



ABK Architects

790 Shadow Analysis Report

Residential Development at Lehaunstown Land,
Cherrywood SDZ, Dublin

April 2024

ABK Architects 34 lower leeson street dublin 2



Shadow Analysis Study

The purpose of this report is to (a) analyse the impact of the proposed development with respect to overshadowing of existing neighbouring properties and (b) overshadowing impact of the proposed development on the amenity spaces within the development.

This report compares the existing site condition with that generated by the proposed development at Launstown Lands by means of a shadow analysis model study. The proposed development has been 3d modelled and geolocated using Revit Building Information Modelling software with shadows generated through its sun path analysis function. This provides a visual representation of any changes to the availability of sunlight that may arise due to the proposed development.

Impact on Adjacent Properties

The overshadowing of neighbouring properties has been carried out in line with the BRE Guidance which states the following, "Where there are existing buildings as well as the proposed one, "before" and "after" shadow plots showing the difference that the proposed building makes may be helpful. In interpreting the impact of such differences, it must be borne in mind that nearly all structures will create areas of new shadow, and some degree of transient overshadowing of a space is to be expected".

Shadow cast plots with and without the Proposed Development in place are presented to highlight any potential overshadowing impact that the proposed development may have. The study uses the Equinox 21st March, Mid-Winter (21st December) and Mid-summer (21st June) between the hours of 10am and 4pm to demonstrate average sun angles at mid-season and high summer and winter

The analysis illustrates that the shadows cast by the proposed development are largely limited to the confines of the site itself. The surrounding lands contain a number of low density residential one-off properties. These properties are in the main sufficiently far away that they will be typically unaffected by shadows cast by the proposed development as is demonstrated by figure 01 to 24.

The shadow analysis carried out at equinox (March 21st) and Mid-summer (21st June) shows that the proposed development has minor to no impact on neighbouring properties at these times of the year. The house located directly to the North West of the site will experience some impact from the development but on the key date of March 21st these are very minor. There will be a degree of shadow casting on the 21st December to this property but this is only slightly more than that cast by its own hedge and boundary wall, in addition to the large tree at the south east boundary of its boundary.

MARCH 21ST - 10 AM

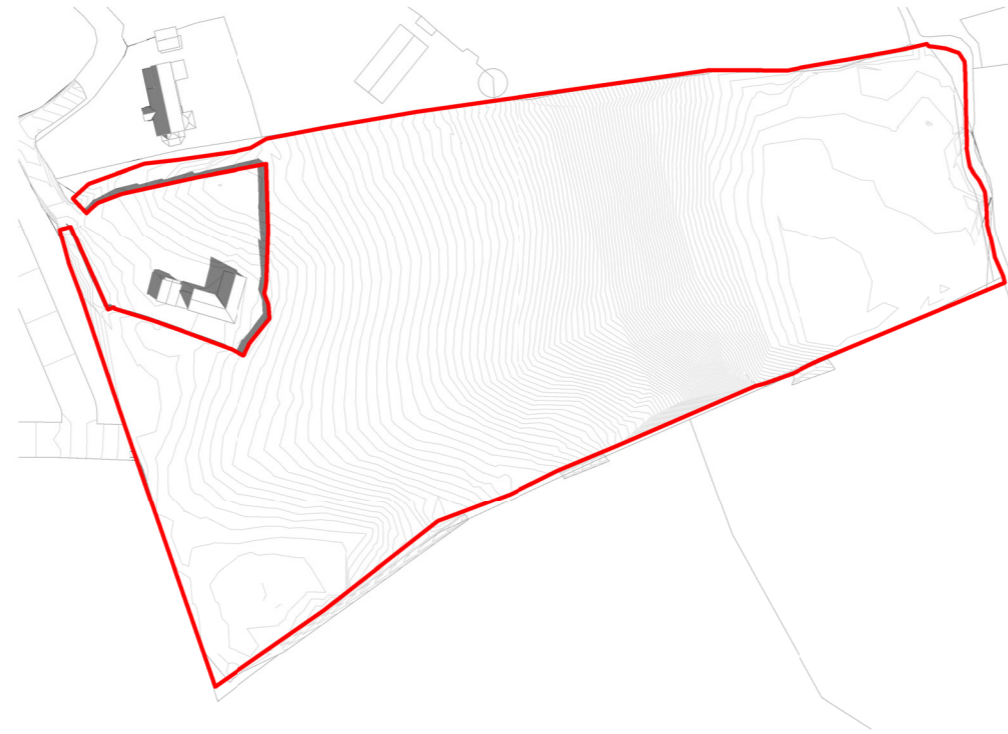


FIG 01 EXISTING PLAN VIEW

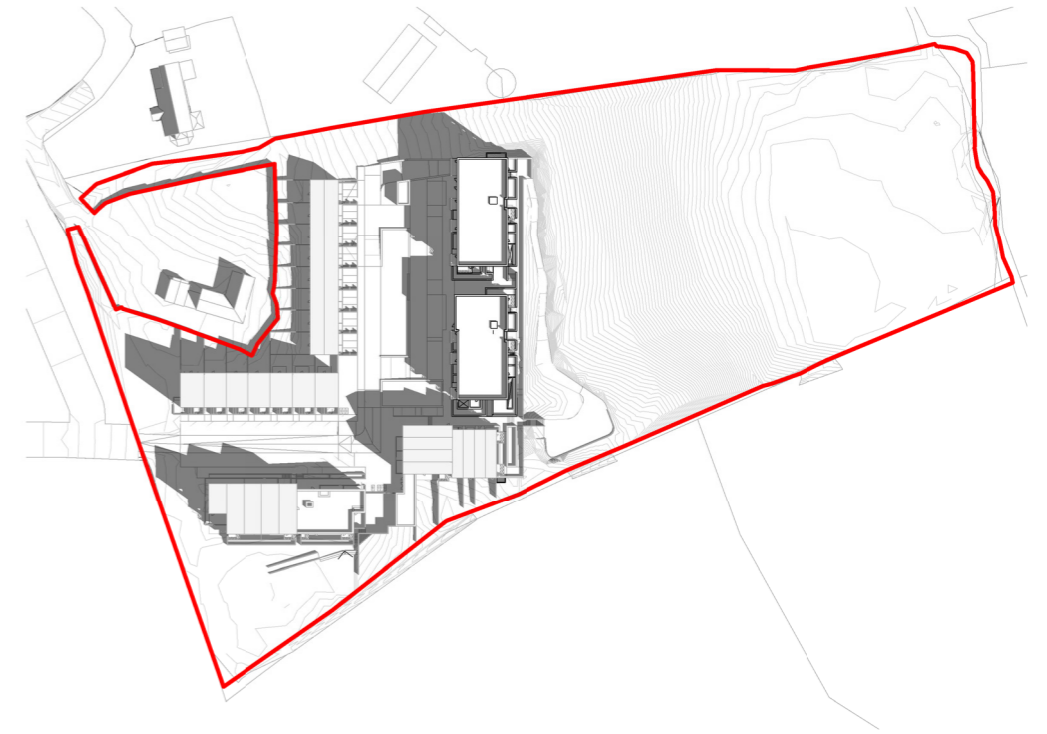


FIG 02 PROPOSED PLAN VIEW

MARCH 21ST - 12 PM



FIG 03 EXISTING PLAN VIEW

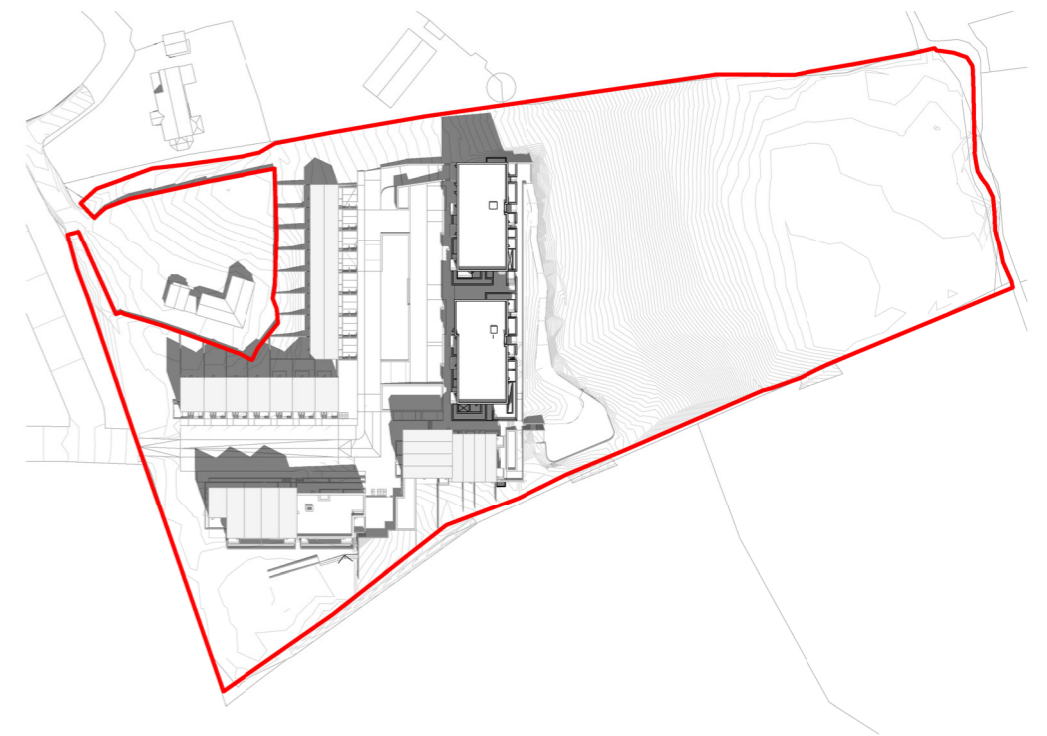


FIG 04 PROPOSED PLAN VIEW

MARCH 21ST - 2 PM



FIG 05 EXISTING PLAN VIEW

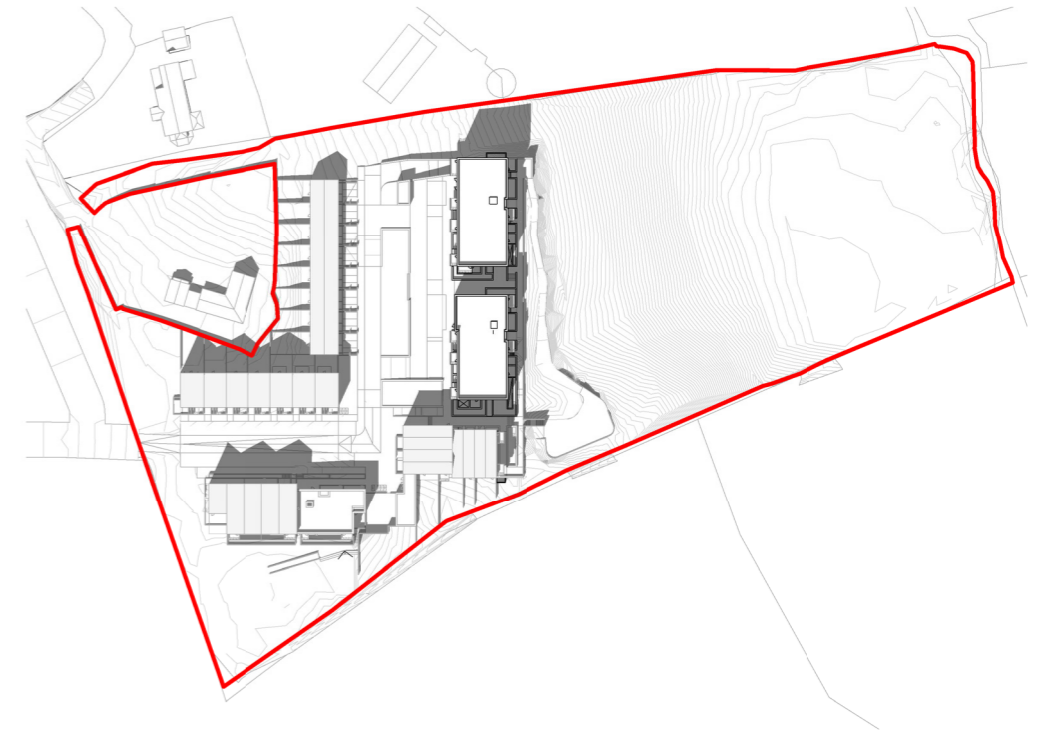


FIG 06 PROPOSED PLAN VIEW

MARCH 21ST - 4 PM



FIG 07 EXISTING PLAN VIEW



FIG 08 PROPOSED PLAN VIEW

JUNE 21ST - 10 AM



FIG 09 EXISTING PLAN VIEW

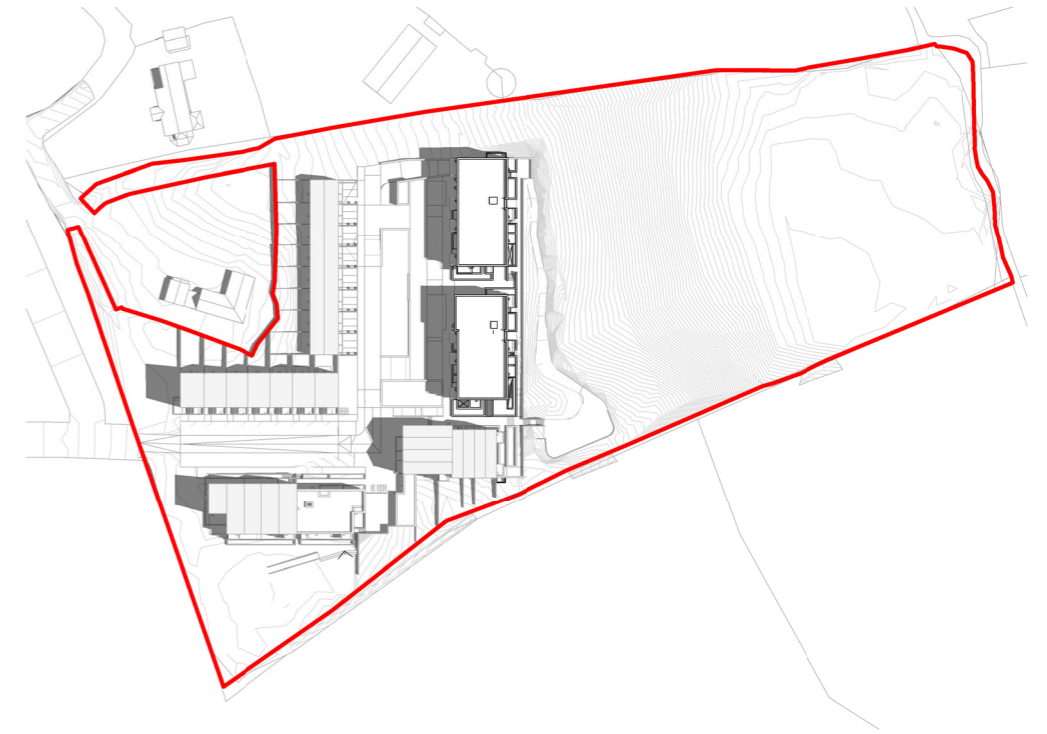


FIG 10 PROPOSED PLAN VIEW

JUNE 21ST - 12 PM



FIG 11 EXISTING PLAN VIEW



FIG 12 PROPOSED PLAN VIEW

JUNE 21ST - 2 PM



FIG 13 EXISTING PLAN VIEW

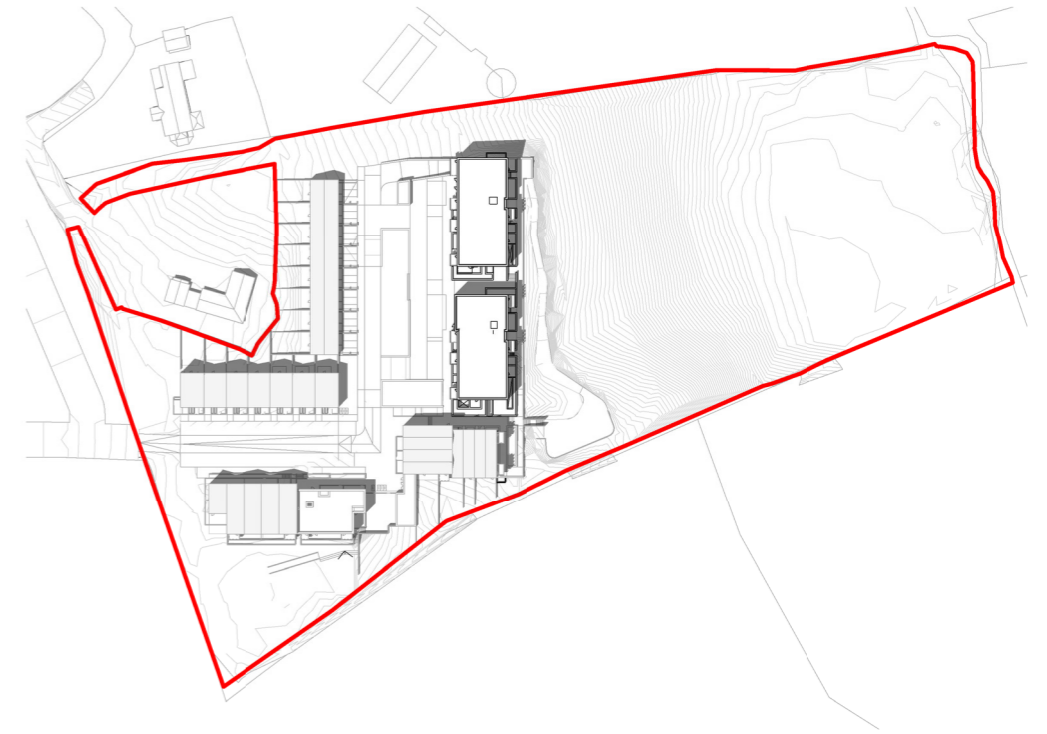


FIG 14 PROPOSED PLAN VIEW

JUNE 21ST - 4 PM



FIG 15 EXISTING PLAN VIEW



FIG 16 PROPOSED PLAN VIEW

DECEMBER 21ST - 10 AM

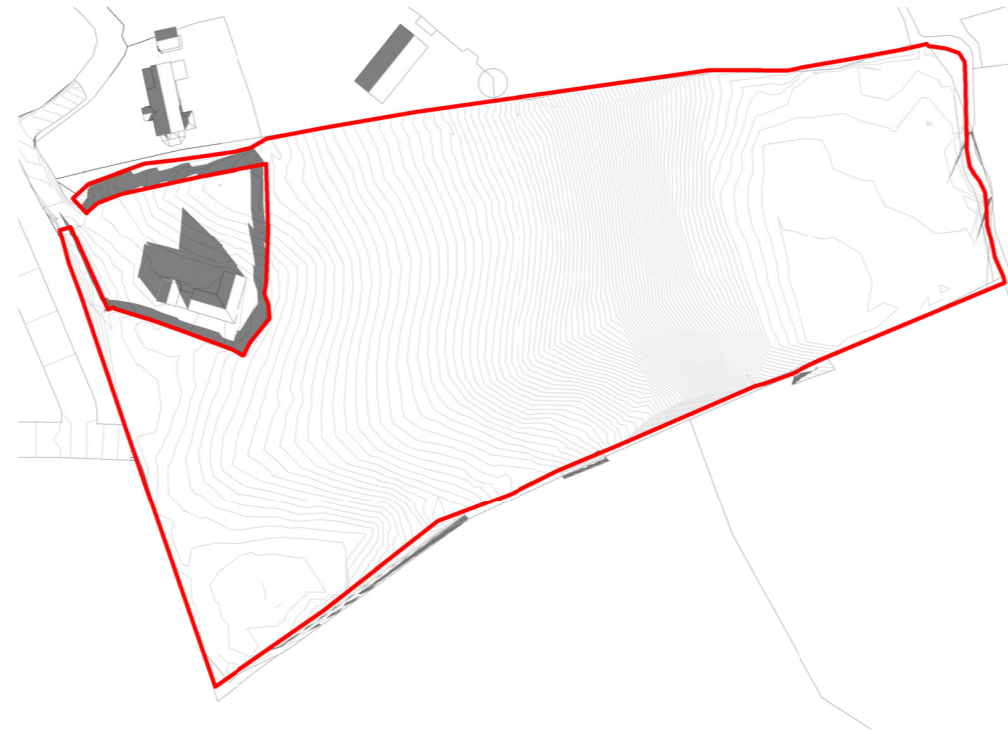


FIG 17 EXISTING PLAN VIEW



FIG 18 PROPOSED PLAN VIEW

DECEMBER 21ST - 12 PM

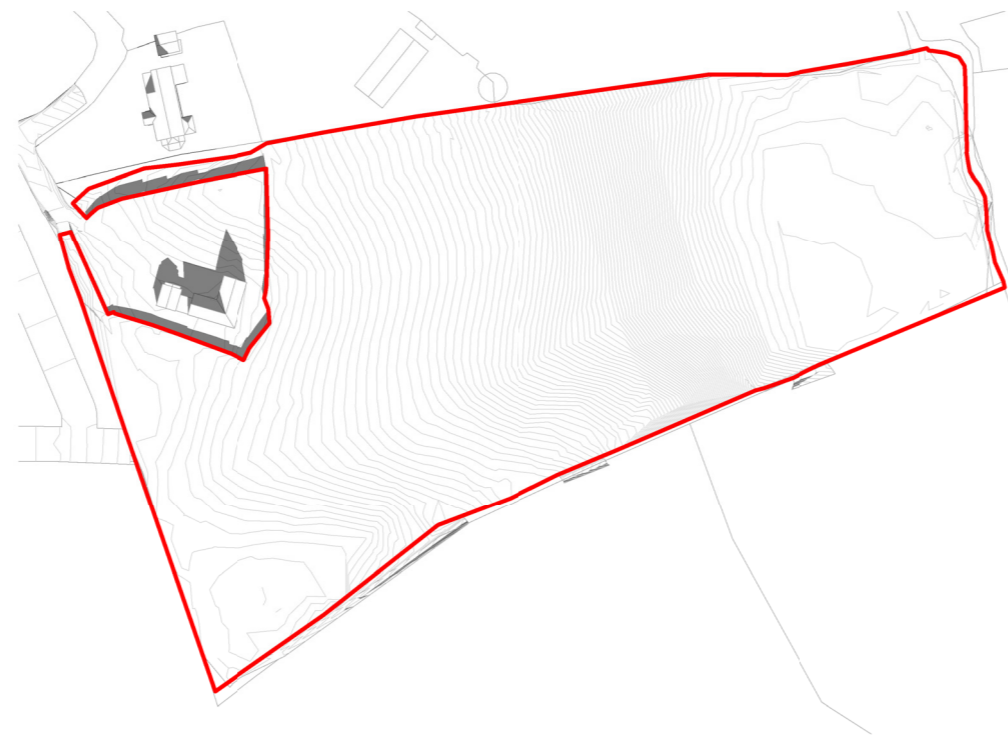


FIG 19 EXISTING PLAN VIEW



FIG 20 PROPOSED PLAN VIEW

DECEMBER 21ST - 12 PM

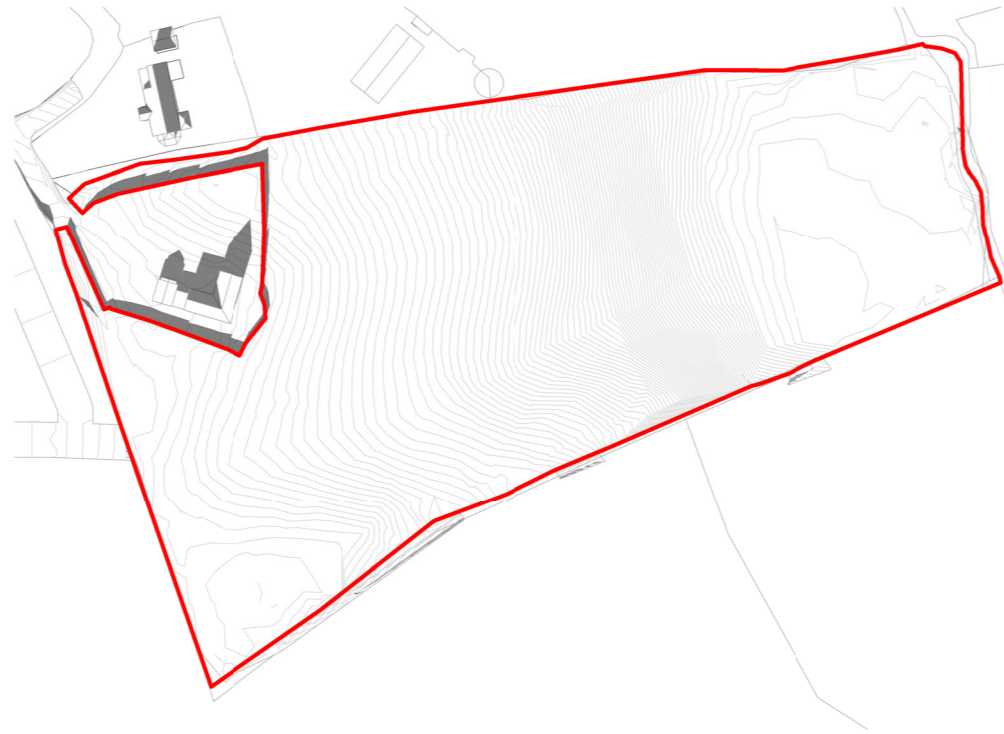


FIG 21 EXISTING PLAN VIEW



FIG 22 PROPOSED PLAN VIEW

DECEMBER 21ST - 4 PM



FIG 23 EXISTING PLAN VIEW



FIG 24 PROPOSED PLAN VIEW

Amenity Area Sunlight Analysis

BRE Guidance states "As a check, it is recommended that at least half of the amenity areas listed above should receive at least two hours of sunlight on 21 March."

The amenity areas within the development are as per Figure 24. The impact of overshadowing and availability of sunlight to these spaces has been checked and illustrated in the following diagrams.

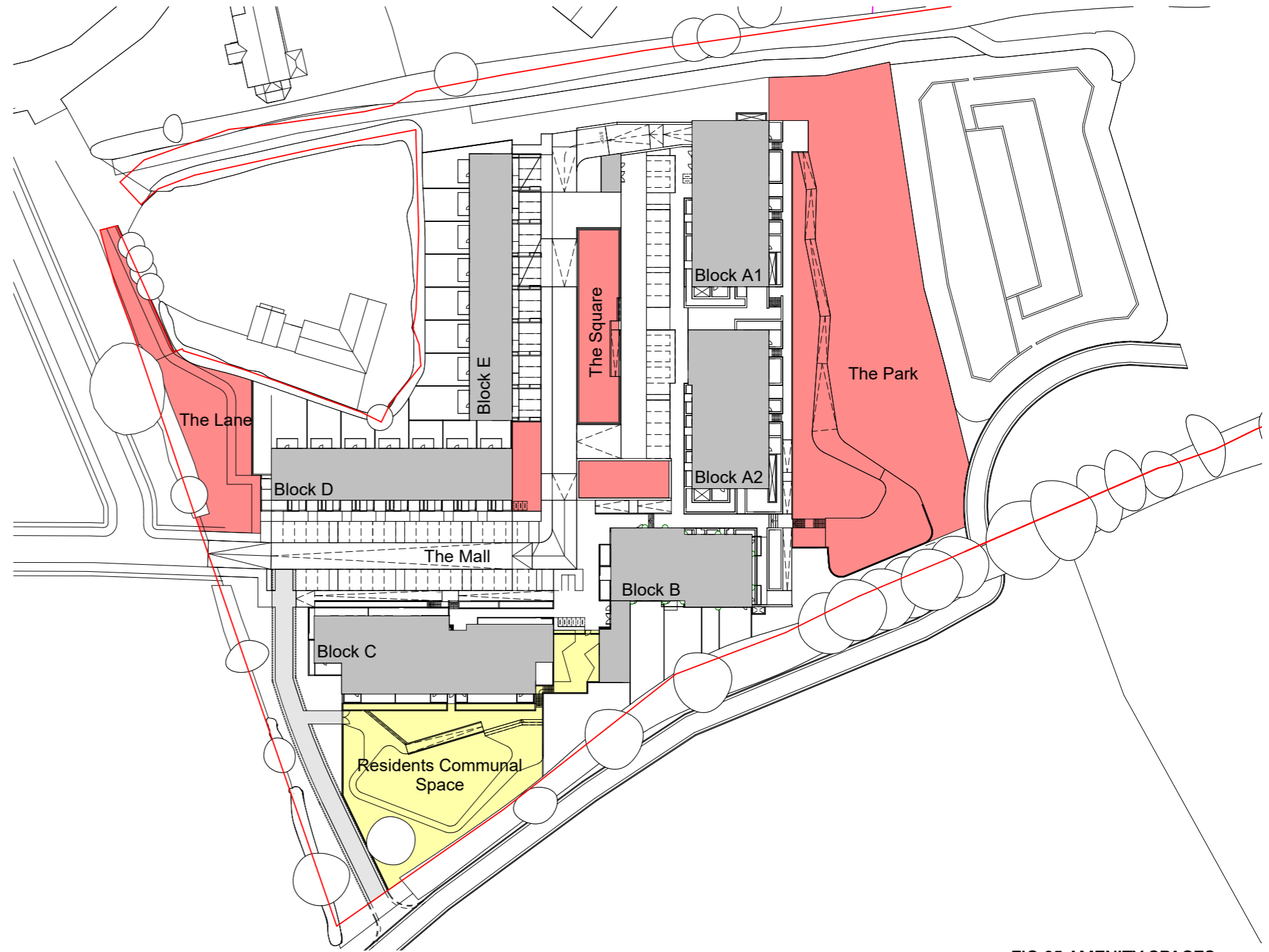


FIG 25 AMENITY SPACES



MARCH 21ST - 10AM

FIG 26 PROPOSED PLAN VIEW



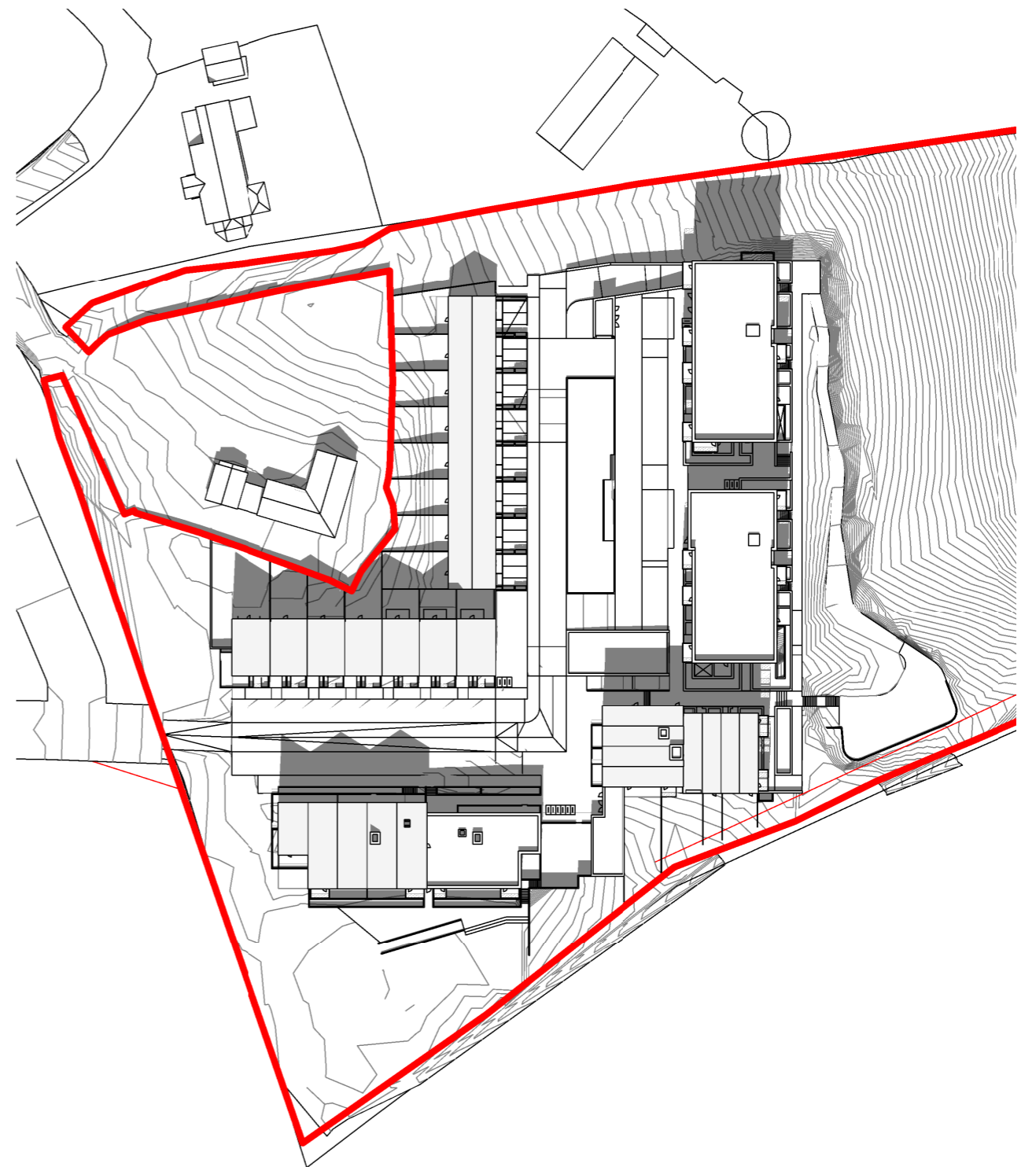
MARCH 21ST - 11AM

FIG 27 PROPOSED PLAN VIEW



MARCH 21ST - 12AM

FIG 28 PROPOSED PLAN VIEW



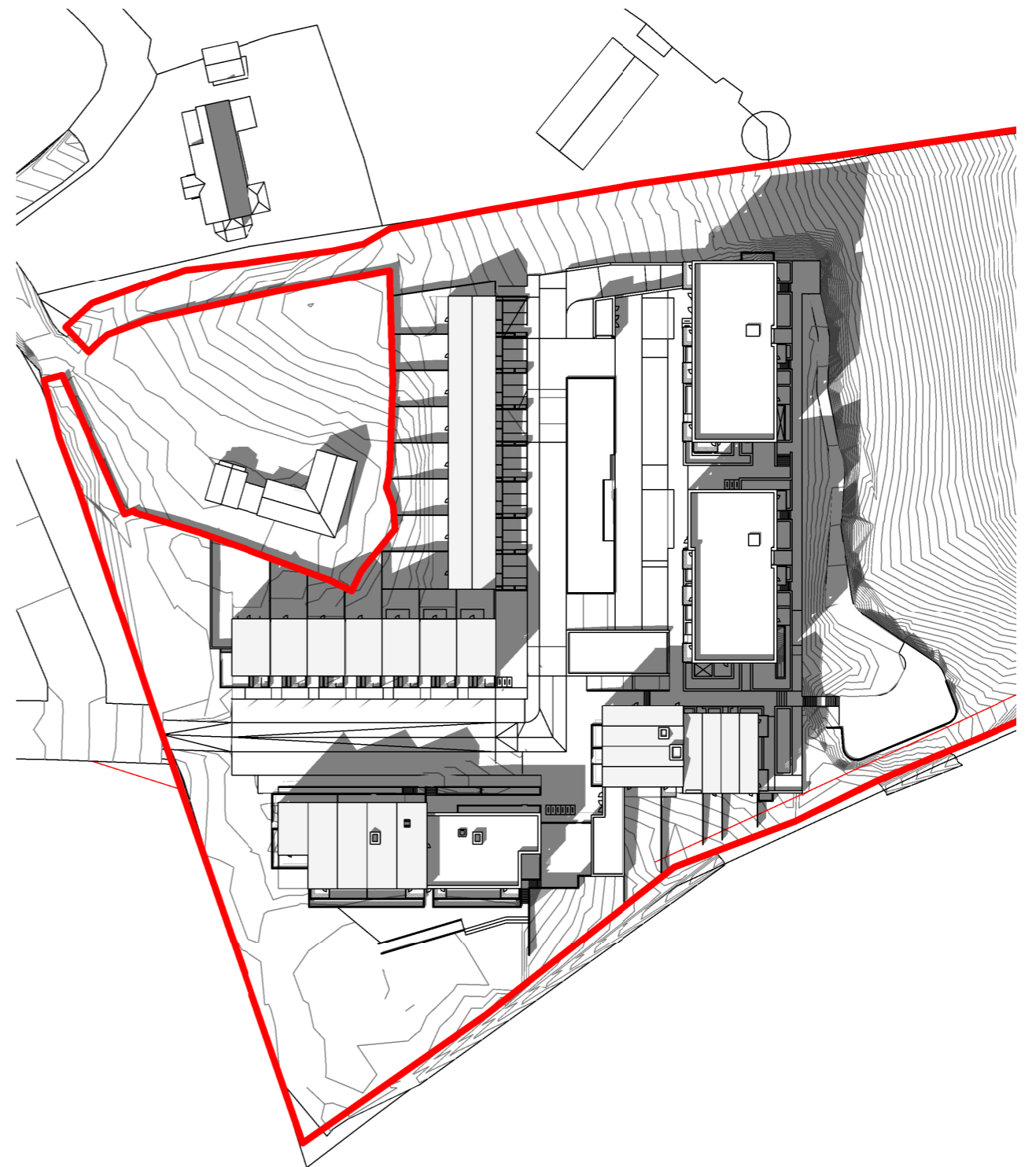
MARCH 21ST - 1PM

FIG 29 PROPOSED PLAN VIEW



MARCH 21ST - 2PM

FIG 30 PROPOSED PLAN VIEW



MARCH 21ST - 3PM

FIG 31 PROPOSED PLAN VIEW



MARCH 21ST - 4PM

FIG 32 PROPOSED PLAN VIEW



MARCH 21ST - 5PM

FIG 33 PROPOSED PLAN VIEW



MARCH 21ST - 6PM

FIG 34 PROPOSED PLAN VIEW

Table 1 - Amenity Area Sunlight Results

Amenity Area Reference	BRE Target (%)	Total Amenity Area (m2)	Total Amenity Area Receiving More Than 2 Hours (m2)	Percentage of Amenity Area Receiving 2 Hours (%)	Status
The Park	50	3448	3448	100.00	Meets Criteria
The Square	50	690	690	100.00	Meets Criteria
The Lane	50	913	913	100.00	Meets Criteria
Residents Communal Space	50	1490	1490	100.00	Meets Criteria

The analysis shows that for proposed external amenity areas within the site, 50% of open space will receive at least 2 hours of sunlight on 21st March as required by BRE. This study confirms that the development will be adequately sunlit throughout the year.