

Worlebury Camp Hillfort



Conservation Management Plan
2018 – 2025

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1. Introduction

Worlebury Camp is a large Iron Age hillfort located on a limestone promontory to the north of Weston-super-Mare. It sits at the western spur of Worlebury Hill covering an area of approximately 10 hectares, within the larger Weston Woods (130 hectares). It is afforded the highest protection for a heritage asset in England, as a Scheduled Monument (National Heritage List for England number: 1011260).

The land within which the hillfort sits is owned and managed by North Somerset Council.

The hillfort was planted with trees in the early 19th century and has been subject to deforestation and subsequent afforestation since this time.

Worlebury Camp was placed on Historic England's Heritage at Risk Register in 2016, categorised as vulnerable, with the principal threats being trees and vegetation.

A number of initiatives have been undertaken by North Somerset Council to improve the hillfort and prevent damage through the removal of trees and vegetation clearance, as well as the creation of interpretation boards and better access to the monument. Now that the hillfort has been placed on the Heritage at Risk Register, North Somerset Council is even more committed to the preservation of this exceptional monument.

Working with the volunteers of the Worlebury Hillfort Group, we will begin this with the creation and implementation of this management plan, which sets out our objectives until 2025.

This document was subject to public consultation between 12th October and 9th November 2018, and all responses have been taken into consideration and included where feasible. We thank the local groups and residents for feeding into this.

2. Site Description

2.1 General information

Parish: Weston-super-Mare

Local Planning Authority: North Somerset Council

Grid Reference: ST 312 624

Maps: OS 1:50000 sheet 182

2.1.1 Area

10.07 hectares (Compartment 8 of Weston Woods plus 7 remaining compartments = 140 hectares)

2.1.2 Tenure

North Somerset Council: Bought by former Woodspring Council in 1937

2.1.3 Status

Designated as Scheduled Ancient Monument in 1915 under *Ancient Monuments Act 1913*. Now protected as a Scheduled Monument under the Ancient Monuments and Archaeological Areas Act (1979).

2.1.4 Sites of Conservation Interest (based on North Somerset Local Plan)

Wildlife Site – number 581 – Worlebury Hill

Local Nature Reserve – number 28 – Weston Woods

2.1.5 Access and pathways

Pedestrian access only. Weston Woods, in which the hillfort sits, is afforded free public access all year round. Main access points are Camp Road, Trinity Road, the bridleway to the north, and Worlebury Hill Road. There is no vehicular access within the scheduled area.

Two public rights of way traverse the interior of the hillfort. One from the eastern end, at the access point from Worlebury Hill Road, to the westernmost access at Camp Steps, and the other crosses this perpendicular from the access on the bridleway on the northern edge, to Trinity Steps on the southern side. A bridleway runs from Toll Road and skirts the edge of the scheduled area on its northernmost limits. All access points are highlighted in figure 1.

2.1.6 Site use

The site is used by a variety of visitors for walking (including dog walking), wildlife/plant interest and historical interest.

2.1.7 Designation details (extracted from the National Heritage List of England – see figure 1 for extent)

Name: **Worlebury Camp: a large multivallate hillfort on Worlebury Hill**

List entry Number: **1011260**

Reasons for Designation

Large multivallate hillforts are defined as fortified enclosures of between 5ha and 85ha in area, located on hills and defined by two or more lines of concentric earthworks set at intervals of up to 15m. They date to the Iron Age period, most having been constructed and used between the sixth century BC and the mid-first century AD. They are generally regarded as centres of permanent occupation, defended in response to increasing warfare, a reflection of the power struggle between competing elites. Earthworks usually consist of a rampart and ditch, although some only have ramparts. Access to the interior is generally provided by two entrances although examples with one and more than two have been noted. These may comprise a single gap in the rampart, inturned or offset ramparts, oblique approaches, guardrooms or outworks. Internal features generally include evidence for intensive occupation, often in the form of oval or circular houses. These display variations in size and are often clustered, for example, along streets. Four- and six-post structures, interpreted as raised granaries, also occur widely while few sites appear to contain evidence for temples. Other features associated with settlement include platforms, paved areas, pits, gullies, fence lines, hearths and ovens. Additional evidence, in the form of artefacts, suggests that industrial activity such as bronze- and iron-working as well as pottery manufacture occurred on many sites. Large multivallate hillforts are rare, with around 50 examples recorded nationally. These occur mostly in two concentrations, in Wessex and the Welsh Marches, although scattered examples occur elsewhere. In view of the rarity of large multivallate hillforts and their importance in understanding the nature of social organisation within the Iron Age period, all examples with surviving archaeological potential are believed to be of national importance.

The large multivallate hillfort on Worlebury Hill is an outstanding example of its class. It survives well and is known from excavations to contain archaeological and environmental information relating to the monument and the landscape in which it was constructed and later reused. This example is unusual in terms of its location as hillforts on this scale are rarely situated on coastal promontories. This hillfort is one of a number of well-preserved examples surviving in the area. Together, these will provide a detailed insight into Iron Age society in the area, its economy and the political and social structure of which it was part.

History

Details

The monument includes a large multivallate hillfort on Worlebury Hill, a carboniferous limestone promontory oriented east to west and overlooking Weston Bay to the south west, Sand Bay to the north east and an area of Levels to the east. The hillfort, known as Worlebury Camp, occupies the spur of Worlebury Hill and has a level sub-rectangular interior with maximum dimensions of 690m from east to west and 200m from north to south. In 1900 Dymond recorded the presence of 93 pits within the interior of the hillfort. These were found to contain human and animal remains. Other finds including an Iron Age axehead, iron spearheads and the beaded rim of a Glastonbury style pot were recovered by Warre during his investigations conducted in the 1850s. Surrounding the enclosed area are steep natural slopes to the south west and west and cliffs with associated terracing to the north.

In the southern area, where the natural slopes are less steep, a single rampart defined the site. This included a stone built bank which survives up to 8m wide and c0.8m high. The topography to the east is almost level with the hillfort and in order to compensate for this a multivallate system of defences was developed. This included a multiple set of ramparts of curvilinear form, comprising three large stone-built banks with four smaller ramparts beyond. The inner bank is the largest and is 10m wide and c1.5m high. The six further banks become progressively smaller and vary in size from 9m wide and c1.2m high in the west, to 2m wide and c0.5m high in the east. All seven banks have external ditches from which material was quarried during their construction. The two innermost examples are 15m wide and c1m deep, the remaining five become progressively smaller to the east; these range between 10m wide and 0.8m deep to 3m wide and c0.5m deep. The maximum width of the ramparts at the eastern end of the monument is 100m.

Neolithic flint arrowheads and flint axes recovered from the area suggest that the hilltop was occupied before the Iron Age. There is also a fragment of a rare cast bronze collar, dated to the Middle Bronze Age and which is likely to represent a German import. Following the period of Iron Age occupation and construction of the hillfort, further occupation of the hilltop can be attested during the Romano-British period. During investigations at the site by Warre in the 1850s, a hoard of Roman coins dating to AD 450 were recovered, along with a quantity of Roman pottery, glass beads and fragments of bronze. Excluded from the scheduling area are all fence posts and benches although the ground beneath all these features is included.

Map of Worlebury Camp

Red line indicates extent of scheduled area

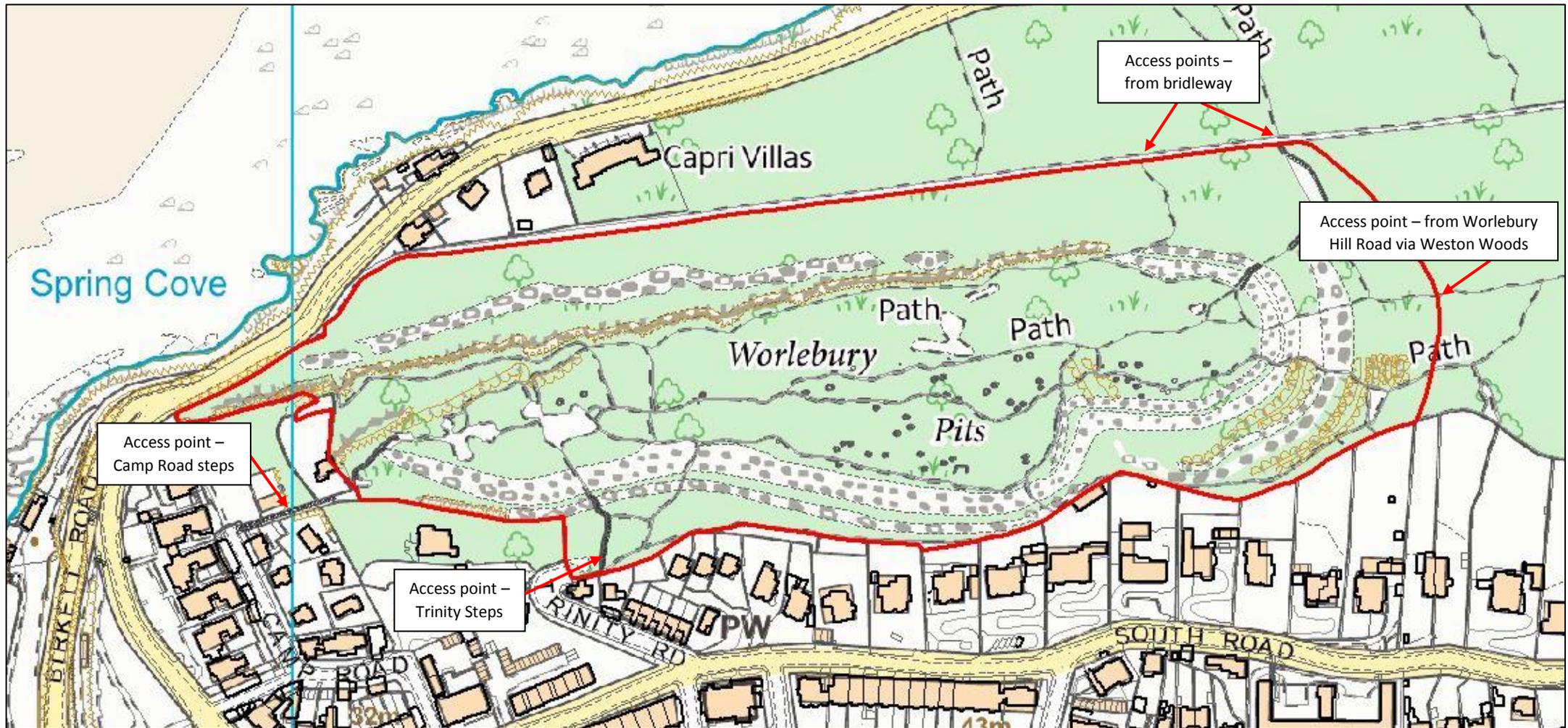


Figure 1: Location map including access points

3. Historical & Archaeological Background

Worlebury Camp was designated a Scheduled Monument in 1915, and was one of the earliest archaeological monuments to be added to the list under the Ancient Monuments Act 1913. At this time, it was under the ownership of the Smyth-Piggott family, one of the key players in the development of Weston-super-Mare as a seaside resort.

Worlebury Hill was subject to the Enclosure Act of 1810, and subsequently enclosed with a ‘hill wall’ (La Trobe Bateman, 1998). After the enclosure of the hill, John Smyth-Piggott began the process of planting trees to create a game reserve. Up until this time, Worlebury Hill has been an open limestone upland, protected by the sea and a steep cliff on the north, and by marshy lowland to the south and east.

The Revd Warre, who wrote of Worlebury Camp in 1851, laments the tree planting across the hillfort, and states that the trees ‘have grown so much, as to render it impossible to perceive the plan of the fortifications at one view’ (Warre, 1851).

Neolithic flint axes and arrowheads have been recovered from Worlebury Hill, suggesting that the hilltop was occupied before the Iron Age. There is tentative evidence that Worlebury Hill was occupied in the Bronze Age: a fragment of a cast bronze penannular collar is said to have been found near the hillfort (Lawson, 1976).

The hillfort on Worlebury Hill dominates the archaeological record for Weston-super-Mare for the Iron Age, because it is the most prominent feature in the town, and it probably played a central role in Iron Age society.

Other recorded Iron Age archaeology in the area includes several burials to the south of Worlebury Hill, which were mostly pit inhumations. Scatters of Iron Age pottery are also recorded within the wider landscape, as well as slingstones and domestic animal bone, most of which were deposited in pits on the southern slopes of the hill. Possible Iron Age cremations have also been recovered to the east of Worlebury Camp. These locations are illustrated in figure 2 below:

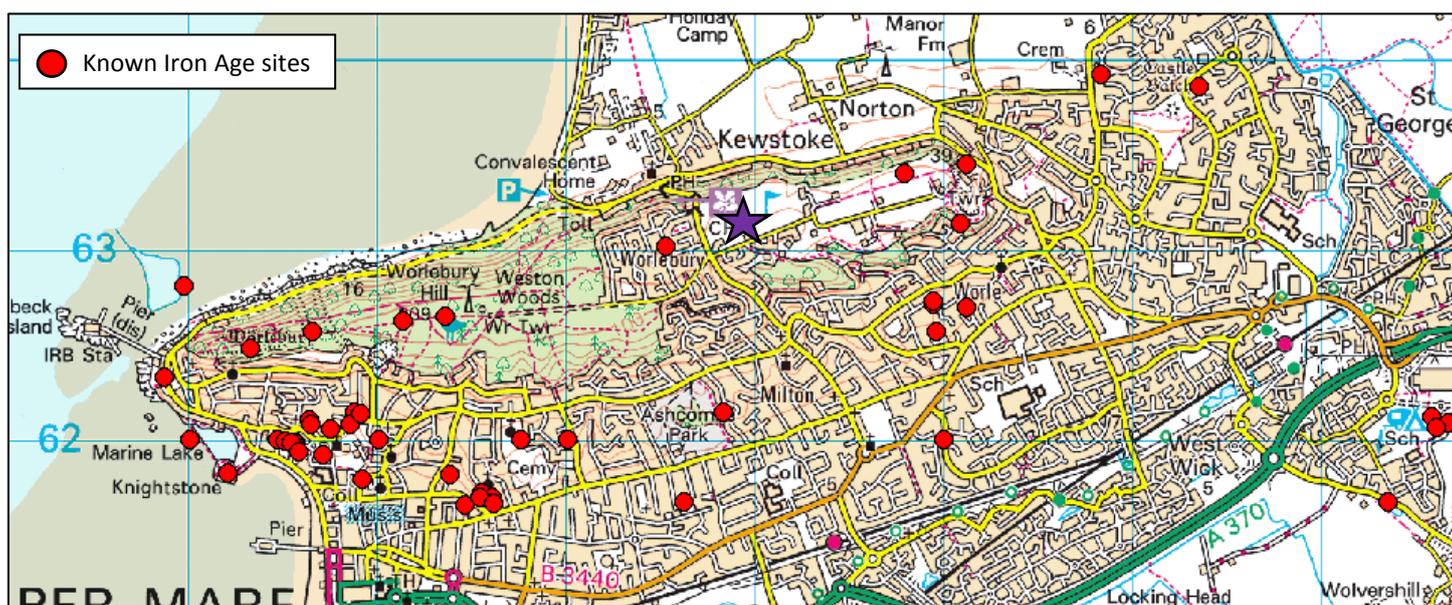


Figure 2: Recorded Iron Age sites from North Somerset Historic Environment Record

The hill has a long gentle south facing slope and plenty of flat land on the plateau top, which meant that it was well suited to agriculture. During the Iron Age, the hill became covered in small fields, traces of which can still be seen from the air (figure 2 – see purple star), masked and yet preserved by the Worlebury golf course (Evans, 1980).

The hillfort dates to the Iron Age, having been constructed and used between the 6th century BC and the mid-first century AD.

The tree cover hides most of the hillfort from aerial photography, and relatively few of the aerial reconnaissance sorties over Weston cover the area of the hillfort. For much of the second half of the 20th century, only glimpses of the ramparts could be seen in small clearings in the trees. Felling of trees occurred between the 1920s and 1950s for the war effort.

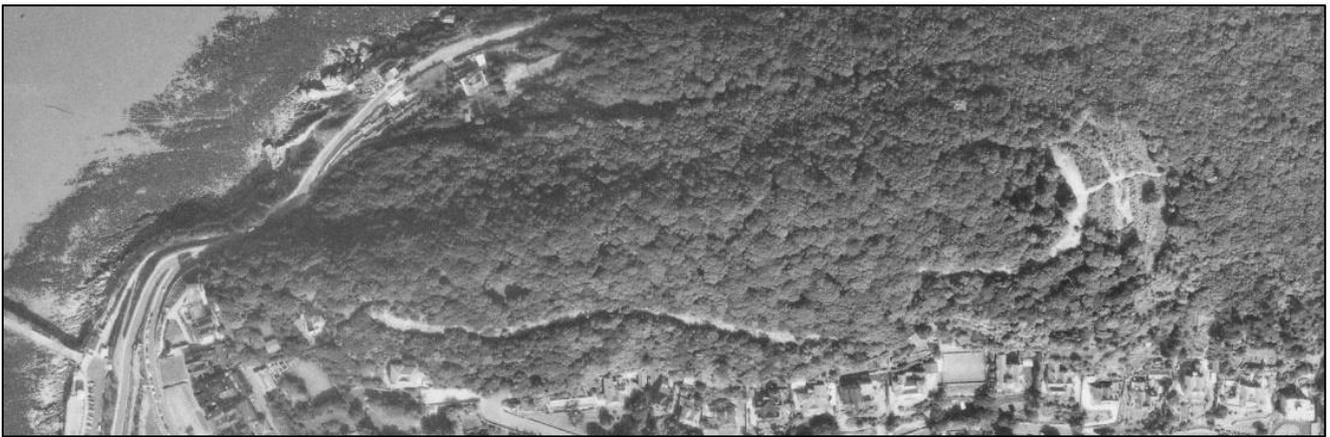


Figure 3: Aerial photograph of Worlebury Camp, 1971

3.1 Archaeological investigations of Worlebury Camp

Worlebury Camp hillfort was first excavated in 1851 and 1852 by a group of antiquaries, including the Rev. Francis Warre, E. Martin Atkins, D. Tomkins and his son Revd H.G. Tomkins, Dr. Pring and Dr. Thurnam, prompted by damage caused to the outer earthworks when South Road was laid out. They cleared 93 pits and discovered finds of Iron Age and Romano-British date and the skeletons of 18 individuals (Warre, 1851). Atkins drew a plan of the hillfort, and several drawings and reports were published.

Thirty years later, in 1886, C.W. Dymond and H. Tomkins drew together all the previously published reports, re-excavated many of the pits, cut sections across the main walls and investigated the cross ditch (eds. Aston & Iles, 1987). He produced a new plan using Atkins' work to mark in outer earthworks on the southern and western sides which, by this time, were lost to the gardens of Victorian houses (fig. 3). Dymond and Tomkins' study of Worlebury in 1886, *Worlebury: An Ancient Stronghold in the County of Somerset*, was one of the first detailed examinations of a hillfort in England, with the report including accurate drawings of features on the site and finds made during their excavations, and also the investigations of Warre in the 1850s (eds. Aston & Iles, 1987).

Worlebury was probably a centre of permanent occupation, defended in response to increasing warfare - a reflection of the power struggle between competing elites. It is not clear how, why or when people stopped living here: it is unlikely that it was occupied long after Britain became part of the Roman empire in the mid-1st century AD (Evans, 1980).

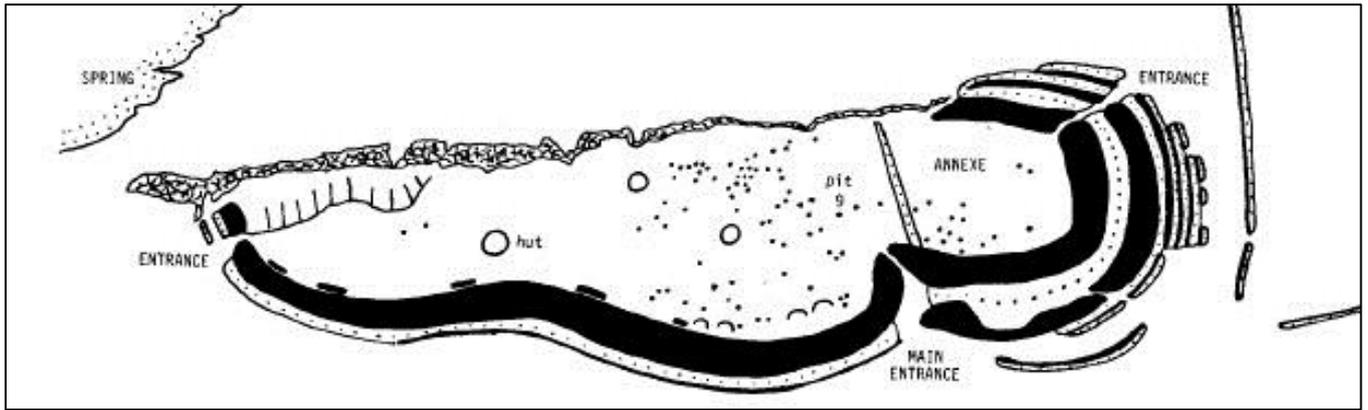


Figure 4: Worlebury, based on Dymond's plan of 1880 showing the ramparts, ditches and pits. Added to it are the approximate positions of some of the hut sites

Evidence for activity in and around the hillfort during the Romano-British period has also been found in the form of a hoard of Roman coins dating to AD 450, glass beads and Roman pottery. A number of artefacts and burials dating to this period have also been found along the southern slopes of Worlebury Hill.

Rutter (1829) offers a suggestion that Worlebury Camp was reoccupied in the early medieval period, based on a Saxon chronicle of 998 recording that the Danes marched from Worlebury Camp to Biddisham.

Important features within the hillfort (discussed in detail in the following section) include the storage pits found mostly within the eastern extent of the interior of the monument. Some of the pits included human remains, and they showed evidence of violent deaths. Whilst it has been widely believed that these inhabitants met their untimely end at the hands of an attacking tribe during the Iron Age, or perhaps even as part of the Roman invasion of this area, it is possible that the bodies were placed in the pits in a ritual context.

3.2 Features of the hillfort

The hillfort occupies approximately 10 hectares of the spur of Worlebury Hill, with maximum dimensions of 690m east to west and 200m north to south (Historic England Listing Description).

Defences

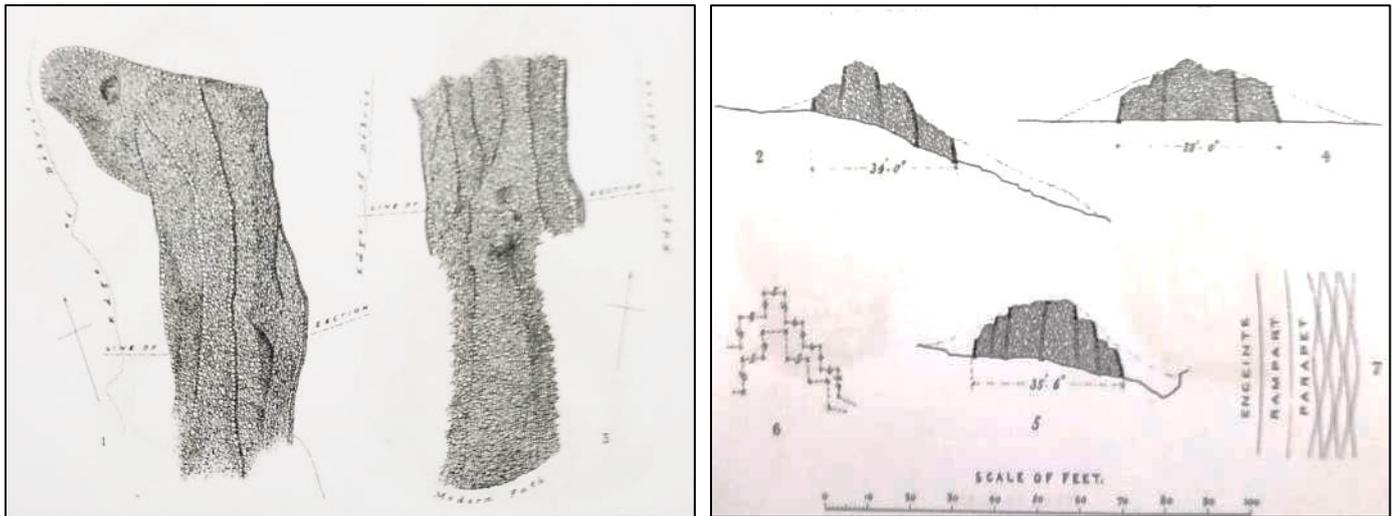
The fortifications of Worlebury Camp comprise a combination of both man-made and natural defences.

To the northern extent of the hillfort, natural slopes and cliffs formed part of the hillfort's defences, and Dymond referred to a possible embankment along the northern boundary (Cotswold Archaeology, 2018).

To the south of the hillfort, the natural slope here is less steep, and so a single rampart, comprised of a single, stone built bank, was constructed. Along the southern rampart there are several platforms, which have been interpreted as 'slinger platforms', where it may have been possible that those defending the hillfort would have stood and used slings and small stones to fend off attackers.

At the eastern end of the hillfort lies a multivallate system of defences in the form of seven banks and ditches. The material for the banks/walls comprises the excavated material from the ditches. The ramparts become smaller in size as you move away from the interior of the hillfort, with the innermost bank measuring 10m wide and c1.5m high. The smaller banks and ditches are cut directly out of the

limestone bedrock. This was the only area that did not benefit from natural defensive slopes or cliffs, and as such, this defensive system was constructed. The maximum width of these ramparts is approximately 100m.



Figures 5 & 6: Plans of walls/ramparts (Dymond & Tomkins, 1886)

Dymond provides a detailed analysis of the construction of the ramparts, stating that they comprised a ‘massive wall comprised of loose stones, faced on both sides with dry walling’ (Dymond, 1886; Cotswold Archaeology, 2018).



Figure 7: Eastern ramparts after vegetation clearance showing 1930s path (January 2018)

Entrances

Three entrances are recorded for Worlebury Camp hillfort. These include one on the southern ramparts, one to the north-east, and one to the west. The entrance on the southern side of the hillfort is surely contemporary with the monument, but it is possible that the other two are later in date.

It must be noted that the pathway through the eastern ramparts is of modern construction (fig.7). The modern entrance, located through the centre of the eastern multivallate defences was constructed in the late 1930s. The path was “cut through the encampment, while deep dips have been neatly bridged” (Anon, 1939). Figure 8 is an image from a newspaper article from May 1939 showing workmen from the council engaged in constructing a pathway from Worlebury Cottage to the Sky

Cottage approach. This was part of the Council's scheme at the time to improve the site, which also included the clearance of vegetation.



Figure 8: Workmen constructing path (Weston Mercury & Somersetshire Herald (1939)

Dymond (1902) calls the southern entrance (fig.8) the 'Grand Entrance', and states that, "*the gateway was bounded by a wall of very bold material ... with a semi-circular wing or shoulder at its inner end, inclosing the northern flanking work*" (rampart).

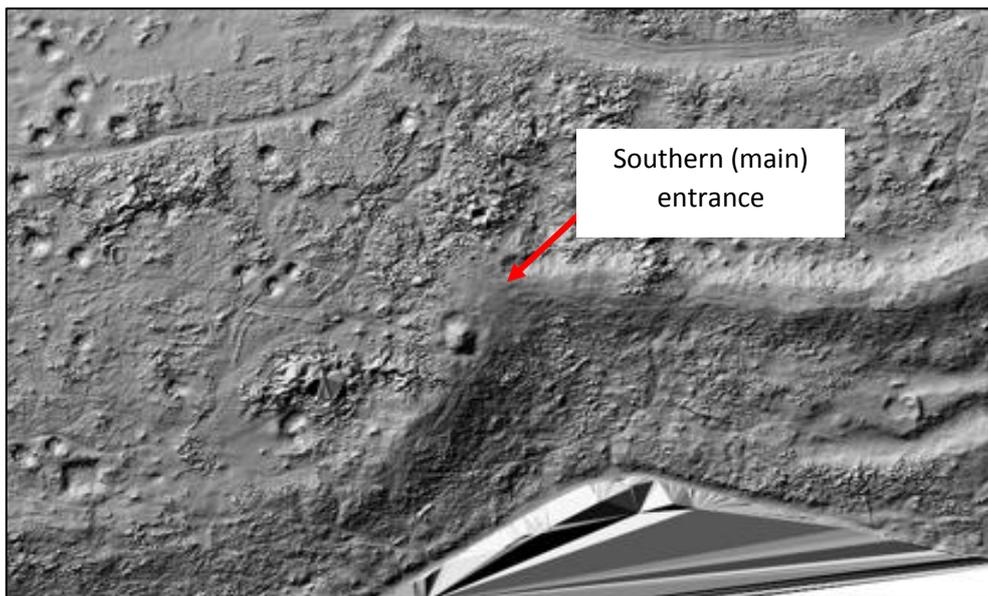


Figure 9: Extract from digital terrain model of Worlebury Camp (Cotswold Archaeology, 2018)

Pits

Many of the pits located within the interior of the hillfort were excavated by Warre in the 1850s, and he incorrectly interpreted them at the time as roundhouses. Dymond and Tomkins re-excavated some of the pits in 1886, and recorded a total of 93. This concentration suggests intensive occupation of the hillfort, and most are located within the eastern part of the interior.

Dymond and Tomkins' re-evaluation of Worlebury in 1902 states, "Mr. Warre speaks of the 'circles' (by which he means the ring-embankments surrounding the pits) as being 28 to 30 feet in diameter; and regards them as undoubtedly the foundations of ancient huts. Although traces of these embankments were then in existence, they must have been very slight, for, at the present time, nothing but a very small shallow bank is here and there to be seen". It is possible that the larger storage pits were roofed, and the embankments are related to this.

There is also the presumption by Dymond that these hollows were misinterpreted by Warre and were actually mineral extraction pits relating to the post-medieval calamine industry known to have been located on Worlebury Hill. Further research into these potential hut circles is required.

4. Previous Management of Worlebury Camp

Management plans have been in place for Weston Woods since 1998, and the hillfort has been identified as compartment 8 (of 8 compartments), with specific management identified for it. Limited resources have meant that the objectives of these management plans have not always been met.

Extracts relating to the archaeology and hillfort within Weston Woods from previous iterations of management plans are listed below. It is evident that vegetation and tree clearance has been a priority for many years.

4.1 Extracts from Weston Woods Management Plan (2004-2009)

Concerns were raised in the original management plan of 1998 that trees were damaging the fabric of the site as well as obscuring it. A small area of trees was felled where damage to archaeology was occurring. This was a trial as a precursor to clear-felling the hillfort to protect and unveil the archaeology. Annual shrub and weed clearance is programmed in every winter.

A5.4) Maintain the clear areas around the Hillfort - cut scrub in winter

Review of management plan - Scrub clearance on the fort's eastern ramparts has been ongoing. No other tree felling has taken place.

A strategy was developed with North Somerset Council's Biodiversity Officer with the objective to manage an area to the North of the hillfort to encourage limestone grassland vegetation and habitat. This appear to have been partially successful as calcareous grassland plants may be seen in the area, however; more intensive maintenance is required to achieve a thriving habitat.

4.2 Extracts from Weston Woods Management Plan (2010-2015)

Concerns were raised in the original management plan of 1998 that trees were damaging the fabric of the site as well as obscuring it. A small area of trees was felled where damage to archaeology was occurring. Annual shrub and weed clearance is programmed in every winter.

Key management issues: Investigate threats to vulnerable archaeological areas

Criteria/aims	Actions	Measure	Timetable	Process
A5.4) Maintain the clear areas around the hillfort	A5.4.1) Cut scrub in winter	All areas cut satisfactorily	Annually	Revenue/Volunteers/Ranger/Officer Time
A5.5) Investigate the need to remove further trees and scrub from the hillfort	A5.5.1) Liaise with qualified parties	Inspect report recommendations	2012	Officer Time/Revenue / Grant
A5.6) Improve limestone grassland area	A5.6.1) Reduce fertility of soil by regular spring and autumn cutting and removal of cuttings	All areas cut and cleared satisfactorily	Annually	Ranger/Grant

4.3 Extracts from Weston Woods Management Plan (2015-2025)

The following information describes the management proposals for the hillfort.

Maintain hillfort reasonably clear of woody vegetation. Indicator: the glade at the hillfort and the western ramparts are reasonably clear of significant vegetation

2010/11 was the last year that a twice yearly cut of the hillfort was possible. A reduction in available resources meant that conservation management contractors are on site once a year, clearing the limestone grassland area and half the hillfort. The ramparts are done every two years. Whilst a more intensive regime would be preferable, especially in trying to maintain the limestone grassland, no funds have been available. With regards to damage to the fabric of the Scheduled Monument from roots, significant woody species growth is removed, and the risk of other vegetation causing damage is low. From June 2016, a volunteer group is cutting vegetation in the glade.

Introduce interpretation signage

Six interpretation boards were installed in 2010 on large boulders, at strategic locations throughout the woodland. These boards are generally in good condition. It was noted that the board which relates to the hillfort could be re-located to allow users of the all-access path to see it. It is currently located on a rough PROW footpath. No resources have been available to relocate the boulder.

Investigate the need to remove further trees and scrub from the hillfort

Due to lack of officer time to investigate this, and means to fund tree works, the aspiration was abandoned.

Improve the limestone grassland at the hillfort

Funds to improve the grassland area, over and above our annual cut, have not been available.

Objectives:

- Maintain and/or enhance the site's prehistoric archaeology
- Maintain the site's prehistoric archaeology and limestone grassland remnants by cutting the glade and ramparts annually, subject to available funding/resource
- To recognise and encourage further community involvement in the woodland through consultation, events and activities
- Maintain hillfort glade and eastern ramparts reasonably clear of woody vegetation (to be monitored in the summer with a visual assessment)

5. Worlebury Hillfort Project

Worlebury Camp hillfort is one of the top 10 hillforts of its type, with only 50 known nationally. The evidence excavated during the 19th century investigations is still accessible yet under-researched, and therefore comprises large research value without having to undertake further destructive excavations on the site itself. Together with the excellent level of preservation, of both the physical monument and the artefactual and environmental evidence recovered from those early excavations, Worlebury Camp hillfort is one of the most important, and significant heritage assets, in North Somerset, and indeed the south-west region.

In recent times, there has been growing interest in the hillfort from the community, which culminated in discussions regarding improved management. Concerns were raised by a volunteer group working on the hillfort who reported vandalism in the form of a 6ft cairn, constructed from rubble from the hillfort's ramparts.

A site visit was subsequently arranged in October 2016 with North Somerset Council's archaeologist, the volunteers, North Somerset Council's tree officer and Historic England's Heritage at Risk Project Officer. The hillfort was thus placed on the Historic England 'Heritage at Risk' Register in 2017. Its condition was described as 'generally unsatisfactory with major localised problems', and its principal vulnerability is listed as 'forestry'.

Lack of resources had prevented previous archaeological involvement, but in 2017 North Somerset Council were successful in the bid for a grant of £10,000 from the Heritage Lottery Fund (HLF) to undertake an archaeological condition survey of the hillfort, which would inform better management of the monument.

The outcomes of the grant are:

- 1) Appoint a consultant to undertake an archaeological condition survey of the hillfort and provide an evaluation of its condition to inform appropriate future management of the monument
- 2) Produce a management plan for the site
- 3) Volunteers to deliver a programme of guided walks to the site for the local school and community groups

In December 2017, Cotswold Archaeology were commissioned to undertake the survey, which was carried out between January and March 2018. Its purpose was to provide comprehensive information on the current form and survival of the hillfort; areas of damage, threats and risks to the monument, meeting the first outcome of the HLF grant, and to inform the second outcome.

Part of the commission was to produce a topographic survey or Digital Terrain Model (DTM) of the entire scheduled area.

The resulting report included a programme of documentary research, using information from the North Somerset Historic Environment Record (HER) data, Somerset Record Office, Historic England's Aerial Photographic Research Unit, antiquarian reports on Worlebury Camp, and information from local archaeological societies and volunteer groups.

5.1 Condition Survey Methodology

The survey was formed of two parts: topographical survey and walkover condition survey. Both were undertaken in January 2018.

The results of the surveys have been provided by Cotswold Archaeology to North Somerset Council as digital GIS (geographical information systems) data, which will allow for queries and viewing of images. These data and images have helped form the basis of this management plan.

5.2 Topographical Survey / Digital Terrain Model (DTM)

The topographical survey was carried out in January 2018 using a handheld laser scanner, with data collected across the full extent of the scheduled area. Surveyors from Cotswold Archaeology were able to record 43,200 points per second, with an anticipated accuracy of 2cm. The results of the digital terrain model can be found in figure 31.

5.3 Condition survey

The walkover condition survey was undertaken at the same time the digital terrain model data was being collected. It was informed by the documentary research undertaken by Cotswold Archaeology, and recorded all locations of heritage threats and risks.

The results from the condition survey can be found in more detail in Section 6 – Management Issues. The section utilises all recorded data from the condition survey and discusses specific issues in further detail.

5.4 Justification for the project

Worlebury Camp hillfort is an outstanding example of its type and, as such, should be rightfully celebrated and enjoyed by all.

The overall aim of this project is to show local residents and visitors alike that Weston-super-Mare has something extra to offer – a real sense of history and depth of time.

The aims within this management plan will ensure that this exemplary hillfort is uncovered, helping to reveal its secrets, lost for almost two hundred years under extensive tree and vegetation growth.

We aim to employ appropriate management to maintain the hillfort, and remove risks and threats to the monument which will ensure its preservation for future generations. By addressing the threats to the hillfort, and implementing management objectives, we intend to remove the hillfort from Historic England's Heritage at Risk Register.

6. Management issues

6.1 Overview

In December 2017, North Somerset Council was awarded £10,000 from the Heritage Lottery Fund to commission an archaeological survey of the hillfort.

The main purpose of the condition survey undertaken by Cotswold Archaeology in early 2018 was to identify and record threats and risks to the hillfort, which will inform the long-term management of the monument. The condition survey report categorised the findings as follows:

- Heritage threats: forestry & scrub growth, erosion
- Heritage crime: removal of objects, littering and fire settings

Below is a map of all recorded threats to the hillfort, along with instances of heritage crime.

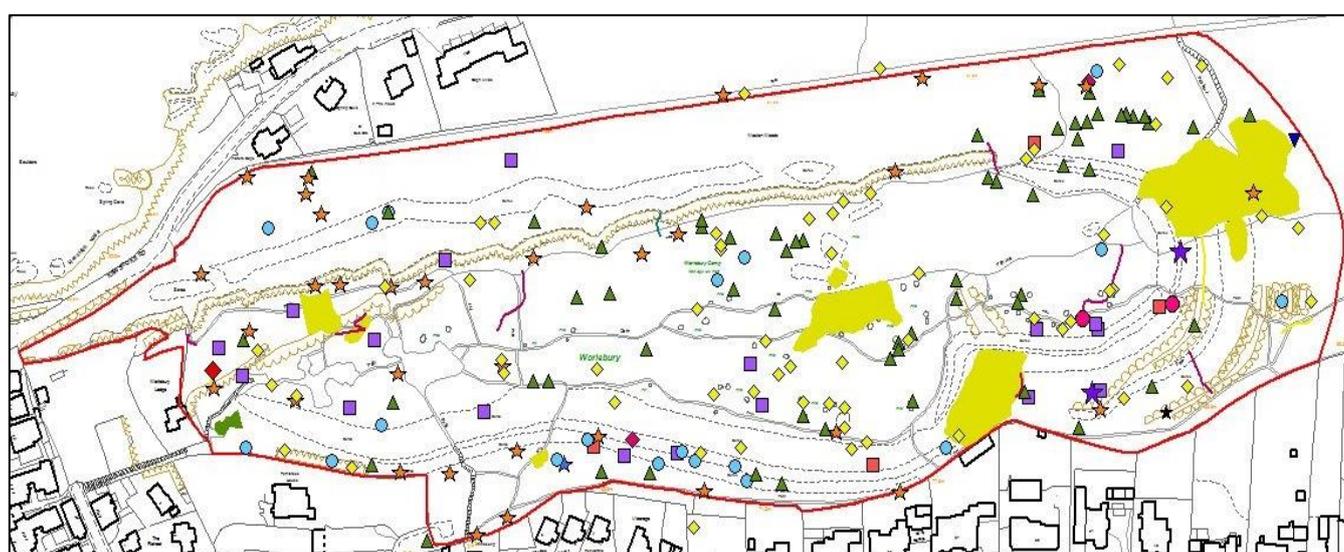


Figure 15: Locations of heritage threats and heritage crime

■ Collapse	◆ Scrub & plant growth	✕ Plant growth	▲ Forestry
▼ Animal burrowing	● Removal of objects	★ Drug paraphernalia	● Fly tipping
✕ Visitor erosion	◆ Metal detecting	■ Scrub & plant growth	★ Sexual paraphernalia
✕ Scrub & plant growth	★ Littering	▲ Forestry	■ Fire setting
✕ Public danger	★ Graffiti	■ Collapse	◆ Erosion

6.2 Heritage Threats

Heritage threats comprise non-intentional damage to the hillfort i.e. as a result of erosion, collapse and animal burrowing, as well as accidental damage resulting from forestry and visitor erosion.

6.2.1 Forestry and scrub growth

The condition survey stated, “forestry comprises the most significant threat to Worlebury Camp, as recorded on the heritage at risk record produced by Historic England” (Cotswold Archaeology, 2018). The threat level of forestry to the monument is largely recorded as severe, and the “ongoing erosion by mature trees of key features of the monument is notable”. Three of the main risks regarding forestry include:

- tree root erosion of features including pits and ramparts
- erosion caused by tree collapse or leaning trees
- collapse of trees across formal footpaths

The main areas impacted on by trees are the ramparts and ditches, the three entrances, and the central (Glade) area and pits.

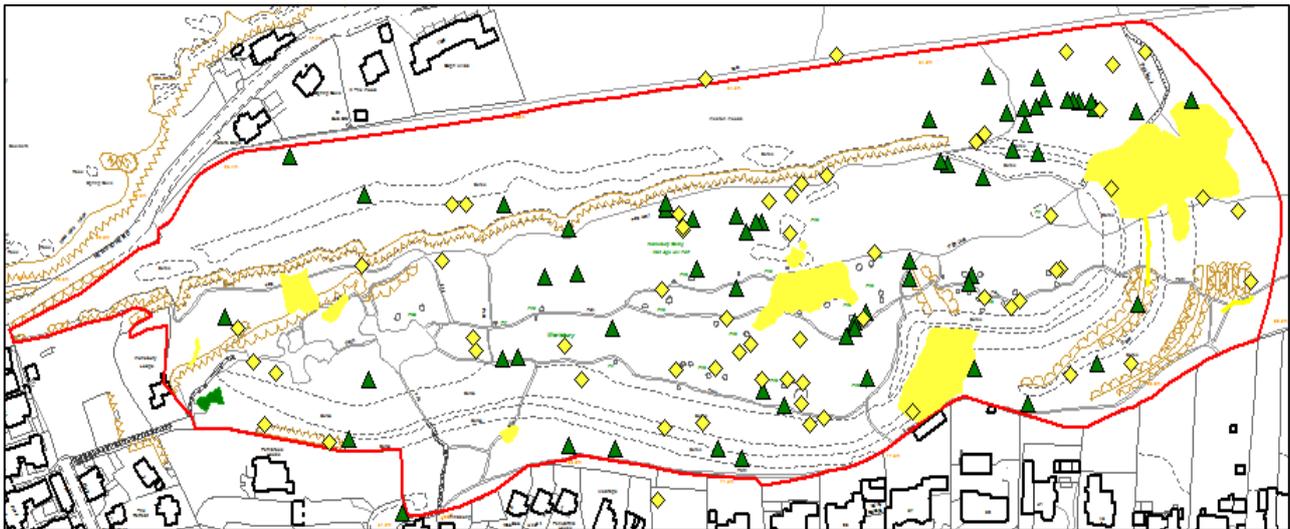
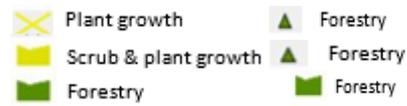


Figure 16: Heritage Threats: vegetation and trees



Damage to the hillfort from trees ranges from slight to severe, with examples including fallen trees, trees on the edges of pits, root disturbance and leaning trees. Those trees that are leaning or have already fallen cause damage to the hillfort by loosening and uprooting stones, thus resulting in collapse of ramparts and pits.

Images of threats from trees and vegetation growth are shown below:



Figure 17: Pit engulfed by ivy, with roots of medium-sized tree enveloping side of pit



Figure 18: Trees and vegetation along southern rampart



Figure 19: Trees and vegetation along ramparts. Roots here are causing damage to the rampart material



Figure 20: Damage caused by a tree throw

Extensive areas of scrub and other plant growth are notable across the monument, and present long-term erosion problems. These areas of extensive growth also impede access to the hillfort.

Damage to the hillfort from scrub growth is less severe, compared to the tree cover, as the roots are generally shallower.

The area known as 'The Glade' was clear-felled by North Somerset Council approximately 15 years ago, and has been managed through annual clearance. However, vegetation clearance in this area has undertaken by the volunteers of the Worlebury Hillfort Group since June 2016. The volunteers are on site weekly, and the images below show the amazing achievements of the group, and limestone grassland is being re-established in this area thanks to their efforts.



Figure 21: Glade after vegetation cut - January 2017



Figure 22: Glade after further removal of vegetation – January 2018



Figure 23: Pit cleared of brambles (Worlebury Hillfort Group, August 2018)

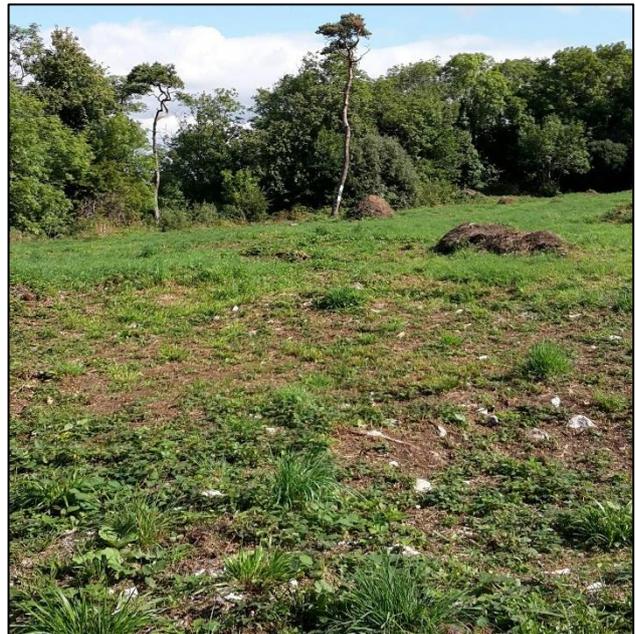


Figure 24: Glade showing continued clearance of brambles, etc., resulting in re-establishment of limestone grassland – Summer 2018

Clearance of vegetation will be easier through the clear-felling of trees, due to improved access to previously inaccessible areas. This will also allow for the re-establishment of limestone grassland across the majority of the interior of the hillfort.

6.2.2 Erosion

Erosion is defined in the condition survey as 'unofficial footpaths'. These are located where visitors stray from more formal routes.

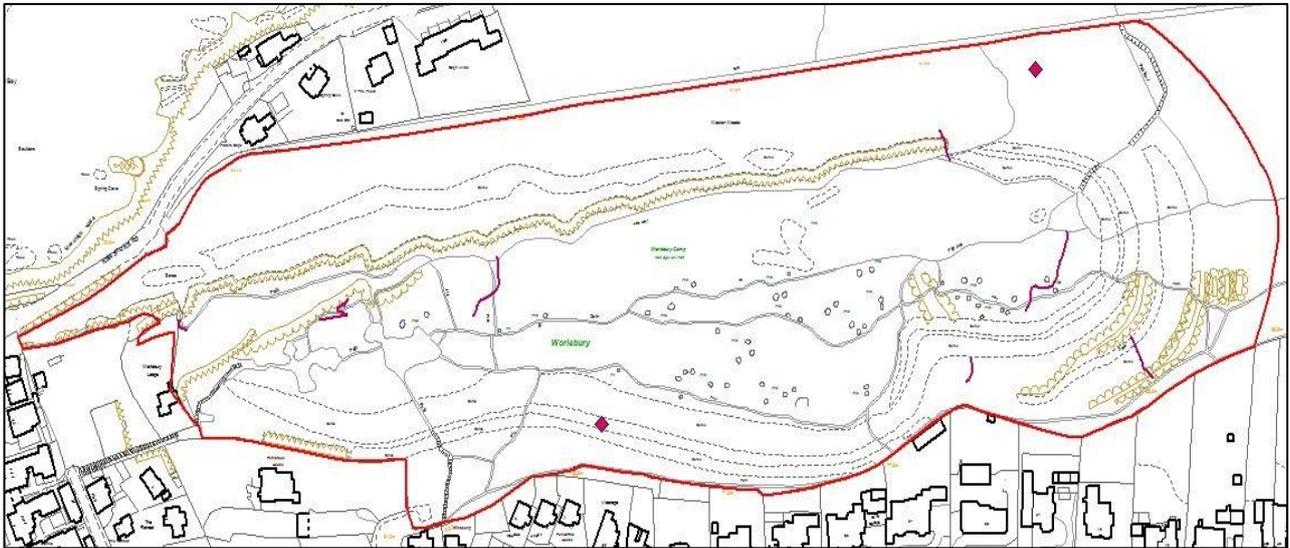


Figure 25: Recorded locations of erosion

Little evidence was identified for animal burrowing, and is thus not considered to be a significant issue.

6.3 Heritage Crime

Heritage crime is deemed to comprise 'wilful damage to the scheduled monument, i.e. as a result of fire starting, vandalism and dumping'. Most recorded sites of heritage crime were located in the southern half of the monument, particularly along the southern rampart.

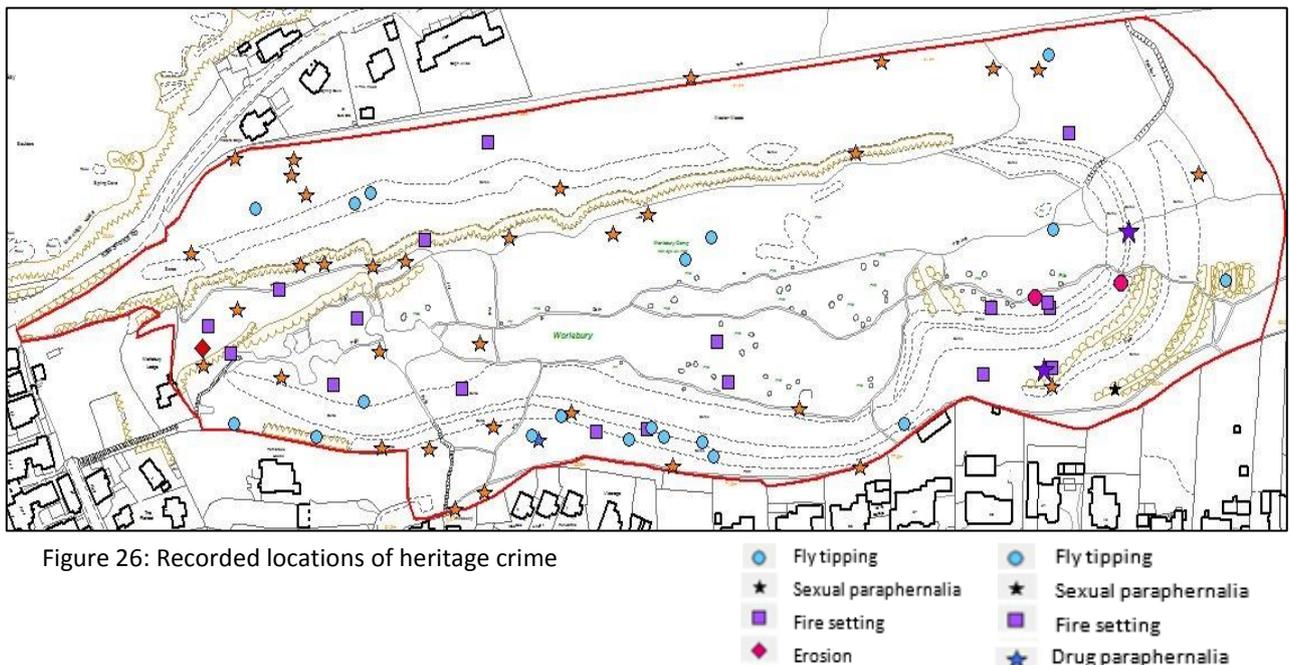


Figure 26: Recorded locations of heritage crime

- | | |
|------------------------|------------------------|
| ● Fly tipping | ● Fly tipping |
| ★ Sexual paraphernalia | ★ Sexual paraphernalia |
| ■ Fire setting | ■ Fire setting |
| ◆ Erosion | ★ Drug paraphernalia |

6.3.1 Removal of objects

Stones that have been moved from their original locations and creation of features such as the cairn in fig.27 and shelters/play-forts in figs. 28, 29 & 30 are regarded as heritage crime. The most significant identified instance of this form of heritage crime is located at the original entrance to the hillfort, at the top of the southern ramparts, and was defined in the condition survey as 'severe damage'. This feature sits almost 2 metres high and 4m in diameter. The main concern with this type of damage to the hillfort is that it causes irreparable damage to the monument's form and structure.



Figure 27: Movement of stones resulting in creation of modern cairn

Other areas of heritage crime through removal of stones include shelters and play-forts, and these are mostly found along the southern ramparts, and also within the eastern rampart complex.



Figure 28: Example of shelter created using rampart material on southern slopes



Figure 29: Example of shelter created using rampart material on southern slopes



Figure 30: Example of shelter/play-fort created using rampart material on eastern ramparts

6.3.2 Littering and fire settings

Most areas of littering and fly tipping are located away from main public access routes. 19 instances of extensive fly tipping were recorded, and 34 instances of littering.

Whilst the fly-tipping and littering have limited physical effects on the scheduled monument, they severely detract from the enjoyment and impact on experience of the hillfort.



Figure 31: Area of fly tipping on northern slopes



Figure 32: Large fire setting at top of Trinity Steps

Fire settings recorded in the condition survey were largely defined as causing ‘moderate damage’, and this was one of the most common instances of heritage crime recorded on the hillfort. 18 fire settings were identified during the condition survey. The majority of recorded fire settings are located along the southern ramparts, and incorporated removal of stone from the monument in order to create them.

The removal of stones leads to irreparable damage to the monument. As well as this physical effect, it impacts on the way in which visitors to the site experience the hillfort.

7. Site management - aims and objectives

Our vision:

Worlebury Camp is a special place.

We will ensure its preservation, reveal its features, widen its audience, and successfully maintain the site.

Having drawn on the information from our own knowledge and experience of managing the site, as well as the condition survey report, and feedback from volunteers and other stakeholders, the following aims and objectives have been agreed:

Objective 1: Preserve the hillfort through monitoring and maintenance of archaeological features, and removal of risk to archaeological fabric including trees and vegetation

Objective 2: Increase awareness of the archaeological and historical importance of the site for the future, and to improve understanding and interpretation of the hillfort

Objective 3: To develop the full recreational potential of Worlebury Camp hillfort, without loss to its important character and biodiversity

Objective 4: To involve the local community as practicably possible in the management of the hillfort

Objective 5: To provide volunteering opportunities at different levels

Objective 6: To improve access to, and within the hillfort

Objective 7: Continue to engage with local schools; further incorporate the archaeological significance and management of this site into their teaching, and to establish better connections with Weston Museum, and improve upon currently available information

Objective 8: Restore the limestone grassland habitat that once flourished on Worlebury Hill

Objective 9: Improve links with Weston town centre

Objective 10: Removal from Historic England's Heritage at Risk register

8. Work Plan

This work plan will form part of a Stage 2 Heritage Lottery Fund bid. Funding to deliver each of the objectives below will inform that bid.

All parties involved in work as part of this management plan will be made aware of the Scheduled status of the hillfort, the monument's boundaries and their own responsibilities.

Objective	Detail	Method	Measure	Timing / Date	Who	
Objective 1: Preserve hillfort through monitoring and maintenance of archaeological features, and removal of risk to archaeological fabric through removal of trees and vegetation						
Removal of trees – see below for details (Appendix 2 for map)						
1.1	Removal of trees within interior of hillfort	Prior to the removal of any vegetation or trees, an ecological survey will be commissioned to ensure key species and habitats are not lost, and hopefully provide recommendations for the restoration of the limestone grassland.	All works are to be undertaken in accordance with Scheduled Monument Consent & felling licence – in accordance with felling plan (Appendix 2). Trees will be felled as near as possible flush with the ground	Removal of trees	Winter 2019/2020	Appointed contractor
1.2	Removal of trees along western and southern ramparts	Clear-fell all trees except those highlighted through tree survey	All works are to be undertaken in accordance with Scheduled Monument Consent & felling licence - in accordance with felling plan. Trees will be felled as near as possible flush with the ground	Removal of trees Important features such as ramparts are clearly visible	Winter 2019/2020	Appointed contractor
1.3	Thinning of trees along north-western and northern extents of scheduled area (except key specimens)	Felled trees to be identified in method statement submitted for felling licence. Retain Whitebeam (<i>Sorbus aria</i>)	All works are to be undertaken in accordance with Scheduled Monument Consent & felling licence - in accordance with felling plan. Trees will be felled as near as possible flush with the ground	Removal of trees Important features such as ramparts are clearly visible	Winter 2019/2020	Appointed contractor

Objective		Detail	Method	Measure	Timing / Date	Who
1.4	Removal of trees at eastern ramparts and entrance	Clear-fell all trees except those highlighted through tree survey	All works are to be undertaken in accordance with Scheduled Monument Consent & felling licence. Trees will be felled as near as possible flush with the ground	Removal of trees	Winter 2019/2020	Appointed contractor
1.5	Vegetation clearance	Initial clearance of north-eastern, eastern and southern ramparts to be undertaken by NSC contractors. Volunteers to maintain interior of hillfort	Through use of brushcutters, strimmers, mowers, pesticide/herbicide application, small tree removal	All areas cut satisfactorily, and vegetation removed. Important features such as pits and ramparts are clearly visible	Annually	NSC contractor / volunteers
1.6	Replacement tree planting	Seek to plant new woodland of similar size, if locations and funds allow	Identify suitable sites, seek funding, and plant as per Forestry Commission guidelines	Replanting of trees	TBC	NSC
1.7	Management of vegetation regrowth	Annual clearance of north-eastern, eastern and southern ramparts undertaken by NSC contractors. Volunteers to maintain interior of hillfort	Through use of brushcutters, strimmers, mowers, pesticide/herbicide application, small tree removal Investigate grazing to control vegetation regrowth and introduce if viable Management of seedbanks – limestone grassland	All areas cut satisfactorily, and vegetation removed. Important features such as pits and ramparts are clearly visible	Bi-annually by contractors / ongoing for volunteers	NSC / NSC contractor / volunteers
1.8	Prevent creation of cairns and play-forts	Features created from rampart material	Dismantle features in line with method statement accepted as part of Scheduled Monument Consent for general maintenance of hillfort. Educate visitors of impact of creating features.	Condition of Scheduled Monument Consent to be discharged / Once features are dismantled, no further structures created /	Ongoing	NSC / volunteers / Civic Society

			Signage to be erected to inform visitors of impact of damage	Signage to be installed		
	Objective	Detail	Method	Measure	Timing / Date	Who
1.9	Tackling illegal fires	Fire settings utilise stones from the hillfort itself, and cause damage to the underlying archaeology	Remove all fire settings under 5 year Scheduled Monument Consent (in line with method statement) Improve signage - notifying visitors of places within Weston Woods where they can use barbeques, etc. (see objective 2)	Eradication of fire settings within scheduled area	Ongoing	Volunteers
Objective 2: Increase awareness of the archaeological and historical importance of the site for the future, and to improve understanding and interpretation of the hillfort						
2.1	Publicise importance and significance of hillfort	Raise awareness through publicity campaigns	Local media and social media / North Somerset Life magazine Regular project updates to be displayed in Weston Museum	Increased visitor numbers to monument, measured by survey	Summer 2019 (first survey) prior to felling, then annually	NSC in collaboration interested parties/volunteers
2.2	Research	Considerable potential for gaining new knowledge about the archaeology of the hillfort	See appendix 1 for details of current & potential research projects (including proposed excavation)	Outcomes of each research project / improved knowledge of monument	Beginning Winter 2018/2019	Historic England / NSC / other researchers
2.3	Information leaflets	Create new leaflets for visitors to hillfort	Creation of new leaflets with up to date information on hillfort, utilising survey data and information gleaned from research projects	Leaflets/maps available through Museum and Tourist Information Centre, and other outlets, including online	Summer 2020	NSC / volunteers / Weston Museum / Civic Society / WSM Town Council / Weston Archaeology Society
2.4	Information for younger visitors / schools	Work with local schools and Young Archaeologists' Club to produce information	Create map of hillfort for children / leaflet 'for children, by children'	Production of information leaflet / map	End 2021	NSC archaeologist / schools / Historic England / Weston Museum / YAC

Objective		Detail	Method	Measure	Timing / Date	Who
2.5	Improved maps of hillfort	Creation of new maps with up to date information on hillfort, utilising survey data and information gleaned from research projects	Leaflets/maps made available through Museum and Tourist Information Centre, and other outlets, as well as downloadable PDF versions	Creation of maps	Summer 2020	NSC with input from volunteers / Weston Museum / Civic Society / WSM Town Council / Weston Archaeology Society / local schools
2.6	Popular publication	Produce publication for wider dissemination	Use results of research projects and antiquarian investigations to provide the definitive story of Worlebury Camp	Creation of popular publication	End 2022	NSC archaeologist with input from volunteers & interested parties / Historic England
2.7	Improve signage / interpretation	Significantly improve signage and interpretation boards at access points to hillfort, once we have a better understanding of the monument carried out through research as part of this project	Utilise research into site to provide up to date interpretation of hillfort and develop an interpretation strategy that includes: Provide temporary signage – Civic Society to provide funding Siting of interpretation board at eastern entrance to ensure visible to disabled visitors (where paths meet)	Creation and delivery of interpretation strategy New signage installed at access points Revised interpretation boards	Temporary signage to be put in place by end 2019 Revised interpretation boards and other signage to be in place by start of 2021	North Somerset Council / Weston-super-Mare Town Council / Historic England / interested parties (incl. Civic Society)
2.8	Document work undertaken throughout project	Creation of project diary	Blog / video diary, possibly to include drone footage at different stages	Creation of project diary	End 2023	NSC / volunteers
2.9	Improve awareness of impact of vandalism to hillfort	Regular articles in local media / NS Life magazine, etc. to highlight impact on archaeology	Publicity regarding illegal removal of stones, fire settings, etc.	Reduction of unlawful activity	Ongoing	North Somerset Council

Objective	Detail	Method	Measure	Timing / Date	Who	
Objective 3: To develop the full recreational potential of Worlebury Camp hillfort, without loss to its important character and biodiversity						
3.1	Removal of trees and vegetation / restore limestone grassland	Allowing local residents and visitors to fully engage with the features of the hillfort. Views will be opened up across Weston Bay and Sand Bay, providing a new destination for visitors to Weston	<i>See objectives 1 and 9 (and appendix 2)</i>	-	-	-
3.2	Improve waste facilities, and improve information relating to their locations	Provide more litter bins and dog waste bins at access points	Provision of additional waste facilities Encourage visitors through signage to take their litter home	Installation of more litter and dog waste bins Less littering	End 2021	NSC / Weston Town Council
3.3	Improve access and signage	<i>See objectives 2 and 6</i>	-	-	-	-
3.4	Tackle antisocial behaviour and vandalism	Educate visitors to the monument of the impact on archaeology Removal of trees will go some way to eradicating antisocial behaviour	Work with NSC Community Response, Avon & Somerset Police, and local community	Eradication of anti-social behaviour and vandalism	Ongoing	NSC / Avon & Somerset Police / local community
3.5	Tackle illegal fires	Fire settings utilise stones from the hillfort itself, and cause damage to the underlying archaeology	Remove all fire settings under 5 year Scheduled Monument Consent (in line with method statement) Improve signage - notifying visitors of places within Weston Woods where they can use barbeques, etc. (<i>see objective 2</i>)	Eradication of fire settings within scheduled area	Ongoing	Volunteers
Objective 4: To involve the local community as fully practicable possible in the management of the hillfort						
4.1	Provide opportunities to	Offer public consultation on revisions of management plan	Incorporate suggestions into management plan revisions	Incorporation of suggestions into	Regular stakeholder meetings to	NSC

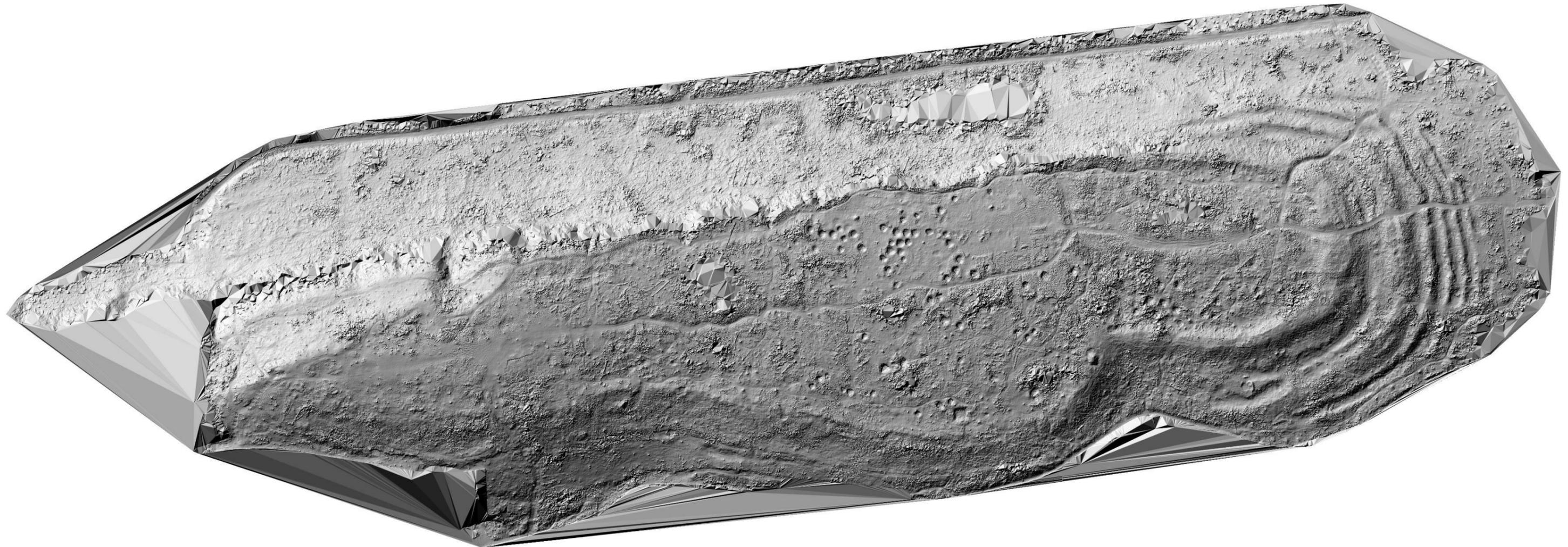
	offer suggestions on management of site			management plan revisions	review progress	
Objective	Detail	Method	Measure	Timing / Date	Who	
4.2	Creation of management committee (potential Trust)	Establish management committee with representatives of stakeholder groups	Management committee to feed into management of site	Creation of management committee	Summer 2019	To include NSC, Civic Society, hillfort volunteers, Archaeological Society, Weston Museum, etc.
4.3	Forest Schools	Liaise with Forest Schools re educational opportunities	Projects around the natural environment and history/ archaeology	Involvement of Forest Schools in projects	Ongoing	NSC / local schools / Forest Schools
4.4	Events and tours of hillfort	Run annual walk/guided tour of hillfort for Festival of Archaeology Offer opportunities for other events such as Heritage Schools	Work with local groups and volunteers to run events about and at the hillfort	Annual tours of hillfort, plus ad hoc events	Annually	NSC archaeologist / volunteers / Weston Museum / Weston Archaeological Society / Historic England
Objective 5: To provide volunteering opportunities at different levels						
5.1	Continue to work with existing volunteers	Volunteer work currently includes removal of vegetation, etc.	In line with method statements and risk assessments	Removal of vegetation / dismantling of features	Ongoing	NSC / volunteers
5.2	Include volunteering element in research projects	Analytical survey of hillfort	Training day – survey techniques	Completion of analytical survey which includes volunteering element	Winter 2018 / 2019	Historic England / NSC archaeologist / volunteers
5.3	Encourage local community to become involved	Incorporate elements of community engagement in research projects	Promotion of opportunities through local press & social media, etc.	Delivery of research projects with volunteer aspect	Ongoing	NSC archaeologist to lead

	with research projects					
Objective	Detail	Method	Measure	Timing / Date	Who	
Objective 6: To improve access to, and within the hillfort						
6.1	Footpaths	PROW that crosses the hillfort is in bad state of repair – severe erosion resulting in protruding rocks and tree roots, causing potential risk to visitors	Reinstate footpath to improve accessibility and prevent further erosion Method to be agreed with Historic England	Improved footpaths/ access	Spring / Summer 2021	NSC / appointed contractors / Historic England
6.2	Improve site access	Trinity Steps are in a poor state of repair Reinstate Victorian path along southern rampart (next to wall)	Maintenance of steps/access/establishment of suitable surfacing	Improved access to the monument via Trinity Steps and Victorian path	End 2021	NSC / appointed contractors / volunteers
6.3	Remote access to hillfort	Enabling people to experience the hillfort that aren't able to physically visit	Creation of short film/tour to be displayed on Know Your Place website / museum website. Project blog	Short film to be created Blog to be published on Discover North Somerset website	Commence 2019	NSC / interested parties / Weston College
Objective 7: Continue to engage with local schools; further incorporate the archaeological significance and management of this site into their teaching, and to establish better connections with Weston Museum, and improve upon currently available information						
7.1	Heritage Schools events	Run event for local schools showcasing Iron Age crafts / tours of hillfort	Liaise with Historic England's Heritage Schools Officer	Running event	Summer 2019	NSC archaeologist / Historic England / local schools
7.2	Projects within schools	Incorporate hillfort project into curriculum of local primary schools (Stone Age to Iron Age)	Liaise with local schools, working on projects incorporating variety of aspects of hillfort/project	Links with local schools / outputs from projects	Ongoing	NSC archaeologist / local schools

Objective	Detail	Method	Measure	Timing / Date	Who	
Objective 8: Restore the limestone grassland habitat that once flourished on Worlebury Hill <i>See Objective 1 relating to tree and vegetation removal</i>						
8.1	Restoration of limestone grassland	Through removal of scrub growth	Reduce fertility of soil by regular spring and autumn cutting and removal of cuttings	All areas cut and cleared satisfactorily	Ongoing	NSC / NSC contractor / volunteers
8.2	Management and maintenance of limestone grassland	Ongoing maintenance will prevent scrub regrowth, and encourage the limestone grassland to become re-established	Options such as grazing and/or mechanical methods to be fully investigated	Appropriate methods employed to encourage limestone grassland	Ongoing	NSC / NSC contractor / volunteers
			Carry out annual ecological survey	Improved species diversity identified	Annual	
Objective 9: Improve links with Weston Town Centre						
9.1	Make site more visible to residents and visitors to Weston-super-Mare	Installation of signage for hillfort within town centre and seafront	Create better links from town centre of Weston and other surrounding areas to hillfort	Installation of signage for hillfort within town centre / on seafront	End 2021	NSC / Civic Society / WSM Town Council / Tourist Board
		Removal of trees	Open up views to and from hillfort	Increased foot traffic at hillfort and Museum	Winter 2019 / 2020	
9.2	Improve links with Weston Museum	Present information on community display board	Volunteers to provide updates to NSC archaeologist who will update information board	Information available on hillfort project progress	Spring 2019	Volunteers / NSC archaeologist / Museum / YAC
		Work with Young Archaeologists' Club	Research undertaken as part of wider projects can feed into information available in museum		Ongoing	
		Improve information provided by Weston Museum			Ongoing	

Objective		Detail	Method	Measure	Timing / Date	Who
Objective 10: Removal from Historic England's Heritage at Risk register						
10.1	Removal of trees and vegetation	Forestry is the principal threat to this hillfort	Removal of trees and vegetation	Removal of Worlebury Camp from Heritage at Risk register	Winter 2019 / 2020 & ongoing	NSC / Historic England
10.2	Remove features of vandalism	<i>See objectives 1, 2 & 3</i>	-	-	-	-

Figure 33: Digital Terrain Model of Worlebury Camp (Cotswold Archaeology, 2018)



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Glossary

Antiquaries	Antiquarians studied history with particular attention to ancient artefacts and manuscripts, as well as historical sites.
Cairn	A man-made pile or stack of stones, often erected as modern landmarks. Historically they were used as burial mound (with internal chambers).
Digital Terrain Model (DTM)	Also known as Digital Elevation Modelling, Digital Terrain Modelling (DTM) allows the visualisation of the surface of monuments and archaeological features.
Geographical Information System (GIS)	A system designed to capture, store, manipulate, analyse, manage and present spatial or geographic data.
Multivallate	Surrounded by two or more ramparts forming multiple lines of defence
Promontory	A point of high land that juts out into the sea; a headland.
Rampart	A fortification consisting of a wall or embankment; a means of defence or protection.
Topographical survey	An accurate depiction of a site (property, area of land, defined boundary) which is scaled and detailed according to the spatial considerations and is the summary of the on-site data capture processes.

Appendix 1 – Research potential / projects

Research project	Details	Timing	Undertaken by
Ancient DNA – Human Genome project	Analysis of human remains	In progress	Harvard University
Taphonomic analysis of artefacts from Worlebury	Isotope analysis of human remains, and mortuary practices	End 2020	Richard Madgwick - Cardiff University
Analytical survey	Detailed analytical survey of hillfort	Winter 2019/2020	Historic England
Excavation	Investigations of features within and around hillfort including pits/hut circles	Summer 2020	Community excavation led by NSC archaeologist and Historic England
Radiocarbon (C14) dating	Radiocarbon dating from human remains and organic material recovered from pits	End 2020	NSC archaeologist to lead / Weston Museum / South West Heritage Trust / Historic England / specialists
Pottery residue analysis	Examination of pottery vessels recovered from Warre & Dymond excavations in 19 th century	End 2021	NSC archaeologist to lead / Weston Museum / South West Heritage Trust / Historic England / specialists
Various projects	TBC	Ongoing	Beckett Primary School, plus other academies in Weston & NSC archaeologist
Various projects	TBC	Ongoing	Young Archaeologist's Club (Weston Museum & NSC archaeologist)

Appendix 2 – Removal of trees and vegetation (including restoration of limestone grassland)

All works should only be undertaken when weather and ground conditions are suitable (i.e. the ground surface must not be broken or disturbed).

Due notice of archaeological earthworks or other historical features should be taken when felling larger trees and boughs, and measures should be taken to ensure that damage is not caused by falling timber.

Mechanically assisted removal of timber (winching, hauling etc.) should only be undertaken where such operations will not affect the ground surface. Where there is risk of damage occurring, brash mats should be used, especially on breaks of slopes.

Vehicles should not be taken onto or across a monument when ground conditions are unsuitable (i.e. if rutting occurs works should cease).

Felled materials should be disposed of off-site where possible and should **not** be burnt on site without permission from Historic England. In some cases, chippings may be spread over the site if agreed in advance with Historic England.

Details from Charlotte Russell, Heritage at Risk Project Officer – South West (Historic England)

Areas identified for felling

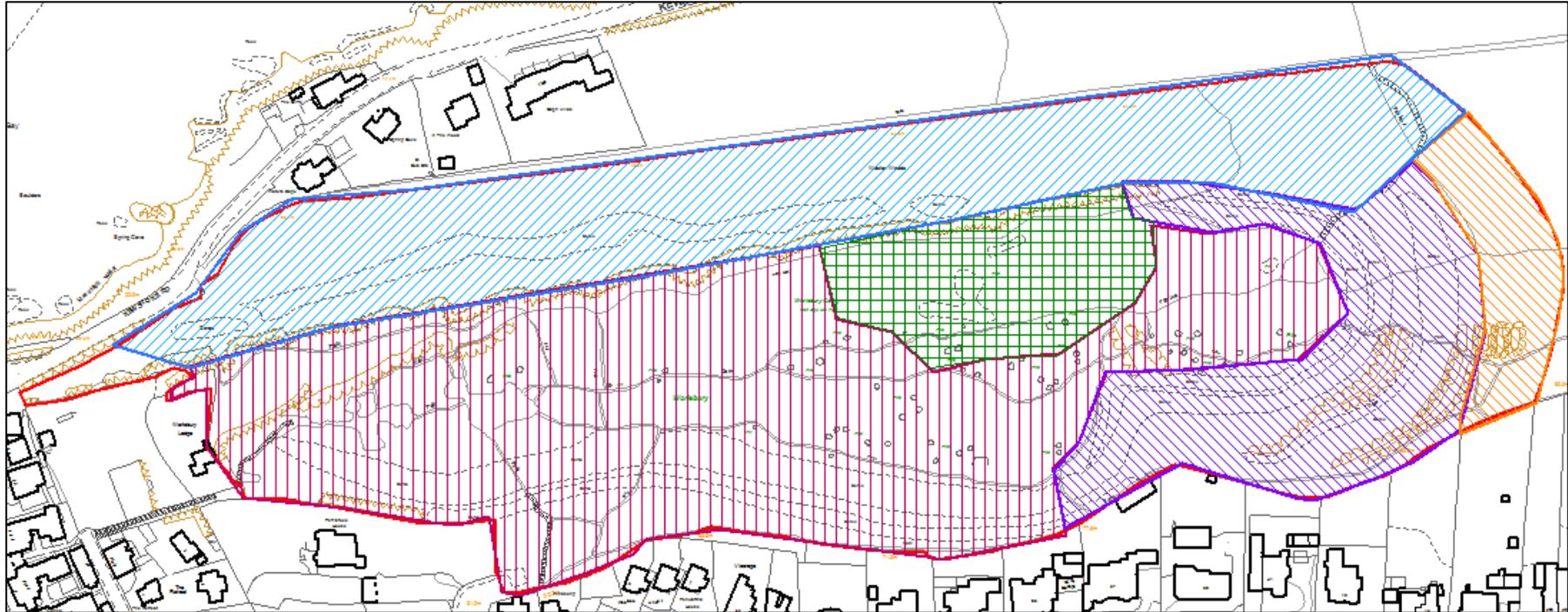
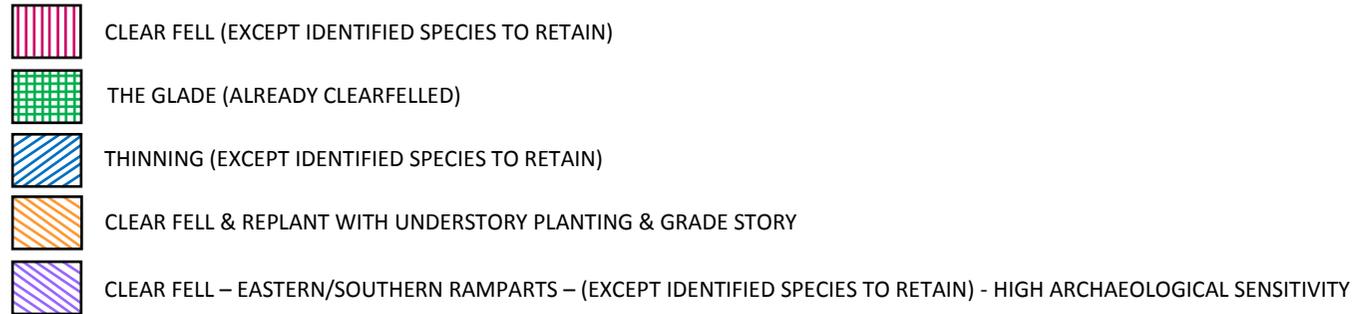


Figure 34: Areas identified for felling

Appendix 3 – Condition Survey Report 2018