

FENTON HOUSE, HAMPSTEAD GROVE, HAMPSTEAD, LONDON, NW3 6SP

ALTERATIONS TO LEANING BOUNDARY WALL AND PIER

DESIGN AND ACCESS STATEMENT

MAY 2019 v2



Leaning boundary wall



Leaning pier

1. Introduction

1.1 This document accompanies an application for Listed Building Consent to alter the leaning boundary wall and leaning pier at Fenton House in Hampstead. Both elements require intervention to prevent further deflection and ultimately collapse.

1.2 The location of the elements are shown in the drawings “Fenton House Site and Access Plan”.

1.2 It is the intention of the National Trust to:

- a) Form an arch in the leaning boundary wall to allow room for the existing tree roots to grow and to preserve the overall integrity of the wall
- b) Install five steel braces along the inside of the leaning wall to provide support and prevent further deflection
- c) Deconstruct and rebuild the leaning pier to the west of the south entrance of the property

2. Background

2.1 Fenton House is a Grade I listed building (List Entry Number: 1378648). The garden walls are Grade II listed (List entry Number: 1378654). The main house was built in c. 1686 with the garden walls built in the 17th and 18th Century.

2.2 A section of the garden wall in the south garden, located next to the public highway of Hampstead Grove is deflecting out and is at risk of collapse if left unattended.

2.3 The pier to the west of the southern entrance is leaning in a south-westerly direction into the adjacent property, Enfield House. This movement has caused cracking within the pier, and a joint to open between the pier and the attached brick party wall.

2.4 In November 2017 the National Trust instructed an inspection of the walls by Civic Engineers, who produced a report with remedial options to prevent further deterioration. This report is provided as an attachment titled “Civic Appraisal of Boundary Walls”.

2.5 This report and discussions with Conservation Officers have informed the repair approach set out in the following sections.

3. Leaning boundary wall

The issue

3.1 The section of boundary wall described in this application consists of a masonry structure, one and a half bricks wide (measured on site as 360mm), and 2.7 metres tall on the highway side.

3.2 The report carried out by Civic Engineers (Civic Engineers, 2017, p8) indicates that the trunk of a large Robinia tree is growing against the inner face of the boundary wall, pushing out the bottom of the wall (Photo 1). There is evidence of sections along the base of the wall that have previously been reset and repointed, but continuous pressure has caused localised cracking and bricks to fall out onto the public footpath on Hampstead Grove (Photo 2).



Photo 1: Robinia tree growing against the wall



Photo 2: Loose bricks on Hampstead Grove

3.3 Further north along the same wall remedial work has previously taken place in the shape of steel 'L' supports on the internal face, secured below ground level to a concrete counterweight foundation (Photo 3). The work is assumed to have been carried out between 2002 and 2016.



Photo 3: Steel supports securing the boundary wall

3.4 This previous intervention has prevented the wall leaning any further and retains the wall in its position.

Options Appraisal

3.5 The lean of the wall is too significant to leave due to the risk of collapse onto the public highway. Therefore, remedial works to stabilise and prevent further deflection are critical. Based on the recommendations of Civic Engineers' report, the National Trust has considered three options for the repair of the wall:

- a) **Remove some of the trees neighbouring the wall;** After discussions with Nick Bell (Tree and Landscape Officer, LB Camden) in June 2018 this was dismissed because it was felt that the trees add to Fenton's spirit of place and protecting these take precedent over protecting the wall.
- b) **Tie the wall to ten new steel posts with concrete foundation counterweights and pull the wall upright;** This was dismissed because the amount of concrete proposed could not easily be reversed and is therefore against conservation principles. The concrete would also displace many of the plants and could damage tree roots. Pulling the wall upright could cause localised cracking and preventable damage.
- c) **Remove some of the bricks in the wall to allow room for the tree roots and tie the wall to five steel posts fixed into the ground with screw piles. This is the preferred option and is discussed in further detail below.**

Proposed Design

3.5 The drawings attached completed by Civic Engineers provide the proposed design for the boundary wall of which there are two parts.

3.6 Part 1 involves removing some of the bricks around the base of the wall to provide space for the tree roots to grow. A brick arch will be created here with a bespoke metal grille installed to prevent unauthorised access. HeliBars will be installed in the section above the wall to prevent further cracking. The mortar will be soot washed to match the existing mortar colour. See drawings below for further details.

- a) 893-07-(DE)006 C01 - arch opening profile
- b) 893-07-(GA)005 C02 - arch opening elevation

3.7 Part 2 involves installing five steel posts along the internal side of the wall. These will be secured in the ground by screw piles. The option to encase the steel in brick was considered but dismissed for a number of reasons.

- a) The existing steels (see photo 3 above) are not surrounded in brick and aesthetically it would be better to have a matching intervention.

- b) Digging foundations for the brick encasement would involve removing more plants and would cause unnecessary damage and intervention to the garden.

Leaving the steel supports on display is an 'honest' repair and allows Fenton's visitors to appreciate this conservation work in action. Overtime, plants will be grown up the steels to provide some disguise and help them blend in.

See drawings below for further details.

- i. 893-07-(GA)004 C02 - steel pier profile
- ii. 893-07-(GA)006 P02 - steel pier locations
- iii. 893-07-(GA)007 C01 - steel pier elevation
- iv. 893-07-(DE)005 C02 - steel pier fixing detail

4. Leaning Pier

The issue

- 4.1 The pier described in this application is a masonry structure, 700mm by 700mm wide, and 3.9m at its tallest.
- 4.2 Civic Engineers Report (Civic Engineers, 2017, p12) indicates that the western party wall has been rebuilt and is leaning where it meets the pier. Since this reconstruction, the pier has displaced further, creating a larger joint between the wall and the pier as shown in photo 4. There is also mortar loss where the pier meets the single skin party wall.



Photo 4: Open joint between pier and wall

- 4.3 The lean of the pier is too significant to leave due to the risk of collapse onto the public highway and into the neighbour's garden. Therefore, remedial works to stabilise and prevent further

deflection are critical. Based on the recommendations of Civic Engineers' report, the National Trust has chosen to deconstruct and rebuild the pier.

Proposed Design

4.4 Rebuilding the pier will ensure the longevity of both the party wall and pier. Drawing "893-07-(AS)004 C01 - brick pier sequence of work" provides the full details but to summarise, the work involves:

1. Deconstructing the pier taking note of existing bricks and patterns
2. Stitching the cracks in the party wall using Helifix bars
3. Reconstructing the pier vertically and tying to the end of the party wall

4.5 As many of the existing bricks as possible will be reused. Where the bricks are beyond their useful life, they will be replaced to match the material and colour using handmade Mulberry Stock bricks manufactured by Bulmer Brick and Tile Company. The existing mortar has been sent for analysis and the same mix will be used for rebuilding. The mortar will be soot washed to match the existing mortar colour.

5. Access arrangements

5.1 Access to the site to undertake the required works is accommodated by way of existing routes into the garden and would not require the alteration of access routes either temporarily or permanently.

5.2 The access route is shown in the attached drawing 'Fenton House Access Plan'.

5.3 To deconstruct and rebuild the pier, propping of the party boundary wall from the garden in Enfield House will be required. The contractors will require access to the garden to rebuild the pier. This issue has been discussed with the owners of Enfield House and they have consented to the work. This will also be covered in a formal Party Wall Notice to the adjoining owner/s.

5.4 Whilst the arch is created in the base of the boundary wall, propping will be required along the footpath of Hampstead Grove. This side of the road has double yellow lines however there is a pavement on the other side so cars and pedestrians will still be able to use the road. Permission from the council will be sought prior to establishing the propping. Photo 5 shows the location of the props.



Photo 5: Approximate location of props whilst the arch is created at the base of the wall

6. Consultation

- 6.1 An initial consultation with Conservation Officer Alfie Stroud from LB Camden was conducted on site in December 2017 to discuss the initial report and remedial options proposed by Civic Engineers. It was confirmed that Listed Building Consent would be required for approval of the method of repair.
- 6.2 In June 2018 a consultation with Conservation Officer Nick Baxter from LB Camden was conducted on site. At this visit it was agreed that option 3.5b should be dismissed and 3.5c was the preferred option.
- 6.3 In June 2018 a telephone conversation with LB Camden Tree and Landscape Officer, Nick Bell was conducted. It was agreed here that removing the trees would not be an acceptable solution to the issue of the leaning boundary wall.
- 6.4 The owners of Enfield House, as adjoining neighbours have been consulted with about the proposed works to the leaning pier and they have verbally given their consent to this work. A Party Wall Notice will be served to formalise the proposal.

7. Conclusions

- 7.1 The Trust consider there to be a good case for repairing the leaning section of garden wall and pier outlined in this application using the methodology advised by Civic Engineers.

7.2 Both solutions are in keeping with the current appearance of the southern garden and walls. The repairs will provide a long term solution to both defects and will prevent collapse by stabilising both areas.

National Trust
May 2019 v2