



ANDREW FIREBRACE PARTNERSHIP

STRUCTURAL AND CIVIL ENGINEERING CONSULTANTS

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PLS/jcr/17/0145

6 December 2018

Fen Ditton Parish Council
c/o Mrs S Smart
Parish Clerk
Barton Ley
Bannold Drove
Waterbeach
Cambridge CB25 9QQ

By post and email:
clerk@fenditton-pc.org.uk
beesonjones@gmail.com

Dear Sirs

Boundary Wall – St Mary the Virgin Church, Church Street, Fen Ditton

After our initial visit and visual report on the boundary wall we re-visited the church on 4 December 2018. The purpose of our visit was to excavate trial holes to confirm the depth of the foundations to the wall and also to try and establish the thickness and construction of the wall.

Four trial holes were excavated on the lower roadway side of the wall to expose the foundations and the ground below the foundations. Two trial holes were excavated on the church yard side of the wall.

These trial holes showed the foundation depths and form of construction to vary along the length of the wall. In all locations though, the foundations were bearing onto a reasonably firm chalk.

Trial hole 1 was excavated to expose the foundations to what we believe to be a rebuilt brick section of the wall. This showed the foundation to be a shallow rubble concrete footing supporting corbelled brickwork. The foundation was bearing onto a firm chalk 400mm below ground level (refer to photos 1 and 2).

Trial hole 2 was excavated on a section of wall which had a low section of brickwork then flintwork topped with a brick capping. The trial hole showed the foundation to be 330mm deep bearing onto the chalk (refer to photos 3 and 4).

Trial hole 3 was against a section of wall where the flintwork extends down to ground level. This section had almost no foundation. The flints extended down 100mm below ground level. They did though bear onto the chalk (refer to photos 5 and 6).

Trial hole 4 was up against the wall near the curved section of wall adjacent to the entrance gate to the church. This showed there to be a rubble concrete footing bearing onto the chalk 300mm below ground level.

Contd/.....

Andrew Firebrace Partnership Limited

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Internal trial holes showed the upper brick capping to the wall to be wider than the original flint wall and to be founded at a very shallow depth and bearing onto the fill behind the main retaining wall. The back of the main retaining wall appeared to be flintwork.

Within the church yard there was a manhole cover. Lifting this revealed a large modern soakaway. The soakaway was constructed of 1.8m diameter precast concrete rings. The edge of the soakaway was only 1.5m from the back of the boundary wall. The bottom of the soakaway appeared to be at or near the same level as the roadway on the other side of the boundary wall.

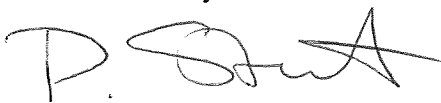
From our inspection it is evident that significant sections of the wall are in poor condition and have very shallow foundations. It is recommended that these sections of the wall are rebuilt in brickwork with a reclaimed flint outer face and reclaimed brick capping, all atop a new concrete foundation. It will be necessary to have a free drainage gravel material placed behind the wall with weep holes through the wall to ensure that the water from the soakaway does not build up behind the wall causing additional lateral force.

We believe it would be prudent to initially allow for the rebuilding of the entire length of wall from the end of the previously rebuilt brick section all round to the brickwork front pier to the gates. Whilst there may be sections that could be repaired and strengthened it is thought that this would incur significant extra cost. If you want to act on these recommendations, we can prepare a structural design and sketches for the rebuild wall and discuss the works with a suitable contractor.

We trust this report is adequate for your current needs. Should you wish to discuss the contents of this report please contact me.

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Yours faithfully



PETER STUART
For and on behalf of Andrew Firebrace Partnership Limited

Enc



Photograph 1

Trial hole 1 location.



Photograph 2

Trial hole 1.



Photograph 3

Trial hole 2 location.



Photograph 4

Trial hole 2.



Photograph 5

Trial hole 3 location.



Photograph 6

Trial hole 3.



Photograph 7

Trial hole 4 location.



Photograph 8

Trial hole 4.



Location of soakaway within church yard.

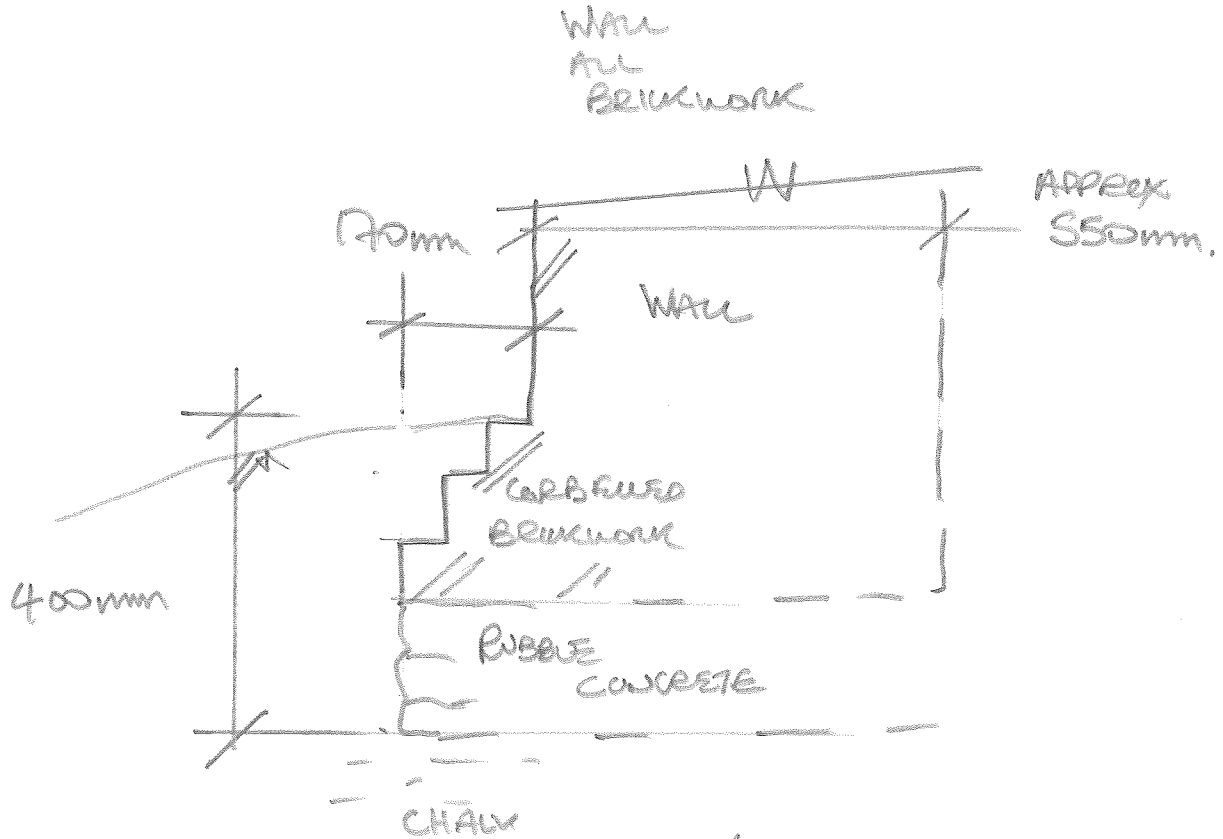


View inside soakaway. Approximately 1800mm diameter concrete rings approximately 1.5m from back of wall. Depth approximately 1.8m

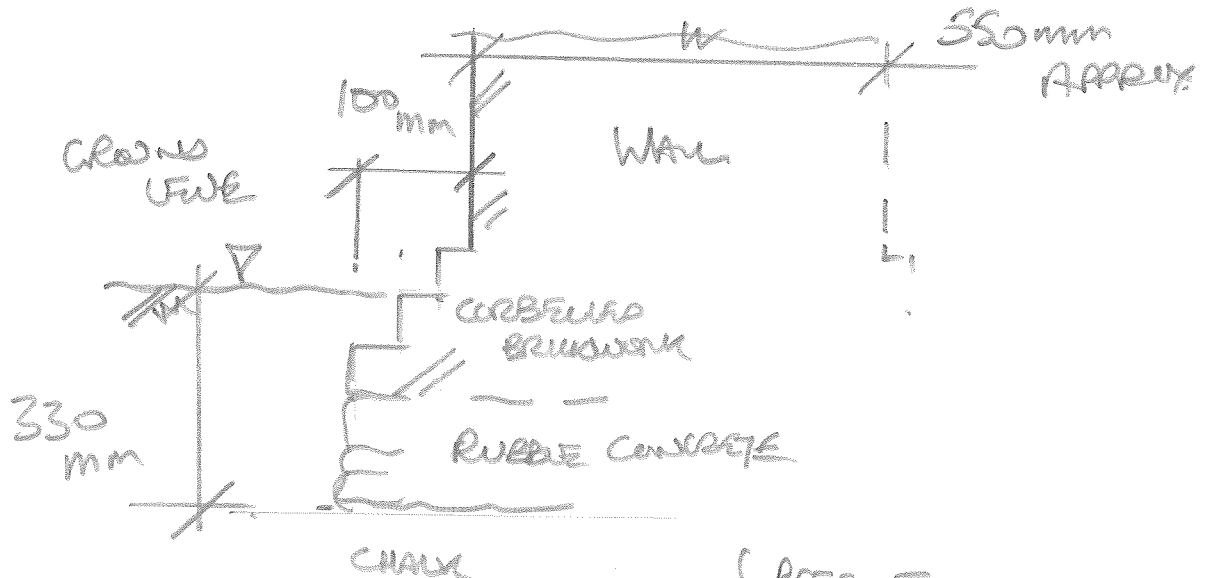


Trial hole within church yard showing upper brickwork capping having shallow foundation with flintwork to main wall set back and extending downwards.

Project:	ST. MARY THE VIRGIN CHURCH FRY DECON	Job No.	710145	Sheet No.	TH 1
Section:	TRIA HOLES	Prepared:	RS	Date:	
		Checked:		Date:	

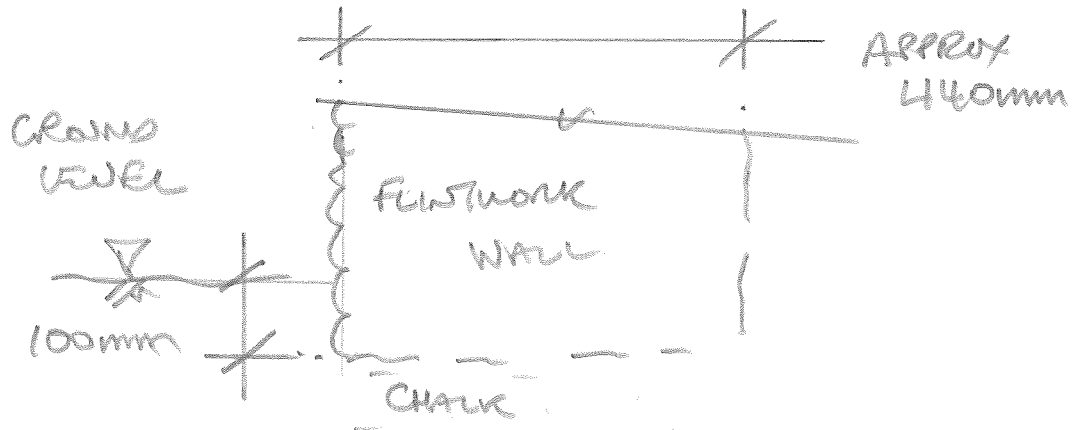


TRIA HOLE ① (REBUILT SECTION OF WALL?)
REFER TO PHOTO 1+2

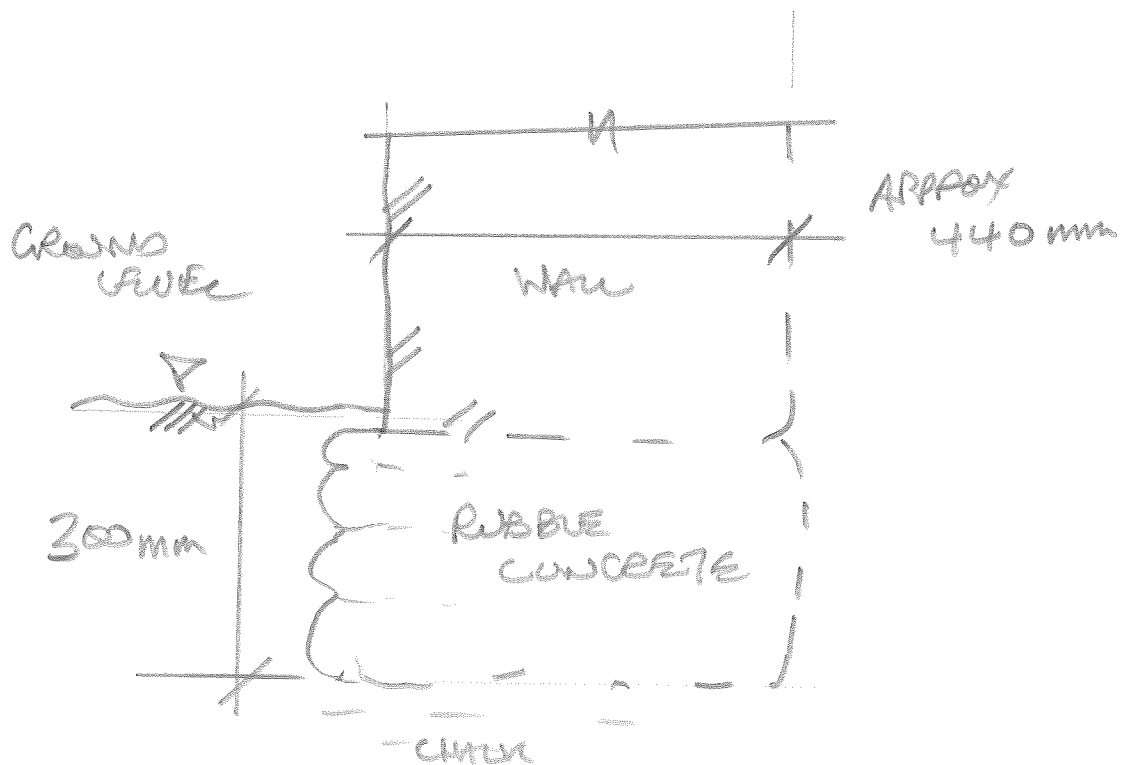


TRIA HOLE ② (REFER TO PHOTO 3+4)

Project: ST. MARY THE VIRGIN CHURCH FEN DITTON.	Job No. 1760145	Sheet No. TH 2
Section: TRIAL HOLES	Prepared: PLS	Date:
	Checked:	Date:



TRIAL HOLE (3)
(REFER TO PHOTOS 5+6)



TRIAL HOLE (4)