
Daylight & Sunlight Report

Assessment of Proposed Development

Pinewood Campus

Legal and General Assurance (Pensions Management) Ltd



7th October 2024



Client: Legal and General Investment Management
C/O PMV Planning Ltd, 71-91 Aldwych, London, WC2B 4HN

Prepared By: MES Building Solutions
Newark Beacon
Beacon Hill Office Park
Cafferata Way
Newark
NG24 2TN

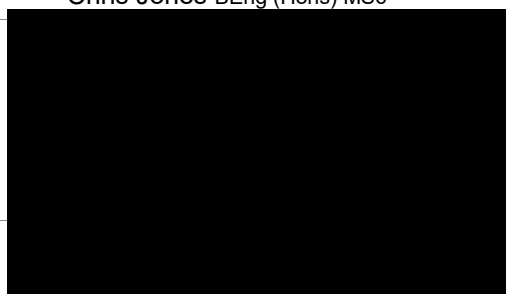
Project: Pinewood Campus, Nine Mile Ride, Wokingham RG40 3EW

Document Title: Daylight & Sunlight Report – Assessment of Proposed Development

Date: 7th October 2024

MES Contact Details: Chris Jones BEng (Hons) MSc

Signature:



MES Offices

NEWARK (HEAD) OFFICE

Newark Beacon
Beacon Hill Office Park
Cafferata Way
Newark
NG24 2TN
T: 01636 653055
E: info@mesbuildingsolutions.co.uk

LONDON

45-46 Lower Marsh
London
SE1 7RG
T: 0207 033 3757
E: info@mesbuildingsolutions.co.uk

BIRMINGHAM

Grosvenor House
11 St Pauls Square
Birmingham
B3 1RB
T: 0121 285 2785
E: info@mesbuildingsolutions.co.uk

About MES Building Solutions

MES Building Solutions (MES) is an established consultancy practice specialising in providing building solutions throughout the UK.

We offer a full range of services for both residential and commercial buildings from small individual properties through to highly complex mixed use developments.

We are an industry leader in delivering a professional, accredited and certified service to a wide range of clients including architects, developers, builders, housing associations, the public sector and private householders.

Employing highly qualified staff, our team comes from a variety of backgrounds within the construction industry with combined knowledge of building design, engineering, assessment, construction, development, research and surveying.

MES Building Solutions maintains its position at the forefront of changes in building regulations as well as technological advances. Our clients, large or small are therefore assured of a cost effective, cohesive and fully integrated professional service.

About the Author

Andrew Pickersgill is an Associate member of the Royal Institution of Chartered Surveyors and leads our neighbourly matters team. He has a BSc (Hons) degree in Building Surveying. Andrew undertakes daylighting, sunlight and shadow analysis for planning applications. He is also involved in party wall issues and carries out other building surveying services for our clients.

Contents

1.0	Executive Summary	4
2.0	Introduction	5
3.0	Planning Policy.....	6
4.0	Description of Development.....	7
5.0	Assessment Process.....	8
6.0	Daylight Provision.....	9
7.0	Sunlight Exposure	10
8.0	Conclusion	11
9.0	Notes	11

Appendices

- Appendix 1 Room Layouts
- Appendix 2 Daylight Test Results Spatial Daylight Autonomy
- Appendix 3 Sunlight Exposure Results

1.0 Executive Summary

We have carried out calculations following guidance in Site Layout Planning for Daylight & Sunlight (SLPDS), PJ Littlefair et al 2022 to assess the expected amount of natural daylight and sunlight in two hundred and fifty two habitable rooms in one hundred and nine new flats that will be formed following the proposed residential conversion of Pinewood Campus, Nine Mile Ride, Wokingham RG40 3EW. and compared the results to the recognised BRE guidance figures.

Daylight and sunlight is one of a number of considerations when designing a building and should therefore be balanced with other planning issues, such as the appearance of the building, the need for additional local housing, the existing street scene and the commercial viability of the project.

The BRE guidance acknowledges that the advice it gives is tailored towards new build projects and care should be taken when this is applied to the conversion of existing buildings as in these situations there may well be constraints on design that would not be relevant to new build schemes.

The results of our analysis shows that two hundred and forty nine of the habitable open plan living rooms and bedrooms assessed will meet the recommended daylight levels, while the remaining three rooms would be considered marginal, being within 5% of the targets suggested in the guidance.

In addition, we have assessed the sunlight provision to the one hundred and nine flats. Of these seventy two meet the requirement that at least one room receives at least 1.5Hrs of direct sunlight per day. The remaining thirty seven flats are all north facing.

Therefore, in our opinion, the development achieves an effective and balanced level of daylight and sunlight provision, and all habitable rooms will receive adequate levels of natural light in line with the requirements for Class MA of the Town and Country Planning (General Permitted Development) Order 2020.

2.0 Introduction

The purpose of this report is to assess the natural daylight and sunlight levels in two hundred and fifty two habitable rooms in one hundred and nine new flats that will be formed following the proposed residential conversion of Pinewood Campus, Nine Mile Ride, Wokingham RG40 3EW.

This report considers the daylight issues using guidance provided in the following publications:

Site Layout Planning for Daylight & Sunlight (SLPDS), PJ Littlefair et al 2022 published by the Building Research Establishment (BRE).

The SLPDS is the culmination of research undertaken by the BRE to determine whether or not a new development will achieve acceptable levels of internal daylight and sunlight. The BRE tests and are widely used by local authorities when deciding on development applications.

BS EN 17037-2018 Daylight in Buildings.

There are no minimum mandatory requirements for daylighting in Building Regulations for England & Wales, but the guidance set out in SLPDS is widely accepted as the approved methodology when calculating light levels in habitable rooms.

3.0 Planning in England: Permitted development and change of use (House of Commons Library 6 March 2024)

Commercial, business and service use to residential (since 2020)

In September 2020, the government created a new use class (use class E) which combined different commercial, business and service uses that were previously contained in separate use classes. Following the creation of use class E, the government introduced new PDRs to allow for changes of use from a building in commercial, business and service use (use class E) to a dwellinghouse (use class C3).⁶⁰

Class MA of Part 3 of Schedule 2 of the General Permitted Development 2015 replaced permitted development rights under Class O (office-to-residential conversions) and Class M (conversions of shops, financial and professional services and other uses to residential use).

Restrictions, conditions and limitations on Class MA

PDRs under Class MA are subject to prior approval with regards to some of the following matters:

- Since August 2020, the provision of adequate natural light in all habitable rooms.
- The impact of noise from existing commercial premises.
- The impact on future occupants of the dwelling if it is in an area the LPA considers important for heavy industry, waste management, storage and distribution.
- The impact of the loss of health centres and registered nurseries.
- In conservation areas, the impact of the loss of ground-floor commercial, business and service uses on the area's character and sustainability.

4.0 Description of Development

The scheme comprises of the conversion of the existing three storey commercial building to provide one hundred and nine new residential apartments over three levels.

The property is located approximately 3.5km south east of Wokingham to the north of the B3430 Nine Mile Ride. The building is situated within an area of woodland and has no neighbouring buildings nearby.



Site Location Plan

5.0 Assessment Process

The guidance states that rooms to be assessed should be living rooms, kitchens and bedrooms in residential properties. In non-domestic buildings rooms where occupants 'have a reasonable expectation of daylight' should be assessed. Although these spaces are not defined, examples are given of the type of non-domestic buildings that would normally fall into this category. These include schools, hospitals, hotels and hostels, small workshops and some offices.

It is important to note that the numerical values in the guidance are purely advisory and different criteria may be used based on the requirements for daylighting in an area viewed against other site layout constraints.

The parameters we have assessed are:

- Spatial Daylight Autonomy (SDA)
- Sunlight Exposure (SE)

Room reference plans of the spaces we have assessed can be found in Appendix 1.

The assessment is based on OS data, along with the following survey data and drawings, provided by Chetwoods:

5730 PL 0002 C site location plan
5730 PL 1100 C proposed site plan
5730 PL 1101 C proposed part site plan
5730 PL 2100 C proposed ground floor plan
5730 PL 2110 C proposed first floor plan
5730 PL 2120 C proposed second floor plan
5730 PL 2130 A proposed roof plan
5730 PL 2210 A proposed elevations sheet 1 - external elevations
5730 PL 2220 A proposed elevations sheet 2 - courtyard elevations

6.0 Daylight Provision

Illuminance (Spatial Daylight Autonomy)

This method involves using climatic data for the location of the site (via the use of an appropriate typical or average year, weather file within the software) to calculate the illuminance from daylight at each point on an assessment grid on the reference plane at an at least hourly interval for a typical year.

The UK National Annex gives illuminance recommendations of 100 lux in bedrooms, 150 lux in living rooms and 200 lux in kitchens. These are the median illuminances, to be exceeded over at least 50% of the assessment points in the room for at least half of the daylight hours.

Other non-habitable rooms need not be assessed.

The calculation of Daylight Provision takes into account the following variables:

- The diffuse visible transmittance of the glazing (we have assumed a figure of 0.68 for double glazing).
- Maintenance factor, allowing for the effects of dirt (we have assumed a figure of 0.76).
- Net glazed area of the window. (we have assumed a figure of 0.8).
- Total area of the room surfaces.

Surface Reflectance should represent real conditions. Where reflectance values have not been measured or specified, default values to be used in the calculation. Assumed reflectance for individual elements are:

Assumed Surface Reflectance	
Surface	Assumed Reflectance
Interior Walls	0.8 (White Painted Finish)
Ceilings	0.8 (White Painted Finish)
Floors	0.2 (Default)
Exterior Walls & Obstructions	0.3 (Default)
Exterior Ground	0.2 (Default)

- Assessment grid: The calculation of illuminance or daylight factor is carried out on a grid of points on a reference plane within each room assessed. The plane is normally 0.85m from the floor level (sometimes described as the working plane height). The standard states that the assessment grid should exclude a band of 0.5m from the walls, unless otherwise specified. In dwellings it is recommended that a band of 0.3m should be excluded, to avoid excluding parts of the room that are used by the occupants.

Daylight Provision Results

Calculations were undertaken using guidance contained in SLPDS. We have assessed open plan living spaces and bedrooms in one hundred and nine flats. Open plan living spaces have been assessed against the recommended target of 150Lux for living rooms, as this will be the primary room use. Bedrooms have been assessed against the recommended target of 100Lux. Of the two hundred and fifty two habitable rooms assessed, two hundred and forty nine meet the recommended targets, while the remaining three rooms would be considered marginal, being within 5% of the target for the room type. We therefore consider all habitable rooms to be adequately lit and compliant with the requirements of Permitted Development and change from Commercial to residential use.

Please see Appendix 2 for the detailed results.

7.0 Sunlight Exposure

The BRE guidance states that access to sunlight can be quantified. BS EN 17037 recommends that a space should receive a minimum of 1.5 hours of direct sunlight on a selected date between 1st February and 21st March with cloudless conditions. It is suggested that 21st March (equinox) be used.

The medium level of recommendation is three hours and the high level of recommendation four hours.

For dwellings, at least one habitable room, preferably a main living room, should meet at least the minimum criterion.

Sunlight Exposure Results

The BRE guidance acknowledges that the advice it gives is tailored towards new build projects and care should be taken when this is applied to the conversion of existing buildings, as in these situations there may well be constraints on design that would not be relevant to new build schemes

We have assessed the sunlight provision to the one hundred and nine flats. Of these seventy two meet the requirement that at least one room receives at least 1.5Hrs of direct sunlight per day. The remaining thirty seven flats are all north facing.

Therefore, it is our opinion that, given the nature of the project, the proposal provides an adequate amount of sunlight into all flats that might be expected to receive direct light from the sun.

Calculations were undertaken using guidance contained in SLPDS. Please see Appendix 2 for the detailed results.

8.0 Conclusion

The results of our analysis demonstrate that the development achieves an effective and balanced level of daylight and sunlight provision, and all habitable rooms will receive adequate levels of natural light in line with the requirements for Class MA of the Town and Country Planning (General Permitted Development) Order 2020.

9.0 Notes

This report has been prepared for the sole use of the Client for the purpose of their planning application. No representation or warranty (expressed or implied) is given to any other parties for any other purpose. Therefore, this report should not be relied upon by any third party for any other use and we accept no liability from the use of this report by any party for any use than originally intended.



Appendix 1

Room Layouts



Newark Beacon
Cafferata Way
Newark NG24 2TN
01636 653 055

www.mesbuildingsolutions.co.uk

CLIENT:
PMV Planning LTD

PROJECT :
Pinewood Campus

DRAWING TITLE:
Ground Floor Plan

DRAWN BY:
NJW

CHECKED BY:
CJ

DATE:
6/8/2024

SCALE:
NTS



Newark Beacon
Cafferata Way
Newark NG24 2TN
01636 653 055

www.mesbuildingsolutions.co.uk

CLIENT:
PMV Planning LTD

PROJECT :
Pinewood Campus

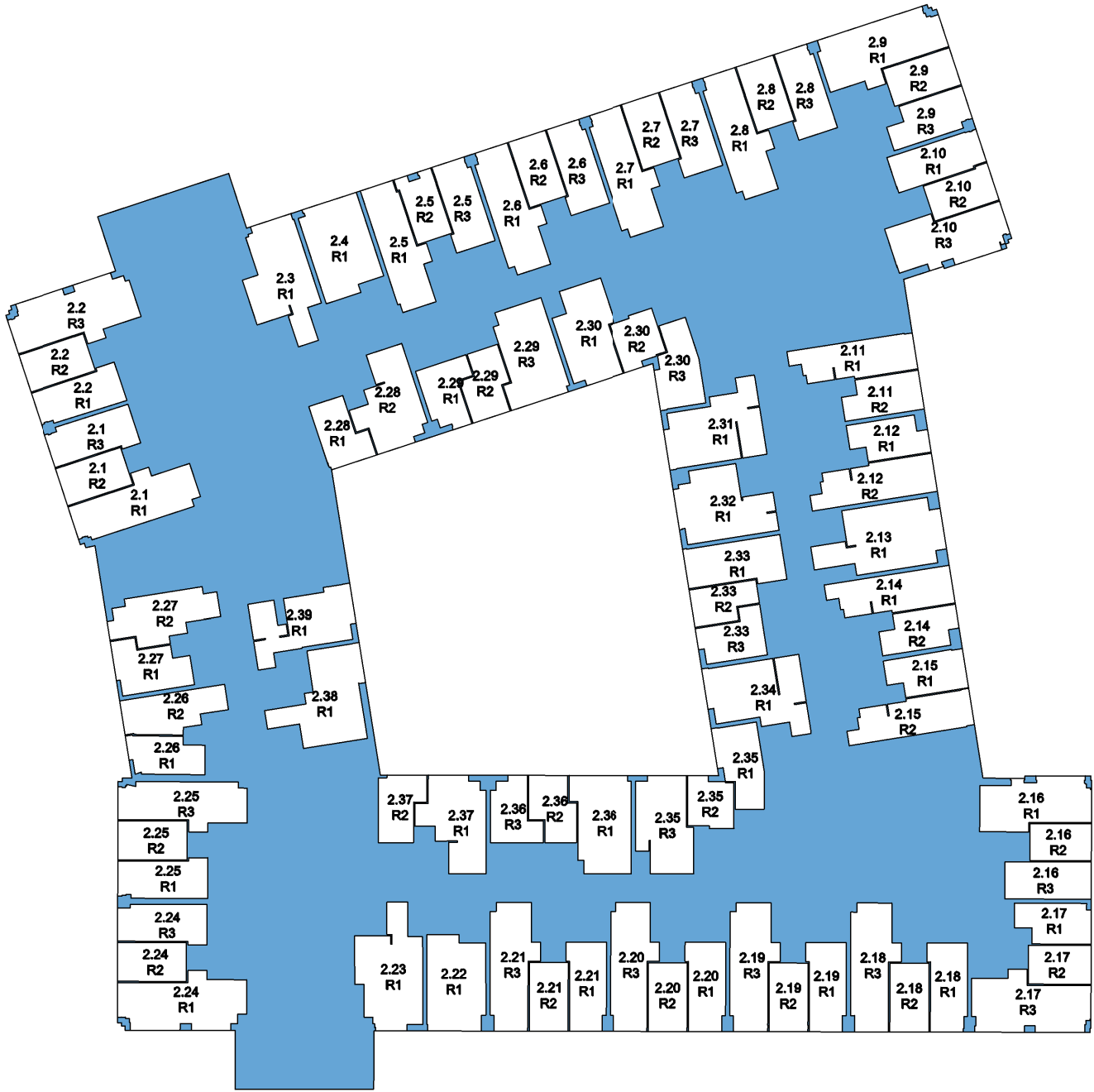
DRAWING TITLE:
First Floor Plan

DRAWN BY:
NJW

CHECKED BY:
CJ

DATE:
6/8/2024

SCALE:
NTS



Newark Beacon
Cafferata Way
Newark NG24 2TN
01636 653 055

www.mesbuildingsolutions.co.uk

CLIENT:
PMV Planning LTD

PROJECT :
Pinewood Campus

DRAWING TITLE:
Second Floor Plan

DRAWN BY:
NJW

DATE:
6/8/2024

CHECKED BY:
CJ

SCALE:
NTS



Appendix 2

Daylight Test Results

Spatial Daylight Autonomy

MES BUILDING SOLUTIONS Daylight Assessment Results (Spatial Daylight Autonomy) Project: Pinewood Campus Date of Analysis: 07/10/2024													Criteria				Meets BRE Guidance
Floor Ref	Room Ref	Room Use	Room Area m2	Effective Area	Median Lux	Area Meeting Target Lux	% of Area Meeting Target Lux	Target Lux	Req % of Effective Area	Req % of Daylight Hours	Daylight Hours						
0.1																	
Ground	R1	LKD	27.88	20.48	370	20.48	100%	150	50%	50%	4380	YES					
	R2	Bedroom	13.30	9.17	749	9.17	100%	100	50%	50%	4380	YES					
	R3	Bedroom	17.45	12.30	727	12.30	100%	100	50%	50%	4380	YES					
0.2																	
Ground	R1	Bedroom	16.85	11.75	715	11.75	100%	100	50%	50%	4380	YES					
	R2	Bedroom	13.27	9.15	762	9.15	100%	100	50%	50%	4380	YES					
	R3	LKD	29.76	22.26	1851	22.26	100%	150	50%	50%	4380	YES					
0.3																	
Ground	R1	Bedsit	30.02	23.54	912	23.54	100%	150	50%	50%	4380	YES					
0.4																	
Ground	R1	Bedroom	17.49	11.42	170	10.96	96%	100	50%	50%	4380	YES					
	R2	LKD	24.63	16.96	591	16.86	99%	150	50%	50%	4380	YES					
0.5																	
Ground	R1	LKD	27.30	19.94	442	19.94	100%	150	50%	50%	4380	YES					
	R2	Bedroom	13.42	9.26	963	9.26	100%	100	50%	50%	4380	YES					
	R3	Bedroom	17.31	12.16	894	12.16	100%	100	50%	50%	4380	YES					
0.6																	
Ground	R1	LKD	27.30	19.94	441	19.94	100%	150	50%	50%	4380	YES					
	R2	Bedroom	13.41	9.25	970	9.25	100%	100	50%	50%	4380	YES					
	R3	Bedroom	17.34	12.18	905	12.18	100%	100	50%	50%	4380	YES					
0.7																	
Ground	R1	LKD	27.26	19.90	441	19.90	100%	150	50%	50%	4380	YES					
	R2	Bedroom	13.40	9.24	972	9.24	100%	100	50%	50%	4380	YES					
	R3	Bedroom	17.38	12.23	907	12.23	100%	100	50%	50%	4380	YES					
0.8																	
Ground	R1	LKD	29.46	21.96	2781	21.96	100%	150	50%	50%	4380	YES					
	R2	Bedroom	13.94	9.69	998	9.69	100%	100	50%	50%	4380	YES					
	R3	Bedroom	15.65	10.75	1237	10.75	100%	100	50%	50%	4380	YES					
0.9																	
Ground	R1	Bedroom	17.63	12.47	989	12.47	100%	100	50%	50%	4380	YES					
	R2	Bedroom	12.58	8.48	1065	8.48	100%	100	50%	50%	4380	YES					
	R3	LKD	26.41	19.61	1690	19.61	100%	150	50%	50%	4380	YES					
0.10																	
Ground	R1	LKD	22.08	15.17	581	15.17	100%	150	50%	50%	4380	YES					
	R2	Bedroom	14.98	10.06	1075	10.06	100%	100	50%	50%	4380	YES					
0.11																	
Ground	R1	Bedroom	18.56	13.23	844	13.23	100%	100	50%	50%	4380	YES					
	R2	LKD	30.34	22.66	424	22.66	100%	150	50%	50%	4380	YES					
0.12																	
Ground	R1	LKD	30.29	22.61	413	22.61	100%	150	50%	50%	4380	YES					
	R2	Bedroom	17.99	12.69	879	12.69	100%	100	50%	50%	4380	YES					
0.13																	
Ground	R1	Bedroom	14.62	9.98	1155	9.98	100%	100	50%	50%	4380	YES					
	R2	LKD	21.36	14.75	630	14.75	100%	150	50%	50%	4380	YES					
0.14																	
Ground	R1	LKD	25.75	19.11	1875	19.11	100%	150	50%	50%	4380	YES					
	R2	Bedroom	11.64	7.81	1219	7.81	100%	100	50%	50%	4380	YES					
	R3	Bedroom	16.89	11.92	1162	11.92	100%	100	50%	50%	4380	YES					
0.15																	
Ground	R1	Bedroom	14.71	10.02	1376	10.02	100%	100	50%	50%	4380	YES					
	R2	Bedroom	12.44	8.48	1225	8.48	100%	100	50%	50%	4380	YES					
	R3	LKD	29.39	21.90	2360	21.90	100%	150	50%	50%	4380	YES					

Daylight Assessment Results (Spatial Daylight Autonomy) Project: Pinewood Campus Date of Analysis: 07/10/2024								Criteria				Meets BRE Guidance
Floor Ref	Room Ref	Room Use	Room Area m2	Effective Area	Median Lux	Area Meeting Target Lux	% of Area Meeting Target Lux	Target Lux	Req % of Effective Area	Req % of Daylight Hours	Daylight Hours	
0.16												
Ground	R1	Bedroom	17.78	12.49	777	12.49	100%	100	50%	50%	4380	YES
	R2	Bedroom	14.04	9.75	1246	9.75	100%	100	50%	50%	4380	YES
	R3	LKD	27.80	20.30	385	20.21	100%	150	50%	50%	4380	YES
0.17												
Ground	R1	Bedroom	17.71	12.43	771	12.43	100%	100	50%	50%	4380	YES
	R2	Bedroom	14.05	9.76	1245	9.76	100%	100	50%	50%	4380	YES
	R3	LKD	27.86	20.36	393	20.36	100%	150	50%	50%	4380	YES
0.18												
Ground	R1	Bedroom	17.82	12.53	786	12.53	100%	100	50%	50%	4380	YES
	R2	Bedroom	14.05	9.76	1244	9.76	100%	100	50%	50%	4380	YES
	R3	LKD	27.81	20.31	385	20.22	100%	150	50%	50%	4380	YES
0.19												
Ground	R1	Bedroom	17.64	12.36	765	12.36	100%	100	50%	50%	4380	YES
	R2	Bedroom	14.05	9.76	1241	9.76	100%	100	50%	50%	4380	YES
	R3	LKD	27.84	20.35	381	20.25	100%	150	50%	50%	4380	YES
0.20												
Ground	R1	Bedsit	28.84	22.41	851	22.41	100%	150	50%	50%	4380	YES
0.21												
Ground	R1	LKD	29.11	21.62	1602	21.62	100%	150	50%	50%	4380	YES
	R2	Bedroom	13.35	9.21	801	9.21	100%	100	50%	50%	4380	YES
	R3	Bedroom	17.17	12.03	731	12.03	100%	100	50%	50%	4380	YES
0.22												
Ground	R1	Bedroom	17.27	12.12	736	12.12	100%	100	50%	50%	4380	YES
	R2	Bedroom	13.34	9.19	746	9.19	100%	100	50%	50%	4380	YES
	R3	LKD	27.17	19.75	339	19.56	99%	150	50%	50%	4380	YES
0.23												
Ground	R1	Bedroom	14.31	9.63	558	9.63	100%	100	50%	50%	4380	YES
	R2	LKD	27.91	20.44	206	13.66	67%	150	50%	50%	4380	YES
0.24												
Ground	R1	Bedroom	14.65	9.75	187	8.80	90%	100	50%	50%	4380	YES
	R2	Bedroom	13.85	9.19	544	9.19	100%	100	50%	50%	4380	YES
	R3	LKD	29.46	22.73	280	16.86	74%	150	50%	50%	4380	YES
0.25												
Ground	R1	LKD	26.96	20.44	137	9.24	45%	150	50%	50%	4380	MARGINAL
	R2	Bedroom	12.00	8.06	190	7.77	96%	100	50%	50%	4380	YES
	R3	Bedroom	17.70	12.35	282	11.39	92%	100	50%	50%	4380	YES
0.26												
Ground	R1	Bedsit	33.24	23.56	135	11.19	47%	150	50%	50%	4380	MARGINAL
0.27												
Ground	R1	Bedsit	33.54	25.36	152	12.72	50%	150	50%	50%	4380	YES
0.28												
Ground	R1	Bedsit	33.50	25.32	248	18.79	74%	150	50%	50%	4380	YES
0.29												
Ground	R1	Bedsit	33.12	23.44	148	11.68	50%	150	50%	50%	4380	YES
0.30												
Ground	R1	Bedroom	17.05	11.86	320	10.89	92%	100	50%	50%	4380	YES
	R2	Bedroom	11.91	7.96	195	7.69	97%	100	50%	50%	4380	YES
	R3	LKD	26.60	19.62	133	9.03	46%	150	50%	50%	4380	MARGINAL

Daylight Assessment Results (Spatial Daylight Autonomy) Project: Pinewood Campus Date of Analysis: 07/10/2024								Criteria				Meets BRE Guidance
Floor Ref	Room Ref	Room Use	Room Area m2	Effective Area	Median Lux	Area Meeting Target Lux	% of Area Meeting Target Lux	Target Lux	Req % of Effective Area	Req % of Daylight Hours	Daylight Hours	
0.31												
Ground	R1	LKD	29.80	23.03	287	15.94	69%	150	50%	50%	4380	YES
	R2	Bedroom	13.88	9.21	597	9.21	100%	100	50%	50%	4380	YES
	R3	Bedroom	14.63	9.73	210	8.70	89%	100	50%	50%	4380	YES
0.32												
Ground	R1	LKD	27.38	19.90	237	14.04	71%	150	50%	50%	4380	YES
	R2	Bedroom	14.44	9.74	573	9.74	100%	100	50%	50%	4380	YES
0.33												
Ground	R1	Bedsit	34.04	25.49	167	13.29	52%	150	50%	50%	4380	YES
1.1												
First	R1	LKD	27.88	20.48	303	20.22	99%	150	50%	50%	4380	YES
	R2	Bedroom	13.30	9.17	635	9.17	100%	100	50%	50%	4380	YES
	R3	Bedroom	17.45	12.30	606	12.30	100%	100	50%	50%	4380	YES
1.2												
First	R1	Bedroom	16.85	11.75	600	11.75	100%	100	50%	50%	4380	YES
	R2	Bedroom	13.27	9.15	645	9.15	100%	100	50%	50%	4380	YES
	R3	LKD	29.76	22.26	1777	22.26	100%	150	50%	50%	4380	YES
1.3												
First	R1	Bedsit	33.44	24.67	484	24.67	100%	150	50%	50%	4380	YES
1.4												
First	R1	Bedsit	30.02	23.54	885	23.54	100%	150	50%	50%	4380	YES
1.5												
First	R1	LKD	25.77	18.58	415	18.58	100%	150	50%	50%	4380	YES
	R2	Bedroom	12.71	8.59	903	8.59	100%	100	50%	50%	4380	YES
	R3	Bedroom	17.27	12.12	839	12.12	100%	100	50%	50%	4380	YES
1.6												
First	R1	LKD	27.30	19.94	410	19.94	100%	150	50%	50%	4380	YES
	R2	Bedroom	13.42	9.26	913	9.26	100%	100	50%	50%	4380	YES
	R3	Bedroom	17.31	12.16	845	12.16	100%	100	50%	50%	4380	YES
1.7												
First	R1	LKD	27.30	19.94	411	19.94	100%	150	50%	50%	4380	YES
	R2	Bedroom	13.41	9.25	917	9.25	100%	100	50%	50%	4380	YES
	R3	Bedroom	17.34	12.18	851	12.18	100%	100	50%	50%	4380	YES
1.8												
First	R1	LKD	27.26	19.90	412	19.90	100%	150	50%	50%	4380	YES
	R2	Bedroom	13.40	9.24	918	9.24	100%	100	50%	50%	4380	YES
	R3	Bedroom	17.38	12.23	848	12.23	100%	100	50%	50%	4380	YES
1.9												
First	R1	LKD	29.46	21.96	2685	21.96	100%	150	50%	50%	4380	YES
	R2	Bedroom	13.56	9.37	966	9.37	100%	100	50%	50%	4380	YES
	R3	Bedroom	15.65	10.75	1160	10.75	100%	100	50%	50%	4380	YES
1.10												
First	R1	Bedroom	17.63	12.47	918	12.47	100%	100	50%	50%	4380	YES
	R2	Bedroom	12.58	8.48	1000	8.48	100%	100	50%	50%	4380	YES
	R3	LKD	26.41	19.61	1659	19.61	100%	150	50%	50%	4380	YES
1.11												
First	R1	LKD	21.99	14.87	523	13.68	92%	150	50%	50%	4380	YES
	R2	Bedroom	14.33	9.73	943	9.73	100%	100	50%	50%	4380	YES
1.12												
First	R1	Bedroom	13.99	9.39	497	9.39	100%	100	50%	50%	4380	YES
	R2	LKD	22.74	15.57	550	14.68	94%	150	50%	50%	4380	YES

Daylight Assessment Results (Spatial Daylight Autonomy) Project: Pinewood Campus Date of Analysis: 07/10/2024								Criteria				Meets BRE Guidance
Floor Ref	Room Ref	Room Use	Room Area m2	Effective Area	Median Lux	Area Meeting Target Lux	% of Area Meeting Target Lux	Target Lux	Req % of Effective Area	Req % of Daylight Hours	Daylight Hours	
1.13												
First	R1	Bedsit	36.68	27.79	442	25.36	91%	150	50%	50%	4380	YES
1.14												
First	R1	LKD	22.50	15.35	583	14.84	97%	150	50%	50%	4380	YES
	R2	Bedroom	14.03	9.43	549	9.43	100%	100	50%	50%	4380	YES
1.15												
First	R1	Bedroom	14.72	10.07	943	10.07	100%	100	50%	50%	4380	YES
	R2	LKD	22.02	14.88	470	13.29	89%	150	50%	50%	4380	YES
1.16												
First	R1	LKD	25.75	19.11	1825	19.11	100%	150	50%	50%	4380	YES
	R2	Bedroom	11.64	7.81	1156	7.81	100%	100	50%	50%	4380	YES
	R3	Bedroom	16.89	11.92	1103	11.92	100%	100	50%	50%	4380	YES
1.17												
First	R1	Bedroom	14.71	10.02	1297	10.02	100%	100	50%	50%	4380	YES
	R2	Bedroom	12.44	8.48	1164	8.48	100%	100	50%	50%	4380	YES
	R3	LKD	28.41	21.15	2320	21.15	100%	150	50%	50%	4380	YES
1.18												
First	R1	Bedroom	17.78	12.49	636	12.49	100%	100	50%	50%	4380	YES
	R2	Bedroom	14.04	9.75	1004	9.75	100%	100	50%	50%	4380	YES
	R3	LKD	27.80	20.30	303	19.92	98%	150	50%	50%	4380	YES
1.19												
First	R1	Bedroom	17.71	12.43	631	12.43	100%	100	50%	50%	4380	YES
	R2	Bedroom	14.05	9.76	1038	9.76	100%	100	50%	50%	4380	YES
	R3	LKD	27.86	20.36	308	19.98	98%	150	50%	50%	4380	YES
1.20												
First	R1	Bedroom	17.82	12.53	643	12.53	100%	100	50%	50%	4380	YES
	R2	Bedroom	14.05	9.76	1037	9.76	100%	100	50%	50%	4380	YES
	R3	LKD	27.81	20.31	304	19.93	98%	150	50%	50%	4380	YES
1.21												
First	R1	Bedroom	17.64	12.36	627	12.36	100%	100	50%	50%	4380	YES
	R2	Bedroom	14.05	9.76	1037	9.76	100%	100	50%	50%	4380	YES
	R3	LKD	27.84	20.35	301	19.96	98%	150	50%	50%	4380	YES
1.22												
First	R1	Bedsit	28.84	22.41	720	22.41	100%	150	50%	50%	4380	YES
1.23												
First	R1	Bedsit	30.84	23.85	261	23.41	98%	150	50%	50%	4380	YES
1.24												
First	R1	LKD	29.11	21.62	1523	21.62	100%	150	50%	50%	4380	YES
	R2	Bedroom	13.35	9.21	645	9.21	100%	100	50%	50%	4380	YES
	R3	Bedroom	17.17	12.03	614	12.03	100%	100	50%	50%	4380	YES
1.25												
First	R1	Bedroom	17.27	12.12	618	12.12	100%	100	50%	50%	4380	YES
	R2	Bedroom	13.34	9.19	629	9.19	100%	100	50%	50%	4380	YES
	R3	LKD	27.17	19.75	273	19.08	97%	150	50%	50%	4380	YES
1.28												
First	R1	LKD	27.20	9.63	615	9.63	100%	150	50%	50%	4380	YES
	R1	Bedroom	14.31	9.63	615	9.63	100%	100	50%	50%	4380	YES
1.29												
First	R1	Bedroom	14.65	9.75	215	9.18	94%	100	50%	50%	4380	YES
	R2	Bedroom	13.85	9.19	605	9.19	100%	100	50%	50%	4380	YES
	R3	LKD	29.46	22.73	341	20.40	90%	150	50%	50%	4380	YES

MES BUILDING SOLUTIONS Daylight Assessment Results (Spatial Daylight Autonomy) Project: Pinewood Campus Date of Analysis: 07/10/2024												
								Criteria				
Floor Ref	Room Ref	Room Use	Room Area m2	Effective Area	Median Lux	Area Meeting Target Lux	% of Area Meeting Target Lux	Target Lux	Req % of Effective Area	Req % of Daylight Hours	Daylight Hours	Meets BRE Guidance
1.30												
First	R1	LKD	26.96	20.44	163	11.05	54%	150	50%	50%	4380	YES
	R2	Bedroom	12.00	8.06	211	7.87	98%	100	50%	50%	4380	YES
	R3	Bedroom	17.70	12.35	324	11.65	94%	100	50%	50%	4380	YES
1.31												
First	R1	Bedsit	33.24	23.56	180	13.46	57%	150	50%	50%	4380	YES
1.32												
First	R1	Bedsit	30.97	23.24	232	17.36	75%	150	50%	50%	4380	YES
1.33												
First	R1	LKD	21.86	15.93	232	10.15	64%	150	50%	50%	4380	YES
	R2	Bedroom	11.64	7.44	664	7.44	100%	100	50%	50%	4380	YES
	R3	Bedroom	14.66	9.86	237	9.35	95%	100	50%	50%	4380	YES
1.34												
First	R1	Bedsit	33.12	23.44	203	14.75	63%	150	50%	50%	4380	YES
1.35												
First	R1	Bedroom	17.10	11.90	362	11.54	97%	100	50%	50%	4380	YES
	R2	Bedroom	11.91	7.96	240	7.87	99%	100	50%	50%	4380	YES
	R3	LKD	26.60	19.62	188	11.70	60%	150	50%	50%	4380	YES
1.36												
First	R1	LKD	29.80	23.03	391	22.68	98%	150	50%	50%	4380	YES
	R2	Bedroom	13.88	9.21	722	9.21	100%	100	50%	50%	4380	YES
	R3	Bedroom	14.63	9.73	257	9.17	94%	100	50%	50%	4380	YES
1.37												
First	R1	LKD	27.44	19.96	299	15.32	77%	150	50%	50%	4380	YES
	R2	Bedroom	14.51	9.80	643	9.80	100%	100	50%	50%	4380	YES
1.38												
First	R1	Bedsit	33.66	25.23	157	12.84	51%	150	50%	50%	4380	YES
1.39												
First	R1	Bedsit	28.83	18.92	362	14.49	77%	150	50%	50%	4380	YES
2.1												
Second	R1	LKD	27.88	20.48	292	20.05	98%	150	50%	50%	4380	YES
	R2	Bedroom	13.30	9.17	999	9.17	100%	100	50%	50%	4380	YES
	R3	Bedroom	17.45	12.30	591	12.30	100%	100	50%	50%	4380	YES
2.2												
Second	R1	Bedroom	16.85	11.75	581	11.75	100%	100	50%	50%	4380	YES
	R2	Bedroom	13.27	9.15	1001	9.15	100%	100	50%	50%	4380	YES
	R3	LKD	29.76	22.26	1463	22.26	100%	150	50%	50%	4380	YES
2.3												
Second	R1	Bedsit	33.44	24.67	348	22.80	92%	150	50%	50%	4380	YES
2.4												
Second	R1	Bedsit	30.02	23.54	727	23.54	100%	150	50%	50%	4380	YES
2.5												
Second	R1	LKD	25.77	18.58	288	18.14	98%	150	50%	50%	4380	YES
	R2	Bedroom	12.71	8.59	669	8.59	100%	100	50%	50%	4380	YES
	R3	Bedroom	17.27	12.12	599	12.12	100%	100	50%	50%	4380	YES
2.6												
Second	R1	LKD	27.30	19.94	282	18.53	93%	150	50%	50%	4380	YES
	R2	Bedroom	13.42	9.26	1065	9.26	100%	100	50%	50%	4380	YES
	R3	Bedroom	17.31	12.16	604	12.16	100%	100	50%	50%	4380	YES

MES BUILDING SOLUTIONS Daylight Assessment Results (Spatial Daylight Autonomy) Project: Pinewood Campus Date of Analysis: 07/10/2024													Criteria				Meets BRE Guidance
Floor Ref	Room Ref	Room Use	Room Area m2	Effective Area	Median Lux	Area Meeting Target Lux	% of Area Meeting Target Lux	Target Lux	Req % of Effective Area	Req % of Daylight Hours	Daylight Hours						
2.7																	
Second	R1	LKD	27.30	19.94	281	18.34	92%	150	50%	50%	4380	YES					
	R2	Bedroom	13.41	9.25	1067	9.25	100%	100	50%	50%	4380	YES					
	R3	Bedroom	17.34	12.18	608	12.18	100%	100	50%	50%	4380	YES					
2.8																	
Second	R1	LKD	27.26	19.90	283	18.77	94%	150	50%	50%	4380	YES					
	R2	Bedroom	13.40	9.24	1069	9.24	100%	100	50%	50%	4380	YES					
	R3	Bedroom	17.38	12.23	607	12.23	100%	100	50%	50%	4380	YES					
2.9																	
Second	R1	KD	29.46	21.96	2610	21.96	100%	200	50%	50%	4380	YES					
	R2	Bedroom	13.56	9.37	1290	9.37	100%	100	50%	50%	4380	YES					
	R3	Bedroom	15.65	10.75	1017	10.75	100%	100	50%	50%	4380	YES					
2.10																	
Second	R1	Bedroom	17.63	12.47	789	12.47	100%	100	50%	50%	4380	YES					
	R2	Bedroom	12.58	8.48	1399	8.48	100%	100	50%	50%	4380	YES					
	R3	LKD	26.41	19.61	1407	19.61	100%	150	50%	50%	4380	YES					
2.11																	
Second	R1	LKD	21.99	14.87	966	14.87	100%	150	50%	50%	4380	YES					
	R2	Bedroom	14.32	9.72	1601	9.72	100%	100	50%	50%	4380	YES					
2.12																	
Second	R1	Bedroom	13.98	9.39	854	9.39	100%	100	50%	50%	4380	YES					
	R2	LKD	22.74	15.57	968	15.57	100%	150	50%	50%	4380	YES					
2.13																	
Second	R1	Bedsit	36.68	27.79	812	27.79	100%	150	50%	50%	4380	YES					
2.14																	
Second	R1	LKD	22.49	15.34	1041	15.34	100%	150	50%	50%	4380	YES					
	R2	Bedroom	14.02	9.42	931	9.42	100%	100	50%	50%	4380	YES					
2.15																	
Second	R1	Bedroom	14.63	9.98	1618	9.98	100%	100	50%	50%	4380	YES					
	R2	LKD	22.02	14.89	861	14.89	100%	150	50%	50%	4380	YES					
2.16																	
Second	R1	LKD	25.75	19.11	1832	19.11	100%	150	50%	50%	4380	YES					
	R2	Bedroom	11.64	7.81	1467	7.81	100%	100	50%	50%	4380	YES					
	R3	Bedroom	16.89	11.92	950	11.92	100%	100	50%	50%	4380	YES					
2.17																	
Second	R1	Bedroom	14.71	10.02	1132	10.02	100%	100	50%	50%	4380	YES					
	R2	Bedroom	12.44	8.48	1494	8.48	100%	100	50%	50%	4380	YES					
	R3	LKD	28.41	21.15	2102	21.15	100%	150	50%	50%	4380	YES					
2.18																	
Second	R1	Bedroom	17.78	12.49	653	12.49	100%	100	50%	50%	4380	YES					
	R2	Bedroom	14.04	9.75	1028	9.75	100%	100	50%	50%	4380	YES					
	R3	LKD	27.80	20.30	311	19.92	98%	150	50%	50%	4380	YES					
2.19																	
Second	R1	Bedroom	17.71	12.43	648	12.43	100%	100	50%	50%	4380	YES					
	R2	Bedroom	14.05	9.76	1063	9.76	100%	100	50%	50%	4380	YES					
	R3	LKD	27.86	20.36	315	19.98	98%	150	50%	50%	4380	YES					
2.20																	
Second	R1	Bedroom	17.82	12.53	661	12.53	100%	100	50%	50%	4380	YES					
	R2	Bedroom	14.05	9.76	1062	9.76	100%	100	50%	50%	4380	YES					
	R3	LKD	27.81	20.31	312	19.93	98%	150	50%	50%	4380	YES					

MES BUILDING SOLUTIONS Daylight Assessment Results (Spatial Daylight Autonomy) Project: Pinewood Campus Date of Analysis: 07/10/2024												
								Criteria				
Floor Ref	Room Ref	Room Use	Room Area m2	Effective Area	Median Lux	Area Meeting Target Lux	% of Area Meeting Target Lux	Target Lux	Req % of Effective Area	Req % of Daylight Hours	Daylight Hours	Meets BRE Guidance
2.21												
Second	R1	Bedroom	17.64	12.36	644	12.36	100%	100	50%	50%	4380	YES
	R2	Bedroom	14.05	9.76	1062	9.76	100%	100	50%	50%	4380	YES
	R3	LKD	27.84	20.35	310	19.96	98%	150	50%	50%	4380	YES
2.22												
Second	R1	Bedsit	28.84	22.41	744	22.41	100%	150	50%	50%	4380	YES
2.23												
Second	R1	Bedsit	30.84	23.85	277	23.58	99%	150	50%	50%	4380	YES
2.24												
Second	R1	LKD	29.11	21.62	1421	21.62	100%	150	50%	50%	4380	YES
	R2	Bedroom	13.35	9.21	1027	9.21	100%	100	50%	50%	4380	YES
	R3	Bedroom	17.17	12.03	598	12.03	100%	100	50%	50%	4380	YES
2.25												
Second	R1	Bedroom	17.27	12.12	602	12.12	100%	100	50%	50%	4380	YES
	R2	Bedroom	13.34	9.19	1005	9.19	100%	100	50%	50%	4380	YES
	R3	LKD	27.17	19.75	266	17.94	91%	150	50%	50%	4380	YES
2.26												
Second	R1	Bedroom	14.40	9.71	574	9.71	100%	100	50%	50%	4380	YES
	R2	LKD	19.13	13.30	576	13.30	100%	150	50%	50%	4380	YES
2.27												
Second	R1	Bedroom	16.62	11.37	786	11.37	100%	100	50%	50%	4380	YES
	R2	LKD	23.09	16.43	234	13.00	79%	150	50%	50%	4380	YES
2.28												
Second	R1	LKD	14.35	9.66	747	9.66	100%	150	50%	50%	4380	YES
	R2	LKD	27.22	19.76	344	15.81	80%	150	50%	50%	4380	YES
2.29												
Second	R1	Bedroom	14.65	9.75	270	9.27	95%	100	50%	50%	4380	YES
	R2	Bedroom	13.85	9.19	734	9.19	100%	100	50%	50%	4380	YES
	R3	LKD	29.46	22.73	439	22.73	100%	150	50%	50%	4380	YES
2.30												
Second	R1	LKD	26.98	20.48	254	16.99	83%	150	50%	50%	4380	YES
	R2	Bedroom	12.00	8.06	269	8.06	100%	100	50%	50%	4380	YES
	R3	Bedroom	17.70	12.35	461	12.35	100%	100	50%	50%	4380	YES
2.31												
Second	R1	Bedsit	33.24	23.56	282	16.19	69%	150	50%	50%	4380	YES
2.32												
Second	R1	Bedsit	30.97	23.24	330	20.17	87%	150	50%	50%	4380	YES
2.33												
Second	R1	LKD	21.86	15.93	328	15.14	95%	150	50%	50%	4380	YES
	R2	Bedroom	11.64	7.44	830	7.44	100%	100	50%	50%	4380	YES
	R3	Bedroom	14.66	9.86	309	9.61	97%	100	50%	50%	4380	YES
2.34												
Second	R1	Bedsit	33.12	23.44	303	16.38	70%	150	50%	50%	4380	YES
2.35												
Second	R1	Bedroom	17.08	11.88	496	11.88	100%	100	50%	50%	4380	YES
	R2	Bedroom	11.91	7.96	335	7.96	100%	100	50%	50%	4380	YES
	R3	LKD	26.60	19.62	304	18.79	96%	150	50%	50%	4380	YES
2.36												
Second	R1	LKD	29.80	23.03	511	23.03	100%	150	50%	50%	4380	YES
	R2	Bedroom	13.88	9.21	879	9.21	100%	100	50%	50%	4380	YES
	R3	Bedroom	14.63	9.73	329	9.54	98%	100	50%	50%	4380	YES

MES BUILDING SOLUTIONS Daylight Assessment Results (Spatial Daylight Autonomy) Project: Pinewood Campus Date of Analysis: 07/10/2024													Criteria				Meets BRE Guidance
Floor Ref	Room Ref	Room Use	Room Area m2	Effective Area	Median Lux	Area Meeting Target Lux	% of Area Meeting Target Lux	Target Lux	Req % of Effective Area	Req % of Daylight Hours	Daylight Hours						
2.37																	
Second	R1	LKD	27.42	19.93	416	18.06	91%	150	50%	50%	4380	YES					
	R2	Bedroom	14.46	9.76	777	9.76	100%	100	50%	50%	4380	YES					
2.38																	
Second	R1	Bedsit	33.66	25.23	227	16.70	66%	150	50%	50%	4380	YES					
2.39																	
Second	R1	Bedsit	28.83	18.92	503	14.79	78%	150	50%	50%	4380	YES					



Appendix 3

Sunlight Exposure Results



Sunlight Assessment Results (Sunlight Exposure)

Project: Pinewood Campus

Date of Analysis: 07/10/2024

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)	Rating
0.1						
Ground	R1	LKD	W1	28°N	0	
					0	North facing
Ground	R2	Bedroom	W2	28°N	0	
			W3	28°N	0	
					0	North facing
Ground	R3	Bedroom	W4	28°N	0.1	
					0.1	North facing
0.2						
Ground	R1	Bedroom	W1	28°N	0	
					0	North facing
Ground	R2	Bedroom	W2	28°N	0	
			W3	28°N	0	
					0	North facing
Ground	R3	LKD	W4	28°N	0.1	
			W5	118°	4.3	
			W6	118°	2.6	
					4.3	High
0.3						
Ground	R1	Bedsit	W1	118°	5.7	
					5.7	High
0.4						
Ground	R1	Bedroom	W1	118°	4.7	
					4.7	High
Ground	R2	LKD	W2	118°	5.5	
					5.5	High



Sunlight Assessment Results (Sunlight Exposure)
Project: Pinewood Campus
Date of Analysis: 07/10/2024

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)	Rating
0.5						
Ground	R1	LKD	W1	118°	5.5	
					5.5	High
Ground	R2	Bedroom	W2	118°	4.7	
			W3	118°	4.7	
					4.7	High
Ground	R3	Bedroom	W4	118°	5.5	
					5.5	High
0.6						
Ground	R1	LKD	W1	118°	5.5	
					5.5	High
Ground	R2	Bedroom	W2	118°	4.7	
			W3	118°	4.7	
					4.7	High
Ground	R3	Bedroom	W4	118°	5.5	
					5.5	High
0.7						
Ground	R1	LKD	W1	118°	5.5	
					5.5	High
Ground	R2	Bedroom	W2	118°	4.7	
			W3	118°	4.7	
					4.7	High
Ground	R3	Bedroom	W4	118°	5.5	
					5.5	High



Sunlight Assessment Results (Sunlight Exposure)

Project: Pinewood Campus

Date of Analysis: 07/10/2024

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)	Rating
0.8						
Ground	R1	LKD	W1	118°	5.7	
			W2	118°	5.7	
			W3	208°	7.5	
					9.5	High
Ground	R2	Bedroom	W4	208°	6.6	
			W5	208°	6.5	
					6.6	High
Ground	R3	Bedroom	W6	208°	7.5	
					7.5	High
0.9						
Ground	R1	Bedroom	W1	208°	7.5	
					7.5	High
Ground	R2	Bedroom	W2	208°	6.5	
			W3	208°	6.5	
					6.5	High
Ground	R3	LKD	W4	208°	7.5	
			W5	298°N	2.8	
			W6	298°N	0.6	
					7.5	High
0.10						
Ground	R1	LKD	W1	217°	4.8	
					4.8	High
Ground	R2	Bedroom	W2	217°	5.4	
					5.4	High
0.11						
Ground	R1	Bedroom	W1	217°	6.1	
					6.1	High
Ground	R2	LKD	W2	217°	6.7	
					6.7	High



Sunlight Assessment Results (Sunlight Exposure)

Project: Pinewood Campus

Date of Analysis: 07/10/2024

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)	Rating
0.12						
Ground	R1	LKD	W1	217°	7.1	
					7.1	High
Ground	R2	Bedroom	W2	217°	7.1	
					7.1	High
0.13						
Ground	R1	Bedroom	W1	217°	7.1	
					7.1	High
Ground	R2	LKD	W2	217°	7	
					7	High
0.14						
Ground	R1	LKD	W1	137°	3.6	
			W2	136°	5.8	
			W3	226°	6.4	
					8.6	High
Ground	R2	Bedroom	W4	226°	5.6	
			W5	226°	5.3	
					5.6	High
Ground	R3	Bedroom	W6	226°	6.5	
					6.5	High
0.15						
Ground	R1	Bedroom	W1	226°	6.4	
					6.4	High
Ground	R2	Bedroom	W2	226°	5.5	
			W3	226°	5.6	
					5.6	High
Ground	R3	LKD	W4	226°	6.4	
			W5	316°N	1.6	
			W6	316°N	1.6	
					6.4	High



Sunlight Assessment Results (Sunlight Exposure)

Project: Pinewood Campus

Date of Analysis: 07/10/2024

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)		Rating
0.16							
Ground	R1	Bedroom	W1	316°N	1.3		
					1.3	North facing	
Ground	R2	Bedroom	W2	316°N	1.4		
					1.4	North facing	
Ground	R3	LKD	W3	316°N	1.3		
					1.3	North facing	
0.17							
Ground	R1	Bedroom	W1	316°N	1.3		
					1.3	North facing	
Ground	R2	Bedroom	W2	316°N	1.4		
					1.4	North facing	
Ground	R3	LKD	W3	316°N	1.3		
					1.3	North facing	
0.18							
Ground	R1	Bedroom	W1	316°N	1.3		
					1.3	North facing	
Ground	R2	Bedroom	W2	316°N	1.4		
					1.4	North facing	
Ground	R3	LKD	W3	316°N	1.3		
					1.3	North facing	
0.19							
Ground	R1	Bedroom	W1	316°N	1.2		
					1.2	North facing	
Ground	R2	Bedroom	W2	316°N	1.4		
					1.4	North facing	
Ground	R3	LKD	W3	316°N	1.3		
					1.3	North facing	
0.20							
Ground	R1	Bedsit	W1	316°N	1.6		
					1.6	Minimum	



Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)	Rating
0.21						
Ground	R1	LKD	W1	316°N	0	
			W2	316°N	0	
			W3	46°N	1.5	
					1.5	Minimum
Ground	R2	Bedroom	W4	46°N	0.1	
			W5	46°N	0.2	
					0.2	North facing
Ground	R3	Bedroom	W6	46°N	1.4	
					1.4	North facing
0.22						
Ground	R1	Bedroom	W1	46°N	1.5	
					1.5	Minimum
Ground	R2	Bedroom	W2	46°N	0	
			W3	46°N	0.4	
					0.4	North facing
Ground	R3	LKD	W4	46°N	1.4	
					1.4	North facing
0.23						
Ground	R1	Bedroom	W1	298°N	0.9	
					0.9	North facing
Ground	R2	LKD	W2	298°N	0.3	
					0.3	North facing
0.24						
Ground	R1	Bedroom	W1	298°N	0	
					0	North facing
Ground	R2	Bedroom	W2	298°N	0	
					0	North facing
Ground	R3	LKD	W3	298°N	0	
					0	North facing



Sunlight Assessment Results (Sunlight Exposure)

Project: Pinewood Campus

Date of Analysis: 07/10/2024

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)	Rating
0.25						
Ground	R1	LKD	W1	298°N	0	
					0	North facing
Ground	R2	Bedroom	W2	298°N	0	
					0	North facing
Ground	R3	Bedroom	W3	37°N	0	
					0	North facing
0.26						
Ground	R1	Bedsit	W1	37°N	0	
					0	North facing
0.27						
Ground	R1	Bedsit	W1	37°N	0	
					0	North facing
0.28						
Ground	R1	Bedsit	W1	37°N	0	
					0	North facing
0.29						
Ground	R1	Bedsit	W1	37°N	0	
					0	North facing
0.30						
Ground	R1	Bedroom	W1	37°N	0	
					0	North facing
Ground	R2	Bedroom	W2	136°	1.1	
					1.1	North facing
Ground	R3	LKD	W3	136°	1.6	
					1.6	Minimum



Sunlight Assessment Results (Sunlight Exposure)

Project: Pinewood Campus

Date of Analysis: 07/10/2024

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)		Rating
0.31							
Ground	R1	LKD	W1	136°	3		
					3	Medium	
Ground	R2	Bedroom	W2	136°	4.3		
					4.3	High	
Ground	R3	Bedroom	W3	136°	4.7		
					4.7	High	
0.32							
Ground	R1	LKD	W1	136°	5.1		
					5.1	High	
Ground	R2	Bedroom	W2	136°	5		
					5	High	
0.33							
Ground	R1	Bedsit	W1	217°	5		
					5	High	
1.1							
First	R1	LKD	W1	28°N	0		
					0	North facing	
First	R2	Bedroom	W2	28°N	0		
			W3	28°N	0		
					0		North facing
First	R3	Bedroom	W4	28°N	0.1		
					0.1	North facing	



Sunlight Assessment Results (Sunlight Exposure)

Project: Pinewood Campus

Date of Analysis: 07/10/2024

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)		Rating
1.2							
First	R1	Bedroom	W1	28°N	0	North facing	
					0		
First	R2	Bedroom	W2	28°N	0	North facing	
			W3	28°N	0		
			0				
First	R3	LKD	W4	28°N	0.1	High	
			W5	118°	4.3		
			W6	118°	2.6		
			4.3				
1.3							
First	R1	Bedsit	W1	118°	5.7	High	
					5.7		
1.4							
First	R1	Bedsit	W1	118°	5.7	High	
					5.7		
1.5							
First	R1	LKD	W1	118°	5.5	High	
					5.5		
First	R2	Bedroom	W2	118°	4.6	High	
			W3	118°	4.7		
			4.7				
First	R3	Bedroom	W4	118°	5.5	High	
					5.5		



Sunlight Assessment Results (Sunlight Exposure)

Project: Pinewood Campus

Date of Analysis: 07/10/2024

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)		Rating
1.6							
First	R1	LKD	W1	118°	5.5		
					5.5		High
First	R2	Bedroom	W2	118°	4.7		
			W3	118°	4.7		
First	R3	Bedroom	W4	118°	5.5		
					5.5		High
1.7							
First	R1	LKD	W1	118°	5.5		
					5.5		High
First	R2	Bedroom	W2	118°	4.7		
			W3	118°	4.7		
First	R3	Bedroom	W4	118°	5.5		
					5.5		High
1.8							
First	R1	LKD	W1	118°	5.5		
					5.5		High
First	R2	Bedroom	W2	118°	4.7		
			W3	118°	4.7		
First	R3	Bedroom	W4	118°	5.5		
					5.5		High



Sunlight Assessment Results (Sunlight Exposure)

Project: Pinewood Campus

Date of Analysis: 07/10/2024

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)	Rating
1.9						
First	R1	LKD	W1	118°	5.7	
			W2	118°	5.7	
			W3	208°	7.5	
					9.5	High
First	R2	Bedroom	W4	208°	6.6	
			W5	208°	6.5	
					6.6	High
First	R3	Bedroom	W6	208°	7.5	
					7.5	High
1.10						
First	R1	Bedroom	W1	208°	7.5	
					7.5	High
First	R2	Bedroom	W2	208°	6.5	
			W3	208°	6.5	
					6.5	High
First	R3	LKD	W4	208°	7.5	
			W5	298°N	2.8	
			W6	298°N	0.6	
					7.5	High
1.11						
First	R1	LKD	W1	217°	5.2	
					5.2	High
First	R2	Bedroom	W2	217°	6.2	
					6.2	High
1.12						
First	R1	Bedroom	W1	217°	6.6	
					6.6	High
First	R2	LKD	W2	217°	7.1	
					7.1	High



Sunlight Assessment Results (Sunlight Exposure)
Project: Pinewood Campus
Date of Analysis: 07/10/2024

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)	Rating
1.13						
First	R1	Bedsit	W1	217°	7.1	
					7.1	High
1.14						
First	R1	LKD	W1	217°	7.1	
					7.1	High
First	R2	Bedroom	W2	217°	6.6	
					6.6	High
1.15						
First	R1	Bedroom	W1	217°	7.1	
					7.1	High
First	R2	LKD	W2	217°	7	
					7	High
1.16						
First	R1	LKD	W1	137°	3.8	
			W2	136°	6.1	
			W3	226°	6.4	
					8.8	High
First	R2	Bedroom	W4	226°	5.5	
			W5	226°	5.3	
					5.5	High
First	R3	Bedroom	W6	226°	6.5	
					6.5	High



Sunlight Assessment Results (Sunlight Exposure)

Project: Pinewood Campus

Date of Analysis: 07/10/2024

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)	Rating
1.17						
First	R1	Bedroom	W1	226°	6.4	High
					6.4	
First	R2	Bedroom	W2	226°	5.5	High
			W3	226°	5.6	
					5.6	
First	R3	LKD	W4	226°	6.4	High
			W5	316°N	1.6	
			W6	316°N	1.6	
			6.4			
1.18						
First	R1	Bedroom	W1	316°N	1.3	North facing
					1.3	
First	R2	Bedroom	W2	316°N	1.4	North facing
					1.4	
First	R3	LKD	W3	316°N	1.3	North facing
					1.3	
1.19						
First	R1	Bedroom	W1	316°N	1.3	North facing
					1.3	
First	R2	Bedroom	W2	316°N	1.4	North facing
					1.4	
First	R3	LKD	W3	316°N	1.3	North facing
					1.3	
1.20						
First	R1	Bedroom	W1	316°N	1.3	North facing
					1.3	
First	R2	Bedroom	W2	316°N	1.4	North facing
					1.4	
First	R3	LKD	W3	316°N	1.3	North facing
					1.3	



Sunlight Assessment Results (Sunlight Exposure)
Project: Pinewood Campus
Date of Analysis: 07/10/2024

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)	Rating
1.21						
First	R1	Bedroom	W1	316°N	1.2	
					1.2	North facing
First	R2	Bedroom	W2	316°N	1.4	
					1.4	North facing
First	R3	LKD	W3	316°N	1.3	
					1.3	North facing
1.22						
First	R1	Bedsit	W1	316°N	1.6	
					1.6	Minimum
1.23						
First	R1	Bedsit	W1	316°N	1.2	
					1.2	North facing
1.24						
First	R1	LKD	W1	316°N	0	
			W2	316°N	0	
			W3	46°N	1.5	
					1.5	Minimum
First	R2	Bedroom	W4	46°N	0.1	
			W5	46°N	0.2	
					0.2	North facing
First	R3	Bedroom	W6	46°N	1.4	
					1.4	North facing
1.25						
First	R1	Bedroom	W1	46°N	1.5	
					1.5	Minimum
First	R2	Bedroom	W2	46°N	0	
			W3	46°N	0.4	
					0.4	North facing
First	R3	LKD	W4	46°N	1.4	
					1.4	North facing



Sunlight Assessment Results (Sunlight Exposure)

Project: Pinewood Campus

Date of Analysis: 07/10/2024

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)	Rating
1.28						
First	R1	LKD	W2	298°N	1.6	
					1.6	Minimum
First	R1	Bedroom	W1	298°N	2.1	
					2.1	Minimum
1.29						
First	R1	Bedroom	W1	298°N	0.1	
					0.1	North facing
First	R2	Bedroom	W2	298°N	0.3	
					0.3	North facing
First	R3	LKD	W3	298°N	0	
					0	North facing
1.30						
First	R1	LKD	W1	298°N	0	
					0	North facing
First	R2	Bedroom	W2	298°N	0	
					0	North facing
First	R3	Bedroom	W3	37°N	0	
					0	North facing
1.31						
First	R1	Bedsit	W1	37°N	0	
					0	North facing
1.32						
First	R1	Bedsit	W1	37°N	0	
					0	North facing



Sunlight Assessment Results (Sunlight Exposure)

Project: Pinewood Campus

Date of Analysis: 07/10/2024

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)	Rating
1.33						
First	R1	LKD	W1	37°N	0	
					0	North facing
First	R2	Bedroom	W2	37°N	0	
					0	North facing
First	R3	Bedroom	W3	37°N	0	
					0	North facing
1.34						
First	R1	Bedsit	W1	37°N	0.5	
					0.5	North facing
1.35						
First	R1	Bedroom	W1	37°N	0.7	
					0.7	North facing
First	R2	Bedroom	W2	136°	2.1	
					2.1	Minimum
First	R3	LKD	W3	136°	3.1	
					3.1	Medium
1.36						
First	R1	LKD	W1	136°	5.7	
					5.7	High
First	R2	Bedroom	W2	136°	6.4	
					6.4	High
First	R3	Bedroom	W3	136°	5.7	
					5.7	High
1.37						
First	R1	LKD	W1	136°	5.7	
					5.7	High
First	R2	Bedroom	W2	136°	5.2	
					5.2	High



Sunlight Assessment Results (Sunlight Exposure)

Project: Pinewood Campus

Date of Analysis: 07/10/2024

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)	Rating
1.38						
First	R1	Bedsit	W1	217°	6.5	
					6.5	High
1.39						
First	R1	Bedsit	W1	217°	6.3	
					6.3	High
2.1						
Second	R1	LKD	W1	28°N	0	
					0	North facing
Second	R2	Bedroom	W2	28°N	0.2	
					0.2	North facing
Second	R3	Bedroom	W3	28°N	0.1	
					0.1	North facing
2.2						
Second	R1	Bedroom	W1	28°N	0	
					0	North facing
Second	R2	Bedroom	W2	28°N	0.2	
					0.2	North facing
Second	R3	LKD	W3	28°N	0.1	
			W4	118°	4.3	
			W5	118°	2.6	
					4.3	High
2.3						
Second	R1	Bedsit	W1	118°	5.7	
					5.7	High
2.4						
Second	R1	Bedsit	W1	118°	5.8	
					5.8	High



Sunlight Assessment Results (Sunlight Exposure)

Project: Pinewood Campus

Date of Analysis: 07/10/2024

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)		Rating
2.5							
Second	R1	LKD	W1	118°	5.5		High
					5.5		
Second	R2	Bedroom	W2	118°	4.6		High
			W3	118°	4.7		
			4.7				
Second	R3	Bedroom	W4	118°	5.5		High
					5.5		
2.6							
Second	R1	LKD	W1	118°	5.5		High
					5.5		
Second	R2	Bedroom	W2	118°	5.6		High
					5.6		
Second	R3	Bedroom	W3	118°	5.5		High
					5.5		
2.7							
Second	R1	LKD	W1	118°	5.5		High
					5.5		
Second	R2	Bedroom	W2	118°	5.6		High
					5.6		
Second	R3	Bedroom	W3	118°	5.5		High
					5.5		
2.8							
Second	R1	LKD	W1	118°	5.5		High
					5.5		
Second	R2	Bedroom	W2	118°	5.6		High
					5.6		
Second	R3	Bedroom	W3	118°	5.5		High
					5.5		



Sunlight Assessment Results (Sunlight Exposure)

Project: Pinewood Campus

Date of Analysis: 07/10/2024

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)	Rating
2.9						
Second	R1	KD	W1	118°	5.8	
			W2	208°	7.5	
					9.5	High
Second	R2	Bedroom	W3	208°	7.7	
					7.7	High
Second	R3	Bedroom	W4	208°	7.5	
					7.5	High
2.10						
Second	R1	Bedroom	W1	208°	7.5	
					7.5	High
Second	R2	Bedroom	W2	208°	7.7	
					7.7	High
Second	R3	LKD	W3	208°	7.5	
			W4	298°N	2.8	
			W5	298°N	0.6	
			7.5		High	
2.11						
Second	R1	LKD	W1	217°	7	
					7	High
Second	R2	Bedroom	W2	217°	7.1	
					7.1	High
2.12						
Second	R1	Bedroom	W1	217°	6.6	
					6.6	High
Second	R2	LKD	W2	217°	7.1	
					7.1	High
2.13						
Second	R1	Bedsit	W1	217°	7.1	
					7.1	High



Sunlight Assessment Results (Sunlight Exposure)

Project: Pinewood Campus

Date of Analysis: 07/10/2024

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)	Rating
2.14						
Second	R1	LKD	W1	217°	7.1	
					7.1	High
Second	R2	Bedroom	W2	217°	6.6	
					6.6	High
2.15						
Second	R1	Bedroom	W1	217°	7.1	
					7.1	High
Second	R2	LKD	W2	217°	7	
					7	High
2.16						
Second	R1	LKD	W1	137°	4.2	
			W2	136°	6.4	
			W3	226°	6.4	
					9.2	High
Second	R2	Bedroom	W4	226°	6.5	
					6.5	High
Second	R3	Bedroom	W5	226°	6.5	
					6.5	High
2.17						
Second	R1	Bedroom	W1	226°	6.4	
					6.4	High
Second	R2	Bedroom	W2	226°	6.5	
					6.5	High
Second	R3	LKD	W3	226°	6.4	
			W4	316°N	1.6	
			W5	316°N	1.6	
					6.4	High



Sunlight Assessment Results (Sunlight Exposure)
Project: Pinewood Campus
Date of Analysis: 07/10/2024

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)		Rating
2.18							
Second	R1	Bedroom	W1	316°N	1.3		
					1.3	North facing	
Second	R2	Bedroom	W2	316°N	1.4		
					1.4	North facing	
Second	R3	LKD	W3	316°N	1.3		
					1.3	North facing	
2.19							
Second	R1	Bedroom	W1	316°N	1.3		
					1.3	North facing	
Second	R2	Bedroom	W2	316°N	1.4		
					1.4	North facing	
Second	R3	LKD	W3	316°N	1.3		
					1.3	North facing	
2.20							
Second	R1	Bedroom	W1	316°N	1.3		
					1.3	North facing	
Second	R2	Bedroom	W2	316°N	1.4		
					1.4	North facing	
Second	R3	LKD	W3	316°N	1.3		
					1.3	North facing	
2.21							
Second	R1	Bedroom	W1	316°N	1.2		
					1.2	North facing	
Second	R2	Bedroom	W2	316°N	1.4		
					1.4	North facing	
Second	R3	LKD	W3	316°N	1.3		
					1.3	North facing	
2.22							
Second	R1	Bedsit	W1	316°N	1.6		
					1.6	Minimum	



Sunlight Assessment Results (Sunlight Exposure)
Project: Pinewood Campus
Date of Analysis: 07/10/2024

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)	Rating
2.23						
Second	R1	Bedsit	W1	316°N	1.2	
					1.2	North facing
2.24						
Second	R1	LKD	W1	316°N	0	
			W2	316°N	0	
			W3	46°N	1.5	
					1.5	Minimum
Second	R2	Bedroom	W4	46°N	1.6	
					1.6	Minimum
Second	R3	Bedroom	W5	46°N	1.4	
					1.4	North facing
2.25						
Second	R1	Bedroom	W1	46°N	1.5	
					1.5	Minimum
Second	R2	Bedroom	W2	46°N	1.6	
					1.6	Minimum
Second	R3	LKD	W3	46°N	1.4	
					1.4	North facing
2.26						
Second	R1	Bedroom	W1	37°N	0.4	
					0.4	North facing
Second	R2	LKD	W2	37°N	0.8	
					0.8	North facing
2.27						
Second	R1	Bedroom	W1	37°N	0.9	
					0.9	North facing
Second	R2	LKD	W2	37°N	0	
					0	North facing



Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)	Rating
2.28						
Second	R1	LKD	W1	298°N	2.7	
					2.7	Minimum
Second	R2	LKD	W2	298°N	2.6	
					2.6	Minimum
2.29						
Second	R1	Bedroom	W1	298°N	1.6	
					1.6	Minimum
Second	R2	Bedroom	W2	298°N	1.9	
					1.9	Minimum
Second	R3	LKD	W3	298°N	1.4	
					1.4	North facing
2.30						
Second	R1	LKD	W1	298°N	0	
					0	North facing
Second	R2	Bedroom	W2	298°N	0	
					0	North facing
Second	R3	Bedroom	W3	37°N	0	
					0	North facing
2.31						
Second	R1	Bedsit	W1	37°N	0	
					0	North facing
2.32						
Second	R1	Bedsit	W1	37°N	0.6	
					0.6	North facing



Sunlight Assessment Results (Sunlight Exposure)
Project: Pinewood Campus
Date of Analysis: 07/10/2024

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)	Rating
2.33						
Second	R1	LKD	W1	37°N	0.9	
					0.9	North facing
Second	R2	Bedroom	W2	37°N	0.8	
					0.8	North facing
Second	R3	Bedroom	W3	37°N	0.1	
					0.1	North facing
2.34						
Second	R1	Bedsit	W1	37°N	0.9	
					0.9	North facing
2.35						
Second	R1	Bedroom	W1	37°N	0.9	
					0.9	North facing
Second	R2	Bedroom	W2	136°	3	
					3	Medium
Second	R3	LKD	W3	136°	5.9	
					5.9	High
2.36						
Second	R1	LKD	W1	136°	6.9	
					6.9	High
Second	R2	Bedroom	W2	136°	6.6	
					6.6	High
Second	R3	Bedroom	W3	136°	5.9	
					5.9	High
2.37						
Second	R1	LKD	W1	136°	5.9	
					5.9	High
Second	R2	Bedroom	W2	136°	5.4	
					5.4	High



Sunlight Assessment Results (Sunlight Exposure)
Project: Pinewood Campus
Date of Analysis: 07/10/2024

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)		Rating
2.38							
Second	R1	Bedsit	W1	217°	7.1		High
					7.1		
2.39							
Second	R1	Bedsit	W1	217°	7.1		High
					7.1		