

E mail exchange with John Howlett, structural engineer, AFP

Email from David Bevan to John Howlett on 5 July 2012 (read from the top down)

Dear John

I have a few follow-up questions on your report and in response to local requests which I would appreciate your help with.

On the report, I attach our brief with comments added in red where I believe that the report needs to say more or where clarification is required.

On the question of potential compensation, I have been asked what the difference in costs would be between the work that the owners would already have to carry out versus that required with underpinning. My assumption is that both will need cracks to be filled and redecoration so that the difference in costs will equal the cost of underpinning. The only departure I can see with this is if, for some reason, there is a delay in the underpinning being carried out which might mean that the crack filling and redecoration would be needed twice e.g. to stop water ingress. Do you agree with my assumptions?

Do you have any views on the impact of recent building works at the Old Rectory as a potential source of the cracking? Your report identifies the cedar as the likely culprit, supported by the pattern of seasonal movement, but the recent building works (2010) have been raised as an alternative source.

Please will you have a look at the attached letter from Dr Charles Turner and say if it in any way affects your report. The geological map with it wasn't too clear as sent in blown up form (the dark area is green on the map) – say if it would help to have a better version.

I would be very grateful if you could confirm that you have received this email and respond by Wednesday of next week. I hope that you can cover the 3rd – 5th paras under your agreed costs but let me know if there is a problem with that.

Many thanks
David

David Bevan
Conservation & Design Manager

Attachments with above:

Letter from Dr Charles Turner (attached separately)

Brief for the structural engineer with comments and questions added following the receipt of his report by David Bevan:

Briefing for structural engineer – DRAFT

The Old Rectory, Church Street, Little Gransden – Tree Preservation Order

The purpose of the structural engineer's report is to help inform the Council's decision on whether a Tree Preservation Order should be confirmed for trees at the Old Rectory, a grade II listed building. The report will allow the Council to weigh structural risks and the implications of underpinning as a way of dealing with the problem of cracking found in parts of the house against the amenity value of the trees and any other relevant factors (which will be outside the scope of the structural engineer's report). It will also give estimates of costs which will mean that Council will be aware of the potential scale of compensation that may result from possible future decisions should the Tree Preservation Order be confirmed and felling applications be made that are then refused.

This report will follow on from an arboricultural report produced for the Council by John Cromar's Arboricultural Company Limited dated 15 May, 2012. That report followed an investigation of causes of cracking to the Old Rectory. Its conclusions included:

"Level monitoring ... confirms a seasonal pattern of damage with levels rising in winter and falling in summer: it can safely be concluded that vegetation is involved in the damage"

"There is no evidence that indicates that any other vegetation [apart from the cedar] is involved in the damage, nor, from the writer's experience is there any significant likelihood that other trees are involved."

"Underpinning or other structural repairs are in detail beyond the scope of this report to assess for applicability but it appears perfectly possible to install a relatively small amount of underpin to support the affected section of external and internal walls ..."

The structural engineer's report will be required to:

1. Identify the potential risks and costs of damage and remedial works resulting from the influence of the cedar if underpinning is not carried out

The report suggests that minor cracking resulting from movement will continue which means that cracks will need to be made good and redecoration will be required. This should be confirmed and estimate of costs given.

2. Give an assessment of the appropriateness of underpinning as a solution to the problems caused by the cedar including their risks and implications such as for the historic building

The report is clear that underpinning is an appropriate solution and it implies that there are no risks or implications for the historic building. This should be confirmed.

3. Subject to (2) describe the underpinning required to deal with the problems caused by the cedar and give an estimate of its cost

The report does this.

4. Describe the risks following the underpinning and potential costs of any further works that may be needed as a result of the retention of the cedar

The report does not identify any risks/potential costs following underpinning and this should be confirmed.

Note: the costs will include fees.

In carrying out this work the structural engineer will be required to:

Read the following documents:

- A copy of the TPO for trees at the Old Rectory
- Report from John Cromar's Arboricultural Company Limited (dated 15 May 2012) commissioned by South Cambridgeshire District Council
- Report from Dr. Giles Biddle (OBE) commissioned by Little Gransden Parish Council
- Report from Richard Jackson Ltd commissioned by Little Gransden Parish Council
- Arboricultural report from Writtle Park submitted with section 211 notification by Mrs Seabright
- Technical Report from Crawford & Co. to Chubb Insurance Company
- Level Monitoring from Crawford & Company adjusters
- Site Investigation from MATLAB
- OCA Landscape Planning Report

Carry out a site investigation (to be arranged by the Council with the owner of The Old Rectory) at which Roz Richardson, the Council's Trees Officer, will be present.

Roz Richardson will be the Council's point of contact for the report. Contact details are:

Roz Richardson

BSc Hon Env Mgt, Tech. Arbor. A.

Trees & Landscape Officer

South Cambridgeshire District Council
South Cambridgeshire Hall
Cambourne
CB23 6EA

Email: - Rosalind.Richardson@scambs.gov.uk

Tel: - 01954 713405

Fax: - 01954 713152

Email exchange between David Bevan and John Howlett following those above on 5 and 9 July 2012 (read from the bottom up)

David .

Yes , I agree with them .

Regards , John .

From: Bevan David [<mailto:David.Bevan@scambs.gov.uk>]
Sent: 09 July 2012 15:16
To: John Howlett
Cc: Richardson Rosalind
Subject: RE: The Old Rectory, Little Gransden

John

Have added some points you made in our telephone conversation. Please will you just confirm by email that you agree with them.

David

From: John Howlett [<mailto:john.howlett@afpconsult.co.uk>]
Sent: 05 July 2012 15:41
To: Bevan David
Subject: RE: The Old Rectory, Little Gransden

Dear David ,

I reply to your comments in red as follows :

1) Minor cracking will continue , but is unlikely to get significantly worse . We are not in a position to give costings for cosmetic repairs such as crack filling and redecorations .

2) Underpinning is an appropriate solution because it can work . In order for it to work it helps to have the results of level monitoring over a few years , which we have , and the input of an engineer experienced in this sort of work . With this building we have already seen that differences in foundation type do not necessarily lead to superstructure damage , because there has been no significant damage where the new deep cellar meets the original building . **There is no significant risk with the underpinning if it is done properly and the stability of the new deep cellar demonstrates the success of deeper foundations.**

3) No comment required .

4) As stated above , there are no significant risks to the underpinned parts of the building or those parts connected to it . There is a possibility that some roots could go under the building and dry out the soil beneath walls even further from the trees , but I would put this as a very low risk **and any impact is likely to be limited to minor cracks.**

I reply to the follow up questions as follows :

The difference in cost would be the cost of underpinning as long as the underpinning is not delayed so long that crack filling and redecorations have to be carried out repeatedly .

The letter from Dr Turner does not affect anything I have written in my report . As I said in my report , the geological drift map is not clear . In any event , in my experience the map can be inaccurate regarding the extent of the boulder clay . However , whatever we choose to call the clay overlying the Lower Greensand , samples have been sent to a laboratory and they have been found to have a medium to high shrinkage potential . In addition , the building has been measured going up and down seasonally exactly as one would expect due to seasonal changes in moisture content , and movement has only occurred along the east side of the building , and the movement has been greatest where the east wall is nearest to the cedar tree . These changes in moisture content could not occur under the foundations along the east side of the building unless tree roots were extracting moisture from the clay , because there is a wide strip of impermeable paving along that side of the building protecting the subsoil from drying out in the summer due to surface evaporation .

Recent works, for example those carried out in 2010 and before, are not responsible for the cracking which is the subject of my report.

I trust this answers your queries . If you need any further clarification , please do not hesitate to contact me .

Regards , John .