Landscape Proof of Evidence Appendices

In Respect of Outline Planning Application for up to 300 Residential Dwellings, Associated Access, Rail Station Car Park, Green Infrastructure and Sustainable Drainage Systems (all matters reserved except for access)

At Land South of Longsight Road, Langho

On behalf of Hallam Land Management Limited

Date: 31 March 2026 | Pegasus Ref: P24-2318

PINS Ref: 6002485 LPA Ref: 3/2025/0196

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Appendix 1: Methodology

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LANDSCAPE AND VISUAL IMPACT ASSESSMENT METHODOLOGY

Contents.

1. Landscape and Visual Impact Assessment Methodology

1.1. The Analysis is based on this methodology which has been undertaken with regards to best practice as outlined within the following publications:

- Guidelines for Landscape and Visual Impact Assessment (3rd Edition, 2013) - Landscape Institute / Institute of Environmental Management and Assessment;
- Notes and Clarifications on Aspects of Guidelines for Landscape and Visual Impact Assessment Third Edition (GLVIA3) - Technical Guidance Note LITGN-2024-01 (2024);
- Visual Representation of Development Proposals (2019) - Landscape Institute Technical Guidance Note 06/19;
- An Approach to Landscape Character Assessment (2014) - Natural England;
- An Approach to Landscape Sensitivity Assessment – To Inform Spatial Planning and Land Management (2019) - Natural England.
- Reviewing Landscape Visual Impact Assessments (LVIAs and Landscape and Visual appraisals (LVAs) Technical Guidance Note 1/20 Landscape Institute.
- Assessing Landscape Value Outside National Designations, Technical Guidance Note 02/21 - Landscape Institute (2021).

1.2. GLVIA3 states within paragraph 1.1 that "Landscape and Visual Impact Assessment (LVIA) is a tool used to identify and assess the significance of and the effects of change resulting from development on both the landscape as an environmental resource in its own right and on people's views and visual amenity."[1]

1.3. GLVIA3 also states within paragraph 1.17 that when identifying landscape and visual effects there is a "need for an approach that is in proportion to the scale of the project that is being assessed and the nature of the likely effects. Judgement needs to be exercised at all stages in terms of the scale of investigation that is appropriate and proportional."[2]

1.4. GLVIA3 recognises within paragraph 2.23 that "professional judgement is a very important part of LVIA. While there is some scope for quantitative measurement of some relatively objective matters much of the assessment must rely on qualitative judgements"[3] undertaken by a landscape consultant or a Chartered Member of the Landscape Institute (CMLI).

1.5. GLVIA3 notes in paragraph 1.3 that "LVIA may be carried out either formally, as part of an Environmental Impact Assessment (EIA), or informally, as a contribution to the 'appraisal' of development proposals and planning applications"[4] Although the proposed development is not subject to an EIA requiring an assessment of the likely significance of effects, this

[1] Para 1.1, Page 4, GLVIA, 3rd Edition
[2] Para 1.17, Page 9, GLVIA, 3rd Edition
[3] Para 2.23, Page 21, GLVIA, 3rd Edition
[4] Para 1.3, Page 4, GLVIA, 3rd Edition

assessment is also titled as an LVIA rather than an 'appraisal' in the interests of common understanding with other planning consultants.

1.6. The effects on cultural heritage and ecology are not considered within this LVIA.

Study Area

1.7. The study area for this LVIA covers a 3km radius from the site. However, the main focus of the assessment was taken as a radius of 1km from the site as it is considered that even with clear visibility the proposals would not be perceptible in the landscape beyond this distance.

Effects Assessed

1.8. Landscape and visual effects are assessed through professional judgements on the sensitivity of landscape elements, character and visual receptors combined with the predicted magnitude of change arising from the proposals. The landscape and visual effects have been assessed in the following sections:

- Effects on landscape elements;
- Effects on landscape character; and
- Effects on visual amenity.

1.9. Sensitivity is defined in GLVIA3 as "a term applied to specific receptors, combining judgments of susceptibility of the receptor to a specific type of change or development proposed and the value related to that receptor."[5] Various factors in relation to the value and susceptibility of landscape elements, character, visual receptors or representative viewpoints are considered below and cross referenced to determine the overall sensitivity as shown in Table 1:

Table 1, Overall sensitivity of landscape and visual receptors

		VALUE		
SUSCEPTIBILITY		HIGH	MEDIUM	LOW
	HIGH	High	High	Medium
	MEDIUM	High	Medium	Medium
	LOW	Medium	Medium	Low

1.10. Magnitude of change is defined in GLVIA3 as "a term that combines judgements about the size and scale of the effect, the extent over which it occurs, whether it is reversible or irreversible and whether it is short or long term in duration."[6] Various factors contribute to

[5] Glossary, Page 158, GLVIA, 3rd Edition
[6] Glossary, Page 158, GLVIA, 3rd Edition

the magnitude of change on landscape elements, character, visual receptors and representative viewpoints.

1.11. The sensitivity of the landscape and visual receptor and the magnitude of change arising from the proposals are cross referenced in Table 11 to determine the overall degree of landscape and visual effects.

2. Effects on Landscape Elements

2.1. The effects on landscape elements includes the direct physical change to the fabric of the land, such as the removal of woodland, hedgerows or grassland to allow for the proposals.

Sensitivity of Landscape Elements

2.2. Sensitivity is determined by a combination of the value that is attached to a landscape element and the susceptibility of the landscape element to changes that would arise as a result of the proposals – see pages 88-90 of GLVIA3. Both value and susceptibility are assessed on a scale of high, medium or low.

2.3. The criteria for assessing the value of landscape elements and landscape character is shown in Table 2:

Table 2, Criteria for assessing the value of landscape elements and landscape character

HIGH	Designated landscape including but not limited to World Heritage Sites, National Parks, National Landscapes (formerly Areas of Outstanding Natural Beauty) considered to be an important component of the country's character or non-designated landscape of a similar character and quality. Landscape condition is good and components are generally maintained to a high standard. In terms of seclusion, enclosure by land use, traffic and movement, light pollution and absence of major built infrastructure, the landscape has an elevated level of tranquility. Rare or distinctive landscape elements and features are key components that contribute to the landscape character of the area.
MEDIUM	Undesignated landscape including urban fringe and rural countryside considered to be a distinctive component of the national or local landscape character. Landscape condition is fair and components are generally well maintained. In terms of seclusion, enclosure by land use, traffic and movement, light pollution and some major built infrastructure, the landscape has a moderate level of tranquility. Rare or distinctive landscape elements and features are notable components that contribute to the character of the area.
LOW	Undesignated landscape including urban fringe and rural countryside considered to be of unremarkable character. Landscape condition may be poor and components poorly maintained or damaged. In terms of seclusion, enclosure by land use, traffic and movement, light pollution and significant major built infrastructure, the landscape has limited levels of tranquility. Rare or distinctive elements and features are not notable components that contribute to the landscape character of the area.

2.4. The criteria for assessing the susceptibility of landscape elements and landscape character is shown in Table 3:

Table 3, Criteria for assessing landscape susceptibility

HIGH	Scale of enclosure – landscapes with a low capacity to accommodate the type of development being proposed owing to the interactions of topography, vegetation cover, built form, etc. Nature of land use – landscapes with no or little existing reference or context to the type of development being proposed. Nature of existing elements – landscapes with components that are not easily replaced or substituted (e.g. ancient woodland, mature trees, historic parkland, etc). Nature of existing features – landscapes where detracting features, major infrastructure or industry is not present or where present has a limited influence on landscape character.
MEDIUM	Scale of enclosure – landscapes with a medium capacity to accommodate the type of development being proposed owing to the interactions of topography, vegetation cover, built form, etc. Nature of land use – landscapes with some existing reference or context to the type of development being proposed. Nature of existing elements – landscapes with components that are easily replaced or substituted. Nature of existing features – landscapes where detracting features, major infrastructure or industry is present and has a noticeable influence on landscape character.
LOW	Scale of enclosure – landscapes with a high capacity to accommodate the type of development being proposed owing to the interactions of topography, vegetation cover, built form, etc. Nature of land use – landscapes with extensive existing reference or context to the type of development being proposed. Nature of existing features – landscapes where detracting features or major infrastructure is present and has a dominating influence on the landscape.

2.5. Various factors in relation to the value and susceptibility of landscape elements are assessed and cross referenced to determine the overall sensitivity as shown in Table 1.

2.6. Sensitivity is defined in GLVIA3 as "a term applied to specific receptors, combining judgments of susceptibility of the receptor to a specific type of change or development proposed and the value related to that receptor."[7] The definitions for high, medium, low landscape sensitivity are shown in Table 4:

[7] Glossary, Page 158, GLVIA, 3rd Edition

Table 4, Criteria for assessing landscape sensitivity

HIGH	Landscape element or character area defined as being of high value combined with a high or medium susceptibility to change. Landscape element or character area defined as being of medium value combined with a high susceptibility to change.
MEDIUM	Landscape element or character area defined as being of high value combined with a low susceptibility to change. Landscape element or character area defined as being of medium value combined with a medium or low susceptibility to change. Landscape element or character area defined as being of low value combined with a high or medium susceptibility to change.
LOW	Landscape element or character area defined as being of low value combined with a low susceptibility to change.

Magnitude of Change on Landscape Elements

2.7. Professional judgement has been used to determine the magnitude of change on individual landscape elements within the site as shown in Table 5:

Table 5, Criteria for assessing magnitude of change for landscape elements

HIGH	Substantial loss/gain of a landscape element.
MEDIUM	Partial loss/gain or alteration to part of a landscape element.
LOW	Minor loss/gain or alteration to part of a landscape element.
NEGLIGIBLE	No loss/gain or very limited alteration to part of a landscape element.

3. Effects on Landscape Character

3.1. Landscape character is defined as the "distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another, rather than better or worse."[8]

3.2. The assessment of effects on landscape character considers how the introduction of new landscape elements physically alters the landform, landcover, landscape pattern and perceptual attributes of the site or how visibility of the proposals changes the way in which the landscape character is perceived.

Sensitivity of Landscape Character

3.3. Sensitivity is determined by a combination of the value that is attached to a landscape and the susceptibility of the landscape to changes that would arise as a result of the proposals – see pages 88-90 of GLVIA3. Both value and susceptibility are assessed on a scale of high, medium or low.

3.4. The criteria for assessing the value of landscape character is shown in Table 2.

3.5. The criteria for assessing the susceptibility of landscape character is shown in Table 3.

3.6. The overall sensitivity is determined through cross referencing the value and susceptibility of landscape character as shown in Table 1.

Magnitude of Change on Landscape Character

3.7. Professional judgement has been used to determine the magnitude of change on landscape character as shown in Table 6:

Table 6, Criteria for assessing magnitude of change on landscape character

HIGH	Introduction of major new elements into the landscape or some major change to the scale, landform, landcover or pattern of the landscape.
MEDIUM	Introduction of some notable new elements into the landscape or some notable change to the scale, landform, landcover or pattern of the landscape.
LOW	Introduction of minor new elements into the landscape or some minor change to the scale, landform, landcover or pattern of the landscape.
NEGLIGIBLE	No notable or appreciable introduction of new elements into the landscape or change to the scale, landform, landcover or pattern of the landscape.

[8] Glossary, Page 157, GLVIA, 3rd Edition

4. Effects on Visual Amenity

4.1. Visual amenity is defined within GLVIA3 as the "overall pleasantness of the views people enjoy of their surroundings, which provides an attractive visual setting or backdrop for the enjoyment of activities of the people living, working, recreating, visiting or travelling through an area." [9]

4.2. The effects on visual amenity considers the changes in views arising from the proposals in relation to visual receptors including settlements, residential properties, transport routes, recreational facilities and attractions; and representative viewpoints or specific locations within the study area as agreed with the Local Planning Authority.

Sensitivity of Visual Receptors

4.3. Sensitivity is determined by a combination of the value that is attached to a view and the susceptibility of the visual receptor to changes in that view that would arise as a result of the proposals – see pages 113-114 of GLVIA3. Both value and susceptibility are assessed on a scale of high, medium or low.

4.4. The criteria for assessing the value of views are shown in Table 7:

Table 7, Criteria for assessing the value of views

HIGH	Views with high scenic value within designated landscapes including but not limited to World Heritage Sites, National Parks, National Landscape (formerly Areas of Outstanding Natural Beauty), etc. Likely to include key viewpoints on OS maps or reference within guidebooks, provision of facilities, presence of interpretation boards, etc.
MEDIUM	Views with moderate scenic value within undesignated landscape including urban fringe and rural countryside.
LOW	Views with unremarkable scenic value within undesignated landscape with partly degraded visual quality and detractors.

4.5. The criteria for assessing the susceptibility of views are shown in Table 8:

Table 8, Criteria for assessing visual susceptibility

HIGH	Includes occupiers of residential properties and people engaged in recreational activities in the countryside using public rights of way (PROW).
MEDIUM	Includes people engaged in outdoor sporting activities and people travelling through the landscape on minor roads and trains.
LOW	Includes people at places of work e.g. industrial and commercial premises and people travelling through the landscape on major roads and motorways.

4.6. Sensitivity is defined in GLVIA3 as "a term applied to specific receptors, combining judgments of susceptibility of the receptor to a specific type of change or development

[9] Page 158, Glossary, GLVIA3

proposed and the value related to that receptor."[10] The definitions for high, medium, low visual sensitivity are shown in Table 9:

Table 9, Criteria for assessing visual sensitivity

HIGH	Visual receptor defined as being of high value combined with a high or medium susceptibility to change. Visual receptor defined as being of medium value combined with a high susceptibility to change.
MEDIUM	Visual receptor defined as being of high value combined with a low susceptibility to change. Visual receptor defined as being of medium value combined with a medium or low susceptibility to change. Visual receptor defined as being of low value combined with a high or medium susceptibility to change.
LOW	Visual receptor defined as being of low value combined with a low susceptibility to change.

Magnitude of Change on Visual Receptors

4.7. Professional judgement has been used to determine the magnitude of change on visual receptors as shown in Table 10:

Table 10, Criteria for assessing magnitude of change for visual receptors

HIGH	Major change in the view that has a substantial influence on the overall view.
MEDIUM	Some change in the view that is clearly visible and forms an important but not defining element in the view.
LOW	Some change in the view that is appreciable with few visual receptors affected.
NEGLIGIBLE	No notable change in the view.

[10] Glossary, Page 158, GLVIA, 3rd Edition

5. Significance of Landscape And Visual Effects

5.1. The likely significance of effects is dependent on all of the factors considered in the sensitivity and the magnitude of change upon the relevant landscape and visual receptors. These factors are assimilated to assess whether or not the proposed development will have a likely significant or not significant effect. The variables considered in the evaluation of the sensitivity and the magnitude of change is reviewed holistically to inform the professional judgement of significance.

5.2. Within Table 11 below, the major effects highlighted in grey are considered to be significant in terms of the EIA Regulations. It should be noted that whilst an individual effect may be significant, it does not necessarily follow that the proposed development would be unacceptable in the planning balance. The cross referencing of the sensitivity and magnitude of change on the landscape and visual receptor determines the significance of effect as shown in Table 11:

Table 11, Significance of landscape and visual effects

		Sensitivity		
		HIGH	**MEDIUM**	**LOW**
Magnitude of Change	**HIGH**	Major	Major	Moderate
	MEDIUM	Major	Moderate	Minor
	LOW	Moderate	Minor	Minor
	NEGLIGIBLE	Negligible	Negligible	Negligible

6. Typical Descriptors of Landscape Effects

6.1. The typical descriptors of the landscape effects are detailed within Table 12:

Table 12, Typical Descriptors of Landscape Effects

MAJOR BENEFICIAL	Substantially: - enhance the character (including value) of the landscape; - enhance the restoration of characteristic features and elements lost as a result of changes from inappropriate management or development; - enable a sense of place to be enhanced.
MODERATE BENEFICIAL	Moderately: - enhance the character (including value) of the landscape; - enable the restoration of characteristic features and elements partially lost or diminished as a result of changes from inappropriate management or development; - enable a sense of place to be restored.
MINOR BENEFICIAL	Slightly: - complement the character (including value) of the landscape; - maintain or enhance characteristic features or elements; - enable some sense of place to be restored.
NEGLIGIBLE	The proposed changes would (on balance) maintain the character (including value) of the landscape and would: - be in keeping with landscape character and blend in with characteristic features and elements; - Enable a sense of place to be maintained.
NO CHANGE	The proposed changes would not be visible and there would be no change to landscape character.
MINOR ADVERSE	Slightly: - not quite fit the character (including value) of the landscape; - be a variance with characteristic features and elements; - detract from the sense of place.
MODERATE ADVERSE	Moderately: - conflict with the character (including value) of the landscape; - have an adverse effect on characteristic features or elements; - diminish a sense of place.
MAJOR ADVERSE	Substantially: - be at variance with the character (including value) of the landscape; - degrade or diminish the integrity of a range of characteristic features and elements or cause them to be lost; - change a sense of place.

7. Typical Descriptors of Visual Effects

7.1. The typical descriptors of the visual effects are detailed within Table 13:

Table 13, Typical Descriptors of Visual Effects

MAJOR BENEFICIAL	Proposals would result in a major improvement in the view.
MODERATE BENEFICIAL	Proposals would result in a clear improvement in the view.
MINOR BENEFICIAL	Proposals would result in a slight improvement in the view.
NEGLIGIBLE	The proposed changes would be in keeping with, and would maintain, the existing view or where (on balance) the proposed changes would maintain the general appearance of the view (which may include adverse effects which are offset by beneficial effects for the same receptor) or due to distance from the receptor, the proposed change would be barely perceptible to the naked eye.
NO CHANGE	The proposed changes would not be visible and there would be no change to the view.
MINOR ADVERSE	Proposals would result in a slight deterioration in the view.
MODERATE ADVERSE	Proposals would result in a clear deterioration in the view.
MAJOR ADVERSE	Proposals would result in a major deterioration in the view.

8. Nature of Effects

8.1. GLVIA3 includes an entry that states *"effects can be described as positive or negative (or in some cases neutral) in their consequences for views and visual amenity."*[11] GLVIA3 does not, however, state how negative or positive effects should be assessed, and this therefore becomes a matter of professional judgement supported by site specific justification within the LVIA.

[11] Para 6.29, Page 113, GLVIA 3rd Edition

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Town & Country Planning Act 1990 (as amended)
Planning and Compulsory Purchase Act 2004

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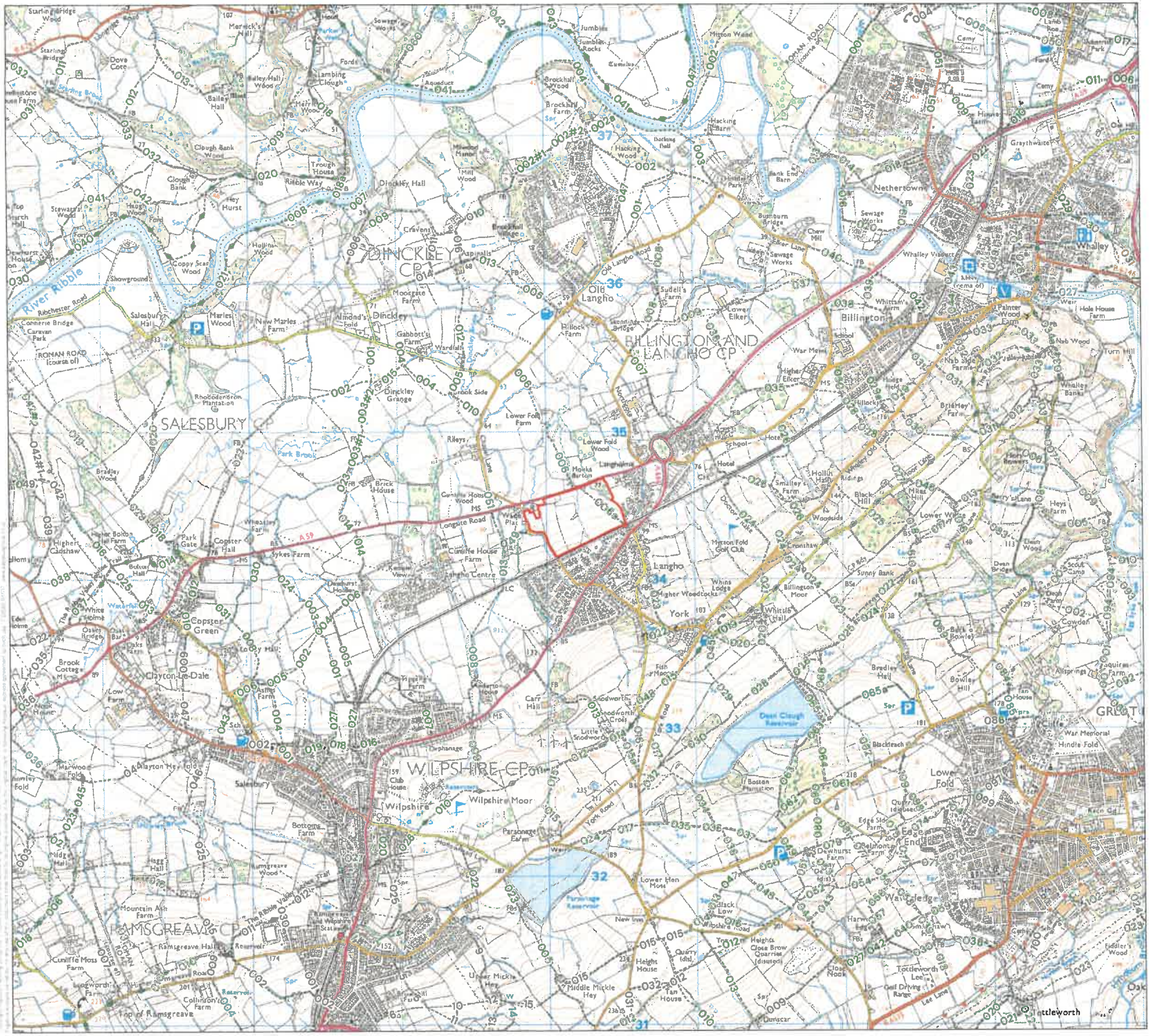
Appendix 2: Site Location Plan with Public Right of Way References



KEY

Site Boundary

REV	DATE	DESCRIPTION
-	-	-

SITE LOCATION PLAN WITH PROW REFERENCES

LONGSIGHT ROAD, LANGHO

HALLAM LAND MANAGEMENT LTD

DATE	SCALE	DRAWN	APPROVED
26/03/2026	1:25,000@A3	EN/NC	AC

SHEET	REV	N	0	0.5KM
-	A			

DRAWING NUMBER
P24_2318_EN_15

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Appendix 3: Landscape Masterplan (Refused Application Scheme)

Issue:

28/02/2025 A Amends in line with new layout

DATE NO REVISION NOTE

Landscape Masterplan

LONGSIGHT ROAD, LANGHO

CLIENT
HALLAM LAND MANAGEMENT LTD.

DATE	SCALE	TEAM	APPRVD
13/01/2025	1:1000 @A1	LAB	RB/ FH

DRAWING NUMBER
P24-2318_EN_07_A_01

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Appendix 4: Landscape Masterplan (Revised Appeal Scheme)


Issue
INDICATIVE PLANT SCHEDULE
PROPOSED TREE PLANTING
Species | Form | Girth | Height cm | Clear Stem | Root Condition
Acer campestre | EHS | 16-18 | 400-450 | Min. 200 | RB
Alnus glutinosa | EHS | 14-16 | 350-450 | Min. 200 | RB
Betula pendula | EHS | 14-16 | 350-450 | Min. 200 | RB
Corylus avellana (ms) | Multi Stem | - | 250-300 | - | 75L
Prunus avium | HS | 12-14 | 250-300 | Min. 200 | RB
Quercus robur | EHS | 14-16 | 350-450 | Min. 200 | RB
Sorbus aria | HS | 12-14 | 250-300 | Min. 200 | RB
Sorbus aucuparia | EHS | 14-16 | 400-450 | Min. 200 | RB
STRUCTURAL PLANTING MIX
To be planted 2/m2
Trees
Species | Mix % | Height cm | Girth cm | Form | Root Condition
Acer campestre | 10 | 300-350 | 10-12 | Selected standard | RB
Betula pendula | 10 | 300-350 | 10-12 | Selected standard | RB
Crataegus monogyna | 5 | 300-350 | 10-12 | Selected standard | RB
Quercus robur | 20 | 300-350 | 10-12 | Selected standard | RB
Sorbus aria | 10 | 300-350 | 10-12 | Selected standard | RB
Understory
Species | Mix % | Height cm | Habit | Age + times transplanted | Root condition
Cornus sanguinea | 10 | 60-80 | Branched min. 3 breaks | 1+2 | B
Crataegus monogyna | 20 | 80-80 | Branched min. 3 breaks | 1+2 | B
Euonymus europaea | 5 | 60-80 | Branched min. 3 breaks | 1+2 | B
Ilex aquifolium | 5 | 60-80 | Branched min. 3 breaks | 1+2 | B
Sambucus nigra | 5 | 60-80 | Branched min. 3 breaks | 1+2 | B
PROPOSED NATIVE SHRUB PLANTING MIX
To be planted 2/m2
Species | Mix % | Height cm | Form | Root Condition
Cornus sanguinea | 5 | 60-80 | Branched | B
Crataegus monogyna | 50 | 60-80 | Branched | B
Euonymus europaea | 5 | 60-80 | Branched | B
Ilex aquifolium | 20 | 80-80 | Leader with laterals | B
Rosa canina | 10 | 60-80 | Branched | B
Viburnum opulus | 10 | 60-80 | Branched | B
PROPOSED NATIVE HEDGEROW PLANTING
To be planted at 7 per linear metre in staggered rows
Species | Mix % | Height cm | Habit | Root Condition
Acer campestre | 10 | 60-80 | Feathered | B
Cornus sanguinea | 5 | 40-60 | Branched | B
Corylus avellana | 15 | 60-80 | Feathered | B
Crataegus monogyna | 40 | 80-80 | Feathered | B
Ilex aquifolium | 10 | 60-80 | Leader with laterals | B
Ulmus glabra | 5 | 40-60 | Transplant | B
Viburnum opulus | 15 | 60-80 | Branched | B
Langholme
Monks Barton
Long range views across Ribble Valley
A59 Longsight Road
SuDS will be incorporated to the north of the development to provide a set back from the A59. There will be an opportunity to include enhanced wetland and marginal planting, a seasonally wet meadow mix and native shrub planting to enhance the site wide biodiversity.
Green Nook Wood
The existing woodland will be retained and the built form will be set outside the root protection area.
Attenuation Basin
Feature tree and bulb planting will mark the vehicular entrance and create an attractive gateway into the site. Structural planting is proposed along the A59 to filter views of the development from the wider area.
Wildflower rich grassland to be retained along the bank of the watercourse
Public open space is located close to the main pedestrian entrance and accessible from the retained footpath. Scattered oak trees and wildflower meadow will complement the existing tree planting. A Local Equipped Area for Play is proposed in this area and will provide a range of formal and informal play opportunities.
A Local Area for Play (LAP) is located within the public open space to the north of the development to provide opportunities for play close to home
Withdmans
New structural planting to provide a buffer to the adjoining farmhouse properties and strengthen the screening to the site boundary.
Native tree and shrub planting along the site boundary will filter views into the development from neighbouring properties, with wildflower seed mixes sown along the watercourse and existing woodland to enhance the opportunities for wildlife.
Indicative provision for Langho Station
Enhanced arrival zone from station underpass to incorporate car parking provision. Feature trees, ornamental shrub and bulb planting will be used to add seasonal colour, creating a welcoming pedestrian entrance to the site.
Langho Station
Potential Grassland translocation area
Public open space to the west of the site will be an enclosed wooded space with links to the adjoining green spaces. A footpath with regular seating will lead through the open space and planting and includes scattered trees, native shrubs and wildflower meadow. This will create an informal space for residents to connect to nature and the planting typologies will be designed for BNG to provide further opportunities for wildlife.
Railway line
Moorland Road
Street trees will be located within grass verges to create a formal, structured character through the site. Feature trees and existing tree planting will be used to create focal points within open spaces, at key junctions and at the end of streets. Swathes of bulb planting will be planted beneath to add seasonal colour and interest.
The Central Wooded Clough will be protected with a buffer from the development to the woodland, stream slopes and individual important trees. The area will be enhanced with additional tree and shrub planting consisting of oak, silver birch and willow to create green corridors across the site.
The development will be sufficiently set back from existing properties to maintain open views across the Ribble Valley where possible.
Whalley Road
Bushburn Drive
KEY
Site boundary
Existing site vegetation with RPAs to be retained to BS 5837
Existing vegetation to be removed
Existing watercourse
Existing PRoW
Proposed diversion of PRoW
Proposed structural planting to site boundary
Proposed feature tree planting
Proposed screen tree planting
Proposed open space tree planting
Proposed native hedgerow
Proposed native shrub planting
Flowering Lawn - e.g. EL1 mix by Emorsgate or similar
Long grassland - e.g. EM10 mix by Emorsgate or similar
Wildflower meadow - e.g. EM2 mix by Emorsgate or similar
Hedgerow mixture - e.g. EH1 mix by Emorsgate or similar
Potential grassland translocation area
Seasonally wet meadow mix within attenuation basin - e.g. EM8 mix by Emorsgate or similar
Proposed footpaths within public open space - sections of footpath within RPAs to be no dig construction in accordance with AMS recommendations
Proposed play area
10/11/2025 B Updated to revised layout and ecologist comments
28/02/2026 A Amends in line with new layout
DATE NO REVISION NOTE
Landscape Masterplan
LONGSIGHT ROAD, LANGHO
CLIENT
HALLAM LAND MANAGEMENT LTD.
DATE 10/11/2025
SCALE 1:1000 @A1
TEAM LAB
APPRVD KC
DRAWING NUMBER
P24-2318_EN_07_B
PEGASUS GROUP
N
0 25 50 m
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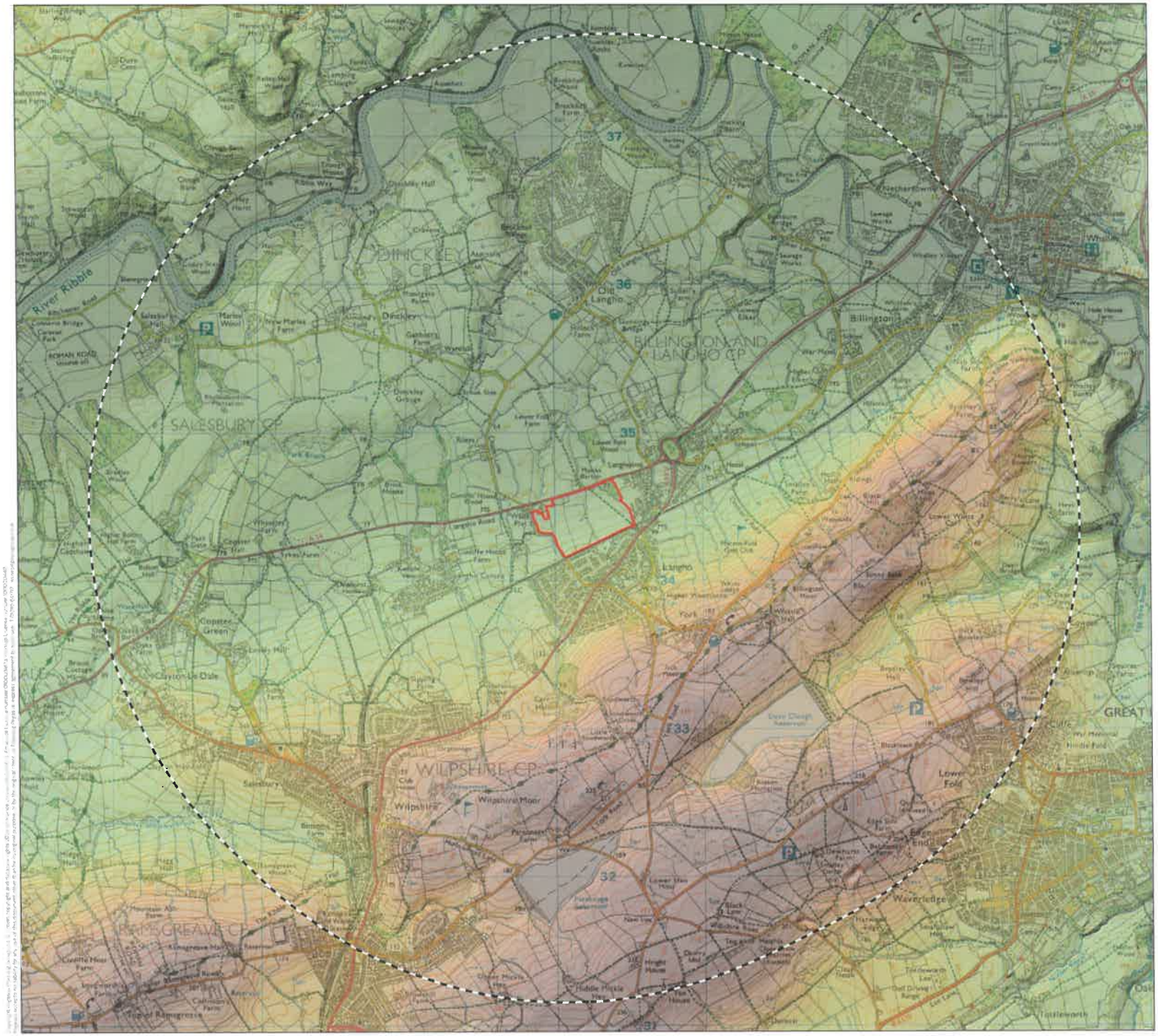
Appendix 5: Topography Plan



KEY

- Site Boundary
- 3km Buffer

OS Terrain 5 DTM

- 220m
- 40m

REV	DATE	DESCRIPTION
B	11/11/24	REVISED SITE BOUNDARY

TOPOGRAPHICAL PLAN

LONGSIGHT ROAD, LANGHO

HALLAM LAND MANAGEMENT LTD

DATE	SCALE	DRAWN	APPROVED
04/03/2026	1:25,000@A3	EN/RL	FH

SHEET	REV	N	0	0.5KM
-	B			

DRAWING NUMBER
P24_2318_EN_05

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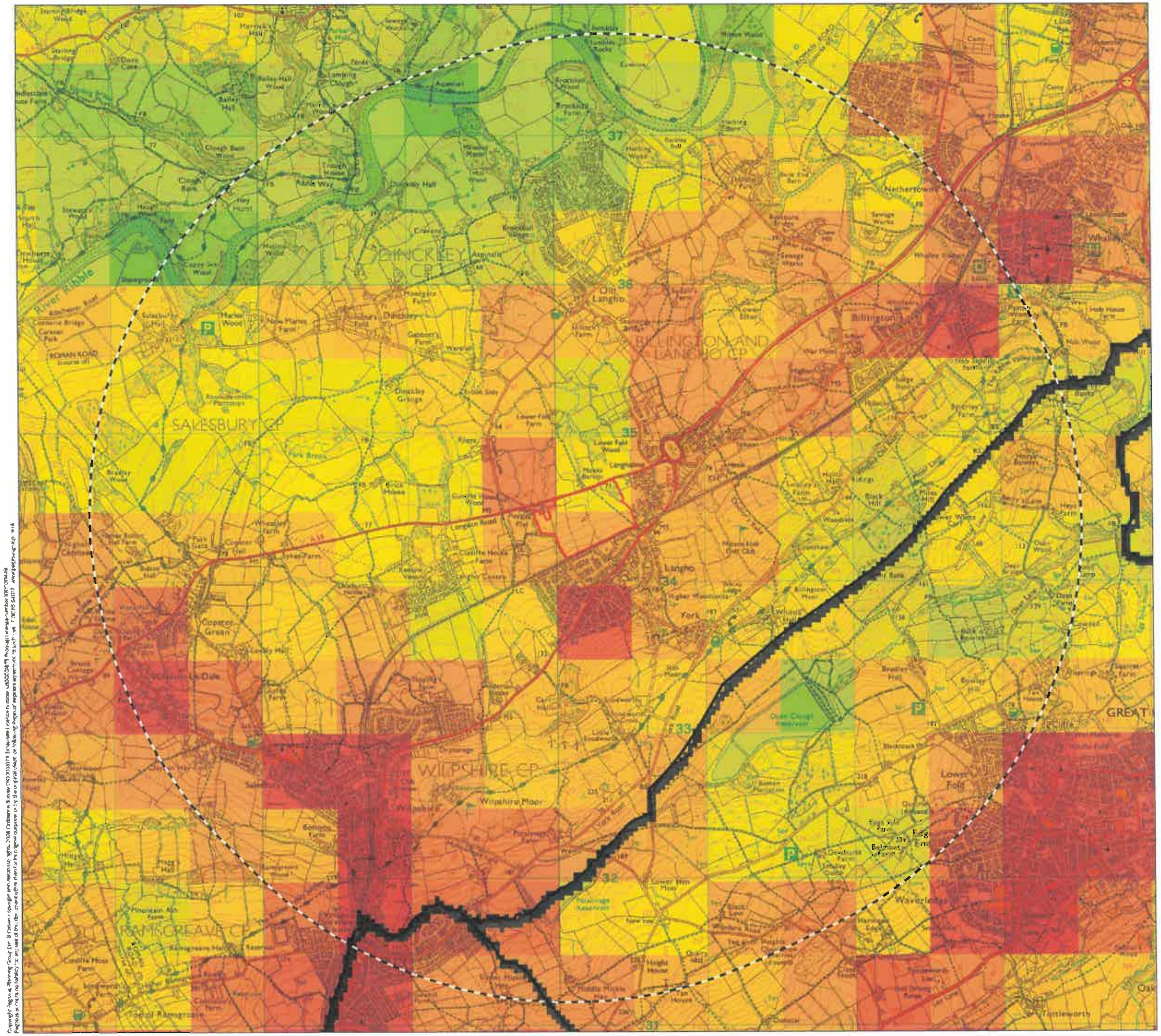
Appendix 6: Tranquility Plan



KEY

- Site Boundary
- 3km Buffer
- District Boundary
- Most tranquil
- Least tranquil

Reproduced courtesy of the Campaign to Protect Rural England. Revised edition 2007.

REV	DATE	DESCRIPTION

TRANQUILLITY PLAN

LONGSIGHT ROAD, LANGHO

HALLAM LAND MANAGEMENT LTD

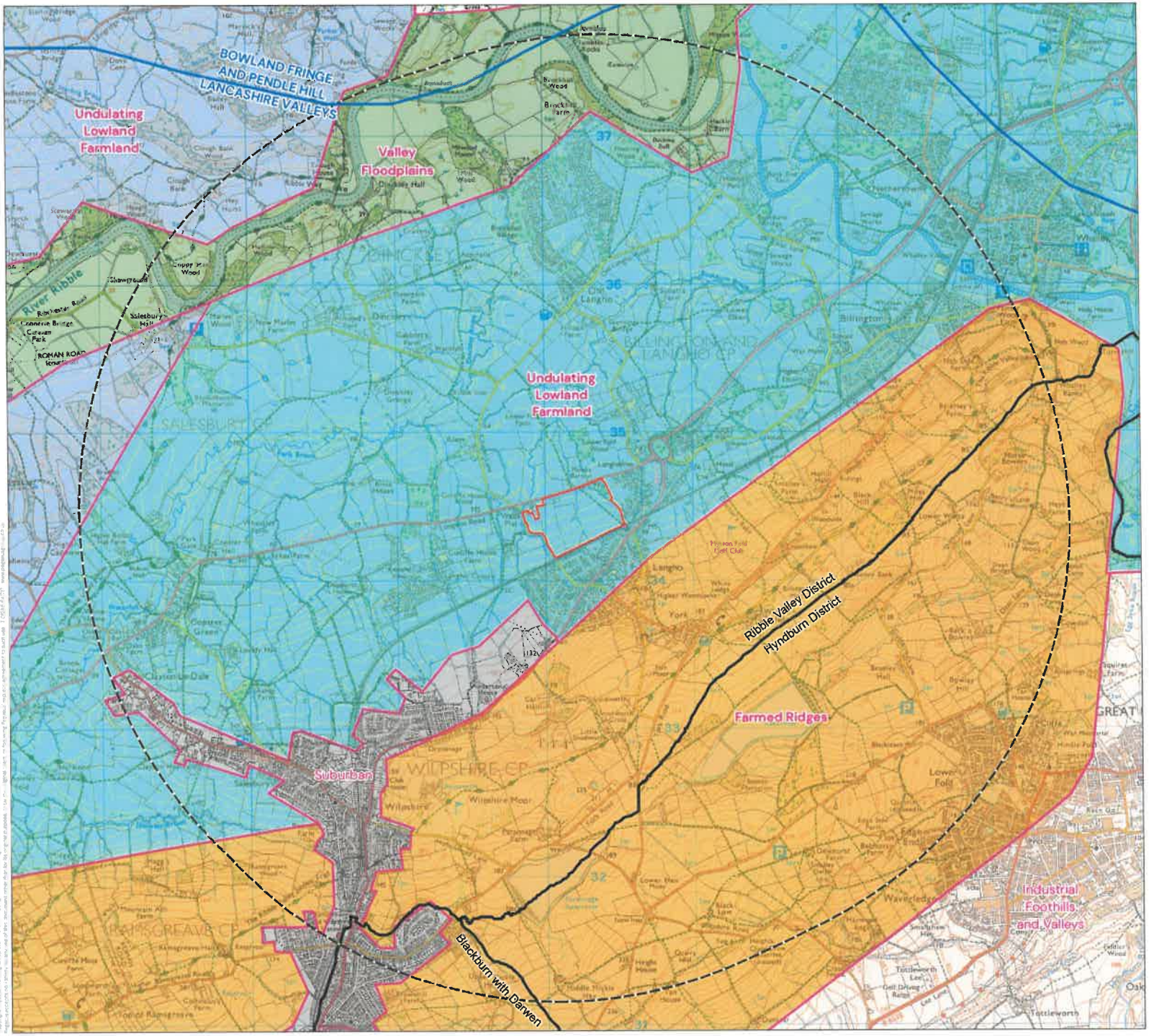
DATE	SCALE	DRAWN	APPROVED
04/03/2026	1:25,000@A3	CS	AC

SHEET	REV	N	0	0.5KM
-	A			

DRAWING NUMBER
P24_2318_EN_13

PEGASUS GROUP

Appendix 7: Landscape Character Plan



KEY

- Site Boundary
- 3km Buffer
- District Boundary
- National Landscape Character Areas

Lancashire Landscape Character Assessment (2000)

- Landscape Character Types

Landscape Character Areas

- Calder Valley
- Lower Ribble
- Lower Ribble Valley
- Lower Ribblesdale (Clitheroe to Gisburn)
- Mellor Ridge
- Suburban

REV	DATE	DESCRIPTION
B	11/11/24	REVISED SITE BOUNDARY

LANDSCAPE CHARACTER PLAN

LONGSIGHT ROAD, LANGHO

HALLAM LAND MANAGEMENT LTD

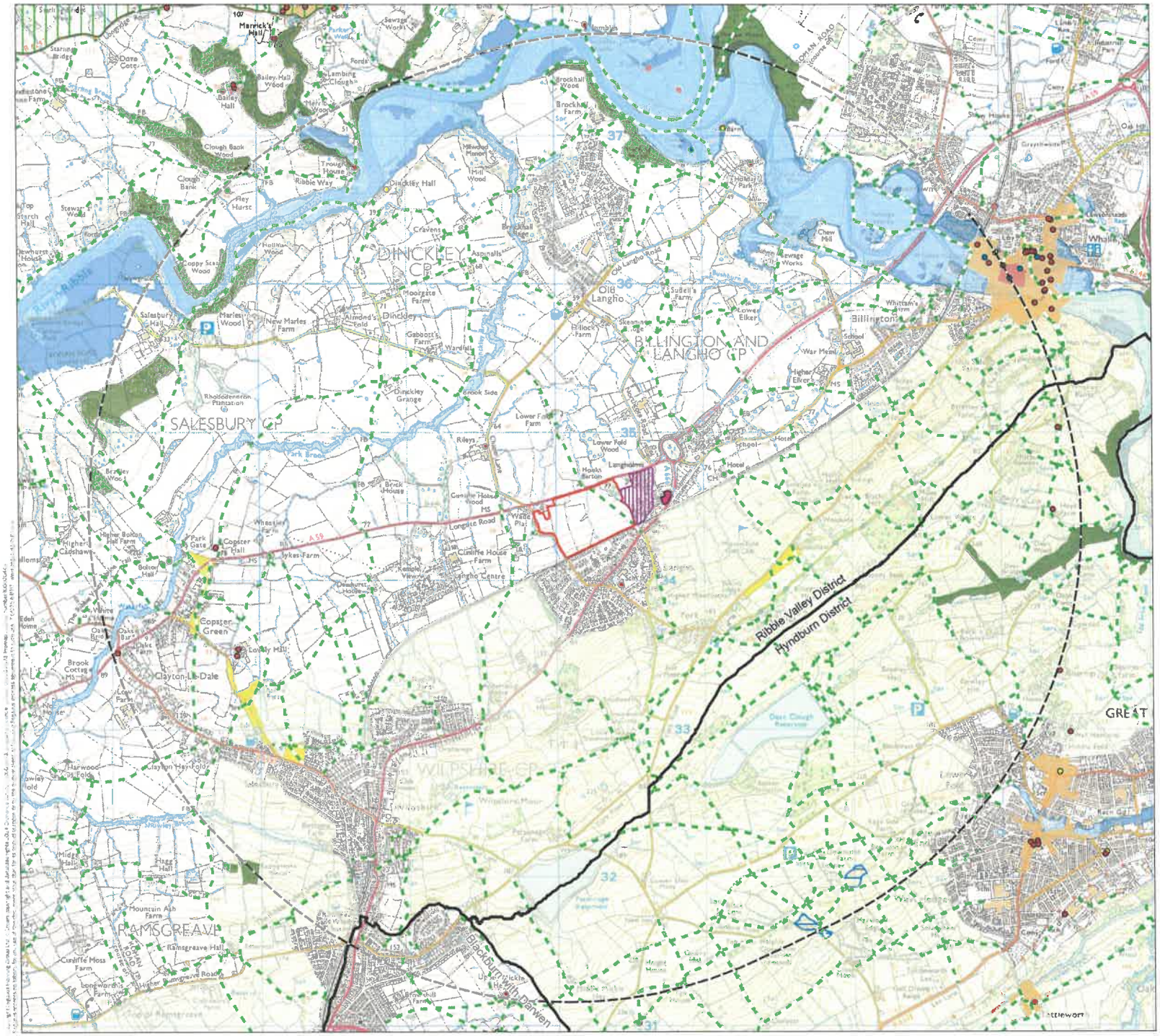
DATE	SCALE	DRAWN	APPROVED
11/11/2024	1:25,000@A3	EN/RL	FH

SHEET	REV	N	0	0.5 KM
-	B			

DRAWING NUMBER
P24_2318_EN_04

PEGASUS GROUP

Appendix 8: Environmental Designations Plan



KEY

- Site Boundary
- 3km Buffer
- District Boundary
- Grade I Listed Building
- Grade II* Listed Building
- Grade II Listed Building
- Public Rights of Way
- CRoW Access Land
- National Landscapes
- Scheduled Monuments
- Conservation Area
- Sites of Special Scientific Interest
- Ancient Woodland
- Green Belt
- EA Flood Zone 3
- EA Flood Zone 2

Ribble Valley Borough Council - Housing and Economic Development DPD Proposals Map

- Committed Housing Site (DS1)
- Housing Allocation Site (HAL6)

REV	DATE	DESCRIPTION
B	11/11/24	REVISED SITE BOUNDARY

ENVIRONMENTAL DESIGNATION PLAN

LONGSIGHT ROAD, LANGHO

HALLAM LAND MANAGEMENT LTD

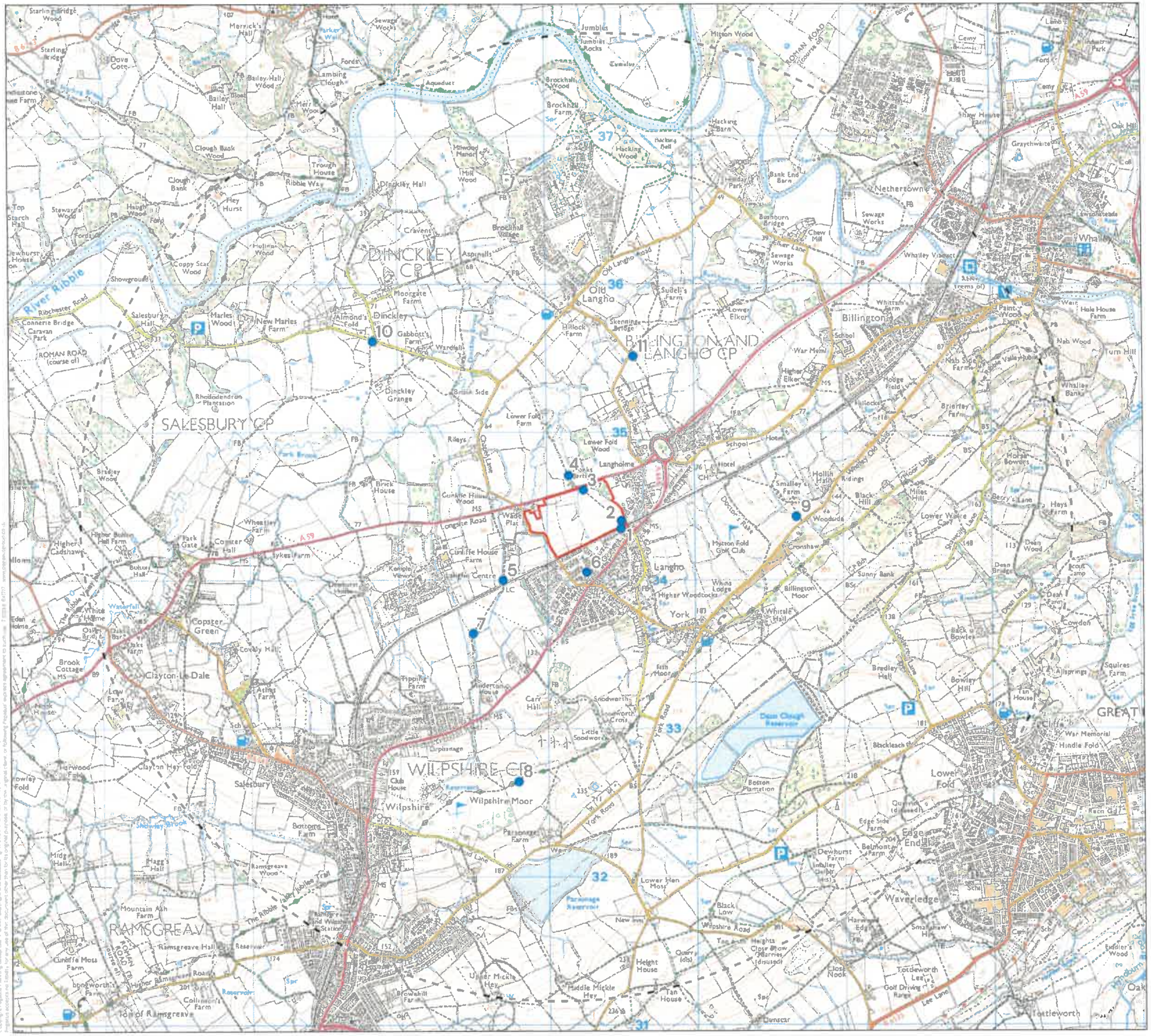
DATE	SCALE	DRAWN	APPROVED
11/11/2024	1:25,000@A3	EN/RL	FH

SHEET	REV	N	0	0.5KM
-	B	A		

DRAWING NUMBER
P24_2318_EN_02

PEGASUS GROUP

Appendix 9: LVIA Viewpoint Location Plan



KEY

Site Boundary

3km Buffer

Viewpoint Location

REV	DATE	DESCRIPTION

SITE LOCATION PLAN WITH LVIA VIEWPOINT LOCATIONS

LONGSIGHT ROAD, LANGHO

HALLAM LAND MANAGEMENT LTD

DATE	SCALE	DRAWN	APPROVED
04/03/2026	1:25,000@A3	CS	AC

SHEET	REV	N	0	0.5KM
-	A			

DRAWING NUMBER
P24_2318_EN_14

PEGASUS GROUP

Appendix 10: Visual Imapct Summary Schedule (LVIA Viewpoints)

Summary of Visual Effects (based on the LVIA Viewpoints)

- Effects are assessed as adverse unless otherwise stated.

Viewpoint	Receptor	Value	Susceptibility	Sensitivity	Magnitude – Year 1	Effect – Year 1	Magnitude – Year 15	Effect – Year 15
1	Langho Railway Station	Medium	Low	Medium	Medium	Moderate	Low	Minor
2	PRoW users	Medium	High	High	Medium	Major	Low	Moderate
3	PRoW users	Medium	High	High	Medium	Major	Low	Moderate
4	PRoW users	Medium	High	High	Negligible	Negligible	Negligible	Negligible
5	PRoW users	Medium	High	High	Negligible	Negligible	Negligible	Negligible
6	Road user	Medium	Medium	Medium	Negligible	Negligible	Negligible	Negligible
7	PRoW users	Medium	High	High	Negligible	Negligible	Negligible	Negligible
8	PRoW users (Long Distance Trail)	Medium	High	High	Negligible	Negligible	Negligible	Negligible
9	PRoW users	Medium	High	High	Negligible	Negligible	Negligible	Negligible
10	PRoW users	Medium	High	High	Negligible	Negligible	Negligible	Negligible
11	PRoW users	Medium	High	High	None	None	None	None

Appendix 11: Sequential View Analysis

Longsight Road, Langho

Sequential View Analysis

Along the A59 to the north of the site

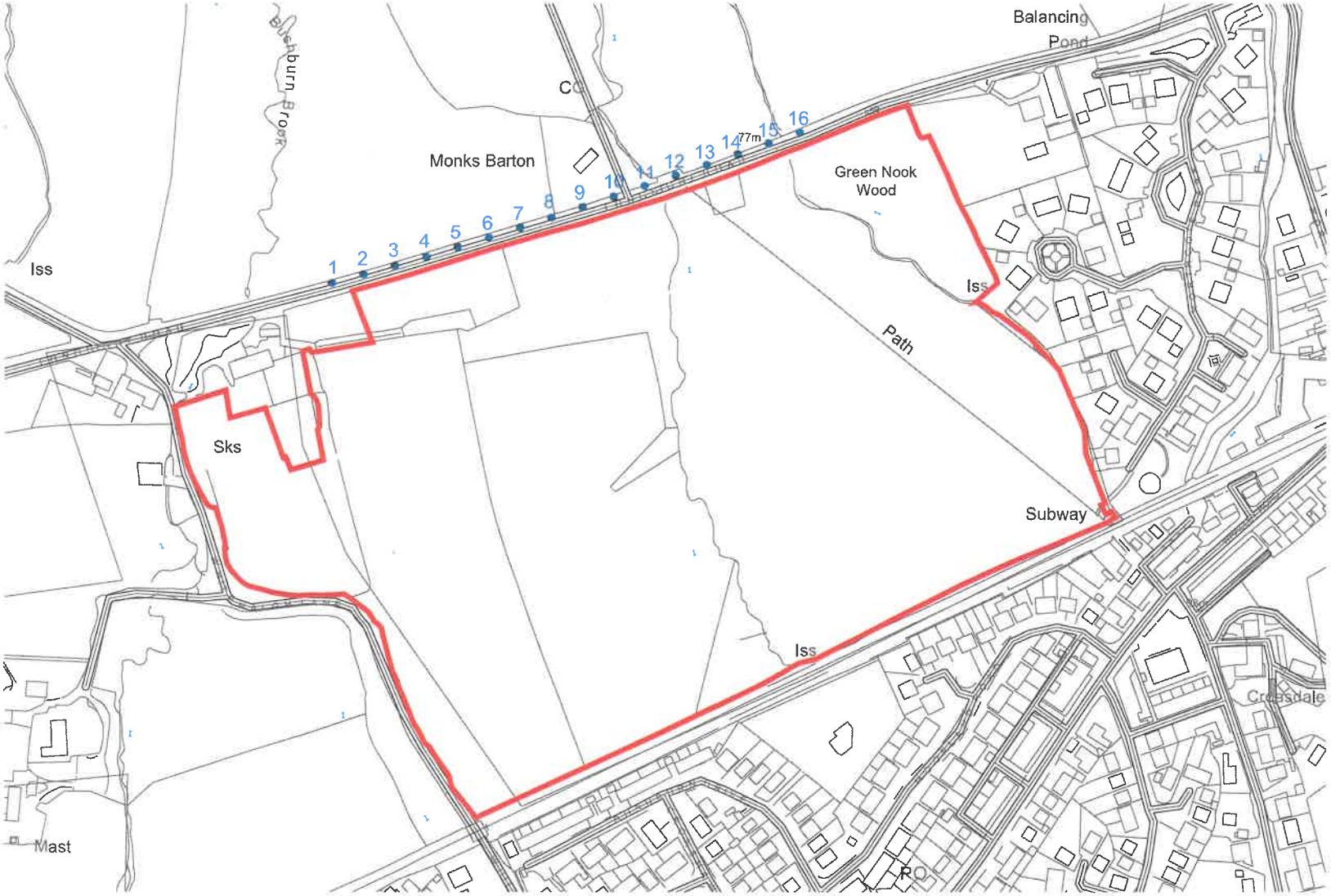
Hallam Land Management Ltd.

November 2025 | P24-2318_EN_09B

Key

Application Boundary

1 Viewpoint Location



SEQUENTIAL VIEWPOINT 1

SEQUENTIAL VIEWPOINT 2

SEQUENTIAL VIEWPOINT 3

SEQUENTIAL VIEWPOINT 4

FROM LONGSIGHT ROAD A59, TRAVELLING FROM WEST TO EAST

SEQUENTIAL VIEWPOINT 5

SEQUENTIAL VIEWPOINT 6

SEQUENTIAL VIEWPOINT 7

SEQUENTIAL VIEWPOINT 8

FROM LONGSIGHT ROAD A59, TRAVELLING FROM WEST TO EAST

SEQUENTIAL VIEWPOINT 9

SEQUENTIAL VIEWPOINT 10

SEQUENTIAL VIEWPOINT 11

SEQUENTIAL VIEWPOINT 12

FROM LONGSIGHT ROAD A59, TRAVELLING FROM WEST TO EAST

SEQUENTIAL VIEWPOINT 13

SEQUENTIAL VIEWPOINT 14

SEQUENTIAL VIEWPOINT 15

SEQUENTIAL VIEWPOINT 16

FROM LONGSIGHT ROAD A59, TRAVELLING FROM WEST TO EAST

PEGASUS GROUP

SEQUENTIAL VIEWPOINT 16

SEQUENTIAL VIEWPOINT 15

SEQUENTIAL VIEWPOINT 14

SEQUENTIAL VIEWPOINT 13

FROM LONGSIGHT ROAD A59, TRAVELLING FROM EAST TO WEST

SEQUENTIAL VIEWPOINT 12

SEQUENTIAL VIEWPOINT 11

SEQUENTIAL VIEWPOINT 10

SEQUENTIAL VIEWPOINT 9

FROM LONGSIGHT ROAD A59, TRAVELLING FROM EAST TO WEST

SEQUENTIAL VIEWPOINT 8

SEQUENTIAL VIEWPOINT 7

SEQUENTIAL VIEWPOINT 6

SEQUENTIAL VIEWPOINT 5

FROM LONGSIGHT ROAD A59, TRAVELLING FROM EAST TO WEST

SEQUENTIAL VIEWPOINT 4

SEQUENTIAL VIEWPOINT 3

SEQUENTIAL VIEWPOINT 2

SEQUENTIAL VIEWPOINT 1

FROM LONGSIGHT ROAD A59, TRAVELLING FROM EAST TO WEST

PEGASUS GROUP

METHODOLOGY

Overview

Pegasus Planning Group use methodologies compliant with relevant sections of the current guidelines for photography included within:

- The Landscape Institute Technical Guidance Note 06/19
- Scottish Natural Heritage (SNH) Visual Representation of Wind Farms (February 2017, Version 2.2).

Site Visit and Viewpoint Locations

Photography was recorded at regular intervals in both an easterly and westerly direction for 500m along the A59, starting at the north western corner and finishing at the north eastern corner of the site, giving the effect of a viewing experience while travelling along the A59 pavement adjacent to the site.

Start and finish points were chosen based on limits of visibility to the site.

Site photography was taken in **October 2025** by Pegasus Planning Group. The views were recorded and the exact GPS position data of the camera was recorded.

Photography

For each agreed viewpoint location, a set of high resolution photographs were taken with a 35mm (full frame) digital mirrorless camera, The camera was set up at a height of 1.5m to replicate an eye level view from the specified position.

Lens Selection

In order to capture the full extent of the proposed development and an appropriate amount of contextual built form a 24mm lens (73.7° horizontal field of view), was used.

Photography Equipment

- Canon EOS R5 digital mirrorless camera (35mm)
- Canon RF 24mm f/1.4 USM Lens
- Tripod indexed pan head
- Levelling base with spirit level

Photography Post Production

Where necessary standard image post production techniques were used, including curves, sharpening and levels.

Documentation

The images were annotated with the following information:

- Unique Identification Code (Viewpoint Reference Number)
- Textual description of viewpoint location and direction of view
- Map and site photography showing location of camera position

Software Used

- PTGui 12.2
- Adobe Photoshop
- Adobe InDesign

Appendix 12: Photomontages (Revised Appeal Scheme)

Longsight Road, Langho

Photomontages

Hallam Land Management Ltd.

January 2026 | P24-2318 Rev A

VIEWPOINT LOCATION PLAN

PEGASUS GROUP

Camera make & model	- Canon EOS R5	Viewpoint height (AOD)	- 92m
Lens make & focal length	- Canon RF 50mm f/1.8 STM	Distance from site	- 0m
Date & time of photograph	- 13/10/2025 @ 15:13	Projection	- Cylindrical
OS grid reference	- 370483, 434420	Sheet Size	- A1

Visualisation Type	- Type 1
Horizontal Field of View	- [illegible]
Height of camera AGL	- 1.5m
Page size / image size (mm)	- 841 x 297 / 820 x 250

VIEWPOINT A – EXISTING

PEGASUS GROUP

Camera make & model	- Canon R5	Viewpoint height (AOD)	- 89m	Visualisation Type	- Type 3
Lens make & focal length	- Canon RF 50mm, f/1.8 STM	Distance from site	- 1m	Horizontal Field of View	- 90°
Date & time of photograph	- 15/01/2025 @ 15:13	Projection	- Cylindrical	Height of camera AGL	- 1.6m
OS grid reference	- 470483, 434480	Sheet Size	- A1	Page size / Image size (mm)	- 841 x 297 / 820 x 240

VIEWPOINT A - PHOTOMONTAGE - YEAR 1

P24-2318_EN_12A PHOTOMONTAGES | LONGRIGHT ROAD LANGHO | MALLARD LAND MANAGEMENT LTD

PEGASUS GROUP

Camera make & model	- Canon EOS 6D	Viewpoint height (AOD)	- 91m	Visualisation Type	- Type 3
Lens make & focal length	- Canon EF 50mm, f/1.8 STM	Distance from site	- 0m	Horizontal Field of View	- 9°
Date & time of photograph	- 15/01/2025 at 11:13	Projection	- Cylindrical	Height of camera AGL	- 1.5m
OS grid reference	- 410483, 423440	Sheet Size	- A1	Page size / Image size (mm)	- 841 x 297 / 820 x 290

VIEWPOINT A – PHOTOMONTAGE – YEAR 15

P24-2281_EN_12a PHOTOMONTAGES | LONGBRIGHT ROAD LANGHO | HALLAM LAND MANAGEMENT LTD

PEGASUS GROUP

Camera make & model	- Canon EOS R5	Viewpoint height (AOD)	- 70m	Visualisation Type	- Type 1
Lens make & focal length	- Canon RF 50mm, f/1.8 STM	Distance from site	- 0m	Horizontal Field of View	- 90°
Date & time of photograph	- 13/10/2025 @ 15:22	Projection	- Cylindrical	Height of camera AGL	- 1.5m
OS grid reference	- 369973, 434619	Sheet Size	- A1	Page size / Image size (mm)	- 841 x 297 / 820 x 260

VIEWPOINT B - EXISTING

VIEWPOINT B – PHOTOMONTAGE – YEAR 1

PEGASUS GROUP

Camera make & model	- Canon EOS RP	Viewpoint height (AOD)	- 79m	Visualisation Type	- Type 3
Lens make & focal length	- Canon RF 50mm f/1.8 STM	Distance from site	- 0m	Horizontal Field of View	- 90
Date & time of photograph	- 13/10/2025 @ 15:37	Projection	- Cylindrical	Height of camera AGL	- 1.5m
OS grid reference	- 358973, 434881	Sheet Size	- A1	Page size / image size (mm)	- 841 x 297 / 820 x 260

PEGASUS GROUP

Camera make & model	- Canon [illegible]	Viewpoint height (AOD)	- 70m	Visualisation Type	- Type 3
Lens make & focal length	- Canon RF 50mm f/1.8 STM	Distance from site	- 0m	Horizontal Field of View	- 90°
Date & time of photograph	- [illegible]	Projection	- Cylindrical	Height of camera AGL	- 1.5m
OS grid reference	- [illegible]	Sheet Size	- A1	Page size / Image size (mm)	- 841 x 297 / 820 x 260

VIEWPOINT B – PHOTOMONTAGE – YEAR 15

P24-2310_EN_12A PHOTOMONTAGES | LONGSIGHT ROAD | LANGHO | HALLAM LAND MANAGEMENT [illegible]

PEGASUS GROUP

Camera make & model	- Canon M5 M6	Viewpoint height (AOD)	- 75m	Visualisation Type	- Type 1
Lens make & focal length	- Canon M 30mm, 32.8 51M	Distance from site	- 0m	Horizontal Field of View	- 90°
Date & time of photograph	- 11/09/2021 @ 15:34	Projection	- Cylindrical	Height of camera AGL	- 1.7m
OS grid reference	- 390157 414614	Sheet Size	- A3	Page size / Image size (mm)	- 841 x 297 / 820 x 280

VIEWPOINT C – EXISTING

P24-2318_EN_02A PHOTOMONTAGES | LONGRIGHT ROAD LANGHO | HALLAM LAND MANAGEMENT LTD

PEGASUS GROUP

Camera make & model	- Canon EOS 6f	**Viewpoint height (AOD)**	- 76m	**Visualisation Type**	- Type 3
Lens make & focal length	- Canon EF 50mm, f/1.8 STM	**Distance from site**	- 0m	**Horizontal Field of View**	- 90°
Date & time of photograph	- 17/01/2025 @ 11:36	**Projection**	- Cylindrical	**Height of camera AGL**	- 1.6m
OS grid reference	- 390157 434164	**Sheet Size**	- A1	**Page size / Image size (mm)**	- 841 x 297 / 820 x 240

VIEWPOINT C - PHOTOMONTAGE - YEAR 1

P24-2319_EN_124 PHOTOMONTAGES | LONGSPIGHT ROAD, LANGHO | HALLAM LAND MANAGEMENT LTD

PEGASUS GROUP

Camera make & model	- Canon EOS R[illegible]	Viewpoint height (AOD)	- 76m	Visualisation Type	- Type 3
Lens make & focal length	- Canon RF 50mm f/1.8 STM	Distance from site	- 0m	Horizontal Field of View	- 90°
Date & time of photograph	- 10/10/2025 @ 15:34	Projection	- Cylindrical	Height of camera AGL	- 1.5m
OS grid reference	- 370757 434614	Sheet Size	- A1	Page size / image size (mm)	- 841 x 297 / 820 x 280

VIEWPOINT C – PHOTOMONTAGE – YEAR 15

P24-2318_EN_12A PHOTOMONTAGES | LONGSIGHT ROAD LANGHO | HALLAM LAND MANAGEMENT LTD

PEGASUS GROUP

Camera make & model	- Canon EOS R5	Viewpoint height (AOD)	- 78m	Visualisation Type	- Type 1
Lens make & focal length	- Canon RF 50mm f/1.8 STM	Distance from site	- 0m	Horizontal Field of View	- 90°
Date & time of photograph	- 13/10/2025 at 11:43	Projection	- Cylindrical	Height of camera AGL	- 1.5m
OS grid reference	- 389413, 434519	Sheet Size	- A1	Page size / image size (mm)	- 841 x 297 / 820 x 260

VIEWPOINT D – EXISTING

PEGASUS GROUP

Camera make & model	- Canon EOS 95	Viewpoint height (AOD)	- 78m	Visualisation Type	- Type 3
Lens make & focal length	- Canon RF 50mm, f/1.8 STM	Distance from site	- 0m	Horizontal Field of View	- 90
Date & time of photograph	- 13/10/2028 @ 15:43	Projection	- Cylindrical	Height of camera AGL	- 1.5m
OS grid reference	- 369873, 434559	Sheet Size	- A1	Page size / Image size (mm)	- 841 x 297 / 820 x 280

VIEWPOINT D – PHOTOMONTAGE – YEAR 1

PEGASUS GROUP

Camera make & model	- Canon EOS R8	Viewpoint height (AOD)	- 78m	Visualisation Type	- Type 3
Lens make & focal length	- Canon RF 50mm, f/1.8 STM	Distance from site	- 0m	Horizontal Field of View	- 90°
Date & time of photograph	- 13/10/2025 @ 15:43	Projection	- Cylindrical	Height of camera AGL	- 1.5m
OS grid reference	- 368973, 434558	Sheet Size	- A1	Page size / Image size (mm)	- 841 x 297 / 820 x 260

VIEWPOINT D – PHOTOMONTAGE – YEAR 15

P24-2318_EN_12A PHOTOMONTAGES | LONGSIGHT ROAD LANGHO | HALLAM LAND MANAGEMENT LTD

Overview

Pegasus Planning Group use methodologies compliant with relevant sections of the current guidelines for photography, photomontage and TYPE 3 production included within:

- The Landscape Institute Technical Guidance Note 06/19
- Scottish Natural Heritage (SNH) Visual Representation of Wind Farms (February 2017, Version 2.2).

The Type 3s within this document have been produced using a consistent methodology using Camera Matching techniques. Camera matching is the process of replicating real-world camera parameters (position, orientation, projection and focal length) in a 3d virtual environment, enabling the production of mass models and photo-realistic renders of development proposals to be overlaid on baseline photography to the correct scale and orientation.

Definition and Classification of TYPE 3s

Landscape Institute Technical Guideance Note: Visual Representation of Development Proposals (17 September 2019) defines an Type 3 as:

Type 3 visualisations are photomontages or photowires (photographs with wireline overlays) where site photography forms the basis of the imagery, which is then overlaid by a 3D wireframe, massing or rendered model. Type 3 are suitable for representing proposals where precise perception of scale of the printed image, and the highest levels of locational accuracy, are not necessary. If the key criteria for Type 4 cannot be guaranteed, then the visualisation will be classified as a Type 3. 'Type 3' should be clearly stated on all visualisations.

Site Visit and Viewpoint Locations

Each viewpoint is carefully chosen based on a combination of information, these include; zone of theoretical visibility (ZTV) analysis, strategic importance, open dialogue with local authority, and site walkover. Once the project team had agreed the exact locations, a photograph was taken which formed the basis of the study. The surveyor established the precise location of the camera.

Site photography was taken in **October 2025** by Pegasus Planning Group. The viewpoint locations were recorded using photography and the exact GPS data of the position of the camera was recorded.

To avoid conflicting labelling with other LVIA documentation, Viewpoints have been labelled A, B, C & D.

Photography

For each agreed viewpoint location, a high resolution photograph was taken with a 35mm (full frame) digital camera, The camera was set up at a height of 1.5m to replicate an eye level view from the specified position. The location at which the photograph was taken and GPS positions recorded and photographed. The camera was levelled horizontally and vertically by means of a tripod mounted levelling base and two camera mounted spirit levels.

Lens Selection

In order to capture the full extent of the proposed development and an appropriate amount of contextual built form a 50mm lens (39.6° horizontal field of view), was used.

Photography Equipment

- Canon EOS R5 Mirrorless camera (35mm)
- Canon RF 50mm f/1.8 STM Lens
- Tripod indexed pan head
- Levelling base with spirit level

Photography stitch

The frames were stitched in PTGUi software to the field of view required and specified in guidance documents. The detail is documented in the footer of each presentation page.

Photography Post Production

Where necessary standard image post production techniques were used, including curves, sharpening and levels. Any exceptions to the applied policies or deviations from the methodology are clearly described.

The Development Proposal

Pegasus Planning Group created the 3D Site using in-house 3D models and with reference to the following drawings:

- **Pegasus Drawing - P24-2318_07B Landscape Masterplan**
- **Stantec Drawing - 33310612_MR_MP_A10102 - Parameter Plans-Land use and heights-compressed SFS**
- **Stantec Drawing - 333101612_MR_MP_VW0101F - Illustrative Masterplan**

Documentation

The images are annotated with the following information:

- Unique identification code (Viewpoint Reference Number)
- Textual description of viewpoint location and direction of view
- Method
- Co-ordinates of camera position, height and tripod height
- Camera model and lens
- Focal length
- Image orientation
- Image horizontal field of view (HFOV)
- Time of day and date for any source photography
- Map and site photography showing location of camera position
- Peripheral annotation to the image to confirm the direction of view in the original photography (the optical axis)
- Definition of the field of view depicted each side of the optical axis, either in the form of peripheral annotation, textual description or more sophisticated maps

Photographic Alignment within the 3D Environment

The 3D model is combined with Environment Agency Lidar data where available into one file, this is then imported to 3ds Max, a 3D visualisation software package.

A virtual camera is created within 3ds Max using the real-world camera location and field of view (FOV) based on the camera and lens combination selected for the shot .

The annotated photograph is inserted as a background to the view, to assist the Visualiser in aligning the surveyed data to each corresponding background point, based on the Camera Matching Technique.

Using this virtual camera, a render is created of the aligned model at a resolution to match the baseline photograph. This is overlaid onto the baseline photograph to assess the accuracy of the alignment.

Final Rendering and Post-Production

The final render is exported to the same resolution as the baseline photography. Multi pass renders are exported to give the visualiser more control in enhancements of the final image. These multi passes may included but not limited to Selection Mattes, Reflections, Refractions, Shadows, Lighting, Ambient Occlusion and Global Illumination.

The multi pass renders are layered within Adobe Photoshop and blended together to produce the correct level of detail and photo-realism. Finally masking is applied to the image. Endless aesthetic effects can be applied to the rendered image to enhance the realism of the final image and/or make adjustments as a result of proposed material changes. However, the visualiser always attempts to be faithful to the proposed design within it's chosen site.

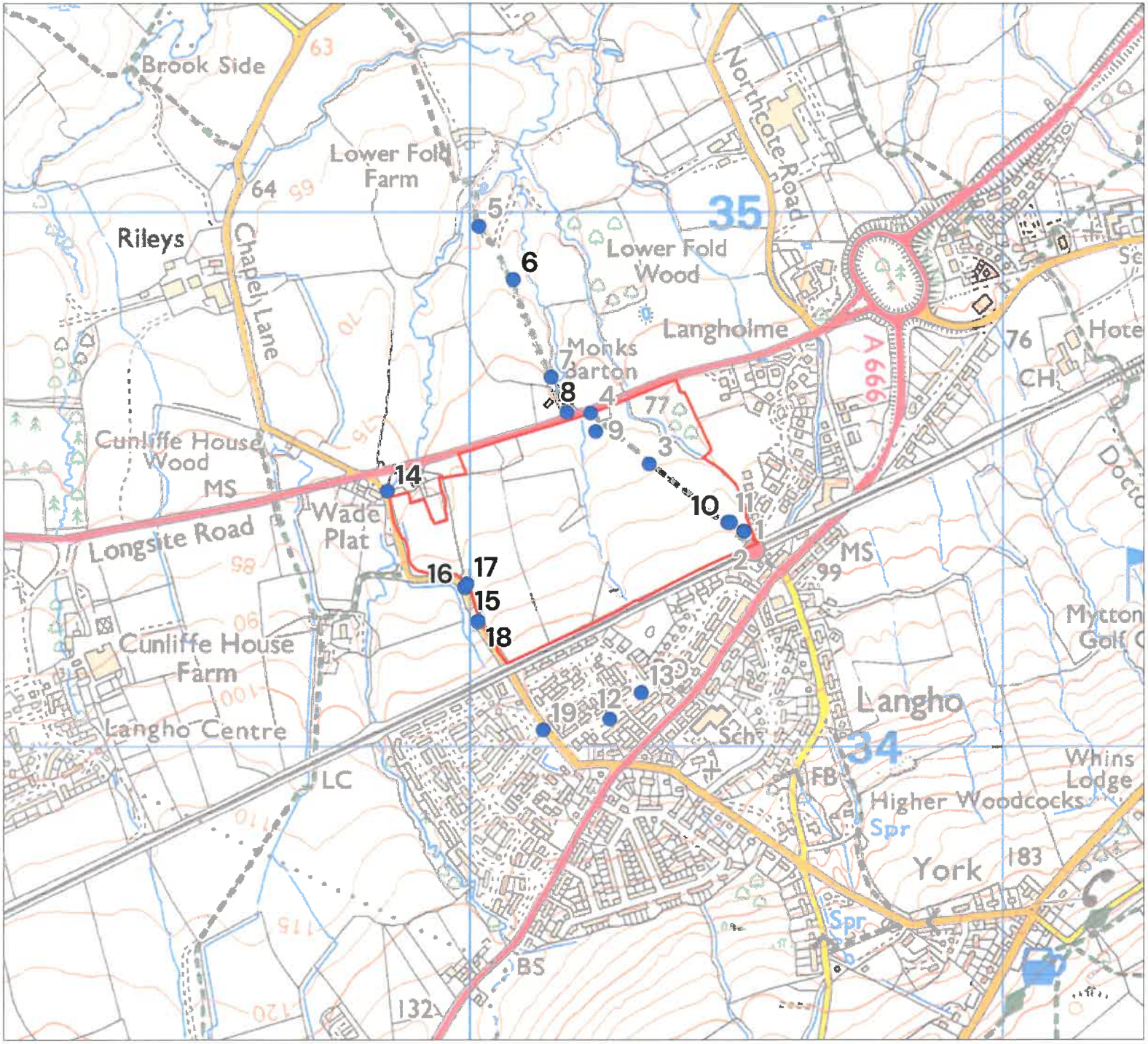
The final images are then saved in an appropriate format for inclusion within the visual document.

Software Used

- AutoCAD
- 3ds Max 2024
- V-Ray 6 for 3ds Max
- PTGui 12.2
- Adobe Photoshop
- Adobe InDesign

PEGASUS GROUP

Appendix 13: Context Viewpoint Location Plan



KEY

- Site Boundary
- Viewpoint Locations

REV	DATE	DESCRIPTION
D	11/11/24	REVISED SITE BOUNDARY

CONTEXT VIEWPOINT LOCATION PLAN

LONGSIGHT ROAD, LANGHO

HALLAM LAND MANAGEMENT LTD

DATE	SCALE	DRAWN	APPROVED
04/03/2026	1:7,000@A3	AB	AC

SHEET	REV	N	0	0.1KM
-	A			

DRAWING NUMBER
P24_2318_EN_10

PEGASUS GROUP

Appendix 14: Context Viewpoint Photographs

PHOTOVIEW 1

PHOTOVIEW 2

PEGASUS GROUP

PHOTOVIEW 3

PHOTOVIEW 4

PEGASUS GROUP

PHOTOVIEW 5

PHOTOVIEW 6

PEGASUS GROUP

PHOTOVIEW 7

PEGASUS GROUP

PHOTOVIEW 8A

PHOTOVIEW 8B

PEGASUS GROUP

PHOTOVIEW 9A

PHOTOVIEW 9B

PEGASUS GROUP

PHOTOVIEW 10

PHOTOVIEW 11

PEGASUS GROUP

PHOTOVIEW 12

PHOTOVIEW 13

PEGASUS GROUP

PHOTOVIEW 14

PHOTOVIEW 15

PEGASUS GROUP

PHOTOVIEW 16A

PHOTOVIEW 16B

PEGASUS GROUP

PHOTOVIEW 17

PEGASUS GROUP

PHOTOVIEW 18A

PHOTOVIEW 18B

PEGASUS GROUP

PHOTOVIEW 19

PEGASUS GROUP

Appendix 15: National Landscape Character Area: 35 Lancashire Valleys

National Character Area profile:

35. Lancashire Valleys

Supporting documents

NATURAL ENGLAND

www.naturalengland.org.uk

Introduction

As part of Natural England's responsibilities as set out in the Natural Environment White Paper[1], Biodiversity 2020[2] and the European Landscape Convention[3], we are revising profiles for England's 159 National Character Areas (NCAs). These are areas that share similar landscape characteristics, and which follow natural lines in the landscape rather than administrative boundaries, making them a good decision-making framework for the natural environment.

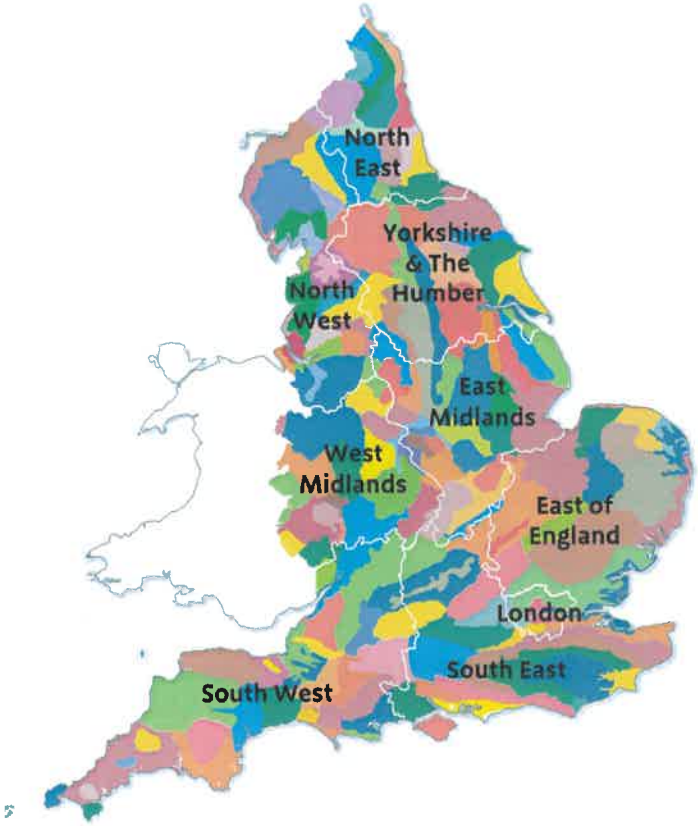
NCA profiles are guidance documents which can help communities to inform their decision-making about the places that they live in and care for. The information they contain will support the planning of conservation initiatives at a landscape scale, inform the delivery of Nature Improvement Areas and encourage broader partnership working through Local Nature Partnerships. The profiles will also help to inform choices about how land is managed and can change.

Each profile includes a description of the natural and cultural features that shape our landscapes, how the landscape has changed over time, the current key drivers for ongoing change, and a broad analysis of each area's characteristics and ecosystem services. Statements of Environmental Opportunity (SEOs) are suggested, which draw on this integrated information. The SEOs offer guidance on the critical issues, which could help to achieve sustainable growth and a more secure environmental future.

NCA profiles are working documents which draw on current evidence and knowledge. We will aim to refresh and update them periodically as new information becomes available to us.

We would like to hear how useful the NCA profiles are to you. You can contact the NCA team by emailing ncaprofiles@naturalengland.org.uk

National Character Areas map



[1] The Natural Choice: Securing the Value of Nature, Defra (2011; URL: www.official-documents.gov.uk/document/cm80/8082/8082.pdf)
[2] Biodiversity 2020: A Strategy for England's Wildlife and Ecosystem Services, Defra (2011; URL: www.defra.gov.uk/publications/files/pb13583-biodiversity-strategy-2020-111111.pdf)
[3] European Landscape Convention, Council of Europe (2000; URL: http://conventions.coe.int/Treaty/en/Treaties/Html/176.htm)

Summary

The Lancashire Valleys run north-east from Chorley through Blackburn and Burnley to Colne. The National Character Area (NCA) lies mainly in east Lancashire and is bounded to the north-west by the Bowland Fells fringe and the Millstone Grit outcrop of Pendle Hill, and to the south by the Southern Pennines. A small proportion of the area (5 per cent) lies in the Forest of Bowland Area of Outstanding Natural Beauty.

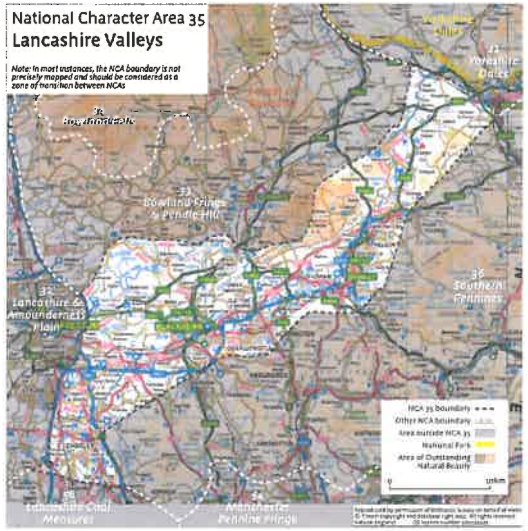
The Lancashire Valleys broadly consist of the wide vale of the rivers Ribble and Calder and their tributaries, running north-east to south-west between the natural backdrops of Pendle Hill and the Southern Pennines. This visually contained landscape has a strong urban character.

The Lancashire Valleys are underlain by Carboniferous rocks including limestone, Millstone Grit, shales and Coal Measures. The bedrock is largely covered by glacial and post-glacial deposits of sands, gravels, clays and alluvium. Localised surface exposures of bedrock have given rise to extractive industries, including stone quarrying and coal mining.

The Industrial Revolution saw the development and expansion of the major settlements, which include Blackburn, Accrington, Burnley, Nelson and Colne. A small 'cottage' cotton and textile industry developed, first drawn to the area for its available water power. It developed rapidly but has been in steady decline since the1920s.The towns are dominated by mills and Victorian-stone terraced housing. Numerous examples of the area's industrial heritage remain, and are matched today by substantial areas of contemporary industrial development.

Agriculture, once the major source of income before industrialisation, is now fragmented by the built environment, industry and housing. The remaining pockets of farmed land, used for extensive livestock rearing, are concentrated along the Ribble Valley, the fringes of Pendle Hill, the area to the west of Blackburn, and in the north around Skipton.

Opportunities for recreation activities are provided by a network of public rights of way, including key routes along the Pennine Bridleway and Pennine Way National Trails, while a series of country parks and local nature reserves also provide quality green space to encourage visitors to engage with and enjoy the local environment.



Click map to enlarge; click again to reduce.

A former mill lodge - Big Lodge, Yarrow Valley Country Park.

Statements of Environmental Opportunity

- **SEO 1**: Conserve and manage the Lancashire Valleys' industrial heritage to safeguard the strong cultural identity and heritage of the textile industry with its distinctive sense of place and history.
- **SEO 2**: Increase the resilience and significance of woodland and trees, and manage and expand existing tree cover to provide a range of benefits, including helping to assimilate new infrastructure; reconnecting fragmented habitats and landscape features; storing carbon; and providing fuel, wood products, shelter and recreational opportunities.
- **SEO 3**: Manage and support the agricultural landscape through conserving, enhancing, linking and expanding the habitat network, and manage and plan for the associated potential impact of urban fringe development, intensive agriculture and climate change mitigation.
- **SEO 4**: Conserve and manage the distinction between small rural settlements and the densely urban areas and ensure that new development is sensitively designed to contribute to settlement character, reduce the impact of the urban fringe and provide well-designed green infrastructure to enhance recreation, biodiversity and water flow regulation.

Description

Physical and functional links to other National Character Areas

The Lancashire Valleys National Character Area (NCA) broadly consists of the wide vale of the rivers Calder and Ribble and their tributaries, running north-east to south-west between Pendle Hill, the Bowland Fells and the Southern Pennines. Although similar in nature conservation terms to the Lancashire and Amounderness Plain and the Morecambe Coast and Lune Estuary NCAs, the landscape here has a contrasting, intensely urban character.

The Millstone Grit outcrop of Pendle Hill, which forms part of the northern boundary to this area, and the fells of the Southern Pennines to the south create enclosure and serve as a backdrop to the settlements in the valley bottom. Similarly, there are views out from the higher land to the north and south over the NCA.

The north-west of the NCA contains part of the middle section of the River Ribble, which has its source in the adjacent Yorkshire Dales NCA, as well as the Ribble's confluence with the River Hodder, which drains the southern slopes of the Bowland Fells NCA. In the south, the River Yarrow rises on Rivington Moor in the Southern Pennines NCA before joining the River Douglas in the Lancashire and Amounderness Plain NCA to the west. A number of reservoirs lie on or close to the boundary with adjacent NCAs.

Many important communication routes pass through the NCA, including the Leeds and Liverpool Canal, the Preston–Colne rail link and the M6, M61 and M65 motorways.

River Ribble at Salmsbury Bottoms.

Key characteristics

- Broad valleys of the rivers Calder and Ribble and their tributaries run north-east to south-west between the uplands of Pendle Hill and the Southern Pennines.
- A Millstone Grit ridge extends between the Ribble and Calder catchments (including the Mellor Ridge and part of Pendle Hill).
- A broad trough underlain by Carboniferous Coal Measures provided the basis for early industrialisation.
- Field boundaries are regular to the west and more irregular to the east. They are formed by hedges with few hedgerow trees and by stone walls and post-and-wire fences at higher elevations.
- Agricultural land is fragmented by towns, villages and hamlets, industry and scattered development, with pockets of farmed land limited to along the Ribble Valley, the fringes of Pendle Hill, the area to the west of Blackburn, and in the north around Skipton.
- Farmed land is predominantly pasture for grazing livestock, with areas of acid and neutral grassland, flushes and mires. There is some upland heath and rough pasture on Pendle Hill and the higher land to the south.
- Small, often ancient, broadleaved woodlands of oak, alder and sycamore extend along narrow, steep-sided cloughs on the valley sides – for example, at Priestley Clough, Spurn Clough and south of Blackburn.
- There are numerous large country houses with associated parklands, particularly on the northern valley sides away from major urban areas.
- There are many examples of proto-industrial heritage, including lime hushings, important turnpike and pack-horse routes involved in the early textile trade, and rural settlements with handloom weavers' cottages.

Continued on next page...

Traditional stone-built weavers' cottages.

Key characteristics continued

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- There is evidence of a strong industrial heritage associated with the cotton weaving and textile industries, with many common artefacts such as mill buildings, mill lodges and ponds, and links to the Leeds and Liverpool Canal.
- The many towns, including Blackburn, Accrington and Burnley, which developed as a result of the Industrial Revolution give the area a strong urban character.
- Robust Victorian architecture of municipal buildings contrasts with the vernacular sandstone grit buildings of the quiet rural settlements on the valley sides.
- Numerous communication routes run along the valley bottoms, including the Leeds and Liverpool Canal, the Preston–Colne railway and the M65 motorway.

Lancashire Valleys today

The Lancashire Valleys are concentrated in a broad trough that runs north-eastwards from Chorley to Skipton.

Leeds to Liverpool Canal, passing through agricultural land near the M61, Chorley.

This is a visually contained landscape that would have once shared many characteristics with the rural valley of the River Ribble in the north. However, the development of industry and settlements has created a landscape with a strongly urban character. Agricultural land is now heavily fragmented by towns, associated housing, industry and scattered development.

Major settlements occur within the Lancashire Valleys. There is a high proportion of built-up land which includes the towns of Blackburn, Accrington, Burnley, Nelson and Colne. The rapid expansion of these towns following the Industrial Revolution has also been aided by the development of dense transport and communications networks following the valley bottoms. These include the Leeds and Liverpool Canal, the Preston–Colne rail link, the M65 and the M6/M61 motorways running north–south at the western end. The towns are dominated by a robust Victorian architecture with stone terraces and municipal buildings generally in good condition. Numerous artefacts and buildings associated with the area's development and industrial heritage remain and are reminders of the historical importance of local industrial development to the character of the landscape. There are substantial areas of contemporary industrial development which have replaced the traditional textile industries.

Scattered villages and hamlets on valley sides are comprised of older sandstone grit buildings, often of the longhouse type, and isolated rows of stone terraced houses are perched at precarious angles on the steep slopes. There are several large country houses with associated parkland built for wealthy mill owners of the textile industry. These are mainly located on south-facing slopes in the Calder Valley away from major urban areas, including those at Read Park Huntroyde Demesne, Gawthorpe, Dunkenhalgh and Towneley Halls.

The remaining fragmented farmland is a mix of pasture with scattered areas of acid and neutral grassland and areas of semi-natural woodland/scrub. Wet grasslands are common on the flood plains and river banks of the Ribble and Calder, and provide valuable habitat for populations of butterflies and birds, including snipe, curlew, redshank and lapwing. Species-rich hay meadows are becoming less common throughout the area with the application of modern agricultural techniques. Lowland field boundaries are marked by hedgerows with few hedgerow trees, which give way to stone walls and fencing on higher ground. The higher land along the southern slopes of the NCA and Pendle Hill in the north includes small but valuable areas of upland heath and acid grassland.

Small broadleaved woodlands, often ancient, are scattered throughout the remaining farmland associated with rivers, field boundaries and cloughs. The wooded, steep-sided and narrow cloughs are a characteristic feature of the Lancashire Valleys – for example; Priestly Clough, Accrington; Spurn Clough, Burnley; and lower Darwen Valley which comprises of oak, alder and sycamore with areas of grassland flushes and wetland. Wood anemone, herb Paris and small-leaved lime are all typical species in these areas. Wet woodlands dominated by alder occur on the flood plains and river banks. There are also small areas of woodland/scrub associated with abandoned or reclaimed industrial land and several small conifer plantations, the largest being Standrise Plantation associated with Elslack Reservoir to the north-east of Colne.

The rivers Calder and Ribble and their tributaries, along with the Leeds and Liverpool Canal, support valuable plant communities as well as populations of birds. The goosander, coot, grebe and warbler are all common; and rare, great crested newt and otter can also be found. The Ribble catchment, including the Calder, is a major salmonid river, one of a top handful in England and Wales. River quality and associated biodiversity have improved over recent years, but parts of the Calder and lower Darwen, in particular, are still affected as a result of sewage and pollution incidents.

Localised surface exposures of bedrock gave rise to many mineral extractive industries in the area, including stone quarrying and coal mining, although many have now declined in importance or ceased. These abandoned mining areas are now generally well vegetated, and grazed by sheep. Most of the more conspicuous dereliction has undergone land reclamation, with some reclaimed by domestic waste landfill such as at Rowley, Brandwood, Whinney Hill and Accrington. Remaining quarry faces, Carboniferous Millstone Grit outcrops and clough exposures of bedrock create distinctive features in the landscape and provide valuable access for further geological study.

Pendle Hill and the Southern Pennines provide a natural backdrop to this visually contained NCA and offer extensive views across the lower valleys from their higher points. There is a lack of tranquillity within the lower valleys linked to towns, development and transport corridors, but in the undisturbed areas on higher land there is less light and noise pollution.

In recent years there has been an increase in the demand for recreational activities such as walking, cycling and horse riding. The majority of land within this NCA is not publicly accessible, but there is a very high density of footpaths, two National Trails, a number of national and regional cycle routes, and many country parks, local nature reserves and woodlands open to the public through the 'Woods for People' initiative.

The landscape through time

The Lancashire Valleys occupy a broad trough lying between the higher land of the Yorkshire Dales to the north, the Southern Pennines to the east and south, and the Forest of Bowland on the west and north. The higher land is underlain by Carboniferous Millstone Grit, formed by large river deltas building out into shallow, tropical marine waters. Millstone grit also forms a sandstone ridge between the Ribble and Calder catchments, which includes the Mellor Ridge and part of Pendle Hill.

The trough is underlain by Carboniferous Coal Measures, which represent the compressed remains of lush swamp vegetation and were formed by the periodic flooding of the extensive low-lying swamps that formed on top of deltas. It is the presence of coal that accounts for the early industrialisation of the area and it has been worked at depth and by open casting at the surface, although this has now declined in importance.

The bottom of the trough is covered in till, deposited beneath glaciers during the last ice age. In the Feniscowles/Pleasington area, west of Blackburn, extensive sand deposits impart a special landscape character. Bedrock resources have been quarried where the drift cover is thin. The main materials extracted were sandstone, worked on a small scale for local building, and mudstone worked for brick making in large pits at Accrington.

The character of the area is strongly dominated by a long history of access and movement along the valleys (for example, Roman roads and forts exist at Burwen Castle to the north-east near Elslack and at Ribchester in the Ribble Valley to the west), and by increasing industrial development of the valleys from the 16th century onwards.

This development began as a cottage industry during the 16th century with weaving rather than spinning. Traditionally, wool came from the Southern Pennine hillsides and flax from the low-lying country of the Lancashire and Amounderness Plain around Rufford and Croston. By 1700 each district was specialising in the production of one type of cloth. Blackburn was a centre for fustians, and most woollens and worsteds were manufactured in Burnley and Colne. The textile industry grew rapidly and, with new machines, the domestic system was replaced by factory systems which further accelerated the growth of these weaving communities. Nucleated settlements, developed from the late 18th century, were built around factory locations. These dominate the main north-east to south-west route alongside the Ribble flood plain and between the forests of Pendle and Trawden. Regular, imposing stone terraces were built to accommodate textile workers in the 19th century.

Pendle Hill from Copster Green.

The proliferation of mills and associated residential development has created a fragmented landscape with a heavily industrialised character. Since the 1920s the textile industry has been in steady decline with many mills becoming derelict or being converted to other uses. Numerous large country houses with ornamental settings occur, particularly along the northern valley sides away from industrial towns. These substantial houses, parklands and barns, dating from the 16th century, attest to the wealth generated by the textile industry. Traditional building materials used are sandstone grit and timber frame, brick was used from the 19th century with stone flag, and from the late 18th century Welsh slate roofs. In some areas, historic parklands have been subsumed within later enclosed farmland. Private and public parks and gardens are also a significant feature of the more urban landscapes (for example, the many parks at Burnley).

The landscape of well-spaced, nucleated villages and medium densities of smaller hamlets and farmsteads was transformed in the 18th and 19th centuries, and further fragmented by the modern transport networks along the valley floors. However, the foundation of later industrial expansion – the improved pastoral economy of the 15th and 16th centuries – is still visible in the dispersed pastoral farmlands of the Ribble Valley flood plain and the later (1600–1850) enclosure of the low moorlands either side of the A56 north of Burnley. Scattered settlements on the valley sides are comprised of older stone buildings, often the longhouse type.

Historic farm buildings are still visible today. They either remain in their original isolation or have been subsumed in later urban growth. Linear and dispersed farmstead groups predominate, with some courtyard steadings developed from the late 18th century when arable farming increased. There are field barns for cattle on higher ground. Aisled barns date from the 16th century and combination barns with cattle housed at storeyed ends were associated with larger farms from the early 17th century and in general use by the 19th century.

There are fragments of former strip-field agriculture alongside northern villages (Foulridge, Kelbrook, and Earby). The Ribble Valley flood plain to the south and west is dominated by irregular pasture fields dating from before 1600. These appear to have been created mainly through processes of assartment – leaving occasional fragments of former woodland along boundaries. To the north-east the field patterns are more planned and rectilinear, reflecting episodes of moorland and Parliamentary enclosure along the fringes of the forests of Trawden and Pendle in the period 1600–1850. Hedges give way to stone walls on rising ground. Except around the fringes of the urban settlements, there is very little evidence of post-1850 enclosure patterns.

Recent developments include the expansion of towns and residential areas, light industry and the road and motorway network, all of which are contributing to and consolidating the urban character of the area. Many redundant mills and associated buildings have been converted into other uses, such as retail and housing. In many areas, farming is now giving way to livery and horsiculture, particularly around the fringes of towns and villages. The rivers that helped to facilitate the Industrial Revolution and, as a result, became polluted with industrial waste, devoid of fish have since been subject to a number of improvement initiatives. Many of the rivers are now host to recreational activities such as angling and canoeing, while the Leeds and Liverpool Canal provides additional opportunities for multi-user pursuits including walking, cycling and horse riding.

Ecosystem services

The Lancashire Valleys NCA provides a wide range of benefits to society. Each is derived from the attributes and processes (both natural and cultural features) within the area. These benefits are known collectively as 'ecosystem services'. The predominant services are summarised below. Further information on ecosystem services provided in the Lancashire Valleys NCA is contained in the 'Analysis' section of this document.

Provisioning services (food, fibre and water supply)

- **Food provision**: The main land use in this NCA is grass and uncropped land (96 per cent), mainly for sheep and cattle rearing. The predominant farm type is livestock grazing. In 2009 there were 295 commercial livestock grazing holdings in the uplands and Less Favoured Area (LFA) (35 per cent) and 121 in the lowlands (14 per cent).

- **Timber provision**: Some 8 per cent of the area is woodland, much of which is either unmanaged or under-managed and of which only a small proportion is conifer. There are opportunities for local woodland products, including wood fuel.

- **Water availability**: Principal surface water resources within the NCA are the catchments of the rivers Ribble and Calder. The majority of the water abstraction in the area is used for public water supply, industrial purposes and supplying the Leeds and Liverpool Canal.

Regulating services (water purification, air quality maintenance and climate regulation)

- **Climate regulation:** In this NCA soil carbon levels are generally low, reflecting the 84 per cent coverage of the NCA by mineral soils. Soil carbon levels rise slightly towards the southern half of the NCA, where there are also some pockets of much higher carbon content bordering the Southern Pennines NCA; – these are likely to be associated with the areas of upland heathland. It is important to conserve these pockets of carbon-rich soils, as they provide a carbon storage function. Soil carbon is also high under areas of woodland, and carbon storage and sequestering is also provided by the woodland itself.

- **Regulating soil quality:** Almost 70 per cent of this NCA may be subject to soil quality issues. The slowly permeable, seasonally wet, acid loamy and clayey soils and the slowly permeable, seasonally wet, slightly acid but base-rich loamy and clayey soils may suffer compaction and/or capping as they are easily damaged when wet. In turn this may lead to increasingly poor water infiltration and diffuse pollution as a result of surface water run-off. Management measures that increase organic matter levels can help to reduce these problems. Similarly, the slightly acid loamy and clayey soils with impeded drainage have a weak topsoil structure that can easily be poached by livestock and compacted by machinery when wet.

- **Regulating water quality:** The steep, fast-flowing streams and rivers result in high levels of run-off, especially after heavy rainfall, with consequent impacts of erosion and increased sediment load on areas downstream. Appropriate management in this and upstream NCAs can capture sediment run-off and improve infiltration, benefiting water quality both within this NCA and downstream.

- **Regulating water flow:** There is a risk of fluvial flooding along the narrow river valleys where settlements have typically developed. River flood risk within the NCA occurs at Ribchester on the River Ribble, at Burnley and Padiham on the River Calder, at Blackburn on the River Darwen, and at Nelson, Accrington and Oswaldtwistle on the Leeds and Liverpool Canal and associated rivers. Downstream, flood risk also occurs within the Lancashire and Amounderness Plain NCA at Preston on the Ribble and at Walton-le-Dale on the Darwen. Chorley is at risk of flooding from the River Yarrow, which rises on Rivington Moor in the Southern Pennines NCA and flows through the southern part of this NCA before joining the River Douglas in the Lancashire and Amounderness Plain NCA, where further flood risk exists at Croston. Land management practices upstream of this area could potentially make a contribution to reducing the degree of flood risk.

Cultural services (inspiration, education and wellbeing)

- **Sense of place/inspiration**: Sense of place is provided by the broad valley of the River Calder and its tributaries, running between Pendle Hill and the Southern Pennines. Large towns and numerous communication routes, including the Leeds and Liverpool Canal, the Preston–Colne rail link and the M65, have created an intensely urbanised and developed landscape – for example, the towns of Accrington, Blackburn and Burnley. Buildings, mainly Victorian-stone terraces, are well integrated into the landscape, while remaining agricultural land is highly fragmented by industry, with small, often ancient, woodlands constrained to narrow, steep-sided cloughs on valley sides. The area also has extensive areas of reclaimed land – a product of former quarries and coal mining – that is now generally well-vegetated, and grazed by sheep. There are also a considerable number of country houses and parklands on the northern valley sides, especially away from the main built-up areas. A strong sense of visual containment is provided by the surrounding hills which also serve as an important backdrop, dwarfing settlements in the valley bottom.

- **Sense of history**: The history of the landscape is evident in its strong industrial heritage linked to the textile industry, with converted or redundant mill buildings, mill lodges and ponds, and the associated towns of Blackburn, Accrington and Burnley which expanded rapidly as a result of the Industrial Revolution. Some towns form part of earlier rural villages, retaining early buildings alongside stone terraces built to accommodate textile workers. Evidence of older buildings, usually of sandstone grit, is also present in the scattered settlements on the valley sides. The historic character is also dominated by access and movement along the valleys, and is reflected in a Roman road and forts at Burwen Castle near Elslack and at Ribchester, and more recently by the Leeds and Liverpool Canal.

- **Recreation**: Recreation is supported by the area's 1,590 km rights of way network (with a density of 2.9 km per km^2), including the Pennine Bridleway and Pennine Way National Trails of which just over 28 km cuts through the area, as well as 1,733 ha of open access land (just over 3 per cent of the NCA). The area also offers a variety of recreational activities, including angling and golf, while access to more natural environments provides opportunities for bird watching and other informal leisure pursuits that contribute to public health and wellbeing.

- **Biodiversity**: There is a limited extent of priority habitats within the NCA, with 600 ha of upland heathland being the largest, while woodland and unimproved grassland are also represented. The NCA contains no Natura 2000 sites and just 75 ha are nationally designated as Sites of Special Scientific Interest. There are 275 local sites in the Lancashire Valleys covering 3,228 ha, which is 6 per cent of the NCA.

- **Geodiversity**: The NCA has a relatively simple geology, formed of Carboniferous rocks and more recent glacial deposits. There are currently three nationally designated geological sites within the NCA, namely Darwen River Section, Cock Wood Gorge, and Harper Clough and Smalley Delph Quarries, all of which are important for their exposures of sandstone geology. The 16 Local Geological Sites include examples of natural outcrops, disused quarries and stream sections. These sites provide opportunities to interpret the local geodiversity, helping to inform and educate visitors and increasing their understanding and enjoyment of the sites.

View looking north from Langho. The top of the Bowland Fells can just be glimpsed.

Statements of Environmental Opportunity

SEO 1: Conserve and manage the Lancashire Valleys' industrial heritage to safeguard the strong cultural identity and heritage of the textile industry with its distinctive sense of place and history.

For example, by:

- Protecting, conserving, managing and interpreting the area's historic identity, in particular the buildings associated with past textile and mining/quarrying industries, urban fabric, parks, rural villages, country houses, parklands and industrial heritage, to ensure a better understanding of past land use and retain evidence of the relationships between features for the future.
- Protecting, conserving, managing and interpreting the many layers of historical evidence to raise awareness and for public benefit, understanding and enjoyment.
- Promoting and encouraging opportunities to restore and re-use vernacular buildings, using local styles and building materials in order to maintain and enhance the historic character of rural villages and urban areas.
- Increasing awareness of, access to, and interpretation of the area's strong industrial heritage/textile industry, particularly that associated with the Leeds and Liverpool Canal.
- Encouraging and promoting land management practices and developments, such as tracks, that will not be detrimental to, or damage, archaeological evidence or historic features.
- Protecting and encouraging sensitive restoration and re-use of existing, redundant and derelict mill buildings and artefacts, such as mill ponds, associated with the textile industry to retain the historic industrial heritage, particularly linked to the Leeds and Liverpool Canal.
- Seeking opportunities to promote and use the network of paths to gain access to, reveal and interpret the area's rich history, to increase public understanding and enjoyment of it.
- Raising awareness and increasing understanding of the local history of the area and its importance at a national level.
- Conserving important geological exposures and providing interpretation, making links between the geology and the industries that relied on these resources.

SEO 2: Increase the resilience and significance of woodland and trees, and manage and expand existing tree cover to provide a range of benefits, including helping to assimilate new infrastructure; reconnecting fragmented habitats and landscape features; storing carbon; and providing fuel, wood products, shelter and recreational opportunities.

For example, by:

- Protecting, conserving and enhancing the mosaic and diversity of existing woodlands, especially ancient semi-natural woodland, and improve their connectivity.
- Bringing the area's small broadleaved woodlands, particularly on farms, into management, focusing on the visually important clough and ridge-side woodlands on the lower hillsides and the wet woodlands in the valley bottoms, and focusing on farm shelter plantings and copses that are distinctive to the industrial foothills and valleys.
- Planting new broadleaved woodlands, particularly on degraded farmland and vacant industrial land in the urban fringe, focusing on the visually important clough and ridge-side woodlands.
- Managing and restoring hedges and field boundary trees and connecting to existing fragmented and degraded habitats.
- Encouraging sustainable management of existing woodlands to produce surplus timber and biomass for local use – for example, for wood-fired boilers – while maintaining their biodiversity and landscape value, increasing resilience, and regulating soils and water.
- Ensuring that new woodland strengthens the local landscape and enhances biodiversity, providing recreational opportunities where possible.
- Creating new woodlands to assimilate urban development and to enhance rural character and tranquillity where appropriate.
- Promoting and marketing small-scale biomass production through planting on sites that are isolated by development and are not suitable for agriculture, spoil heaps or closed landfill sites.
- Supporting the aims of the North West Regional Forestry Framework and sub-regional strategies.

SEO 3: Manage and support the agricultural landscape through conserving, enhancing, linking and expanding the habitat network, and manage and plan for the associated potential impact of urban fringe development, intensive agriculture and climate change mitigation.

For example, by:

- Conserving, enhancing and expanding characteristic landscape and important ecological resources, such as species-rich, unimproved/semi-improved meadows and pastures and wetland meadows, including bringing nationally and locally designated habitats into, and maintaining, favourable condition.
- Managing land adjacent to isolated habitats to ensure that they are protected, expanded, buffered and linked to increase habitat connectivity and allow species movement, especially along rivers, the Leeds and Liverpool Canal, mill ponds and clough woodlands.
- Encouraging improved management of grassland and woodland through increased uptake of environmental incentive schemes to provide a farmed landscape of fields, well-managed hedgerows, mosaics of grass and margins, and small woodlands to benefit species such as farmland birds.
- Managing pressures on remnant farmland adjoining urban areas so that the characteristic stone wall and hedgerow field boundaries, especially those adjacent to urban areas, lanes and important footpaths and viewpoints, are conserved and enhanced.
- Managing and extending permanent grassland, woodland, wetland and riparian habitats along watercourses, the Leeds and Liverpool Canal, cloughs and valley sides to capture sediment, increase holding capacity, slow down run-off and improve infiltration.
- Managing pastures at a sustainable level, to improve soil structure, increase soil carbon storage, aid water infiltration and slow down/reduce water run-off, and safeguard water and soil quality.
- Encouraging expansion of wetland habitats such as reedbeds, woodlands and wet grasslands along valley bottoms, to improve flood mitigation by intercepting and retaining water for longer.
- Encouraging and promoting opportunities within the Upper Ribble and Hodder sub-catchment to provide flood storage and create habitat that could reduce downstream flood risk.

SEO 4: Conserve and manage the distinction between small rural settlements and the densely urban areas and ensure that new development is sensitively designed to contribute to settlement character, reduce the impact of the urban fringe and provide well-designed green infrastructure to enhance recreation, biodiversity and water flow regulation.

For example, by:

- 'Designing in' green infrastructure principles with housing expansion, business park developments (associated with key road intersections), expansion of water treatment facilities and associated changes such as horsiculture.
- Encouraging innovative new uses for old and/or abandoned buildings, while preserving their characteristic features.
- In urban areas, protecting important views to the hills from the impact of new development, including windfarms.
- Providing new permissive access that links to open access land, long distance rights of way, country parks and other areas of greenspace.
- Protecting the nature conservation interest of vacant land from new development.
- Protecting the setting of the adjacent Forest of Bowland Area of Outstanding Natural Beauty.
- Seek opportunities to develop sustainable urban drainage systems (SUDS) in urban areas in particularly in new development, to improve infiltration and manage surface water.
- Improving the urban-rural fringe through careful design and integration of green infrastructure with housing and industry, through linking new developments with the wider countryside and sustainably manage urban activities within agricultural areas.
- Improving, maintaining and expanding semi-natural habitats on farmland, such as meadows, pastures, wetlands and clough woodlands, which may increase the sense of tranquillity in the urban fringes, for example by planting new woodlands and shelter belts, and ensuring new developments are sensitively designed to reduce any visual and infrastructure impacts on rural areas and the urban fringe.
- Ensuring new woodland screens urban fringes to enhance rural character and tranquillity and contributes to recreational value by providing appropriate access to encourage public engagement with and enjoyment of nature.

Supporting document 1: Key facts and data

Area of Lancashire Valleys National Character Area (NCA): 55,423 ha

1. Landscape and nature conservation designations

Five per cent of the NCA or 2,700 ha, lies within the Forest of Bowland Area of Outstanding Natural Beauty (AONB). The Forest of Bowland AONB Management Plan provides a policy framework and identifies a five year programme of actions (April 2009 to March 2014) to help guide the work of the AONB partnership organisations towards achieving the purpose of this plan; to conserve and enhance the natural and cultural beauty of the Forest of Bowland landscape.

The management plan can be downloaded at:

- http://www.forestofbowland.com/cons_managementplan

Source: Natural England (2011)

1.1 Designated nature conservation sites

The NCA includes the following statutory nature conservation designations:

Tier	Designation	Name	Area (ha)	% of NCA
International	n/a	n/a	0	0
European	Special Protection Area (SPA)	n/a	0	0
	Special Area of Conservation (SAC)	n/a	0	0
National	National Nature Reserve (NNR)	n/a	0	0
	Site of Special Scientific Interest (SSSI)	A total of 6 sites wholly or partly within the NCA	75	<1

Source: Natural England (2011)

Please note: (i) Designated areas may overlap (ii) all figures are cut to Mean High Water Line, designations that span coastal areas/views below this line will not be included.

There are 275 local sites in the Lancashire Valleys covering 3,228 ha which is 6 per cent of the NCA.

Source: Natural England (2011)

- Details of individual Sites of Special Scientific Interest can be searched at: http://www.sssi.naturalengland.org.uk/Special/sssi/search.cfm
- Details of Local Nature Reserves (LNR) can be searched at: http://www.lnr.naturalengland.org.uk/Special/lnr/lnr_search.asp
- Maps showing locations of Statutory sites can be found at: http://magic.Defra.gov.uk/website/magic/ – select 'Rural Designations Statutory'

1.1.1 Condition of designated sites

SSSI condition category	Area (ha)	Percentage of NCA SSSI resource
Unfavourable declining	0	0
Favourable	71	95
Unfavourable no change	0	0
Unfavourable recovering	4	5

Source: Natural England (March 2011)

- Details of SSSI condition can be searched at: http://www.sssi.naturalengland.org.uk/Special/sssi/reportIndex.cfm

2. Landform, geology and soils

2.1 Elevation

Elevation ranges within this NCA from 5 m above sea level to 486 m.

Source: Natural England 2010

2.2 Landform and process

The Lancashire Valleys are concentrated in a broad trough which runs north-eastwards from Chorley to Skipton; lying between the higher land of the Yorkshire Dales to the north, the Southern Pennines to the east and south, and the Forest of Bowland on the north and west sides. Pendle Hill, the outlier of Millstone Grit, forms part of the northern boundary of the area.

Source: Lancashire Valleys Countryside Character Area description

2.3 Bedrock geology

The Lancashire Valleys, with the key towns of Blackburn, Accrington and Burnley, occupy a broad trough underlain by Coal Measures. A Millstone Grit ridge lies between the Ribble and Calder catchments. This includes the Mellor Ridge and part of Pendle Hill. The main river, the River Calder, cuts out of the trough through a gorge at Whalley and joins the River Ribble at the edge of the area to the north-west of the town. The Millstone Grit outcrop of Pendle Hill, with its clear glaciated whaleback form, lies on the northern boundary of area.

Source: : Lancashire Valleys Countryside Character Area description

2.4 Superficial deposits

The bottom of the trough containing Blackburn, Accrington and Burnley is covered with glacial deposits, mostly till. In the Feniscowles/Pleasington area west of Blackburn there are extensive sand deposits. The undulating lowland farmland and flood plain west of Blackburn is underlain by heavy clays.

Source: Lancashire Valleys Countryside Character Area description

2.5 Designated geological sites

Tier	Designation	Number
National	Geological Site of Special Scientific Interest (SSSI)	3
National	Mixed Interest SSSIs	0
Local	Local Geological Sites	16

Source: Natural England (2011)

- Details of individual Sites of Special Scientific Interest can be searched at: http://www.sssi.naturalengland.org.uk/Special/sssi/search.cfm

2.6 Soils and Agricultural Land Classification

Forty-six per cent of the NCA is Grade 4 agricultural land. Poorer quality soils (Grade 5) occur in the higher areas to the east of Pendle Hill and around Foulridge, Kelbrook, Earby and Elslack. Better quality soils (Grade 3) occur along the Calder Valley and in the west of the NCA around the Ribble, Darwen and Yarrow rivers. There are 9 main soilscape types in this area; slowly permeable, seasonally wet acid loamy and clayey soils, covering 45 per cent of the area; slowly permeable, seasonally wet slightly acid but base-rich loamy and clayey soils (14 per cent); slightly acid loamy and clayey soils with impeded drainage (10 per cent); slowly permeable, wet very acid upland soils with a peaty surface (8 per cent); freely draining, slightly acid loamy soils (8 per cent); freely draining, slightly acid sandy soils (5 per cent); loamy and clayey flood plain soils with naturally high groundwater (3 per cent); very acid, loamy upland soils with a wet peaty surface (3 per cent); and freely draining flood plain soils (2 per cent).

Source: Natural England (2010)

The main grades of agricultural land in the NCA are broken down as follows (as a proportion of total land area):

Grade	Area (ha)	% of NCA
Grade 1	0	0
Grade 2	55	<1
Grade 3	19,058	34
Grade 4	25,290	46
Grade 5	2,841	5
Non-agricultural	0	0
Urban	8,179	15

Source: Natural England (2010)

- Maps showing locations of Statutory sites can be found at: http://magic.Defra.gov.uk/website/magic/ – select 'Landscape' (shows ALC classification and 27 types of soils).

3. Key water bodies and catchments

3.1 Major rivers/canals

The following major rivers/canals (by length) have been identified in this NCA.

- River Calder 24 km
- River Ribble 23 km
- River Darwen 18 km
- Sabden Brook 10 km
- River Aire 9 km
- River Yarrow 9 km

Source: Natural England (2010)

Please note: Other significant rivers (by volume) may also occur. These are not listed where the length within the NCA is short.

Six rivers flow through the NCA totalling 93 km of watercourse along with 78 km of the Leeds-Liverpool Canal.

The NCA contains part of the middle section of the River Ribble, which has its source in the Yorkshire Dales NCA, as well as the Ribble's confluence with the River Hodder which drains the southern slopes of the Bowland Fells NCA. Tributaries of the Ribble within the NCA include the River Calder, and its tributary Sabden Brook, and the River Darwen. The River Yarrow rises on Rivington Moor in the Southern Pennines NCA and flows through the southern part of this NCA before joining the River Douglas in the Lancashire and Amounderness Plain NCA.

3.2 Water quality

The total area of Nitrate Vulnerable Zone is 35,791 ha, or 65 per cent of the NCA.

Source: Natural England (2010)

3.3 Water Framework Directive

Maps are available from the Environment Agency showing current and projected future status of water bodies at:

http://maps.environment-agency.gov.uk/wiyby/wiybyController?ep=maptopics&lang=_e

4. Trees and woodlands

4.1 Total woodland cover

The NCA contains 4,517 ha of woodland, 8 per cent of the total area, of which 894 ha is ancient woodland.

Source: Natural England (2010), Forestry Commission (2011)

4.2 Distribution and size of woodland and trees in the landscape

Small, often ancient, woodlands of oak, alder and sycamore extend along narrow, steep-sided cloughs on the valley sides, for example at Priestly Clough and Spurn Clough and in the Darwen valley. There are several small areas of conifer plantation the largest being at Standrise Plantation associated with Elslack reservoir. There are occasional fragments of former woodland along field boundaries particularly in the Ribble valley flood plain.

Source: Lancashire Valleys Countryside Character Area description

4.3 Woodland types

A statistical breakdown of the area and type of woodland found across the NCA is detailed below.

Area and proportion of different woodland types in the NCA (over 2 ha)

Woodland type	Area (ha)	% of NCA
Broadleaved	3,760	7
Coniferous	348	1
Mixed	199	<1
Other	210	<1

Source: Forestry Commission (2011)

Area and proportion of ancient woodland and planted ancient woodland within the NCA.

Type	Area (ha)	% of NCA
Ancient semi-natural woodland	787	1
Planted Ancient Woodland (PAWS)	107	<1

Source: Natural England (2004)

5. Boundary features and patterns

5.1 Boundary features

Boundaries are formed by hedgerows with few hedgerow trees, and by stone walls and post and wire fences at higher elevations. Boundaries are generally degraded around urban areas.

Source: Lancashire Valleys Countryside Character Area description; Countryside Quality Counts (2003)

5.2 Field patterns

The Ribble valley flood plain to the south and west is dominated by irregular, hedgerow-bounded pasture fields dating from before 1600. These appear to have been created mainly through the processes of assarting, leaving occasional fragments of former woodland along boundaries. To the north and east the dominant field forms are more clearly planned and rectilinear in form reflecting episodes of moorland enclosure along the fringes of the Forest of Trawden and Pendle in the period 1600 to 1850. There are rare fragments of former strip-field agriculture alongside northern villages as at Fowlridge, Kelbrook and Earby.

Source: English Heritage Historic Profiles; Countryside Character Area description; Countryside Quality Counts (2003)

6. Agriculture

The following data has been taken from the Agricultural Census linked to this NCA.

6.1 Farm type

The predominant farm type in this NCA is livestock grazing. In 2009 there were 295 commercial livestock grazing holdings in the Less Favourable Area (LFA) part of the NCA accounting for 35 per cent of all holdings and 121, or 14 per cent, in the lowlands. There were also 131 dairy holdings (15 per cent), 20 specialist poultry holdings (2 per cent), 18 mixed holdings (2 per cent), 12 horticultural holdings (1 per cent), 11 specialist pig holdings (1 per cent) and 6 cereals holdings (1 per cent). Survey data from 2000 to 2009 shows a 31 per cent increase in the number of grazing farms in the LFA while grazing farms in the lowlands decreased by 28 per cent. Of the other holding types specialist pig holdings showed an increase and all other types showed a decrease in numbers.

Source: Agricultural Census, Defra (2010)

6.2 Farm size

Farm size distribution shows a slight skew towards the smaller size bands with most holdings (35 per cent) being of 5 to 20 ha in size. However, holdings over 50 ha account for 67 per cent of the farmed area. Between 2000 and 2009 the number of commercial holdings decreased overall by 9 per cent from 938 to 850. This decrease was across all size bands with the exception of farms over 100 ha which showed a 10 per cent increase from 62 to 68 holdings. It should be noted that these figures do not include the access that many farmers have to common grazing on moorland.

Source: Agricultural Census, Defra (2010)

6.3 Farm ownership

2009: Total farm area = 31,902 ha; owned land = 19,241 ha
2000: Total farm area = 31,735 ha; owned land = 20,669 ha.

In 2009 60 per cent of the total farm area was owner occupied. Between 2000 and 2009 there was a slight increase in the total farmed area by 167 ha (1 per cent) although there was a slight decrease in the number of holders from 1,285 to 1,147.

Source: Agricultural Census, Defra (2010)

6.4 Land use

The main land use in this NCA is grass and uncropped land (96 per cent), mainly for sheep and cattle rearing.

Source: Agricultural Census, Defra (2010)

6.5 Livestock numbers

Sheep are the most numerous livestock type in this landscape (a total of 118,100 in 2009 in comparison with 37,200 cattle and 2,900 pigs). Between 2000 and 2009 sheep numbers decreased by 19,100 (14 per cent), cattle numbers decreased by 9,900 (21 per cent) and pig numbers decreased by 3,200 (53 per cent).

Source: Agricultural Census, Defra (2010)

6.6 Farm labour

In 2009 the majority of holdings were run by principal farmers (1,147 or 73 per cent) with only 29 salaried managers (2 per cent) employed. Between 2000 and 2009 the total farm labour decreased by 9 per cent from 1,735 to 1,573. The number of principal farmers decreased from 1,285 to 1,147, salaried managers decreased from 32 to 29, full time workers decreased from 166 to 165, part time workers increased from 148 to 166 and casual/gang workers decreased from 104 to 66.

Source: Agricultural Census, Defra (2010)

Please note: (i) Some of the Census data is estimated by Defra so will not be accurate for every holding (ii) Data refers to Commercial Holdings only (iii) Data includes land outside of the NCA belonging to holdings whose centre point is within the NCA listed.

7. Key habitats and species

7.1 Habitat distribution/coverage

The River Calder and its tributaries dominate this NCA. Canals, once the main transport routes for industry, are also a feature of the area. These waterways support valuable plant communities as well as populations of birds. Goosander, coot, grebe and warblers are all common here. Great crested newts and otters can also be found.

Fragmented agricultural land is dominated by pasture. Wet grasslands are common on the flood plains, and provide habitat for valuable populations of butterflies and birds. Snipe, curlew, redshank and lapwing are all common sights here. Species rich hay meadows are becoming less common with the application of modern agricultural techniques. The field boundaries are marked by hedgerows with few trees, while stone walls and fencing are characteristic on the higher ground.

Numerous large country houses with associated parkland are largely situated on the south facing valley sides away from major urban areas. Small woodlands occur throughout the farmland particularly on the sides of steep river valleys and cloughs. Wood anemone, herb Paris and small leaved lime can be found here. Wet woodlands dominated by alder occur on the flood plains and river banks.

Source: Lancashire Valleys Countryside Agency Summary Statements; Lancashire Plains & Valleys Natural Area Profile

7.2 Biodiversity Action Plan (BAP) priority habitats

The Government's new strategy for biodiversity in England, Biodiversity 2020, replaces the previous Biodiversity Action Plan (BAP) led approach. Priority habitats and species are identified in Biodiversity 2020, but references to BAP priority habitats and species, and previous national targets have been removed. Biodiversity Action Plans remain a useful source of guidance and information.

More information about *Biodiversity 2020* can be found at:

http://www.naturalengland.org.uk/ourwork/conservation/biodiversity/protectandmanage/englandsbiodiversitystrategy2011.aspx

The NCA contains the following areas of mapped priority habitats (as mapped by National Inventories). Footnotes denote local/expert interpretation. This will be used to inform future national inventory updates.

Access designation	Area (ha)	% of NCA
Broadleaved mixed and yew woodland (broad habitat)	1,910	3
Upland heathland	615	1
Coastal and flood plain grazing marsh	552	1
Lowland meadows	381	1
Lowland dry acid grassland	91	<1
Purple moor grass and rush pasture	79	<1
Upland calcareous grassland	71	<1
Blanket bog	53	<1
Lowland heathland	38	<1
Upland hay meadows	13	<1
Lowland calcareous grassland	11	<1

Sources: Natural England (2011)

- Maps showing locations of UK BAP priority habitats are available at: http://magic.Defra.gov.uk/website/magic/ select 'Habitat Inventories'

7.3 Key species and assemblages of species

- Maps showing locations of UK BAP priority habitats are available at: http://magic.Defra.gov.uk/website/magic/
- Maps showing locations of S41 species are available at: http://data.nbn.org.uk/

8. Settlement and development patterns

8.1 Settlement pattern

Settlement within the Lancashire Valleys is extensive. There is a high proportion of built land which includes the towns of Blackburn, Darwen, Accrington, Burnley, Nelson and Colne. There is substantial new industry in the area as well as many artefacts of the area's industrial heritage. Scattered settlements on valley sides are comprised of older stone buildings, often of the longhouse type, and isolated blocks of stone terraced houses perched at precarious angles on the steep slopes. There are also several large country houses along the Calder valley.

Source: Lancashire Valleys Countryside Character Area description; Countryside Quality Counts (2003)

8.2 Main settlements

The largest settlements within the NCA include: Blackburn, Burnley, Accrington, Chorley, Nelson, Colne, Skipton, Padiham, Oswaldtwistle and Great Harwood. There are also many towns, villages and hamlets with populations of less than 10,000. The total estimated population for this NCA (derived from ONS 2001 census data) is: 671,807.

Source: Lancashire Valleys Countryside Character Area description; Countryside Quality Counts (2003)

8.3 Local vernacular and building materials

Buildings are predominantly constructed from sandstone and are generally in good repair. The area's many Victorian buildings and terraces are well-integrated into the landscape. There is a strong industrial heritage associated with the textile industry, and redundant mill buildings, mill lodges and ponds are common. Numerous large country houses with associated parklands occur, particularly on the northern valley sides away from major urban areas.

Source: Lancashire Valleys Countryside Character Area description; Countryside Quality Counts (2003)

9. Key historic sites and features

9.1 Origin of historic features

The history of the landscape is evident in its strong industrial heritage linked to the textile industry, with converted or redundant mill buildings, mill lodges and ponds, and the associated towns of Blackburn, Accrington and Burnley which expanded rapidly as a result of the industrial revolution. Some towns form part of earlier rural villages, retaining early buildings alongside stone terraces to accommodate textile workers. Evidence of older buildings, usually of sandstone grit, is also present in the scattered settlements on the valley sides. The historic character is also dominated by access and movement along the valleys, and is reflected in a Roman road and forts at Burwen Castle near Elslack and at Ribchester, and more recently by the Leeds-Liverpool Canal. Aspects of history likely to be particularly evident to the general public include the area's country houses and associated parklands, located particularly on the northern valley sides. These include Read Park, Huntroyde Demesne and Gawthorpe, and Dunkenhalgh and Towneley Halls, built as a result of the wealth generated from the textile industry.

Source: Countryside Quality Counts Draft Historic Profile, Countryside Character Area description

9.2 Designated historic assets

This NCA has the following historic designations:

- 11 Registered Parks and Gardens covering 502 ha
- 0 Registered Battlefields
- 34 Scheduled Monuments
- 1,323 Listed Buildings

Source: Natural England (2010)

- More information is available at the following address:
  http://www.english-heritage.org.uk/caring/heritage-at-risk/

  http://www.english-heritage.org.uk/professional/protection/process/national-heritage-list-for-england/

10. Recreation and access

10.1 Public access

- Three per cent of the NCA, 1,733 ha, is classified as being publically accessible. This tends to be in the more elevated areas to the east of Pendle Hill and around Foulridge, Kelbrook, Earby and Elslack.
- There are 1,589 km of public rights of way at a density of 2.9 km per km^2.
- There are 2 national trails within the NCA; 15 km of the Pennine Bridleway and 13 km of the Pennine Way fall within this NCA.

Sources: Natural England (2010)

The table below shows the breakdown of land which is publically accessible in perpetuity:

Access designation	Area (ha)	% of NCA
National Trust (Accessible all year)	0	0
Common Land	313	1
Country Parks	642	1
CROW Access Land (Section 4 and 16)	1,733	3
CROW Section 15	142	<1
Village Greens	<1	<1
Doorstep Greens	1	<1
Forestry Commission Walkers Welcome Grants	167	<1
Local Nature Reserves (LNRs)	80	<1
Millennium Greens	3	<1
Accessible National Nature Reserves (NNRs)	0	0
Agri-environment Scheme Access	8	<1
Woods for People	689	1

Sources: Natural England (2011)

Please note: Common Land refers to land included in the 1965 commons register; CROW = Countryside and Rights of Way Act 2000; OC and RCL = Open Country and Registered Common Land.

11. Experiential qualities

11.1 Tranquillity

Based on the CPRE map of tranquillity (2006) the lowest scores for tranquillity are found along the M65 motorway corridor, particularly around Blackburn, Accrington and Burnley.

A breakdown of tranquillity values for this NCA is detailed in the table below:

Category of tranquillity	Score
Highest value within NCA	48
Lowest value within NCA	91
Mean value within NCA	16

Sources: CPRE (2006)

- More information is available at the following address: http://www.cpre.org.uk/what-we-do/countryside/tranquil-places/in-depth/item/1688-how-we-mapped-tranquillity

11.2 Intrusion

The 2007 Intrusion Map (CPRE) shows the extent to which rural landscapes are 'intruded on' from urban development, noise (primarily traffic noise), and other sources of visual and auditory intrusion. This shows that the majority of the NCA is categorised as disturbed. The largest remaining undisturbed areas include pockets to the south of Longridge Fell and Pendle Hill, land to the south of Skipton and very small areas to the west of Blackburn.

A breakdown of intrusion values for this NCA is detailed in the table below.

Category of intrusion	1960s (%)	1990s (%)	2007 (%)	% change (1960s-2007)
Disturbed	52	64	67	15
Undisturbed	38	26	16	-21
Urban	10	10	17	7

Sources: CPRE (2007)

Notable trends from the 1960s to 2007 are a general increase in intrusion outwards from the urban centres.

- More information is available at the following address: http://www.cpre.org.uk/resources/countryside/tranquil-places

12. Data sources

- British Geological Survey (2006)
- Natural Area Profiles, Natural England (published by English Nature 1993-1998)
- Countryside Character Descriptions, Natural England (regional volumes published by Countryside Commission/Countryside Agency 1998/1999)
- Joint Character Area GIS boundaries, Natural England (data created 2001)
- National Parks and AONBs GIS boundaries, Natural England (2006)
- Heritage Coast Boundaries, Natural England (2006)
- Agricultural Census June Survey, Defra (2000,2009)
- National Forest Inventory, Forestry Commission (2011)
- Countryside Quality Counts Draft Historic Profiles, English Heritage (2004)*
- Ancient Woodland Inventory, Natural England (2003)
- BAP Priority Habitats GIS data, Natural England (March 2011)
- Special Areas of Conservation data, Natural England (data accessed in March 2011)
- Special Protection Areas data, Natural England (data accessed in March 2011)
- Ramsar sites data, Natural England (data accessed in March 2011)
- Sites of Special Scientific Interest, Natural England (data accessed in March 2011)
- Detailed River Network, Environment Agency (2008)
- Source protection zones, Environment Agency (2005)
- Registered Common Land GIS data, Natural England (2004)
- Open Country GIS data, Natural England (2004)
- Public Rights of Way Density, Defra (2011)
- National Trails, Natural England (2006)
- National Tranquillity Mapping data, CPRE (2007)
- Intrusion map data, CPRE (2007)
- Registered Battlefields, English Heritage (2005)
- Record of Scheduled Monuments, English Heritage (2006)
- Registered Parks and Gardens, English Heritage (2006)
- World Heritage Sites, English Heritage (2006)
  Incorporates Historic Landscape Characterisation and work for preliminary Historic Farmstead Character Statements (English Heritage/Countryside Agency 2006)

Please note all figures contained within the report have been rounded to the nearest unit. For this reason proportion figures will not (in all) cases add up to 100%. The convention <1 has been used to denote values less than a whole unit.

Supporting document 2: Landscape change

Recent changes

Trees and woodlands

- About 20 per cent of the existing woodland is ancient woodland (894 ha), of this 12 per cent (107 ha) is plantation on ancient woodland sites.
- Existing woodlands, which are important landscape features, often lack management. In 2003 data indicated that an extremely small proportion (9 per cent) of the area's woodland was in active management under the Woodland Grant Scheme. An even smaller proportion (5 per cent) of ancient woodland was in management.
- Some new woodlands have been planted, often in association with recreational activities near to major settlements (golf courses) and on derelict land.

Boundary features

- The estimated boundary length for the NCA is about 3,627 km. The total length of Environmental Stewardship agreements for linear features as at March 2011 is approximately 524 km.
- The most frequent Environmental Stewardship agreements for linear features as at March 2011 were for stonewalls (233 km) and hedgerows (213 km).
- Data from 1999 and 2003 suggests that decline in management of hedges and walls, continues, with conversion to post-and-wire fencing.

Agriculture

- There was a 5 per cent decline in permanent grassland cover in the period 1990-1998, although this partly reflected a decline in farmland generally. Permanent grassland and hay meadows have been lost due to increases in agricultural productivity and conversion to silage production.
- Urban fringe pressures and demand for recreation activities (such as golf courses) has caused loss of agricultural land and degradation of field boundaries.
- Between 2000 and 2009 there has been a slight increase in the total farmed area of 167 ha (1 per cent).
- Between 2000 and 2009 all livestock numbers decreased; sheep by 19,100 (14 per cent), cattle by 9,900 (21 per cent) and pigs by 3,200 (53 per cent).

Settlement and development

- Rationalising farming operations has led to the conversion of traditional farm buildings to alternative uses including the conversion of traditional farm buildings to dwellings, with the desire for more rural homes.
- Residential development pressure around towns and villages is an issue in all lowland parts of the area. The motorway corridors are particularly at risk from housing, leisure, retail and commercial development.
- Pressures on farmland adjoining urban areas particularly from livery and horsiculture have caused degradation of field boundaries.

Semi-natural habitat

- Species-rich hay meadows are becoming less common with the application of modern agricultural techniques.
- The most significant grassland management options under Countryside Stewardship agreements in 2003 were for upland in-bye pasture (328 ha) and upland hay meadows (166 ha).
- In 2003 CSS annual payments for margins and buffers was significant (243 km).

Historic features

- Rationalisation of farming operations has led to redundancy and/or conversion of traditional farm buildings.
- Valuable industrial heritage buildings and features associated with the textile industry especially along the Leeds-Liverpool Canal have become redundant and neglected. The potential loss, restoration or conversion of these traditional artefacts to other uses affects the landscape and historic character of this area.

Rivers

- At its western edge in the area of Preston and Bamber Bridge the NCA overlays a major aquifer, which is classed as being 'over abstracted'.
- The River Yarrow receives compensation flows from the Rivington Reservoirs in the Southern Pennines NCA and has 'water available'.
- The River Ribble catchment within the NCA generally has 'water available', although its tributary the River Calder is 'over licensed' in the area of Burnley.

Minerals

- The NCA lies within a broad trough underlain by Coal Measures, which have been worked at depth and by open-casting. The coal industry has declined over recent years and many sites have now been reclaimed and land restored to woodland, agricultural and recreational use.
- The bottom of the trough is covered in glacial deposits, mostly till. In the Feniscowles/Pleasington area, west of Blackburn, extensive sand deposits occur. Bedrock resources have been quarried where the drift cover is thin. The main materials extracted were sandstone, worked on a small scale for local building, and mudstone, worked for brick-making in large pits at Accrington.
- Areas of former quarrying and coal mining have now largely been reclaimed.

Drivers of change

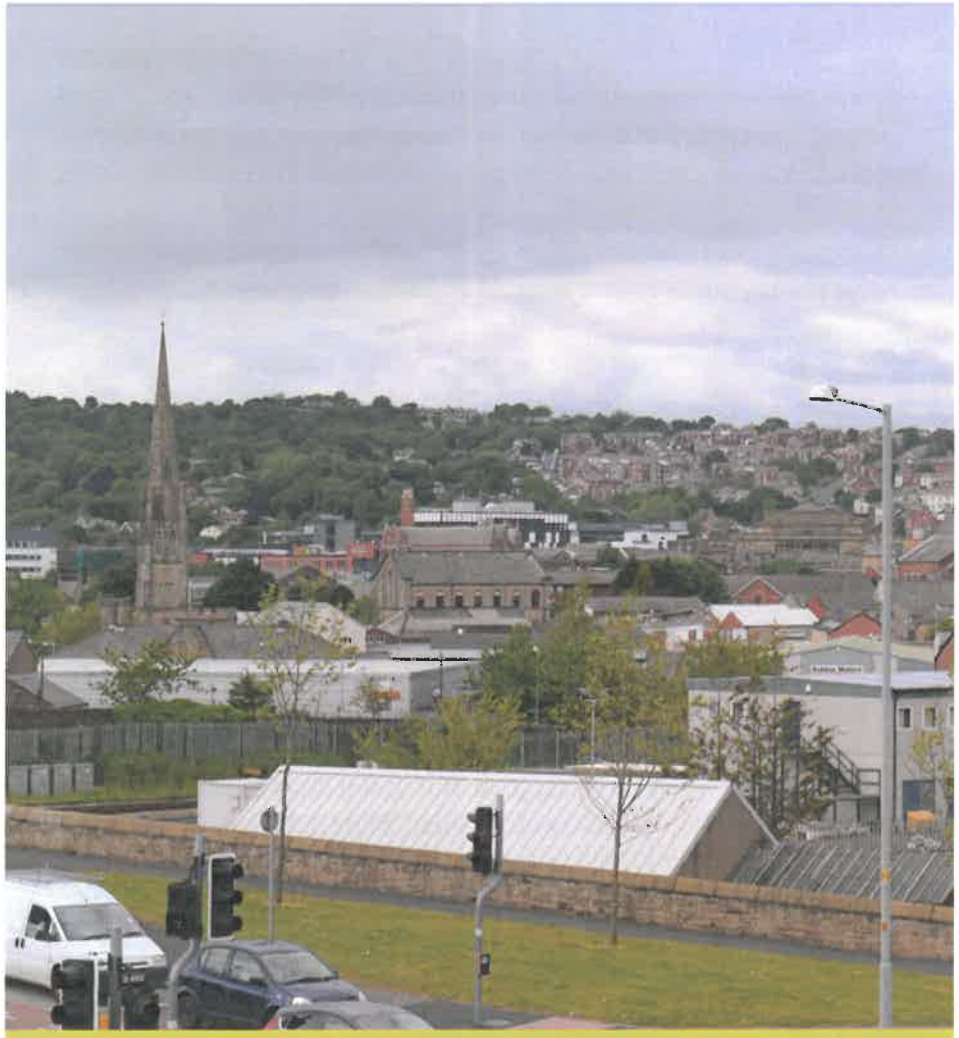
Climate change

- Evidence from the UK Climate Impacts Programme (UKCP09) shows that over the coming century the area's climate is expected to become warmer and wetter in winter and hotter and drier in summer. Under the medium emissions scenario by 2080: mean winter temperatures will increase by 2.6°C, mean summer temperatures will increase by 3.7°C, winter precipitation will increase by 16 per cent, summer precipitation will decrease by 22 per cent and there will be an increased frequency of extreme events (floods/drought).
- The North West Landscape Framework Climate Change Assessment 2010/11 identifies urban areas as having a higher vulnerability to climate change due to their lack of habitats and for generally being located on the flattest areas of land. These two factors restrict species movement and ecosystem functionality.
- Prolonged periods of drought could lead to reduced ground water and drying out of peat habitats making them more prone to soil erosion and wildfire events.
- Smaller, fragmented patches of habitat and poor-quality habitat are vulnerable to loss of biodiversity arising from changes in rainfall and temperature.
- Periods of heavy rain may lead to an increase in flooding and an increased risk of soil erosion or weakened soil structure due to flash flooding. There is also an associated greater likelihood of pollution of watercourses downstream and a potential increased risk of landslides during times of increased rainfall.
- Potential for more favourable conditions for crops and other farming practices not presently possible within this area.
- Potential change in cropping patterns and types of crops in response to climate change altering the character of the landscape.
- Threat to trees and woodland from changing pests and diseases and extreme weather events.
- Possible expansion of arable or energy crops into areas currently under permanent grassland but also possibility of more meadows replacing pastures at higher altitudes.
- There will be pressures for renewable energy development.

Other key drivers

- Habitat connectivity will be needed to address species movement and adaptation to climate change.
- Lack of management and replanting of semi-natural clough woodland and ancient woodland sites may reduce wildlife value and lead to decline in value of woodlands as landscape features and for access and associated recreational opportunities.
- There is an opportunity to increase tree and woodland cover to provide multiple environmental and recreational benefits including reconnecting fragmented habitats, increasing resilience and improving water quality.

- Heavy fertiliser use and diffuse pollution may lead to loss of biodiversity both on and off agricultural land as well as affecting water quality.
- Changing agricultural policy and farm subsidies creates uncertainty and pressures on farming. Increasing emphasis on food security and bio-energy crops.
- Review of agri-environment schemes in 2013 may provide more flexible management incentives attractive to small/marginal/lowland farmers.
- Challenges in the urban fringe, such as the trend towards hobby farming and horsiculture is expected to continue along with increased demand for recreational facilities and access to the open countryside from adjacent urban population. This will require appropriate management to safeguard local features whilst providing opportunities for communities to reconnect with nature and enjoy the health and social benefits this brings.
- Transport pressures and development are likely to continue with ongoing pressure for expansion of residential areas, new housing and industry linked to good transport networks, particularly within the M65/M61 corridors.
- Increasing pressure for commercial scale renewable energy infrastructure such as windfarms and hydro-power.
- Continued exploitation of mineral deposits including re-working of old sites, reclamation schemes, redevelopment and new development has the potential to affect the landscape character of the area.



The area has a strong urban character.

Supporting document 3: Analysis supporting Statements of Environmental Opportunity

The following analysis section focuses on a selection of the key provisioning, regulating and cultural ecosystem goods and services for this NCA. These are underpinned by supporting services such as photosynthesis, nutrient cycling, soil formation and evapo-transpiration. Supporting services perform an essential role in ensuring the availability of all ecosystem services.

Biodiversity and geodiversity are crucial in supporting the full range of ecosystem services provided by this landscape. Wildlife and geologically-rich landscapes are also of cultural value and are included in this section of the analysis. This analysis shows the projected impact of Statements of Environmental Opportunity on the value of nominated ecosystem services within this landscape.

View across Roeburn Valley.

Statement of Environmental Opportunity	Food provision	Timber provision	Water availability	Genetic diversity	Biomass provision	Climate regulation	Regulating water quality	Regulating water flow	Regulating soil quality	Regulating soil erosion	Pollination	Pest regulation	Regulating coastal erosion	Sense of place/inspiration	Sense of history	Tranquility	Recreation	Biodiversity	Geodiversity
	Ecosystem Service																		
SEO 1: Conserve and manage the Lancashire Valleys' industrial heritage to safeguard the strong cultural identity and heritage of the textile industry with its distinctive sense of place and history.	**	↔ ***	↔ ***	***	↔ ***	↔ ***	↔ ***	↔ ***	↔ ***	↔ ***	***	***	***	↑ ***	↑ ***	↔ **	↑ ***	↔ ***	↔ ***
SEO 2: Increase the resilience and significance of woodland and trees, and manage and expand existing tree cover to provide a range of benefits, including helping to assimilate new infrastructure; reconnecting fragmented habitats and landscape features; storing carbon; and providing fuel, wood products, shelter and recreational opportunities.	**	↑ ***	↗ **	***	↗ **	↗ ***	↑ **	↑ **	↗ **	↑ **	***	***	***	↗ *	↗ *	↗ **	↗ **	↗ **	↗ *

Note: Arrows shown in the table above indicate anticipated impact on service delivery: ↑ = Increase ↗ = Slight Increase ↔ = No change ↘ = Slight Decrease ↓ = Decrease. Asterisks denote confidence in projection (*low **medium***high) ° symbol denotes where insufficient information on the likely impact is available.

= National Importance; = Regional Importance; = Local Importance

Statement of Environmental Opportunity	Food provision	Timber provision	Water availability	Genetic diversity	Biomass provision	Climate regulation	Regulating water quality	Regulating water flow	Regulating soil quality	Regulating soil erosion	Pollination	Pest regulation	Regulating coastal erosion	Sense of place/inspiration	Sense of history	Tranquility	Recreation	Biodiversity	Geodiversity
	Ecosystem Service																		
SEO 3: Manage and support the agricultural landscape through conserving, enhancing, linking and expanding the habitat network, and manage and plan for the associated potential impact of urban fringe development, intensive agriculture and climate change mitigation.	***	***	***	***	**	***	***	***	***	***	***	***	***	**	*	**	**	***	***
SEO 4: Conserve and manage the distinction between small rural settlements and the densely urban areas and ensure that new development is sensitively designed to contribute to settlement character, reduce the impact of the urban fringe and provide well-designed green infrastructure to enhance recreation, biodiversity and water flow regulation.	↗ **	↗ **	↗ **	***	↗ **	↗ **	↗ **	↗ **	↗ **	↗ **	***	o ***	o ***	↗ ***	↗ ***	↗ ***	↗ **	↗ ***	↗ **

Note: Arrows shown in the table above indicate anticipated impact on service delivery: ↑ = Increase ↗ = Slight Increase ↔ = No change ↘ = Slight Decrease ↓ = Decrease. Asterisks denote confidence in projection (*low **medium***high) ° symbol denotes where insufficient information on the likely impact is available.

= National Importance; = Regional Importance; = Local Importance

Landscape attribute	Justification for selection
The broad valley of the River Calder and its tributaries, running north-east to south-west between the backdrops of Pendle Hill to the north and the Southern Pennines.	■ 6 key rivers flow through the NCA totalling 93 km along with the Leeds-Liverpool Canal (78 km). ■ A broad trough which runs north-eastwards from Chorley to Skipton, lying between the higher land of the Yorkshire Dales to the north east, the Southern Pennines to the east and south, and the Forest of Bowland on the north and west sides. Pendle Hill, the outlier of Millstone Grit, forms part of the northern boundary of the area. ■ Elevation ranges within this NCA from 5 m above sea level to 486 m. ■ Mellor ridge and gorge at Whalley. ■ The waterways support valuable plant communities as well as populations of birds. The goosander, coot, grebe and warblers are all common here, and great crested newt and otter can also be found.
Underlying coal measures and bedrock resources, with available water supplies which provided the basis for early industrialisation.	■ Areas of former mineral extraction, stone quarrying and coal mining that have now largely been reclaimed. ■ Leeds and Liverpool Canal, and rivers. ■ A strong industrial heritage associated with buildings and artefacts from the cotton and textile industries, especially those along then Leeds and Liverpool Canal.
Valuable broadleaved woodland cover including small, often ancient, woodlands of oak, alder and sycamore that extend along narrow, steep-sided cloughs on the valley sides.	■ The NCA contains 4,517 ha of woodland (8.2 per cent of the total area), of which 894 ha is ancient woodland. ■ Characteristic examples include: Priestley Clough and Spurn Clough and in the lower Darwen valley. ■ Wood anemone, herb Paris and small leaved lime can be found on the flood plains and river banks amongst wet woodland; dominated by alder.

Landscape attribute	Justification for selection
Characteristic field patterns.	■ The Ribble valley flood plain to the south and west is dominated by irregular, hedge bounded pasture fields dating from before 1600. These appear to have been created mainly through processes of assartment, leaving occasional fragments of former woodland along boundaries. ■ Field boundaries formed by hedges with few hedgerow trees on the flatter land and flood plains and by stone walls and post-and-wire fences at higher elevations. ■ Regular parliamentary/moorland enclosure of lower hillsides. ■ Increasing degradation and loss of field boundary patterns around towns.
Farmed land is predominantly grassland for livestock production, fragmented by urban and industrial fabric.	■ The main land use in this NCA is grass and uncropped land (96 per cent), mainly for sheep and cattle rearing. ■ The predominant farm type in this NCA is livestock grazing. In 2009 there were 295 commercial livestock grazing holdings in the LFA (35 per cent) and 121 in the lowlands (14 per cent). ■ 46 per cent of the NCA is Grade 4 agricultural land. ■ The farmed land includes a mix of pasture with areas of acid and neutral grassland, flushes and mires. ■ Some upland heath and rough pasture on Pendle Hill and the higher land to the south. ■ Species-rich hay meadows are becoming less common with the application of modern agricultural techniques. ■ Wet grasslands are common on the flood plains for example, Ribble Valley and provide habitat for valuable populations of butterflies and birds including snipe, curlew, redshank and lapwing. ■ Rare fragments of former strip-field agriculture alongside northern villages (Foulridge, Kelbrook, Earby).
Numerous large country houses with associated parklands, particularly on the northern valley sides away from major urban areas.	■ Aspects of history likely to be particularly evident to the general public include the area's country houses and associated parklands, located particularly on the northern valley sides. ■ Examples include those at Read Park, Huntroyde Demesne and Gawthorpe, Dunkenhalgh and Towneley Halls, built as a result of the wealth of the textile industry. ■ 11 registered Parks and Gardens covering 502 ha, 34 Scheduled Monuments and 1,323 Listed Buildings.

Landscape attribute	Justification for selection
The strong industrial heritage associated with the textile industry.	■ Long history of textile industry since 1600s. ■ Strong Influence of Leeds and Liverpool Canal. ■ Early cotton then weaving/spinning and specialist production per town/area. ■ Traditional mill complexes and associated buildings, mill lodges and ponds. ■ Many mills now redundant, some derelict or converted/restored to alternative uses.
Large urban areas which have robust Victorian architecture for municipal buildings which contrasts with the quiet rural settlements with vernacular stone buildings.	■ There is a high proportion of built up land which includes the towns of Blackburn, Accrington, Burnley, Nelson and Colne. ■ The total estimated population for this NCA (derived from ONS 2001 census data) is 671,807. ■ Isolated blocks of stone terraced houses perched at precarious angles on the steep slopes. ■ Spreading residential areas and urban fringe influences.
Several communication routes run along the valleys with associated development and increased urbanisation.	■ The Leeds and Liverpool Canal (78 km). ■ M65/M61/M6 motorways and development hubs at junctions. ■ Major roads and rail links. ■ New industries.

Landscape opportunities

- Bring the area's small broadleaved woodlands, particularly on farms, into management, focusing on the visually-important clough and ridge-side woodlands on the lower hillsides and the wet woodlands in the valley bottoms. Also focus on farm shelter plantings and copses that are distinctive to the industrial foothills and valleys.
- Protect, manage and conserve ancient semi-natural woodlands to reduce grazing, maintain plant/herbs in pasture, and encourage natural regeneration of native species, especially those in cloughs and the undulating lowland farmland west of Blackburn.
- Protect, conserve and actively manage parkland landscapes including restoring links to associated Country houses and farmland, especially in the undulating lowland farmland.
- Conserve and manage wetland/riparian habitats along rivers, streams and the Leeds and Liverpool Canal to protect and support valuable wildlife.
- Create new small native broadleaved woodlands, to provide improved farm shelter, strengthen cloughs and valley side woodlands, enhance the landscape around towns and villages, restore former industrial land and provide a new recreational resource especially in the urban fringe.
- Protect, conserve and strengthen field boundaries both hedgerows and walls, focusing on livestock farms, and relatively intact and visually prominent field boundary patterns, such as those on the Millstone Grit ridge.
- Manage, restore and replant hedgerows and hedgerow trees using species typical of the area.
- Maintain and restore dry stone walls using local stone for repairs to retain them as key historic features, and keep the visual link with the underlying geology.
- Protect the contrasts between the urbanised and industrial valley bottoms and the more rural lower valley sides.
- Protect, conserve and manage traditional hay meadows and pastures to maintain the diversity of semi-natural grasslands, especially remnant flood plain and upland hay meadows.
- Encourage and support traditional agricultural practices to maintain and enhance species-rich meadows.
- Conserve the historic character and unity of villages and hamlets on lower hillsides by using traditional building materials and patterns in restoration, conversion and any new development.
- Maintain and restore traditional farm buildings and barns using local materials/vernacular style, especially the longhouses (laithe houses) which are key features of land on the fringes of the Forest of Bowland.
- Protect and restore redundant or derelict mills and associated buildings, and artefacts such as mill ponds to conserve the strong industrial heritage associated with the textile industry, and offer interpretation and educational experiences to increase visitor understanding and enjoyment of this environment.

Ecosystem service analysis

The following section shows the analysis used to determine key ecosystem service opportunities within the area. These opportunities have been combined with the analysis of landscape opportunities to create Statements of Environmental Opportunity.

Please note that the following analysis is based upon available data and current understanding of ecosystem services. It does not represent a comprehensive local assessment. Quality and quantity of data for each service is variable locally and many of the services listed are not yet fully researched or understood. Therefore the analysis and opportunities may change upon publication of further evidence and better understanding of the inter-relationship between services at a local level.

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Food provision	Livestock farming; sheep, cattle and pigs Semi-natural grassland habitats Soils	There are over 47,000 ha of agricultural land within the NCA. 80 per cent of the land area is Grade 3 or 4 agricultural land. Stock rearing is the predominant agricultural activity with sheep being most numerous, followed by cattle. There is little opportunity for arable crops due to topography and the poor quality of the majority of the soils.	Regional	Food production is an important service to the area, however much of the farmed land is influenced by the adjacent urban areas and associated diversification especially in the urban fringe. Inappropriate stocking regimes, with poor stock management, may have significant detrimental effects on biodiversity, sense of place, soil erosion, water quality and climate change.	Work with the local farming community to achieve appropriate grazing regimes to produce food and other multiple benefits. Locally sourced food can also support tourism in the area, and in the process help encourage a locally sustainable green economy.	**Food provision** **Biodiversity** **Regulating soil erosion** **Regulating water quality** **Climate regulation** **Sense of place / inspiration**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Timber provision	Existing woodland and forestry estates	8 per cent of the NCA is under woodland cover (4,517 ha). Much of this (83 per cent) is broadleaved and is situated on steep valley sides. There are also 787 ha of ancient semi-natural woodland and a small amount of conifer plantation.	Local	Most of the woodland is on steep valley sides or in cloughs, and is not viable to manage and extract for timber. With majority of the farmed land used for livestock rearing and diversification associated with the adjacent urban areas there is limited potential for woodland creation. There is scope for woodland creation in some areas, including within urban and urban fringe area without adverse impacts on sense of place, biodiversity or historic value/features. Need to ensure that new woodlands are located and designed to enhance the local landscape character in terms of typical scale, type and location. Clearance of timber from some conifer plantations may provide opportunities to restore to more valuable semi-natural habitats. Sound woodland management will help to minimise soil erosion and regulate water availability and flow. Climate change may provide new opportunities to establish more woodland in the future.	Seek opportunities to increase timber production from existing woodlands whilst maintaining their biodiversity and landscape value, and regulation of soils and water. Protect, conserve and enhance the mosaic and diversity of existing woodlands, especially ASNW, and improve their connectivity. Seek to ensure new woodland strengthens the local landscape and enhances biodiversity, providing recreational opportunities where possible. Create new woodlands to assimilate urban development and to enhance rural character and tranquillity where appropriate.	**Timber provision** **Regulating water flow** **Regulating water availability** **Climate regulation** **Sense of place / inspiration** **Tranquillity** **Biodiversity** **Recreation**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Water availability	Aquifer Reservoirs Rivers and streams Canals Geology and soils	At its western edge in the area of Preston and Bamber Bridge the NCA overlays a major aquifer, which is classed as being 'over abstracted'. The River Yarrow receives compensation flows from the Rivington Reservoirs in the Southern Pennines NCA and has 'water available' status. Abstractions from the Douglas CAMS area, of which the Yarrow is part, are mainly for public water supply and industry[4]. The River Ribble catchment within the NCA generally has 'water available', although its tributary the River Calder is 'over licensed' in the area of Burnley.	Regional	Abstracted water is used for public water supply and industrial purposes both within and beyond the NCA. Water is also used to supply the Leeds-Liverpool Canal. Land management practices on grassland and uncropped land are critical to improving infiltration and storing surface water in the agricultural landscape, and maintaining groundwater re-charge in aquifers. It is also important to minimise compaction and/or capping risk on wet soils, which can arise from over-grazing, trafficking or other mechanised activities. These may exacerbate run-off problems as well as damaging soil structure and quality of water supply.	Seek opportunities to ensure that riparian habitats and other semi-natural habitats are under positive management to, increase holding capacity and aid water infiltration. Seek opportunities to develop Sustainable Urban Drainage Systems (SUDS) in urban areas; in particular in new development to improve infiltration and manage surface water. Promote and encourage opportunities to work with landowners and managers to manage pastures at a sustainable level, to improve soil structure, water infiltration and slow down/reduce water run-off, and safeguard water quality This will also help to mitigate flood risk, reduce soil erosion and improve water quality for drinking and industrial use, climate regulation, habitat networks and ecosystem resilience to climate change.	**Water availability** **Regulating water quality** **Regulating water flow** **Biodiversity** **Climate regulation** **Regulating soil erosion**
Genetic diversity	Not applicable in this NCA	N/A	N/A	N/A	N/A	N/A

[4] *The Douglas Catchment Abstraction Management Strategy*, Environment Agency (April 2003; URL: www.environment-agency.gov.uk/business/topics/water/119927.aspx)

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Biomass energy	Existing woodland and forestry estates	The existing woodland cover (8 per cent) offers fairly limited scope for the provision of biomass.	Local	The potential yield for short rotation coppice (SRC) is mixed throughout the NCA although is predominantly high, while the potential miscanthus yield is generally medium. Any biomass should be sited carefully to avoid adverse impacts on historic environment, biodiversity and food production. Increased provision of SRC and miscanthus as a source of renewable energy could contribute towards addressing climate regulation, but could also decrease provision of food if grown on farmland. There may be degraded and scattered parcels of land that are not suitable for agriculture such as spoil heaps and closed landfill sites, which would be suitable for planting. Major expansion could also affect the sense of place if SRC and miscanthus became a major component of the landscape because the use of existing land is dominated by housing, industrial development and farming. Improved management could provide greater outputs from existing woodlands. Adjacent urban settlements and industry provides a potentially high local demand for biomass energy such as for wood-fired boilers in schools and domestic use as wood fuel. For information on the potential landscape impacts of biomass plantings within the NCA, refer to the tables on the Natural England website at: http://www.naturalengland.org.uk/ourwork/farming/funding/ecs/sitings/areas/default.aspx	Seek opportunities to encourage sustainable management of existing woodlands to produce surplus timber and biomass for local use, such as for wood-fired boilers. Seek opportunities to promote and market small scale biomass production through planting on sites that are isolated by development and are not suitable for agriculture, spoil heaps and closed landfill sites. Promote opportunities to plant and manage new small woodlands for biomass and local supplies of wood fuel, for example, adjacent to rivers, cloughs and lower hillsides.	**Biomass energy** **Climate regulation** **Biodiversity**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Climate regulation	Existing woodland Soils Permanent grassland Semi-natural habitats including upland heathland	Permanent grassland and uncropped land (96 per cent of agricultural land use in this NCA), provides improved soil carbon storage capacity. Soil carbon levels are generally low (0-5 per cent), reflecting the 84 per cent coverage of the NCA by mineral soils which can be low in organic matter. Soil carbon levels rise slightly towards the southern half of the NCA (5-10 per cent), where there are also some pockets of much higher carbon content (20-50 per cent) bordering the Southern Pennines NCA. This is likely to be associated with the NCA's very acid loamy upland soils with a wet peaty surface (3 per cent of NCA), slowly permeable wet very acid upland soils with a peaty surface (8 per cent of NCA), and loamy and clayey flood plain soils with naturally high groundwater (3 per cent of NCA), all of which can provide important stores of carbon. **Continued on next page...**	Regional	Carbon storage is generally low due to large extent of mineral soils in the NCA but is provided by woodland and its humus rich soils, and small pockets of carbon rich soils under other semi-natural habitat all of which are very important to conserve. To maximise the benefits to climate regulation, bare and eroded areas need to be re-vegetated and any activities which may damage permanent vegetation should be restricted. Carbon sequestration can be increased in the area's mineral soils by increasing organic matter input and by adopting low input farming systems and limiting the use of artificial fertilisers to reduce the amount of nitrous oxide released.	Encourage management of sustainable grazing regimes on permanent grassland with a low input of artificial fertiliser. Seek opportunities to promote and adopt good sustainable management of existing woodlands. Encourage opportunities to create new woodlands using native broadleaved species, to benefit wildlife, biodiversity and carbon, whilst also providing an additional recreational resource through appropriate access. On soils low in organic matter, measures could be taken to improve carbon sequestration by increasing organic matter inputs and by reducing the frequency and extent of cultivation.	**Climate regulation** **Regulating water quality** **Water availability** **Biodiversity** **Timber provision** **Regulating soil quality** **Regulating soil erosion** **Recreation**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Climate regulation continued...		... **continued from previous page** The humus-rich soils under woodland cover (8 per cent of the NCA) also store carbon, as will the wood itself, where carbon sequestration can be enhanced by bringing the woodland under management.		It is important to ensure that the existing woodlands are actively managed to enhance both biodiversity and their ability to store and sequester carbon. The area of woodland cover could be expanded to increase these benefits.	Encourage the sound management and maintenance of permanent grasslands to increase soil carbon storage and subsequent improvement in soil quality. Encourage restoration of former industrial sites and derelict land to permanent grassland. Manage and extend other semi-natural habitats.	

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Regulating water quality	Streams and rivers Semi-natural habitats including heathland, rough grazing and woodland Permanent grassland Aquifers	The Rivers Ribble and Calder are of moderate ecological quality whilst the River Darwen has poor quality and the Leeds and Liverpool Canal has good quality. The chemical status of surface waters within the NCA fails to achieve good status. The chemical status of groundwater across most of the NCA is good[5]. The NCA falls within the Ribble Priority Catchment designated under Defra's ECSFDI with support for measures which reduce diffuse pollution from agricultural land[6].	Regional	Seek improvements to water quality through selective reduction in inputs from point source pollution and diffuse pollution. On agricultural land this might be achieved through the introduction of improved land management practices, such as the buffering of water courses to address specific pollutant issues, altering the timing of fertiliser and manure applications to grassland and restricting livestock access to streams and rivers. Urban, industrial and previously mined/quarried areas can produce high run-off and flash flooding. Steep agricultural land and unwooded cloughs may be associated with high rates of runoff into adjacent water courses especially after heavy rainfall, which can be associated with high rates of soil erosion, high turbidity and increased sediment load impacting on areas downstream. **Continued on next page...**	Seek opportunities to manage and extend permanent grassland, woodland, wetland and riparian habitats along watercourses, Leeds and Liverpool Canal, cloughs and valley sides to capture sediment, slow-down run off and improve infiltration. Encourage opportunities for managing and increasing organic matter in order to help reduce compaction and/or capping of soils which can lead to poor water infiltration and diffuse pollution as a result of surface water run off. Promote opportunities to develop Sustainable Urban Drainage Systems (SUDS) in new development of housing and industry to improve infiltration and water quality. Promote and work with farmers to encourage adoption of improved land management to address water quality issues across river catchments. In particular through the creation of grassland buffer strips alongside watercourses and restricting livestock access to watercourses.	**Regulating water quality** **Regulating soil erosion** **Biodiversity** **Regulating soil quality** **Regulating water flow** **Climate regulation** **Water availability**

[5] *River Basin Management Plan, North West River Basin District,* Environment Agency (December 2009; URL: www.environment-agency.gov.uk/research/planning/33106.aspx)

[6] *Catchment Sensitive Farming Funding Priority Statements 2010/11,* Defra (URL: www.defra.gov.uk/foodfarm/landmanage/water/csf/grants/index.htm)

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Regulating water quality continued				... **continued from previous page** Water quality is also affected by runoff from urban areas and the urban drainage systems. New Sustainable Urban Drainage systems (SUDS), can be introduced in urban areas to improve water quality for example, introduction of swales and porous surfaces. Managing existing and creating new semi-natural habitats/vegetation cover for example, Woodland planting, increasing riparian vegetation such as scrub and permanent grassland and strengthening hedgerow networks will aid in the capture of chemicals and nutrients before they enter the groundwater. They will also filter or slow sediments and organic matter preventing it from travelling into water courses.	Encourage restoration of former mining and quarrying areas and derelict/degraded land to permanent grassland to reduce run off and pollution sources.	

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Regulating water flow	Rivers and streams Surface water Semi-natural habitat including woodland, wetlands, permanent grassland Leeds and Liverpool Canal	This NCA contains part of the middle section of the River Ribble, which has its source in the Yorkshire Dales NCA, as well as the Ribble's confluence with the River Hodder which drains the southern slopes of the Bowland Fells NCA. Tributaries of the Ribble within the NCA include the River Calder (and its tributary Sabden Brook) and the River Darwen. The Ribble catchment has a history of flooding. River flood risk within the NCA occurs at Ribchester on the River Ribble, Burnley on the River Calder, Blackburn on the River Darwen, and Nelson, Accrington and Oswaltwistle on the Leeds and Liverpool Canal. Downstream, flood risk also occurs within the Lancashire and Amounderness Plain NCA at Preston on the Ribble and Walton-le-Dale on the Darwen (Southern Pennines NCA) to the south. Chorley is at risk of flooding from the River Yarrow, which rises on Rivington Moor in the Southern Pennines NCA and flows through the southern part of this NCA before joining the River Douglas in the Lancashire and Amounderness Plain NCA, where further flood risk exists at Croston[7].	Regional	In upstream NCAs moorland and grassland management needs to be addressed to slow down flow, reduce the rate/speed of runoff and store flood waters. Similarly, the improved management and control of flood waters from rapid rising streams and cloughs within this NCA will influence many urban areas and settlements downstream. There is also some scope for creating opportunities for rivers to naturally re-engage with their flood plains or creating wetlands adjacent to watercourses to regulate flow and increase water storage.	Encourage opportunities in upstream NCAs to slow down run off from the moorlands by blocking grips and increasing storage capacity of the soils in order to raise water table levels to potentially reduce downstream flood risk. Encourage expansion of wetland habitats such as reedbeds, woodlands and wet grasslands along valley bottoms, to improve flood mitigation by intercepting and retaining water for longer. Investigate and seek opportunities to develop Sustainable Urban Drainage Systems (SUDS) in new development to improve infiltration and manage surface water. **Continued on next page...**	**Regulating water flow** **Regulating soil erosion** **Regulating water quality** **Water availability** **Biodiversity** **Climate regulation**

[7] *Douglas Catchment Flood Management Plan Summary Report,* Environment Agency (December 2009; URL: www.environment-agency.gov.uk/research/planning/33586.aspx)

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Regulating water flow continued					**... continued from previous page** Seek opportunities to manage, extend and restore existing semi-natural habitats , such as new woodland planting, strengthening hedgerow networks and managing grasslands to aid infiltration. Encourage and promote opportunities within the Upper Ribble and Hodder sub-catchments to provide flood storage and create habitat which could reduce downstream flood risk.	

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Regulating soil quality	Soils Geology Semi- natural vegetation Permanent grassland Woodland	The slowly permeable seasonally wet acid loamy and clayey soils (45 per cent) and the slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils (14 per cent) may suffer compaction and/ or capping as they are easily damaged when wet. In turn this may lead to increasingly poor water infiltration and diffuse pollution as a result of surface water run-off. Similarly, the slightly acid loamy and clayey soils with impeded drainage (10 per cent) have a weak topsoil structure that can easily be poached by livestock and compacted by machinery when wet. Careful timing of activities is required to reduce this likelihood.	Regional	Management measures that maintain good vegetation cover and increase organic matter levels, can help reduce compaction and/or capping of soils when wet, which can also lead to increasingly poor water infiltration and diffuse pollution as a result of rapid surface water run-off. Careful timing of seasonal land management activities is required to reduce problems with soil structure.	Work with farmers and landowners to improve grassland management and soil structure to encourage the build up of organic matter, through adoption of extensive grazing regimes to reduce the level of poaching by livestock. Encourage the careful planning of cultivations and the carrying out mechanised activities such as trafficking that will cause compaction of soils, especially in wet conditions.	**Regulating soil quality** **Regulating water quality** **Climate regulation** **Regulating water flow** **Regulating soil erosion** **Water availability** **Biodiversity**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Regulating soil erosion	Semi-natural vegetation cover Woodland Hedgerows Permanent grassland Soils	Soils that cover 64 per cent of this NCA are not susceptible to erosion. The remaining soils (34 per cent) are prone to erosion and include; the freely draining slightly acid loamy soils (8 per cent), the freely draining slightly acid sandy soils (5 per cent) , where vegetation is removed or where organic matter levels are low after continuous cultivation. These soil types are light and also at risk of wind erosion, especially where coarse textured (freely draining slightly acid loamy soils), cultivated or left bare. The slightly acid loamy and clayey soils with impeded drainage (10 per cent) are easily compacted by machinery or livestock if accessed when wet and are prone to capping or slaking, increasing the risks of soil erosion by surface water run-off, especially on steeper slopes. **Continued on next page...**	Regional	34 per cent of the soils in this NCA are subject to soil and/or wind erosion occurring when vegetation is removed and ground left bare, where organic matter levels are low, where soils are coarse textured, when wet and easily compacted by machinery or livestock, and where they are prone to capping or slaking by surface water run-off; this occurs especially on steeper slopes. Measures will be beneficial where they retain water in situ; ensure good vegetative cover; and avoid over-grazing/ trampling or damage by mechanised activities. Risks arise with loamy and sandy soils which are vulnerable to erosion if heavily trafficked or after heavy rain. Improving organic matter content and vegetation cover on these soils is important. The many watercourses result in high levels of runoff, especially after heavy rainfall, with consequent impacts of soil erosion and sediment load impacting on areas downstream.	Seek opportunities to manage permanent grasslands to build up organic matter and avoid compaction, for instance by reducing grazing pressures, thus slowing down run-off. Encourage opportunities to manage and extend woodland and riparian habitats along cloughs, valley sides and near water courses to prevent or capture sediment run-off and improve infiltration. Encourage restoration and management of hedgerows and maintaining dry stone walls in good condition to act as wind breaks and bind the soil.	**Regulating soil erosion** **Regulating water quality** **Regulating soil quality** **Regulating water flow** **Biodiversity** **Climate regulation**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Regulating soil erosion continued		... **continued from previous page** The slowly permeable wet very acid upland soils with a peaty surface (8 per cent) often found on the hill tops are at risk of gullying/ hagging (and loss of particulate organic matter) where surface vegetation is damaged or lost. Drainage of these soils (for example through gripping) may also result in increased oxidation of carbon and soil wastage. Measures will be beneficial that retain water in situ; ensure good vegetative cover; and avoid over-grazing/ trampling or damage by mechanised activities. Erosion is equally prevalent in the very acid loamy upland soils with a wet peaty surface (3 per cent) often found on steep slopes, where a combination of rapid runoff and easily damaged peat layers results in soil erosion.		There are also risks of poaching and compaction on soils with impeded drainage. The small pockets of upland soils with a peaty surface are at risk of gullying/ hagging (and loss of particulate organic matter) where surface vegetation is damaged or lost. Issues include ensuring that these peaty soils retain water in situ, have good vegetative cover and are not overgrazed, subject to trampling / poaching or damage by mechanised activities. Drainage of these soils for example, through gripping, may also result in increased oxidation of carbon and soil wastage.		
Pollination	Not applicable in this NCA	N/A	N/A	N/A	N/A	N/A

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Pest Regulation	Not applicable in this NCA	N/A	N/A	N/A	N/A	N/A
Sense of place/ inspiration	The broad valley of the River Calder and Ribble and their tributaries Large towns and communications corridors Leeds and Canal Extensive areas of reclaimed land Scattered rural villages and hamlets in lower hills Homogeneity of stone buildings Wooded cloughs Strong Industrial heritage AONB designation Country Parks, Local Nature Reserves and other local green spaces	Sense of place is provided by the broad valley of the rivers Ribble and Calder and their tributaries, running northeast to southwest between Pendle Hill and the Southern Pennines. Additionally, local areas of green space provide environments that are important to communities, providing connections to the natural environment, from which they derive enjoyment and inspiration.	Regional	Large towns and numerous communication routes, including the Leeds and Liverpool Canal, the Preston-Colne rail link and the M65 have created an intensely urbanised and developed landscape including the towns of Accrington, Blackburn and Burnley. Further development of transport corridor and associated infrastructure may lead to a weakening of the sense of place. Agricultural land is highly fragmented by industry, with small, often ancient woodlands, constrained to narrow, steep sided cloughs on valley sides. Pastures are bounded by hedges on low ground, while stone walls and post-and-wire fences are more characteristic of higher ground, with boundary edges often degraded around urban areas. Field sizes are regular in the west and irregular to the east. **Continued on next page...**	Plan to protect and conserve the contrasts between open expansive moorlands, walled pastures of the moorland fringes, and enclosed wooded valleys. Manage and restore grasslands to retain livestock industry. Manage and expand clough woodlands through new tree planting. Encourage Farmers and Landowners to maintain and restore patterns of dry stone walls, and Manage, Restore and enhance the hedgerows patterns to strengthen them as valuable landscape features and wildlife habitats in the farmed landscape.	**Sense of place/ inspiration** **Sense of history** **Recreation** **Tranquillity** **Food Provision** **Biodiversity** **Geodiversity**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Sense of place/ inspiration continued				**... continued from previous page** The area also has extensive areas of reclaimed land, a product of former quarries and coal mining that is now generally well vegetated and grazed by sheep, as well as a considerable number of country houses and parklands on the northern valley sides especially away from the main built up areas. Land reclamation from quarrying, mining and past industries needs to strengthen and enhance landscape character, whilst still retaining some evidence of the industrial heritage. There are important recreational areas close to where people live and work, and in addition to offering valuable wildlife habitats, they provide a sense of place and inspiration for local communities. There is a strong sense of visual containment resulting from the surrounding hills which also serve as an important backdrop, dwarfing settlements in the valley bottom.	Seek opportunities to conserve and maintain local settlement patterns of stone built villages, hamlets, farmsteads and barns with their vernacular architecture and building materials, and to avoid the loss of historic evidence through insensitive development. Seek opportunities to encourage the urban populations to engage with the natural environment through better access provision, and volunteering activities within local green space, and encouraging their involvement in the future management of sites. Improve the urban-rural fringe through careful design and integration of green infrastructure with housing and industry, linking new developments with the wider countryside to sustainably manage urban activities within agricultural areas. Increase awareness of, access to, and interpretation of strong industrial heritage/ textile industry, particularly associated with the Leeds and Liverpool Canal, to increase knowledge, understanding and enjoyment of these features.	

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Sense of history	Industrial heritage linked to the textile industry Historic access and movement along the valleys Country houses and parkland 11 Registered Parks and Gardens 34 Scheduled Ancient Monuments 1,323 Listed Buildings Vernacular architecture and building materials	The history of the landscape is evident in its strong industrial heritage linked to the textile industry, and associated mill buildings, mill lodges (some redundant, derelict and/or underused) and ponds. Densely populated, stone built towns of Blackburn, Accrington and Burnley which expanded rapidly as a result of the industrial revolution. Large country houses with parks and gardens built from wealth of textile and mining industries away from urban areas. Stone built rural and urban settlements.	Regional	There is a strong connection between geology and the industrial heritage, linking to local quarrying, coal mining and water power that initiated the Industrial Revolution and development of textile industry that has influenced the landscape. Increasing the sense of history has the potential to increase the sense of place which may in turn lead to an increase in biodiversity and create recreational opportunities by reinforcing the historic character of the landscape. Some towns form part of earlier rural villages, retaining early buildings alongside stone terraces to accommodate textile workers. Evidence of older buildings, usually of sandstone grit, is also present in the scattered settlements on the valley sides. The historic character is also dominated by access and movement along the valleys, and is reflected in a Roman road and forts at Burwen Castle near Elslack and at Ribchester, and more recently by the Leeds and Liverpool Canal developed for industrial use but now mainly recreational. **Continued on next page...**	Seek ways to Protect, conserve, manage and interpret the area's historic identity, in particular the buildings associated with past textile and mining/ quarrying, industries, urban fabric and parks, rural villages, country houses, parklands and industrial heritage to ensure a better understanding of past land use and retain evidence of the relationships between features for the future. Seek opportunities to protect, conserve, manage and interpret the many layers of historic evidence to raise awareness and to increase public engagement, enjoyment and understanding Promote and encourage opportunities to restore and re-use vernacular buildings using local styles and building materials	**Sense of history** **Sense of place/ inspiration** **Recreation**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Sense of history				**... continued from previous page** Aspects of history likely to be particularly evident to the general public include the area's country houses and associated parklands, located particularly on the northern valley sides. These include Read Park, Huntroyde Demesne and Gawthorpe, and Dunkenhalgh and Towneley Halls, built as a result of the wealth from the textile industry.	in order to maintain and enhance the historic character of rural villages and urban areas. Encourage and promote land management practices and developments such as tracks that will not be detrimental to or damage archaeological evidence or historic features. Encourage sensitive restoration and re-use of existing, redundant and derelict mill buildings associated with the textile industry to retain the historic industrial heritage, particularly associated with the Leeds and Liverpool Canal. Raise awareness and increase understanding of the local history of the area and the importance of this at a national level. Seek opportunities to promote, improve and use the rights of way network to access, reveal and interpret the area's rich history, enabling greater understanding and enjoyment. Encourage opportunities to maintain, conserve and restore patterns of dry stone walls and the vernacular architecture of farmsteads and field barns.	

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Tranquillity	Agricultural land Woodland Parklands and urban green spaces Rivers, streams and Leeds and Liverpool Canal	Tranquillity has declined fairly significantly in the past fifty years. Total area of the NCA classified as 'undisturbed' decreased from 38 per cent in the 1960s to 16 per cent in 2007. Greatest remaining 'undisturbed' areas include small pockets of farmland, woodland and parkland on the lower slopes of Longridge Fell and Pendle Hill in the north and the Southern Pennines to the south, as well as the south-west of Skipton, and west of Blackburn, the Ribble valley and stretches of the Leeds and Liverpool Canal. Majority of the land in NCA is categorised as disturbed (67 per cent) with 17 per cent urban. The NCA suffers from high levels of intrusion from urban /housing development, industry and noise, in the transport corridor surrounding the M65.	Local	Tranquillity has declined fairly significantly, in the past fifty years with the amount of disturbed land increasing by 15 per cent since the 1960s. A sense of tranquillity is associated with small pockets of woodland in cloughs, on valley sides, in the parklands associated with country houses, and along undeveloped stretches of Leeds and Liverpool Canal and rivers such as the Ribble and Sabden Brook. The remaining undisturbed areas are an important source of perceived tranquillity in the local area and are highly valued for the relative tranquillity they provide. Providing increased opportunities and improved access to tranquil environments, through management, enhancement and expansion of existing and creation of new woodlands and other semi-natural habitats. This may help manage the challenges associated with key sites, ensuring that they can remain tranquil and contribute to biodiversity, sense of place and recreation.	Seek opportunities to protect and enhance remaining areas of undisturbed or less disturbed land, for example, parklands, urban green space from development. Encourage opportunities to improve, maintain and expand semi-natural habitats on farmland, such as meadows, pastures, wetlands and clough woodlands which may increase the sense of tranquillity in the urban fringes. For example, by planting new woodlands and shelter belts and ensuring new developments are sensitively designed to reduce any visual and infrastructure impacts on rural areas and the urban fringe. Seek to ensure new woodland contributes to the recreational value and screen urban fringes to enhance rural character and tranquillity. Seek opportunities through regeneration and restoration, new housing and industrial developments to create additional green infrastructure provide quiet enjoyment and improve wellbeing through increased contact with the natural environment.	**Tranquillity** **Sense of place/ inspiration** **Biodiversity** **Recreation** **Geodiversity** **Sense of history**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Recreation	Network of public rights of way Open access land Country parks Industrial heritage – textiles Leeds and Liverpool Canal Woodlands Registered Parks and Gardens Local Nature Reserves Recreational activities such as golf	1,590 km rights of way (with a density of 2.9 km per km^2), including the Pennine Bridleway (15 km) and Pennine Way (13 km) which cuts through the area. 1,733 ha of open access land (just over 3 per cent of the NCA). Other recreation provisions are recognised through "Woods for People" (689 ha) and Forestry Commission Walkers Welcome Grants (167 ha), country parks (642 ha), Local Nature Reserves (80 ha) and 11 Registered Parks and Gardens, together with other local green space. These locations accommodate a variety of recreational activities for quiet enjoyment including walking, cycling and horse riding and other activities such as bird watching, fishing, canoeing and golf.	Regional	Only 3 per cent of the Lancashire Valleys is classified as being publically accessible. Whilst the extent of open access land is limited, the large urban population within the Lancashire Valleys has access to many public rights of way, as well as Country Parks, Local Nature Reserves, Woodlands, Parklands and urban green spaces. Reflecting the needs and interests of the large urban populations in the area, and with easy access by road, rail and bus, there are many opportunities to access the natural environment for recreation and leisure pursuits. Improved access to and the provision of a range of recreational opportunities and interpretational facilities would enable people to enjoy the natural environment and landscape without significant or detrimental effects. Local woodlands, cloughs and the strategic/historic Leeds and Liverpool Canal may generate local interest to improve and expand habitats, create wildlife corridors and provide new access for people.	Seek opportunities to improve access by ensuring that paths are maintained and well signposted, creating new circular routes and some surfaced paths are provided for use by all levels of ability. Seek opportunities to provide increased access and interpretation of the landscape and its many historic features, especially boundary stones, tracks, farms, canals and mills. Seek opportunities to provide new and improved access to green spaces, especially within urban fringe areas, new housing and industrial developments enabling communities to reconnect with the natural environment close to where they live, allowing them to enjoy this contact, and benefit from the health and social rewards it affords them. Provide interpretation of the landscape, its history and its features through sensitive restoration and regeneration schemes.	**Recreation** **Sense of place/ inspiration** **Sense of history** **Biodiversity** **Geodiversity** **Tranquillity**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Biodiversity	Semi-natural habitats SSSI and Local Wildlife sites Woodlands Wetlands Mill ponds Rivers and canals Species	There is a limited extent of BAP priority habitats within the NCA; with 1,910 ha of broadleaved woodland being the largest, then 615 ha of upland heathland unimproved grassland are also significant. The NCA contains no internationally designated nature conservation sites or National Nature Reserves and just 75 ha are nationally designated as SSSI. There are 275 Local sites covering 3,228 ha (6 per cent of NCA).	Local	Small isolated pockets of Habitats and species have been identified that are of local conservation importance and require action in order to conserve, manage and enhance them. Consideration should be given to surrounding areas to promote linking and expansion of habitats (and populations) to improve their biological condition through sensitive land management practices. This may help habitats and species to adapt to climate change, link habitats and allow species movement to strengthen populations to provide a more integrated approach. For example, this could include managing and restoring field margins; providing buffers along watercourses; planting new woodlands; creating linear wildlife corridors along rivers and canals, managing and extending green spaces within urban areas to improve connectivity. **Continued on next page...**	Encourage improved management to Bring nationally and locally designated habitats, into and maintain favourable condition. Seek opportunities to conserve, enhance and expand semi-natural habitats and post-industrial habitats There are opportunities to manage the land adjacent to the isolated habitats to ensure that they are protected, expanded, buffered and linked to increase habitat connectivity and allow species movement especially along rivers, Leeds and Liverpool Canal, mill ponds and clough woodlands.	**Biodiversity** **Regulating water quality** **Sense of place/ inspiration** **Recreation** **Regulating soil quality** **Geodiversity**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Biodiversity continued				**... continued from previous page** Lowland meadows are now rarely managed in a traditional way and are confined to the upland fringes where the steeper slopes and smaller field size have made improvement less worthwhile. Permanent pastures for livestock grazing also provide conditions for upland waders. The urban fringe location enables people to experience and enjoy biodiversity close to home at local nature reserves.	Encourage opportunities to promote sustainable recreation, public understanding and education opportunities linked to biodiversity. Enhance the value of habitats for interpretation, education and visual amenity. Encourage improved Management of grassland and woodland through increased uptake of environmental incentive schemes to provide a farmed landscape of fields, well-managed hedgerows, mosaics of grass and margins, and small woodlands to benefit species such as farmland birds . Seek to improve restoration of mineral / industrial sites, maintaining their soil quality and water flow to maximise their value to wildlife and biodiversity. Encourage opportunities to incorporate green infrastructure projects into new developments especially on the urban fringe to enhance sense of place, recreational and biodiversity value.	

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Geodiversity	Geological SSSI Local Geological Sites Exposures in old quarries Local stone used for building	There are 3 geological SSSI in this NCA and 16 Local Geological Sites. The Lancashire Valleys, occupy a broad trough underlain by Coal Measures and covered in glacial deposits, mostly till. A millstone grit ridge lies between the Ribble and Calder catchments; this includes the Mellor Ridge and part of Pendle Hill. The bottom of the trough containing Blackburn, Accrington and Burnley is covered in glacial deposits, mostly till. In the Feniscowles / Pleasington area west of Blackburn there are extensive sand deposits. The undulating lowland farmland and flood plain west of Blackburn is underlain by heavy boulder clays.	Regional	The NCA is a heavily urbanised area and there are pressures on geological sites for landfill and development. The close proximity of large populations also offers opportunities for education, interpretation and recreation at these sites. Old and existing quarries provide opportunities for people to see and understand the underlying geology and allow continued research into the geodiversity of the NCA. The reclamation and restoration of past mineral workings and quarries provides opportunities to link man's activities with a sense of place and history whilst increasing habitats for wildlife.	Encourage and seek opportunities to maintain the diversity and integrity of geological and geomorphological features within the NCA, linking them to the history and development of land use to enhance their value for interpretation, education and visual amenity. Encourage initiatives to improve public access to, enjoyment of and understanding of the area's geology. Promote opportunities to use local building materials to repair, restore and build new developments and housing Seek restoration of past mineral sites and quarries for agriculture, recreation and wildlife value, sensitive to local geology and geodiversity. Opportunities related to the role of geology in the Industrial Revolution and textile industry.	**Geodiversity** **Sense of place/ inspiration** **Sense of history** **Recreation** **Biodiversity**

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Natural England is here to secure a healthy natural environment for people to enjoy, where wildlife is protected and England's traditional landscapes are safeguarded for future generations.

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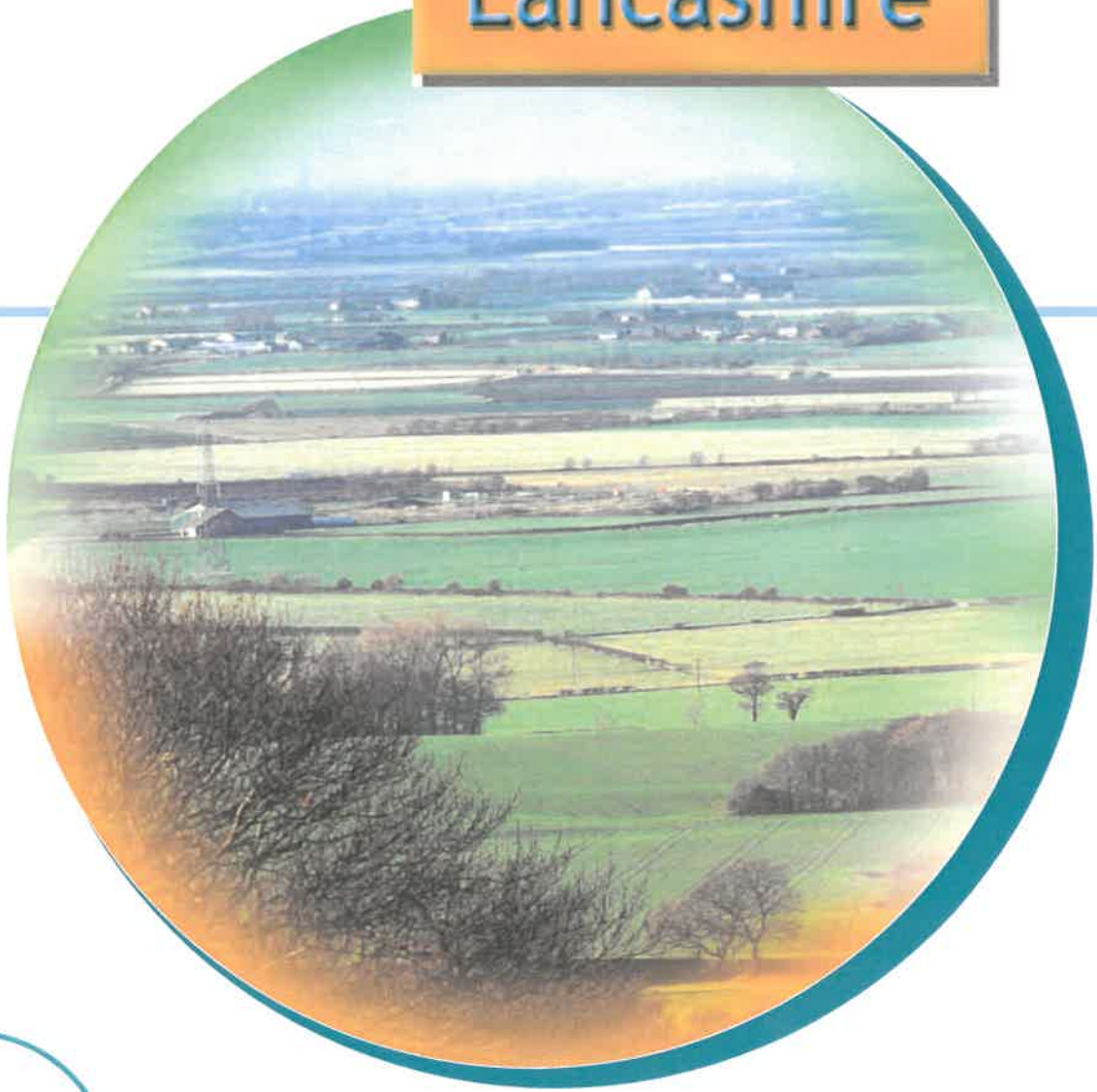
Appendix 16: Lancaster Landscape Character Assessment

A Landscape Strategy for Lancashire



Landscape Character Assessment

Lancashire County Council
Environment Directorate

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The Countryside Agency

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Fylde Borough Council,
Hyndburn Borough Council,
North Yorkshire County Council,
Pendle Borough Council,
Preston Borough Council,
Ribble Valley Borough Council,
South Ribble Borough Council,
West Lancashire District Council,
Wyre Borough Council.

The study was prepared for Lancashire County Council by:
Environmental Resources Management
Eaton House, Wallbrook Court,
North Hinksey Lane, Oxford OX2 0QS

Geological Map based on
British Geological Survey Information.

Landscape Character Areas

1 Moorland Plateaux
1a. South Pennine Moors
1b. High Bowland Plateaux

2 Moorland Hills
2a. West Pennine Moors
2b. Central Bowland Fells
2c. Longridge Fell
2d. Waddington Fell
2e. Pendle Hill
2f. White Moor/Burn Moor
2g. Beacon Fell

3 Enclosed Uplands
3a. Rossendale Hills

4 Moorland Fringe
4a. Trawden Fringe
4b. Rossendale Moorland Fringe
4c. Blackburn Moorland Fringe
4d. Bowland Gritstone Fringes
4e. Bowland Limestone Fringes
4f. Longridge Fell Fringes
4g. South Pendle Fringe
4h. Leck Fell Fringe
4i. North Pendle Fringe
4j. West Pennine Fringes

5 Undulating Lowland Farmland
5a. Upper Hodder Valley
5b. Lower Hodder and Loud Valley
5c. Lower Ribble
5d. Salmesbury-Withnell Fold
5e. Lower Ribblesdale (Clitheroe to Gisburn)
5f. Lower Ribblesdale (Gisburn to Hellifield)
5g. South Bowland Fringes
5h. Goosnargh-Whittingham
5i. West Bowland Fringes
5j. North Bowland Fringes
5k. Cuerden-Euxton

6 Industrial Foothills and Valleys
6a. Calder Valley
6b. West Pennine Foothills
6c. Cliviger Gorge
6d. Adlington-Coppull

7 Farmed Ridges
7a. Mellor Ridge
7b. Upholland Ridge
7c. Langthwaite Ridge

8 Settled Valleys
8a. Irwell

9 Reservoir Valleys
9a. Rivington
9b. Turton-Jumbles
9c. Haslingden Grane
9d. Belmont
9e. Roddlesworth

10 Wooded Rural Valleys
10a. Wyre Valley
10b. North Bowland Valleys

11 Valley Floodplains
11a. Lower Ribble Valley
11b. Long Preston Reaches
11c. Aire Valley
11d. Lune Valley

12 Low Coastal Drumlins
12a. Camforth-Galgate-Cockerham
12b. Warton-Borwick
12c. Heysham-Overton

13 Drumlin Field
13a. Gargrave Drumlin Field
13b. Bentham-Clapham
13c. Docker-Kellet-Lancaster

14 Rolling Upland Farmland
14a. Slaidburn-Giggleswick
14b. Lothersdale and Cringles

15 Coastal Plain
15a. Ormskirk-Lathom-Rufford
15b. Longton-Bretherton
15c. Croston-Mawdesley
15d. The Fylde
15e. Forton-Garstang-Catterall
15f. Knott End-Pilling

16 Mosslands
16a. North Fylde Mosses
16b. South Fylde Mosses
16c. Martin Mere and South West Mosses
16d. Skelmersdale Mosses
16e. Tarleton Mosses
16f. Heysham Moss
16g. Hoole and Farington Mosses

17 Enclosed Coastal Marsh
17a. Clifton and Hutton Marsh
17b. Cockerham Coast

18 Open Coastal Marsh
18a. Ribble Marshes
18b. Hest Bank-Silverdale Marshes
18c. Wyre Marshes
18d. Lune Marshes
18e. Pilling and Cockerham Marshes

19 Coastal Dunes
19a. Fylde Coast Dunes

20 Wooded Limestone Hills and Pavements
20a. Arnside and Silverdale

21 Limestone Fells
21a. Leck Fell

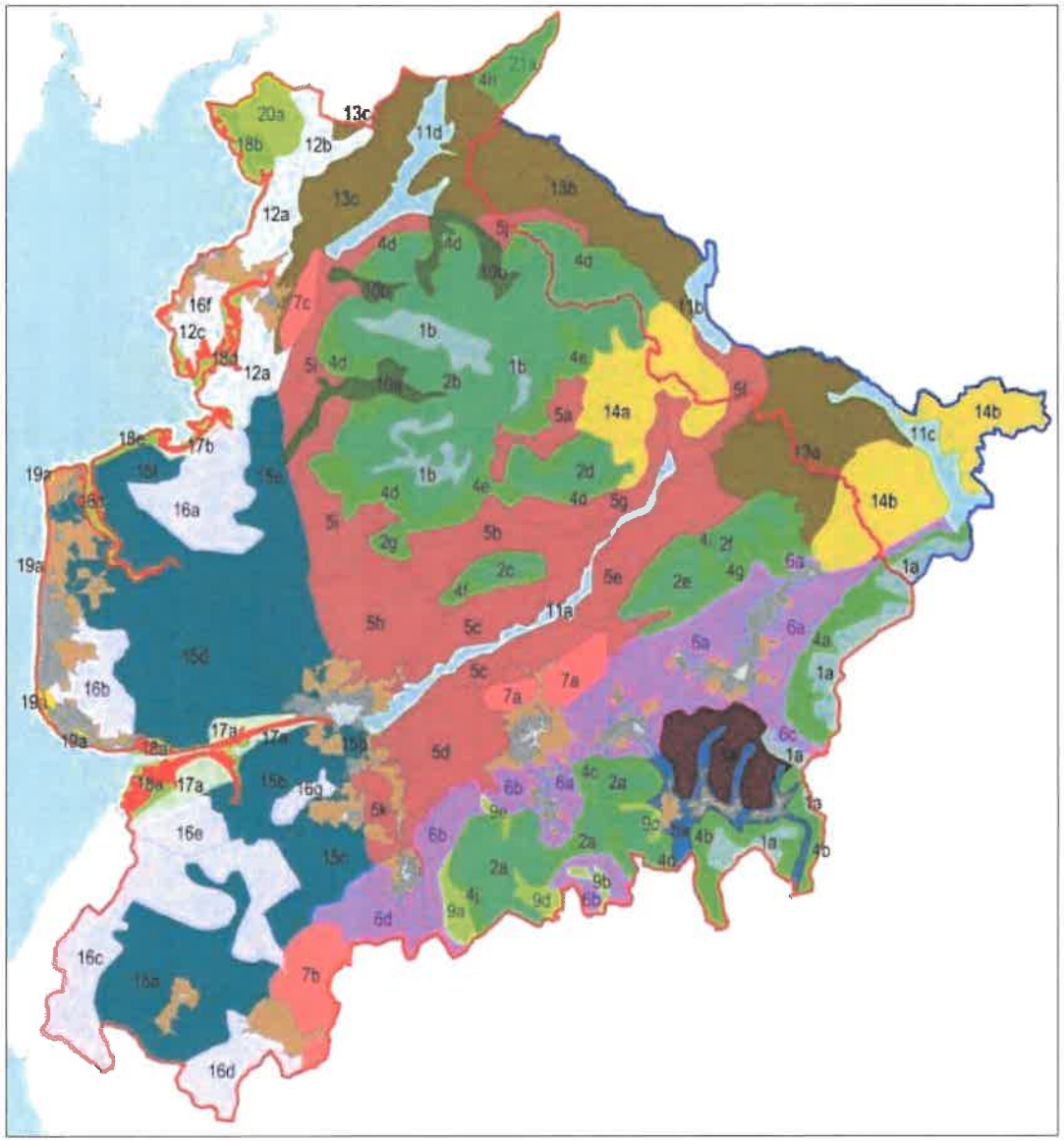

Figure 8: Landscape Character Types & Landscape Character Areas

Lancashire County, Blackpool and Blackburn with Darwen Boundary

Craven Study Area

Landscape Character Types & Areas

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1b. High Bowland Plateaux

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20a. Arnside and Silverdale

21 Limestone Fells
21a. Leck Fell

Urban Landscape Types
Historic Core
Industrial Age
Suburban

Coastline

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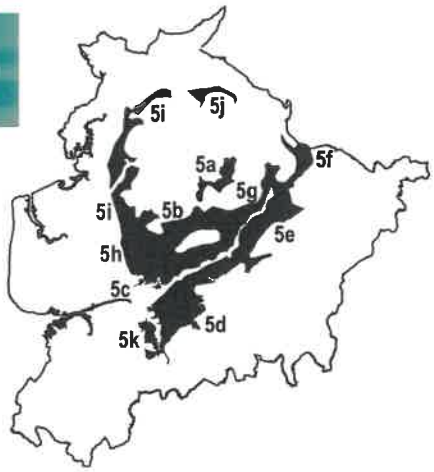


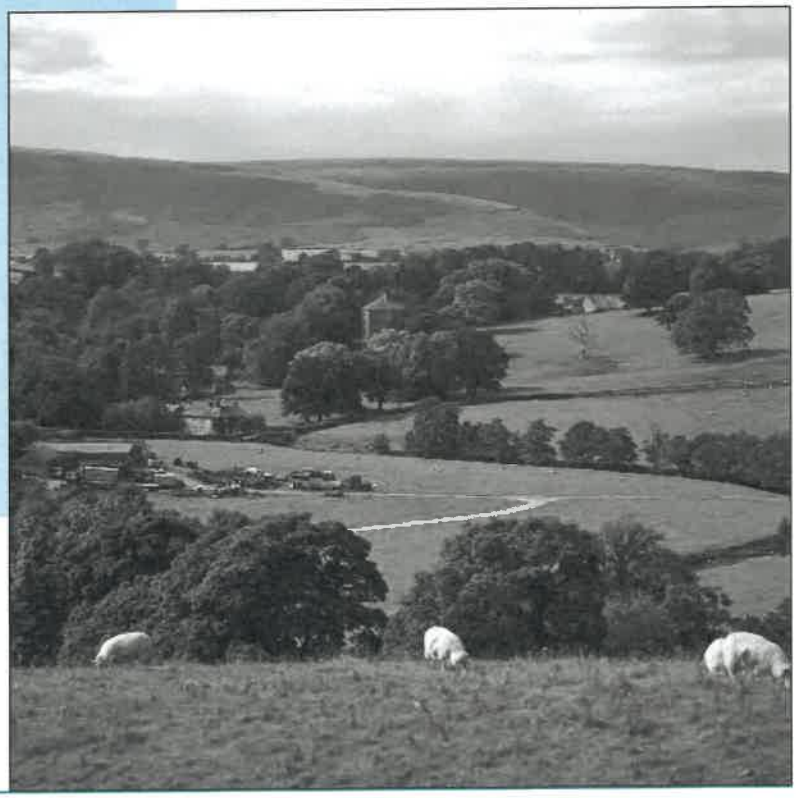
UNDULATING LOWLAND FARMLAND

Character Areas

- 5a *Upper Hodder Valley*
- 5b *Lower Hodder and Loud Valley*
- 5c *Lower Ribble*
- 5d *Samlesbury-Withnell Fold*
- 5e *Lower Ribblesdale (Clitheroe to Gisburn)*
- 5f *Lower Ribblesdale (Gisburn to Hellifield)*
- 5g *South Bowland Fringes*
- 5h *Goosnargh-Whittingham*
- 5i *West Bowland Fringes*
- 5j *North Bowland Fringes*
- 5k *Cuerden-Euxton*

Landscape Character

Generally below 150m, the Undulating Lowland Farmland lies between the major valleys and the moorland fringes The underlying geology is largely masked by heavy boulder clays and hedgerows predominate over stone walls. This lowland landscape is traversed by deeply incised, wooded cloughs and gorges. There are also many mixed farm woodlands, copses and hedgerow trees, creating an impression of a well wooded landscape from ground level and a patchwork of wood and pasture from raised viewpoints on the fells. Some of the most picturesque stone villages of the county occur within this well settled landscape type. The towns of Longridge and Clitheroe also occur within this type, but are not typical of the settlement pattern. The area also has many country houses whose boundary walls and designed landscapes add to the species diversity and visual appeal. There is a high density of farms and scattered cottages outside the clustered settlements, linked by a network of minor roads. Typical view - photo 19 below.



Physical Influences

The Undulating Lowland Farmland forms a transitional zone between the low lying plains of soft glacial deposits and the high fells of Bowland, formed from Mill stone Grit. To the west of the Forest of Bowland, running along the line of the M6, a substantial fault separates the soft Triassic rock of the lowlands from the harder Carboniferous rocks of the fells. The Clitheroe Reef Knolls SSSI, located between Worston and Downham, comprise an important geological feature. This is one of several Reef Knolls which support species-rich calcareous grassland.

This landscape type, whether composed of limestone, grit, shale or sandstone, is of gentle topography when compared to the fells and hills. Glacial action has accentuated the differences by further tempering the relief of the low-lying areas by the deposition of glacial drift. Deep drift is conspicuous where hedges predominate over stone walls, as quarrying is only possible where the drift is sufficiently thin.

Many of the woodlands which survive on the steep slopes of the deep cloughs and valley sides are of ancient origin and represent a rich natural resource. They include alder and ash woods on the base-rich soils of the valley floors grading through to lowland oakwoods and upland oak woods on the upper valley sides. Red Scar and Tun Brook Woods, situated east of Preston between Ribbleton and Grimsargh are classified as SSSI's and are important for their extensive examples of ash-wych elm woodland and alder woods. Hedges and hedgerow trees are also important as habitats in an otherwise intensively managed landscape.

Standing bodies of water are important habitats within the area; especially for birds. Rough Hey Wood, located south east of Garstang is designated as a SSSI and contains one of Britain's largest heronries.

Human Influences

The landscape proved more favourable to early settlers than the nearby uplands. At Portfield above Whalley, large earthworks of Iron Age date defend the neck of a steep-sided promontory whose flat top had been utilized since the Neolithic period. The presence of a large aisled barn of probably 18th century date points to an earlier, perhaps medieval, successful farmstead, attesting to the favourable nature of the site.

By the Roman period it is probable that much of this landscape type was already settled fairly densely and the fort established at Ribchester is known to have had some civilian government functions. Whilst Roman remains (besides roads) outside the immediate area of the forts are poorly represented in the record, the presence of Roman Kilns at Quernmore show that they exploited the natural resources of the area.

Medieval population pressures, which saw the utilisation of small areas of the mosslands elsewhere in Lancashire also led to the continuation of small woodland clearances along the Ribble and the Lune. This created a small scale intimate landscape of scattered farms linked by winding roads with irregular fields and patches of surviving woodland on stream and field edges, a landscape which has remained intact to this day.

The majority of enclosure dates from the medieval period and has created a landscape of small fields which are mostly hedged although stone walls are evident where geology lies close to the surface.

Country houses are a feature of the area and are often surrounded by parklands and well managed estates. They are evidence of the developing industrial enterprise and increasing wealth between the 16th and 19th centuries. Architecturally distinctive yeoman and gentry houses are also characteristic of this type and date from the 17th century onwards.

During the 17th century lime was used for land improvement in these lowland fringe areas and many small farm kilns remain in the landscape, along with the larger industrial kilns and quarries of the 19th and 20th century. The mining of Millstone Grit also proved to be important in this landscape type. Where suitable stone was available, querns and millstones could be quarried and manufactured to meet the needs of the population. Remains of 19th century millstone production near Quernmore can still be seen on the flanks of Clougha Pike. Lead and Silver were extracted in Rimington from the 17th century and mined and manufactured in places such as at Quernmore to meet the demands of the rapidly industrialising county.

CHARACTER AREAS - UNDULATING LOWLAND FARMLAND

Undulating Lowland Farmland occurs on the lower fringes of the uplands, below about 150m AOD, across the whole study area.

Local	Character Areas	Description
5a	Upper Hodder Valley	*This is a unique hidden area of settled farmland enclosed by shale and limestone uplands and the grit moorland of the Bowland Fells. It is a lush oasis in the middle of a bleak landscape. The landscape is centred around the upper River Hodder and its tributaries and is well wooded. The underlying geology is largely overlain by boulder clays although the underlying limestone is evident as outcrops known as `Reef Knolls' as well as in the white stone walls, bridges and limestone built villages, such as Slaidburn. The Reef Knolls are particularly characteristic of this area as are stands of beech which are often visible on hill tops.*
5b	Lower Hodder and Loud Valley	*This area forms part of the Undulating Lowland Farmland to the south of the Forest of Bowland and includes the deeply incised wooded course of the Hodder below Whitewell and its tributary, the River Loud, as far as its confluence with the Ribble. The underlying bedrock is limestone which is overlain by good soils, providing lush green pastures and good tree growth. The course of the Hodder is particularly well wooded and the pattern of incised minor wooded tributaries is distinctive to this character area. The area is little affected by modern development and the picturesque limestone villages of Chipping and Waddington have retained their vernacular character.*
5c	Lower Ribble	*The Lower Ribble is an area of lowland gritstone farmland between Longridge Fell to the north and Mellor Ridge to the south. It has a distinctive broad valley landform; the north and south valley sides are separated by a flood plain which contains the meandering course of the River Ribble. There is a particularly distinctive pattern of wooded cloughs which descend the valley sides, their streams emptying into the Ribble. A complex pattern of hedges and woodland form links to these wooded cloughs, giving an overall impression of a well wooded landscape. Although a rural valley, the area is well settled; a dense network of winding country lanes and tracks link the large number of stone farm buildings. Other features of this area are the country houses and designed landscapes, for example Stonyhurst College, Huntingdon Hall and Showley Hall. The Roman settlement of Ribchester is sited at an historic crossing point of the Ribble, a tranquil village in the centre of the valley.*
5d	Samlesbury-Withnell Fold	*An area between the Ribble Valley to the north and the Industrial Foothills to the south. It is underlain by millstone grit and sandstone, but the landscape is influenced by the mantle of glacial till which covers the surface, producing a gently undulating landscape of large lush green pastures divided by low cut hedgerows and hedgerow trees. Dramatic steep sided wooded valleys wind their way through the landscape carrying the River Darwen and its tributaries. Designed landscapes and parkland associated with Samlesbury Hall, Woodfold Hall, Pleasington Old Hall and Hoghton Tower add to the overall woodland cover in this lowland landscape and Witton Country Park provides a countryside resource on the edge of Blackburn. It is also influenced by infrastructure (major road*

Local	Character Areas	Description
		and rail routes), industrial works, the airfield at Samlesbury and built development on the edges of Preston.
5e	Lower Ribblesdale (Clitheroe to Gisburn)	*This area forms the southern valley side of the Ribble, between Copster Green and Gisburn, on the lowland fringes of Pendle Hill. It is a particularly well settled area and provides a corridor for communication routes along the Ribble Valley. The A59(T) runs the length of the area, linking the settlements of Copster Green, Whalley, Clitheroe, Chatburn and Gisburn. The railway links the valley to Blackburn and Yorkshire. This communication structure has encouraged built development and industry; the large cement works at Clitheroe is a prominent visual landmark for miles around. This character area is underlain by limestone and has some good examples of limestone reef knolls, particularly around Clitheroe; Clitheroe Castle is located on top of one of these knolls.*
5f	Lower Ribblesdale (Clitheroe to Gisburn)	*This character area follows the upper reaches of the River Ribble between Bolton-by-Bowland and Long Preston on limestone geology. It occurs on the fringes of the Slaidburn Rolling Upland Farmland between 100 and 150m AOD. It is a highly rural area which is dominated by lush green pastures divided by hedgerows with many hedgerow trees. The mixed plantation woodlands associated with estates of Bolton Hall and Halton Place and the ancient woodlands along the Ribble itself contribute to the wooded character of this landscape character area.*
5g	South Bowland Fringes	*This character area forms the lowland fringes of Waddington Fell, to the south of the Forest of Bowland. It is a well wooded area whose limestone slopes are particularly notable for their pattern of wooded cloughs - the tributaries which descend the valley side before feeding into the Ribble. The villages of Waddington, West Bradford, Grindleton and Holden are located at the foot of wooded cloughs. Browsholme Hall has an influence over landscape character; shelter belts and beech hedges are features of the area around Cow Ark.*
5h	Goosnargh-Whittingham	*The undulating lowland farmland on the north-east fringes of Preston forms a transitional landscape between the upland landscape of the Bowland Fells to the north-east and the agricultural Amounderness Plain to the west. It is an historically interesting area on the fringe of the Forest of Bowland AONB. The landform gently descends from 150m at the moorland fringe of Beacon Fell to the 30m contour (approximately) which defines the edge of the sandstone agricultural plain of the Fylde. However, this is not a clear boundary and the visual transition from one to the other occurs across a broad area between the M6 and main Preston to Lancaster railway line. As a result of this gradual transition it demonstrates characteristics of both the Fylde and the Bowland fringes. It is a pastoral landscape which is relatively open and intensively farmed with much hedgerow loss and few trees or woodlands although hedgerows along the network of lanes are important landscape features. There are often clear views over the plain below. The area is under pressure from built development as a result of its proximity to Preston. Vernacular buildings are of local stone, although a number of incongruous materials are seen throughout the area. The area is rich in evidence for Roman occupation.*

Local	Character Areas	Description
5i	West Bowland Fringes	*A transitional landscape between the gritstone scarps of the Bowland Fells and the coastal plain of Amounderness. A fault line provides a corridor along which the motorway, road and railway run and provides a transition to the agricultural plain. However, this transition is softened by glacial deposits, for example at Galgate where the lowland farmland merges imperceptibly with the low drumlin fields. However, at Quernmore, there is a dramatic wooded ridge (7c) which forms a definite boundary between the grit lowland fell edges and the adjacent glacial landscape to the west. The transition from fringe to fell is quite striking, particularly to the north-west below Claughton Moor where it occurs over a short distance. The valleys of the Brock, Calder and Wyre are also relatively dramatic, descending from the fells in deeply incised wooded valleys. There are exceptional views of the Amounderness Plain from the hillsides and the scarps of the Bowland fells are never far away.*
5j	North Bowland Fringes	*The north-facing gritstone slopes, known as the Forest of Mewith, is an area of undulating marginal farmland on the northern edges of the Bowland Fells It is bordered by a drumlin field to the north which influences the landform of the lowland fringe; the broadly undulating landform contrasts with the steep scarps of west Bowland. This is a rural area which is crossed by a dense network of footpaths and farm tracks; a number of small stone farm holdings are found at the end of these dead-end farm tracks.*
5k	Cuerden-Euxton	*The rural character of this landscape is largely obscured by built development which has taken place since the late 1970s. Motorways and motorway junctions dominate the northern sector. The principal landscape feature is Cuerden Valley Park, based upon the woodland and valley of the river Lostock. The park is managed for nature conservation and recreational use and is an important local resource. Pockets of farmland and vernacular buildings survive as a reminder of earlier land use and settlement pattern.*

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