

2.0 SITE INVESTIGATIONS

2.1 The site investigation was undertaken by Catalyst Claims on 4th March 2019 (Ref: 103297) and included the excavation of a trial pit extended by hand auger to the rear conservatory.

2.2 The investigation report identifies the conservatory wall to be constructed upon a 200mm thick concrete foundation which projects 130mm from the face of the wall. The underside of the foundation is 280mm below ground level and bears onto the following subsoils:

■ 280mm ■ 100mm - Firm very moist brown slightly sandy CLAY with roots.
■ 800mm ■ 500mm - Very firm dry crumbly light brown slightly sandy CLAY with roots.

■ 1500mm ■ 780mm - Very firm very dry brown slightly sandy CLAY with roots.
■ 1780mm ■ 800mm - Very firm very dry crumbly brown slightly sandy CLAY with roots.
CLAY.

2.3 Roots recovered from below foundation level were sent to a laboratory for identification testing and were found to belong to QUERCUS (Oak) or the related CASTANEA (Sweet Chestnut).

3.0 MONITORING

3.1 Not considered necessary.

4.0 CAUSE OF DAMAGE

4.1 The results of the site investigations confirm that the cause of subsidence is root-induced clay shrinkage. The clay is plastic and thus will shrink and swell with changes in moisture content. Roots have extracted moisture below the depth of the footings, thus causing differential foundation movement to occur.

4.2 Roots were recovered from below the foundation. We consider these roots emanate from the Oak Trees growing beyond the rear boundary. We consider these trees are the predominant cause of movement.

4.3 The conservatory was built around 2000. The relevant minimum construction requirements at the time, in accordance with NHBC Guidelines (1995) was for foundations to be a minimum of 2190mm. This calculation has been made based on a low shrinkable clay soil. If the clay is a moderate or a highly shrinkable clay, then the depth of the foundation will need to be greater. The absolute minimum when building on a clay soil is 750mm (without the influence of vegetation).