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1. Introduction

- 1.1 This Heritage and Archaeological Statement has been prepared by PAS Surveying onbehalf of the owners of Beauchamp Lodge, Two Mile Lane, Higham within the district of Tewkesbury. The single storey addition is subsiding, and the statement relates to a proposal to stabilise the extension of the property by way of installing cantilevered knuckle piles are around the base if the structure to support the foundations.
- **1.2** Beauchamp Lodge is listed grade II and is of special architectural and historic interest as a 19th century timber framed cottage. There are no other relevant heritage assets.
- 1.3 The extension is a cavity constructed masonry structure of traditional construction with a dual pitched gable ended projection to the right-hand side which is the area most affected by downward movement.
- 1.4 The property occupies an elevated position adjacent to the A40 and is accessed via an unmade road which is shared with an adjoining property. There is a small parking area to the left-hand side of the property, which is heavily vegetated, including a mature dominant redwood which is thought to be the catalyst for the movement affecting the extension.



Figure 1: Site Location Plan

1.5 Beauchamp Lodge, was listed on 26th November 1986 at grade II: Listing Entry Number: 1091367



Figure 2: Front (west) elevation of Beauchamp Lodge

1.6 This report should be read in conjunction with the Design and Access Statement and drawings prepared by PAS Surveying.

2. Report Structure

- **2.1** The report consists of a survey, including advice for the respected structure of historic fabric and setting. This has then been used to notify the proposed subsidence stabilisation.
- **2.2** For the purposes of this statement, preservation equates to an absence of harm. Harm is defined in paragraph 84 of Historic England's Conservation Principles as change which erodes the significance of a heritage asset.³
- 2.3 The significance of a heritage asset is defined in the National Planning Policy Framework (NPPF) as being made up of four main constituents: architectural interest, historical interest, archaeological interest, and artistic interest. The assessments of heritage significance and impact are normally made with primaryreference to the four main elements of significance identified in the NPPF. Setting can contribute to heritage significance.
- The NPPF requires the impact on the significance of the designated heritage asset be considered in terms of either "substantial harm" or "less than substantial harm". National Planning Practice Guidance (NPPG) makes it clear that substantial harm is a hightest, and case law describes substantial harm in terms of an effect that would vitiate or drain away much of the significance of a heritage asset. ⁴ The Scale of Harm.
- Paragraphs 195 and 196 of the NPPF refer to two different balancing exercises in which harm to significance, if any, is to be balanced with public benefit. Paragraph 18a-020-20190723 of National Planning Practice Guidance (NPPG) online makes it clear that some heritage-specific benefits can be public benefits. Paragraph 18a-018-20190723 of the same NPPG makes it clear that it is important to be explicit about the category of harm (that is, whether paragraph 195 or 196 of the NPPF applies, if at all), and the extent of harm, when dealing with decisions affecting designated heritage assets, as follows: "Within each category of harm (which category applies should be explicitly identified), the extent of the harm may vary and should be clearly articulated."
- Paragraphs 193 and 194 of the NPPF state that great weight should be given to the conservation of a designated heritage asset when considering applications that affect its significance, irrespective of how substantial or otherwise that harm mightbe.

3. The Existing Building & Site

- **3.1** This site lies within the Tewkesbury (District Authority) district.
- The property is a two-storey, detached Grade II listed Lodge building built c.1850s in a rural location adjacent to the A40 on the outskirts of Gloucester.
- Construction is English bond brickwork to ground floor, timber framing with rendered panels above with mock Tudor 1st floor and gabled tiled roof. Attached to the left (west) elevation is a single storey kitchen extension, c.1950s, of cavity brick construction under a ridge tiled roof and with an independent ground-bearing concrete floor slab. The brickwork of the extension is toothed into the original house.
- Also of note is a smaller single storey half-octagonal brick on the internal corner between the west house wall and south extension wall. There is no access internally to this structure.
- 3.5 The property stands on a slightly elevated site that is generally level. Surrounding gardens to the front are occupied by a driveway. There are a number of established deciduous trees and shrubs surrounding the property.

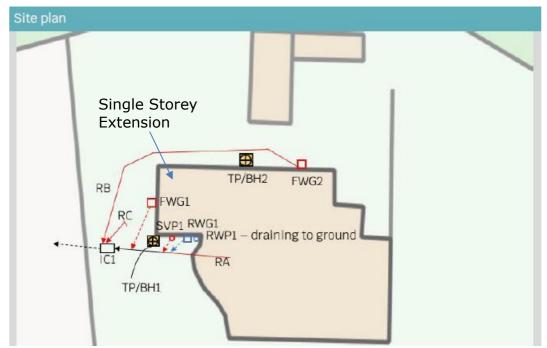


Figure 3 - Site plan

4. History

- 4.1 The Lodge was built Circa 1836 and provides residence. The area the Site is located in is recorded as 'historic dispersed' as part of the Churcham Landscape.
- 4.2 The house has undergone some alterations over time but retains a substantial portion, at ground and first floor of its historic timber frame within theoriginal frontages. There is a 19th century extension to the west elevation of the property which is the subject of this application.

Statement of Significance 5.

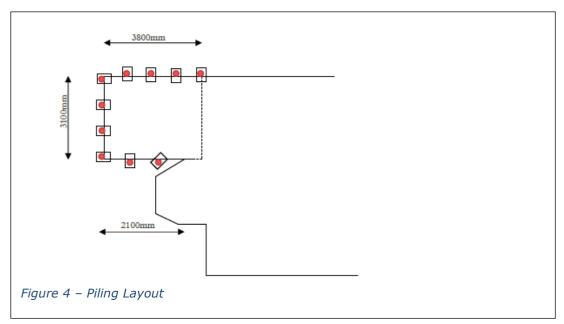
- 5.1 We believe the main building structure and roof contains the main areas of significance on site. Whilst sections of the property are of differing ages, it seems appropriate that these areas are stabilised and repaired faithfully.
- 5.2 The original features including timber framing with rendered panels are not affected by the proposed works. The setting and importance of the property are compromised only by damage caused by the incidents of ground movement to the side extension.
- 5.3 Damage caused by subsidence of the site has been reported to the kitchen extension only. The following areas of movement have been reported: -
 - The cracking is at the junction where the extension abuts the main house. There is gapping at the ceiling and cracking extending above the side window which is mirrored externally. There is also diagonal cracking to the rear wall of the enclosed wc.
 - The damage is indicative of subsidence of the extension with it tilting to the west. The bed joint tilt was measured at 1 in 95 which equates to a drop of c.40mm on the end wall of the extension compared to where it abuts the main house.
- 5.4 Site investigations were carried out to determine the cause of the movement, the investigations comprised two trial pits extended by boreholes and testing of the drainage system.
- 5.5 The extension footing at the SW corner is a 600mm thick concrete footing at 1.1m below ground level (bgl). A previous 2011 investigation found a 400mm thick concrete footing at 0.8m bgl at the NW corner. The underlying subsoil is a very stiff, slightly sandy, gravelly CLAY to a depth of 3.8m. There was water ingress at 3.2m and roots to 3.4m. These were subsequently identified as the Cedrus which are Cedar

or Pine.

- 5.6 The extension footing on the north wall, east side, is a similar concrete footing, 850mm thick at 1.2m below ground level. The underlying subsoil was a similar stiff to very stiff CLAY to a depth of 4m where an obstruction prevented further augering. Very rare rootlets were noted to 3.2m but too small for identification. There was a similar water entry at 3.2m.
- 5.7 Soils testing indicated the clay to be of very high to high plasticity and a comparison of moisture content profiles indicates slight desiccation at the SW end of the extension compared to the NE junction with the house.
- 5.8 The drainage investigation was limited to the main runs (not those joining these runs) but showed no damage that would be leaking significant fluid into the subsoil during normal working use.
- 5.9 Site investigations have confirmed the cause of subsidence is clay shrinkage caused by moisture extraction by roots from nearby vegetation. The root was analysed as Cedrus which does not implicate any nearby trees. However, the roots were thin and, having spoken to an Arboriculturist, it is possible that the identification was mistaken and was Taxus which is Wellingtonia, Yew etc. Given the size and proximity of the Wellingtonia, it is very likely to be the main cause.
- 5.10 Normally, removal of trees causing subsidence will stabilise the structure. The ground swells back to its natural moisture content and the cracks close. In this instance, there would be concern using this approach due to a heave risk. The previous repairs have locked in some distortion of the extension, so removing the influence of the Wellingtonia could cause additional heave damage over a period of time. In addition, we understand the Wellingtonia may be protected, so gaining consent for removal would be problematic.
- 5.11 The depth of the roots and presence of ground water would make mass concrete underpinning incredibly difficult and dangerous. It is industry accepted good practice to extend the footings 500mm past the last root and to that end, mass concrete underpinning would need to extend to 3.9m BGL. Given the restricted nature of the site, this would be very problematic and difficult to achieve. There is also the risk of collapse of the excavations with the ground water encountered. To that end, it is proposed the cantilevered knuckle piles are introduced around the structure to support the foundations. If the piles are installed before the onset of the growing season and given the degree of current distortion and damage, the risk of heave, given the proposal is unable to isolate the footing form natural ground is limited by

virtue of the rehydration and recovery that would have occurred during the wetter winter period.

5.12 The schematic drawing below indicates the number and position of the proposed piles:



- 5.13 Internally crack repairs will be carried out including fine fill various cracking to the ceiling perimeter and hairline cracking to left hand side of kitchen window. Cutting back plaster 75mm either side of crack to expose cracking to brick work, rake out joints & repoint using lime mortar in the WC.
- 5.14 Externally some crack repairs and repointing in lime mortar are proposed.

6. Conclusion

- 6.1 It is proposed to stabilise the single storey extension using a cantilevered knuckle piles. The Design and Access Statement provides full details.
- 6.2 Failure to stabilise the extension promptly will create a significant risk of progressive decline and an accelerated deterioration of the building structure and fabric. The proposed repair process will result in the best possible solution and offers a practical method of restoring the listed elements.
- 6.3 The scheme seeks to reinstate BEAUCHAMP Lodge so that it might once again be used and enjoyed in a suitable manner. This will preserve it for future generations by ensuring that individuals living in it are maintaining and caring for it.

- 6.4 This proposed method has the advantage of ensuring the dimensions and character of the property are retained for the future and the historic niches are recreated.
- 6.5 No harm will be caused to the special interest of the listed building and so paragraphs 194-196 of the NPPF are not engaged by the proposal. The works are in line with local plan policy and in keeping with the aims of the Planning (Listed Buildings and Conservation Areas) Act, 1990.
- 6.6 The works will be carefully executed so as not to disrupt the existing timber frame. We feel that this statement and supporting information justify the proposal which preserves and enhances the existing protected building.

Appendix 1

Scale of Harm (HCUK, 2019)

Scale of Harm		
Total Loss	Total removal of the significance of the designated heritage asset.	
Substantial Harm	Serious harm that would drain away or vitiate the significance of the designated heritage asset	
	High level harm that could be serious, but not so serious as to vitiate or drain away the significance of the designated heritage asset.	
Less than Substantial Harm	Medium level harm, not necessarily serious to the significance of the designated heritage asset, but enough to be described as significant, noticeable, or material.	
	Low level harm that does not seriously affect the significance of the designated heritage asset.	

Heritage Collective, 2019

Standard Sources

https://maps.nls.uk

https://historicengland.org.uk/listing/the-list

www.heritagegateway.org.uk

https://discovery.nationalarchives.gov.uk/details/a/A135329