



**Haweswater Aqueduct Resilience Programme - Proposed Bowland
Section**

Volume 6

Proposed Ribble Crossing

Chapter 10: Cultural Heritage

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Water for the North West



Haweswater Aqueduct Resilience Programme - Proposed Bowland Section

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10. Cultural Heritage

10.1 Introduction

- 1) This chapter presents an assessment of the likely significant effects of the Proposed Ribble Crossing on Cultural Heritage.
- 2) The legislation and planning policies relevant to Cultural Heritage are considered in Volume 2, Section 10.3 of the Proposed Bowland Section Environmental Statement, while assessment methodology and assessment criteria are presented in Volume 2, Section 10.4 of the same document.
- 3) Baseline assets were derived from an initial search area bounded to the north by West Bradford Road and Waddington Road, to the east by West Bradford Road, to the south by the woods at Cross Hill and the River Ribble, and to the west by the Clitheroe Road. This baseline records search included both designated and non-designated assets from the local Historic Environment Record (HER) and the National Heritage List for England (NHLE) and was supported by a site survey (Figure 10.1). Historic Landscape Types (HLTs) are categories and are not recorded as single assets and can be present in more than one assessment area.
- 4) A wider search area was also established to identify any potential for impacts on the setting of designated Cultural Heritage assets, based on a zone of theoretic visibility (ZTV). The ZTV for the Proposed Ribble Crossing extends out to a distance of approximately 3 km from the indicative route alignment. This 3 km overarching assessment area (shown on Figure 10.1) has been further refined, as site appraisal has shown that significant effects are unlikely to be experienced as far as 3 km and, in many situations, visibility is limited by intervening topography, buildings and vegetation. Therefore, the baseline for designated Cultural Heritage effects focused on a smaller assessment area extending generally to a distance of 2 km from the Proposed Ribble Crossing (shown on Figure 10.2)

10.2 Scoping and consultations

10.2.1 Scoping

- 5) A Cultural Heritage chapter was included within the EIA Scoping Report Addendum which was submitted to the relevant planning authorities for comment in February 2021. Scoping report responses were provided by each of the local authorities and these have been reviewed and incorporated into the assessment. Scoping comments and responses are outlined in Volume 4 Appendix 4.1 of the Proposed Bowland Section of the Environmental Statement.

10.2.2 Consultation

- 6) Consultation is being undertaken with Lancashire County Council and Ribble Valley Borough Council.

10.3 Embedded Mitigation and Good Practice

- 7) Embedded mitigation is inherent to the design, and good practice measures are those which are standard industry practice used to manage commonly occurring environmental effects. The assessment of likely significant effects in Sections 10.5 and 10.6 takes into account the application of both embedded mitigation and good practice measures as set out in this section.
- 8) The need for any additional topic-specific essential mitigation (generally for effects likely to be significant in the context of the EIA Regulations) identified as a result of the assessment in Sections 10.5 and 10.6 is then set out separately in Section 10.7

10.3.1 Embedded Mitigation

- 9) Chapter 3: Design Evolution and Development Description explains the evolution of the design. Due to the awareness of constraints including both designated and undesignated Cultural Heritage assets

throughout the design process, the Proposed Ribble Crossing has been designed to avoid known assets where feasible.

10.3.2 Good Practice Measures

- 10) Good practice measures contained in Volume 4, Appendix 3.2: Construction Code of Practice (CCoP) of particular relevance to Cultural Heritage are set out below:
- The appointed Contractor would consult with the relevant local planning authority and United Utilities' historic environment advisor should any archaeological or Cultural Heritage finds or sites be discovered or revealed during enabling works to allow appropriate measures to be implemented to mitigate potential impacts
 - Maintenance and operation of the Proposed Ribble Crossing would be in accordance with environmental legislation and good practice procedures similar to those outlined in the draft CCoP; this approach would be established for all high-risk activities and construction personnel would be trained in responding to such incidents.

10.3.3 Assumptions and Limitations

- 11) Due to COVID-19 restrictions during 2020 and 2021, visits to council archives and local studies services were not undertaken. No intrusive archaeological investigations have been undertaken, which is considered appropriate for the purposes of this assessment as the indicative route alignment within the planning application boundary may be refined at a later date.

10.4 Baseline Conditions

- 12) This section details the Cultural Heritage baseline for the assessment area and ZTV and identifies receptors where there is potential for significant effects to arise.
- 13) Baseline data were collated from a variety of sources in compiling this assessment, including:
- Field survey undertaken in January 2021
 - National Heritage List for England (NHLE) for information on the designated Cultural Heritage resource
 - Light Detecting and Ranging (LiDAR) Digital Surface Model (DSM)
 - Lancashire County Council (LCC) HER for information on non-designated Cultural Heritage resource including archaeological sites or monuments, non-designated historic buildings, historic landscape characterisation data and for information on locally listed buildings
 - Ribble Valley Borough Council for Conservation Areas
 - National Library of Scotland for digital historic mapping
 - Open Domesday for information from the Domesday book.

10.4.1 Information Sources

- 14) The assessment was undertaken with reference to the sources detailed in Table 10.1.

Table 10.1: Key Information Sources

Data Source	Reference
Multi-Agency Geographic Information for the Countryside (MAGIC) web site. This data source provided information showing sensitive national designations that fall within the Proposed Ribble Crossing.	https://magic.defra.gov.uk/MagicMap.aspx

Data Source	Reference
LCC HER for information on the non-designated Cultural Heritage resource including archaeological sites or monuments, non-designated historic buildings, historic landscape characterisation data and for information on locally listed buildings and Conservation Areas.	https://www.lancashire.gov.uk/council/planning/historic-environment-record/
National Library of Scotland for digital mapping	https://maps.nls.uk/
NHLE for information on the designated Cultural Heritage resource.	https://historicengland.org.uk/listing/the-list/data-downloads/
Open Domesday for information from the Domesday book.	https://opendomesday.org/map/

- 15) National and Local Planning Policies are covered in Chapter 5: Planning Policy and Context of the Proposed Bowland Section Environmental Statement.

10.4.2 Archaeological Remains

- 16) There are a total of 13 non-designated archaeological remains within the Proposed Ribble Crossing assessment area.

Medieval Period (AD 1066 – AD 1540)

- 17) The form of Medieval settlements and associated hinterland is not well understood within Lancashire (Newman and Newman 2007¹) although the assessment area was part of the Craven Hundred of Yorkshire during the Medieval period. This is reflected in the Domesday book which records the settlements of Waddington, West Bradford and Clitheroe within the vicinity of the Proposed Ribble Crossing, however, no households are recorded, or taxable assets, suggesting that the area was a waste (Open Domesday 2021²). Despite the limited evidence for settlement and land use, within the assessment area four silver pennies of Edward I (Assets 7026-7029) and a lead alloy spindle whorl (Asset 7041) have been recovered north of the River Ribble. As the artefacts have been removed from their find location and are therefore no longer associated with their original contexts, they have been assessed to be of negligible value.

Post Medieval Period (AD 1540 – AD 1901)

- 18) The County during the Post Medieval period developed strong links with the textile industry and its development from a cottage industry to industrial, largely urban production (Newman and McNeil 2007³). To support the growing urban populations, agricultural practices changed during the Post Medieval period including parliamentary enclosure and the construction of new types of farm buildings. Archaeological remains recorded within the assessment area illustrate the prevalence of cloth production and agriculture. These include the site of a potash pit⁴ (Asset 7042) producing potash for fertiliser and fixing dyes to cloth and two areas of ridge and furrow (Assets 7036 and 7043) that are indicative of the ploughing regime of the time. Given their potential contribution to research agendas concerned with Post Medieval agriculture (Newman and McNeil 2007⁵), but also in consideration of their lack of rarity, the two areas of ridge and furrow (Assets 7036 and 7043) have been assessed to be of low value. In consideration of the lack of remains associated with the potash pit (Asset 7042), it has been assessed to be of negligible value.

¹ Newman, C. and Newman, R. 2007. *Chapter 5: The Medieval Period Research Agenda in the Research Agenda for North West England*

² Open Domesday [Available Online] at <https://opendomesday.org/> [Accessed February 2021]

³ Newman, R. and McNeil, R. 2007. *Chapter 6: The post-Medieval Research Agenda in the Research Agenda for North West England*

⁴ The geographical extent of the potash pit is uncertain as it recorded as a point in the HER. The pit is not shown on historic OS mapping from 1885 onwards.

⁵ Newman, R. and McNeil, R. 2007. *Chapter 6: The post-Medieval Research Agenda in the Research Agenda for North West England*

- 19) In addition to the Cultural Heritage assets recorded above, three Cultural Heritage assets are the findspots of an 18th century shoe buckle (Asset 7038), a metal trade weight (Asset 7039) and a lead spindle whorl (Asset 7041). As these Cultural Heritage assets have been removed from and are no longer associated with their original contexts, they have been assessed to be of negligible value.

Unknown date

- 20) Two archaeological remains of unknown date have been recorded within the Ribble Crossing assessment area. Within the east of the assessment area a palaeochannel (Asset 7014) of unknown date is recorded. As the asset is of unknown date and archaeological potential it is currently assessed to be of low value. Asset 7040 is the recorded findspot of a lead alloy object of unknown date and function. As this cultural heritage asset has been removed from its findspot and is no longer associated with its original context, it is of negligible value.

Potential for Unknown Archaeological Remains

- 21) The potential for unknown archaeological remains to be encountered within the Proposed Ribble Crossing assessment area has been assessed to be medium. This is in consideration of the known archaeological remains that date from the Medieval to the Post Medieval Periods and the undeveloped nature of the assessment area in proximity to the River Ribble.

10.4.3 Historic Buildings

- 22) There is a total of 121 historic buildings within the assessment area and ZTV for the Proposed Ribble Crossing. Of these one is a Grade I Listed Building, two are Grade II* Listed Buildings, 115 are Grade II Listed Buildings, there is one Conservation Area and there are two non-designated historic buildings.
- 23) Of the 121 historic buildings 79 are associated with domestic dwelling and are all Grade II Listed Buildings.
- 24) Four domestic dwellings (Assets 7032, 7046, 7050 and 7061) date to the 17th century. Waddington Hall (Asset 7032) possibly dates to the early 17th century and was rebuilt c. AD1900. It is H-shaped in plan and is of sandstone rubble construction with a slate roof. It has an associated wall (Asset 7033) that is of sandstone rubble construction with ashlar details that dates to the 20th century. Pimlico Farmhouse and attached Farm Building (Asset 7046) dates to the 17th century with 18th century additions. It is of two storeys and is pebble dashed with a slate roof. Waddow Hall (Asset 7050) is a large house that dates to the 17th century with 18th century additions. It is of two storeys and attics and is of pebble dashed rubble construction with a slate roof. 23 Church Street (Asset 7061) dates to the mid-17th century. It is of two storeys and is of rough rendered stone construction with slate roof. In consideration of their historic interest as good examples of 17th century domestic dwellings and a 20th century wall and their listed status, these historic buildings have been assessed to be of high value.
- 25) Fifty domestic dwellings date to the 18th century (Assets 4007, 7002, 7005 – 7007, 7010 – 7012, 7022, 7035, 7037, 7045, 7048, 7049, 7051, 7062 – 7068, 7070, 7071, 7073, 7075 – 7078, 7080, 7083, 7088, 7093, 7096, 7102, 7103, 7107 – 7110, 7112, 7114, 7115, 7120 – 7122, 7124, 7125, 7127 and 7128). These historic buildings exhibit the various architectural styles of domestic dwellings of the 18th century and are good examples of their type. In consideration of this and their listed status they have been assessed to be of high value.
- 26) Twenty three domestic dwellings date to the 19th century (Assets 7001, 7003, 7054, 7055, 7057, 7059, 7060, 7072, 7074, 7079, 7082, 7087, 7094, 7097, 7098, 7101, 7116 – 7119, 7123, 7129 and 7130). These historic buildings are good examples of the architectural styles of 19th century domestic dwellings and in consideration of this and their listed status they have been assessed to be of high value.
- 27) One domestic dwelling dates to the 20th century. Eaves Hall (Asset 7004) dates to 1922 and is attributed to Hitchon and Pickup. It is a two storey and attics of red brick and Portland stone construction with slate roof. In consideration of its historic interest as a good example of its type, its fine architectural style, association with well-known architects and its listed status it has been assessed to be of high value.

- 28) Sixteen historic buildings are associated with commerce and date to the 18th and 19th centuries. Of these five are shops (Assets 7086, 7099, 7100, 7111 and 7126). Four are Public Houses (Assets 7009, 7053, 7091 and 7105). Four are Hotels (Assets 7085, 7089, 7104 and 7106). One is a Post Office (Asset 7017), one is a Bank (Asset 7092) and one is a Warehouse (Asset 7113). In consideration of their historic interest as good examples of historic buildings associated with commerce dating to the 18th and 19th centuries and their listed status, these historic buildings have been assessed to be of high value.
- 29) Four historic buildings are associated with worship and commemoration. Of these two (Assets 7025 and 7056) are churches dating to the Medieval Period and are both Grade II* Listed buildings. The Church of St Helen (Asset 7025) dates to c. AD1500 with its nave and chancel rebuilt in 1894. It is of squared sandstone construction with slate roof and has a three-stage west tower with angled buttresses, embattled parapet, gargoyles and corner pinnacles. The Parish Church of St Mary Magdalene (Asset 7056) has a tower and east end that date to 15th century the rest dating to 1828-1829 and attributed to T. Rickman. The tower was heightened, and a spire was added in 1844. It is of coursed rubble gritstone construction with freestone dressings and hammer-dressed buttresses with a slate roof with clay ridge tiles. In consideration of their historic interest as Medieval churches, association with well-known architects where relevant and their listed status, the Church of St Helen and the Parish Church of St Mary Magdalene have been assessed to be of high value. The Tomb of Robert Parker in St Helen's Churchyard (Asset 7024), a Grade II Listed Building, dates to 1718 and comprises a chest tomb of sandstone construction. In consideration of its historic interest as a good example of an 18th century chest tomb and its listed status, Asset 7024 has been assessed to be of high value. Waddington War Memorial (Asset 7034) dates to 1919 and comprises an intricately carved wheel-headed cross bearing the names of those lost in WWI and WWII. In consideration of its historic interest as an eloquent witness to the tragic impact of world events on the local community and its listed status, Waddington War Memorial has been assessed to be of high value.
- 30) Four historic buildings (Assets 7013, 7052, 7095 and 7133) are associated with water supply and all are Grade II Listed Buildings. The Pump south of Chapel, Waddington Hospital (Asset 7013) probably dates to the early 19th century. It is lead with a cast iron handle and base and has renewed timber casing. Saint Mary's Well (Asset 7052) is a rectangular walled pool of coursed stone construction with flagged stone floor. The Towns Well (Asset 7095) and Stocks Wells (Asset 7133) are both square flagged and walled pools and along with Saint Mary's Well (Asset 7052) these historic buildings provided the water supply for Waddington prior to 1852. In consideration of their historic interest as good examples of water provision prior to piped supplies and their listed status these historic buildings have been assessed to be of high value.
- 31) Three historic buildings (Assets 7008, 7016 and 7047) are associated with communication and comprise Grade II Listed Bridges. West Bradford Bridge (Asset 7008) dates to c. AD1800. It is of sandstone ashlar construction. It comprises a single segmental arch with furrowed band. Its solid parapet has a rounded top. Waddington Bridge (Asset 7016) probably dates to the early 19th century. Again, it is of sandstone ashlar construction and comprises a single segmental arch. It has a solid parapet with weathered coping. Wetters Bridge (Asset 7047) which crosses Bashall Brook dates to the early 19th century. It too is of sandstone ashlar construction and comprises a single segmental arch with solid parapet and weathered coping. Its west parapet is inscribed 'Bashall Eaves' and 'Waddington' with an incised finger pointing in both directions. In consideration of their historic interest as good examples of early 19th century transport infrastructure improvements and their listed status these historic bridges have been assessed to be of high value.
- 32) Two historic buildings (Assets 7030 and 7031), both Grade II Listed Buildings, are garden ornaments. Asset 7030 comprises a sundial base of sandstone construction probably dating to the 18th century. It is square in plan and has chamfered edges and cyma-moulded cap. Asset 7031 is a sundial dated 1686 with 20th century restorations. It too is of sandstone construction and is square in section. Its shaft is chamfered with each face grooved vertically. In consideration of their historic interest as good examples of 17th and 18th century garden ornaments and their listed status they have been assessed to be of high value.

- 33) Two historic buildings (Assets 7058 and 7131) are associated with education and are both Grade II Listed Buildings. Clitheroe Royal Grammar School for Boys Old Building (Asset 7058) dates to the 18th century. It is a two-storey stone construction with a moulded stone eaves cornice and modillions. It has a slate roof with stone copped gable ends. St Michael's Primary School (Asset 7131) dates to 1799 and was formerly a Roman Catholic Church. It is of single storey coursed rubble construction with three round-headed windows in stone surrounds with keystones and impost blocks and has a slate roof. In consideration of their historic interest as good examples of 18th century education establishments and their listed status, these historic schools have been assessed to be of high value.
- 34) Two historic buildings (Assets 7069 and 7081), both Grade II Listed Buildings, are associated with public assembly. The Grand Cinema (Asset 7069) dates to 1873-1874 and was originally the Clitheroe Public Hall it was converted to a cinema in 1921. It is of irregular coursed stone construction with ashlar dressings and a slate roof with crestings. The Town Hall (Asset 7081) dates to c. AD1820 and is attributed to T. Rickman. It is 2-storeys of sandstone ashlar construction with parapet and moulded cornice. It is now the Tourist Information Office. In consideration of their historic interest as good examples of 19th century Town Halls and their listed status, they have been assessed to be of high value.
- 35) Waddington Hospital Gateway (Asset 7015), a Grade II Listed Building, dates to AD1700 is of sandstone ashlar construction. It has a moulded open pediment that is supported on projecting quoins. Horrocks Hall Barn (Asset 7019), a Grade II Listed Building, probably dates to the 17th century. It is of coursed stone construction with a slate roof and has a Dovecot in its gable end. The Stocks (Asset 7023), a Grade II Listed Building, is of unknown date and is of sandstone and wood construction. The end piers are of square plan with rounded tops and are grooved to take two boards with four holes. The Andrew Carnegie Public Library (Asset 7084), a Grade II Listed Building, dates to 1903 and is attributed to the architects Briggs and Wolstenholme. It is of sandstone ashlar construction with slate roof and is a mixture of the Loire and Art Nouveau styles. Asset 7090 is a Grade II Listed K6 Telephone Kiosk designed in 1935 by Sir Giles Gilbert and is of cast iron construction. Clitheroe Castle (Asset 7132), a Grade I Listed Building, is noted in the Domesday Book. It comprises a small 12th century square tower keep with flat corner turrets one of which contains a staircase. In consideration of their historic interest as good examples of their types, association with well-known architects where relevant and their listed status, these historic buildings have been assessed to be of high value.
- 36) Waddington Conservation Area (Asset 7021) was designated in 1974. Waddington is primarily a residential village but contains local businesses including three pubs, a café, a bed and breakfast establishment, an architectural practice and a Post Office and village store. In contrast to its neighbours Waddington does not have extensive views of the surrounding hills and fells instead it looks in upon itself as it is set within the banks of the narrow valley cut by the Waddington Brook. In consideration of its designation, Waddington Conservation Area has been assessed to be of medium value.
- 37) Finally, there are two non-designated historic buildings within the Proposed Ribble Crossing assessment area, the Bradford bridge (Asset 7018) and the barn at Lillands farm (Asset 7044). Bradford bridge (Asset 7018) dates to 1912 when it was rebuilt as a stone road bridge, previously a wooden footbridge stood on the site predating 1847. Lillands barn (Asset 7044) is an example of a Post Medieval agricultural building within an area of Ancient Enclosure (HLT1). In consideration of their historic interest as a good example of an early 20th century bridge and a Post Medieval agricultural building, these historic buildings have been assessed to be of low value.

10.4.4 Historic Landscape Types

- 38) There are four non-designated HLTs within the assessment area for the Ribble Crossing.
- 39) Ancient Enclosure (HLT1) is characterised by irregular, small to medium sized enclosed fields, enclosed with mixed species hedges, walls, banks and ditches. Settlement within HLT1 is often dispersed, with farms, churches and domestic houses connected by roads and trackways. In consideration of its historic interest reflecting the agricultural landscape in the Medieval period but also recognising this is a common type HLT1 has been assessed as being of low value.
- 40) Post Medieval enclosure (HLT2) is characterised by medium sized fields, often bounded by hawthorn hedges. The field pattern is predominantly irregular, with some regular layout, reflecting the piecemeal

private enclosure of Lancashire, rather than the parliamentary enclosure of the midlands. As a common type but in consideration of its historic interest reflecting the agricultural landscape in the Post Medieval period, including through the agricultural revolution, this type has been assessed as being of low value.

- 41) Ancient and Post Medieval Settlement (HLT3) is characterised by a wide range of buildings, open space and the course of road systems and rights of way. The majority of the extant buildings are Post Medieval or Modern in date with the exception of the Churches. Conversely the building plots, tenement boundaries and open spaces and lanes may date to the Medieval Period or earlier. As a common type but in consideration of its historic interest reflecting Ancient and Post Medieval settlement, HLT3 has been assessed to be of low value.
- 42) Modern Settlement (HLT4) comprises the post c. AD1850 expansion of existing settlements. It is characterised by farmhouses, domestic houses and several structures associated with the textile industry, railways and canals. Other buildings include schools, Inns and various other types of structures. As a common type with limited time depth, HLT4 has been assessed to be of negligible value.

10.4.5 Map Regression

- 43) The 1885-1900 Ordnance Survey (OS) Map shows the Ribble Crossing assessment area as agricultural land with some of the extant field boundaries shown, although a number of field boundaries on the north side of the River Ribble are not shown. The River Ribble is shown running broadly east-west across the assessment area joined by both the Coplow Brook and the Waddington Brook. Towards the east of the assessment area a track or path is shown, the line of which is currently preserved as a field boundary. In the west of the assessment area the extant barn associated with Lillands farm (7045) is shown to the east of a field boundary shown on the OS map, although the farm is not labelled.
- 44) The 1888-1913 OS map shows the Ribble Crossing assessment area as agricultural land, several field boundaries have been added since the 1885-1900 map resulting in a field pattern very similar to that seen during the 2021 field survey. The River Ribble and stream are shown, with the barn associated with Lillands farm shown adjoining a small yard area. The farm is labelled as 'Lillands', but the barn is not labelled, and an additional path or track is marked between the barn and the River Ribble as well as between the barn and farmhouse leading north to West Bradford Road.
- 45) The 1949-1970 OS map shows the Proposed Ribble Crossing assessment area as shown on the 1888-1913 OS map.

10.5 Assessment of likely significant effects

- 46) The following section describes the effects of the Proposed Ribble Crossing on Cultural Heritage during the enabling works, construction, operational and decommissioning phases of work. The enabling works comprise vegetation clearance, minor reprofiling of laydown areas and compound, temporary bridge construction access and access track construction and establishing crossing points. Construction works would include topsoil stripping along the route corridor and topsoil storage mound formation, construction of the road base and tarmac wearing course including fencing and drainage, construction of bridges and reinstate compound and laydown areas. Operation would include traffic using the route and security presence to control access onto the route. Finally, decommissioning would include the reinstatement of all areas to their original agricultural purpose and the reinstatement of trees, hedgerows and other boundary features.

10.5.1 Enabling Works Phase

Archaeological Remains

- 47) There are no known archaeological remains within the laydown area south of the River Ribble, however, there is potential for impacts to occur on unknown archaeological remains during the enabling phase of works and so this risk has assessed as low. This is in consideration of the largely undeveloped nature of the assessment area and the known archaeological remains that date from the Medieval to Post Medieval periods.

- 48) There is potential for groundworks within the proposed laydown area north of the River Ribble to truncate or partially remove archaeological remains associated with the palaeochannel North of Bradford Bridge (Asset 7014). The magnitude of this permanent impact on the low value asset has been assessed to be minor and the significance of effect has been assessed to be slight.

Historic Buildings

- 49) During the enabling phase of works there would be noise and visual intrusion into the setting of the non-designated Bradford bridge (Asset 7018) in partially screened views to the south and west as a result of the construction of the laydown areas, construction traffic and stockpiling of materials. The magnitude of this temporary impact on the low value bridge has been assessed to be minor and the significance of effect has been assessed to be slight.
- 50) During the enabling phase of works there would also be noise and visual intrusion into the setting of the non-designated Lillands barn (Asset 7044) in views to the north and east as a result of the construction of the laydown areas, construction traffic and stock piling of materials. The magnitude of this temporary impact on the low value barn has been assessed to be moderate and the significance of effect has been assessed to be slight.
- 51) During the enabling phase of works there would similarly be visual intrusion into the setting of the Grade II Listed Brungerley Farmhouse (7048) in long distant partially screened views to the north and east as a result of the construction of the laydown areas, construction traffic and stock piling of materials. The magnitude of this temporary impact on the high value farmhouse has been assessed to be negligible and the significance of effect has been assessed to be slight.
- 52) No settings impacts are predicted on Waddington Conservation Area (Asset 7021), as the principal views are within the Conservation Area and not directed to the surrounding fields and fells⁶. No setting impacts are predicted on Lane Side (Asset 7010) as its principal elevation is towards the farm buildings of Laneside Farm on the opposite side of the West Bradford Road.

Historic Landscape Types

- 53) During the enabling phase of works the removal of the stone wall (along West Bradford Road, south of the River Ribble) and the hedgerow (along West Bradford Road north of the River Ribble) would remove parts of the elements that define Ancient Enclosure (HLT1) and Post Medieval Enclosure (HLT2). This would not affect the legibility of these common and widespread low value HLTs, and therefore the magnitude of this temporary impact would be minor and of negligible significance.
- 54) The summary of enabling works effects are shown in Table 10.2 below.

Table 10.2: Summary of Enabling Works Effects

Environmental / Community Asset	Value / Sensitivity	Effect	Duration	Magnitude	Significance of Effect (Pre-Mitigation)
North of Bradford Bridge (7014)	Low	Partial removal of associated archaeological remains.	Permanent - Adverse	Minor	Slight
Bradford bridge (7018)	Low	Noise and visual intrusion into the setting.	Short term - Adverse	Minor	Slight

⁶ Ribble Valley Borough Council (2006) *Waddington Conservation Area Appraisal (Page 12)*. [Available Online] at: [file:///C:/Users/curtisali/Downloads/Waddington_CAA_final_with_photos%20\(3\).pdf](file:///C:/Users/curtisali/Downloads/Waddington_CAA_final_with_photos%20(3).pdf) [Accessed April 2021]

Environmental / Community Asset	Value / Sensitivity	Effect	Duration	Magnitude	Significance of Effect (Pre-Mitigation)
Lillands Barn (7044)	Low	Noise and visual intrusion into the setting.	Short term - Adverse	Moderate	Slight
Brungerley Farmhouse (7048)	High	Visual intrusion into the setting.	Short term - Adverse	Negligible	Slight
Ancient Enclosure (HLT1)	Low	Minor changes and loss of elements.	Short term - Adverse	Minor	Negligible
Post Medieval Enclosure (HLT2)	Low	Minor changes and loss of elements.	Short term - Adverse	Minor	Negligible

10.5.2 Construction Phase

Archaeological Remains

- 55) During the construction phase of works there is the potential for truncation or partial removal of the potash pit (7043) as a result of topsoil stripping and road base construction. Because the spatial extent of the asset is unknown, the magnitude of this permanent impact has been assessed as minor for the low value asset and the significance of effect as slight. There is the potential for impacts on any previously unknown archaeological remains identified during the construction phase of works.

Historic Buildings

- 56) During the construction phase of works there would be continuing noise and visual intrusion into the setting of the non-designated Bradford bridge (Asset 7018) as a result of the introduction of new infrastructure in partially screened views to the south and west. The magnitude of this temporary impact on the low value bridge would be minor and the significance of effect would be slight.
- 57) During the construction phase of works there would also be continuing noise and visual intrusion into the setting of the non-designated Lillands barn (Asset 7044) as a result of the introduction of new infrastructure in views to the north and east. The magnitude of this temporary impact on the low value barn has been assessed to be moderate and the significance of effect would be slight.
- 58) During the construction phase of works there would similarly be continuing visual intrusion into the setting of the Grade II Listed Brungerley Farmhouse (7048) as a result of the introduction of new infrastructure in long distant partially screened views to the north and east. The magnitude of this temporary impact on the high value farmhouse would be negligible and the significance of effect would be slight.

Historic Landscape Types

- 59) During the construction phase of works there would be minor changes to and loss of elements from Ancient Enclosure (HLT1) and Post Medieval Enclosure (HLT2) as a result of construction activities including topsoil stripping along the route corridor. This would not affect the legibility of these common and widespread low value HLTs, and therefore the magnitude of this temporary impact would be minor and of negligible significance.
- 60) The summary of construction effects are shown in Table 10.3 below.

Table 10.3: Summary of Construction Phase Effects

Environmental / Community Asset	Value / Sensitivity	Effect	Nature of Effect	Magnitude	Significance of Effect (Pre-Mitigation)
Bradford bridge (7018)	Low	Noise and visual intrusion into the setting	Short term - Adverse	Minor	Slight
Lillands Barn (7044)	Low	Noise and visual intrusion into the setting	Short term - Adverse	Moderate	Slight
East of Waddington (potash pit) (7043)	Low	Partial removal of archaeological remains	Long term - Adverse	Minor	Slight
Brungerley Farmhouse (7048)	High	Visual intrusion into the setting	Short term - Adverse	Negligible	Slight
Ancient Enclosure (HLT1)	Low	Minor changes and loss of elements.	Short term - Adverse	Minor	Negligible
Post Medieval Enclosure (HLT2)	Low	Minor changes and loss of elements.	Short term - Adverse	Minor	Negligible

10.5.3 Operational Phase

Archaeological Remains

- 61) No impacts are predicted on archaeological remains during the operational phase of works as any impacts would have occurred during the enabling and construction phase of the works.

Historic Buildings

- 62) During the operational phase of the Proposed Ribble Crossing there would be continuing noise and visual intrusion into the setting of the non-designated Bradford bridge (Asset 7018) in partially screened views to the south and west as a result of construction traffic travelling along the Ribble Crossing. The magnitude of this temporary impact on the low value bridge has been assessed to be minor and the significance of effect would be slight.
- 63) During the operational phase of the Proposed Ribble Crossing there would also be continuing noise and visual intrusion into the setting of the non-designated Lillands barn (Asset 7044) in views to the north and east as a result of traffic travelling along the Ribble Crossing. The magnitude of this temporary impact on the low value barn has been assessed to be moderate and the significance of effect has been assessed to slight.
- 64) During the operational phase of the Proposed Ribble Crossing there would similarly be continuing visual intrusion into the setting of the Grade II Listed Brungerley Farmhouse (Asset 7048) in long distant partially screened views to the north and east from traffic travelling along the Ribble Crossing. The magnitude of this temporary impact on the high value farmhouse has been assessed to be negligible and the significance of effect has been assessed to be slight.

Historic Landscape Types

- 65) No impacts are predicted on HLTs during the operational phase of the Proposed Ribble Crossing as any impacts would have occurred during the enabling and construction phase of works.

66) The summary of operational phase effects are shown in Table 10.4 below

Table 10.4: Summary of Operational Phase Effects

Environmental / Community Asset	Value / Sensitivity	Effect	Nature of Effect	Magnitude	Significance of Effect (Pre-Mitigation)
Bradford bridge (7018)	Low	Noise and visual intrusion into the setting	Short term - Adverse	Minor	Slight
Lillands barn (7044)	Low	Noise and visual intrusion into the setting	Short term - Adverse	Moderate	Slight
Brungerley Farmhouse (7048)	High	Visual intrusion into the setting	Short term - Adverse	Negligible	Slight

10.5.4 Decommissioning Phase

Archaeological Remains

67) No impacts are predicted on archaeological remains during the decommissioning phase of works as any impacts would have occurred during the enabling and construction phase of the works.

Historic Buildings

68) During the decommissioning phase of the Proposed Ribble Crossing there would be noise and visual intrusion into the setting of the non-designated Bradford bridge (Asset 7018) in partially screened views to the south and west as a result of decommissioning works along the Ribble Crossing. The magnitude of this temporary impact on the low value bridge has been assessed to be minor and the significance of effect would be slight.

69) During the decommissioning phase of the Proposed Ribble Crossing there would also be noise and visual intrusion into the setting of the non-designated Lillands barn (Asset 7044) in views to the north and east as a result of decommissioning works along the Ribble Crossing. The magnitude of this temporary impact on the low value barn has been assessed to be moderate and the significance of effect has been assessed to be slight.

70) During the decommissioning phase of the Proposed Ribble Crossing there would similarly be visual intrusion into the setting of the Grade II Listed Brungerley Farmhouse (Asset 7048) in long distant partially screened views to the north and east from decommissioning works along the Ribble Crossing. The magnitude of this temporary impact on the high value farmhouse has been assessed to be negligible and the significance of effect has been assessed to be slight.

Historic Landscape Types

71) No impacts are predicted on HLTs during the decommissioning phase of the Proposed Ribble Crossing as any impacts would have occurred during the enabling and construction phase of works.

72) The summary of decommissioning phase effects are shown in Table 10.5 below

Table 10.5: Summary of Decommissioning Phase Effects

Environmental / Community Asset	Value / Sensitivity	Effect	Nature of Effect	Magnitude	Significance of Effect (Pre-Mitigation)
Bradford bridge (7018)	Low	Noise and visual intrusion into the setting	Short term - Adverse	Minor	Slight
Lillands barn (7044)	Low	Noise and visual intrusion into the setting	Short term - Adverse	Moderate	Slight
Brungerley Farmhouse (7048)	High	Visual intrusion into the setting	Short term - Adverse	Negligible	Slight

10.6 Hedgerows

73) During the enabling works for the proposed Ribble Crossing road, temporary impacts on two hedgerows classified as archaeologically or historically important under The Hedgerow Regulations 1997 have been identified due to the partial removal of sections of hedgerow that would result as part of the works. It is proposed that impacted Hedgerows would be reinstated during the decommissioning phase of works.

10.7 Essential Mitigation and Residual Effects

74) As explained in Section 10.3, the assessment of effects in Sections 10.5 and 10.6 takes into account the application of both embedded mitigation and good practice measures. This section identifies additional topic-specific essential mitigation identified through the assessment process, and then sets out the residual effects taking all three categories (embedded, good practice and essential) into account. Each essential mitigation item is assigned a reference number.

10.7.1 Archaeological Remains

75) Prior to the enabling works, once details of the construction easement within the planning application boundary have been finalised, a staged programme of archaeological investigation would be undertaken. This may comprise an archaeological geophysical survey undertaken in line with the Chartered Institute for Archaeologists (CIfA) Standard and guidance for archaeological geophysical survey (CIfA, 2020a⁷) (Mitigation Item **CH-RC1**). Following on from the geophysical survey (Mitigation Item **CH-RC1**) archaeological trial trenching may be undertaken in line with the CIfA Standard and guidance for archaeological field evaluation (CIfA, 2020b⁸) (Mitigation Item **CH-RC2**). This would target both known archaeological remains, and areas of archaeological potential for unknown remains arising from the geophysical survey (Mitigation Item **CH-RC1**).

76) Following archaeological trial trenching (Mitigation Item **CH-RC2**), archaeological mitigation to make a permanent record of any affected previously unknown archaeological remains could include:

- Detailed archaeological excavation (Mitigation Item **CH-RC3**)
- Strip, map and sample (Mitigation Item **CH-RC4**)
- Archaeological recording during construction ('watching brief') (Mitigation Item **CH-RC5**).

77) Sufficient time must be allowed for within the construction programme to mitigate any impacts on previously unknown archaeological remains identified during the archaeological trial trenching

⁷ Chartered Institute for Archaeologists (2020a) *Standard and guidance for archaeological geophysical survey* [Online] Available from: https://www.archaeologists.net/sites/default/files/CIfAS%26GGeophysics_3.pdf [Accessed April 2021]

⁸ Chartered Institute for Archaeologists (2020b) *Standard and guidance for archaeological field evaluation* [Online] Available from: https://www.archaeologists.net/sites/default/files/CIfAS%26GFieldevaluation_3.pdf [Accessed April 2021]

(Mitigation Item CH-RC2). These or any other mitigation measures will be agreed with the local planning authority archaeological advisor.

- 78) Prior to the enabling works and trial trenching (Mitigation Item CH-RC2) a geoarchaeological and palaeoenvironmental assessment would be undertaken to include North of Bradford Bridge (7014) paleochannel. This may include a review of existing geotechnical information followed by a programme of hand auger sampling, assessment, analysis and reporting undertaken in line with Historic England's Geoarchaeology Using Earth Sciences to Understand the Archaeological Record (Historic England, 2015⁹) (Mitigation Item CH-RC6).

10.7.2 Historic Buildings

- 79) Good practice measures that will mitigate noise and visual impacts in the settings of Bradford bridge (7018), Lillands Barn (7044) and Brungerley Farmhouse (7048) are set out in Chapter 17: Noise and Vibration.

10.7.3 Historic Landscape Types

- 80) No essential mitigation is proposed for the HLTs.

10.7.4 Summary of Mitigation and Residual Effects

- 81) Table 10.6 sets out predicted residual effects taking into account proposed essential mitigation for Cultural Heritage (Mitigation Items CH1 to CH6).

Table 10.6: Summary of Mitigation and Residual Effects

Cultural Heritage Asset	Mitigation	Magnitude (With Mitigation)	Residual Effect and Significance
North of Bradford Bridge (7014)	Geoarchaeological and Palaeoenvironmental assessment	Minor	Neutral/Not significant

10.8 Cumulative Effects

- 82) The following section provides an overview of the potential cumulative effects from different proposed developments and land allocations, in combination with the Proposed Ribble Crossing (i.e. inter-project cumulative assessment). Data on proposed third party developments and land allocations contained in development plan documents were obtained from various sources, including local planning authority websites, online searches, and consultations with planning officers. Proposed development data were then reviewed with a view to identifying schemes or land allocations whose nature, scale and scope could potentially give rise to significant environmental effects when considered in combination with the likely effects arising from the Proposed Ribble Crossing.
- 83) Intra-project cumulative impacts, i.e. two or more types of impact acting in combination on a given environmental receptor, property or community resource, are considered in Chapter 14: Communities and Health.
- 84) It is important to note that future growth on the local road network was taken into account in the traffic modelling described in Chapter 16: Transport Planning. For this reason, the potential cumulative effects of future traffic growth between the Proposed Ribble Crossing and other proposed developments are embedded into predicted road traffic-related impacts on highways capacity, air quality and noise.

⁹ Historic England (2015) *Geoarchaeology Using Earth Sciences to Understand the Archaeological Record* [Online] Available from: <https://historicengland.org.uk/images-books/publications/geoarchaeology-earth-sciences-to-understand-archaeological-record/heag067-geoarchaeology/> [Accessed April 2021]

- 85) The over-arching cumulative effects of the Proposed Programme of Works i.e. the five proposed replacement tunnel sections in combination, are considered in Chapter 19: Cumulative Effects. In addition, Chapter 19 examines the cumulative effects associated with the outcomes from Volume 2 (delivery and operation of the main construction compounds, tunnel, and construction traffic routes), Volume 5 (proposed off-site highways works and satellite compounds), and Volume 6 (Proposed Ribble Crossing).
- 86) Based on professional judgement, it was concluded that there are no proposed third party developments or land allocations in local development plan documents which could potentially give rise to likely significant cumulative effects. No cumulative assessment was therefore undertaken in connection with cultural heritage.

10.9 Conclusion

- 87) This chapter considered the potential Cultural Heritage impacts associated with the enabling works phase, construction phase, operation and decommissioning of the route of the Proposed Ribble Crossing. No significant effects were identified on the Cultural Heritage resource.
- 88) Prior to mitigation, slight significance effects were identified on five Cultural Heritage assets: North of Bradford Bridge, Bradford bridge, East of Waddington (potash pit), Lillands barn and Brungerley Farmhouse (Assets 7014, 7018, 7043, 7044 and 7048 respectively) and effects of negligible significance were identified on two Cultural Heritage assets: Ancient Enclosure and Post Medieval Enclosure (HLT1 and HLT2 respectively). No impacts were predicted on the remaining Cultural Heritage resource.
- 89) Following mitigation residual effects of slight significance were identified on four Cultural Heritage assets: Bradford bridge, East of Waddington (potash pit), Lillands barn and Brungerley Farmhouse (Assets 7018, 7043, 7044 and 7048 respectively), residual effects of negligible significance were identified on two Cultural Heritage assets: Ancient Enclosure and Post Medieval Enclosure (HLT1 and HLT2 respectively) and a residual impact of neutral significance was identified on one Cultural Heritage asset: North of Bradford Bridge (Asset 7014). No residual effects were predicted on the remaining Cultural Heritage resource.

10.10 Glossary and Key Terms

- 90) Key phrases and terms used within this technical chapter relating to Cultural Heritage are defined within Appendix 1.2: Glossary and Key Terms.