

Summary of Sunpath Model – R E V I S I O N

Site Address: 15 Etrick Road, Jarrow, Tyne & Wear NE32 5SL

Application Number: ST/0552/15 HFUL

Introduction

Following submission of the initial report of the Sun Path affecting the application site, Senior Planning Officer Helen Lynch requested further details showing the site from 4pm to 7.30pm. This information has been updated with further details showing the impact of the proposed extension to the application site, and the neighbouring properties.

Model

The proposal has been modelled using the same 3D CAD software as previously, and the GPS coordinates of the location used to calculate the geographical position and sunlight position.

The attached diagrams in Section 1 show the existing and proposed situation at 30minute intervals (although 15minute intervals were requested, this did not show any significant movement of shadows due to the size of the site). This has been modelled at the Summer Solstice to relate back to the initial report.

The diagrams in Section 2 compare photographs submitted by the adjoining neighbour at 8 Teviot Way, with the timing of the model matched to the photographs.

Section 3 shows the path of the sun compared to the proposed application site, with a summary of the times and directions of sunlight/shadow at that time.

Section 1

The model shows the sun path starting at 1pm. At this point, the shadow cast over the gardens is made by 8 Teviot Way.

By 4.30pm, the sun is directly facing the application site, with the shadow cast across the gardens. The proposal casts an additional shadow partially across the garden of 8 Teviot Way. This is predominantly from the gable of the rear extension.

By 5.00pm, the gap between 13 and 15 Etrick Way allows sunlight to the garden of 8 Teviot Way and the application site, and the shadow cast by the proposed extension moves across the garden of 8 Teviot Way.

Due to the existing orientation of the property, it is not until 8pm that the larger shadow caused by the proposed extension is cast across the rear elevation of 8 Teviot Way. The rear elevation of the original house at 8 Teviot Way is in the

shadow of the existing shape of the application site, and the rear extension of 8 Teviot Way, projecting into the garden, is affected after 8pm.

Section 2

Unfortunately the same view from the first floor window of 8 Teviot Way could not be modelled using the software (too narrow a field of view), so the model has had to show a wider view.

At 16.50, the model shows no impact to 8 Teviot Way.

At 17.25, the model shows a minor additional shadow, again caused by the gable of the proposed rear extension element.

At 18.20, again there is a small additional shadow over the garden area, and cast across the wall of the rear extension of number 6 Teviot Way.

By 19.27 the entire garden area is in shadow caused by the existing property. The shadow caused by the proposed extension is now cast over the flat roof of the rear extension to number 6 Teviot Way, rather than the rear elevation of 8 Teviot Way, due to the orientation of the site.

Section 3

The final diagrams show the path of the sun during the afternoon and evening. The application site's front elevation faces West, with the rear elevation of 8 Teviot Way facing North. Due to the orientation, the shadow cast by the proposed extension is largely limited to the gardens and outside space of 8 Teviot Way, with virtually no impact to number 6 Teviot Way, or number 13 Etrick Road.

Summary

The model shows that the direction of the sun, and the shadow that is cast, has a minor effect on both the rear garden of the application site, and that of 8 Teviot Way. It is clear that the gable/pitched roof design of the rear extension element is the primary cause of the additional shadow, with the main body of the proposed extension having very little impact on the rear gardens, with a very limited impact on the rear elevation of 8 Teviot Way.

It is proposed that the applicants submit an amended design of the roof detail of this element, consisting of a hipped design to remove the gable, and allow a more favourable shadow cast over the rear garden of number 8 Teviot Way.