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**Town and Country Planning Act 1990**

**Proposed Development:  
Land between Woodchurch Road  
and Appledore Road,  
Tenterden  
Kent**

**REBUTTAL of Proof of Evidence of Mr Phil Cook**

**by**

**Simon R. M. Jones, Dip. Arb. (RFS), FArborA, RCArborA**

**January 2022**

**Local Planning Authority Ref.: 21/00790/AS**

**Planning Inspectorate Ref.: APP/E2205/W/21/3284479**

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## APPENDICES

1. Proposed section plans

# **1. INTRODUCTION**

## **1.1. Proof of evidence**

1.1.1. This document comprises rebuttals of points made by the Ashford Brough Council Tree Officer Mr Phil Cook, in his proof of evidence. These are in relation to reasons for refusal nos. 3 and 4 (a).

## 2. Reason for refusal no. 3

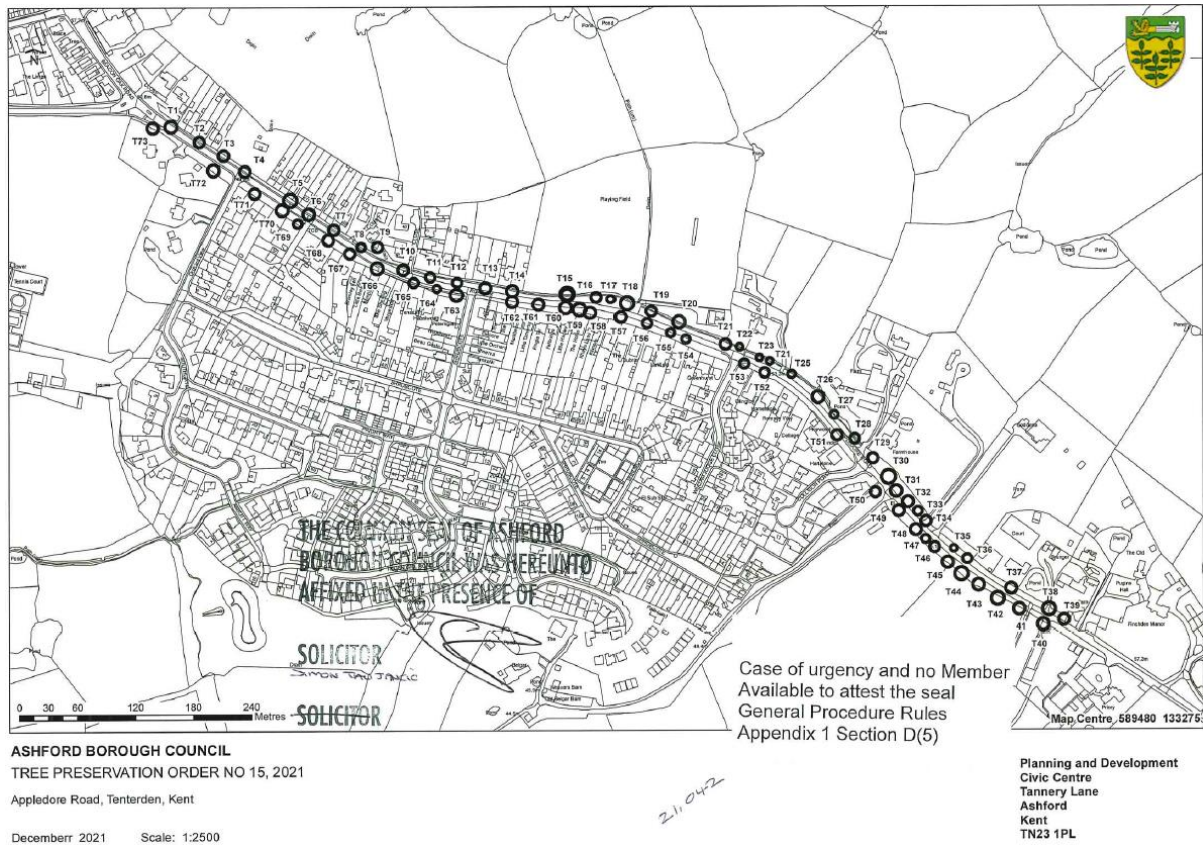
2.1.1. In sections 4 and 6 of his evidence Mr Cook sets out his views on the proposed loss of the horse chestnut tree no. 43, in terms of its impact on the local landscape, the proposed mitigation and the degree of harm that would result. At paragraph 6.6 he recognises that in my view, the loss of this tree is “the least harmful” option but makes no connection with its removal being necessary to provide access to the site.

2.1.2. One recent example of a tree’s removal being necessary to provide site access occurred in the appeal decision (ref: APP/R3650/W/21/3278196) on ‘Land west of Loxwood Road, Alford, Surrey, GU6 8HN’, where at paragraph 68 of the decision notice allowing the appeal, issued on the 11th January 2022, the Inspector states: “The tree removal is necessitated in order to create the access to the site for the development. I note that there is no alternative suitable access proposed which would avoid a need for tree loss.”

2.1.3. The Inspector concludes this paragraph by stating that “In my view the loss would not impact on the reasonable enjoyment of the public” and then concludes at paragraph 71 that “It would not be appropriate for T93 to be retained given the necessity of removal to make way for the access, the considerable retention of trees, and the proposed planting.” This demonstrates that the tree’s removal was considered appropriate in light of it being necessary to create the site access, there being no other option for access that would avoid tree loss, its loss not impacting unreasonably on public amenity, there being considerable retention of trees on the site as a whole, and there being appropriate mitigation measures by way of replacement planting. All these factors apply in this Appeal in the case of tree 43.

2.1.4. At paragraph 6.3 of his proof (beneath Photo 1), Mr Cook states that the cohesive nature of the avenue is demonstrated by reference to the map defining the trees protected by the recently-made Tree Preservation Order, TPO/21/00015. This map is shown below at Figure 1.

2.1.5. Mr Cook asserts that this map shows the avenue pattern is “very well defined despite some historical losses.”



**Figure 1: Map included within TPO/21/00015**

2.1.6. In terms of demonstrating the pattern of the avenue, I consider the TPO map is ineffective. This is because the map is based on an OS plan onto which the trees have been plotted, seemingly by eye, with accuracy sufficient for the purposes of identifying which are covered by the TPO, but not with the level of accuracy to inform an accurate impression of pattern or composition; and because the TPO covers mature, semi-mature and recently-planted young trees, yet the map doesn't distinguish between these and doesn't provide an accurate depiction of the scale of the trunks or of the canopies of these specimens.

2.1.7. To gain a more accurate depiction of the pattern of the avenue, the Avenue Tree Location plans (SJA AVTL 21586-091 (west, central and east) at Appendix 3 of Mr Jones' proof of evidence should be used, as these benefit from:

- being based on a topographical survey and therefore tree locations being shown accurately;
- tree trunks being shown to scale;
- tree canopies being shown to scale;

- original, now mature trees being identified separately (by green-hatched canopies);
- the sites of former original trees, now removed, being shown (by red crosses);
- newly planted trees, consistent with original avenue trees in terms of species and location being shown (by yellow hatching);
- newly planted trees, not consistent with original avenue tree in terms of species and location being shown (by brown hatching; and
- adjacent groups of trees, outside the highway boundary being shown (by turquoise/cyan hatching).

2.1.8. At paragraph 6.3 beneath Map 1 of Mr Cook’s proof, he states that it “can be clearly seen that the removal of T43<sup>1</sup> would have a serious impact on the local landscape of Appledore Road” but the TPO map is misleading in this respect as it doesn’t show any off-site trees, including the mature oaks nos. 39 and 46, to the north-east and the north-west of tree T43, as referred to in paragraphs 4.5.1 and 4.5.2 of Mr Jones’ proof.

2.1.9. Mr Cook’s reliance on the TPO map, which shows semi-mature and young trees not part of the original planting, to demonstrate the cohesive nature of the avenue is undermined somewhat in the following paragraph (6.4) of his evidence where he states that the wording of “pattern” in Policy ENV3a (b) “is salient in the context of the avenue’s discernible composition regularity of Limes and Horse Chestnut”. As noted at section 4.2 of Mr Jones’ evidence, the “composition regularity” of lime and horse chestnut has been fragmented in recent decades, with 35 of the original trees no longer being present.

2.1.10. It is interesting to consider why the LPA has considered it expedient to make a TPO on the avenue trees at this time. LPAs don’t usually consider it necessary to protect with TPOs trees that are in public ownership, unless there are specific

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<sup>1</sup> For the avoidance of doubt, this tree should properly be termed “tree no. 43” (the tree survey number) or “T18” (the TPO number).

reasons to do so. Government guidance on the making of TPOs<sup>2</sup> states “it is unlikely to be necessary to make an Order in respect of trees which are under good arboricultural or silvicultural management”, which suggests that it wouldn’t ordinarily be expedient to make an Order on land in the ownership of a body that is both well-informed and capable of implementing regular management, such as Kent County Council, which has a statutory duty to manage these trees. This raises the question of why this Order has been made at this time.

2.1.11. I note one planning application currently under determination (51-57 Appledore Road, ref. 21/01723/AS) that includes an access onto Appledore Road that could impact the adjacent avenue tree (horse chestnut no. 146, TPO no. T12); but in respect of that application it might have been more appropriate to make a TPO on the three non-highway trees shown to be removed as part of that application (hornbeams nos. 147 to 149), one of which is shown as a ‘notable’ specimen on the ancient tree inventory (ATI). So this doesn’t explain how this application may have prompted the making of an Order on the entire avenue.

2.1.12. It should be remembered that the presence of a TPO on a tree does not mean that that specimen necessarily meets the criteria for a TPO; furthermore, a tree that has been made the subject of a TPO is not, for this reason alone, worthy of protection<sup>3</sup>. A tree should be protected by a TPO if it is of amenity value; it does not acquire value or additional value merely because it has been protected.

2.1.13. I advised my clients on the appropriateness of this Order, and on whether we should submit an objection to it. Whilst it includes some trees that probably do not yet meet the criteria for the making of a TPO, in respect of the subject of reason for refusal no. 3, the horse chestnut no. 43, I concluded that this tree does meet the criteria and so an objection to the TPO on the grounds of this specimen could not be substantiated.

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<sup>2</sup> Guidance: Tree Preservation Orders and trees in conservation areas (6 March 2014). <https://www.gov.uk/guidance/tree-preservation-orders-and-trees-in-conservation-areas>

<sup>3</sup> *Robinson v East Riding of Yorkshire Council* [2003]

2.1.14. The Order covers a young lime tree (T17) that isn't included in the SJA tree survey schedule, as it wasn't present at the time (August 2017) and was planted between the 23<sup>rd</sup> April 2020 (not shown on Google Earth aerial image) and the 28<sup>th</sup> January 2021 (when I first observed it). This means it was planted after the previous planning application (19/01788/AS) had been registered on the 20<sup>th</sup> December 2019. Its location on the north side of the road, close to mid-way between the original trees nos. 43 and 47 (TPO nos. T16 and T18) doesn't replicate the pattern of the original avenue and has been planted in a more densely-treed section of the avenue rather than in locations elsewhere where it would have had a greater impact (for example, where limes are missing opposite limes nos. 109, 150 or between trees nos. 2 and 27).

2.1.15. This tree is less than a metre from the kerb line of the proposed site access, so it wouldn't be retainable in this location in the event the Appeal is allowed. However, the tree is small enough to be transplanted successfully and so it won't be lost.

2.1.16. At 6.5 ii) of his evidence, Mr Cook notes that any replacement trees would require 20-30 years to have any meaningful amenity presence in the wider avenue context. While replacement trees will certainly have a less significant presence in the avenue than the mature tree no. 43, it is inconsistent that Mr Cook appears to rely on those planted recently to support his argument that the avenue has a cohesive nature, yet discounts trees to be planted in the event the Appeal is allowed as unlikely to have any "meaningful presence". Presumably therefore, his view is that the recently-planted lime (T17) referred to above, also has no "meaningful presence" at present.

2.1.17. At paragraph 6.5 iii) Mr Cook suggests that the carbon capture and ecosystem services provided by the tree would require a significant number of trees to become mature before offsetting is achievable. However, he provides no evidence to support this or to quantify it. In respect of carbon capture, it is certainly the case that this specimen will be storing carbon; and that young newly-planted trees will not.



2.1.18. The carbon content of a tree is approximately 50% of its biomass<sup>4</sup>, so by estimating the carbon content by calculating the mass of the tree based on its trunk diameter (c. 7,600kg) and then dividing this by two, we might reasonably estimate that tree 43 might contain at least 3,800kg of carbon<sup>5</sup> (see **Table 1** below). Other ways of estimating carbon storage, based on species and age, suggest this specimen might be storing between 4,000 to 5,000kg of carbon.

| Trunk diameter (mm) | Circumference (cm) | Dry weight (kg) | Carbon stored (kg) |
|---------------------|--------------------|-----------------|--------------------|
| 5                   | 1.5                | 0.009           | 0                  |
| 8                   | 2.5                | 0.04            | 0                  |
| 16                  | 5                  | 0.23            | 0                  |
| 32                  | 10                 | 1.4             | 1                  |
| 64                  | 20                 | 9               | 5                  |
| 95                  | 30                 | 27              | 14                 |
| 127                 | 40                 | 82              | 41                 |
| 159                 | 50                 | 106             | 53                 |
| 239                 | 75                 | 310             | 155                |
| 318                 | 100                | 668             | 334                |
| 398                 | 125                | 1,208           | 604                |
| 477                 | 150                | 1,964           | 982                |
| 557                 | 175                | 3,253           | 1627               |
| 637                 | 200                | 4,221           | 2111               |
| 716                 | 225                | 5,771           | 2886               |
| 796                 | 250                | 7,641           | 3821               |
| 875                 | 275                | 9,842           | 4921               |
| 955                 | 300                | 12,410          | 6205               |
| 1114                | 350                | 18,700          | 9350               |
| 1273                | 400                | 26,674          | 13337              |

**Table 1: Carbon storage of trees based on trunk diameter. Based on Natural Resources Wales carbon storage calculator**

2.1.19. If we use the mean figure of 4,500 kg, then the 49 remaining original avenue trees might between them be storing c. 220 tonnes of carbon. The loss of the horse chestnut would therefore mean a 2% reduction in the carbon stored by the avenue.

2.1.20. In terms of newly planted trees, their ability to sequester and store carbon is very small in comparison, and current research suggests that almost no carbon is stored in trees of less than 20mm diameter, and that trees of 50mm diameter,

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<sup>4</sup> MATTHEWS, GEORGE. (1993) "The Carbon Content of Trees". FORESTRY COMMISSION TECHNICAL PAPER 4.

<sup>5</sup> Natural Resources Wales: eng-worksheet-carbon-storage-calculator.pdf (naturalresources.wales)

(possibly the size of heavy standard trees to be planted as replacements), might be capable of storing around 4kg. So, to replace instantly the carbon lost by the removal of tree 43 is clearly unfeasible, as it would require the planting of over a thousand replacements. This is one of the reasons why the location of the site access was chosen, so that it required the removal of no more than one of the mature avenue trees and limited the loss of other mature trees to just one other specimen (no. 46).

2.1.21. However, Mr Cook's assertion that the carbon storage lost by the removal of tree 43 would require a significant number of trees *to become mature* (my italics) is not the case. Clearly, it would only take one tree to become mature to replace the amount of storage lost by the one mature tree to be removed. If say, 36 new trees were planted, together they would have developed the capacity to store the same amount of carbon as tree 43 does currently once their trunks have grown to around 200mm diameter (4,500kg divided by 36 = 125kg of carbon each). Trees of this size would be only semi-mature, not mature; and if lime or horse chestnut, might be in the region of 30 years old (so perhaps around 25 years after planting). If other less slow growing species are planted, this timeframe might be reduced by five or six years.

2.1.22. If the loss of this tree's carbon capacity is set against the amount of proposed tree planting across the whole site, then this should be seen as only a small reduction, which will be quickly compensated for, in years rather than in decades.

2.1.23. Nevertheless, this comparison doesn't show the full picture. The carbon within tree 43 would not necessarily be converted into carbon dioxide: this will depend on what is done with the tree once it is removed. If the tree is neither burned (which releases the carbon into the atmosphere as carbon dioxide CO<sub>2</sub>), nor buried, (in which case the carbon will be released as CH<sub>4</sub> (methane) rather than CO<sub>2</sub>, which is around 30 times more harmful as a global warming gas), but is chipped and used as mulch, the carbon will be tied up in the soil. If the chips are used on site or as mulch around the bases of other avenue trees, the carbon would remain present, and by enriching the soil, would encourage root growth of these specimens.

2.1.24. Mr Cook's referral to the loss of ecosystem services provided by the tree is normally considered to relate to carbon storage and sequestration (as discussed above), the reduction of surface water run-off by the interception of precipitation by

their canopies and the amount of air pollution removal.<sup>6</sup> As with his comment on carbon, Mr Cook provides no evidence to support this assertion.

2.1.25. Despite this, it is clear that the canopy of tree 43 will be contributing to the interception of both precipitation and air pollution; and whilst the loss of these functions may be regrettable, this has been minimised by restricting the number of mature avenue trees to be removed to just this one specimen; and by this specimen being surrounded by so many other trees (as set out at paragraphs 4.5.1 to 4.5.3 of Mr Jones' evidence). I am not qualified to comment on the extents of reduction of water run-off and air pollution caused by its removal, but these impacts will be minimised by the presence of so many other mature trees in proximity to this specimen.

Indeed, the canopy of tree 43 is growing into the canopies of the avenue horse chestnut (no. 44) on the south side of the road and the mature oak (no. 39) to its north-east and suppressing the growth of these to some degree. In the case of tree 39, it is significantly shading the crown of that specimen. If tree 43 is removed the crowns of these two trees will no longer be suppressed or shaded and are likely to put on additional growth in these directions, which will increase their ability to intercept precipitation and air pollution, thus mitigating the removal of tree 43 in this regard.

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<sup>6</sup> HAND, KATHRYN L., DOICK, KIERON J. and MOSS, JOSEPH L. (2019) "Ecosystem services delivery by large stature urban trees". Forest Research Report

### 3. Reason for refusal no. 4 (a)

3.1.1. At paragraph 8.1 of his evidence, Mr Cook states that ancient examples of field maples are not very common but provides no evidence of reference to substantiate this. This is not the case in my experience, and I haven't seen any evidence that corroborates this. It should be remembered that there is one other veteran field maple on the site: no. 353, located on the east boundary of field F11.

3.1.2. In section 8 of his evidence Mr Cook sets out the reasons why he considers the proposed sports pitch would lead to the deterioration or even the possible loss of the field maple. The central reason he gives for this is that the pitch would lie within a circular buffer zone based on 15 times the diameter of the former tree's stool. I have dealt with this at sections 5.4 and 5.5 of my proof of evidence; but there are two points of note are worthy of comment.

3.1.3. Mr Cook points out that the Standing Advice on ancient woodland and veteran trees (CD5.8) doesn't provide for the morphing of buffer zones and it is correct that the advice states only that the size and type of buffer zone should vary, depending on the scale and type of development and its effect on ancient woodland, ancient and veteran trees and on the character of the surrounding area. In contrast the morphing of root protection areas is encouraged by the British Standard BS5837 (CD5.7).

3.1.4. It is interesting to note therefore that under the 'Buffer zone recommendations' heading, the recently released standing advice (14<sup>th</sup> January 2022) states "For ancient or veteran trees (including those on the woodland boundary), the buffer zone should be at least 15 times larger than the diameter of the tree. The buffer zone should be 5 metres from the edge of the tree's canopy if that area is larger than 15 times the tree's diameter. This will create a minimum root protection area." The inclusion of the final sentence of this paragraph demonstrates the primary aim of a buffer zone is to protect tree roots.

3.1.5. Accordingly, it cannot be, as Mr Cook argues, that deterioration or loss of this ancient tree is inevitable for no other reason than proposed development is within the standard buffer zone. To demonstrate likely deterioration or loss it needs to be demonstrated that there will be direct or indirect root damage to a degree sufficient for

this to be inevitable; and relying on simply whether the development is within the buffer zone is insufficient, especially in light of the trial pits and the ground radar investigation, which inform us of where root distribution and density are, rather than where they might be.

3.1.6. As the standing advice refers to a buffer creating a “minimum root protection area”, about which the British Standard BS 5837 (CD5.7), states (at 4.6.2) that if “rooting has occurred asymmetrically, a polygon of equivalent area *should* (my italics) be produced”, Mr Cook’s point at paragraph 9.9 of his evidence that the standing advice doesn’t stipulate that buffers can be morphed in shape should not be accorded significant weight, as the evidence before us demonstrates that the rooting area of this tree is not circular in shape.

3.1.7. In any case, whatever the type, size or shape of a veteran tree buffer and whatever the type of development, the standing advice makes it clear in the ‘Making decisions’ section that “You should make decisions in line with paragraph 180 (c) of the NPPF”; that is, will the proposals result in the loss or deterioration of the ancient tree?

3.1.8. On this basis, the type of development needs to be considered: in this case there is no construction or building proposed: it is merely the change from agricultural to recreational use, and only the removal and replacement of the existing turf layer. The section drawings by STRI at **Appendix 1** of this statement show the changes in levels and the root depths at the closest points of the pitch to the tree, demonstrating no severance of roots greater than 20mm in diameter.

3.1.9. These drawings show that finished levels of the proposed pitch will in all cases be above existing ground level and will not need any excavation other than the removal of the 50mm deep existing turf layer. Where soil levels need to be increased, this will be done using topsoil (rather than sub-soil) taken from elsewhere on field F10, as set out in the TGMS report at Appendix 6 of Mr O’Grady’s Sports Facilities and Open Space Supporting Statement (CD1.7). Within the RPA or buffer zone, the method by which this is installed can be subject to an appropriately worded condition to ensure no damage to the tree’s roots or the soil beneath the pitch.

3.1.10. At paragraph 8.6 Mr Cook states that the raising of soil levels will “have an effect on the soil moisture and gas exchange in the rooting environment of T381; yet again he provides not evidence or quantification of this. A reading of the Outline Maintenance Recommendations at Appendix ii of the TGMS report at Appendix 6 of Mr O’Grady’s Sports Facilities and Open Space Supporting Statement (CD1.7) show that the pitch will be aerated on at least two occasions a year (in the spring and autumn) with 18mm diameter solid tines to a minimum depth of 200 mm below the surface. The recommendations then suggest that additional aeration treatments “(e.g. slitting or spiking) during the playing season would also be highly beneficial to maintain surface drainage rates”.

3.1.11. As Field F10 appears not to have been ploughed, aerated or otherwise managed for several years, if not decades, accordingly shows little evidence of organic matter and is described as deficient in core nutrients, it appears that contrary to Mr Cook’s assertion, the change of use to a pitch will actually improve soil moisture and gaseous exchange in the soil in an area suitable for root growth. This is likely to encourage root growth and root branching, which will be to the benefit of the tree, rather than lead to its deterioration.

3.1.12. Mr Cook continues with this theme at paragraph 9.9 of his evidence, where he states that “management changes from agricultural to recreational would be over a relatively short timescale and represent a significant intensification of use”. I don’t agree that there would be a significant intensification of use: as I pointed out in my evidence at paragraphs 5.10.3 and 5.10.4 horticultural machinery is likely to cause less compaction than agricultural machinery, and the compaction caused by humans is likely to be no worse than compaction caused by sheep. But the point is that an intensification of use is not inevitably bad in terms of impacts on the tree’s root system; intensification of use will be beneficial in this case, as it will lead to better soil management beneath the pitch, which will encourage root growth.

## 4. Conclusions

4.1.1. Despite Mr Cook's view that the loss of the horse chestnut no. 43 would be detrimental to visual character and could not be mitigated, in paragraphs 2.1.1 to 2.1.3 I have demonstrated that a precedent exists for removal of a mature tree if this is necessary to create a site access, there is no other option for access that would avoid tree loss, its loss will not impact unreasonably on public amenity, there being considerable retention of trees on the site as a whole, and there being appropriate mitigation measures by way of replacement planting.

4.1.2. In paragraphs 2.1.4 to 2.1.9 I have shown that Mr Cook's reliance on the TPO map to demonstrate the cohesive nature of the avenue is undermined not only by the inadequacies of this map, but also by the fact that 35 of the original plantings are no longer present and that therefore the "composition regularity" of lime and horse chestnut, as described by Mr Cook, has been significantly fragmented.

4.1.3. In paragraphs 2.10 to 2.14 I point out that the imposition of the recent TPO does not give any additional value to the horse chestnut tree no. 43. This applies also to the small recently-planted lime (T17), which using Mr Cook's terminology, currently has "no meaningful presence",

4.1.4. At paragraphs 2.1.14 to 2.1.23 I have shown that whilst Mr Cook's (unsubstantiated) assertions that the loss of tree 43 will require a significant number of replacement trees to compensate fully or immediately, that this will be mitigated by increased growth by adjacent trees currently suppressed by tree 43, by the proposed replacement planting within the site and by the replacement planting, to be agreed, within the highway land of the avenue.

4.1.5. Regarding the impact of the proposed sports pitch on the field maple no. 381, I have shown at paragraphs 3.1.2 to 3.1.7 that regardless of the shape, location or extent of the buffer zone, deterioration or loss of this tree cannot be seen as inevitable for no other reason than proposed development is within that buffer zone. I have pointed out that the government guidance/standing advice on ancient and veteran trees makes it clear that above all, decisions should be made line with paragraph 180

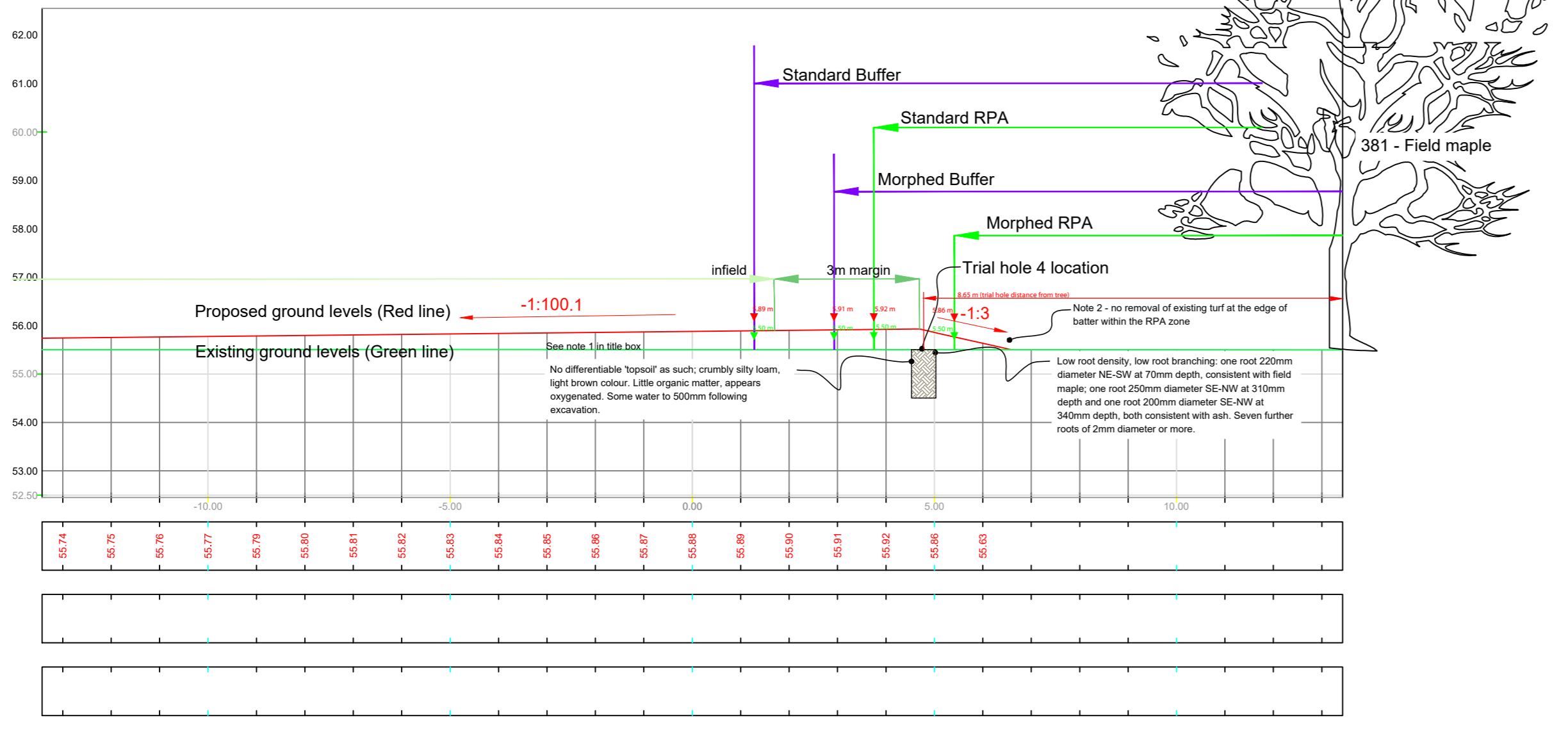
(c) of the NPPF; that is, based on whether the proposals will result in the loss or deterioration of the ancient tree.

4.1.6. At paragraphs 3.1.8 to 3.1.12 I have shown that Mr Cook's assertion that the proposed sports pitch will lead to the deterioration of this tree is unfounded on the basis of that no construction is necessary, no excavation is necessary other than the removal of the existing turf layer, the maintenance proposed will actually improve soil moisture and gaseous exchange beneath the pitch and that there will be no significant intensification of use that might have a detrimental effect on the tree.

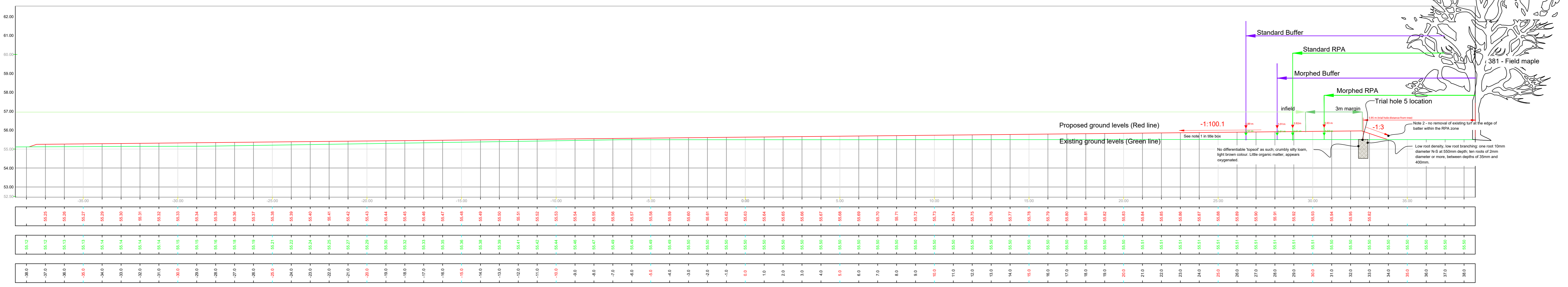


## **APPENDIX 1**

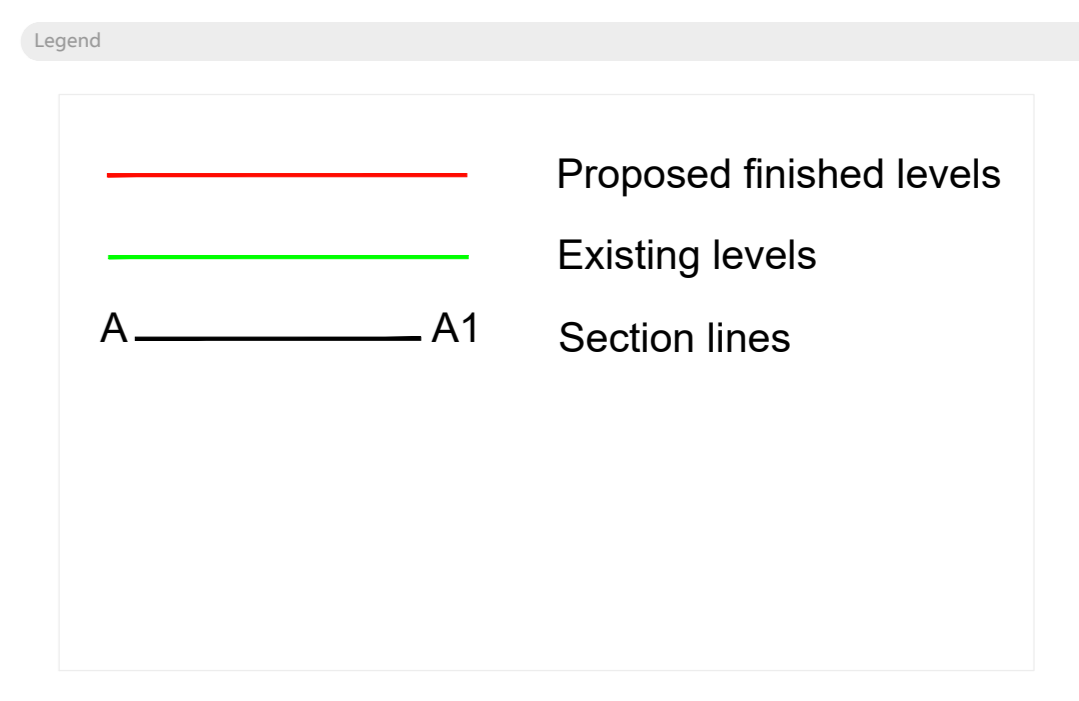
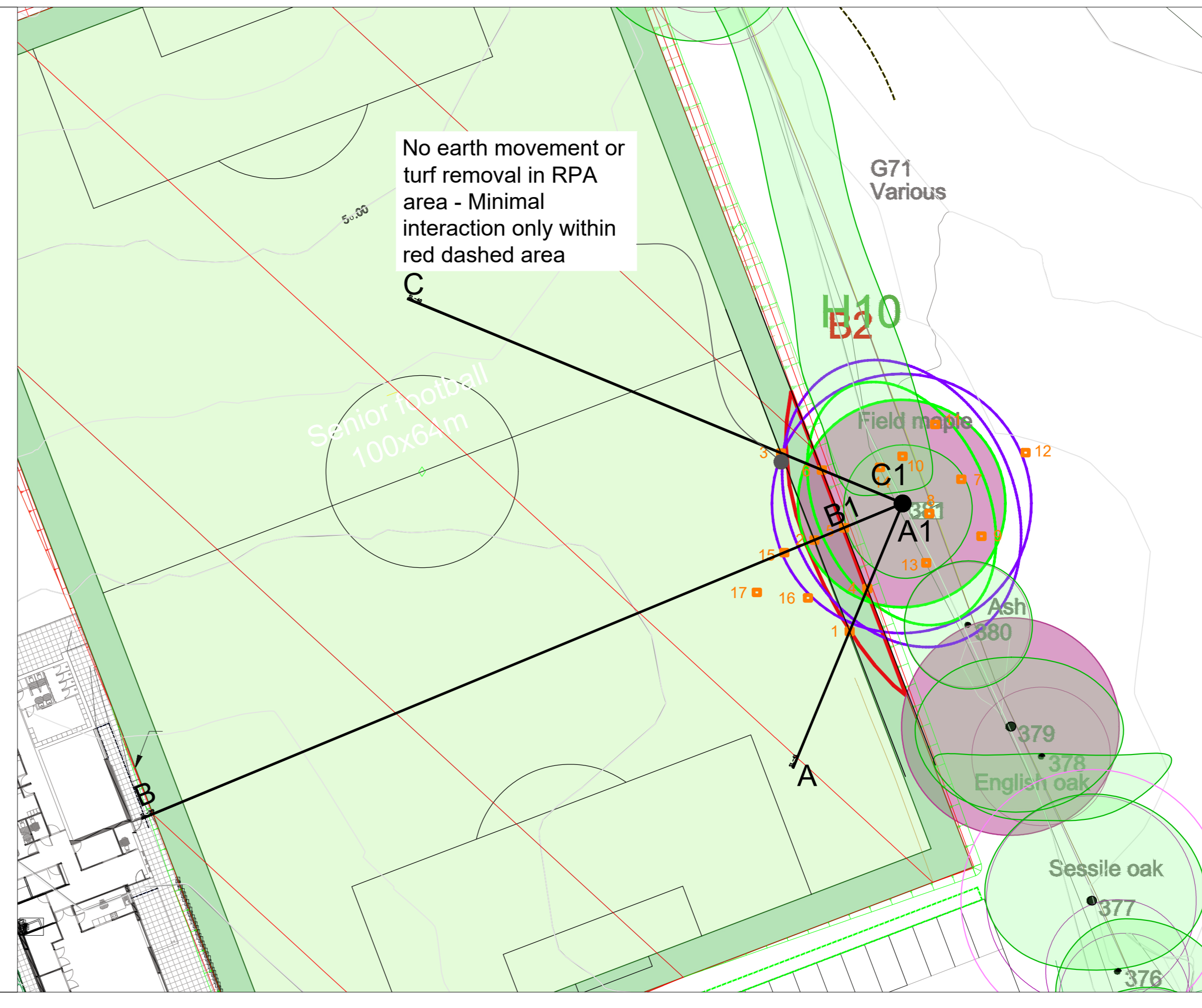
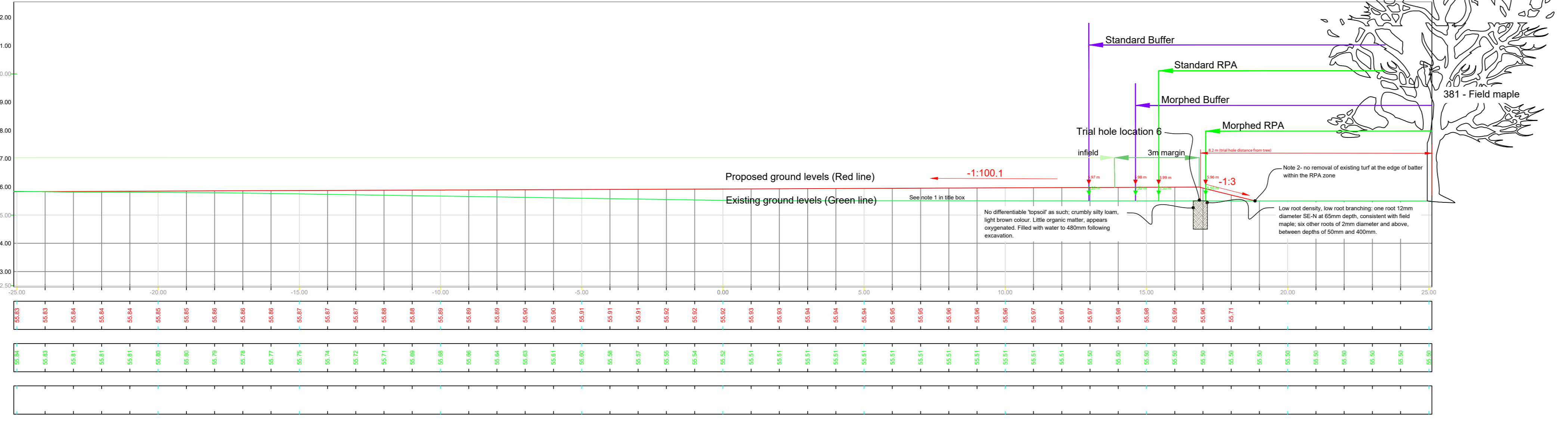
AA1 - Trial hole 4



B-B1 - Trial hole 5



C-C1 - Trial hole 6



revision history

| revision | date | by | checked by | desc |
|----------|------|----|------------|------|
|          |      |    |            |      |

Draft For Information

Notes:  
 1. Existing ground vegetation will be stripped by 50mm in preparation for proposed levels design - Designed by others.  
 2. Existing grass will not be stripped at the edge of the pitch surround in RPA.

This drawing, design and information is subject to copyright of the Sports Turf Research Institute (STRI) and used under license by the client. It is the contractor's responsibility to ensure the location of all services prior to the commencement of work. Setting out shall be the responsibility of the contractor, any discrepancies shall be reported and dealt with at the earliest opportunity.

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