# **Shadow Sunlight Assessment**

This study is based on the os map and it's DTM data for the site model. Using a building information model in auto desk Revit 2024. The parameters set for this Sun path to plot the Shadows have determined at various times of the day (tracking the sun moving from morning to evening) through a year at 9am ,12pm and 3pm and 5pm depending on sunset. See Appendix h for planning massing Appendix I for planning massing with addition technical 3D model setup.



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1 Point data develeloped into surface



Drawing Title: Control Enviroment data setup for daylight assessment

Date : 02/18/24 Scale @ A1: 1:750 @ A3: 1:1500 Drawing No: 000a If any discrepancies are found in the drawing these are to be brought to the attention of the Architect.Please check all dimensions on site before commencement. All dimensions are approximate All areas and quanties to be checked by a Quanity Surveyor. Indicative structural support to be determined by structural engineer.

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Appendix i

Drawing Title: Control Enviroment data setup for daylight assessment

Date : 02/18/24 Scale @ A1: 1:750 @ A3: 1:1500 Drawing No: 000a If any discrepancies are found in the drawing these are to be brought to the attention of the Architect. Please check all dimensions on site before commencement. All dimensions are approximate All areas and quanties to be checked by a Quanity Surveyor. Indicative structural support to be determined by structural engineer.

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### The following appendices form this document :

- 1. Appendix a shows existing planning massing 18/00631/FUL shadow casts
- 2. Appendix b shows existing planning massing with addition shadow casts
- 3. Appendix c overlay of all years shadow plots for existing planning 18/00631/FUL
- 4. Appendix d overlay of all years shadow plots for existing with addition
- 5. Appendix e Colour coded shadow mapping for existing planning massing
- 6. Appendix f Colour coded shadow mapping for existing planning massing with addition
- 7. Appendix g overlay of both plots of Shadow comparison

### The diagrams below are formed from data from the following appendices

- 1. See D1 Appendix a shows existing planning 18/00631/FUL massing shadow cast
- 2. See D2 Appendix b shows existing planning 18/00631/FUL massing with addition







## Please see Document: D2 appendix b.pdf for all day and shadow plots



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Rev No Revision Description Date These have then been combined into full year shadows for the times on those days per month for both original massing and the original with the side addition plotted over each other to form the diagrams as follows:

- 1. Appendix c overlay of all years shadow plots for existing planning 18/00631/FUL
- 2. Appendix d overlay of all years shadow plots of existing planning 18/00631/FUL with addition





DAYLIGHT STUDY FOR EXISTING PLANNING APPLICATION MASSING 15TH OF EACH MONTH FOR A YEAR CYCLE (SEE APPENDIX a)

Appendix c

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## EXISTING PLANNING APPLICATION MASSING WITH SIDE ADDITION





DAYLIGHT STUDY FOR DAYLIGHT STUDY FOR EXISTING PLANNING APPLICATION MASSING WITH SIDE ADDITION 15TH OF EACH MONTH FOR A YEAR CYCLE (SEE APPENDIX b)

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These then have been Colour coded to in the following diagrams:

- 1. Appendix e existing planning massing
- 2. Appendix f existing planning massing with addition

## EXISTING PLANNING APPLICATION IN GREEN





DAYLIGHT STUDY FOR EXISTING PLANNING APPLICATION MASSING 15TH OF EACH MONTH FOR A YEAR CYCLE (SEE APPENDIX a)

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![](_page_12_Figure_1.jpeg)

![](_page_12_Figure_2.jpeg)

APPENDIX C

DAYLIGHT STUDY FOR EXISTING PLANNING APPLICATION MASSING 15TH OF EACH MONTH FOR A YEAR CYCLE (SEE APPENDIX b)

Appendix f

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Finally The shadows cast by original mass of the planning 18/00631/FUL have been compared with the overlay shadows cast the addition to form the red lines overlay

1. Appendix g overly of both plots of Shadow to compared

## EXISTING PLANNING APPLICATION IN GREEN WITH OVERLAY IN RED OF SHADOWS FROM EXISTING WITH ADDITION COMPARISON

![](_page_14_Figure_1.jpeg)

![](_page_14_Figure_2.jpeg)

DAYLIGHT STUDY FOR EXISTING PLANNING APPLICATION MASSING 15TH OF EACH MONTH FOR A YEAR CYCLE (SEE APPENDIX a / b)

Appendix g

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## Conclusion

In considering the extent of any possible overshadowing caused by the addition on the side of the north elevation the design has been done to minimise this for any excessive or additional overshadowing of neighbouring properties. It will be expected that the greater part of any overshadowing caused by a new extension should be confined within the original planning massing shadow cast.

From this study it is fair to assume the additional side extension would not impact greatly, if at all, on the shadow cast from the original planning mass, as its massing is set down from the main roof and back from the east and west elevations minimises its shadow impact.