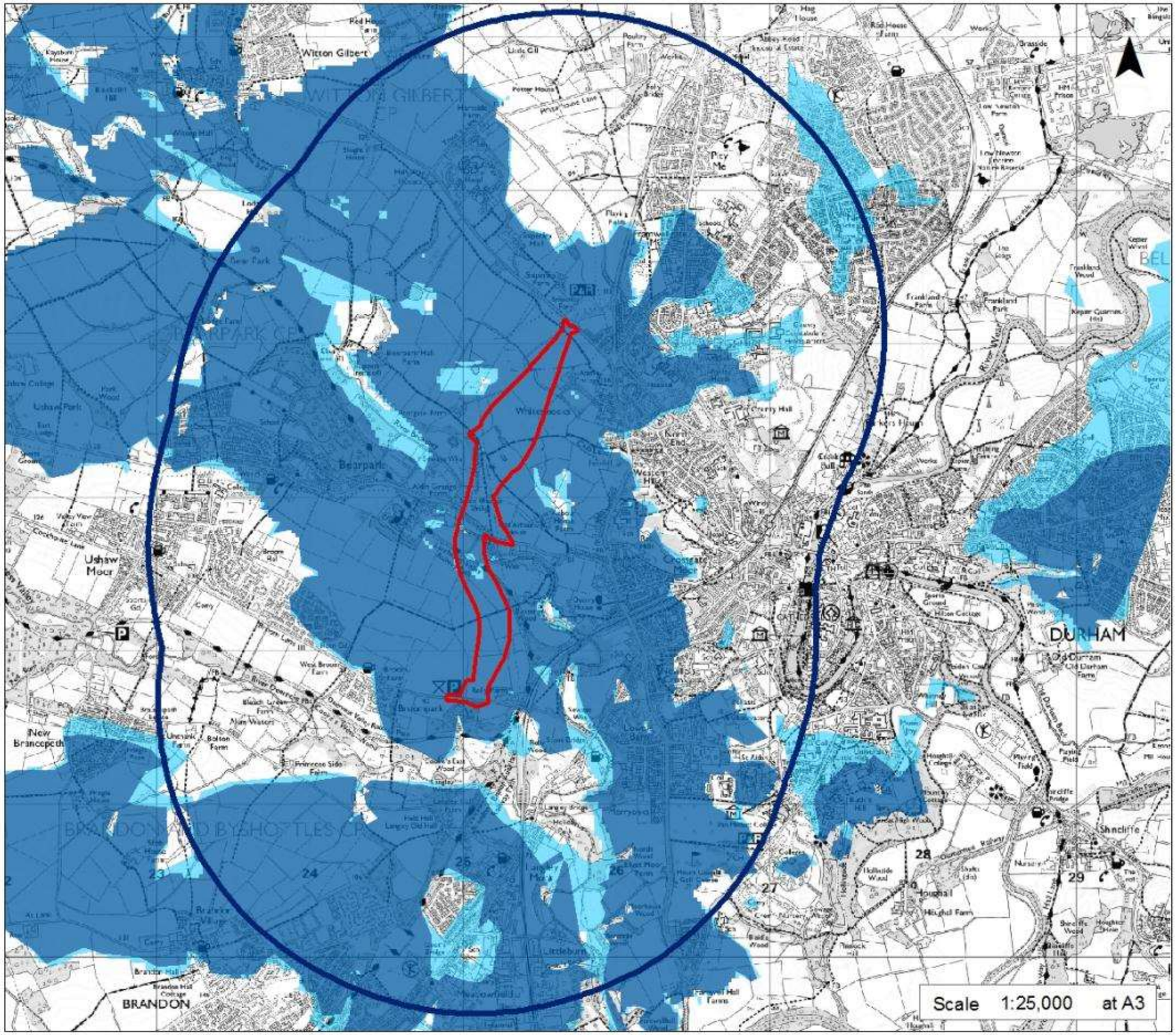

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Figure 8: Zone of Theoretical Visibility

- Study area
- Road corridor
- Zone of theoretical visibility road corridor
- Zone of theoretical visibility road corridor plus 4m

For further information see METHODOLOGY

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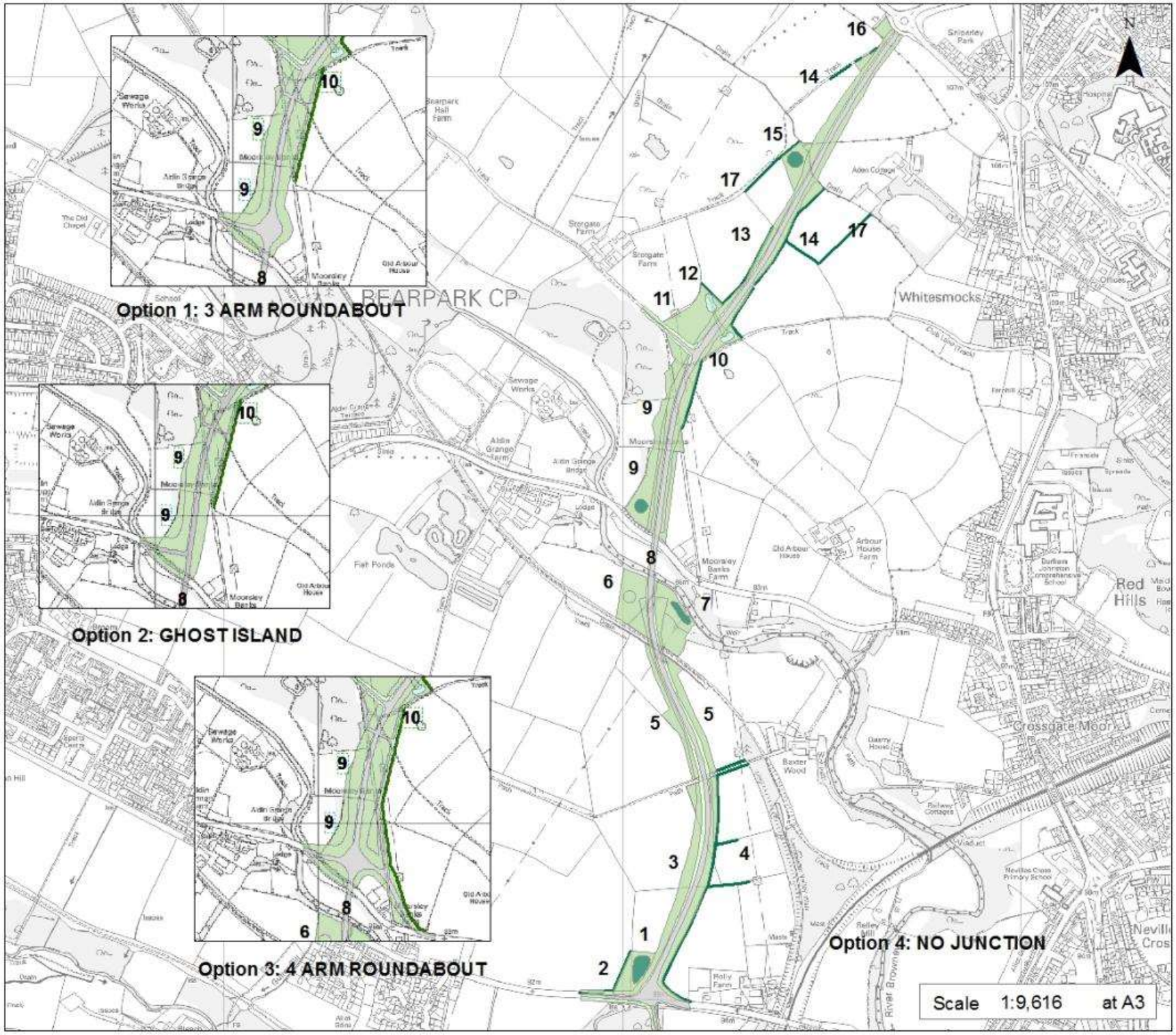
Proposed Western Relief Road

Figure 9: Mitigation potential



Mitigation_potential

- Hard surface
- Grassland
- SUDS
- Trees
- Wetland
- Hedge

Numbers relate to Landscape Appraisal Section 6: Mitigation Measures

LANDSCAPE AND VISUAL IMPACT APPRAISAL

PROPOSED WESTERN RELIEF ROAD

APPENDIX 5

Schedule of Potential Landscape and Visual Effects

June 2019

Potential Landscape and visual affects

Landscape effects

Landscape Features

Landform: impacts are described in order running from south-east to north-west

CH	Receptor	Sensitivity	Potential effect	Magnitude	Significance
-	Gentle valley side (L1)	Low	Shallow cutting complex to accommodate roundabout.	Medium	Minor
			Residual effects after mitigation. Some potential to reshape locally to integrate with adjacent SUDS pond.	Medium	Minor
-	Gentle valley side (L1)	Low	SUDS pond	Medium	Minor
			Residual effects after mitigation. Some potential to re-shape to create more naturalistic feature.	Medium	Minor
0-530	Gentle (L1) / moderate (L2) valley side	Low & Medium	Deep (0-9m) asymmetrical cutting in sidelong ground.	Medium- high	Minor to **Moderate - Major**
			Residual effects after mitigation. Some limited potential to ease western flanks at northern end of cutting.	Medium-high	Minor to **Moderate - Major**
530-680	Moderate (L2) / gentle (L3) valley side	Medium & Low	Shallow asymmetrical embankment on sidelong ground.	Low	Minor
			Residual effects after mitigation. Limited potential for mitigation.	Low	Minor
680-900	Moderate (L2) / gentle (L3) valley side	Medium & Low	Shallow asymmetrical cutting in sidelong ground.	Low	Negligible & Minor
			Residual effects after mitigation. Some limited potential to ease western flanks at northern end of cutting.	Low	Negligible & Minor

900-1020	Moderate (L2) / steep (L4) valley side	High & Medium	Deep embankment (0-7.5m) to vertical abutment.	High	**Moderate – Major & Major**
			Residual effects after mitigation. Limited potential for mitigation.	High	**Moderate – Major & Major**
1020	Moderate (L2) valley side	Medium	SUDS pond	High	**Moderate - Major**
			Residual effects after mitigation. Limited potential for mitigation where proposed but more potential if located on lower ground east of the abutment	Low	Minor
1020 - 1190	Steep valley side (L5) / flat valley floor (L6)	High	Bridge	None	None
		Option1: 3 arm roundabout at Toll House Road			
1190 - 1319	Moderate (L7) / gentle (L8) valley side	Low & Medium	Deep wide cutting complex to accommodate roundabout.	High	Moderate & **Moderate - Major**
			Residual effects after mitigation. Limited potential for mitigation.	High	**Moderate & Moderate - Major**
1250 - west	Steep (L5) / moderate (L7) valley side	High & Medium	Moderate -deep cutting on rising ground of steep valley slopes.	High	**Moderate – Major & Major**
			Residual effects after mitigation. Limited potential for mitigation.	High	**Moderate – Major & Major**
1319 - 1660	Steep (L5) valley side / moderate valley side (L9) / moderately undulating ridge (L10)	High & Medium	Deep cutting through rising ground with over-bridge	High	**Moderate – Major & Major**
			Residual effects after mitigation. Limited potential for mitigation.	High	**Moderate – Major & Major**
		Option2: Ghost island junction at Toll House Road			
1190 - 1319	Moderate (L7) / gentle (L8) valley side	Low & Medium	Deep cutting.	High	Moderate & **Moderate - Major**

			Residual effects after mitigation. Limited potential for mitigation.	High	Moderate & **Moderate - Major**
1250 - west	Steep (L5) / moderate (L7) valley side	High & Medium	Moderate -deep cutting on rising ground of steep valley slopes.	High	**Moderate – Major & Major**
			Residual effects after mitigation. Limited potential for mitigation.	High	**Moderate – Major & Major**
1319 - 1660	Steep (L5) valley side / moderate valley side (L9) / moderately undulating ridge (L10)	High & Medium	Deep cutting through rising ground with over-bridge	High	**Moderate – Major & Major**
			Residual effects after mitigation. Limited potential for mitigation.	High	**Moderate – Major & Major**
		Option 3: 4 arm roundabout at Toll House Road			
1190 - 1319	Moderate (L7) / gentle (L8) valley side	Low & Medium	Deep wide cutting complex to accommodate roundabout.	High	Moderate & **Moderate - Major**
			Residual effects after mitigation. Limited potential for mitigation.	High	Moderate & **Moderate - Major**
1250 - west	Steep (L5) / moderate (L7) valley side	High & Medium	Moderate -deep cutting on rising ground of steep valley slopes.	High	**Moderate – Major & Major**
			Residual effects after mitigation. Limited potential for mitigation.	High	**Moderate – Major & Major**
1250 - east	Gentle valley side (L8)	Low	Moderate –deep cutting complex east of roundabout.	High	Minor
			Residual effects after mitigation. Limited potential for mitigation.	High	Minor
1319 - 1660	Steep (L5) valley side / moderate valley side (L9) / moderately undulating ridge (L10)	High & Medium	Deep cutting through rising ground with over-bridge	High	**Moderate – Major & Major**
			Residual effects after mitigation. Limited potential for mitigation.	High	**Moderate – Major & Major**
		Option 4: No junction at Toll House Road			
1190	Moderate valley side (L7)	Medium	Low abutment	Medium	Moderate
			Residual effects after mitigation. Limited potential for mitigation.	Medium	Moderate

1190-1390	Moderate (L7) / gentle (L8) valley side	Medium & Low	SUDS pond	Low	Negligible & Minor
			Residual effects after mitigation. Some potential to integrate with adjacent embankment.	Low	Negligible & Minor
1190-1390	Moderate (L7) / gentle (L8) valley side	Medium & Low	Low embankment.	Medium	Minor & Moderate
			Residual effects after mitigation. Some potential to ease western slopes to integrate with adjacent SUDS.	Low	Minor
1390-1660	Steep (L5) valley side / moderate valley side (L9 / moderately undulating ridge (L10)	High & Medium	Moderate asymmetrical cutting through edge of steep slopes and through minor ridge.	High	**Moderate – Major & Major**
			Residual effects after mitigation. Potential to re-shape (fill) land on western side at southern end of cutting to blend in landform.	Medium	Moderate & **Moderate - Major**
1660 - 1870	Moderately (L10) / gently (L11) undulating ridge	Medium & Low	Moderate embankment over shallow minor valley.	Medium	Minor & Moderate
			Residual effects after mitigation. Some limited potential for softening embankments to reduce apparent height integrated with re-creation of wetlands.	Medium	Minor & Moderate
1870 - 2130	Gently undulating ridge (L11) / moderate valley side (L12)	Low & Medium	Moderate broadly symmetrical cutting.	Medium	Minor & Moderate
			Residual effects after mitigation. Limited potential for mitigation.	Medium	Minor & Moderate
2130 – 2490	Moderate valley (L12)	Medium	Moderate to deep asymmetrical embankment on rising ground.	High	**Moderate - Major**

			Residual effects after mitigation. Some limited potential for softening embankments locally to reduce apparent height integrated with SUDS	High	**Moderate - Major**
2180	Moderate valley (L12)	Medium	SUDS pond	Low	Minor
			Residual effects after mitigation. Some potential to re-shape to create more naturalistic feature Some potential to re-shape to create more naturalistic feature	Low	Minor
2490 - 2615	Gently undulating ridge (L13)	Low	Low symmetrical embankment.	Low	Minor
			Residual effects after mitigation. Limited potential for mitigation.	Low	Minor

Trees/ hedges/woodlands/wetlands. Impacts are described in order running from south-east to north-west

ID	Receptor	Sensitivity	Potential effect	Magnitude	Significance
W1	Plantation woodland	Medium	Localised felling to woodland edge.	Low	Minor
B1	Low clipped hedge. Probably late post-medieval.	Medium	None.	None	None
B2	Low clipped gappy hedge. Probably late post-medieval.	Medium	Removal of around 100m.	Medium	Moderate
B3	Fence	Low	Removal.	High	Minor
B4	Overgrown hedge with trees. Early post-medieval. Township boundary.	High	Partial removal (10m – 50m) with loss of mature trees.	Medium	**Moderate - Major**
			Residual effects after mitigation. Potential to design SUDS to reduce number of trees lost.	Low	Moderate
B5	Fence	Low	Removal (70m).	Medium	Minor
B6	Fence / Relict C20th hedge	Low	Substantial removal (120m).	High	Minor
B7	Fence / Relict late post-	Low	Short section removed	Low	Negligible

	medieval hedge		Residual effects after mitigation. Potential to reinstate around 50m outside of road corridor	Medium	Minor +
B8	Fence	Low	Partial removal (40m).	Low	Negligible
B9	Low clipped gappy hedge. Probably late post-medieval	Medium	Partial removal (40m).	Medium	Moderate
B10	Overgrown hedge. Probably late post-medieval	Medium	Partial removal (100m). Some vulnerability to further loss in future field rationalisation.	Medium	Moderate
F1	Former railway line - cycleway	Medium	Partial removal (50m).	Low	Minor
B11	Stream with overgrown hedge and mature trees. Early post medieval	High	Substantial removal (80m). Removal of veteran oak.	High	**Major**
W2	Old, possibly ancient, semi-natural riparian woodland	High	Removal or coppicing of section under bridge. Some additional removal likely during construction phase. Magnitude of effect will depend heavily on how extensive this was.	Medium or High	**Moderate – Major or Major**
			Residual effects after mitigation. Potential for mitigation through working method that avoids tree loss.	Low	Minor
R1	River Browney: natural watercourse	High	None	None	None
T1	Riparian tree-line	High	Possible removal of individual trees during construction phase.	Medium	**Moderate - Major**
			Residual effects after mitigation. Potential for mitigation through working method that avoids tree loss.	Low	Moderate
W3	Secondary / planted woodland	High	Removal or coppicing of section under bridge. Some additional removal likely during construction phase. Magnitude of effect will depend heavily on how extensive this was.	High	**Major**
			Residual effects after mitigation. Potential for mitigation through working method that reduces tree loss	Medium	**Moderate - Major**
		Option1: 3 arm roundabout at Toll House Road			

W4	Wooded highway embankment	Medium	Substantial removal	High	**Moderate-Major**
W5	Scrub	Medium	Partial removal	Medium	Moderate
B16	Clipped hedge. Late post-medieval	Medium	Removal (300m)	High	Moderate
B17	Relict post-medieval hedge	Low	Removal	High	Minor
B18	Relict hedge with trees. Early post-medieval	High	Removal	High	**Major**
W6 W7	Scrub	Medium	None	None	None
W8	Ancient woodland	High	None	None	None
B19	Hedge with mature trees. Early post-medieval	High	Removal of section (100-150m). Loss of one or more mature trees.	High	**Major**
		Option2: Ghost island junction at Toll House Road			
W4	Wooded highway embankment	Medium	Substantial removal	High	**Moderate-Major**
W5	Scrub	Medium	Partial removal	Medium	Moderate
B16	Clipped hedge. Late post-medieval	Medium	Removal (300m)	High	**Moderate-Major**
B17	Relict post-medieval hedge	Low	Removal	High	Minor
B18	Relict hedge with trees. Early post-medieval	High	Removal	High	**Major**
W6 W7	Scrub	Medium	None	None	None
W8	Ancient woodland	High	None	None	None
B19	Hedge with mature trees. Early post-medieval	High	Removal of section (100-150m). Loss of one or more mature trees.	High	**Major**
		Option 3: 4 arm roundabout at Toll House Road			

W4	Wooded highway embankment	Medium	Substantial removal	High	**Moderate - Major**
W5	Scrub	Medium	Partial removal	Medium	Moderate
B12	Gappy roadside hedge	Medium	Partial removal	Low	Minor
B13	Fence	Low	Partial removal	Low	Negligible
B14	Hedge with mature trees. Early post-medieval	High	Short section removed. Loss of veteran roadside tree	Medium	**Moderate - Major**
B15	Clipped hedge. Probably late post-medieval	Medium	Partial removal (50m).	Medium	Moderate
B16	Clipped hedge. Late post-medieval	Medium	Removal	High	**Moderate - Major**
B17	Relict post-medieval hedge	Low	Removal	High	Minor
B18	Relict hedge with trees. Early post-medieval	High	Removal	High	**Major**
W6 W7	Scrub	Medium	None	None	None
W8	Old, possibly ancient woodland	High	None	None	None
B19	Hedge with mature trees. Early post-medieval	High	Removal of section (100-150m). Loss of one or more mature trees.	High	**Major**
		Option 4: No junction at Toll House Road			
W4	Wooded highway embankment	Medium	Small section under bridge removed	Low	Minor
B16	Clipped hedge. Late post-medieval	Medium	Partial removal (120m)	Medium	Moderate
B17	Relict post-medieval hedge	Low	Partial removal	Low	Minor
B18	Relict hedge with trees. Early post-medieval	High	Partial removal (15m)	Low	Moderate

W6 W7	Scrub	Medium	None	None	None
W8	Ancient woodland	High	None	None	None
B19	Hedge with mature trees. Early post-medieval	High	Removal of section (50). Loss of one or more mature trees.	Medium	**Moderate - Major**
P1	Seasonal pond	Medium	Removal	High	**Moderate - Major**
			Residual effects after mitigation. Potential to re-model and create more extensive and permanent wetland.	Low	Minor
B20	Hedge. Early post-medieval	High	Partial removal (50m)	High	**Major**
			Residual effects after mitigation. Potential to gap up 100m off-site.	Low	Minor +
B21	Tree lined ditch, medieval / early post-medieval hedge. Historic parish boundary.	High	Partial removal (100m) including loss of several mature trees.	High	**Major**
B22	Hedge. Medieval / early post-medieval. Boundary of deer park. Historic parish boundary.	High	Partial removal (60m)	High	**Major**
B23	Gappy hedge. Early post-medieval.	Medium	Removal of gappy section.	Low	Minor
			Residual effects after mitigation. Potential to gap up 80m off-site.	Low	Minor
B24	Hedge. Medieval / early post-medieval. Boundary of deer park. Historic parish boundary.	High	Partial removal (35m)	Medium	**Moderate - Major**

Landscape Character

Receptor	Sensitivity	Potential effect	Magnitude	Significance

National Character Areas				
Tyne and Wear Lowlands	Medium	The scale of the change to the character of the landscape would be small and highly localised	Low	Minor
Durham Coalfield Pennine Fringe	Medium	The scale of the change to the character of the landscape would be small and highly localised.	Low	Minor
County Character Areas				
Wear Lowlands	Medium	The scale of the change to the character of the landscape would be small and highly localised.	Low	Minor
West Durham Coalfield	Medium	The scale of the change to the character of the landscape would be small and highly localised.	Low	Minor
Broad Landscape Type				
Incised Lowland Valley	Medium	The scale of the change to the character of the landscape would be small and localised.	Low	Minor
Lowland Valley Terraces	Medium	The scale of the change to the character of the landscape would be small and localised.	Low	Minor
Coalfield Valley	Medium	The scale of the change to the character of the landscape would be small and localised.	Low	Minor
Broad Character Area				
Lower Browney Valley	Medium	The scale of the change to the character of the landscape would be medium and relatively widely visible in the northern part of the character area.	Medium	Moderate
Western Valley Terraces	Medium	The scale of the change to the character of the landscape would be small and localised.	Low	Minor
Browney Valley	Medium	The scale of the change to the character of the landscape would be small and localised.	Low	Minor
Deerness and Hedleyhope Valley	Medium	The scale of the change to the character of the landscape would be small and localised.	Low	Minor

Local Character Areas				
Broom Ridge	Medium	Construction period. The southern end of the road would be a potential location for intrusive elements such as site compound / plant / storage during construction phase. Engineering operations on the southern leg and parts of the northern leg would be intrusive during the construction period. Effects would be widely visible within the character area. The scale of the change to the character of the landscape would be high, relatively widespread and temporary (short term).	Low	Minor
		Post-construction. Engineered earthworks and moving vehicles would be intrusive and erode the rural character and tranquillity of the area. Localised loss of hedges and a small number of trees. Road mostly in cut in south therefore traffic movements screened other than at the roundabout. The road would not be visible or visible only in shallow views over much of the southern part of the ridge. Moving traffic more open to view in shallow cuttings and low banks in the north. The bridge would be widely visible north of the ridge as would the northern section across Moorsley Banks. The scale of the change to the character of the landscape would be high, relatively widely visible and permanent.	High	**Moderate - Major**
		Residual effects (10 + years) with mitigation. Cuttings and shallow embankments could be assimilated by roadside planting in the medium term (5-10 years). The landscape pattern in the area is weak and fragmented with a linear grain following the former railway line in views from the east. Structural landscaping associated with the road would not be out of keeping with that pattern. The scale of the change to the character of the landscape would be medium, relatively widely visible and permanent.	Medium	Moderate
Baxterwood & Aldin Grange	High	Construction period. Construction operations on both southern and northern sections and bridge crossing would be likely to be prominent and visually intrusive in much of the character area. The scale of the change to the character of the landscape would be high, widely visible and temporary (short term).	Low	Moderate
		Junction options 1, 2 & 3		
		Post-construction. The new bridge would be locally visually intrusive though screened or filtered by vegetation in many views. The substantial modification of the natural landform on the upper flanks of Moorsley Banks (including accommodation bridge) would be prominent. The southern section would be prominent in views to the south although screened or filtered by vegetation in views from lower ground. Localised loss of mature trees and hedges. Erosion of tranquillity and rural character. The scale of the change to the character of the landscape would be high, widely visible and permanent.	High	**Major**

		Residual effects (10 + years) with mitigation. The bridge abutments could be partially screened / assimilated in the longer term (>10 years) by offsite tree planting. The landform of cuttings on Moorsley Banks and south of the bridge could be screened and assimilated to some degree in the longer term (>10 years) by planting within and outside the highway boundary as would moving traffic. The scale of the change to the character of the landscape would be high, widely visible and permanent.	High	**Major**
		Option 4: No junction at Toll House Road		
		Post-construction. The new bridge would be locally visually intrusive though screened or filtered by vegetation in many views. The localised modification of the natural landform on Moorsley Banks would be prominent. The southern section would be prominent in views to the south although screened or filtered by vegetation in views from lower ground. Localised loss of mature trees and hedges. Reduction in tranquillity. Intrusion of moving traffic on low embankment north of Tollhouse Road crossing. Erosion of tranquillity and rural character. The scale of the change to the character of the landscape would be high, widely visible and permanent.	High	**Major**
		Residual effects (10 + years) with mitigation. The bridge abutments could be partially screened / assimilated in the longer term (>10 years) by offsite tree planting. The landform of the main highway cutting could be modified by ground modelling to the west and screened / assimilated in the medium term (<10 years) by a combination of on and offsite planting. Moving vehicles could be screened in the medium term (<10years) by a combination of on and offsite planting. The engineered landforms of the road south of the bridge could be screened and assimilated in the longer term (>10 years) by planting within and outside the highway boundary as would moving traffic. The scale of the change to the character of the landscape would be medium-high, widely visible and permanent.	Medium-high	**Moderate-major -Major**
Bearpark Hall, Stotgate and Whitesmocks	High	Construction period. Engineering operations on the northern leg would be intrusive during the construction period. The scale of the change to the character of the landscape would be high, visible across much of the character area and temporary (short term).	Low	Moderate
		Post-construction. Engineered earthworks and moving vehicles would be intrusive and erode the rural character and tranquillity of the area. Localised loss of mature trees and hedges. Effects would be widely visible within the character area. The scale of the change to the character of the landscape would be high, widely visible and permanent.	High	**Major**

		Residual effects (10 + years) with mitigation. Embankments could be screened / assimilated in the long term (>10 years) by a combination of on and off-site planting. Cuttings could be assimilated by roadside planting in the medium term (<10 years years). Moving traffic could be screened on other sections by offsite planting but with attendant impacts of outlining road and obstructing views. The scale of the change to the character of the landscape would be medium-high, widely visible and permanent.	Medium-high	**Moderate - Major**
Bearpark North	High	Construction period. Engineering operations on the northern leg would be intrusive during the construction period. The scale of the change to the character of the landscape would be high, localised and temporary (short term).	Low	Moderate
		Post-construction. Sections of hedge of historic interest following the Deer Park boundary would be removed. Engineered earthworks would be visually intrusive. The road would be on embankment and vehicles would be visually intrusive on a 300m section. Effects would be widely visible within the eastern part of the character area but as a small component in the view. The scale of the change to the character of the landscape would be high, localised and permanent.	Medium	**Moderate - Major**
		Residual effects (10 + years) with mitigation. Impacts could be reduced in the medium term (5-10 years) by visually dense planting on embankments. This would assimilate the embankments and screen traffic but would obscure to some degree the existing field pattern of the enclosed Park. The scale of the change to the character of the landscape would be medium, localised and permanent.	Low	Moderate
Sniperley	Medium	Construction period. Potential location for intrusive elements such as site compound / plant / storage during construction phase. Engineering operations on northern leg would be intrusive during the construction period. The scale of the change to the character of the landscape would be high, relatively localised and temporary (short term).	Low	Minor
		Post-construction. Localised intrusion of engineered earthworks and moving vehicles in area already dominated by park and ride. Effects would only be visible within a localised part of the character area. The scale of change to the character of the landscape would be low, localised and permanent.	Low	Minor
		Residual effects (10 + years) with mitigation. Impacts would be reduced further by structure planting within and adjacent to the road corridor. The scale of change to the character of the landscape would be small, localised and permanent.	Low	Minor
Bearpark South	Medium	Construction period. No physical impacts. Engineering operations on northern leg would be intrusive during the construction period. The scale of the change to the character of the landscape would be medium, relatively localised and temporary (short term).	Low	Minor

		Post-construction. No physical impacts. Earthworks of the northern part of the road would be visible in some views as would vehicles on elevated sections. Effects would be visible from higher ground but often screened by intervening features in views from lower ground. The scale of the change to the character of the landscape would be medium, relatively localised and permanent.	Medium	Moderate
		Residual effects (10 + years) with mitigation. Impacts could be reduced in the medium term (5-10 years) by visually dense planting on and adjacent to earthworks. This would assimilate the modified landform and screen traffic movements. The scale of the change to the character of the landscape would be small, relatively localised and permanent.	Low	Minor
Lower Deerness	Medium	Construction period. No physical impacts. Possible highly localised shallow views of construction activities. The scale of change to the character of the landscape would be very small, localised and temporary (short term).	Low	Minor
		Post-construction. No physical impacts. Possible highly localised shallow views of cutting on southern flanks of Broom ridge. The scale of change to the character of the landscape would be very small, localised and permanent.	Low	Minor
		Residual effects (10 + years) with mitigation. Impacts could be reduced further by planting within the southern cutting. The scale of change to the character of the landscape would be very small, localised and permanent.	Low	Minor
Brandon	Medium	Construction period. No physical impacts. From higher ground construction of southern cutting visible. Site compound / storage / plant may be visible depending on location. The scale of change to the character of the landscape would be small, localised and temporary (short term).	Low	Minor
		Post-construction. No physical impacts. From higher ground cutting on southern flanks of Broom ridge would be visible in middle distance. Moving vehicles would be visible in some views. The scale of change to the character of the landscape would be small, localised and permanent.	Low -medium	Minor- Moderate
		Residual effects (10 + years) with mitigation. Impacts could be reduced further by planting within the southern cutting. The scale of change to the character of the landscape would be small, localised and permanent.	Low	Minor
Stonebridge	High	Construction period. No physical impacts. Localised views from higher ground of construction of southern section. Site compound / storage / plant may be visible depending on location. The scale of change to the character of the landscape would be small, localised and temporary.	Low	Minor

		Post-construction. No physical impacts. Localised views from higher ground of earthworks and moving vehicles in southern section. The scale of change to the character of the landscape would be small, localised and permanent.	Low	Minor
		Residual effects (10 + years) with mitigation. Impacts could be reduced further by plating within and east of the southern section. The scale of change to the character of the landscape would be small, localised and permanent.	Low	Minor
Merryoaks	Medium	Construction period. No physical impacts. From western edge construction of southern cutting visible. Site compound / storage / plant may be visible depending on location. The scale of change to the character of the landscape would be small, localised and temporary. The scale of change to the character of the landscape would be small, localised and temporary.	Low	Minor
		Post-construction. No physical impacts. From western edge cutting on southern flanks of Broom ridge would be visible in middle distance. Moving vehicles on short sections may be visible in some views. The scale of change to the character of the landscape would be small, localised and permanent.	Low	Minor
		Residual effects (10 + years) with mitigation. Impacts could be reduced further by planting within the southern cutting. The scale of change to the character of the landscape would be small, localised and permanent	Low	Minor
Kinblesworth and Fiindon	Medium	Construction period. No physical impacts. Some visual intrusion of engineering operations during construction period from higher ground but as small features in complex views. The scale of change to the landscape would be small, localised and temporary	Low	Minor
		Post-construction. No physical impacts. Some visual intrusion of earthworks and moving traffic in views from higher ground but as small features in complex views. The scale of change to the character of the landscape would be small, localised and permanent.	Low	Minor
		Residual effects (10 + years) with mitigation. Impacts would be reduced further by structure planting within and adjacent to the road corridor. The scale of change to the character of the landscape would be small, localised and permanent.	Low	Minor
Mountjoy and Mount Oswald	Medium	No impact predicted	None	None
Blackdene	High	No impact predicted	None	None
Kepier & Frankland	High	No impact predicted	None	None

Designated Landscapes (including non-designated but locally listed landscapes)				
Receptor	**Sensitivity**	**Potential effect**	**Magnitude**	**Significance**
Areas of Higher Landscape Value				
Lower Browney Valley Area of Higher Landscape Value	High	Construction period. Engineering operations in the northern part of the route would be intrusive during the construction period. The effect on the special qualities of the AHLV would be high, widespread in the northern part of the AHLV and temporary (short term).	Low	Moderate
		Junction options 1, 2 & 3		
		Post-construction. The new bridge would be locally visually intrusive though screened or filtered by vegetation in wider views. The substantial modification of the natural landform on the upper flanks of Moorsley Banks (including accommodation bridge) would be prominent as would cuttings and embankments running northwards and moving traffic. There would be localised loss of mature trees and historic hedges and interruption of public rights of way. The effect on the special qualities of the AHLV would be high, widespread in the northern part of the AHLV and permanent.	High	**Major**
		Residual effects (10 + years) with mitigation. The bridge abutments could be partially screened / assimilated in the longer term (>10 years) by offsite tree planting. The landform of cuttings on Moorsley Banks and northwards could be screened and assimilated to some degree in the longer term (>10 years) by planting within and outside the highway boundary, as could moving traffic, but with attendant impacts of outlining road and obstructing views. The effect on the special qualities of the AHLV would be high, widespread in the northern part of the AHLV and permanent.	High	**Major**
		Option 4: No junction at Toll House Road		
		Post-construction. The new bridge would be locally visually intrusive though often screened or filtered by vegetation in wider views. The localised modification of the natural landform on Moorsley Banks would be prominent as would moving traffic there and on the low embankment north of the Tollhouse Road crossing. Cuttings and embankments to the north would be prominent as would moving traffic in that area. There would be localised loss of mature trees and historic hedges and interruption to of public rights of way. The effect on the special qualities of the AHLV would be high, widespread in the northern part of the AHLV and permanent.	High	**Major**

		Residual effects (10 + years) with mitigation. The bridge abutments could be partially screened / assimilated in the longer term (>10 years) by offsite tree planting. The bridge would remain visible. The landform of the main highway cutting could be modified by ground modelling to the west and screened / assimilated in the medium term (<10 years) by a combination of on and offsite planting. Moving vehicles could be screened in the medium term (<10years) by a combination of on and offsite planting but with attendant impacts of outlining road and obstructing views. The effect on the special qualities of the AHLV would be medium-high, widespread in the northern part of the AHLV and permanent.	Medium-high	**Moderate-major -Major**
Middle Browney Valley Area of Higher Landscape Value	High	Construction period. Engineering operations within the AHLV at the A690 park & ride roundabout and sections of embankment to the immediate south would be visually intrusive during the construction period. The effect on the special qualities of the AHLV would be high, localised and temporary (short term).	Low	Moderate
		Post-construction. Engineered earthworks would be visually intrusive. The road would be on embankment and vehicles would be visually intrusive on a 300m section. Sections of hedge of historic interest following the deer park boundary would be removed and there would be localised interruption of public rights of way. Effects would be widely visible within the visually open parts of the AHLV but typically as a small component in the view. The effect on the special qualities of the AHLV would be high, localised and permanent.	Medium	**Moderate-major**
		Residual effects (10 + years) with mitigation. Impacts could be reduced in the medium term by visually dense planting on embankments. This would assimilate the embankments and screen traffic. The effect on the special qualities of the AHLV would be medium, localised and permanent.	Low	Moderate
Deerness Valley Area of Higher Landscape Value	High	Construction period. Engineering operations within the AHLV at the entrance to the Broom Park Picnic area would be visually intrusive. The effect on the special qualities of the AHLV would be low, highly localised and temporary (short term).	Low	Minor
		Post-construction. The southern part of the southern roundabout would lie in the edge of the AHLV. There would be some permanent loss of currently young mature trees in that area and a reduction in tranquillity from increased traffic flows and additional street lighting. These effects would be highly localised and would not be felt across the wider AHLV. The effect on the special qualities of the AHLV would be low, highly localised and permanent.	Low	Minor
		Residual effects (10 + years) with mitigation. As above. The effects of the proposals would be unlikely to change to any noticeable degree with mitigation. The effect on the special qualities of the AHLV would be low, highly localised and permanent.	Low	Minor

Historic Parks, Gardens and Designed Landscapes of local interest				
Beaurepaire (Bearpark)	High	Construction period. Engineering operations on the northern leg would be intrusive during the construction period. The scale of the change to the character of the historic park would be high, localised and temporary (short term).	Low	Moderate
		Post-construction. The proposals would entail the removal of short sections of hedgerow lying on the historic boundary of the park in the north. They would also entail removing sections of hedgerow dating from post medieval enclosures associated with Arbour House Farm on the former Bearpark Moor and parts of a later, late C19th hedge, above Moorsley Banks. The route would cross the route of Club Lane: the historic route from the City to the Park and Beaurepaire. Engineered earthworks and moving vehicles would be visually intrusive. Effects would be widely visible within the eastern part of the known park but as a small component in the view. Effects would be widely visible, and more notable in general views, within the area of the former Bearpark Moor / Arbour House Farm enclosures where the road would create a degree of separation between this area and the known area of the park to the west. Impacts for junction options 1, 2 and 3 would be likely to be slightly higher than those for option 4 due to the higher impact of earthworks in the south of Moorsley Banks. The scale of the change to the character of the historic park would be high, localised and permanent.	Medium	**Moderate - Major**
		Residual effects (10 + years) with mitigation. Impacts could be reduced in the medium term (5-10 years) by tree and hedgerow planting within and around the highway corridor. This would assimilate the embankments and screen traffic but could locally reinforce the separation between the southern area and the known area of the park to the west. The scale of the change to the character of the historic park would be medium, localised and permanent.	Low	Moderate
Sniperley Hall	High	Construction period. No physical impacts. Engineering operations on the northern leg would be intrusive in views out from the park to the south. The scale of the change to the character of the historic park in respect of setting would be low, localised and temporary (short term).	Low	Minor
		Post-construction. The proposed road would be largely screened in views from the more visually sensitive parkland core south of the hall by intervening vegetation. Parts of the northern section would be visible in views from estate farmland east of the hall and from land south of the A691. The visible elements would be relatively small features in a complex view. The scale of the change to the character of the historic park in respect of setting would be low, localised and permanent.	Low	Minor
		Residual effects (10 + years) with mitigation. Visual impacts could be reduced by structure planting within and adjacent to the road. The scale of the change to the character of the historic park in respect of setting would be low, localised and permanent.	Low	Minor

Aldin Grange	High	Construction period. No physical impacts. Construction operations on the bridge crossing and adjacent areas would be likely to be visible, in views out from the gardens, screened or filtered in places by vegetation. The effects would be higher for junction option 4 with its more elevated bridge than for options 1, 2 and 3. Construction activities on and to the north of the road east of the existing bridge, including earthworks and removal or trees, would be likely to be prominent and visually intrusive. The effects would be higher for junction options 1, 2 and 3 due to the higher impact of earthworks and tree removal close to the garden. The scale of the change to the character of the gardens in respect of setting would be high, widespread and temporary (short term).	Low	Minor
		Post-construction. The new bridge would be visually intrusive though screened or filtered by vegetation. The effects would be higher for junction option 4 with its more elevated bridge than for options 1, 2 and 3. Earthworks to the north and east would be notable as would the loss of mature roadside trees in that area (Options 1, 2 & 3). The scale of the change to the character of the gardens in respect of setting would be medium, widespread and permanent.	Low-medium	Moderate
		Residual effects (10 + years) with mitigation. The new bridge would remain locally visually intrusive though screened or filtered by vegetation. The landform of cuttings to the north and east could be screened and assimilated to some degree in the longer term (>10 years) by planting within and outside the highway boundary. The scale of the change to the character of the setting of historic gardens would be medium, localised and permanent.	Low-medium	Moderate
Crook Hall	High	No impact predicted	None	None
Mount Oswald	High	No impact predicted	None	None
Wharton Park	High	No impact predicted	None	None
Durham Peninsula & River Banks	High	No impact predicted	None	None

Visual Effects

Receptor	Sensitivity	Potential effect	Magnitude	Significance

Local residents				
Residential properties and public vantage points in Bearpark	High	Construction period. Construction operations and ancillary activities could be visible in a variety of views from residential properties and public vantage points (public open space, streets and footways) at distances of >900m. The scale of the change in the view would vary from small to large for those properties with open views to the north-east and would be temporary (short term).	Low	Moderate
		Junction options 1-3		
		Post-construction. The proposed road north of the Browney bridge would be visible in a variety of views from residential properties and public vantage points (public open space, streets and footways) at distances of >900m. In open views engineered earthworks, and particularly those on Moorsley Banks, together moving traffic on elevated sections would be visually intrusive in otherwise attractive rural views. The scale of the change in the view would be large for properties and public spaces with open views to the north-east and would be permanent.	High	**Major**
		Residual effects (10 + years) with mitigation: Structural landscaping within and outside of the road corridor would screen and assimilate the road and moving traffic. The scale of the change in the view would reduce to medium for properties with open views and would be permanent.	Medium	**Moderate-Major**
		Junction Option 4		
		Post-construction. The proposed road north of the Browney bridge would be visible in a variety of views from residential properties and public vantage points (public open space, streets and footways) at distances of >900m. In open views engineered earthworks, and particularly those on Moorsley Banks, together moving traffic on elevated sections would be visually intrusive in otherwise attractive rural views. The scale of the change in the view would be large for properties and public spaces with open views to the north-east and would be permanent.	High	**Major**
		Residual effects (10 + years) with mitigation: Structural landscaping within and outside of the road corridor would screen and assimilate the road and moving traffic. The scale of the change in the view would reduce to low for properties with open views and would be permanent.	Low	Moderate
Residential properties and public vantage points in Aldin Grange	High	Construction period. Construction operations and ancillary activities such as site compound, plant and materials storage could be visible in views from properties in Aldin Grange at distances as close as 120m. The scale of the change in the view would vary from small to large and would be temporary (short term).	Low	Moderate
		Junction options 1 - 3		

		Post-construction. The reconfigured section of Tollhouse Road from the bridge to the roundabout or junction would be visible at close range (120m) in a prominent cutting on rising ground. The upper slopes of the main cutting would be visible on the skyline. The main cutting on Moorsley Banks would be visible filtered by existing roadside vegetation. The bridge would be visible filtered in varying degrees by intervening tree canopies. The scale of the change in the view would vary but would be typically large and would be permanent.	High	**Major**
		Residual effects (10 + years) with mitigation: Structural landscaping within the road corridor would assimilate the new landforms to some degree. The scale of the change in the view would be medium and would be permanent.	Medium	**Moderate-Major**
		Junction option 4		
		Post-construction. The low embankment north of the bridge and moving traffic would be visible on the skyline. The cutting on Moorsley Banks would be visible filtered by existing roadside vegetation. The higher bridge would be visible filtered in varying degrees by intervening tree canopies. The scale of the change in the view would be typically medium -large and would be permanent.	Medium-High	**Major**
		Residual effects (10 + years) with mitigation: Terrain modelling and structural landscaping west of the road would screen the road and traffic. The scale of the change in the view would decrease to medium and would be permanent.	Medium	**Moderate-major**
Residential properties and public vantage points on the western edge of Durham City	High	Construction period. Construction operations and ancillary activities such as site compound, plant and materials storage could be visible in views from properties on the western edge of the city at distances as close as 100m but more typically >500m. The scale of the change in the view would vary from small to large and would be temporary (short term).	Low	Moderate
		Post-construction. The proposed road would be visible in a variety of views from residential properties and public vantage points (streets and footways) along the A167. In open views from properties west of the A167 the engineered earthworks and moving traffic would be visually intrusive in otherwise largely rural views at distances as close as 100m but more typically >500m. The scale of the change would be large in open views and would be permanent.	High	**Major**
		Residual effects (10 + years) with mitigation: Structural landscaping within and outside of the road corridor would screen and assimilate the road and moving traffic. Offsite planting giving a minimum combined width of 15m would be needed south of the Browney bridge. The scale of the change would be medium in open views and would be permanent.	Medium	**Moderate - Major**

Residential properties in Ushaw Moor	High	Construction period. Construction operations and ancillary activities such as site compound, plant and materials storage could be visible in views from a small number of properties on the eastern edge of the village at distances of >900m. The scale of the change in the view would be likely to be small and temporary (short term).	Low	Minor
		Post-construction. Parts of the southern section of the road would be visible from a small number of properties on the eastern edge of the village in shallow views, largely from first floor windows. The greater part of the road would be screened by intervening topography. The scale of the change in the view would be likely to be small and permanent.	Low	Minor
		Residual effects (10 + years) with mitigation: Planting within the road corridor and west of the roundabout would reduce impacts further	Low	Minor
Residential properties in Broompark		Construction period. Construction operations and ancillary activities such as site compound, plant and materials storage could be visible in views from a small number of properties on the eastern edge of the village at distances of <500m. The scale of the change in the view would be likely to be medium and temporary (short term).	Low	Minor
		Post-construction. Parts of the southern section of the road would be visible from a small number of properties on the eastern edge of the village in shallow views. The greater part of the road would be screened by intervening topography. The scale of the change in the view would be likely to be small and permanent.	Low	Minor
		Residual effects (10 + years) with mitigation: Planting within the road corridor and west of the roundabout would reduce impacts further	Low	Minor
Residential properties in Brandon / Langley Moor		Construction period. Construction operations and ancillary activities such as site compound, plant and materials storage could be visible in views from a small number of properties and public vantage points (streets, footways, allotment gardens) on the northern edge of the village at distances of around 1.5km. The scale of the change in the view would be small and would be temporary (short term).	Low	Minor
		Post-construction. Parts of the southern section of the road would be visible from a small number of properties and public vantage points (streets, footways, allotment gardens) on the northern edge of the village at distances of around 1.5km. The southern cutting through rising ground would be oriented towards the viewer. The greater part of the road would be screened by intervening topography. The scale of the change in the view would be likely to be small and permanent.	Low	Minor

		Residual effects (10 + years) with mitigation: Planting within the road corridor would reduce impacts further	Low	Minor
Residents in isolated properties	High	Not assessed	-	-
Walkers, cyclists and horse riders (footpaths, bridleways, cycle-ways and access land)				
Walney to Wear	High	Construction period. Construction operations and ancillary activities would be visible in a variety of views from sections of the route – such as the section following the C17 - but would be screened elsewhere by vegetation and topography. The scale of the change in the view would vary from small to medium and would be temporary (short term).	Low	Moderate
		Post-construction. Earthworks and traffic on part of the southern section of the road would be visible from the route in the vicinity of Tollhouse Road. The scale of the change in the view would vary to medium locally and would be permanent.	Medium	**Moderate - Major**
		Residual effects (10 + years) with mitigation: Structure planting to the east of the new road where it is on shallow embankment south of the bridge (minimum 15m overall width) would screen the road and traffic. The scale of change in the view would be small and permanent	Low	Moderate
Lanchester Valley Railway Path	High	Construction period. Construction operations and ancillary activities would be visible in a variety of views from sections of the route. They would be prominent in views from the line between Baxter Wood and Aldin Grange and from short sections west of Aldin Grange. The scale of the change in the view would be large in open views and would be temporary (short term).	Low	Moderate
		Post-construction. The new road bridge engineered landforms and moving traffic would be visible from the sections described above and would erode the rural character of the view and the relative tranquillity of the experience. The road would be crossed at an at-grade crossing. The scale of the change in the view would be large in open views and would be permanent. The effect would be higher for junction options 1, 2 and 3 than option 4 due to the higher visual impact of earthworks north of the bridge in views in that direction.	High	**Major**
		Junction options 1, 2 and 3.		
		Residual effects (10 + years) with mitigation: Structure planting to the east of the new road where it is on shallow embankment south of the bridge (minimum 15m overall width), structure planting west of the bridge abutment and within the road corridor north of the bridge would screen or assimilate the road and traffic to some degree. The scale of change in the view would be medium and permanent.	Medium	**Moderate-Major**

		Junction option 4		
		Residual effects (10 + years) with mitigation: Structure planting to the east of the new road where it is on shallow embankment south of the bridge (minimum 15m overall width), structure planting west of the bridge abutment and west of the road north of the bridge would screen or assimilate the road and traffic to a significant degree. The scale of change in the view would be medium and permanent.	Medium	**Moderate-Major**
Deerness Valley Railway Path	High	No impact predicted	None	None
Brandon to Bishop Auckland Railway Path	High	No impact predicted	None	None
Club Lane / Pilgrim's Way Bridleways: 0310000006 0040000010 0040000011 0040000022	High	Construction period. Construction operations and ancillary activities would be visible in close and middle-distance views. The scale of the change in the view would be large and would be temporary (short term).	Low	Minor
		Post-construction. Engineered earthworks and moving traffic would be visible in close and middle-distance views. Moving traffic and noise would erode tranquillity. The route would be crossed by the road. The scale of the change in the view would be large and permanent.	High	**Major**
		Residual effects (10 + years) with mitigation: Structure planting would screen and assimilate the road to some degree but would either not do so fully or would obstruct open views to the north. The scale of the change in the view would be large and permanent.	High	**Major**
Rights of way network between western edge of Durham City and road corridor. Bridleways 00400000010 Arbour House Footpaths 0040000009 Moorsley Banks 0310000009 Quarry House 0140000083 Baxter Wood 0310000009 Neville's Cross 0140000086 Rely Mill 0140000085 Rely Mill 00400000015 Aden Cottage	High	Construction period. Construction operations and ancillary activities would be visible in a wide range of close and middle-distance views from open sections and particularly those north of Arbour House, on Moorsley Banks, north of Aden Cottage and along Quarry House lane. The site would be typically screened from view by vegetation on lower sections of path. The scale of the change in the view would vary from small to large and would be temporary (short term).	Low	Moderate
		Post-construction. Engineered earthworks and moving traffic would be visible in the views described above. Moving traffic and noise would erode tranquillity. The scale of the change in the view would vary from small to large and would be permanent.	Low to high	Moderate to **Major**
		Residual effects (10 + years) with mitigation: Structure planting would screen and assimilate the road to a substantial degree in some views. The scale of the change in the view would be generally low or medium but would remain large on sections of the nearest paths (Moorsley Banks, Arbour house North, Aden Cottage) would be permanent.	Low to high	Moderate to **Major**

Rights of way network on the southern flanks of the Deerness Valley Footpaths 0140000078 High Brandon 0140000094 Brandon 0140000093 Brandon 0140000090 Langley Old Hall 0140000091 Langley Old Hall	High	Construction period. Construction operations and ancillary activities such as site compound, plant and materials storage could be visible in open views from paths on higher ground at distances of >1km but would be screened by vegetation in views from lower ground. The scale of the change in the view would be small and would be temporary (short term).	Low	Moderate
		Post-construction. Engineered earthworks and moving traffic in the southern cutting would be visible in the views described above as small features in visually complex panoramic views. The southern cutting through rising ground would be oriented generally towards the viewer. The greater part of the road would be screened by intervening topography. The scale of the change in the view would be likely to be small and permanent.	Low	Moderate
		Residual effects (10 + years) with mitigation: Planting within the road corridor would reduce impacts further	Low	Moderate
Rights of way network crossing Broom Ridge Bridleways 01400000080 Broompark N 01400000082 Broompark N 01400000063a Ushaw Moor Footpaths 01400000081 Aldin Grange	High	Construction period. Construction operations and ancillary activities would be visible in range of close and middle-distance views from paths falling either side of the ridge. The scale of the change in the view would vary from medium to large and would be temporary (short term).	Low	Moderate
		Post-construction. Engineered earthworks and moving traffic would be visible in the views described above. The bridge would be visible from paths north of the ridge. South of the ridge the southern cutting would generally be seen in shallow views and traffic would be hidden within it. In short sections close to the road moving traffic and noise would erode tranquillity. The scale of the change in the view would vary from small to large and would be permanent.	Low to High	Moderate to **Major**
		Residual effects (10 + years) with mitigation: Planting (minimum 15m width) within and outside of the road corridor where the road is in shallow cuttings or on low embankments south of the bridge would reduce impacts as would planting adjacent to the bridge abutments. The scale of the change in the view would vary from small to medium and would be permanent.	Low to Medium	Moderate to **Moderate-Major**
Rights of way network in the Browney Valley to the west Footpaths 00400000001 Beaurepaire 00400000002 Bearpark 13800000015 River Browney 13800000013 Sleight House 13800000012 Sleight House	High	Construction period. Construction operations and ancillary activities in the north of the corridor would be visible in distant and middle-distance views. The scale of the change in the view would vary from small to medium and would be temporary (short term).	Low	Moderate
		Post-construction. Engineered earthworks and moving traffic in the north of the corridor would be visible in the views described above, generally as small features in visually complex panoramic views. The scale of the change in the view would be typically low and would be permanent.	Low	Moderate

13800000009 Sniperley 13800000008 Earls House		Residual effects (10 + years) with mitigation: Structure planting would screen and assimilate some elements. The scale of the change in the view would be typically small and would be permanent.	Low	Moderate
Bearpark colliery woodlands	High	Construction period. Construction operations and ancillary activities on Moorsley banks would be visible from some open ground within the woods but would be generally screened by trees. The scale of the change in the view would be medium or high in open views and would be temporary (short term).	Low	Moderate
		Post-construction. Engineered earthworks crossing Moorlsey Banks corridor would be visible in the views described above. The scale of the change in the view would be likely to be medium in open views and would be permanent.	Medium	**Moderate-Major**
		Residual effects (10 + years) with mitigation: Structure planting would screen and assimilate the road. The scale of the change in the view would be typically small and would be permanent.	Low	Moderate
Motorists (roads)				
A690	Medium	The ZTV predicts some visibility from the road but all within areas where the proposed road would be screened from view by buildings or vegetation. No effects are predicted	None	None
A691	Medium	Construction period. Construction operations and ancillary activities such as site compound, plant and materials storage could be visible in a variety of views form the A691 including close views from adjacent areas and middle-distance views in which activities would be small elements in visually complex views. The scale of the change in the view would vary from small to large and would be temporary (short term)	Low	Negligible
		Post-construction. Earthworks and moving traffic of the northern section of the new road would be episodically visible from the A691 between Sleight's House and Sniperley roundabout. The scale of the change in the view would vary from small to medium and would be permanent.	Low to Medium	Minor to Moderate.
		Residual effects (10 + years) with mitigation: Structural landscaping would screen and assimilate the road to some degree in these views. The scale of the change in the view would be small to medium and would be permanent.	Low to Medium	Minor to Moderate.

A167	Medium	Construction period. The proposals would be generally screened from view by intervening buildings. Construction operations and ancillary activities such as site compound, plant and materials storage would be occasionally visible in between buildings in areas such as the junction with Tollhouse Road where they would be filtered by vegetation or form a small part of visual complex views. The scale of the change in the view would be small and would be temporary (short term).	Low	Minor
		Post-construction. The proposals would be generally screened from view by intervening buildings. The earthworks of the new highway and moving traffic would be occasionally visible in between buildings in areas such as the junction with Tollhouse Road where they would be filtered by vegetation or form a small part of visual complex views. The scale of the change in the view would be small and would be permanent.	Low	Minor
		Residual effects (10 + years) with mitigation: Structural landscaping would screen and assimilate the road. The scale of the change in the view would be low and would be permanent.	Low	Minor
B6302	Medium	Construction period. Construction operations and ancillary activities such as site compound, plant and materials storage could be visible in the vicinity of the roundabout. The scale of the change in the view would be large and would be temporary (short term).	Low	Minor
		Post-construction. The new road in the vicinity of the proposed roundabout would be visible from the section between Relly Bridge and Broompark. Much of the road would be screened from view by topography. The scale of the change in the view would be medium and would be permanent.	Medium	Moderate
		Residual effects (10 + years) with mitigation: Structural landscaping would screen and assimilate the road. The scale of the change in the view would be low and would be permanent.	Low	Minor
C17 Tollhouse Road / Auton Stile	Medium	Construction period. Construction operations and ancillary activities such as site compound, plant and materials storage would be visible in a wide variety views from close views in the immediate vicinity of the junction with the new road to middle distance views from within Bearpark and between Moorsley Banks Farm and the A167, the latter typically filtered by vegetation. The scale of change in the view would vary from small to large but typically medium or large and would be temporary (short term).	Medium	Moderate
		Junction options 1 - 3		

		Post-construction. The earthworks and moving traffic of the new road would be visible in a wide variety views from close views at the junction with the new road where relatively large scale engineered earthworks would be visible at close proximity to middle distance views from within Bearpark and adjacent to the A167 where other sections of the road would be visible, in the latter typically filtered by vegetation. The scale of change in the view would be large overall and would be permanent.	High	**Moderate - Major**
		Residual effects (10 + years) with mitigation: Structural landscaping within the road corridor would help assimilate it in time. The scale of change in the view would remain large compared to its current rural character, and would be permanent	High	**Moderate - Major**
		Junction option 4		
		Post-construction. The earthworks and moving traffic of the new road would be visible in middle distance views from within Bearpark and adjacent to the A167 where other sections of the road would be visible in the latter typically filtered by vegetation. The road bridge over the C17 would be a notable feature. The scale of change in the view would be large overall and would be permanent.	High	**Moderate - Major**
		Residual effects (10 + years) with mitigation: Structural landscaping within and adjacent to the road corridor would screen and assimilate it in wider views. The scale of change in the view would be medium to high overall, compared to its current rural character, and would be permanent.	Medium -high	Moderate to **Moderate - Major**
C18	Medium	Construction period. The proposals would be largely screened from view by intervening vegetation. Construction operations and ancillary activities such as site compound, plant and materials storage could be visible in shallow views on the northern skyline as small elements in visually complex views. The scale of the change in the view would be small and would be temporary (short term).	Low	Minor
		Post-construction. The proposals would be largely screened from view by intervening vegetation. The southern cutting would be visible in shallow views on the northern skyline as a small element in visually complex views at distances generally >1000m. The scale of the change in the view would be small and would be permanent.	Low	Minor
		Residual effects (10 + years) with mitigation: Structural landscaping would assimilate the cutting further into the landscape. The scale of the change in the view would be small and would be permanent.	Low	Minor

C98 Lowe's Barn Bank	Medium	Construction period. The proposals would be largely screened from view by roadside vegetation but there would be 'keyhole' views of the area of the southern cutting from a short section falling to the A690. Construction operations and ancillary activities could be visible on the northern skyline as small elements in visually complex views at distances of 800-1000m. The scale of the change in the view would be small and would be temporary (short term).	Low	Minor
		Post-construction. A short section of the road would be visible in the view described above. The scale of the change in the view would be small and would be permanent.	Low	Minor
		Residual effects (10 + years) with mitigation: Structural landscaping would assimilate the cutting further into the landscape. The scale of the change in the view would be small and would be permanent.	Low	Minor
U19.12 Trout Lane	Medium	The ZTV predicts some visibility from the road but all within areas where the proposed road would be screened from view by vegetation. No effects are predicted	None	None
U26.6 Brandon Lane	Medium	The ZTV predicts some visibility from the road but all within areas where the proposed road would be screened from view by vegetation. No effects are predicted	None	None