FAO Mr D. Beattie
Alton Apples Limited
Ivy Cottage
Tythe Barn
Alton
ST10 4AZ

27th June 2017

Dear Duncan,

Re: Disease and loss of newly planted trees

During my recent inspection, it is clear that at least 80 of the new trees have died and many others are clearly diseased. Some are exhibiting signs of Mildew and other Scab and Canker which has appeared this season. (See photographs)

Many of the remaining trees are not thriving and some are showing decline with dead shoots and branches. The growth on some of the others is stunted and not growing well.

Research has shown that tree loss is a major problem when old orchards are re-planted. It is well known and commonly call “Replant Disease”. I have quoted below from an article published a while ago by East Malling Research who are the leading experts in fruit production.

“Poor establishment of apple trees grown in soils previously planted with apple trees is a world-wide problem that affects the production of both rootstocks and fruit. Symptoms of Apple replant disease (ARD) are manifested within three months of replanting and include uneven growth, stunting and shortened internodes aboveground and discoloured roots, root tip necrosis and reduced root biomass belowground.”

Defra have produced an Apple Best Practice Guide which includes some advice on how to deal with this problem but the main issue with their advice is that it requires the use of chemicals to sterilise the soil and this would not be conducive to the goal of producing an Organic Juice for the trees. I have again quoted from their advice below. You can see that Defra used to provide a service to test soils but this is no longer available.

“Previously it was possible to test potential new orchard sites for replant disease, but the test is no longer provided as a service.”

“Soil fumigation pre-planting can reduce the effects of replant disease. The most effective fumigant is chloropicrin, which can only be applied by contractor. Pre-planting drenches with formalin are also usually effective.”

Neither of the above would be compatible with the Soil Association requirements and therefore the aim to achieve "Organic Status" could not be achieved for many years
It is now clear that the number of trees left will not be sufficient to produce enough apples to make this site viable. Planting more trees within the spaces left by the dead trees would be unlikely to be successful as the same results are likely to occur. Likewise, it would be inadvisable to alter the spacing and plant within the previous rows of removed trees as the soil is still likely to be contaminated.

An alternative solution would be to clear all the trees from the site and leave it "Fallow" so that the organisms that spread the disease die out. Unfortunately, I cannot find any clear research into how long it would be necessary to leave the land "Fallow" before it would be safe to plant more trees. Even if this was a relatively short period of say 5 years this would clearly not be viable

The neighbouring field has not been planted with fruit trees to my knowledge and therefore this site would not be susceptible to "Replant Disease". In my opinion, it would be much better to start again and establish a new orchard on "Virgin Soil". This eliminates the risk of not only "Replant Disease" but also other diseases that spread via spores which over winter either in leaf litter or in the soil.

Yours sincerely,

H. E. Williams

H. E. WILLIAMS.
TREE HERITAGE Ltd.

References

Defra — Apple Best Practice Guide
East Malling Research — Apple Replant Disease

Shoot from typically diseased tree.

Shoot showing mildew as well as dying shoot.

Another tree showing dieback.