# FOR MOON'S MOAT SCHEDULED MONUMENT, REDDITCH, WORCESTERSHIRE

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# Integrated Management and Maintenance Plan for Moons Moat Scheduled Monument, Redditch, Worcestershire

#### **Project Summary**

This 'Integrated Management and Maintenance Plan' for the Scheduled Monument known as Moons Moat (national reference 1019855, Worcestershire Historic Environment Record reference WSM00043) has been produced by Worcestershire Archive and Archaeology Service on behalf of Redditch Borough Council and the Moons Moat Conservation Group.

The plan aims to summarise, in a clear and concise format, a 10 year programme of high, medium and low priority actions, to support a management and maintenance strategy to bring the site back into favourable condition and too maintain improvements in perpetuity. It can also be used to inform future funding applications in support of ongoing conservation and interpretation.

Moons Moat is a Scheduled Monument and is therefore protected under the Ancient Monuments and Archaeological Areas Act 1979. All works are subject to Scheduled Monument Consent and as such this plan will be submitted to Historic England for approval, prior to any works being undertaken on site. All machinery and equipment (including vehicles used to access the site and deliver equipment) must be used or operated in a manner that does not result in damage to the monument or result in ground disturbance. Tenders for work must make it clear that the monument is scheduled and that works must not break the ground surface or add to the monument unless agreed under Scheduled Monument Consent.

To assist with regular maintenance tasks the plan could be operated through a standing term Scheduled Monument Consent (five year consent) or a Section 17 Management Agreement (usually three years, but can be done for five years). This will give consent for certain tasks and either they will be "green light" works (works that can be done without correspondence with Historic England, but recorded on a site management log) or "amber light" works (works that need to be agreed with Historic England in advance of being carried out). Other works would be regarded as "red light" works requiring a further application for Scheduled Monument Consent.

#### 1. Background

The Scheduled Monument known as Moons Moat (national reference 1019855, Worcestershire Historic Environment Record reference WSM00043) is located in Redditch, Worcestershire (National Grid reference SP0692 6817). The site has been subject to a number of recent surveys including a Historic Environment Landscape Survey (Cornah and Hathaway, 2015), Ecological Survey (Underhill, 2015) and Tree Survey (Bucklitch, 2016), following a long period of neglect and decline.

Worcestershire Archive and Archaeology Service has been requested to prepare an Integrated Management and Maintenance Plan (hereafter known as the plan), which can be submitted to Historic England for Scheduled Monument Consent. The plan aims to set out in a clear and concise format, a 10 year programme of high, medium and low priority actions that will bring the site back into favourable condition and ensure that delivered improvements are maintained in perpetuity.

This work has been requested by Martin Lewis, the Parks and Green Space Development Officer at Redditch Borough and Bromsgrove District Councils (the Client), in response to a specification prepared by Derek Coombes and Phil Mitchell of The Moons Moat Conservation Group (based on guidance from Neil Rimmington, Assistant Inspector for Scheduled Ancient Monuments) dated 27th May, 2016.

#### 1.1 Reasons for the project

Moon's Moat was first designated in 1968 by English Heritage (known as Historic England from April 2015) for its national significance. The designation was reviewed and amended on 9th March 2001.

A 2004 Conservation Statement was produced by Worcestershire Archaeological Service. This was based on the results of a walk-over survey, desk-based research, ecological survey, local consultation, and the results of excavations between 1969 and 1974. The statement aimed to guide conservation and management of the site, after a long period of neglect and decline. It also presented a number of recommendations, principally, to bring the site back into proactive management. Recommendations included an auger survey, which was undertaken in 2006 (Head, et al), to establish the nature of deposits in the pond, in advance of de-silting.

It appears that few of these recommendations were actioned and as a consequence the condition of the site has continued to decline. De-silting is understood to have taken place in the recent past, although no associated records were available at the time of writing.

A walkover survey, undertaken in 2015, recorded the overall condition of the monument as moderate to poor, with invasive vegetation, erosion of earthworks, a low water level and fly tipping, recorded as principal issues of concern. Therefore there is now a real need to implement a strategy which both reverses the site's decline but also delivers the sustained integrated management required to maintain and enhance its condition for the long term.

#### 1.2 Aims

This maintenance and management programme does not intend to reproduce the desk based research and survey discussed in previous documentation but rather aims to synthesise the results of various surveys and discussions into one, easily accessible and comprehensive document to outline a programme of works, with actions appropriately prioritised, to be delivered over a 10 year period.

The principle sources consulted were as follows;

- Bucklitch, A. 2016. Moons Moat Tree Survey
- Cornah T and E Hathaway, 2015. Historic Environment Landscape Survey at Moons Moat Redditch. Worcestershire Archive and Archaeology Survey
- The Moons Moat Conservation Group Brief of Work (dated 27<sup>th</sup> May, 2016).
- Underhill, J. 2015. Preliminary Ecological Survey at Moons Moat, Redditch

Other significant sources to be considered during management and interpretation of the site are listed in the Bibliography.

#### 1.3 Project parameters

The project conforms to the current Regulations, Standards and Guidelines developed by the Chartered Institute for Archaeologists (CIfA) and to a project proposal written by Emily Hathaway (Historic Landscape Officer) and dated 14<sup>th</sup> March, 2016.

#### 2. Management and Maintenance Programme for Moons Moat Scheduled Ancient Monument, Redditch (version 1)

#### **Management Objectives**

- a. Minimise impacts on sensitive archaeological and palaeoecological deposits.
- b. Minimise impacts on habitat of conservation interest.
- c. Safeguard notable and protected species.
- d. Introduce site enhancements in line with National Planning Policy Framework 2012.
- e. Introduce enhanced interpretation of the site.
- f. Deliver sustainable water management at the site, where this **does not** conflict with maintaining the Scheduled Monument in 'improving' and 'favourable' condition.

#### All works are subject to Scheduled Monument Consent and should be in consultation with Historic England.

#### Please note

- > The use of any temporary structures to gain access to the moat platform will require Scheduled Monument Consent.
- > Scheduled Monument Consent will be required for any stump grinding, chipping and burning on the site. Chipping or burning on the site will only be acceptable if material cannot be removed from site and to an agreed method statement.
- > Tenders for work must make it clear that the monument is scheduled and that works must not break the ground surface or add to the monument unless agreed in a Scheduled Monument Consent.
- > Removal of annual leaf litter from the moat will require Scheduled Monument Consent as will any de-silting and removal of bulrush if the root is being removed (cutting at water level or above can be done without consent).
- Log piles, fencing and interpretation where within the scheduled area will also require Scheduled Monument Consent.

- All machinery and equipment (including vehicles used to access the site and deliver equipment) must be used or operated in a manner that does not result in damage to the monument or result in ground disturbance.
- Ecological surveys for mobile species are generally considered valid for 12 months. As works is commencing more than twelve months after the most up to date ecological survey (2015), further surveys may be required. Please contact a professional ecological for advice.

All sections where conservation work has been carried out will need regular monitoring to assess whether the targeted management aim is being addressed. Fixed-point photographs should be taken on an annual basis, at approximately the same time of year to monitor the effectiveness of the management regime. Where required the management regime should be amended following monitoring. If management works are effective then a three year cycle of review for the fixed point photographs is sufficient.

This Management and Maintenance Programme is accompanied by a separate Gantt chart which breaks down management and maintenance objectives over a 10 year period.

## **High Priority Actions**

Task	1
Feature/Habitat	Woodland and Trees
Task Name	Bat Activity Survey
Aim	Inspect trees on site for their potential as bat roosting habitat.
Method	Bat Activity Survey to be undertaken by a qualified ecologist. To be informed by Tree Survey undertaken by A Bucklitch
	(2016) and Ecological Survey undertaken by J Underhill (2015). All bats and their roosts are strictly protected under the
	Wildlife and Countryside Act 1981 and the Conservation (Natural Habitats) Regulations 1994. Trees that will be subject to
	arboricultural works must therefore be inspected by a qualified ecologist for their potential as bat roosting habitat. Survey
	should be undertaken <b>before</b> any arboricultural works are carried out (e.g. May-September, Year 1). If any bat roosts are
	identified the ecologist will advise on relevant licences, permitted work and the timing of permitted work.
Priority	High
Season/Year	Summer - Early Autumn/Year 1
Monitoring	Potential for follow-on monitoring surveys (Tasks 1a) prior to felling or clearance works in future years. To be advised by
	surveyor.
Task	2
Feature/Habitat	Woodland and Trees
Task Name	A phased programme of non-urgent tree surgery to trees on site.
Aim	Bring scattered trees, groups of trees and woodland into management and increase the structural diversity of the site.
Method	To be informed by Tree Survey undertaken by A Bucklitch (2016), Ecology Survey, undertaken by J Underhill (2015) or up to
	date survey if required, Landscape Survey, undertaken by T Cornah (2015) and Bat Activity Survey. Non-urgent tree surgery
	involving tree removal or reduction should take place outside the bird nesting or breeding season. The bird nesting and

breeding season is considered to be from 1 March to 31 July. Some birds may continue breeding into August and September, depending on seasonal temperatures. It is therefore recommended that non-urgent tree work is carried out in the winter (commencing **Autumn – Winter, Year 1**).

#### Tendering will need to be undertaken in the Summer/Autumn of Year 1.

Recommended work includes crown lifting, pollarding, the striping of ivy and climbing plants and selected felling. Trees should be cut down to stump level and then treated with a suitable herbicide immediately after cutting to prevent regrowth of the root system. The herbicide should, however, be suitable to use adjacent to a water course so as not to pollute the local water system or the surrounding area.

Please note: felling and use of an appropriate herbicide is the preferred option as stump grinding poses a risk to archaeology and faunal species. If stump grinding is required to kill regrowth this should be in consultation with Historic England and limited to the immediate root bole. The use of heavy machinery should be avoided as this can compact soils, damage archaeological earthworks and retained wildlife habitat and harm any faunal species that may be present. If possible consider using brash matting and ensure that work is undertaken in dry conditions to prevent the compaction, displacement or erosion of below ground archaeology.

All material should be removed from site and disposed of in the appropriate manner.

Protect retained trees from above-ground damage and from damage to their root structure, in accordance with BS 5837 (BSI Standards Publication).

The removal of shading trees around the Moat should be carried out over several seasons and the results monitored to guard against any unpredictable and undesirable changes to pond biodiversity. Removal of mature, native trees should be

	avoided.
	Hedgehogs are a species of Principal Importance and also a Biodiversity Action Plan Priority Species, they are likely to be present on site. Hedgehogs nest where there is leaf litter material and/or cavities suitable for nest construction, as such appropriate measures should be put in place to prevent any harm coming to resident animals during tree and scrub work/removal.
Priority	High
Season/Year	The majority of non-urgent tree works can be undertaken in the Winter of Year 1
	The removal of shading trees on the moat edge should be managed as part of a phased programme over three seasons
	Task 2a (Winter/Year 1)
	Task 2b (Winter/Year 2)
	Task 2c (Winter/Year 3)
	Trees considered at a high risk from erosion or wind throw should be considered a high priority for Season 1.
Monitoring	Regular inspections by a qualified arboricultural officer, to identify and inform future capital and maintenance works,
	including the treatment of regrowth. Inspections relating to non-urgent works should be undertaken every 3-5 years, after
	initial works, and should be informed by the site managers risk assessment of the site ( <b>Task 2d</b> ).
	Seasonal monitoring of any unpredictable, desirable/undesirable changes to pond biodiversity and water level as a result of
	tree management (Task 2e).
Task	3
Feature/Habitat	Invasive vegetation associated with the Moat edge and wider environs.
Task Name	Removal of non-native scrub, saplings, native scrub and ruderal vegetation.
Aim	To remove, control and manage non-native scrub, saplings, native scrub and ruderal vegetation.

#### Method

To be informed by Ecology Survey, undertaken by J Underhill (2015) or up to date survey if required, and Landscape Survey, undertaken by T Cornah (2015).

Works should concentrate on removing non-native shrubs and saplings and in the area for proposed fencing on the western side of the moat. Cut back small sections of native scrub between November and February. No more than a third of scrub should be removed in any one season.

At least 25% of ground covering scrub should be retained around the margins of the Moat to provide wildlife refuge and foraging habitat. Scalloped areas of vegetation around the Moat will provide a range of micro-habitats that will benefit small mammals, birds, reptiles, bumblebees, butterflies and moths.

Saplings should be cut down to stump level and then treated with a suitable herbicide immediately after cutting to prevent regrowth of the root system. The herbicide should be suitable to use adjacent to a water course so as not to pollute the local water system or the surrounding area.

Please note: felling and use of an appropriate herbicide is the preferred option as stump grinding poses a risk to archaeology and faunal species. If stump grinding is required to kill regrowth this should be in consultation with Historic England and limited to the immediate root bole.

The use of heavy machinery should be avoided as this can compact soils, damage archaeological earthworks and retained wildlife habitat and harm any faunal species that may be present. If possible consider using brash matting and ensure that work is undertaken in dry conditions to prevent the compaction, displacement or erosion of below ground archaeology.

All material should be removed from site and disposed of in the appropriate manner.

Hedgehogs are a species of Principal Importance and also a Biodiversity Action Plan Priority Species, they are likely to be present on site. Hedgehogs nest where there is leaf litter material and/or cavities suitable for nest construction, as such appropriate measures should be put in place to prevent any harm coming to resident during tree and scrub work/removal. Reptiles are identified as a Priority species in the UKBAP and, as such, have been adopted as a Species of Principal Importance in the UK. No reptiles were detected on the site during the 2015 Ecological Survey and the risk to reptiles is therefore considered low. However, scrub and ruderal vegetation may provide suitable habitat for reptiles and as such due diligence should be taken during all phases of scrub and vegetation clearance. Contractors should be aware of the potential for encountering sheltering or hibernating reptiles during clearance operations and avoid the use of heavy machinery into these habitats. If reptiles are detected, they should be carefully moved to other suitable, nearby habitat. N.B If additional non-native, invasive plants are discovered on a protected site, such as a Scheduled Monument, they must be managed and disposed of appropriately. The most commonly found invasive, non-native plants are: Japanese knotweed Giant hogweed Himalayan balsam Rhododendron ponticum New Zealand pigmyweed (this is banned from sale). If additional non-native, invasive plants are identified on Moons Moat, a review of this management programme should be undertaken. This should be in consultation with Historic England. The Environment Agency may need to be informed. For further information on invasive species see https://www.gov.uk/guidance/prevent-the-spread-of-harmful-invasive-and-nonnative-plants **Priority** High Season/Year Rolling three year winter management cycle, commencing in the winter of Year 1 (Tasks 3, 3a and 3b).

	Vegetation should be cut in-between November and March, when reptiles (and amphibians) are least active, and so unlikely
	to be present above ground.
Monitoring	Annual monitoring and treatment of saplings and non-native scrub growth, grassland management on cleared areas and
	impact of clearance to water level (Task 3c).
Task	4
Feature/Habitat	Moat and Stream
Task Name	Improvement of water level and quality.
Aim	Removal of leaf litter.
Method	Annual removal of leaf litter from moat (with the exception of some rotting logs which should be left as habitat for aquatic
	invertebrates).
Priority	High
Season/Year	Annually in Winter
Monitoring	
Task	5
Feature/Habitat	West side of the Moat.
Task Name	Renewing fencing on the west side of the site.
Aim	Address health and safety concerns.
	Manage erosion to earthworks.
Method	Hawthorn hedge enclosed by chestnut paling. The fencing will surround the moat and will be offset from the top of the
	bank by approximately three metres to allow a native hedge to be planted behind the fence using native mixed 3ft whips
	during the Winter of Year 1 – eventually this will allow the hedge to be laid in a traditional style to reinforce the boundary.

	Scrub will be cleared from the bank by cutting to the base and sprayed using a systemic herbicide once it has regenerated sufficiently to allow the chemical to work properly.
	The design and erection of a hedge/fence boundary should be in consultation with Historic England and may require individual Scheduled Monument Consent.
	An archaeological watching brief may be required to monitor work.
Priority	High
Season/Year	Year 1 /Winter
Monitoring	Regular monitoring of fence and hedgerow to manage repairs/dead/damaged sections (5a). The hedgerow should be
	trimmed lightly for first few years (5b), and then cut on a three or more year rotation, allowing height to increase a little
	each time (5c).
Task	6
Feature/Habitat	Moat/Stream
Task Name	Removal of large stands of bulrushes.
Aim	Remove large stands of bulrush and control its spread beyond the eastern section of the pond.
Method	Bulrush currently occupies more than 75% of the eastern section of the moat. Bulrush can provide valuable habitat, both
	above and below water, but it rapidly colonises any open areas of water and large stands will have a negative impact on
	water level
	Annual removal of a third of vegetation in the eastern section of the moat.

	Work must be undertaken by hand.  Cleared vegetation should be left on the bank for 24 hours to allow slower creatures to escape back to the water.
	Cleared material should be removed from site and disposed of in the appropriate manner.
Priority	High
Season/Year	A rolling (staged) and annual programme of removal commencing in Winter of Year 1.
Monitoring	Monitor effects on water level.

### **Medium Priority Actions**

Task	7
Feature/Habitat	Moat
Task Name	Monitoring of archaeological earthworks for signs of erosion damage caused by the action of trees/invasive vegetation
	and/or recreational activity.
Aim	Monitoring visit by qualified archaeologist, following initial three year cycle of tree and invasive scrub management, to assess
	the impact of erosion on archaeological earthworks and deposits.
Method	To be informed by Landscape Survey undertaken by T Cornah (2015).
	Follow on survey to assess areas of erosion, following initial three year cycle of tree and invasive scrub management, to
	evaluate and inform potential recommendations for managing erosion pressures.
Priority	Medium
Season/Year	Year 4/Spring
Monitoring	Potential for mitigation to manage erosion pressures (including recreational pressures) and/or repairs to erosion scars.
	All works should be in consultation with Historic England and may require individual Scheduled Monument Consent.
	Potential for follow-on monitoring surveys, to be advised by surveyor (Task 7a).
Task	8
Feature/Habitat	Amenity Grassland
Task Name	Enhance conservation interest of amenity grassland.
Aim	Improve foraging and shelter opportunities of amenity grassland.
Method	Less intensive management of areas of amenity grassland (buffer strips/grass margins).

Priority	Medium
Season/Year	Ongoing
Monitoring	Potential for future surveys to monitor the condition and conservation interest of grassland (Task 8a.)
Task	9
Feature/Habitat	Moat/Stream
Task Name	Ongoing monitoring of water flow, depth and quality.
Aim	Monitoring of water flow, depth and quality to inform the desirability of a hydrology survey to inform potential modifications to the inlet and outlet structures and future programmes of de-silting.
Method	Assessment of water flow, depth and quality prior to and during the course of the first three year cycle of tree/invasive vegetation management.  N.B the inlet feed has been recently unblocked and the water level is deeper and flowing as a result.  Review the evidence to determine the desirability of a <a href="https://www.nydrological.survey">hydrological.survey</a> to inform future modifications to the inlet/outlet and any future programmes of de-silting.
Priority	Medium
Season/Year	Years 1 - 4
Monitoring	
Task	10
Feature/Habitat	Moat/Stream
Task Name	Hydrology Survey (if required)
Aim	Hydrology survey to inform potential modifications to the inlet and outlet structures and future programmes of de-silting, following the initial ten year management programme.

Method	To be informed by hydrologist. In consultation with Historic England and other relevant organisations and specialists.
Priority	Medium
Season/Year	Spring/Year 4
Monitoring	
Task	11
Feature/Habitat	Moat/Stream
Task Name	Modifications to the inlet
Aim	Improve the flow from the brook into the Moat and the water capacity of the moat.
Method	To be informed by Hydrology Survey and up to date Ecology Survey.
	Shallow water is generally the richest and most diverse habitat for aquatic fauna so an increase in water depth across the
	whole of the feature may damage the pond habitat. Early consultation with a qualified ecologist is recommended to reduce the likelihood of any potentially negative adverse impact to habitat and wildlife.
	Proposals include upgrading the structure in the river that feeds the inlet, to a purpose designed one. This would incorporate modification to the existing weir to create a stilling area (to capture larger debris and stop it being drawn into the inlet pipe).
	To the bank side of this area water would flow into a headwall protected by a two stage trash grill with differing bar spacings
	to help screen the inlet from floatable rubbish and other debris. The existing pipe could be replaced with a higher capacity
	one to increase the volume of water flowing into the moat and help reduce the frequency of future de-silting programmes.
	Although outside the Scheduled Area modifications to the inlet have the potential to impact the moated site itself, and
	should therefore be in consultation with Historic England.
Priority	Medium
Season/Year	Unknown, Year 4/5 at the earliest (to be informed by hydrology survey)

Monitoring	Annual monitoring of water levels and fluctuations.
Task	12
Feature/Habitat	Moat/Stream
Task Name	Modifications to the outlet.
Aim	Improve the flow out of the Moat and into the brook and the water capacity of the moat.
Method	To be informed by the Hydrology Survey and up to date Ecology Survey.
	Shallow water is generally the richest and most diverse habitat for aquatic fauna so an increase in water depth across the whole of the feature may damage the pond habitat. Early consultation with a qualified ecologist is recommended to reduce the likelihood of any potentially negative adverse impact to habitat and wildlife.
	Proposals include creating a of a simple v notch weir structure to increase the capacity of the moat both generally and in storm conditions.
	Although outside the Scheduled Area modifications to the outlet have the potential to impact the moated site itself, and should therefore be in consultation with Historic England.
Priority	Medium
Season/Year	Unknown, Year 4/5 at the earliest (to be informed by hydrology survey)
Monitoring	Annual monitoring of water levels and fluctuations.
Task	13
Feature/Habitat	Moat edge
Task Name	Creation of log piles.
Aim	The creation of log piles along the side of the moat as a by-product of arboricultural works

Method	Log piles will provide refuge habitat for amphibians, hedgehog, small mammals and a wide range of invertebrates.
	Timber should be left in direct contact with the ground, in dappled shade, and in compact piles to maintain humidity. Timbers
	may need to be pegged/staked down. Log piles within the scheduled area will require Scheduled Monument Consent and should be in consultation with Historic England.
	Larger diameter pieces are of most value.
	Some logs should also be left in the water.
Priority	Medium
Season/Year	Ongoing
Monitoring	Creation of log piles at appropriate intervals thereafter.
Task	14
Feature/Habitat	Site
Task Name	Regular monitoring of the site for litter and fly tipping.
Aim	To reduce the negative impacts of litter, including fly tipping, to preserve and enhance the ecological and aesthetic value of the site and to protect sensitive archaeological remains.
Method	Regular community litter picks, co-ordinated by the council in collaboration with the Moons Moat Conservation Group to reduce and manage litter and fly tipping on site. Potential for voluntary groups or the probation service to serve working parties.
	Consider alternative methods of litter control/awareness e.g. the Communitrees project <a href="http://www.bbc.co.uk/news/uk-england-37350153">http://www.bbc.co.uk/news/uk-england-37350153</a>
Priority	Medium

Season/Year	Rolling, annual programme.
Monitoring	Regular monitoring and twice yearly litter picks.
Task	15
Feature/Habitat	Site
Task Name	Enhanced interpretation of the site.
Aim	To enhance community understanding and appreciation of the site.
Method	Series of community events to engage local community and generate a sense of ownership and involvement.
Priority	Medium
Season/Year	Year 1 and then every three years.
Monitoring	

## **Low Priority Actions**

Task	16
Feature/Habitat	Site
Task Name	Enhanced interpretation of the site.
Aim	Replace interpretation panels.
Method	Replace on-site interpretation panels to include more engaging information on the archaeology, history and ecology of the site.
	An archaeological watching brief may be required to monitor work.
Priority	Low
Season/Year	>Year 4
Monitoring	Regular monitoring of interpretation panels to manage repairs.
Task	17
Feature/Habitat	Moat
Task Name	Desilting (if required)
Aim	Stabilise fluctuating water levels.
Method	De-silting recently undertaken on site, without Scheduled Monument Consent. No record/information was available at the
	time of writing (April 2017).
	Scheduled Monument Consent must be acquired in advance of any future de-silting programme.
	Any future de cilting programme must be informed by provious surveys including the Hydrology Survey. Landscape Survey
	Any future de-silting programme must be informed by previous surveys including the Hydrology Survey, Landscape Survey (2015) and Auger Survey (2006).

All dredged material must be removed from site and disposed of in the appropriate manner.  Low  To be reviewed in the last year of the first ten year management programme.
All dredged material must be removed from site and disposed of in the appropriate manner.
To avoid widespread damage to wildlife habitats, silt should be taken only from previously agreed points along the margin.
consultation with the ecologist and water management experts.
Shallow water is generally the richest and most diverse habitat for aquatic fauna so an increase in water depth across the whole of the feature may damage the pond habitat. Potential variations in depth, across the feature, should be deliberated in
Pond sediment is helpful to aquatic wildlife during times of drought and occasional drying. Therefore de-silting is most appropriate when water levels have been stabilised.
Work must not detrimentally impact the current shape, form and characteristics of the moated site.
Work should be undertaken in dry conditions or at a time when water levels are lowest (usually late Summer/early Autumn), using the appropriate machinery, to minimise potential impact to archaeological earthworks and habitat.
An archaeological watching brief may be required to monitor work.
An up-to date Ecological Survey of the moat and its environs will be required in advance of any de-silting programme.

#### 3. Bibliography

#### **Principal sources**

Bucklitch, A. 2016. Moons Moat Tree Survey

Cornah T and E Hathaway, 2015. Historic Environment Landscape Survey at Moons Moat Redditch. Worcestershire Archive and Archaeology Survey

The Moons Moat Conservation Group Brief of Work

Underhill, J. 2015. Preliminary Ecological Survey at Moons Moat, Redditch

# Other sources of information to consider during management and interpretation of the site

CIFA, 2014 Standard and guidance for historic environment desk-based assessment, Chartered Institute for Archaeologists

Head, K. Pearson, E and Mann, A. (2006) *Archaeological Auger Survey of Moon's Moat, Redditch, Worcestershire,* Worcestershire County Council, Historic Environment and Archaeological Service, internal report 1470

Miller, D. (2004) Conservation statement on Moon's Moat, Redditch, Worcestershire County Council, Historic Environment and Archaeology Service, internal report, 1256

National Heritage List Entry for Moated Site known as Moons Moat <a href="https://historicengland.org.uk/listing/the-list/list-entry/1019855">https://historicengland.org.uk/listing/the-list/list-entry/1019855</a>

Watson, W, 2001, *Moon's Moat Pond Survey*, report commissioned for the Landscape and Countryside Service of Redditch Borough Council

Wise, M, and Medley, C, 1970b *Moon's Moat, Beoley. First Interim Report* (unpublished typescript)

Wise, M, and Medley, C, 1972b *Moon's Moat. Second Interim Report* (unpublished typescript)

Wise, M. Medley, C, undated, Undated Report on excavations at Moon's Moat, Redditch (unpublished typescript)

Worcestershire County Council January 2012 (Revised February 2015) *Manual of Service Practice: Recording* Manual Worcestershire Archive and Archaeology Service

Worcestershire Archive and Archaeology Service Historic Environment Records for Moons Moat