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The Cornwall and West Devon Mining Landscape World Heritage Site Management Plan 2020-2025



Appendix 2: World Heritage Site Monitoring Report 2019



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**Cornwall and West Devon
Mining Landscape**

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The Cornwall and West Devon Mining Landscape World Heritage Site Management Plan 2020-2025

Appendix 2: World Heritage Site Monitoring Report 2019

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1 Executive Summary

1.1 Scope, format and limitations of the Monitoring Report

With a total area of 19,710 hectares, the Cornwall and West Devon Mining Landscape World Heritage Site (CWDML WHS) is the largest industrial World Heritage Site (WHS) in the UK. It is defined by a suite of seven landscape 'attributes' (or components) through which the Site's *Outstanding Universal Value* (OUV)¹, or international significance, is expressed.

Comprising ten separate Areas, the size and scope of the WHS presents significant management challenges for the WHS Office, and the remit of this and the WHS Partnership Board and Technical Panels - its governing structure - are correspondingly wide-ranging.

The 2013-2018 Management Plan for the CWDML WHS sets out a suite of 34 policies which address the need for active management of the Site in accordance with the requirements of the UNESCO *Convention on the Protection of World Natural and Cultural Heritage* of 1972. These policies address the following Convention themes, as defined by UNESCO: *Protection, Conservation and Enhancement, Presentation, and Transmit*. A suite of monitoring indicators has been devised to assess the application of the Plan policies over time (below), and the impacts of WHS status. This, the second Monitoring Report produced for the CWDML WHS, has been prepared on behalf of the WHS Partnership Board and the partner local authorities Cornwall Council, West Devon Borough Council and Devon County Council.

While WHS management activity covers a broad spectrum of issues, a significant focus of the monitoring of the CWDML WHS centres on the protection and, whenever possible, the conservation and enhancement of the Site's OUV. The term OUV encompasses all those sites and features - known as 'attributes' - for which the WHS was inscribed, and maintaining the condition of these, and appropriately addressing any perceived threats, is of paramount concern. The protection of OUV is a mandatory requirement set out by UNESCO within the Convention and this, consequently, forms a primary focus of this report.

Presentation of the Cornish Mining brand is of considerable importance in raising public awareness and understanding of the Site and the values which it embodies. This, in turn, can be especially useful in engendering a valuable sense of ownership which, of itself, can help to promote protection and conservation. World Heritage Site cultural events, such as Golden Tree Productions' 'Man-Engine', staged to commemorate the Tenth (tenth) Anniversary of the status in 2016, are particularly important in conveying the local and global cultural importance of Cornwall and west Devon's mining heritage to a wide audience. In accordance with this, public benefits accruing from increased knowledge and enjoyment of the WHS should be assessed, where possible, along with education through school, college and life-long learning provision. All these are important means of increasing awareness and appreciation of World Heritage status, which need to be carefully formulated, delivered and monitored to achieve the desired outcomes. Presenting the WHS in this manner will require significant resources, however, and partnership working is likely to be the only means of delivering this going forward.

The function of monitoring, beyond its immediate use in defining and delivering Management Plan objectives, is a mandatory activity under the terms of the UNESCO Convention to inform the UNESCO Periodic Reporting requirement. This stipulates that all Sites submit State of Conservation reports on a six-yearly basis as part of a group submission of similar reports from other Sites in the same geographical world region. The CWDML WHS is located within the Europe and North America Region and the next round of Periodic Reporting for this group is anticipated to be set for 2021/2022, the previous report having been submitted in 2013. This, the second WHS Monitoring Report, constitutes an evolution of the first report produced in 2012, which was compiled to inform the UNESCO Periodic Report submitted in 2013.

Through a process of comparing and contrasting a number of monitoring reports produced by UK World Heritage Sites, in accordance with previous UNESCO Periodic Reporting guidelines, specific monitoring indicators have been developed which aim to address key management objectives. The ICOMOS UK

*Tool Kit for World Heritage Site Monitoring Indicators*² has been used to inform the creation of this suite of indicators, although these have been augmented or otherwise adapted to suit the multi-area nature and extended scale of this serial WHS, and the limited resources available for monitoring.

The structure of the Monitoring Report is as set out below and is presented under three headings;

- **Conservation of Outstanding Universal Value** (addressing the World Heritage Convention objectives: *Protection, Conservation and Enhancement*)
- **Communication of Outstanding Universal Value** (addressing the World Heritage Convention objectives: *Presentation and Transmission*)
- **Environmental Value***

The respective policies from the 2013-2018 Management Plan have been quoted in regard to each monitoring subheading, to aid cross referencing of the respective themes and the attendant management objectives. In addition to providing descriptive information relating to the indicators, the monitoring status is also given for each monitoring theme or topic indicator, and an explanation of data gaps where these occur. Given the scale and complexity of the CWDML WHS, effective monitoring can only be secured with the on-going co-operation of the partner local authorities (Cornwall Council, Devon County Council, and West Devon Borough Council), agencies and groups with particular conservation remits, and stakeholders with a related heritage tourism focus. The data contained within this Monitoring Report is the result of work undertaken directly by the WHS Office - under the aegis of the WHS Partnership Board - West Devon Borough Council, the Historic Environment department and Planning Department of Devon County Council, and by agencies including, but not limited to, Natural England and Cornwall Wildlife Trust.

All of the above requires a sustained World Heritage Site Office function but maintaining this is likely to become increasingly difficult should public sector funding be further reduced in the coming years. Consolidating the Cornish Mining World Heritage Site brand will be essential if a future funding shortfall is to be met by the private sector, making awareness raising all the more important going forward.

As monitoring is an ongoing process, it should be noted that the majority of the data collated for this report is presented as 'snap-shots' and taken at specific times during the period of the previous Management Plan, i.e. 2013-2018.

**During the lifetime of the Management Plan for 2020-2025, we will review the existing approach to monitoring to incorporate measures which encompass the contribution of the WHS and related activities to UN Sustainable Development Goals (SDGs), within the context of the environmental and ecological values of the Site.*

1.2 Summary conclusions

Significant progress has been made in delivering monitoring across the suite of indicators defined for the first Monitoring Report of 2012 and this is detailed below. Where data gaps or inconsistencies exist, these are acknowledged within the relevant sections.

Baseline condition monitoring of mining heritage features constituting OUV, the most important aspect of WHS monitoring, was undertaken initially for the whole Site in 2010, surveying 991 attributes. This exercise produced over 12,000 ground-based digital photographic images, in addition to a detailed condition assessment spread sheet. A follow up survey of sites originally found to be in an unfavourable condition in 2010 was undertaken during the summer and autumn of 2017, to assess current condition. A summary of its findings can be seen at 3.2.1 but in essence the 2017 survey indicated a small (c.5 per cent) increase in the number of sites rated in an unfavourable condition. A principal issue here is an apparent lack of vegetation management which is, in some instances, limiting or preventing access through overgrown footpaths or growth within or around features.

Some aspects of Site management result in outcomes which pertain to more than one monitoring indicator, e.g. 'Impact of World Heritage designation on conservation of OUV' or 'Economic impacts of World Heritage status'. In this example, the major conservation work undertaken at mine sites across the WHS, which could be said to have been secured largely through the existence of WHS status, serves to preserve attributes of OUV while delivering economic benefits for Cornwall and west Devon. Conservation work of the considerable scale and value experienced during the first thirteen years of World Heritage status, currently totalling over £92million, will be difficult to repeat in the foreseeable future, however, due to significant reductions in levels of National Lottery Heritage funding and the re-targeting of environmental stewardship grants away from heritage. The impact of Brexit may also further limit environmental stewardship funding potential unless previous European sourced grant aid available to Cornwall, due to its Convergence status, is replaced with UK Government funds. New sources of conservation funding will undoubtedly need to be identified and differing and flexible approaches required to address the priority 'at risk' sites identified within the condition surveys whilst retaining OUV.

During the period of the previous Management Plan (2013-2018) notable advances in Site management were achieved, particularly in relation to the mandatory UNESCO requirement to protect the Site. The appointment of a dedicated Planning Advice Officer for the WHS Office in December 2015 has dramatically improved the planning advice function, as this officer's role is solely concerned with WHS priorities and not the wider sphere of the historic environment. Previously WHS planning advice was delivered in Cornwall by Cornwall Council's Historic Environment Service, through a service level agreement, and within Devon via a broadly parallel arrangement. The enhanced planning advice function has secured notable gains at planning Appeal, establishing valuable case precedent to inform future planning responses. One of the Appeal gains is presented to illustrate the effectiveness of the improved planning advice regime, at 3.1.4.

Maintaining the WHS as a 'living' landscape, where communities evolve and thrive, requires the careful integration of change within and around those attributes which comprise the Site's OUV. In recent years the question of how this is addressed within Cornwall and west Devon has proven to be of some concern to the World Heritage Centre and its Advisory bodies, ICOMOS and ICCROM. Commercial and residential developments at Hayle, the potential resumption of mining at South Crofty, and a housing proposal within the setting of the WHS at Callington Road, Tavistock, have all come under scrutiny since 2011. Reactive Monitoring Mission visits have subsequently been undertaken to Cornwall and west Devon in 2013, and to Cornwall only in 2015, and have focused a spotlight on the challenges which can arise around achieving development, which is both appropriate to, and respectful of, OUV.

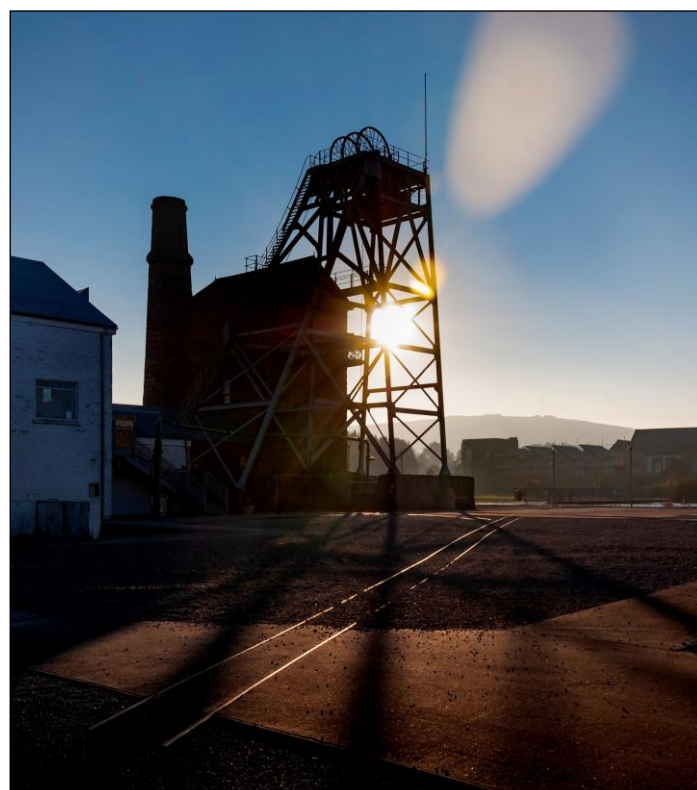
In order to further enhance protection through the planning system, a Supplementary Planning Document (SPD) was drafted on behalf of the WHS in 2016 and formally adopted by the partner local authorities on 31 May 2017, i.e. Cornwall Council, Devon County Council, and West Devon Borough Council. A public consultation exercise confirmed that, as a means of aligning the UNESCO World Heritage Convention requirements with the current UK Planning system through which these are

delivered, the processes described are accurate and deliverable. The SPD sets out how the planning authorities will seek to fulfil the responsibilities and opportunities deriving from WHS status, the latter with the potential to deliver substantial social and economic gains for Cornwall and west Devon. The SPD seeks to clarify what makes the WHS important, why it must be protected and how the planning system can achieve this. It is structured to explain these requirements clearly and aims to encourage early and effective consultation between developers, the local planning authorities and historic environment advisors.

While significant advances have been made with respect to monitoring delivery of the mandatory requirements of the World Heritage Convention, i.e. the protection of OUV, much remains to be achieved in terms of monitoring non-obligatory objectives. These include the monitoring of economic impacts and visitor management. Public sector funding reductions, unforeseen at the time the previous Management Plan was in preparation, have limited partners' progress in these and other areas. Without the in-house resource capacity to commission bespoke research, beyond that relating to OUV attribute condition, the WHS Office is solely reliant on third party data from partner organisations. This situation is not ideal, but the data that has been garnered is nevertheless useful in allowing management issues and trends to be defined and further considered. Lack of resourcing for extending research is likely to remain an issue for the foreseeable future and will continue to limit monitoring effectiveness in some areas. Monitoring objectives have been carried over from the previous report of 2012, in those instances where progress remains to be achieved.

For the period of the current Management Plan (2020-2025) it will be a necessity to act on the conclusions of the Condition Survey update and prioritise those sites or features most in need of attention (see Monitoring Report Appendix 3). The WHS Partnership Board and WHS Office now possess the information required to inform conservation funding priorities and to bid for grant aid where possible.

Beyond OUV attribute condition, data gaps should be addressed where possible and further work is required particularly in the areas of social impacts and visitor satisfaction, resources permitting. The sustained support and co-operation of stakeholders, especially the partner local authorities Cornwall Council, Devon County Council, and West Devon Borough Council, will remain - as previously - an essential requirement in addressing these and other shared objectives.



2 World Heritage Site co-ordinated management

CWDML WHS Management Plan Policies: P1, P2, P3

In 2011 the WHS governance structure evolved from that provided by the Officer Working Group to a partnership board model, as agreed following the governance review process undertaken in 2008. Current governance is currently delivered via a Partnership Board, principally local authority elected members and owners /managers of major WHS landscapes, and a Technical Panel, comprising officers from partner organisations and staff from Non-Government Organisations and related professional groups. The Technical Panel considers practical issues of ongoing management in discussion with the WHS Office, in advance of presentation of information and recommendations to the Partnership Board for further discussion and decision making. The WHS Office reports to the Partnership Board on a quarterly basis and consults whenever a specific need arises.

Status summary: WHS Co-ordinator and team in place (currently 4.2 FTE), hosted by the Culture and Creative Industries team within the Economic Growth and Development Department of Cornwall Council; local authority commitment to continuing funding support secured from Cornwall Council, West Devon Borough Council and Devon County Council; WHS Management Plan revised for the plan period 2020-2025 under the guidance of a dedicated Management Plan steering group.

Indicator	Status	Notes
World Heritage Site Governance	WHS Partnership Board inaugurated in 2011 to oversee delivery of the 34 policies of the WHS Management Plan (2013-2018)	Current Partnership Board led governance structure supersedes the previous WHS Officer Working Group, formed for purposes of the nomination in 2001; governance review proposed within the lifetime of the Management Plan (2020-2025)
World Heritage Site Office	Three FT staff members – WHS Co-ordinator, Planning Advice Officer, Research & Information Officer plus PT Administration Officer and PT Marketing & Business Development Officer	WHS Office and staff hosted and funded by Cornwall Council; operational project budget co-funded by Cornwall Council, Devon County Council, and West Devon Borough Council on a pro-rata by WHS Area basis
Ongoing management status	WHS Management Plan Consultation Draft (2020-2025) completed Updated Management Plan anticipated to be finalised and approved for adoption in 2020, following a period of statutory public consultation	Both the WHS Partnership Board and Technical Panel meet four times per year on average to monitor progress and oversee the delivery of the WHS Management Plan policies Answering the number and range of enquiries received by the WHS Office represents a significant aspect of ongoing Site management, which should be resourced accordingly
Enquiries received by the WHS Office	The WHS Office receives a large volume of enquiries following implementation of awareness raising projects. During 2010, 150 written enquires were received with a further estimated 260 telephone	NB. Staff and other resource limitations following a departmental budget reduction in 2014 necessitated an appraisal of the amount of office resource which should be dedicated to responding

	<p>enquiries. In 2011, written enquiries stood at 113 with the number of those by telephone remaining broadly similar to the previous year. In 2012, 148 written enquiries were received plus an estimated 300 telephone enquiries for the year to November</p> <p>In addition, the WHS Office also commented on many of the 139+ WHS related planning applications which were received during the 2010-2012 period. This was undertaken in consultation with Cornwall Council Historic Environment Service (HES) officers, charged with the duty of issuing planning responses under the terms of a service level agreement then in place with HES to discharge this function</p>	<p>to enquiries, going forward. It was duly decided to remove the office telephone numbers of staff from the Cornish Mining website to restrict enquiries to emails only</p> <p>Analysis of enquiries received during the calendar year 2016 indicate that 302 discrete enquiries were received, indicating that awareness of WHS status has continued to grow over the intervening years as a result of initiatives such as Discover the Extraordinary and Tinth Anniversary celebrations</p> <p>NB. The planning advice function was transferred to the WHS Office in July 2015 and has been the duty of a dedicated WHS Planning Advice Officer, since December 2015. See 3.1.2 for explanation.</p>
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3 Conservation of Outstanding Universal Value (OUV)

3.1 Protection

CWDML WHS Management Plan Polices: P4, P5, P6, P7, P8

The protection of a Site’s OUV is a mandatory requirement under the terms of the UNESCO ‘Convention Concerning the Protection of the World Cultural and Natural Heritage’, as ratified by State Parties comprising the World Heritage Committee in 1972.

Under the auspices of the UK planning system the WHS has protection through a number of Acts of Parliament, strategies and local government plans. Relevant paragraphs of the National Planning Policy Framework (NPPF, 2019) provide the overarching approach while the Cornwall Local Plan Strategic Policies (2010-2030) (Policy 24) - adopted November 2016 - and the West Devon Borough Council Local Development Framework Core Strategy Development Plan Document (2006-2026) (Strategic Policy 18) - adopted in 2011 - give policy protection for OUV at a local level.

- Cornwall Local Plan Strategic Policies 2010-2030

“Development within the Cornwall and West Devon Mining Landscape World Heritage Site (WHS) and its setting should accord with the WHS Management Plan. Proposals that would result in harm to the authenticity and integrity of the Outstanding Universal Value, should be wholly exceptional. If the impact of the proposal is neutral, either on the significance or setting, then opportunities to enhance or better reveal their significance should be taken.”

Cornwall Local Plan Strategic Policies (2010-2030) - Policy 24

Alongside the Local Plan, the Cornwall Minerals Safeguarding Development Plan Document sets out how mineral resources will be managed within the planning system and supports the delivery of relevant policies in the Local Plan. It was adopted by Cornwall Council on 4 December 2018 and carries full weight as part of the policy framework for Cornwall.

The NPPF states that local planning authorities should adopt appropriate policies in order that known locations of specific mineral resources of local and national importance are not needlessly sterilised by

non-mineral development. Safeguarding does not attempt to predict how much mineral resources will be needed over the plan period; instead it focuses on the viable mineral resources, taking into account evidence of them being a proven resource. It is important to note that there is no presumption in favour of minerals development within a Mineral Safeguarding Area, equally there is no presumption that non-mineral development within a Mineral Safeguarding Area is automatically precluded. The inclusion of land within a Mineral Safeguarding Area carries no presumption that mineral development would be acceptable or that planning permission would be forthcoming.

- Plymouth and South West Devon Joint Local Plan 2014-2034

A new Joint Local Plan for the Local Planning Authorities (Plymouth City, South Hams District and West Devon Borough Councils), was adopted in 2019. <https://plymswdevonplan.co.uk/policy> - this contains a number of relevant policies, the most notable being Policy DEV23:

‘Development proposals within or within the setting of the Cornwall and West Devon Mining Landscape World Heritage Site will conserve or enhance the Outstanding Universal Value of the site. In particular, regard should be given to the following:

1. The historical and social importance of key buildings or other features and their contextual setting.
2. The need to retain locally distinctive features in the design of buildings, layouts and landscape.
3. The integrity of industrial infrastructure, transportation networks and associated features.
4. The importance of and evidence for ancillary industries.
5. Be in accordance with the principles and objectives of the relevant Cornwall and West Devon Mining Landscape WHS Management Plan and other guidance/ adopted documents.’

This policy sits alongside other complementary policies that relate specifically to protecting the WHS and its setting in Tavistock (TTV20 and 21).

- The Devon Minerals Plan 2011-2033

(<https://devoncc.sharepoint.com/sites/PublicDocs/Planning/Planning/Minerals%20policy%20documents/Devon%20Minerals%20Plan/Final%20Adopted%20Version/Devon%20Minerals%20Plan%202011-2033.pdf?slrid=fc16bb9e-2085-7000-d050-78213b3f08ec>) was adopted in February 2017 and provides the minerals policy framework for Devon over the period to 2033. It includes specific reference to the needs of the WHS:

‘The Cornwall and West Devon Mining Landscape World Heritage Site is internationally designated for its cultural and historic landscape and is recognised for the contribution that the technology and infrastructure developed in this area made to the Industrial Revolution and mining practices globally. The landscape reflects this with historic canals, railways, engine houses and remains of mines. These elements determine the Outstanding Universal Value and the integrity and authenticity of the area, to which any proposal must be shown not to have an adverse effect upon; more information can be found in the Site’s Management Plan and its emerging Supplementary Planning Document. The National Planning Policy Framework highlights that substantial harm to or loss of this designated heritage asset of the highest significance should be wholly exceptional. Consideration must be shown, and evidenced, to the contents and guidance of the Cornwall and West Devon Mining Landscape World Heritage Site Management Plan 2013-2018 in proposals that are located within the World Heritage Site or that will have an adverse impact on its setting. When determining applications within these areas, regard must be had to the Management Plan and, on its adoption, the Supplementary Planning Document.’

Similarly, the Devon Waste Plan 2011-2031, adopted in, adopted February 2017, protects OUV in west Devon through Policy M19. (<https://new.devon.gov.uk/planning/planning-policies/minerals-and-waste-policy/devon-waste-plan>) acknowledges the international significance of Cornish Mining World Heritage Site, and policy W13 sets out protection for the Historic Environment.

There are no known proposed site options for waste management development within or close to the World Heritage Site.

- Devon County Minerals and Waste Development Framework - Minerals and Waste - not just County Matters; Part 2: Mineral Safeguarding Supplementary Planning Document 2018

'1.2.1 The Mineral Safeguarding Supplementary Planning Document [SPD] provides guidance to local planning authorities and developers on the implementation of Objective 2 and Policy M2 of the Devon Minerals Plan, which together provide for the safeguarding of the mineral resources and infrastructure identified in Table 3.1 of that Plan. In addition, the SPD will assist in meeting the mineral safeguarding requirements of national planning policy and, for local planning authorities, the statutory consultation requirements.'

- West Devon Borough Council Supplementary Planning Document (SPD)

At the time of writing (March 2020) it is intended that the Joint Local Plan SPD will be regarded as an emerging draft document until this is formally adopted.

- General Permitted Development Order (GPDO)

WHS are also afforded some protection through the designation of these as Article 2(3) land under General Permitted Development Order (GPDO) legislation.

- National Statutory Designations

Many attributes of OUV within the WHS have protection through UK statutory designations and Historic England maintains a list of sites designated at Listed Grade II* and above, which are under threat, within its 'Heritage at Risk' (HAR) Register. Updated annually, this highlights those features most at risk and provides outline condition assessments to aid management by owners and local authorities (see: 6.3). The Historic Environment team of Cornwall Council also maintains a list of features at risk as part of the council's Historic Buildings, Sites and Monuments Record (HBSMR). Since 2010 the WHS Office has commissioned a number of condition surveys to, firstly, establish baseline condition and then changing condition over time (see: 3.2).

3.1.1 Managing change

CWDML WHS Management Plan Policies: C2, C3, C5

Introduction and current status

In order to protect the OUV of the Site and to deliver against the Management Plan Conservation Policies (see above and 9.1), the Authenticity and Integrity of the Site must be maintained. Landscape attributes, which together comprise the OUV of the WHS, are potentially susceptible to harm caused by inappropriate development, whether this be through industrial, commercial, housing, agricultural or transport related change. Prior to July 2015, all planning advice issued on behalf of the WHS Office was provided by staff of Cornwall Council's Historic Environment Service and figures acquired in 2012 indicated that just short of 400 responses were made on planning applications for the two-year period March 2010 to April 2012. Since July 2015 the planning advice role for the Cornwall areas of the Site has been brought in-house, with this change being completed ultimately with the recruitment of a dedicated WHS Planning Advice Officer in December that year. The wisdom of this change has proven to be immediately apparent as the planning application response rate has risen dramatically. Analysis of an approximately six-month period from 1 September 2016 to 9 March 2017 indicates that 370 responses were made to 411 applications received, with 41 responses pending. If extrapolated, this gives a figure of circa 1,500 for a two-year period which underlines the effectiveness and benefit of the facility.

Maintaining the WHS as a 'living' landscape, where communities evolve and thrive, requires the careful integration of change within and around those features which comprise the Site's OUV. In recent years the addressing of this requirement has proven to be of some concern to the World Heritage Centre. Developments at Hayle, the potential resumption of mining at South Crofty, and a housing proposal

within the setting of the WHS at Callington Road, Tavistock, have all come under the scrutiny of UNESCO and its Advisory bodies ICOMOS and ICCROM. Reactive Monitoring Mission visits were undertaken to Cornwall and west Devon in 2013 and to Cornwall only in 2015 and have focused a spotlight on the challenges around achieving development which is both appropriate to - and respectful of - OUV. The granting of planning permission for a commercial development at Hayle Harbour South Quay in 2011 and the process by which this was undertaken without due reference to the World Heritage Centre, has led over time to the possibility of an 'in danger' listing for the Site. The second and current phase of development at South Quay, specifically the proposed construction of a mixed dwelling and commercial development along its northern extent, has served, however, as an opportunity to employ the enhanced decision-making processes discussed with the UNESCO Advisory bodies, and put in place since the Mission of 2015. The WHS Supplementary Planning Document, adopted by partner LPAs in May 2017, is also now available to inform the planning determination process – see: 3.1.2.

Managing the workload resulting from two Reactive Monitoring Missions and four subsequent World Heritage Committee decisions has deflected resources away from other strategic actions planned for the 2013-2018 Management Plan period. Consulting on the second phase of development, has consumed much officer time and that of the Technical Panel. At the time of writing (February 2019) South Quay remains a significant concern, but it is hoped revisions to the planning schemes initially proposed will be sufficient to ultimately remove the threat of the WHS being delisted at some future date.

3.1.2 WHS Planning Advice

The WHS Office acquired control of planning application consultation responses as of July 2015, initially engaging a consultant to comment on planning applications pending appointment to the WHS Planning Advice Officer post. Prior to this all planning advice relating to the WHS had been delivered by Cornwall Council's Historic Environment Service by means of a service level agreement in place between departments. Since December 2015, all WHS Planning Advice has been issued directly from the WHS Office by the Planning Advice Officer and is uploaded to Cornwall Council's planning web portal by the same.³

Analysis of planning applications assessed during select periods illustrates well the scale of the task of tracking development proposals within the WHS.

- Sample planning cases: 2016-2017

The following is a snapshot of the period 1st September 2016 to 9th March 2017, by way of an example of the number of planning applications received by the WHS Office and the outcomes following the submission of formal comments.

During the period 1st September 2016 to 9th March 2017 the WHS Office received formal consultations on 411 applications and provided responses to 370 of these, with 41 pending. By comparison for the same period in 2015/2016, the WHS Office received and responded to 339 applications. This constitutes an increase in application consultations received equating to 21 per cent.

A random sample of 41 applications (10 per cent) from this period provides the following insights

- 27 of the 41 applications were approvals, with none being in conflict with WHS advice
- Of the 41 applications, 2 were refused, both of which were the subject of WHS Office objections
- Of the 41 applications 12 (29 per cent) were withdrawn. The reason for withdrawal for at least 6 of these applications were unrelated to WHS comments

- Number of planning applications and responses in 2017

During the period 1st January 2017 to 31st December 2017, the WHS Office had received and reviewed 893 validated planning applications and provided responses to 876 of these. This equates to an average planning advice response rate of 2.4 applications per day, or 16.8 per week, including weekends, bank holidays and annual leave.

17 of the 893 applications received in 2017 were later either removed from Cornwall Council's Planning Portal website, before comment could be made, or deemed not relevant to the WHS. These applications were dealt with separately as Tamar Valley AONB responses or passed on to other heritage officers/agencies as being related to their field of interest.

- Number of planning applications and responses in 2019

During the period 1st January 2019 to 31st December 2019, the WHS Office received and reviewed 790 validated planning applications. A random sample of 79 cases (10 per cent) gave the following;

- Applications objected to by WHS = 17 - of which, 6 applications were refused, 10 were approved and 1 application was withdrawn
- Of the 6 applications that were refused, 2 refusals were appealed, and both were dismissed (giving a success rate of 100 per cent within the sample)
- The 10 applications that were approved contrary to WHS advice represents 13 per cent of total sample, if extrapolated up to 790 applications then this would represent 103 applications not determined in accordance with WHS advice

Explanatory note: of the 10 cases approved despite WHS objection in 2019, 6 would be classed as minor issues such as better materials, slight design alteration required, no upgrade in quality of previous works, etc. and 2 applications were modified to overcome WHS objections but without further consultation with the WHS.

These 8 applications approved contrary to WHS advice, whilst not an enhancement within the WHS, would not threaten the authenticity and integrity of WHS attributes.

Of the 10 cases approved, 2 cases would result in a degree of harm to specific attributes of OUV. This would represent 2.5 per cent of cases where some harm to OUV will occur (in both cases the harm was somewhat minor). If this trend applies to the full 790 cases, then this would equate to 20 cases a year where some harm of varying degrees occurs to OUV.

Applications where no objection was raised = 62, this represents 78 per cent of applications not being an issue for WHS. If we were to factor in the 8 applications where the objection from the WHS is on minor issues of design or where the scheme was modified without further consultation with the WHS, as per the note above, then overall 89% of applications would be compliant with WHS advice or not result in a level of change that threatens the authenticity and integrity of the WHS.

Number of applications which had an HIA submitted (including when requested by WHS) = 21 (27 per cent of sample) if this trend is consistent across 790 applications then only 213 of them would have an accompanying HIA despite the CC adopted validation checklist (2019) requiring them for all applications within or affecting the WHS. Equally HIAs are not always submitted as a matter of course and had to be requested following WHS requests for them and not all HIAs are of good quality.

3.1.3 Notable planning wins at Appeal

Example: APP/D0840/W/16/3153632 (Chacewater)

One of the trends the WHS Office has identified in planning applications relates to proposals on the peripheries of rural settlements and within open countryside, which in the WHS can be within areas historically used as smallholdings.

The WHS Office was tasked to find a consistent approach to assessing applications that could impact upon mineworkers' smallholdings which are an attribute of OUV. Following consideration, the approach below was adopted in order to assess potential harm.

1. Context of land holding in the WHS landscape: is it a rare survival? Has it been compromised through boundary loss? What physical remains are there (buildings, dwellings, field boundaries, etc.)?
2. Does the proposed development overwrite the smallholding system to the extent that it is no longer legible as such, i.e. through housing development, even where historic hedge boundaries are to be retained?

The WHS Office now has the benefit of a planning appeal decision (APP/D0840/W/16/3153632) where the primary reason for refusal is in reference to the proposed loss of smallholding fields as an attribute of OUV. The WHS Planning Advice Officer provided the Local Planning Authority with the wording for the refusal reason, and extensive comments on the matter were provided by way of a formal statement to the Planning Inspectorate.

The appeal was dismissed with key points of note being as follows.

- The WHS Office was requested by Cornwall Council as LPA to provide the wording of the refusal – this was done via email exchange on 10th February 2016
- The WHS Office provided its statement (on 20th October 2016) to the Planning Inspectorate for their consideration.
- The Inspector issued his decision on 14th December 2016.

Below are excerpts from the WHS Office statement sent to the Inspector and excerpts from the decision notice for comparison.

1. WHS - 4.1 ...The concern of the WHS Office in respect of this development is that in developing the fields for housing the resultant development will overwrite the smallholding as an attribute that expresses OUV. The retention of hedges will not suffice to overcome this harm. The hedges are the last remnants of the smallholding, i.e. they remain as a legible landscape element that shows what the fields were used for, they are physical markers that define the fields as a mineworkers' smallholding through size, shape and layout.

Inspector – 24 Part of the understanding of the smallholding is the legibility of the pattern of fields. They are physical markers that define the fields as a mineworker's smallholding through size, shape and layout. In my view the introduction of this number of dwellings with the number of gardens would break up the legibility of the fields leading to harm to the overall heritage asset.

2. WHS - 4.1 ...In overwriting the fields with a new form of development (in this case housing) the smallholding is overwritten; it no longer reads as what it was. Even if the hedges remain in situ the field system is lost to the new development, the hedges simply become boundaries to gardens, open space and parking areas, there is no historic context left.

Inspector - 22 & 23 ...The individual properties would have individual curtilages each defined by boundaries, and it is highly likely, if not inevitable, that the existing Cornish hedgerows would be incorporated into a high proportion of the individual gardens and become at least part of their boundaries.

It is not clear how the existing Cornish hedgerows would be maintained; particularly as inevitably individual occupiers would have different desires as to how their gardens would be maintained leading to different solutions. This would increase the risk that the hedgerows would be physically lost over time.

3. WHS - 4.3 ...It is the contention of the WHS Office that the attribute that expresses OUV would be lost if the proposed housing development were to be granted and that this loss cannot be adequately mitigated. As the refusal reason notes this smallholding is a rare survival in this section of the WHS and therefore its significance is clear. There is no hierarchy in terms of the seven key attributes that express the OUV of the WHS, they are all equally valuable. Whilst not as readily discernible as being related to the mining landscape of Cornwall and West Devon, mineworkers' smallholdings are nonetheless intrinsically part the OUV of the WHS.

Inspector - 18 It seems to me that the WHS is made up of all its attributes and that none should be given greater priority than another; it is an integral whole. Thus, the fields of smallholdings are important to an overall understanding of the WHS as they show miners often had second areas of work.

4. WHS - 5.8 ...It is the WHS Office's view that the argument presented in the statement implies that small changes to the WHS can be allowed even where they harm/overwrite key attributes especially as they only form one of the many attributes present in an area of the WHS.

Again, the WHS is of the view that this argument does not align with the UNESCO Guidelines, ICOMOS HIA Guidance and indeed runs contrary to the NPPF and PPG.

In respect of this argument the WHS Office would draw the Inspectors attention to another recent appeal (APP/C1055/W/15/3141117). That appeal again dealt with proposed development within the setting of a WHS, in this case the site was within the Derwent Valley WHS buffer zone.

In dismissing the appeal, the Inspector noted at paragraph 36 of their decision that;

"...Planning Practice Guidance (PPG) endorses the principle of protecting a World Heritage Site from the effect of changes which are relatively minor but which, on a cumulative basis, could have a significant effect."

Given the above it is evident that the harmful impacts of cumulative change in the buffer zone to a WHS is not accepted as being compliant with current planning practice.

Inspector - 27 ...Even taking into account that the appeal site is only a very small percentage of the overall WHS I therefore conclude that the severity of the impact would represent a major change and would have a major adverse effect as smallholdings represent a key attribute of the WHS.

5. WHS - 5.1 ...As has been set out in the consultation response provided by WHS Office the harm to a key attribute is considered to be substantial.

Inspector - 28 That being the case the proposals would represent substantial harm to the significance of the heritage asset, and, in line with paragraph 133 of the Framework, permission should be refused unless it can be demonstrated that the substantial harm is necessary to achieve substantial public benefits that outweigh that harm, or all of four criteria apply. These four criteria are not applicable to this case. I will make the assessment in the planning balance section of this decision below.

6. WHS - 5.10 The WHS Office is concerned that there was a failure to identify the key attribute when undertaking the original HIA, the significance of that attribute is being underplayed and that the public benefits offered as part of this scheme are not considered to outweigh the harm identified whether that is deemed to be substantial harm or as being less than substantial.

Inspector - 57 ...That being the case the public benefits are not substantial and therefore do not outweigh the environmental and social harm to the WHS. As such the proposal does not comply with the CLP as a whole.

This appeal decision represents one of several recent examples where an inspector has given weight to protection of World Heritage Sites. These are providing clarity and useful precedent for how to protect the WHS and deliver the World Heritage Convention in the context of the UK Planning system.

The following table contains statistics relating to the number of planning applications made within the WHS Areas, and also the number of responses made by the WHS Office and other heritage consultees. Data presented in the previous Monitoring Report (2012) has been retained for comparison with that obtained for the period of this monitoring assessment - July 2015 to July 2017.

Status summary: Planning application data collated and analysed by WHS Planning Advice Officer for the Areas of the WHS in Cornwall. Planning application data collated and analysed for west Devon separately by partner local planning authorities and heritage agencies. A greatly enhanced planning advice function secured for the WHS in 2015, leading to a significant improvement in the number and quality of planning advice responses made. Land-cover change data sourced with respect to mineworkers' smallholdings in 2012, but of limited coverage with respect to the WHS; aerial photography to be reconsidered to address this issue, resources permitting. A revised Land-cover assessment is due to be published in 2018 by the Environmental Records Centre for Cornwall and the Isles of Scilly (ERCCIS)⁴.

Indicator	Status	Notes
Planning applications within the World Heritage Site	<p>Cornwall – WHS Areas A1 to A10:</p> <p>A total of 3,629 application determinations were recorded for the Cornwall Areas of the Site between 1st March 2015 to 30th April 2017*, in comparison to 2,909 for the same period between March 2010 and April 2012. This appears to indicate a 20 per cent (19.8) uplift in recorded applications/ determinations, but the earlier figure is known to be incomplete **</p> <p>Per WHS Area in Cornwall:</p> <p>A1 – 365 A2 – 151 A3 – 613 A4 – 48 A5 - 950 A6 – 541 A7 – 338 A8 – 108 A9 – 160 A10 – 355</p>	<p>In Cornwall planning application validation and determination is recorded be means of the UNI-form e-planning system I-DOX, with the Northgate M3 system fulfilling this function in west Devon/South Hams</p> <p>* Data courtesy of Cornwall Council Applications & Data team</p> <p>** NB. This figure is known to be incomplete as the Cornwall Council Unitary Authority area planning teams did not adopt the UNI-form e-planning system I-DOX until August 2010</p>

<p>Comments on planning applications made within the World Heritage Site by partner authority Historic Environment advisors 2010-2012</p>	<p>Per WHS Area A10 in West Devon:</p> <p>91 planning cases were recorded for the west Devon A10 Area of the Site between 1st March 2016 and 30th April 2017; compare with 63 for the period April 2011 to February 2012</p> <p>Cornwall – WHS Areas A1 to A10:</p> <p>Comments were made on 397 pre and validated planning applications by Cornwall Council Historic Environment (CC HE) planning advisors from March 2010 to April 2012 **</p> <p>West Devon – WHS Area A10:</p> <p>Comments were made on 30 planning applications by Devon County Council Historic Environment (DCC HE) planning advisors from March 2010 to April 2012; of these 24 were determined by West Devon Borough Council and 6 by Devon County Council. 1 Breach of condition process was also investigated by the DCC Historic Environment team during this time</p>	<p>** NB. This figure is likely an underestimate as the Cornwall Council Unitary Authority area planning teams did not adopt the I-DOX UNI-form e-planning system until August 2010</p>
<p>Comments on planning applications made within the World Heritage Site by WHS Planning Advice Officer 2015-2017</p>	<p>Cornwall – WHS Areas A1 to A10:</p> <p>Comments were made on c.1,400 planning applications by dedicated WHS Planning Advice Officer, from December 2015 to November 2017**</p> <p>Comments were made on 790 planning applications by dedicated WHS Planning Advice Officer, from January 2019 to December 2019</p> <p>West Devon – WHS Area A10:</p> <p>Comments were made on 94 planning applications by Devon County Council Historic Environment (DCC HE) planning advisors from 1st April 2015 to 30th March 2017, from a total of 1,303 applications made in west Devon during this period***</p> <p>The DCC HE team engaged in 3 planning pre-application consultations from 1st April 2015 to 30th March 2017</p>	<p>** During the period 1st January 2017 to 31st December 2017, the WHS Office had received and reviewed 893 validated planning applications and provided responses to 876 of these</p> <p>Greatly enhanced WHS planning advice function has secured notable gains at Appeal; responses are now benefiting from growing Appeal case precedent</p> <p>***Data courtesy: County Archaeologist, DCC Historic Environment Service</p>

<p>Consultations received by Historic England with respect to planning applications within the World Heritage Site</p>	<p>Listed Building applications with possible WHS interest: 52 (mostly through West Devon Borough Council casework)</p> <p>Consultations were received, and responses given, on 21 Listed Building Consent cases and 89 planning cases, for the period 1st September 2016 to 1st September 2017 (includes all Cornwall and west Devon Areas of the Site) **</p>	<p>Data courtesy: Historic England South West Office</p> <p>** NB. These figures include some 'no further action' responses</p>
<p>Land-cover change – mineworkers' smallholdings</p>	<p>Cornwall – WHS Areas A1 to A10: Figures supplied by Cornwall Wildlife Trust indicate that some 11 km of field boundaries were lost within what are now the World Heritage Site Areas in Cornwall between 1995 and 2005, and principally through agricultural improvement, the figure for Cornwall as a whole being 152 km. The 11 km figure is considered to be lower than the actual degree of loss experienced over this period, however, due to the data being derived from random sampling only</p> <p>West Devon – WHS Area A10: Mineworkers' smallholdings are not a common feature of the west Devon area of the WHS but a limited degree of boundary loss (<1 km) was noted (2012) in the southern area of the Site (near South Hooe Farm***)</p>	<p>It is understood the Environmental Records Centre for Cornwall and the Isles of Scilly (ERCCIS) is to publish a revised land-cover assessment in 2018, based on data acquired up to 2015</p> <p>*** Ref: 'The West Devon Borough and Tamar Valley Area of Outstanding Natural Beauty Landscape Character Assessment' (2008)</p>

3.1.4 World Heritage Site Supplementary Planning Document (2017)

In order to enhance protection through the planning system a Supplementary Planning Document (SPD) was drafted on behalf of the CWDML WHS in 2016 and formally adopted by the partner local authorities in May 2017, i.e. Cornwall Council, Devon County Council, and West Devon Borough Council. This has been produced in accordance with the World Heritage Site related paragraphs of the NPPF, specifically sections 128, 132, 137 and 138.

The contractors Land Use Consultants were appointed in December 2014 to develop an initial draft of the SPD and in accordance with a brief set by the project Steering Group. Further revisions were undertaken by members of the WHS team with support from partner local authorities. A public consultation exercise confirmed that, as a means of aligning the UNESCO World Heritage Convention requirements with the current UK Planning system through which these are delivered, the processes described are accurate and deliverable. The final draft included amendments in line with comments made during the public consultation exercise and was reordered and reduced in length.

The SPD sets out how the planning authorities will seek to fulfil the responsibilities, and opportunities, deriving from WHS status. The opportunities include substantial social and economic gains for Cornwall and Devon. The SPD seeks to clarify what makes the WHS important, why it must be protected and how the planning system can do this. It is concerned with protecting the landscape characteristics – the attributes of OUV - that make the ten Areas of Cornwall and west Devon worthy of being a WHS. It is structured to explain these requirements as clearly as possible and aims to encourage early and

effective consultation between developers, the Local Planning Authorities and historic environment professionals.

The SPD is available to download via the 'Planning in the Site' page of the Cornish Mining WHS website - see: <http://www.cornish-mining.org.uk/planning-site>

Indicator	Status	Notes
Planning policy protection	National Planning Policy Framework (NPPF, 2018) containing specific reference to WHS protection; WHS designated as Article 2(3) land under General Permitted Development Order (GPDO) legislation; the Cornwall Local Plan Strategic Policies (2010-2030) references the WHS Management Plan under Policy 24; WHS Supplementary Planning Document (SPD) adopted by partner local authorities 31 May 2017; West Devon Borough Council Local Development Framework Core Strategy Development Plan Document (2006-2026) - Strategic Policy 18; covers the west Devon area of the Site (adopted 2011)	Emerging Local Plan for Plymouth, South Hams and west Devon will cover the WHS in west Devon NB. OUV Area significance statements created in 2007, and revised in 2012
Number and type of statutory designations within the WHS:		
Listed buildings:	1,654* (Cornwall: 1,468 [+159 recorded since 2012]; West Devon: 186 [+107 recorded since 2012])	*As of September 2017 Data: Cornwall Council HBSMR and Historic England
Scheduled Monuments:	186* (Cornwall: 182 [+38 recorded since 2012], West Devon: 4)	
Conservation Areas:	36*(Cornwall: 34, West Devon: 2)	

Status summary: Management structure in place to co-ordinate the delivery of the 34 policies set out in the WHS Management Plan (2013-2018); governance structure of WHS Partnership Board and Technical Panel in operation, with WHS Office and staff hosted by Cornwall Council. Protection of WHS OUV assets afforded at national and local levels through the National Planning Policy Framework (NPPF, 2019), General Permitted Development Order legislation (Article 2(3) status), the Cornwall Local Plan Strategic Policies (2010-2030), and West Devon Borough Council Local Development Framework Core Strategy Development Plan Document (2006-2026). WHS Supplementary Planning Document (SPD) adopted by partner local authorities in May 2017 which provides greater clarity around the OUV of the WHS and how this is to be protected through the planning system. Systematic training for planning officers and council elected members (and others) available. WHS Office advising Cornwall Council as LPA in its pursuance of planning determinations at South Quay, Hayle.

3.1.5 Neighbourhood Development Plans and Guidance Note (2019)

- Neighbourhood Development Plans (NDP)

There are certain legal requirements that Town and Parish Councils need to consider when developing a Neighbourhood Development Plan or Order that is set out within the Neighbourhood Planning

Regulations (2012) and the amended Regulations (2015). Neighbourhood Development Plans must meet certain conditions to become legally compliant.

Local authorities have a statutory role in supporting Neighbourhood Planning. As part of the Neighbourhood Planning process, Town and Parish Councils must submit a letter and map to the Local Planning Authority to designate their Neighbourhood Area that their Plan covers. The local Authority must consult local people on certain stages during the development of individual Plans such as the designation of the Neighbourhood Area and the submission of the draft Plan proposal. The local Authority also has a responsibility to appoint an Independent Examiner for each individual Plan and to organise the respective Referendums.

At the time of writing (March 2020), the 'Made' (adopted) Plans and the 'Plans in development', which intersect with the WHS, are as follows;

'Made' Plans (9)	Plans in development (27)	
• Bere Ferrers	• Breage	• St Agnes
• Chacewater	• Calstock	• St Austell Bay
• Feock	• Camborne	• St Blaise
• Gwinear-Gwithian	• Carlyon	• St Cleer
• Hayle	• Crowan	• St Day
• Illogan	• Gwennap	• St Gluvias
• Lanlivery	• Linkinhorne	• St Hilary
• Lanner	• Madron	• St Just and Pendeen
• Luxulyan	• Mylor	• Stithians
	• Perranarworthal	• Stoke Climsland
	• Perranuthnoe	• Tavistock
	• Portreath	• Tywardreath and Par
	• Redruth	• Wendron
	• Sithney	

Further NDP notes as of March 2020;

- Breage – further NDP consultation taking place over April 2020
- Callington and Kelly Bray – consultation on draft vision ended January 2020
- Camborne – initial public meeting held on 29 October 2019
- Carn Brea – commenced in 2018
- Gwennap NDP – successful at referendum on 27 February 2020 and will be adopted ('made') in the near future
- Linkinhorne – draft NDP dates as February 2020
- St Cleer – currently at examination
- St Ive – no apparent progress since 2013-2014
- St Erth - formally 'made' on 28 June 2018

- Tywardreath and Par - Parish Neighbourhood Plan Steering Group meeting scheduled in March 2020
- NDP Guidance Note

In 2019 the World Heritage Site Office prepared a guidance note for use by those drafting Neighbourhood Development Plans (NDP) and the content of this is reproduced below. This is available via the Cornwall Council website at: <https://www.cornwall.gov.uk/media/39892027/world-heritage-site-revised-ndp-guidance-note-aug-2019.pdf> The content of the guidance will be revised upon the adoption of the current Management Plan (2020-2025).

>>>> The purpose of this guidance note is to encourage communities to consider what Neighbourhood Development Plans (NDPs) can do to protect the World Heritage Site.

UNESCO World Heritage status is a designation for places of outstanding value to all humanity. These sites have been chosen through their natural and/or cultural significance to be protected for future generations to appreciate and enjoy. The Cornwall and West Devon Mining Landscape World Heritage Site (WHS), or 'Cornish Mining', was inscribed on the World Heritage List on 13 July 2006. World Heritage status gives international recognition to Cornish Mining's contribution to the development of our modern industrial society.

The Cornwall and West Devon Mining WHS is a landscape designation, which covers a series of 10 Area locations, comprising the distinctive patterns of buildings, monuments and sites which together form the coherent series of distinctive cultural landscapes created by the industrialisation of hard rock mining processes in the period 1700 to 1914. It is a heritage asset of the highest significance. With this in mind it is useful to consider the impact of development in both a landscape visual/character sense as well as impacting upon specific buildings and structures. You can use Cornwall Council's free to use Interactive Mapping to view a map of the WHS and link directly to the information on that Area of the WHS. Information on the WHS and the existing planning context are included in these documents:

- The World Heritage Site Management Plan (2013-2018)
- World Heritage Site Supplementary Planning Document (2017)

Both of these documents are available via the [Cornish Mining Website](#) and provide detailed information on how the impact of development should be assessed. When developing your plan, it is important to consider what additional local detail the NDP may provide to these existing policies. For example, the main benefit in terms of protection of the WHS would be if the NDP contained specific heritage and landscape policies, based on the evidence from the WHS Management Plan.

Key points to consider

There are seven landscape 'Attributes' that express the 'Outstanding Universal Value' of the WHS.

- Mine sites including ore dressing sites
 - Mine transport
 - Ancillary industries
 - Mining settlements and social infrastructure
 - Mineworkers' smallholdings
 - Great houses, estates and gardens
 - Mineralogical and other related sites of particular scientific importance
- These are all of equal international importance under the World Heritage Site designation. Attributes can have differing degrees of national statutory protection, for example a Listed engine house or chapel within a Conservation Area (nationally designated) versus a mineworkers' smallholding field or a mine spoil heap (nationally non-designated), but the whole WHS and therefore all the landscape attributes are designated assets of the highest significance.

- There will be related features/landscapes that are located beyond the boundaries of a development site that are either functionally related to the WHS or provide a landscape context that are important in terms of the setting to the WHS.
- The WHS differs from designations such as Areas of Outstanding Natural Beauty (AONB) in that many areas of the WHS are not aesthetically pleasing, but nonetheless are essential to the make-up of the Site overall. Equally, impacts such as noise may be an issue in an AONB, where tranquillity is part of that designation's special qualities, whereas this is not necessarily an issue within the WHS (subject to the context of the site in question).

The World Heritage Site: national and local planning context

National Planning Policy Framework (NPPF) and Guidance (NPPG)

The NPPF confirms that WHSs are internationally recognised to be of Outstanding Universal Value. These assets are an irreplaceable resource and should be conserved in a manner appropriate to their significance, so that they can be enjoyed for their contribution to the quality of life of existing and future generations. (Para 184) Any loss of such assets should be wholly exceptional (para 194) and local authorities should also look for opportunities to promote development that preserve those elements of the setting that make a positive contribution to the asset or which better reveal its significance (para 200)

The NPPG also gives detailed advice on planning for development in or affecting world heritage sites in paragraphs 26-38 of the Conserving and Enhancing the Historic Environment Section and requires WHSs to be protected from inappropriate development, while encouraging enhancement of Sites and their settings where appropriate. Paragraph 32 sets out the principles that should inform the development of a positive strategy for the conservation and enjoyment of World Heritage Sites.

The Cornwall Local Plan Strategic Policies (2010-2030)

CLP Policy 24: Historic Environment provides the local strategic policy context for the historic Environment in Cornwall. Regarding the World Heritage Site, it says:

...Development within the Cornwall and West Devon Mining Landscape World Heritage Site (WHS) and its setting should accord with the WHS Management Plan. Proposals that would result in harm to the authenticity and integrity of the Outstanding Universal Value, should be wholly exceptional. If the impact of the proposal is neutral, either on the significance or setting, then opportunities to enhance or better reveal their significance should be taken.

...Proposals causing harm will be weighed against the substantial public, not private, benefits of the proposal and whether it has been demonstrated that all reasonable efforts have been made to sustain the existing use, find new uses, or mitigate the extent of the harm to the significance of the asset; and whether the works proposed are the minimum required to secure the long term use of the asset.

The Cornwall & West Devon Mining Landscape World Heritage Site Management Plan (2013-2018) Consider referencing the following protection and conservation policies (and potentially others) as set out within the World Heritage Site Management Plan:

Protection Policy P2: All relevant strategic planning documents will make provision for the protection, conservation and enhancement of the Site and its setting.

Conservation & Enhancement Policy C2: New development will add to the quality and distinctiveness of the Site by being of high-quality design and respectful of setting.

Conservation & Enhancement Policy C7: The historic character and distinctiveness of the Cornwall and West Devon mining landscape will be maintained.

What can an NDP add to strategic Policy?

NDP Area Mapping

Consider including a suitably scaled and annotated map of the Neighbourhood Area depicting the boundary of the World Heritage Site and also other designated areas and heritage assets, as appropriate.

WHS Management Plan Appendices

Use the information in the area descriptions in [Appendix 8.1](#) to the WHS Management Plan, which includes the statement of Outstanding Universal Value for each Area and descriptions of the features and character of the Area, to inform your NDP strategy.

Examples and Case Studies

The heritage policies set out within the [Hayle NDP](#) are a good example of how to apply the above general advice to deliver appropriate policy for a specific local context. As well as a general policy about the protection of the WHS, Hayle NDP has policy HB3 on Signs, Advertising and Illumination.

‘As a qualifying body with the right to set planning policies for a World Heritage Site, we take our responsibility very seriously. We seek to adhere to the policies in the current WHS Management Plan, which includes obligations under Policy P3, of the Management Plan, to ensure that new development protects, conserves and enhances the World Heritage Site and its setting, and under its Policy C7 to maintain the historic character and distinctiveness of the Cornwall and West Devon mining landscape. Hayle Town Council is strongly against illuminated signs in the Conservation Area and World Heritage Site. It successfully opposed internally illuminated signs at Gratton's Garage and proposals by Asda in 2014 to have illuminated signs on its new harbour-side superstore. Regarding the Asda application, the store is situated in a sensitive conservation area and, more importantly, within a World Heritage Site. The proposed signs were over-large and internally illuminated and considered, therefore, to be inappropriate. Hayle has thus been able to retain its World Heritage Status, despite the incongruity of some recent developments. The Town Council feels that not acting to prevent illuminated signs and advertising sites could jeopardise the town's WHS status/ The Community Consultation of 2016 showed that 97.3% of respondents were in favour of this policy.’

‘POLICY HB3 Signs, Advertising and Illuminations Development proposals within or affecting the Conservation Area or the World Heritage Site shall not include: i) advertising or other signs that are internally illuminated; and ii) external illumination of buildings or signs that impact adversely on the heritage areas.’

Further Information

- If you are approached by a developer, the World Heritage Site Office provides a pre-application advice service for major planning developments within the Site and further information can be found on the [Cornish Mining Website](#) and within the document: [The Cornwall and West Devon Mining Landscape World Heritage Site Pre-application Advice Service](#).
- Half-day training sessions are also available for those who wish to have an introduction to the World Heritage Site Supplementary Planning Document and its practical application. <<<<

3.1.6 The Setting of the World Heritage Site

CWDML WHS Management Plan Policy: P8

The setting of the CWDML WHS has been established as nominally the Cornish coastline and the western fringes of Dartmoor, as a high degree of inter-visibility exists between the ten separate Areas as inscribed. This delineation is effectively the nominal ‘buffer zone’ for the Site, as a formal buffer was, by

choice, not adopted at the time of nomination due to the perceived difficulty which would accompany the management of such. World Heritage Site buffer zones also have no legal status in UK planning law.

Effective monitoring of the setting could include periodic fixed-point photography to capture relevant views. Aerial photography may be beneficial here if such a survey could be co-funded as, perhaps, part of a partnership funded landscape recording project. A similar approach will be required to cover sites in west Devon which may possibly be achieved in partnership with Devon County Council's Historic Environment Service.

The OUV Area Statements work undertaken by the WHS Office in 2007 will be a valuable asset in monitoring as it provides fine-grained definitions of the ten inscribed Areas with a focus on the distinctiveness of each (see: <http://www.cornish-mining.org.uk>). The immediate landscape setting for the individual Areas can be, to a degree, informed by these definitions and used to prepare a checklist of values to aid the monitoring process.

Status summary: fixed-point photographic survey completed for OUV features within the Site, and 'baseline' condition assessment created expressing the condition of these; subsequent surveys undertaken in 2011, 2014 and 2017. Aerial photography could be explored to address WHS setting issue over the period of the next Management Plan (2020-2025).

Indicator	Status	Notes
Setting protected through established planning assessment/determination process	The high degree of inter-visibility between Areas of the World Heritage Site effectively precludes the use of a buffer zone and, consequently, no buffer zone was included in the WHS Nomination	Impact of planning proposals on the setting of the WHS is assessed, principally, according to scale, massing, proximity of development, materials proposed, and any associated heritage conservation gains secured through planning conditions
Fixed point (and aerial) photography	Options for this could be explored with the Historic Environment departments of Cornwall and Devon County councils if resources permit	

3.1.7 Sites of mineralogical value as Attributes of OUV

CWDML WHS Management Plan Policies: P1, P2, P3, P5, P6, P7

In excess of 450 mineral species have been recorded in Cornwall and Devon, almost fifty per cent of the British total, with fifteen metallic ores understood to have been mined in significant economic quantities.⁵ Cornwall '... has long been a classic area of British geology, on account of its wealth of mineral deposits...' ⁶ while Devon is known to geologists the world over for its variety of rock types and as the 'type area' of the Devonian System.

County Geology Sites (CGS)

Cornwall and Devon's geological importance has given rise to the inclusion of a number of sites as designated County Geology Sites (CGS), formerly known as RIGS sites (Regionally Important Geological/Geomorphological Sites). While this designation is of county status only, and is not therefore statutory, it does convey something of the significance of these areas to the science of mineralogy, and to the WHS and protection issues, through local planning policies. There are currently 108 CGS sites within Cornwall and 81 CGS sites in Devon.

The monitoring of CGS sites within both Cornwall and west Devon is undertaken by the Cornwall RIGS Group, the geological arm of the Cornwall Wildlife Trust Cornwall Wildlife Trust, and the Devon RIGS Group respectively. The former reviews and adds sites to the register periodically, but it is understood the monitoring activities of the Devon RIGS Group are now somewhat curtailed by personal and other

resource limitations (Pers. Comm., P. Chamberlain). The background to County Geology Sites and the site selection criteria for those in Cornwall is comprehensively set out within: Hocking, S. (2010) *County Geology Site Criteria for Cornwall And The Isles Of Scilly*. Truro: Cornwall Wildlife Trust & Environmental Records Centre for Cornwall and the Isles of Scilly.

Sites of Special Scientific Interest (SSSI)

A number of sites within Cornwall and west Devon are designated Sites of Special Scientific Interest (SSSI) through their mineralogical/geological importance and all are protected by law. Some SSSI express OUV and a full list of those within the WHS can be seen at: 9.5. SSSI are administered and monitored by Natural England which can identify land designated as SSSI and provide information on activities which may or may not be permitted.

Natural England's 'MAGIC' interactive online mapping can be used to identify land which may be on or within a SSSI - <http://www.magic.gov.uk/> - and specific SSSIs can be searched using Natural England's Designated Sites system: <https://designatedsites.naturalengland.org.uk/>

This web facility also presents information covering:

- 'Operations requiring Natural England's consent' - lists of permitted activities for specific SSSIs can be downloaded
- The condition of the site
- Natural England's advice on managing and protecting the site

Monitoring: possible future research methodologies/objectives

- Fixed point photography of CGS sites undertaken periodically as part of scheduled condition monitoring assessment. Will require resourcing which is understood not to be currently available. Discussion with the Cornwall and Devon RIGS groups and Cornwall Wildlife Trust is recommended to explore options for enhanced monitoring
- Discuss SSSI monitoring/data sharing options with Natural England, the administering body

Status summary: Register of relevant County Geology Sites and SSSIs in place for Cornwall and west Devon though monitoring data for the former is limited for sites in west Devon; periodic condition monitoring of all SSSIs currently undertaken by Natural England.

Indicator	Status	Notes
County Geology Sites (RIGS)	26 County Geology Sites (CGS or RIGS) recorded within the WHS, 21 in Cornwall and 5 in west Devon – see 9.4 for details and condition status The total number of County Geology Sites in Cornwall and Devon: 108 and 81 respectively (as of 2012)	Monitoring of the County Geology Sites in Cornwall comes under the remit of Cornwall Wildlife Trust with the intention being to undertake a rolling programme of site assessments and record updates, but this is understood to be dependent on the availability of funding. Currently members of the RIGS Group (Regionally Important Geological and Geomorphological Sites) submit condition assessments on a voluntary basis as and when this is considered necessary. In Devon the monitoring function has been undertaken by the Devon RIGS Group and Devon

<p>Sites of Special Scientific Interest (SSSI)</p>	<p>12 SSSIs with mineralogical / geological relevance recorded within the WHS, 10 in Cornwall Areas and 2 in west Devon Area (see: 9.5)</p>	<p>County Council though current arrangements are uncertain</p> <p>No significant change of CG site status though concerns were expressed in 2012 with regard to Redmoor Mine, near Callington, due to on-site tipping; current status of this site unknown though expect no change</p> <p>No significant change of SSSI status is known for these though Penberthy Croft Mine near Relubbas has previously been highlighted for attention due to possible mine waste dump removal (c.2012)</p>
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3.1.8 Cornwall Council Minerals Strategy

The adopted Cornwall Local Plan Strategic Policies (2010-2030) document is supported by other formal documents including Development Plan Documents (DPD), providing further detail for policies such as mineral safeguarding. The policies within the Cornwall Local Plan must be read and considered as a whole and in conjunction with national planning policy.

The Cornwall Local Plan contains two policies specifically relating to mineral development. The first policy sets out the general principles for mineral development throughout Cornwall, providing support for the industry. The policy states that a sufficient supply of indigenous minerals will be maintained.

The policy continues by setting out the strategy for new mineral development throughout Cornwall for the different mineral sectors; for china clay these are restricted to the St Austell (Hensbarrow) area; throughout Cornwall for building stone, metal and other industrial minerals (of a scale sensitive to any landscape designation) and primary aggregates of a grade not available from other permitted reserves. The aim of this strategy for mineral development is to ensure that the scale of development respects any landscape designations and whilst making provision for minerals, which can only be worked where they naturally occur.

The policy also makes reference to the need for effective reclamation for beneficial after-uses.

NB. the Minerals DPD may be revised following examination which will require changes to this commentary.

Policy 18 – Minerals – General Principles

1. Support will be given to maintain and grow a world class, thriving and sustainable minerals industry in Cornwall which meets local needs as well as exporting minerals, predominantly by rail and sea, to serve regional, national and international markets.
2. A sufficient supply of indigenous minerals will be maintained to achieve sustainable and economic growth, whilst encouraging the use of recycled and secondary materials, particularly secondary aggregates from china clay (kaolin) production, to minimise the requirement for new extraction.
3. New mineral development, of a scale sensitive to any landscape designations, will be supported in the following areas;
 - a. China clay (kaolin) and secondary aggregate extraction in the St Austell (Hensbarrow) China Clay Area.
 - b. Throughout Cornwall for:

- i. Building, roofing and ornamental stone;
 - ii. Metal and industrial minerals; and
 - iii. Primary aggregate development for a particular grade of material not provided for by other permitted reserves,
4. Mineral recycling and recovery facilities will be supported where they fall within well screened areas at currently operational quarries and landfill sites.
5. Mineral development should have no adverse impact from slope stability, differential settlement of quarry backfilling and mining subsidence.
6. All mineral development should enable effective reclamation at the earliest opportunity for appropriate uses that:
- i. Contribute to and enhance the natural and local environment including, ecosystem services and networks; and
 - ii. Conserve and enhance heritage assets and protect and enhance valued landscapes, geological conservation interests and soils; and/or
 - iii. Have the potential for wider community benefits.

The other mineral-specific policy relates to safeguarding mineral resources. The policy states that important mineral resource and reserves and infrastructure will be safeguarded from sterilisation; the mineral resources to be safeguarded include aggregates, china clay, building stone and metals. The delineation of these mineral safeguarding areas will be through a forthcoming Minerals Safeguarding DPD.

It must be noted that safeguarding is not a presumption in favour of working that mineral, it merely protects the resource from potentially conflicting development.

- **Policy 19 – Minerals Safeguarding**

1. Important mineral resources and reserves and associated bulk transport, storage, handling and processing facilities and sites shall be safeguarded from sterilisation by other forms of development.
2. Mineral Safeguarding Areas will be identified for the following minerals resources and reserves:
 - a. aggregates (both primary and secondary);
 - b. china clay;
 - c. building and ornamental stone (including roofing and heritage materials); and
 - d. metals.
3. Mineral Safeguarding Areas will be identified for the following mineral infrastructure:
 - a. for key concrete batching and other products and road stone coating;
 - b. for handling, processing and distribution of substitute, recycled and secondary aggregate; and
 - c. for the bulk transport of minerals by rail, sea (ports) or haul roads.

The Cornwall Minerals Plan will develop detailed policy and identify sites for safeguarding minerals: mineral resources and associated facilities for transport, storage, handling and processing for onward transport by rail or sea. Key sites used for the batching/manufacture of concrete products and coated materials will also be identified for safeguarding as well as sites for processing and distribution of substitute recycled and secondary aggregate materials. Policy will also be developed to encourage prior extraction where appropriate.

Protecting the World Heritage Site

In addition to the mineral-specific policies, the Cornwall Local Plan contains a specific policy relating to the historic environment. This policy states that the OUV of the World Heritage Site and its setting will be protected, enhanced and promoted; along with supporting the adopted WHS Management Plan.

- **Policy 24 - Historic Environment**

Development proposals will need to sustain Cornwall's local distinctiveness and character and protect and enhance Cornwall's historic environment and assets according to their international, national and local significance through the following measures:

- a. Protect, conserve and enhance the historic environment of designated and undesignated heritage assets and their settings, including historic landscapes, settlements, Conservation Areas, marine environments, archaeological sites, parks and gardens and historic buildings.
- b. Protect, enhance and promote the Outstanding Universal Value of the World Heritage Site and its setting; supporting the adopted management plan.

Assessment and mitigation

Development and management proposals should be informed by proportionate historic environment assessments and evaluations. Where the balance of a decision in favour of development results in the loss of a heritage asset, the Council will seek appropriate and proportionate mitigation by using planning conditions, management agreements, and obligations.

Minerals Safeguarding Development Plan Document

In addition to the policies contained in the Local Plan, Cornwall Council has prepared a draft DPD on mineral safeguarding - the Mineral Safeguarding Development Plan. This plan will delineate mineral safeguarding areas for the following minerals;

- China clay
- Metals
- Building stone including heritage materials
- Aggregates (both primary and secondary)

The Minerals Safeguarding Plan will also safeguard infrastructure associated with mineral operations, in particular wharves/railheads.

Cornwall Council consulted on the Mineral Safeguarding Development Plan Document (DPD) for a period of eight weeks, from 12 June 2017 to 7 August 2017 with the plan being supported by a range of evidence reports such as a Sustainability Appraisal and Habitat Regulations Assessment. The responses received during the consultation are to be sent to the Secretary of State for a subsequent examination in public. (See: <https://www.cornwall.gov.uk/environment-and-planning>)

Paragraph 59 of the Submission Consultation Mineral Safeguarding DPD (June 2017) references the WHS as follows.

'The main underground metalliferous mining areas of Cornwall have made a contribution to the landscape, built heritage, culture and society. In 2006 the mining landscape of Cornwall and West Devon was inscribed as a World Heritage Site (WHS). The WHS Management Plan clearly states that there is not a presumption against mining within the World Heritage Site, subject to development respecting the outstanding universal values of the WHS. The WHS Management Plan also acknowledges that the WHS contains many old mineral dumps and recognises their historic value.'⁷

3.1.9 Extant mineral planning permissions within the World Heritage Site

In 1995 the UK Government commenced a review of all extant mineral planning permissions across the country in order to gauge the impacts of the extractive industries and ensure no environmental damage is taking place as a result. Within Cornwall Council, the Planning and Sustainable Development Service collates and reviews mineral planning permissions and undertakes related management duties.

The majority of mineral production is focused within and around the china clay district north west of St Austell - the Hensbarrow District - and here particularly there are residential houses located on land where there is an underlying mineral planning permission for the mining of china clay. These permissions were usually granted in the mid twentieth century and often cover large tracts of land. These permissions can affect many households and may have come into being before or after the houses were constructed. A search can be undertaken by Cornwall Council to confirm the presence or otherwise of a mineral planning permission, if required.

There are two extant mineral planning permissions relating to metalliferous mineral reserves within the WHS (as of 2018). The most extensive of these in terms of area is that within the Central Mining District, i.e. within and around the A5 Area of the Site – The Camborne and Redruth Mining District. Here the permission pertaining to the operations at South Crofty, Pool, cover an area of some 1,499 hectares (5.8 sq. mi.), which also makes this by some margin the largest single mineral planning permission in Cornwall, the second being the Karslake Operational Area of Imerys Plc., within the china clay district, at 742 hectares (2.9 sq. mi.). GIS analysis indicates the total South Crofty mineral permission held by Strongbow Exploration Inc. within Area A5 to be 580 hectares (2.2 sq. mi.).

The other metalliferous mineral permission relates to the St Agnes Area of the Site, Area A7, and is at Blue Hills, where small scale tin recovery and smelting is undertaken in support of this popular mining heritage attraction. The remaining seven non-metalliferous mineral permissions which intersect with the WHS Areas relate to limited sand, china clay and monumental or road stone production, within Areas 7, 8, 9 and 10, and together total only 641 hectares (2.5 sq. mi.) in extent.

3.2 Conservation

3.2.1 Condition monitoring of mining heritage assets and risk assessment

CWDML WHS Management Plan Policies: C6, C7, C8, C9, C10, C11, C12

In order to enable effective management features of OUV should be subject to periodic condition surveys including periodic quinquennial (five yearly) fixed-point photography to record the state of preservation of OUV attributes over time. The data thus available can then be used to inform conservation prioritisation and detailed recommendations for medium and longer-term remediation, as required.

As part of the formulation of an ongoing monitoring methodology, a list of OUV attributes was prepared addressing the range of landscape component sites/features for which the WHS was inscribed. The WHS document *The Outstanding Universal Value (OUV) of the Cornwall and West Devon Mining Landscape World Heritage Site – Area descriptions*, produced for the Site in 2007, was used to inform the monitoring development process.

Given the large number and broad range of landscape attributes to be monitored within the Site, a *Common Standards Monitoring* methodology has been adopted, in a modified form, to enable perceived changes in condition, or otherwise, to be recorded as trends, e. g. 'Favourable - maintained' or 'Unfavourable – no change'.⁸ 'Condition statements' were also considered important to summarise the principal issues which may pertain to a particular site or feature. Overall this is considered a straightforward but effective means of expressing the condition of Site OUV attributes over time, which can also be used to prepare 'Key message' trend-related statements if required.

Survey assessment categories and data recorded

Site/feature condition is to be assessed in each instance using the following categories plus a short free text description:

- Favourable (*for use in initial baseline survey only, undertaken in 2010*)
- Favourable – maintained (*for use in all surveys other than that establishing the baseline*)
- Favourable – recovered (*for use in all surveys other than that establishing the baseline*)
- Unfavourable (*for use in initial baseline survey only, undertaken in 2010*)
- Unfavourable – no change (*for use in all surveys other than that establishing the baseline*)
- Unfavourable – recovering (*for use in all surveys other than that establishing the baseline*)
- Unfavourable – declining (*for use in all surveys other than that establishing the baseline*)

The following data is logged as part of the respective survey including Global Positioning System (GPS) co-ordinates to aid future repeat surveys:

- Surveyor name
- Survey date
- Agreed date for follow-up visit
- National and local designations
- Recommended management actions
- Details of record photographs (see below) including:
 - WHS Area
 - Site type
 - Site name
 - Date of visit

In order to enable the photographic element of a survey to be more readily repeatable, each photograph is tagged with spatial co-ordinates using a camera equipped with a GPS data logging attachment. The EXIF files thus generated with the individual images contain data that can be readily converted to a National Grid Reference (NGR), as and when required.

In addition to the above details and the various Favourable/Unfavourable categorisations, the condition surveys also include the following:

- The National Grid Reference (NGR) for the site/feature
- Rarity of a site/feature within the WHS
- Rarity of a site/feature within a WHS Area (A1 - A10)
- Details of status/threat type and vulnerability
- Details of any statutory protection relevant to the site/feature
- Whether the site/feature is on, or should be added to, the Historic England 'Heritage at Risk' register
- Details of site ownership outline management recommendations and the approximate likely cost of this (in some instances)

The condition surveys also include an estimated 'risk' scoring for each OUV Attribute, based on a number of factors - the site/feature's 'Rarity within the WHS', its 'Rarity within a WHS Area' and the Attribute's 'vulnerability'. To obtain the risk score, the sum of the individual Attribute's scorings for the first two categories is multiplied by its perceived vulnerability, i.e. 'Rarity within the WHS' + 'Rarity within a WHS Area' x 'vulnerability' = the risk score. This provides a ready means of determining which attributes are most in need of consolidation work or other management going forward.

WHS Condition Surveys (2010, 2011, 2014 & 2017)

A Site-wide photomonitoring condition survey was commissioned in 2010 and undertaken from the end of August until November that year. Over 12,000 digital still images were captured in total across the ten Areas of the Site and assessments of baseline condition for each Attribute site/feature were logged using an electronic spreadsheet. All images and data have subsequently been shared with World Heritage Site partners within west Devon - West Devon Borough Council and Devon County Council - and Historic England, as required.

As an adjunct to this work, the WHS Office commissioned an assessment of Cornwall Council holdings within the Site which express OUV. The report entitled: *Cornish Mining World Heritage Site: Condition assessment of CC Holdings*, produced in 2011, concluded that, overall, the CC holdings were considered to be in a Favourable condition, using the common standards monitoring approach adopted. Of the 70 Cornwall Council owned OUV sites assessed by the survey, 17 were identified to be in an 'Unfavourable' condition and these were recommended for remedial action accordingly. A further survey of privately owned OUV sites/features deemed in an Unfavourable condition (in 2010) was undertaken during the summer and early autumn of 2014, with a lack of vegetation management being an issue coming to the fore for some.

As part of the data gathering required for the 2020-2025 WHS Management Plan, a further condition survey was undertaken during the summer of 2017. This addressed specifically those sites/features previously found to be in an Unfavourable condition in the survey of 2010. Also surveyed were a random sample of Favourable condition sites - to test the Common Standards Monitoring assessment methodology adopted - and a selection of sites which have become of concern since the survey of 2010, e.g. Gunnislake Clitters Mine. A number of other sites were included which were conveniently accessible whilst on route to the pre-selected sites.

Part of the introductory summary of the 2017 survey: '*Cornwall and West Devon Mining Landscape World Heritage Site: Condition Survey 2017*' by Adam Sharpe of the Cornwall Archaeological Unit (CAU), is reproduced below, which sets out the background and context.

'The inscription of the Cornwall and West Devon Mining Landscapes World Heritage Site in 2006 required adequate mechanisms to be in place to monitor the condition of the components contributing to its Outstanding Universal Value. Given the very large size and complexity of the Cornish Mining WHS, and the fact that the majority of its elements are privately owned and managed, the decision was taken to undertake periodic condition assessments of its components to determine which were in favourable condition and which in unfavourable condition and thus the degree to which the WHS management plan is an effective tool.

In 2010, Historic Environment Projects, Cornwall Council (now Cornwall Archaeological Unit) was commissioned to undertake a condition survey of the various assets making up the OUV of the Cornish Mining World Heritage Site, this being achieved through a combination of photographic recording and a spreadsheet containing information on the component sites and their conditions. Just under 1,000 assets were assessed during this initial exercise. A similarly based condition assessment of those elements falling within Cornwall Council ownership was undertaken by Historic Environment Projects in 2011, this involving the assessment of 60 sites or structures.

In 2014, Cornwall Archaeological Unit (CAU) was asked to re-assess all those elements of the Site which were within private ownership and whose condition had been graded as unfavourable in 2010, excluding the majority of those making up the urban environments of the WHS, a small list of sites which were undergoing conservation measures or for which such measures were proposed in the near future, and a group on Caradon Hill to which the landowner refused access. A total of 243 structures or groups of contiguous structures were shortlisted for this assessment, which was undertaken during the summer and early autumn of 2014.¹⁹

While the initial concept was to limit the number of reassessed Favourable condition sites to around 10 per cent of the total number of Unfavourable sites/features previously recorded, i.e. of 179, in the event the number of these sites/features was increased to 73. This was done to ensure an adequate geographic spread across all ten Areas of the Site. 51 other sites/features were also added to the survey list, this number including those of concern condition-wise and others which were conveniently located on route. Five sites which had previously received an Unfavourable rating in 2010 were excluded from the 2017 survey as these had been successfully consolidated in the interim. These are: the Taylor's Shaft pumping engine house, the Taylor's Shaft Whim engine house, and Davey's Shaft Whim engine house at Wheal Virgin within the Wheal Maid Valley; the Wheal Busy pumping engine and boiler house site near Chacewater; and North Boscaswell Mine at Trease. In total 298 sites/features were assessed during the summer and early autumn of 2017, producing a written report, a detailed condition spreadsheet and an archive in excess of 2,300 digital photographs.

While appearing to confirm the CSM approach as an effective methodological means of assessing OUV attributes, the Condition Report highlights a growing trend towards impeded access and general encroachment on buildings and features due to a lack of periodic vegetation management at some sites (see the comments by Sharpe, below). This issue appears to be increasing in significance due to the reduction in vegetation management now undertaken by the local authority (Cornwall Council), perhaps as a result of austerity driven revenue budget reductions. This has led to an increase in the number of sites now assessed as being in an Unfavourable condition to 48, giving a Site-wide total of 222, or 23 per

cent of the total of 991 OUV attributes. In considering these statistics, however, it should be remembered that not all OUV attributes are located within a predominantly rural setting and that vegetation management may not constitute a factor in these instances. Also, and as Sharpe notes within the Condition Report,¹⁰ the majority of OUV attributes were purposefully not assessed in 2017, as these are understood to be in good condition with appropriate management. An increase in the number of Unfavourable sites by 5 per cent still affords a Favourable rating of 77 per cent for all attributes, reduced from the 2010 rating of 82 per cent.

Within regard to the perceived lack of vegetation management, Sharpe notes:

‘Unchecked scrub development was again found to be an increasingly widespread problem, not only on sites on which no work has previously been undertaken, but also as the result of a lack of appropriate periodic maintenance on some sites which are in public ownership and which are currently presented as elements of historic trails; there has been a resultant loss of both access to and visibility of the sites which these link up. This is a serious issue as the creation of these trails and the conservation of the sites along them was identified as having significant potential for enhancing and diversifying the economy of areas of rural Cornwall through the development of industrial tourism. Public realm projects such as the development of the Great Flat Lode Trail and the Coast to Coast Trail were developed by the former Kerrier District Council and Cornwall County Council, and considerable effort was taken to clear, conserve, make safe, interpret and promote both the trails and their sites. These important initiatives are now being put at risk through an increasingly longstanding shortfall in appropriate management. As an example, large areas of the conserved dressing floors at Betty Adit on the Red River [WHS Area A5] have become impenetrable owing to scrub and sapling growth, and the majority of its features have been lost to view. Similar problems were found elsewhere, particularly (but not exclusively) elsewhere along the Flat Lode Trail, the Coast to Coast Trail [both Area A5] and in the Tamar Valley [Area A10].’¹¹

Survey conclusions and future work

The total number of sites/features considered to be in an Unfavourable condition across the ten Areas of the World Heritage Site in 2010 totalled 179, this being equivalent to 18 per cent of the overall total of 991 OUV attributes surveyed. Appendix 8.2 lists the sites identified as Unfavourable and sets out the Area by Area comments made by the archaeologist at that time. Concerns over condition were raised in relation to a number of other sites, though not considered of sufficient importance to warrant their inclusion in the Unfavourable category. Notes within the 2010 condition monitoring spread sheet identify these borderline sites. Two further condition surveys have also been produced since 2010, adding extra detail regarding Unfavourable condition OUV attributes in Cornwall Council and private ownership, respectively.

The most recent condition survey of 2017 focused primarily on 174 sites/features found to be in an Unfavourable condition in 2010 and which had not been consolidated subsequently. At the request of the WHS Partnership Board, the 2017 assessment also included a random sample of sites/features, eventually numbering 73, which were previously found to be in a Favourable condition. This was done in order to test for unanticipated deteriorations in condition and also to check the CSM assessment methodology. A further 51 sites/features were also assessed, either due to concerns post-2010, or incidentally as these were located on route to other pre-selected sites.

An analysis of the survey results is set out in the graphs below, while Appendix 8.3 provides the results of 2017 Condition Survey summarised by World Heritage Site Area.

Total number of OUV sites/features assessed in 2017: 298

Of this number:

- Total number of sites/features considered in Favourable condition: 75
- Total number of sites/features considered in Unfavourable condition: 222
- Total number of sites/features for which the condition is Uncertain: 1

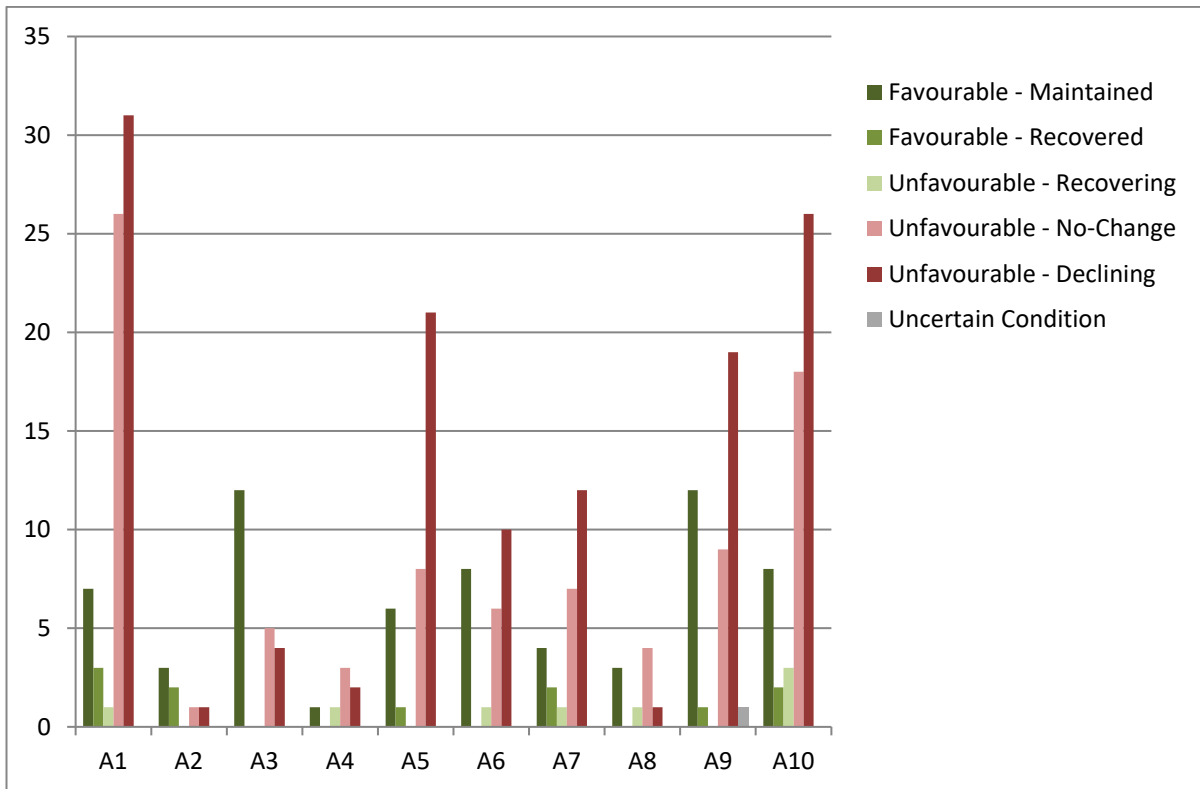


Figure 1 - Condition Survey findings for 298 attributes of OUV assessed in 2017, shown by condition category and WHS Area A1 to A10 across Cornwall and west Devon.

Only 298 sites/features were selected for assessment in 2017, representing approximately 30 per cent of the 991 OUV sites/features that were assessed during the initial baseline Condition Survey of 2010, these being predominantly those sites/features rated as Unfavourable in 2010. The remaining c.70 per cent of sites/features assessed in 2010 (i.e. 693 sites/features) are understood to remain in a Favourable condition with appropriate management.

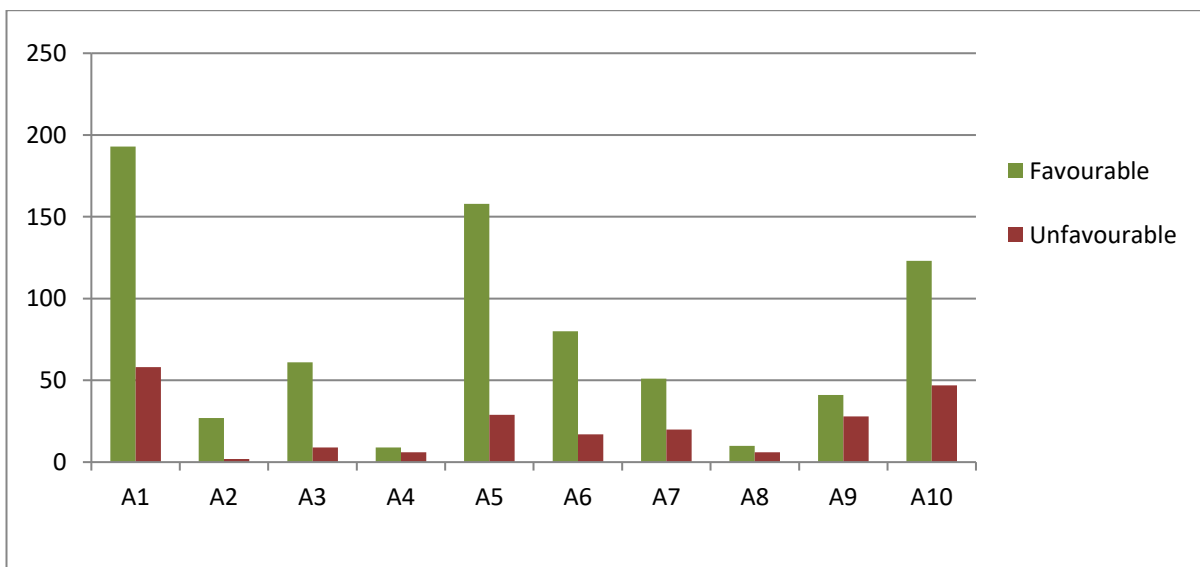


Figure 2 - the inferred condition of all sites of OUV based on the combined survey results of 2010 and 2017. Shown by condition category and WHS Area, the largest number of Unfavourable condition sites/features are to be found within Areas A1 (58) and A10 (47). As noted previously, c.70 per cent of all sites/features are understood to remain in a Favourable condition with appropriate management.

In summary, the outcomes of the 2017 survey are broadly as expected in that the attributes being assessed were already known to be in an Unfavourable condition. The extent of the problem caused at some sites by a lack of vegetation management appears to be attributable, in some instances, to the real-world impact of local authority budget cuts in recent years. While the ultimate number of local authority owned sites/features effected is minimal in relation to the total number of sites/features surveyed (i.e. 15 sites owned by Cornwall Council out of 298 surveyed), the impacts of reduced vegetation management could be said to be disproportionately impactful at these sites which were, in the main, made accessible through major publicly funded consolidation projects. A public perception has been created over time that these sites are safe and accessible for all to enjoy, and failure to satisfy this expectation is likely to be particularly keenly felt. As the local authority with, by some margin, the most publicly owned mine sites, Cornwall Council is more exposed to this issue than its World Heritage Site Partners West Devon Borough Council and Devon County Council.

Generally, the deficit in periodic vegetation management is a challenge to be addressed during the lifecycle of the Management Plan (2019-2024) and Area-specific volunteering related initiatives may be a useful way forward here. Separate from the issue of vegetation management, a conservation priority setting exercise will be undertaken during the lifetime of the Management Plan, based on the Condition Report findings, to direct conservation project planning.

Following the 2010 condition survey it was envisaged that the results would be entered into Cornwall Council's Exegesis-based Historic Buildings, Sites and Monuments Record (HBSMR), in order to enhance the dataset. This work has not been undertaken, however, due principally to staff resource limitations. The 2010 condition report, along with the associated data and imagery, has been shared with local authority partners and Historic England, and for the latter specifically to aid its ongoing heritage management within Cornwall and west Devon. It is envisaged this will be repeated with the 2017 survey and data in due course, as required.

The WHS includes a number of former mineral ports and harbours, such as Hayle and Portreath, which are susceptible to increasing sea level rise through gradual climate change. Sea level data gathered through the DEFRA funded *Strategic Regional Coastal Monitoring Programmes of England*¹² could be useful in informing future monitoring and emergency response planning.

3.2.2 Potential condition monitoring of mining heritage assets beyond the World Heritage Site

During the research phase of the bid for World Heritage status from 2001 to 2005, it was confirmed that extensive mining landscapes survived across Cornwall and west Devon beyond the ten Areas provisionally selected for nomination. GIS analysis of historic Ordnance Survey mapping - dating from c.1880 - revealed that evidence of shaft worked metalliferous mining covered 2,717 hectares (10.5 sq. mi.) of Cornwall and west Devon by that date. Using this data it can be inferred that at the point of inscription in 2006 mine site features totalling 1,442 hectares (5.6 sq. mi.) had been designated, with the remaining 1,275 hectares (4.9 sq. mi.) recorded having been excluded through discussion prior to nomination.¹³ While it should be noted these figures are not a measure of which mine site features were known to survive at the time of inscription, or of that which may survive today, these do indicate something of the scale of mining heritage assets with significant survival potential beyond the inscribed Site.

While this monitoring report is principally concerned with the World Heritage Site as inscribed, the extent and condition of metalliferous mining heritage assets beyond the ten Areas can be considered important in associative terms, i.e. the survival of sites and features beyond the World Heritage Site Areas can contribute much to the understanding of attributes within the boundaries. While not being a monitoring priority, assessing the extent of survival and condition of at least some sites beyond the World Heritage Areas would be advantageous, and should be supported if the necessary resources can be found. Discussion with Historic England and the historic environment teams of Cornwall Council and Devon County Council would be useful in defining the scope of such surveys and in securing assessment funding if the principle is supported.

Status summary: Photomonitoring condition survey undertaken in 2017, predominantly to resurvey sites/features found to have been in an Unfavourable condition through the baseline survey of 2010 and subsequent surveys. Random sample of Favourable condition sites also resurveyed to test Common Standards Monitoring (CSM) assessment methodology. Condition data and images to be shared with partners – Cornwall Council Historic Environment Records (HER) team, West Devon Borough Council and the Historic Environment Records (HER) team of Devon County Council (DCC), and Historic England, for integration into HER datasets, as required. Discussion with heritage agencies would be useful in defining the scope of potential surveys intended to assess the survival and condition of mining heritage assets beyond the World Heritage Site Areas.

Indicator	Status	Notes
Baseline condition survey of attributes of OUV (2010)	<p>Site wide condition survey undertaken from September to November 2010</p> <p>The survey results indicate that of the 991 nominal sites surveyed, 812 were considered to be in a 'favourable' condition with 179 being 'unfavourable'. In percentage terms, 82 per cent of the sites surveyed were assessed as being in a 'favourable' condition in 2010; number of site photographs taken: >12,000</p>	<p>Feature condition assessments and images to be integrated into Cornwall Council HBSMR; survey data and photographs made available to West Devon Borough Council and Devon County Council</p> <p>NB. For the purpose of the survey the term 'sites' includes individual features and clusters, and these vary considerably in scale from boundary stones, engine houses or chimneys, to small settlements and to areas of larger settlements. In many instances, entries are included not only for urban areas but also for specific components within them such as schools, Methodist chapels, institutes etc. The total number of 991 entries in the spreadsheet can only be taken as an outline guide to the number of sites recorded, therefore</p> <p>Report to be used as evidence to secure consolidation and vegetation management funding from core council budgets and other sources</p>
Condition assessment of Cornwall Council Holdings	<p>The WHS commissioned condition assessment of Cornwall Council holdings (2011) found that 17 of the 70 sites inspected were considered to require attention</p>	
Condition survey of sites / features of OUV known to be in an Unfavourable condition (2017)	<p>298 sites/features were selected for assessment in 2017 the majority of these (174) being those assessed in an unfavourable condition in 2010. A further 73 sites/features were assessed to check the CSM assessment methodology and an additional 51 due either to known concerns, or incidentally as being on route to other sites; number of site photographs taken: >2,300</p> <p>2017 survey data indicates the number of unfavourable condition sites has increased by 48 since</p>	<p>See Appendix 8.3 for list giving condition categories and aggregate assessment ratings for all ten Areas of the Site</p> <p>NB. Of the total number of 298 sites/features assessed in 2017:</p>

<p>Number of buildings at risk</p>	<p>2010 (c.16.1% of the 298 sites surveyed in 2017); thought mainly due to a reduction in periodic vegetation management at local authority owned sites</p> <p>29 entries are included currently on the Historic England: <i>Heritage at Risk (HAR) Register (2017)</i> within the World Heritage Site: 25 in Cornwall and 4 in west Devon (see: Appendix 8.4 for list); this is a net increase of 4 sites since the previous monitoring report (2012)</p>	<p>75 considered in Favourable condition</p> <p>222 considered in Unfavourable condition</p> <p>2 HAR entries have been removed from the Register since 2012 and a more are to be removed in 2017, due to the ongoing conservation development at Perran Foundry and King Edward Mine</p> <p>Cornwall Council's Historic Environment Records team maintains a local list of 'heritage at risk' features for Cornwall, but this is currently intended for internal use only, pending further work</p>
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3.2.3 Impact of World Heritage designation on conservation of OUV

CWDML WHS Management Plan Policies: PN5, PN6, PN7, PN8

This includes assessments of how and to what degree WHS designation has impacted on mining features and landscapes, e.g. numbers of mine sites and buildings consolidated; access improvements to mining landscapes; streetscape improvements within former mining settlements through Townscape Heritage Initiatives (THI) and Heritage Economic Regeneration Schemes (HERS).

Within the last twenty years approximately 100 mine sites and individual mining heritage features have been consolidated which represents a considerable conservation achievement underlining the commitment of local authorities and project partners to the preservation of mining heritage. These conservation works have been funded through a range of grant opportunities including, initially, Derelict Land Grants and, later, the Heritage Lottery Fund. In many instances this work took place over the years prior to WHS inscription, with the prospect of gaining World Heritage Site status used as additional justification.

Major conservation projects

Five of the major mining heritage related regeneration/conservation projects undertaken in recent years were aided considerably in their respective grant bidding through direct reference to the World Heritage Site and their importance in relation to maintaining its OUV. While the Mineral Tramways Trails Project had been underway for some years before the inscription of the World Heritage Site in 2006, reference to the project areas forming part of the World Heritage Site bid undoubtedly contributed to the success of the Trails Project's own bid.

Townscape Heritage Initiatives (THI)

Townscape Heritage Initiatives (THI) are multi-funded grant schemes which fund traditional repairs and the reinstatement of architectural detailing to targeted historic buildings in Conservation Areas. These bring vacant buildings back into use, promote the use of local materials and traditional building techniques, and have done much to enhance the OUV of particular mining settlements within the WHS.

A THI scheme commenced within the Camborne, Roskear and Tuckingmill Conservation Areas (within the WHS Area A5) in 2008, and the early take up of the initial grant funding helped a successful follow-on bid for additional THI funding, for the same area.

- **Tavistock THI**

A THI is currently underway at Tavistock in the easternmost Area of the WHS. The scheme is benefitting from a Heritage Lottery Fund grant of nearly £1 million which over the next five years will address concerns within the historic core of the town, specifically regarding the Pannier Market roof and the Butchers' Hall. The project will also deliver upgrades to public areas in the town centre and grants will be provided for property owners to rejuvenate premises in the King Street, Market Street and West Street areas.

In detail the aims of the Tavistock THI project¹⁴ are to:

- Repair the external elements of many of the town's historic buildings
- Re-instate missing architectural detail and remove insensitive alterations
- Return vacant floor space to productive use
- Enhance the quality of the public realm (e.g. Guildhall Car Park, Market Street and the perimeter areas of the Pannier Market)
- Provide a worthy setting for the unique ensemble of civic buildings in the town centre
- Create a townscape which will attract more shoppers and visitors
- Raise awareness among residents of the World Heritage Site and the town's heritage

The first properties to be addressed are those on Market Street and also the Butchers' Hall, the latter which is to have a new roof allowing it to be brought back into use. The HLF grant award to the THI scheme is national recognition of the architectural importance of Tavistock and the town is one of few in the south west to secure this degree of funding. The Tavistock scheme has a dedicated website given regular progress updates at: <http://www.tavistockthi.co.uk>

Looking forward, it is understood the HLF will no longer be maintaining Townscape Heritage as a distinct Heritage Lottery grant funding stream through lack of revenue due to the significant downturn in Lottery ticket sales in recent years.

Heritage Economic Regeneration Schemes (HERS)

Heritage Economic Regeneration Schemes (HERS) are property-based grants schemes that target and engage property owners and leaseholders in the improvement of historic property in Conservation Areas. As with the THI schemes above, the HERS project outputs were delivered using HLF funding and these schemes have enhanced the OUV in some former mining settlements.

The Redruth HERS scheme (within WHS Area A5), completed in 2008, targeted historic properties within the Redruth Town Centre Conservation Area and has benefitted the WHS significantly. The scheme awarded targeted grants for building repairs (using local materials, tradesmen and traditional methods), the reinstatement of architectural detailing, and secured the reuse of vacant buildings and underused floor-space. The HERS scheme linked closely with the Redruth Town Centre Improvements project - which has seen the enhancement of key areas of the public realm – and has engaged with the private sector to influence commercial investment decisions for the public good.

A HERS scheme was also delivered in Hayle (within WHS Area A2) from 2004 to 2008 and the following extract from the project *Final Monitoring and Evaluation Report* summarises the various outputs of the scheme;

‘Penwith District Council led a partnership to carry out a major town centre regeneration project in the historic port of Hayle. The project was based on the Heritage Lottery Fund Townscape Heritage Initiative (THI) Programme and it funded works to restore and reuse derelict, underused and rundown buildings and street spaces in the historic commercial areas of the town. The principal element of the project – the regeneration of the Foundry Farm complex at Harvey's Foundry – was completed as the first phase. This accounted for almost 50 per cent of the total project value and comprises craft

workshops and live-work units for which the project was to win two awards. The Trust is also supporting a local archive that is currently based in another improved building.

Nearby, White’s Warehouse was also been completely refurbished and is fully occupied. The creative sector is strongly represented in the new accommodation in these developments. Complementary public realm works at Foundry Lane and Foundry Square have also been completed. Although take up of grants by private owners for refurbishing historic buildings in the remainder of the town was initially slower, the latter part of the scheme has seen significant improvements at Copperhouse – in particular at the focal point of the Old Cinema, now St George’s Hall. Several other owners also undertook works at their own expense.

Public realm improvements have been carried out at Copperhouse using Liveability funding separate from the Hayle Townscape project. Hayle looks more attractive, cared-for and invested-in, which has generated more confidence in its economic future. The overall project value increased from £4.1m to £4.7m as a result of higher contributions than originally budgeted from the private sector, highway authority and Penwith District Council (the [then] accountable body). Targets for jobs and sales, originally set from formulae developed for the wider south-west region, proved un-achievable here in the far west of Cornwall, where the economy is fragile, and businesses are generally small in scale. However, 24.5 new full-time jobs were created, as were 62 temporary construction jobs, and 31 jobs were safeguarded. Business occupying premises grant-aided by the project achieved safeguarded and newly created sales amounting to over £1.23 million. The uplift in the wider economy of Hayle is estimated to amount to at least 52 new and safeguarded jobs and £1.2 million of net additional GDP [Gross Domestic Product] safeguarded and created. It had been hoped that plans for the regeneration of the harbour area would have progressed faster than has been the case, which would certainly have boosted the outputs of this scheme.¹⁵

An estimated £2.5 million in grants had been expended through THI and HERS schemes in Cornwall up to November 2012, directly improving historic townscapes in the former mining settlements of Redruth and Camborne. At the time of writing (December 2017) it is understood the HLF will no longer be maintaining Townscape Heritage as a distinct Heritage Lottery grant funding option and the future of HERS schemes in Cornwall and west Devon is therefore uncertain.

Status summary: Registers of buildings and mining features consolidated in place; major mine building consolidation and streetscape enhancements undertaken since WHS inscription through THI and HERS schemes.

Indicator	Status	Notes
<p>Examples of conservation projects undertaken in relation to attributes of OUV (c.2002-2017)</p> <p><i>NB. this is not a complete list and is provided here only as an example of the types of projects undertaken; please see 4.4.5 for a full list of conservation projects allocated funding from June 2006 to December 2019</i></p>	<p>Example projects:</p> <p>Mineral Tramways Project £6,000,000</p>	Multi-use trail creation programme and mine site consolidation work completed
	<p>East Cornwall Regeneration £2,200,000</p>	Mine site consolidation and trail development works completed
	<p>Geevor Mine £3,500,000</p>	Extensive conservation work to the Scheduled Monument complete
	<p>Tamar Valley Mining Heritage Project £5,000,000</p>	
	<p>Caradon Hill Heritage Project £2,000,000</p>	Works complete

THI and HERS schemes	<p>Wheal Trewavas £550,000</p>	<p>Mine site conservation managed by the National Trust and funded by its Neptune Coastline Campaign</p>
	<p>Heartlands, Pool c.£35,000,000</p>	<p>Completed and Robinson's Shaft (South Crofty) site open to the public</p>
	<p>The Taylor's and Davey's shaft sites at Consolidated Mines within the Wheal Maid Valley, near Crofthandy (WHS Area A6), was consolidated in 2013-2014, using £270,000 of Natural England Higher Level Stewardship (HLS) funding</p>	<p>NB. These constitute some of the earliest surviving engine houses within the WHS and are to be conserved using funding secured by Cornwall Council Historic Environment and the World Heritage Site Office, through a partnership between the site owners Gwennap Parish Council and Natural England</p>
	<p>Wheal Busy Pumping Engine and Boiler House (Scheduled Monument) £280,000</p> <p>Features consolidated using DEFRA funding via Natural England's Higher-Level Stewardship Scheme; Natural England working in partnership with the site's owner the Tregothnan Estate</p>	<p>NB. rare survival of both engine and boiler houses together.</p>
	<p>King Edward Mine (Grade II* Listed buildings); creation of workspace units, museum facility and café within historic mine buildings £1,926,000 (NB. Phase 1 of project only)</p>	<p>Principally funded by ERDF and Cornwall Council with other partners</p> <p>NB. c.100+ individual mining heritage features and sites had been consolidated in Cornwall and c.24 in west Devon (as of 2012), through a variety of conservation projects delivered by local authorities, heritage agencies or partnerships</p>
	<p>The Camborne, Roskear and Tuckingmill THI scheme has successfully exceeded its projected outputs with 28 buildings having been enhanced including 8 Listed buildings. 15 buildings have been removed from the English heritage 'Buildings at Risk' register and a private sector contribution of £1,491,582 has been secured, in addition to c.£8 million from the residential development of the former Holman's No. 3 Rock Drill Works, at Trevu Road, Camborne</p> <p>The successful Redruth HERS scheme secured grant aid for 35 properties in the town, including the</p>	<p>NB. THI public realm improvement funding is currently being sought for the Bedford Square area of Tavistock (WHS Area A10), which will significantly benefit WHS OUV</p> <p>THI and HERS figures: Cornwall Council</p>

	<p>adjoining offices of the Malayan Tin Dredging Company and Abbott & Wickett in Station Road, two buildings of OUV</p> <p>The Redruth HERS secured £1,073,937, and was co-funded by Objective One (ERDF), English Heritage, the Neighbourhood Renewal Fund, Kerrier District Council, Cornwall County Council, and Redruth Town Council</p> <p>Tavistock THI scheme underway (2017) after securing c.£1 million to conserve attributes within the town's historic core, including buildings in Market Street and the Butchers' Hall</p>	<p>Dedicated Tavistock THI website available: http://www.tavistockthi.co.uk</p>
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3.2.4 Projected temperature and rainfall increase due to climate change

For temperatures, the 2018 projections indicate that all areas of the UK are to be warmer by the end of the 21st century, more so in summer than in winter. The probabilistic projections provided within UKCP18 assess local low, central and high changes across the UK, corresponding to a range of probability levels, i.e. 10%, 50% and 90%. UKCP18 states that: 'These local values can be averaged over the UK to give a range of average warming between the 10% and 90% probability levels. By 2070, in the high emission scenario, this range amounts to 0.9 °C to 5.4 °C in summer, and 0.7 °C to 4.2 °C in winter. This has already been surpassed by temperatures across Europe. The summer of 2019 has already seen temperatures six degrees hotter than average for June – the hottest ever recorded on earth, according to the European Satellite Agency. The 1.5 degrees threshold set out in the IPCC report will be breached within the next five years, according to the UK Met Office. This is risking extremely unpredictable consequences of extreme weather across all continents.

Regarding precipitation, the projections state that: 'In the past few decades there has been an increase in annual average rainfall over the UK, particularly in Scotland... Summers in the UK, for the most recent decade (2008-2017), have been on average 17% wetter than 1981-2010 and 20% wetter than the 1961-1990 average. However, very long-period natural variations are also seen in the longer observational record. Total rainfall from extremely wet days (days exceeding the 99th percentile of the 1961-1990 rainfall) has increased by around 17% in the most recent decade (2008- 2017), for the UK overall. However, changes are largest for Scotland and not significant for most of southern and eastern England.'

In light of the above, collaborating with environmental agencies will be increasingly necessary to enhance climate change resilience and to develop emergency response strategies which incorporate protection of OUV as a priority. See Management Plan Section 6.3 'Conservation and Enhancement' for the context of the WHS with regard to climate change.

4 Communication of Outstanding Universal Value

4.1 The wider value of heritage to society

The societal value of heritage has been a subject of continued study by Historic England for some years with this work expressed principally through a dedicated annual report. The purpose of *Heritage Counts 2017: Heritage and Society*,¹⁶ produced on behalf of the Historic Environment Forum (HEF), is to provide readily digestible information with statistics, which demonstrate the straightforward importance of heritage to society. The conclusions reached within the reports are based on detailed technical studies

and are useful in understanding the social values of heritage in order to better articulate these when making the case for heritage. In summary, the 2017 report sets out a number of statistics indicating the degree to which the general public regard heritage as being important, to both local communities and in a national context:¹⁷

- Heritage plays an important part in our well-being and quality of life – 93 per cent of residents say that local heritage has an impact on their quality of life
- Heritage supports social cohesion and inclusion – People can develop much stronger, long-lasting connections with their communities through heritage conservation work
- Heritage improves places – 80 per cent of people think local heritage makes their area a better place to live
- People value heritage – 73 per cent of UK adults agree that the UK government has a moral obligation to protect our heritage

While World Heritage Sites are not a subject of specific study within the 2017 report, it can be inferred from the above that the public in principle supports the designation of sites/areas expressing OUV as part of the overall heritage value or worth of the UK.

4.2 Public awareness of World Heritage status

CWDML WHS Management Plan Policies: PN2, PN3, T1, PN4, PN5, PN6, PN7, PN8, T2, T3, T4, T5

Interpreting the values of the WHS is essential in awareness raising and to promote conservation through stakeholder and community 'ownership' of inscribed mine sites and landscapes. The effectiveness of brand value interpretation should be assessed by peer review on a periodic cycle (five yearly) if possible, and should address WHS signage, the web portal, publications and other disseminated marketing, educational and interpretative material.

Visitor surveys should also be used to assess the efficacy of interpretation available on-site at mining heritage attractions. It is recommended that a questionnaire addressing the ease of availability of WHS information and the perceived quality of such be employed and made available at mining related attractions within the WHS, in conjunction with existing or planned visitor surveys.

Recommendations

- Five yearly peer reviews re. WHS signage, information and interpretation
 - Requires standard methodology, preferably with same personnel each review
 - Must be independent / unbiased, and with sufficient time given to complete
- Visitor surveys at mining heritage related sites in Cornwall and west Devon
- Additional WHS specific question(s) in visitor surveys annually or, at minimum, five yearly

Assessment of awareness

The doctoral thesis undertaken by Dr Hilary Orange in 2009-2012 constitutes a useful body of research testing awareness of WHS status.¹⁸ Entitled 'Cornish Mining Landscapes: Public Perceptions of Industrial Archaeology in a Post-Industrial Society', this work compared and contrasted public responses from three Areas of the WHS, specifically Botallack (Area A1), St Agnes (Area A7), and Minions (Area A9). Orange indicates that general awareness of the status was high with 83.2 per cent of respondents across all three sites choosing either 4 or 5 (on a scale where 5=high and 1=low importance) whilst only 5.2 percent chose 1 or 2. Botallack residents demonstrated the highest awareness among the three sites tested at 86.4 per cent, followed by St Agnes at 85.7 per cent and 76.6 per cent at Minions.¹⁹ This

compares favourably with Hunt's case study of locals and visitors to the Giant's Causeway, Co. Antrim, which revealed a low awareness of the site's WHS status.²⁰ The relatively low awareness reported at Minions is attributed by Orange to a perceived lack of WHS publicity in the area. Taken overall, awareness levels in excess of 75 per cent can be regarded as positive.

The WHS 'Discover the Extraordinary' (DtE) visitor facility and interpretation enhancement programme which was undertaken from 2009 to 2014 (see: 5.2) included an element of market research to assess the effectiveness of the programme's outputs. The DtE Project Evaluation Summary²¹ stated in 2014 that an increase of 5.5 per cent had been achieved in the number of visitors who indicated the World Heritage Site's historic mining landscape had influenced their decision to visit. This uplift led to an increased figure of 15 per cent of the 4 million plus visitors per annum stating that WHS status was one of the motivations leading to their visit.

Status summary: Periodic assessment of WHS brand value interpretation by peer review yet to be implemented; visitor satisfaction surveys also yet to be implemented; online survey in 2010 indicated that of the 500 respondents, just over 50 percent were aware of the WHS; PhD research indicates that the degree of awareness of WHS status at three geographically dispersed sites (Botallack, St Agnes and Minions) had exceeded 75 per cent by 2012. DtE Project Evaluation Summary indicates that this programme has achieved a 5.5 per cent uplift in the number of visitors indicating the WHS' historic mining landscape had influenced their decision to visit.

Indicator	Status	Notes
Peoples Panel survey	Cornwall County Council's People's Panel survey of 2004 found 87 per cent of the 1,484 respondents thought Cornwall's historic mining remains should be protected	Peoples Panel no longer active
Awareness monitoring on behalf of the WHS 'Discover the Extraordinary' project (DtE)	Major visitor facility improvement and marketing project being delivered over three years as part of £2.4m scheme Market research commissioned in 2010 indicated that just over 50 per cent of the 500 individuals surveyed online were aware of the CWDML WHS, though less than 25 per cent had seen information on this	Further visitor awareness monitoring undertaken as part of DtE project delivery, to gauge effectiveness of project marketing: see 6.2 below for details
Visitor attraction monitoring	Visitor satisfaction surveys required but not yet implemented	NB. 15 per cent of the 4 million plus visitors per annum stating that WHS status was one of the motivations leading to their visit (by 2014)
PhD research (Dr H. Orange, 2012)	Indicates an awareness level of WHS status of in excess of 75 per cent by 2012	
'Discover the Extraordinary' Project Evaluation Summary (2014)	Indicates this programme (2009-2014) achieved a 5.5 per cent uplift in the number of visitors indicating the WHS' historic mining landscape had influenced their decision to visit.	

4.2.1 Impact of the World Heritage Site on communities

WHS Management Plan Policies PN7 and PN8 address the aim to ensure communities within and around the WHS are engaged in all the benefits the Site has to offer and that these should be available to all regardless of ability or income.²²

Altered perceptions of quality of life and environment as a result of the WHS, and changes in attitude to mining heritage should be gauged if possible, through periodic monitoring. Local authority quality of life surveys have previously provided useful statistics relating to public perceptions of community wellbeing previously (e.g. *Quality of Life Summary Report (draft)*, 2004, Research and Information Unit, Cornwall County Council). Future surveys to monitor changes in public perception will most likely have to be externally contracted if the resource for this is available.

The impacts of WHS-derived tourism should be monitored if possible through resident-focused surveys and ongoing contact and discussions with local interest groups, and borough, parish and town councils.

4.2.2 World Heritage Site Cultural Programme

The WHS Cultural Programme was created in 2006 to expose a wider audience to the CWDML WHS who may not otherwise engage with industrial heritage. This has garnered much interest since inscription and has helped significantly in general awareness-raising. Eleven major performance arts events were staged during the initial part of the programme, from 2006 to 2012.

While many WHS commissioned or supported cultural events have been presented since inscription, the most significant has been undoubtedly the Tinth (tenth) Anniversary celebrations staged throughout the summer of 2016. In advance of this, the WHS Office launched the Tinth Anniversary public relations campaign in January 2016, which immediately generated online and offline media coverage, including local and national press and radio. Throughout the following months a PR agency generated press content and imagery that drove a steady stream of media coverage of the whole Tinth Anniversary programme.

A total of 100 performances of seven separate events were delivered from May to November 2016, spanning the WHS from west Cornwall into west Devon. The full programme comprised the following:

- The 'Man-Engine' (performance art tour with a giant mechanical puppet in the form of a miner)
- Picturing the Mines (art workshops and the creation of commemorative copper etchings with a mining theme)
- 'Tin' the Movie (a filmed version of the stage play 'Tin', by Miracle Theatre, with screenings across Cornwall and Devon)
- 'The Tinworking Landscape of Dartmoor' (European academic conference hosted in Tavistock)
- The Trench (a First World War commemorative drama at Levant Mine which included public participation)
- Trevithick! (a biographic drama covering the life of renowned Cornish engineer Richard Trevithick)
- The Zigzag Way (a stage play based on the novel recounting the experiences of a young American with Cornish ancestry in Mexico)

Apart from the Trench and the Dartmoor Tinworking Conference, which were principally site based, these events toured the ten WHS Areas, and in some cases other venues across Cornwall and Devon. An interactive calendar of events and map were created for the WHS website, to enable people to search for events by date or place. Analysis of the response to the Tinth Anniversary events provides a

combined attendance figure of 161,000,¹ with a direct education audience figure (including in-school and other sessions) in excess of 1,500.²

‘Man-Engine’

The most significant and impactful of the Tinth Anniversary events was undoubtedly Golden Tree Productions’ ‘Man-Engine’, a ten-metre-high mechanical figure built to symbolise and celebrate the impact of metalliferous mining across the WHS and beyond. While the target event audience number for the Man-Engine was a modest 7,000 at the procurement stage, the eventual series of twenty-two performances over ten days drew astounding crowds, estimated to total around 149,400.³ This figure was due undoubtedly to the unusual nature of the Man-Engine and the outstanding public relations work undertaken in advance and during the tour across Cornwall and west Devon. Figures for TV, radio, newspaper, online and social media coverage were to greatly exceed this number, however, with the Man-Engine eventually achieving an estimated global reach of around 112 million across 104 countries. Golden Tree Productions also estimates the combined events generated some £2.97 million in attendance spend, a remarkable figure given the modest scale of the initial proposal.⁴ This level of success took all those involved by surprise but demonstrates well the engagement potential for local mining or other industrial heritage when this is promoted in an unusual and thought-provoking manner. This level of coverage amounts to at least £2 million advertising equivalent value and £6 million in Public Relations Value (PRV). Another positive feature of the media coverage was the quality of the messaging, with almost all items referencing the Tinth Anniversary of the Cornwall and West Devon Mining Landscape inscription as an UNESCO World Heritage Site. Recognition of the Man-Engine’s impact was to continue with the Heritage Lottery Fund granting its ‘Best Arts Project’ award to Golden Tree Productions in 2017. Man-Engine was to gain further exposure in 2018 when a second tour of the WHS was undertaken followed by a series of locally tailored performances in Somerset, Wales and the north of England.

Detailed below are two more recent events, presented as part of the WHS Cultural Programme in 2018 and 2019.

‘Hireth’

Produced by Palores productions and O Region, the stage production ‘Hireth’ attracted a performance audience of 3,523, plus 575 others engaged in school and adult outreach activities. The play, set at Geevor Mine, explores the contribution made by Cornish miners during the First World War. Hireth also enabled the St Just Miners’ Chapel to establish itself as a venue for theatre productions, as part of a plan to develop alternative uses and enhance the building’s viability. The CMWHS also encouraged and funded Palores and O Region to film one of the performances, and this was screened at venues across all ten WHS Areas during 2019.

‘Estah’s Story’

In August 2019 the aerial dance performance ‘Estah’s Story’ was presented by Yskynna Productions, at the Robinson’s Shaft site, Heartlands, Pool. Telling the tale of a nineteenth century Cornish bal maiden, Estah’s Story was performed over eleven days and attracted significant media coverage. The event was publicised across broadcast news (including ITV West Country), key local and regional papers, and social media, with a total estimated reach of the latter of 120,446, plus 2,955 clicks through to the event website. The performances of Estah’s Story gained a total live audience of 1,024 and a total estimated broadcast, online, and in print audience of 501,093.

As noted within the previous Monitoring Report (2012), qualitative evaluation of the events reveals a high level of satisfaction with, and learning from, the Cultural Programme. Given the high level of external

¹ Figure: WHS Partnership Board, October 2016

² *Ibid.*

³ Retrieved from <https://www.themanengine.co.uk/2016-tour-ii>

⁴ *Ibid.*

income generated by events, the programme represents a particularly cost-effective means of raising awareness of the WHS and communicating its values to new audiences.

4.2.3 Supporting community events

In addition to its specially commissioned events, the CWDML WHS has also supported a number of community organised events, through funding and officer time, which have a strong mining heritage theme or association. Examples of this include the very successful Smokin' Chimneys event held on the Great Flat Lode, south of Camborne, in June 2008, where 22 mine chimneys were brought back in smoke, and the Portreath Tramway Bicentenary Celebration in August 2009, which commemorated the commencement of construction of the first iron tramroad in Cornwall, in 1809. More recently the WHS has supported through grant funding the delivery of the churchyard focused event Perthi Kov at St Euny, Redruth. The series of events held in May 2017 included a series of 'theatre' walks through the churchyard, whereby characters with a mining connection were metaphorically 'brought to life' through story-telling and song.

4.2.4 Volunteering

Volunteers make a significant contribution to the operation and maintenance of many mining heritage attractions and sites within the CWDML WHS and are, indeed, essential to the continued operation of some. The combined input and value of volunteers should be assessed across the WHS, if possible, and in relation to particular aims and objectives of the Management Plan. It is in the interests of achieving particular Management Plan aims and objectives to encourage volunteering, and a study – along the lines of the *Volunteering Study and Action Plan* proposed in relation to an Interreg project in 2012 – would be useful in scoping how volunteering might best be encouraged and utilised. This should explore existing activity and the potential for securing growth in volunteering, while defining how an action plan might be developed, and setting out the priorities and how this might be achieved. In examining existing volunteer activity in this manner, future Monitoring Reports could benefit from data which has hitherto not been available. Such a study could also raise awareness of WHS status and lead to increased engagement by existing and new volunteers.

- **Tamar Valley AONB – 'Helping Hands for Heritage' project**

The purpose of the Tamar Valley AONB co-ordinated Helping Hands for Heritage project was to increase and develop opportunities for volunteering across the AONB over a two-year period from May 2014. Through the application of training and engagement opportunities to existing and new volunteers the project engaged with around 2,280 individuals through 106 organised events, and an estimated 51,300 volunteer hours were contributed to help conserve the landscape of the Tamar Valley. The project encompassed heritage themes, across both biodiversity and cultural heritage, relating to the special qualities that contribute to the AONB designation.

Training constituted an important element of the project with an additional 2,295 hours were given by the volunteers in this activity. At the end of the project in July 2016, 81 volunteers remained active and it was the aim of the project to maintain the momentum established through the work of legacy groups, also run by volunteers. Although issues were encountered throughout the project in engaging people in some of the 16 'Approved Purposes' set out within the original proposal, the project has enabled the focus of residents to be defined in clarifying what locals wish to be cared for in their area. The project is understood to have been a useful springboard for future engagement and training which has hopefully encouraged people to continue caring for their cherished landscapes. The project outcomes have considerable potential to inform WHS volunteering objectives going forward.

- **Historic England 'Adopt a Monument' scheme**

In light of the findings of the WHS Condition Survey 2017 regarding the lack of vegetation management at some sites (3.2.1), volunteers are likely to become increasingly of focus as a potential means of addressing this issue. It is understood Historic England have experienced some success with its 'Adopt a Monument Scheme' on Dartmoor in recent years, whereby interested volunteer groups are identified to

address problems with specific Heritage at Risk registered sites. Following an assessment of the risks at hand and the conservation techniques required to address these, individuals are identified who can deliver the required training for volunteers. Historic England then funds this, including training for chainsaw tickets, hedging laying and soft capping, in order for volunteer teams to be able to maintain the monument that the respective group has adopted. As with the Helping Hands for Heritage project, the Adopt a Monument scheme may provide a useful model for managing vegetation and other issues at specific sites.

4.3 Education, Outreach and Research

CWDML WHS Management Plan Policies: C13, PN2, PN3, T1, T2

4.3.1 The WHS World Wide Web and Social Media

The bid for World Heritage Site status, commencing in 2001, included the creation of a website to promote the nomination and to raise awareness of Cornwall and west Devon's mining heritage. The website was conceived by the then bid team and built by web designers employed by Cornwall County Council as part of its communications staff.

This early 2000s web design was based on the html format and by using the software package Microsoft Frontpage the bid team could publish text and images, and regularly update content and news items as required. The format of this initial design could be said to have been somewhat text reliant, with predominantly text-based content set out covering aspects of the nomination process and progress with this, in addition to detailed content addressing differing historical aspects of the metalliferous mining industry across Cornwall and west Devon.

An initial analysis of the public reaction to the website was encouraging with an estimated 70,000 users being recorded annually. This level of usage was estimated to be broadly maintained throughout the years of the WHS nomination, from 2001 to 2006. With the application of the Google Analytics monitoring coding to the website from October 2007, a more reliable means of assessing web usage became available.

In 2010 the WHS tourism enhancement project 'Discover the Extraordinary' (DtE) was launched, with the programme outputs including a revised website built by the web designers Numiko. Developed on the Drupal content management system (CMS) platform, the new website enables easier updating and remote access for this via a username and password login (<http://www.cornish-mining.org.uk>). In line with the marketing approach conceived for the WHS through the DtE programme, the revised website was designed primarily to encourage interaction with the various mining landscapes which together comprise the Site. This revised approach included a focus on activities which visitors might wish to engage in, by specifically detailing what there is to see and do within the respective Site Areas, A1 to A10. Navigation around the site was principally directed by means of a number of tags across the top of the home page which addressed specific themes including 'Delving Deeper', 'Areas, Places & Activities' and 'News'. Further tags were added to the home page in subsequent years to address additional requirements and most recently the 'Planning in the Site' page.

The first year of Google Analytics data indicated 13,430 sessions* for the site (21,583-page views), for the period 1 October 2007 to 1 October 2008. The number of sessions was to increase the following year to 22,137 (37,030-page views) but declined slightly to 18,955 (27,468-page views) for the year 2010-2011. More recent figures indicate session usage has decreased to 1,002 sessions (1,604-page views) for the period 1 October 2016 to 1 October 2017.

This decline in usage numbers may relate to a number of factors including, perhaps, the form and perceived ease of use of the revised website, or an incorrect or sub-optimal implementation of the Google Analytics coding at the time of the site's build. The role of the WHS Business Development Officer is to include examining how web and social media are deployed by the WHS team, with a view to optimising this from both the perspective of engaging more effectively with the public and potential

business supporters. Optimising the implementation of Google Analytics will also be necessary and the Analytics' facility 'Tag Manager' is due to be included with this.

Fundamental security issues were to become a concern in September 2018, however, when the Drupal content management system adopted as the platform for the website came under attack by a bit coin mining virus – the black comedy of which was not lost of the WHS team. This led to a decision to take down the site in order to prevent any potential security issues for users. Since this time a temporary website has been in development, hosted by Cornwall Council, which will be used until a wholly new and independently hosted website can be developed later 2019.

Since 2011 the WHS has maintained both Facebook and Twitter accounts (@cornishmining and @CornishMining, respectively) to broaden its outreach, and as of February 2019 the Facebook account had 1,741 followers and the Twitter account 2,067 followers.

The online social media video outlet YouTube also hosts WHS output and to date 23 videos are available covering a range of place and topic themed clips. The introductory video for the WHS, uploaded in 2011 as part of the Discover the Extraordinary programme outputs, currently has 13,044 views (February 2019).

With the arrival of the WHS Business Development Officer in March 2018, the WHS established an Instagram account which had, as of February 2019, 1,010 followers.

Status summary: 'Cornish Mining' Facebook, Twitter and Instagram accounts in place, with a temporary website in development pending a full revision later in 2019. Online and social media usage due to be reviewed as part of the WHS Business Development Officer's role.

* Within Google Analytics, the 'Sessions' metric unifies reports for both 'Visits' and 'Active Users', meaning whatever a user does on a website (e.g. browses pages, downloads resources, or purchases products) before they leave, equals one Session within a period of 30 minutes. Should the same user re-visit the site after 30 minutes has elapsed, this is counted as a new Session.

4.3.2 World Heritage Site Research Agenda

Research Agenda in support of the Aims and Objectives of the World Heritage Site Management Plan

*'...good site management requires ongoing, focused research.'*²³

The World Heritage Site Management Plan 2013-2018 sets out a range of policies to facilitate the protection and enhancement of historic sites, landscapes and settlements - the attributes which comprise the Site's OUV - and to promote physical and intellectual access to these through educational and promotion/marketing initiatives.

The extensive documentary and map-based research undertaken by the World Heritage Site Bid Team from 2001 to 2003 enabled the delineation of ten Areas which together comprised the Site, and the definition of a robust Statement of Significance. Studies undertaken to achieve this included the assessment of the authenticity and integrity of former mining settlements and landscapes, and a comparative analysis of metal mining sites elsewhere in the UK and worldwide. This research however has highlighted gaps or deficiencies in current knowledge which should be ideally more clearly defined and addressed should these be likely to have significant impact on Site management.

What is termed Cornish Mining, within the context of this World Heritage Site, can only be adequately assessed against the context of both British and world mining. European mining practice and technologies were to leave a significant mark on Cornwall and west Devon, and other parts of Britain, from the medieval period. Subsequent advances in steam engineering, ore extraction and processing techniques achieved in south-west Britain were later exported with the global spread of the British Industrial Revolution, during the latter eighteenth and nineteenth centuries. It is important therefore the

World Heritage Site research strategy fully acknowledges the role of Cornish Mining practice and culture within a global context.

The aims of the Research Agenda are to set out that research which is required to satisfy the requirements of the various Management Plan policies and to inform the delivery of the strategic actions contained therein. Given the broad scope of all possible research which could relate to the Cornish mining industry during the nominal period of inscription, 1700-1914, the Agenda has, by necessity, to be selective in targeting principally the study areas pertinent to the Management Plan and to address topics or themes where knowledge is thought to be insufficient in this regard. Some research can also be regarded as being mandatory in order to satisfy the six-yearly UNESCO Periodic Reporting requirement.

The Management Plan defines the purpose of the research programme to;

- define the current state of knowledge within the various study areas relating directly to the Management Plan where required
- set out known gaps or insufficiencies in knowledge
- inform the preparation of appropriate research strategies

The Agenda guides WHS direct commissioning of, or support for, research by others, where this relates to the Vision and Aims as set out in the Management Plan. For the purposes of this Agenda the research requirement is to be delivered against the following categories;

- **The World Heritage Site: the resource and monitoring** - assessment of the designated landscape to aid management and inform UNESCO Periodic Reporting requirements
- **The World Heritage Site: outreach related research** - research primarily to inform site/feature conservation, or WHS education and interpretation initiatives, or to assist with related promotion and marketing

Delivery of the many and various aims and objectives of the Management Plan will undoubtedly pose new questions and research opportunities, and the management response should be sufficiently flexible to enable and support research accordingly. The potential benefit of research undertaken by organisations and individuals beyond the WHS management structure should be duly noted and supported, where this can be demonstrated to clearly support the Management Plan. Moreover, this is often the most cost-effective and efficient means of enhancing the knowledge base of 'Cornish Mining', as research initiated independently can benefit from part funding by the WHS to either bring this to print or be otherwise disseminated.

Principal considerations

- Given the strictly limited resources available to the WHS to undertake research, it will be necessary to prioritise research to address those aspects of management which relate directly to the protection and preservation of OUV within the Site and to, therefore, satisfy UNESCO Periodic Reporting requirements
- It is expected that the delivery of research initiatives considered as being 'non-mandatory', and beyond the scope of UNESCO Periodic Reporting, will have less priority where these require direct funding from WHS research budget funds. The timescale for delivery of these will be by necessity flexible, with Periodic Reporting and other mandatory requirements taking priority
- 'Non-mandatory' research should focus primarily on the nominal date range for WHS inscription (1700-1914), but research into earlier periods will be supported where this provides valuable context to later developments

Status summary: The Research Agenda sets out principal themes to be considered for study but should be regarded as being a continually evolving document which will be revised as and when

required, and in accordance with new iterations of the Management Plan and the policies therein. At the time of writing (December 2017) the Research Agenda is in need of further revision to align this with the next iteration of the Management Plan (2019-2024).

4.3.3 Publications and research commissioned or co-funded 2005-2018

Under the auspices of its research budget, the Cornwall and West Devon Mining Landscape World Heritage Site (CWDML WHS) has commissioned or supported the production of a number of publications since 2005 which accord with the policies set out in the World Heritage Site Management Plan (2005-2010).

These address a wide range of Cornish mining related topics, including studies of heritage building conservation methodologies, the social impacts of hard rock mining, and the international dimension of mining related migration among some of the subjects covered.

During the summer of 2009, the CWDML WHS and the University of Stirling co-hosted the Eighth International Mining History Congress in Redruth, the historic business 'heart' of the Cornish mining industry. This prestigious bi-annual conference saw the presentation of a range of academic papers, a number with Cornish mining-related themes, and also provided the opportunity to showcase some of the extraordinary mining landscape of the Site to over eighty delegates from around the world. In 2011 the CWDMLWHS was pleased to co-ordinate the publication of the full proceedings in partnership with the University of Stirling.

The publication of *Cornish Mines: Metalliferous and Associated Minerals, 1845-1913* in 1987 for the first time presented the mineral output statistics recorded by the Mining Records Office for all the metalliferous mines across Cornwall. Alongside its sister publication *Devon and Somerset mines: metalliferous and associated minerals, 1845-1913* (1984), this has become the standard reference work covering mine output for the period. In the intervening years Dr Burt has worked with friends and colleagues to collate other datasets, such as the mining returns for the Duchy of Cornwall, with the view to publish a significantly revised edition combining the output records for Cornwall and Devon. The CWDMLWHS was pleased to co-ordinate the production of this valuable work in 2014, which includes an accompanying CD ROM containing the various mine production datasets.

The Camborne School of Mines (CSM) has a very well-established international reputation of which it is justifiably proud. Graduates of the School can be found working around the globe but the background to the early years of mining education in Cornwall is, to many, little understood. The CSM came about as the result of a number of earlier technical education initiatives and the research of Laurie Piper, a former governor on the CSM board of trustees, has brought this story together for the first time in a volume published in partnership with the Trevithick Society.

The promotion of the World Heritage Site online has been an important function of the office since the commencement of the nomination phase for the status in 2001. In addition to providing general and detailed information about the nature of World Heritage status and how the Cornish mining landscapes are significant internationally, the Cornish Mining website has also hosted 'Cornish Mining' the regular e-newsletter. In 2011 the new CWDML WHS website was launched, adopting a more visitor focused approach, and 'Cornish Mining' can be found via a link from the News page (<http://www.cornish-mining.org.uk>).

Since inscription 'Cornish Mining' has highlighted a wide range of themes relating to the Cornish mining story locally, in and around the ten Areas of the Site, and both nationally and internationally. The overseas dimension is a particular theme which has been gaining greater prominence in recent years and to date a number of sites beyond Cornwall and Devon have been featured, including the Keweenaw Peninsula in Michigan, Kåfjord in Norway, and Timor in Australia. The aim is to progress this aspect of the newsletter further during the duration of the Management Plan (2020-2025), to feature yet more sites in Britain and around the world where migrating Cornish mineworkers made their mark, while continuing to highlight significant projects and events within the Site.

In 2018 the World Heritage Site Office instigated a limited programme of research to address the migration of Cornish mineworkers to other parts of Britain, in order to increase community engagement with regard to the 'Man-Engine' tour of Cornwall, Wales and northern England that year. This shed light on a number of migration destinations, with Roose in Cumbria being particularly prominent due to mineworkers relocating in numbers to work in the area's iron mines in the 1870s. The intent is to develop this research further during the period of the current Management Plan (2020-2025), to explore migration throughout Britain in greater detail.

Within the operational period of this Management Plan the CWDML WHS aims to support and commission further publications and research on the basis of management requirement, and where these can be demonstrated to accord with one or more Management Plan policies.

Below is a list of the twenty publications and research projects produced by, or in partnership with, the CWDML WHS from 2005 to the end of 2018. Management Plan policies have been cited in each instance to illustrate those policies relating to the work in question.

Research projects and publications: 2005 - 2018

- ***The conservation of historic mine buildings in Cornwall: practical guidelines to assist conservation of similar buildings internationally***

Sharpe, A. Weardale: Europamines

ISBN: 0-9551301-1-5 (2005)

CWDMLWHS Management Plan Policies: C6, C7, C8, C9, T4

Produced by the Europamines project and co-funded by the World Heritage Site, this is a detailed study covering the full breadth of issues relating to the consolidation of historic mine features, including archaeological recording, surveys, and the most appropriate materials and techniques to use; 56 pages, in both Spanish and English text.

- ***Interpreting the Ruins of Cornish Design Engine Houses***

Brown, K., Morris, J. H., Perez Sanchez, A. A., & Critchley, M. Weardale: Europamines

ISBN: 0-9551301-0-7 (2005)

CWDMLWHS Management Plan Policies: C6, C7, C8, C9

Another Europamines production co-funded by the World Heritage Site, this is a thorough work detailing how to interpret the many design features of Cornish type engine houses in order to determine the engines they once contained; 48 pages, in both Spanish and English text.

- ***Mining a Shared Heritage: Harnessing the Potential of Cornish Transnationalism***

Schwartz, S. P. Truro: Cornish Mining World Heritage Site / Cornwall County Council (2006)

CWDMLWHS Management Plan Policy: T2

Research commissioned by the World Heritage Site and undertaken by an academic regarded as the foremost authority on Cornish mining related migration; addresses 40 Cornish migrant destination sites around the world and contains detailed information on individual locations, site histories, extant heritage and contacts.

- ***Harnessing the potential of the Cornish overseas: a preliminary overseas marketing strategy for the Cornwall and West Devon Mining Landscape World Heritage Site (WHS)***

Schwartz, S. P. Truro: Cornish Mining World Heritage Site / Cornwall County Council (2006)

CWDMLWHS Management Plan Policies: PN3, T2, T3, T5,

Part funded by Devon and Cornwall Overseas Marketing (DACOM) and VisitCornwall, this study document focuses on the potential for those descendants of migrant Cornish mineworkers around the world to visit the World Heritage Site, and through ancestral tourism to contribute to the growth of visitor numbers.

- ***Mining a Shared Heritage: Harnessing the Potential of Cornish Transnationalism (second series)***

Schwartz, S. P. Truro: Cornish Mining World Heritage Site / Cornwall County Council (2008)

CWDMLWHS Management Plan Policy: T2

This, the second series of research commissioned by the World Heritage Site on Cornish mining related migration sites, addresses 30 Cornish migrant destinations and, as with the first series (above), contains detailed information on individual locations, site histories, extant heritage and contacts.

- ***Voices of the Cornish Mining Landscape***

Schwartz, S. P. Truro: Mineral Tramways Heritage Project / Cornwall County Council

ISBN: 978-1-903798-47-8 (2008)

CWDMLWHS Management Plan Policies: PN2, PN3, T1, PN7, PN8, T2, T3

While being commissioned and funded by the Mineral Tramways Heritage Project, the World Heritage Site was delighted to be able to assist in the final publication of this very useful study. Adopting a somewhat different approach to mining heritage, it focuses on the impact of metalliferous mining on Cornish communities, when mining was in its heyday and through the years of decline and beyond into the present. It is interwoven with interviews with many of today's residents from the Camborne, Pool, Redruth area, giving their very personal accounts of how mining has influenced the lives of both themselves and their families; 128 pages.

- ***Churks, Clidgy & Doodle-Dashers – Hayle Tales and Trails***

Frears, L. (Ed.) Hayle: Hayle Oral History Project / Hayle Community Archive (2010)

CWDMLWHS Management Plan Policies: PN2, PN3, T1, PN7, PN8, T2, T3

This fascinating work, part funded by the World Heritage Site, describes Hayle as an industrial town through the use of archive photos, memories, expert articles and historic trails around the Hayle area including St. Erth, the Dynamite Works, Gwithian Tin Streams and Godrevy. An additional multimedia disc contains archive film footage, animations created based on oral testimony, and recordings and transcriptions of interviews made by the Hayle Oral History Project; 168 pages.

- ***WHS Photomonitoring Survey***

Sharpe, A. Truro: Cornwall Council (2010); Report No: 2010R141

CWDMLWHS Management Plan Policies: C6, C7

A Site-wide Photomonitoring Survey was commissioned in 2010 to assess the condition of those features which constituted the outstanding universal value of the World Heritage Site. In addition, over 12,000 digital still images were produced across the ten Areas of the Site and assessments of baseline condition for each site/feature were logged using an accompanying electronic spreadsheet.

- ***Cornish Mining World Heritage Site: Condition assessment of CC Holdings***

Sharpe, A. Truro: Cornwall Council (2011); Report No: 2011R088

CWDMLWHS Management Plan Policies: C6, C7

As an adjunct to the above survey, the WHS Office commissioned an assessment of Cornwall Council holdings within the Site which demonstrate outstanding universal value. 70 Cornwall Council owned sites were assessed in total and the conclusions of the survey will be used to inform recommendations for future conservation work.

- ***Mining a Shared Heritage: Mexico's 'Little Cornwall'***

Schwartz, S. P. Wendron: Cornish-Mexican Cultural Society

ISBN: 978-1-903798-70-6 (2011)

CWDMLWHS Management Plan Policies: PN2, PN3, PN7, T1, T2, T3, T5

Written by Dr Sharron Schwartz, the foremost authority on Cornish mining related migration and funded by the World Heritage Site, this fascinating work covers the ground-breaking introduction of Cornish steam technology to the silver mines of Pachuca and Real del Monte in the State of Hidalgo, Mexico from the 1820s. It also brings the story up to date with a look at how these communities celebrate their Cornish mining heritage today.

- ***Mining Perspectives – the Proceedings of the Eighth International Mining History Congress, 2009***

Claughton, P., & Mills, C. (Eds.) Truro: Cornish Mining World Heritage Site / University of Stirling

ISBN: 978-1-903798-77-5 (2011)

CWDMLWHS Management Plan Policy: T2

Co-funded by the World Heritage Site with the University of Stirling and edited by Drs Peter Claughton and Catherine Mills, the 24 papers within *Mining Perspectives* cover a wide range of international mining related topics. These include *Hathorn Davey and Company Limited of Leeds*, noted steam engine manufacturers during the nineteenth century, and *The Cuban Copper Cycle*, highlighting copper production from the east of that country during the middle 1800s. Papers with a direct relevance to the World Heritage Site were also presented at the congress, including *War and Peace: the economy of Cornish copper mining 1795-1840*, and *Tasmania's Mount Bischoff tin mine: Dolcoath of the Antipodes?*, which details the history of this long-lived tin producer with established Cornish connections.

- ***The history of mining education in Cornwall: the story of the Camborne School of Mines***

Piper, L. P. S. Camborne: The Trevithick Society

ISBN: 978-1-903798-66-9 (2013)

CWDMLWHS Management Plan Policy: T2

This painstakingly researched work by Laurie Piper - a former governor on the CSM Board of Trustees and education specialist - recounts the origins and rise of the world-famous Camborne School of Mines (CSM) and the background to the early years of mining education in Cornwall.

- ***Cornwall and West Devon Mining Landscapes World Heritage Site, Condition Survey 2014***

Sharpe, A. Truro: Cornwall Council (2014); Report No: 2014R060

CWDMLWHS Management Plan Policies: C6, C7

A further condition assessment of OUV attributes across the Site, this work addressed a selection of sites/features in private ownership which were assessed as being in unfavourable condition in 2010. Sites/features not surveyed included the majority of those making up the urban environments of the WHS, a small list of sites which were undergoing conservation measures or for which such measures were proposed in the near future, and a group on Caradon Hill for which landowner permission could not be obtained. A total of 243 structures or groups of contiguous structures were chosen for assessment.

- ***Mining in Cornwall & Devon: Mines and Men***

Burt, R., Burnley, R., Gill, M. & Neill, A. Exeter: University of Exeter Press

ISBN: 978-0-85989-889-8 (2014)

CWDMLWHS Management Plan Policies: C13, T2

This collection of mining output statistics is an essential acquisition for all those interested in the history and economics of metalliferous mining in Cornwall and Devon, and the management personnel who captained the industry. Co-authored by Dr Roger Burt, renowned mining historian and Professor Emeritus at the University of Exeter, the work was co-funded by the World Heritage Site and published by the University of Exeter Press. The volume is available in softback comprising a 60,000-word introduction accompanied by a data CD ROM.

- ***Great Wheal Vor: a study of the history and working of one of the richest tin mines in Cornwall***

Bennett, T. Camborne: The Trevithick Society

ISBN: 978-0-9575660-6-4 (2015)

CWDMLWHS Management Plan Policies: C13, T2

Great Wheal Vor is known as being at one time Cornwall's greatest producer of tin - a renown which extended far beyond its homeland. Such was the productivity of Vor that it established its own on-site tin smelting furnaces, a development understood to have been almost unique in Cornish mining. Bennett's detailed study runs to 600 pages and contains a comprehensive history of the mine, including the prolonged and damaging court case which may have inspired Charles Dickens, as well as information on the way the mine was worked, its geology, and what remains on the ground today.

- ***The Cornish in Latin America: 'Cousin Jack' and the New World***

Schwartz, S. P. Wicklow: The Cornubian Press

ISBN: 978-1-873489-50-5 (2016)

CWDMLWHS Management Plan Policies: PN2, PN3, PN7, T1, T2, T3, T5

This extensively researched but thoroughly readable work recounts in detail how the Latin American mining fields of Peru, Mexico, Chile, Cuba, Brazil and elsewhere became established, or were reshaped through the application of Cornish skills and technology, allied with British capital. In addition to documenting the impacts of the Cornish in communities throughout Latin America, Dr Schwartz also addresses the effects that this migration had on the many towns and villages across Cornwall from whence the migrants came.

- ***Mine Pumping Engines in Eighteenth Century Cornwall***

Stewart, R. J. Camborne: The Trevithick Society

ISBN: 978-0-9935021-2-5 (2017)

CWDMLWHS Management Plan Policies: C13, T2

The literature addressing mine pumping in Cornwall is extensive but has largely concentrated on the use of steam in the nineteenth century; the story of the eighteenth century and its pioneers has received considerably less attention. This work attempts to address this shortfall and opens with a discussion of adit drainage and the use of waterpower. It then progresses to the introduction to the Newcomen engine in Cornwall and covers the work of Boulton and Watt from the 1770s and their sometimes highly acrimonious relationship with Cornish mine adventurers. The book's closing chapters cover the work of Jonathan Hornblower and Edward Bull both of whom challenged Boulton and Watt's near monopoly on engine construction.

- **Cornwall and West Devon Mining Landscapes World Heritage Site: Condition Survey 2017**

Sharpe, A. Truro: Cornwall Council (2017); Report No: 2017R039

CWDMLWHS Management Plan Policies: C6, C7

An update to the Site-wide Photomonitoring condition survey of 2010 to assess primarily those OUV attributes considered to be an unfavourable condition at that time. A total of 298 sites/features were assessed during the summer and early autumn of 2017, producing a written report, a detailed condition spreadsheet and an archive in excess of 2,300 digital photographs.

- **Cornish UK Migration destinations study 2018**

Colwill, S. Unpublished: Cornish Mining World Heritage Site Office

CWDMLWHS Management Plan Policies: PN7, T1, T2, T3, T5

In 2018 the World Heritage Site Office instigated a limited programme of research to address the migration of Cornish mine workers across Britain, in order to increase community engagement with regard to the 'Man-Engine' tour of Cornwall, Wales and northern England that year.

- **The Official Guide to the Cornwall & West Devon Mining Landscape World Heritage Site**

The World Heritage Site Office Truro: The World Heritage Site Office

ISBN: 978-1-9996208-0-8 (2018)

CWDMLWHS Management Plan Policies: PN7, T1, T2, T3, T5

This award-winning, well-illustrated and accessible guide introduces the World Heritage Site to a general readership, with descriptions of what to see and explore across all ten areas of the Site.

4.3.4 Future research into education provision

Future research should collect information regarding educational resources available for schools, colleges or other learning conduits. These should include teachers' packs, websites and on-site activities (with key stage groups and curriculum links) with the aim being to increase or, at a minimum, maintain provision.

The conclusions of the WHS Learning Strategy (2010-2013), commissioned and completed in 2009 and subsequently reviewed in 2014, included the following;

- Formal education practitioners are more likely to use mining heritage locations as a context for learning where they perceive it will match curriculum requirements. Learning service providers need to know what these are and be able to develop appropriate content and experiences.
- Schools are deterred from extending their studies into the WHS landscape, or from visiting Cornish Mining heritage attractions, by a range of factors, which include in order of priority;
 - Lack of appropriate resources and curriculum materials to support study in the classroom
 - Lack of outreach, such as special events or visiting speakers
 - The cost of transport
 - The preparation of risk assessments

Future education provision research should consider the following;

- Audit of relevant educational resources in place for Cornwall and west Devon

(Audit commissioned by WHS in 2008 available)

- Education Strategy in place for Cornwall and west Devon (Audit commissioned by WHS in 2009 available)
- Five yearly peer review by relevant teachers at schools and colleges
- Peer review panel selection criteria and process to be identified
- Adult education/life-long learning provision monitoring

Status summary: Education Audit and Learning Strategy produced for the WHS. Learning Strategy reviewed and updated in 2014, since when a number of projects have been commissioned across the Site, and in some instances in conjunction with the WHS Cultural Events Programme. Twenty publications and research projects produced by, or in partnership with, the WHS from 2005 to the end of 2018.

Indicator	Status	Notes
Assessment of mining-related education provision	<p>WHS Education Services Audit and WHS Learning Strategy (2010-2013), commissioned and completed in 2008 and 2009, respectively. WHS Learning Strategy reviewed in 2014.</p> <p>Twenty publications and research projects produced/pursued from 2005-2018</p> <p>Multiple projects delivered in conjunction with WHS Cultural Programme</p>	Continue to implement recommendations of Learning Strategy when project funding can be secured

4.4 Economic impacts of World Heritage status

CWDML WHS Management Plan Polices: PN5, PN6, PN7, PN8

4.4.1 The value of heritage to the UK economy

As noted in a recent study by Historic England, heritage generally is of great value to the national economy in addition to its social worth. The report *Heritage Counts 2017: Heritage and the Economy*²⁴, produced on behalf of the Historic Environment Forum (HEF), sets out in broad terms the degree to which the heritage sector contributes to the economy through revenue generated by heritage tourism, through the upkeep of heritage buildings and properties, and through direct and induced employment. The study indicates that heritage tourism generated some £16.4 billion in spending by domestic and international visitors in the year 2016-2017 and the repair and maintenance of historic buildings delivered £9.6 billion in construction sector output. Analysis indicates that during the same period some 278,000 people were employed in the heritage sector, usefully contributing to the gross value added (GVA) figure for England. In 2014, the report indicates heritage directly generated £11.9 billion in GVA with the heritage sectors' contribution to GVA increasing to £22 billion if indirect and induced effects are considered. This is equivalent to 2 per cent of GVA nationally.²⁵

Figures for the regional distribution of direct, indirect and induced heritage GVA in England give a total of £2,533 million for the south-west, i.e. including the area from Cornwall to Gloucestershire, Wiltshire and Dorset. The south-west is positioned third in GVA output terms, after the south-east and London areas at

£3,452 million and £5,908 million respectively. In 2014, the report states 168,000 direct heritage jobs were recorded in England. When indirect and induced heritage employment is included, this figure increases to 278,000 heritage jobs or 1 per cent of total national employment figure.²⁶

4.4.2 The value of UNESCO and World Heritage to the UK economy

Considering the role of World Heritage Sites specifically, the UNESCO report *Wider Value of UNESCO to the UK 2012–13*, produced by the UK National Commission for UNESCO, indicates the combined estimated financial value of World Heritage Sites to the UK as £61.1 million. When added to the other UNESCO designated heritage sites across the country this figure rose to £89.4 million.²⁷ When set against the UK's assessed contribution to UNESCO in 2012 of £14.1 million,²⁸ these figures illustrate well the fundamental financial value of engaging culturally on the global stage. These are in addition to the wider benefits of UNESCO membership which include the promotion of UK principles and agendas, international development, sustainable development, foreign policy, cultural diversity, and influencing global policy. In a post Brexit trading arrangement, many of these benefits have potential to be of far greater importance to the UK as it navigates a somewhat changed world order where forging stronger and more extensive international links will be crucial.

As acknowledged in the UNESCO report, the CWDML WHS has attracted an average of £3.8 million of additional capital funding per year since the inscription of UNESCO status, an estimated 100 per cent increase on pre-inscription annual funding.²⁹ This significant impact is demonstrated most clearly through the major conservation related capital works funding secured by partners since 2006, which by October 2013 totalled some £95 million (see: 8.7). Capital works funding secured since 2013, including the HLF grant of £3.6 million for the Luxulyan Valley Project awarded in September 2017, has now passed the £100 million figure.³⁰

The subsequent edition of the UNESCO *Wider Value* report, produced in 2015, included the CWDML WHS as a specific case study, which is reproduced in full here;

'Cornwall and West Devon Mining Landscape (Cornish Mining) World Heritage Site is the UK's largest World Heritage Site spanning 10 areas across Cornwall and West Devon. Receiving the UNESCO World Heritage status in 2006 brought the dispersed area and the diverse interests involved with them together in one collective partnership, with one coordinated site management plan. This brought new opportunities to develop a single, marketable world-class tourist destination.

UNESCO's external validation that a region is of Outstanding Universal Value influences local planning decisions. UNESCO's formal recognition of the area's international significance also has positive impacts on attracting regeneration funding. Since inscription, conservation and heritage led regeneration projects identified as priorities from the Cornish Mining World Heritage Site Partnership's Management Plan have attracted over £100 million in external funding from a wide range of public and private sources.

The status has also provided a rallying call for local business and the wider community to get behind the Partnership's successful community-based sustainable tourism strategy. This aims to support local enterprises to engage with the status, and develop the tourist offer as a dynamic, world-class visitor destination. Their tourism initiative 'Discover the Extraordinary' is about thinking globally and acting locally. Local businesses - that range from small, family owned hotels to independent walking tours – are providing training in sustainable tourism practices, in order to improve theirs and their customer's impact on the environment. Training in what makes the Site special encourages locals to take collective responsibility for promoting and protecting their shared asset and provide a more authentic visitor experience that is delivered by local people and benefits the local economy.

"There is a positive emotional value attached to the World Heritage Site status," notes the World Heritage Coordinator. "In heritage terms, it's seen as the best of the best. UNESCO, an objective international body, has recognised the quality and specialness of this place, and many businesses

want to be linked to that. Also, our Outstanding Universal Value is an intrinsic element of a distinctive cultural identity that formed this landscape. Many businesses in the area are run by people who love this place. They see they have a role in protecting it and helping us sustain its character”.

The Partnership, aware that UNESCO rules stipulate that the UNESCO logo cannot be used for commercial gain, developed a local Cornish Mining World Heritage brand which local businesses sign up to use. The branding now appears on locally produced products which to date have brought in over £21,000 a year, which is invested back into protecting and promoting the World Heritage Site.

The local creative sector has also been critical in the development of the community-led visitor experience, creating new pieces of work that use the site’s Outstanding Universal Value as their inspiration, to bring stories of the mining landscape and the people who shaped it to visitors and residents. These performances have reached an estimated 35,000 people over the past seven years.

The Cornish Mining World Heritage Site’s tremendous efforts to transform the designated area into a world class visiting destination have been recognised, with CNN naming it as one of ‘27 places to see before you die’, the European Route of Industrial Heritage (ERIH), a network of the most important industrial heritage sites in Europe, recognising Cornish Mining, as one of its ‘Regional Routes’, Prime Minister David Cameron choosing to launch the UK’s new five point tourism strategy at the site, and 15% of visitors now reporting the World Heritage Site mining landscape as one of their motivations to visit the area.³¹

From: *Wider Value of UNESCO to the UK 2014 – 15 - Contribution of UNESCO to the work of UK organisations* (UK National Commission for UNESCO, 2015)

The UK National Commission for UNESCO provides further data on UNESCO designations in England within its most recent report *UNESCO in England (2017)*. Under the topic of financial value, it states ‘...UNESCO projects in England generated an estimated £78 million from April 2014 to March 2015 through their association with UNESCO’.³²

Beyond the WHS conservation related capital works projects outlined above, and as noted in the previous Monitoring Report, the influence of the WHS on the economy of Cornwall and west Devon will be experienced through the marketing and promotion of the Site as a high-quality cultural landscape destination. This holistic approach remains important as engaging with the tourism industry more widely brings benefits beyond those secured through targeting the tourist ‘gaze’ at established mining attractions only (see: 5.2). The existing mining heritage attractions have the capacity to welcome increased visitor numbers and WHS marketing initiatives will continue to be directed to this end, in accordance with recommendations set out within the WHS Interpretation Strategy³³.

4.4.3 World Heritage Site Bid Economic Impact Assessment

The *WHS Economic Impact Assessment* (EIA) commissioned during the WHS bid phase (2003) proposed a range of strategic actions that were thought necessary to deliver a projected degree of financial growth in the tourism sector. The EIA had identified that a potential investment of £500,000 in promotional campaigns over three years could deliver additional tourism activity to the value of £11-12 million to the local economy per annum. Marketing of the WHS status from 2006 to 2009 was to be undertaken with only minimal resources as the £500,000 identified in the EIA was not forthcoming. Securing tourism development funding from the Rural Development Programme for England (RDPE) in late 2009 enabled the holistic approach concept to be put to the test, however, by means of a three-year programme of asset improvements and direct engagement with tourism providers: ‘Discover the Extraordinary’.

4.4.4 The 'Discover the Extraordinary' programme and legacy

In light of the conclusions of the *WHS Economic Impact Assessment* of 2003, the WHS Office approached the Regional Development Agency (RDA) in 2007 with proposals for an integrated programme of tourism product improvements, tourism industry engagement and promotion, to be delivered given that WHS status had been secured. The key focus of this investment was subsequently on building the quality experience expected by the target markets for what is perceived as a world class destination under the programme banner: 'Discover the Extraordinary' (DtE).

Delivered between 2010 and 2013, the project combined investment in tourism product (interpretation, orientation and visitor facilities at mining heritage attractions), business engagement with the wider tourism sector, a PR driven promotional campaign to raise awareness of the WHS with target markets, and promotion of environmentally sustainable behaviours across both industry partners and visitors.

The initial expression of interest put to the RDA developed into a £2.4 million Rural Development Programme for England (RDPE) funded three-year programme of activity, funding for which was confirmed in late 2009. The project began and operated in the midst of the most extreme financial recession since the 1930s, creating a rapidly changing and highly unpredictable environment in terms of visitor behaviour, visitor interests and visitor spend. Despite these circumstances, Discover the Extraordinary successfully demonstrated the value, and further growth potential, of both the mining heritage sub sector within the Cornwall and West Devon tourism offer and the World Heritage Site as a designation. By the end of the project 15 per cent of visitors surveyed cited the World Heritage Site mining landscapes as a factor in choosing the destination, and partner tourism businesses had experienced an average 20 per cent increase in customer spend.

From 2010 to 2013, the DtE project team, including tourism, marketing and interpretation posts, delivered;

- £1.1 million of physical improvements at 11 attractions that were members of the former Cornish Mining Attractions Marketing Association (CMAMA, now dissolved)
- A series of 14 new walking trails and audio tours around the 10 WHS landscape Areas
- A new WHS website, supporting audio, film and social media content to highlight the Cornish Mining story and how and where to access it
- A smart phone application for both Apple and Android platforms
- An online 'digi-guide' to the CWDML WHS
- Direct engagement with 300+ tourism businesses, over 100 of which host Cornish Mining content on their own websites via an embedded bespoke web 'widget'
- Extensive media coverage of the WHS via local and national outlets and publications

The DtE programme also commissioned market research from the Arkenford consultancy which has improved understanding of visitor preferences and subsequently informed the sustainable tourism priorities for the period of the previous Management Plan (2013-2018). The DtE Project Evaluation Summary (2014)³⁴ sets out the principal outputs and conclusions of the project, and the highlights of this are reproduced below.

Discover the Extraordinary programme highlights (DtE Project Evaluation Summary 2014)

- An increase of 5.5 per cent of visitors who indicate the World Heritage Site's historic mining landscape has influenced their decision to visit
- Overall increase of 24 jobs created across a sample of heritage attractions (not including accommodation sector)
- An average percentage increase in visitor spend/income of 138 per cent amongst a sample of 20 inland heritage related businesses

Thoughts on heritage: awareness and attraction value of the WHS tourism product

Around 15 per cent, of a market of 4 million+ visitors p.a., now report the WHS mining landscape as one of their motivations to visit. This is equivalent to 600,000+ visitors to the area. In addition, the project has delivered an increase in the awareness and appeal of industrial heritage and its relationship with WHS status.

- An increase of 16 per cent in those who consider industrial heritage to be contributory factor in World Heritage Site status
- An increase of 16 per cent in those who consider mining heritage to be contributory factor in World Heritage Site status
- Upward trend in those who plan, or would consider a visit to an industrial heritage attraction
- Increase of 4.6 per cent of visitors who considered industrial heritage to be of high or some interest

Attractions

The £1.1m capital investment in attractions and subsequent marketing activity has contributed to a growth in the quality of experience and visitor activity at partner sites.

- 21 awards and commendations for excellence were won at local, regional and national level by mining heritage attractions and Heritage Champions in 2013 alone
- 8 out of 9 heritage attractions are showing or expecting an overall increase in visitor numbers over the period of the programme
- Overall increase 10.5 FTE posts across a range of heritage attractions
- Increase from 14 per cent to 32 per cent of visitors who recalled seeing World Heritage Site specific information between 2011-2013

Visitors

Customers are the lifeblood of any business. Improvements in product quality, skills transferred to tourism businesses and the resulting increased awareness and satisfaction, has delivered impressive income growth.

- An average actual increase in visitor spend of 20 per cent amongst a sample of 20 inland heritage related businesses
- Percentage uplift in visitor spend amongst sample of heritage related businesses ranges from 11 per cent to 1000 per cent
- Over 10,500 new unique Cornwall based visitors and 13,600 unique Devon based visitors accessed the Cornish Mining website in less than two years, from a total of 181,400 unique visitors worldwide

From: *Discover the Extraordinary: Project Evaluation Summary*, (2014) Truro: WHS Office, pp.8-9

The DtE Project Evaluation Summary also identified a number of priorities for the future to build on this progress, including:

- Ensure continued investment in communication and engagement, to overcome presumptions, misconceptions and social barriers to the concepts of “heritage” (and mining heritage in particular)
- Continue collaboration with the full tourism supply chain, to ensure that the offer is joined up, with each part of the wider and diverse World Heritage Site networking to ensure optimum exposure and a coherent offer to visitors

- Continue to develop links with related sectors, such as arts, culture, food, activity and accommodation, to build a year-round, multi-thematic and resilient heritage offer with a diversity of possible audiences.
- Continue support for World Heritage Site cultural events, which have proven to be a major factor in growing and broadening new audiences.
- Encourage data collection, which has been affected by decreasing local authority and tourism destination budgets, to allow intelligent investment and resource management.
- Advocate for research and investment in the potential for working collaboratively with the private sector to generate income streams for continued conservation, preservation and development of the heritage site and its diverse visitor offer.
- Pro-actively support the potential mutual benefits of joining up businesses and strategic management agencies at sub-regional level. Developing even greater joined up activity between local destinations and strategic agencies such as WHS, AONB's, National Trust can support initiatives that attracts and holds investment in those destinations.

Progress in pursuing the recommendations arising from DtE was negatively affected by the budget cuts which took effect from 2015 and the additional unforeseen workload involved in organising the two Reactive Monitoring Missions of October 2013 and January 2015. Nevertheless, significant legacy achievements informed by the experience gained from the project included:

- Cornwall 365, a Visit England and Arts Council funded cultural tourism development programme linking cultural (including heritage) organisations with the wider tourism industry to drive growth in both sectors.
- 'Tin Coast', a tourism destination initiative for the St Just and Pendeen area, instigated by the National Trust and bringing together local businesses and community groups, tourism agencies and local authorities to develop a sustainable tourism offer based on preserving and promoting the area's cultural identity and landscape assets.
- A new post of Marketing and Business Development was created within the WHS Office, to continue to manage WHS brand communications and further develop cross sectoral business engagement and revenue income generation.

4.4.5 The economic value of conservation within the World Heritage Site

Many capital works projects have been delivered within the CMWHS from 2006 to 2019 and a list of these by WHS Area is reproduced below.⁵ This indicates that a total of 52 discrete projects had been allocated project funding from various sources to 2019. These projects have, and are, delivering significant investment across the WHS, particularly in the form of mine site consolidation and streetscape improvements to historic buildings within former mining settlements. A total of £92,433,220 had been allocated across 52 individual projects to December 2019, with this being secured through the use of WHS status as a principal means to persuade funding partners.

The criteria used in the selection of the projects for inclusion in the list below, are as follows;

- Project funding application cited WHS bid as major driver/justification
- Project funding application cited WHS status as evidence of heritage value and/or justification
- Project funding application arising directly from pursuing stated WHS Management Plan objectives
- Investment attracted in part as a result of WHS status impact on significance/value perception

⁵ Data initially collated by Jeremy Williams, WHS Project Development Officer

The value of the collected major projects across the ten areas of the WHS also indicates a significant uplift effect which, it is argued, is attributable to the status. Additional heritage led regeneration projects funded within the WHS, but not attributed to the status specifically, total a further £38,574,000 - some 29 per cent of a combined total of £131,007,220 (i.e. £92,433,220 + £38,574,000).

These figures are important in illustrating that heritage led regeneration, as opposed to regeneration delivered otherwise, has been significantly influenced by World Heritage status; without this, only £38.5million in investment would have been achieved between 2006 and 2019. WHS status could therefore be said to have increased the potential for heritage led investment across the ten Areas by a factor of 3.4.

Major capital works implementing WHS Management Plan 2006 - 2019

The following sets out the major capital works expenditure committed as aggregated by WHS Area and, and in detail by Area. It can be seen that the majority of spend has been committed to WHS Area A5 - The Camborne and Redruth Mining District. This is due to the significant cost associated with the Big Lottery funded project Heartlands (at Robinson's Shaft, South Wheal Crofty). The major capital works expenditure committed, by WHS Area, from June 2006 - December 2019, is as below;

A1:	£ 4,464,900	7 projects
A2:	£ 8,571,700	4 projects
A3:	£ 850,000	3 projects
A4:	£ 112,000	1 project
A5:	£52,213,846	12 projects
A6:	£ 7,246,000	6 projects
A7:	£ 105,000	2 projects
A8:	£ 5,424,218	5 projects
A9:	£ 2,080,000	2 projects
A10:	£11,365,556	10 projects

Total: £92,433,220 52 projects across WHS Areas A1 – A10

WHS Area	Approved Funding	Principal Sources of Funding
Area A1: St Just Mining District		
Carn Galva Mine: conservation works to Porthmeor Stamps	£38,000	EU, Defra (HLS), NT
Geavor Tin Mine Project: major conservation works, and implementation of the Hard Rock Museum	£3,703,600	HLF, EU, CC, Penwith DC
Geavor Tin Mine: WHS Key Centre interpretation	£33,000	EU, Defra
Geavor Tin Mine: Extension of underground tour route & change to LED lighting for route	£112,000	EU, Defra, CC
Geavor Tin Mine Phase II Redevelopment: project development stage for conservation/regeneration works estimated to total around £4,500,000	£500,000	HLF
Wheal Call dressing floors, Kenidjack Valley: conservation works	£16,000	EU, Defra (HLS), NT
Cot Valley dressing floors: conservation works	£62,300	EU, Defra (HLS), NT
Area A2: Hayle		
Hayle Townscape Heritage Initiative, including £2,525,000 for Harvey's Foundry Phase 2	£3,861,100 plus £857,600 private owner contributions	HLF, EU, SWRDA, EH, CC, Penwith DC, Guinness Trust
Harvey's Foundry Phase 3, project development stage of £3.7million project for conservation works and adaptation for workspace	£108,000	CC
Harvey's Foundry Phase 3: delivery phase of project for conservation works and adaptation for workspace	£3,700,000	HLF

Implementation of Hayle Heritage Centre, a WHS Area Centre	£45,000	Harvey's Foundry Trust plus Section 106 planning gain funding
Area A3: Tregonning and Gwinear with Trewavas		
Wheal Trewavas: conservation works to engine houses and chimney	£520,000	NT
Visitor welcome centre for Godolphin visitor attraction, a WHS Area Centre	£190,000	EU, Defra, NT
Godolphin: conservation works to outbuilding	£140,000	NT
Area A4: Wendron Mining District		
Poldark Mine visitor attraction: WHS Area Centre interpretation and improvements to Museum and underground tour route	£112,000	EU, Defra, WHS Office
Area A5: Camborne Redruth with Portreath		
Mineral Tramways Heritage Project	See WHS Area 6 below	HLF, EU, SWRDA, CC, Kerrier DC
Wheal Peevor: mainly conservation works to engine houses	£780,000	HLF, SWRDA, Kerrier DC
King Edward Mine: Improvements to King Edward Mine Museum, a WHS Area Centre	£133,000	EU, Defra, WHS Office
King Edward Mine Museum: Visitor trail and interpretation	£15,000	HLF, CC
King Edward Mine: conservation of Count House & Carpenters' Shop complexes and adaptation to workspace	£1,986,000	EU, CC
King Edward Mine: development stage of project to enhance site and create new museum	£40,000	EU, Defra, CC, WHS Office
King Edward Mine: project delivery stage to create new museum facility and café	£1,651,846	HLF, EU, CC
Heartlands: conservation of mining heritage and development as multi use facility and WHS Key Centre	£35,000,000	Big Lottery Fund, H&CA, EU, CC, Kerrier DC
East Pool Mine visitor attraction: WHS Area Centre interpretation	£102,000	EU, Defra, NT
Camborne, Roskear & Tuckingmill Townscape Heritage Initiative Phase 1 (NB. THI Phase 1 <u>also</u> included THI funding for eligible elements of two projects listed immediately below)	£752,100 plus £8,772,700 private owner contributions	HLF, H&CA, CC, Camborne TC
Holmans' No. 3 Works: Townscape Heritage Initiative (THI) conservation works relating to housing development	£274,700	THI funding: HLF, H&CA, CC, Camborne TC
Former Holmans' Museum building: conservation works and adaptation to new uses including base for Trevithick Society	£2,017,600 plus £22,200 THI funding	Coastline Housing, plus THI funding: HLF, H&CA, CC, Camborne TC
Camborne, Roskear & Tuckingmill Townscape Heritage Initiative Phase 2. This funding will be matched by an estimated £512,000 private owner contributions	£666,700	HLF, H&CA, CC, Camborne TC
Area A6: Gwennap with Devoran and Kennall Vale		
Mineral Tramways Heritage Project: mining heritage conservation, mining village enhancements and completion of 60kms trails network (also within WHS Area 5)	£5,460,000	HLF, EU, SWRDA, CC, Kerrier DC
Wheal Maid: conservation works to engine houses	£270,000	EU, Defra (HLS)
Wheal Busy: conservation works to engine house and other mining heritage	£293,000	EU, Defra (HLS)
Wheal Busy: conservation of mine Smithy workshop	£1,000,000	Highways England
Gwennap Pit – implementation of WHS Area Centre	£18,000	EU, Defra
Kennall Vale: conservation works to gunpowder works structures	£205,000	EU, Defra (HLS), EH, CWT

Area A7: St Agnes Mining District		
Major improvements to St Agnes Museum, a WHS Area Centre	£55,000	EU, Defra
Wheal Tye / South Wheal Towan: consolidation of shaft head structures and chimney	£50,000	EU, Defra (HLS)
Area A8: Charlestown and Luxulyan Valley		
Luxulyan Valley Project: initial project development stage of £3.4million project focusing on conservation works	£120,000	EH, CC, WHS Office, CHT
Luxulyan Valley Project: delivery phase of conservation and interpretation project, subsequently increased to £5million	£5,054,618	HLF, CC, CHT and other local partner organisations
Improvements to Carmears Tramway Path	£30,000	EU, Defra (HLS), CC
Wheal Martyn: visitor interpretation and new signage at WHS Area Centre	£47,000	EU, Defra, WHS Office, South West Lakes Trust
Wheal Martyn: initial development stage of visitor facility and interpretation improvement project at WHS Area Centre, projected at £1,351,863	£172,600	HLF, South West Lakes Trust
Area A9: Caradon Hill Mining District		
Caradon Hill Area Heritage Project: focused on major conservation works to mining heritage	£2,000,000	HLF, SWRDA, CC, Caradon DC
Minions Heritage Centre: new exhibition to implement WHS Area Centre	£80,000	EU, Defra
Area A10: Tamar Valley and Tavistock		
Major improvements to Tavistock Museum, a WHS Area Centre	£109,500	EU, Defra, Biffaward
Tavistock Guildhall Project to create WHS Key Centre – development phase 1	£81,850	HLF, West Devon BC, WHS
Tavistock Guildhall Project to create WHS Key Centre – implementation phase 2	£1,713,206	HLF, West Devon BC, WHS
Tavistock Townscape Heritage Initiative: project development stage of £2million project for the town centre	£50,000	HLF, West Devon BC, Tavistock TC
Tamar Valley Mining Heritage Project: focused on major conservation works, and implementation of the Tamar Trails network	£6,800,000	HLF, EU, SWRDA, Defra, Devon County Council, West Devon BC, South West Water, Tavistock Woodlands Estate
East Cornwall Regeneration Project: focused on major conservation works to engine houses and implementation of the Cotehele Quay Discovery Centre and Tamar Valley Centre	£2,200,000	EU, SWRDA, CC
South Kit Hill Mine	£20,000	EU, Defra (HLS)
Tamar Trails Centre: new build project to provide visitor centre for trails and mining heritage	£210,000	HLF, EU, Defra, Devon County Council, West Devon BC
Wheal Tom/New Consols Mine Arsenic Chimney	£70,000	EU, Defra (HLS)
South Hooe Mine	£111,000	EU, Defra (HLS)
TOTAL APPROVED FUNDING FOR MAJOR CAPITAL WORKS: June 2006 to December 2019	£92,433,220	

Abbreviations

BC	Borough Council
CC	Cornwall County Council until 31 March 2009, thereafter Cornwall Council
CHT	Cornwall Heritage Trust
CWT	Cornwall Wildlife Trust
DC	District Council
Defra	Department of Environment, Food & Rural Affairs, UK Government
EH	English Heritage

EU	European Union
HERS	Heritage Economic Regeneration Scheme
HLF	Heritage Lottery Fund
H&CA	Homes & Communities Agency (a UK Government agency)
NT	National Trust
SWRDA	South West Regional Development Agency
TC	Town Council
THI	Townscape Heritage Initiative
WHS	Cornish Mining World Heritage Site

4.4.6 Economic monitoring issues for consideration

A number of monitoring options were proposed in the initial Monitoring Report of 2012 relating to economic impacts deriving from World Heritage status, and these are reproduced below. While the current lack of resource for monitoring largely precludes research into some of the topics identified, data pertaining to the following has significant potential to enhance the perceived 'value' of the WHS, to local authority partners and potential project funders.

Potential monitoring options include;

- £ spent on conservation of WHS by major conservation projects during a five-yearly period
- Number of people assisted in conservation skills development as a result of WHS related projects
- Number of people trained on relevant conservation skills courses in Cornwall and west Devon during a monitoring period (data would need to be qualified by a statement that only part of this is due to WHS generated conservation; relevance to WHS monitoring can be associative only)
- Number of jobs (i.e. FTE for at least one year) created or sustained by the WHS

Estimates as to the number of jobs created or sustained by the WHS, both directly and indirectly. (Suggest only monitoring direct jobs and not estimating indirect jobs which can only be estimated using standard benchmark formulae)

Definitions

- *Created job* = new, paid job that would not have existed in the region or with that employer in the UK before
- *Sustained job* = paid jobs that existed before the relevant expenditure, and which are sustained by the relevant expenditure for the period of that spend
- *Direct jobs* = jobs in businesses directly commissioned to do project work (these will be temporary, and therefore should be listed separately as temporary project jobs); jobs in WHS visitor attractions; jobs in relevant tourism businesses; jobs in WHS Office (see below); and jobs in local authority planning and conservation advice
- *Indirect jobs* = jobs due to supply chain impact of relevant expenditure i.e. WHS related project spend and WHS related visitor spend

NB. Always show related jobs data subdivided as follows

- By WHS related project spend (i.e. on conservation, public realm enhancement, development of visitor facilities, marketing and interpretation etc.) during a five-yearly period
- NB. Should be presented as temporary one-year-equivalent FTE jobs, and not compared with number for previous periods as project spend may change over time for many reasons

- Using standard benchmark formulae for £ of spend per new job created / job sustained
- Methodology needs to be consistent
- By mining heritage attraction; the degree to which jobs at attractions depend on the WHS and the contribution of this to monitoring to be decided. NB. This will measure only part of the impact on jobs or visitor spend, of mining heritage attraction or WHS visitors
- In management and maintenance of other WHS mining heritage sites where there is good public access, and which are owned by local authorities, the National Trust and other landowners/trusts which can be easily monitored
- Within the WHS Office
- In local authority planning and conservation advice departments

It is considered that much of the employment which may, in part, be due to the influence of the WHS would be extremely difficult to monitor and any estimates would most likely be inaccurate and easily disputed. The monitoring of jobs created or sustained by the WHS, with the exception of the above, therefore, can only be partial and of strictly limited relevance to monitoring overall. This issue should to be made clear in relation to the following;

- Jobs created and sustained by spend in Cornwall and west Devon of WHS visitors (other than visitor spend at mining heritage attractions)
- Jobs created in Cornwall and west Devon by businesses moving to Cornwall and west Devon due to WHS (many of these would in any case have been jobs that existed elsewhere in the UK before the move, and therefore are not 'created jobs' as defined above)
- Jobs created and sustained by the private sector's initiatives relevant to the WHS, other than for mining heritage attractions in private ownership and major private sector projects for which the cost was made public

4.4.7 Visitor expenditure: potential future surveys

Estimations of visitor spending which can be attributed to the WHS, based on regional and national statistics (i.e. numbers of day trips, overnight stays, overseas visitors). Annual turnover figures from mining heritage attractions would be useful if available with the aim being to increase receipts through carefully targeted marketing. Mining heritage attractions to be approached to provide baseline data from visitor surveys and site monitoring during the period of the Management Plan (2019-2024).

- Total annual visitor spend at each mining heritage attraction – future research

Must be a consistent methodology for each mining heritage attraction, from year to year

Required for calendar year; the variation in individual sites' accounting periods needs to be taken in to account which may differ from this

Ascertain when site accounting information will be available

Ascertain if overall total available including the relevant gross sales of catering concessions etc.

Ascertain if confidentiality of information is likely to be an issue for privately owned sites; present as combined total/percentage change for whole of mining heritage gated attraction

Status summary: In 2018 the management personnel of the WHS increased to 4.2 FTE posts, up from 3.6 FTE posts in 2017. Partner Local authority funding support enables the delivery of Management Plan focused projects though the reduction in budget contribution by Cornwall Council, to £14,000 from £75,000 in 2012, will impact on management planning. WHS 'Discover the Extraordinary' project (2010 - 2013) has delivered significant European funding (£2.4m) across targeted member sites of the former Cornish Mining Attractions Marketing Association (CMAMA) group, now dissolved. Impact of WHS status on wider employment within the mining heritage sector has yet to be monitored.

Indicator	Status	Notes
Economic impacts directly attributable to WHS status	WHS Office function: projected operational costs and overheads for 5 posts (4.2 FTE) including NI and Superannuation from 2018*	*Total WHS Staffing/Overheads: £195,069
WHS Office function (2018)	Funds WHS Co-ordinator (FT), Research & Information Officer (FT), Planning Advice Officer (FT), Marketing and Business Development Officer (0.6 FTE), Administration Officer (0.6 FTE)	(NB. A figure of £161,378 was recorded for 2012, before the planning advice role became a function of the WHS Office and the annual payment to HE Planning Advice of £87,931 was suspended)
	Cornwall Council, as lead partner, provides the funding to support the WHS Team and related operating costs and overheads, plus a contribution to the Partnership's Management Plan projects budget	Management Plan projects contribution (Cornwall Council): £14,000 (NB. £75,000 in 2012)
	The WHS revenue budget for implementing strategic objectives as set out in the Management Plan is comprised of contributions from all partner authorities, as established in the financial schedule attached to the Partnership Board Memorandum of Agreement	Management Plan projects contribution (Devon County Council): £25,000** (NB. £30,000 in 2012)
		Management Plan projects contribution (West Devon Borough Council): £3,600** (NB. £3,600 in 2012)
		Total operating budget for 2017/18: <u>£349,219</u> (NB. £358,309 in 2012)
		** Secured by Memorandum of Agreement between the three partner local authorities
		See: '5. Impact of World Heritage designation on conservation'
The 'Discover the Extraordinary' programme (DtE)	RDPE funded three-year DtE project delivered £2.4 million for a range of visitor facility and interpretation enhancement initiatives across the former CMAMA mining attractions network	Mining heritage attraction visitor statistics indicate that numbers increased to member sites during the first half of 2012, indicating the DtE marketing activity to be beneficial

WHS Cultural Programme	Since 2006, over 230 performances of commissioned presentations or events have been made to an estimated audience of over 190,000 people	
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5 Environmental Value

CWDML WHS Management Plan Polices: C7, C10

Whilst ecology does not form part of the WHS' OUV as inscribed, Site management can incorporate measures which address the conservation of that particular biodiversity which is solely dependent on the minerals occurring at former mine sites. During the Plan period 2013-2018, the following projects investigated aspects of the biodiversity of the Site:

- Natural England Bryophyte Habitat Programme at Minions (WHS Area A9) (2015)
- Mining for Butterflies in Cornwall project (2015)
- Bees on Metalliferous Mine Sites within the Cornwall AONB and WHS (2018)

Relict mining landscapes comprising burrows or spoil heaps of mineral waste are habitats for a variety of lower plants (i.e. mosses and liverworts), which have adapted and often thrive on 'soils' completely unsuitable for most other vegetation. Many of these species are extremely rare and, in some instances, have received statutory protection as Sites of Special Scientific Interest (SSSI). In excess of 25 per cent of all the mosses and liverworts found in Cornwall have been observed on former metalliferous mine sites.⁶

Similarly, heathland habitats have become established at many former mine sites despite extreme environmental factors such as mineral contamination in soils and the depletion or reduced availability of nutrients. Such soils can also provide habitats for types which would normally be out-competed by more fertile species.⁷

From a mammalian perspective, former mine sites can also be a very attractive habitat; rabbits and badgers burrow in the waste dumps and various species of bats, some rare, often occupy open mine shafts and adit levels; the latter being extremely important roost sites for Greater Horseshoe bats in particular. Likewise, bird species use neglected mine buildings and shafts as undisturbed nesting sites in many areas.

Former dressing floors within mine sites usually contain water storage or ore/waste settling areas which, after abandonment, can lead to the creation of micro aquatic habitats for species of insects and amphibians. Conversely, dry areas of exposed and semi-exposed waste dumps are often colonised by invertebrates such as common snakes, slow worms and lizards. Habitats of heathland and wild flowers, created within and around areas of mine spoil over the decades since abandonment, can also support rare bee and butterfly species.

The proposed ecological audit of the CMWHS, to be undertaken during the lifetime of this Plan (2020-2025) should include an assessment of priority species and habitats as identified in the IUCN International Red Data List for endangered species.⁸ These should be considered in addition to those featured within the UK Biodiversity Action Plan (BAP).⁹ The methodology employed for an assessment and the frequency and type of monitoring for species should be developed in partnership with academia.

⁶ Holyoak, D. T. (1995 & 1996) *Report on a survey of bryophytes on some derelict mine sites in Cornwall*. Redruth: Cornish Biological Records Unit, Institute of Cornish Studies.

⁷ Johnson, N., Payton, P. & Spalding, A. eds. (1996) *The Conservation Value of Metalliferous Mine Sites in Cornwall*. Truro: Cornwall County Council/University of Exeter Press. p.32

⁸ Retrieved www.iucnredlist.org

⁹ Retrieved www.ukbap.org.uk/GenPageText.aspx?id=54

The focus on the UN SDGs within the Plan period (2020-2025) further highlights the need to understand the breadth of biodiversity which exists across the Site.

The frequency and type of monitoring for species will be dependent on the ecology at any given site but should aim to;

- Identify habitat information already available for target sites each (as baseline data) and devise monitoring methodologies as appropriate (requires specialist academic input)
- List existing records of protected species for mine sites within WHS (e.g. the non-vascular *Ditrichum cornubicum* [Cornish Path Moss] which is unique to Cornwall, only occurring on mine workings and one of 146 rare mosses recorded nationally), with details of quantities, where this information is available; record the habitats and habitat requirements of these species (requires specialist academic input)
- Consider establishing a mechanism which allows perceived changes or otherwise to be stated as trends, e.g. 'stable and improving' or 'unfavourable but improving'. Such condition statements could also be used as a straightforward means of expressing the condition of WHS-related ecology over time (requires specialist academic input)
- Pressure, state, response models (PSR) could be used to establish if management or other activities on sites are neutral, advantageous or deleterious for WHS-related ecology (requires specialist academic input)

5.1 Bryophyte habitat improvement at Minions - WHS Area A9 (2015)

In 2015 Natural England undertook a programme of work to provide additional habitat for the Cornish Path Moss and other rare bryophytes at Phoenix United Mine, at Minions on Bodmin Moor. The Cornish Path Moss was later included as one of the priority target species for the HLF funded *Back from the Brink* project. (see: <https://www.gov.uk/government/news/bringing-englands-wildlife-back-from-the-brink-of-extinction>)

The Cornish Path Moss project in 2015 focused principally on the limited re-exposure of small areas of metalliferous mine waste as a means to provide a renewed mineral rich habitat for metallophytes. Following consultation with the WHS Office, Natural England engaged a Senior Archaeologist of the Cornwall Archaeological Unit to advise on how the project could be undertaken in order not to cause harm to the Site's OUV. Subsequently small areas of mine waste dumps were selected for a trial, with these having the top c.10cm of surface mineral removed in order to expose the mineral rich substrate essential for the metallophyte Cornish Path Moss to flourish.

The following is reproduced from the Natural England 2015 action plan for the Phoenix United Mines site;

'Phoenix United Mine is a disused 19th Century copper and tin mine. Part of the Cornish Mining World Heritage Site, the site comprises 29.8 ha of bare metal-rich substrate with areas of heath, scrub, young woodland and acid grassland. The entire site is designated SSSI and forms part of the Phoenix United Mine and Crow's Nest Special Area of Conservation, designated as it supports the only currently known world populations of Cornish path moss *Ditrichum cornubicum*.

The habitat of the site is dominated by the presence of heavy metals from the mining operations within the soil. These metals are toxic to most other plants, so their growth is restricted allowing a specialised community of bryophytes (mosses and liverworts) and lichens to flourish here over the years, including the Cornish path moss *Ditrichum cornubicum* which is endemic to just two sites in Cornwall; Phoenix United Mine and the nearby Crow's Nest mine.

The main issue affecting the survival of these mosses, liverworts and lichens is vegetative succession; the metals are leached out of the soil over time, allowing grasses and other mosses to colonise the soil and outcompete the rare mosses, liverworts and lichens. Whilst the mine was still active, there would

have been plentiful bare open habitat continually created through the day to day operations of the mine. The main management activity will be to create areas of bare metal-rich substrate. Further threats come in the form of invasive non-native species, specifically *Rhododendron ponticum* and *Cotoneaster* which smother the ground rendering conditions unsuitable for these rare species to survive.

Native scrub - European gorse *Ulex europaeus* and bracken *Pteridium aquilinum* - is also an issue on site, albeit at a smaller scale and more localised than the invasive non-native species but has the same impact as the non-native species, i.e. shading and rendering areas unsuitable for the mosses, liverworts and lichens.

This project will use mechanical means to recreate areas of disturbed bare metal-rich substrate as would have existed whilst the mine was active, to create conditions suitable for the Cornish path moss and other mosses, liverworts and lichens. In addition, it will address some key further threats, namely invasive non-native species (*Rhododendron* and *Cotoneaster*), and invasive native species (European gorse and bracken).'

Project scope and timetable

- *Year 1:*

Habitat creation: Scrape creation, bank exposure, spoil heap inversion

Non-native invasive species control: *Rhododendron* control, *Cotoneaster* control

Invasive native species control: European gorse control, bracken control

- *Year 2:*

Non-native invasive species control: *Rhododendron* control, *Cotoneaster* control (follow-up treatment)

Invasive native species control: European gorse control, bracken control (follow-up treatment)

- *Year 3:*

Habitat creation: Scrape creation

Non-native invasive species control: *Rhododendron* control, *Cotoneaster* control (follow-up treatment)

Invasive native species control: European gorse control, bracken control (follow-up treatment)'

(From: *Cornish Path Moss Action Plan, 2015* – Natural England)

Following the drafting of the action plan, a detailed method statement was prepared in July 2015 setting out how mine spoil would be re-exposed to create the enhanced habitats envisioned;

'Method statement for re-exposure of mineral rich spoil for metallophyte bryophytes at Phoenix United Mine SSSI/SAC (Final version: 7th September 2015)

Prepared by Clare FitzGibbon, Natural England, July 2015

Introduction

Phoenix United Mine supports an outstanding assemblage of bryophyte species growing on metalliferous ground, including *Cephaloziella integerrima*, *C. massalongi*, *C. nicholsonii*, *C. stellulifera*, *Pohlia andalusica*, *Scopelophila cataractae* and *Ditrichum cornubicum*. The latter is a Schedule 8 species which is endemic to the British Isles and known from only three sites, Phoenix United Mine, nearby Crow's Nest and at Mountain Mine, Ireland (Holyoak, 2009b). At Phoenix United Mine, the metalliferous assemblage occurs on exposed metal-rich spoil that has not been over-grown by coarser vegetation and on the banks of the stream that runs through the northern part of the site.

The site was surveyed in 2011 by Des Callaghan (Ecostudy 2011). *D. cornubicum* was found in four locations during this survey, of which one (Site H) is newly discovered but could not be found in three sites from where it has been known in recent years. It seems to be extinct in two formerly occupied 100 m grid cells (i.e. Sites C, D and G), though viable tubers are likely to be still present within the soil. Overall, *D. cornubicum* is under-going a long and slow decline at this site, as exposed metal-rich substrates are gradually over-grown by vegetation and disturbance events that recreate suitable patches of habitat on a significant scale occur no longer.

The sites known to support *Ditrichum cornubicum* within the SSSI in 2011 are shown in Annex 1 (from Ecostudy 2011).

To achieve favourable condition, the following targets need to be met, in relation to *D. cornubicum*.

- a. Present in ≥ 5 100 m OS grid cells and in ≥ 10 10 m OS grid cells
- b. Total cover $\geq 1,000$ cm²

In 2011, it was found in three 100m OS grid cells and eight 10m OS grid cells, and the total cover was 638 cm². In addition, there needs to be no significant loss of area of exposed metalliferous substrates. Des Callaghan noted that there was a significant loss due to lack of significant ground disturbance and vegetation succession. Consequently, the site was assessed as being in unfavourable declining condition. Other targets, in relation to the presence and occupancy of other metalliferous community species, and indirect measures of habitat suitability, such as grazing pressure, were met.

A number of management recommendations were made in the Ecostudy (2011) report including:

Recommendation 1. Remove the fenced enclosures and re-expose significant areas of bare spoil around Sites A and B. The fencing has been removed already but the re-exposure of spoil has not been carried out. The report recommended the re-exposure of a significant area (≥ 100 m²) of bare spoil around the surviving colonies.

Recommendation 2. Re-expose significant areas of spoil around Sites E and H. Observations suggest that viable tubers of *Ditrichum cornubicum* are dormant within the soil around Sites E and H. The removal of surface vegetation and any accumulated organic matter from patches of ground at these locations would recreate suitable habitat for this plant. Clearance of about ten patches with a mini excavator, each ≥ 100 m², would likely lead to a rapid increase in the population of *D. cornubicum*. If such management proves successful, a cycle of patch clearance should be established in order to maintain the plant at a favourable conservation status.

The Duchy of Cornwall who own the site have offered to carry out some management works to help bring the site into favourable condition, and this document details the spoil re-exposure works to be completed.

Method statement for spoil re-exposure 2015

1. Re-expose one patch (c.100 m²) of bare spoil around the surviving colonies at sites A and B, one patch of c.100 m² at site E (no *D. cornubicum* recorded recently), one patch of c. 100m² at site G (where *D. cornubicum* recorded in 1998 but not since) and 8-9 patches, each c.100 m², around site H. The patches to be cleared at site H should avoid any existing bare areas, which may already have been colonised by *D. cornubicum*. At site E, the aim should be to expose the mine spoil in the mound shown in the photo on pg 17 of the report (Ecostudy 2011).
2. The patches should be cleared of vegetation and organic matter to a depth of ≤ 10 cm depth (see Figure 1 as example of appropriate depth), ideally using a mini-excavator on rubber tracks mounted with a wide shovel and a dozer blade, and the cleared vegetation and top soil should be placed in a pile well away from known *D. cornubicum* sites/piles of mine spoil.

3. The exact location of the patches to be cleared will be agreed on site on the day by a bryophyte specialist, but should be located on areas of mine spoil, and avoid areas where *D. cornubicum* has been located in the most recent survey.
4. There are no special ecological reasons requiring that the operation should be carried out at a particular time of year. Therefore, the operation can be carried out at any time of year. The operation is estimated to take one-two man days (using a mini excavator).
5. The work should be supervised by a suitable bryophyte specialist to ensure that the cleared patches are created in the most optimal sites and that no known sites for rare bryophytes are disturbed.
6. Although Phoenix United Mine is not a scheduled monument, the site is within the Cornwall and West Devon Mining Landscape World Heritage Site, and therefore care needs to be taken to ensure that no damage is done to the historic interest of the site – see comments from WHS officer below. To ensure no adverse impact on world heritage site features, an archaeologist will agree the works on site prior to them commencing.
7. Archaeologist input: Attend site visit with Des Callaghan (Bryophyte specialist), Clare FitzGibbon (NE) and Wesley Pascoe (Duchy of Cornwall) to locate and review machine access for all Bryophyte sites, and to meet with contractor to discuss site constraints. Additional site visit to review works once complete. Proposed archaeologist Colin Buck.

Comments of the Research and Information Officer, Cornish Mining World Heritage Site Office

Regarding the 'Method statement for spoil re-exposure 2015'; the process steps set out to reintroduce bryophytes are noted in that the intention is to remove vegetation and organic matter from the surface of mine spoil to a depth of c.10cm (Point 2). While in principle this would be beneficial in preserving exposed mine spoil within the World Heritage Site, there is some concern that the use of a mini-excavator has the potential to cause damage to the mine site, both at the respective project sites and in accessing these. However, if it can be demonstrated that a rubber tracked mini excavator will not constitute an unacceptable intervention into this site this methodology may be acceptable. Also, the c.10cm excavation depth specified in the method statement should not be exceeded.

The input of a suitably experienced archaeologist is required to provide the necessary guidance to avoid damage to the site, which is part of the Outstanding Universal Value (OUV), or international significance, of the UNESCO inscribed World Heritage Site; the archaeologist's input should be sought specifically to liaise with the project team and any contractors to ensure all access and works are undertaken in such a manner as to avoid damage to OUV.'

(References: Ecostudy (2011) Bryophyte survey and condition assessment of Phoenix United Mine SSSI/SAC, Cornwall. Report to Natural England; Holyoak, D. T. (2009) Surveys and Habitat Management of threatened bryophytes in Cornwall and Devon, 2009. Report to Natural England.)

Project targets and outcomes

The key outcomes for the project are that better management for this species will be achieved on the Phoenix United Mines site, this being one of only two in the world supporting the Cornish Path Moss. Condition improvements will also be secured for Special Sites of Scientific Interest (SSSI) and Special Areas of Conservation (SAC) features, which will move the current condition assessment for this site from 'unfavourable declining' to 'favourable'. As a legacy, the project is intended to deliver a long-term management plan for the site which will include management options and potential funding sources to deliver on-site work.

The project was successfully commenced in September 2015 with a programme of vegetation control and scrape creation undertaken at the Phoenix United Mines site under the archaeological guidance of Cornwall Council Senior Archaeologist Colin Buck. In July 2016, Dr Des Callaghan, a bryophyte specialist, undertook an assessment of the works carried out in 2015, to ascertain their effectiveness, to record bryophytes present at the Crow's Nest (South Caradon Mine) site, and with Dave Lamacraft of

Plantlife³⁵ – the British conservation charity working to save threatened flowers, plants and fungi - to advise on habitat improvement options.³⁶

Dr Callaghan was instructed by Natural England to:

- Revisit the Phoenix United Mines SSSI site and survey the spoil areas that were scraped in September 2015 to determine whether they have been re-colonised by *Ditrichum cornubicum*.
- Visit the Crow's Nest SSSI site with Dave Lamacraft / Plantlife representative and Natural England to advise on the management actions required to improve habitat for this species.
- Advise Dave Lamacraft / Plantlife / NE on management actions necessary for maintenance of *Ditrichum cornubicum* to include in an HLF bid.
- Provide brief summary report of findings by email.

The site visits were undertaken during 13-14 July 2016.

The conclusions from the July 2016 assessment were summarised as:

- Phoenix United Mine and Crow's Nest are the only two sites in the world where *Ditrichum cornubicum* is known to occur presently.
- During a two-day survey covering both sites the moss was found in a total of 24 OS 10 m grid cells, five at Phoenix United Mine and 19 at Crow's Nest. A comprehensive survey would likely discover further locations at both sites.
- Its overall population continues to undergo a general decline, as patches of exposed metalliferous spoil gradually become overgrown by grasses and scrub.
- Of the seven scrapes excavated at Phoenix United Mine in September 2015, a good population of the moss has already appeared at one (Location A), apparently from rhizoidal gemmae that lay dormant in the soil diaspore bank, presumably for at least several decades. It is possible that some of the other scrapes will become colonised in the future, possibly by immigration rather than the germination of in situ dormant gemmae.

(From: Callaghan, D. (2016) *Ditrichum cornubicum* at Crow's Nest and Phoenix United Mine. Widnes: Bryophyte Surveys Ltd.)

A programme of similar works was also proposed for the Crow's Nest bryophyte habitat at South Caradon Mine (a Scheduled Monument) but this has yet to be undertaken. It is understood that interest remains in carrying out a programme of works at this site however and that discussions are ongoing to this end.

5.2 Bees on metalliferous mine sites within the Cornwall AONB and WHS (2018)

Species of bees have been identified as having habitats on many former metalliferous mine sites within Cornwall through a scoping document commissioned by the Cornwall Area of Outstanding Natural Beauty (AONB). The study *Bees on AONB mine sites: a project scoping*, by Patrick Saunders³⁷ (October 2016), identifies key habitats across the Cornwall AONB - and in many instances within the WHS - and sets out how these might be augmented and/or enhanced. The importance of former mine sites and related grassland to bee populations is highlighted and guidance provided as to where 'bee meadows' could be created to increase bee species and numbers.

Within its summary section the study concludes the following.

- The Cornish AONB is of national significance for its bee fauna. Three endangered bees have probably larger populations in the Cornish AONB than anywhere else in the UK

- 4 Priority S.41, 7 Red Data Book and 10 Nationally Scarce bees have been identified by this study to be found within the project area
- There is strong linkage between bee rich landscapes and Cornish mining heritage
- Over 1820 mine sites are present in the AONB. About 400 sites have been identified as key sites to link to an AONB bees and mines project
- The best sites occur on the Lizard, West Penwith and the North Coast of Cornwall AONB
- The recommended way to target conservation measures is to focus on key site clusters or bee mine hot spots
- The recommended project should have two main themes. Advise land managers on high value sites and create "bee meadows" near focus areas

(From: Saunders, P. (2016) *Bees on AONB mine sites: a project scoping*. Truro: Kernow Ecology on behalf of the Cornwall AONB Unit <http://www.kernowecology.co.uk/>)

Projects emerging in the wake of the study have considerable potential to enhance habitats through relatively modest interventions. The provision of additional 'wild' grassland containing a variety of flowering plants for pollinators could do much to increase bee numbers and also, indeed, help ensure existing populations survive. As such grassland is most likely to be located around the margins of metalliferous mine sites, and their associated waste dumps, the creation of new grassland areas is thought unlikely to impact negatively on WHS OUV. On this basis, such projects should in principle be supported.

The development and implementation of bee habitat creation projects should be monitored to ensure bee habitat site selection is in accordance with the protection and conservation policies of the WHS Management Plan (2020-2025).

5.3 Mining for butterflies in Cornwall project

In 2015 Cornwall Butterfly Conservation (CBC), a branch of Butterfly Conservation the leading UK charity dedicated to saving butterflies, moths and their habitats, agreed to support a project to undertake survey and conservation work on metalliferous mines within the World Heritage Site. It is recognised that mine sites have important cultural significance for Cornwall and are also unique habitats supporting a range of wildlife, including butterflies. The distribution of butterfly colonies, species and numbers is understood to have not been fully explored previously, but former mine sites are known to be important for some of the most threatened butterfly species.

In summary, a three-year project was instigated with the first phase focusing on two Areas within the WHS, specifically Area A5 the Camborne and Redruth Mining District and Area A6, the Gwennap Mining District. The project focus includes habitat assessment and identification of the appropriate larval food plants which thrive in poor soils associated with mine waste, followed by survey work undertaken by volunteers. The second phase, as proposed, will improve habitats for target species through a range of conservation activities, continue butterfly monitoring and undertake outreach work with the local community and landowners. The latter will encourage the input of volunteers to participate in conservation work, butterfly walks and workshop sessions. Beyond the identification of rare species and the improvement of habitats, an additional beneficial outcome will be in the raising of awareness of the WHS generally and specifically as to how former mine sites are often rich ecosystems supporting much flora and fauna.

Cornwall Butterfly Conservation commenced its assessment of disused mining sites in Cornwall in 2015, in a project supported by Butterfly Conservation. In 2018, grant funding from the Cornish Mining World Heritage Site and Postcode Local Trust enabled 37 mining sites to be visited by 20 CBC volunteers. 26

butterfly species were recorded, including six UK Biodiversity Action Plan priority species: Dingy Skipper, Silver-studded Blue, Small Pearl-bordered Fritillary, Wall, Grayling and Small Heath, as well as several day-flying moth species.

The project grants enabled Cornwall Butterfly Conservation to engage Sarah Board, an experienced field ecologist, to assess 20 further sites, owned by Cornwall Council. Between July and September 2018, Sarah recorded the butterflies and habitats at each site, and for the six BAP priority species listed above noted the presence of larval foodplants and other factors on which these species depend.

The subsequent report has helped Cornwall Butterfly Conservation to decide its priorities for improving habitats for butterflies on Cornwall's former mine sites and where more fieldwork is needed to identify the populating species. This is due to take place during the two-year period 2019-2021. Each site has also been assessed for its suitability for further work by Cornwall Butterfly Conservation volunteers. Possibly the most significant outcome of the report is that this provides independent scientific evidence of the importance of former metalliferous mine sites for wildlife and the need to conserve these as part of the WHS.

A Cornwall Butterfly Conservation report addressing the Silver-studded Blue specifically was published in 2020 reviewing all the known habitat sites for this species in Cornwall. The report, written by Sally Foster and J. Dennis, includes information from preceding Silver-studded Blue SpeciesNet reports (see: 'A Review of the Silver-studded Blue in Cornwall 2020 - 2020 Silver-studded Blue SpeciesNet Report' by Sally Foster and J Dennis).

(The above has been summarised from a project proposal prepared by Dick Goodere, CBC County Recorder, and Philip Hambly, CBC Chair, in 2016, and the Butterfly Conservation communication 'Mining for butterflies', retrieved from: <http://www.cornwall-butterfly-conservation.org.uk>)

Status summary: Create register of nationally protected species with record of location and extent of protected habitats within the WHS; monitoring programme to be devised if and when resources permit. Cornish Path Moss habitat enhancement programme undertaken by Natural England and contractors at Phoenix United Mines in 2015, with follow up work proposed at Phoenix United and Crow's Nest (South Caradon Mine). Project to be monitored and liaison undertaken with Natural England, to prevent any potential harm to site OUV and to gauge the effectiveness of the habitat enhancement techniques. Cornwall Mining Bees' surveys delivered with future project work under discussion to deliver habitat assessment and improvement works at mine sites across the Cornwall AONB. Funding support for the Mining for butterflies in Cornwall project provided by the WHS.

Indicator	Status	Notes
Natural England monitoring	Natural England undertakes monitoring assessments to gauge the condition of SSSIs	Condition survey data to be sourced from Natural England
Natural England Cornish Path Moss Action Plan (Phoenix United Mines and Crow's Nest (South Caradon Mine), Bodmin Moor)	Natural England has undertaken habitat creation work at Phoenix United Mines, under archaeological supervision, to improve species management of the nationally rare Cornish Path Moss Follow up project work likely to commence in early 2018.	Data from Natural England bryophyte re-establishment project sourced, and input to follow-on projects to take place as and when required
Cornwall AONB Mining Bees project	Project surveys undertaken to inform site improvement works at WHS mine sites across the AONB	

Mining for butterflies in Cornwall project

Funding support granted for Mining for butterflies in Cornwall project

6 Appendices

6.1 World Heritage Site Management Plan Policies (2013-2018)

This Monitoring Report relates to the policies below, as set out within the World Heritage Site Management Plan for 2013-2018. These are grouped under the four UNESCO thematic headings: Protection, Conservation and Enhancement, Presentation, and Transmit.

Protection

- (Policy P1) The Partnership will ensure that all relevant strategic documents and programmes have regard for the Site and its Vision & Aims.
- (Policy P2) All relevant strategic planning documents should make provision for the protection, conservation and enhancement of the Site and its setting.
- (Policy P3) Planning authorities should ensure that new development protects, conserves and enhances the Site and its setting.
- (Policy P4) The review of statutory protection within the Site will continue through national designations.
- (Policy P5) Local designations and protection systems will continue to be reviewed throughout the Site.
- (Policy P6) Local authorities and other agencies should make full use of the powers available to them for the protection and conservation of the Site.
- (Policy P7) There is a presumption against the removal of historic mine waste within the Site.
- (Policy P8) Developments outside the Site that will adversely affect its outstanding universal value will be resisted.

Conservation and Enhancement

- (Policy C1) Sustainable heritage-led regeneration will be encouraged and supported.
- (Policy C2) New development should add to the quality and distinctiveness of the Site by being of high-quality design and respectful of setting.
- (Policy C3) There should be a presumption in favour of retaining and re-using historic buildings which are important components of the Site.
- (Policy C4) Proposals for the resumption of mining will be supported where they do not adversely affect the Outstanding Universal Value of the Site.
- (Policy C5) Landscape, nature conservation and agri-environment management regimes should have regard for the authenticity and values of the Site.
- (Policy C6) The conservation and continuing maintenance of the historic fabric of the Site should be undertaken to the highest standards to ensure authenticity and integrity.
- (Policy C7) The historic character and distinctiveness of the Cornwall and West Devon mining landscape should be maintained.
- (Policy C8) Traditional materials and skills should be encouraged in the maintenance of the authentic historic fabric within the Site.
- (Policy C9) Where the historic fabric within the Site has been lost or compromised through non-authentic materials, inappropriate details and poor workmanship, historic character and detail will be reintroduced wherever and whenever possible.
- (Policy C10) Resources available for conservation of the Site should be prioritised to address the Vision & Aims.

- (Policy C11) Key moveable components should be preserved in situ unless relocation will conserve or enhance the outstanding universal value of the Site.
- (Policy C12) The risks to the World Heritage Site and its management should be regularly assessed and actions taken to ameliorate these risks.
- (Policy C13) Archives, collections and data concerning the World Heritage Site should be curated, catalogued and conserved and made accessible to all.

Presentation

- (Policy PN1) The Partnership should promote access to the World Heritage Site that is sustainable to the environment and consistent with the values of the Site.
- (Policy PN2) The World Heritage Site should be interpreted and presented as a distinctive, evolving, living landscape.
- (Policy PN3) Visitors should be encouraged to explore and learn about the physical, social and cultural aspects of the Cornwall and West Devon mining heritage.
- (Policy PN4) The marketing and interpretation of the World Heritage Site should be coordinated to ensure a consistent, responsible use of the World Heritage Site Inscription.
- (Policy PN5) The economic impacts of the World Heritage Site should be monitored and quantified.
- (Policy PN6) The economic benefits of the World Heritage Site should be promoted to support wider cases for sustainable heritage-led regeneration and cultural tourism.
- (Policy PN7) The communities within and outside the World Heritage Site should be engaged in the enjoyment, benefits and management of the World Heritage Site.
- (Policy PN8) Enjoyment of the World Heritage Site should be available to all regardless of ability or income.

Transmit

- (Policy T1) The values and significance of the World Heritage Site should be communicated to a wide range of educational audiences.
- (Policy T2) Research into Cornish Mining and its worldwide linkages should be facilitated and encouraged, published and disseminated.
- (Policy T3) The distinctiveness of Cornish Mining culture should be celebrated, promoted and propagated.
- (Policy T4) The Partnership will promote best practice in heritage management, heritage-led regeneration and sustainable remediation of Cornish mining landscapes worldwide.
- (Policy T5) The Partnership will actively facilitate the exchange of ideas, experiences and the stories of Cornish mining communities worldwide.

6.2 Results of Condition Survey summarised by World Heritage Site Area (2017)

The Condition Survey of 2017 addressed predominantly those attributes of OUV across the WHS which were shown to be in an Unfavourable condition in 2010, in accordance with the agreed methodology for repeat surveys. The chosen sample of 298 sites/features constitutes only c.30 per cent of the overall total of OUV attributes as assessed in 2010 (991 sites/features), the remainder of which are understood to be in a favourable condition and with appropriate management.

Key to Common Standards Monitoring (CSM) assessment categories used in 2017

FM = Favourable - Maintained

FR = Favourable – Recovered

UR = Unfavourable - Recovering

UNC = Unfavourable - No-Change

UD = Unfavourable – Declining

UCT = Uncertain Condition

NB. The limited number of 'Unfavourable – Recovering' sites identified within the 2017 Condition Survey (#8 sites) have been added to the 'Assessed Favourable' totals for the purposes of this assessment summary

A1

Number of sites/features deemed Unfavourable at previous assessment (2010) = 56

FM=7

FR= 3

UR=1

UNC=26

UD=31

FM+FR in 2017 = 10 Assessed Favourable; UR+UNC+UD in 2017 = 58 Assessed Unfavourable (+2)

Total sites/features assessed = 68

A2

Number of sites/features deemed Unfavourable at previous assessment (2010) = 5

FM= 3

FR= 2

UR= 0

UNC= 1

UD= 1

FM+FR in 2017 = 5 Assessed Favourable; UR+UNC+UD in 2017 = 2 Assessed Unfavourable (-3)

Total sites/features assessed = 7

A3

Number of sites/features deemed Unfavourable at previous assessment (2010) = 7

FM= 12

FR= 0

UR= 0
UNC= 5
UD= 4

FM+FR in 2017 = 12 Assessed Favourable; UR+UNC+UD in 2017 = 9 Assessed Unfavourable (+2)

Total sites/features assessed = 21

A4

Number of sites/features deemed Unfavourable at previous assessment (2010) = 5

FM= 1
FR= 0
UR= 1
UNC= 3
UD= 2

FM+FR in 2017 = 1 Assessed Favourable; UR+UNC+UD in 2017 = 6 Assessed Unfavourable (+1)

Total sites/features assessed = 7

A5

Number of sites/features deemed Unfavourable at previous assessment (2010) = 23

FM= 6
FR= 1
UR= 0
UNC= 8
UD= 21

FM+FR in 2017 = 7 Assessed Favourable; UR+UNC+UD in 2017 = 29 Assessed Unfavourable (+6)

Total sites/features assessed = 36

A6

Number of sites/features deemed Unfavourable at previous assessment (2010) = 17

FM= 8
FR= 0
UR= 1
UNC= 6
UD= 10

FM+FR in 2017 = 8 Assessed Favourable; UR+UNC+UD in 2017 = 17 Assessed Unfavourable (NC)

Total sites/features assessed = 25

A7

Number of sites/features deemed Unfavourable at previous assessment (2010) = 12

FM= 4
FR= 2
UR= 1
UNC= 7
UD= 12

FM+FR in 2017 = 6 Assessed Favourable; UR+UNC+UD in 2017 = 20 Assessed Unfavourable (+8)

Total sites/features assessed = 26

A8

Number of sites/features deemed Unfavourable at previous assessment (2010) = 4

FM= 3

FR= 0

UR= 1

UNC= 4

UD= 1

FM+FR in 2017 = 3 Assessed Favourable; UR+UNC+UD in 2017 = 6 Assessed Unfavourable (+2)

Total sites/features assessed = 9

A9

Number of sites/features deemed Unfavourable at previous assessment (2010) = 21

FM= 12

FR= 1

UR= 0

UNC= 9

UD= 19

UCT (Uncertain condition) = 1

FM+FR in 2017 = 13 Assessed Favourable; UR+UNC+UD in 2017 = 28 Assessed Unfavourable (+7); UCT= 1

Total sites/features assessed = 42

A10

Number of sites/features deemed Unfavourable at previous assessment (2010) = 29

FM= 8

FR= 2

UR= 3

UNC= 18

UD= 26

FM+FR in 2017 = 10 Assessed Favourable; UR+UNC+UD in 2017 = 47 Assessed Unfavourable (+18)

Total sites/features assessed = 57

Total number of OUV sites/features assessed in 2017: 298

Of this number:

Total number of sites/features considered in Favourable condition: 75

Total number of sites/features considered in Unfavourable condition: 222

Total number of sites/features for which the condition is Uncertain: 1

6.3 Attributes of OUV included within the Historic England Heritage at Risk Register (2019)

Since the previous World Heritage Site Monitoring Report in 2012, a total of twelve attributes of OUV have been added to those previously included in the Historic England Heritage at Risk Register (HAR), while six sites have been removed.

In some instances, the addition of a site/feature to the HAR has been done particularly in order to further promote its conservation, through establishing it as a clearly perceived priority at a national level (e.g. Geevor Mine). The twelve additional sites are as below.

- Geevor Mine (Pendeen – WHS Area A1)
- Methodist Church (St Just – WHS Area A1)
- Late C18-C19 Mill Complex (Hayle – WHS Area A2)
- Tolgus Arsenic Works (Redruth – WHS Area A5)
- Wheal Busy (Chacewater - Area A6i)
- Former Carharrack Methodist Church (Carharrack - Area A6i)
- Remains of Carclew House (Mylor – WHS Area A6ii)
- Gunpowder works at Kennall Vale (St Gluvias - Area A6ii)
- Gunnislake Clitters Mine (Gunnislake – WHS Area A10i)
- Holmbush Mine (Kelly Bray – WHS Area A10i)
- New Consols Mine (Luckett – WHS Area A10i)
- Guildhall and Police Station (Tavistock – WHS Area A10ii)

Major conservation work has been undertaken at a number of attribute sites since 2012, including at King Edward Mine, Great Wheal Busy, and Perran Foundry. Buildings at King Edward Mine now have a new lease of life as museum interpretation, workspace units and a café, while the principal pumping engine house and boiler house at Wheal Busy have been consolidated. The remainder of the Scheduled Monument at Wheal Busy remains on the list however pending further conservation. The adaptation of Perran Foundry to create dwelling space is mostly complete, which has removed two previous entries from the Registry, i.e. the New Pattern Shop and the Warehouse, although two Perran Foundry attributes remain on the HAR, the Dry Sand Shop and Engineers Shop.

The attribute sites that have been removed from the HAR Register since 2012 are as follows.

- Count House, blacksmiths' shop and miners' dry, King Edward Mine (Troon – WHS Area A5)
- Weighbridge stores, assay office and brass machining shop at King Edward Mine (Troon – WHS Area A5)
- Boiler house to winding engine house at King Edward Mine (Troon – WHS Area A5)
- Great Wheal Busy engine house and mine buildings (Chacewater – WHS Area A6i)
- New Pattern Shop, Perran Foundry (Perranarworthal – WHS Area A6iii)
- Warehouse (formerly listed as office), Perran Foundry (Perranarworthal – WHS Area A6iii)

The majority of the entries within the current HAR (2019) include a priority 'action' rating and these are included below with the individual entries, where given. The HAR principal vulnerability assessment is also included where available.

Key to Priority ratings:

For buildings at risk, the following priority categories are used as an indication of trend and as a means of prioritising action:

- A - Immediate risk of further rapid deterioration or loss of fabric; no solution agreed
- B - Immediate risk of further rapid deterioration or loss of fabric; solution agreed but not yet implemented
- C - Slow decay; no solution agreed
- D - Slow decay; solution agreed but not yet implemented
- E - Under repair or in fair to good repair, but no user identified; or under threat of vacancy with no obvious new user (applicable only to buildings capable of beneficial use)
- F - Repair scheme in progress and (where applicable) end use or user identified; functionally redundant buildings with new use agreed but not yet implemented

There are a total of 30 attributes of OUV included within the 2019 Register, which can be viewed online at: <https://historicengland.org.uk/advice/heritage-at-risk/search-register/>

WHS Areas A1 – A10 in Cornwall: 26 sites included in Register

WHS Area A10 in west Devon: 4 sites included in Register

CORNWALL

- **WHS A1**

Geevor Mine, St. Just, Area A1 – Scheduled Monument; Priority Category: not given; Principal vulnerability: collapse (*New entry since 2012 Monitoring Report*)

Methodist Church (former Wesleyan Chapel), St Just, Area A1 – Grade II* Listed Building; Priority Category: C; Principal vulnerability: not given (*New entry since 2012 Monitoring Report*)

- **WHS A2**

Late C18-C19 mill complex, ropeworks and associated water management system immediately east of Millpond Avenue, Foundry, Hayle - Scheduled Monument; Priority Category: not given; Principal vulnerability: Scrub/tree growth (*New entry since 2012 Monitoring Report*)

- **WHS A4**

Wesleyan Chapel, Porkellis, Wendron, Area A4 - Grade II* Listed building; Priority Category: F; Principal vulnerability: not given

- **WHS A5**

Rosewarne House (Gladys Holman House), Tehidy Road, Camborne, Area A5 - Grade II* Listed building; Priority Category: A; Principal vulnerability: not given

Sara's Foundry, Tolgus Place, Redruth, Area A5 - Grade II* Listed building; Priority Category: A; Principal vulnerability: not given

Tolgus Calciner, New Portreath Road, Redruth, Area A5 - Scheduled Monument; Priority Category: A; Principal vulnerability: not given.

With:

The Tolgus arsenic works (the wider site associated with the above calciner) 80 metres south east of East Tolgus House, Redruth, Area A5 - Scheduled Monument, Grade II Listed building; Priority Category: not given; Principal vulnerability: Other (*New entry since 2012 Monitoring Report*)

Carn Brea Castle, Carn Brea, Area A5 - Scheduled Monument; Priority Category: not given; Principal vulnerability: scrub/tree growth

- **WHS A6**

Wheal Busy, Chacewater Area A6i – Scheduled Monument, Grade II Listed Building; Priority Category: not given; Principal vulnerability: deterioration – in need of management (*NB. Great Wheal Busy engine house and boiler house consolidated since previous Monitoring Report in 2012*)

Former Carharrack Methodist Church, Church Street, Carharrack, Area A6i - Listed Building Grade II*; Priority Category: C; Principal vulnerability: not given (*New entry since 2012 Monitoring Report*)

Gunpowder storage complex at Kennall Vale, St Gluvias Area A6ii - Scheduled Monument; Priority Category: not given; Principal vulnerability: deterioration – in need of management

Gunpowder works at Kennall Vale, St Gluvias Area A6ii - Scheduled Monument; Priority Category: B; Principal vulnerability: deterioration – in need of management (*New entry – reassessed*)

Dry sand and green sand shop, Perran Foundry, Perran Wharf, Mylor Area A6ii - Grade II* Listed building; Priority Category: F; Principal vulnerability: not given (*NB. Conversion pending as part of wider site development*)

Engineers' Shop, Perran Foundry, Perran Wharf, Mylor, Area A6ii - Grade II* Listed building; Priority Category: D; Principal vulnerability: not given (*NB. Conversion pending as part of wider site development*)

Remains of Carclew House, Mylor, Area A6ii – Grade II* Listed building; Priority Category: A; Principal vulnerability: not given (*New entry since 2012 Monitoring Report; support for consolidation being sought by current owners*)

- **WHS A7**

Wheal Kitty 20th century tin processing works, St Agnes, Area A7 - Scheduled Monument; Priority Category: not given; Principal vulnerability: deterioration – in need of management

- **WHS A8**

Treffry Viaduct, Luxulyan Valley, Area A8i - Scheduled Monument; Priority Category: B; Principal vulnerability: not given

Charlestown Methodist Church, Charlestown Road, St Austell, Area A8ii - Grade II* Listed building; Priority Category: B; Principal vulnerability: not given

- **WHS A9**

South Caradon 19th century copper mine, Area A9 - Scheduled Monument; Priority Category: not given; Principal vulnerability: collapse

Medieval and post-medieval tin and copper mines with medieval field system on the middle and lower northern slopes of Caradon Hill, Linkinhorne, Area A9 - Scheduled Monument; Priority Category: not given; Principal vulnerability: plant growth

- **WHS A10 (in Cornwall)**

Gunnislake Clitters copper, tin, arsenic and wolfram mine, Calstock, Area A10i - Scheduled Monument, Grade II Listed building; Priority Category: not given; Principal vulnerability: Scrub/tree growth; (*New entry since 2012 Monitoring Report*)

Holmbush Mine: Windsor Lane rotative engine house with adjacent boiler house, loadings and platform, Stokeclimsland, Area A10i - Scheduled Monument, Grade II Listed building; Priority Category: C (C); Principal vulnerability: not given (*New entry since 2012 Monitoring Report*)

New Consols Mine: surface, buried and underground remains, Lucket, Stokeclimsland, Area A10i - Scheduled Monument, 5 Listed buildings, CA; Priority Category: not given; Principal vulnerability: collapse (*New entry since 2012 Monitoring Report*)

Prince of Wales Mine, at Harrowbarrow, Calstock, Cornwall, Area A10i - Scheduled Monument; Priority Category: not given; Principal vulnerability: vandalism

Okeltor 19th century arsenic, copper and tin mine, Calstock, Area A10i - Scheduled Monument; Priority Category: not given; Principal vulnerability: permitted development

DEVON

- **WHS A10 (in west Devon)**

Morwellham Quay: transport infrastructure, part of the water control system and a manganese mill, Gulworthy, Area A10i - Scheduled Monument; Priority Category: not given; Principal vulnerability: development requiring planning permission

Gawton mine complex, Gulworthy, Area A10i - Scheduled Monument; Priority Category: A; Principal vulnerability: not given

Gawton arsenic mine and flue, Gulworthy, Area A10i - Scheduled Monument; Priority Category: not given; Principal vulnerability: vehicle damage/erosion - extensive

Guildhall and police station, Abbey Place, Guildhall Square, Tavistock, Area A10ii - Scheduled Monument, Grade II* Listed building, CA; Priority Category: D; Principal vulnerability: not given (*New entry since 2012 Monitoring Report*)

6.4 County Geology Sites (RIGS) within the WHS that are Attributes of OUV (2018)

WHS Areas A1–A10 in Cornwall:	21 sites
WHS Area A10 in west Devon:	5 sites
Total number of sites relevant to WHS OUV:	26

Monitoring status: Since June 2011, Geoconservation UK has funded a further two rounds of County Geology Site monitoring visits – in 2011-2012 and 2012-2013 – following that undertaken in 2009/2010. The condition status and monitoring dates relating to these visits are given in *italics*.³⁸

- **WHS A1**

Pendeen Old Cliff to Kenidjack Ref: P/15 NGR: SW 3793 3563 to SW 3554 3230
Coastal cliffs with a series of faults and rich hydrothermal mineral veins - *condition status: Good (05/03/2010)*

Gryll's Bunny Ref: P/1 NGR: SW 364335 Opencast and underground tin workings; *condition status: Good (18/02/2009)*

Wheal Cock Ref: P/3 NGR: SW 364340 Mine spoil; *condition status: Good (18/02/2009)*

Wheal Hazard Ref: P/4 NGR: SW 363334 Mine workings exhibiting granite contact; condition status: Unknown

Wheal Drea Ref: P/8 NGR: SW 365322 Large mine spoil; *condition status: Good declining (19/03/2013)*

Geevor Mine Ore Stockpile Ref: P/11 NGR: SW 373346 Recently constructed 'finger-dump' of original Geevor ore; *condition status: Good (21/02/2010)*

New Mexico Shaft, Geevor Mine Ref: P/12 NGR: SW 368344 18th century mine workings exhibiting fissure veins, hand-worked stopes and an exposure of the granite/killas contact - *condition status: Good (21/02/2010)*

Wheal Edward Ref: P/13 NGR: SW361327 Killas and hornfels mining waste; *condition status: Good (18/02/2009)*

Croft Gothal Mine Ref: P/14 NGR: SW 569309 Mine dumps; condition status: Unknown

- **WHS A2 - None**

- **WHS A3 - None**

Trewavas Mine Ref: K/24 NGR: SW 598265 Spoils with sulphide mineralisation; *condition status: Good (24/02/2012)*

Great Wheal Fortune Ref: K/6 NGR: SW 626288 Mineralisation in the Mylor metasediments; *condition status: Poor declining (05/03/2012)*

- **WHS A4**

Poldark Mine Ref: K/31 NGR: SW 682315 Old mine workings representing the roots of a lode system and the base of the tin zone; condition status: Unknown

- **WHS A5**

Wheal Basset Ref: K/1 NGR: SW 690398 Mine spoils - *condition status: Good declining (23/02/2009)*

Wheal Uny Ref: K/2 NGR: SW 695410 Only known access to the Great Flat Lode; condition status: Unknown

- **WHS A6**

Wheal Gorland Ref: K/10 NGR: SW 731428 Sim's Shaft & Davey's Footway, accessing lodes; condition status: Unknown

Wheal Jane East Ref: CK/6 NGR: SW 786433 Underground workings on an eastward extension of the 'B lode' with an extensive exposure of the elvan hangingwall; condition status: Unknown

- **WHS A7 - None**
- **WHS A8 - None**
- **WHS A9**

Stowe's Section, Wheal Phoenix Ref: CN/4 NGR: SX 262722 Surface spoils & underground workings; *condition status: Good declining (07/03/2013)*

The Cheesewring Ref: CN/5 NGR: SX 258724 Granite tor and sulphide vein in quarry below; *condition status: Good (07/03/2013)*

- **WHS A10 – Cornwall**

Kit Hill Ref: NC/7 NGR: SX 376713 Mine spoils; condition status: Unknown

Harrowbarrow Mine Ref: CN/3 NGR: SX 401701 Underground lead/silver workings; *condition status: Good (05/03/2013)*

Redmoor Mine Ref: CN/1 NGR: SX 356711 Underground workings and surface spoils; condition status: Unknown

- **WHS A10 – west Devon**

Wheal Anna Maria Gulworthy Ref:? NGR: SX426736 Copper mine with evidence of chalcopyrite; condition status: Unknown

Wheal Anna Maria Gulworthy Ref:? NGR: SX426734 Copper mine with evidence of chalcopyrite and arsenopyrite; condition status: Unknown

Fremontor Mine Gulworthy Ref:? NGR: SX424724 The only surface exposures of Gunnislake granite body in Devon; condition status: Unknown

Bedford United Mine Gulworthy Ref:? NGR: SX441726 The most diverse range of copper secondary minerals in Devon; condition status: Unknown

South Tamar Consols Bere Ferrers Ref:? NGR: SX435645 Representative of the geology of the Bere Alston silver-lead mines; condition status: Unknown

Some significant sites beyond the WHS (within Cornwall):

Lambriggan Mine Ref: CK/7 NGR: SW 760511 A unique example of a mine ore pile left standing at surface. One of very few sites of its kind in Cornwall; condition status: Unknown

Wheal Carpenter Ref: P/9 NGR: SW 584353 Mine spoils; condition status: Unknown

Carclaze Old Tin Pit Ref: R/17 NGR: SX 024549 Kaolinised and mineralised granite in a china clay pit that played a part in the early development of geological science; condition status: Unknown

Wheal Rose Ref: K/18 NGR: SW 634249 Lead 'stringer' vein running across beach and underground workings; condition status: Unknown

Wheal Johnny Ref: K/11 NGR: SW 627412 Mine dumps. Good educational site; condition status: Unknown

NB. All data courtesy of Sue Hocking (Cornwall Wildlife Trust) and Peter Chamberlain (Devon RIGS Group)

6.5 SSSI sites within the World Heritage Site with mineralogical/geological significance (2018)

Sites of Special Scientific Interest (SSSI)

12 SSSI sites recorded within the World Heritage Site Areas A1 to A10

Assessment classification - main habitat classification: 'Earth heritage'

Cornwall:

1. Aire Point to Carrick Du (WHS A1) – Condition: 'Favourable'
2. Penberthy Croft Mine (WHS A3) – Condition: 'Favourable'
3. Great Wheal Fortune (WHS A3) – Condition: 'Unfavourable declining'
4. Porthcew (WHS A3) – Condition: 'Favourable'
5. Wheal Gorland (WHS A6) – Condition: 'Unfavourable declining'
6. Godrevy Head to St Agnes (WHS A7) – Condition: mostly 'Favourable' *
7. St Agnes Beacon Pits (WHS A7) – Condition: 'Favourable'
8. Trevaunce Cove (WHS A7) – Condition: 'Favourable'
9. Cligga Head (WHS A7) – Condition: 'Favourable'
10. Hingston Down Quarry and Consols (WHS A10) – Condition: 'Favourable'

West Devon:

11. Devon Great Consols (WHS A10) – Condition: 'Favourable'
12. Lockridge Mine (WHS A10) – Condition: 'Favourable'

* Five out of the six component areas of this SSSI were considered to be in 'Favourable' condition

7 References

- 1 World Heritage Centre, (2002) *Monitoring World Heritage*, World Heritage Papers 10, Paris: UNESCO World
Heritage Centre, p.12
- 2 Bedu, I., Harrap, A., Foster, S., Jackson, J., Wilkinson, C. & Simmonds, S. (2007) *Tool Kit for World Heritage Site
Monitoring Indicators*, London: ICOMOS UK
- 3 Explanation and data provided by WHS Planning Advice Officer, Ben Dancer
4 <http://erccis.org.uk/>
- 5 The World Heritage Site Bid Team (2005) *Nomination of the Cornwall and West Devon Mining Landscape for
inclusion on the World Heritage List*. Truro: Cornwall County Council, p.153
- 6 Embrey, P. G. & Symes, R. F. (1987) *Minerals of Cornwall and Devon*. London: British Museum (Natural
History), & Tucson: The Mineralogical Record Inc. p.2
- 7 Cornwall Minerals Safeguarding Development Plan Document - Submission Consultation, June 2017, p.17
8 Monitoring indicators for the Cornish Mining World Heritage Site (2009)
- 9 Sharpe, A. (2017) *Cornwall and West Devon Mining Landscape World Heritage Site: Condition Survey 2017*,
Truro: Cornwall Archaeological Unit, p.13
- 10 *Ibid.* pp.13-14
11 *Ibid.*
- 12 *Strategic Regional Coastal Monitoring Programmes of England* website: www.channelcoast.org/
13 The figures given here relate to mine site features specifically and do not include other landscape attributes of
OUV such as mining settlements or transport infrastructure which together comprise the Site
14 <http://www.tavistockthi.co.uk>
- 15 Hayle Townscape : A Heritage-Led Sustainable Economic Regeneration Initiative in West Cornwall
Final Monitoring and Evaluation Report January 2009. Penzance: Penwith District Council, p.1
16 Historic England *Heritage Counts 2017: Heritage and Society* (2017), London: Historic England
17 *Ibid.* p.1
- 18 Orange, H. (2012) *Cornish Mining Landscapes: Public Perceptions of Industrial Archaeology in a Post-Industrial
Society* - Thesis submitted for the degree of doctor of Philosophy to University College London
19 *Ibid.* p.300 et seq.
20 *Ibid.* p.300
- 21 *Discover the Extraordinary – Project Evaluation Summary* (2014), p.8 - [http://www.cornish-
mining.org.uk/sites/default/files/WHs%20DTE%20Project%20Evaluation%20Summary.pdf](http://www.cornish-mining.org.uk/sites/default/files/WHs%20DTE%20Project%20Evaluation%20Summary.pdf)
- 22 *Op Cit.*, The World Heritage Site Bid Team (2005), p.144-145
- 23 Downes, J., Foster, S. M. & Wickham-Jones, C. R. (2005) *The Heart of Neolithic Orkney World Heritage Site
Research Agenda*. Edinburgh: Historic Scotland
- 24 Historic England *Heritage Counts 2017: Heritage and the Economy* (2017), London: Historic
England
25 *Ibid.* p.3
26 *Ibid.*
- 27 UK National Commission for UNESCO (2013) *Wider Value of UNESCO to the UK 2012 – 13*, London: UK
National Commission for UNESCO, p.3
28 *Ibid.* p.2
29 *Ibid.* p.3
- 30 Figure: World Heritage Site Office, 2017
- 31 UK National Commission for UNESCO (2015) *Wider Value of UNESCO to the UK 2014 – 15 - Contribution of
UNESCO to the work of UK organisations*, London: UK National Commission for UNESCO, pp.67-68
- 32 UK National Commission for UNESCO (2017) *UNESCO in England*, London: UK National Commission for
UNESCO, p.9
- 33 *Op Cit.*, Gamble, B. (2005)
34 *Op Cit.*, *Discover the Extraordinary – Project Evaluation Summary* (2014)
35 <https://www.plantlife.org.uk>
- 36 Callaghan, D. (2016) *Ditrichum cornubicum* at Crow’s Nest and Phoenix United Mine. Widnes: Bryophyte
Surveys Ltd.
- 37 Saunders, P. (2016) *Bees on AONB mine sites: a project scoping*. Truro: Kernow Ecology on behalf of the
Cornwall AONB Unit
- 38 All data courtesy Sue Hocking (Cornwall Wildlife Trust) and Peter Chamberlain (Devon RIGS Group)