



Viewpoint Visualisations for Residential Development at Christmas House, Shalford

Mr T. Shea

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1. Introduction

Thomson Environmental Consultants were commissioned by Mr Toby Shea to undertake a Landscape and Visual Appraisal (LVA) of land to the rear of Christmas House and Crossways, Chinthurst Lane, Shalford, Surrey in support of a full planning application to be submitted to Guildford Borough Council for the erection 2 new dwellings. The scope also included the production of computer-generated visualisations related to views considered by some local residents to be particularly sensitive.

Thomson has previously undertaken similar work in relation to the planning application submitted earlier in 2020 (Ref. 20/S/00785). The current work has followed the same methodology as the for the previous scheme and makes extensive reference to the site visits and contextual observations made for that scheme as they remain directly relevant to the current proposed development.

The LVA report¹ for the current scheme has concluded that the site has very limited visibility from the surrounding area as a result of the intervening development and mature vegetation. Views of the site are limited to local views (under 0.5km distant) and these are heavily filtered by adjacent development and vegetation. The only publicly available view where part of the site is clearly visible is the view from Chinthurst Lane along the site access. Even in this view most of the site is obscured by adjacent development and vegetation. No medium distance views of the site (0.5km to 2.0km from the site) or long-distance views (from more than 1km away) were found.

The current assessment of visual effects notes only one of Minor Significance which was from Chinthurst Lane looking up the driveway of Christmas House to the site. Visual effects from the Shalford Tennis Club and from the public footpath (No.262) have been assessed as Not Significant.

2. Visualisations

2.1 Methodology

Thomson's GIS Team used ESRI Inc. (the world's leading GIS provider) software (ArcGIS Pro 3D Scene) to create 3D maps and visualisations of data mapped in a traditional 2D manner. For this project the detailed AutoCAD tree survey and proposed buildings footprints were 'dropped' into an Ordnance Survey base map and rectified to their exact position on the earth. The base map was then laid on a topographic framework to give height and contours and to ensure accurate levels.

Height data was added to each building and the buildings were then 'extruded' - literally extended up from the ground - for the proposed 5 units of housing an eaves height was added, followed by a roof line height. It should be noted that the roof line is indicative of the highest point of the roof and is not sloped to reflect reality - this means in fact the roofs are likely to be less intrusive.

Additional field surveys were then carried out by environmental practitioners. These marked the location of existing trees and hedges nearby to the site and in the line of sight

¹ Land at Christmas House, Shalford – Landscape and Visual Appraisal, October 2020, prepared by Viridian Landscape Planning

(across the field from a gate on Footpath 262 and from the tennis club). For the bowling club observations were made from outside the green as the club is private so access was not possible.

As several months had passed since the previous surveys were done, a follow up site visit was undertaken on 7th October 2020, the purpose of which was to assess the extent of growth of the cypress trees along the boundary of the Christmas House site and to look at the section of the boundary of the neighbouring property (Rusham End) where vegetation clearance has been undertaken to open up views into the property from the public footpath.

Trees outside of these main lines of sight were not mapped. Each tree was given an accurate geographic location, a height value and a species type. These species were then analysed using a geo-spatial toolkit and modelled in 3D, with aerial imagery used to cross-reference locations. Where the species was not identified the tree/hedge shape and height were noted and a comparable tree type from the database applied. This means that individual tree features may not be true world representations e.g. a particular tree may have a unique shape that extends more in one direction than another - the tree visualised will be a generic tree of the correct species and height and using the smallest spread extent rather than the largest. This means that the visualisation is likely to slightly understate of the size of some trees and consequently understate the screening effect i.e. the actual view is likely to be even more limited than shown.

Finally, the model was overlaid with aerial imagery from the ESRI World Imagery catalogue, which is approximately 4 years old. However, it is understood there have been no significant changes in terms of tree or hedge clearance and planting in the wider area in the intervening period so the imagery is considered to be valid. Once the images are overlaid it is possible to move the map, change perspective, fly over and take viewpoints from different positions and different heights and produce accurate model representations of different views and scenes.

At the request of the client, visualisations have been prepared for three locations identified by local residents as potentially having clear views of the development site which would be significantly adversely impacted by the construction of new houses. The three locations are:

- Location 1 – A field gate on Footpath 262 to the southeast of the development site.
- Location 2 - The courts at Shalford Tennis Club north-northwest of the development site.
- Location 3 - The bowling green at Shalford Bowling Club north west of the development site.

For the detailed assessment of the landscape and visual impacts from these locations, the reader is referred to the LVA Report.

2.2 Limitations and Assumptions

The generated images are models produced from ESRI ArcGIS Pro 3D Scene - they are not exact representations. Buildings and trees are positioned and measured and then modelled - each tree is a generic species fit. Data are based on site surveys and overlaid on ESRI World Imagery and topology data. Data are accurate to $\pm 1\text{m}$.

Supplementary photographs have been taken and provided in this report to inform and support the commentary on each viewpoint, together with observations made when on site. These are particularly important for the tennis club and bowling club viewpoints, as it was

not possible to enter into either to take representative photographs from the modelled viewpoints.

All aerial images are reproduced courtesy of Google Maps (© 2020).

2.3 Results

Location 1 – Footpath 262

Footpath 262 runs west-east from Chinthurst Lane through open countryside which rises gently to the east. Although reasonably wide, the footpath is bounded on each side by mature dense hawthorn hedge varying between 2.5m and 3m in height. The first point at which there is a clear line of sight towards the development site is at the corner of the first field approximately 200m along from Chinthurst Lane (Figure 1).

The development site is heavily screened by existing boundary trees and fences, as well as substantial and varied vegetation immediately adjacent to and along the boundary of the nearby properties, which further reduce the visible area of the site. Between the viewpoint and the development site there is also a mature field hedge approximately 3m in height running east-west screen across the field, interspersed with several large mature trees.

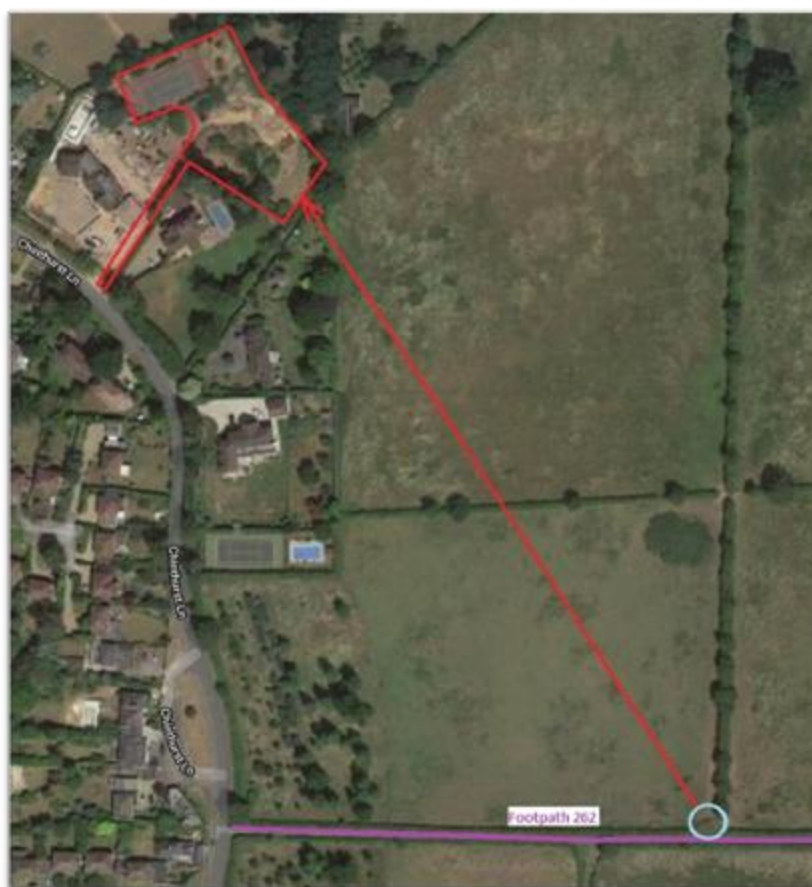


Figure 1: Location 1 – location and sight line to development site

A representative photograph from this location has been used to create the visualisation. Figure 2 shows the existing view without new development. Using the computer model and known heights of trees within and immediately adjacent to the site, it was possible to calculate the position and height of the new houses and hence create a visualisation of their visibility between the trees and hedges. As can be seen from Figure 3, only the upper part of the roof of the house closest to the boundary of the Christmas House site would be visible through a narrow gap in the tree line. Compared to the nearby properties which are prominent in the view, the proposed new house would be a very small element within a significant treescape.



Figure 2: Location 1 - view towards development site - existing



Figure 3: Location 1 - view towards development site - with development

To provide further context, Figure shows a 'zoomed in' photo from the field gate. This has been annotated with details of the trees and hedges to provide visual perspective. All quoted tree heights are taken from the arboricultural report prepared for the development, with the exception of the field hedge, which was estimated based on the height of the hedge that runs either side of the Footpath 262 at Location 1.

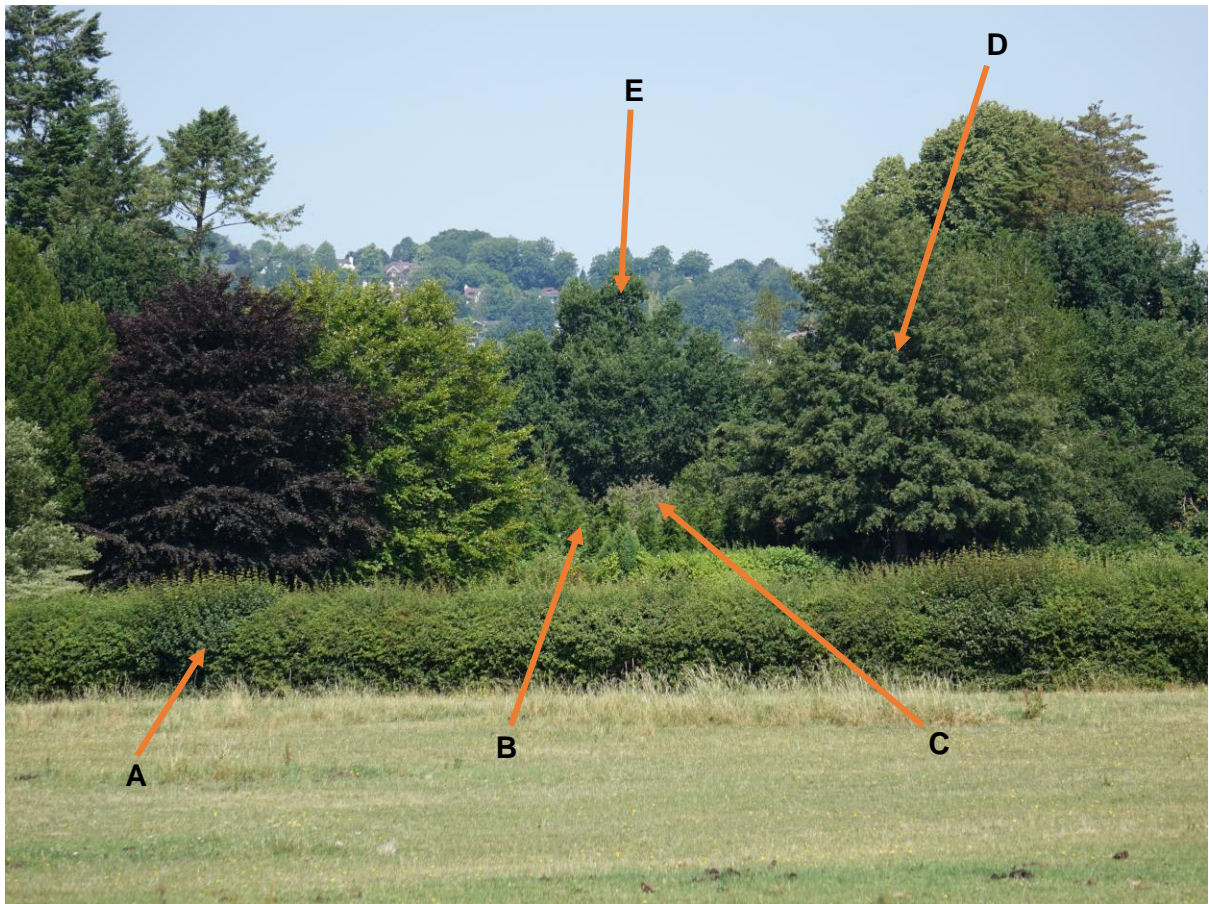


Figure 4: 'Zoomed in' shot from Location 1 showing key vegetation:

A – hawthorn hedge across field c.3m height

B – line of conifers inside site boundary c.5m height

C – cherry tree within site boundary c.6m height

D – large oak tree adjacent to southeast boundary site c.20m height

E – large mature oak tree on far boundary of site c.20m height

The proposed new houses would be c.7.6m in height to the ridge of the roof. Therefore, this would mean that less than 2m i.e. the roof, of the house would be visible from this viewpoint location, as shown in Figure 3. Compared to the previous application, there would be a very marginal increase in the area of building seen by virtue of the fact the proposed house extends across most of the width of the site. However, taking into account the slightly lower building height, the overall impact would remain the same.

The photograph used for this visualisation was taken in July 2020, since when the boundary conifer trees have grown a further c.0.75m. Over time these will continue to grow and thicken, enhancing the screening effect and further reducing the visibility of the house in the landscape.

Location 2 – Shalford Tennis Club

Location 2 is the tennis courts at Shalford Tennis Club adjacent to the Village Hall on the edge of the village. The club sits at the bottom of the hill with an open field between it and the development site (Figure 5).

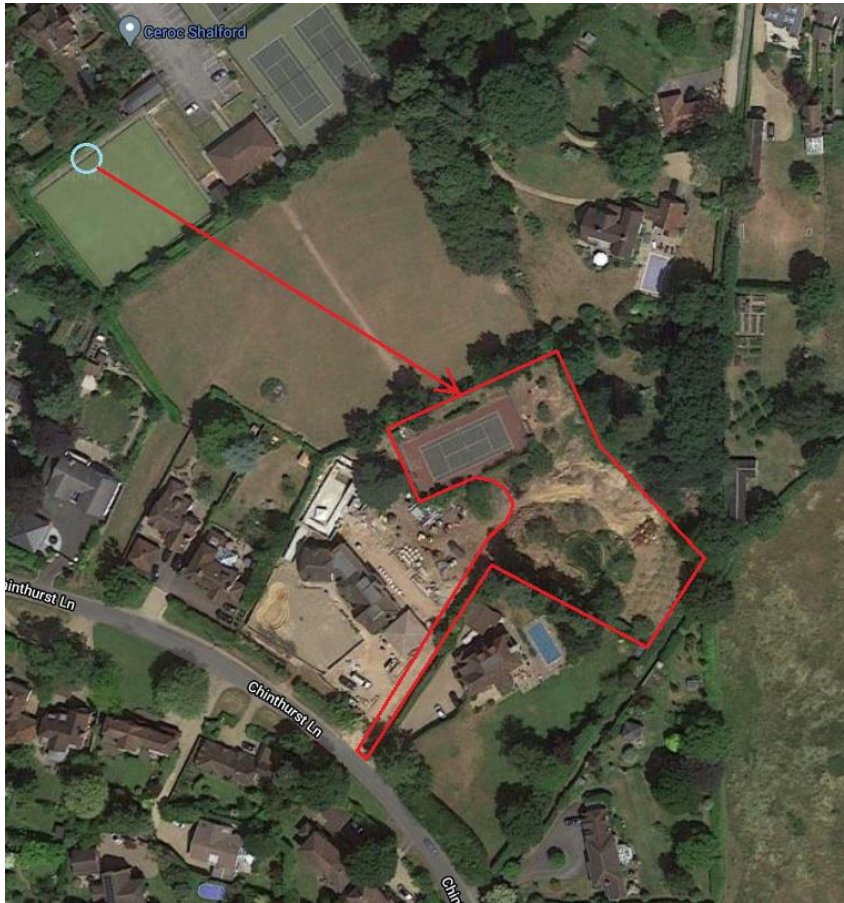


Figure 5: Location 2 – location and sight line to development site

Along the southeast boundary of the tennis club there is a steep earth bank rising approximately 1-1.5m above the level of the nearest tennis court. Along the top of the bank is a line of mature trees and hedges. This runs most of the length of the boundary of the village hall site which also includes the adjacent bowling club. Beyond this, the land rises sharply up towards the development site. Figures 6 and 7 show views along the bank behind the tennis courts and the Upper Hall building. Figure 8 is a photo taken at eye level (c.1.75m) towards the development site from the path alongside the Upper Hall. Although this is approximately 0.8m below the level of the tennis courts, there is no clear view through the lower vegetation. Figure 6 clearly shows that the base of the line of trees and hedges is approximately at eye level when standing on the court. Views through and up the hill beyond would be heavily filtered by the vegetation.

To provide further context, Figure 9 shows a view across the field between the tennis club and development site the gate taken from the gate at the corner of Footpath 266 which runs from Chinthurst Lane down to the A248. It shows how the land immediately adjacent the southeastern boundary of the tennis club rises.



Figure 6: View to NE of steep bank along rear of tennis courts



Figure 7: View SW of steep bank along rear of Upper Hall building



Figure 8: View from alongside Upper Hall towards development site (c0.8m below tennis court level)



Figure 9: View N-NE across field towards tennis courts

Using the GIS computer model a visualisation has been generated from a nominal point roughly at the centre (forecourt) of one of the courts (Figure 10). Due to the limitations of the available tree types within the GIS model, the visualisation cannot recreate the detail of the actual tree line but it is a good representation of the average height. It is noted that the new house designs have reduced the height to the ridge of the roof from 7.8m in the previous scheme to 7.6m in the new scheme. At this elevation it is clear there would be no visibility of the house closest to the boundary of the Christmas House.

The photos in Figures 11 and 12 are provided for context. The first was taken from the farthest (northwest) boundary fence of the upper tennis courts. Unfortunately, there is a mesh screen along most of the fence which shields the view through so the only view possible was from approximately 0.5m above ground level where there is no mesh covering. However, even this shows how the trees and hedges along the field boundary form an almost solid screen. The second photo was taken from the top of the steps leading up from the car park to the entry gate into the upper tennis courts at the northwestern end and was an eye level view (c.1.75m) directly towards the development site. Given the fairly dense foliage, it is unlikely players at the far end of the courts facing towards the site would see anything beyond the tree line.

It is also worth noting that anyone standing at the end of the courts closest to the field boundary would, for the most part, be facing the opposite direction to the development site whilst playing. Even then, the substantial treeline along the boundary of the development site would provide screening and it would require someone to make a conscious effort to look through to see up the hill to the development site.

The only time of year when there may be more open views would be during the winter months when most of the trees have shed their leaves. However, the tennis courts are unlikely to be as busy, if used at all, due to the shorter days and generally colder, more inclement weather during the winter months. Nonetheless, views would still be filtered by the tree trunks, stems and branches. Along the boundary of the development site there is a c.6m high dense evergreen cypress hedge which would screen most of the new houses all year round with only the roofs likely to be visible.

At the time of writing, trees were beginning to shed their leaves but it was not yet possible to do winter view photographs. However, a 'worst case' representation of the view from the tennis courts in the winter has been produced by simply removing the vegetation immediately adjacent to the courts from the 3D model, thereby creating an unobstructed view up the hill towards the development site. This is shown in Figure 13. As can be seen, even with no intervening vegetation the new houses would be mostly screened by the evergreen cypress hedge along the inside boundary of the development site, with only the top section of roof being visible.

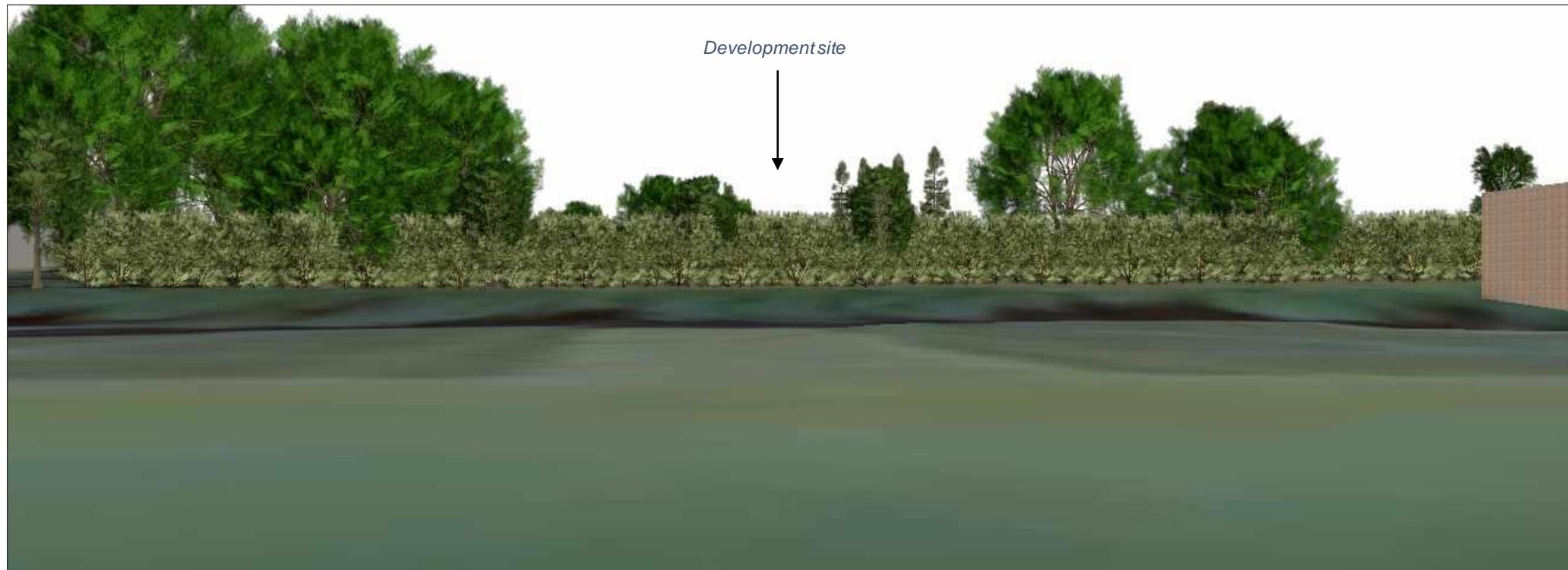


Figure 10: View from forecourt of tennis court towards development site (c.2m eye level)



Figure 11: Wide angle view from NW end of tennis court towards the development site (c.0.5m above ground level)



Figure 12: View towards the development site taken from top of steps at NW corner of tennis courts



Figure 13: Location 2 - Worst case 'winter' view with boundary vegetation removed

Location 3 – Shalford Bowling Club

Location 3 is roughly the middle of the northwestern end of the green at the Shalford Bowling Club adjacent to the Village Hall on the edge of the village. As with the tennis club, it sits at the bottom of the hill with an open field between it and the development site (Figure 14).



Figure 14: Location 3 - location and sight line to development site

The southeastern boundary of the bowling green comprises a mix of gabion wall, ornamental hedge and nature hedgerow interspersed with mature trees. From observations made during the site visit the green is first bounded by a gabion retaining wall that runs the length of the boundary and is approximately 1m high. Behind and atop this there is a laurel hedge of a similar height. Beyond that and the boundary fence, there is a natural hedgerow varying in height approximately 0.5-1.0m above the laurel hedge, effectively creating a visual screen ranging 2.5-3.0m in height at the closest points on the bowling green. There are approximately 5 trees within the hedgerow roughly evenly spaced along the boundary. Due to the lack of access it was not possible to take any representative photographs looking up the hill towards the development site.

Based on the field observations, a visualisation has been generated using the computer model (Figure 15). At an eye level of c.2m the existing hedgerow along the club boundary, together with the trees along the boundary of the development site, appear to create an effective screen to views. Notwithstanding the limitations of the model, at most all that might be seen would be the tops of the roofs of the closest houses. However, these would

be filtered by the hedge and tree line, including that along the immediate boundary of the development site, and would not likely be significant elements in the general view. It is also noted that there are several other properties along Chinthurst Lane that are much closer to the bowling club and which will already be visible to players.

As with the tennis club, active use of the bowling green is likely to be reduced during winter due to colder and more inclement weather conditions. Figure 16 is a further visualisation from within the bowling green at 2m eye level but with the existing hedges and trees along the bowling club boundary removed representing an 'worst case' unobstructed view during winter months when trees and shrubs have shed their leaves. This provides a clear view up the hill towards the development site but even in this scenario the closest new house would be mostly screened with just the top of the roof visible.



Figure 15: Location 3 - view from NW end of bowling green looking towards the development site (c.2m eye level)



Figure 16: Location 3 - Worst case 'winter' view with boundary vegetation removed.

3. Conclusions

A computer model of the proposed development has been developed to enable visualisations from key locations to be created as a means of testing the visibility of the proposed new houses from viewpoints considered by local residents in response to previous planning applications to be at risk of significant adverse impact. These have been supplemented by field survey observations and photographs.

Notwithstanding the limitations of the model and the lack of access into the tennis courts and bowling green to take fully representative photographs, the visualisations produced show that views of the proposed two new houses would be heavily screened and/or filtered from all viewpoints with, at most, only the tops of roofs likely to be visible.

The total height of each of the houses for this planning application has been reduced by 0.2m (7.6m) compared to the previous scheme. The appraisal of the previous scheme, where five houses were proposed, concluded that they would be adequately screened from views from the three locations tested.

The visualisations created for the current scheme show that there will be limited visibility of the new houses from the tennis club and bowling club. From the public footpath (No. 251), the new house will be largely screened. This is expected to increase further as the boundary conifer trees continue to grow and thicken. Since the original survey work was done in July 2020, the trees have grown by c.0.75m. Similar levels of growth can be expected over the next few years which, as the trees thicken out, will further reduce the visibility of the building.