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DESIGN & ACCESS / PLANNING JUSTIFICATION STATEMENT

Existing structural retaining wall, forming the boundary between Castle House, 5 Castle Street and Patford House, Patford Street, Calne

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Type of Application
This design and access statement has been prepared to support a Listed Building Application covering the dismantling, repair and alteration of a structural retaining wall. The application is being submitted by A L Associate Surveyors Ltd, on behalf of The Castle House Management Company.

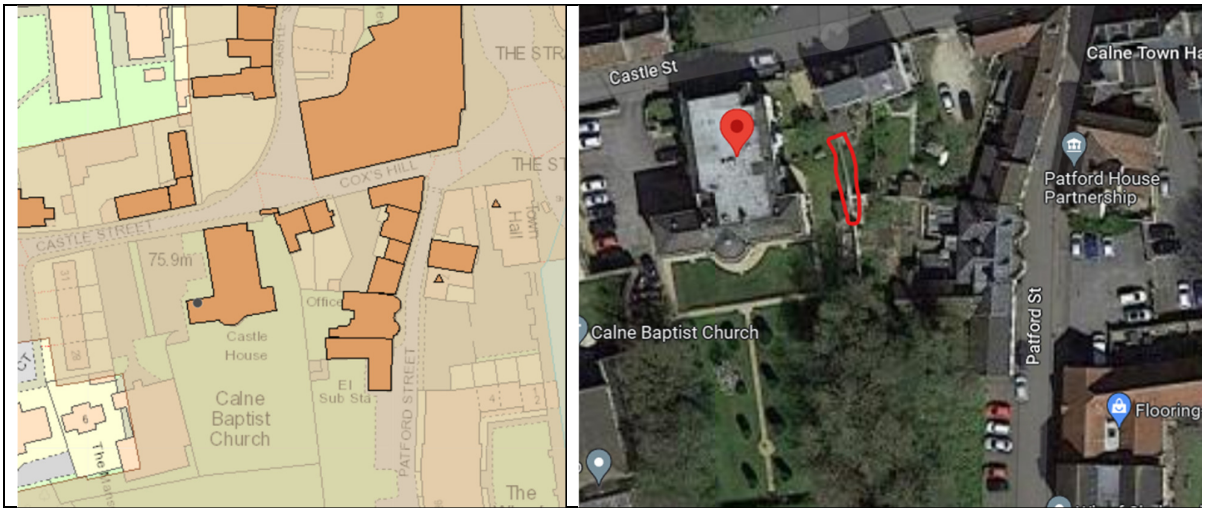
Information
This statement should be read with reference to the following documentation, which has all been submitted as part of the same application.

Ref	Document	Consultant
S2651	Structural report	Atkins Martin Associates
25535-100-01T	Topographical survey drawing	Brunel Surveys
25535-100-02E	Survey elevations	Brunel Surveys
SR-01-001	Structural summary report	Clegg Consulting Engineers
2023-102 SK01	Mark-up drawing	Clegg Consulting Engineers
23-012-001	West elevation drawing	A L Associate Surveyors
23-012-002	East elevation drawing	A L Associate Surveyors

Location and Setting
The structural retaining wall runs on a north-south axis and forms the boundary between several different properties, known as;

Castle House, Castle Street, Calne, SN11 0EY
5 Castle Street, Castle Street, Calne, SN11 0DX
Patford House, Patford Street, Calne, SN11 0EF

All three properties are believed to be Listed. The structural retaining wall is therefore Curtilage Listed, as well as being located within the Calne Conservation Area.



General topography of the area means that Castle House occupies the higher ground. The gardens of the adjoining properties, 5 Castle Street and Patford House, are located around 2.5m lower down.

History

In the spring of 2021, a section of the boundary wall suffered from collapse, with the debris falling into the garden of Patford House. Atkins Martin Consulting Engineers were subsequently appointed, to inspect the wall and to provide advice as to the cause of movement and the approach to repair. The Local Authority Building Control department were notified of the issue and we believe attended site to inspect. Through agreement with Building Control, the most unstable section of the wall was carefully dismantled, to protect against further collapse.

Brunel Surveys were appointed to undertake a topographical survey of the area and to prepare some elevation drawings, recording the existing arrangement and establishing differences in ground levels.

Despite having initially been made safe, the wall has continued to deteriorate, to a stage where further structural movement occurred. In July 2023, Clegg Consulting Engineers were appointed to undertake a new inspection, to assess the cause and extent of further movement and to advise on potential options and methods of repair.

As it stands, the wall has been deemed as structurally unstable and is in need of significant repairs. Initial urgent works are necessary to ensure short-term safety of the various property owners. In the longer-term, repairs and alterations will be necessary, to improve structural stability and to remove the risk of total collapse.

In July 2023, A L Associates contacted Wiltshire Council Building Control, to update them on the current situation. It was agreed that further dismantling and 'making safe' could take place as necessary, subject to a Listed Building Application being submitted at the earliest opportunity.

This application is being submitted, so that the essential emergency dismantling works can take place and so that further discussions can take place, with the Conservation Team, in respect to the subsequent repairs and alterations.

Property Description
The boundary wall runs on a North-South axis, acting as both a retaining structure and a boundary feature between multiple properties. The wall runs to a length on excess of 35m and is of varying heights, ranging from 1.7 to 2.4m high on the Castle House (west) side and 3m to 4.5m on the Patford House (East) side.

The wall is constructed in a mixture of red brick and rubble stone. Large parts of the wall are obscured by vegetation. Some sections are topped with stone copings and others are exposed. Much of the exposed masonry is severely weathered.

The structural movement has occurred due to insufficient cross-bonding between the brick and stonework, primarily arising from sub-standard construction and poor quality materials. The situation has been made worse by the effects of age, general weathering, poor historic repair and maintenance. As it stands, the structure is at risk of further collapse and potential catastrophic failure.

Proposals:
The boundary wall, which sits above the retaining structure, is leaning dangerously and needs to be dismantled as a matter of priority. The lower-level retaining structure is also leaning, though we believe this part of the structure could be retained, subject to testing and geotechnical input by a specialist contractor. The proposals seek to address these points through a staged approach to investigation and repair as follows:

1. To carefully dismantle a 25m stretch of the unstable garden/boundary wall, removing the masonry down to the level of the ground on the Castle House (west) side of the wall.
2. To erect temporary buttressing scaffolding to arrest any further movement on the 'retaining' portion of the wall.
3. To erect temporary Herras safety fencing along the boundary on the land of Castle House
4. To undertake specialist geotechnical investigations to assess the type of and stability of the sub-soil behind the retaining structure.
5. To install specialist ground anchors/tension rods through the structural retaining wall for the purpose of stabilisation.
6. To undertake localised repairs to the face of the retaining wall, including the replacement of defective stonework and some re-pointing
7. Once the retaining structure has been stabilised, to then re-form the higher-level boundary, using a more lightweight structure, so as to avoid imposing additional 'wind induced over-turning forces' to the retained masonry.

Design Considerations
The proposed method of restoring stability to the existing retaining wall is by tying it back to the underlying ground, using stainless steel ground anchors. The ground anchors are percussion driven and cannot therefore be installed, unless the risk of collapse has been removed.

The suitability of the proposed system can only be established through testing and geotechnical analysis by a specialist. This would necessitate the formation of 100mm diameter cores through the existing masonry, through which a test rod would then be inserted. The rod with the end washer would remain and would function as a restraint to the retaining wall.

Provided the testing was satisfactory then the ties would be inserted at close centres to give a restraint to the leaning retaining wall. The proposed method would retain the historic fabric of the existing retaining wall by tying it back without significantly disturbing it or the earth which it retains.

Amount of Development
The proposals will not result in any increase in development. The work relates to the dismantling and repair of an existing structural retaining wall. To avoid imposing additional wind induced turning forces on the retained structure, part of the existing boundary wall will be removed and replaced with a more lightweight structure, such as a timber fence. The replacement boundary feature will not extend above the height of the existing wall.

Layout
The walls runs on a north-south axis and separates Castle House from two other properties, known as 5 Castle Street and Patford House. Castle House occupies the higher ground. The lower part of the wall therefore acts as a retaining structure. None of the work will result in a change to the existing site layout.

Whilst the work necessitates partial removal of an existing boundary wall (above ground), measures will need to be put in place to ensure continued privacy on completion of the work. The proposal is therefore to replace part of the existing boundary wall with a lighter structure, such as a timber fence.

Scale
The proposals will not alter the scale or the setting of any of the Listed Buildings or the wider Conservation Area.

Appearance
There will inevitably be changes to the appearance of the boundary wall. The use of ground-anchors in the lower-level section will necessitate the introduction of metal plates. The size, position and frequency of these plates will need to be determined following geotechnical investigations. At this stage however it is anticipated that the retaining sections of the wall would then be repaired using a mixture of stonework, brickwork and areas of re-pointing, all of which will utilise materials which match the existing.

The upper section of the wall, which defines the boundary between the various properties will need to be re-formed using a lightweight structure, to avoid imposing additional wind induced turning forces on the retained wall below. The new boundary will most likely be formed with a timber fence, though details will need to be agreed at a later date.

It is suggested that details of the replacement boundary feature are conditioned on the approval, to be confirmed once the structural retaining wall has been stabilised.

Landscape
The proposals will inevitably result in some change to the landscape. The boundary wall will need to be dismantled at the start of the project, so that the ground investigation works can take place with minimal risk of collapse. Once the structural retaining wall has been stabilised, a new boundary will be formed, though the design and details will need to be confirmed at a later date.

Access
The work will not, in any way, affect access to or around the site.

Conclusion & Justification for Development

The existing structural retaining wall and the boundary wall which rises above it are Curtilage Listed by virtue of their position and relationship with three different properties, each of which are Listed in their own right.

The wall is structurally significant and is of some value in terms of the landscape, setting and privacy of the various properties which it serves. That said, the structure has been poorly constructed, using sub-standard materials. Its condition means it is no longer capable of serving its purpose, without significant intervention.

Dismantling of the upper-level boundary wall is essential to ensure the health, safety and wellbeing of the various property owners. Structural repair and stabilisation of the lower level retaining wall is also essential, to remove the risk of catastrophic failure. Repair options are limited, and full details will be subject to the results of specialist geotechnical investigations.

Reinstatement of the upper-level boundary wall on a like-for-like basis is unfeasible, both from a structural perspective and in terms of matching the existing aesthetics. Replacement with a lightweight structure will not only avoid imposing additional wind induced turning forces on the retained structure. It will also ensure that the boundary can be reinstated with minimal financial cost and minimal environmental impact.

The proposed works are considered to be wholly justifiable, in terms of health, safety and well-being and in terms of ensuring the longer-term stability of the retaining structure. The use of a timber fencing infill will have negligible impact on the various properties or the wider Conservation Area.