

NEVERN CASTLE SQUARE TOWER

CONSERVATION WORK

BRIEF

1. Site Background and Location

Nevern Castle is a scheduled monument located in the village of Nevern, Pembrokeshire (see figure 1 for location). The site is owned by the Nevern Community Council (NCC) and support for management of the site is provided by the Pembrokeshire Coast National Park Authority. In partnership with Durham University, the site was extensively excavated between 2008 and 2018 which revealed that the site dates back to the early 12th century. The site played a significant role in the battle for control of the area between the Welsh princes and the Anglo-Norman lords during this period. The site therefore plays an important part in Welsh medieval history.



Figure 1: Location of Nevern Castle and scheduling area indicated by red boundary line.

2. Overview of work requirements

As part of ongoing management, the site is in need of conservation work to safeguard a feature known as the square tower (see figure 2 for location and figure 3 for detailed view of square tower). Partial conservation work to safeguard this feature was carried out by Cadw's conservation arm known as Cadwraeth during 2010. This feature, along with the remains of the round tower were the first monuments in Wales to be conserved in clay mortar and

acted as a test bed for conservation techniques in Wales. The purpose of this work will be to complete the same type of conservation work on the outstanding sections of the square tower. Further details of the sections to be covered by this work are included in this brief (see section 3. Specific sections of work').

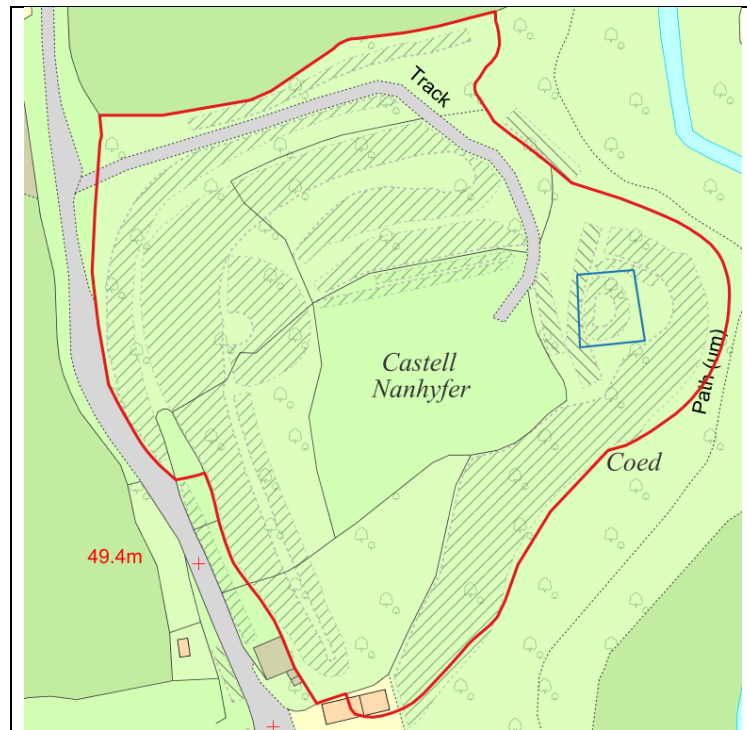


Figure 2: Map showing location of square tower at Nevern Castle, indicated by blue boundary line.

In general, the work will comprise the following:

- It will be carried out under the supervision of Dr Chris Caple, Durham University and Tomos Jones, Pembrokeshire Coast National Park Authority who will be present during work on site and provide archaeological advice to the contractor.
- The specifications included in this brief have been approved by Cadw as part of the scheduled monument consent process, as such, the contractor is legally required to complete work as per the specifications outlined in this brief.
- Cadwraeth have agreed to provide training at the commencement of work so that the contractor is familiar with clay mortar construction techniques.
- Cleaning down the walls to the top of the bedded 12th century walling.
- Reseating any loose slates using clay mortar.
- Marking the top of the original walls with occasional red tiles.
- Building up additional walling (including face) to protect the 12th century walling beneath using appropriate slates and clay mortar.
- Adding a turf 'soft' capping which runs over the sloping top of the additional protective walling.
- The slope, which is no more than 40° from the horizontal, allow excessive rainfall to quickly drain off the wall top, discourages visitors walking on the top of the wall and minimises the height of any new face which needs to be constructed.
- Facing is only constructed where it is certain that it was originally present in the 12th century original and no widows, arrow slits, doorways or other features were

present. The minimum facing will be reconstructed, to ensure that the 12th century remains are preserved.

- Locally supplied clay and turf will be used.
- In line with good conservation practice, the new wall faces will be built to appear similar, but not identical, to the original 12th century work.

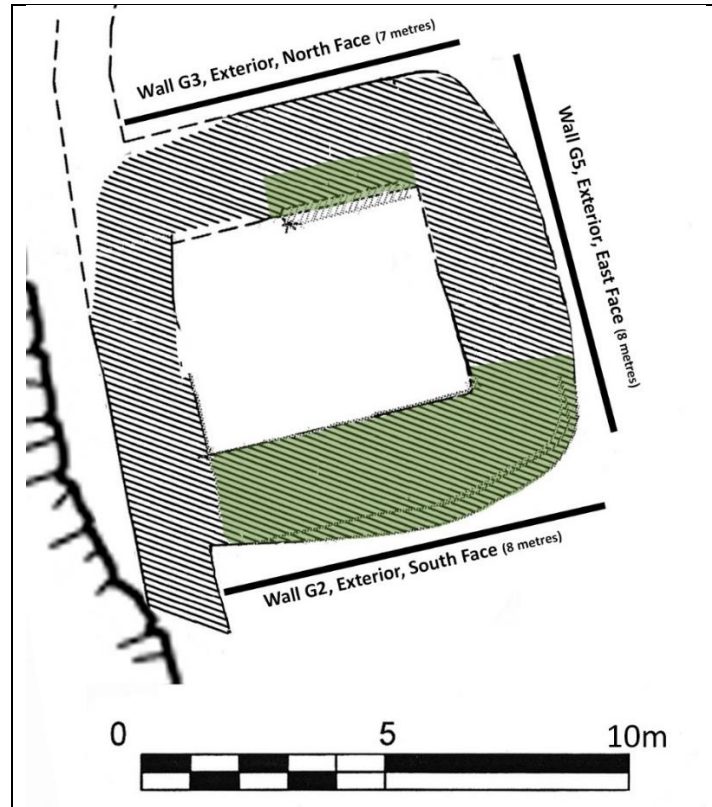
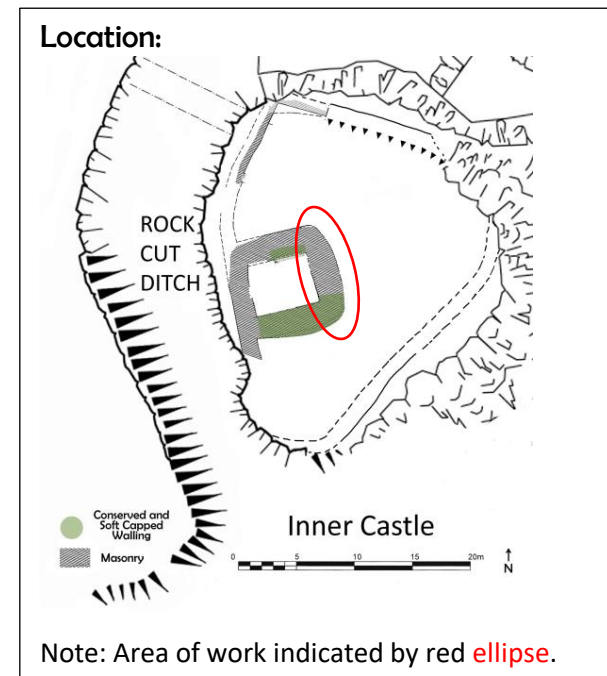
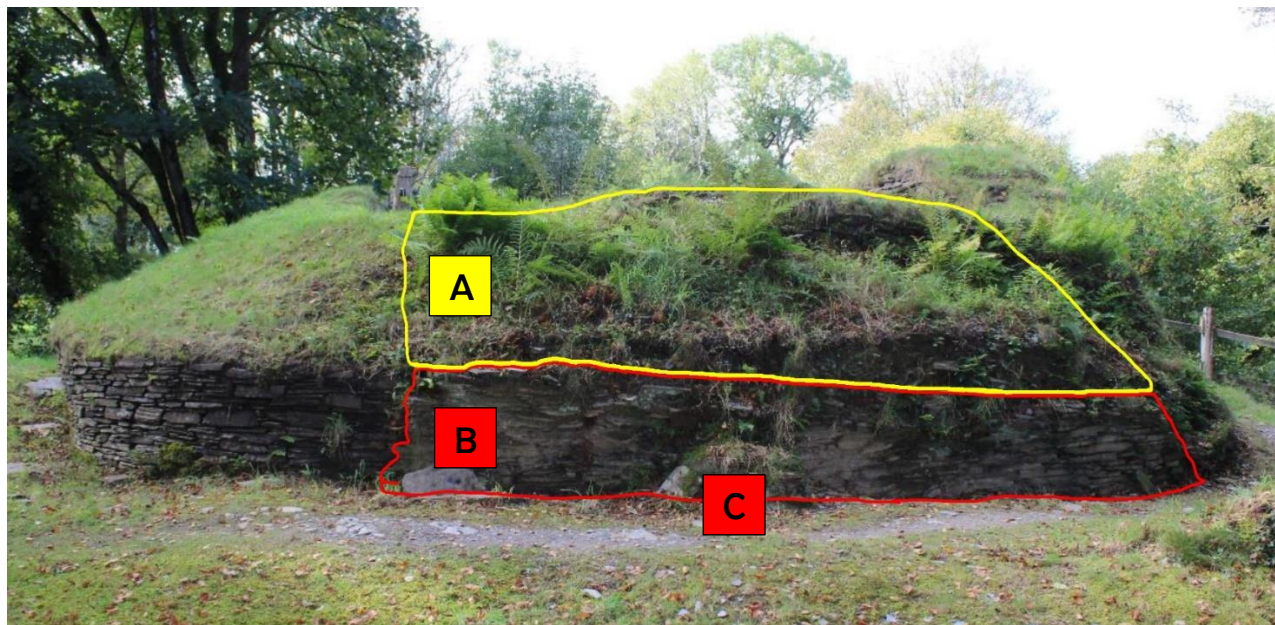


Figure 3: Aerial drawing of square tower with Square Tower with areas conserved in 2010 shown in green.

3. Specific sections of work

The following section provides a detailed overview for each section of the square tower that requires conservation work.

3.1 Square Tower – East Face Conservation Work



A East Wall top: exposed clay mortared slate wall core is unstable and support rooting vegetation; risk of collapse and root damage. Vegetation and loose rubble will be removed under archaeological supervision until original horizontal bedded rubble is reached. The wall core will be built up with clay mortared slate to a height that creates a 30-40° sloping top, matching the south face of the tower. A soft cap of local turf will be installed. This system proved stable and effective over the last 10 years on the South Wall of the Square Tower. Extent approx. 5.4m x 2.4m x 1.2m. See Square Tower Conservation- Materials. The internal face, conserved in 2010, has been partially exposed. The top edge will be repaired, given an additional single facing stone protection layer and a fresh turf capping.

B East Wall face: the existing 12th century clay mortared slate exterior tower face is leaning outwards, it is unstable and supported by a temporary drystone buttress constructed during excavation **C**. This wall face will be taken down and rebuilt to the vertical using the original slate and fresh clay mortar. Additional vertical face will be added in new slate to protect the top of the original 12th century wall. The level of the facing will be raised to meet the soft turf capping in order to provide a stable face for the rubble core. The top of the original walling will be marked with deep set red clay tile at approx. 1m intervals, as used elsewhere on the site. This will effectively continue the same facing and soft capping which was used on the south face and southeast corner, and which has proved effective protection for the wall of the tower since 2010. This will give a consistent conservation approach to this monument. Extent approx. 5.4m x 0.9m. See Square Tower Conservation- Materials.

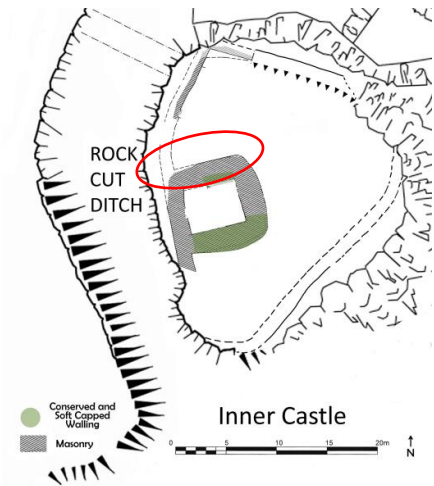
Archaeological mitigation:

The work will be supervised by Dr Chris Caple and Tomos Jones. A photographic and documentary record will be maintained of the work, including information about conservation approach to work. A report will be produced upon completion of the work and deposited with Cadw, DAT and the RCAHWW.

3.2 Square Tower – North Face Exterior Conservation Work



Location:



Note: Area of work indicated by red ellipse.

A North Wall top: exposed clay mortared slate wall core especially overhanging areas is unstable and support rooting vegetation. There is risk of collapse and root damage. Vegetation and loose rubble will be removed under archaeological supervision until original horizontal bedded rubble is reached. The wall core will be built up with clay mortared slate to appropriate height that creates a 30-40° sloping top, matching the south face of the tower. A soft cap of local turf will be installed. This system proved stable and effective over the last 10 years on the South Wall of the Square Tower. Extent approx. 6.4m x 2.1m x 1.0m. See Square Tower Conservation- Materials.

B North Wall face: the top of the existing face of the 12th century clay mortared slate exterior tower face requires protection. The rubble core of the North Wall requires a stable face which will not support vegetation. This will be achieved by building up new face in clay mortared slate. This has proved successful on the south face of this tower. The new vertical face will continue the original face line upwards for approximately 0.8m, to meet the turf soft capping. The top of the original walling will be marked with deep set red clay tiles at approx. 1m intervals, as used elsewhere on the site. Alternative conservation methods such as building additional supportive core-work will leave sloping clay surface exposed that will soon be inhabited by rooting plants. To date, only the soft turf cap and vertical clay mortared slate wall has proved stable and effective at conserving clay mortared slate walling with low maintenance levels. Extent of additional work 6.4m x 0.8m. See Square Tower Conservation - Materials.

C The present access through the wall, is unsafe; sloping damaged slate. A new stable slate surface needs to be created. This work to have a broken wall appearance as current access is through a crack created in the destruction of the castle, it is not an original medieval stepped access point. Extent 0.8m x 2m x 0.2m.

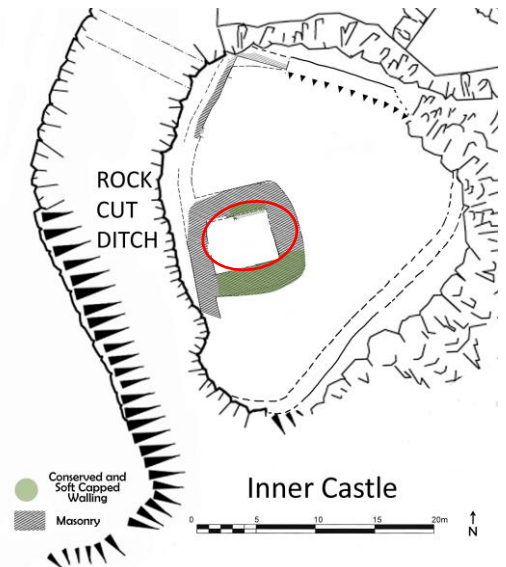
Archaeological mitigation:

The work will be supervised by Dr Chris Caple and Tomos Jones. A photographic and documentary record will be maintained of the work, including information about conservation approach to work. A report will be produced upon completion of the work and deposited with Cadw, DAT and the RCAHMW.

3.3 Square Tower - Interior Floor Conservation Work



Location:



Note: Area of work indicated by red ellipse.

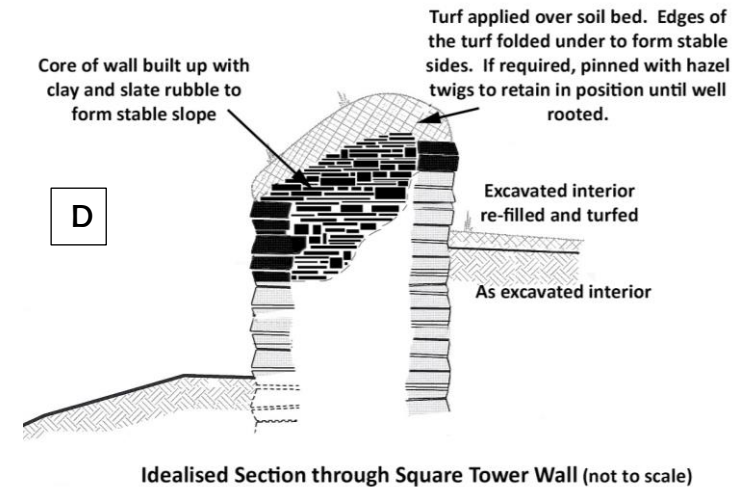
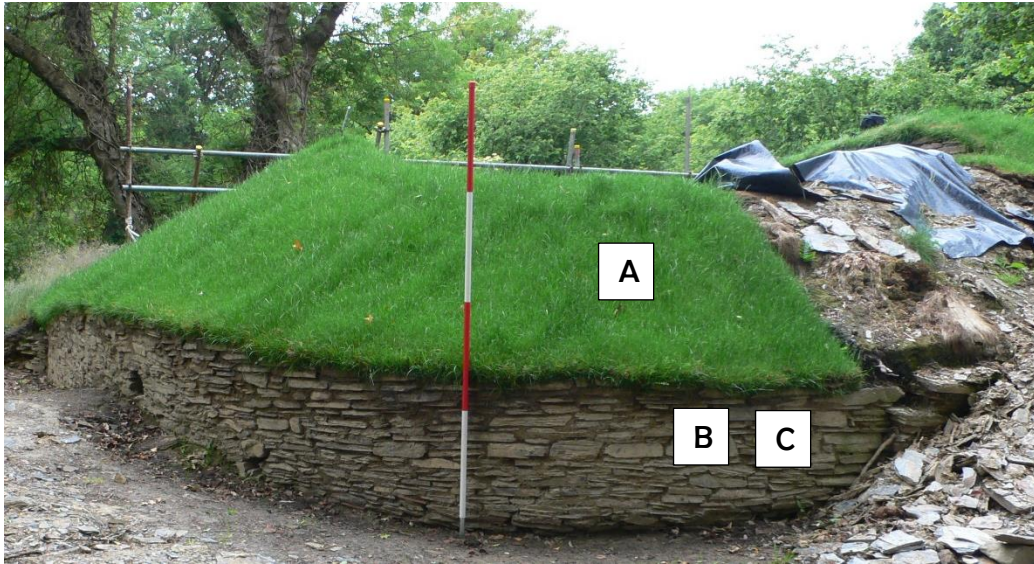
A

The clay mortared slate face has become exposed below the original floor level, due to the slumping of the fill within the North Tower. This has exposed flaking fire damaged stone which has no good face, risking slate damage and erosion. The ground level within the tower to be raised slightly up to 100mm with additions of soil and slate rubble (material from wall clearing) and returfed to provide a slightly higher floor level which slopes up to the interior north face protecting the exposed core-work but leaving the facework visible above the turf. Maximum extent 4.5 x 5.7 x 0.1m (See Square Tower Conservation- Materials).

Archaeological mitigation:

The work will be supervised by Dr Chris Caple and Tomos Jones. A photographic and documentary record will be maintained of the work, including information about conservation approach to work. A report will be produced upon completion of the work and deposited with Cadw, DAT and the RCAHWW.

4. Conservation approach and materials



Nevern Castle: Square Tower Conservation - Materials

The proposed conservation work, continues the initial conservation work programme undertaken by Cadwraeth in 2010. To ensure consistent appearance it will use similar materials and techniques.

A

The walls will be soft capped with locally supplied turf and creating an appropriate surface in the Square Tower. Turf to be obtained from a local supplier such as *Thomas Turf*, as it was in 2010 during previous conservation work, since it grows well in the soil and weather conditions experienced in the Nevers area. The success of the turf over the last 10 years in protecting the wall tops is noted.

B

The walls will be mortared using locally supplied clay which is similar to the colour and texture of the existing clay mortar. Clay from the Pantgwyn quarry will be used, as it was in 2010 as it has proved a good match to the Nevers clay and remained stable throughout the past 10 years. The clay mortar, will be mixed with a quantity of sharp sand to reduce shrinkage and allow it to be distinguished from the original (no sand) by a simple finger feel test. The clay will be mixed with sand and water in the builder's compound to ensure that there is always workable supply of mortar. The clay mortar will have the consistency of butter, which facilitates bedding the slates close together just touching each other. The joints are initially filled with mortar and left flush with the face. Over time the clay weathers back between the joints from the face, to a depth of up to 10mm, at which point the face becomes and remains stable. The wall faces thus created appear similar to the 12th century wall exteriors revealed by excavation.

C

New walling will be formed of clay mortared locally supplied slate, which matches the size, shape and colour of the existing walling slate. Slate from a quarry near Cilgerran, used for the previous conservation work by Cadwraeth in 2010, will be sourced and used. It has proved a good match to the Nevers slate and remained stable throughout the past 10 years.

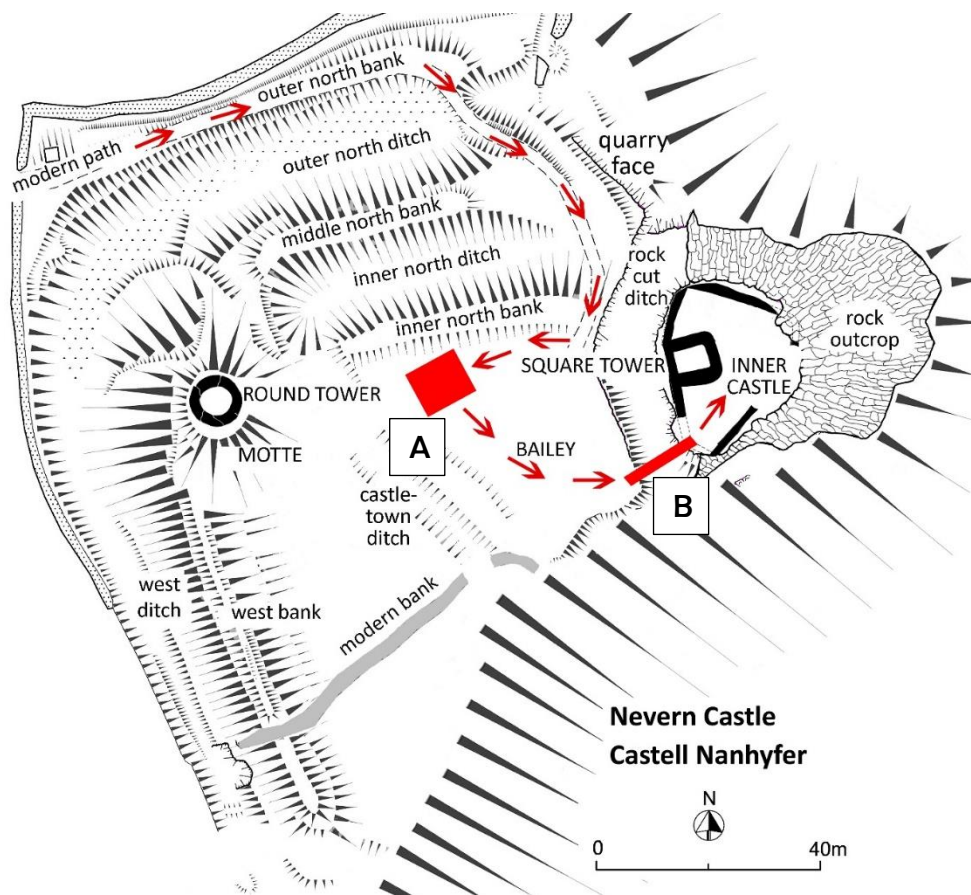
D

An original detail drawing of conserved clay mortared slate wall topping at Nevers, has here been modified to reflect actual practice in 2010. It was found that there was no need for additional overhanging top slates secured with stainless steel pins to deflect water as originally envisaged. Nor was geotextile required as it potentially created a weakness at the junction between old and new work risking shearing at that point on these sloping wall tops.

Archaeological mitigation:

The work will be supervised by Dr Chris Caple and Tomos Jones. A photographic and documentary record will be maintained of the work, including information about conservation approach to work. A report will be produced upon completion of the work and deposited with Cadw, DAT and the RCAHMW.

5. Access and contractor compound



Site access:

Proposed vehicular access onto the site and to the Square Tower marked with arrows on attached plan. The hardcore roadway remains usable in most weather, but vehicular access across the Bailey will be avoided in very wet weather, to ensure the surface is not damaged.

A The location of the site compound, 10mm x 8m will be in the Bailey and is sited over an already excavated area, to minimise risk of damage to the site. The compound perimeter to be secured with appropriate fencing to ensure safety of tools and materials.

B A scaffold bridge (1.5m wide) will need to be constructed across the rock cut ditch to give safe access for workers and materials from the Bailey to the Inner Castle [B]. The bridge will be located so the ends of the walkway surface are located on already excavated areas (Trenches GM and CM) minimising risk to the archaeological deposits of the site. This is a similar position to the scaffolding bridge used by Cadwraeth during their conservation work of 2010 as shown on images available at [Nevern Castle | Coflein](#). (Image 6358921). The vertical poles of the scaffold will be located on spreader plates to avoid piercing the soil surface and potentially damaging archaeological remains.

Note: Only a limited number of contractors have experience of using clay mortar in conservation work. The Cadwraeth team have agreed to provide some training to the contractor at the beginning of commencement of work.

6. Archaeological mitigation of work

The following archaeological mitigation will take place during the work:

- The work must follow the specifications as stipulated in this brief. This is a legal requirement as these are the specifications that have been approved as part of the scheduled monument consent process.
- Prior to commencement of the conservation work, the PCNPA will carry out a drone survey to capture detailed photographic images of the square tower. This will enable a detailed 3D photogrammetric model to be created.
- The conservation work will be supervised by Dr Chris Caple, Durham University and Tomos Jones, PCNPA who will be on site to provide archaeological advice to the contractor.
- A photographic record will be kept throughout the work.
- Only a limited number of contractors have experience of using clay mortar in conservation work. The Cadwraeth team have agreed to provide some training to the contractor at the beginning of commencement of work.
- It is not expected, but if any significant archaeological discoveries are made, the contractor will stop work and Cadw informed immediately to determine and agree upon mitigation strategy.

7. Site access

Nevern Castle is publicly accessible, as such a prospective contractor wanting to quote for this work is welcome to attend the site. In addition, the community archaeologist for the Pembrokeshire Coast National Park Authority will be happy to meet with a prospective contractor if required.

8. Timescale

The work should be completed during 2023.

9. Skills/requirements

The following skills/requirements are required for this type of work:

- Previous skills and experience with this type of work.
- Previous experience working on heritage sites including scheduled monuments and awareness of sensitivities around working on such sites.
- Previous experience working with clay mortar, however this is not essential as training will be provided at the beginning of the work with Cadwraeth regarding working with clay mortar.
- Ability to complete work during 2023.
- Public liability insurance.

Note: Please provide evidence of the above with your quote.

10. Quote

When submitting a quote, please provide a breakdown of your costings e.g. labour, material, equipment etc.

11. Submitting quote and supporting documents

Please send your quote and supporting documents to tenders@pembrokeshirecoast.org.uk with 'Nevern Castle' in the email title. Due to procurement rules this should not be sent to individual officers in the Pembrokeshire Coast National Park Authority as this will disqualify your submission.

12. Deadline

Submissions should be received by no later than 12:00pm on 14 April 2023.

13. Enquiries

If you have any enquiries regarding this work or questions about the brief, contact Tomos Jones via email tomosj@pembrokeshirecoast.org.uk or phone 07773788208.