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TEMPLE

Kenavon Drive, Reading

Environmental Statement Addendum
October 2019



CHAPTER 1: INTRODUCTION

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1.0 INTRODUCTION

1.1.1 This document is an Environmental Statement Addendum (ESA), prepared on behalf of the Applicant (a joint venture between London & Quadrant and Berkeley Homes) to support a Section 73 (minor material amendment) application for proposed changes to the design of the scheme approved in October 2018 (Planning Ref: 170509). The original permission was for:

"Demolition of the two existing retail (Homebase and former Toys R Us) structures and the erection of new buildings ranging between 2 and 11 storeys in height, providing 765 (18 x studio, 302x1, 409x2 and 36x3- bed) residential units (Class C3), 5 commercial units (1x flexible Class A1-A4, B1 or D1-D2, 1x flexible D1 or D2, 1x flexible Class A1-A5, 1x flexible Class A3 or A4, 1x flexible A1-A5 or D1-D2 uses), various works to the public realm, including a new riverside square, landscaping, accesses, parking and associated works."

1.1.2 Due to the scale of the scheme, the application was accompanied by an Environmental Statement, produced by Temple in March 2017 ('the Original ES'), the scope of which was agreed through an EIA Scoping report and Scoping Opinion received on 11th November 2016 from Reading Borough Council. The site location is shown in Figure 1.1.

Figure 1.1 Kenavon Drive Site Location



1.1.3 In summary, the S73 changes now being proposed by the Applicant relate to:

- An increase of 22 residential units overall, as a result of optimising some of their layouts;
- Minor changes to building heights;
- Changes to the façades/elevations in a number of locations, including relocating and externalising balconies;

- Minor changes in parking provision;
- Consequential changes to servicing and trip generation and energy strategy.

ES Addendum Purpose

1.1.4 The purpose of this ESA is to:

- Describe the scheme and proposed changes;
- Systematically examine them against the findings of the Original ES;
- To identify those environmental impacts which have the potential to be materially affected by the S73 Application; and
- Use professional judgement, qualitative and/or quantitative technical assessment methods to update assessments where required (including cumulatively with other developments), identify the need for further mitigation, and present the updated residual effects and conclusions.

ESA Structure

1.1.5 The ESA is structured as follows:

- Chapter 1 – Introduction to the ESA, setting out planning history and context and the purpose and structure of the document;
- Chapter 2 – Description of the S73 Application and comparison with the permitted scheme;
- Chapter 3 - ESA Methodology, describing the proportional approach to the assessment, how each previous ES topic has been reviewed and updated with consideration of current baseline, policy/guidance and cumulative scenario and the changes to the scheme design;
- Chapter 4 – 5 – updated technical assessments to include those chapters of the Original ES that are affected by the proposed changes (not all chapters have been updated);
- Chapter 6 – updated residual effects and conclusions chapter.

ESA and Original ES Availability

1.1.6 This ESA (and Original ES) will be made available to view at:

- Reading Borough Council, Civic Offices, Bridge Street, Reading, RG1 2LU

1.1.7 Copies of the ESA (and Original ES) can also be purchased from:

- Temple Group, The Woolyard, 52 Bermondsey Street, London, SE1 3UD (quoting Ref: T4367).

1.1.8 This ESA should be read in conjunction with the Original ES, which can be viewed by searching for Planning Ref 170509 on RBC's Online Planning website (http://planning.reading.gov.uk/fastweb_PL/detail.asp?AltRef=170509&ApplicationNumber=170509&AddressPrefix=&Postcode=&Submit=Search).

CHAPTER 2:

S73 CHANGES AND COMPARISON WITH CONSENTED SCHEME

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2.0 S73 CHANGES AND COMPARISON WITH CONSENTED SCHEME

2.1.1 This chapter provides a description of the S73 application scheme and identifies the specific differences between this and the Consented Scheme, in order to robustly identify where the impacts identified in the Original ES may be affected.

Comparison of Changes Against the Consented Scheme

2.1.2 The changes proposed under this S73 application affect a number of unit types within all three blocks (West, Middle and East Blocks). **Figures 2.1-2.3** identify the locations of the changes at ground floor, first floor and a typical floor, respectively.

Figure 2.1 S73 Changes to Units at Ground Floor



Figure 2.2 S73 Changes to Units at First Floor

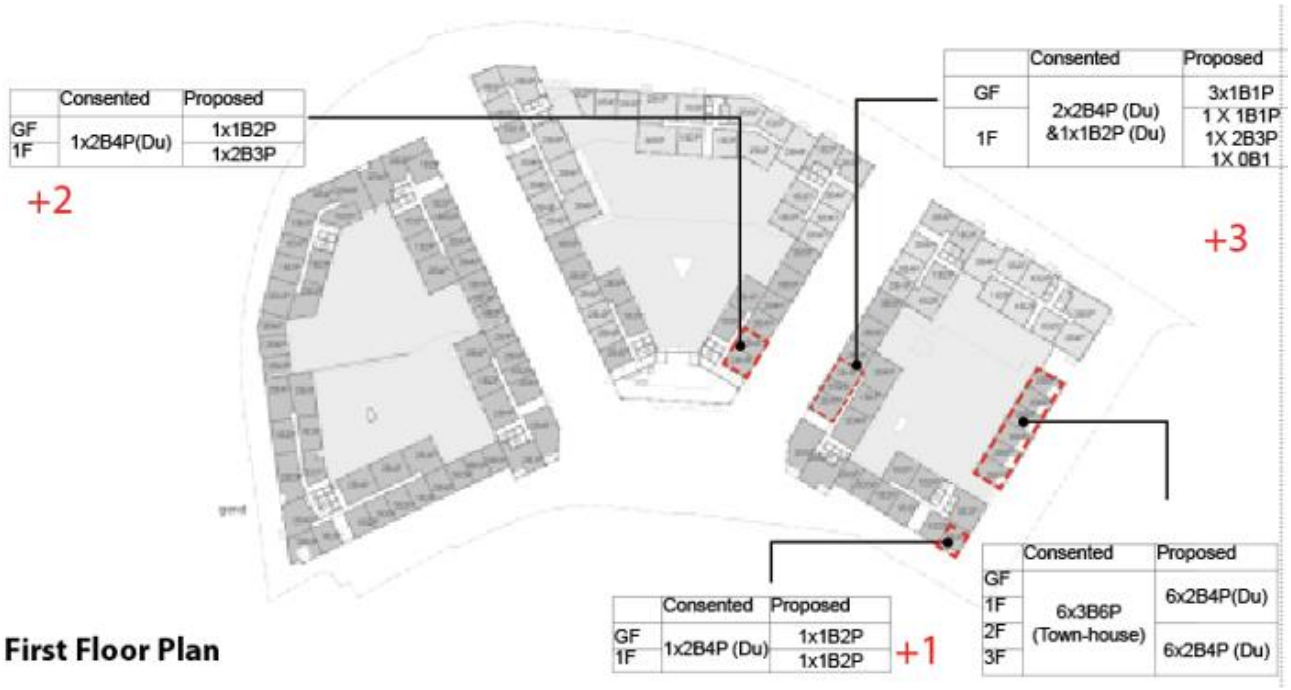
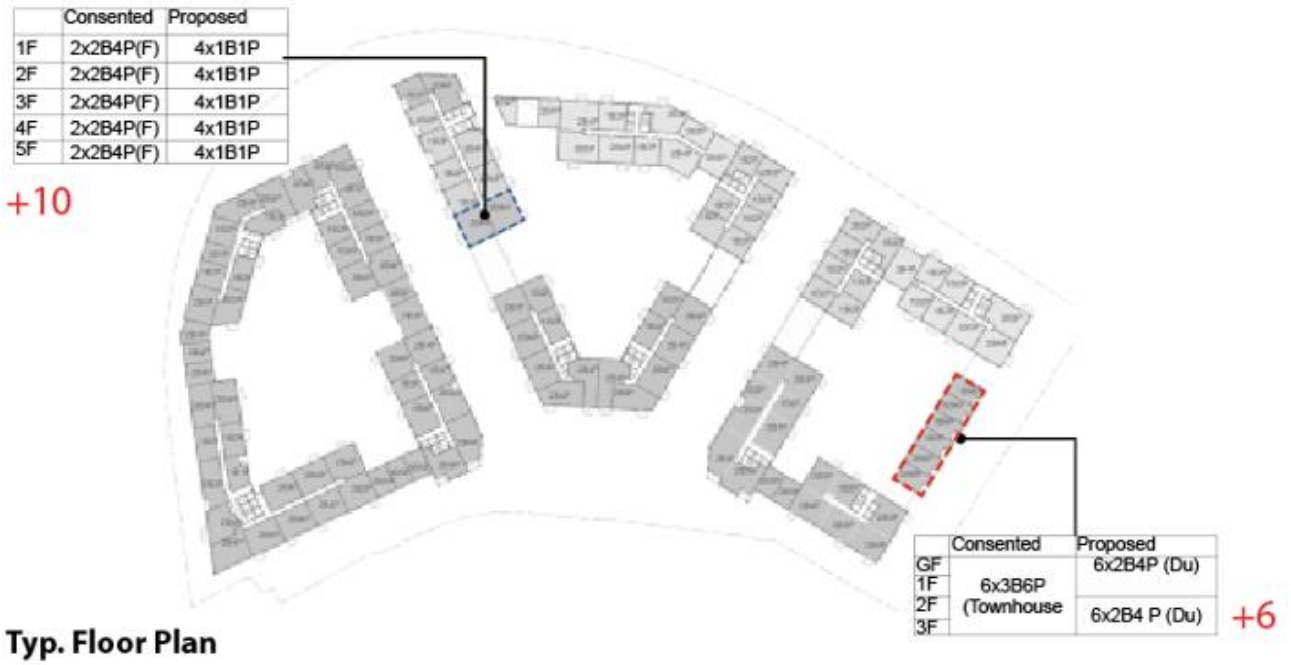


Figure 2.3 S73 Changes to Units at a Typical Floor



2.1.3 The changes to the unit types and numbers are summarised in **Tables 2.1 and 2.2**.

Table 2.1 Summary of S73 Unit Changes: Residential

Consented Unit No.	Consented Provision	Proposed Replacement Provision
Blocks E, M and W	1B1P (18 units)	1B1P (39 units)
Blocks E, M and W	1B2P (302 units)	1B2P (302 units)
Blocks E, M and W	2B3P, 2B4P (409 units)	2B3P, 2B4P (412 units)
Blocks E, M and W	3B5P (36 units)	3B5P (34 units)
Total Unit Provision	**765**	**787**

Table 2.2 Summary of S73 Unit Changes: Commercial

Consented Unit No.	Consented Proposed Provision	Total Size of Unit Gross Internal Area (GIA) (sqm)	Proposed Replacement Provision	Total Size of Unit Gross Internal Area (GIA) (sqm)
Unit 1 (Block W3)	Convenience Store	396.4	Convenience Store	409.5
Unit 2 (Block M2)	Nursery	305.9	Nursery	364.8
Unit 3 (Block W4)	Café	161.6	Café	168.7
Unit 4 (Block M1, M5)	Restaurant	338.8	Restaurant	331.6
Unit 5 (Block E1)	Yoga Studio	181.6	Yoga Studio	169.8
Total Floorspace		**1,384.3**		**1,444.4**

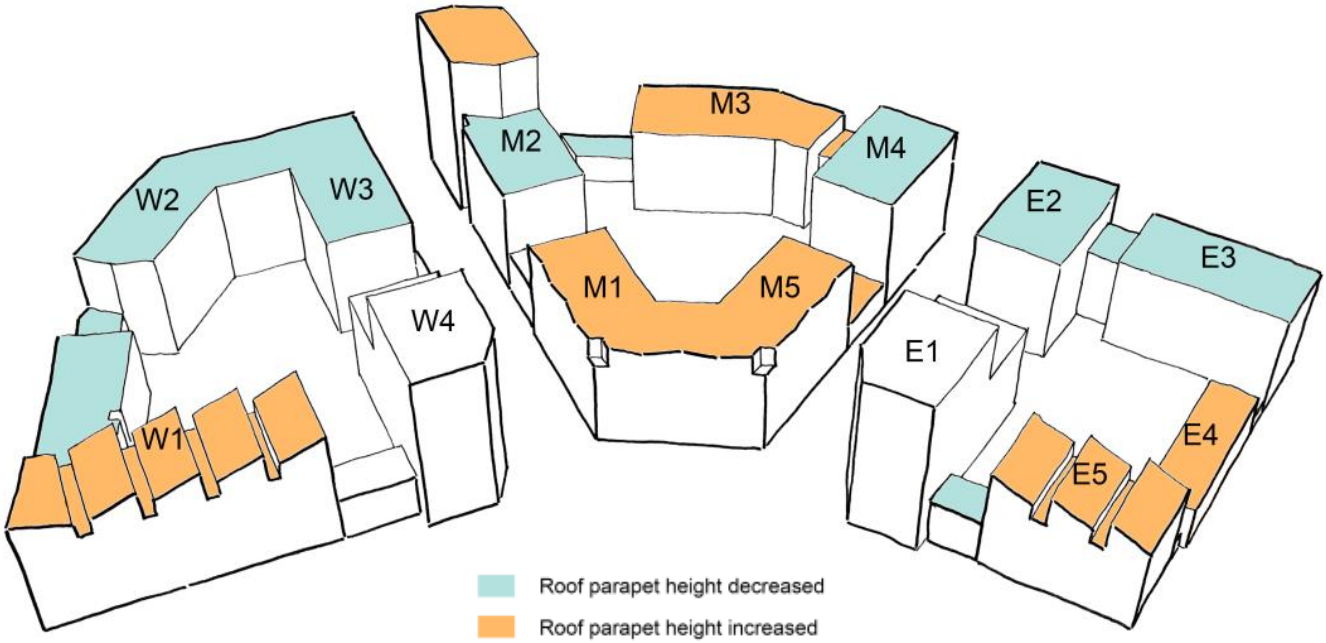
2.1.4 Changes to building heights as a result of amendments to the floor to ceiling heights, amendments of the roof form and increases or decreases of roof parapet height are detailed in **Table 2.3** and **Figure 2.4.** The maximum increase in roof parapet height across the proposed development is 300mm, while the maximum height reduction is approximately 1000mm.

Table 2.3 Summary of S73 Building Height Changes

Block	Description of Proposed Changes
East	Floor to floor amendments and changes to the parapet heights. Roof form amendments, with increases and decreases in roof parapet height.

Block	Description of Proposed Changes
Middle	Lowering the parapet and reducing the first and last floor build-up. Both increases and decreases in roof parapet height.
West	Floor to floor amendments and changes to the parapet heights (both increase and decrease).

Figure 2.4 S73 Building Height Changes



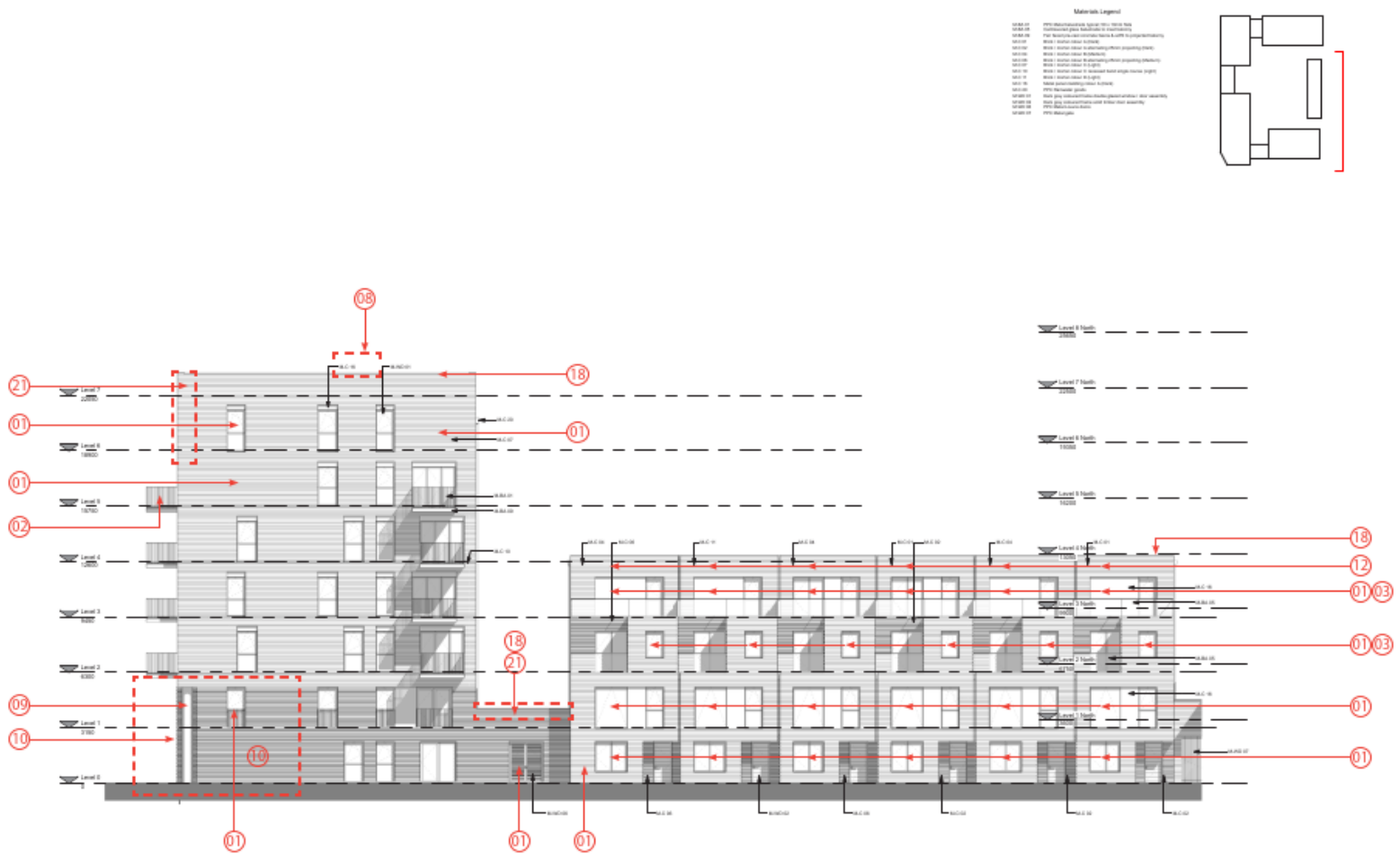
2.1.5 A full set of drawings showing changes to the floorplans, elevations (including specific heights) and internal units' configurations have been provided in Appendix A and submitted in support of S73 application.

2.1.6 A selection of images illustrating where the elevations have changed are provided in **Figures 2.5-2.7** for the East, West and Middle Blocks, respectively.

Figure 2.5 Selected Elevational Changes to the East Block

Consented

Amended area as result of internal layout changes



Consented

Amended area as result of internal layout changes

This facade has been redesigned to include one additional balcony on levels 2 - 6. As such, one brick pier has been omitted and the rest have been relocated. Windows have been replaced by a balcony door.

Other amendments include relocation of balconies as well as amendments to the ground and first floor windows and doors.

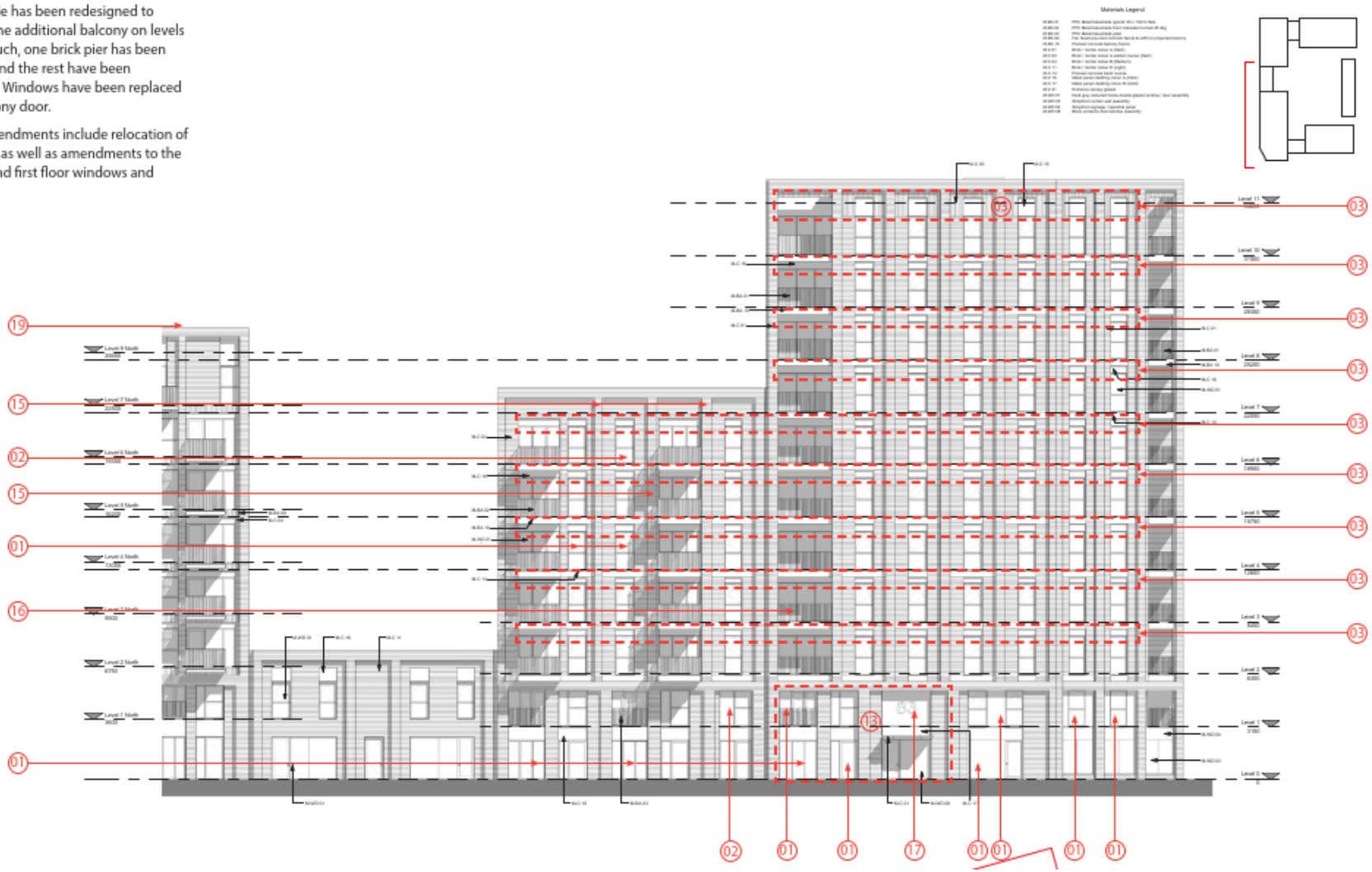


Figure 2.6 Selected Elevational Changes to the Middle Block

Consented

Amended area as result of internal layout changes



Consented

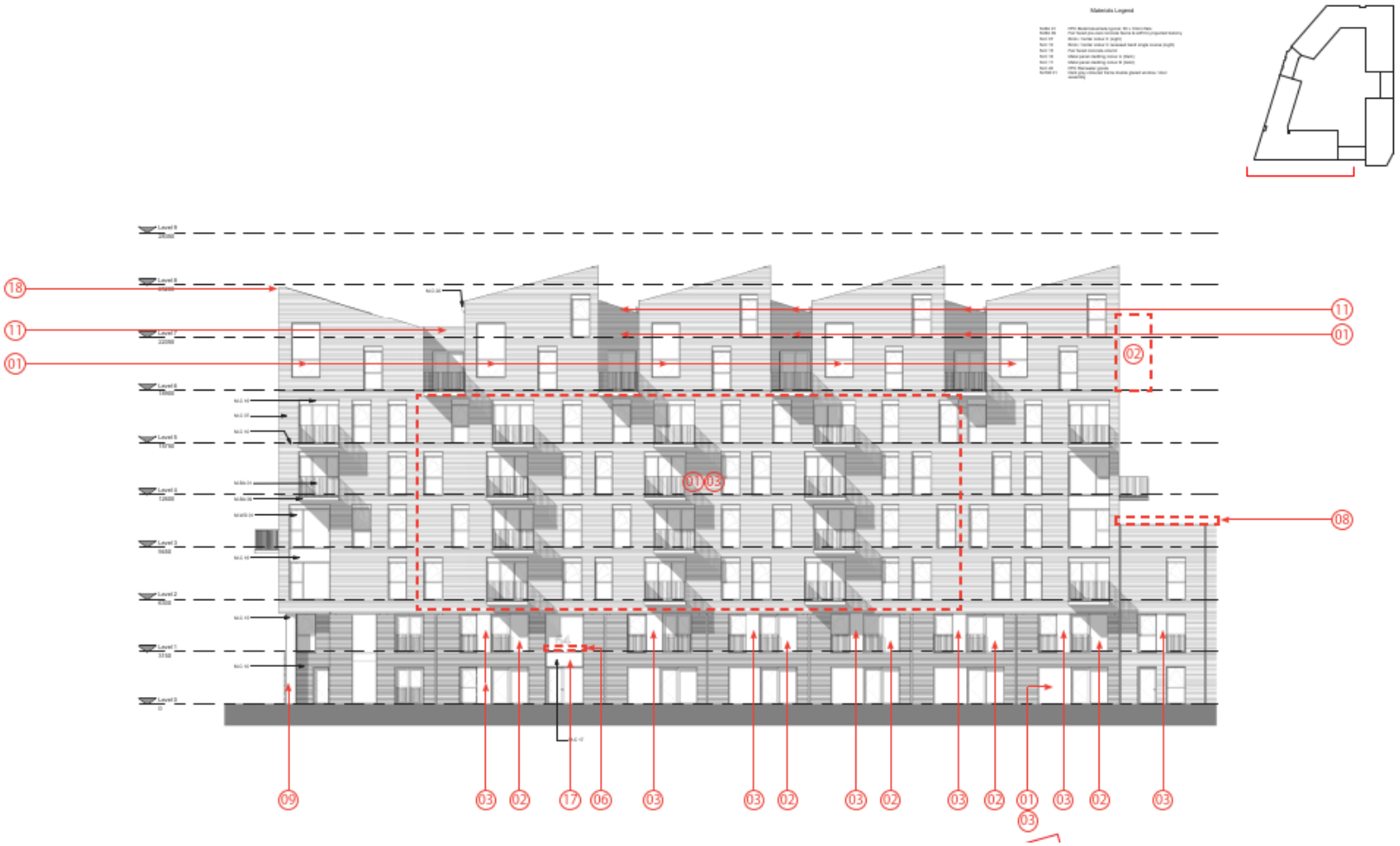
Amended area as result of internal layout changes



Figure 2.7 Selected Elevational Changes to the West Block

Consented

Amended area as result of internal layout changes



Elements Unchanged from the Consented Scheme

2.1.7 There are many aspects of the design that will not change compared to the Consented Scheme, namely:

- Any energy plant;
- External open space/landscaping;
- Basement depths and extents;
- Construction activities and approximate duration (although start and completion dates would clearly be later than originally reported).

2.1.8 As a result of this, it can be concluded that the changes are limited (as would be expected for a S73 'minor material amendment'), and therefore the scope of the updated environmental assessment required for this ESA will also be limited, as described in the following chapter.

CHAPTER 3:
ES ADDENDUM SCOPE AND METHODOLOGY

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3.0 ES ADDENDUM SCOPE AND METHODOLOGY

3.1.1 This chapter sets out the approach and methodology for assessing the environmental effects of the S73 (minor material amendment) scheme and the proposed scope of this Environmental Statement Addendum (ESA).

The EIA Regulations and Proportional Assessment

3.1.2 The 2017 EIA Regulations were formally transposed in the UK on 16th May 2017 to implement the requirements of European Union (EU) Directive 2014/52/EU. However, given that this document is an Addendum to an ES produced under the 2011 EIA Regulations (Town and Country Planning (Environmental Impact Assessment) Regulations 2011), this ESA should be considered against the 2011 EIA Regulations.

3.1.3 Furthermore, a key principle advocated by the Institute of Environmental Assessment and Management (IEMA) is that of 'proportionate EIA'. Trends in EIA over recent years have seen ESs become longer and more complex, in some cases unnecessarily. IEMA's document 'Delivering Proportionate EIA (2017) states that: *"efforts need to move beyond just addressing length or reducing bulk, to ensure that the process and reporting stages are efficient, effective and add value to the consenting process, its stakeholders and the environment*".

3.1.4 This approach has been taken with this ESA, whereby the significance of effect, alternatives and acceptability of development has already been assessed in detail as part of the Original ES, and the minor material nature of the S73 Scheme changes from the Consented Scheme can be assessed at a more qualitative level, whilst still maintaining robustness.

ESA Scope

3.1.5 In line with the approach described above, it is considered that only those EIA topics (chapters and appendices of the Original ES) which could be affected by the proposed S73 design changes need to be included in the ESA.

3.1.6 Therefore, this section has been based upon a review of the Original ES, and identifies those topics to be revisited and those which do not need to be:

- Air Quality. Although 22 additional units will require additional energy for heating and electricity, this will be within the capacity of the building plant/boilers established through the Original Energy Strategy, and therefore there will be no additional emissions. An additional 5 car parking spaces are proposed, which, although will cause a minor increase in trips, is considered to be unlikely to cause any material changes to the trip generation or servicing requirements (and therefore no additional emissions). This topic has therefore not been revisited in the ESA;
- Archaeology. There are no changes proposed to the sub-surface design or coverage, and therefore there can be no changes to the assessment presented in the Original ES. This topic has therefore not been revisited in the ESA;
- Townscape, Visual Effects and Built Heritage. Building heights have increased slightly for some blocks, however this is by no more than 300m at any one point. The Zone of Theoretical Visibility will not perceptibly change, and therefore no additional visual

receptors would need to be considered. The proposed design approach has not materially changed, however there are a number of subtle alterations to material palette and several elevations across all three blocks. This topic therefore requires further consideration;

- Ecology. There are no changes to the external landscaping or trees assessed in the Original ES. This topic has therefore not been revisited in the ESA;
- Socio-economics. There are no changes to the construction or operational employment. However, there will be changes to the operational assessment of housing provision and of impacts upon social infrastructure as a result of changes to the housing mix and commercial floor space. This topic therefore requires further consideration;

3.1.7 The following topics were provided as appendices to the Original ES, and commentary provided regarding the need to revisit them:

- Code of Construction Practice. It is not considered that the S73 materially changes the construction programme or activities warranting an update to the construction phase assessment. This topic has therefore not been revisited in the ESA;
- Acoustics. An addendum has been produced to consider if any changes to the acoustic treatments required as a result of the façade changes. There will be no changes to any baseline levels, plant noise or effects upon surrounding receptors;
- Ground Conditions and Contamination. There are no proposed changes to the subsurface works, and therefore the previous assessment remains valid. This topic has therefore not been revisited in the ESA;
- Flood Risk Assessment. The building footprint at the south east corner of the East Block has increased the ground floor building footprint by less than 5 square metres. This would not alter the permeable/impermeable areas or finished floor levels. This topic has therefore not been revisited in the ESA;
- Daylight/sunlight/overshadowing. An update is required due to the changes in internal layouts, balcony positioning and building heights;
- Wind microclimate. An update to the desk-based assessment is required to account for the alterations to balconies and entrance locations, and to clarify the need for any specific mitigation.

ESA Methodology

3.1.8 For those ES chapters identified above as requiring revisiting, the purpose of this ESA is to highlight aspects that have changed since the assessments were undertaken as part of the Original ES. These aspects can comprise changes in:

- Legislation, Policy and Guidance;
- Baseline conditions;
- The development to be assessed;
- The cumulative scenario.

3.1.9 Chapters 4-5 of this ESA therefore consider those ES topics identified above, and these include a description of how each previous ES topic has changed under the four headings above.

3.1.10 A clear statement of whether (and how) the effects of the S73 Scheme will be materially different to those identified in the Original ES will be given.

3.1.11 Chapter 6 provides an updated assessment of significant residual effects.

Updated Cumulative Scenario

3.1.12 The list of cumulative schemes in the Original ES have been reviewed and compared to those major schemes within 0.5km that currently fit the criteria of:

- Approved but uncompleted projects (i.e. unimplemented or under construction); and
- Projects for which an application has been made and which are under consideration by the consenting authorities.

3.1.13 **Table 3.1** provides details of the current cumulative schemes, compared to how they were described in the Original ES (in italics).

Table 3.1 Cumulative Schemes Considered in the ES Addendum

Scheme Name & Application Number	Scheme Details	Planning Status	Approximate Distance from the site
Thames Quarter (Former Cooper Reading BMW), Kings Meadow Road, Reading, RG1 8DQ (Ref. 182196)	Erection of a part 13-storey, part 23 storey building comprising 338 apartments in a mix of studio, one-bedroom, two-bedroom and three-bedroom units, residents' lounges, tech hub, dining room, and cinema room, various rooftop outdoor amenity spaces, concierge/reception with coffee meeting area, gym, residents' storage facilities, post room, ancillary back-of-house facilities, 338 secure cycle parking spaces, car parking spaces, landscaping, associated works (revision to planning permission 162166 dated 23/11/2017) (Part Retrospective).	Awaiting decision	300m north west of site.
(Ref. 162166)	Erection of a part 12 storey, part 23 storey building comprising 315 apartments in a mix of studio, one-bedroom, two-bedroom and 3-bedroom units; residents' lounges, tech-hub, dining room, and cinema room, various rooftop outdoor amenity spaces, concierge/reception with coffee meeting area, residents' storage facilities, post room, ancillary back-of-house facilities, 315 secure cycle parking spaces, 49 car parking	Application permitted 23rd November 2017	

Scheme Name & Application Number	Scheme Details	Planning Status	Approximate Distance from the site
(Ref. 150120)	spaces, landscaping, and associated works. Demolition of existing multi-storey car park. *Demolition of all existing on-site buildings and structures, including remediation, 352 new homes in a mix of sizes in three new buildings up to 28 storeys in height and up to 523 square meters of commercial floorspace. Although this application was refused, the developments behind this scheme are preparing to submit a new application for a "landmark" building.*	*Refused*	
Kings Point, 120 Kings Road, Reading, RG1 3DA (Ref. 162087) *(Ref. 150019)*	Demolition of existing building and the erection of a part seven, part nine, part eleven, part twelve and part seventeen storey building comprising 103 residential units and 351.5 sqm GIA of commercial (A1/A3) floorspace at ground and mezzanine floor level together with parking and associated landscaping (without complying with conditions (2, 7, 8, 9, 18, 19, 28 of planning permission 150019) to allow the removal of sub-basement, enlargement of basement level and internal and external alterations at the basement, ground and mezzanine levels (amended description). *Demolition of existing building and the erection of a pert seven, part nine, part eleven, part twelve and part seventeen storey building comprising 103 residential units and 351.5 square metres GIA of commercial (A1/A3) floorspace at ground and mezzanine floor level together with parking and associated landscaping (amended description).*	Application permitted 9th February 2017 *Permission granted in 2015*	100m south of site

3.1.14 The following schemes were described in the Original ES as being under construction, but they are now completed and form part of baseline. This would have been assessed in the Original ES and would not introduce any additional effects.

- Energis House, Forbury Road, Reading (Ref. 121826);
- 42 Kenavon Drive, Reading, RG1 3DH (Ref. 131280);
- Former Gas Works Building, Gas Works Road (Ref. 160378).

3.1.15 Therefore, it can be concluded that no new material cumulative effects are likely to arise, beyond what was already assessed in the Original ES.

CHAPTER 4:

TOWNSCAPE, VISUAL EFFECTS AND BUILT HERITAGE

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4.0 TOWNSCAPE, VISUAL EFFECTS AND BUILT HERITAGE

4.1.1 This chapter provides an update of the Original ES in light of the changes described in Chapters 2 and 3 of this ES Addendum (ESA).

Changes to Legislation, Policy and Guidance

4.1.2 There have been no changes to the legislative framework since the Original ES.

4.1.3 The National Planning Policy Framework (NPPF) (March 2012) described in the Original ES has recently been replaced by the new NPPF (July 2018, updated in January 2019). This provides high level guidance and principles to underpin the plan making process at a sub-national scale.

4.1.4 At the heart of both is a 'presumption of sustainable development', and therefore it is not considered to materially affect the acceptability of the scheme against policy, although the Planning Statement Addendum explores this further.

4.1.5 The RBC LDF Core Strategy was adopted in 2008 and updated in January 2015, and along with the Reading Central Area Action Plan and Sites and Detailed Policies Document, continues to be the adopted local plan. A new Local Plan was submitted to the Secretary of State in March 2018, and introduced relevant policies such as EN6: New Development in a Historic Context and H2: Density and Mix. However, these changes in policy are not yet adopted (although at the time of writing has been made sound, subject to some minor amendments) and as it is considered that the Proposed Development was designed sensitively to its townscape and local heritage it is not considered that these policies will result in a material change to the assessment.

4.1.6 No changes in technical guidance are known to have occurred since the Original ES.

Changes to Baseline Conditions

4.1.7 As described in Chapter 3, three schemes assessed as cumulative schemes in the Original ES have now been completed and form part of the baseline. This change has therefore already been accounted for and assessed as being acceptable.

4.1.8 No other material changes in the baseline conditions are known to have occurred since the Original ES was submitted in March 2017.

Changes Associated with the S73 Scheme

Built Heritage

4.1.9 As described in the Original ES, there are no designated or non-designated built heritage assets within the Site and therefore no potential for direct impacts on the fabric of any asset.

4.1.10 There will be no material changes to construction phase impacts as the changes would be imperceptible, as described in Chapter 2 of the ESA.

4.1.11 During the operational phase, the S73 scheme is likely to continue to have a permanent direct low beneficial magnitude impacts upon the setting of Reading Gaol (Grade II) and the Former Gas Works Buildings and Blakes Cottages (both non-designated)

4.1.12 There will also continue to be permanent indirect impact of a neutral magnitude upon all other identified heritage assets, including the settings of the buildings comprising Blake's Lock Sewage Pumping Station, including the Engine House (Grade II), the Screens House (Grade II), the Pump and Turbine House (Grade II) and 47-48 Kenavon Drive (Grade II), Reading Abbey Ruins (Grade I and Scheduled Monument (above ground remains only)), settings of the Church of St James (Grade II), St James Presbytery (Grade II) and St James Roman Catholic School (Grade II).

4.1.13 The S73 scheme will continue to be of high architectural quality, displaying varied elevations and creative use of building materials. It will continue to include breaks within the massing, that would reveal longer distance views.

Townscape

4.1.14 There will be no material changes to construction phase impacts as the changes would be imperceptible, as described in Chapter 2 of the ESA.

4.1.15 During the operational phase the S73 scheme will continue to have a permanent direct impact of high beneficial magnitude upon TCA 1 (Kenavon Drive and Forbury Retail Park), within which the Application Site is located. It will replace poor quality retail units with a high quality residential-led mixed use scheme of architectural interest, with varied roofscape, appropriate massing, creative use of building materials and elevations with interesting contrasts of projection and recession. It will form a new focal point, improving both the legibility and quality of the surrounding townscape character, also fulfilling a wayfaring role for the wider area to the east of Reading city centre. It would furthermore improve street frontages on Kenavon Drive and improve connectivity with areas further to the east, and in addition, increase the range of uses in the local area, adding variety and interest to the TCA.

4.1.16 As described in the Original ES, and unchanged in the S73 scheme, there will be a permanent direct impact of a medium beneficial magnitude on TCA 5: Reading Gaol. This is due to the high quality design, drawing upon the history and historic architecture of the area to inform its built form and use of building materials, and creating a new focal point to the east of Reading Townscape to open up new connectivity to this TCA.

4.1.17 Low to medium indirect beneficial impacts to TCA2, TCA3, TCA4, TCA6, TCA9 would be unchanged, as the overall mitigation strategies such as creating a sense of place, and opening up access routes and permeability continue to form important considerations in the proposed S73 design.

Views

4.1.18 It is proposed that building heights will be slightly adjusted in several locations across the three buildings, as a result of amended floor to ceiling heights with alterations to the roof form and parapet heights increasing or decreasing. These have been detailed in **Chapter 2, Table 2.3, Figure 2.4** and **Appendix A.** The changes are minor, likely to be imperceptible at viewpoints or small scale enough to be an insignificant change. Furthermore, reconfiguring and repositioning of external doors, windows and or brickwork on the facades will be imperceptible in the context of the overall view. **Figure 4.2** highlights these changes.

4.1.19 As part of the Original ES, it was described how measures to mitigate effects on views were considered throughout the design process and appropriate height, scale, massing and arrangement of the proposed buildings, approach to architectural design and

materials and the approach to public realm and landscaping were incorporated into the design.

4.1.20 The Verified Views Assessment contained within the HTVIA of the Original ES has been reviewed and commentary provided in Table 4.1 upon all 17 views, the locations of which are shown in Figure 4.1.

Figure 4.1 Location of Viewpoints Assessed

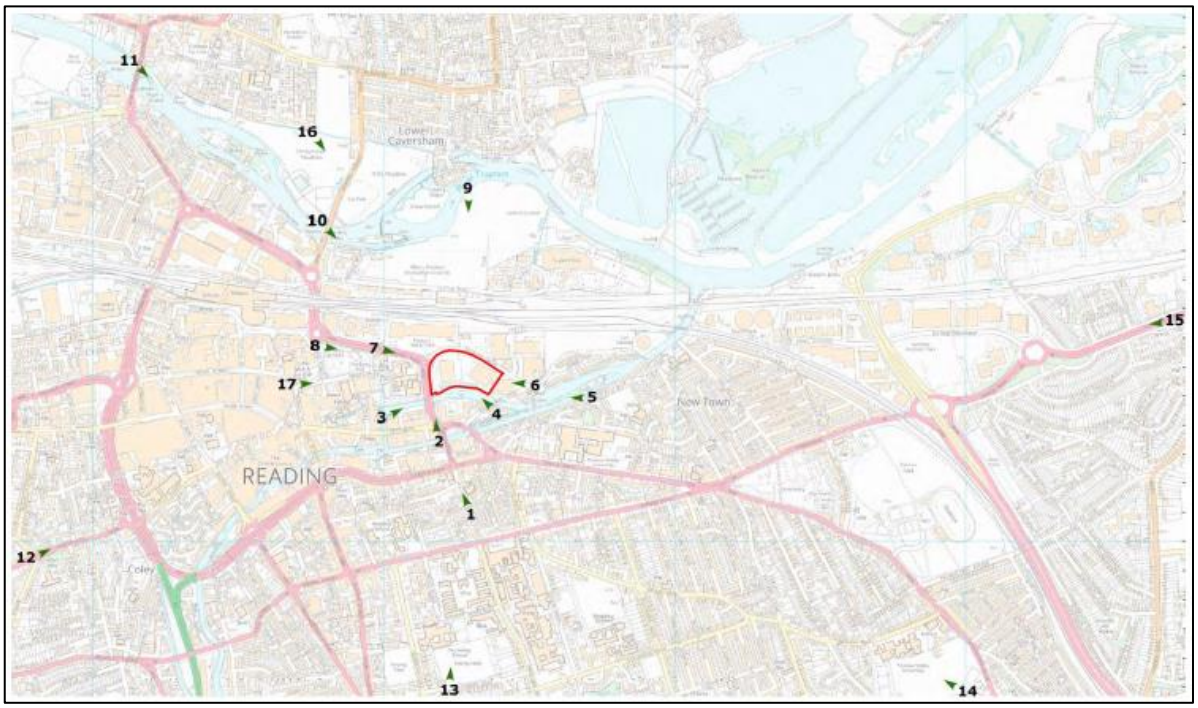


Table 4.1 Viewpoints Considered in the ES Addendum

Viewpoint	Changes in Appearance from Viewpoint Compared to Original ES	Original ES Assessment	S73 Scheme Assessment
Viewpoint 1: Watlington Street near the junction with The Grove	The Proposed Development will not be visible from this viewpoint	No effect	No effect
Viewpoint 2: Forbury Road, near King's Road junction	S73 external changes include reconfiguring, repositioning, addition or omission of external doors, windows and or brickwork. The scheme, and changes, are prominent in this view, however the nature of external changes will not detract from the architectural quality.	Minor beneficial	Minor beneficial

Viewpoint	Changes in Appearance from Viewpoint Compared to Original ES	Original ES Assessment	S73 Scheme Assessment
Viewpoint 3: Blakes Cottages	The S73 scheme will be prominent in this view, however, as shown in Figure 4.2, the S73 change, which include reconfiguring, repositioning, addition or omission of external doors, windows and or brickwork will not detract from the architectural quality.	Moderate beneficial	Moderate beneficial
Viewpoint 4: River Kennet towpath near the Gas Works Road bridge	The S73 scheme will be prominent in this view, however, as shown in Figure 4.2, the external changes to brickwork, windows and doors will not be perceptible.	Major beneficial	Major beneficial
Viewpoint 5: River Kennet	The S73 will continue to be largely be screened behind the existing and prominent Meridian building.	Minor beneficial	Minor beneficial
Viewpoint 6: Kenavon Drive	The S73 scheme will continue to for a high quality addition to the street scene. The S73 external changes are predominantly the reconfiguring, repositioning, addition or omission of brickwork. Whilst this may be perceptible, the changes will not detract from the architectural quality, and will not be perceptible in the Blocks further away.	Minor beneficial	Minor beneficial
Viewpoint 7: A329 west of the Application Site	The S73 scheme will be prominent in this view, however, as shown in Figure 4.2, the external changes, the majority of which are to brickwork, will be minor and not detract from the architectural quality.	Moderate beneficial	Moderate beneficial
Viewpoint 8: Forbury Gardens	The upper storeys of the taller elements of the S73 scheme are likely to be partially visible, but the view is from the same direction as Viewpoint 7, but more distant and the changes will be imperceptible.	Minor beneficial	Minor beneficial
Viewpoint 9: Kings Meadow	The S73 external changes will not be visible from this viewpoint and the effects remain unchanged.	Minor beneficial	Minor beneficial

Viewpoint	Changes in Appearance from Viewpoint Compared to Original ES	Original ES Assessment	S73 Scheme Assessment
Viewpoint 10: George Street Bridge (B3345)	The S73 external changes will not be visible from this viewpoint and the effects remain unchanged.	Minor beneficial	Minor beneficial
Viewpoint 11: Caversham Bridge	The S73 external changes will not be visible from this viewpoint and the effects remain unchanged.	Negligible	Negligible
Viewpoint 12: A4155, near the junction with Coley Avenue	The S73 external changes will not be visible from this viewpoint and the effects remain unchanged.	Negligible	Negligible
Viewpoint 13: Morgan Road	The S73 external changes will not be visible from this viewpoint and the effects remain unchanged.	Negligible	Negligible
Viewpoint 14: Regis Park Road	The S73 external changes will not be visible from this viewpoint and the effects remain unchanged.	Negligible	Negligible
Viewpoint 15: London Road	The S73 external changes will not be visible from this viewpoint and the effects remain unchanged.	Negligible	Negligible
Viewpoint 16: Christchurch Meadows	The S73 external changes will not be visible from this viewpoint and the effects remain unchanged.	Negligible	Negligible
Viewpoint 17: The Forbury	The S73 scheme will be prominent in this view, however, as shown in Figure 4.1, the S73 changes will be minor and not detract from the architectural quality.	Minor beneficial	Minor beneficial

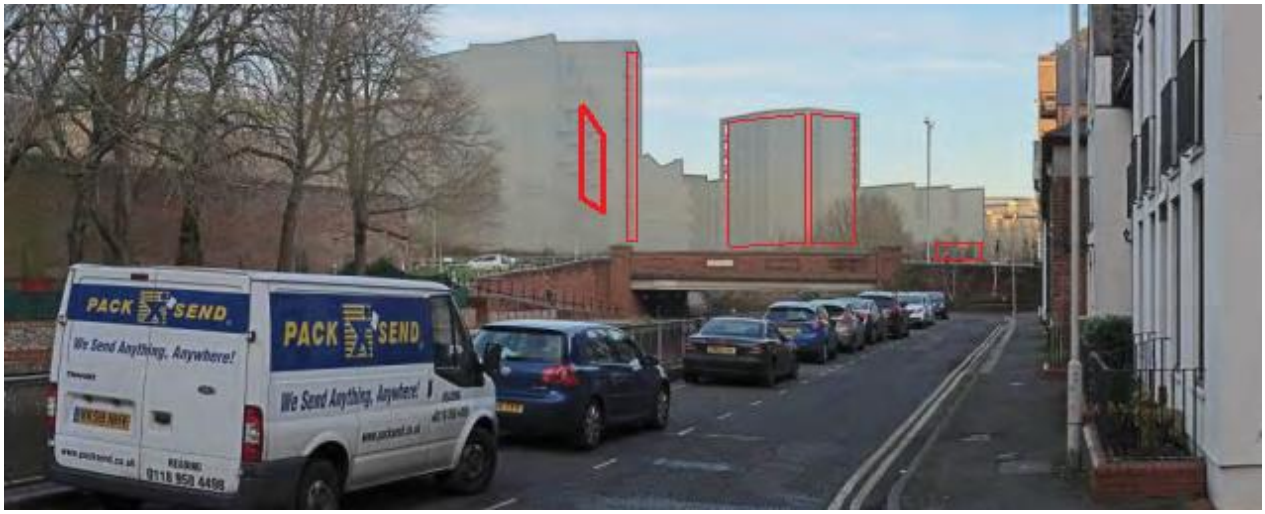
4.1.21 For those views where the S73 changes could be visible, Figure 4.2 illustrates the parts of the façade that would be visually different form the Original Scheme. Please refer to Chapter 2 of this ESA for further details of the changes to the external appearance.

Figure 4.2 Annotation of Original ES Views Showing External S73 Changes (Viewpoints 2, 3, 4, 6 & 7)

Viewpoint 2



Viewpoint 3



Viewpoint 4



Viewpoint 6



Viewpoint 7



Updated Mitigation and Residual Effects

4.1.22 Based upon the minor design changes in the S73 scheme, this assessment has demonstrated that there is no change in the residual effects reported in the Original ES and no changes in associated mitigation.

CHAPTER 5:
SOCIO-ECONOMICS

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5.0 SOCIO-ECONOMICS

5.1.1 This chapter provides an update of the Original ES in light of the changes described in Chapters 2 and 3 of this ES Addendum (ESA). It should be read in conjunction with Chapter 10 of the Original ES.

Changes to Legislation, Policy and Guidance

5.1.2 There have been no changes to the legislative framework since the Original ES.

5.1.3 The National Planning Policy Framework (NPPF) (March 2012) described in the Original ES has recently been replaced by the new NPPF (July 2018, updated in January 2019). This provides high level guidance and principles to underpin the plan making process at a sub-national scale.

5.1.4 At the heart of both is a 'presumption of sustainable development', and therefore it is not considered to materially affect the acceptability of the scheme against policy, although the Planning Statement Addendum explores this further.

5.1.5 The RBC LDF Core Strategy was adopted in 2008 and updated in January 2015, and along with the Reading Central Area Action Plan and Sites and Detailed Policies Document, continues to be the adopted local plan. A new Local Plan was submitted to the Secretary of State in March 2018 and introduced relevant policies such as H1: Provision of Housing, H2: Density and Mix and H3: Affordable Housing. However, these changes in policy are not yet adopted (although at the time of writing has been made sound, subject to some minor amendments) and as it is considered that the Proposed Development largely helps to achieve the Council's aims, and therefore it is not considered that these policies will result in a material change to the assessment.

5.1.6 No changes in technical guidance are known to have occurred since the Original ES.

Changes to Baseline Conditions

5.1.7 As described in Chapter 3, three schemes assessed as cumulative schemes in the Original ES have now been completed and form part of the baseline. This change has therefore already been accounted for and assessed as being acceptable. Given the dynamic and ever-changing nature of socio-economics and population, there is expected to have been some changes in demographics, etc, although no new Census data has become available.

5.1.8 No other material changes in the baseline conditions are known to have occurred since the Original ES was submitted in March 2017.

Changes Associated with the S73 Scheme

Construction Phase

5.1.9 There will be no material changes to construction phase impacts (employment and supply chain) as the changes would be imperceptible, as described in Chapter 2 of the ESA.

Operational Phase

Permanent Effect: Additional Housing by Size and Tenure

5.1.10 During the operational phase, the S73 scheme will introduce an additional 22 residential units compared to what was assessed in the Original ES, making a total of 787 dwellings. This represents an even greater contribution to Reading's housing stock, increasing the supply of housing in a place that has documented shortages. This represents almost 14 % of the total number of dwellings (5,731) planned to be built in the years covered by the Reading Core Strategy for the period 2016 to 2026.

5.1.11 Studio units increase from 18 to 39 (+21), 1-beds remain the same at 302, 2-beds increase from 409 to 412 (+3) and 3-beds decrease from 36 to 34 (-2). The S73 proposals are set out in red (with comparison against the Original ES in black) in Table 5.1.

Table 5.1 Changes in Unit Numbers and Sizes

Tenure	Bedrooms per unit				Total units	Tenure %	Affordable Tenure breakdown %
	Studio	1	2	3			
Rented	0 0	49 **50**	50 **49**	11 11	110 110	14.38 **14.0**	70.06 **70**
Shared Ownership	0 0	39 39	8 8	0 0	47 47	6.14 **6.0**	29.94 **30**
Open Market	18 **39**	214 **213**	351 **355**	25 **23**	608 **630**	79.48 **80.1**	
Total	18 **39**	302 302	409 **412**	36 **34**	765 **787**	Total affordable = 20.52 **= 20.0**	
Bedrooms per unit%	2.35 **4.96**	39.48 **38.37**	53.46 **52.35**	4.71 **4.57**			

5.1.16 The total proportion of affordable units has decreased very slightly from 20.52% to 20.0%, reflecting the overall increase in smaller private units. It increases the number of and percentage of one-bed units from 41.8% to 43.3%. Whilst this continues to not comply with RBC's Policy RC9i, which targets a maximum of 40% one-bed units, the small variation sought to the consented housing split should similarly be deemed acceptable in principle.

5.1.17 Whilst the S73 scheme slightly decreases the proportion of affordable housing units as a result of the increase in one-bed unit provision, the scheme provides an overall greater contribution to Reading's housing numbers than the consented scheme. It is considered that the magnitude of the impact of the S73 scheme on housing is considered major and beneficial. This results in a major beneficial effect which is

significant in the context of a serious need for housing in the Borough, and no change from the assessment in the Original ES.

Education and Childcare

5.1.18 The Proposed Development will introduce 787 new dwellings to Abbey ward. RBC uses ratios of 0.3 and 0.15 children per dwelling (with 2 bedrooms or more) for calculating school places needed for primary and secondary levels respectively from new development. This equates to a total of 134 new primary places and a total of 67 new secondary places required (whilst reported as 230 and 115 places, respectively, in the Original ES).

5.1.19 Given the likely number of school places required, in particular primary places when there are current capacity concerns, the magnitude of the impact has been assessed as minor, leading to a minor adverse effect, which is not significant. This is less impactful than what was reported in the Original ES (major to moderate adverse), due to an error in the calculations (which considered all units, rather than only 2 beds and larger as per local guidance).

5.1.20 The correct values for the original ES would have been an additional 134 primary school places and an additional 67 secondary school places. Therefore the amendment to the proposed development does not represent any increase in the requirement for primary and secondary school places.

5.1.21 There will also be no material changes in on-site childcare requirements due to the barely perceptible change in child yield as a result of the smaller units. Given that a childcare facility is being built in the Middle Block which will serve the development, there is expected to continue to be a negligible effect (unchanged from the Original ES).

Increase in Demand for Health Services and Facilities

5.1.22 The overall population from the S73 scheme has been recalculated and considered to increase slightly from 1,291 to 1,320 people.

5.1.23 Based on the UK average of 1,607 patients per GP, it is estimated that the S73 scheme will generate demand for an additional 0.8 GPs (unchanged from the Original ES). Given that a number of existing GP surgeries in the area have low ratios which suggest some spare capacity, this additional population is likely to be easily absorbed by existing provision. The magnitude of the impact is minor, resulting in a minor adverse effect, which is not significant.

Increase in Demand for Community and Recreational Facilities

5.1.24 The slight increase in population in the S73 scheme will not materially change the negligible effect reported in the Original ES.

Increase in Supply of and Demand for Open and Play Spaces

5.1.25 The decrease in children living at the scheme (from that reported in the Original ES) will put less pressure on the open space provided, and the slight increase in population in the S73 scheme will not materially change the minor beneficial effect reported in the Original ES.

Increase in Crime due to Change of Use

5.1.26 The slight increase in population will not materially change the minor adverse effect reported in the Original ES (assessed as such because of the introduction of the new population into the area).

Loss of/Changes in Employment/Increase in Labour Supply and Skills

5.1.27 The S73 changes will affect the non-residential uses, however, it is expected that the gross number of jobs generated by the proposed scheme will be 54, the same as reported in the Original ES. This will not materially change the negligible, not significant effect.

Spending of Additional Population

5.1.28 The slight increase in population in the S73 scheme (particularly as they are likely to be of working ages) will slightly increase local spending and benefit the local economy, however this will not materially change the minor beneficial effect reported in the Original ES.

Increased Access to Local Retail and Eateries

5.1.29 The S73 changes will not affect the non-residential uses and therefore the effect remains as per the Original ES.

Updated Mitigation and Residual Effects

5.1.30 Based upon the minor design changes in the S73 scheme, this assessment has demonstrated that the is one change in the residual effects reported in the Original ES and no changes in associated mitigation.

5.1.31 This is as a result of the substantial reduction in children living at the site, mainly because of a calculation error in the Original ES. This reduces the impact upon education provision (primary and secondary schools) from major-moderate adverse to minor adverse, and thereby removes a potentially significant effect.

CHAPTER 6:

UPDATED RESIDUAL EFFECTS AND CONCLUSIONS

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6.0 UPDATED RESIDUAL EFFECTS AND CONCLUSIONS

6.1.1 This chapter summarises how the S73 changes have been demonstrated to affect the assessment of environmental and socio-economic effects assessed in the Original ES and its appendices and annexes. It also provides a clear conclusion as to whether there will be any new significant effects resulting from the proposed S73 changes.

Updates to Original ES Residual Effects

6.1.2 Table 6.1 lists the assessment chapters in the Original ES and highlights any effects that would be materially different resulting from the S73 changes.

Table 6.1 Material Changes to Residual Effects from the S73 Changes

Original ES Chapter	Description of Material Change in Assessment	Original ES Effect	ES Addendum Effect
Chapter 6: Air Quality	None – topic scoped out of reassessment	n/a	n/a
Chapter 7: Archaeology	None – topic scoped out of reassessment	n/a	n/a
Chapter 8: Townscape, Visual Effects and Built Heritage	None – ESA Chapter 4 considers the S73 changes and confirms there will be no material changes to the assessment or updated residual effects.	n/a	n/a
Chapter 9: Ecology	None – topic scoped out of reassessment	n/a	n/a
Chapter 10: Socio-economics	The population of the S73 scheme s calculated to result in an increase from 1,291 to 1,320 new residents. This minor increase would not have a material effect on any associated topics. The increase in one-bed and two-bed units and decrease in three-bed units would lead to proportionally a similar amount of children living at the site. That combined with a calculation error in the Original ES means	Effect on education and childcare: Major-moderate adverse	Effect on education and childcare: Minor adverse

Original ES Chapter	Description of Material Change in Assessment	Original ES Effect	ES Addendum Effect
	that there will be a substantially reduced effect upon education and childcare provision.		

6.1.3 As can be seen in Table 6.1 the S73 changes do not result in any material changes to the assessments provided in the Original ES, other than a substantial lessening of effects associated with provision of education and childcare. These would have been mitigatable in any case, for instance through Section 106 contributions.

6.1.4 Updated addendum reports are also provided for:

- Acoustics;
- Daylight, sunlight and overshadowing;
- Wind microclimate.

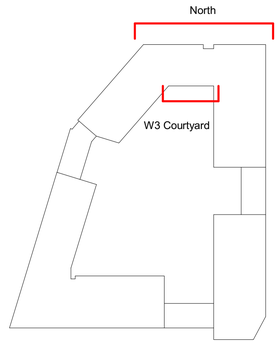
6.1.5 These conclude that the S73 changes will not result in any material changes to the effects considered under the Original scheme.

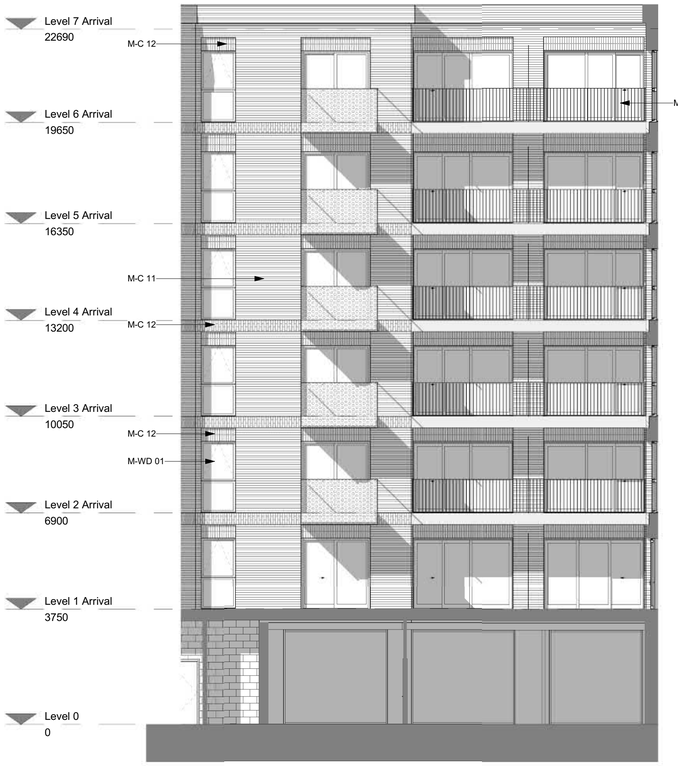
APPENDIX A:
COMPARISON S73 DRAWINGS

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Materials Legend

M-BA 01	PPC Metal balustrade typical; 50 x 10mm flats
M-BA 03	PPC Metal balustrade juliet
M-C 04	Brick / mortar colour B (Medium)
M-C 05	Brick / mortar colour B soldier course (Medium)
M-C 11	Brick / mortar colour D (Red)
M-C 12	Brick / Mortar colour D soldier course (Red)
M-C 16	Metal panel cladding colour A (Dark)
M-C 17	Metal panel cladding colour B (Gold)
M-C 26	Brick / glazed colour A (Dark)
M-WD 01	Dark grey coloured frame glazed window / door assembly
M-WD 03	Shopfront curtain wall assembly
M-WD 06	PPC Metal Louvre doors





West Block W2 & W3 Courtyard South West Elevation
1 : 100



West Block North Elevation
1 : 100

0m 2m 4m 6m 8m

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Date	Jan 2017
Scale @ A1	1:100

Kenavon Drive

West Block North Elevation

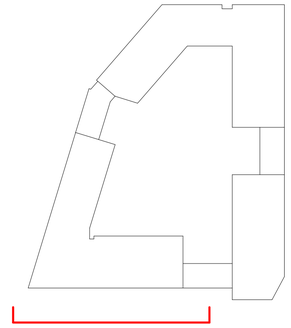
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REV A

FOR PLANNING

PRP

Materials Legend

M-C 07	Brick / mortar colour C (Light)
M-C 09	Brick / mortar colour C alternating 25mm projecting (Light)
M-C 10	Brick / mortar colour C recessed band single course (Light)
M-C 17	Metal panel cladding colour B (Gold)
M-WD 09	Gold coloured frame glazed window / door assembly





0m 2m 4m 6m 8m

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A	11/03/19	Issued for S73 Coordination
B	29/03/19	Issued for S73 application
C	25/10/19	Issued for S73 Re-submission

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MC	RS
AMC	RS

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West Block South Elevation 1

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REV C

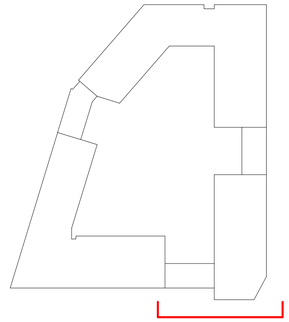
FOR PLANNING

PRP



Materials Legend

M-BA 01	PPC Metal balustrade typical; 50 x 10mm flats
M-BA 03	PPC Metal balustrade juliet
M-C 01	Brick / mortar colour A (Dark)
M-C 03	Brick / mortar colour A soldier course (Dark)
M-C 07	Brick / mortar colour C (Light)
M-C 10	Brick / mortar colour C recessed band single course (Light)
M-C 14	Precast concrete band course
M-C 16	Metal panel cladding colour A (Dark)
M-C 17	Metal panel cladding colour B (Gold)
M-WD 01	Dark grey coloured frame glazed window / door assembly
M-WD 03	Shopfront curtain wall assembly



0m 2m 4m 6m 8m

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Scale @ A1	100

Kenavon Drive

West Block South Elevation 2

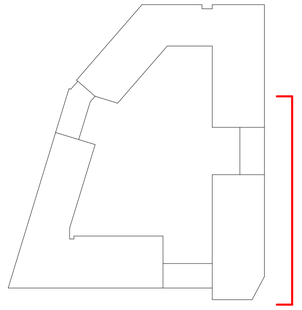
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REV A

FOR PLANNING

PRP

Materials Legend

M-BA 03	PPC Metal balustrade juliet
M-C 01	Brick / mortar colour A (Dark)
M-C 03	Brick / mortar colour A soldier course (Dark)
M-C 04	Brick / mortar colour B (Medium)
M-C 05	Brick / mortar colour B soldier course (Medium)
M-C 11	Brick / mortar colour D (Red)
M-C 14	Precast concrete band course
M-C 16	Metal panel cladding colour A (Dark)
M-C 17	Metal panel cladding colour B (Gold)
M-WD 01	Dark grey coloured frame glazed window / door assembly
M-WD 03	Shopfront curtain wall assembly





0m 2m 4m 6m 8m

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Drawn	KR
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Date	Jan 2017
Scale @ A1	100

Kenavon Drive

West Block East Elevation 1

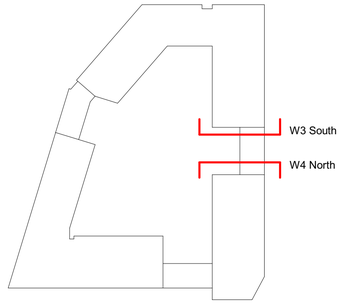
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REV A

FOR PLANNING

PRP

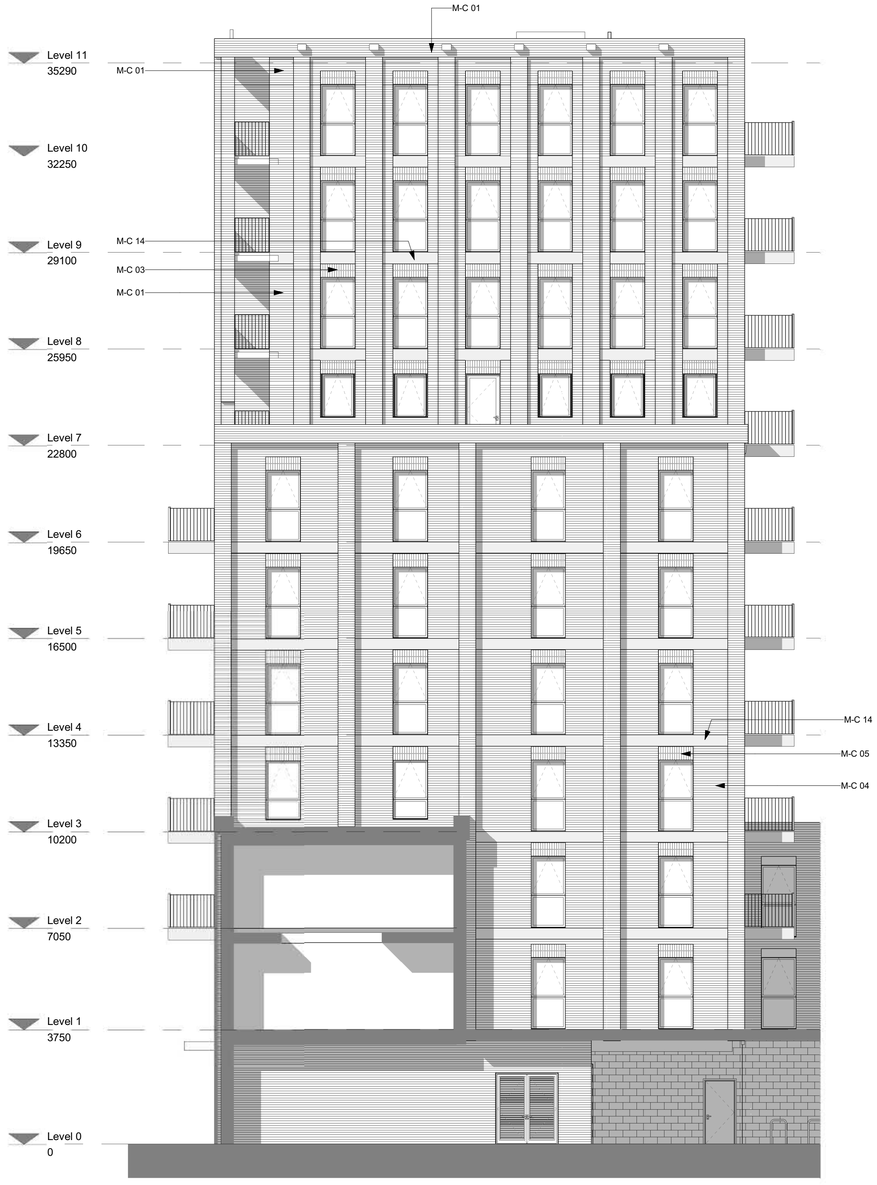
Materials Legend

M-C 01	Brick / mortar colour A (Dark)
M-C 03	Brick / mortar colour A soldier course (Dark)
M-C 04	Brick / mortar colour B (Medium)
M-C 05	Brick / mortar colour B soldier course (Medium)
M-C 14	Precast concrete band course
M-WD 01	Dark grey coloured frame glazed window / door assembly





West Block W3 Courtyard South Elevation
1 : 100



West Block W4 Courtyard North
1 : 100

0m 2m 4m 6m 8m

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West Block East Wing Ends

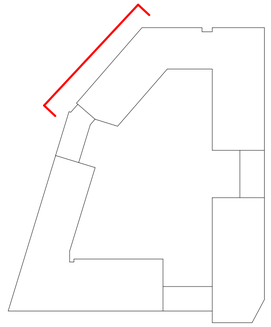
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REV A

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PRP

Materials Legend

M-C 04	Brick / mortar colour B (Medium)
M-C 11	Brick / mortar colour D (Red)
M-C 12	Brick / Mortar colour D soldier course (Red)
M-WD 06	PPC Metal Louvre doors





0m 2m 4m 6m 8m

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West Block North West Elevation

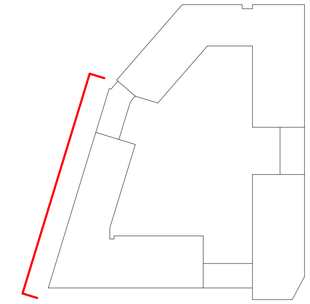
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REV A

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PRP

Materials Legend

M-C 01	Brick / mortar colour A (Dark)
M-C 03	Brick / mortar colour A soldier course (Dark)
M-C 07	Brick / mortar colour C (Light)
M-C 09	Brick / mortar colour C alternating 25mm projecting (Light)
M-C 10	Brick / mortar colour C recessed band single course (Light)
M-C 11	Brick / mortar colour D (Red)
M-C 12	Brick / Mortar colour D soldier course (Red)
M-C 16	Metal panel cladding colour A (Dark)
M-C 17	Metal panel cladding colour B (Gold)
M-WD 09	Gold coloured frame glazed window / door assembly





0m 2m 4m 6m 8m

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Scale @ A1	1:100

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West Block South West Elevation

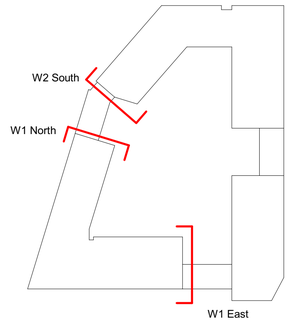
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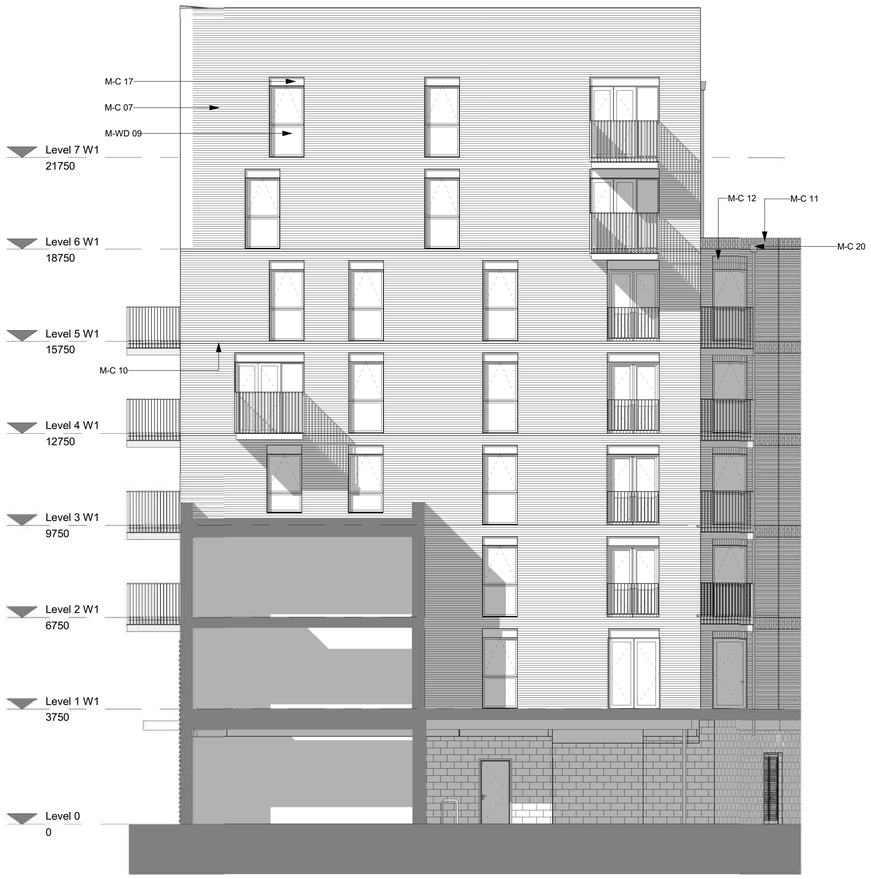
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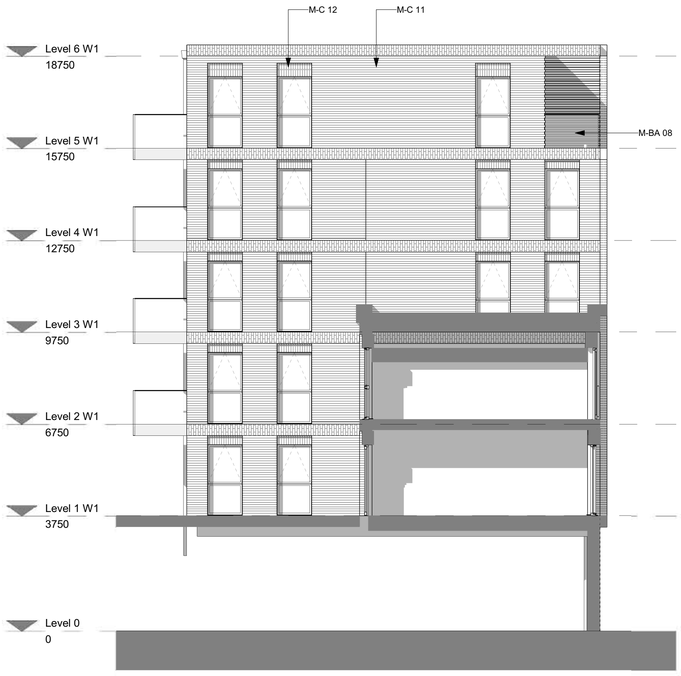
Materials Legend

M-BA 08	Glass juliet balustrade
M-C 07	Brick / mortar colour C (Light)
M-C 10	Brick / mortar colour C recessed band single course (Light)
M-C 11	Brick / mortar colour D (Red)
M-C 12	Brick / Mortar colour D soldier course (Red)
M-C 17	Metal panel cladding colour B (Gold)
M-C 20	PPC Rainwater goods
M-WD 09	Gold coloured frame glazed window / door assembly

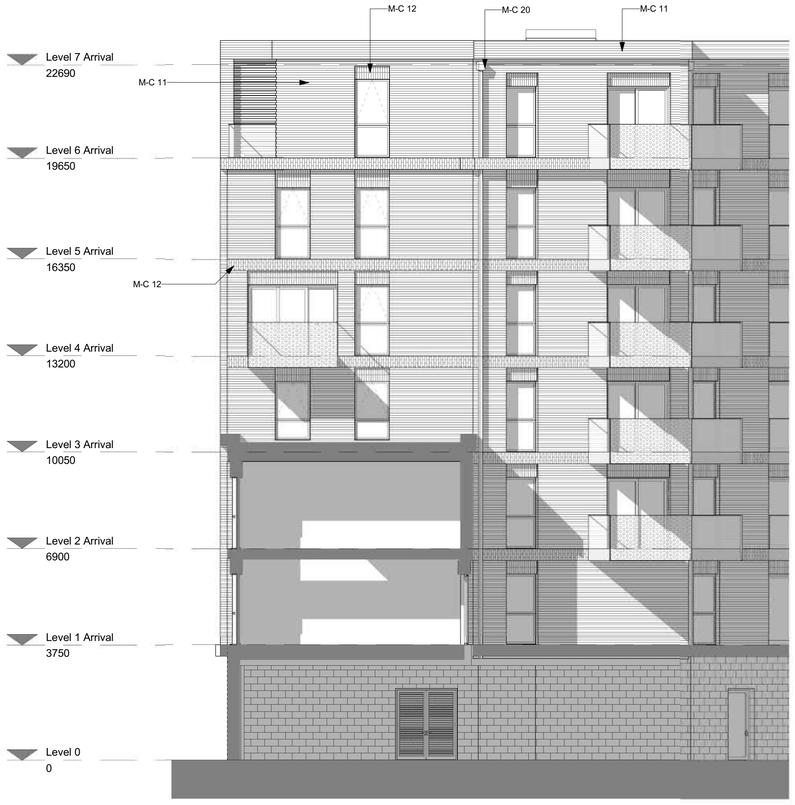




West Block W1 Courtyard East Elevation
1 : 100



West Block W1 Courtyard North Elevation
1 : 100



West Block W2 Courtyard South West Elevation A
1 : 100

0m 2m 4m 6m 8m

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Scale @ A1	1:100

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West Block West & South Wing Ends

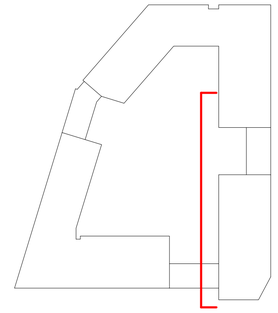
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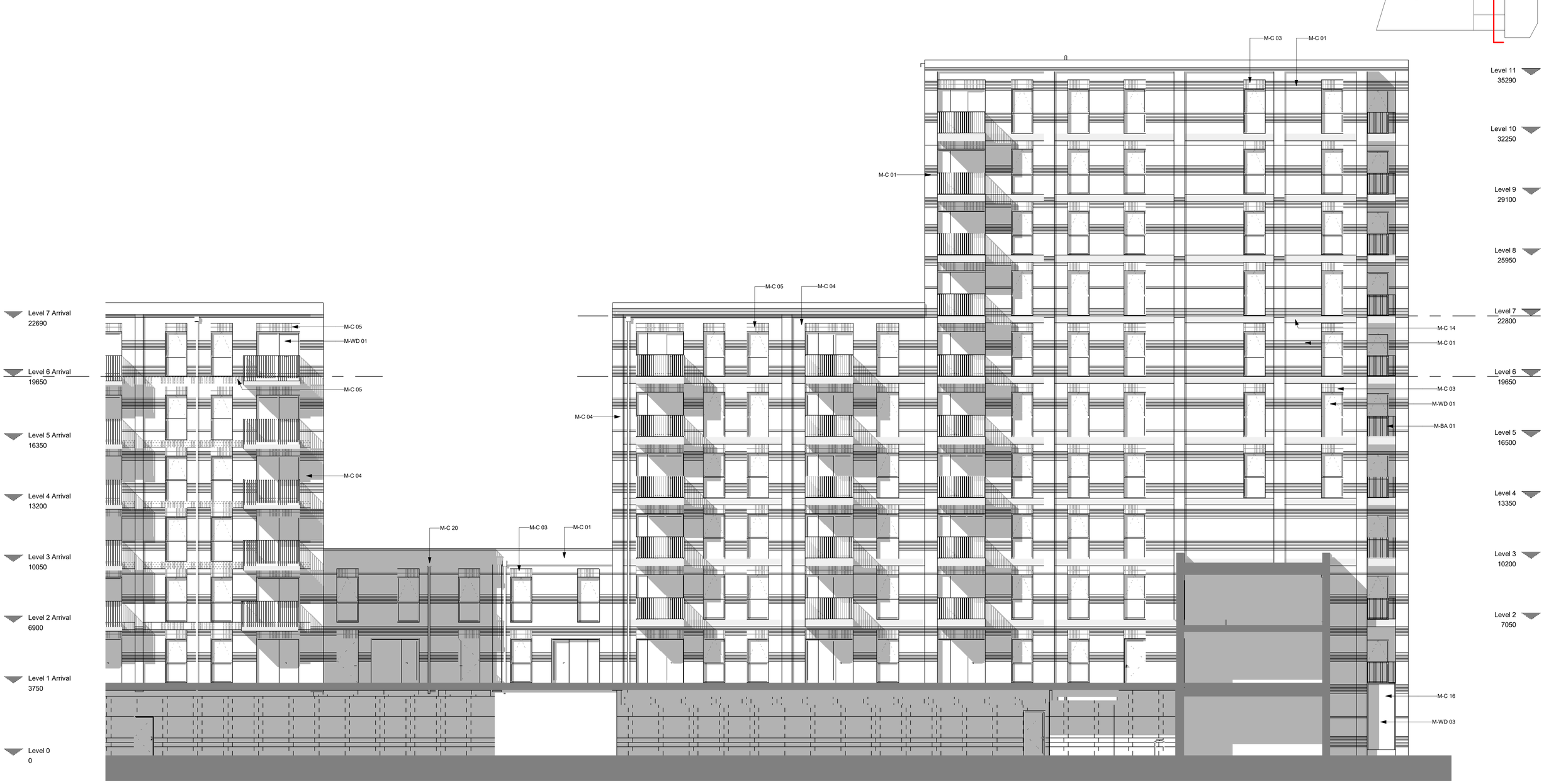
FOR PLANNING

PRP

Materials Legend

M-BA 01	PPC Metal balustrade typical; 50 x 10mm flats
M-C 01	Brick / mortar colour A (Dark)
M-C 03	Brick / mortar colour A soldier course (Dark)
M-C 04	Brick / mortar colour B (Medium)
M-C 05	Brick / mortar colour B soldier course (Medium)
M-C 14	Precast concrete band course
M-C 16	Metal panel cladding colour A (Dark)
M-C 20	PPC Rainwater goods
M-WD 01	Dark grey coloured frame glazed window / door assembly
M-WD 03	Shopfront curtain wall assembly





0m 2m 4m 6m 8m

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Date	Jan 2017
Scale @ A1	1:100

Kenavon Drive

West Block Courtyard West Elevation 1

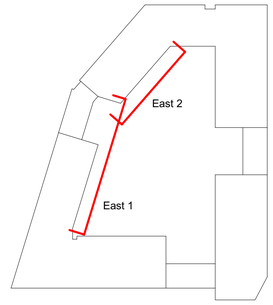
AA5990-2208
REV A

FOR PLANNING

PRP

Materials Legend

M-BA 01	PPC Metal balustrade typical; 50 x 10mm flats
M-BA 10	Precast concrete balcony fascia
M-C 01	Brick / mortar colour A (Dark)
M-C 03	Brick / mortar colour A soldier course (Dark)
M-C 11	Brick / mortar colour D (Red)
M-C 12	Brick / Mortar colour D soldier course (Red)
M-C 20	PPC Rainwater goods





West Block Courtyard East Elevation 1
1 : 100



West Block Courtyard East Elevation 2
1 : 100

0m 2m 4m 6m 8m

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Rev	Date	Description
-	22/03/17	For submission
A	25/10/19	Issued for S73 Re-submission

Dwn	Ckd
FR	CS
AMC	RS

Drawn	KR
Checked	CS
Date	Jan 2017
Scale @ A1	1:100

Kenavon Drive

West block Courtyard East Elevation

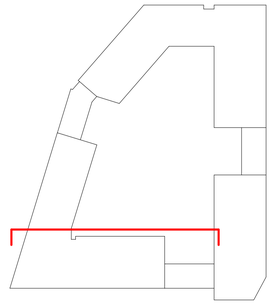
AA5990-2209
REV A

FOR PLANNING

PRP

Materials Legend

M-C 07	Brick / mortar colour C (Light)
M-C 10	Brick / mortar colour C recessed band single course (Light)
M-C 17	Metal panel cladding colour B (Gold)
M-C 20	PPC Rainwater goods
M-WD 09	Gold coloured frame glazed window / door assembly





0m 2m 4m 6m 8m

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Rev	Date	Description
-	22/03/17	For submission
A	25/10/19	Issued for S73 Re-submission

Dwn	Ckd
FR	CS
AMC	RS

Drawn	KR
Checked	CS
Date	Jan 2017
Scale @ A1	1:100

Kenavon Drive

West Block Courtyard North Elevation

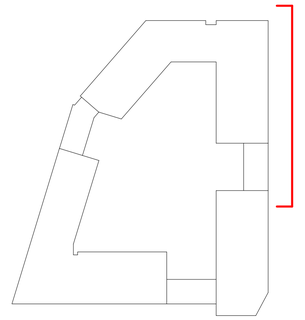
AA5990-2210
REV A

FOR PLANNING

PRP

Materials Legend

M-BA 03	PPC Metal balustrade juliet
M-C 01	Brick / mortar colour A (Dark)
M-C 03	Brick / mortar colour A soldier course (Dark)
M-C 04	Brick / mortar colour B (Medium)
M-C 05	Brick / mortar colour B soldier course (Medium)
M-C 16	Metal panel cladding colour A (Dark)
M-C 17	Metal panel cladding colour B (Gold)
M-WD 03	Shopfront curtain wall assembly
M-WD 06	PPC Metal Louvre doors





0m 2m 4m 6m 8m

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Rev	Date	Description
-	22/03/17	For submission
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Dwn	Ckd
FR	CS
AMC	RS

Drawn	KR
Checked	CS
Date	Jan 2017
Scale @ A1	1:100

Kenavon Drive

West Block East Elevation 2

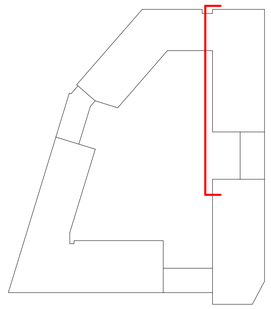
AA5990-2211
REV A

FOR PLANNING

PRP

Materials Legend

M-C 01	Brick / mortar colour A (Dark)
M-C 03	Brick / mortar colour A soldier course (Dark)
M-C 04	Brick / mortar colour B (Medium)
M-C 05	Brick / mortar colour B soldier course (Medium)
M-C 20	PPC Rainwater goods
M-WD 01	Dark grey coloured frame glazed window / door assembly





0m 2m 4m 6m 8m

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Rev	Date	Description
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Dwn	Ckd
FR	CS
AMC	RS

Drawn	KR
Checked	CS
Date	Jan 2017
Scale @ A1	1:100

Kenavon Drive

West Block Courtyard West Elevation 2

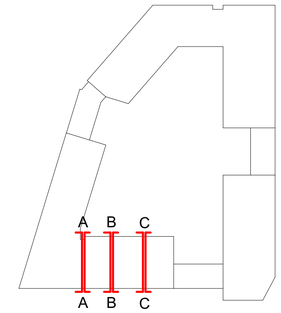
AA5990-2212
REV A

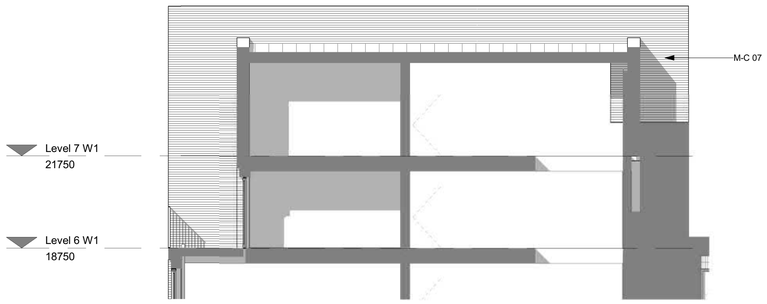
FOR PLANNING

PRP

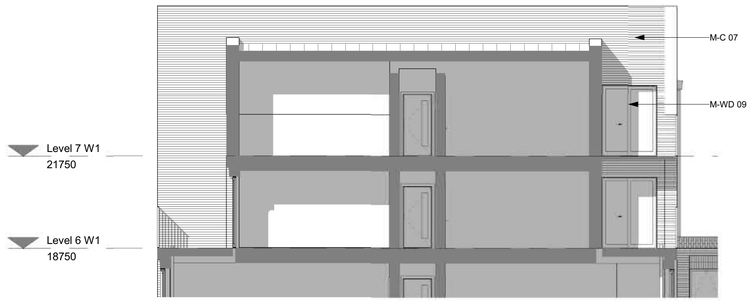
Materials Legend

M-C 07	Brick / mortar colour C (Light)
M-C 12	Brick / Mortar colour D soldier course (Red)
M-C 17	Metal panel cladding colour B (Gold)
M-WD 09	Gold coloured frame glazed window / door assembly

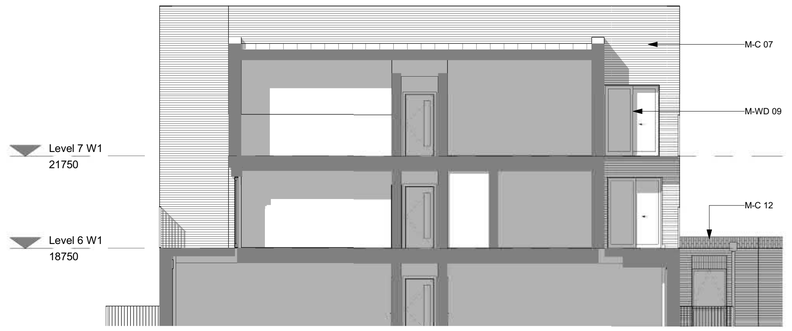




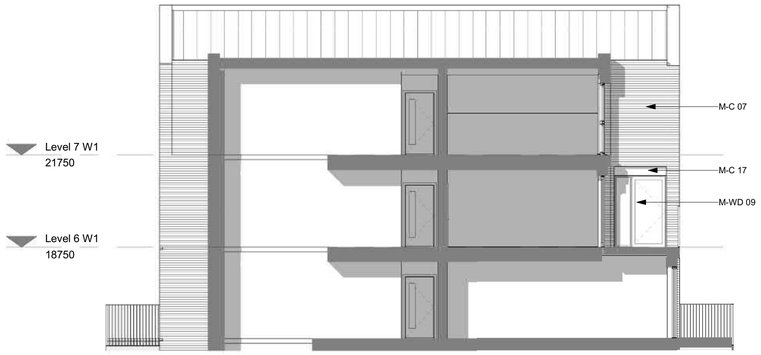
W1 Internal Elevation East A
1 : 100



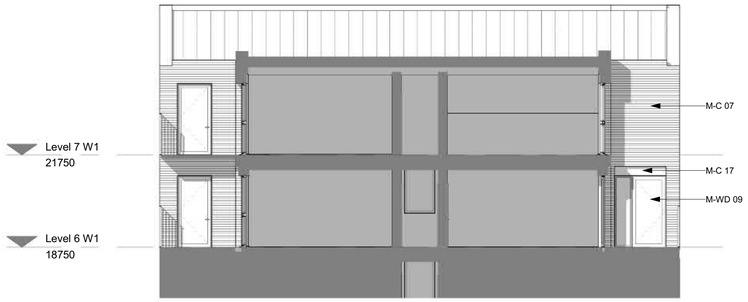
W1 Internal Elevation East B
1 : 100



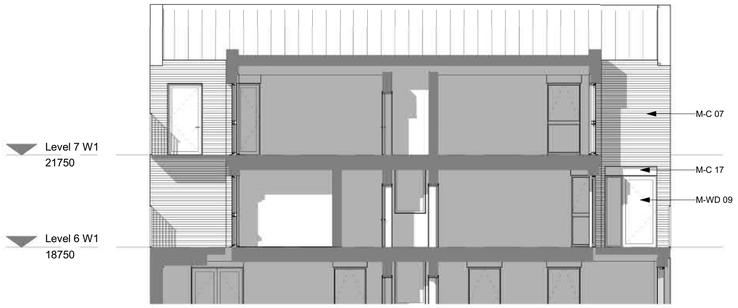
W1 Internal Elevation East C
1 : 100



W1 Internal Elevation West A
1 : 100



W1 Internal Elevation West B
1 : 100



W1 Internal Elevation West C
1 : 100

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Rev	Date	Description
-	12/04/17	Post submission comments
A	25/10/19	Issued for S73 Re-submission

Dwn	Ckd
FR	CS
AMC	RS

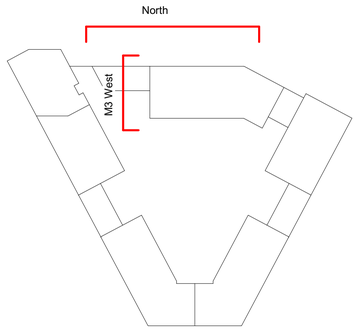
Drawn	Author
Checked	Checker
Date	04/12/17
Scale @ A1	As indicated

Kenavon Drive

West Block - Terraces between top floor flats elevations

AA5990-2213
REV A

PRP

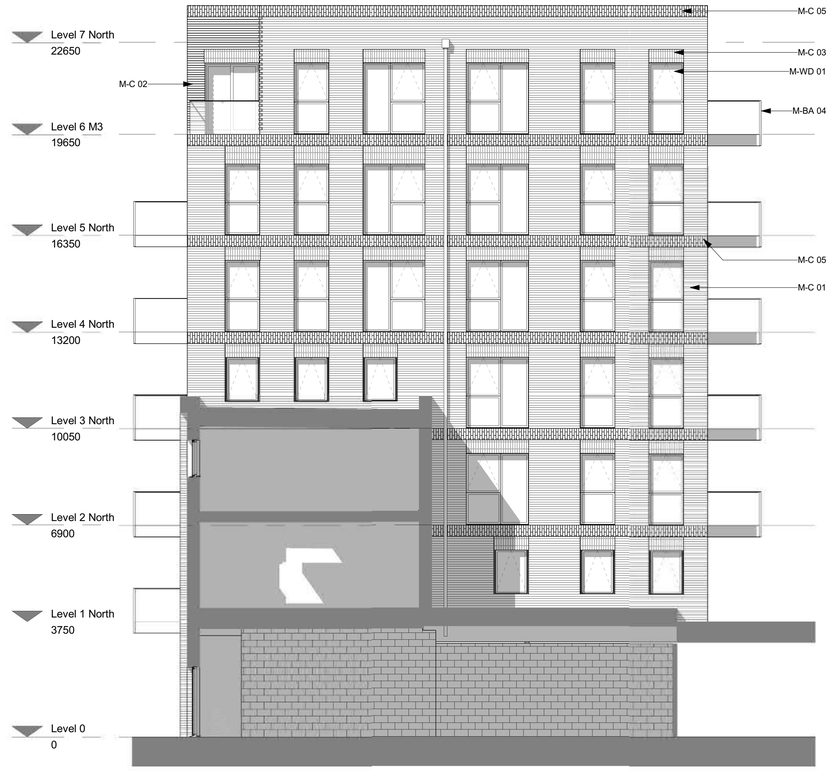


Materials Legend

M-BA 04	PPC Perforated metal balustrade pattern: diaper
M-BA 05	Cantilevered glass balustrade to inset balcony
M-C 01	Brick / mortar colour A (Dark)
M-C 02	Brick / mortar colour A alternating 25mm projecting (Dark)
M-C 03	Brick / mortar colour A soldier course (Dark)
M-C 05	Brick / mortar colour B soldier course (Medium)
M-C 27	Brick / glazed colour B (Red)
M-WD 01	Dark grey coloured frame glazed window / door assembly
M-WD 02	Dark grey coloured frame solid timber door assembly



Middle Block North Elevation
1 : 100



Middle Block M3 Courtyard West Elevation
1 : 100

0m 2m 4m 6m 8m

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Rev	Date	Description
	27/01/17	First Issue
-	22/03/17	For submission
A	25/10/19	Issued for S73 Re-submission

Dwn	Ckd
FR	CS
FR	CS
AMC	RS

Drawn	GS
Checked	CS
Date	Jan 2017
Scale @ A1	100

Kenavon Drive

Middle Block North Elevation

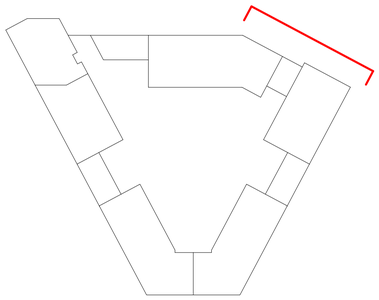
AA5990-2220
REV A

FOR PLANNING

PRP

Materials Legend

M-C 01	Brick / mortar colour A (Dark)
M-C 02	Brick / mortar colour A alternating 25mm projecting (Dark)
M-C 03	Brick / mortar colour A soldier course (Dark)
M-C 04	Brick / mortar colour B (Medium)
M-C 05	Brick / mortar colour B soldier course (Medium)
M-C 16	Metal panel cladding colour A (Dark)
M-WD 01	Dark grey coloured frame glazed window / door assembly
M-WD 02	Dark grey coloured frame solid timber door assembly
M-WD 06	PPC Metal Louvre doors





0m 2m 4m 6m 8m

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-	27/01/17	First Issue
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A	25/10/19	Issued for S73 Re-submission

Dwn	Ckd
FR	CS
FR	CS
AMC	RS

Drawn	GS
Checked	CS
Date	Jan 2017
Scale @ A1	100

Kenavon Drive

Middle Block North East Elevation

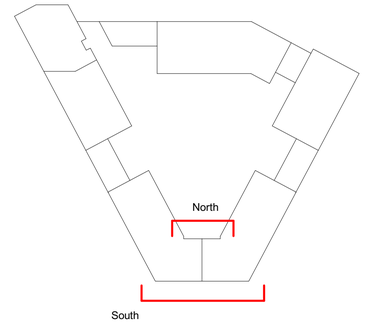
AA5990-2221
REV A

FOR PLANNING

PRP

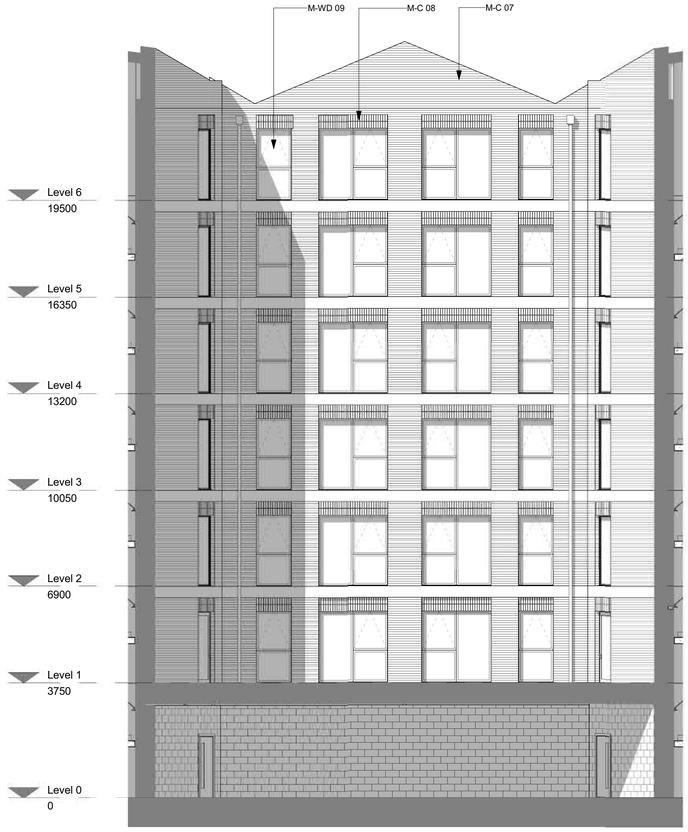
Materials Legend

M-BA 03	PPC Metal balustrade juliet
M-BA 05	Cantilevered glass balustrade to inset balcony
M-BA 07	Cantilevered glass balustrade with fritted bands to match M-C 09
M-BA 10	Precast concrete balcony fascia
M-C 07	Brick / mortar colour C (Light)
M-C 08	Brick / Mortar colour C soldier course (Light)
M-C 09	Brick / mortar colour C alternating 25mm projecting (Light)
M-C 14	Precast concrete band course
M-C 22	Entrance canopy PCC metal cladding
M-WD 08	Block entrance door/window assembly
M-WD 09	Gold coloured frame glazed window / door assembly





Middle Block South Elevation
1 : 100



Middle Block Courtyard M1 North Elevation
1 : 100

0m 2m 4m 6m 8m

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Rev	Date	Description
-	27/01/17	First Issue
A	22/03/17	For submission
B	12/04/17	Post submission comments
C	25/10/19	Issued for S73 Re-submission

Dwn	Ckd
FR	CS
FR	CS
FR	CS
AMC	RS

Drawn	GS
Checked	CS
Date	Jan 2017
Scale @ A1	100

Kenavon Drive

Middle Block South & North Elevations

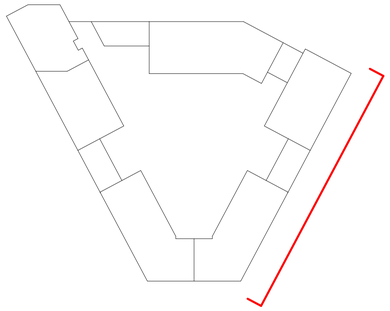
AA5990-2222
REV C

FOR PLANNING

PRP

Materials Legend

M-BA 03	PPC Metal balustrade juliet
M-BA 07	Cantilevered glass balustrade with fritted bands to match M-C 09
M-C 01	Brick / mortar colour A (Dark)
M-C 03	Brick / mortar colour A soldier course (Dark)
M-C 04	Brick / mortar colour B (Medium)
M-C 05	Brick / mortar colour B soldier course (Medium)
M-C 07	Brick / mortar colour C (Light)
M-C 08	Brick / Mortar colour C soldier course (Light)
M-C 09	Brick / mortar colour C alternating 25mm projecting (Light)
M-C 14	Precast concrete band course
M-C 16	Metal panel cladding colour A (Dark)
M-C 17	Metal panel cladding colour B (Gold)
M-WD 01	Dark grey coloured frame glazed window / door assembly
M-WD 08	Block entrance door/window assembly
M-WD 09	Gold coloured frame glazed window / door assembly





0m 2m 4m 6m 8m

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Dwn	Ckd
FR	CS
FR	CS
AMC	RS

Drawn	GS
Checked	CS
Date	Jan 2017
Scale @ A1	100

Kenavon Drive

Middle Block East Elevation

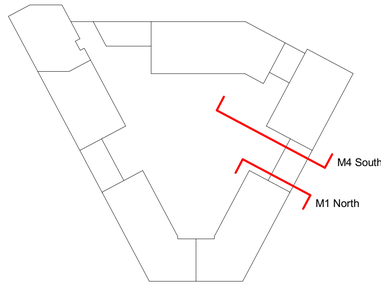
AA5990-2223
REV A

FOR PLANNING

PRP

Materials Legend

M-BA 01	PPC Metal balustrade typical; 50 x 10mm flats
M-BA 02	PPC Metal balustrade front, balusters turned 45 deg
M-BA 07	Cantilevered glass balustrade with fritted bands to match M-C 09
M-BA 10	Precast concrete balcony fascia
M-C 01	Brick / mortar colour A (Dark)
M-C 03	Brick / mortar colour A soldier course (Dark)
M-C 04	Brick / mortar colour B (Medium)
M-C 05	Brick / mortar colour B soldier course (Medium)
M-C 07	Brick / mortar colour C (Light)
M-C 08	Brick / Mortar colour C soldier course (Light)
M-C 09	Brick / mortar colour C alternating 25mm projecting (Light)
M-C 14	Precast concrete band course
M-C 20	PPC Rainwater goods
M-WD 01	Dark grey coloured frame glazed window / door assembly
M-WD 09	Gold coloured frame glazed window / door assembly





Middle Block M1 East Wing Courtyard North Elevation
1 : 100



Middel Block M4 East Wing Courtyard South Elevation
1 : 100

0m 2m 4m 6m 8m

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Rev	Date	Description
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Dwn	Ckd
FR	CS
FR	CS
AMC	RS

Drawn	GS
Checked	CS
Date	Jan 2017
Scale @ A1	100

Kenavon Drive

Middle Block East Wing Ends

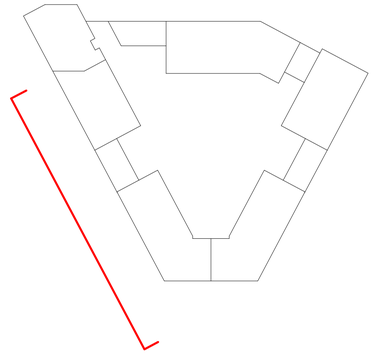
AA5990-2224
REV A

FOR PLANNING

PRP

Materials Legend

M-BA 02	PPC Metal balustrade front, balusters turned 45 deg
M-BA 07	Cantilevered glass balustrade with fritted bands to match M-C 09
M-BA 09	Fair faced pre-cast concrete fascia & soffit to projected balcony
M-C 01	Brick / mortar colour A (Dark)
M-C 03	Brick / mortar colour A soldier course (Dark)
M-C 04	Brick / mortar colour B (Medium)
M-C 05	Brick / mortar colour B soldier course (Medium)
M-C 07	Brick / mortar colour C (Light)
M-C 08	Brick / Mortar colour C soldier course (Light)
M-C 09	Brick / mortar colour C alternating 25mm projecting (Light)
M-C 14	Precast concrete band course
M-C 22	Entrance canopy PCC metal cladding
M-WD 01	Dark grey coloured frame glazed window / door assembly
M-WD 08	Block entrance door/window assembly





0m 2m 4m 6m 8m

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Rev	Date	Description
-	22/03/17	For submission
A	11/03/19	Issued for S73 Coordination
B	29/03/19	Issued for S73 application
C	07/05/19	Levels added. Re-issued for S73
D	25/10/19	Issued for S73 Re-submission

Dwn	Ckd
FR	CS
MC	RS
MC	RS
AMC	RS

Drawn	GS
Checked	CS
Date	Jan 2017
Scale @ A1	100

Kenavon Drive

Middle Block West Elevation

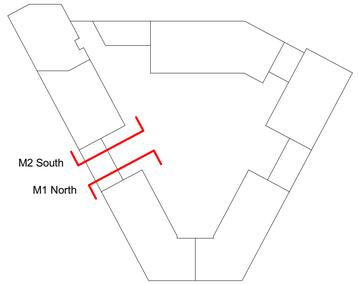
AA5990-2225
REV D

FOR PLANNING

PRP

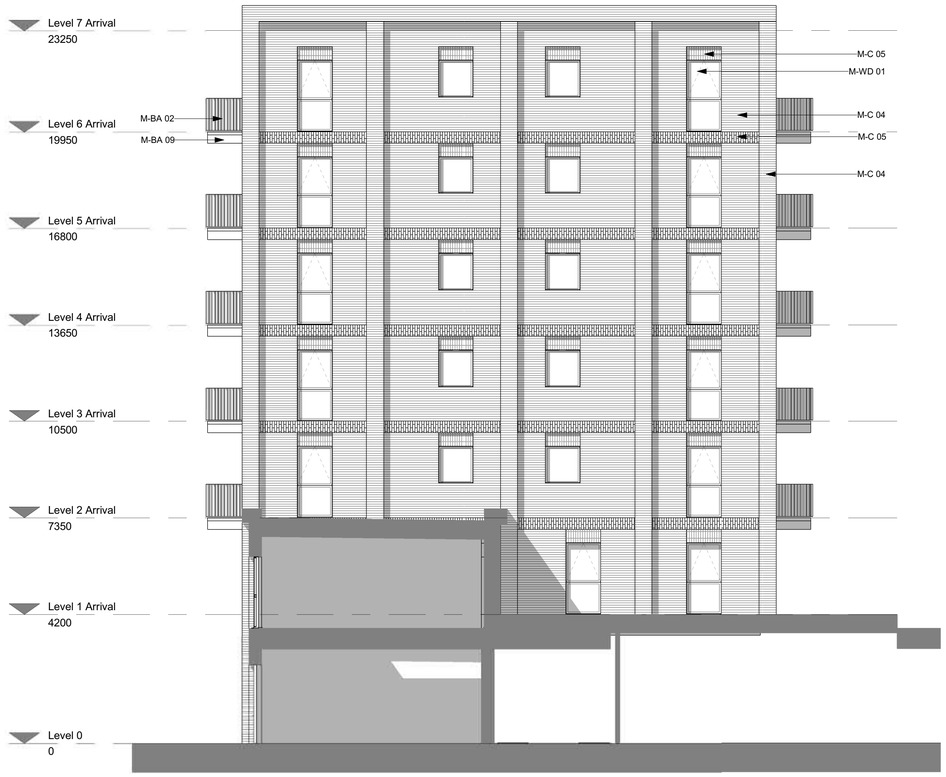
Materials Legend

M-BA 02	PPC Metal balustrade front, balusters turned 45 deg
M-BA 09	Fair faced pre-cast concrete fascia & soffit to projected balcony
M-C 04	Brick / mortar colour B (Medium)
M-C 05	Brick / mortar colour B soldier course (Medium)
M-C 07	Brick / mortar colour C (Light)
M-C 08	Brick / Mortar colour C soldier course (Light)
M-C 09	Brick / mortar colour C alternating 25mm projecting (Light)
M-C 14	Precast concrete band course
M-WD 01	Dark grey coloured frame glazed window / door assembly
M-WD 09	Gold coloured frame glazed window / door assembly





Middle Block M1 West Wing Courtyard North Elevation
1 : 100



Middel Block M2 West Wing Courtyard South Elevation
1 : 100

0m 2m 4m 6m 8m

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Rev	Date	Description
-	22/03/17	For submission
A	11/03/19	Issued for S73 Coordination
B	29/03/19	Issued for S73 application
C	07/05/19	Levels added. Re-issued for S73
D	25/10/19	Issued for S73 Re-submission

Dwn	Ckd
FR	CS
MC	RS
MC	RS
AMC	RS

Drawn	GS
Checked	CS
Date	Jan 2017
Scale @ A1	100

Kenavon Drive

Middle Block West Wing Ends

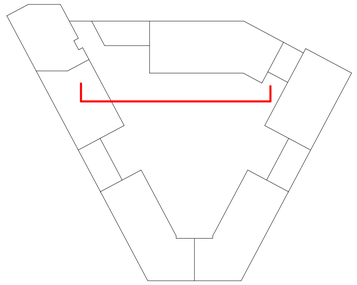
AA5990-2226
REV D

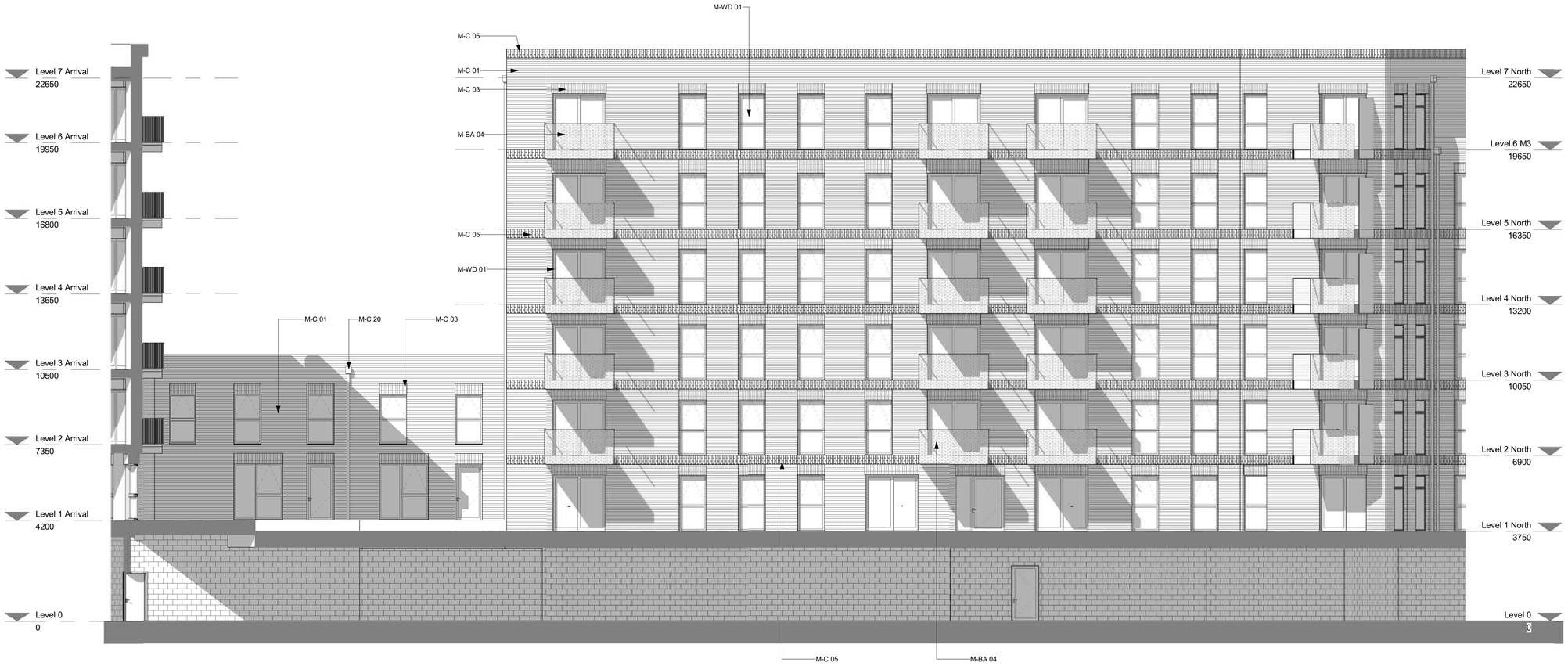
FOR PLANNING

PRP

Materials Legend

M-BA 04	PPC Perforated metal balustrade pattern: diaper
M-C 01	Brick / mortar colour A (Dark)
M-C 03	Brick / mortar colour A soldier course (Dark)
M-C 05	Brick / mortar colour B soldier course (Medium)
M-C 20	PPC Rainwater goods
M-WD 01	Dark grey coloured frame glazed window / door assembly





Middle Block Courtyard South Elevation
1 : 100

0m 2m 4m 6m 8m

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C	25/10/19	Issued for S73 Re-submission

Dwn	Ckd
FR	CS
FR	CS
FR	CS
AMC	RS

Drawn	GS
Checked	CS
Date	Jan 2017
Scale @ A1	100

Kenavon Drive

Middel Block Courtyard South Elevation

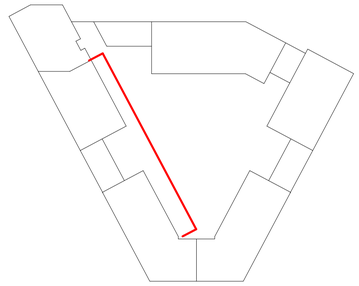
AA5990-2227
REV C

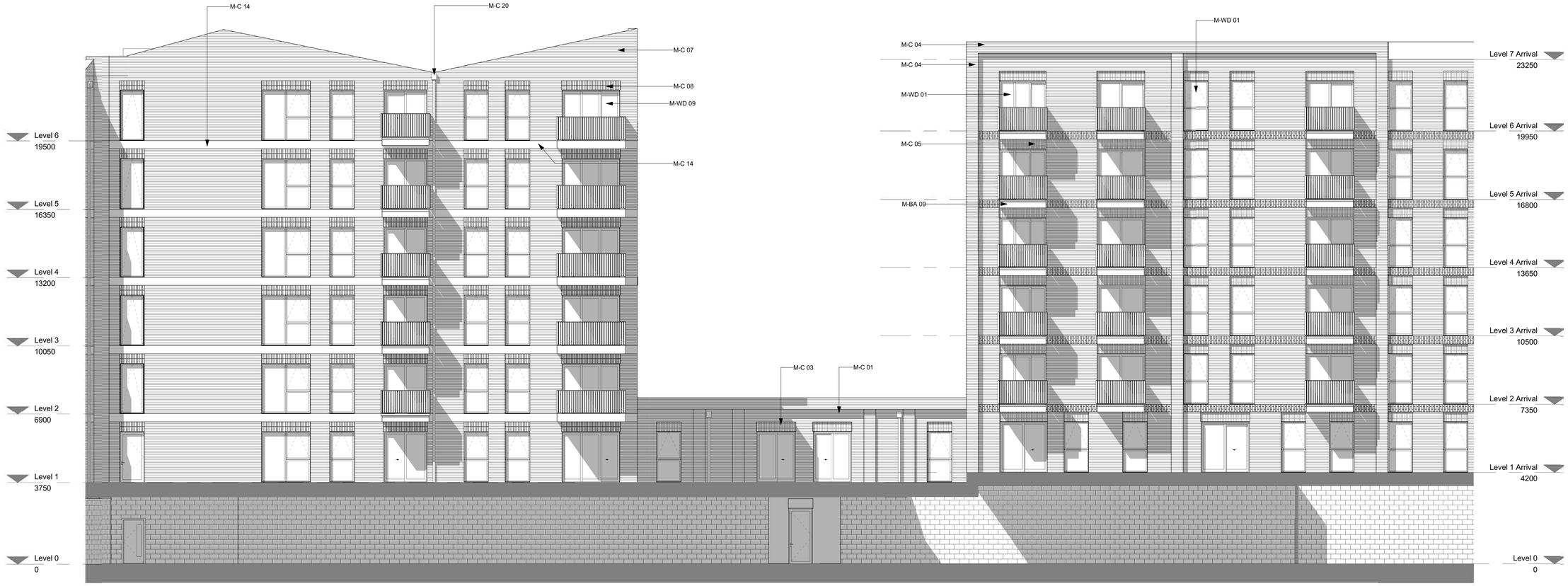
FOR PLANNING

PRP

Materials Legend

M-BA 09	Fair faced pre-cast concrete fascia & soffit to projected balcony
M-C 01	Brick / mortar colour A (Dark)
M-C 03	Brick / mortar colour A soldier course (Dark)
M-C 04	Brick / mortar colour B (Medium)
M-C 05	Brick / mortar colour B soldier course (Medium)
M-C 07	Brick / mortar colour C (Light)
M-C 08	Brick / Mortar colour C soldier course (Light)
M-C 14	Precast concrete band course
M-C 20	PPC Rainwater goods
M-WD 01	Dark grey coloured frame glazed window / door assembly
M-WD 09	Gold coloured frame glazed window / door assembly





0m 2m 4m 6m 8m

CDM REGULATIONS 2015. All current drawings and specifications for the project must be read in conjunction with the Designer's Hazard and Environment Assessment Record. All intellectual property rights reserved.

Rev	Date	Description
A	11/03/19	Issued for S73 Coordination
B	29/03/19	Issued for S73 application
C	07/05/19	Levels added. Re-issued for S73
D	15/05/19	Re-issued for S73 application
E	25/10/19	Issued for S73 Re-submission

Dwn	Ckd
MC	RS
MC	RS
AMC	RS

Drawn	GS
Checked	CS
Date	Jan 2017
Scale @ A1	100

Kenavon Drive

Middle Block Courtyard East Elevation

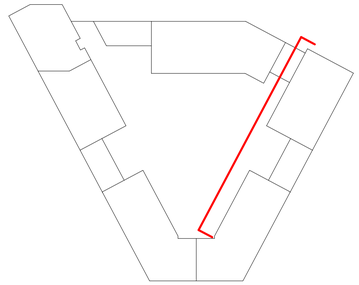
AA5990-2228
REV E

FOR PLANNING

PRP

Materials Legend

M-BA 02	PPC Metal balustrade front, balusters turned 45 deg
M-BA 09	Fair faced pre-cast concrete fascia & soffit to projected balcony
M-BA 10	Precast concrete balcony fascia
M-C 01	Brick / mortar colour A (Dark)
M-C 03	Brick / mortar colour A soldier course (Dark)
M-C 04	Brick / mortar colour B (Medium)
M-C 05	Brick / mortar colour B soldier course (Medium)
M-C 07	Brick / mortar colour C (Light)
M-C 08	Brick / Mortar colour C soldier course (Light)
M-C 14	Precast concrete band course
M-C 20	PPC Rainwater goods
M-WD 01	Dark grey coloured frame glazed window / door assembly





0m 2m 4m 6m 8m

CDM REGULATIONS 2015. All current drawings and specifications for the project must be read in conjunction with the Designer's Hazard and Environment Assessment Record. All intellectual property rights reserved.

Rev	Date	Description
-	27/01/17	First Issue
-	22/03/17	For submission
A	25/10/19	Issued for S73 Re-submission

Dwn	Ckd
FR	CS
FR	CS
AMC	RS

Drawn	GS
Checked	CS
Date	Jan 2017
Scale @ A1	100

Kenavon Drive

Middle Block Courtyard West Elevation

AA5990-2229
REV A

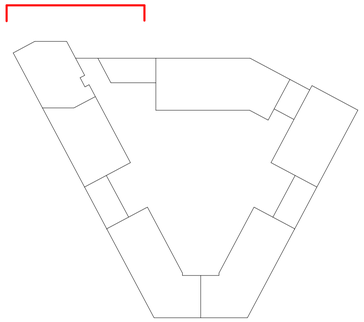
FOR PLANNING

PRP

Materials Legend

M-BA 01	PPC Metal balustrade typical; 50 x 10mm flats
M-BA 05	Cantilevered glass balustrade to inset balcony
M-C 01	Brick / mortar colour A (Dark)
M-C 02	Brick / mortar colour A alternating 25mm projecting (Dark)
M-C 03	Brick / mortar colour A soldier course (Dark)
M-C 05	Brick / mortar colour B soldier course (Medium)
M-C 23	Signage to facing brick with matt pigment finish
M-C 24	Stainless steel clad energy centre flues
M-C 25	Galvanised steel with glass canopy
M-C 28	Brick / mortar colour A (Dark) 15mm reccess
M-WD 01	Dark grey coloured frame glazed window / door assembly
M-WD 05	PPC Metal Louvre panel
M-WD 08	Block entrance door/window assembly

NOTE: The super graphic text shown on the elevations is illustrative only and the actual form, font and wordage is to be agreed with the Local Authority





0m 2m 4m 6m 8m

CDM REGULATIONS 2015. All current drawings and specifications for the project must be read in conjunction with the Designer's Hazard and Environment Assessment Record. All intellectual property rights reserved.

Rev	Date	Description
B	12/04/17	Post submission comments
C	11/03/19	Issued for S73 Coordination
D	29/03/19	Issued for S73 application
E	07/05/19	Levels added. Re-issued for S73
F	25/10/19	Issued for S73 Re-submission

Dwn	Ckd
FR	CS
MC	RS
MC	RS
AMC	RS

Drawn	GS
Checked	CS
Date	Jan 2017
Scale @ A1	As indicated

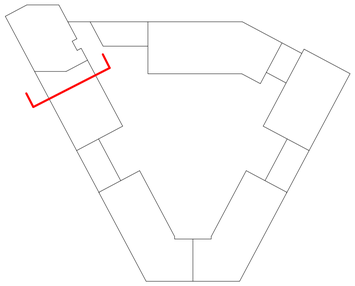
Kenavon Drive

Arrival Space Block North Elevation

AA5990-2230
REV F

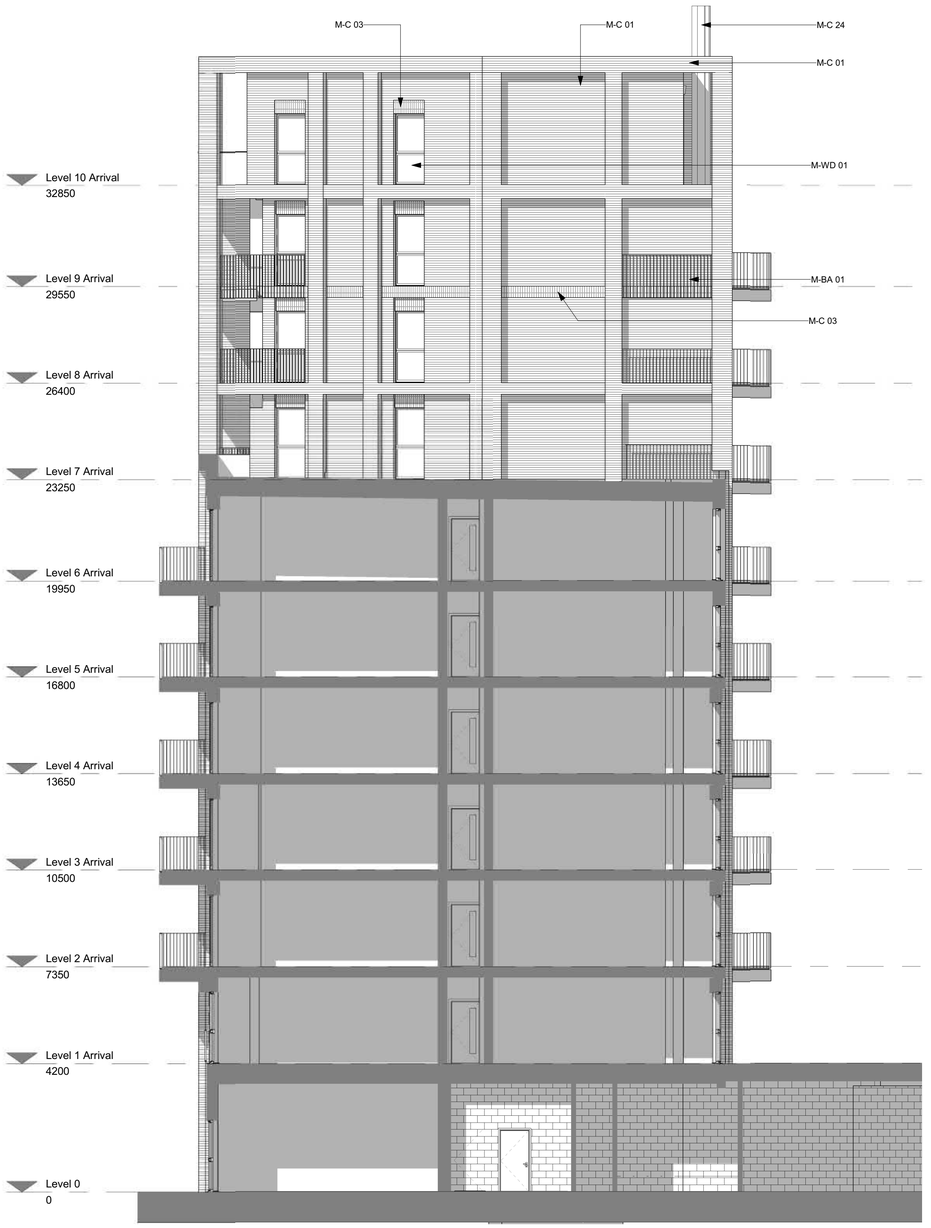
FOR PLANNING

PRP



Materials Legend

M-BA 01	PPC Metal balustrade typical; 50 x 10mm flats
M-C 01	Brick / mortar colour A (Dark)
M-C 03	Brick / mortar colour A soldier course (Dark)
M-C 24	Stainless steel clad energy centre flues
M-WD 01	Dark grey coloured frame glazed window / door assembly



0m 2m 4m 6m 8m

CDM REGULATIONS 2015. All current drawings and specifications for the project must be read in conjunction with the Designer's Hazard and Environment Assessment Record. All intellectual property rights reserved.

Rev	Date	Description
C	11/03/19	Issued for S73 Coordination
D	29/03/19	Issued for S73 application
E	07/05/19	Levels added. Re-issued for S73
F	15/05/19	Re-issued for S73 application
G	25/10/19	Issued for S73 Re-submission

Dwn	Ckd		
MC	RS	Drawn	GS
MC	RS	Checked	CS
		Date	Jan 2017
AMC	RS	Scale @ A1	As indicated

Kenavon Drive

Arrival Space Block South Elevation

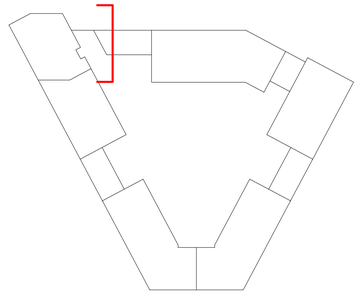
AA5990-2231
REV G

FOR PLANNING

PRP

Materials Legend

M-BA 01	PPC Metal balustrade typical; 50 x 10mm flats
M-BA 02	PPC Metal balustrade front, balusters turned 45 deg
M-BA 05	Cantilevered glass balustrade to inset balcony
M-BA 09	Fair faced pre-cast concrete fascia & soffit to projected balocny
M-C 01	Brick / mortar colour A (Dark)
M-C 03	Brick / mortar colour A soldier course (Dark)
M-C 04	Brick / mortar colour B (Medium)
M-C 05	Brick / mortar colour B soldier course (Medium)
M-C 16	Metal panel cladding colour A (Dark)
M-C 24	Stainless steel clad energy centre flues
M-C 25	Galvanised steel with glass canopy
M-WD 08	Block entrance door/window assembly





0m 2m 4m 6m 8m

CDM REGULATIONS 2015. All current drawings and specifications for the project must be read in conjunction with the Designer's Hazard and Environment Assessment Record. All intellectual property rights reserved.

Rev	Date	Description
C	11/03/19	Issued for S73 Coordination
D	29/03/19	Issued for S73 application
E	07/05/19	Levels added. Re-issued for S73
F	15/05/19	Re-issued for S73 application
G	25/10/19	Issued for S73 Re-submission

Dwn	Ckd
MC	RS
MC	RS
AMC	RS

Drawn	GS
Checked	CS
Date	Jan 2017
Scale @ A1	As indicated

Kenavon Drive

Arrival Space Block East Elevation

AA5990-2232
REV G

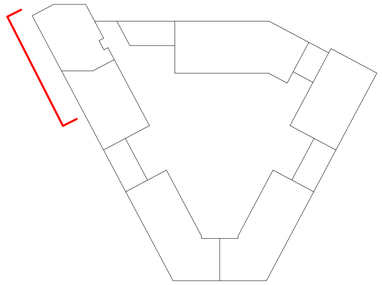
FOR PLANNING

PRP

Materials Legend

M-BA 01	PPC Metal balustrade typical; 50 x 10mm flats
M-BA 02	PPC Metal balustrade front, balusters turned 45 deg
M-BA 03	PPC Metal balustrade juliet
M-BA 05	Cantilevered glass balustrade to inset balcony
M-BA 09	Fair faced pre-cast concrete fascia & soffit to projected balocny
M-C 01	Brick / mortar colour A (Dark)
M-C 03	Brick / mortar colour A soldier course (Dark)
M-C 04	Brick / mortar colour B (Medium)
M-C 05	Brick / mortar colour B soldier course (Medium)
M-C 16	Metal panel cladding colour A (Dark)
M-C 17	Metal panel cladding colour B (Gold)
M-C 23	Signage to facing brick with matt pigment finish
M-C 24	Stainless steel clad energy centre flues
M-WD 01	Dark grey coloured frame glazed window / door assembly
M-WD 08	Block entrance door/window assembly

NOTE: The super graphic text shown on the elevations is illustrative only and the actual form, font and wordage is to be agreed with the Local Authority





0m 2m 4m 6m 8m

CDM REGULATIONS 2015. All current drawings and specifications for the project must be read in conjunction with the Designer's Hazard and Environment Assessment Record. All intellectual property rights reserved.

Rev	Date	Description
B	12/04/17	Post submission comments
C	11/03/19	Issued for S73 Coordination
D	29/03/19	Issued for S73 application
E	07/05/19	Levels added. Re-issued for S73
F	25/10/19	Issued for S73 Re-submission

Dwn	Ckd		
FR	CS	Drawn	GS
MC	RS	Checked	CS
MC	RS	Date	Jan 2017
AMC	RS	Scale @ A1	As indicated

Kenavon Drive

Arrival Space Block West Elevation

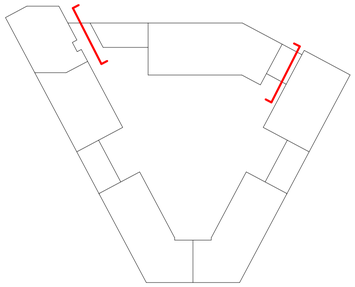
AA5990-2233
REV F

FOR PLANNING

PRP

Materials Legend

M-BA 04	PPC Perforated metal balustrade pattern: diaper
M-BA 06	Cantilevered glass balustrade to side of projected balcony
M-BA 09	Fair faced pre-cast concrete fascia & soffit to projected balcony
M-C 01	Brick / mortar colour A (Dark)
M-C 03	Brick / mortar colour A soldier course (Dark)
M-C 05	Brick / mortar colour B soldier course (Medium)
M-C 20	PPC Rainwater goods





Middle Block Courtyard Elevation Block M3 End West
1 : 100



Middle Block Courtyard Elevation Block M3 East
1 : 100

CDM REGULATIONS 2015. All current drawings and specifications for the project must be read in conjunction with the Designer's Hazard and Environment Assessment Record. All intellectual property rights reserved.

Rev	Date	Description
-	12/04/17	Post submission comments
A	25/10/19	Issued for S73 Re-submission

Dwn	Ckd
FR	CS
AMC	RS

Drawn	FB
Checked	Checker
Date	March 2017
Scale @ A1	As indicated

Kenavon Drive

Middle Block Courtyard Ends

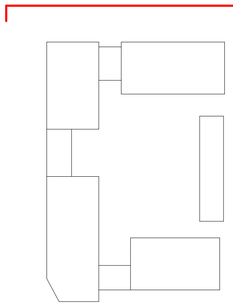
AA5990-2234
REV A

FOR PLANNING

PRP

Materials Legend

M-BA 04	PPC Perforated metal balustrade pattern: diaper
M-BA 05	Cantilevered glass balustrade to inset balcony
M-BA 06	Cantilevered glass balustrade to side of projected balcony
M-BA 10	Precast concrete balcony fascia
M-C 01	Brick / mortar colour A (Dark)
M-C 02	Brick / mortar colour A alternating 25mm projecting (Dark)
M-C 04	Brick / mortar colour B (Medium)
M-C 05	Brick / mortar colour B soldier course (Medium)
M-C 15	Fair faced concrete column
M-C 16	Metal panel cladding colour A (Dark)
M-C 27	Brick / glazed colour B (Red)
M-WD 01	Dark grey coloured frame glazed window / door assembly
M-WD 08	Block entrance door/window assembly





0m 2m 4m 6m 8m

CDM REGULATIONS 2015. All current drawings and specifications for the project must be read in conjunction with the Designer's Hazard and Environment Assessment Record. All intellectual property rights reserved.

Rev	Date	Description
	27/01/17	First issue
	22/03/17	For submission
A	25/10/19	Issued for S73 Re-submission

Dwn	Ckd
FR	CS
FR	CS
FB	RS

Drawn	DB
Checked	CS
Date	Jan 2017
Scale @ A1	100

Kenavon Drive

East Block North Elevation

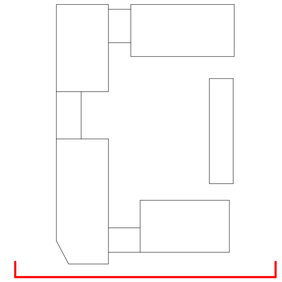
AA5990-2240
REV A

FOR PLANNING

PRP

Materials Legend

M-BA 01	PPC Metal balustrade typical; 50 x 10mm flats
M-BA 03	PPC Metal balustrade juliet
M-BA 10	Precast concrete balcony fascia
M-C 01	Brick / mortar colour A (Dark)
M-C 03	Brick / mortar colour A soldier course (Dark)
M-C 07	Brick / mortar colour C (Light)
M-C 09	Brick / mortar colour C alternating 25mm projecting (Light)
M-C 10	Brick / mortar colour C recessed band single course (Light)
M-C 14	Precast concrete band course
M-C 16	Metal panel cladding colour A (Dark)
M-C 17	Metal panel cladding colour B (Gold)
M-WD 01	Dark grey coloured frame glazed window / door assembly
M-WD 04	Shopfront signage / spandral panel
M-WD 08	Block entrance door/window assembly
M-WD 09	Gold coloured frame glazed window / door assembly





0m 2m 4m 6m 8m

CDM REGULATIONS 2015. All current drawings and specifications for the project must be read in conjunction with the Designer's Hazard and Environment Assessment Record. All intellectual property rights reserved.

Rev	Date	Description
A	11/03/19	Issued for S73 Coordination
B	29/03/19	Issued for S73 application
C	07/05/19	Levels added. Re-issued for S73
D	15/05/19	Re-issued for S73 application
E	25/10/19	Issued for S73 Re-submission

Dwn	Ckd
MC	RS
MC	RS
MC	RS
MC	RS
FB	RS

Drawn	DB
Checked	CS
Date	Jan 2017
Scale @ A1	100

Kenavon Drive

East Block South Elevation

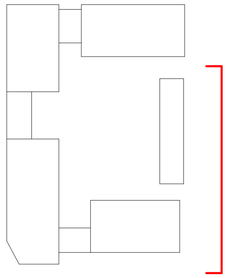
AA5990-2241
REV E

FOR PLANNING

PRP

Materials Legend

M-BA 01	PPC Metal balustrade typical; 50 x 10mm flats
M-BA 10	Precast concrete balcony fascia
M-C 01	Brick / mortar colour A (Dark)
M-C 02	Brick / mortar colour A alternating 25mm projecting (Dark)
M-C 04	Brick / mortar colour B (Medium)
M-C 06	Brick / mortar colour B alternating 25mm projecting (Medium)
M-C 07	Brick / mortar colour C (Light)
M-C 09	Brick / mortar colour C alternating 25mm projecting (Light)
M-C 10	Brick / mortar colour C recessed band single course (Light)
M-C 17	Metal panel cladding colour B (Gold)
M-C 20	PPC Rainwater goods
M-WD 01	Dark grey coloured frame glazed window / door assembly
M-WD 02	Dark grey coloured frame solid timber door assembly
M-WD 06	PPC Metal Louvre doors
M-WD 07	PPC Metal gate
M-WD 09	Gold coloured frame glazed window / door assembly



Key Plan White



0m 2m 4m 6m 8m

CDM REGULATIONS 2015. All current drawings and specifications for the project must be read in conjunction with the Designer's Hazard and Environment Assessment Record. All intellectual property rights reserved.

Rev	Date	Description	Dwn	Ckd
C	29/03/19	Issued for S73 application	MC	RS
D	08/04/19	Amended level 3 spandrel panel. Re-issued for S73 submission	MD	RS
E	07/05/19	Levels added. Re-issued for S73	MC	RS
F	15/05/19	Re-issed for S73 application	MC	RS
G	25/10/19	Issued for S73 Re-submission	FB	RS

Drawn	DB
Checked	CS
Date	Jan 2017
Scale @ A1	As indicated

Kenavon Drive

East Block East Elevation 1

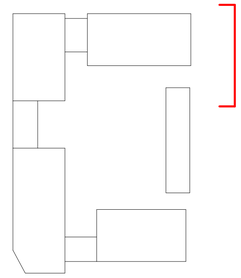
AA5990-2242
REV G

FOR PLANNING

PRP

Materials Legend

M-BA 04	PPC Perforated metal balustrade pattern: diaper
M-BA 05	Cantilevered glass balustrade to inset balcony
M-C 02	Brick / mortar colour A alternating 25mm projecting (Dark)
M-C 03	Brick / mortar colour A soldier course (Dark)
M-C 05	Brick / mortar colour B soldier course (Medium)
M-C 20	PPC Rainwater goods
M-C 27	Brick / glazed colour B (Red)
M-WD 01	Dark grey coloured frame glazed window / door assembly
M-WD 06	PPC Metal Louvre doors
M-WD 07	PPC Metal gate





0m 2m 4m 6m 8m

CDM REGULATIONS 2015. All current drawings and specifications for the project must be read in conjunction with the Designer's Hazard and Environment Assessment Record. All intellectual property rights reserved.

Rev	Date	Description	Dwn	Ckd
B	13/03/19	Town-houses amended. Re-issued for coordination	MD	RS
C	29/03/19	Issued for S73 application	MC	RS
D	07/05/19	Levels added. Re-issued for S73	MC	RS
E	15/05/19	Re-issed for S73 application	MC	RS
F	25/10/19	Issued for S73 Re-submission	FB	RS

Drawn	DB
Checked	CS
Date	Jan 2017
Scale @ A1	100

Kenavon Drive

East Block East Elevation 2

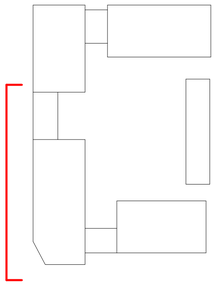
AA5990-2243
REV F

FOR PLANNING

PRP

Materials Legend

M-BA 01	PPC Metal balustrade typical; 50 x 10mm flats
M-BA 02	PPC Metal balustrade front, balusters turned 45 deg
M-BA 03	PPC Metal balustrade juliet
M-BA 10	Precast concrete balcony fascia
M-C 01	Brick / mortar colour A (Dark)
M-C 03	Brick / mortar colour A soldier course (Dark)
M-C 04	Brick / mortar colour B (Medium)
M-C 05	Brick / mortar colour B soldier course (Medium)
M-C 14	Precast concrete band course
M-C 16	Metal panel cladding colour A (Dark)
M-C 17	Metal panel cladding colour B (Gold)
M-C 21	Entrance canopy glazed
M-WD 01	Dark grey coloured frame glazed window / door assembly
M-WD 04	Shopfront signage / spandral panel
M-WD 08	Block entrance door/window assembly





0m 2m 4m 6m 8m

CDM REGULATIONS 2015. All current drawings and specifications for the project must be read in conjunction with the Designer's Hazard and Environment Assessment Record. All intellectual property rights reserved.

Rev	Date	Description
A	11/03/19	Issued for S73 Coordination
B	29/03/19	Issued for S73 application
C	07/05/19	Levels added. Re-issued for S73
D	15/05/19	Re-issed for S73 application
E	25/10/19	Issued for S73 Re-submission

Dwn	Ckd
MC	RS
MC	RS
MC	RS
MC	RS
FB	RS

Drawn	DB
Checked	CS
Date	Jan 2017
Scale @ A1	100

Kenavon Drive

East Block West Elevation 1

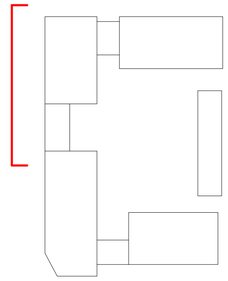
AA5990-2244
REV E

FOR PLANNING

PRP

Materials Legend

M-BA 02	PPC Metal balustrade front, balusters turned 45 deg
M-BA 03	PPC Metal balustrade juliet
M-BA 10	Precast concrete balcony fascia
M-C 01	Brick / mortar colour A (Dark)
M-C 03	Brick / mortar colour A soldier course (Dark)
M-C 04	Brick / mortar colour B (Medium)
M-C 05	Brick / mortar colour B soldier course (Medium)
M-C 16	Metal panel cladding colour A (Dark)
M-C 17	Metal panel cladding colour B (Gold)
M-WD 08	Block entrance door/window assembly





0m 2m 4m 6m 8m

CDM REGULATIONS 2015. All current drawings and specifications for the project must be read in conjunction with the Designer's Hazard and Environment Assessment Record. All intellectual property rights reserved.

Rev	Date	Description
A	11/03/19	Issued for S73 Coordination
B	29/03/19	Issued for S73 application
C	07/05/19	Levels added. Re-issued for S73
D	15/05/19	Re-issed for S73 application
E	25/10/19	Issued for S73 Re-submission

Dwn	Ckd
MC	RS
MC	RS
MC	RS
MC	RS
FB	RS

Drawn	DB
Checked	CS
Date	Jan 2017
Scale @ A1	100

Kenavon Drive

East Block West Elevation 2

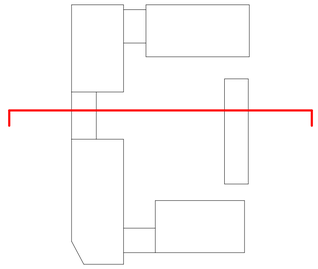
AA5990-2245
REV E

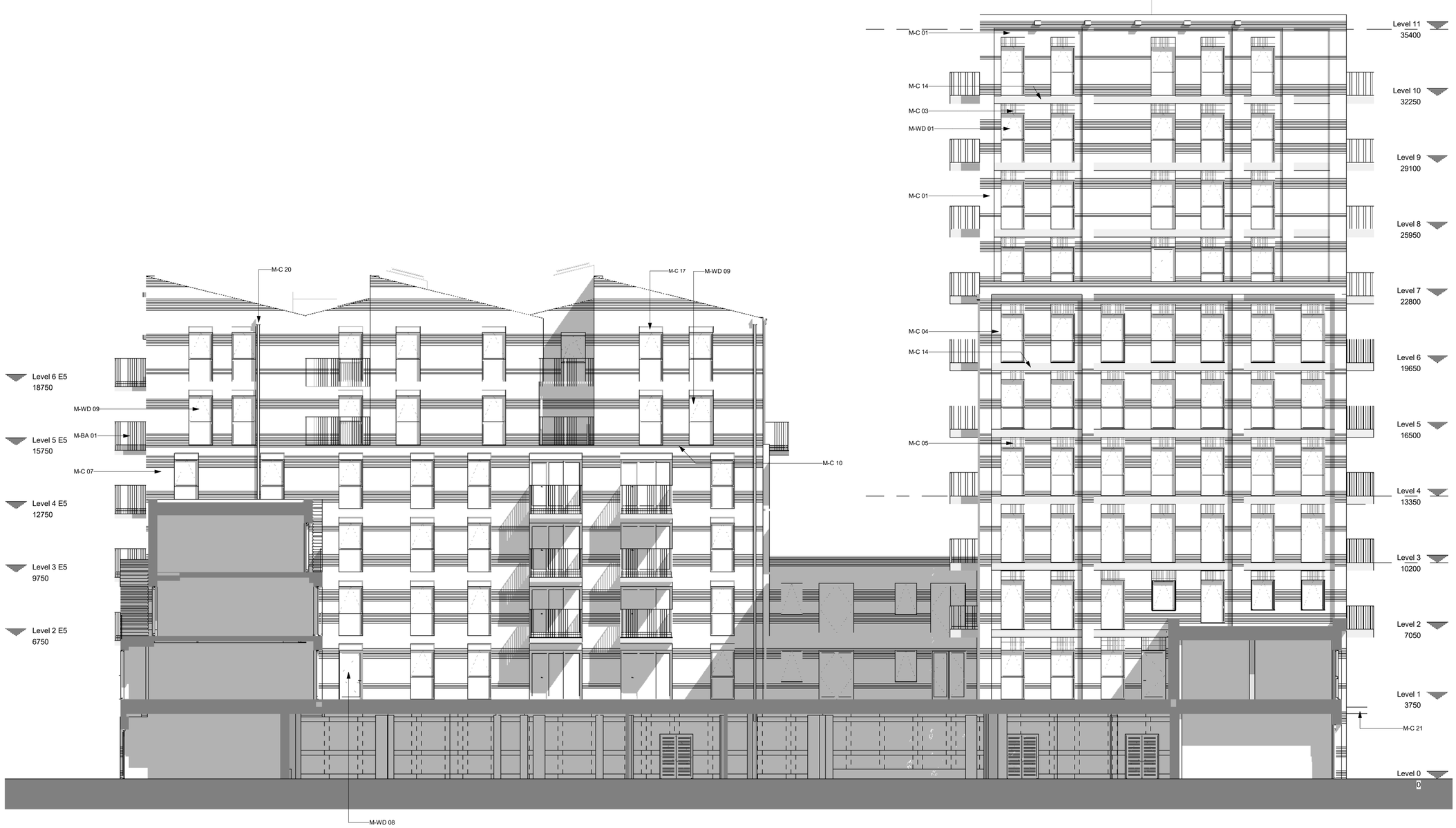
FOR PLANNING

PRP

Materials Legend

M-BA 01	PPC Metal balustrade typical; 50 x 10mm flats
M-C 01	Brick / mortar colour A (Dark)
M-C 03	Brick / mortar colour A soldier course (Dark)
M-C 04	Brick / mortar colour B (Medium)
M-C 05	Brick / mortar colour B soldier course (Medium)
M-C 07	Brick / mortar colour C (Light)
M-C 10	Brick / mortar colour C recessed band single course (Light)
M-C 14	Precast concrete band course
M-C 17	Metal panel cladding colour B (Gold)
M-C 20	PPC Rainwater goods
M-C 21	Entrance canopy glazed
M-WD 01	Dark grey coloured frame glazed window / door assembly
M-WD 08	Block entrance door/window assembly
M-WD 09	Gold coloured frame glazed window / door assembly





0m 2m 4m 6m 8m

CDM REGULATIONS 2015. All current drawings and specifications for the project must be read in conjunction with the Designer's Hazard and Environment Assessment Record. All intellectual property rights reserved.

Rev	Date	Description
C	20/03/19	Amended deck design
D	29/03/19	Issued for S73 application
E	07/05/19	Levels added. Re-issued for S73
F	15/05/19	Re-issed for S73 application
G	25/10/19	Issued for S73 Re-submission

Dwn	Ckd
MD	RS
MC	RS
MC	RS
MC	RS
FB	RS

Drawn	DB
Checked	CS
Date	Jan 2017
Scale @ A1	100

Kenavon Drive

East Block Courtyard North Elevation 1

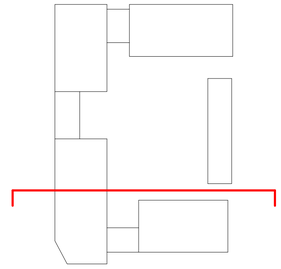
AA5990-2246
REV G

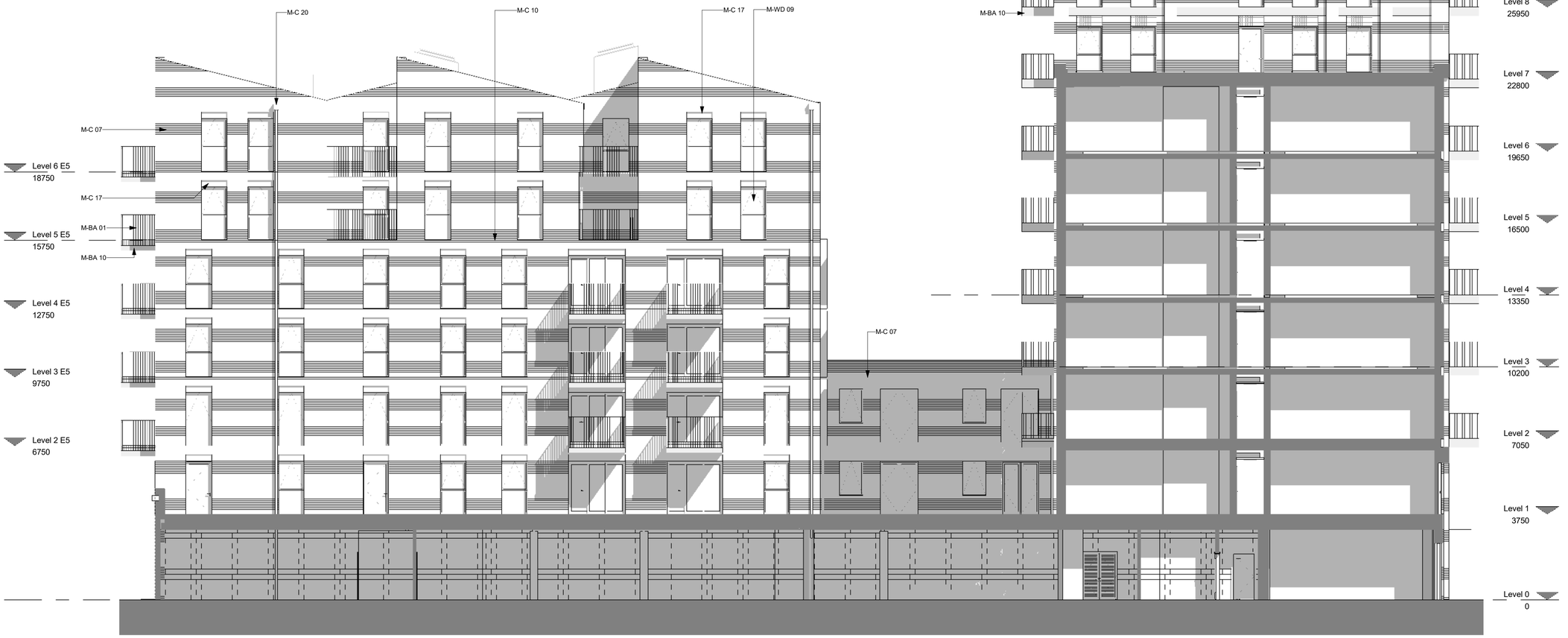
FOR PLANNING

PRP

Materials Legend

M-BA 01	PPC Metal balustrade typical; 50 x 10mm flats
M-BA 10	Precast concrete balcony fascia
M-C 01	Brick / mortar colour A (Dark)
M-C 03	Brick / mortar colour A soldier course (Dark)
M-C 07	Brick / mortar colour C (Light)
M-C 10	Brick / mortar colour C recessed band single course (Light)
M-C 14	Precast concrete band course
M-C 17	Metal panel cladding colour B (Gold)
M-C 20	PPC Rainwater goods
M-WD 09	Gold coloured frame glazed window / door assembly





0m 2m 4m 6m 8m

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Rev	Date	Description
B	20/03/19	Amended deck design
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D	07/05/19	Levels added. Re-issued for S73
E	15/05/19	Re-issed for S73 application
F	25/10/19	Issued for S73 Re-submission

Dwn	Ckd		
MD	RS	Drawn	DB
MC	RS	Checked	CS
MC	RS	Date	Jan 2017
MC	RS	Scale @ A1	100
FB	RS		

Kenavon Drive

East Block Courtyard North Elevation 2

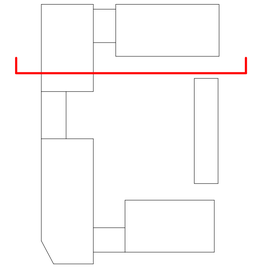
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REV F

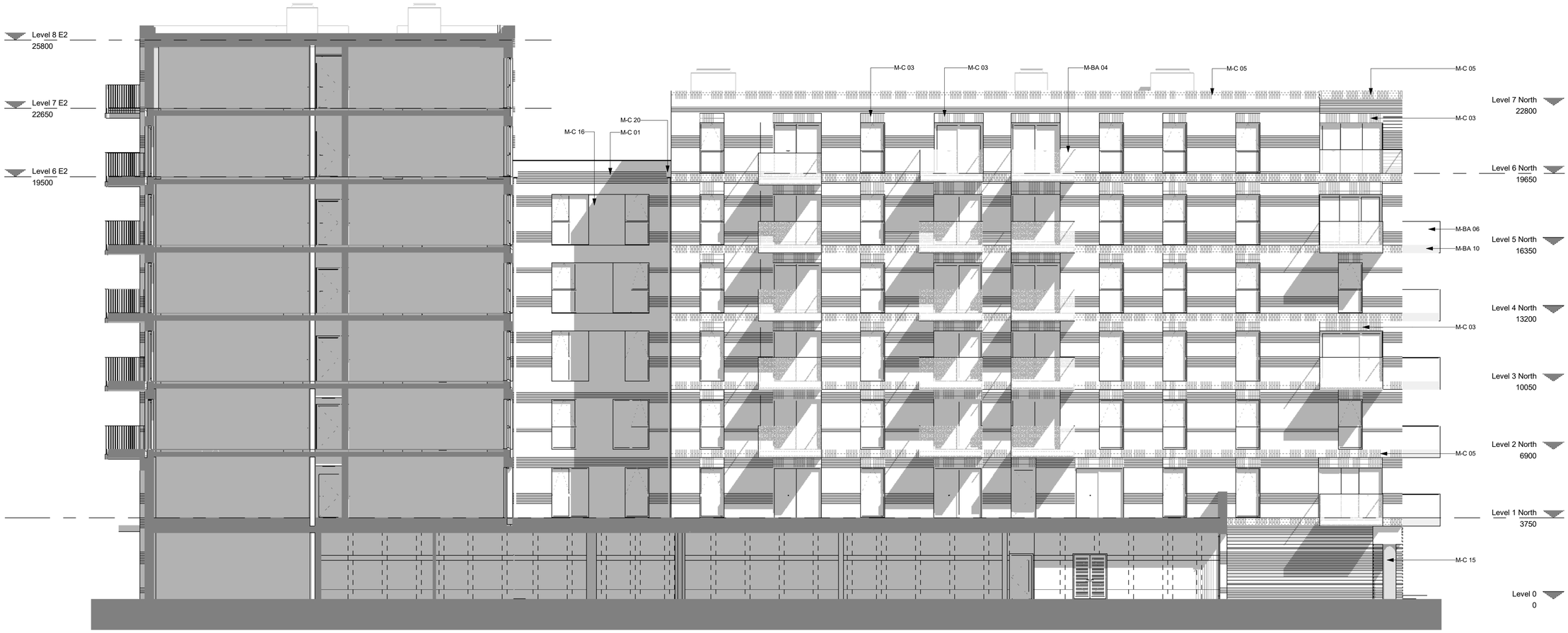
FOR PLANNING

PRP

Materials Legend

M-BA 04	PPC Perforated metal balustrade pattern: diaper
M-BA 06	Cantilevered glass balustrade to side of projected balcony
M-BA 10	Precast concrete balcony fascia
M-C 01	Brick / mortar colour A (Dark)
M-C 03	Brick / mortar colour A soldier course (Dark)
M-C 05	Brick / mortar colour B soldier course (Medium)
M-C 15	Fair faced concrete column
M-C 16	Metal panel cladding colour A (Dark)
M-C 20	PPC Rainwater goods





0m 2m 4m 6m 8m

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Rev	Date	Description
	22/03/17	For submission
A	25/10/19	Issued for S73 Re-submission

Dwn	Ckd
FR	CS
FB	RS

Drawn	DB
Checked	CS
Date	Jan 2017
Scale @ A1	100

Kenavon Drive

East Block Courtyard South Elevation 1

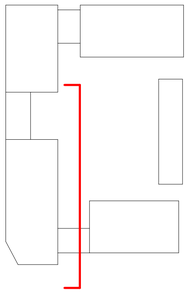
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REV A

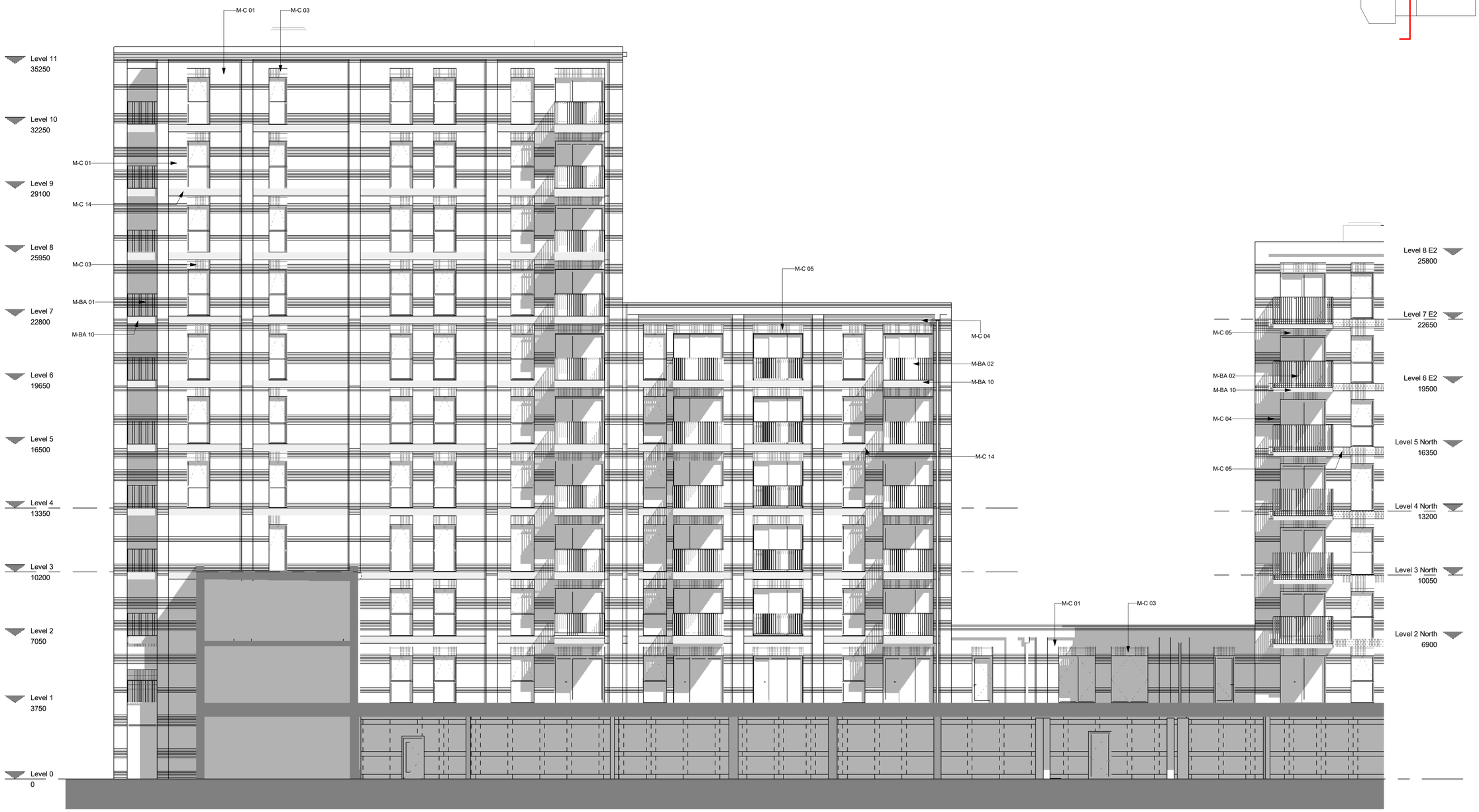
FOR PLANNING

PRP

Materials Legend

M-BA 01	PPC Metal balustrade typical; 50 x 10mm flats
M-BA 02	PPC Metal balustrade front, balusters turned 45 deg
M-BA 10	Precast concrete balcony fascia
M-C 01	Brick / mortar colour A (Dark)
M-C 03	Brick / mortar colour A soldier course (Dark)
M-C 04	Brick / mortar colour B (Medium)
M-C 05	Brick / mortar colour B soldier course (Medium)
M-C 14	Precast concrete band course





0m 2m 4m 6m 8m

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Rev	Date	Description
A	11/03/19	Issued for S73 Coordination
B	29/03/19	Issued for S73 application
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D	15/05/19	Re-issed for S73 application
E	25/10/19	Issued for S73 Re-submission

Dwn	Ckd		
MC	RS	Drawn	DB
MC	RS	Checked	CS
MC	RS	Date	Jan 2017
MC	RS	Scale @ A1	100
FB	RS		

Kenavon Drive

East Block Courtyard East Elevation 1

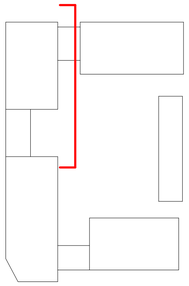
AA5990-2249
REV E

FOR PLANNING

PRP

Materials Legend

M-BA 02	PPC Metal balustrade front, balusters turned 45 deg
M-BA 10	Precast concrete balcony fascia
M-C 01	Brick / mortar colour A (Dark)
M-C 03	Brick / mortar colour A soldier course (Dark)
M-C 04	Brick / mortar colour B (Medium)
M-C 05	Brick / mortar colour B soldier course (Medium)
M-C 16	Metal panel cladding colour A (Dark)
M-C 20	PPC Rainwater goods
M-WD 01	Dark grey coloured frame glazed window / door assembly





0m 2m 4m 6m 8m

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Rev	Date	Description
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Dwn	Ckd
MC	RS
MC	RS
MC	RS
MC	RS
FB	RS

Drawn	DB
Checked	CS
Date	Jan 2017
Scale @ A1	100

Kenavon Drive

East Block Courtyard East Elevation 2

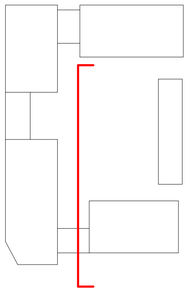
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REV E

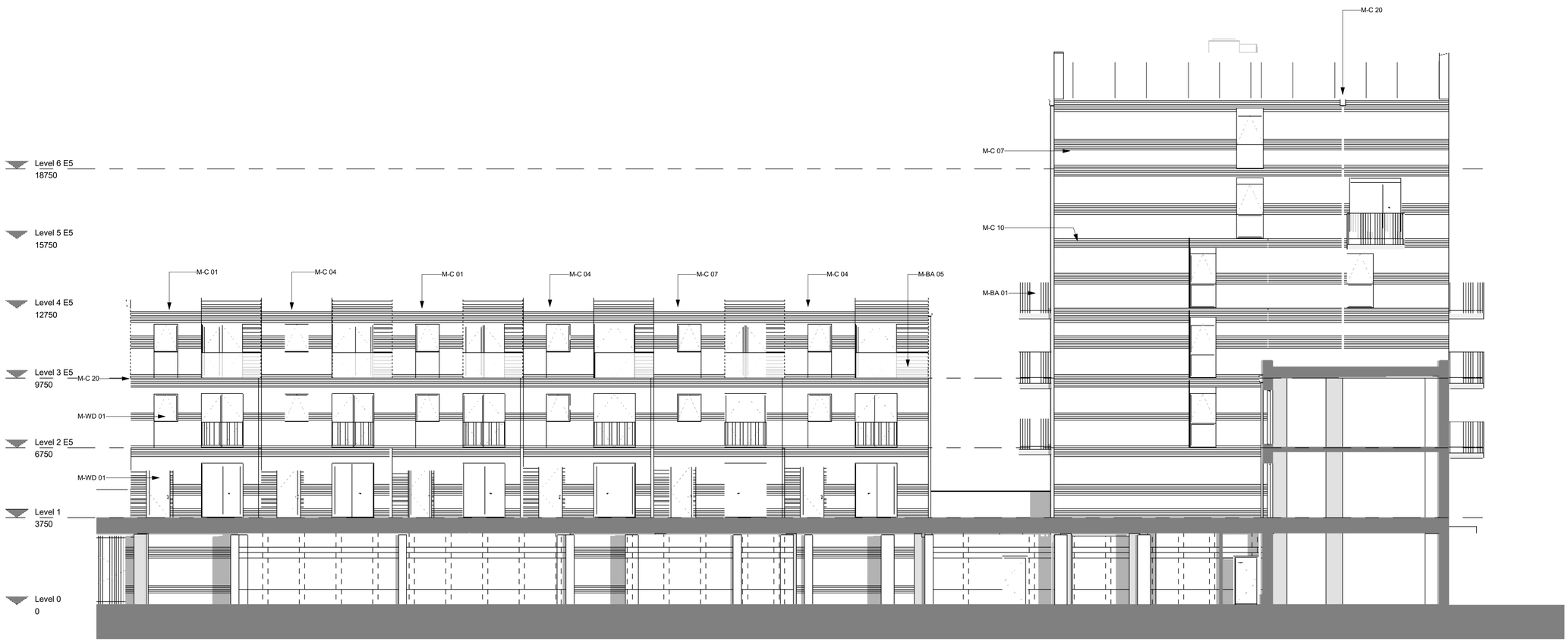
FOR PLANNING

PRP

Materials Legend

M-BA 01	PPC Metal balustrade typical; 50 x 10mm flats
M-BA 05	Cantilevered glass balustrade to inset balcony
M-C 01	Brick / mortar colour A (Dark)
M-C 04	Brick / mortar colour B (Medium)
M-C 07	Brick / mortar colour C (Light)
M-C 10	Brick / mortar colour C recessed band single course (Light)
M-C 20	PPC Rainwater goods
M-WD 01	Dark grey coloured frame glazed window / door assembly





0m 2m 4m 6m 8m

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Dwn	Ckd
MD	RS
MC	RS
MC	RS
MC	RS
FB	RS

Drawn	DB
Checked	CS
Date	Jan 2017
Scale @ A1	100

Kenavon Drive

East Block Courtyard West Elevation 1

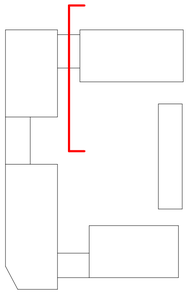
AA5990-2251
REV G

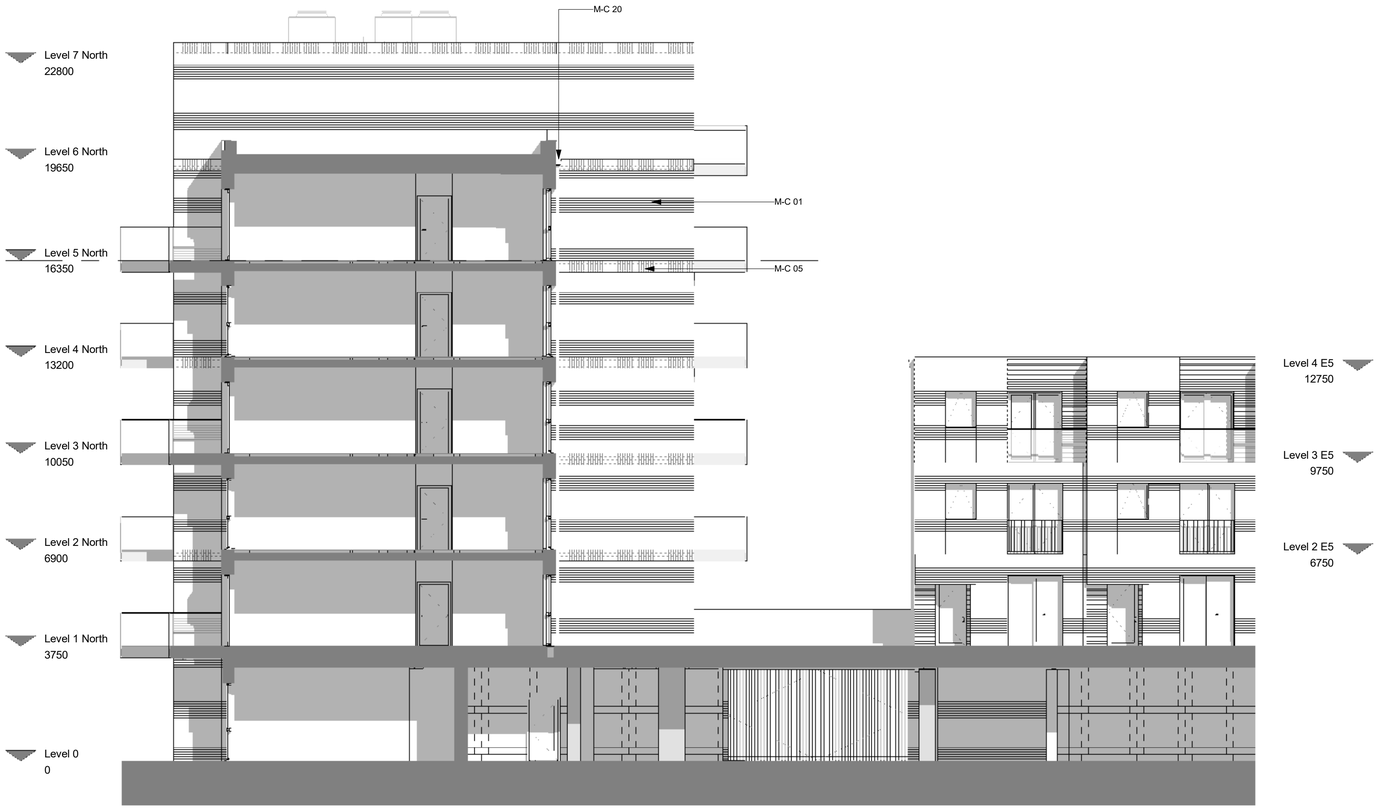
FOR PLANNING

PRP

Materials Legend

M-C 01	Brick / mortar colour A (Dark)
M-C 05	Brick / mortar colour B soldier course (Medium)
M-C 20	PPC Rainwater goods





0m 2m 4m 6m 8m

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Dwn	Ckd
MD	RS
MC	RS
MC	RS
MC	RS
FB	RS

Drawn	DB
Checked	CS
Date	Jan 2017
Scale @ A1	100

Kenavon Drive

East Block Courtyard West Elevation 2

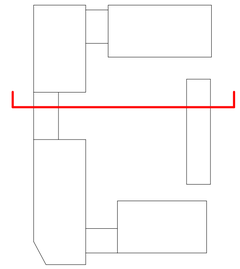
AA5990-2252
REV G

FOR PLANNING

PRP

Materials Legend

M-BA 04	PPC Perforated metal balustrade pattern: diaper
M-BA 05	Cantilevered glass balustrade to inset balcony
M-BA 06	Cantilevered glass balustrade to side of projected balcony
M-BA 10	Precast concrete balcony fascia
M-C 03	Brick / mortar colour A soldier course (Dark)
M-C 04	Brick / mortar colour B (Medium)
M-C 05	Brick / mortar colour B soldier course (Medium)
M-WD 01	Dark grey coloured frame glazed window / door assembly





0m 2m 4m 6m 8m

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F	15/05/19	Re-issed for S73 application
G	25/10/19	Issued for S73 Re-submission

Dwn	Ckd
MD	RS
MC	RS
MC	RS
MC	RS
FB	RS

Drawn	KR
Checked	CS
Date	Jan 2017
Scale @ A1	As indicated

Kenavon Drive

East Block Courtyard South Elevation 2

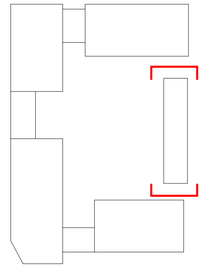
AA5990-2253
REV G

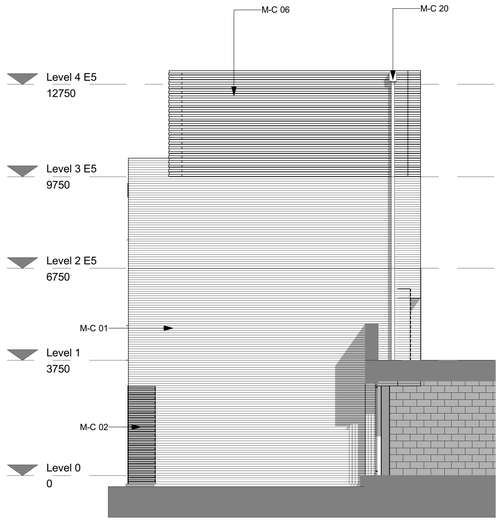
FOR PLANNING

PRP

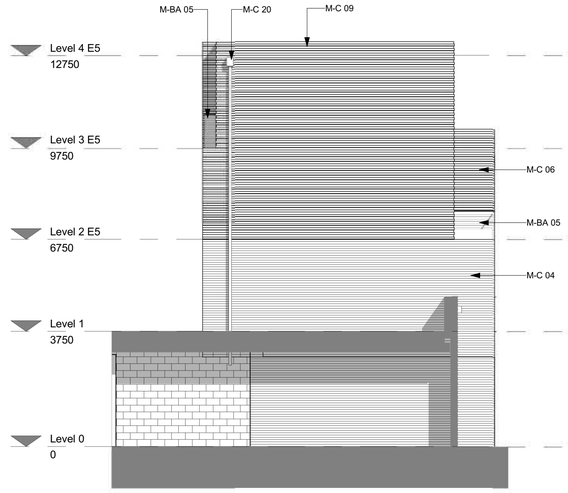
Materials Legend

M-BA 05	Cantilevered glass balustrade to inset balcony
M-C 01	Brick / mortar colour A (Dark)
M-C 02	Brick / mortar colour A alternating 25mm projecting (Dark)
M-C 04	Brick / mortar colour B (Medium)
M-C 06	Brick / mortar colour B alternating 25mm projecting (Medium)
M-C 09	Brick / mortar colour C alternating 25mm projecting (Light)
M-C 20	PPC Rainwater goods





East Block E4 Elevation North
1 : 100



East Block E4 Elevation South
1 : 100

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Rev	Date	Description
C	20/03/19	Amended deck design
D	29/03/19	Issued for S73 application
E	07/05/19	Levels added. Re-issued for S73
F	15/05/19	Re-issed for S73 application
G	25/10/19	Issued for S73 Re-submission

Dwn	Ckd
MD	RS
MC	RS
MC	RS
MC	RS
FB	RS

Drawn	Author
Checked	Checker
Date	04/12/17
Scale @ A1	As indicated

Kenavon Drive

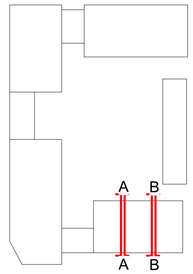
East Block Courtyard Ends

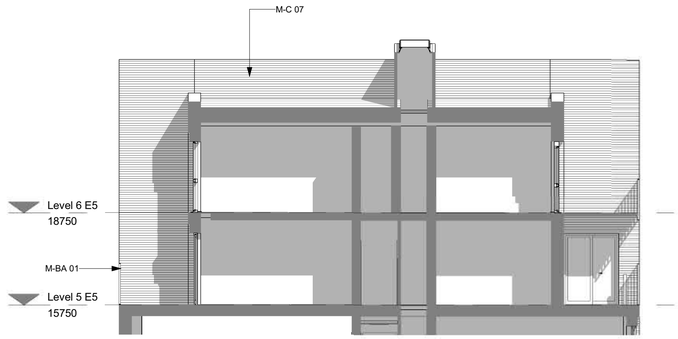
AA5990-2254
REV G

PRP

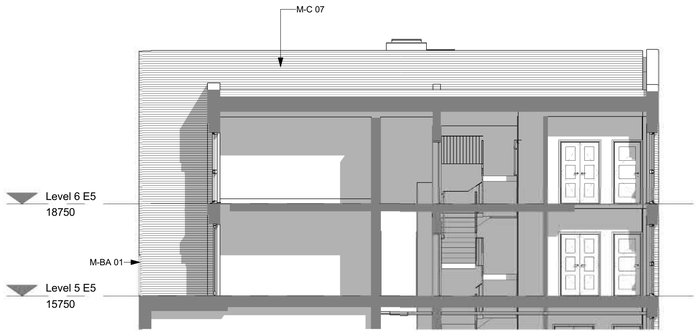
Materials Legend

M-BA 01	PPC Metal balustrade typical; 50 x 10mm flats
M-C 07	Brick / mortar colour C (Light)
M-C 20	PPC Rainwater goods
M-WD 09	Gold coloured frame glazed window / door assembly

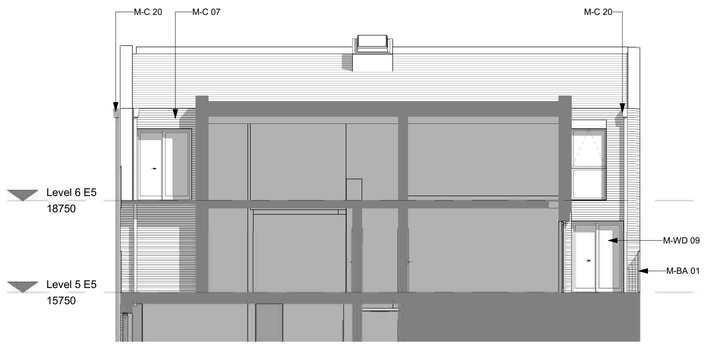




E5 Internal Elevation East A
1 : 100



E5 Internal Elevation East B
1 : 100



E5 Internal Elevation West A
1 : 100



E5 Internal Elevation West B
1 : 100

Rev	Date	Description
	27/01/17	First Issue
	22/03/17	For submission
A	25/10/19	Issued for S73 Re-submission

Dwn	Ckd
FR	CS
FR	CS
FB	RS

Drawn	Author
Checked	Checker
Date	04/12/17
Scale @ A1	As indicated

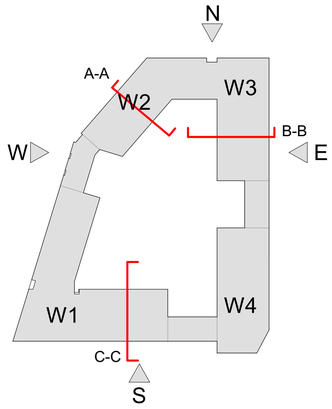
Kenavon Drive

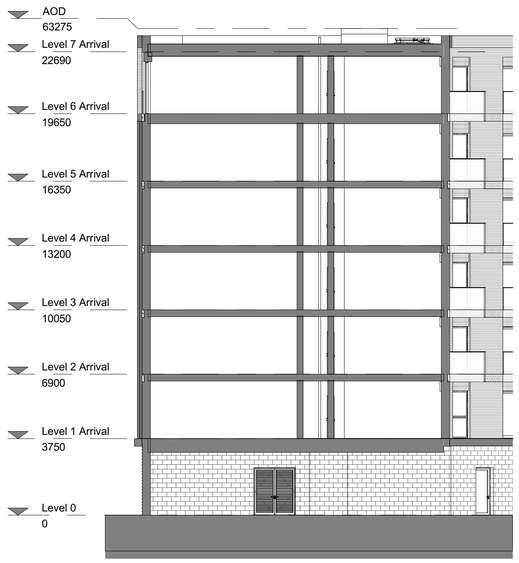
East Block - Terraces between top floor flats

AA5990-2255
REV A

PRP

CDM REGULATIONS 2015. All current drawings and specifications for the project must be read in conjunction with the Designer's Hazard and Environment Assessment Record. All intellectual property rights reserved.

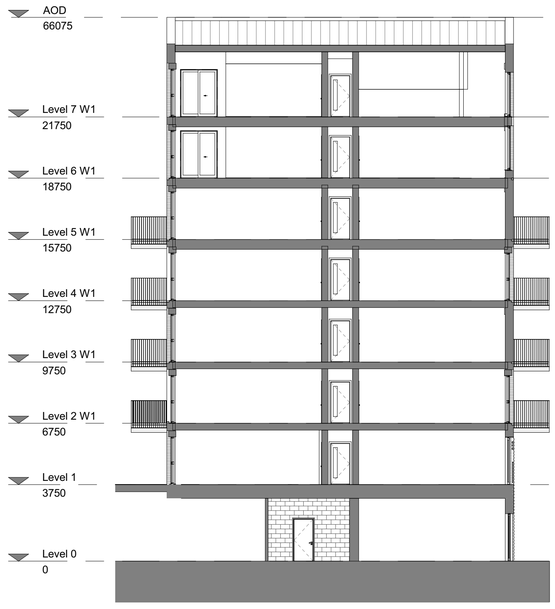




West Block Section A-A
1 : 150



West Block Section B-B
1 : 150



West Block Section C-C
1 : 150

CDM REGULATIONS 2015. All current drawings and specifications for the project must be read in conjunction with the Designer's Hazard and Environment Assessment Record. All intellectual property rights reserved.

Rev	Date	Description
	27/01/17	First Issue
-	22/03/17	For submission
A	25/10/19	Issued for S73 Re-submission

Dwn	Ckd
FR	RS
FR	CS
AMC	RS

Drawn	KR
Checked	CS
Date	Jan 2017
Scale @ A1	1:150

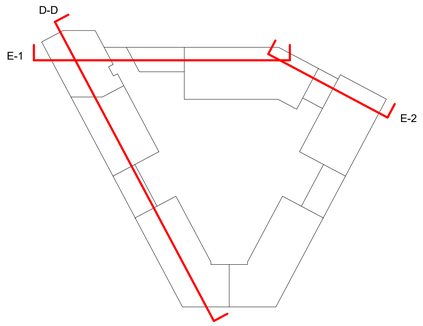
Kenavon Drive

West Block Sections

AA5990-2300
REV A

FOR PLANNING

PRP





Middle Block Section D-D

1 : 150

Rev	Date	Description
-	22/03/17	For submission
A	29/03/19	Issued for S73 application
B	25/10/19	Issued for S73 Re-submission

Dwn	Ckd
FR	CS
MC	RS
AMC	RS

Drawn	KR
Checked	CS
Date	Jan 2017
Scale @ A1	As indicated

Kenavon Drive

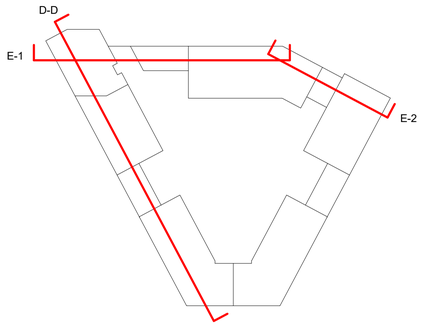
Middle Block Sections

AA5990-2320
REV B

FOR PLANNING

PRP

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Middle Block Section E-2
1 : 150



Middle Block Section E-1
1 : 150

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Rev	Date	Description
	27/01/17	First Issue
-	22/03/17	For submission
A	25/10/19	Issued for S73 Re-submission

Dwn	Ckd
FR	CS
FR	CS
AMC	RS

Drawn	KR
Checked	CS
Date	Jan 2017
Scale @ A1	As indicated

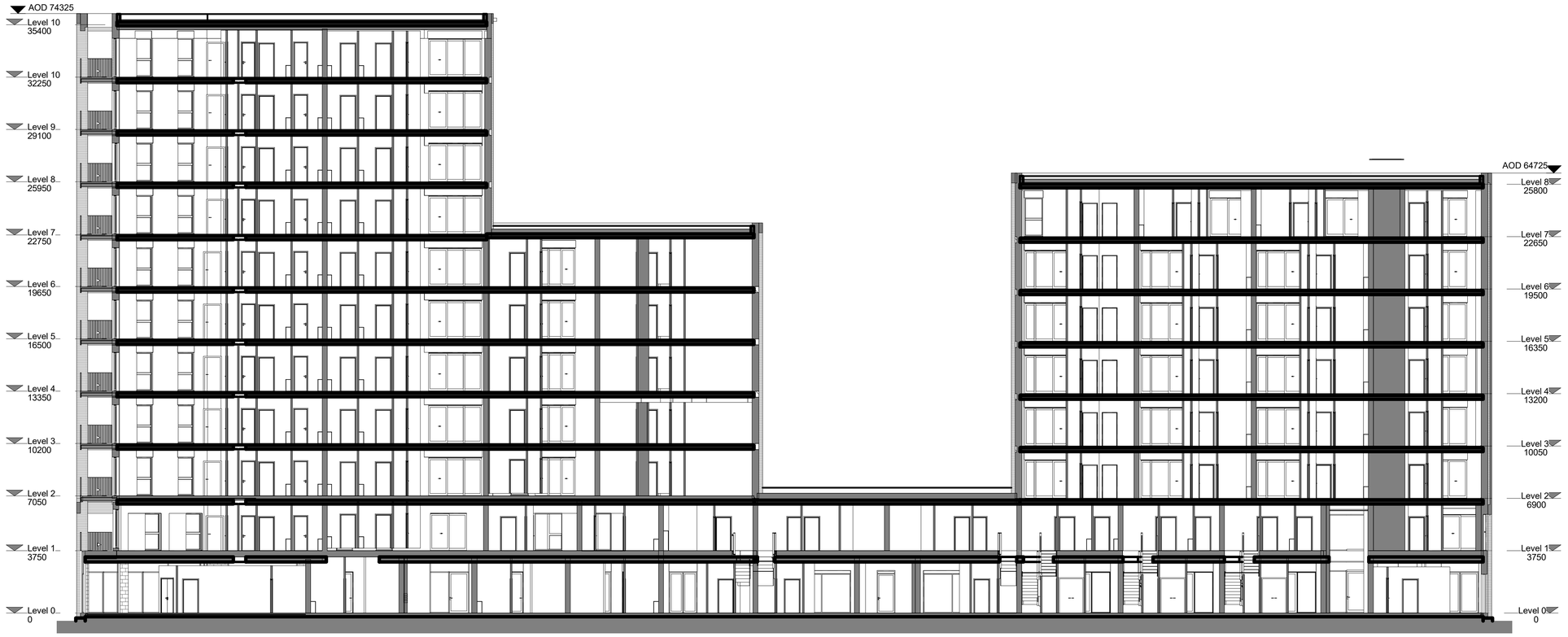
Kenavon Drive

Middle Block Sections

AA5990-2321
REV A

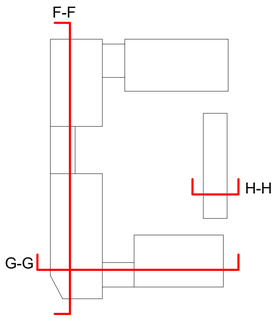
FOR PLANNING

PRP



East Block Section F-F

1 : 150





Section G-G

1 : 150



East Block Sections H-H

1 : 150

Rev	Date	Description
	27/01/17	First Issue
	22/03/17	For submission
A	29/03/19	Issued for S73 application
B	07/05/19	Deck omitted. Re-issued for S73
C	25/10/19	Issued for S73 Re-submission

Dwn	Ckd
FR	CS
FR	CS
MC	RS
MC	RS
FB	RS

Drawn	KR
Checked	CS
Date	Jan 2017
Scale @ A1	As indicated

Kenavon Drive

East Block Sections

AA5990-2340
REV C

FOR PLANNING

PRP

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APPENDIX B:
ACOUSTIC REPORT ADDENDUM

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Berkeley
Designed for life

MLM

Kenavon Drive, Reading

Stage 3 Acoustic Report Addendum
October 2019



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Certifying Body

MLM are full members of the ANC:

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Client: Berkeley Homes
Project: Kenavon Drive, Reading
Document Title: Addendum to Acoustic Assessment
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MLM Reference: 102751

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Appendix A - Glossary of Acoustic Terminology

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1 Introduction

MLM Acoustics has been commissioned by Berkeley Homes to provide an Addendum to Report reference MS/101307/MS/R2 Rev04 Stage 3 Acoustic Report, issued April 2017.

This Report firstly sets the relevant sound criteria and requirements that will need to be met by the future development.

Then the Report assesses the suitability of the site for residential development based on the current development proposals and the measured sound levels.

Whilst every effort has been made to ensure that this Report is easily understood, it is technical in nature; a Glossary of Terms in Appendix A is included to assist the reader.

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2 Policy and Assessment Methodology

2.1 British Standard 8233

BS 8233:2014 *Guidance on Sound Insulation and Noise Reduction for Buildings* sets out the principles for planning and design in terms of noise. The proposed sequence of stages is:

- Assess the site, identify significant existing and potential noise sources, measure or estimate noise levels, and evaluate layout options;
- Determine design noise levels for spaces in and around the building(s);
- Determine sound insulation requirements, including the ventilation strategy;
- Identify internal sound insulation requirements;
- Identify and design appropriate noise control measures; and
- Establish quality control and ensure good quality workmanship.

It goes on to recommend that for noise sources outside the building, the initial appraisal should take account of the options for:

- Location of the site in relation to the noise source(s);
- Reduction of noise at source;
- Positioning of the buildings on site;
- Orientation of buildings on site;
- Provision of barriers;
- Increasing the sound insulation of the building envelope; and
- Re-planning the interior of the building.

BS 8233:2014 draws on the results of research and experience to provide information on achieving internal acoustic environments appropriate to their functions. The guideline values provided are in terms of an average (L_{Aeq}) level.

The standard advises that, for steady external noise sources, it is desirable for internal ambient noise levels to not exceed the guidance values, as detailed below in Table 1.

Table 1: BS8233:2014 Indoor Ambient Noise Levels

Activity	Location	07:00 to 23:99	23:00 to 07:00
Resting	Living room	35 dB $L_{Aeq,16hour}$	-
Dining	Dining room	40 dB $L_{Aeq,16hour}$	-
Sleeping (daytime resting)	Bedroom	35 dB $L_{Aeq,16hour}$	30 dB $L_{Aeq,8hour}$

BS8233:2014 goes on to suggest that where development is considered necessary or desirable, the internal target levels may be relaxed by up to 5 dB and reasonable internal conditions will still be achieved.

With regard to maximum noise levels, the standard identifies that regular individual noise events (such as passing trains or scheduled aircraft etc) can cause sleep disturbance. The standard does not provide a guideline design target, but simply goes on to suggest that a guideline value may be set in terms of SEL or $L_{Amax,F}$, depending upon the character and number of events per night. It goes on to suggest that more sporadic noise events could require separate values

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In respect of external noise levels, the guidance in BS8233:2014 suggests that *"it is desirable that the external noise level does not exceed 50dB $L_{Aeq,T}$, with an upper guideline value of 55dB $L_{Aeq,T}$ which would be acceptable in noisier environments"*. Accordingly, the design criteria adopted for this assessment will ensure that noise within external amenity areas will be adequately controlled.

BS8233:2014 provides a much more detailed narrative on noise levels in external amenity areas and acknowledges that it may not always be necessary or feasible to ensure that noise levels remain within these guideline values.

In respect of gardens and patios, BS8233:2014 states; *"however, it is also recognized that these guideline values are not achievable in all circumstances where development might be desirable. In higher noise areas, such as city centres or urban areas adjoining the strategic transport network, a compromise between elevated noise levels and other factors, such as the convenience of living in these locations or making efficient use of land resources to ensure development needs can be met, might be warranted. In such a situation, development should be designed to achieve the lowest practicable levels in these external amenity spaces, but should not be prohibited"*.

In respect of balconies, roof gardens and terraces, BS8233:2014 states, *"Other locations, such as balconies, roof gardens and terraces, are also important in residential buildings where normal external amenity space might be limited or not available, i.e. in flats, apartment blocks, etc. In these locations, specification of noise limits is not necessarily appropriate. Small balconies may be included for uses such as drying washing or growing pot plants, and noise limits should not be necessary for these uses; however, the general guidance on noise in amenity space is still appropriate for larger balconies, roof gardens and terraces, which might be intended to be used for relaxation. In high-noise areas, consideration should be given to protecting these areas by screening or building design to achieve the lowest practicable levels. Achieving levels of 55 dB $L_{Aeq,T}$ or less might not be possible at the outer edge of these areas, but should be achievable in some areas of the space"*.

It is clear from the narrative of BS8233:2014, that proposed development within noisy environments should be designed to ensure that the recommended internal design standards are achieved, and that noise levels in external amenity areas are designed to effectively control and reduce noise levels, although it acknowledges that in certain circumstance meeting the external design recommendations may not be feasible, or necessary, especially where the provision of such spaces is desirable for other technical, planning or policy reasons.

Based on the above, the following internal noise level criteria have been adopted for this assessment, which will ensure no adverse impact:

Table 1: Indoor Ambient Noise Levels

Location	Time	Indoor ambient noise level L_{Aeq}, dB
Living Rooms	07:00–23:00 hours	35 dB L_{Aeq}
Bedrooms	07:00–23:00 hours	35 dB L_{Aeq}
	23:00–07:00 hours	35 dB L_{Aeq}
	and no more than 15 events exceeding	45 dB L_{Amax}
Dining Rooms	07:00–23:00 hours	40 dB L_{Aeq}
External Living Areas	07:00–23:00 hours	55 dB L_{Aeq}

3 Site Description and Development Proposals

The proposed development site is currently used as a retail park located at Kenavon Drive, Reading. The proposed site is bounded by Kenavon Drive to the North, Forbury Road (A329) to the West, the River Kennet to the South and an existing residential development to the East.

Beyond the River Kennet to the south is a commercial development comprising office uses. Beyond Forbury Road is Reading Prison and Young Offenders Institution. To the north of the site is Forbury Retail Park.

Kenavon Road is a no-through road which leads to a residential area. Forbury Road (A329) is a busy urban road which forms part of the Reading Ring road system.

The Great Western Railway is located 120m to the North of the site and is largely shielded by existing buildings.

The location of the proposed development site is identified in Figure 1.



Figure 1: Site Plan

It is proposed to develop the site into 787 residential units with 1,444.4m^2 of commercial floor space, as depicted in Figure 2.

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Figure 2 – Proposed Site Layout

The sound climate at the development site is dominated by road traffic movements along the nearby Forbury Road. It should be noted that traffic sound is much quieter during the night-time period, when traffic flows on Forbury Road are much lower. Traffic flows on Kenavon Drive are currently very low.

The nearest noise sensitive receivers are the residential properties located adjacent to the proposed development site, on the eastern boundary.

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4 Acoustic Assessment of Residential Amenity

4.1 Acoustic Modelling

A 3D acoustic modelling exercise has been undertaken, based on the updated site plans and calibrated to the noise survey data. A plan view of the model is shown below:



Figure 4 – Acoustic Model Layout

The modelling considers noise from the surrounding roads, railway and commercial activities. In order to calibrate the model, the output values have been compared with the survey data. For clarity, the comparison is presented below:

Table 8: Sound survey measurements & calibrated model values

Position (see figure 3)	Period	Measured $L_{Aeq,16hour}$ (dBA)	Model $L_{Aeq,16hour}$ (dBA)
1	Day	53	55
	Night	45	43
2	Day	54	47
	Night	45	40
3	Day	68	68
	Night	63	63
4	Day	60	60
	Night	55	55

It can be seen that there is a very good correlation between locations 3 and 4, at which the noise levels are dominated by road traffic.

A ground floor noise contour plot is provided below:

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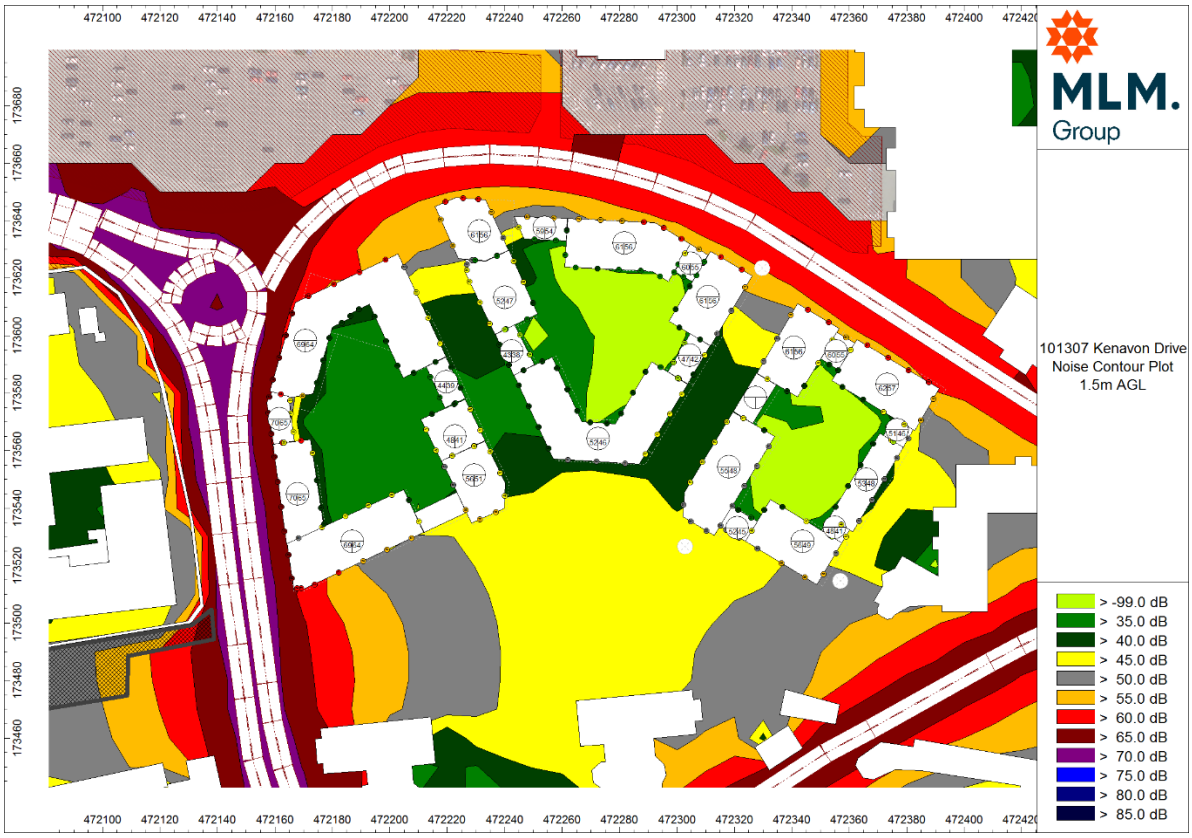


Figure 5 – Noise Contour Plot @1.5m AGL

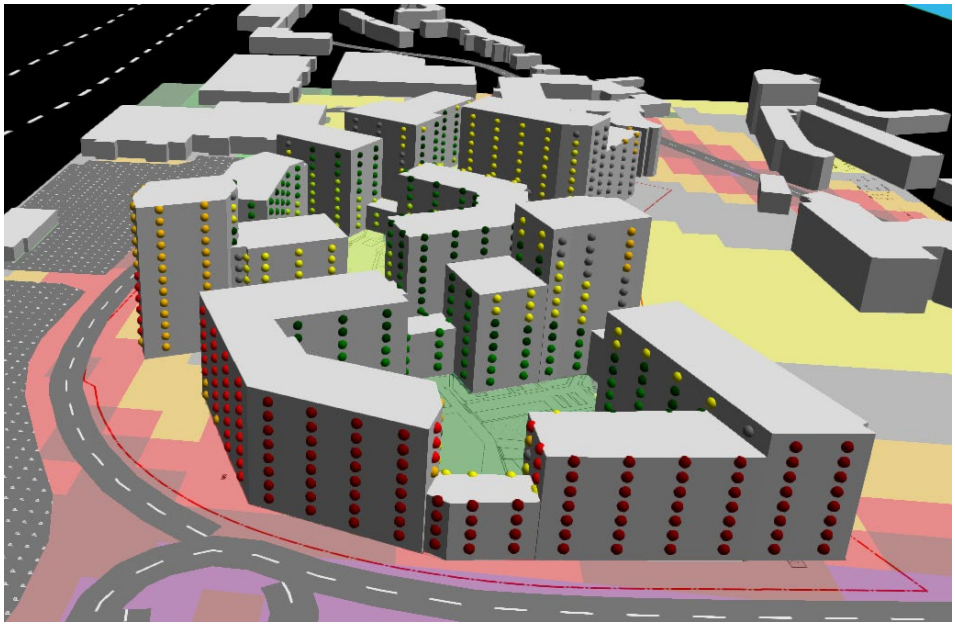


Figure 6 – View to the east

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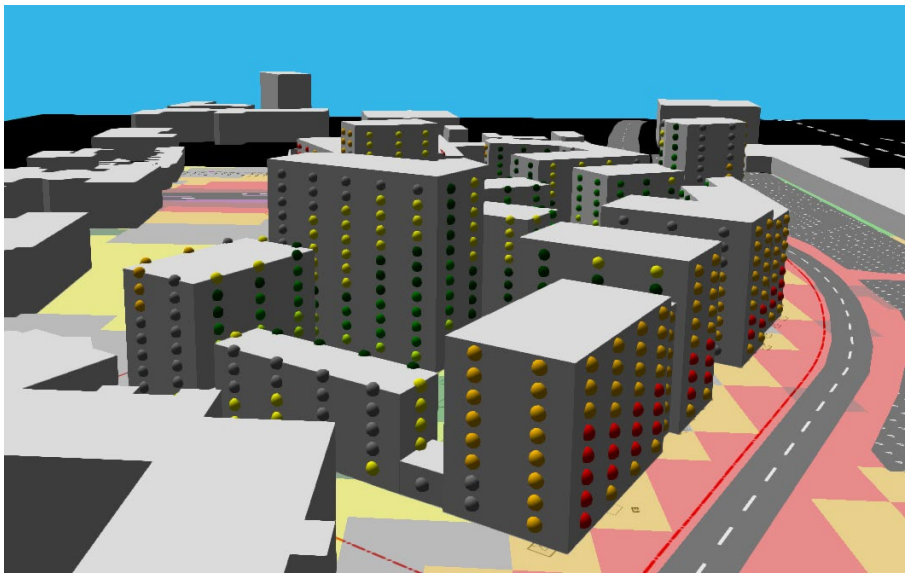


Figure 7 – View to the West

4.2 Assessment and Comments

The external sound levels on Forbury Road are high and, as such, sound control must form an integral part of the site layout. Typical worst-case façade incident sound levels are predicted to be 70 dBA during the daytime period and 65 dBA during the night-time period.

Based on these external sound levels a ventilation strategy based on the use of open windows for the majority of the year would not be suitable for properties over-looking Forbury Road and Kenavon Drive. Openable windows can be used for purge ventilation and at the resident's discretion. However, they should not need to open them for ventilation purposes. A mechanical ventilation system should therefore be considered for these facades. If additional passive ventilation is required to avoid over-heating, then this will need to be acoustically treated.

The courtyard areas of the site are subject to lower noise levels; typically less than 55 dBA during the daytime period and less than 45 dBA during the night-time period. In these areas a ventilation strategy based around openable windows and trickle vents would be acceptable.

Table 9 below sets out the generic façade (i.e. glazing/external wall/roof) and ventilation strategies for the site. For clarity and ease of understanding, these are depicted graphically in Figure 8, below.

Table 9 – Façade Zoning Requirements

Zone	Glazing Specification dB Rw+Ctr	Typical Ventilation Type
1	39	Mechanical Ventilation with summer bypass mode. Any additional fresh air paths must be acoustically treated.
2	32	Mechanical Ventilation with summer bypass mode. Any additional fresh air paths must be acoustically treated.
3	27	Trickle Vents and Openable Windows

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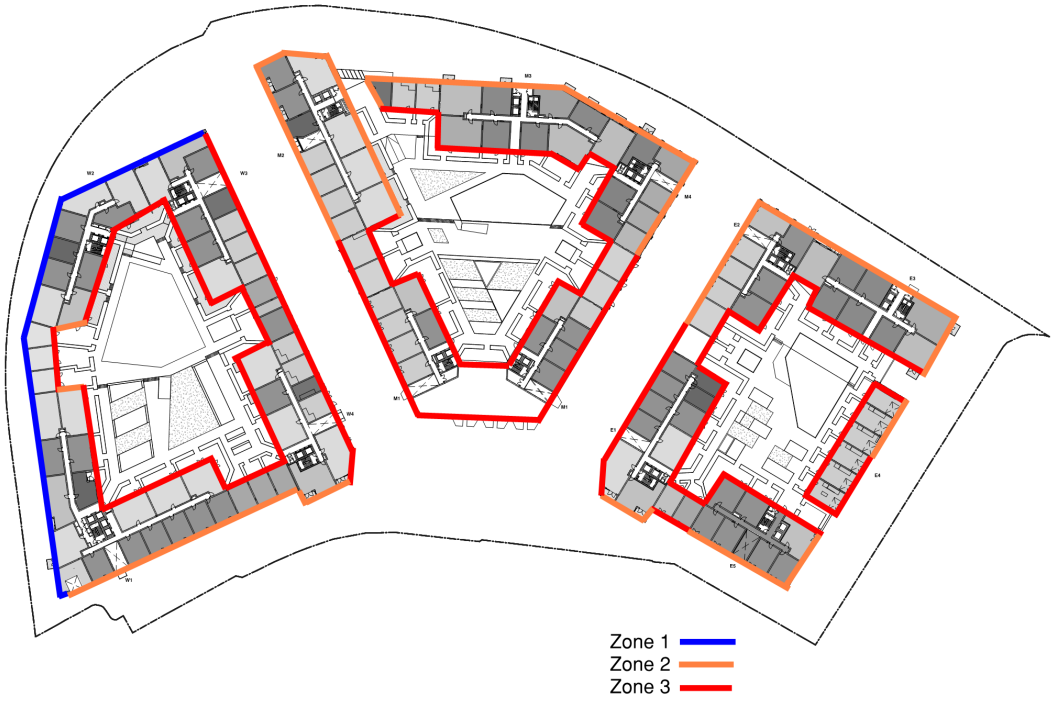


Figure 8 – Façade Zones

The proposed external wall constructions are understood to be as follows:

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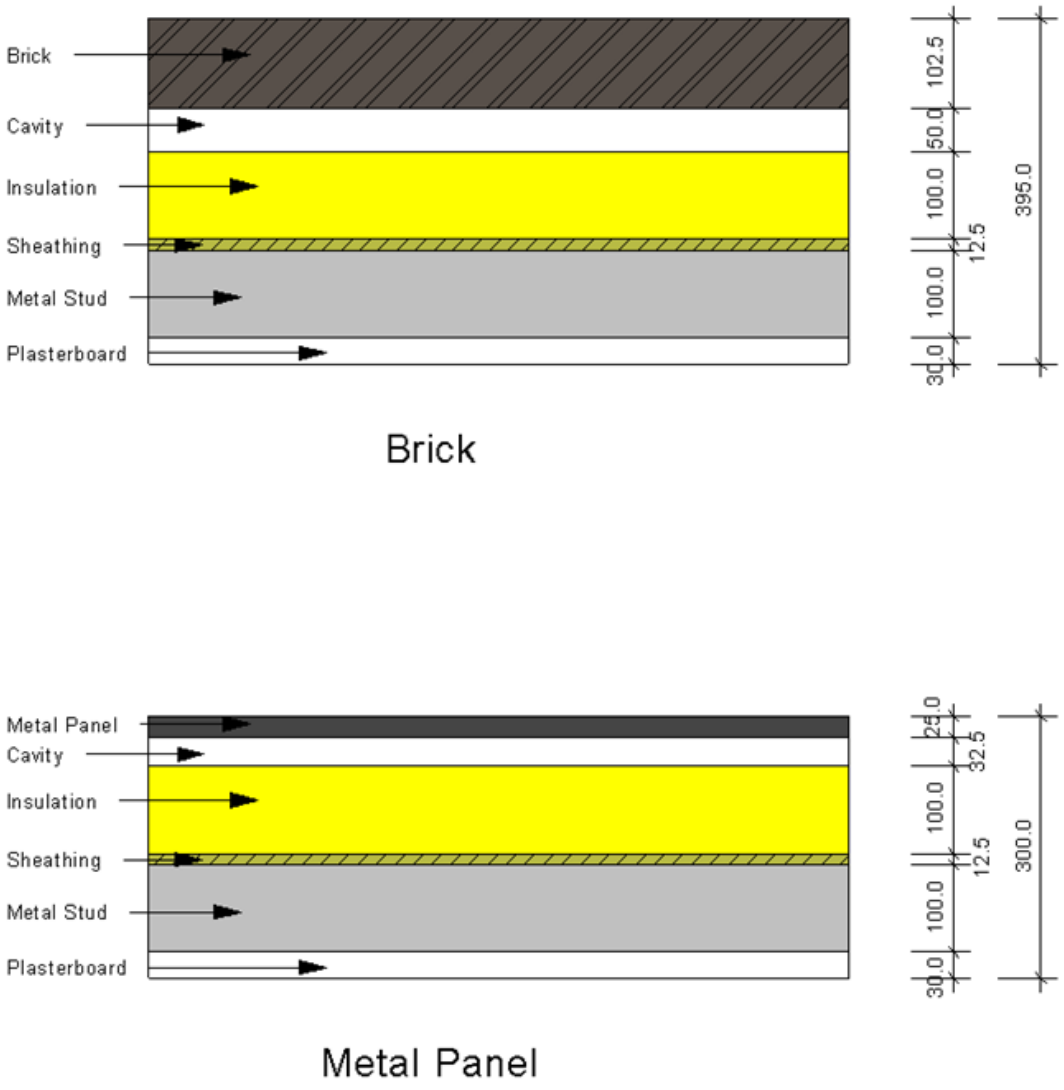


Figure 9 – Proposed External Wall Constructions

Both wall types are expected to achieve in excess of 40 dB R_w+C_{tr}. However, the metal clad system will exhibit a lower performance at 63 Hz and, therefore, should not be used in treatment zone 1, without any acoustic enhancements.

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5 Conclusion

MLM Acoustics has been commissioned by Berkeley Homes and L&Q to provide an Addendum to Report reference MS/101307/MS/R2 Rev04 Stage 3 Acoustic Report, issued April 2017.

In the light of the findings of this Report, it is considered that although existing sound conditions are expected to be a constraint to the residential development of this site, acoustic solutions are available which should allow, in combination with careful design, compliant dwellings.

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Appendix A - Glossary of Acoustic Terminology

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Wording	Description
Sound Pressure	Sound, or sound pressure, is a fluctuation in air pressure over the static ambient pressure.
Sound Pressure Level (Sound Level)	The sound level is the sound pressure relative to a standard reference pressure of 20μPa (20x10-6 Pascals) on a decibel scale.
Decibel (dB)	A scale for comparing the ratios of two quantities, including sound pressure and sound power. The difference in level between two sounds s1 and s2 is given by 20 log10 (s1 / s2). The decibel can also be used to measure absolute quantities by specifying a reference value that fixes one point on the scale. For sound pressure, the reference value is 20μPa.
A-weighting, dB(A)	The unit of sound level, weighted according to the A-scale, which takes into account the increased sensitivity of the human ear at some frequencies.
Noise Level Indices	Noise levels usually fluctuate over time, so it is often necessary to consider an average or statistical noise level. This can be done in several ways, so a number of different noise indices have been defined, according to how the averaging or statistics are carried out.
$L_{eq,T}$	A noise level index called the equivalent continuous noise level over the time period T. This is the level of a notional steady sound that would contain the same amount of sound energy as the actual, possibly fluctuating, sound that was recorded.
$L_{max,T}$	A noise level index defined as the maximum noise level during the period T. L_{max} is sometimes used for the assessment of occasional loud noises, which may have little effect on the overall Leq noise level but will still affect the noise environment. Unless described otherwise, it is measured using the 'fast' sound level meter response.
$L_{90,T}$	A noise level index. The noise level exceeded for 90% of the time over the period T. L_{90} can be considered to be the "average minimum" noise level and is often used to describe the background noise.
$L_{10,T}$	A noise level index. The noise level exceeded for 10% of the time over the period T. L_{10} can be considered to be the "average maximum" noise level. Generally used to describe road traffic noise.
Free-Field	Far from the presence of sound reflecting objects (except the ground), usually taken to mean at least 3.5m
Facade	At a distance of 1m in front of a large sound reflecting object such as a building façade.
Fast Time Weighting	An averaging time used in sound level meters. Defined in BS 5969.



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APPENDIX C:

DAYLIGHT, SUNLIGHT, OVERSHADOWING ADDENDUM

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Kenavon Drive, Reading

Scheme Internal Daylight Report Addendum
October 2019



KENAVON DRIVE
READING BOROUGH COUNCIL

SCHEME INTERNAL DAYLIGHT REPORT

DIRECTOR: LIAM DUNFORD
CLIENT: BERKELEY
DATE: OCTOBER 2019
VERSION: DRAFT
PROJECT: P915

Point 2 Surveyors Limited,
17 Slingsby Place,
London, WC2E 9AB

0207 836 5828
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POINT 2

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1 Introduction 3
2 Planning Overview 4
3 Methodology 5
4 The Proposal 6
5 Internal Daylight Study 7
6 Conclusion 8

Appendices

Appendix 1: Drawings
Appendix 2: Technical Analysis

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1 Introduction

1.1 This report considers the internal daylight amenity of the proposed development of Kenavon Drive, Reading. The site is located in the Royal Borough of Reading.

1.2 It specifically considers the levels of internal daylight and sunlight amenity received within the proposed residential units.

Sources of Information

In the process of compiling this report, the following sources of information have been used:

PRP
Topographical Survey 25/05/16
0839-005 003 Existing Site Layout and Topographical Survey - Reading 130711 kr.dwg
Proposed Plans & Elevations 18/10/19
AA5990-2100_West Block.dwg to AA5990-2111_West Block.dwg
AA5990-2180_East Block.dwg to AA5990-2185_East Block.dwg
Proposed 3D Models 21/10/19
O446-AA5990C-E-ZZ-A-EAST-S73.dwg
O446-AA5990C-M-ZZ-A-MID-S73.dwg
O446-AA5990C-W-ZZ-A-WEST-S73.dwg
Proposed Plans & Elevations 21/10/19
AA5990-2140_Middle Block.dwg to AA5990-2151_Middle Block.dwg

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2 Planning Overview

2.1 Through the planning process the local authority will wish to be reassured that the construction of the new scheme will benefit from acceptable levels of internal daylight amenity within BRE and British Standard Guidance.

2.2 The Local Authority will be informed in this by the BRE document entitled *Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice 2011* (the BRE guidelines). This document is the principal guidance in this area and sets out the methodology for measuring light and recommends what it considers to be permitted or unobtrusive levels of change.

2.3 The BRE guidelines are not mandatory, though local planning authorities and planning inspectors will consider the suitability of a proposed scheme for a site within the context of BRE guidance. Consideration will be given to the urban context within which a scheme is located and the internal daylight amenity will be one of a number of planning considerations which the local authority will weigh

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3 Methodology

3.1 In assessing the daylight to the main habitable spaces within the proposed accommodation, as recommended by the guidelines, we have calculated the ADF. With reference to BS8206 Part 2:2008 and Appendix C of the BRE Report, in calculating the values, we have assumed light internal finishes giving the following reflectances: floors 0.4 (light wood or cream carpet), ceilings 0.85 (white paint), internal walls 0.81 (pale cream paint). We have assumed double glazing with a transmittance of 0.68, and have allowed for a maintenance factor of 8% (appropriate for urban residential properties).

3.2 This daylight assessment method considers the transmittance of the glazing to the room in question (i.e. how much light gets through the window glass); the net glazed area of the window in question; the total area of the room surfaces (ceiling, walls, floor and windows) and their reflectances; and the angle of visible sky reaching the window/windows in question.

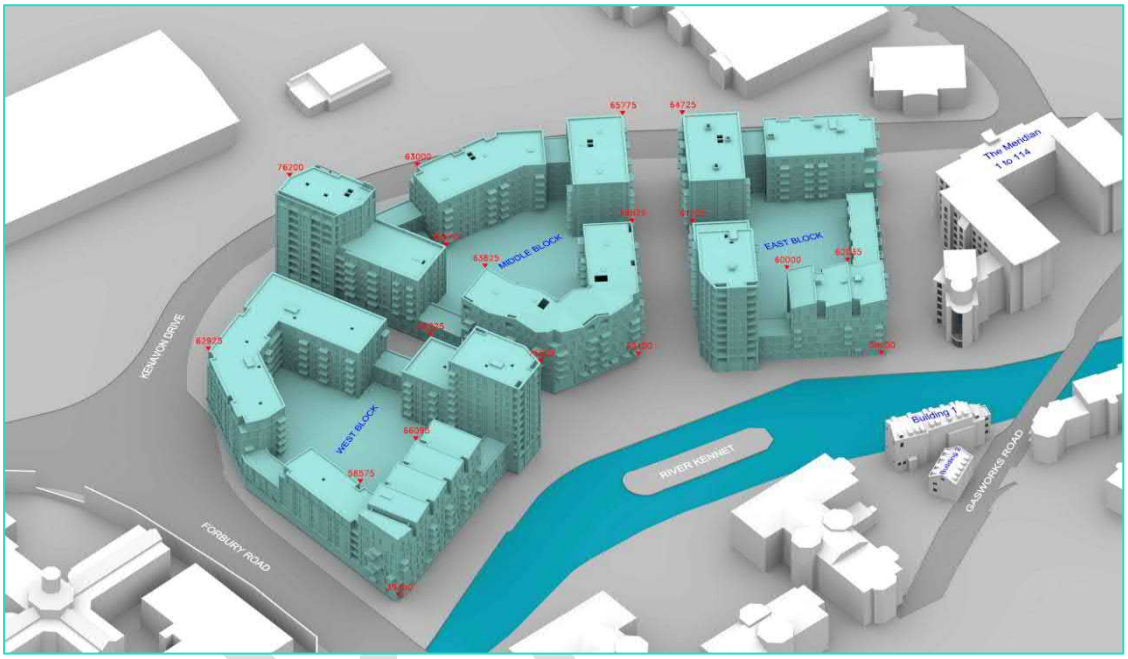
3.3 The BRE guidelines / British Standard sets the following recommended ADF levels for habitable room uses:

- 1% Bedroom
- 1.5% Living Room
- 2.0% Kitchens

3.4 It is important to remember that the BRE Guide states that 'the advice given here is not mandatory and should not be seen as an instrument of planning policy'. Furthermore, daylight criteria should be 'interpreted flexibly because natural lighting is only one of many factors'. Based upon these statements it is important to apply the guidance and target levels sensibly and flexibly taking into account the context of the site as a conversion of an existing building

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4 The Proposal



Drawing Number: P915/15 – 3D View – Proposed Scheme

4.1 Our understanding of the proposed scheme is illustrated in drawings P915/50-52 located within Appendix 1.

5 Internal Daylight Study

5.1 The results of our internal daylighting study to the proposed rooms, including drawings showing the layouts, window positions and orientation of the units can be found appended to this report under drawing references P915/I/250-279 (Appendix 2).

5.2 788 rooms have been analysed to establish the ADF levels within. For the purposes of this study we have considered the amenity levels to the habitable rooms on the ground, first, second and a sample of rooms on the third and fourth floors.

5.3 649 of the rooms assessed meet the required ADF value appropriate for the rooms' usage with many of the rooms achieving above the required minimums.

5.4 Where derogations from the target occur, the results are broadly comparable to those already consented and, furthermore, are influenced by the presence of balconies at various points. Officers previously considered that the benefits of providing valuable, external amenity spaces outweighed the daylight deficiencies on the wider planning balance and that daylight provision overall was considered adequate for the scheme as a whole.

5.5 To understand the effect of the balcony provisions and for completeness, we have undertaken a study by removing the balconies from the analysis scenario. This analysis can be found in Appendix 2. In this scenario, 740 (94%) of the rooms assessed surpass the ADF target for the rooms' use.

5.6 Overall, we consider the proposal to conform well with BRE Guidance in relation to daylight amenity and encourage the same degree of pragmatism to be afforded to this proposal as with the consented scheme.

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6 Internal Sunlight Study

6.1 For the purposes of this assessment we have assessed all proposed Living Rooms, Living Kitchen Dining Rooms and Studios which have at least one window orientated within 90 degrees either side of due south; BRE Guidance stating bedrooms and kitchens are less important (BRE para 3.1.2).

6.2 We have included a colour coded analysis table within Appendix C to this report which identifies the orientation of windows from due south and the rooms' APSH and Winter Sunlight Values. The room and window references correspond with those provided within the ADF layout drawing within Appendix B.

6.3 The below table summarises the results:

No. of Rooms achieving 25+% APSH	No. of Rooms achieving 15-24% APSH	No. of Rooms achieving less than 20% APSH
109	7	49
No. of Rooms achieving 5+% Winter Sunlight	**No. of Rooms achieving 3-4% Winter Sunlight**	**No. of Rooms achieving less than 3% Winter Sunlight**
149	51	32

6.4 There is an overall good level of compliance with regard to sunlight amenity. Where rooms do not achieve 25% APSH with 5% in Winter, they still retain levels of sunlight which are commensurate within dense developments. British Standard states that the absence of sunlight is more acceptable when a building is in a densely-built urban area. Overall we consider the level of sunlight received acceptable on planning balance.

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7 Conclusion

7.1 The above report and technical analysis appended hereto shows the scheme demonstrates compliance with BRE Guidance in terms of internal daylight and sunlight amenity with over the majority of rooms meeting their desired target value in the as built position.

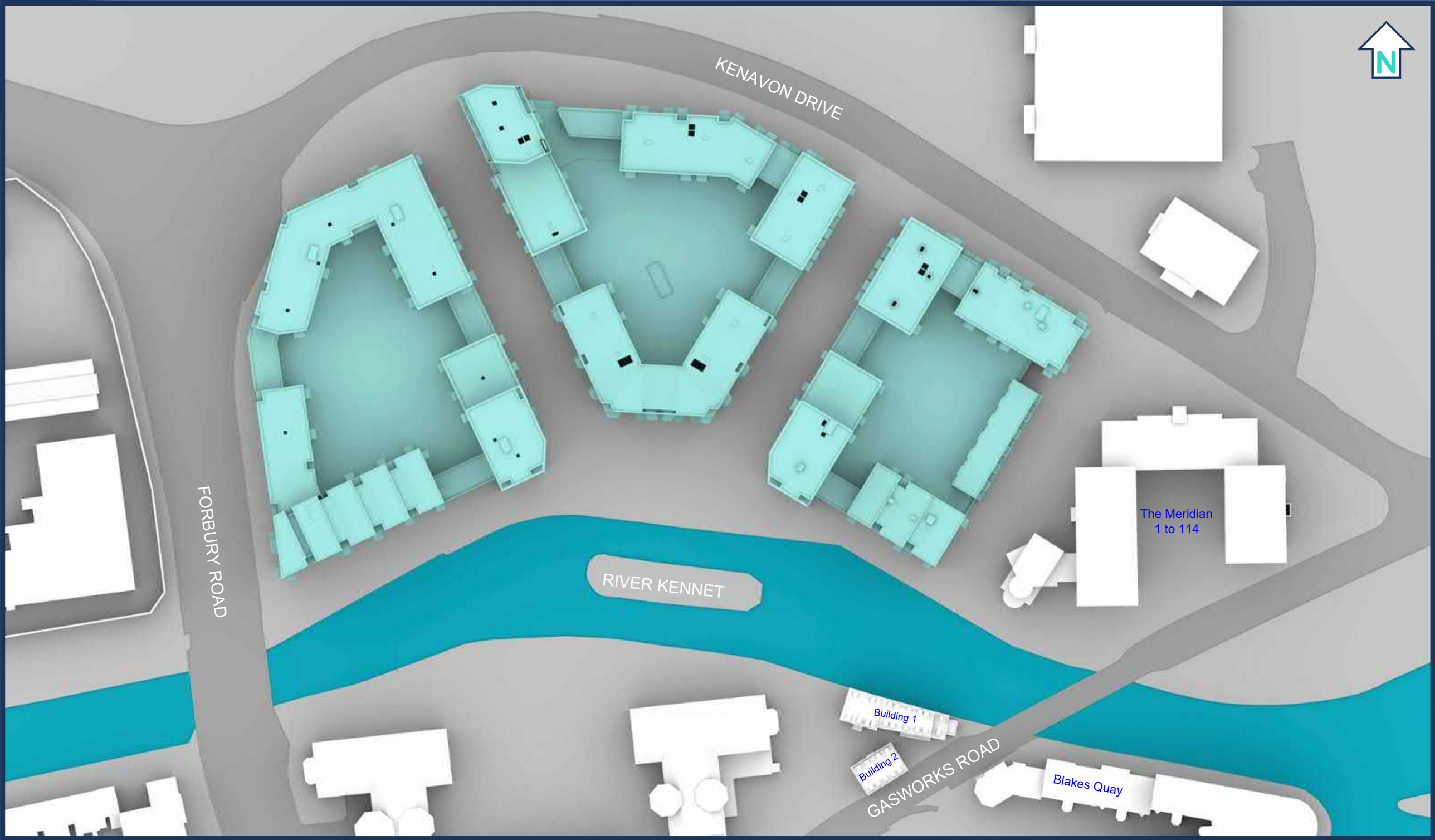
7.2 As is common within dense urban development, the scheme comprises many external amenity spaces which naturally limit the amount of sky that can reach a window. External amenity areas are readily sought after by occupants and should be considered as a benefit to the property, not a constraint. The position in this regard should be considered pragmatically. The analysis in Appendix 3 shows that, if the balcony area was removed then 94% of the rooms assessed meet their target value for their observed use. Moreover, it should be borne that this considers the lowest residential floors whereas if all rooms across the scheme were considered then the rate of compliance would increase further still.

7.3 The scheme has been designed well to allow good levels of daylight to penetrate into the proposed units and distribute throughout the rooms efficiently – especially in consideration of the it being located in an urban area, whereas the BRE guidelines are predicated upon a typically suburban environment.

7.4 We fully support this scheme in terms of internal daylight and sunlight amenity

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Appendix 1:
Scheme 3D Drawings



Sources: PRP
Topographical Survey 25/05/16
0839-005 003 Existing Site Layout and Topographical Survey - Reading 130711 kr.dwg
Proposed Plans & Elevations 18/10/19
AA5990-2100_West Block.dwg to AA5990-2111_West Block.dwg
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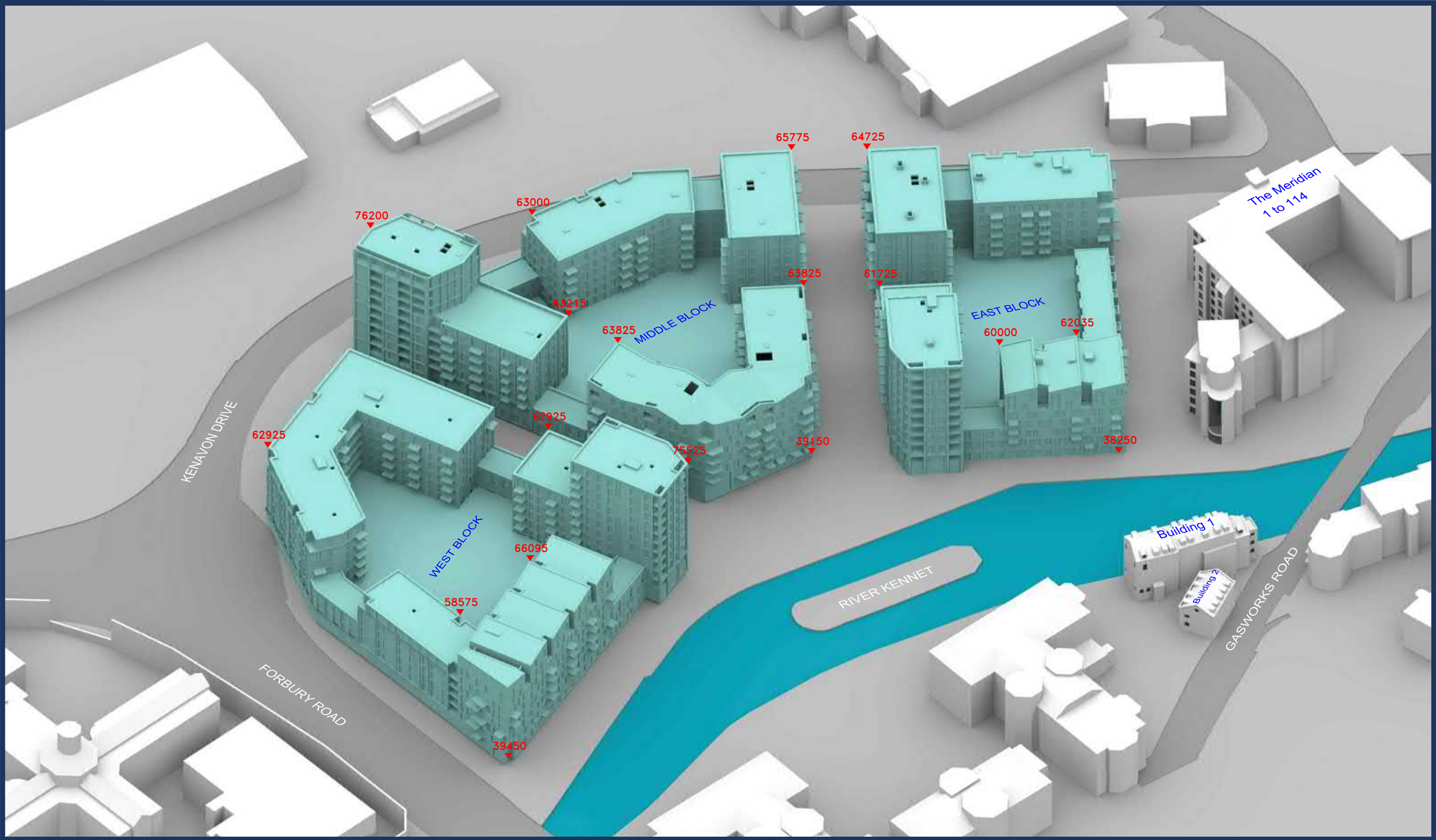
Key: Existing Buildings
Proposed Scheme

Project: Kenavon Drive
Reading

Title: Site Plan
Proposed Scheme 21/10/19

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
		BW	1:1000	Oct 19	P915/50	20

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Key: Existing Buildings
Proposed Scheme

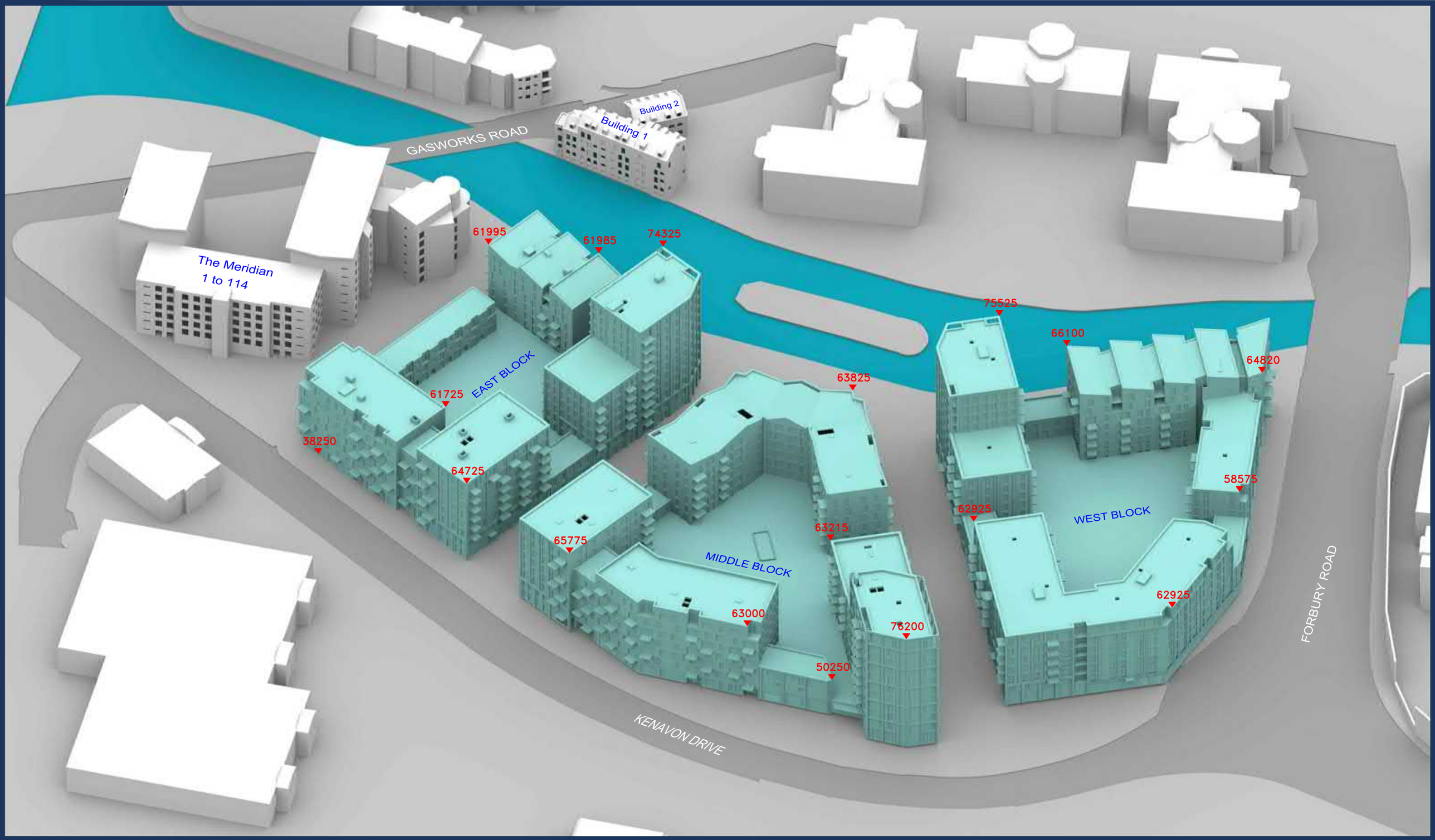
All Heights in mm AOD

Project: Kenavon Drive
Reading

Title: 3D View
Proposed Scheme 21/10/19

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
		BW	NTS	Oct 19	P915/51	20

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Sources: PRP
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Key: Existing Buildings
Proposed Scheme

All Heights in mm AOD

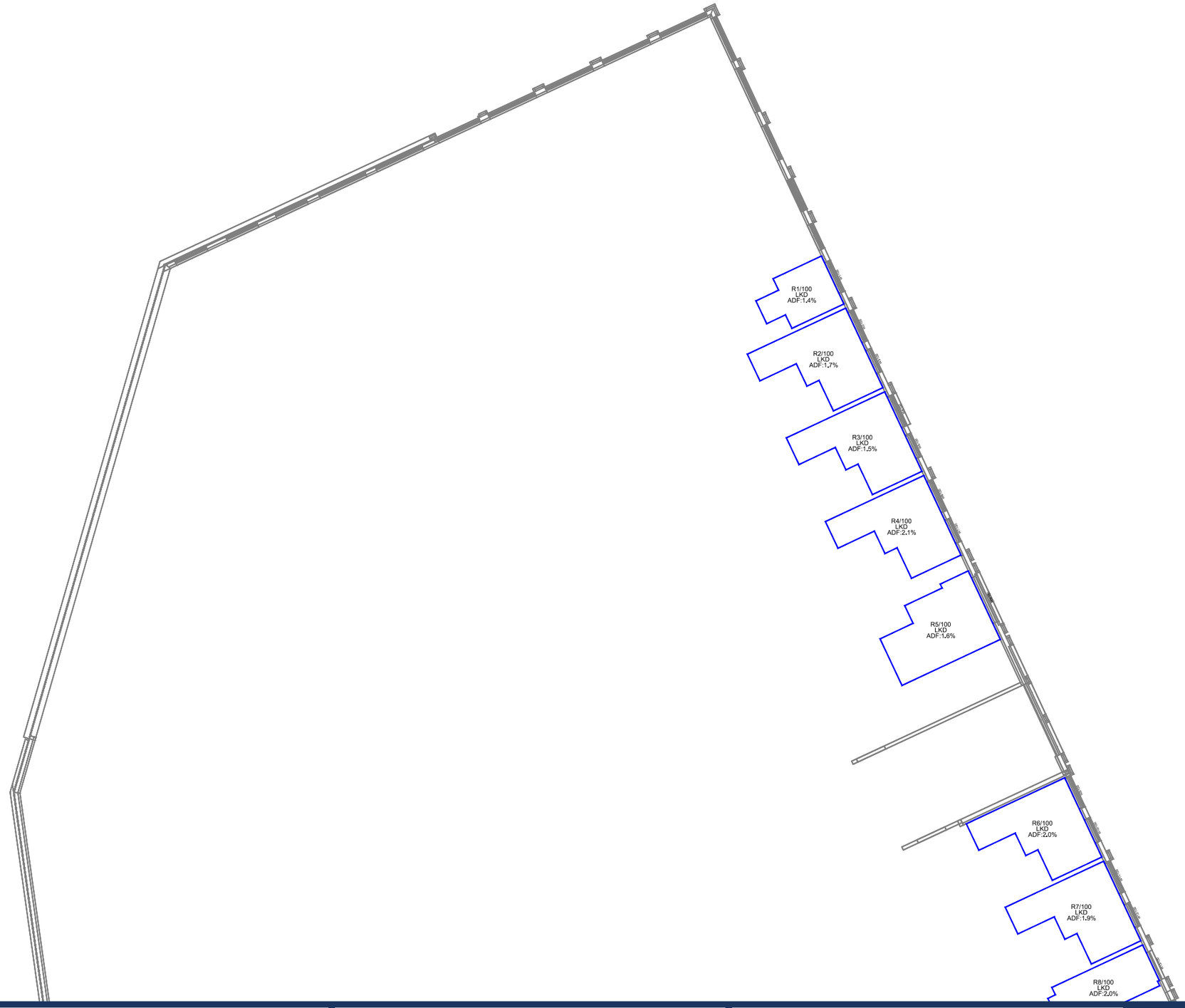
Project: Kenavon Drive
Reading

Title: 3D View
Proposed Scheme 21/10/19

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
		BW	NTS	Oct 19	P915/52	20

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Appendix 2:
ADF (Daylight) Analysis



GROUND FLOOR

Sources: PRP
Topographical Survey 25/05/16
0839-005 003 Existing Site Layout and Topographical Survey - Reading 130711 kr.dwg
Proposed Plans & Elevations 18/10/19
AA5990-2100_West Block.dwg to AA5990-2111_West Block.dwg
AA5990-2180_East Block.dwg to AA5990-2185_East Block.dwg
Proposed 3D Models 21/10/19
O446-AA5990C-E-ZZ-A-EAST-S73.dwg
O446-AA5990C-M-ZZ-A-MID-S73.dwg
O446-AA5990C-W-ZZ-A-WEST-S73.dwg
Proposed Plans & Elevations 21/10/19
AA5990-2140_Middle Block.dwg to AA5990-2151_Middle Block.dwg

Key:

Project: Kenavon Drive
Reading

Title: Internal ADF Results
Proposed Scheme 21/10/19
West Block

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
		BW	1:300	Oct 19	P915/I/250	20

POINT 2



GROUND FLOOR

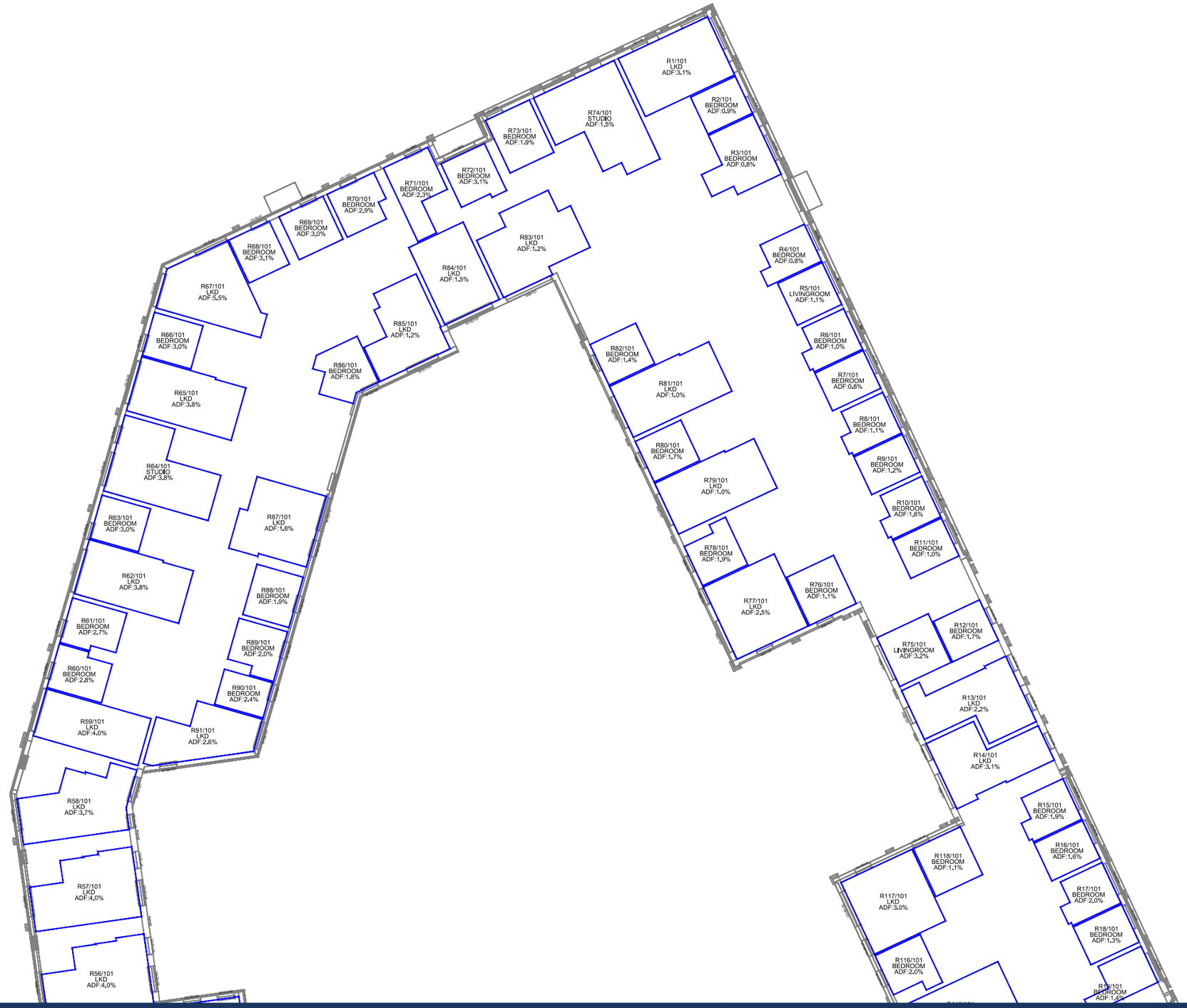
Sources: PRP
Topographical Survey 25/05/16
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O446-AA5990C-W-ZZ-A-WEST-S73.dwg
Proposed Plans & Elevations 21/10/19
AA5990-2140_Middle Block.dwg to AA5990-2151_Middle Block.dwg

Key:

Project: Kenavon Drive
Reading

Title: Internal ADF Results
Proposed Scheme 21/10/19
West Block

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
		BW	1:300	Oct 19	P915/I/251	20



FIRST FLOOR

Sources: PRP
Topographical Survey 25/05/16
0839-005 003 Existing Site Layout and Topographical Survey - Reading 130711 kr.dwg
Proposed Plans & Elevations 18/10/19
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AA5990-2180_East Block.dwg to AA5990-2185_East Block.dwg
Proposed 3D Models 21/10/19
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O446-AA5990C-M-ZZ-A-MID-S73.dwg
O446-AA5990C-W-ZZ-A-WEST-S73.dwg
Proposed Plans & Elevations 21/10/19
AA5990-2140_Middle Block.dwg to AA5990-2151_Middle Block.dwg

Key:

Project: Kenavon Drive
Reading

Title: Internal ADF Results
Proposed Scheme 21/10/19
West Block

Scheme Confirmed:

Date:

Drawn By: BW

Scale: 1:300

Date: Oct 19

Dwg No: P915/I/252

Rel: 20



FIRST FLOOR

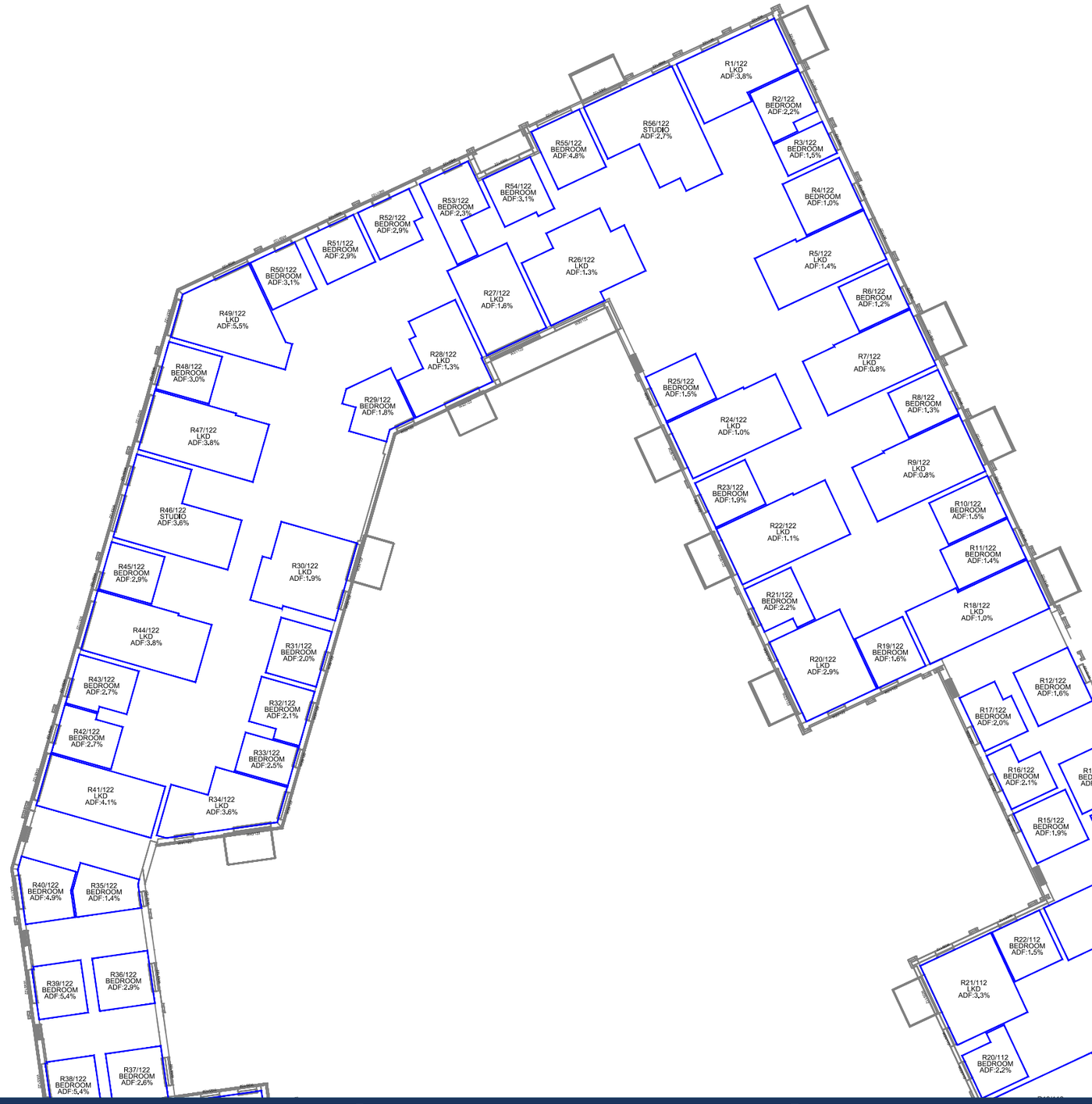
Sources: PRP
Topographical Survey 25/05/16
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O446-AA5990C-W-ZZ-A-WEST-S73.dwg
Proposed Plans & Elevations 21/10/19
AA5990-2140_Middle Block.dwg to AA5990-2151_Middle Block.dwg

Key:

Project: Kenavon Drive
Reading

Title: Internal ADF Results
Proposed Scheme 21/10/19
West Block

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
		BW	1:300	Oct 19	P915/I/253	20



SECOND FLOOR

Sources: PRP
Topographical Survey 25/05/16
0839-005 003 Existing Site Layout and Topographical Survey - Reading 130711 kr.dwg
Proposed Plans & Elevations 18/10/19
AA5990-2100_West Block.dwg to AA5990-2111_West Block.dwg
AA5990-2180_East Block.dwg to AA5990-2185_East Block.dwg
Proposed 3D Models 21/10/19
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O446-AA5990C-M-ZZ-A-MID-S73.dwg
O446-AA5990C-W-ZZ-A-WEST-S73.dwg
Proposed Plans & Elevations 21/10/19
AA5990-2140_Middle Block.dwg to AA5990-2151_Middle Block.dwg

Key:

Project: Kenavon Drive
Reading

Title: Internal ADF Results
Proposed Scheme 21/10/19
West Block

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
		BW	1:300	Oct 19	P915/I/254	20



SECOND FLOOR

Sources: PRP
Topographical Survey 25/05/16
0839-005 003 Existing Site Layout and Topographical Survey - Reading 130711 kr.dwg
Proposed Plans & Elevations 18/10/19
AA5990-2100_West Block.dwg to AA5990-2111_West Block.dwg
AA5990-2180_East Block.dwg to AA5990-2185_East Block.dwg
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O446-AA5990C-W-ZZ-A-WEST-S73.dwg
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AA5990-2140_Middle Block.dwg to AA5990-2151_Middle Block.dwg

Key:

Project: Kenavon Drive
Reading

Title: Internal ADF Results
Proposed Scheme 21/10/19
West Block

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
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THIRD FLOOR

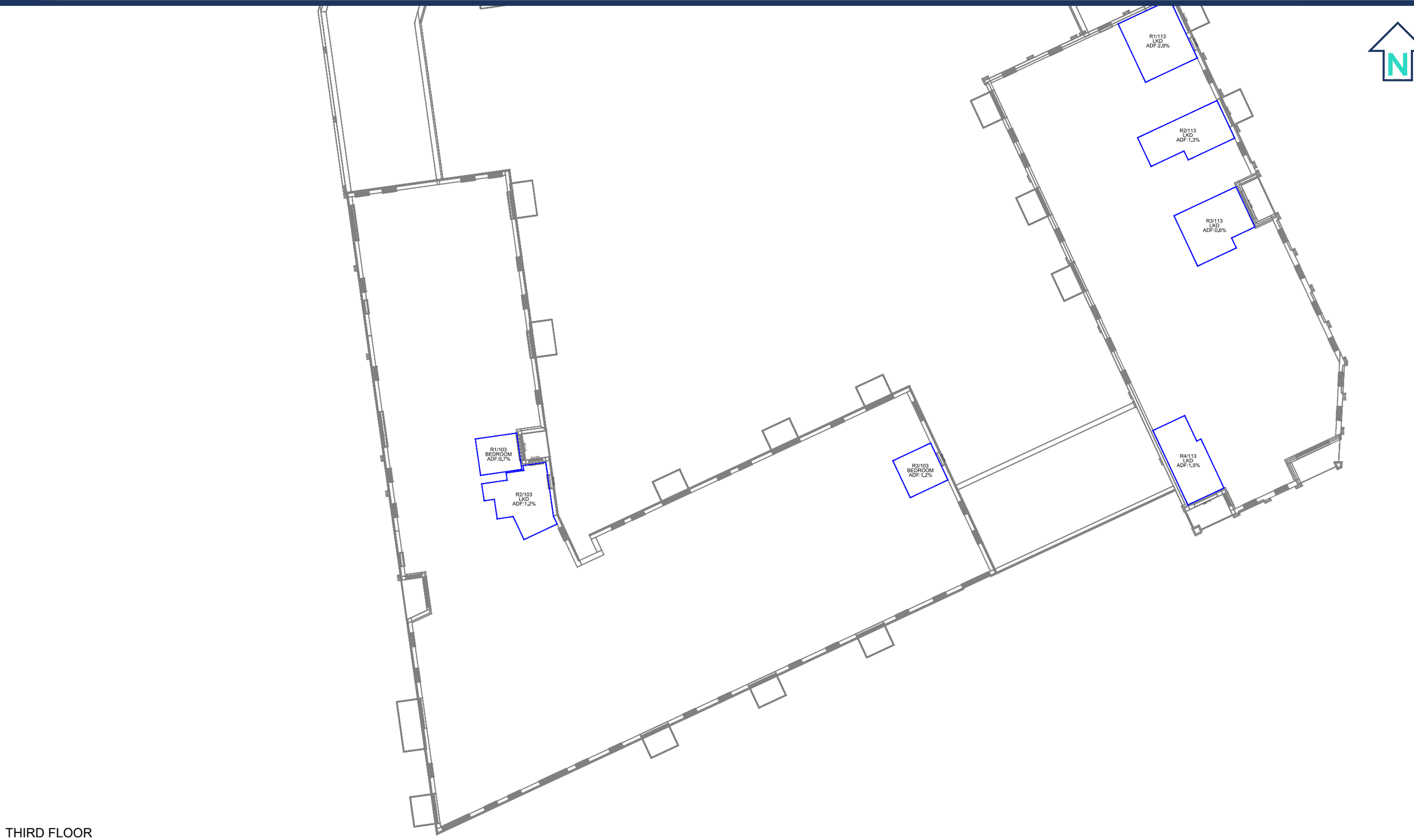
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AA5990-2180_East Block.dwg to AA5990-2185_East Block.dwg
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O446-AA5990C-W-ZZ-A-WEST-S73.dwg
Proposed Plans & Elevations 21/10/19
AA5990-2140_Middle Block.dwg to AA5990-2151_Middle Block.dwg

Key:

Project: Kenavon Drive
Reading

Title: Internal ADF Results
Proposed Scheme 21/10/19
West Block

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
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THIRD FLOOR

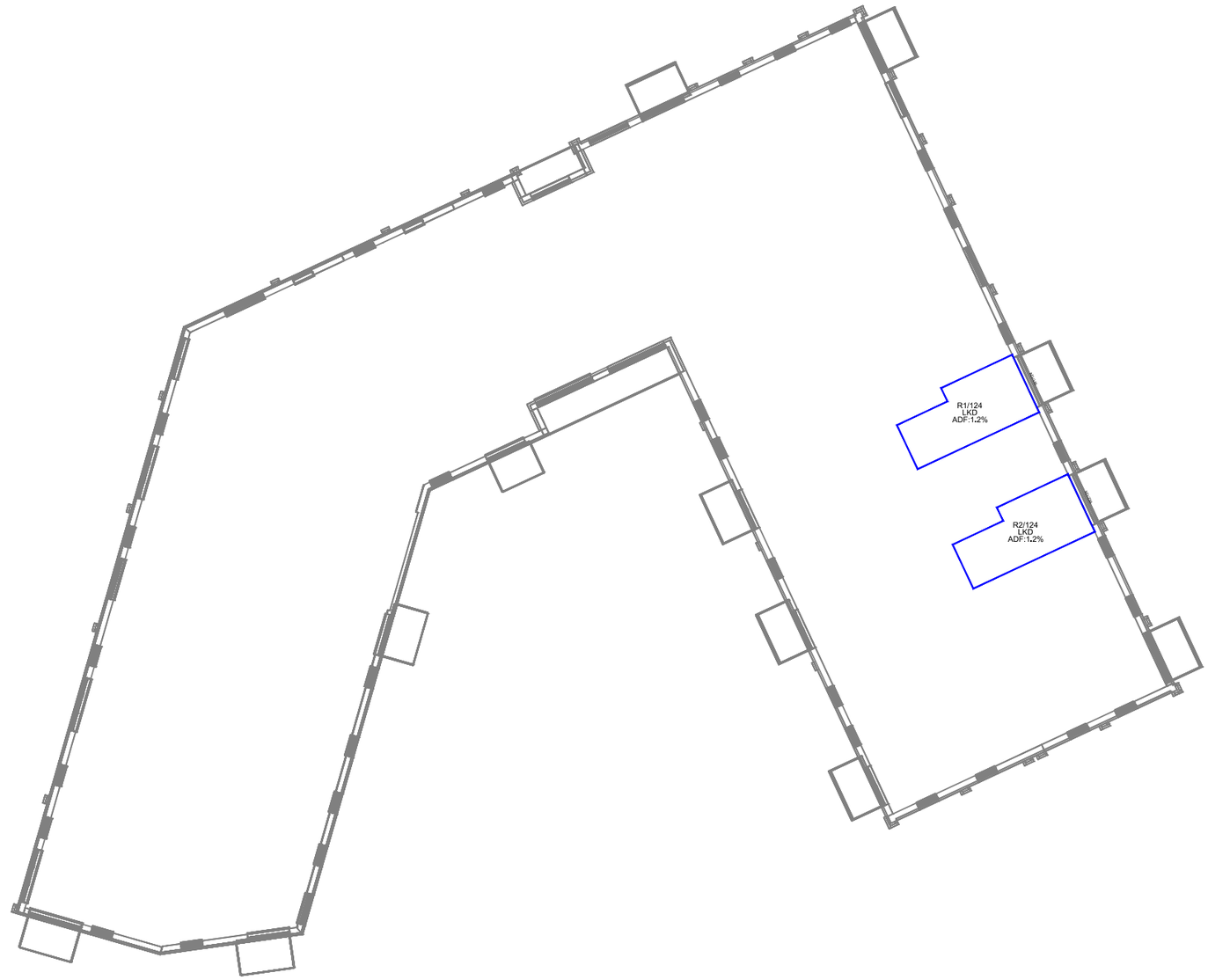
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Proposed Plans & Elevations 18/10/19
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AA5990-2180_East Block.dwg to AA5990-2185_East Block.dwg
Proposed 3D Models 21/10/19
O446-AA5990C-E-ZZ-A-EAST-S73.dwg
O446-AA5990C-M-ZZ-A-MID-S73.dwg
O446-AA5990C-W-ZZ-A-WEST-S73.dwg
Proposed Plans & Elevations 21/10/19
AA5990-2140_Middle Block.dwg to AA5990-2151_Middle Block.dwg

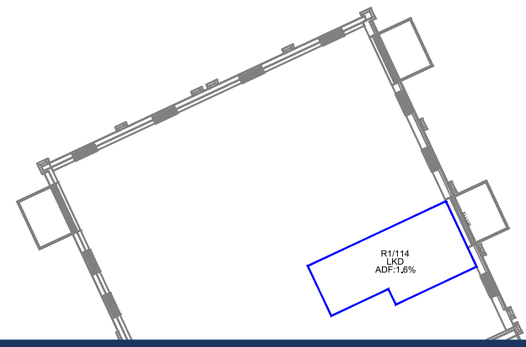
Key:

Project: Kenavon Drive
Reading

Title: Internal ADF Results
Proposed Scheme 21/10/19
West Block

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
		BW	1:300	Oct 19	P915/I/257	20





FOURTH FLOOR

Sources: PRP
Topographical Survey 25/05/16
0839-005 003 Existing Site Layout and Topographical Survey - Reading 130711 kr.dwg
Proposed Plans & Elevations 18/10/19
AA5990-2100_West Block.dwg to AA5990-2111_West Block.dwg
AA5990-2180_East Block.dwg to AA5990-2185_East Block.dwg
Proposed 3D Models 21/10/19
O446-AA5990C-E-ZZ-A-EAST-S73.dwg
O446-AA5990C-M-ZZ-A-MID-S73.dwg
O446-AA5990C-W-ZZ-A-WEST-S73.dwg
Proposed Plans & Elevations 21/10/19
AA5990-2140_Middle Block.dwg to AA5990-2151_Middle Block.dwg

Key:

Project: Kenavon Drive
Reading

Title: Internal ADF Results
Proposed Scheme 21/10/19
West Block

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
		BW	1:300	Oct 19	P915/I/258	20

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FOURTH FLOOR

Sources: PRP
Topographical Survey 25/05/16
0839-005 003 Existing Site Layout and Topographical Survey - Reading 130711 kr.dwg
Proposed Plans & Elevations 18/10/19
AA5990-2100_West Block.dwg to AA5990-2111_West Block.dwg
AA5990-2180_East Block.dwg to AA5990-2185_East Block.dwg
Proposed 3D Models 21/10/19
O446-AA5990C-E-ZZ-A-EAST-S73.dwg
O446-AA5990C-M-ZZ-A-MID-S73.dwg
O446-AA5990C-W-ZZ-A-WEST-S73.dwg
Proposed Plans & Elevations 21/10/19
AA5990-2140_Middle Block.dwg to AA5990-2151_Middle Block.dwg

Key:

Project: Kenavon Drive
Reading

Title: Internal ADF Results
Proposed Scheme 21/10/19
West Block

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
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GROUND FLOOR

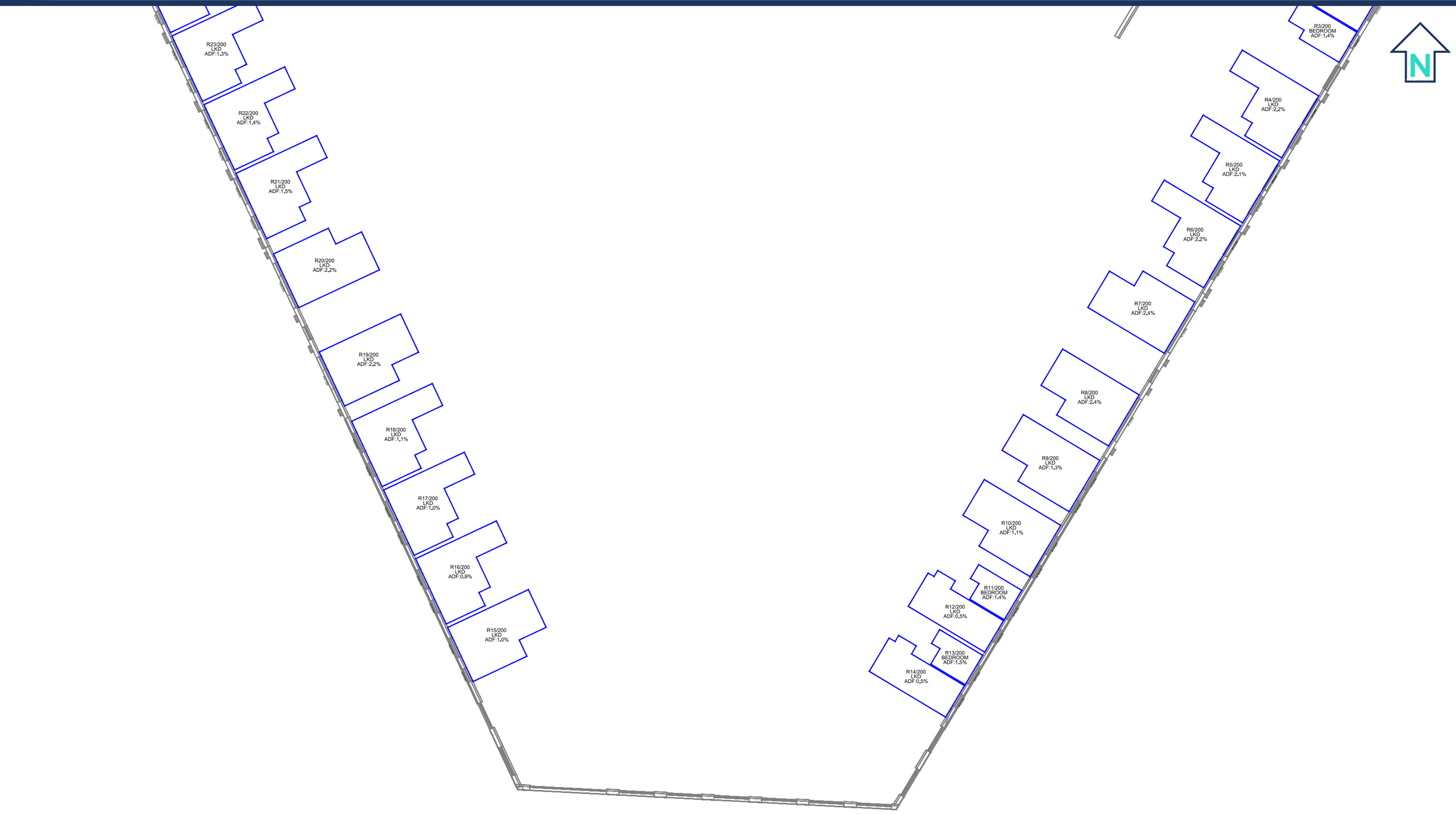
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Proposed Plans & Elevations 21/10/19
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Key:

Project: Kenavon Drive
Reading

Title: Internal ADF Results
Proposed Scheme 21/10/19
Middle Block

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
		BW	1:300	Oct 19	P915/I/260	20



GROUND FLOOR

Sources: PRP
Topographical Survey 25/05/16
0839-005 003 Existing Site Layout and Topographical Survey - Reading 130711 kr.dwg
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AA5990-2140_Middle Block.dwg to AA5990-2151_Middle Block.dwg

Key:

Project: Kenavon Drive
Reading

Title: Internal ADF Results
Proposed Scheme 21/10/19
Middle Block

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
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FIRST FLOOR

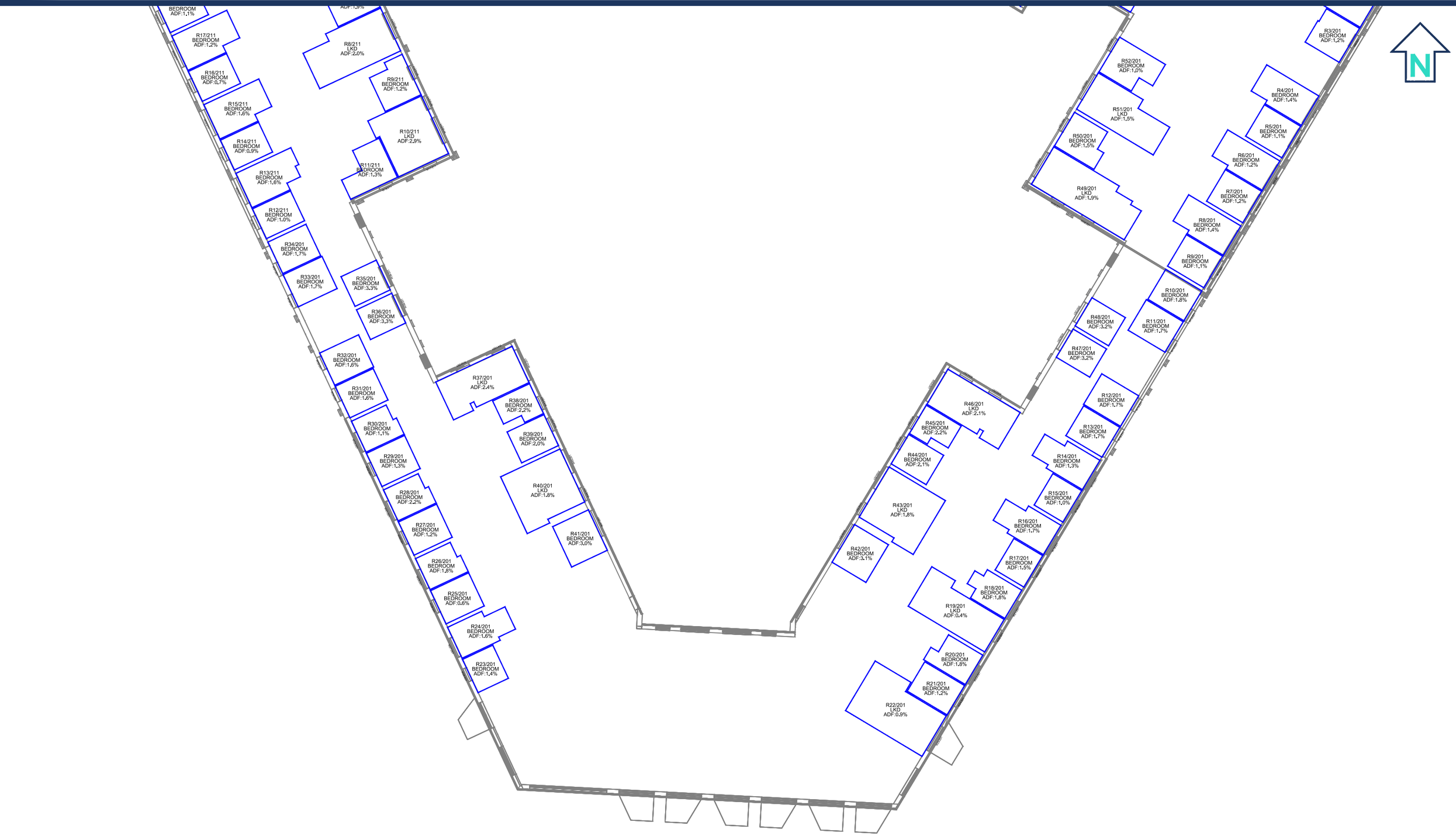
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Proposed Plans & Elevations 21/10/19
AA5990-2140_Middle Block.dwg to AA5990-2151_Middle Block.dwg

Key:

Project: Kenavon Drive
Reading

Title: Internal ADF Results
Proposed Scheme 21/10/19
Middle Block

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
		BW	1:300	Oct 19	P915/I/262	20



FIRST FLOOR

Sources: PRP
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0839-005 003 Existing Site Layout and Topographical Survey - Reading 130711 kr.dwg
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Proposed 3D Models 21/10/19
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AA5990-2140_Middle Block.dwg to AA5990-2151_Middle Block.dwg

Key:

Project: Kenavon Drive
Reading

Title: Internal ADF Results
Proposed Scheme 21/10/19
Middle Block

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
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SECOND FLOOR

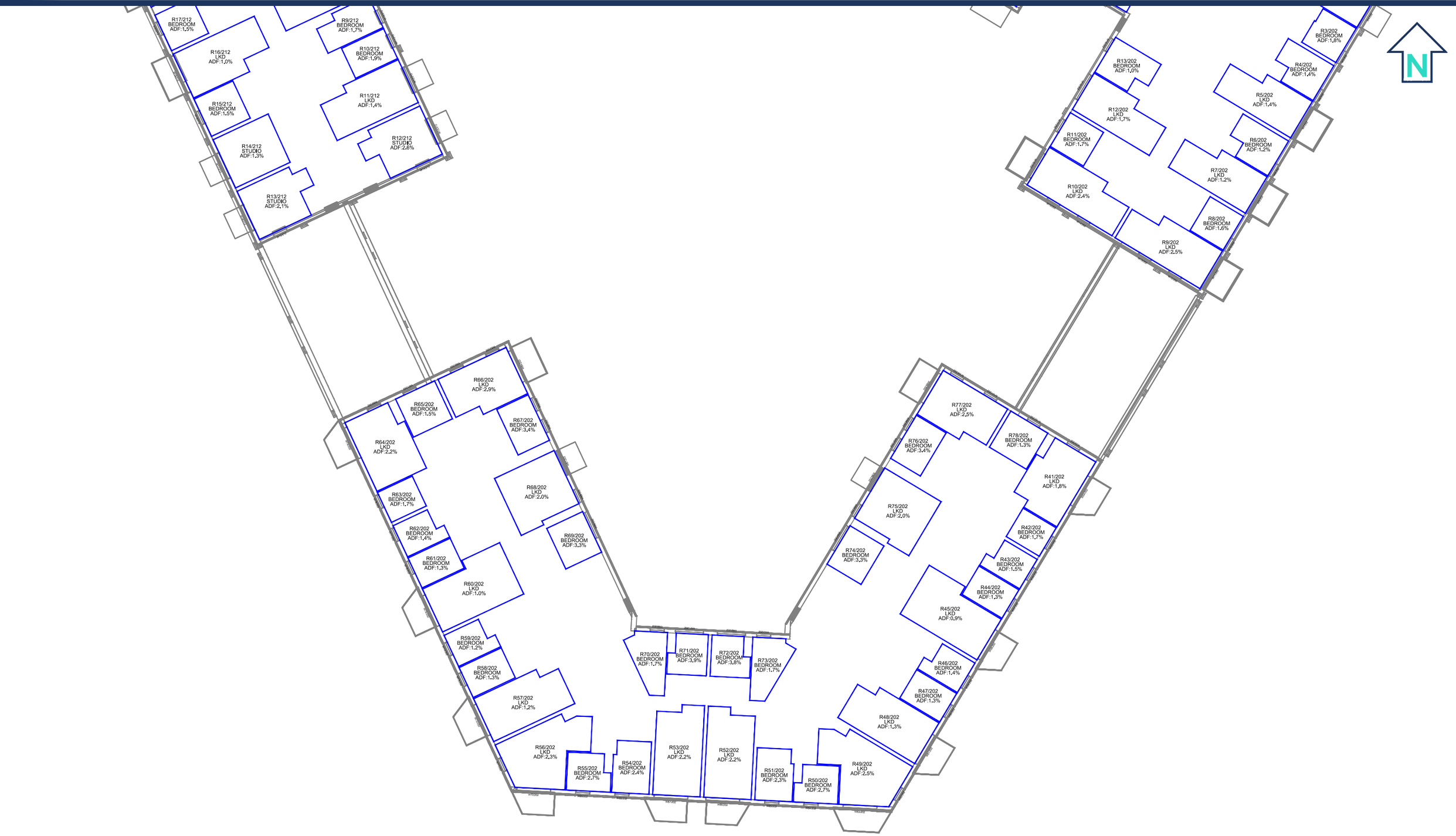
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O446-AA5990C-W-ZZ-A-WEST-S73.dwg
Proposed Plans & Elevations 21/10/19
AA5990-2140_Middle Block.dwg to AA5990-2151_Middle Block.dwg

Key:

Project: Kenavon Drive
Reading

Title: Internal ADF Results
Proposed Scheme 21/10/19
Middle Block

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
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SECOND FLOOR

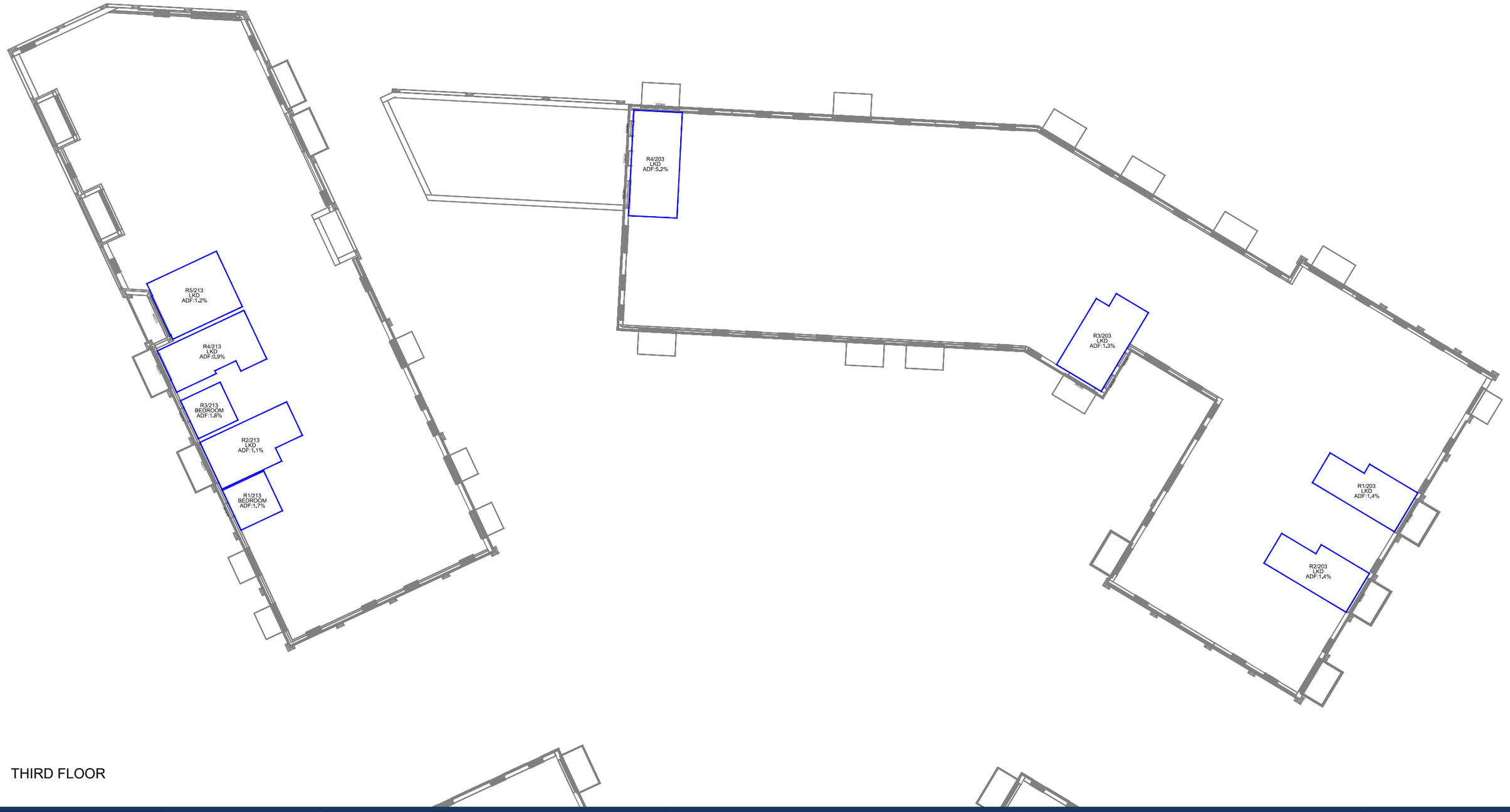
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O446-AA5990C-W-ZZ-A-WEST-S73.dwg
Proposed Plans & Elevations 21/10/19
AA5990-2140_Middle Block.dwg to AA5990-2151_Middle Block.dwg

Key:

Project: Kenavon Drive
Reading

Title: Internal ADF Results
Proposed Scheme 21/10/19
Middle Block

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
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THIRD FLOOR

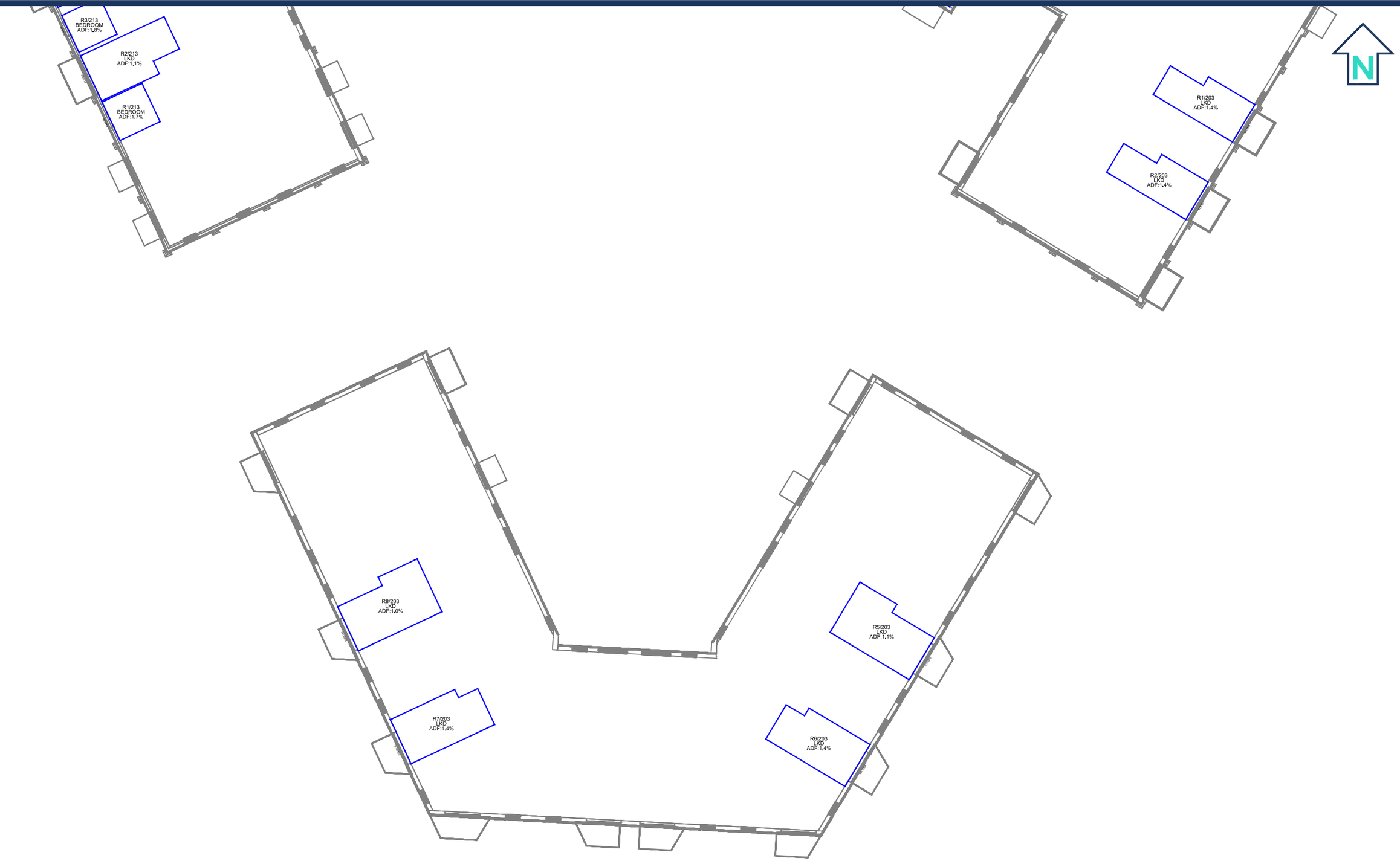
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Proposed Plans & Elevations 21/10/19
AA5990-2140_Middle Block.dwg to AA5990-2151_Middle Block.dwg

Key:

Project: Kenavon Drive
Reading

Title: Internal ADF Results
Proposed Scheme 21/10/19
Middle Block

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
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THIRD FLOOR

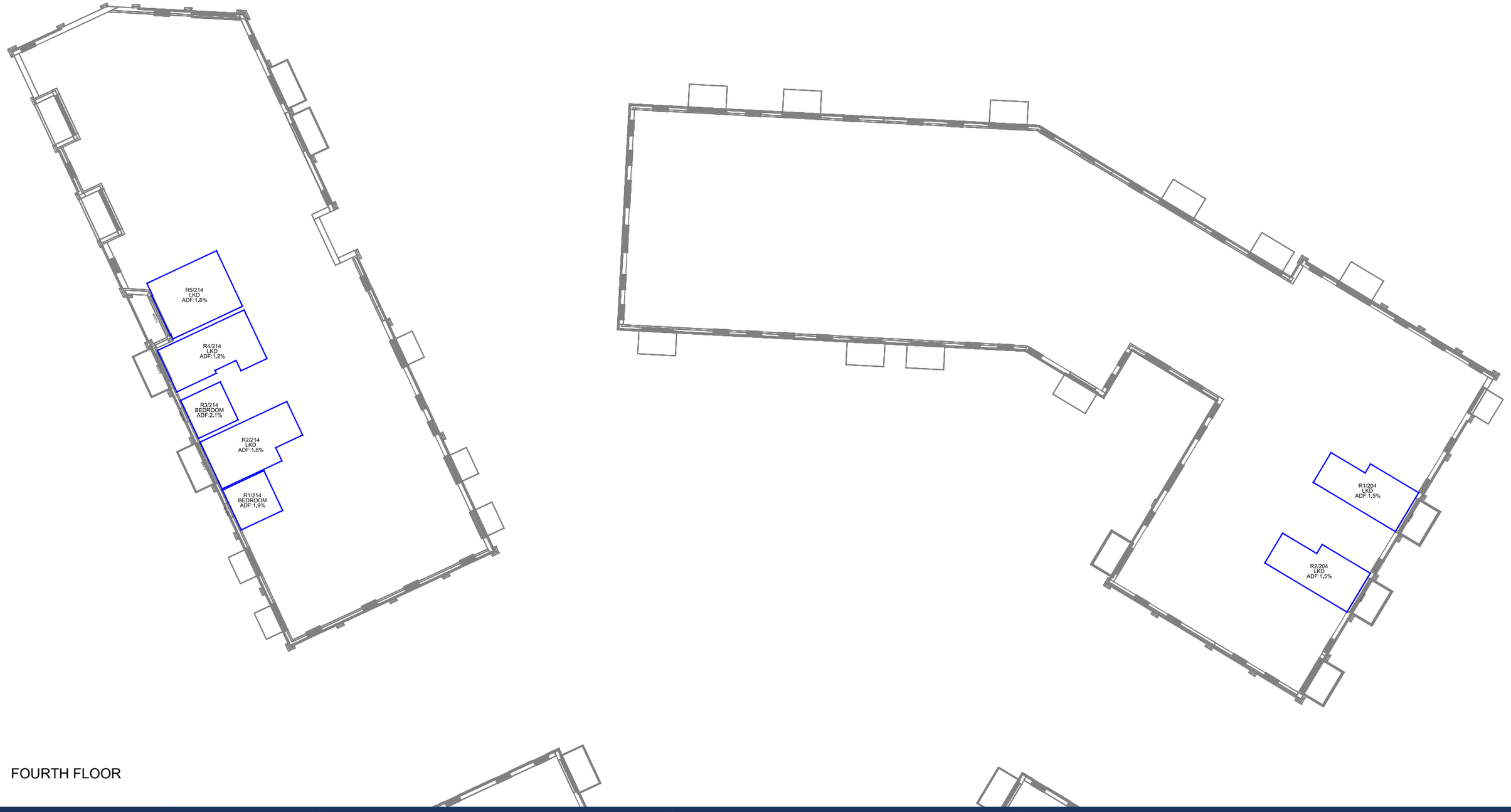
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AA5990-2140_Middle Block.dwg to AA5990-2151_Middle Block.dwg

Key:

Project: Kenavon Drive
Reading

Title: Internal ADF Results
Proposed Scheme 21/10/19
Middle Block

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
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FOURTH FLOOR

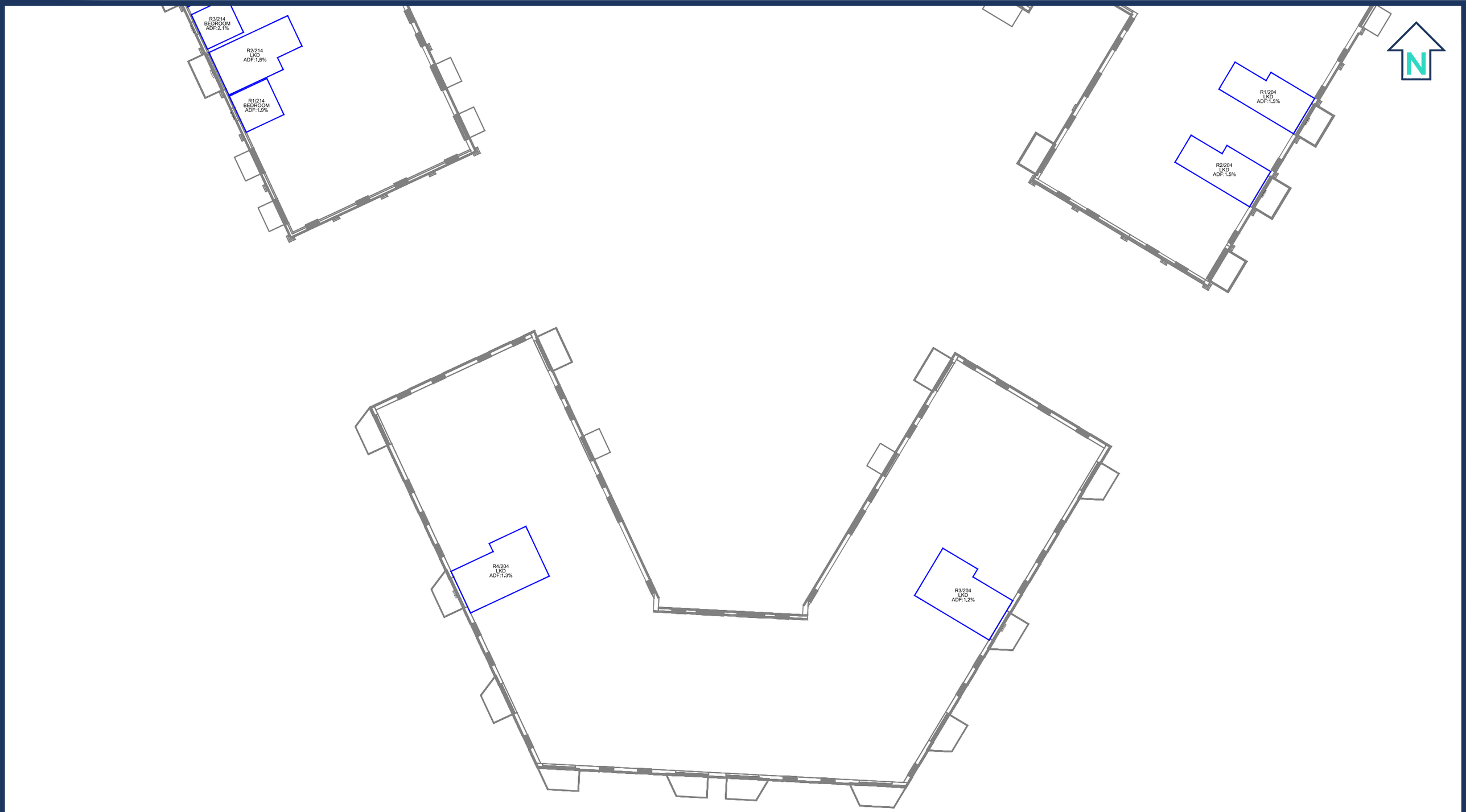
Sources: PRP
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AA5990-2180_East Block.dwg to AA5990-2185_East Block.dwg
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O446-AA5990C-W-ZZ-A-WEST-S73.dwg
Proposed Plans & Elevations 21/10/19
AA5990-2140_Middle Block.dwg to AA5990-2151_Middle Block.dwg

Key:

Project: Kenavon Drive
Reading

Title: Internal ADF Results
Proposed Scheme 21/10/19
Middle Block

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
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FOURTH FLOOR

Sources: PRP
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0839-005 003 Existing Site Layout and Topographical Survey - Reading 130711 kr.dwg
Proposed Plans & Elevations 18/10/19
AA5990-2100_West Block.dwg to AA5990-2111_West Block.dwg
AA5990-2180_East Block.dwg to AA5990-2185_East Block.dwg
Proposed 3D Models 21/10/19
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O446-AA5990C-M-ZZ-A-MID-S73.dwg
O446-AA5990C-W-ZZ-A-WEST-S73.dwg
Proposed Plans & Elevations 21/10/19
AA5990-2140_Middle Block.dwg to AA5990-2151_Middle Block.dwg

Key:

Project: Kenavon Drive
Reading

Title: Internal ADF Results
Proposed Scheme 21/10/19
Middle Block

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
		BW	1:300	Oct 19	P915/I/269	20



GROUND FLOOR

Sources: PRP
Topographical Survey 25/05/16
0839-005 003 Existing Site Layout and Topographical Survey - Reading 130711 kr.dwg
Proposed Plans & Elevations 18/10/19
AA5990-2100_West Block.dwg to AA5990-2111_West Block.dwg
AA5990-2180_East Block.dwg to AA5990-2185_East Block.dwg
Proposed 3D Models 21/10/19
O446-AA5990C-E-ZZ-A-EAST-S73.dwg
O446-AA5990C-M-ZZ-A-MID-S73.dwg
O446-AA5990C-W-ZZ-A-WEST-S73.dwg
Proposed Plans & Elevations 21/10/19
AA5990-2140_Middle Block.dwg to AA5990-2151_Middle Block.dwg

Key:

Project: Kenavon Drive
Reading

Title: Internal ADF Results
Proposed Scheme 21/10/19
East Block

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
		BW	1:300	Oct 19	P915/I/270	20



GROUND FLOOR

Sources: PRP
Topographical Survey 25/05/16
0839-005 003 Existing Site Layout and Topographical Survey - Reading 130711 kr.dwg
Proposed Plans & Elevations 18/10/19
AA5990-2100_West Block.dwg to AA5990-2111_West Block.dwg
AA5990-2180_East Block.dwg to AA5990-2185_East Block.dwg
Proposed 3D Models 21/10/19
O446-AA5990C-E-ZZ-A-EAST-S73.dwg
O446-AA5990C-M-ZZ-A-MID-S73.dwg
O446-AA5990C-W-ZZ-A-WEST-S73.dwg
Proposed Plans & Elevations 21/10/19
AA5990-2140_Middle Block.dwg to AA5990-2151_Middle Block.dwg

Key:

Project: Kenavon Drive
Reading

Title: Internal ADF Results
Proposed Scheme 21/10/19
East Block

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
		BW	1:300	Oct 19	P915/I/271	20



FIRST FLOOR

Sources: PRP
Topographical Survey 25/05/16
0839-005 003 Existing Site Layout and Topographical Survey - Reading 130711 kr.dwg
Proposed Plans & Elevations 18/10/19
AA5990-2100_West Block.dwg to AA5990-2111_West Block.dwg
AA5990-2180_East Block.dwg to AA5990-2185_East Block.dwg
Proposed 3D Models 21/10/19
O446-AA5990C-E-ZZ-A-EAST-S73.dwg
O446-AA5990C-M-ZZ-A-MID-S73.dwg
O446-AA5990C-W-ZZ-A-WEST-S73.dwg
Proposed Plans & Elevations 21/10/19
AA5990-2140_Middle Block.dwg to AA5990-2151_Middle Block.dwg

Key:

Project: Kenavon Drive
Reading

Title: Internal ADF Results
Proposed Scheme 21/10/19
East Block

Scheme Confirmed:

Date:

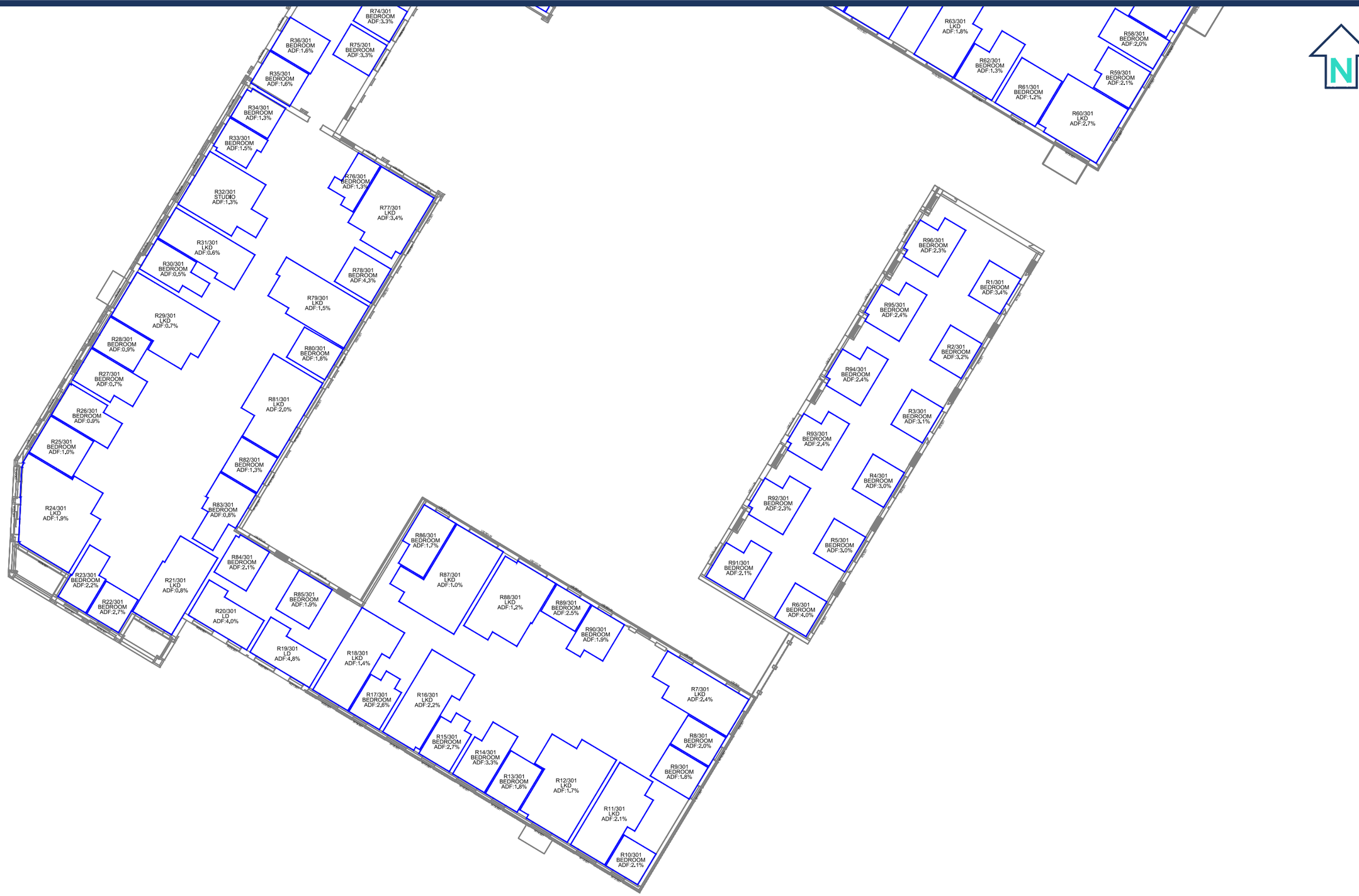
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Date: Oct 19

Dwg No: P915/I/272

Rel: 20



FIRST FLOOR

Sources: PRP
Topographical Survey 25/05/16
0839-005 003 Existing Site Layout and Topographical Survey - Reading 130711 kr.dwg
Proposed Plans & Elevations 18/10/19
AA5990-2100_West Block.dwg to AA5990-2111_West Block.dwg
AA5990-2180_East Block.dwg to AA5990-2185_East Block.dwg
Proposed 3D Models 21/10/19
O446-AA5990C-E-ZZ-A-EAST-S73.dwg
O446-AA5990C-M-ZZ-A-MID-S73.dwg
O446-AA5990C-W-ZZ-A-WEST-S73.dwg
Proposed Plans & Elevations 21/10/19
AA5990-2140_Middle Block.dwg to AA5990-2151_Middle Block.dwg

Key:

Project: Kenavon Drive
Reading

Title: Internal ADF Results
Proposed Scheme 21/10/19
East Block

Scheme Confirmed:

Date:

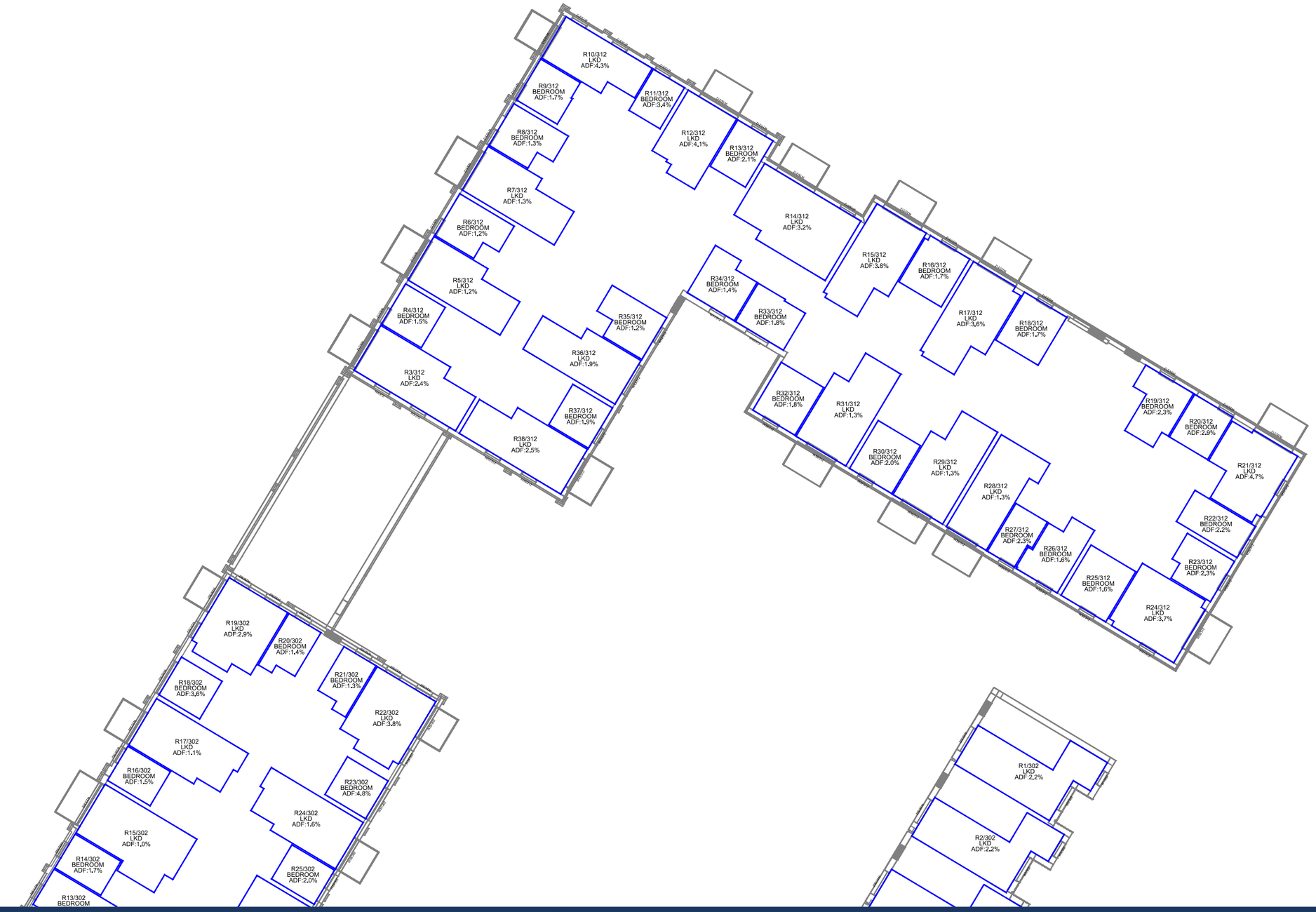
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Scale: 1:300

Date: Oct 19

Dwg No: P915/I/273

Rel: 20



SECOND FLOOR

Sources: PRP
Topographical Survey 25/05/16
0839-005 003 Existing Site Layout and Topographical Survey - Reading 130711 kr.dwg
Proposed Plans & Elevations 18/10/19
AA5990-2100_West Block.dwg to AA5990-2111_West Block.dwg
AA5990-2180_East Block.dwg to AA5990-2185_East Block.dwg
Proposed 3D Models 21/10/19
O446-AA5990C-E-ZZ-A-EAST-S73.dwg
O446-AA5990C-M-ZZ-A-MID-S73.dwg
O446-AA5990C-W-ZZ-A-WEST-S73.dwg
Proposed Plans & Elevations 21/10/19
AA5990-2140_Middle Block.dwg to AA5990-2151_Middle Block.dwg

Key:

Project: Kenavon Drive
Reading

Title: Internal ADF Results
Proposed Scheme 21/10/19
East Block

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
		BW	1:300	Oct 19	P915/I/274	20



SECOND FLOOR

Sources: PRP
Topographical Survey 25/05/16
0839-005 003 Existing Site Layout and Topographical Survey - Reading 130711 kr.dwg
Proposed Plans & Elevations 18/10/19
AA5990-2100_West Block.dwg to AA5990-2111_West Block.dwg
AA5990-2180_East Block.dwg to AA5990-2185_East Block.dwg
Proposed 3D Models 21/10/19
O446-AA5990C-E-ZZ-A-EAST-S73.dwg
O446-AA5990C-M-ZZ-A-MID-S73.dwg
O446-AA5990C-W-ZZ-A-WEST-S73.dwg
Proposed Plans & Elevations 21/10/19
AA5990-2140_Middle Block.dwg to AA5990-2151_Middle Block.dwg

Key:

Project: Kenavon Drive
Reading

Title: Internal ADF Results
Proposed Scheme 21/10/19
East Block

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
		BW	1:300	Oct 19	P915/I/275	20



THIRD FLOOR

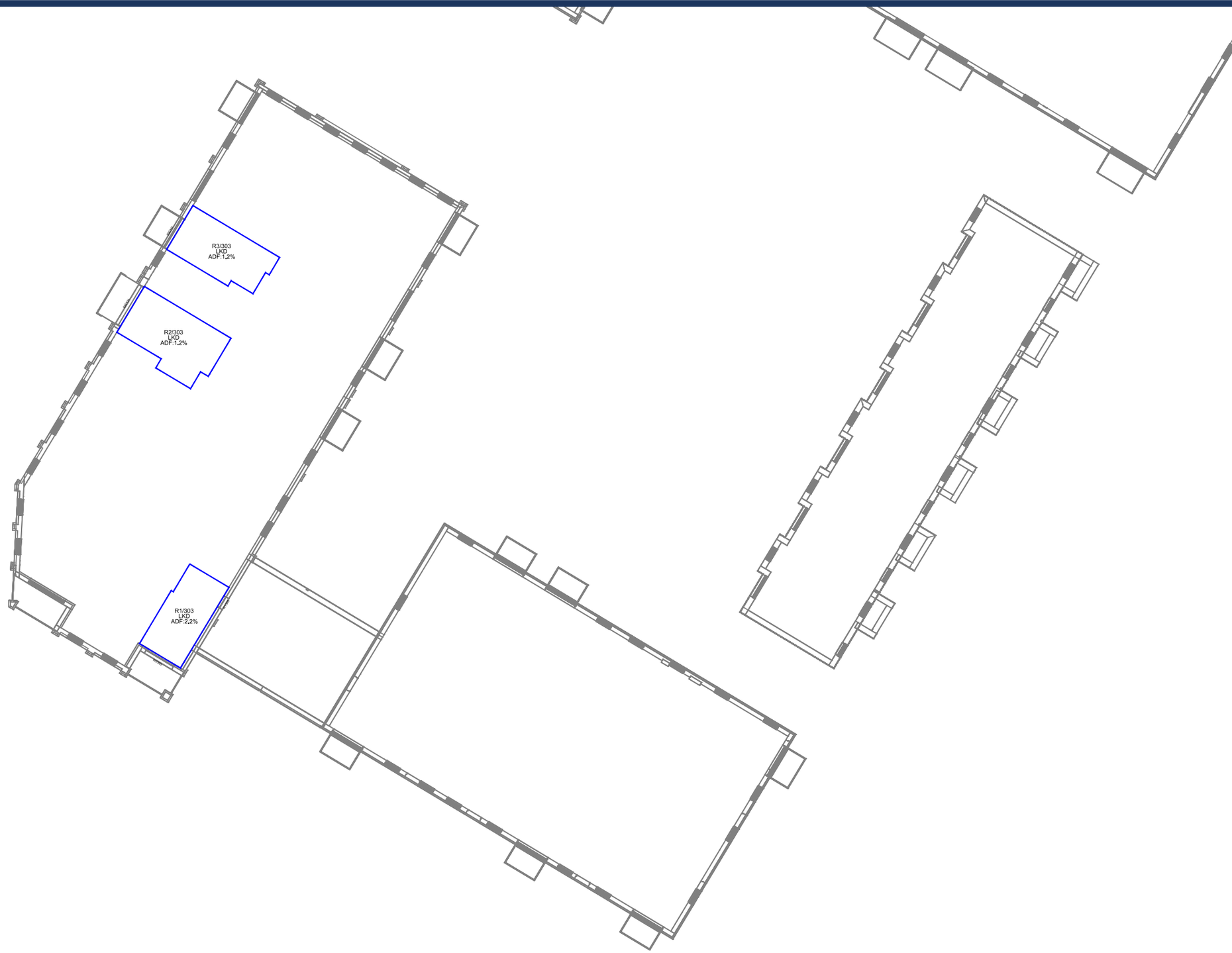
Sources: PRP
Topographical Survey 25/05/16
0839-005 003 Existing Site Layout and Topographical Survey - Reading 130711 kr.dwg
Proposed Plans & Elevations 18/10/19
AA5990-2100_West Block.dwg to AA5990-2111_West Block.dwg
AA5990-2180_East Block.dwg to AA5990-2185_East Block.dwg
Proposed 3D Models 21/10/19
O446-AA5990C-E-ZZ-A-EAST-S73.dwg
O446-AA5990C-M-ZZ-A-MID-S73.dwg
O446-AA5990C-W-ZZ-A-WEST-S73.dwg
Proposed Plans & Elevations 21/10/19
AA5990-2140_Middle Block.dwg to AA5990-2151_Middle Block.dwg

Key:

Project: Kenavon Drive
Reading

Title: Internal ADF Results
Proposed Scheme 21/10/19
East Block

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
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THIRD FLOOR

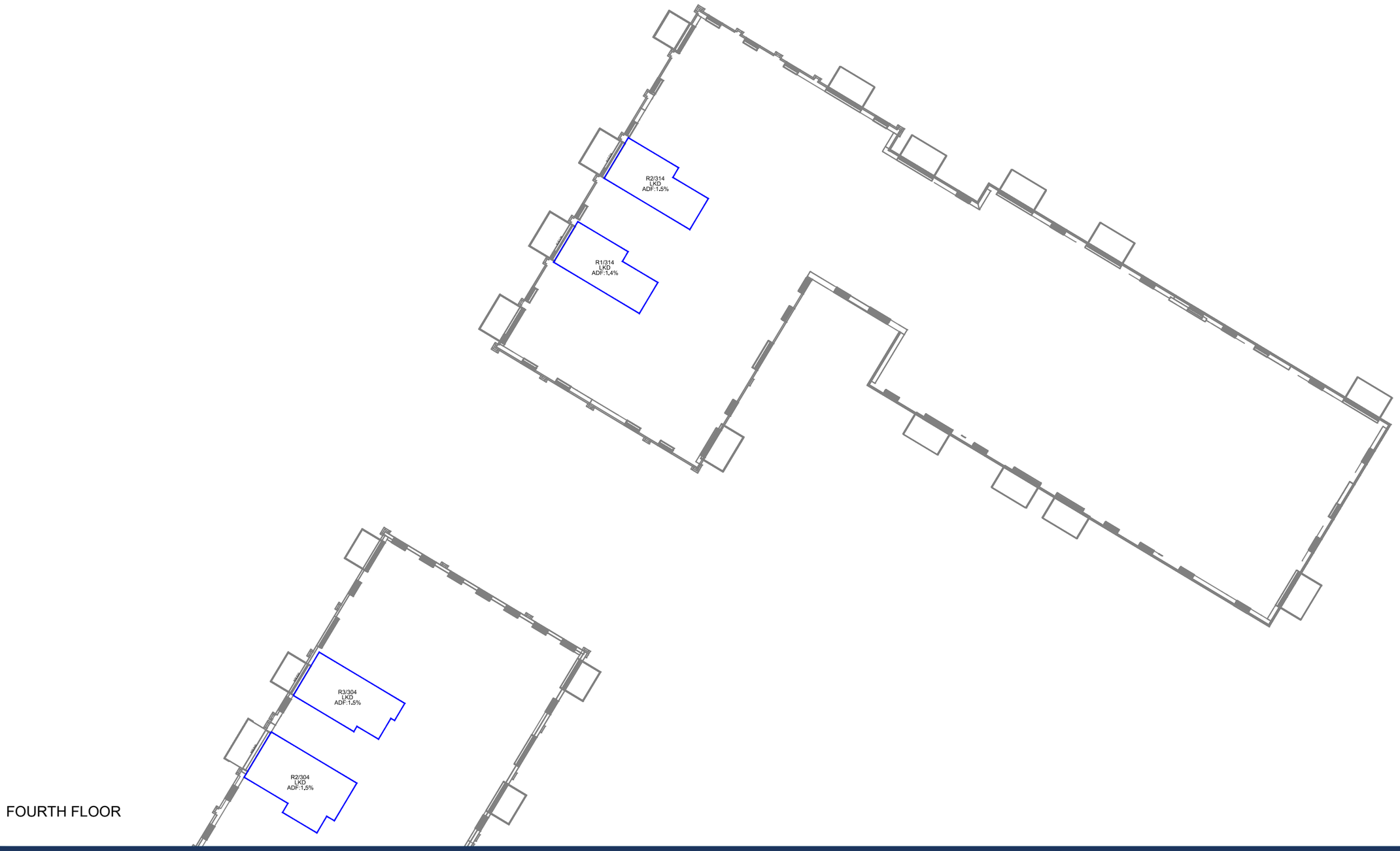
Sources: PRP
Topographical Survey 25/05/16
0839-005 003 Existing Site Layout and Topographical Survey - Reading 130711 kr.dwg
Proposed Plans & Elevations 18/10/19
AA5990-2100_West Block.dwg to AA5990-2111_West Block.dwg
AA5990-2180_East Block.dwg to AA5990-2185_East Block.dwg
Proposed 3D Models 21/10/19
O446-AA5990C-E-ZZ-A-EAST-S73.dwg
O446-AA5990C-M-ZZ-A-MID-S73.dwg
O446-AA5990C-W-ZZ-A-WEST-S73.dwg
Proposed Plans & Elevations 21/10/19
AA5990-2140_Middle Block.dwg to AA5990-2151_Middle Block.dwg

Key:

Project: Kenavon Drive
Reading

Title: Internal ADF Results
Proposed Scheme 21/10/19
East Block

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
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FOURTH FLOOR

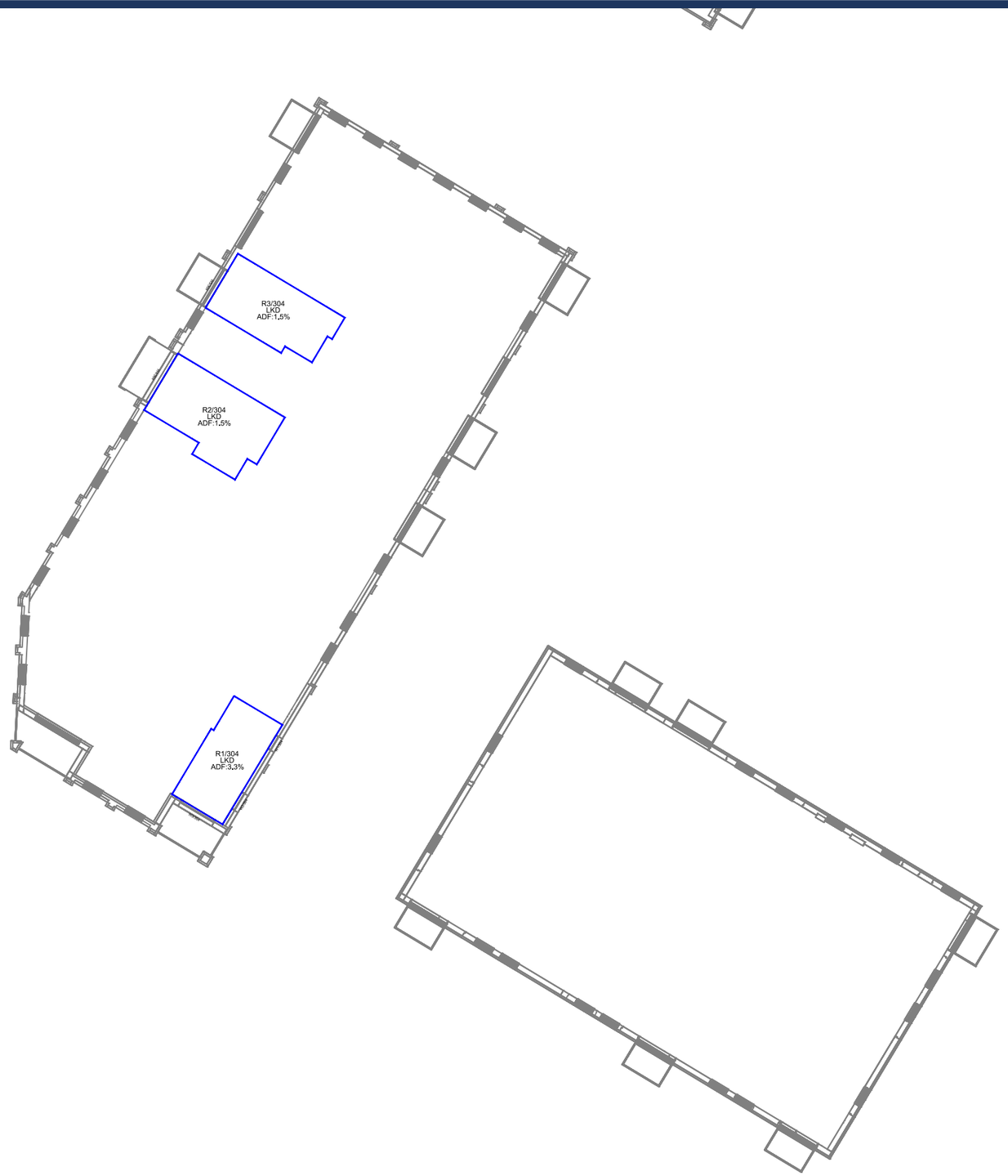
Sources: PRP
Topographical Survey 25/05/16
0839-005 003 Existing Site Layout and Topographical Survey - Reading 130711 kr.dwg
Proposed Plans & Elevations 18/10/19
AA5990-2100_West Block.dwg to AA5990-2111_West Block.dwg
AA5990-2180_East Block.dwg to AA5990-2185_East Block.dwg
Proposed 3D Models 21/10/19
O446-AA5990C-E-ZZ-A-EAST-S73.dwg
O446-AA5990C-M-ZZ-A-MID-S73.dwg
O446-AA5990C-W-ZZ-A-WEST-S73.dwg
Proposed Plans & Elevations 21/10/19
AA5990-2140_Middle Block.dwg to AA5990-2151_Middle Block.dwg

Key:

Project: Kenavon Drive
Reading

Title: Internal ADF Results
Proposed Scheme 21/10/19
East Block

Scheme Confirmed:	Date:	Drawn By:	Scale:	Date:	Dwg No:	Rel:
		BW	1:300	Oct 19	P915/I/278	20



FOURTH FLOOR

Sources: PRP
Topographical Survey 25/05/16
0839-005 003 Existing Site Layout and Topographical Survey - Reading 130711 kr.dwg
Proposed Plans & Elevations 18/10/19
AA5990-2100_West Block.dwg to AA5990-2111_West Block.dwg
AA5990-2180_East Block.dwg to AA5990-2185_East Block.dwg
Proposed 3D Models 21/10/19
O446-AA5990C-E-ZZ-A-EAST-S73.dwg
O446-AA5990C-M-ZZ-A-MID-S73.dwg
O446-AA5990C-W-ZZ-A-WEST-S73.dwg
Proposed Plans & Elevations 21/10/19
AA5990-2140_Middle Block.dwg to AA5990-2151_Middle Block.dwg

Key:

Project: Kenavon Drive
Reading

Title: Internal ADF Results
Proposed Scheme 21/10/19
East Block

Scheme Confirmed:

Date:

Drawn By: BW

Scale: 1:300

Date: Oct 19

Dwg No: P915/I/279

Rel: 20

Appendix 3:

ADF (Daylight) Analysis – Balconies Removed

DAYLIGHT ANALYSIS

KENAVON DRIVE, READING

PROPOSED SCHEME 21/10/19

P915 - rel20

INTERNAL DAYLIGHT

Room	Room Use	Window	VSC(%)	ADF(%)	Total ADF(%)
EAST BLOCK					
R1/300	LKD	W1/300	21.40	1.1	1.1
R2/300	LKD	W2/300	19.95	1.1	1.1
R3/300	LKD	W3/300	18.91	1.0	1.0
R4/300	LKD	W4/300	18.08	1.0	1.0
R5/300	LKD	W5/300	17.74	1.0	1.0
R6/300	LKD	W6/300	17.80	1.2	1.2
R7/300	LKD	W7/300	19.89	1.6	1.6
R8/300	BEDROOM	W8/300	20.79	1.6	1.6
R9/300	BEDROOM	W9/300	21.53	1.4	1.4
R10/300	BEDROOM	W10/300	34.89	2.6	2.6
R11/300	LKD	W11/300	34.93	2.8	2.8
R12/300	BEDROOM	W12/300	35.06	2.6	2.6
R13/300	LKD	W13/300	35.12	2.8	2.8
R14/300	BEDROOM	W14/300	35.11	2.7	2.7
R15/300	LKD	W15/300	34.99	2.8	2.8
R16/300	BEDROOM	W16/300	34.84	2.7	2.7
R17/300	LKD	W17/300	34.62	2.8	2.8
R18/300	LKD	W18/300	33.49	2.0	2.0
R19/300	LKD	W19/300	22.83	1.5	1.5
R20/300	STUDIO	W20/300	16.13	0.5	
R20/300	STUDIO	W21/300	15.84	0.9	1.4
R21/300	STUDIO	W22/300	13.14	0.4	
R21/300	STUDIO	W23/300	14.19	0.8	1.2

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DAYLIGHT ANALYSIS

KENAVON DRIVE, READING

PROPOSED SCHEME 21/10/19

P915 - rel20

INTERNAL DAYLIGHT

Room	Room Use	Window	VSC(%)	ADF(%)	Total ADF(%)
R22/300	STUDIO	W24/300	14.79	0.8	
R22/300	STUDIO	W25/300	15.10	0.8	1.6
R23/300	LKD	W26/300	15.19	0.9	
R23/300	LKD	W27/300	16.08	1.0	1.9
R24/300	LKD	W28/300	16.89	2.3	2.3
R25/300	LKD	W29/300	16.76	2.3	2.3
R26/300	LKD	W30/300	15.98	0.9	
R26/300	LKD	W31/300	15.34	1.1	2.0
R27/300	LKD	W32/300	15.23	0.9	
R27/300	LKD	W33/300	14.85	1.1	2.0
R28/300	LKD	W34/300	15.68	0.9	
R28/300	LKD	W35/300	16.10	1.2	2.1
R29/300	BEDROOM	W36/300	20.20	1.4	1.4
R30/300	LKD	W37/300	22.66	1.9	
R30/300	LKD	W38/300	36.49	1.2	
R30/300	LKD	W39/300	36.41	1.2	
R30/300	LKD	W40/300	36.22	1.2	5.5
R31/300	BEDROOM	W41/300	36.30	2.4	2.4
R32/300	LKD	W42/300	36.34	3.4	3.4
R33/300	BEDROOM	W43/300	35.96	2.3	2.3
R34/300	LKD	W44/300	29.77	2.4	2.4
R35/300	BEDROOM	W45/300	27.18	2.0	2.0
R36/300	LKD	W46/300	36.17	2.4	
R36/300	LKD	W47/300	23.02	0.7	3.1
R37/300	BEDROOM	W48/300	23.77	1.5	1.5
R38/300	LKD	W49/300	35.95	2.4	
R38/300	LKD	W50/300	22.78	0.7	3.1
R39/300	BEDROOM	W51/300	23.53	1.5	1.5

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DAYLIGHT ANALYSIS

KENAVON DRIVE, READING

PROPOSED SCHEME 21/10/19

P915 - rel20

INTERNAL DAYLIGHT

Room	Room Use	Window	VSC(%)	ADF(%)	Total ADF(%)
R40/300	BEDROOM	W52/300	35.34	1.9	1.9
R41/300	LKD	W53/300	35.08	1.2	
R41/300	LKD	W54/300	19.12	1.2	
R41/300	LKD	W55/300	29.00	1.1	3.5
R42/300	BEDROOM	W56/300	27.99	1.8	1.8
R1/301	BEDROOM	W1/301	24.21	3.4	3.4
R2/301	BEDROOM	W2/301	22.81	3.2	3.2
R3/301	BEDROOM	W3/301	21.84	3.1	3.1
R4/301	BEDROOM	W4/301	21.12	3.0	3.0
R5/301	BEDROOM	W5/301	20.84	3.0	3.0
R6/301	BEDROOM	W6/301	20.88	4.0	4.0
R7/301	LKD	W7/301	13.94	0.7	
R7/301	LKD	W8/301	14.26	0.7	
R7/301	LKD	W9/301	23.14	1.7	3.1
R8/301	BEDROOM	W10/301	23.83	2.0	2.0
R9/301	BEDROOM	W11/301	24.95	1.8	1.8
R10/301	BEDROOM	W12/301	36.48	3.2	3.2
R11/301	LKD	W13/301	36.50	2.2	2.2
R12/301	LKD	W14/301	36.50	1.7	1.7
R13/301	BEDROOM	W15/301	36.44	2.6	2.6
R14/301	BEDROOM	W16/301	36.44	3.4	3.4
R15/301	BEDROOM	W17/301	36.33	2.7	2.7
R16/301	LKD	W18/301	36.24	2.2	2.2
R17/301	BEDROOM	W19/301	36.04	2.7	2.7
R18/301	LKD	W20/301	35.79	2.2	2.2

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DAYLIGHT ANALYSIS

KENAVON DRIVE, READING

PROPOSED SCHEME 21/10/19

P915 - rel20

INTERNAL DAYLIGHT

Room	Room Use	Window	VSC(%)	ADF(%)	Total ADF(%)
R19/301	LD	W21/301	35.42	1.9	
R19/301	LD	W22/301	34.68	2.9	4.8
R20/301	LD	W23/301	32.25	1.8	
R20/301	LD	W24/301	24.01	2.2	4.0
R21/301	LKD	W25/301	15.64	1.6	1.6
R22/301	BEDROOM	W26/301	36.00	2.7	2.7
R23/301	BEDROOM	W27/301	35.89	2.2	2.2
R24/301	LKD	W28/301	13.78	1.5	
R24/301	LKD	W29/301	26.23	0.6	
R24/301	LKD	W30/301	25.10	0.6	2.7
R25/301	BEDROOM	W31/301	19.88	1.0	1.0
R26/301	BEDROOM	W32/301	19.18	0.9	0.9
R27/301	BEDROOM	W33/301	18.46	0.7	0.7
R28/301	BEDROOM	W34/301	17.96	0.9	0.9
R29/301	LKD	W35/301	17.34	0.9	0.9
R30/301	BEDROOM	W36/301	17.05	0.5	0.5
R31/301	LKD	W37/301	17.08	0.9	0.9
R32/301	STUDIO	W38/301	17.35	0.7	
R32/301	STUDIO	W39/301	17.57	0.7	1.4
R33/301	BEDROOM	W40/301	18.24	1.6	1.6
R34/301	BEDROOM	W41/301	18.77	1.8	1.8
R35/301	BEDROOM	W42/301	18.87	1.6	1.6
R36/301	BEDROOM	W43/301	18.97	1.6	1.6
R37/301	BEDROOM	W44/301	18.99	1.6	1.6
R38/301	BEDROOM	W45/301	18.90	1.6	1.6
R39/301	BEDROOM	W46/301	18.60	1.5	1.5

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DAYLIGHT ANALYSIS

KENAVON DRIVE, READING

PROPOSED SCHEME 21/10/19

P915 - rel20

INTERNAL DAYLIGHT

Room	Room Use	Window	VSC(%)	ADF(%)	Total ADF(%)
R40/301	BEDROOM	W47/301	18.05	1.8	1.8
R41/301	BEDROOM	W48/301	17.07	1.4	1.4
R42/301	BEDROOM	W49/301	16.95	1.4	1.4
R43/301	BEDROOM	W50/301	17.49	1.4	1.4
R44/301	BEDROOM	W51/301	18.12	1.6	1.6
R45/301	BEDROOM	W52/301	21.77	1.2	1.2
R46/301	LKD	W53/301	24.35	1.4	
R46/301	LKD	W54/301	38.31	1.1	
R46/301	LKD	W55/301	38.29	1.1	
R46/301	LKD	W56/301	38.25	1.1	4.7
R47/301	BEDROOM	W57/301	38.21	2.6	2.6
R48/301	BEDROOM	W58/301	38.18	2.0	2.0
R49/301	LKD	W59/301	38.13	3.3	3.3
R50/301	LKD	W60/301	29.05	0.9	
R50/301	LKD	W61/301	32.81	2.6	3.5
R51/301	BEDROOM	W62/301	38.05	2.4	2.4
R52/301	LKD	W63/301	38.02	3.6	3.6
R53/301	BEDROOM	W64/301	37.96	2.4	2.4
R54/301	LKD	W65/301	37.90	3.6	3.6
R55/301	BEDROOM	W66/301	37.65	2.1	2.1
R56/301	BEDROOM	W67/301	37.57	2.7	2.7
R57/301	LKD	W68/301	37.42	1.3	
R57/301	LKD	W69/301	31.56	3.1	4.4
R58/301	BEDROOM	W70/301	30.65	2.0	2.0
R59/301	BEDROOM	W71/301	29.88	2.1	2.1

DAYLIGHT ANALYSIS

KENAVON DRIVE, READING

PROPOSED SCHEME 21/10/19

P915 - rel20

INTERNAL DAYLIGHT

Room	Room Use	Window	VSC(%)	ADF(%)	Total ADF(%)
R60/301	LKD	W72/301	28.49	1.0	
R60/301	LKD	W73/301	18.06	2.1	3.1
R61/301	BEDROOM	W74/301	16.43	1.2	1.2
R62/301	BEDROOM	W75/301	19.49	1.3	1.3
R63/301	LKD	W76/301	21.69	2.0	2.0
R64/301	LKD	W77/301	23.90	2.0	2.0
R65/301	BEDROOM	W78/301	24.00	1.8	1.8
R66/301	LKD	W79/301	23.38	2.0	2.0
R67/301	BEDROOM	W80/301	21.94	1.7	1.7
R68/301	BEDROOM	W81/301	9.59	1.2	1.2
R69/301	BEDROOM	W82/301	13.52	1.9	1.9
R70/301	BEDROOM	W83/301	13.07	1.1	1.1
R71/301	LKD	W84/301	17.89	1.8	1.8
R72/301	BEDROOM	W85/301	20.98	1.7	1.7
R73/301	LKD	W86/301	22.63	1.6	
R73/301	LKD	W87/301	18.71	0.6	
R73/301	LKD	W88/301	16.16	0.6	2.8
R74/301	BEDROOM	W89/301	19.77	3.3	3.3
R75/301	BEDROOM	W90/301	19.60	3.3	3.3
R76/301	BEDROOM	W91/301	12.99	1.3	1.3
R77/301	LKD	W92/301	15.02	0.6	
R77/301	LKD	W93/301	16.05	0.6	
R77/301	LKD	W94/301	25.98	2.1	
R77/301	LKD	W95/301	25.55	0.9	4.2
R78/301	BEDROOM	W96/301	24.62	4.3	4.3
R79/301	LKD	W97/301	23.24	2.1	2.1

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DAYLIGHT ANALYSIS

KENAVON DRIVE, READING

PROPOSED SCHEME 21/10/19

P915 - rel20

INTERNAL DAYLIGHT

Room	Room Use	Window	VSC(%)	ADF(%)	Total ADF(%)
R80/301	BEDROOM	W98/301	22.24	2.0	2.0
R81/301	LKD	W99/301	20.34	1.8	
R81/301	LKD	W100/301	18.16	0.7	2.5
R82/301	BEDROOM	W101/301	13.05	1.3	1.3
R83/301	BEDROOM	W102/301	10.21	0.8	0.8
R84/301	BEDROOM	W103/301	12.35	2.2	2.2
R85/301	BEDROOM	W104/301	10.34	1.9	1.9
R86/301	BEDROOM	W105/301	22.15	1.7	1.7
R87/301	LKD	W106/301	23.11	1.8	1.8
R88/301	LKD	W107/301	23.33	2.2	2.2
R89/301	BEDROOM	W108/301	22.59	2.5	2.5
R90/301	BEDROOM	W109/301	21.30	1.9	1.9
R91/301	BEDROOM	W110/301	15.71	2.1	2.1
R92/301	BEDROOM	W111/301	18.22	2.3	2.3
R93/301	BEDROOM	W112/301	19.87	2.4	2.4
R94/301	BEDROOM	W113/301	20.39	2.4	2.4
R95/301	BEDROOM	W114/301	19.90	2.4	2.4
R96/301	BEDROOM	W115/301	18.30	2.3	2.3
R1/302	LKD	W1/302	27.89	0.4	
R1/302	LKD	W2/302	16.73	0.8	
R1/302	LKD	W49/302	20.61	1.0	2.2
R2/302	LKD	W3/302	26.57	0.4	
R2/302	LKD	W4/302	15.96	0.8	
R2/302	LKD	W48/302	22.31	1.0	2.2
R3/302	LKD	W5/302	25.48	0.4	
R3/302	LKD	W6/302	15.54	0.8	
R3/302	LKD	W47/302	22.77	1.1	2.3

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KENAVON DRIVE, READING

PROPOSED SCHEME 21/10/19

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INTERNAL DAYLIGHT

Room	Room Use	Window	VSC(%)	ADF(%)	Total ADF(%)
R4/302	LKD	W7/302	24.71	0.4	
R4/302	LKD	W8/302	15.26	0.8	
R4/302	LKD	W46/302	22.28	1.0	2.2
R5/302	LKD	W9/302	24.40	0.4	
R5/302	LKD	W10/302	15.03	0.8	
R5/302	LKD	W45/302	20.64	1.0	2.2
R6/302	LKD	W11/302	24.22	0.4	
R6/302	LKD	W12/302	19.91	1.2	
R6/302	LKD	W44/302	17.94	0.9	2.5
R7/302	LKD	W13/302	23.83	2.3	2.3
R8/302	BEDROOM	W14/302	36.27	3.2	3.2
R9/302	BEDROOM	W15/302	36.19	2.7	2.7
R10/302	LKD	W16/302	25.67	2.0	
R10/302	LKD	W17/302	27.72	0.8	
R10/302	LKD	W18/302	26.66	0.8	3.6
R11/302	BEDROOM	W19/302	21.95	1.6	1.6
R12/302	BEDROOM	W20/302	21.22	1.4	1.4
R13/302	BEDROOM	W21/302	20.58	1.4	1.4
R14/302	BEDROOM	W22/302	20.03	1.7	1.7
R15/302	LKD	W23/302	19.72	2.4	2.4
R16/302	BEDROOM	W24/302	19.36	1.7	1.7
R17/302	LKD	W25/302	19.75	1.9	1.9
R18/302	BEDROOM	W26/302	20.08	3.7	3.7
R19/302	LKD	W27/302	20.74	0.8	
R19/302	LKD	W28/302	21.31	1.9	
R19/302	LKD	W29/302	20.40	0.6	
R19/302	LKD	W30/302	18.86	0.5	3.8
R20/302	BEDROOM	W31/302	17.76	1.4	1.4

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KENAVON DRIVE, READING

PROPOSED SCHEME 21/10/19

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INTERNAL DAYLIGHT

Room	Room Use	Window	VSC(%)	ADF(%)	Total ADF(%)
R21/302	BEDROOM	W32/302	17.17	1.4	1.4
R22/302	LKD	W33/302	17.67	0.7	
R22/302	LKD	W34/302	18.77	0.7	
R22/302	LKD	W35/302	28.80	2.3	
R22/302	LKD	W36/302	28.41	1.0	4.7
R23/302	BEDROOM	W37/302	27.52	4.8	4.8
R24/302	LKD	W38/302	26.18	2.4	2.4
R25/302	BEDROOM	W39/302	25.18	2.2	2.2
R26/302	LKD	W40/302	23.40	2.0	
R26/302	LKD	W41/302	21.44	0.8	2.8
R27/302	BEDROOM	W42/302	17.13	1.5	1.5
R28/302	BEDROOM	W43/302	14.06	1.0	1.0
R1/303	LKD	W1/303	22.99	0.7	
R1/303	LKD	W2/303	24.44	2.2	2.9
R2/303	LKD	W3/303	22.75	2.6	2.6
R3/303	LKD	W4/303	22.84	2.1	2.1
R1/304	LKD	W1/304	26.93	0.7	
R1/304	LKD	W2/304	30.20	1.1	
R1/304	LKD	W3/304	24.95	2.2	4.0
R2/304	LKD	W4/304	26.33	2.9	2.9
R3/304	LKD	W5/304	26.47	2.4	2.4
R1/312	BEDROOM	W1/312	35.48	4.5	4.5
R2/312	BEDROOM	W2/312	25.04	3.5	3.5
R3/312	LKD	W3/312	20.31	0.7	
R3/312	LKD	W4/312	21.47	0.7	
R3/312	LKD	W5/312	20.64	2.1	3.5
R4/312	BEDROOM	W6/312	18.91	1.6	1.6
R5/312	LKD	W7/312	19.01	2.3	2.3

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PROPOSED SCHEME 21/10/19

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INTERNAL DAYLIGHT

Room	Room Use	Window	VSC(%)	ADF(%)	Total ADF(%)
R6/312	BEDROOM	W8/312	17.96	1.2	1.2
R7/312	LKD	W9/312	19.40	2.4	2.4
R8/312	BEDROOM	W10/312	19.50	1.3	1.3
R9/312	BEDROOM	W11/312	21.30	1.7	1.7
R10/312	LKD	W12/312	24.89	2.2	
R10/312	LKD	W13/312	38.63	1.4	
R10/312	LKD	W14/312	38.54	1.4	5.0
R11/312	BEDROOM	W15/312	38.61	3.4	3.4
R12/312	LKD	W16/312	39.10	4.6	4.6
R13/312	BEDROOM	W17/312	38.81	2.9	2.9
R14/312	LKD	W18/312	33.61	2.7	
R14/312	LKD	W19/312	29.31	0.9	3.6
R15/312	LKD	W20/312	39.20	3.9	3.9
R16/312	BEDROOM	W21/312	39.21	2.5	2.5
R17/312	LKD	W22/312	39.21	3.9	3.9
R18/312	BEDROOM	W23/312	39.21	2.5	2.5
R19/312	BEDROOM	W24/312	39.21	2.3	2.3
R20/312	BEDROOM	W25/312	39.21	2.9	2.9
R21/312	LKD	W26/312	39.21	4.0	
R21/312	LKD	W27/312	33.76	1.2	5.2
R22/312	BEDROOM	W28/312	32.73	2.2	2.2
R23/312	BEDROOM	W29/312	31.98	2.3	2.3
R24/312	LKD	W30/312	30.97	3.2	
R24/312	LKD	W31/312	23.94	1.0	4.2
R25/312	BEDROOM	W32/312	21.98	1.6	1.6

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KENAVON DRIVE, READING

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INTERNAL DAYLIGHT

Room	Room Use	Window	VSC(%)	ADF(%)	Total ADF(%)
R26/312	BEDROOM	W33/312	24.05	1.6	1.6
R27/312	BEDROOM	W34/312	25.60	2.3	2.3
R28/312	LKD	W35/312	26.77	2.3	2.3
R29/312	LKD	W36/312	27.21	2.3	2.3
R30/312	BEDROOM	W37/312	26.91	2.0	2.0
R31/312	LKD	W38/312	25.93	2.2	2.2
R32/312	BEDROOM	W39/312	24.03	1.8	1.8
R33/312	BEDROOM	W40/312	11.08	1.9	1.9
R34/312	BEDROOM	W41/312	14.41	1.4	1.4
R35/312	BEDROOM	W42/312	14.20	1.2	1.2
R36/312	LKD	W43/312	19.59	1.9	1.9
R37/312	BEDROOM	W44/312	23.18	2.0	2.0
R38/312	LKD	W45/312	25.04	1.9	
R38/312	LKD	W46/312	21.39	0.8	
R38/312	LKD	W47/312	20.00	0.7	3.4
R39/312	BEDROOM	W48/312	13.54	2.3	2.3
R40/312	BEDROOM	W49/312	11.59	2.1	2.1
R1/313	LKD	W1/313	21.44	2.4	2.4
R2/313	LKD	W2/313	21.68	2.5	2.5
R1/314	LKD	W1/314	24.38	2.7	2.7
R2/314	LKD	W2/314	24.49	2.7	2.7
R1/322	LKD	W1/322	19.31	0.9	
R1/322	LKD	W2/322	19.98	0.9	
R1/322	LKD	W3/322	25.84	2.4	4.2
R2/322	BEDROOM	W4/322	26.67	2.4	2.4

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INTERNAL DAYLIGHT

Room	Room Use	Window	VSC(%)	ADF(%)	Total ADF(%)
R3/322	BEDROOM	W5/322	27.30	2.2	2.2
R4/322	LKD	W6/322	29.24	1.0	
R4/322	LKD	W7/322	37.62	3.1	4.1
R5/322	BEDROOM	W8/322	37.60	3.0	3.0
R6/322	BEDROOM	W9/322	37.55	2.6	2.6
R7/322	LKD	W10/322	37.47	3.2	3.2
R8/322	BEDROOM	W11/322	37.42	3.2	3.2
R9/322	BEDROOM	W12/322	37.33	2.7	2.7
R10/322	BEDROOM	W13/322	37.13	2.7	2.7
R11/322	BEDROOM	W14/322	37.00	3.0	3.0
R12/322	LKD	W15/322	36.70	3.2	3.2
R13/322	BEDROOM	W16/322	4.80	0.3	0.3
R14/322	BEDROOM	W17/322	24.80	2.2	2.2
R15/322	LKD	W18/322	26.08	2.3	2.3
R16/322	LKD	W19/322	26.72	2.5	2.5
R17/322	BEDROOM	W20/322	26.41	2.9	2.9
R18/322	BEDROOM	W21/322	25.44	2.2	2.2
MIDDLE BLOCK					
R1/200	BEDROOM	W1/200	37.69	2.5	2.5
R2/200	LKD	W2/200	37.15	1.4	
R2/200	LKD	W3/200	37.54	1.4	
R2/200	LKD	W4/200	37.34	1.4	
R2/200	LKD	W5/200	22.53	2.2	6.4
R3/200	BEDROOM	W6/200	20.01	1.4	1.4
R4/200	LKD	W7/200	16.33	1.3	
R4/200	LKD	W8/200	15.80	1.0	2.3

INTERNAL DAYLIGHT

Room	Room Use	Window	VSC(%)	ADF(%)	Total ADF(%)
R5/200	LKD	W9/200	15.18	1.2	
R5/200	LKD	W10/200	15.57	0.9	2.1
R6/200	LKD	W11/200	15.91	1.3	
R6/200	LKD	W12/200	16.61	1.0	2.3
R7/200	LKD	W13/200	17.57	2.4	2.4
R8/200	LKD	W14/200	17.23	2.4	2.4
R9/200	LKD	W15/200	15.92	0.8	
R9/200	LKD	W16/200	15.12	0.5	1.3
R10/200	LKD	W17/200	14.05	0.7	
R10/200	LKD	W18/200	13.46	0.4	1.1
R11/200	BEDROOM	W19/200	13.14	1.5	1.5
R12/200	LKD	W20/200	13.05	0.5	0.5
R13/200	BEDROOM	W21/200	13.56	1.5	1.5
R14/200	LKD	W22/200	14.10	0.5	0.5
R15/200	LKD	W23/200	13.53	0.4	
R15/200	LKD	W24/200	13.28	0.7	1.1
R16/200	LKD	W25/200	12.87	0.4	
R16/200	LKD	W26/200	12.94	0.6	1.0
R17/200	LKD	W27/200	13.18	0.4	
R17/200	LKD	W28/200	13.56	0.6	1.0
R18/200	LKD	W29/200	14.18	0.4	
R18/200	LKD	W30/200	14.71	0.7	1.1
R19/200	LKD	W31/200	15.50	2.2	2.2
R20/200	LKD	W32/200	15.72	2.2	2.2
R21/200	LKD	W33/200	15.02	0.5	
R21/200	LKD	W34/200	14.43	1.0	1.5
R22/200	LKD	W35/200	14.12	0.5	
R22/200	LKD	W36/200	13.85	0.9	1.4

DAYLIGHT ANALYSIS

KENAVON DRIVE, READING

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INTERNAL DAYLIGHT

Room	Room Use	Window	VSC(%)	ADF(%)	Total ADF(%)
R23/200	LKD	W37/200	13.79	0.4	
R23/200	LKD	W38/200	13.80	0.9	1.3
R24/200	LKD	W39/200	14.21	0.4	
R24/200	LKD	W40/200	14.67	1.0	1.4
R25/200	LKD	W41/200	19.62	1.7	1.7
R26/200	BEDROOM	W42/200	37.92	2.9	2.9
R27/200	BEDROOM	W43/200	37.99	3.0	3.0
R28/200	LKD	W44/200	38.08	2.6	2.6
R29/200	BEDROOM	W45/200	25.27	1.6	1.6
R30/200	LKD	W46/200	38.24	1.2	
R30/200	LKD	W47/200	38.29	3.4	4.6
R31/200	BEDROOM	W48/200	38.26	2.5	2.5
R1/201	BEDROOM	W1/201	38.91	2.7	2.7
R2/201	LKD	W2/201	38.90	1.1	
R2/201	LKD	W3/201	38.87	1.1	
R2/201	LKD	W4/201	38.85	1.1	
R2/201	LKD	W5/201	24.38	1.5	4.8
R3/201	BEDROOM	W6/201	22.14	1.3	1.3
R4/201	BEDROOM	W7/201	18.63	1.6	1.6
R5/201	BEDROOM	W8/201	18.03	1.4	1.4
R6/201	BEDROOM	W9/201	17.51	1.4	1.4
R7/201	BEDROOM	W10/201	17.88	1.4	1.4
R8/201	BEDROOM	W11/201	18.77	1.6	1.6
R9/201	BEDROOM	W12/201	19.41	1.5	1.5
R10/201	BEDROOM	W13/201	19.94	1.8	1.8
R11/201	BEDROOM	W14/201	19.88	1.7	1.7

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INTERNAL DAYLIGHT

Room	Room Use	Window	VSC(%)	ADF(%)	Total ADF(%)
R12/201	BEDROOM	W15/201	19.85	1.7	1.7
R13/201	BEDROOM	W16/201	19.54	1.7	1.7
R14/201	BEDROOM	W17/201	18.70	2.0	2.0
R15/201	BEDROOM	W18/201	17.74	1.7	1.7
R16/201	BEDROOM	W19/201	16.33	1.8	1.8
R17/201	BEDROOM	W20/201	15.68	1.5	1.5
R18/201	BEDROOM	W21/201	15.23	1.9	1.9
R19/201	LKD	W22/201	15.04	0.6	0.6
R20/201	BEDROOM	W23/201	15.35	2.0	2.0
R21/201	BEDROOM	W24/201	15.74	1.2	1.2
R22/201	LKD	W25/201	16.55	1.2	1.2
R23/201	BEDROOM	W26/201	15.12	1.4	1.4
R24/201	BEDROOM	W27/201	14.98	1.6	1.6
R25/201	BEDROOM	W28/201	14.74	1.2	1.2
R26/201	BEDROOM	W29/201	14.94	2.1	2.1
R27/201	BEDROOM	W30/201	15.42	1.2	1.2
R28/201	BEDROOM	W31/201	16.00	2.2	2.2
R29/201	BEDROOM	W32/201	17.00	1.4	1.4
R30/201	BEDROOM	W33/201	17.75	2.4	2.4
R31/201	BEDROOM	W34/201	18.25	1.6	1.6
R32/201	BEDROOM	W35/201	18.55	1.6	1.6
R33/201	BEDROOM	W36/201	18.76	1.7	1.7
R34/201	BEDROOM	W37/201	18.71	1.7	1.7

INTERNAL DAYLIGHT

Room	Room Use	Window	VSC(%)	ADF(%)	Total ADF(%)
R35/201	BEDROOM	W38/201	17.62	3.3	3.3
R36/201	BEDROOM	W39/201	17.68	3.3	3.3
R37/201	LKD	W40/201	13.50	0.6	
R37/201	LKD	W41/201	17.88	0.7	
R37/201	LKD	W42/201	23.38	2.3	3.6
R38/201	BEDROOM	W43/201	22.85	2.2	2.2
R39/201	BEDROOM	W44/201	22.35	2.1	2.1
R40/201	LKD	W45/201	21.28	1.6	
R40/201	LKD	W46/201	20.21	0.8	2.4
R41/201	BEDROOM	W47/201	19.01	3.0	3.0
R42/201	BEDROOM	W48/201	19.34	3.1	3.1
R43/201	LKD	W49/201	20.41	0.9	
R43/201	LKD	W50/201	21.38	1.6	2.5
R44/201	BEDROOM	W51/201	22.24	2.1	2.1
R45/201	BEDROOM	W52/201	22.53	2.3	2.3
R46/201	LKD	W53/201	22.90	2.3	
R46/201	LKD	W54/201	14.53	0.6	
R46/201	LKD	W55/201	11.73	0.5	3.4
R47/201	BEDROOM	W56/201	17.81	3.2	3.2
R48/201	BEDROOM	W57/201	17.76	3.2	3.2
R49/201	LKD	W58/201	16.39	0.6	
R49/201	LKD	W59/201	18.65	0.6	
R49/201	LKD	W60/201	18.46	1.4	2.6
R50/201	BEDROOM	W61/201	16.53	1.5	1.5
R51/201	LKD	W62/201	14.28	1.6	1.6
R52/201	BEDROOM	W63/201	11.27	1.0	1.0
R53/201	BEDROOM	W64/201	13.78	1.4	1.4

INTERNAL DAYLIGHT

Room	Room Use	Window	VSC(%)	ADF(%)	Total ADF(%)
R54/201	BEDROOM	W65/201	10.54	2.2	2.2
R55/201	LKD	W66/201	1.95	0.0	
R55/201	LKD	W67/201	2.32	0.0	
R55/201	LKD	W68/201	21.02	1.8	1.8
R56/201	BEDROOM	W69/201	22.45	1.8	1.8
R57/201	BEDROOM	W70/201	20.06	1.3	1.3
R58/201	BEDROOM	W71/201	21.39	1.5	1.5
R59/201	LKD	W72/201	22.99	2.2	2.2
R60/201	LKD	W73/201	24.52	2.2	2.2
R61/201	BEDROOM	W74/201	24.52	1.7	1.7
R62/201	BEDROOM	W75/201	24.13	1.7	1.7
R63/201	BEDROOM	W76/201	23.64	2.3	2.3
R64/201	LKD	W77/201	22.01	1.7	
R64/201	LKD	W78/201	10.41	0.4	
R64/201	LKD	W79/201	9.58	0.4	2.5
R65/201	BEDROOM	W80/201	7.18	1.0	1.0
R66/201	LKD	W81/201	38.74	3.5	3.5
R67/201	BEDROOM	W82/201	38.82	2.3	2.3
R68/201	BEDROOM	W83/201	38.90	2.1	2.1
R69/201	BEDROOM	W84/201	38.92	2.4	2.4
R70/201	LKD	W85/201	38.97	3.7	3.7
R71/201	BEDROOM	W86/201	39.05	2.2	2.2
R72/201	BEDROOM	W87/201	39.06	2.8	2.8
R73/201	LKD	W88/201	39.06	4.1	4.1
R74/201	LKD	W89/201	39.00	1.4	

INTERNAL DAYLIGHT

Room	Room Use	Window	VSC(%)	ADF(%)	Total ADF(%)
R74/201	LKD	W90/201	38.94	3.9	5.3
R75/201	BEDROOM	W91/201	38.76	2.7	2.7
R76/201	LKD	W92/201	37.94	3.3	
R76/201	LKD	W93/201	30.11	1.0	4.3
R77/201	LKD	W94/201	38.97	3.6	3.6
R78/201	BEDROOM	W95/201	38.95	2.1	2.1
R1/202	BEDROOM	W1/202	38.95	3.4	3.4
R2/202	LKD	W2/202	38.94	1.5	
R2/202	LKD	W3/202	38.94	1.5	
R2/202	LKD	W4/202	25.39	2.2	5.2
R3/202	BEDROOM	W5/202	22.26	1.8	1.8
R4/202	BEDROOM	W6/202	20.53	1.4	1.4
R5/202	LKD	W7/202	20.31	2.4	2.4
R6/202	BEDROOM	W8/202	18.98	1.3	1.3
R7/202	LKD	W9/202	19.93	2.3	2.3
R8/202	BEDROOM	W10/202	19.90	1.7	1.7
R9/202	LKD	W11/202	21.57	2.1	
R9/202	LKD	W12/202	20.46	0.7	
R9/202	LKD	W13/202	19.36	0.7	3.5
R10/202	LKD	W14/202	19.90	0.7	
R10/202	LKD	W15/202	21.14	0.8	
R10/202	LKD	W16/202	20.99	1.6	3.1
R11/202	BEDROOM	W17/202	18.81	1.8	1.8
R12/202	LKD	W18/202	16.14	1.7	1.7
R13/202	BEDROOM	W19/202	12.39	1.1	1.1
R14/202	BEDROOM	W20/202	14.65	1.4	1.4
R15/202	BEDROOM	W21/202	11.55	2.3	2.3

DAYLIGHT ANALYSIS

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Room	Room Use	Window	VSC(%)	ADF(%)	Total ADF(%)
R16/202	LKD	W22/202	2.51	0.0	
R16/202	LKD	W23/202	3.05	0.0	
R16/202	LKD	W24/202	22.98	1.9	1.9
R17/202	BEDROOM	W25/202	24.49	1.9	1.9
R18/202	BEDROOM	W26/202	22.21	1.4	1.4
R19/202	BEDROOM	W27/202	23.65	1.6	1.6
R20/202	LKD	W28/202	25.35	2.3	2.3
R21/202	LKD	W29/202	26.57	2.2	2.2
R22/202	BEDROOM	W30/202	26.87	2.1	2.1
R23/202	BEDROOM	W31/202	26.95	1.8	1.8
R24/202	BEDROOM	W32/202	26.59	1.8	1.8
R25/202	BEDROOM	W33/202	26.11	2.4	2.4
R26/202	LKD	W34/202	24.47	1.8	
R26/202	LKD	W35/202	14.42	0.6	
R26/202	LKD	W36/202	14.12	0.6	3.0
R27/202	BEDROOM	W37/202	10.98	1.4	1.4
R28/202	LKD	W38/202	39.13	1.3	1.3
R29/202	BEDROOM	W39/202	39.20	5.9	5.9
R30/202	BEDROOM	W40/202	39.22	2.1	2.1
R31/202	LKD	W41/202	39.27	3.7	3.7
R32/202	BEDROOM	W42/202	39.31	2.4	2.4
R33/202	LKD	W43/202	39.37	1.3	
R33/202	LKD	W44/202	39.38	3.6	4.9
R34/202	BEDROOM	W45/202	39.47	3.1	3.1
R35/202	BEDROOM	W46/202	39.45	2.6	2.6

INTERNAL DAYLIGHT

Room	Room Use	Window	VSC(%)	ADF(%)	Total ADF(%)
R36/202	BEDROOM	W47/202	39.37	2.5	2.5
R37/202	LKD	W48/202	39.21	4.4	4.4
R38/202	LKD	W49/202	38.71	1.2	
R38/202	LKD	W50/202	34.55	3.0	4.2
R39/202	BEDROOM	W51/202	39.02	2.9	2.9
R40/202	LKD	W52/202	39.37	4.7	4.7
R41/202	LKD	W53/202	19.59	0.7	
R41/202	LKD	W54/202	20.64	2.0	2.7
R42/202	BEDROOM	W55/202	18.84	1.7	1.7
R43/202	BEDROOM	W56/202	18.03	1.5	1.5
R44/202	BEDROOM	W57/202	17.43	1.4	1.4
R45/202	LKD	W58/202	17.29	1.6	1.6
R46/202	BEDROOM	W59/202	17.25	1.4	1.4
R47/202	BEDROOM	W60/202	17.50	1.4	1.4
R48/202	LKD	W61/202	18.16	1.8	1.8
R49/202	LKD	W62/202	19.61	0.6	
R49/202	LKD	W63/202	33.22	2.6	3.2
R50/202	BEDROOM	W64/202	34.13	2.7	2.7
R51/202	BEDROOM	W65/202	34.61	2.4	2.4
R52/202	LKD	W66/202	34.92	3.1	3.1
R53/202	LKD	W67/202	34.83	3.1	3.1
R54/202	BEDROOM	W68/202	34.41	2.4	2.4
R55/202	BEDROOM	W69/202	33.74	2.7	2.7
R56/202	LKD	W70/202	32.94	2.6	
R56/202	LKD	W71/202	19.15	0.6	3.2

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Room	Room Use	Window	VSC(%)	ADF(%)	Total ADF(%)
R57/202	LKD	W72/202	17.55	1.7	1.7
R58/202	BEDROOM	W73/202	16.96	1.3	1.3
R59/202	BEDROOM	W74/202	16.73	1.3	1.3
R60/202	LKD	W75/202	16.74	1.5	1.5
R61/202	BEDROOM	W76/202	17.16	1.3	1.3
R62/202	BEDROOM	W77/202	17.78	1.4	1.4
R63/202	BEDROOM	W78/202	18.52	1.7	1.7
R64/202	LKD	W79/202	20.64	2.0	
R64/202	LKD	W80/202	20.37	0.8	2.8
R65/202	BEDROOM	W81/202	19.32	1.5	1.5
R66/202	LKD	W82/202	19.58	0.8	
R66/202	LKD	W83/202	20.93	0.8	
R66/202	LKD	W84/202	26.05	2.5	4.1
R67/202	BEDROOM	W85/202	25.54	1.8	
R67/202	BEDROOM	W86/202	25.06	1.7	3.5
R68/202	LKD	W87/202	24.01	1.7	
R68/202	LKD	W88/202	22.92	0.9	2.6
R69/202	BEDROOM	W89/202	21.65	3.3	3.3
R70/202	BEDROOM	W90/202	21.33	1.7	1.7
R71/202	BEDROOM	W91/202	21.92	3.9	3.9
R72/202	BEDROOM	W92/202	21.79	3.9	3.9
R73/202	BEDROOM	W93/202	20.93	1.7	1.7
R74/202	BEDROOM	W94/202	21.87	3.4	3.4
R75/202	LKD	W95/202	23.03	0.9	
R75/202	LKD	W96/202	24.02	1.8	2.7
R76/202	BEDROOM	W97/202	24.88	1.8	
R76/202	BEDROOM	W98/202	25.17	1.8	3.6

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INTERNAL DAYLIGHT

Room	Room Use	Window	VSC(%)	ADF(%)	Total ADF(%)
R77/202	LKD	W99/202	25.52	2.4	
R77/202	LKD	W100/202	17.43	0.7	
R77/202	LKD	W101/202	16.99	0.7	3.8
R78/202	BEDROOM	W102/202	17.57	1.3	1.3
R1/203	LKD	W1/203	22.90	2.6	2.6
R2/203	LKD	W2/203	22.62	2.6	2.6
R3/203	LKD	W3/203	3.40	0.0	
R3/203	LKD	W4/203	4.24	0.1	
R3/203	LKD	W5/203	25.12	2.0	2.1
R4/203	LKD	W6/203	22.22	1.2	
R4/203	LKD	W7/203	23.58	0.3	
R4/203	LKD	W8/203	24.16	0.7	
R4/203	LKD	W9/203	39.43	3.1	5.3
R5/203	LKD	W10/203	19.66	1.8	1.8
R6/203	LKD	W11/203	19.74	2.0	2.0
R7/203	LKD	W12/203	19.29	1.9	1.9
R8/203	LKD	W13/203	19.14	1.7	1.7
R1/204	LKD	W1/204	26.00	2.9	2.9
R2/204	LKD	W2/204	25.81	2.9	2.9
R3/204	LKD	W3/204	22.57	2.0	2.0
R4/204	LKD	W4/204	21.82	1.9	1.9
R1/211	LKD	W1/211	9.69	0.5	
R1/211	LKD	W2/211	12.44	1.0	
R1/211	LKD	W8/211	38.33	0.7	2.2
R2/211	LKD	W3/211	13.64	0.6	
R2/211	LKD	W4/211	13.50	1.0	
R2/211	LKD	W7/211	38.11	0.7	2.3
R3/211	LKD	W5/211	2.95	0.1	
R3/211	LKD	W6/211	3.41	0.0	0.1

INTERNAL DAYLIGHT

Room	Room Use	Window	VSC(%)	ADF(%)	Total ADF(%)
R4/211	LKD	W9/211	19.77	1.0	1.0
R5/211	BEDROOM	W10/211	19.62	2.2	2.2
R6/211	BEDROOM	W11/211	21.01	1.5	1.5
R7/211	BEDROOM	W12/211	21.52	1.9	1.9
R8/211	LKD	W13/211	21.83	2.0	2.0
R9/211	BEDROOM	W14/211	22.19	1.8	1.8
R10/211	LKD	W15/211	22.66	0.9	
R10/211	LKD	W16/211	22.89	2.0	
R10/211	LKD	W17/211	19.30	0.8	3.7
R11/211	BEDROOM	W18/211	16.42	1.3	1.3
R12/211	BEDROOM	W19/211	18.98	1.4	1.4
R13/211	BEDROOM	W20/211	18.21	1.8	1.8
R14/211	BEDROOM	W21/211	17.52	1.3	1.3
R15/211	BEDROOM	W22/211	17.07	1.6	1.6
R16/211	BEDROOM	W23/211	16.78	1.1	1.1
R17/211	BEDROOM	W24/211	16.82	1.6	1.6
R18/211	BEDROOM	W25/211	17.23	1.2	1.2
R19/211	BEDROOM	W26/211	17.75	1.7	1.7
R20/211	LKD	W27/211	12.48	1.7	1.7
R21/211	BEDROOM	W28/211	20.94	1.7	1.7
R22/211	LKD	W29/211	11.52	2.2	2.2
R23/211	BEDROOM	W30/211	26.36	2.0	2.0
R24/211	LKD	W31/211	14.66	2.2	2.2
R25/211	BEDROOM	W32/211	38.32	2.8	2.8

INTERNAL DAYLIGHT

Room	Room Use	Window	VSC(%)	ADF(%)	Total ADF(%)
R26/211	BEDROOM	W33/211	38.51	2.1	2.1
R27/211	LKD	W34/211	38.58	3.8	
R27/211	LKD	W35/211	35.13	1.1	4.9
R28/211	BEDROOM	W36/211	33.85	4.0	4.0
R29/211	STUDIO	W37/211	27.69	2.7	2.7
R1/212	BEDROOM	W1/212	11.38	1.2	1.2
R2/212	BEDROOM	W2/212	14.67	1.4	1.4
R3/212	BEDROOM	W3/212	15.71	1.5	1.5
R4/212	BEDROOM	W4/212	15.32	1.4	1.4
R5/212	BEDROOM	W5/212	14.17	0.9	
R5/212	BEDROOM	W6/212	3.49	0.2	1.1
R6/212	BEDROOM	W7/212	25.52	1.5	1.5
R7/212	BEDROOM	W8/212	24.59	1.8	1.8
R8/212	LKD	W9/212	25.42	2.4	2.4
R9/212	BEDROOM	W10/212	25.26	1.7	1.7
R10/212	BEDROOM	W11/212	24.38	1.9	1.9
R11/212	LKD	W12/212	25.45	2.2	2.2
R12/212	STUDIO	W13/212	25.77	2.4	
R12/212	STUDIO	W14/212	21.84	1.0	3.4
R13/212	STUDIO	W15/212	20.82	0.9	
R13/212	STUDIO	W16/212	21.97	2.0	2.9
R14/212	STUDIO	W17/212	20.65	2.1	2.1
R15/212	BEDROOM	W18/212	19.85	1.5	1.5
R16/212	LKD	W19/212	19.57	2.3	2.3
R17/212	BEDROOM	W20/212	19.88	1.6	1.6

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Room	Room Use	Window	VSC(%)	ADF(%)	Total ADF(%)
R18/212	LKD	W21/212	20.46	1.8	1.8
R19/212	LKD	W22/212	14.75	2.2	2.2
R20/212	BEDROOM	W23/212	23.27	1.5	1.5
R21/212	LKD	W24/212	16.80	2.5	2.5
R22/212	BEDROOM	W25/212	28.16	2.0	2.0
R23/212	LKD	W26/212	20.52	2.7	2.7
R24/212	BEDROOM	W27/212	39.04	2.9	2.9
R25/212	BEDROOM	W28/212	39.13	2.4	2.4
R26/212	LKD	W29/212	39.16	4.1	
R26/212	LKD	W30/212	36.08	1.2	5.3
R27/212	BEDROOM	W31/212	35.19	4.1	4.1
R28/212	STUDIO	W32/212	31.41	2.9	2.9
R1/213	BEDROOM	W1/213	23.20	1.7	1.7
R2/213	LKD	W2/213	22.99	2.6	2.6
R3/213	BEDROOM	W3/213	23.22	1.8	1.8
R4/213	LKD	W4/213	23.62	2.0	2.0
R5/213	LKD	W5/213	17.27	2.4	2.4
R1/214	BEDROOM	W1/214	27.08	2.0	2.0
R2/214	LKD	W2/214	26.94	3.0	3.0
R3/214	BEDROOM	W3/214	27.15	2.1	2.1
R4/214	LKD	W4/214	27.46	2.2	2.2
R5/214	LKD	W5/214	20.22	2.7	2.7

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Room	Room Use	Window	VSC(%)	ADF(%)	Total ADF(%)
R1/100	LKD	W1/100	11.43	1.4	1.4
R2/100	LKD	W2/100	11.40	1.0	
R2/100	LKD	W3/100	12.01	0.8	1.8
R3/100	LKD	W4/100	13.00	0.7	
R3/100	LKD	W5/100	13.40	0.8	1.5
R4/100	LKD	W6/100	14.41	1.2	
R4/100	LKD	W7/100	15.57	1.0	2.2
R5/100	LKD	W8/100	17.24	1.6	1.6
R6/100	LKD	W9/100	16.50	1.2	
R6/100	LKD	W10/100	16.24	0.9	2.1
R7/100	LKD	W11/100	15.21	1.1	
R7/100	LKD	W12/100	15.25	0.8	1.9
R8/100	LKD	W13/100	15.07	2.1	2.1
R9/100	LKD	W14/100	15.13	1.1	
R9/100	LKD	W15/100	14.95	0.8	1.9
R10/100	LKD	W16/100	25.08	0.9	
R10/100	LKD	W17/100	30.18	1.0	1.9
R11/100	LKD	W18/100	33.70	1.1	
R11/100	LKD	W19/100	34.23	1.1	2.2
R12/100	LKD	W20/100	34.65	1.1	
R12/100	LKD	W21/100	34.77	1.1	2.2
R13/100	LKD	W22/100	34.92	2.1	
R13/100	LKD	W23/100	35.01	1.0	3.1
R14/100	LKD	W24/100	35.04	2.8	2.8
R15/100	BEDROOM	W25/100	35.03	2.6	2.6
R16/100	LKD	W26/100	34.97	2.8	2.8
R17/100	BEDROOM	W27/100	34.89	2.6	2.6
R18/100	LKD	W28/100	34.90	2.8	2.8

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Room	Room Use	Window	VSC(%)	ADF(%)	Total ADF(%)
R19/100	BEDROOM	W29/100	34.88	2.6	2.6
R20/100	LKD	W30/100	34.86	2.8	2.8
R21/100	BEDROOM	W31/100	34.82	2.6	2.6
R22/100	LKD	W32/100	34.80	2.8	2.8
R23/100	BEDROOM	W33/100	34.82	2.6	2.6
R24/100	BEDROOM	W34/100	34.83	3.5	3.5
R25/100	LKD	W35/100	35.06	1.8	
R25/100	LKD	W36/100	36.17	2.1	
R25/100	LKD	W37/100	24.40	0.7	
R25/100	LKD	W38/100	35.35	0.9	5.5
R1/101	LKD	W1/101	37.33	0.9	
R1/101	LKD	W2/101	36.78	1.5	
R1/101	LKD	W3/101	16.42	0.9	3.3
R2/101	BEDROOM	W4/101	14.44	0.9	0.9
R3/101	BEDROOM	W5/101	13.89	0.8	0.8
R4/101	BEDROOM	W6/101	13.56	0.8	0.8
R5/101	LIVINGROOM	W7/101	13.76	1.3	1.3
R6/101	BEDROOM	W8/101	14.06	1.1	1.1
R7/101	BEDROOM	W9/101	14.47	1.0	1.0
R8/101	BEDROOM	W10/101	15.27	1.4	1.4
R9/101	BEDROOM	W11/101	16.13	1.3	1.3
R10/101	BEDROOM	W12/101	17.46	1.8	1.8
R11/101	BEDROOM	W13/101	18.36	1.6	1.6
R12/101	BEDROOM	W14/101	18.70	1.7	1.7
R13/101	LKD	W15/101	19.74	0.7	
R13/101	LKD	W16/101	19.77	0.7	
R13/101	LKD	W88/101	19.70	0.8	2.2

INTERNAL DAYLIGHT

Room	Room Use	Window	VSC(%)	ADF(%)	Total ADF(%)
R14/101	LKD	W17/101	19.67	0.7	
R14/101	LKD	W86/101	16.09	1.6	
R14/101	LKD	W87/101	18.96	0.8	3.1
R15/101	BEDROOM	W18/101	19.91	2.3	2.3
R16/101	BEDROOM	W19/101	18.94	1.8	1.8
R17/101	BEDROOM	W20/101	18.41	2.1	2.1
R18/101	BEDROOM	W21/101	18.09	1.7	1.7
R19/101	BEDROOM	W22/101	17.92	1.4	1.4
R20/101	BEDROOM	W23/101	18.01	2.0	2.0
R21/101	BEDROOM	W24/101	18.42	1.6	1.6
R22/101	BEDROOM	W25/101	20.08	0.9	0.9
R23/101	BEDROOM	W26/101	20.66	1.2	1.2
R24/101	LKD	W27/101	26.03	0.7	
R24/101	LKD	W28/101	27.16	0.7	
R24/101	LKD	W29/101	17.02	2.2	3.6
R25/101	BEDROOM	W30/101	36.08	2.0	2.0
R26/101	BEDROOM	W31/101	36.12	2.7	
R26/101	BEDROOM	W32/101	13.49	1.7	4.4
R27/101	LKD	W33/101	18.22	1.9	1.9
R28/101	BEDROOM	W34/101	26.89	2.2	2.2
R29/101	BEDROOM	W35/101	34.75	2.7	2.7
R30/101	BEDROOM	W36/101	35.75	2.8	2.8
R31/101	BEDROOM	W37/101	36.04	4.1	4.1
R32/101	BEDROOM	W38/101	36.14	2.8	2.8
R33/101	LKD	W39/101	36.20	2.2	2.2

INTERNAL DAYLIGHT

Room	Room Use	Window	VSC(%)	ADF(%)	Total ADF(%)
R34/101	BEDROOM	W40/101	36.20	2.7	2.7
R35/101	LKD	W41/101	36.19	2.2	2.2
R36/101	BEDROOM	W42/101	36.13	2.7	2.7
R37/101	LKD	W43/101	36.18	2.2	2.2
R38/101	BEDROOM	W44/101	36.15	2.7	2.7
R39/101	LKD	W45/101	36.17	2.2	2.2
R40/101	BEDROOM	W46/101	36.13	2.7	2.7
R41/101	LKD	W47/101	36.16	2.2	2.2
R42/101	BEDROOM	W48/101	36.17	2.7	2.7
R43/101	BEDROOM	W49/101	36.21	4.3	4.3
R44/101	BEDROOM	W50/101	21.48	1.6	
R44/101	BEDROOM	W51/101	37.10	2.9	4.5
R45/101	LKD	W52/101	36.94	3.4	3.4
R46/101	BEDROOM	W53/101	36.75	2.8	2.8
R47/101	BEDROOM	W54/101	36.70	4.9	4.9
R48/101	BEDROOM	W55/101	23.50	4.1	4.1
R49/101	LKD	W56/101	13.06	0.6	
R49/101	LKD	W57/101	36.15	1.1	
R49/101	LKD	W58/101	36.09	1.1	2.8
R50/101	BEDROOM	W59/101	35.71	3.2	3.2
R51/101	LKD	W60/101	36.18	3.7	3.7
R52/101	BEDROOM	W61/101	35.97	2.6	2.6
R53/101	BEDROOM	W62/101	36.19	2.7	2.7
R54/101	BEDROOM	W63/101	35.96	2.7	2.7
R55/101	LKD	W64/101	36.16	3.3	3.3

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INTERNAL DAYLIGHT

Room	Room Use	Window	VSC(%)	ADF(%)	Total ADF(%)
R56/101	LKD	W65/101	36.10	2.1	
R56/101	LKD	W114/101	18.41	0.8	
R56/101	LKD	W115/101	15.86	1.1	4.0
R57/101	LKD	W66/101	36.22	2.1	
R57/101	LKD	W112/101	18.75	0.8	
R57/101	LKD	W113/101	19.55	1.2	4.1
R58/101	LKD	W67/101	36.32	2.2	
R58/101	LKD	W110/101	17.39	1.1	
R58/101	LKD	W111/101	16.52	0.6	3.9
R59/101	LKD	W68/101	36.97	4.0	4.0
R60/101	BEDROOM	W69/101	36.93	2.8	2.8
R61/101	BEDROOM	W70/101	37.05	2.7	2.7
R62/101	LKD	W71/101	37.45	3.8	3.8
R63/101	BEDROOM	W72/101	37.26	3.0	3.0
R64/101	STUDIO	W73/101	37.63	2.6	
R64/101	STUDIO	W74/101	37.45	1.2	3.8
R65/101	LKD	W75/101	37.73	3.8	3.8
R66/101	BEDROOM	W76/101	37.61	3.0	3.0
R67/101	LKD	W77/101	37.87	2.7	
R67/101	LKD	W78/101	38.30	2.8	5.5
R68/101	BEDROOM	W79/101	38.04	3.1	3.1
R69/101	BEDROOM	W80/101	38.14	3.0	3.0
R70/101	BEDROOM	W81/101	37.92	2.9	2.9
R71/101	BEDROOM	W82/101	37.74	2.3	2.3
R72/101	BEDROOM	W83/101	25.95	4.1	4.1
R73/101	BEDROOM	W84/101	37.98	1.9	1.9
R74/101	STUDIO	W85/101	37.79	1.8	1.8

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INTERNAL DAYLIGHT

Room	Room Use	Window	VSC(%)	ADF(%)	Total ADF(%)
R75/101	LIVINGROOM	W89/101	18.22	3.2	3.2
R76/101	BEDROOM	W90/101	11.82	1.1	1.1
R77/101	LKD	W91/101	17.44	0.7	
R77/101	LKD	W92/101	24.61	1.9	
R77/101	LKD	W93/101	23.68	0.9	3.5
R78/101	BEDROOM	W94/101	22.65	2.0	2.0
R79/101	LKD	W95/101	20.82	1.8	1.8
R80/101	BEDROOM	W96/101	18.86	1.8	1.8
R81/101	LKD	W97/101	16.61	1.6	1.6
R82/101	BEDROOM	W98/101	14.08	1.5	1.5
R83/101	LKD	W99/101	15.50	2.1	2.1
R84/101	LKD	W100/101	16.14	2.6	2.6
R85/101	LKD	W101/101	19.29	2.1	2.1
R86/101	BEDROOM	W102/101	19.50	1.9	1.9
R87/101	LKD	W103/101	18.98	1.8	
R87/101	LKD	W104/101	20.03	0.9	2.7
R88/101	BEDROOM	W105/101	21.57	1.9	1.9
R89/101	BEDROOM	W106/101	22.45	2.0	2.0
R90/101	BEDROOM	W107/101	22.97	2.4	2.4
R91/101	LKD	W108/101	23.30	1.8	
R91/101	LKD	W109/101	15.14	0.8	2.6
R92/101	LKD	W116/101	12.15	0.5	
R92/101	LKD	W117/101	14.91	0.6	
R92/101	LKD	W118/101	22.88	1.7	2.8
R93/101	BEDROOM	W119/101	21.95	2.0	2.0
R94/101	BEDROOM	W120/101	21.02	1.9	1.9

INTERNAL DAYLIGHT

Room	Room Use	Window	VSC(%)	ADF(%)	Total ADF(%)
R95/101	LKD	W121/101	19.71	1.9	1.9
R96/101	BEDROOM	W122/101	17.61	1.6	1.6
R97/101	BEDROOM	W123/101	7.49	2.0	2.0
R98/101	LKD	W124/101	7.48	0.5	
R98/101	LKD	W125/101	13.42	0.7	1.2
R99/101	BEDROOM	W126/101	15.21	1.6	1.6
R100/101	BEDROOM	W127/101	16.90	1.7	1.7
R101/101	LKD	W128/101	19.68	1.8	1.8
R102/101	BEDROOM	W129/101	22.17	2.1	2.1
R103/101	BEDROOM	W130/101	22.94	2.1	2.1
R104/101	LKD	W131/101	24.14	2.0	2.0
R105/101	BEDROOM	W132/101	24.74	2.2	2.2
R106/101	LKD	W133/101	24.58	2.4	
R106/101	LKD	W134/101	9.02	0.8	3.2
R107/101	BEDROOM	W135/101	6.56	0.5	0.5
R108/101	LIVINGROOM	W136/101	11.87	1.4	
R108/101	LIVINGROOM	W137/101	14.20	1.6	3.0
R109/101	LIVINGROOM	W138/101	16.12	1.7	
R109/101	LIVINGROOM	W139/101	16.43	1.7	3.4
R110/101	LIVINGROOM	W140/101	15.71	1.6	
R110/101	LIVINGROOM	W141/101	14.71	1.6	3.2
R111/101	BEDROOM	W142/101	16.90	1.6	1.6
R112/101	BEDROOM	W143/101	19.94	1.8	1.8
R113/101	LKD	W144/101	21.75	1.8	1.8
R114/101	BEDROOM	W145/101	23.20	2.0	2.0

DAYLIGHT ANALYSIS

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INTERNAL DAYLIGHT

Room	Room Use	Window	VSC(%)	ADF(%)	Total ADF(%)
R115/101	LKD	W146/101	24.05	2.2	2.2
R116/101	BEDROOM	W147/101	24.91	2.0	2.0
R117/101	LKD	W148/101	25.42	0.9	
R117/101	LKD	W149/101	25.90	2.1	
R117/101	LKD	W150/101	17.12	0.7	3.7
R118/101	BEDROOM	W151/101	12.82	1.2	1.2
R1/102	BEDROOM	W1/102	27.79	2.4	2.4
R2/102	BEDROOM	W2/102	35.53	2.8	2.8
R3/102	BEDROOM	W3/102	36.59	2.8	2.8
R4/102	BEDROOM	W5/102	37.06	2.6	2.6
R5/102	BEDROOM	W6/102	37.09	2.8	2.8
R6/102	LKD	W7/102	37.13	2.9	2.9
R7/102	BEDROOM	W8/102	37.13	2.9	2.9
R8/102	BEDROOM	W9/102	37.11	3.0	3.0
R9/102	LKD	W10/102	37.16	2.9	2.9
R10/102	BEDROOM	W11/102	37.16	2.9	2.9
R11/102	BEDROOM	W12/102	37.17	3.0	3.0
R12/102	LKD	W13/102	37.18	3.3	3.3
R13/102	BEDROOM	W14/102	37.20	2.9	2.9
R14/102	BEDROOM	W15/102	37.22	3.0	3.0
R15/102	BEDROOM	W16/102	37.25	5.4	5.4
R16/102	BEDROOM	W17/102	37.29	2.7	2.7
R17/102	LKD	W18/102	37.38	2.7	
R17/102	LKD	W19/102	38.31	2.7	
R17/102	LKD	W20/102	38.29	1.1	
R17/102	LKD	W21/102	38.23	1.1	7.6

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INTERNAL DAYLIGHT

Room	Room Use	Window	VSC(%)	ADF(%)	Total ADF(%)
R18/102	LKD	W22/102	38.14	3.7	3.7
R19/102	BEDROOM	W23/102	38.08	3.0	3.0
R20/102	BEDROOM	W24/102	38.02	3.1	3.1
R21/102	BEDROOM	W25/102	24.14	4.2	4.2
R22/102	LKD	W26/102	13.31	0.6	
R22/102	LKD	W27/102	37.54	1.1	
R22/102	LKD	W28/102	37.51	1.1	2.8
R23/102	BEDROOM	W29/102	37.16	3.1	3.1
R24/102	BEDROOM	W30/102	37.65	6.7	6.7
R25/102	LKD	W31/102	37.44	1.5	1.5
R26/102	BEDROOM	W32/102	37.67	2.8	2.8
R27/102	BEDROOM	W33/102	37.42	2.8	2.8
R28/102	LKD	W34/102	37.62	3.3	3.3
R29/102	LKD	W35/102	16.65	0.7	
R29/102	LKD	W36/102	19.97	0.7	
R29/102	LKD	W37/102	25.09	1.8	3.2
R30/102	BEDROOM	W38/102	24.18	2.1	2.1
R31/102	BEDROOM	W39/102	23.24	2.1	2.1
R32/102	LKD	W40/102	21.91	2.0	2.0
R33/102	BEDROOM	W41/102	19.66	1.7	1.7
R34/102	BEDROOM	W42/102	8.59	2.1	2.1
R35/102	LKD	W43/102	7.98	0.6	
R35/102	LKD	W44/102	14.83	0.8	1.4
R36/102	BEDROOM	W45/102	17.25	1.8	1.8
R37/102	BEDROOM	W46/102	19.33	1.8	1.8

INTERNAL DAYLIGHT

Room	Room Use	Window	VSC(%)	ADF(%)	Total ADF(%)
R38/102	LKD	W47/102	22.51	1.9	1.9
R39/102	BEDROOM	W48/102	25.08	2.3	2.3
R40/102	BEDROOM	W49/102	25.82	2.3	2.3
R41/102	LKD	W50/102	26.89	2.2	2.2
R42/102	BEDROOM	W51/102	27.38	2.3	2.3
R43/102	LKD	W52/102	27.15	2.6	
R43/102	LKD	W53/102	11.93	0.9	3.5
R44/102	BEDROOM	W54/102	9.43	0.9	0.9
R45/102	LKD	W4/102	36.92	3.2	3.2
R46/102	BEDROOM	W55/102	15.47	2.0	2.0
R47/102	BEDROOM	W56/102	17.73	2.0	2.0
R48/102	BEDROOM	W57/102	15.61	1.8	1.8
R1/103	BEDROOM	W1/103	9.90	2.3	2.3
R2/103	LKD	W2/103	8.52	0.6	
R2/103	LKD	W3/103	16.48	0.8	1.4
R3/103	BEDROOM	W4/103	15.29	1.2	1.2
R1/104	BEDROOM	W1/104	11.52	2.5	2.5
R2/104	LKD	W2/104	9.42	0.6	
R2/104	LKD	W3/104	18.57	0.9	1.5
R1/112	LKD	W1/112	22.49	2.0	2.0
R2/112	BEDROOM	W2/112	21.66	1.6	1.6
R3/112	BEDROOM	W3/112	21.19	1.7	1.7
R4/112	LKD	W4/112	20.83	2.1	2.1
R5/112	BEDROOM	W5/112	20.70	1.4	1.4
R6/112	LKD	W6/112	11.95	1.5	1.5

INTERNAL DAYLIGHT

Room	Room Use	Window	VSC(%)	ADF(%)	Total ADF(%)
R7/112	BEDROOM	W7/112	21.06	1.7	1.7
R8/112	BEDROOM	W8/112	21.58	1.5	1.5
R9/112	BEDROOM	W9/112	22.21	1.3	1.3
R10/112	BEDROOM	W10/112	22.92	1.8	1.8
R11/112	LKD	W11/112	27.45	0.9	
R11/112	LKD	W12/112	28.47	0.9	
R11/112	LKD	W13/112	26.19	2.4	4.2
R12/112	BEDROOM	W14/112	36.32	2.3	2.3
R13/112	BEDROOM	W15/112	36.38	3.2	
R13/112	BEDROOM	W16/112	16.65	1.8	5.0
R14/112	LKD	W17/112	24.87	2.2	2.2
R15/112	BEDROOM	W18/112	21.48	1.9	1.9
R16/112	BEDROOM	W19/112	23.70	1.9	1.9
R17/112	LKD	W20/112	25.00	2.0	2.0
R18/112	BEDROOM	W21/112	26.16	2.1	2.1
R19/112	LKD	W22/112	26.90	2.3	2.3
R20/112	BEDROOM	W23/112	27.69	2.2	2.2
R21/112	LKD	W24/112	28.17	1.0	
R21/112	LKD	W25/112	28.61	2.4	
R21/112	LKD	W26/112	20.96	0.8	4.2
R22/112	BEDROOM	W27/112	17.53	1.6	1.6
R1/113	LKD	W1/113	23.40	0.8	
R1/113	LKD	W2/113	25.56	2.2	
R1/113	LKD	W3/113	24.82	0.9	3.9
R2/113	LKD	W4/113	24.12	2.3	2.3
R3/113	LKD	W5/113	14.64	1.7	1.7

INTERNAL DAYLIGHT

Room	Room Use	Window	VSC(%)	ADF(%)	Total ADF(%)
R4/113	LKD	W6/113	25.40	2.2	2.2
R1/114	LKD	W1/114	27.87	2.6	2.6
R2/114	LKD	W2/114	17.75	2.0	2.0
R3/114	LKD	W3/114	25.84	2.0	
R3/114	LKD	W4/114	31.07	1.2	
R3/114	LKD	W5/114	28.83	1.1	4.3
R1/122	LKD	W1/122	37.63	1.3	
R1/122	LKD	W2/122	37.23	1.3	
R1/122	LKD	W3/122	17.49	1.9	4.5
R2/122	BEDROOM	W4/122	16.38	2.4	2.4
R3/122	BEDROOM	W5/122	15.47	1.5	1.5
R4/122	BEDROOM	W6/122	14.57	1.0	1.0
R5/122	LKD	W7/122	15.53	1.4	1.4
R6/122	BEDROOM	W8/122	15.25	1.3	1.3
R7/122	LKD	W9/122	15.99	1.8	1.8
R8/122	BEDROOM	W10/122	16.36	1.4	1.4
R9/122	LKD	W11/122	17.32	1.9	1.9
R10/122	BEDROOM	W12/122	17.94	1.5	1.5
R11/122	BEDROOM	W13/122	19.21	1.4	1.4
R12/122	BEDROOM	W15/122	21.04	1.6	1.6
R13/122	BEDROOM	W16/122	22.16	1.7	1.7
R14/122	BEDROOM	W17/122	22.09	1.9	1.9
R15/122	BEDROOM	W18/122	20.69	1.9	1.9
R16/122	BEDROOM	W19/122	21.68	2.1	2.1
R17/122	BEDROOM	W20/122	20.47	2.0	2.0

INTERNAL DAYLIGHT

Room	Room Use	Window	VSC(%)	ADF(%)	Total ADF(%)
R18/122	LKD	W14/122	20.85	2.1	2.1
R19/122	BEDROOM	W21/122	17.43	1.6	1.6
R20/122	LKD	W22/122	21.34	0.8	
R20/122	LKD	W23/122	27.36	2.1	
R20/122	LKD	W24/122	26.48	1.0	3.9
R21/122	BEDROOM	W25/122	25.46	2.2	2.2
R22/122	LKD	W26/122	23.63	2.0	2.0
R23/122	BEDROOM	W27/122	21.59	1.9	1.9
R24/122	LKD	W28/122	19.13	1.7	1.7
R25/122	BEDROOM	W29/122	16.21	1.6	1.6
R26/122	LKD	W30/122	16.65	2.2	2.2
R27/122	LKD	W31/122	17.60	2.7	2.7
R28/122	LKD	W32/122	21.31	2.2	2.2
R29/122	BEDROOM	W33/122	21.37	1.9	1.9
R30/122	LKD	W34/122	21.60	2.0	
R30/122	LKD	W35/122	22.67	1.0	3.0
R31/122	BEDROOM	W36/122	24.16	2.0	2.0
R32/122	BEDROOM	W37/122	24.99	2.1	2.1
R33/122	BEDROOM	W38/122	25.47	2.5	2.5
R34/122	LKD	W39/122	25.85	1.6	
R34/122	LKD	W40/122	24.37	2.1	
R34/122	LKD	W41/122	20.30	0.9	4.6
R35/122	BEDROOM	W42/122	18.13	1.5	1.5
R36/122	BEDROOM	W43/122	21.49	2.9	2.9
R37/122	BEDROOM	W44/122	17.24	2.6	2.6
R38/122	BEDROOM	W45/122	37.41	5.4	5.4

INTERNAL DAYLIGHT

Room	Room Use	Window	VSC(%)	ADF(%)	Total ADF(%)
R39/122	BEDROOM	W46/122	37.49	5.4	5.4
R40/122	BEDROOM	W47/122	37.55	4.9	4.9
R41/122	LKD	W48/122	38.06	4.1	4.1
R42/122	BEDROOM	W49/122	37.97	2.7	2.7
R43/122	BEDROOM	W50/122	38.03	2.7	2.7
R44/122	LKD	W51/122	38.37	3.8	3.8
R45/122	BEDROOM	W52/122	38.14	2.9	2.9
R46/122	STUDIO	W53/122	38.45	2.4	
R46/122	STUDIO	W54/122	38.23	1.2	3.6
R47/122	LKD	W55/122	38.47	3.8	3.8
R48/122	BEDROOM	W56/122	38.32	3.0	3.0
R49/122	LKD	W57/122	38.57	2.7	
R49/122	LKD	W58/122	38.89	2.8	5.5
R50/122	BEDROOM	W59/122	38.63	3.1	3.1
R51/122	BEDROOM	W60/122	38.72	2.9	2.9
R52/122	BEDROOM	W61/122	38.51	2.9	2.9
R53/122	BEDROOM	W62/122	38.33	2.3	2.3
R54/122	BEDROOM	W63/122	26.34	4.1	4.1
R55/122	BEDROOM	W64/122	38.41	5.0	5.0
R56/122	STUDIO	W65/122	38.39	2.5	
R56/122	STUDIO	W66/122	37.96	1.1	3.6
R1/123	BEDROOM	W1/123	18.29	2.7	2.7
R2/123	LKD	W2/123	18.78	2.2	2.2
R3/123	LKD	W3/123	20.25	2.4	2.4

DAYLIGHT ANALYSIS

KENAVON DRIVE, READING

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INTERNAL DAYLIGHT

Room	Room Use	Window	VSC(%)	ADF(%)	Total ADF(%)
R4/123	LKD	W4/123	22.06	0.8	
R4/123	LKD	W5/123	23.63	2.4	
R4/123	LKD	W6/123	24.52	0.9	4.1
R5/123	LKD	W7/123	17.92	2.3	2.3
R1/124	LKD	W1/124	22.04	2.5	2.5
R2/124	LKD	W2/124	23.66	2.7	2.7

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Appendix 4:
APSH (Sunlight) Analysis

INTERNAL SUNLIGHTINTERNAL ANALYSIS

KENAVON DRIVE, READING

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INTERNAL APSH

Room	Window	Room Use	Orientation	Window		Room	
				Winter APSH	Annual APSH	Winter APSH	Annual APSH
EAST BLOCK							
R1/300	W1/300	LKD	121.0	2	21	2	21
R2/300	W2/300	LKD	121.0	1	19	1	19
R3/300	W3/300	LKD	121.0	1	15	1	15
R4/300	W4/300	LKD	121.0	1	16	1	16
R5/300	W5/300	LKD	121.0	4	19	4	19
R6/300	W6/300	LKD	121.0	6	20	6	20
R7/300	W7/300	LKD	121.0	11	24	11	24
R11/300	W11/300	LKD	211.0	24	63	24	63
R13/300	W13/300	LKD	211.0	23	62	23	62
R15/300	W15/300	LKD	211.0	23	60	23	60
R17/300	W17/300	LKD	211.0	23	60	23	60
R18/300	W18/300	LKD	211.0	22	56	22	56
R19/300	W19/300	LKD	211.0	19	40	19	40
R41/300	W53/300	LKD	31.0	0	4		
R41/300	W54/300	LKD	31.0	0	7		
R41/300	W55/300	LKD	121.0	4	28	4	28
R7/301	W7/301	LKD	31.0	0	0		
R7/301	W8/301	LKD	31.0	0	0		
R7/301	W9/301	LKD	121.0	12	18	12	18
R11/301	W13/301	LKD	211.0	20	53	20	53
R12/301	W14/301	LKD	211.0	23	56	23	56
R16/301	W18/301	LKD	211.0	22	58	22	58
R18/301	W20/301	LKD	211.0	21	31	21	31
R19/301	W21/301	LD	211.0	21	52		
R19/301	W22/301	LD	211.0	24	58	24	58
R20/301	W23/301	LD	211.0	21	49		
R20/301	W24/301	LD	211.0	20	41	24	54

INTERNAL SUNLIGHTINTERNAL ANALYSIS

KENAVON DRIVE, READING

PROPOSED SCHEME 21/10/19

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INTERNAL APSH

Room	Window	Room Use	Orientation	Window		Room	
				Winter APSH	Annual APSH	Winter APSH	Annual APSH
R21/301	W25/301	LKD	211.0	7	7	7	7
R24/301	W28/301	LKD	211.0	6	6		
R24/301	W29/301	LKD	273.0	7	23		
R24/301	W30/301	LKD	273.0	7	23	10	26
R57/301	W68/301	LKD	31.0	0	4		
R57/301	W69/301	LKD	121.0	11	46	11	46
R60/301	W72/301	LKD	121.0	2	18		
R60/301	W73/301	LKD	211.0	8	36	8	51
R63/301	W76/301	LKD	211.0	6	35	6	35
R64/301	W77/301	LKD	211.0	8	16	8	16
R66/301	W79/301	LKD	211.0	13	19	13	19
R71/301	W84/301	LKD	121.0	14	33	14	33
R73/301	W86/301	LKD	121.0	12	19		
R73/301	W87/301	LKD	211.0	7	24		
R73/301	W88/301	LKD	211.0	6	22	14	37
R77/301	W92/301	LKD	31.0	0	0		
R77/301	W93/301	LKD	31.0	0	0		
R77/301	W94/301	LKD	121.0	5	26		
R77/301	W95/301	LKD	121.0	3	33	5	37
R79/301	W97/301	LKD	121.0	3	25	3	25
R81/301	W99/301	LKD	121.0	2	22		
R81/301	W100/301	LKD	121.0	0	19	2	26
R87/301	W106/301	LKD	31.0	0	3	0	3
R88/301	W107/301	LKD	31.0	0	2	0	2
R1/302	W1/302	LKD	121.0	2	30		
R1/302	W2/302	LKD	121.0	1	25		
R1/302	W49/302	LKD	301.0	0	9	3	44
R2/302	W3/302	LKD	121.0	5	28		
R2/302	W4/302	LKD	121.0	4	27		
R2/302	W48/302	LKD	301.0	0	7	6	42
R3/302	W5/302	LKD	121.0	5	26		
R3/302	W6/302	LKD	121.0	2	24		
R3/302	W47/302	LKD	301.0	0	5	5	37

INTERNAL SUNLIGHTINTERNAL ANALYSIS

KENAVON DRIVE, READING

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INTERNAL APSH

Room	Window	Room Use	Orientation	Window		Room	
				Winter APSH	Annual APSH	Winter APSH	Annual APSH
R4/302	W7/302	LKD	121.0	4	22		
R4/302	W8/302	LKD	121.0	2	20		
R4/302	W46/302	LKD	301.0	0	5	4	32
R5/302	W9/302	LKD	121.0	3	19		
R5/302	W10/302	LKD	121.0	3	23		
R5/302	W45/302	LKD	301.0	0	2	5	29
R6/302	W11/302	LKD	121.0	5	24		
R6/302	W12/302	LKD	121.0	10	36		
R6/302	W44/302	LKD	301.0	0	0	10	38
R7/302	W13/302	LKD	211.0	17	19	17	19
R10/302	W16/302	LKD	211.0	13	19		
R10/302	W17/302	LKD	273.0	6	24		
R10/302	W18/302	LKD	273.0	7	26	15	34
R15/302	W23/302	LKD	301.0	2	9	2	9
R22/302	W33/302	LKD	31.0	0	0		
R22/302	W34/302	LKD	31.0	0	0		
R22/302	W35/302	LKD	121.0	8	26		
R22/302	W36/302	LKD	121.0	5	36	9	42
R24/302	W38/302	LKD	121.0	4	26	4	26
R26/302	W40/302	LKD	121.0	4	23		
R26/302	W41/302	LKD	121.0	0	21	4	29
R1/303	W1/303	LKD	121.0	7	18		
R1/303	W2/303	LKD	211.0	17	19	19	32
R1/304	W1/304	LKD	121.0	7	26		
R1/304	W2/304	LKD	121.0	12	33		
R1/304	W3/304	LKD	211.0	17	19	24	47
R3/312	W3/312	LKD	211.0	4	29		
R3/312	W4/312	LKD	211.0	5	30		
R3/312	W5/312	LKD	301.0	0	10	7	38
R21/312	W26/312	LKD	31.0	0	11		
R21/312	W27/312	LKD	121.0	9	25	9	26
R24/312	W30/312	LKD	121.0	11	50		
R24/312	W31/312	LKD	211.0	9	14	12	56
R28/312	W35/312	LKD	211.0	11	19	11	19
R29/312	W36/312	LKD	211.0	12	20	12	20

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INTERNAL SUNLIGHTINTERNAL ANALYSIS

KENAVON DRIVE, READING

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INTERNAL APSH

Room	Window	Room Use	Orientation	Window		Room	
				Winter APSH	Annual APSH	Winter APSH	Annual APSH
R31/312	W38/312	LKD	211.0	19	26	19	26
R36/312	W43/312	LKD	121.0	15	34	15	34
R38/312	W45/312	LKD	121.0	13	20		
R38/312	W46/312	LKD	211.0	8	30		
R38/312	W47/312	LKD	211.0	7	29	14	41
R1/322	W1/322	LKD	31.0	0	0		
R1/322	W2/322	LKD	31.0	0	0		
R1/322	W3/322	LKD	121.0	11	16	11	16
R4/322	W6/322	LKD	121.0	11	35		
R4/322	W7/322	LKD	211.0	23	37	25	61
R7/322	W10/322	LKD	211.0	23	37	23	37
R12/322	W15/322	LKD	211.0	24	35	24	35

MIDDLE BLOCK

R2/200	W2/200	LKD	31.0	0	3		
R2/200	W3/200	LKD	31.0	0	4		
R2/200	W4/200	LKD	31.0	0	4		
R2/200	W5/200	LKD	121.0	4	29	4	29
R4/200	W7/200	LKD	121.0	3	17		
R4/200	W8/200	LKD	121.0	1	14	3	18
R5/200	W9/200	LKD	121.0	3	15		
R5/200	W10/200	LKD	121.0	3	15	4	19
R6/200	W11/200	LKD	121.0	3	18		
R6/200	W12/200	LKD	121.0	4	21	4	23
R7/200	W13/200	LKD	121.0	5	27	5	27
R8/200	W14/200	LKD	121.0	5	25	5	25
R9/200	W15/200	LKD	121.0	0	15		
R9/200	W16/200	LKD	121.0	0	10	0	15
R10/200	W17/200	LKD	121.0	1	7		
R10/200	W18/200	LKD	121.0	0	2	1	7
R12/200	W20/200	LKD	121.0	3	5	3	5
R14/200	W22/200	LKD	121.0	4	8	4	8

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INTERNAL SUNLIGHTINTERNAL ANALYSIS

KENAVON DRIVE, READING

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INTERNAL APSH

Room	Window	Room Use	Orientation	Window		Room	
				Winter APSH	Annual APSH	Winter APSH	Annual APSH
R15/200	W23/200	LKD	245.0	4	7		
R15/200	W24/200	LKD	245.0	6	12	7	13
R16/200	W25/200	LKD	245.0	2	4		
R16/200	W26/200	LKD	245.0	5	10	5	10
R17/200	W27/200	LKD	245.0	0	2		
R17/200	W28/200	LKD	245.0	3	10	3	10
R18/200	W29/200	LKD	245.0	0	6		
R18/200	W30/200	LKD	245.0	0	9	0	10
R19/200	W31/200	LKD	245.0	3	17	3	17
R20/200	W32/200	LKD	245.0	3	20	3	20
R21/200	W33/200	LKD	245.0	0	12		
R21/200	W34/200	LKD	245.0	0	15	0	18
R22/200	W35/200	LKD	245.0	1	9		
R22/200	W36/200	LKD	245.0	1	13	1	14
R23/200	W37/200	LKD	245.0	2	8		
R23/200	W38/200	LKD	245.0	1	11	3	14
R24/200	W39/200	LKD	245.0	0	6		
R24/200	W40/200	LKD	245.0	2	13	2	13
R2/201	W2/201	LKD	31.0	0	5		
R2/201	W3/201	LKD	31.0	0	5		
R2/201	W4/201	LKD	31.0	0	5		
R2/201	W5/201	LKD	121.0	5	20	5	21
R19/201	W22/201	LKD	121.0	2	2	2	2
R22/201	W25/201	LKD	121.0	7	7	7	7
R49/201	W58/201	LKD	211.0	1	24		
R49/201	W59/201	LKD	211.0	1	26		
R49/201	W60/201	LKD	301.0	0	11	2	30
R55/201	W66/201	LKD	121.0	0	0		
R55/201	W67/201	LKD	121.0	0	0		
R55/201	W68/201	LKD	211.0	6	16	6	16
R59/201	W72/201	LKD	183.0	10	16	10	16
R60/201	W73/201	LKD	183.0	15	43	15	43

INTERNAL SUNLIGHTINTERNAL ANALYSIS

KENAVON DRIVE, READING

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INTERNAL APSH

Room	Window	Room Use	Orientation	Window		Room	
				Winter APSH	Annual APSH	Winter APSH	Annual APSH
R64/201	W77/201	LKD	183.0	12	18		
R64/201	W78/201	LKD	273.0	0	1		
R64/201	W79/201	LKD	273.0	0	2	12	20
R2/202	W2/202	LKD	31.0	0	5		
R2/202	W3/202	LKD	31.0	0	5		
R2/202	W4/202	LKD	121.0	2	18	2	18
R5/202	W7/202	LKD	121.0	3	8	3	8
R7/202	W9/202	LKD	121.0	6	7	6	7
R9/202	W11/202	LKD	121.0	8	11		
R9/202	W12/202	LKD	211.0	5	27		
R9/202	W13/202	LKD	211.0	4	28	11	37
R10/202	W14/202	LKD	211.0	3	31		
R10/202	W15/202	LKD	211.0	2	30		
R10/202	W16/202	LKD	301.0	0	12	4	37
R16/202	W22/202	LKD	121.0	0	1		
R16/202	W23/202	LKD	121.0	0	1		
R16/202	W24/202	LKD	211.0	9	19	9	20
R20/202	W28/202	LKD	183.0	13	19	13	19
R21/202	W29/202	LKD	183.0	15	26	15	26
R26/202	W34/202	LKD	183.0	13	21		
R26/202	W35/202	LKD	273.0	0	3		
R26/202	W36/202	LKD	273.0	0	4	13	25
R41/202	W53/202	LKD	31.0	0	0		
R41/202	W54/202	LKD	121.0	4	18	4	18
R45/202	W58/202	LKD	121.0	8	12	8	12
R48/202	W61/202	LKD	121.0	12	17	12	17
R49/202	W62/202	LKD	121.0	8	15		
R49/202	W63/202	LKD	183.0	24	36	24	43
R52/202	W66/202	LKD	183.0	26	37	26	37
R53/202	W67/202	LKD	183.0	26	35	26	35
R56/202	W70/202	LKD	183.0	24	26		
R56/202	W71/202	LKD	245.0	6	14	24	33
R57/202	W72/202	LKD	245.0	9	9	9	9

INTERNAL SUNLIGHTINTERNAL ANALYSIS

KENAVON DRIVE, READING

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INTERNAL APSH

Room	Window	Room Use	Orientation	Window		Room	
				Winter APSH	Annual APSH	Winter APSH	Annual APSH
R60/202	W75/202	LKD	245.0	6	6	6	6
R64/202	W79/202	LKD	245.0	1	6		
R64/202	W80/202	LKD	335.0	0	0	1	6
R1/203	W1/203	LKD	121.0	3	8	3	8
R2/203	W2/203	LKD	121.0	6	7	6	7
R3/203	W3/203	LKD	121.0	0	2		
R3/203	W4/203	LKD	121.0	0	2		
R3/203	W5/203	LKD	211.0	10	20	10	22
R5/203	W10/203	LKD	121.0	6	11	6	11
R6/203	W11/203	LKD	121.0	10	10	10	10
R7/203	W12/203	LKD	245.0	10	17	10	17
R8/203	W13/203	LKD	245.0	7	14	7	14
R1/204	W1/204	LKD	121.0	7	18	7	18
R2/204	W2/204	LKD	121.0	8	15	8	15
R3/204	W3/204	LKD	121.0	8	22	8	22
R4/204	W4/204	LKD	245.0	6	11	6	11
R1/211	W1/211	LKD	183.0	4	18		
R1/211	W2/211	LKD	183.0	7	22		
R1/211	W8/211	LKD	3.0	0	0	8	25
R2/211	W3/211	LKD	183.0	7	24		
R2/211	W4/211	LKD	183.0	8	26		
R2/211	W7/211	LKD	3.0	0	0	9	29
R3/211	W5/211	LKD	245.0	0	0		
R3/211	W6/211	LKD	245.0	0	0	0	0
R10/211	W15/211	LKD	65.0	2	8		
R10/211	W16/211	LKD	65.0	3	20		
R10/211	W17/211	LKD	155.0	2	31	4	38
R20/211	W27/211	LKD	245.0	0	3	0	3
R22/211	W29/211	LKD	245.0	0	7	0	7
R24/211	W31/211	LKD	245.0	2	14	2	14

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INTERNAL SUNLIGHTINTERNAL ANALYSIS

KENAVON DRIVE, READING

PROPOSED SCHEME 21/10/19

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INTERNAL APSH

Room	Window	Room Use	Orientation	Window		Room	
				Winter APSH	Annual APSH	Winter APSH	Annual APSH
R27/211	W34/211	LKD	3.0	0	2		
R27/211	W35/211	LKD	65.0	0	13	0	14
R12/212	W13/212	STUDIO	65.0	3	22		
R12/212	W14/212	STUDIO	155.0	4	35	6	44
R13/212	W15/212	STUDIO	155.0	6	33		
R13/212	W16/212	STUDIO	245.0	4	12	9	40
R14/212	W17/212	STUDIO	245.0	4	11	4	11
R16/212	W19/212	LKD	245.0	3	3	3	3
R18/212	W21/212	LKD	245.0	2	3	2	3
R19/212	W22/212	LKD	245.0	0	5	0	5
R21/212	W24/212	LKD	245.0	1	8	1	8
R23/212	W26/212	LKD	245.0	3	15	3	15
R2/213	W2/213	LKD	245.0	5	10	5	10
R4/213	W4/213	LKD	245.0	5	11	5	11
R5/213	W5/213	LKD	245.0	0	10	0	10
R2/214	W2/214	LKD	245.0	7	18	7	18
R4/214	W4/214	LKD	245.0	7	19	7	19
R5/214	W5/214	LKD	245.0	1	16	1	16
WEST BLOCK							
R10/100	W16/100	LKD	155.0	19	42		
R10/100	W17/100	LKD	155.0	21	49	21	49
R11/100	W18/100	LKD	155.0	23	57		
R11/100	W19/100	LKD	155.0	22	56	23	57
R12/100	W20/100	LKD	155.0	22	56		
R12/100	W21/100	LKD	155.0	22	55	22	56
R13/100	W22/100	LKD	155.0	24	67		
R13/100	W23/100	LKD	155.0	22	55	24	67
R14/100	W24/100	LKD	155.0	25	66	25	66

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INTERNAL SUNLIGHTINTERNAL ANALYSIS

KENAVON DRIVE, READING

PROPOSED SCHEME 21/10/19

P915 - rel20

INTERNAL APSH

Room	Window	Room Use	Orientation	Window		Room	
				Winter APSH	Annual APSH	Winter APSH	Annual APSH
R16/100	W25/100	LKD	155.0	25	67	25	67
R18/100	W26/100	LKD	155.0	25	68	25	68
R20/100	W27/100	LKD	155.0	25	67	25	67
R22/100	W28/100	LKD	155.0	24	65	24	65
R25/100	W31/100	LKD	155.0	23	61		
R25/100	W32/100	LKD	155.0	23	61		
R25/100	W33/100	LKD	155.0	18	39		
R25/100	W34/100	LKD	262.0	6	30	29	90
R13/101	W15/101	LKD	65.0	0	5		
R13/101	W16/101	LKD	65.0	0	3		
R13/101	W88/101	LKD	245.0	3	24	3	29
R14/101	W17/101	LKD	65.0	0	2		
R14/101	W86/101	LKD	245.0	0	13		
R14/101	W87/101	LKD	245.0	2	20	2	22
R24/101	W27/101	LKD	93.0	7	28		
R24/101	W28/101	LKD	93.0	7	29		
R24/101	W29/101	LKD	155.0	5	8	11	34
R27/101	W33/101	LKD	155.0	12	13	12	13
R33/101	W39/101	LKD	155.0	20	56	20	56
R35/101	W41/101	LKD	155.0	23	60	23	60
R37/101	W43/101	LKD	155.0	21	33	21	33
R39/101	W45/101	LKD	155.0	23	62	23	62
R41/101	W47/101	LKD	155.0	23	63	23	63
R45/101	W52/101	LKD	262.0	12	37	12	37
R49/101	W56/101	LKD	172.0	8	10		
R49/101	W57/101	LKD	262.0	6	31		
R49/101	W58/101	LKD	262.0	6	31	11	36
R51/101	W60/101	LKD	262.0	11	40	11	40
R55/101	W64/101	LKD	262.0	12	41	12	41
R56/101	W65/101	LKD	262.0	8	35		
R56/101	W114/101	LKD	82.0	0	10		
R56/101	W115/101	LKD	82.0	0	3	8	45

INTERNAL SUNLIGHTINTERNAL ANALYSIS

KENAVON DRIVE, READING

PROPOSED SCHEME 21/10/19

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INTERNAL APSH

Room	Window	Room Use	Orientation	Window		Room	
				Winter APSH	Annual APSH	Winter APSH	Annual APSH
R57/101	W66/101	LKD	262.0	8	37		
R57/101	W112/101	LKD	82.0	1	19		
R57/101	W113/101	LKD	82.0	1	18	9	56
R58/101	W67/101	LKD	262.0	8	38		
R58/101	W110/101	LKD	106.0	2	26		
R58/101	W111/101	LKD	82.0	1	18	10	67
R75/101	W89/101	LIVINGROOM	245.0	6	28	6	28
R77/101	W91/101	LKD	155.0	7	27		
R77/101	W92/101	LKD	245.0	8	15		
R77/101	W93/101	LKD	245.0	4	19	11	46
R79/101	W95/101	LKD	245.0	8	12	8	12
R81/101	W97/101	LKD	245.0	9	15	9	15
R83/101	W99/101	LKD	155.0	11	11	11	11
R84/101	W100/101	LKD	155.0	12	13	12	13
R85/101	W101/101	LKD	155.0	12	14	12	14
R87/101	W103/101	LKD	106.0	6	15		
R87/101	W104/101	LKD	106.0	3	23	6	28
R91/101	W108/101	LKD	106.0	5	31		
R91/101	W109/101	LKD	172.0	3	26	5	39
R113/101	W144/101	LKD	245.0	3	16	3	16
R115/101	W146/101	LKD	245.0	2	19	2	19
R117/101	W148/101	LKD	245.0	1	28		
R117/101	W149/101	LKD	245.0	2	20		
R117/101	W150/101	LKD	335.0	0	0	2	33
R6/102	W7/102	LKD	155.0	22	39	22	39
R9/102	W10/102	LKD	155.0	22	39	22	39
R12/102	W13/102	LKD	155.0	23	37	23	37
R17/102	W18/102	LKD	155.0	26	71		
R17/102	W19/102	LKD	262.0	12	26		
R17/102	W20/102	LKD	262.0	7	30		
R17/102	W21/102	LKD	262.0	7	32	30	94

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INTERNAL SUNLIGHTINTERNAL ANALYSIS

KENAVON DRIVE, READING

PROPOSED SCHEME 21/10/19

P915 - rel20

INTERNAL APSH

Room	Window	Room Use	Orientation	Window		Room	
				Winter APSH	Annual APSH	Winter APSH	Annual APSH
R18/102	W22/102	LKD	262.0	9	22	9	22
R22/102	W26/102	LKD	172.0	8	10		
R22/102	W27/102	LKD	262.0	7	33		
R22/102	W28/102	LKD	262.0	7	33	12	38
R25/102	W31/102	LKD	262.0	7	33	7	33
R28/102	W34/102	LKD	262.0	12	41	12	41
R11/112	W11/112	LKD	93.0	6	28		
R11/112	W12/112	LKD	93.0	6	30		
R11/112	W13/112	LKD	155.0	16	26	17	42
R14/112	W17/112	LKD	155.0	16	18	16	18
R17/112	W20/112	LKD	245.0	6	19	6	19
R19/112	W22/112	LKD	245.0	3	19	3	19
R21/112	W24/112	LKD	245.0	1	29		
R21/112	W25/112	LKD	245.0	5	22		
R21/112	W26/112	LKD	335.0	0	1	5	35
R4/113	W6/113	LKD	155.0	16	18	16	18
R3/114	W3/114	LKD	155.0	16	18		
R3/114	W4/114	LKD	245.0	10	29		
R3/114	W5/114	LKD	245.0	10	28	21	42
R20/122	W22/122	LKD	155.0	9	34		
R20/122	W23/122	LKD	245.0	11	20		
R20/122	W24/122	LKD	245.0	6	23	15	58
R22/122	W26/122	LKD	245.0	11	15	11	15
R24/122	W28/122	LKD	245.0	11	18	11	18
R26/122	W30/122	LKD	155.0	11	11	11	11
R27/122	W31/122	LKD	155.0	13	14	13	14
R28/122	W32/122	LKD	155.0	14	16	14	16
R30/122	W34/122	LKD	106.0	6	16		
R30/122	W35/122	LKD	106.0	3	24	6	29
R34/122	W39/122	LKD	106.0	5	33		
R34/122	W40/122	LKD	172.0	9	23		
R34/122	W41/122	LKD	172.0	5	35	11	56

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INTERNAL SUNLIGHTINTERNAL ANALYSIS

KENAVON DRIVE, READING

PROPOSED SCHEME 21/10/19

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INTERNAL APSH

Room	Window	Room Use	Orientation	Window		Room	
				Winter APSH	Annual APSH	Winter APSH	Annual APSH
R41/122	W48/122	LKD	286.0	5	30	5	30
R44/122	W51/122	LKD	286.0	6	31	6	31
R46/122	W53/122	STUDIO	286.0	6	30		
R46/122	W54/122	STUDIO	286.0	2	21	6	30
R47/122	W55/122	LKD	286.0	6	31	6	31
R4/123	W4/123	LKD	65.0	0	7		
R4/123	W5/123	LKD	65.0	1	14		
R4/123	W6/123	LKD	155.0	7	39	7	48
R5/123	W7/123	LKD	155.0	13	13	13	13

APPENDIX D:
WIND MICROCLIMATE

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Kenavon Drive, Reading

Wind Microclimate Addendum
October 2019



1.0 WIND MICROCLIMATE

1.1.1 This document provides an update of the assessment provided in the Original ES in light of the changes described in Chapters 2 and 3 of this ES Addendum (ESA). It should be noted that this topic was scoped out of the EIA on the basis it was unlikely to have significant effects, which is considered to remain the case. It should be read in conjunction with Annex G of Volume 4 of the Original ES.

Changes to Legislation, Policy and Guidance

1.1.2 There have been no changes to the legislative framework since the Original ES.

1.1.3 The National Planning Policy Framework (NPPF) (March 2012) described in the Original ES has recently been replaced by the new NPPF (July 2018, updated in January 2019). This provides high level guidance and principles to underpin the plan making process at a sub-national scale.

1.1.4 At the heart of both is a 'presumption of sustainable development', and therefore it is not considered to materially affect the acceptability of the scheme against policy, although the Planning Statement Addendum explores this further.

1.1.5 The RBC LDF Core Strategy was adopted in 2008 and updated in January 2015, and along with the Reading Central Area Action Plan and Sites and Detailed Policies Document, continues to be the adopted local plan. A new Local Plan was submitted to the Secretary of State in March 2018, and introduced relevant policies such as CC3: Adaptation to Climate Change, CC8: Safeguarding Amenity. However, these changes in policy are not yet adopted (although at the time of writing, it has been made sound subject to some minor amendments) and as it is considered that the S73 scheme has accounted for wind impacts adequately, and therefore it is not considered that these policies will result in a material change to the assessment.

1.1.6 No changes in technical guidance are known to have occurred since the Original ES.

Changes to Baseline Conditions

1.1.7 The pedestrian level wind effects were assessed in the Original ES through an experience-based desk study undertaken by Urban Microclimate Ltd. This described how the site is partially sheltered by surrounding mid-rise buildings from wind approaching in most directions. The prevailing winds are from the south west or west-south-west, which is unchanged.

1.1.8 As described in Chapter 3, three schemes assessed as cumulative schemes in the Original ES have now been completed and form part of the baseline. This change has therefore already been accounted for and assessed as being acceptable. These schemes are too distant to have an influence on wind conditions at the site.

1.1.9 No other material changes in the baseline conditions are known to have occurred since the Original ES was submitted in March 2017.

Changes Associated with the S73 Scheme

<u>Construction Phase</u>

1.1.10 There will be no material changes to construction phase impacts as the changes would be imperceptible, as described in Chapter 2 of the ESA.

Operational Phase

1.1.11 The Original ES described how the introduction of taller buildings could deflect higher level winds to lower ground floor levels, causing downdrafts. Wind acceleration around and through the site could also result in places due to the introduced massing.

1.1.12 The Original ES concluded that the site would remain safe for all users at pedestrian levels. Figure 1.1 shows the predicted wind conditions across the site, with reference to the well-established Lawson Comfort Conditions. It also shows the location of the proposed landscaping and concludes that the conditions on thoroughfares around and through the site are expected to be suitable for their intended use.

1.1.13 The entrance near the south east corner of the Middle Block is expected to be slightly windy during the windiest season for its entrance use. The arrivals square in the north west of the site is expected to be suitable for short period of standing/sitting. The courtyards and private garden spaces are expected to be suitable for at least short periods of standing and sitting. The nursery playground will be well sheltered and suitable for children's play. Conditions within the riverside square will be suitable for general recreational activities.

Figure 1.1 Wind Comfort Conditions



1.1.14 The S73 scheme changes will alter the proposed building heights with minor amendments from roof levels being both increased and decreased in places (see Chapter 2, Table 2.3 and Figure 2.4, Appendix A). Changes to the proposed building heights and building entrances however are small scale and not expected to alter significance of impact, and therefore will not cause any changes to downdrafts than were considered in the Original ES.

1.1.15 It does not result in any external ground floor changes of use, and therefore any new expectations for calmer wind conditions.

1.1.16 It does result in changes to some of the external facades, through the introduction of balconies, but there is not expected to be any greater exposure to users of the new balconies than would be the case under the Original ES scheme.

Updated Mitigation and Residual Effects

1.1.17 Based upon the minor design changes in the S73 scheme, this assessment has demonstrated that there is no change in the residual effects reported in the Original ES and no changes in associated mitigation.