herrington CONSULTING LIMITED

Client: London Square

Assessment for the Provision Daylight and Sunlight within the Development at Extension to Ascot High Street

June 2023

Appendix A.2 – Graphical Model Outputs

Client: London Square

Assessment for the Provision Daylight and Sunlight within the Development at Extension to Ascot High Street

Contents Amendment Record

This report has been issued and amended as follows:

Revision	Description	Date	Written by	Checked by
0	Draft Issue	13th May 2022	KC	SPH
1	Second Issue	17th November 2022	KC	SPH
2	Scheme Amendment	29th June 2023	KC/LH	LH/IK

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Contents

1 Executive Summary

The detailed analysis undertaken as part of this assessment has examined the availability of daylight and sunlight within the proposed development Blocks 1, 2, 6 and 7 in accordance with BRE Guidance (2022).

Although no specific concerns have been raised relating to the availability of daylight and sunlight within the proposed developments, it is considered important that the future units provide attractive and well-lit living spaces that have a reduced reliance on supplementary electric lighting.

In line with the assessment criteria prescribed by the BRE Guidelines, it has been shown that for 98% of assessed rooms, the provision of natural daylight will meet or exceed the minimum required threshold set out in the BRE Guidelines. It has also been possible to demonstrate that in each of the proposed units, at least one habitable room will receive direct sunlight for part of the day throughout the year. Therefore, the units successfully meet the guidance set out in the Borough Wide Design Guide. As a consequence of the light and visual interest provided by this direct sunlight, the amenity value of the rooms will be enhanced.

2 Background and Scope of Appraisal

2.1 Study Objectives

Herrington Consulting has been commissioned by London Square to analyse and quantify the provision of natural daylight and sunlight to the habitable rooms within the proposed development Blocks 1, 2, 6 and 7 at Extension to Ascot High Street.

2.2 Site Location

The application site comprises the western part of the Strategic Allocation AL16 of the adopted Borough of Windsor and Maidenhead Local Plan in the town of Ascot. The development site is located immediately south of High Street and immediately east of Station Hill Road. The location of the site is shown in Figure 2.1 and the site plan included in Appendix A.1 of this report gives a more detailed reference to the site location and layout.

Figure 2.1 – Location map (Contains Ordnance Survey data © Crown copyright and database right 2011)

2.3 The Development

The proposal for development is for the redevelopment of the existing site to provide 1,798.9sqm flexible commercial floorspace and 278.5sqm flexible community floorspace (mix of uses within Use Classes E, F1 and F2) and 117 dwellings with associated parking, access, open space, landscaping and other associated works. Provision of new public open space with associated hard and soft landscape works, new pedestrian and cycle paths and children's play area.

Drawings of the proposed scheme are included in Appendix A.1 of this report.

3 Policy and Guidance

3.1 National Planning Policy

National Planning Policy Framework (Revised July 2021)

Paragraph 125 on 'Achieving appropriate densities' states that *"c) local planning authorities should refuse applications which they consider fail to make efficient use of land, taking into account the policies in this Framework. In this context, when considering applications for housing, authorities should take a flexible approach in applying policies or guidance relating to daylight and sunlight, where they would otherwise inhibit making efficient use of a site (as long as the resulting scheme would provide acceptable living standards)."*

3.2 Local Planning Policy

Royal Borough of Windsor and Maidenhead – Borough Local Plan 2013-2033 (February 2022)

Policy QP3 Character and Design of New Development states that *'1) New development will be expected to contribute towards achieving sustainable high quality design in the Borough. A development proposal will be considered high quality design and acceptable where it achieves the following design principles: l. Provides sufficient levels of high quality private and public amenity space; m. Has no unacceptable effect on the amenities enjoyed by the occupants of adjoining properties in terms of privacy, light, disturbance, vibration, pollution, dust, smell and access to sunlight and daylight'.*

Borough Wide Design Guide (June 2020)

Paragraph 8.11 on Daylight Access to Dwellings states that *'Design solutions to achieve good quality internal lighting of new homes include:*

- *providing glazing areas in habitable rooms that is not less than 20% of internal floor area of room; dual aspect dwellings;*
- *Ensure that habitable rooms comply with current/up to date BRE guidance on daylighting, currently contained in 'Site layout planning for daylight and sunlight: a guide to good practice'.*

Paragraph 8.16-8.18 on Sunlight Access to states that *'provided it can be controlled, people love sunlight and likewise, its absence has a damaging effect. Neighbours will often be particularly distressed if new development threatens their existing private sunny spaces. Accordingly, when drawing up their plans developers should consider the following sunlight needs:*

- *sun access for habitable indoor spaces of both new and existing neighbouring development. The needs for people who spend a large proportion of their day indoors, (including older people), will require particular consideration.*
- *Sun access to habitable residential outdoor spaces of both new and existing neighbouring development;*
- *Provision or maintenance of good sunlight to public realm social spaces and focal points such as squares, pause points, gardens and pocket parks.*

Potential design solutions to provide good quality solar access include:

- *Providing for direct sunlight to enter at least one habitable room for part of the day through-out the year. Dual aspect dwellings will assist with this;*
- *Providing private external spaces (patios, gardens, balconies, roof terraces) that receive direct sunlight for part of the day in the period between 1st April and 30th September;*
- *Providing public realm social focal point spaces with direct sunlight for a good part of the day in the period between 1st April and 30th September.*

The main guidance principles relating to daylight and sunlight availability are included in Principle 8.3 and are as follows:

1. *The occupants of new dwellings should be provided with good quality daylight and sun access levels to habitable internal rooms and external spaces.*
2. *Dual aspect dwellings are strongly encouraged. Where single aspect dwellings are proposed, developers should demonstrate how good levels of ventilation, daylight and sun access will be provided to habitable spaces. Single aspect residential units that are north facing should be avoided.*
3. *New public realm social focal point spaces should be provided with direct sunlight for a good part of the day in the period between 1st April and 30th September.*
4. *Developments should not result in occupants of neighbouring dwellings or nearby public realm social spaces suffering from a material loss of daylight and sun access.*

3.3 Best Practice Guidance

In the absence of official national planning guidance / legislation on daylight and sunlight, the most recognised guidance document is published by the Building Research Establishment.

An updated version of these guidelines was published on the 8th June 2022 and is referred to as 'Site layout planning for daylight and sunlight: a guide to good practice (BR 209 2022, third edition)'. This version includes significant changes to the 2011 edition methodologies used for analysing the daylight and sunlight provision to new developments and therefore this assessment has been prepared in line with the current 2022, third edition of the guidelines.

The BRE Guidelines are not mandatory and themselves state that they should not be used as an instrument of planning policy, however in practice they are heavily relied upon as they provide a good guide to approach, methodology and evaluation of daylight and sunlight impacts.

In conjunction with the BRE Guidelines further guidance is given within BS EN 17037:2018 - Daylight in Buildings. This British Standard is the UK implementation of the European Standard and supersedes BS 8206-2:2008.

Whilst the BRE Guidelines provide numerical guidance for daylight, sunlight and overshadowing, these criteria should not be seen as absolute targets. The document states that the intention of the guide is to aid rather than constrain the designer. The Guide is not an instrument of planning policy, therefore whilst the methods given are technically robust, it is acknowledged that some level of flexibility should be applied where appropriate.

4 Assessment Techniques

4.1 Background

Natural light refers to both daylight and sunlight. However, a distinction between these two concepts is required for the purpose of analysis and quantification of natural light in buildings. In this assessment, the term '*Daylight*' is used for natural light where the source is the sky in overcast conditions, whilst '*Sunlight*' refers specifically to the light coming directly from the sun.

The updated third edition of the BRE Guidelines no longer supports the use of the Average Daylight Factor (ADF) method of calculating illuminance within a room and now recommends two methodologies. These are based on the assessment methods included within the BS EN 17037:2018, but with the adaptions as set out in the UK National Annex. The two methods are described as follows.

4.2 Illuminance Method

The Illuminance method involves using climatic data based on the location of the site to calculate the illuminance of the specified reference plane resulting from natural daylight entering the room via windows and other glazed apertures. The analysis is carried out across an assessment grid on the reference plane for at least hourly intervals for a typical year. The objective of this test is to achieve a target illuminance (E_T), which varies depending on room use, across at least half of the reference plane. This level of illuminance needs to be achieved for at least half of the daylight hours.

For UK dwellings, there are specific recommendations for daylight provision, and these are set out in the UK National Annex. These minimum recommendations for habitable rooms acknowledge the specific challenges faced in the UK and these are used throughout this appraisal. The minimum illuminance recommendations are:

- 100 lux for bedrooms;
- 150 lux in living rooms; and
- 200 lux in kitchens/studios.

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. The National Annex also states that the recommended levels over 95% of a reference plane need not apply to dwellings in the UK.

4.3 Daylight Factor Method

In the same way as for the illuminance method, this method calculates the Daylight Factor (DF) at each calculation point on an assessment grid within each room. DF is the illuminance at a point on the reference plane in a space, divided by the illuminance on an unobstructed horizontal surface outdoors. The CIE standard overcast sky is used, and the ratio is expressed as a percentage.

Given that the numerical modelling process uses an overcast sky model, the orientation of the window(s) serving the room has no bearing on the daylight

availability. However, in order to account for different climatic conditions at different locations around the UK National Annex provides daylight factor targets (D_T) corresponding to the target illuminances for locations of differing latitude. These are shown in Table 4.1 and for each assessment, the targets associated with the location with the closest latitude are adopted.

Location	**D_T** for 100 lx (Bedroom)	**D_T** for 150 lx (Living room)	**D_T** for 200 lx (Kitchen)
St Peter (Jersey)	0.6%	0.9%	1.2%
London (Gatwick Airport)	0.7%	1.1%	1.4%
Birmingham	0.6%	0.9%	1.2%
Hemsby (Norfolk)	0.6%	0.9%	1.3%
Finningley (Yorkshire)	0.7%	1.0%	1.3%
Aughton (Lancashire)	0.7%	1.1%	1.4%
Belfast	0.7%	1.0%	1.4%
Leuchars (Fife)	0.7%	1.1%	1.4%
Oban	0.8%	1.1%	1.5%
Aberdeen	0.7%	1.1%	1.4%

Table 4.1 – Median Target daylight factors (D_T)

The recommendations are met if the median of the daylight factors calculated in a room meets or exceeds the specific target for room type and location.

4.4 Access to Sunlight

The provision of sunlight within new development is also important, especially within the main living spaces. Bedrooms and kitchens are generally viewed as less important, where occupants normally prefer sunlight in the mornings.

The requirements for access to sunlight are set out within BS EN 17037 and this standard is adopted by the BRE Guidelines, which recommend that a space should receive a minimum of 1.5 hours of direct sunlight on the spring equinox (21st March) with cloudless conditions. The medium level of recommendation is three hours and the high level of recommendation four hours. The number of sunlight hours received by each window is calculated using the specialist software described in Section 5.2.

The Guidelines state that at least one habitable room, preferably a main living room, should meet at least the minimum criterion.

For new development and especially where existing buildings are being re-developed, it is important to acknowledge that these are aspirational targets intended to aid and not constrain the designer.

4.5 Sunlight to Gardens and Amenity Spaces

The BRE Guidance suggests that where new development is served by amenity areas, then analysis can be undertaken to quantify the amount of sunlight these amenity areas will enjoy. Typical examples of areas that could be considered as open spaces or amenity areas are main back gardens of houses, allotments, parks and playing fields, children's playgrounds, outdoor swimming pools, sitting-

out areas, such as in public squares and focal points for views, such as a group of monuments or fountains.

Sun Hours on Ground

The BRE Guidelines recommend that for a garden or amenity area to appear adequately sunlit throughout the year, at least 50% of an amenity area should receive at least 2 hours of sunlight on 21st March.

When undertaking this analysis, sunlight from an altitude of 10° or less has been ignored as this is likely to be obscured by planting and undulations in the surrounding topography. Driveways and hard standing for cars is also usually left out of the area used for this calculation. Fences or walls less than 1.5 metres high are also ignored. Front gardens which are relatively small and visible from public footpaths are omitted with only main back gardens needing to be analysed.

The Guidelines also state that "normally, trees and shrubs need not be included, partly because their shapes are almost impossible to predict, and partly because the dappled shade of a tree is more pleasant than a deep shadow of a building". This is especially the case for deciduous trees, which provide welcome shade in the summer whilst allowing sunlight to penetrate during the winter months.

The findings of the overshadowing analysis are discussed in a separate assessment report.

5 Assessment Methodology

5.1 Method of Baseline Data Collation

The following data and information has been used to inform this study:

- OS Mastermap mapping
- Scheme drawings in AutoCAD format (DHA Architecture – June 2023)
- 3D Building model including trees constructed using photogrammetric techniques to 15cm accuracy based on 2019 satellite imagery (Accucities – April 2022)
- Plan and details of proposed trees including species, crown height and diameter after 5-year establishment (Exterior Architecture)
- Aerial photography (Google Maps and Bing)

5.2 Numerical Modelling

The numerical analysis used in this assessment has been undertaken using the Waldrum Tools (Version 6.0.0.11) software package.

5.3 Calculation Assumptions

The following assumptions have been made when undertaking the analysis:

- When assessing the Illuminance and/or Daylight Factor for internal rooms and in the absence of specific information, the following parameters are assumed:
  - The glazing type used in this assessment is based on a Saint Gobain Solar Control product (SKN 183 II) with a light transmittance value of 0.75, U-value of 1.0 and G-value of 0.4. The details of glazing have been provided by SRE (November 2022)
  - Correction factor for frames and glazing bars = 0.8
  - Where information from the designer is not available, the following values are used to derive the Maintenance Factor applied to the transmittance values.

Type of window	Maintenance Factor	
	Rural/ suburban	Urban
Vertical, no overhang	0.96	0.92
Vertical, sheltered from rain by balcony/overhang	0.88	0.76
Sloping rooflight	0.92	0.84
Horizontal rooflight	0.88	0.76

Table 5.1 – Parameters used for deriving Maintenance Factor

- The reflectance values used in the numerical analysis are shown in Table 5.2 below and have been specified by DHA Architecture:

Surface	Material/Finish	Reflectance Value
Internal walls	Painted White	0.8
Internal ceiling	Painted White	0.8
Internal flooring	Cream Carpet/Light Wood	0.4
Internal balcony walls	White painted brickwork	0.6
Internal/External balcony floor	Light coloured wood	0.4
Exterior walls and obstructions	*Standard value applied (brickwork)*	*0.2*
Exterior ground	*Standard value applied*	*0.2*

Table 5.2 – Materials / colours applied to daylight calculations

- 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 set 0.85m from the floor level. This assessment grid excludes a band of 0.3m from the walls, unless otherwise specified.

- BS EN 17037 gives an equation for maximum grid spacing. However, in line with the recommendation of the BRE Guidelines for domestic rooms a maximum grid spacing of 0.3m is adopted.

5.4 Location Specific Data

In terms of latitude, the subject site is located in closest proximity to London (Gatwick Airport) and therefore climatic conditions and DF targets are set using values for this latitude.

6 Daylight Provision

6.1 Principles of Analysis

As discussed in Section 3, there are two tests for daylight; Illuminance and Daylight Factor. Both of these tests have been applied to the habitable rooms within the development and the results are discussed in the following sections. The detailed numerical outputs are included in the appendix to this report.

When setting the target illuminance value (E_T), it is important to account for rooms that have a shared use, as it is necessary to apply the highest target. For example, in a bedroom/sitting room in student accommodation or studio apartment, the value for a living room should be used as the occupants would be spending the majority of the daylight hours using the space as a living room.

However, in the case of a living/dining/kitchen area, the BRE Guidelines fully acknowledge that in the majority of situations, the kitchen element of these open plan living areas is not treated as a habitable space. Therefore, it is acceptable to adopt the target for the dominant room use, i.e. a living room. It is, nevertheless, still necessary to include the kitchen space as part of the assessment area, albeit that the interpretation of the daylighting results reflects the non-habitable status of the kitchen area.

It is also conventional to assume that where the layout of the rooms and fenestration on lower floors is repeated on the floors above, then providing the daylighting provision on the lower floors meets the specific requirements, then it can be inferred that the rooms on the floors above will also meet the target criteria.

6.2 Assessment of the Impact of Trees

Where there is potential for the provision of daylight to the new rooms within the development to be affected by surrounding trees, the following methodology is applied.

The Guidelines acknowledge that quantifying the impact that trees have on daylighting is not a straightforward process as the tree canopy only causes partial shade; additionally, the daylight radiating through it varies depending on the time of year and the amount of leaf cover. The BRE Guidelines therefore include specific analytical procedures that allow the impact that trees have on the provision of daylight to be quantified. This is based on the optical transparency of deciduous tree crowns for winter and summer conditions, i.e. when they are in leaf or in bare branch condition. These values are taken from Table G1 of Appendix G of the BRE Guidelines.

The guidelines also acknowledge that some light is reflected from the tree canopy. The reflectance values used are based on those set out in Table G2 of the BRE Guidelines.

The way in which the influence of trees is taken into account differs between the two methods of assessing daylight. The illuminance method uses location specific climatic data at hourly interval over a typical year. Therefore, to accurately apply the transparency and reflectance values, these would need to be varied over the year depending on whether the tree is in leaf or bare branch

condition. This process is a very time consuming and demanding in terms of computer processing time and therefore for most applications, the results of the daylight factor method are used to understand the impact of trees on the daylighting provision.

However, in order to limit computational time, a hierarchical approach has been adopted when assessing the impact of trees. Firstly, the trees are modelled as fully opaque features with no allowance for any light transmission through the canopy during both summer and winter conditions. If the results of the daylighting analysis show that the daylight illuminance targets are met, then it is concluded that whilst the results are overly conservative, the minimum requirements are nevertheless achieved.

If this approach shows that by ignoring the transmission of daylight through the canopy the recommended target values are not being achieved, then more detailed analysis is undertaken.

With the daylight factor method, the simulations are undertaken for both summer and winter conditions and for each, the appropriate transparency factor, which is specific to each species of tree for both 'in leaf' (summer) and 'bare branch' (winter) conditions is applied.

If the recommended daylight factor values are achieved in both summer and winter, then the daylight provision is considered adequate; and if the recommendations are not reached in both summer or winter then daylight would be considered inadequate. For a room where the recommendation is exceeded in winter, but not in summer, daylight provision year-round is likely to be adequate, but it is clear that the trees are having some effect on daylight.

6.3 Analysis of Illuminance

Using the analytical techniques and assumptions discussed in Sections 3 and 4 respectively, the illuminance within each habitable room has been calculated.

For each room, the percentage of the assessment area that meets or exceeds the target illuminance value (E_T) is presented in the detailed outputs included in the appendix of this report. To meet the assessment criteria, 50% or more of the assessment area will need to achieve illuminance that meets or exceeds E_T. The results are summarised in Table 6.1 below.

Block	Floors Tested	Number of Rooms Tested	Rooms meeting BRE Targets	Percentage Compliant
Block 1	First, Second, Third	45	45	100%
Block 2	First, Second	47	46	98%
Block 6	Ground, First	47	45	96%
Block 7	Ground, First	47	46	98%
	Total	**186**	**182**	**98%**

Table 6.1 – Rooms meeting Illuminance targets

6.4 Summary of Daylight Provision

From the results summarised in Table 6.1, it can be seen that the significant majority of proposed habitable rooms meet the target values set out within the BRE Guidelines for the illuminance test, with worst case, solid tree crown conditions. Therefore, in 98% of the rooms within the proposed Blocks 1, 2, 6

and 7, it can be seen that the majority of the assessed rooms will meet or exceed the target illuminance value and consequently it can be concluded that these habitable spaces will be well lit and will have reduced reliance on supplementary electric lighting.

For the 4 rooms which are falling short of meeting the target values, this does not necessarily mean that the daylight availability is unacceptable. Two of these four rooms are Living/Kitchen/Dining Rooms. These rooms have access to a private internal balcony or are overhung by a balcony above and this feature is the primary reason for the lower daylight availability within these rooms. This is because the windows are set back from the building façade, or overhung from above and the view of the sky is restricted from the window itself. However, having access to these private internal balconies or patio areas provides a valuable amenity to the future occupants of the flats.

One of the four rooms is a bedroom on the ground floor of Block 6. From the results in Appendix A.3, it can be seen that the room meets the illuminance targets to 29% of its area. Whilst this is below the target of 50%, it should be noted the BRE Guidelines are intended to be interpreted flexibly. It should also be considered that bedrooms have the lowest expectation of daylight. Lastly, the remaining room falling short of meeting the target value is a small kitchen on the ground floor of Block 6. This kitchen is less than 13m^2 in size and could be considered non-habitable. This room is situated in a unit which will have a well-lit south facing Living/Dining room and therefore, overall the daylight available within this unit is considered acceptable.

The UK National Annex to BS EN 17037 states that the provision of natural daylight be adequate provided that at least one of the two daylight tests are passed. Provided that the majority of the rooms pass the more complex illuminance test, the results of the Daylight Factor have not been summarised in this instance. The results for this test can be found in Appendix A.3.

Overall, it is possible to conclude that the proposed units in Blocks 1, 2, 6 and 7 will have an acceptable level of daylighting and there will be a reduced reliance on supplementary electric lighting.

7 Sunlight Provision to Proposed Development

7.1 Sunlight Exposure Analysis

The BRE Guidelines provide guidance in respect of sunlight quality for new developments stating: “in housing, the main requirement for sunlight is in living rooms, where it is valued at any time of the day, but especially in the afternoon. Sunlight is also required in conservatories. It is viewed as less important in bedrooms and in kitchens where people prefer it in the morning rather than the afternoon.”

When considering the provision and access to sunlight, the quantitative methods set out within BS EN 17037 are used and based on these, the BRE Guidelines recommend that a space, preferably a main living room should receive a minimum of 1.5 hours of direct sunlight under cloudless conditions on the 21st March (equinox).

The BS EN 17037 criterion applies to rooms of all orientations, although it is recognised that if a room faces significantly north of due east or west it is unlikely to be met.

It should be noted that where rooms have more than one window, it is acceptable to sum the non-coincident sunlight hours to achieve a ‘room total’. This approach is acknowledged by the BRE Guidelines and facilitates a greater understanding of the sunlight received within a room by taking into account the fact that some windows will receive sunlight at different times during the day.

In addition, to the BRE Guidance on Sunlight, Windsor and Maidenhead’s Borough Wide Design Guide (June 2020) states that developers should consider potential design solutions to provide good quality solar access which includes ‘Providing for direct sunlight to enter at least one habitable room for part of the day through-out the year. Dual aspect dwellings will assist with this’.

Firstly, it should be noted that there are no units in Blocks 1, 2, 6 and 7 which solely have north facing windows and the significant majority of units are dual aspect, many of which have access to a private amenity space in the form of an internal or external balcony/terrace or private garden.

All of the proposed units will have at least one window facing East, South or West and as shown in the results of the Sunlight Exposure analysis in Appendix A.3, the majority of units will have at least one habitable room meeting the aspirational BRE target values for sunlight. It should also be noted that a number of windows are set back from the building façade in order to provide a private amenity space. These balconies restrict the availability of sunlight to the window, however, the balcony itself will receive a greater level of direct sunlight. Whilst this sunlight is not registered by the numerical analysis as being incident on the window, it is nevertheless falling on the balcony area and visible within the room. Therefore, where balconies are present, it is important to acknowledge that the amenity benefits provided by the sunlight are still present within the room itself.

Lastly, it should be noted that all units will provide direct sunlight in at least one habitable room for part of the day throughout the year. Therefore, the proposed units in Blocks 1, 2, 6 and 7 successfully meet the guidance set out in the Borough Wide Design Guide.

8 Conclusions

The detailed analysis undertaken as part of this assessment has examined the provision of natural daylight and sunlight to the habitable rooms for the proposed development at Extension to Ascot High Street. Using detailed numerical modelling applications, the Daylight Factor and Sunlight Exposure have been quantified for each room.

In line with the assessment criteria prescribed by the BRE Guidelines, it has been shown that for 98% of assessed rooms, the provision of natural daylight will meet or exceed the minimum required threshold set out in the BRE Guidelines. Consequently, it can be concluded that these habitable spaces will be well lit and will have a reduced reliance on supplementary electric lighting.

It has also been possible to demonstrate that in each of the proposed units, at least one habitable room will receive direct sunlight for part of the day throughout the year. Therefore, the units successfully meet the guidance set out in the Borough Wide Design Guide. As a consequence of the light and visual interest provided by this direct sunlight, the amenity value of the rooms will be enhanced.

Overall, the provision of natural daylight and sunlight in will meet or exceed the minimum required thresholds set out in BRE, industry and local planning guidelines. Consequently, it can be concluded that the habitable spaces will be well lit and will have a reduced reliance on supplementary electric lighting.

A Appendices

Appendix A.1 – Scheme Drawings

Appendix A.2 – Graphical Model Outputs

Appendix A.3 – Tabulated Results for Daylight & Sunlight Calculations (Provision to New Development)

Appendix A.1 – Scheme Drawings

LONDON SQUARE

N

S

1:500

60m 50m 40m 30m 20m 10m

10m 20m 30m 40m 50m 60m

presentation planning layout

QUEEN'S PLACE

COURSE ROAD

HIGH STREET

A 330 STATION HILL

Block 1
3 x 61 (2B3P)
12 x 70 (2B4P)
1 - 15

Block 2
9 x 50 (1B2P)
3 x 61 (2B3P)
3 x 70 (2B4P)
3 x 74 (3B4P)
6 x 86 (3B5P)
16 - 39

Block 3
1 x 61 (2B3P)
5 x 70 (2B4P)
3 x 50 (1B2P-M43)
1 x 61 (2B3P-M43)
2 x 70 (2B4P-M43)
40 - 51

Block 4
4 x 70 (2B4P)
52 - 55

Block 5
3 x 50 (1B2P)
3 x 61 (2B3P)
68 - 73

Block 6
2 x 61 (2B3P)
7 x 70 (2B4P)
89 - 97

Block 7
2 x 61 (2B3P)
7 x 70 (2B4P)
106 - 114

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extension to ascot high street

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B	16.06.23	JeH	Updated to incorporate consultation comments.
A	01.11.22	JeH	Updated to incorporate consultation comments.

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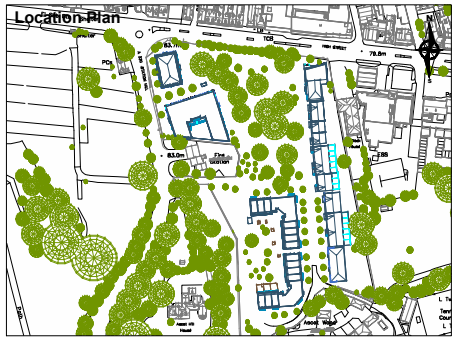
Legend

- Proposed Buildings
- Surrounding Buildings



Rev	Description	Date
02	Third issue	29/06/2023
01	Second issue	17/11/2022
00	First issue	13/05/2022

CLIENT: London Square

PROJECT: High Street, Ascot

SCALE	PROJ REF	ANALYST	DRAWN BY
Not to scale	3455	KC	LR

DWG REF.: 3D Model - Location Plan

DWG No.: 3455_01

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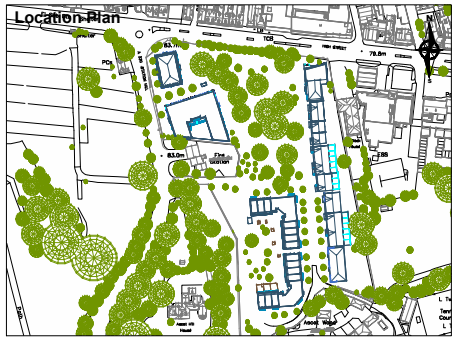
Legend

- Proposed Buildings
- Surrounding Buildings



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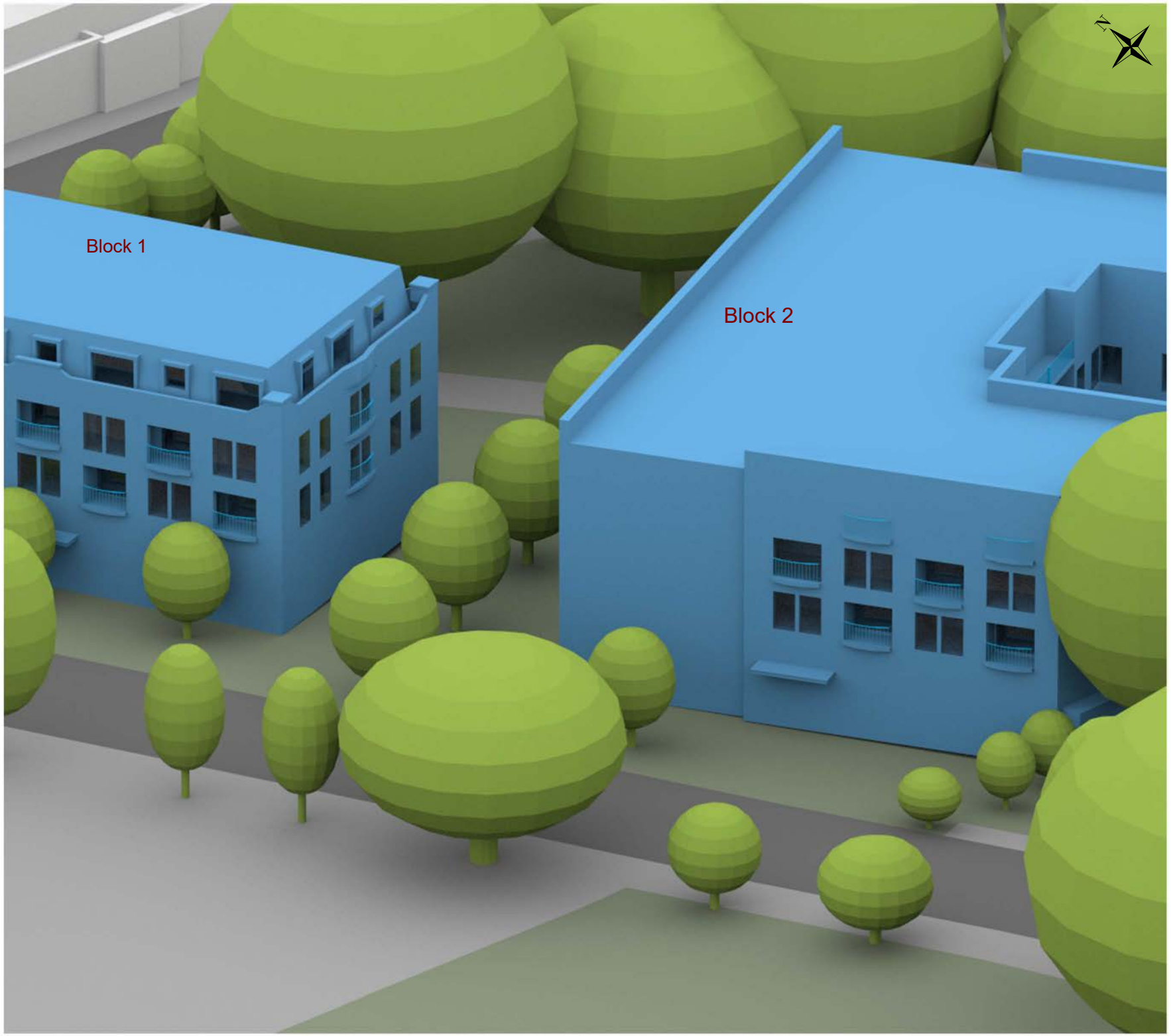
PROJECT: High Street, Ascot

SCALE	PROJ REF	ANALYST	DRAWN BY
Not to scale	3455	KC	LR

DWG REF.: 3D Model - Proposed Site Scenarios

DWG No.: 3455_02



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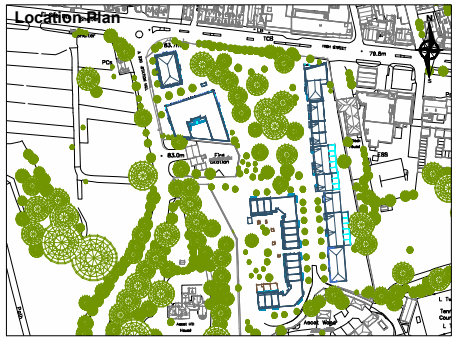
Legend

- Proposed Buildings
- Surrounding Buildings



Rev	Description	Date
02	Third issue	29/06/2023
01	Second issue	17/11/2022
00	First issue	13/05/2022

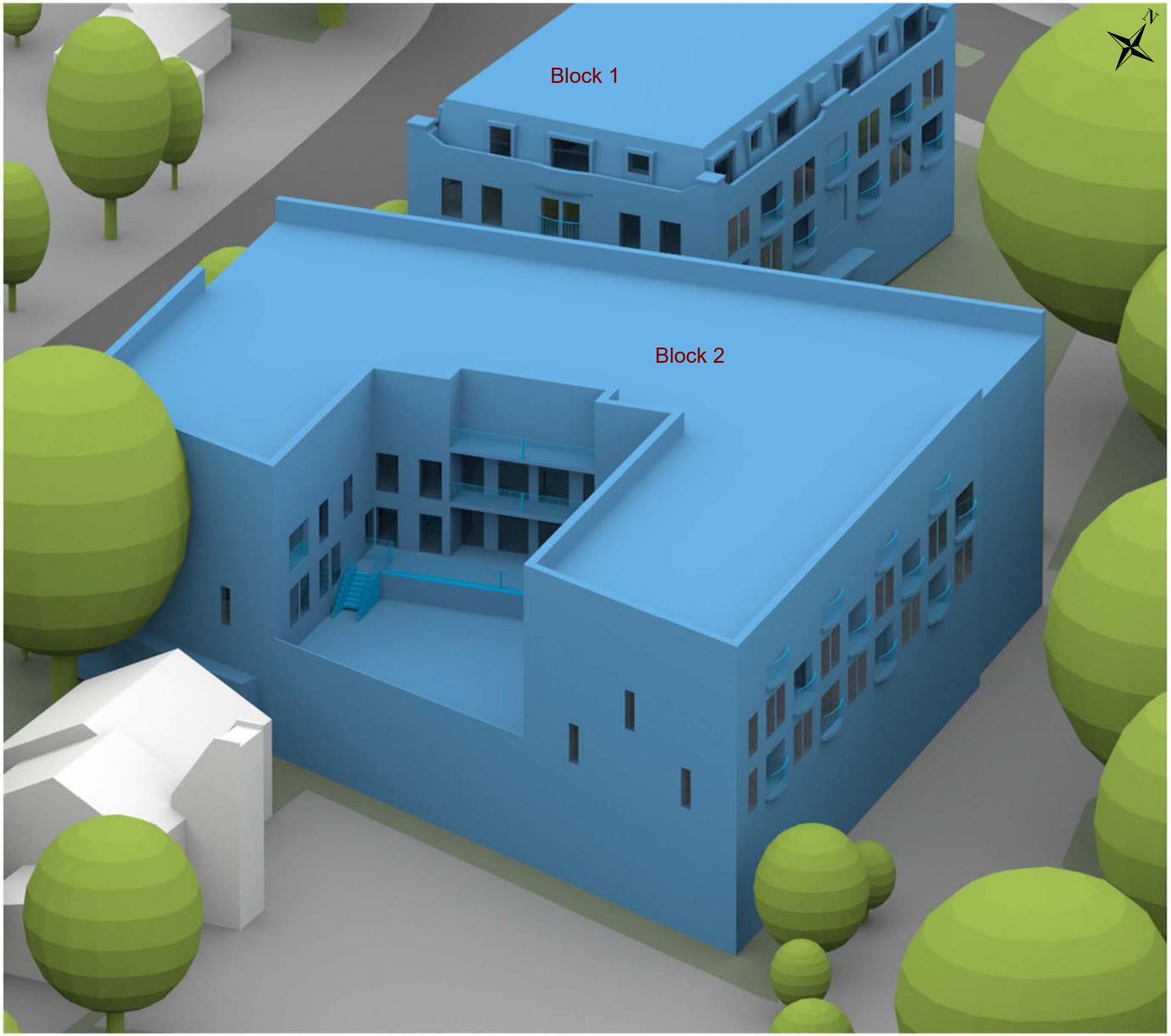
CLIENT: London Square

PROJECT: High Street, Ascot

SCALE	PROJ REF	ANALYST	DRAWN BY
Not to scale	3455	KC	LR

DWG REF.: 3D Model - Proposed Site Scenarios

DWG No.: 3455_03



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Legend

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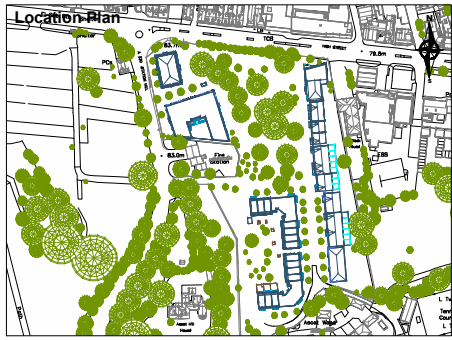

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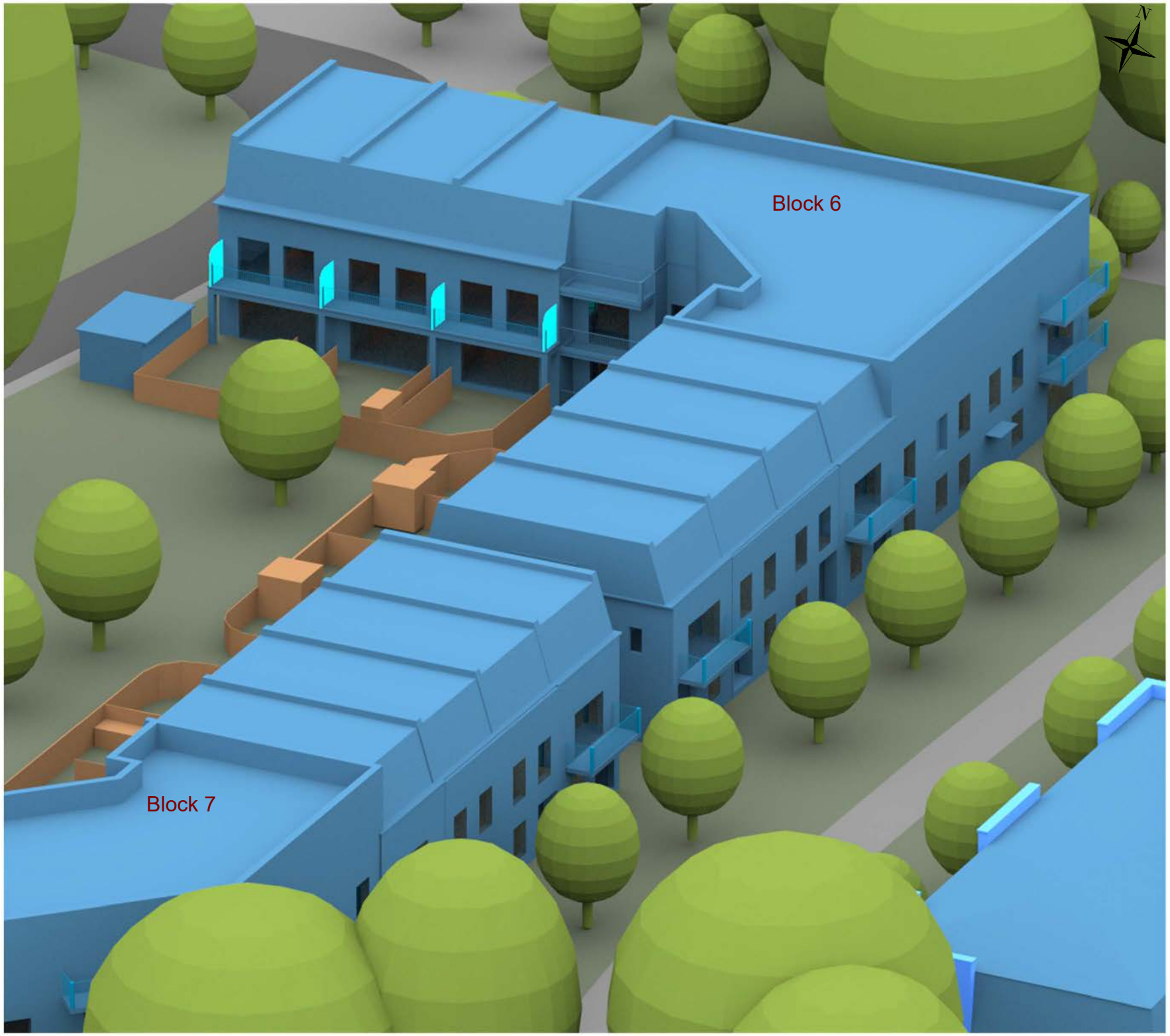
DWG REF.: 3D Model - Proposed Site Scenarios

DWG No.: 3455_04



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Legend

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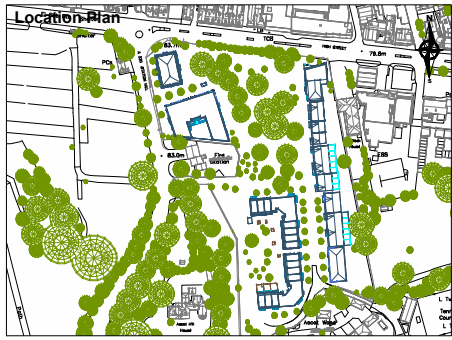

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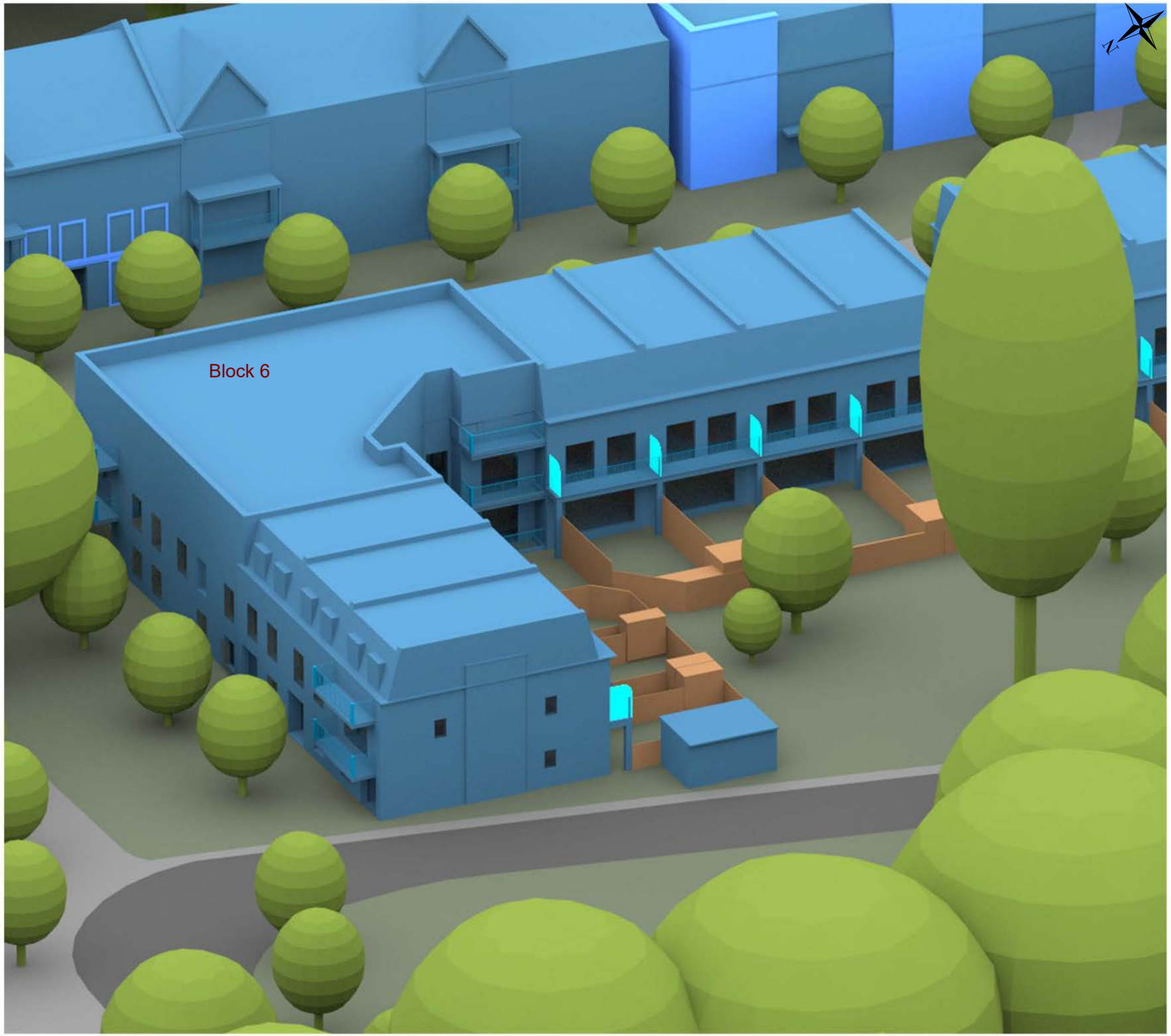
DWG REF.: 3D Model - Proposed Site Scenarios

DWG No.: 3455_05



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Legend

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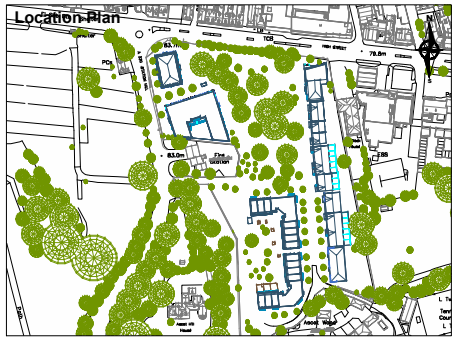
Location Plan



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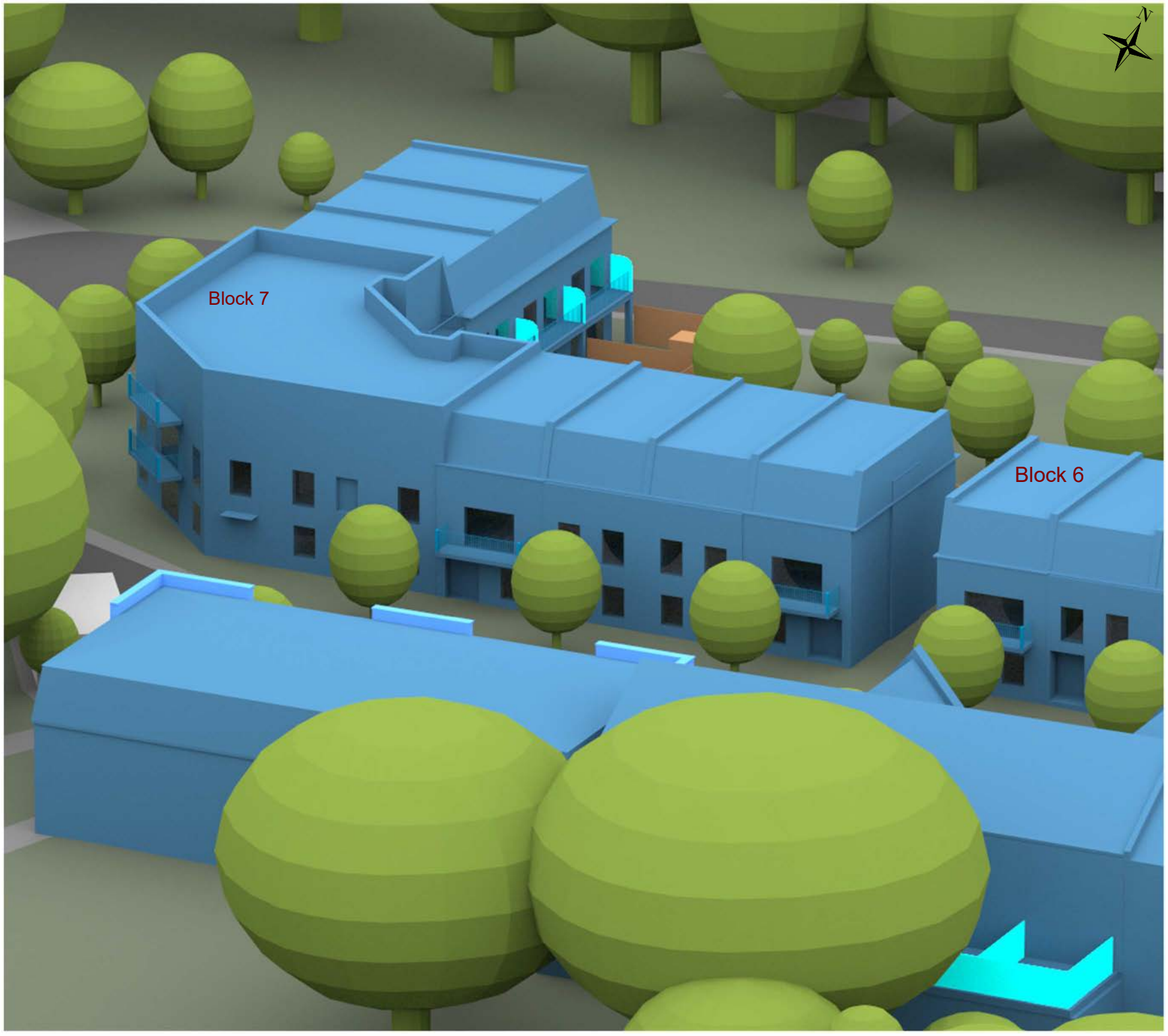
DWG REF.: 3D Model - Proposed Site Scenarios

DWG No.: 3455_06



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Legend

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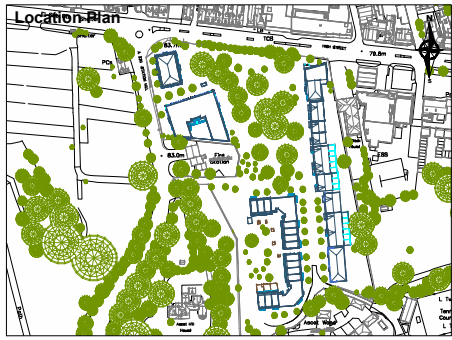
Location Plan



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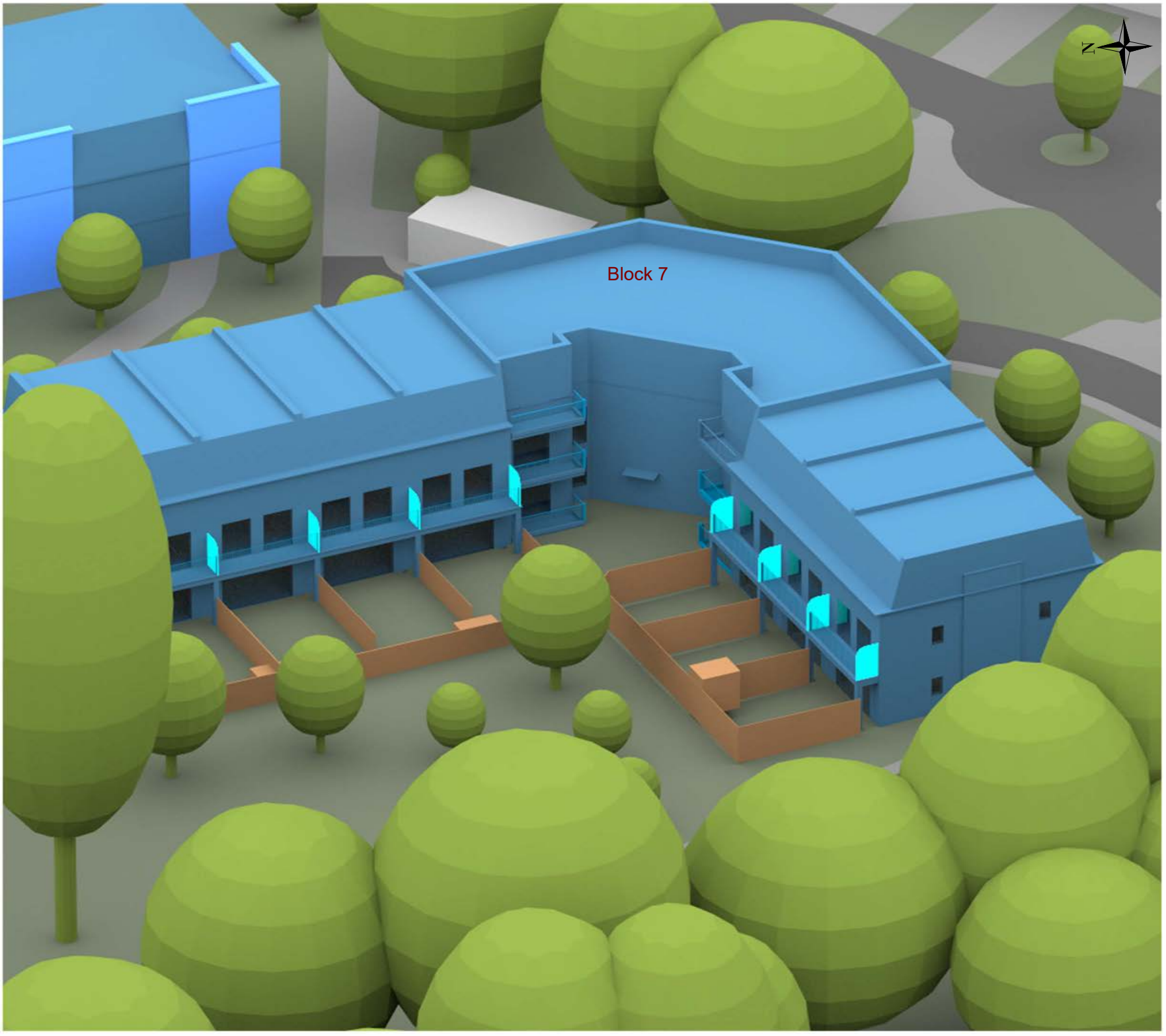
DWG REF.: 3D Model - Proposed Site Scenarios

DWG No.: 3455_07



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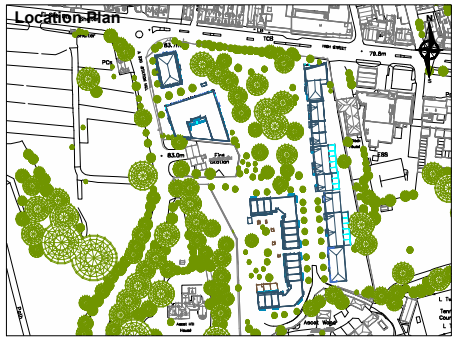

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Not to scale	3455	KC	LR

DWG REF.: 3D Model - Proposed Site Scenarios

DWG No.: 3455_08