

Our Ref: L2039 – L665

Your Ref:

Directors

Date: 20th July 2021

W. Diffley, B.Eng. MSc. C.Eng. M.I.Struct.E.

Mr Alex McBride
11 Chalcot Square
London
NW1 8YB

Dear Mr McBride

No. 10 / 11 CHALCOT SQUARE REAR BOUNDARY WALL

I visited 11 Chalcot Square on 8 September 2020. The purpose of our visit was to inspect and access the rear garden boundary wall between No 10 & 11 - in particular a far end section of the wall which had collapsed into No. 11's garden.

No 11 was soon to be occupied by a family with young children and there were health and safety concerns pertaining to the stability of the remaining rear sections of the wall that were leaning considerably towards No 11.

The boundary wall is a 9" thick solid brick wall with 475 mm square piers at centers varying between 3.5m and 6m. The wall height, measured on No 11's side, is 1.2 m tall at the rear of the boundary increasing linearly to approximately 1.8m where it is bonded to the back of the property. The end 6m of the wall is acting as a retaining wall for the back garden in No.10.

Our inspection revealed the end section of the wall had collapsed over a length of about 3 metres and that a further length of at least 3 metres was in imminent danger of collapse.

I surveyed the wall and levels on both sides and found that the ground level on No 10 side was approximately 800mm higher than on No 11 side at the end of the wall and that the level difference decreased to zero at about 6 meters from the end.

A plumb bob (verticality) survey was carried on the section of wall between the two end piers. The survey found the 9" wall was leaning up to 140 mm towards No.11 reducing to 75 mm out of plumb at the second end pier (at about 8 m from the end of the wall). The centre line of the top of the wall was therefore significantly outside the middle third of the base of the wall and considered at risk of collapse.

Three trial holes were dug at the base of the wall between the two end piers. The existing foundation were found to be founded in weak water-logged soils, deemed to be inadequate and too shallow to support the wall.

We advised that the wall needed to be rebuilt on deeper concrete foundations from the end of the wall up to and including the second end pier. Rebuilding the second pier on a secure foundation would also help stabilise the remainder of the wall.

We provided drawings with specifications for the work required to rebuild the wall. This included a below-ground reinforced retaining structure over the section of significant ground level difference with a backing land drain to avoid a build-up of water.

The retaining structure is on the No 10 side of the wall only and is about 200mm below ground level. The top levels of the foundations are a minimum of 150 mm below the garden ground levels in No.11.

The rebuild works will extend the life of the boundary wall by at least another 25 years and help prevent further deterioration of the remainder of the existing wall.

Yours sincerely

A handwritten signature in black ink that reads "William Diffley". The signature is written in a cursive style with a large, looped 'W' and 'D'.

William Diffley
William Diffley Consulting Engineers Ltd