



Llywodraeth Cymru
Welsh Government

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A487 New Dyfi Bridge

Environmental Statement –
Volume 1: Chapter 7 Cultural
Heritage

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7 Cultural Heritage

7.1 Introduction

7.1.1 This chapter provides an assessment of the Scheme in relation to archaeology and cultural heritage. It encompasses standing monuments, historic structures, buried archaeology and areas of heritage value such as historic landscapes, parks and gardens and Conservation Areas.

7.1.2 Any development has the potential to disturb both known remains and undiscovered archaeology. It also has the potential to visually impact upon features and areas for which setting is an essential concern, including Scheduled Monuments (SMs) and Listed Buildings.

7.1.3 The purpose of this chapter is to detail the archaeological and cultural heritage resource relating to the Scheme and its environs, to identify potential constraints to the Scheme and the nature of potential effects, to formulate mitigation measures where an impact is identified, and to quantify any residual effects.

7.2 Legislation, Policy Context and Guidance

Legislation

7.2.1 Statutory protection for archaeology is principally provided by the Ancient Monuments and Archaeological Areas Act of 1979.

7.2.2 Statutory protection for listed buildings and conservation areas is provided by The Planning (Listed Buildings and Conservation Areas) (Wales) Regulations 2012.

7.2.3 The Historic Environment (Wales) Act came into force on 21 March 2016 and forms part of a suite of legislation, policy, advice and guidance that makes important improvements to the existing systems for the protection and sustainable management of the Welsh historic environment. In broad terms, the Act gives more effective protection to listed buildings and scheduled monuments, enhances existing mechanisms for the sustainable management of the historic environment, and introduces greater transparency and accountability into decisions taken on the historic environment.

7.2.4 The Act makes important changes to the two main UK laws that provide the legislative framework for the protection and management of the historic environment: the Ancient Monuments and Archaeological Areas Act 1979 and the Planning (Listed Buildings and Conservation Areas) Act 1990.

The Act also incorporates three stand-alone provisions. The Act will:

- give more effective protection to listed buildings and scheduled monuments;
- improve the sustainable management of the historic environment; and
- introduce greater transparency and accountability into decisions taken on the historic environment.

7.2.5 The Hedgerows Regulations 1997 sets out the criteria for hedgerows over 30 years old, to be protected with regard to their cultural heritage aspects. These are:

- The hedgerow marks the boundary, or part of the boundary, of at least one historic parish or township; and for this purpose “historic” means existing before 1850; and
- The hedgerow incorporates an archaeological feature which is (a) included in the schedule of monuments compiled by the Secretary of State under section 1 (schedule of monuments) of the Ancient Monuments and Archaeological Areas Act 1979(1); or (b) recorded at the relevant date in a Sites and Monuments Record.

Policy Context

National and Regional Policy

Planning Policy Wales (8 January 2016)

7.2.6 This document sets out Welsh Government’s objectives with regard to the Historic Environment. These are to:

- preserve or enhance the historic environment, recognising its contribution to economic vitality and culture, civic pride and the quality of life, and its importance as a resource for future generations; and specifically to;
- protect archaeological remains, which are a finite and non-renewable resource, part of the historical and cultural identity of Wales, and valuable both for their own sake and for their role in education, leisure and the economy, particularly tourism;
- ensure that the character of historic buildings is safeguarded from alterations, extensions or demolition that would compromise a building’s special architectural and historic interest; and
- to ensure that conservation areas are protected or enhanced, while at the same time remaining alive and prosperous,

avoiding unnecessarily detailed controls over businesses and householders.

7.2.7 The document also sets out policies for dealing with the impact of development on key aspects of the Historic Environment: Listed Buildings, Scheduled Monuments; Conservation Areas, World Heritage Sites, historic landscapes, parks and gardens, and buried archaeological remains.

7.2.8 A revision of this policy is currently under consultation; the revisions are required to take account of Cadw's *Conservation Principles for the sustainable management of the historic environment* (2011), and to reflect how the historic environment contributes to the Welsh Government's seven well-being goals for a sustainable Wales as set out in the Well-being of Future Generations (Wales) Act 2015.

Local Planning Policy

Eryri Local Development Plan 2007 - 2022

7.2.9 The Eryri Local Development Plan 2007 – 2022 was adopted 13 July 2011. The following policies are relevant to the Scheme:

Strategic Policy Ff: Historic Environment (Ff)

7.2.10 The historic landscape, heritage assets and cultural heritage of Snowdonia National Park will be conserved and enhanced, due to their contribution to the character and 'Special Qualities' of the National Park. Particular protection will be given to the following archaeological, architectural, historic or cultural assets and where appropriate, their settings. Development will not be permitted that will adversely affect in any way the following Heritage Assets, or where appropriate their settings and significant views:

- i. Conservation Areas;
- ii. World Heritage Sites;
- iii. Scheduled Monuments and other sites of archaeological importance;
- iv. Historic landscapes, parks and gardens;
- v. Listed Buildings; and
- vi. Traditional Buildings.

Development Policy 8: Protection of Non Designated Sites (8)

7.2.11 Development which may adversely affect sites that are of archaeological interest or are acknowledged of local heritage

importance including sites of industrial archaeology that are not scheduled will:

- i. Be judged in terms of the intrinsic importance of the heritage asset and the potential extent of harm; and
- ii. Require where appropriate archaeological assessments and field evaluations before applications are determined. Where proposals are acceptable but may have an adverse effect on a site a condition will be attached to the permission stating that no development should take place until an agreed programme of archaeological work has taken place.

Powys Unitary Development Plan 2001 - 2016

7.2.12 The Powys Unitary Development Plan 2001 - 2016 was adopted March 2010. The following policies are relevant to the Scheme:

Policy ENV 14: listed buildings

7.2.13 Proposals for development unacceptably adversely affecting a listed building or its setting will be refused. In considering proposals for development affecting a listed building and its setting (sic), account will be taken of the following:

1. The desirability of preserving the listed building and its setting;
2. The importance of the building, its intrinsic architectural and historic interest and rarity;
3. The effect of the proposals on any particular features of the building which justified its listing;
4. The building's contribution to the local scene and its role as part of an architectural composition;
5. The condition of the building and the benefit that the proposals would have to its state of repair;
6. The merits of the proposals in securing an appropriate alternative use of the building; and
7. The need for proposals to be compatible with the character of the building and its surroundings and to be of high quality design, using materials in keeping with the existing building.

Policy ENV 17: ancient monuments and archaeological sites

7.2.14 Development which would unacceptably affect the site or setting of a scheduled monument or of an archaeological site of national importance will not be permitted and other sites of archaeological importance will be safeguarded where possible.

7.2.15 Policy ENV 18: development proposals affecting archaeological sites

1. Where it appears that a proposed development may affect a site potentially containing important archaeological remains, the applicant will be requested to undertake an archaeological field evaluation before determining any planning application.
2. In instances where archaeological remains of importance are revealed on development sites, their preservation in-situ should be carried out wherever possible.
3. Where preservation in-situ is not possible but the council is convinced that the merits of the proposal mean that development should proceed, they will impose conditions on any planning consent or seek planning obligations to facilitate archaeological mitigation through such means as a site excavation, survey or a watching brief during the development and the observation and/or recording of remains of archaeological interest.

Relevant Guidance

- 7.2.16** The method for assessing the likely cultural heritage effects of the Scheme has followed the guidance described in DMRB Volume 11, Section 3, Part 2: HA 208/07 (Highways Agency *et al.*, 2008).
- 7.2.17** Additional guidance on how to identify and appraise the values associated with heritage assets is presented in the document Conservation Principles for the Sustainable Management of the Historic Environment in Wales (Welsh Assembly Government, 2011).
- 7.2.18** As described above with regard to Planning Policy Wales, Welsh Government has established a Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales. A specific methodology has been established by Cadw and the former Countryside Commission for Wales (now Natural Resources Wales) for the examination of the impacts of proposed developments on registered historic landscapes. Guidance on the use of this methodology (Assessment of the Significance of Impacts of Development on Historic Landscapes - ASIDOHL) has been most recently published in the Guide to Good Practice on using the Register of Landscape of Historic Interest in Wales in the Planning and Development Process (Cadw *et al.*, 2007).
- 7.2.19** Additionally the Standard and Guidance for Historic Environment Desk-Based Assessment (Chartered Institute for Archaeologists, 2014a) has been used to inform the desk-based aspects of the assessment. Guidance for archaeological fieldwork includes the

Standard and Guidance for Archaeological Field Evaluation (Chartered Institute for Archaeologists, 2014b) and the Standard and Guidance for Archaeological Geophysical Survey.

7.3 Study Area

7.3.1 The study area for the assessment has extended 300m from the footprint the outermost area affected by the Scheme, in line with DMRB Volume 11, Section 3, Part 2, section 5.4.

7.4 Methodology

Identification of Baseline

7.4.1 The desk-based assessment and field survey have been conducted by the Clwyd-Powys Archaeological Trust (CPAT). The assessment was conducted according to the Chartered Institute for Archaeologists' (CIfA) *Standard and Guidance for Historic Environment Desk-based Assessment* (2014).

7.4.2 The assessment involved the examination of all the readily available primary and secondary documentary, cartographic and photographic sources at the following repositories:

- Regional Historic Environment Records (HERs), CPAT, Welshpool and GAT, Bangor;
- National Library of Wales, Aberystwyth;
- National Monuments Record (NMR), RCAHMW, Aberystwyth;
- Powys County Archives, Llandrindod Wells;
- Merioneth Record Office, Dolgellau; and
- Cadw – Welsh Historic Monuments.

7.4.3 Information on designated assets was obtained from Cadw as part of a dataset dated August 2015.

Assessment of the Source Material

Historic Environment Records (HER)

7.4.4 The known heritage assets within the study area were identified through a search of the regional HERs and the NMRW. The area has been the subject of a number of assessments relating to several infrastructure Schemes and consequently almost all of the assets now known within the study area had already been recorded in the HERs.

Historic Maps

- 7.4.5** Readily available historic mapping for the area comprises the standard range of 19th century maps – from the Ordnance Survey and the Tithe Commission – with a single 18th-century source.

Aerial Photography

- 7.4.6** The vertical aerial photography that was examined dated from the 1940s and provided little useful information regarding the cultural heritage.

Written Sources

- 7.4.7** Professional experience suggests that where an HER is low in pinpointed heritage assets, it is extremely unlikely that printed sources such as county histories or specifically themed articles will provide any new information that can be geographically located; any such information will already have been extracted by the HER.

Walkover Survey

- 7.4.8** The route of the Scheme was subject to a systematic field survey, conducted on 1 February 2016. The weather was dry and the visibility good, although ground conditions were very wet after recent flooding. Three fields were not accessible at the time of the visit owing to access issues with the landowner. However, the fields were covered by a similar survey in 2001 (Jones 2001) and views from a distance as part of the current survey. A single new asset was identified during the survey, a boundary stone to the west of the proposed route.

Assessment Methodology and Criteria

- 7.4.9** This assessment has been undertaken based upon the approach outlined in Design Manual for Roads and Bridges Volume 11, Section 3, Part 2 ‘Cultural Heritage’ (DMRB Vol 11 Sec 3 Part 2). This is widely used by heritage professionals for undertaking EIA and is accepted as a best practice approach.
- 7.4.10** DMRB Volume 11 Section 3 Part 2 provides a three stage approach to determining the importance of the heritage asset, the level of impact and the significance of effect. This approach is described in more detail in the following sections.
- 7.4.11** Additionally, guidance issued by Historic England (HE) *Historic Environment Good Practice Advice in Planning Note 3* (2015), formerly *The Setting of Heritage Assets* has been considered to inform the assessment, in lieu of equivalent guidance in Wales.
- 7.4.12** Significance Criteria Table 7.1 summarises the criteria, based upon DMRB Volume 11 Section 3 Part 2, which has been used

for the determination of value of heritage assets located within the area potentially affected by the Scheme.

Table 7.1: Value of Heritage Assets

Value	Typical descriptors
Very High	<ul style="list-style-type: none"> • World Heritage Sites (including nominated sites). • Assets of acknowledged international importance. • Assets that can contribute significantly to acknowledged international research objectives • Structures inscribed as of universal importance as World Heritage Sites. • Other buildings of recognised international importance. • World Heritage Sites inscribed for their historic landscape qualities. • Historic landscapes of international value, whether designated or not. • Extremely well preserved historic landscapes with exceptional coherence, time-depth, or other critical factor(s).
High	<ul style="list-style-type: none"> • Scheduled Monuments (including proposed sites). • Undesignated assets of schedulable quality and importance. • Assets that can contribute significantly to acknowledged national research objectives. • Scheduled Monuments with standing remains. • Grade I and Grade II* Listed Buildings. • Other listed buildings that can be shown to have exceptional qualities in their fabric or historical associations not adequately reflected in the listing grade. • Conservation Areas containing very important buildings. • Undesignated structures of clear national importance. • Designated historic landscapes of outstanding interest. • Undesignated landscapes of outstanding interest. • Undesignated landscapes of high quality and importance, and of demonstrable national value. • Well preserved historic landscapes, exhibiting considerable coherence, time-depth or other critical factor(s).
Medium	<ul style="list-style-type: none"> • Designated or undesignated assets that contribute to regional research objectives. • Grade II Listed Buildings. • Historic (unlisted) buildings that can be shown to have exceptional qualities in their fabric or historical associations. • Conservation Areas containing buildings that contribute significantly to its historic character.

Value	Typical descriptors
	<ul style="list-style-type: none"> • Historic Townscape or built-up areas with important historic integrity in their buildings, or built settings (e.g. including street furniture and other structures). • Designated special historic landscapes. • Undesignated historic landscapes that would justify special historic landscape designation, landscapes of regional value. • Averagely well-preserved historic landscapes with reasonable coherence, time-depth or other critical factor(s).
Low	<ul style="list-style-type: none"> • Designated and undesignated assets of local importance. • Assets compromised by poor preservation and/or poor survival of contextual associations. • Assets of limited value, but with potential to contribute to local research objectives. • 'Locally Listed' buildings (Scotland Category C(S) Listed Buildings). • Historic (unlisted) buildings of modest quality in their fabric or historical association. • Historic Townscape or built-up areas of limited historic integrity in their buildings, or built settings (e.g. including street furniture and other structures). • Robust undesignated historic landscapes. • Historic landscapes with importance to local interest groups. • Historic landscapes whose value is limited by poor preservation and/or poor survival of contextual associations.
Negligible	<ul style="list-style-type: none"> • Assets with very little or no surviving archaeological interest. • Buildings of no architectural or historical note; buildings of an intrusive character. • Landscapes with little or no significant historical interest.
Unknown	<ul style="list-style-type: none"> • The importance of the resource has not been ascertained. • Buildings with some hidden (i.e. inaccessible) potential for historic significance

Magnitude of Impact

7.4.13 The approach used to assess magnitude of impacts on heritage assets considers the change upon the receptor. This takes into account the severity of impact of the Scheme, together with the vulnerability of the receptor to change.

7.4.14 Table 7.2 summarises the types of impact and magnitude, according to DMRB Vol 11, Section 3, Part 2.

Table 7.2: Description of impacts

Magnitude	Description of Impact
Major	Complete destruction/demolition of site or feature. Change to the site or feature resulting in a fundamental change in our ability to understand and appreciate the resource and its historical context and setting.
Moderate	Change to the site or feature resulting in an appreciable change in our ability to understand and appreciate the resource and its historical context and setting.
Minor	Change to the site or feature resulting in a small change in our ability to understand and appreciate the resource and its historical context and setting.
Negligible	Negligible change or no material change to the site or feature. No real change in our ability to understand and appreciate the resource and its historical context and setting.
No change	No change

Significance of effect

7.4.15

Table 7.3 describes the matrix used to arrive at the significance of effect upon each asset. The effects may be either adverse or beneficial, depending on the nature of the impact. It should be noted that the initial assessment is made for the Scheme without mitigation; the residual effect as a result of mitigation is determined separately. Where the matrix suggests more than one likely outcome, for instance slight or moderate, professional judgement would be used in conjunction with the evaluation criteria descriptors in Table 7.4 to arrive at an appropriate result.

Table 7.3: Significance of Effect

		Magnitude of Impact (Degree of Change)				
		No Change	Negligible	Minor	Moderate	Major
Environmental Value (Sensitivity)	Negligible	Neutral	Neutral	Neutral or slight	Neutral or slight	Slight
	Low	Neutral	Neutral or slight	Neutral or slight	Slight	Slight or Moderate
	Medium	Neutral	Neutral or slight	Slight	Moderate	Moderate or Large
	High	Neutral	Slight	Slight or moderate	Moderate or Large	Large or Very large
	Very High	Neutral	Slight	Moderate or large	Large or Very large	Very large

Table 7.4: Descriptors of significance of effect

Significance of Effect	Typical Descriptors of Effect
Very large adverse	Partial or total loss of a site of Very High Importance.
Large adverse	<p>Result in the total, or almost total, loss of heritage assets.</p> <p>Be highly intrusive and would seriously damage the setting of the heritage resource such that its context is seriously compromised and can no longer be appreciated or understood.</p> <p>Be strongly at variance with the form scale and pattern of a heritage resource or conservation area.</p> <p>Be in serious conflict with government policy for the protection of the heritage resource.</p>
Moderate adverse	<p>Be out of scale with or at odds with the scale pattern or form of the heritage resource or conservation area.</p> <p>Be intrusive in the setting (context) and adversely affect the appreciation and understanding of the resource.</p> <p>Result in loss of features such that their integrity of the heritage resource is compromised, but not destroyed.</p> <p>Be in conflict with local or regional policies for the protection of the heritage.</p>
Slight adverse	<p>Have a detrimental impact on the context of a heritage feature such that its integrity is compromised and appreciation and understanding of it is diminished.</p> <p>Not fit perfectly with the form scale pattern and character of a heritage resource or conservation area.</p> <p>Be in conflict with local policies for the protection of the local character of the heritage resource.</p>
Neutral	<p>Maintain existing historic features in the townscape.</p> <p>Have no appreciable impacts either beneficial or adverse on any known or potential heritage assets.</p> <p>Result in a balance of beneficial and adverse impacts.</p> <p>Not result in severance or loss of integrity context or understanding within a historic landscape.</p> <p>Not be in conflict with and do not contribute to policies for the protection or enhancement of the heritage.</p>
Slight beneficial	<p>Restore or enhance the sense of place of a heritage feature through good design and mitigation.</p> <p>Remove or mitigate visual intrusion (or other indirect impacts) into the context of heritage features such as that appreciation and understanding of them is improved.</p> <p>Not be in conflict with national regional or local policies for the protection of the heritage.</p> <p>Marginally enhance the integrity understanding and sense of place of a site or group of sites.</p>
Moderate beneficial	<p>Provide potential for significant restoration of characteristic features or their setting through the removal, relocation or mitigation of existing damaging or discordant impacts on the heritage resource.</p>

Significance of Effect	Typical Descriptors of Effect
	Contribute to regional or local policies for the protection or enhancement of the heritage resource. Enhance the integrity, understanding and sense of place of a site or group.
Large beneficial effect	Result in the removal relocation or substantial mitigation of very damaging or discordant existing impacts (direct or indirect) on the heritage. Result in extensive restoration or enhancement of characteristic features or their setting. Form a major contribution to government policies for the protection or enhancement of the heritage resource. Remove or successfully mitigate existing visual intrusion such as that the integrity understanding and sense of place of a site or group of sites is re-established.
Very Large beneficial effect	As 'Large beneficial' where the effect would be upon a site of Very High Importance

Consultation

7.4.16 Consultation has been maintained with archaeological officers of Snowdonia National Park, Clwyd Powys Archaeological Trust and Cadw as requested by Cadw in their response to the Scoping Report. Proposals for geophysical survey were agreed in collaboration with the consultees. The officer of Snowdonia National Park queried the area for survey and that it should include all areas that would be affected. This suggestion was implemented for the survey, and as the design evolved additional areas were included and surveyed. The results of surveys were subsequently shared with the consultees. The CPAT archaeological officer required no further surveys to be undertaken.

Limitations and Assumptions

7.4.17 It is assumed that all data provided by Historic Environment Records, and by Cadw to be utilised by this assessment represent an accurate record of known heritage assets, their locations, and designation. While field surveys have been undertaken and the archaeological potential of the study area is considered to be understood with a high degree of confidence, the potential for unexpected archaeological remains to be present within the study area cannot be entirely discounted.

7.5 Baseline Environment

Baseline Data

Heritage History

- 7.5.1** There is no clear evidence for the early history of the area, other than the presence of two Bronze Age burial mounds, now much denuded, on the edge of the floodplain to the north of the river. There is a tradition of a Roman settlement at Machynlleth known as Maglona, although no physical or artifactual evidence has ever come to light to support this (RCAHM 1911, 145-6). There is, however, a Roman fort downstream on the north side of the river at Pennal and the predicted line of a Roman road follows the modern road along the northern bank of the Afon Dyfi. Machynlleth itself was founded as a planned settlement in the late 13th century although some form of settlement may already have been in existence (Silvester 1992, 124).
- 7.5.2** The land to the south of the Afon Dyfi, as far as the railway, extends across the floodplain and is therefore unlikely to have been settled. There is, however, evidence that this area was cultivated during the medieval or early post-medieval period. A map of the Wynnstay Estate in 1763 depicts five mere stones which would have been erected to demarcate different plots of land, probably meadow from which hay crops were taken.
- 7.5.3** The Afon Dyfi valley has long been an important routeway and a river crossing may well have existed here long before the construction of the first timber bridge in 1533. This bridge was replaced in stone around 1681. The present bridge (PRN 4090; SAM MG002) dates from 1805, and records suggest that it was constructed on dry land and the river then diverted to run underneath it (Davies 1991, 68). From the available evidence it would seem that the late 17th-century bridge occupied approximately the same position as its successor, although possibly slightly upstream, which may have allowed the later bridge to be constructed alongside. There is no evidence, however, to suggest that the course of the river has been substantially altered at this point.
- 7.5.4** There are records of a minor Civil War engagement in November 1644, which has in some sources been attributed to the area around Pont-ar-Ddyfi, although the exact location is not recorded. What may have been little more than a local skirmish involved Parliamentary troops marching from Pembroke who beat off a Royalist ambush near Machynlleth and went on to burn Mathafarn, the home of the Royalist leader, Rowland Pugh, some miles to the east (Gaunt 1991, 50).
- 7.5.5** The present line of the A487 is likely to have been established following the construction of the first bridge. A new road between Machynlleth and Tywyn was constructed in 1775 by the Turnpike Trust although the existing road, also a turnpike, dates from 1827 (Davies 1996, 71). A tollgate was erected in the second half of the 18th century opposite the north end of the bridge (Davies 1991, 71), although it is unclear whether this is the same building

that survives in that position today. The section of road on the north side of the Afon Dyfi is, for part of its length, flanked by the original dry-stone walls which in places still stand to around 1.0m in height. One section has a substantial revetment wall on the south side, close to a bend in the river. Another feature relating to the turnpike is a milestone, which survives on the north side of the road to the east of Pont-ar-Ddyfi, and bears the inscription Mach 1M, with a benchmark beneath. A small quarry recorded by the Ordnance Survey in 1886 close to Pont-ar-Ddyfi may have been used to provide stone for the construction and maintenance of the road and possibly also for the bridge.

7.5.6 The tollgate is depicted on an estate map of 1828 while the Tithe Surveys for the parishes of Pennal (1842) and Machynlleth (1844) provide details of land ownership and field names, although unfortunately not landuse. A number of houses are depicted at the northern end of the bridge, including a row of six cottages and a detached building to the east of the bridge. The surveys provide little useful information, apart from field 688 which is recorded in the Machynlleth apportionment as ‘Cae Bricks’, suggesting either brick kilns, or clay pits.

7.5.7 During the 19th century the area around Corris developed as a major producer of slate and by the 1850s improved transport was needed to the river port at Derwenlas, downstream from Machynlleth. The Corris, Machynlleth and Afon Dyfi Tramroad Act was passed in 1858 allowing the construction of a 2ft 3in narrow gauge line from Corris to Machynlleth, and then to Derwenlas, which was opened in 1859. The line was worked by horses and gravity and crossed the Afon Dyfi on a timber viaduct. The main line railway opened in 1863 after which slate was exchanged at Machynlleth and the track to Derwenlas was abandoned with the railway now being known as the Corris Railway. In 1878 the Imperial Tramways Company of Bristol acquired the line, relaying it with steel rails, easing some curves and introducing steam locomotives from 1879. Passengers were carried briefly by horse bus in 1879 and from 1883 by steam following improvements to some curves. In 1906 the timber viaduct was replaced with a steel girder construction resting on three stone piers. The line was purchased by GWR in 1930 with the passenger service ending the following year. Following floods in 1948 the line was closed, and it was dismantled by 1950 (Baughan 1991 175-7).

7.5.8 The line now survives to the south of the Afon Dyfi as an embankment (PRN 36886) up to 5m wide and 0.6m high, the top being 3m wide. The best preserved section is flanked by concrete fence posts. Elsewhere, the line can be identified by following field boundaries. Immediately south of the Afon Dyfi an exposed section shows the embankment to be constructed of slate waste

with edge-set slate edging and slate coping. A well-constructed stone-built culvert (PRN 36888) survives beneath the embankment. The section to the north of the Afon Dyfi has been partly reused by a recently constructed cycleway, beyond which the line survives alongside the road. There is no surviving trace of the viaduct, the site now being occupied by a recently constructed bridge for the new cycleway.

Table 7.5: Summary of Designated and Registered Assets

Designated asset	Within the Study Area
World Heritage Sites	0
Scheduled Monuments	2
Listed buildings	27
Registered historic parks and gardens	0
Registered historic landscapes	0
Conservation areas	1

Scheduled Monuments

MG002 Machynlleth Bridge (Pont-ar-Ddyfi) SH744019

7.5.9

The present bridge dates from 1805, and records suggest that it was constructed on dry land and the river then diverted to run underneath it (Davies 1991, 68). From the available evidence it would seem that the late 17th-century bridge occupied approximately the same position as its successor, although possibly slightly upstream, which may have allowed the later bridge to be constructed alongside. There is no evidence, however, to suggest that the course of the river has been substantially altered at this point. The bridge is also listed grade II* (nos 8506 and 22723). The bridge is considered to be a High Value heritage asset due to its scheduled status.

ME231 Fridd round barrows SH751020

7.5.10

The monument comprises the remains of two round barrows, probably dating to the Bronze Age (c. 2300 BC - 800 BC) and situated within improved pasture on the Afon Dyfi valley floor. The northern most barrow is a grass covered earthen mound, circular in plan and measuring 20m in diameter and up to 0.6m in height. The southernmost barrow is a grass-covered earthen mound, circular in plan and measuring 21m in diameter and up to 0.8m in height. While it is not possible to determine the importance ascribed to the choice of location of the barrows by the builders, it is likely that a key element of their setting would have been views from the barrows across the river and valley, and to the barrows from the river and valley.

The barrows are considered to be High Value heritage assets due to their scheduled status.

Listed Buildings

Table 7.6: Listed buildings within the study area

Record no.	Name	Grade	NGR	Value	Scheme visible from asset/ included in assessment
8396	No.15 Morris Cottages, Heol-Y-Doll	II	SH7448701097	Medium	No, not included in the assessment
8397	No.17 Morris Cottages, Heol-Y-Doll	II	SH7448601101	Medium	No, not included in the assessment
8398	No.19 Morris Cottages, Heol-Y-Doll	II	SH7448401106	Medium	No, not included in the assessment
8399	No.21 Morris Cottages, Heol-Y-Doll	II	SH7448301110	Medium	No, not included in the assessment
8400	No.23 Morris Cottages, Heol-Y-Doll	II	SH7448101114	Medium	No, not included in the assessment
8401	No.25 Morris Cottages, Heol-Y-Doll	II	SH7447901119	Medium	No, not included in the assessment
8402	No.27 Morris Cottages, Heol-Y-Doll	II	SH7447801124	Medium	No, not included in the assessment
8403	No.29 Morris Cottages, Heol-Y-Doll	II	SH7447601127	Medium	No, not included in the assessment
8404	No.31 Morris Cottages, Heol-Y-Doll	II	SH7447501131	Medium	No, not included in the assessment
8405	No.33 Morris Cottages, Heol-Y-Doll	II	SH7447401136	Medium	No, not included in the assessment
8406	No.1 Cottage To Rear Of Morris Cottages, Heol-Y-Doll	II	SH7449301125	Medium	No, not included in the assessment
8407	No.2 Cottage To Rear Of Morris Cottages, Heol-Y-Doll	II	SH7449101128	Medium	No, not included in the assessment
8408	No.3 Cottage To Rear Of Morris Cottages, Heol-Y-Doll	II	SH7448901131	Medium	No, not included in the assessment
8409	No.4 Cottage To Rear Of Morris Cottages, Heol-Y-Doll	II	SH7448701134	Medium	No, not included in the assessment
8410	No.5 Cottage To Rear Of Morris Cottages, Heol-Y-Doll	II	SH7448601138	Medium	No, not included in the assessment
8411	No.6 Cottage To Rear Of Morris Cottages, Heol-Y-Doll	II	SH7448401140	Medium	No, not included in the assessment
8506	Pont-ar-Ddyfi (Partly in Corris community)	II*	SH7441901902	High	Yes
22720	Turnpike Cottage	II	SH7513302322	Medium	No, not included in the assessment

Record no.	Name	Grade	NGR	Value	Scheme visible from asset/ included in assessment
22722	Pont Felin-y-ffridd	II	SH7519302429	Medium	No, not included in the assessment
22723	Pont-ar-Ddyfi (partly in Machynlleth Community)	II*	SH7441701921	High	Yes
22891	Dovey Cottage, Pen-y-bont Cottages	II	SH7439201954	Medium	Yes
22892	Pen-y-bont Cottages	II	SH7439701955	Medium	Yes
22893	Pen-y-bont Cottages	II	SH7440301956	Medium	Yes
22894	Pen-y-bont Cottages	II	SH7440901958	Medium	Yes
22895	Pen-y-bont Cottages	II	SH7441501959	Medium	Yes
83040	Pont Felin y ffridd (partly in Corris Community)	II	SH7520102448	Medium	No, not included in the assessment

7.5.11 The following descriptions are taken from the Cadw listing documents for each asset included in the assessment.

22891 Dovey Cottage, Pen-y-bont Cottages

7.5.12 Grade II listed cottage on the north bridgehead of the Pont-ar-Ddyfi facing S across the river towards Machynlleth. The cottages were probably built at various periods from the early-mid 19th century, with later alterations. Single bay, with a modern studded stable-type door on the right, and timber windows with applied diamond lattice leads. Door and window openings on the ground floor have small raised key stones; the first floor window is raised through the eaves and gabled. Included as a good group of traditional cottages in vernacular style of the early 19th century, in an important and conspicuous location by the bridgehead.

22892 Pen-y-bont Cottages

7.5.13 Grade II listed cottage on the north bridgehead of the Pont-ar-Ddyfi facing south across the river towards Machynlleth. The cottages were probably built at various periods from the early-mid C19, with later alterations. Single bay cottage, with a boarded door with applied cover strips on the left. 2-light window to both ground and first floors. Applied timber framing to the front. Included as a good group of traditional cottages in vernacular style of the early 19th century, in an important and conspicuous location by the bridgehead.

22893 Pen-y-bont Cottages

7.5.14 Grade II listed cottage on the north bridgehead of the Pont-ar-Ddyfi facing S across the river towards Machynlleth. The cottages were probably built at various periods from the early-mid 19th century, with later alterations. Two bays, extending into an additional bay, a former separate cottage, to the W. The two east bays are approximately symmetrical, with a central boarded door and 4-pane horned sash windows, and having sliding sash windows to the first floor. The additional bay has a former door converted to a window, and a 4-pane sash window, and on the upper floor a small-paned window. Dark brick stack, and a stone stack on the west party wall. Included as a good group of traditional cottages in vernacular style of the early 19th century, in an important and conspicuous location by the bridgehead.

22894 Pen-y-bont Cottages

7.5.15 Grade II listed cottage on the north bridgehead of the Pont-ar-Ddyfi facing south across the river towards Machynlleth. The cottages were probably built at various periods from the early-mid 19th century, with later alterations. Nos 5 and 6 were probably the first to be built, in the later 18th century. Nos 5 and 6 are a pair at the east end of the row, set higher, and perhaps earlier in

date. No 5 occupies a single bay, with the entrance on the right sharing the wide opening with No 6. Door is a stop chamfered frame. Pair of modern timber casement windows on ground and first floors. Blue brick stack. Included as a good group of traditional cottages in vernacular style of the early 19th century, in an important and conspicuous location by the bridgehead.

22895 Pen-y-bont Cottages

7.5.16 Grade II listed cottage on the north bridgehead of the Pont-ar-Ddyfi facing south across the river towards Machynlleth. The cottages were probably built at various periods from the early-mid 19th century, with later alterations. Nos 5 and 6 were probably the first to be built, in the later 18th century. No 6 is a pair with No 5 at the east end of the row, set slightly higher and perhaps somewhat earlier in date. No 6 occupies two bays, with the entrance on the left sharing the wide opening with No 5. Boarded door in a stop-chamfered frame. Two-light paned timber window to the ground floor, and a similar but shorter window to the first floor, with a similar window above the entrance. Gable end blue-brick stack. The gable end has smooth-rendered bands painted black simulating timber-framing. Included as a good group of traditional cottages in vernacular style of the early 19th century, in an important and conspicuous location by the bridgehead.

Undesignated Heritage Assets

7.5.17 The assessment has identified 15 undesignated assets recorded in the CPAT HER, 19 in the GAT HER and a further five assets in the NMRW which were not recorded in the regional HERs. In addition, the desk-based study and field survey have added a further six records. These are listed in Table 7.7, and described in detail in the following text. Where noted in the table, assets that have no views towards the Scheme, or lie outside the footprint, have not been taken forward to assessment.

Table 7.7: Undesignated assets

PRN/ NPRN	Site Name	Period	Type	NGR	Value	Included in assessment?
CPAT 4323	Pont-ar-Ddyfi (Machynlleth) battle	Post-Medieval	Battle site	SH7442001873	Medium	Yes present within footprint, however location is unknown
CPAT 36886	Corris Railway (Powys section)	Post-Medieval	Railway	SH74770174	Low	Not included in the assessment
CPAT 36888	Corris Railway, culvert	Post-Medieval	Culvert	SH74880191	Low	Not included in the assessment
CPAT 36893	Pont-ar-Ddyfi platform	Post-Medieval	Building platform	SH7446501545	Low	Yes, within footprint
CPAT 36894	Corris Railway, Pont-ar-Ddyfi I	Post-Medieval	Railway viaduct	SH74920196	Low	Not included in the assessment
CPAT 36895	Pont-ar-Ddyfi embankment	Modern	Flood defence	SH74920196	Low	Yes, within footprint
CPAT 36897	Machynlleth ridge and furrow	Medieval	Ridge and furrow	SH74740162	Low	Not included in the assessment
CPAT 36898	Pont-ar-Ddyfi 'mere stones'	Post-Medieval	Boundary stone	SH74440168	Low	Not included in the assessment
CPAT 36899	Machynlleth, Pont-ar-Ddyfi (1533)	Post-Medieval	Bridge	SH74420188	Medium	Not included in the assessment
CPAT 87279	Machynlleth, Pont-ar-Ddyfi (1681)	Post-Medieval	Bridge	SH74420188	Medium	Not included in the assessment
CPAT 87280	Corris Railway, Pont-ar-Ddyfi II	Modern	Railway bridge	SH74920196	Low	Not included in the assessment
CPAT 87281	Ddyfi Millennium Cycle Bridge	Modern	Suspension bridge	SH74920196	Low	Not included in the assessment
CPAT 87284	Corris Railway, embankment	Post-Medieval	Railway embankment	SH74770174	Low	Not included in the assessment
CPAT 87285	Pont-ar-Ddyfi, Ddyfi revetment	Modern	Revetment	SH74910195	Low	Not included in the assessment

PRN/ NPRN	Site Name	Period	Type	NGR	Value	Included in assessment?
CPAT 130953	Machynlleth bus garage	Modern	Bus station	SH7441401188	Low	Not included in the assessment
GAT 6533	Felin y Ffridd, near Machynlleth	Post medieval	Mill	SH75140242	Low	Not included in the assessment
GAT 16042	Cae Deintyr, Afon Dulas	Post medieval	Place-name	SH75210229	Low	Not included in the assessment
GAT 16044	Corris Railway Line, N of Afon Dyfi	Post medieval	Railway	SH75000249	Low	Not included in the assessment
GAT 17271	Ffridd Gate Station, Near Machynlleth	Post medieval	Railway station	SH7514502325	Low	Not included in the assessment
GAT 17272	Machynlleth to Dolgellau Turnpike	Post medieval	Road	SH74750199	Low	Yes, current road lies on this alignment.
GAT 17273	Haulfryn, Ffridd Gate	Post medieval	Building	SH7512302271	Low	Not included in the assessment
GAT 17274	Ruined Structure, Ffridd Gate	Post medieval	Building	SH75060219	Low	Not included in the assessment
GAT 17275	Parallel Scarps, Ffridd Gate	Post medieval	Tramway	SH74870204	Low	Not included in the assessment
GAT 17276	Trackways, Ffridd Farm	Post medieval	Trackway	SH75000223	Low	Not included in the assessment
GAT 17277	Field Boundaries, Ffridd Gate	Post medieval	Field boundary	SH75030234	Low	Not included in the assessment
GAT 17279	Y Ffridd Farm, Ffridd Gate	Post medieval	Farm	SH74960224	Low	Not included in the assessment
GAT 17714	Pennal – Ffestiniog Roman Road	Roman	Road	N/A	Medium	Not included in the assessment
GAT 20851	Quarry, Pen yr Allt, Machynlleth	Post medieval	Quarry	SH74600130	Low	Not included in the assessment
GAT 29498	Milestone, Pont-ar-Ddyfi	Post medieval	Milestone	SH7481702015	Medium	Yes, potentially affected by construction
GAT 29499	Sunday School, Pont-ar-Ddyfi	Post medieval	Sunday School	SH7443501970	Low	Not included in the assessment
GAT 29500	Minafon, Pont-ar-Ddyfi	Post medieval	House	SH74450196	Low	Not included in the assessment
GAT 29501	Tollgate, Pont-ar-Ddyfi	Post medieval	Toll Gate	SH74410196	Low	Not included in the assessment
GAT 29502	Quarry, Pont-ar-Ddyfi	Post medieval	Quarry	SH74420198	Low	Not included in the assessment
GAT 58077	Bryn-y-coed / Pennant, E of Ysgoldy	Modern	House	SH7455002009	Low	Not included in the assessment
NMRW 23691	Werglodd Pensarn	Post medieval	Causeway	SH745015	Low	Not included in the assessment
NMRW 409333	The Old Station Garage, Railway Terrace, Heol y Doll, Machynlleth	19th century	Garage, Motor Vehicle Showroom, Petrol Station	SH7443001174	Low	Not included in the assessment

PRN/ NPRN	Site Name	Period	Type	NGR	Value	Included in assessment?
NMRW 418018	Cambrian Coast Line; Aberystwith and Welsh Coast Railway; Aberystwyth and Welsh Coast Railway	19th century	Railway	SH7432801218	Medium	Not included in the assessment
NMRW 419405	Former National School, Heol-y-Doll, Machynlleth	19th century	National School	SH7446701175	Low	Not included in the assessment
NMRW 43029	Machynlleth Railway Station, Cambrian Coast Line	19th century	Railway Station	SH7447301317	Medium	Not included in the assessment
Site 1	Pont-ar-Ddyfi building I	19th century	Building	SH7440901871	Low	Not included in the assessment
Site 2	Pont-ar-Ddyfi building II	19th century	Building	SH7416801566	Low	Not included in the assessment
Site 3	Pont-ar-Ddyfi building III	19th century	Building	SH7441901831	Low	Not included in the assessment
Site 4	Pont-ar-Ddyfi building IV	19th century	Building	SH7451701781	Low	Not included in the assessment
Site 5	Machynlleth Brickworks	Post medieval	Brickworks	SH7465701527	Low	Not included in the assessment
Site 6	Pont-ar-Ddyfi boundary stone	Post medieval	Boundary stone	SH7417501575	Low	Not included in the assessment

The following section replicates the entries for each asset as received from the Historic Environment Records.

CPAT 4323 Pont-ar-Ddyfi (Machynlleth) battle

- 7.5.18** Site of civil war battle November 1644. Exact location not recorded, what may have been little more than a local skirmish involved Parliamentary troops marching from Pembroke who beat off a Royalist ambush near Machynlleth and went on to burn Mathafarn, the home of the Royalist leader Rowland Pugh some miles to the east (Jones 2001).

CPAT 36886 Corris Railway (Powys section)

- 7.5.19** The Corris, Machynlleth and Afon Dyfi Tramroad (the name changed to the Corris Railway in around 1863) of 2ft 3in gauge from Corris to Machynlleth, and then to Derwenlas. Construction began 1858, and it was opened in 1859. Worked by horses and gravity until steam locomotives were introduced in 1879. After the opening of the main line in 1863 slate was exchanged at Machynlleth and the track to Derwenlas was abandoned. Passenger services as well as those for industrial purposes were run between 1879 and 1931. Following flooding in 1948 the line was closed and it was dismantled by 1950. The line survives to the south of the Afon Dyfi as an embankment (PRN 87284), elsewhere, the line can be identified by following field boundaries (Jones 2001).

CPAT 36888 Corris Railway, culvert

- 7.5.20** A stone-built culvert beneath the Corris Railway embankment (PRN 87284) to the south of the Afon Dyfi. Dimensions, width 0.65m, height 0.5m, crossing beneath the line at an angle. Only west side clearly visible as east side partly obscured by vegetation (Jones 2001).

CPAT 36893 Pont-ar-Ddyfi Platform

- 7.5.21** A level area in a pasture field. Slight scarp 0.3m high defines NE and SE sides, with overall dimensions c.9m NW-SE by 5m NE-SW. Probing suggested a solid surface beneath the turf, possibly a floor or rubble. A building is depicted at this spot on the OS 2nd edition 25" to the mile map of 1900 (Jones 2001).

CPAT 36894 Corris Railway, DPont-ar-Ddyfi I

- 7.5.22** A timber viaduct with at least seven piers carrying the Corris Railway (PRN 36886) over the Dyfi. No visible trace survives, the Millennium Cycle Bridge (PRN 87281) now occupies the site (Jones 2001).

CPAT 36895 Pont-ar-Ddyfi embankment

- 7.5.23** Flood defence bank along south side of the Dyfi to the E of Pont-ar-Ddyfi (PRN 4090). A turf-covered bank up to 17m wide and

1.2m high. Appears to post-date the Corris Railway (PRN 36886), suggesting that it was constructed after 1950 when the line was dismantled. A footpath follows the top of the embankment (Jones 2001).

CPAT 36897 Machynlleth ridge and furrow

7.5.24 Possible ridge and furrow identified from RAF vertical APs. No visible traces on the ground (Jones 2001).

CPAT 36898 Pont-ar-Ddyfi 'mere stones'

7.5.25 Five mere stones depicted and named on an estate map of 1763. Erected to demarcate plots of land, probably meadow from which hay crops were taken no longer surviving in pasture field (Jones 2001).

CPAT 36899 Machynlleth, Pont-ar-Ddyfi (1533)

7.5.26 Timber bridge across the Dyfi constructed in 1533 when Geoffrey Hughes, a citizen and merchant of London, left £6 13s 4d towards the making of a bridge. Replaced with a stone bridge in 1681 (PRN 87279) (Jones 2001).

CPAT 58077 Bryn-y-coed / Pennant, E of Ysgoldy

7.5.27 Site identified using early Ordnance Survey Maps

CPAT 87279 Machynlleth, Pont-ar-Ddyfi (1681)

7.5.28 Stone bridge built in 1681 to replace the previous timber example (PRN 36899). It is not clear whether any remains survive. It may have been located immediately upstream of the present structure (PRN 4090) (Jones 2001).

CPAT 87280 Corris Railway, Pont-ar-Ddyfi II

7.5.29 A steel girder bridge on three stone piers and stone abutments at either end that replaced a timber viaduct (PRN 36894) in 1906. Carried the Corris Railway (PRN 36886) over the Afon Dyfi. No visible trace survives (the stones on the south side of the river (PRN 87285) are probably revetment for the south bank), the Millennium Cycle Bridge (PRN 87281) now occupies the site (Jones 2001).

CPAT 87281 Millennium Cycle Bridge

7.5.30 A steel suspension bridge with stone abutments opened in 2001 to carry a cycleway over the Afon Dyfi (Jones 2001).

CPAT 87284 Corris Railway, embankment

7.5.31 An embankment upon which ran the Corris Railway (PRN 36886). Dimensions, width 5m, height 0.6m, the top being 3m wide. The best preserved section is flanked by concrete fence posts. Immediately south of the Rivr Dyfi an exposed section

shows it to be constructed of slate waste with edge-set slate edging and slate coping (Jones 2001).

CPAT 87285 Pont-ar-Ddyfi, Ddyfi revetment

- 7.5.32** Large stones forming the remains of revetting on the south bank of the Afon Dyfi near the Millennium Cycle Bridge (Jones, N W, 2001, pp3).

CPAT 130953Machynlleth bus garage

- 7.5.33** No description available.

GAT 6533 Felin y Ffridd, near Machynlleth

- 7.5.34** Felin y Ffridd is listed merely as a mill in the 1844 tithe schedule, but is specified as a cornmill on the 25" OS map (1901). However, a Pandy'r-Ffridd (Ffridd fulling mill) was present in the area in 1749 (Jenkins 1969, 174). The neighbouring farm was occupied by a fuller at least until 1848. The name of Cae Deintyr for a nearby field strongly supports this. The mill building is still in very good condition. The interior has not been renovated, and though the machinery has gone, other fixtures remain. It is still just possible to trace the outline of the leat, although it has been entirely in-filled, and incorporated in a garden. The house south of the mill has been recently renovated and the survival of original features is unknown. This building is shown on the 1844 tithe map (Kenney 2002).

- 7.5.35** The design of the existing mill building is not typical of a cornmill, and it is probably a converted fulling mill. It contained disused corn milling machinery, including a 4.7 metre diameter iron waterwheel, until that machinery was dismantled and transferred to Felin Crewi, Penegoes (NPRN 40198) for its restoration in 1985. The two-storey mill is constructed of heavily mortared rubblestone under a pitched slate roof. The waterwheel was situated on the north-west gable (Parkinson 1994, 452).

GAT 16042 Cae Deintyr, Afon Dulas

- 7.5.36** This field is named as Cae Deintyr on the 1844 tithe map. This strongly suggests that it was the field in which tenter frames were constructed and cloth, fulling in Felin y Ffridd, was stretched. Shallow linear hollows can be seen running east to west across this field. These were not at sufficiently regular intervals to be ridge and furrow, but could merely be surface traces of drainage. However, the field to the south does not contain similar features, implying that the earthworks are specific to the use of this field. It is possible that these furrows are related to the tenter frames (Kenney 2002).

GAT 16044 Corris Railway Line, N of Afon Dyfi

7.5.37 The bed of the line still survives along the whole length of the survey area. For most of its length it is overgrown with brambles, but parts of it have been adapted for various uses. Where the line passes east of Turnpike Cottage it has been made into a driveway. On the other side of the road it has also been converted into a drive for Haulfryn, with a new gate and section of slate walling. On the east and south side of Haulfryn the line has been incorporated into the garden. In the southern part of the study area the line has been made into a cycle path leading to the new cycle bridge over the Afon Dyfi. Along much of the eastern side of the line the original slate fencing still survives (Kenney 2002). The original slate fencing is still largely intact on the eastern side to the north of Haulfryn. The southern portion is largely bounded by a hedgerow (Hopewell 2004).

7.5.38 The Corris Machynlleth and Afon Dyfi tramroad Act was passed in 1858 allowing the construction of a 2ft 3in narrow gauge line from Corris to Machynlleth, and then to Derwenlas, which was opened in 1859. The line was worked by horses and gravity and crossed the Afon Dyfi on a timber viaduct. The main line railway opened in 1868 after which slate was exchanged at Machynlleth and the track to Derwenlas was abandoned with the railway now being known as the Corris Railway. In 1878 Imperial Tramways Company of Bristol acquired the line, relaying with steel rails, easing some curves and introducing steam locomotives from 1879. Passengers were carried briefly by horse bus in 1879 and from 1883 by steam following improvements to some curves. The line was purchased by GWR in 1930 with the passenger service ending the following year. Following floods in 1948 the line was closed and dismantled by 1950 (Baughan 1991, 175-7). The section to the north of the Afon Dyfi has been partly reused by a recently constructed cycleway, beyond which the line survives alongside the road with the remains of a slate slab fence on the east side.

GAT 17271 Ffridd Gate Station, Near Machynlleth

7.5.39 This is the first station north of Machynlleth and was opened in 1885 to serve the adjoining hamlet and the village of Llanwrin. The station consisted of a platform and a small, sentry box-like shelter. Neither these, nor the crossing gates survive as the area is now the gateway and drive to Haulfryn (Kenney 2001).

GAT 17272 Machynlleth to Dolgellau Turnpike

7.5.40 The turnpike road ran up the western side of the Dulas valley, taking the most direct route through the hills from Machynlleth to Dolgellau. There is no firm evidence that it was turnpiked much before the Turnpike Cottage was built c.1830. There are no

traces of the 19th century road visible, although its surface may be preserved under the present road surface (Kenney 2002).

GAT 17273 Haulfryn, Ffridd Gate

7.5.41 A stone-built cottage with sheds added to its north-eastern end. The house has recently been re-roofed in slate. The most unusual feature about the house is its lack of windows on the western side. Haulfryn is not shown on the 1844 Tithe map, or an 1850 tramway plan, but was built by the time the 1901 25" map was surveyed (Kenney 2020).

GAT 17274 Ruined Structure, Ffridd Gate

7.5.42 The remains of a very small stone built structure measuring roughly 2m by 2.5m. The south-eastern side is defined by a ruined section of slate dry-stone walling on the top of a small natural mound. To the west of this is a platform terraced into the hill, with another, parallel, section of walling, now completely overgrown with turf. There are no side walls visible. The function of this structure is unclear, but the remains do not seem to be consistent with a roofed building. It is presumed to be either 18th- or 19th-century in date, and probably related to the use of this field, which was previously woodland (1901 25" map; 1844 tithe map) (Kenney 2002).

GAT 17275 Parallel Scarps, Ffridd Gate

7.5.43 Running most of the length of the field are two very slight scarps, no more than 0.2m high, and about 4m apart. They are aligned roughly north-east to south-west, and run at an angle to the present road-side boundary. They are so slight that it was initially assumed that they were just the result of livestock using the same tracks across the field, although, they did seem too continuous to be explained in this way. However, the plan of the route of the Corris, Machynlleth and Afon Dyfi Tramway dated to 1850 (Z/CD/128) shows the route running on the western side of the road, along a very different line to that eventually used. In the field by the road, to the south of Ffridd Farm, the tramway takes exactly the same alignment as the scarps noticed on the ground. It seems probable that the scarps are related in some way to the tramway. Perhaps initial levelling of the route had started before it was decided to move the line to run next to the road (Kenney 2002).

7.5.44 A measured survey was produced using taped offsets from a baseline. The scarps were found to be somewhat fragmentary and not quite parallel. The upper scarp petered out about 65m from the west of the field although a well-defined fragment was visible adjacent to the western boundary. The lower scarp was fairly well defined towards the east of the field but was difficult to trace with any certainty at the west (Hopewell 2004).

GAT 17276 Trackways, Ffridd Farm

7.5.45 Two tracks are shown leading to Ffridd Farm on the 1844 tithe map, from the south (12a) and the east (12b). Both are also shown on the 1901 map. The former is still in use as the main access to the farm. The latter is completely grassed over, and is visible as an earthwork terraced into the hillslope. The 1901 map also shows a track coming in from the north (12c), which is no longer in use. Although this track is not actually marked on the tithe map the field boundaries to the north of the farm leave a gap for a track to pass between them, suggesting that this route had been in use before 1844, if not actually at the time of the map (Kenney 2002).

7.5.46 Two tracks are shown leading to Ffridd Farm on the 1844 tithe map, from the south (12a) and the east (12b). Both are also shown on the 1901 map. The former is still in use as the main access to the farm. It is about 3m wide and runs along a 4m wide artificial terrace. This is cut into a slate outcrop on the western side. Track 12b is completely grassed over, and is visible as an earthwork terraced into the hillslope. The slope is revetted on the northern side by a drystone wall (feature 13c). The 1901 map also shows a track coming in from the north (12c), which is no longer in use. Although this track is not actually marked on the tithe map, the field boundaries to the north of the farm leave a gap for a track to pass between them, suggesting that this route had been in use before 1844, if not actually at the time of the map. The track is visible as a 2.5m terrace within sloping woodland to the north of the farm (Hopewell 2004)

GAT 17277 Field Boundaries, Ffridd Gate

7.5.47 The field boundaries shown on the 1844 tithe map are almost identical to the present boundaries. One boundary (13a) had gone out of use by 1901, and is now visible on the ground only as a very slight ditch and bank. Boundary 13b has fairly recently gone out of use, and is now just a grass covered bank 0.4m high and 2m wide, with some trees and bushes surviving on its line. Boundary 13c is composed of an earthen bank revetted on the southern side by stone. Boundary 13d is also not now maintained, but has been fenced off. It is defined by large coppiced hazel trees, and is partially terraced into the hillslope. The boundaries alongside the road are closely clipped hedges (Kenney 2002; Hopewell 2004).

GAT 17279 Ffridd Farm, Ffridd Gate

7.5.48 The farmhouse and the barns to its east are shown on the 1844 tithe map. At this time they were owned by John Edwards and occupied by Owen Jones. At the same time Vaughan Jones occupied Felin y Ffridd, and William Jones occupied

Ddolderwen factory (tithe schedule). It is not known if all these Jones were closely related but it seems likely (Kenney 2002).

GAT 17714 Pennal – Ffestiniog

- 7.5.49** Predicted line of roman road. No evidence of Roman work seen. The modern road above the west bank is topographically an equally suitable route but again no ground evidence found.

GAT 20851 Quarry, Pen Yr Allt, Machynlleth

- 7.5.50** No description available.

GAT 29498 Milestone, Pont-ar-Ddyfi

- 7.5.51** Milestone, roughly shaped, 46cm wide and 80cm high, lying on N side of A487. Inscribed 'MACH 1M' with benchmark beneath.

GAT 29499 Sunday school, Pont-ar-Ddyfi

- 7.5.52** Brick-built chapel and Sunday school on N side of A487 to E of Pont-ar-Ddyfi. Now pebbledashed and converted to a dwelling. Pen-y Bont Independent Sunday school was built in 1899 in the Simple Gothic style of the gable-entry type and with a triple window to the road. Pen-y-Bont had fallen into disuse by 1996 and partially demolished, but has since been sympathetically converted into a house.

GAT 29500 Minafon, Pont-ar-Ddyfi

- 7.5.53** Stone-built house immediately to E of Pont-ar-Ddyfi (Jones 2001).

GAT 29501 Tollgate, Pont-ar-Ddyfi

- 7.5.54** Tollgate erected in the second half of the C18th and depicted in 1828 opposite the N end of the bridge. Unclear whether this is the same building which survives at the E end of the row of cottages.

GAT 29502 Quarry, Pont-ar-Ddyfi

- 7.5.55** Quarry depicted on OS 2nd edition 25" 1900. Now disused.

NMRW 23691 Werglodd Pensarn

- 7.5.56** Field to the right of road to Dovey Bridge - locally called Sarn - raised causeways on both sides.

NMRW 43029 Machynlleth Railway Station, Cambrian Coast Line

- 7.5.57** The mainline station with its surviving steam locomotive engine shed (to the east) dates from 1863 and the opening of the Newtown and Machynlleth Railway. The following year the Aberystwyth and Welsh Coast Railway opened as far as Aberystwyth via Dovey Junction, and in 1867 the line was extended from Barmouth to Pwllheli via Porthmadog. In 1868, the

station and lines were absorbed into the Cambrian Railway. The Cambrian Railway was absorbed by the Great Western Railway on 1 January 1922 as a result of the Railways Act 1921, and became part of British Railways in 1948. The current train operator, Arriva Trains Wales, has also developed the old Victorian depot for its fleet of Class 158 trains which provide nearly all passenger services on the Cambrian Lines. It features environmentally friendly technologies such as rainwater harvesting and a wind turbine. The station ticket office features copies of the colourful posters from the 1930- 50s promoting the scenic Cambrian Coast Railway. There is also a display of historic photographs of the station and town, plus a small cafe/kiosk selling snacks and drinks. The terminal station, from 1864, of the Corris Railway (NPRN 43018) lies adjacent to the north.

NMRW 409333 The Old Station Garage, Railway Terrace, Heol y Doll, Machynlleth

7.5.58 A motorcar service station, probably dating from the 1930s, the Old Station Garage stands gable-on to Heol y Doll at the northern end of Railway Terrace. It is a two-storey building under a pitched slated roof; the east or street frontage has large windows on the ground floor with a red brick wall at each end, a pebbledashed first floor with a large central window under a hood, partly arched, and above mock timber framing with a protruding, probably illuminated, Art Deco style sign 'AUSTIN OF ENGLAND SALES & SERVICE'. Ventilation pipes, next to an old cigarette machine, on the northern brick wall of the frontage suggest the existence of underground tanks and thus that the garage formerly sold petrol. The building is currently still in use by the motor trade.

NMRW 418018 Cambrian Coast Line; Aberystwyth and Welsh Coast Railway; Aberystwyth and Welsh Coast Railway

7.5.59 The Cambrian Coast Line, incorporating the former Aberystwyth and Welsh Coast Railway, runs between Pwllheli and Aberystwyth, via Dovey Junction and Machynlleth. On the seal of the 'Aberystwith [sic] & Welsh Coast Railway Company' of 1861, is depicted a representation of a train crossing what is thought to be the proposed but not built viaduct across the Afon Dyfi estuary, between a point on the railway by Ynyslas Farm (now Ynys Tachwedd) (NPRN 417597) on the south side and Penhelyg/Penhelig on the northern side. An alternative route was constructed, crossing the Afon Dyfi by the viaduct (NPRN 96104) at Dovey Junction. Sources include: Kidner R W, *The Cambrian Railways*, Oakwood Press, 1992; Christiansen R and Miller R W, *The Cambrian Railways (Vol.1)*, David & Charles, 1971; Green C C, *The Coastlines of the Cambrian Railways: Volume 1*, 1993; Gasquoine C P, *The Story of the Cambrian*, 1922.

NMRW 419405 Former National School, Heol-y-Doll, Machynlleth

7.5.60 The former National School in Machynlleth appears on the first edition Ordnance Survey 252 map, MY XXV.12, of 1889. It had a schoolroom for boys on one side and a schoolroom for girls on the other with a schoolhouse in the middle. In 1886, there were 157 boys attending and 111 girls. The earliest reference to schools in Machynlleth comes from John Owen of Llynloedd leaving £200 in his will to support a charity school in the early 18th century. His gift provided for ten poor children to be educated free of expense to their parents. John Owen's gift passed on to supporting the National School in 1829, when John Jones of London provided £1000 to build the school where children would be taught in the principles of the Church of England. The school was built on land provided by Sir Watkin Williams-Wynn. In 1833, a further bequest of £40 was received from Ann Jones to help provide for a school master. The school was rebuilt in 1912 in its present plan form. The main block is now a self-storage facility.

Site 1 Ffridd Gate Station

7.5.61 Station depicted on OS 2nd edition 25".

Site 2 Ffridd Gate Station buildings

7.5.62 Building, now a house, depicted on OS 2nd edition 25" in area of former railway sidings.

Site 3 Pont-ar-Ddyfi building II

7.5.63 Building, perhaps a barn, depicted on OS 1st edition 25", now surviving as an earthen mound.

Site 4 Pont-ar-Ddyfi building I

7.5.64 Building depicted on OS 1st edition 25". Area now levelled for a concrete slab.

Site 5 Pont-ar-Ddyfi building III

7.5.65 Possible building depicted on OS 1st edition 25". No surviving trace in pasture field.

Site 6 Pont-ar-Ddyfi building IV

7.5.66 Building, perhaps a field barn, depicted on OS 1st edition 25". No obvious trace in pasture field, although there is a low earthen mound at approximately that location.

Site 7 Machynlleth Brickworks

- 7.5.67** Fieldname 'Cae Bricks' recorded in Machynlleth Tithe Apportionment. Now largely beneath the railway.

Site 8 Pont-ar-Ddyfi boundary stone

- 7.5.68** A boundary stone c. 0.5m high.

Historic Hedgerows and Boundaries

- 7.5.69** The boundaries within and around the study area are typically mature hedgerows reinforced with post and wire fences. The hedges are sometimes on the top of a slight bank and some have a slight ditch along one side. Although none of the boundaries incorporates any heritage assets they are depicted on the Tithe Survey and are considered to be historic in terms of the 1997 Historic Hedgerow legislation.

Palaeoenvironmental Potential

- 7.5.70** A watching brief conducted in November 2015 during the excavation of geotechnical test pits along the route revealed deep alluvial clays overlying sands and gravels, as well as occasional organic material (Logan 2015). It is considered likely that the area contains information which would elucidate the sediment history of the Afon Dyfi and habitation within the valley; this evidence could include insect remains, seeds, preserved wood or charcoal.

LANDMAP

- 7.5.71** The significance of the area is reinforced by LANDMAP, the Welsh methodology employed in landscape assessment. This indicates that the development lies within a landscape two historic landscape aspect areas. To the south of the Afon Dyfi is a landscape (MNTGMHL288) of high value characterised by mixed fieldscapes of large irregular and straight-sided fields, probably mostly of post-medieval date along the valley floor of the Afon Dyfi between Machynlleth and Aberangell, with drained marshes and 20th-century conifer plantations west of Derwenlas. Scattered farms of post-medieval origin. The dismantled late 19th-century, narrow-gauge mineral railway from Gemmaes Road to quarries at Dinas Mawddwy runs through the area.
- 7.5.72** To the north of the river the landscape (SNPHL206) is of moderate value. A large expanse of rounded uplands with valleys diving off mainly consisting of pasture with large enclosed parcels divided by grass-covered banks. It includes some woodlands and scattered settlement pattern of farms, as well as block of largely unenclosed mountain. A series of hill-top cairns and sheepfolds are the only other characteristic historic features. Around Cwm

Maethlon ('Happy Valley') there are disparate area of irregular field patterns, and some mining remains.

Surveys

7.5.73 A magnetometer survey was undertaken to evaluate the potential for buried archaeological remains to be present within the footprint of the Scheme, and land required for construction (refer to Volume 3, Appendix 7.1). The survey identified evidence of post-medieval agriculture at the southern end of the viaduct in the form of ridge and furrow. At the northern extent of the Scheme, a linear anomaly, possibly representing a former ditch, was identified to the west of the scheduled Ffridd round barrows. No evidence of archaeological activity was identified elsewhere within the Scheme.

7.6 Potential Construction Effects - Before Mitigation

Designated Assets

7.6.1 Construction would take place within the setting of the listed Pen-y-Bont cottages immediately to the north of the listed and scheduled Pont-ar-Ddyfi, Pont-ar-Ddyfi itself, and the scheduled Ffridd round barrows. The movements of plant and other construction activities would, from some views, result in a temporary adverse impact. The assessment of impact is set out below:

- Pen-y-Bont Cottages (Listed Building numbers 22891-5). This Grade II Listed (medium value) terrace of cottages would have a view to the south of the main A487 construction activities at a distance of approximately 300m. Other works, including construction of A493 traffic calming measures and improved A493 highway drainage would take place adjacent to the cottages. These local works are expected to be limited in duration. It is considered that these activities would result in a temporary minor adverse impact upon the significance of the cottages, due to the visual and noise intrusion of the works into their exiting semi-rural setting. This would result in a **Slight Adverse** effect;
- The high value Scheduled Pont-ar-Ddyfi would have a view to the south of the main A487 construction activities at a distance of approximately 200m. Other works, including construction of A493 traffic calming measures and improved A493 highway drainage would take place immediately to the north of Pont-ar-Ddyfi. A line of fixed and de-mountable bollards would also be installed along both the northern and southern ends of Pont-ar-Ddyfi in order to control vehicular access onto the bridge. These local works are expected to be

limited in duration. It is considered that these activities would result in a temporary minor adverse impact upon the significance of the bridge, due to the intrusion of the works into its existing semi-rural setting. This would result in a **Slight Adverse** effect; and

- The high value scheduled Ffridd round barrows would a view westwards towards the temporary construction compound, and the northern working area for the Scheme at a distance of approximately 100m. However the views to the south and east, across and along the valley would not be affected; these views are considered to be the key setting of the barrows. The view of the compound and construction works would result in a temporary minor adverse impact upon the significance of the barrows through intrusion into their settings. This would result in a **Slight Adverse** effect.

7.6.2 There would be no change to the Machynlleth Conservation area, as this has no views in which the Scheme would be visible. This would result in a **neutral** effect.

Non-designated assets

7.6.3 The non-designated Pont-ar-Ddyfi milestone, has been identified within the area that could be directly affected by the Scheme. Possible direct impacts upon this asset would be avoided by removal of the milestone under archaeological supervision prior to the commencement of construction and replacement following completion. As a result there would be no change to this asset, and a neutral effect. In order to avoid damage during removal, the works would be subject to a detailed method statement which would be approved in advance by the consultees; an outline of a proposed approach is provided in Section 7.8.1.

7.6.4 The non-designated Pont-ar-Ddyfi platform lies within the construction area, and would likely be destroyed by the proposed works; this would be a major adverse impact on a low importance asset, resulting in a **slight adverse** effect.

7.6.5 Physical evidence of the non-designated former turnpike road may survive beneath the existing A487, and may therefore be impacted upon by the Scheme. This would be a moderate adverse impact upon a low importance asset, resulting in a **slight adverse** significance of effect.

7.6.6 Palaeoenvironmental remains, of medium importance, may be present within the Scheme footprint. The construction of bridge piers may cause localised impact upon these. These impacts are considered to be slight adverse impact on the totality of deposits likely to survive within the floodplain. The effect would be **slight adverse**.

7.6.7 No other archaeological deposits have been identified within the footprint of the Scheme. It is possible that small ephemeral features may exist that were not identified by geophysical survey. These are considered likely to be of low importance. The construction of the Scheme would result in the destruction of such remains, resulting in a **slight adverse** effect.

7.7 Potential Operational Effects - Before Mitigation

7.7.1 The operation of the Scheme would result in only permitted vehicles using Pont-ar-Ddyfi. This reduction in traffic movements would result in a moderate beneficial impact upon the setting of the bridge and would also result in a moderate/large beneficial direct impact upon the bridge; the removal of heavy modern traffic will help safeguard the historic structure for future generations. The wider river-valley setting of the bridge would be affected by the presence of the Scheme, which would result in a minor adverse impact. The operation of the A493 traffic calming measures and improved A493 highway drainage is considered to have a negligible impact. It is considered that this adverse impact is largely outweighed by the beneficial impacts to the structure and its immediate setting. Taking this into account it is considered that these impacts would result in a **moderate beneficial** effect.

7.7.2 The operation of the Scheme would reduce the amount of traffic passing close to the listed, medium value, Pen-y-Bont cottages. This would derive from the closure of Pont-ar-Ddyfi to vehicles other than those permitted to use it. Also traffic calming measures would be applied to the A493 at the cottages. These measures would allow only one-way traffic, reducing the speed and noise of traffic adjacent to the cottages. This cumulative reduction in traffic movements would result in a moderate beneficial impact upon the setting of these assets. The Scheme would be visible within the wider floodplain to the south east of the cottages, which would result in a minor adverse impact. However it is considered that this adverse effect is largely outweighed by the improvement to the immediate setting of the cottages leading to a **moderate beneficial** effect.

7.7.3 The scheduled, high value, Ffridd Round Barrows would experience a negligible impact upon their setting as a result of the proposed T-junction; this would be visible from the barrows but would not substantially alter their current rural setting and views across the valley. This would lead to a **slight adverse** effect.

7.7.4 There would be no operational effects upon non-designated assets.

7.8 Mitigation and Monitoring

Pre-construction avoidance

7.8.1 In order to avoid accidental damage to the Pont-ar-Ddyfi milestone, the following avoidance measures are proposed:

- Photographic and, where appropriate, drawn record of all elevations;
- Exposure of buried structure through archaeological hand excavation;
- Cover milestone in protective layer to prevent damage;
- Removal of milestone by mechanical hoist;
- Off-site storage until completion of works, location to be determined; and
- Milestone will be re-erected as close to its original location as possible.

Construction Mitigation

7.8.2 No mitigation would be implemented for the temporary effects on the setting of Listed Buildings and Scheduled Monuments during construction, as there are no measures to achieve this (e.g. fences) that would not in themselves affect the setting of the assets. To prevent accidental damage during construction, works traffic will be excluded from the barrow field by fencing.

7.8.3 An outline Cultural Heritage Management Plan is provided as part of the Pre-Construction Environmental Management Plan (Pre-CEMP) which has been developed during the EIA process and is provided in Volume 3 Appendix 17.1.

7.8.4 Prior to construction a programme of palaeoenvironmental sampling, by means of window samples, will be undertaken. The detailed extent of this sampling will be agreed with the consultees, and the methodology set out in a Written Scheme of Investigation. Specialist advice will be sought from a geo-archaeologist with expertise of the study of Welsh floodplain deposits with regard to the most appropriate methodology for sampling.

7.8.5 Based upon the adverse effects identified upon buried archaeological remains, it is proposed that preservation by record would be appropriate mitigation for these impacts.

7.8.6 A493 traffic calming measures and the line of fixed and demountable bollards along both northern and southern ends of Pont-ar-Ddyfi would be designed in consultation with Cadw to ensure that the appearance and form of these are appropriate for the Scheduled/Listed bridge and Pen-y-Bont cottages.

7.8.7 An archaeological watching brief would be maintained in areas of topsoil stripping, and where existing road surface is to be removed, in order to identify earlier road surfaces or features, if these are present.

7.8.8 Detailed archaeological recording will be implemented by means of Strip-Map-Sample in areas of higher archaeological potential:

- the area of the proposed site compound to the west of the Ffridd Round Barrows;
- Pont-ar Ddyfi Platform.

Operational Mitigation

7.8.9 No mitigation would be required during operation

7.9 Construction Effects - With Mitigation

7.9.1 Construction effects on buried archaeological remains cannot be made neutral or beneficial as the assets (Pont-ar-Ddyfi platform, turnpike road and palaeoenvironmental deposits) would be destroyed as a result of construction. Therefore the effect post mitigation would remain **slight adverse**.

7.10 Operational Effects - With Mitigation

7.10.1 Operational effects would be as described in section 7.7 above

7.11 Assessment of Cumulative Effects

7.11.1 No other developments have been identified which could generate cumulative effects with the Scheme during the construction or operation phase.

7.12 Inter-relationships

7.12.1 The topic of Cultural Heritage has inter-relationships with other topics considered within the Environmental Statement, in particular Landscape and Visual Effects (Chapter 8). This topic has been considered as part of the assessment of Cultural Heritage effects presented in this chapter.

7.13 Summary

7.13.1 In summary, while the Scheme would result in slight adverse effects upon buried archaeological remains, the Scheme would result in beneficial effects upon the setting of the Pont-ar-Ddyfi and Pen-y-Bont cottages due to the reduction of existing traffic due to re-routing; the physical structure of the Pont-ar-Ddyfi will

also be safeguarded by the removal of traffic that currently uses it.