

49 Breamish Street. Jarrow. NE32 5SH

Study to demonstrate degree of overshadowing of adjacent site.

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Introduction.

Carvell Associates were appointed to carry out sun path analysis for the above site as part of a planning application for an extension to a semi-detached dwelling.

The Topography of the site is straightforward; the property is on the corner of Breamish Street and Teviot Way. The property is at right-angles to the property it adjoins (1 Teviot Way). The rear private gardens to the South consist of 2 triangular plots of land, typical for such corner units. The adjacent property has a single storey rear sun room extension, and 2 original windows at First Floor Level. There appears no be no further fenestration to this rear elevation.

Massing of the adjacent properties and street scene were taken from Google Maps. Measurements for the existing house and extension have been taken directly from CAD drawing provided by Michael Parkinson, drawings as follows: 15_24_001A, 15_24_002, 15_24_010A, 15_24_011 , 49 Breamish Street OS Plan.

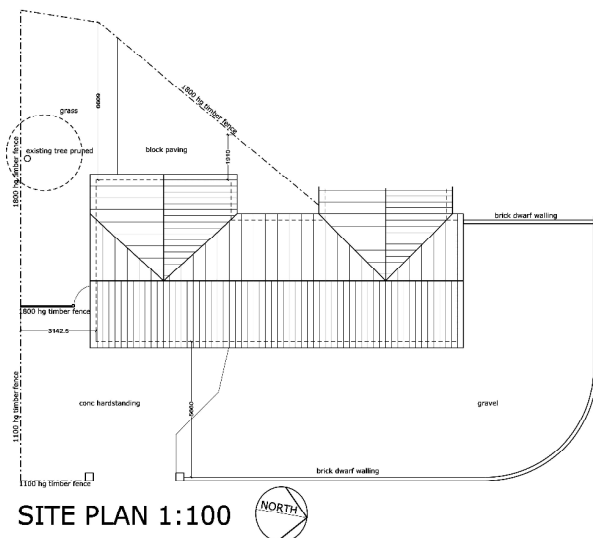


Image courtesy of Michael Parkinson.

Methodology.

The model demonstrates the effect on direct solar radiation only. The model has been created to demonstrate the effect of overshadowing on the adjacent plot for given times of year, given the variation in sun path throughout the year.

The Planning Officer has requested images showing shadows cast on the adjoining property for 3 dates in the calendar year: 22nd December (Winter Solstice), 22 March (Equinox) and 22nd June (Summer solstice).

The shadow mapping exercise was carried out to demonstrate the sun path for each hour of sunlight for each given day. The site was then modelled showing the proposed house for comparison. The results showing the effects of the proposals have been presented alongside the existing site for analysis purposes.

The above procedure was repeated at hourly intervals and the results recorded on a separate sheet for each given hour (please refer to the attached appendix).

Summary.

The analysis shows the proposed extension has a very limited overshadowing effect on the adjacent property and garden, with a relatively small increase in the shadow cast in the early morning between the winter months and the equinox. In the summer months the sun appears to be higher in the sky, and so the overshadowing at this time is limited to an hour or so in the early morning. The adjacent property still retains a clear 'view of sky' from all windows on the rear elevation, and given this rear elevation faces due South we would argue the overshadowing effect of the extension is negligible.

James Carvell.

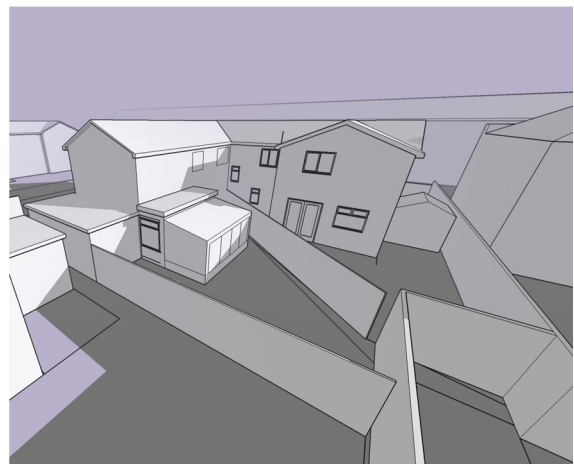
Architect. Carvell Associates. 28.04.16



View of front of property looking South



View of rear of property looking North



Proposed model Looking East (tree not modelled)

Appendix.

Sun path analysis of site.