

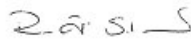
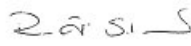
CPAT Report No 1238

Risca Flood Risk Management Scheme

CULTURAL HERITAGE ASSESSMENT



THE CLWYD-POWYS ARCHAEOLOGICAL TRUST

<i>Client name:</i>	Natural Resources Wales	
<i>CPAT Project No:</i>	1884	
<i>Project Name:</i>	Risca Flood Risk Management Scheme	
<i>Grid Reference:</i>	ST 2161 9369 to ST 2596 8876	
<i>County/LPA:</i>	Caerphilly; Newport	
 <i>Report Title:</i>	 Risca Flood Risk Management Scheme: Cultural Heritage Assessment	
<i>CPAT Report No:</i>	1238	
<i>Report status:</i>	Final	
<i>Confidential:</i>	Yes	
 <i>Report Prepared by:</i>	<i>Position:</i>	
R Hankinson	Project Archaeologist	
<i>Completion date:</i>	10 December 2013	
 <i>Checked by:</i>	<i>Position:</i>	<i>Signed:</i>
R J Silvester	Head of Field Services	
<i>Checked on:</i>	11 December 2013	
 <i>Approved by:</i>	<i>Position:</i>	<i>Signed:</i>
R J Silvester	Head of Field Services	
<i>Approved on:</i>	11 December 2013	

Bibliographic reference:

Hankinson, R., 2013. *Risca Flood Risk Management Scheme: Cultural Heritage Assessment*.
Unpublished report. CPAT Report No. 1238.



The Clwyd-Powys Archaeological Trust
41 Broad Street, Welshpool, Powys, SY21 7RR
tel: 01938 553670, fax: 552179
email: trust@cpat.org.uk
www.cpat.org.uk

© CPAT 2013

Cover photo: (CPAT 3650-0011; Pont y Cymmer bridge, from SE)

Contents

1	Introduction	2
2	Sources of Information and Guidance	2
3	Assessment Methodology	3
4	Cultural Heritage History of the Area	4
5	The Baseline Assessment	4
6	Assessment of Impacts from the Proposed Scheme	5
7	Detailed Mitigation Measures	6
8	Conclusions	8
9	Sources	8
	Appendix 1 Undesignated heritage assets within the study area	10
	Appendix 2 The categorisation and conservation of the heritage resource	13
	Appendix 3 The Assessment Framework	15
	Figures	17

1 Introduction

- 1.1 This report describes the results of a cultural heritage assessment undertaken by the Field Services Section of the Clwyd-Powys Archaeological Trust (CPAT) along the course of the Ebbw and Sirhowy rivers in relation to a flood risk management scheme proposed by Natural Resources Wales (NRW). The assessment was conducted in two parts, the first of which (Hankinson 2013) comprised an assessment of the cultural heritage of a wider area conducted in advance of trial excavations to determine the local ground conditions (Fig. 1). The wider area was defined by CPAT and then approved by NRW. It extended for around 9.5km between Abercarn on the Ebbw (ST 2161 9369) and Wattsville on the Sirhowy (ST 2071 9129), both in Caerphilly County Borough, and downstream as far as Rogerstone (ST 2596 8876), in Newport Unitary Authority.
- 1.2 The initial assessment fed information back into the scheme planning process to ensure that the trial excavations could be sited in such a way as to remove any potential threat to the known heritage resource. Once the test excavations were completed, NRW produced a final proposal for the flood risk management features that were needed. The work envisaged the construction of a series of earthwork bunds and some repair/strengthening works to existing flood protection features (see Fig. 2); the final proposal has formed the basis for the assessment described in this report.
- 1.3 The floors of the valleys are largely occupied by residential development, with lesser amounts of industrial activity, retail outlets and a notable proportion of recreational areas in the form of parks and sports grounds. The Ebbw has clearly already been subject to flood protection works, with sections of raised embankment flanking its course and with armouring of the riverbank in many places. Although the upper section of the Sirhowy under consideration remains in a natural state, its lower section, approaching the confluence with the Ebbw, has also been modified to reduce the flood risk. There are some areas of undeveloped ground within the preliminary study area, most being woodland with pedestrian access along paths, with the remainder either unused or pasture.
- 1.4 It was not appropriate to consider mitigation measures at the preliminary stage, but now that the specific proposals have been finalised, the potential threat levels on the heritage assets of the area can be assessed. Consideration has therefore been given to how the impact of the works on the cultural heritage can be reduced or eliminated and this is detailed in Section 7.

2 Sources of Information & Guidance

- 2.1 Cultural heritage is deemed to include the complete range of man-made features that have been introduced into the landscape from the Palaeolithic, more than 250,000 years ago, to the 20th century. Some of these features will be visible as upstanding remains on the ground; others will be buried and only become apparent during ground disturbance, whilst others may be objects that have been discarded, lost or deliberately deposited. Some will have an archaeological interest and importance; others will be more historical in their origin. In addition, some natural features will be relevant because of the information they contain; peat bogs, for instance, hold pollen that can provide information on past human activity in the area. Collectively, all these features are known as heritage assets - as for instance defined in the Highways Agency's Design Manual for Roads and Bridges (DMRB) (Highways Agency, revised 2007). Appendix 2 contains information on the categorisation and conservation of the cultural heritage resource.
- 2.2 DMRB, Volume 11 Section 3 Part 2, HA 208/07 provides a suitable, general framework for assessing the cultural heritage, and currently offers the most explicit, government-endorsed

methodology for Wales. The approach to the cultural heritage which it promotes, although designed for road developments, is relevant as a methodology for the proposed development and has been adopted here. All sites can be classified according to a system devised for the assessment of heritage assets in the DMRB, and this is summarised in Appendix 3.

- 2.3 The baseline survey of the assessment was undertaken with reference to the principles and methods for assessing heritage assets laid out in the *Standard and Guidance for Archaeological Desk-based Assessments* (1994, revised 2012) and the *Standard and Guidance for Archaeological Field Evaluation* (1994, revised 2008), both produced by the Institute for Archaeologists.
- 2.4 It is a general tenet in relevant conservation strategies that heritage assets represent a non-renewable resource, and should be avoided wherever this is feasible in order to ensure that their inherent information is preserved.

3 Assessment Methodology

General

- 3.1 The primary aim of the assessment is to identify the heritage assets within the designated study area, and to provide sufficient information on them to enable the reader to appreciate their level of importance, whether national, regional or local; to identify the significance of impact that the development might have upon them; and to recommend mitigation to limit the impact of the proposal on them. The preliminary study area was defined to encompass all the areas on the valley floor where flood risk management works might be considered.

Desk-top Methodology

- 3.2 The desk-based study, which formed the basis for the baseline assessment of the area, involved the examination of readily available written, cartographic, and aerial photographic sources held in the following repositories:
 - a) The National Monuments Record, Aberystwyth.
 - b) The National Library of Wales, Aberystwyth.
 - c) The regional Historic Environment Record maintained by GGAT in Swansea.
 - d) The Gwent Record Office, Ebbw Vale.

Field survey

- 3.3 Following the completion of the desk-top study, limited field work was undertaken to verify the location and extent of known assets, in as far as this was possible, to inform the detailed planning of the proposed scheme. The initial survey was limited to land for which there was public access, so not all of the locations of heritage assets could be thoroughly examined.

Impacts and Effects

- 3.4 This report considers potential direct impacts on statutorily protected assets and undesignated assets during the construction phase of the proposed scheme.
- 3.5 Direct physical impacts are most likely to result from:
 - a) the excavation of foundations for flood defence structures
 - b) the need to gain vehicular access to locations along the route during all phases of work
 - c) the creation of site compounds
 - d) the rebuilding of existing structures that have a flood defence function
- 3.6 Mitigation measures for the construction works are considered in Section 7.

4 Cultural Heritage History of the Area

- 4.1 The cultural heritage of the study area has been subject to a great deal of change during the period for which records are available. There is some evidence for early monastic activity and a medieval grange associated with Llantarnam Abbey in the area around Pont-y-mister, but these have not been definitively located.
- 4.2 The earliest cartographic sources date to the mid-18th century and show a largely pastoral landscape occupied by dispersed farms and settlements, but in the later years of the 18th century the area became increasingly industrialised with the advent of large-scale coal mining and the construction of housing for the expanding workforce. By the beginning of the 19th century other industries, such as the ironworks at Pont-y-mister, were in operation and some of these industrial sites were linked by a complex of tramways which operated in the Ebbw and Sirhowy valleys, with their hub at Risca.
- 4.3 As the 19th century progressed agricultural land was gradually taken over by industry and the construction of further workers' dwellings on the valley floor; this trend continued into the 20th century, so that today there is no surviving farmed land within the study area. Any open land is now used for recreational purposes, either as sports grounds or parks. The decline of heavy industry in the 20th century led to the construction of a more dispersed range of factories, often on abandoned industrial sites, such as the site of the Pont-y-mister ironworks. Even there, these later industries have been supplanted in part by retail developments, meaning that the earliest cultural heritage evidence has been lost to a long sequence of construction, demolition and rebuilding.
- 4.4 In recent times the cultural heritage resource of the area has been seriously affected by the construction of new bypasses around Risca and the adjoining settlements. It is also the case that an earlier river management scheme, presumably of late 20th-century date, has removed much of the evidence for heritage assets in close proximity to the river. As a result, there is little visible evidence of the assets identified in the desk-based study.

5 The Baseline Assessment

Designated Heritage Assets within the wider study area

- 5.1 The identification of designated assets within the wider study area is based on official information provided by Cadw. All assets designated as nationally important are automatically considered to be of **high** value.
- 5.2 Each of these designated assets was assessed to establish whether there is likely to be any direct impact as a result of the proposed development.

World Heritage Sites

- 5.3 There are no world heritage sites within the study area.

Scheduled Ancient Monuments

- 5.4 There are no scheduled ancient monuments within the study area.

Listed Buildings

- 5.5 There are 4 listed buildings within the study area, all of which are designated at Grade II (Table 1). Two of these (21003 and 21008) are actually the same site, but in different parishes. One site (No 21009) does not have an individual record in the HER. These structures are all of high value.

Table 1: Listed Buildings within the study area

LB No	Name	LB Grade	NGR
22508	Pont-y-mister bridge	II	ST2458389562
21009	Pont y waun, former railway bridge over canal outfall	II	ST2194092728
21003	Hall's Bridge, railway viaduct over River Ebbw (Abercarn)	II	ST2179792965
21008	Hall's Bridge, railway viaduct over River Ebbw (Cross Keys)	II	ST2181392954

Registered Historic Parks and Gardens

- 5.6 There are no Registered Historic Parks and Gardens within the study area.

Registered Historic Landscapes

- 5.7 There are no Registered Historic Landscapes within or in close proximity to the study area.

Conservation Areas

- 5.8 The nearest Conservation Area is the Monmouthshire and Brecon Canal area, which, at its closest, lies 200m distant from the study area.

Undesignated Heritage Assets within the study area

- 5.9 At the commencement of the study, a total of 11 undesignated heritage assets were identified within the study area from consultation of the regional HER. An additional 3 assets were identified solely from the records of the RCAHMW and some 68 previously unrecorded assets were identified by the desk-based study. No further assets were identified by the field survey, giving a total of 82 undesignated heritage assets that have now been identified within the study area, a full list of which is provided in Appendix 1. The 4 listed buildings identified in Table 1 have also been included in the appendix, together with an assessment of the perceived value of all of the 86 assets within the study area. The majority (59 assets) are of negligible value, a result of past disturbance or removal by later development. There are 11 assets of low value and 12 of unknown value; the uncertainty regarding many of the latter is due to the potential for sub-surface remains at sites which are no longer visible.
- 5.10 It is worth noting that while some of these assets are individually of negligible or low value, they may occasionally have a collective value which is greater. This is particularly the case where features combine undesignated and designated assets, an example being the courses of the various railways and tramways that once provided transport links in the Ebbw and Sirhowy valleys.

6 Assessment of Impacts from the Proposed Scheme

- 6.1 This section considers the potential impacts of the construction phase of the scheme, now that detailed proposals are available. It should be noted, however, that there may be additional works such as the provision of site access and construction compounds which may impact on the cultural heritage resource. This will need to be considered, if required, once these secondary elements of the proposal are finalised.

Potential Direct Impacts on designated heritage assets

- 6.2 No direct impacts are predicted for any scheduled ancient monuments, registered historic landscapes, or registered parks and gardens.

- 6.3 A potential direct impact during the construction phase of the proposal has been identified for a single designated asset, the Pont-y-mister bridge, which lies in close proximity to a proposed earthwork bund.

Table 2: Potential direct impacts on designated heritage assets

Site No	Type	NGR	Threat	Type of Impact	Magnitude of impact before mitigation
45	Bridge	ST2458389562	Bund construction	Machine excavation	Minor

Potential Direct Impacts on Undesignated Heritage Assets

- 6.4 Potential direct impacts have been identified for two undesignated heritage assets and these are listed in Table 3. In the table the magnitude of impact before mitigation is an assessment of the impact that could occur if a site were damaged during the construction phase of the proposal.

Table 3: Potential direct impacts on undesignated heritage assets

Site No	Type	NGR	Threat	Type of Impact	Magnitude of impact before mitigation
22	Bridge	ST2256291329	Bund construction	Machine excavation	Negligible
25	Bridge	ST2307991358	Bund construction	Machine excavation	Negligible

- 6.5 There are a number of assets in close proximity to sections of existing flood protection features where further works are proposed as part of the scheme, but these either have no visible surviving remains at the relevant location or are standing structures that are not under threat. There remains a possibility of disturbance to potential sub-surface evidence of assets if the proposed repair/strengthening works (depicted on Fig. 2) involve the excavation of ground not affected by the original construction of the flood defences.

Summary

- 6.6 To summarise, there is a single designated asset and two undesignated assets where there is the potential for a direct impact. All are bridges or former bridges across the River Ebbw.

7 Detailed Mitigation Measures

Introduction

- 7.1 A small number of heritage assets have been identified which could be subject to direct impacts from the construction phase of the scheme. In the light of the assessment above, this section therefore provides a description of the measures that could be adopted to mitigate the identified impacts on heritage assets, together with a consideration of the potential effects of the development on presently unknown heritage assets.

- 7.2 Heritage assets represent a non-renewable resource and should be avoided wherever this is feasible, in order to prevent damage or destruction. The purpose of mitigation is to avoid or reduce any adverse impacts that might result from the proposed scheme on the cultural heritage resource. The main strategy for minimising impacts from the scheme is avoidance, through careful planning, design and demarcation of sensitive assets. Where an impact is unavoidable, the reduction of that impact on the heritage asset necessitates detailed consideration of the site characteristics and the introduction of specific measures designed to limit the impact. These are addressed in the section that follows.
- 7.3 The client has been provided with digital data identifying the location of all heritage assets, which should be included on all constraints mapping for the project.
- 7.4 Table 4 provides detailed mitigation options for those assets where there may be a direct impact from the proposed refurbishment works. It is also worth mentioning that the design and creation of the bund near Site No 45 should be carefully considered to ensure that the bridge, which is a listed building, is not threatened with any form of disturbance, either during the construction phase or by resulting alterations to the water flow of the river. The site should be clearly marked out prior to the commencement of work to ensure it is not subject to accidental damage.

Table 4: Mitigation Measures

Site No	Type	Value of asset	Type of Impact	Mitigation
22	Bridge	Unknown	Machine excavation	Watching brief
25	Bridge	Negligible	Machine excavation	Watching brief
45	Bridge	Medium	Machine excavation	Avoid asset - demarcate

- 7.5 There is some potential for the disturbance of recorded assets during the proposed repair/strengthening works on existing flood management features. However, the only assets under threat from this work have no surviving visible remains and will only be affected if ground is disturbed which was not modified during the original construction of the flood defences. If this is considered to be possible when the plans for the works are finalised, then a watching brief should be carried out during the initial groundworks to record any evidence that may be revealed.
- 7.6 In addition to known heritage assets, the development may impact on sub-surface assets that have not yet been recorded. This is particularly relevant given the degree of development that took place in the area during the 19th and 20th centuries, which could have masked earlier evidence. It is therefore recommended that all works that involve significant earthmoving operations should be subject to an archaeological watching brief during the initial soil stripping phase to record any evidence of this nature which may be revealed.
- 7.7 The above mitigation measures are based on the proposed flood management features of which CPAT has been informed. At this stage, no details regarding proposed access routes to the new flood management features or any site compounds has been provided. It may be, therefore, that there remain other elements of the proposal that could have an impact on the cultural heritage resource. It is recommended that consultations are carried out prior to the commencement of any such additional works.

8 Conclusions

- 8.1 A cultural heritage study has been prepared for the proposed flood risk management scheme, and is based on a walkover survey and an assessment of the available desk-based sources for assets within the study area. This was reported on in June 2013 (Hankinson 2013) and following its completion a programme of ground investigations was carried out by NRW which was informed by its results. This led to the formulation of proposals for detailed flood management works, which are the subject of this report.
- 8.2 The study indicates that there is the potential for direct impacts on a small number of heritage assets during the construction phase of the proposal. One of these, the bridge at Pont-y-mister, is a listed building and must be avoided. As long as measures are put in place to ensure this avoidance, then no formal permissions should be required with regard to the cultural heritage.
- 8.3 Potential impacts have been identified for two undesignated assets, both of which should be subject to an archaeological watching brief during the construction of the proposed flood management features.
- 8.4 There are other recorded assets in close proximity to existing flood management features where repair/strengthening works are proposed, and if a potential for the disturbance of any possible surviving sub-surface elements of the assets during those works is identified then a watching brief should be carried out to record any evidence that may be revealed. It is also recommended that a watching brief is conducted during initial soil stripping work which may be needed prior to the construction of all of the new flood management features, as there is a potential for sub-surface cultural heritage features which could not be recognised at the assessment stage to be affected.
- 8.5 These conclusions may need to be reviewed, and where appropriate revised, once the detailed plans for the flood risk management scheme are finalised, particularly in regard to any ancillary works which may be needed to provide access or site compounds. It is anticipated that the results of the preliminary study will be used to inform the nature and location of any such additional works.

9 Sources

References

- Hankinson, R., 2013. *Risca Flood Alleviation Scheme: Cultural Heritage Assessment*.
Unpublished report. CPAT Report No. 1211.
- Roberts, J. H. A., 1985. *A View from the Hill: A History of Risca*, Risca: Moriah Baptist Church.

Cartographic

- 1760 National Library of Wales Tredegar Map Volume 9
1799 National Library of Wales Tredegar Map 932
1806 National Library of Wales Maybery 245/246 Pontymister Ironworks sale poster
1828 Gwent Record Office MAN G/1/0004 Map of lands taken from the Abercarne Estate for the Monmouth Canal Company's tramroad
1841 Machen Tithe map and apportionment
1843 Risca Tithe map and apportionment
1844 Bassaleg Tithe map and apportionment
1846 Mynydd Islwyn Tithe map and apportionment
c. 1852 Gwent Record Office D1918. 31-36 Plans for converting tramroads to railways

Ordnance Survey 1st edition 1:2500 maps

Monmouthshire 27.04 (1882)
Monmouthshire 27.08 (1880)
Monmouthshire 27.12 (1879)
Monmouthshire 28.05 (1883)
Monmouthshire 28.09 (1883)
Monmouthshire 28.10 (1883)
Monmouthshire 28.13 (1883)
Monmouthshire 28.14 (1883)

Ordnance Survey 2nd edition 1:2500 maps

Monmouthshire 27.04 (1901)
Monmouthshire 27.08 (1901)
Monmouthshire 27.12 (1901)
Monmouthshire 28.05 (1901)
Monmouthshire 28.09 (1901)
Monmouthshire 28.10 (1901)
Monmouthshire 28.13 (1901)
Monmouthshire 28.14 (1901)

APPENDIX 1

Heritage Assets within the Study Area

Site	PRN	NGR	Name	Type	Value
1	00124g	ST2158893678	Pont Mynachlog	Bridge	Low
2		ST2190093026	Aber Carn flannel factory	Woollen mill	Low
3	03677g; LB21003; LB21008	ST2181892945	Pont Hall railway bridge	Bridge	Medium
4	03700g; LB21003; LB21008	ST2181192923	Pont Hall tramway bridge	Bridge	Medium
5		ST2191492519	Pont y Waun Farm	Farmstead	Unknown
6		ST2185691934	Pandy	Fulling mill	Negligible
7		ST2185791795	Pont y Cymmer well I	Well	Negligible
8		ST2184691763	Pont y Cymmer well II	Well	Negligible
9		ST2180891662	Newtown Calvinistic Methodist chapel	Chapel	Low
10		ST2120991377	Rhyd-fraith house	House	Unknown
11		ST2107391310	Rhyd-fraith cottages I	House	Unknown
12		ST2112691311	Rhyd-fraith cottages II	House	Unknown
13		ST2128391352	Rhyd-fraith building I	Building	Negligible
14		ST2134791491	Rhyd-fraith building II	Building	Unknown
15		ST2138391368	Rhyd-fraith signal box	Signal box	Negligible
16		ST2156391397	Rock Vein Colliery	Colliery	Negligible
17		ST2127491529	North Risca Black Vein Collieries	Colliery	Negligible
18		ST2186991341	Rock Vein Colliery air shaft	Shaft	Negligible
19		ST2230191239	Waun-fawr cottages	House	Negligible
20		ST2228891559	Risca House building	Building	Negligible
21		ST2187391708	Pont y Cymmer (1901)	Bridge	Low
22		ST2256291329	Waunfawr bridge	Bridge	Unknown
23		ST2278691326	Waun Fawr cottages	House	Unknown
24		ST2309291312	Waun Fawr settlement	Settlement	Unknown
25		ST2307991358	Waun Fawr footbridge	Bridge	Negligible
26		ST2314191374	Waun Fawr well	Well	Negligible
27	03678g	ST2357690980	Risca Viaduct	Bridge	Unknown
28		ST2351890998	Dan-y-graig cottages I	House	Negligible
29		ST2352590951	Dan-y-graig cottages II	House	Negligible
30		ST2358390803	Long Bridge building	House ?	Negligible
31	04246g	ST2360590786	Long Bridge	Bridge	Negligible
32		ST2363690533	Dan-y-graig road bridge	Bridge	Negligible
33		ST2396290072	Pont-y-mister weir I	Weir	Negligible
34		ST2407889963	Pont-y-mister weir II	Weir	Negligible
35		ST2392589983	Pont-y-mister farm I	Farmstead ?	Negligible
36		ST2417989862	Pont-y-mister Ironworks leat	Leat	Negligible
37		ST2399989890	Pont-y-mister building	Building	Negligible
38		ST2433489932	Pont-y-mister gas works	Gas works	Negligible
39		ST2442889619	Pont-y-mister Ironworks	Ironworks	Unknown
40		ST2440189654	Pont-y-mister House	House	Negligible
41		ST2442189725	Pont-y-mister footbridge I	Bridge	Negligible
42		ST2444089713	Pont-y-mister footbridge II	Bridge	Negligible
43		ST2450089628	Pont-y-mister steelworks bridge	Bridge	Negligible

44		ST2455489550	Pont-y-mister mill	Mill	Negligible
45	04288g; LB22508	ST2458389562	Pont-y-mister bridge	Bridge	Medium
46		ST2474089529	Pont-y-mister Farm II	Farmstead	Low
47		ST2566489639	Pen y Van well	Well	Negligible
48		ST2586588861	Pont-newydd-fawr footbridge	Bridge	Low
49		ST2587088845	Pont-newydd-fawr ford	Ford	Negligible
50		ST2454489563	Pont-y-mister shaft I	Shaft	Negligible
51		ST2449389571	Pont-y-mister shaft II	Shaft	Negligible
52		ST2429189838	Ebbw Cottages	House	Negligible
53		ST2412889937	Pont-y-mister rifle range	Rifle range	Negligible
54		ST2433089873	Pont-y-mister tramway bridge	Bridge	Negligible
55		ST2347191037	Dan-y-graig building	Building	Negligible
56		ST2348891047	Dan-y-graig limekiln I	Limekiln	Negligible
57		ST2343791080	Dan-y-graig limekiln II	Limekiln	Negligible
58		ST2306691333	Ebenezer Chapel	Chapel	Unknown
59		ST2284791285	Waun Fawr industrial building	Building	Negligible
60		ST2130091491	Rhyd-fraith footbridge I	Bridge	Negligible
61		ST2137991522	Rhyd-fraith footbridge II	Bridge	Low
62		ST2148791522	Rhyd-fraith ford	Ford	Negligible
63		ST2137891540	Rhyd-fraith mine level	Level	Negligible
64		ST2186791786	Pont y Cymmer (18 th -19 th C)	Bridge	Negligible
65		ST2188392175	Western Terrace railway bridge	Bridge	Low
66		ST2187993143	Aber Carn weir	Weir	Negligible
67		ST2190993100	Aber Carn leat	Leat	Negligible
68		ST2129591530	Ty Prince building	Barn	Negligible
69		ST2184692915	Hall's Tramway	Tramway	Low
70		ST2352591010	Sirhowy/Monmouth Railway & Canal Co Tramway	Tramway	Negligible
71		ST2578089545	Monmouth Railway and Canal Co railway	Railway	Negligible
72		ST2192692145	Monmouthshire Railway and Canal Co railway	Railway	Negligible
73		ST2178692968	Pont-y-waun railway (section)	Railway	Negligible
74		ST2435289900	Pontymister tramway	Tramway	Negligible
75	07275.0g	ST2176792974	GWR Pennar Branch Railway III	Railway	Negligible
76	07413g	ST2272191242	Risca Railway	Railway	Negligible
77	08438g	ST23938994	Pontymister Farm	Monastery	Negligible
78	08325g	ST23938994	Maestir Grange	Grange	Negligible
79	04504g	ST25918879	Rhyd lydan house	House	Negligible
80	07396g	ST2180392193	Cox's Quarry Branch Railway	Railway	Negligible
81	LB21009	ST2194092728	Pont y waun, former railway bridge over canal outfall	Bridge	Medium
82	03263.16g	ST2134898491	Monmouth and Brecon Canal-Crumlin Branch	Canal	Negligible
83	00130g	ST21689370	Skeletons - Skeleton Row	Inhumation burial	Unknown
84	NPRN 415112	ST2175193560	Cwmcarn, former public park and recreation ground; BT	Public park	Negligible

			telephone factory		
85	NPRN 411761	ST2232091406	Waunfawr Park, Cross Keys	Public park	Low
86	NPRN 415352	ST2365390761	Open-air swimming baths, Risca	Swimming pool	Low

APPENDIX 2

The categorisation and conservation of the cultural heritage resource

The cultural heritage resource is not a single body of equally significant assets, but an infinitely complex set of individual assets, the number of which increases and alters in form and relationships on a continuous basis. They range in importance from internationally significant sites to features of minor and even negligible value, with those perceived to be of more importance being categorised by designation (statutory) or registration (non-statutory).

World Heritage Sites. This is the only statutorily recognised category of international importance. No World Heritage Site has been designated within or adjacent to the corridor.

Scheduled Ancient Monuments. SAMs are protected under the Ancient Monuments and Areas of Archaeological Importance Act, 1979, and their settings are also protected. Setting is not defined within the Act, but is typically taken to refer to the immediate area around a protected site, for example the curtilage of a building. As a concept, it is covered in Planning Policy Wales (4th edition; 2011), and in more detail in a supporting Welsh Office Circular on Planning and the Historic Environment: Archaeology (60/96)

Listed Buildings. These are protected under the Planning (Listed Buildings and Conservation Areas) Act 1990, and are usually classed in diminishing importance as Grades I, II* and II. The Act requires local planning authorities to have special regard to the desirability of preserving the setting of a listed building, and it also requires planning proposals to meet the test of determining the extent to which a development affects views to and from a listed building. Further guidance comes in Welsh Office Circular on Planning and the Historic Environment: Historic Buildings and Conservation Areas (61/96).

Conservation Areas. These are protected under the Planning (Listed Buildings and Conservation Areas) Act 1990. This Act requires local planning authorities to have special regard to the desirability of preserving the setting of a conservation area, and it also requires planning proposals to meet the test of determining the extent to which a development affects views to and from such an area. The setting of a conservation area is covered in the same set of publications as those for scheduled ancient monuments, above.

Parks and Gardens. In Wales parks and gardens of significance appear in the non-statutory Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales, the register for Powys appearing in 1999. Parks and gardens are graded using the same categories as listed buildings. Being non-statutory, parks and gardens are thus classed as registered rather than designated assets, though for practical purposes this distinction appears to be of limited importance. Planning Policy Wales (2011) states that local authorities should protect registered parks and gardens and their settings, and that Cadw should be consulted on developments affecting grade I and II* sites.

Historic Landscapes. In Wales significant landscapes appear in the two-volume non-statutory Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales (1998 & 2001). Unlike parks and gardens, registered landscapes are not graded, but are classified as either 'outstanding' or 'special'. Though registered rather than designated, historic landscapes are treated in the same way as parks and gardens, as indicated in Planning Policy Wales (2011). All the larger registered landscapes have been the subject of historic landscape characterisation in recent years.

Battlefields. England has a Battlefields Register, but there is at present nothing equivalent for Wales, though one is now in preparation.

Undesignated assets. There are a large number of undesignated heritage assets within the route corridor, both above ground where they are still visible and buried beneath the surface. These could range in date from the prehistoric era through to the 20th century.

Planning Policy Wales (5th edition, 2012) sets out the land-use planning policies of the Welsh Government, including the conservation of the historic environment. This states that ‘it is important that the historic environment - encompassing archaeology and ancient monuments, listed buildings, conservation areas and historic parks, gardens and landscapes - is protected’, with the following objectives:

- 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.

APPENDIX 3**The Assessment Framework**

The classification of designated and registered assets is laid out in DMRB (2007) (as in Table 1). The classification of undesignated assets is based on the collective professional judgement and expertise of the field staff of CPAT.

Table 1 Factors for Assessing the Value of Heritage Assets

Factors for Assessing the Value of Heritage Assets	
Very High	<input type="checkbox"/> World Heritage Sites (including those nominated). <input type="checkbox"/> Assets of acknowledged international importance. <input type="checkbox"/> Assets that can contribute significantly to acknowledged international research objectives.
High	<input type="checkbox"/> Scheduled Monuments (including those proposed). <input type="checkbox"/> Undesignated monuments of which could potentially be worthy of scheduling. <input type="checkbox"/> Listed Buildings. <input type="checkbox"/> Assets that can contribute significantly to acknowledged national research objectives.
Medium	<input type="checkbox"/> Conservation Areas. <input type="checkbox"/> Designated or undesignated assets that contribute to regional research objectives.
Low	<input type="checkbox"/> Designated and undesignated assets of local importance. <input type="checkbox"/> Assets compromised by poor preservation and/or poor survival of contextual associations. <input type="checkbox"/> Assets of limited value, but with the potential to contribute to local research objectives.
Negligible	<input type="checkbox"/> Assets with very little or no surviving cultural heritage interest.
Unknown	<input type="checkbox"/> The importance of the resource has not been ascertained.

Factors to be considered in assessing the magnitude (or scale) of the impact are given in Table 2, based on the DMRB (2007).

Table 2 Factors in the Assessment of the Magnitude of Impacts

Factors in the Assessment of Magnitude of Direct Impacts	
Major	<input type="checkbox"/> Change to most or all key cultural heritage elements, such that the resource is totally altered.
Moderate	<input type="checkbox"/> Changes to many key cultural heritage elements, such that the resource is clearly modified.
Minor	<input type="checkbox"/> Changes to key cultural heritage elements, such that the asset is slightly altered or different.
Negligible	<input type="checkbox"/> Very minor changes to cultural heritage elements.
No Change	<input type="checkbox"/> No change.

The significance of the impact of a development on a particular heritage asset is then established from the matrix (Table 3) taken from the DMRB (2007).

Table 3 Matrix for Assessing the 'Significance' of Direct Impacts of the Proposed Development upon Heritage Assets

Magnitude of Impact	Value/Sensitivity of Heritage Asset				
	Very High	High	Medium	Low	Negligible
Major	Very Large	Large/ Very Large	Moderate/ Large	Slight/ Moderate	Slight
Moderate	Large/Very Large	Moderate/ Large	Moderate	Slight	Neutral/ Slight
Minor	Moderate/ Large	Moderate/ Slight	Slight	Neutral/ Slight	Neutral/ Slight
Negligible	Slight	Slight	Neutral/ Slight	Neutral/ Slight	Neutral
No change	Neutral	Neutral	Neutral	Neutral	Neutral

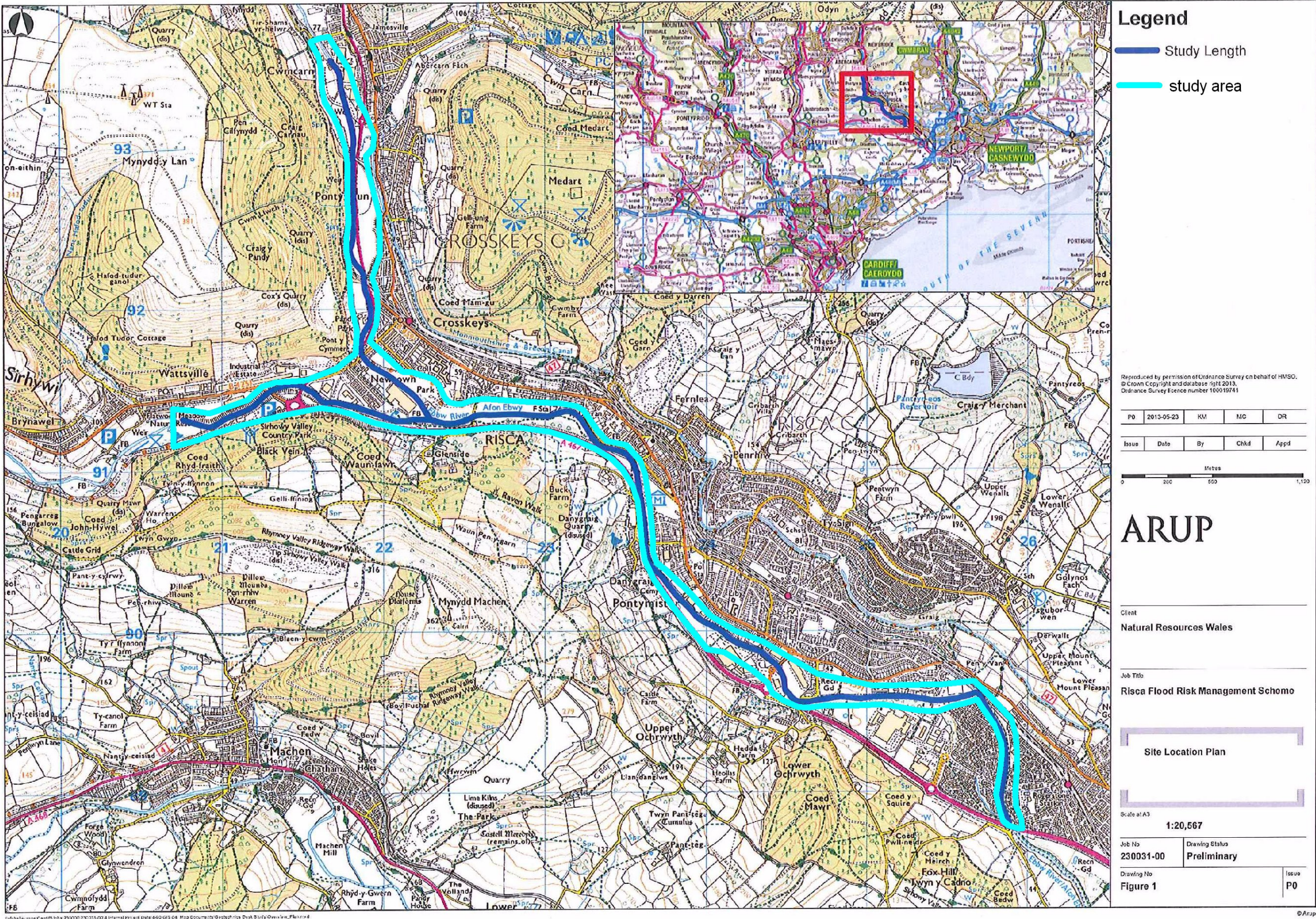


Fig. 1 Location of the initial study area

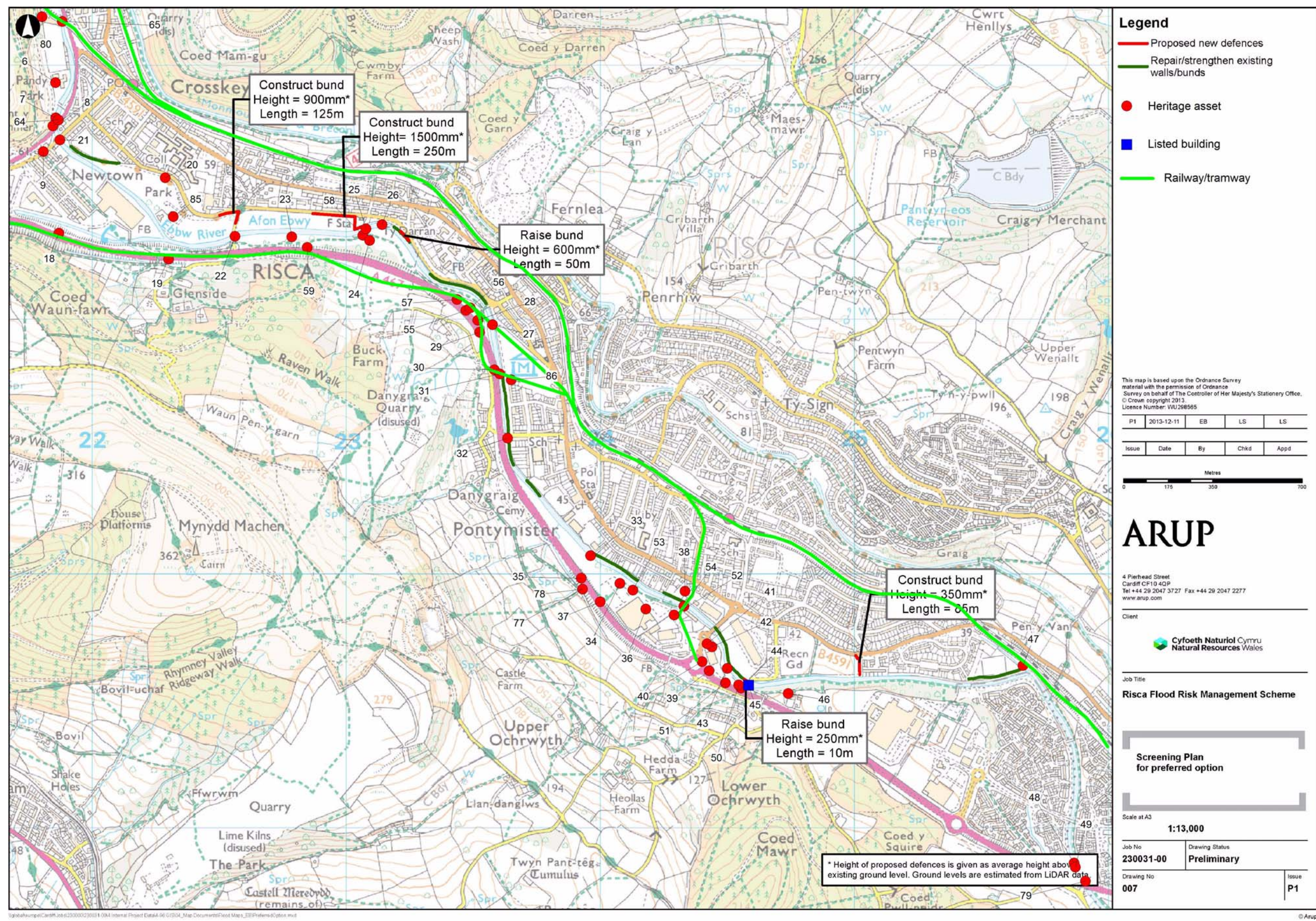


Fig. 2 Heritage Assets in relation to the proposed flood management works