

Ms V Harrison
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Our Ref: 201750/TPO
Your Ref:

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23 March 2021

Your contact
is: Sarah Hanson, Planning

Dear Ms Harrison

RE: PROPOSED FELLING OF ONE LIME TREE AND ONE CYPRESS TREE AT 77 CHAZEY ROAD, READING - T11 AND T13 RESPECTIVELY OF TREE PRESERVATION ORDER 61/06 AND T2 AND T3 RESPECTIVELY OF THE APPLICATION.

Thank you for your tree works application of 8 December 2020 to fell one Lime and one Cypress tree at the above address. I apologise for the delay in providing this decision following our correspondence.

You have submitted the following in support of the application:

MWA Arboricultural Report 25.11.2019
Statement of reasons for works
Crawco Tech Report 06.03.19
Crawco Add Tech Report 27.11.20
Optera SI Report 17.07.19
Knight Level Monitoring 29.11.19 - 25.01.21

I undertook a visit to the property on 21 January 2021 with Tim Pither of our consultant engineers, Subtilis Consulting Ltd.

As you are aware, following our receipt of the application, Mr Raeburn-Ward subsequently requested that the Cypress tree be removed from the application, however during our visit, it was agreed that the application would continue to include the felling of this tree based on its condition.

Following the site visit, I wrote to you on 4 February 2021 enclosing a copy of the report from Subtilis Consulting Ltd which raised questions over the implications of the trees (Lime and Horse chestnut next door) in the damage to the garage. I requested that in the first instance you and your fellow experts consider the contents of this report and provide a response. Your colleague David Mahon provided your responses via email on 12 February 2021.

I attach the report from Subtilis Consulting Ltd again for your reference. In relation to the responses to this, given in David Mahon's email of 12 February 2021, I have the following comments:

Mr Mahon commented that *'Irrespective of the soil particle matrix, the soils below foundation level include a shrinkable clay fraction which will undergo volumetric change with changes in soil moisture. Moisture abstraction by vegetation will influence the volume of the clay'*. This is agreed, as per clause 6.3 of the Report. However, it is the degree by which volumetric change is likely to occur that is relevant. The clay is not a 'pure' clay in the sense of a 'London Clay' but has a high granular content making this much less susceptible to shrinkage and swelling. The granular content also makes it susceptible to migration of the fines from escape of water from drains.

Mr Mahon stated that *'the roots of the subject horse chestnut T1 and lime T2 have been recovered from below foundations to 1.8m and 2.5m respectively which is the closing depth of the boreholes. Roots may be present below this depth. This confirms the influence of the trees on large volumes of the clay below foundations and extending below the entire footprint of the garage'*. If it is the case that the root systems have extended to below the entire footprint of the garage in line with a radial spread from the tree then it raises the question of why the damage is isolated to just one corner of the garage? Given that the garage structure and the trees have remained in equilibrium since construction of the garage in 1978, what was the trigger for the damage now as opposed to say 10 or 20 years ago when it is likely that the tree would have been at a size to influence the subsoil below the foundations? The pattern of the damage confirms the downward movement to be in the locality of a leaking drain and, on balance, the leaking drain is most likely to be the trigger for the damage.

In relation to the drains, Mr Mahon advised that *'were leaking drains the cause of damage typically progressive downward movement would be seen without the recovery (uplift) phase'*. The below comments in relation to the monitoring are relevant to this point. No reason has been provided as to why the blocked drain has not been repaired given its locality in the area of the damage. If tree root related subsidence was considered to be the cause then any leaking drains would only serve to draw roots closer to this area of the garage. No comment has been provided as to why this drain was left in a blocked condition causing water to overspill the gully into the adjacent ground.

Mr Mahon advised that *'The density of the fine moisture abstracting roots is relatively low close to the tree. As the roots system divides and spreads with increasing distance from the tree, the density of the fine roots will be greater to the left of the garage which would explain the location of the damage. As the roots will be present below the entire garage foundation there will be movement across the garage as opposed to only a portion of it and differential movement is therefore less significant which is reflected to some extent in the levels readings'*. However, this theory does not explain why the garage foundations were not affected after construction given that the trees were in place already and would have continued growing after construction. This would suggest that the section of the garage closest to the trees should have been affected by clay shrinkage subsidence many years ago which as far as I am aware is not the case.

In relation to Level Monitoring, Mr Mahon noted that *'This records a further uplift from 16.11.2021 (except for pin 3) which is consistent with a re-hydrating soil from a dried (shrunken) state due to soil drying by the subject trees'*. The monitoring results

(including January 2021) shows monitor station 3 (to the rear left corner of the garage) showing downward movement since November 2020 which is the opposite of that expected from tree root related subsidence.

Mr Mahon comments that *'It is noted that the amplitudes of movement are not large. At 6.9 of the report its states "The pattern of movement is not consistent with seasonal movement with upward movement recorded between July and September 2020 when downward movement would be expected". Attached are rainfall figures for Reading University located approximately 3km to the south east of the property and therefore considered be a reasonably accurate reflection of the rainfall at the risk address over the same period. The increased rainfall during August explains the uplift recorded in the September readings. The sharp decrease in rainfall during September explains the drop in levels recorded in November. Tree dormancy largely accounts for the rising levels from November to January'*. However, it is noted that the magnitude of movement is consistent with normal seasonal movement occurring to a structure founded on a clay subsoil, i.e. that which would occur without the influence of vegetation.

Mr Mahon stated that *'Whilst the pattern of movement is not entirely typical of the seasonal influence of the trees, the fall and rise of the building can only be explained by the change in volumes of the clay due to soil moisture abstraction by the trees roots'*. In respect of the pattern of cracking damage, as observed on site, the rear left-hand corner of the garage (Monitor station 3) is considered to be the location of downward movement. The level monitoring at this location was recorded as follows;

29-11-19 to 25-01-20: No movement recorded; Expected upward recovery movement
25-01-20 to 11-05-20: Downward movement of 2mm; Expected upward recovery movement
11-05-20 to 13-07-20: No movement recorded; Expected downward movement
13-07-20 to 21-09-20: Upward movement of 1mm; Expected downward movement
21-09-20 to 16-11-20: No movement recorded; Expected upward movement

No matter how much rainfall has occurred over the summer or what the weather conditions were experienced at the property during the level monitoring period, none of the readings are indicative to an episode of tree root clay subsidence. Within the various papers provided by Giles Biddle, one of the most authoritative experts on tree related subsidence, he promotes the use and validation of level monitoring to determine the causative link between foundation movement and trees. The following are extracts from his various papers;

Level monitoring provides definitive information on all of the above, and in most situations is the only investigation which should be necessary. Where vegetation is involved, it produces a characteristic seasonal pattern of foundation movement; subsidence in the summer reaching a maximum usually in September, followed by upward recovery in the winter. No other cause produces a similar pattern. Level monitoring can demonstrate this pattern. One does not need to demonstrate the full cycle; just sufficient to confirm movement is consistent with this pattern. Monitoring upward recovery in the winter is particularly valuable.

None of the data provided by the level monitoring is indicative of tree root related subsidence in this regard.

A further observation noted is the location of the datum for the monitoring which was noted as *'on the main house'*. Given the age of the property (circa 1903) it is likely that the main house is shallow founded and may itself be susceptible to seasonal movement.

This is perhaps borne out by the ‘similarity’ of the pattern recorded between differing points. For example, Points 4 and 5 show an almost exact pattern and magnitude of movement during the 12-month monitoring period. Similarly, points 7 and 10 show a similar pattern and magnitude of movement. This pattern of movement is indicative of the datum moving seasonally rather than the garage and could explain some of the reverse readings recorded. Levels should be measured relative to a fixed datum (reference point) and where no sufficiently stable deep features are available for this purpose, a deep datum should be installed at a suitable depth - this has not been done, making the level monitoring results unreliable. The difference in movement between, for example, point 3 and point 7 of the monitoring stations located at opposing corners of the garage would appear to be very negligible and probably less than 1mm over a 12 month period. The plotting of a graph utilising the front right-hand corner of the garage as the datum (Station 7) to assess the differential movement across the garage structure could be considered.

Mr Mahon concludes that *‘The technical evidence in our view confirms that on the balance of probabilities the trees are the cause of the movement and arising damage’*.

As advised in my letter of 4 February 2021, given the importance of trees and the Council’s current aims to increase canopy cover and work to mitigate climate change, we need to be sure that all tree felling is fully justified. In alleged subsidence cases, it is common practice for the large tree(s) on site to be cited as the cause, or major contributory factor, in the damage based the evidence provided, regardless of what that evidence actually seems to show. It is obviously important to carefully examine the evidence to avoid unnecessary felling of significant trees along with the multiple environmental benefits they provide. We fully appreciate that trees in proximity to dwellings can cause subsidence and would not object to felling if the evidence put forward clearly demonstrated that the tree(s) were the cause. However, given the importance of trees and our wider responsibility to residents of the borough, it is only reasonable that we do not support felling where the evidence does not support it.

On balance, the evidence and particularly that of the level monitoring does not support the influence of vegetation on the damage to the garage. Both the pattern and magnitude of the level monitoring is inconsistent with tree root related subsidence damage and as such the felling of the Lime tree is not agreed. We would be happy to consider a new application once the issues raised in this decision have been addressed.

Approved works

I can confirm that the following proposed works, as detailed in your application, are approved subject to the conditions below:

- Cypress (T13 of TPO; T3 of application) - fell due to poor condition.

Refused works.

- Lime (T11 of TPO; T2 of application) - fell. Felling is refused for the reasons given above.

Conditions

1. Five days’ notice in writing shall be given to the Council prior to undertaking the approved works.

Reason: To ensure that the Local Planning Authority is given sufficient notice of the works to enable the effective monitoring of tree work within the Borough.

2. All tree surgery shall be in accordance with BS 3998: (2010) Tree Work - Recommendations.

Reason: To ensure that all works are carried out in an acceptable arboricultural manner

3. Following the felling of the Cypress tree authorised by this consent, one replacement tree of a minimum 2.5m in height shall be planted within the front garden during the planting season (Nov-March) following or at the time of the felling of the tree, whichever is soonest. The species shall be agreed with the Council prior to purchase and planting.

Planting should be carried out in accordance with clause 10 (Planting) of BS 8545:2014 'Trees: from nursery to independence in the landscape - Recommendations'

Should the replacement tree be removed, die or become severely damaged or seriously diseased, all within 5 years of planting, it shall be replaced by a tree of a similar size and species to that originally planted. Modifications to the requirements of this condition must be agreed in writing with Reading Borough Council Natural Environment Team.

PLEASE NOTE: The requirement to replant is the responsibility of the tree owner even if the application was submitted by another person.

Reason: To retain the present visual amenity value of the area and ensure continuity of tree coverage.

Informatives

1. You are advised that, in accordance with Part 4, 17 (4) of The Town and Country Planning (Tree Preservation)(England) Regulations 2012, this decision is valid for one pruning operation (as per the approved specifications) to be undertaken within two years from the date of this notice, after which the consent lapses and a new application will be required.

2. Removal of dead or dangerous wood: This does not require the formal consent of the Council. However written notice must be given 5 working days in advance of removing dead wood. Where a branch is deemed to be 'dangerous', i.e. where works are 'urgently necessary to remove an immediate risk of serious harm', you are required to give notice to the Council 'as soon as practicable after the works become necessary'.

3. Disturbance of wildlife: It is an offence under the Wildlife and Countryside Act 1981 (as amended) to disturb roosting bats or nesting birds. It is advisable to consult your tree surgeon/consultant to agree an acceptable time for carrying out any work. Wildlife and habitat controls are administered by Natural England who can be contacted on 0300 030 6000

4. Tree work consents on land not owned by the applicant: It is strongly recommended that the owner of the tree be advised of any proposed works. The owner's permission must be sought if the tree works involve work past the boundary line. This consent does not in any way imply that this Council has informed the owner of sought permission or will condone the use of consents to force any landowner to grant such permission.

5. Crown lifting of trees over the footpath and carriageway: If the clearance of vegetation overhanging the highway only involves the removal of branches to give a ground clearance to the statutory heights of 2.7m over the footpath and 5.5m over the road, this does not require formal consent from the Council. You are advised, however, to give notice to the

Council of these intended works in order that they can be agreed.

If you wish to appeal against the Council's decision to refuse the felling of the Lime tree or against conditions attached to the approved felling of the Cypress, please contact the Planning Inspectorate within 28 days of receipt of this letter to obtain the relevant forms:

Trees and Hedges
Room 3A Eagle Wing
Temple Quay House
2 The Square
Temple Quay
Bristol
BS1 6PN

Telephone: 0303 444 5570

E-mail it to: treeandhedgeappeals@planninginspectorate.gov.uk

If you suffer any loss or damage as a result of this refusal of consent, you may be entitled to recover compensation from the Council. If you wish to make a claim you must do so within 12 months from the date of this decision (or, if you appeal to the Secretary of State, within 12 months from the date of his decision). Claims should be made in writing to the Insurance Section, Reading Borough Council, Civic Centre, Bridge Street, Reading, RG1 2LU.

If you require any further assistance, please do not hesitate to contact me on the above number.

Yours sincerely

Sarah Hanson

Sarah Hanson
Natural Environment Officer

C.c. Mr Raeburn-Ward, 77 Chazey Road