



key plan

notes

revision	date	prepared	checked
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Berkeley
Designed for life

Berkeley House
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project
Vastern Road
Reading

drawing
Block E,F and G
Second Floor Plan

date
October 2019

scale @ a1
1:100

drawn
EE

drawing number
448.PL.EFG.102

revision
/





Third Floor Plan



Fourth Floor Plan



key plan

notes

revision	date	prepared	description
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drawing
Block E,F and G
Fourth Floor Plan

date
October 2019

scale @ a1
1:100

drawn
EE

drawing number
448.PL.EFG.104

revision
/



Fifth Floor Plan



key plan

notes

revision	date	prepared	description
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Reading

drawing
Block E,F and G
Fifth Floor Plan

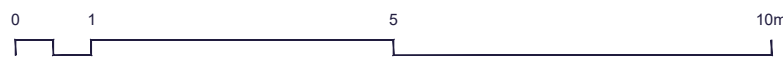
date
October 2019

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1:100

drawn
EE

drawing number
448.PL.EFG.105

revision
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Seventh Floor Plan



key plan

notes

revision	date	prepared	description
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project
Vastern Road
Reading

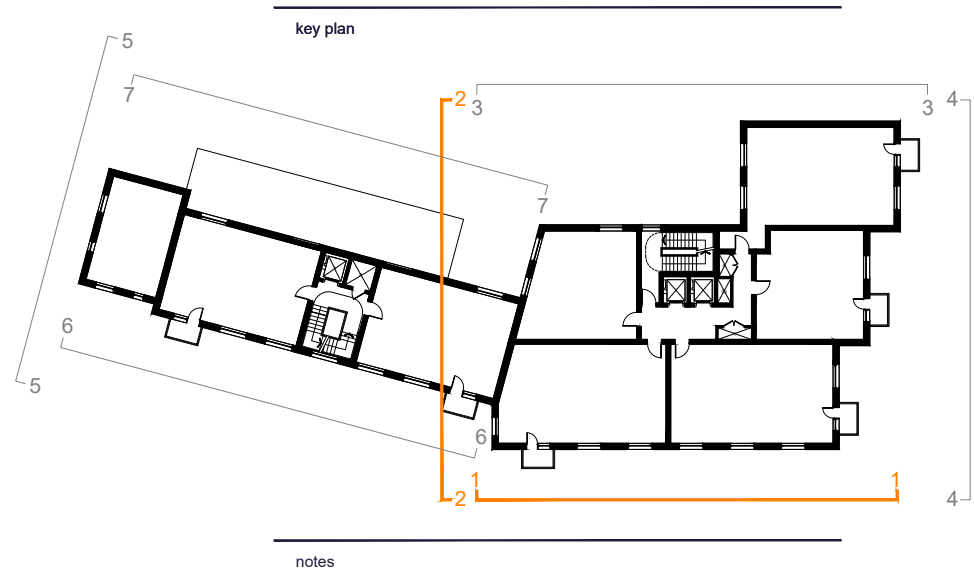
drawing
Block E,F and G
Seventh Floor Plan

date	scale @ a1	drawn
October 2019	1:100	EE

drawing number	revision
448.PL.EFG.107	/

0 1 5 10m

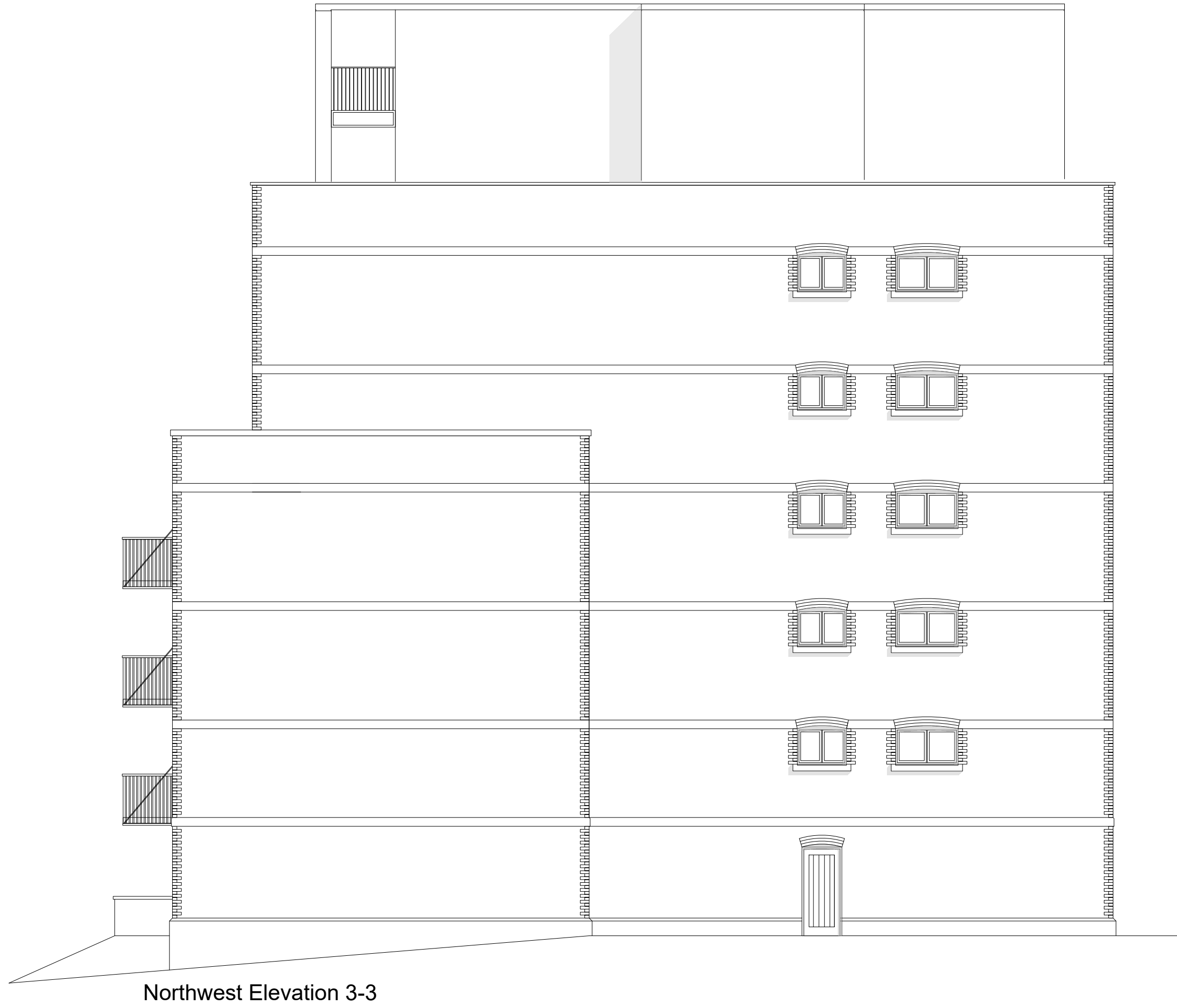
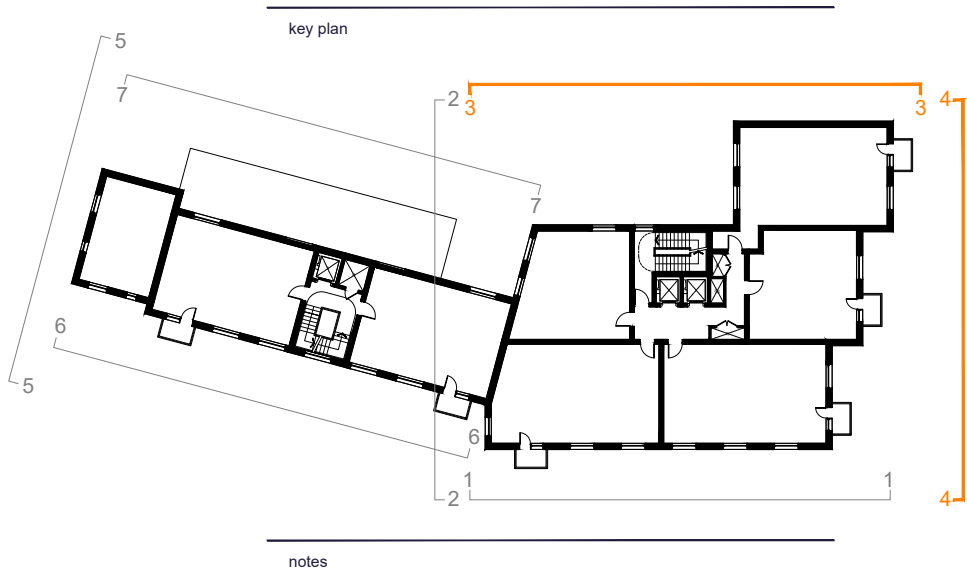




Southeast Elevation 1-1



Southwest Elevation 2-2



Northwest Elevation 3-3



Northeast Elevation 4-4

revision	date	prepared	description

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Vastern Road
Reading

drawing
Block E
Northwest and Northeast Elevation

date	scale @ a1	drawn
October 2019	1:100	EE

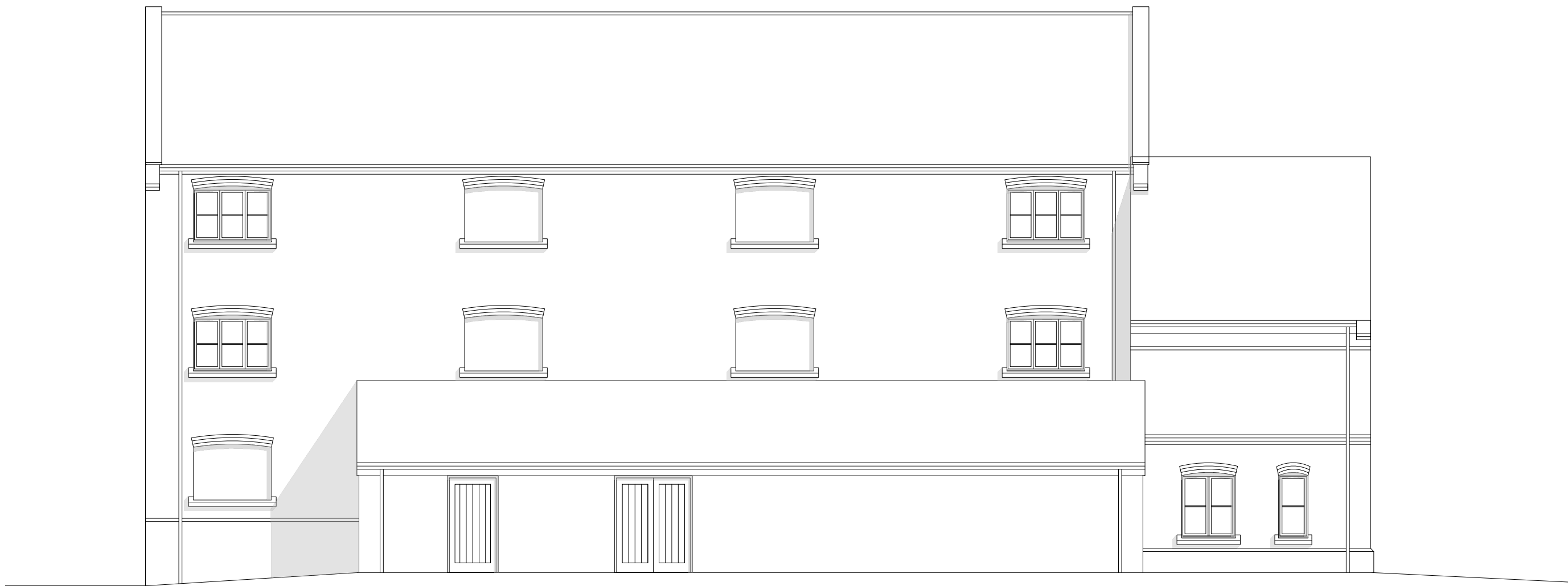
drawing number	revision
448.PL.EFG.201	/



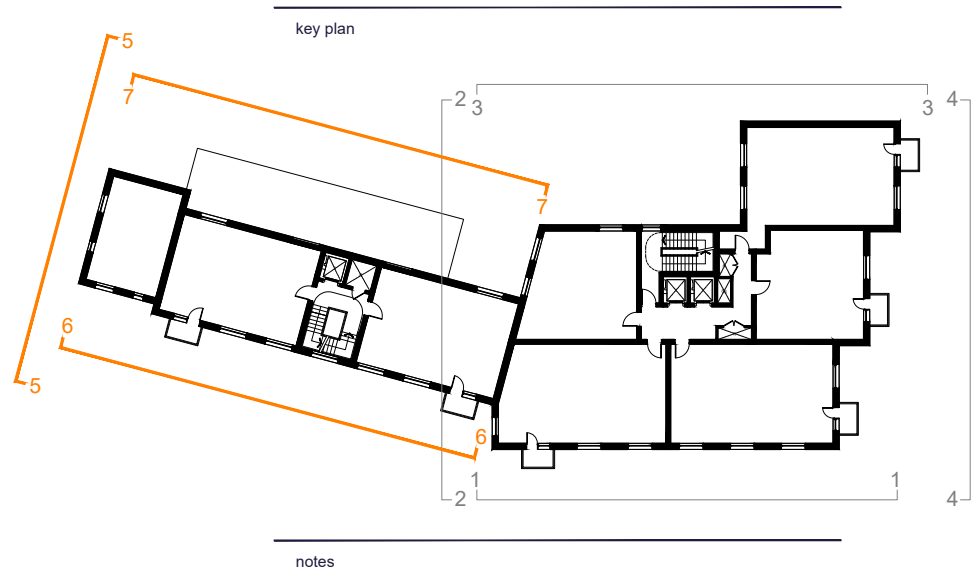
Southwest Elevation 5-5

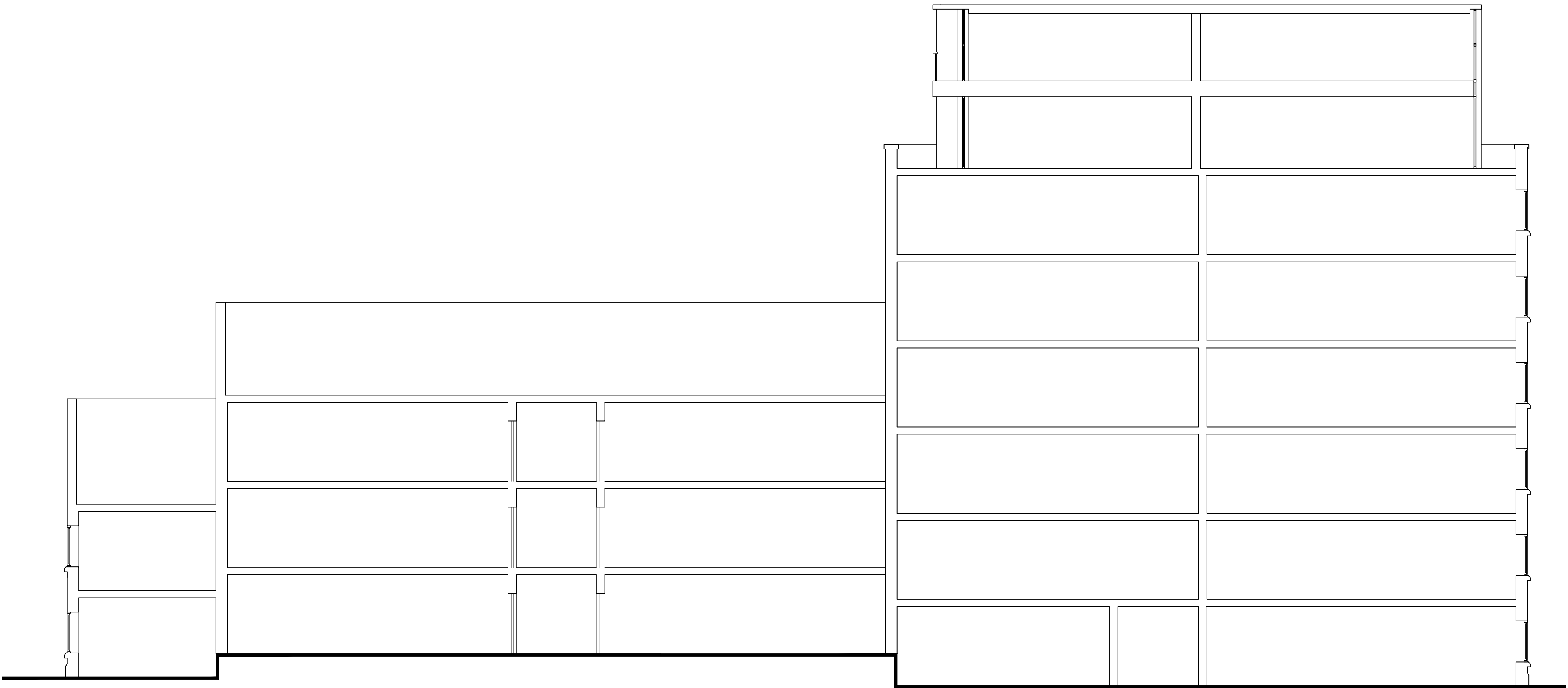


Southeast Elevation 6-6

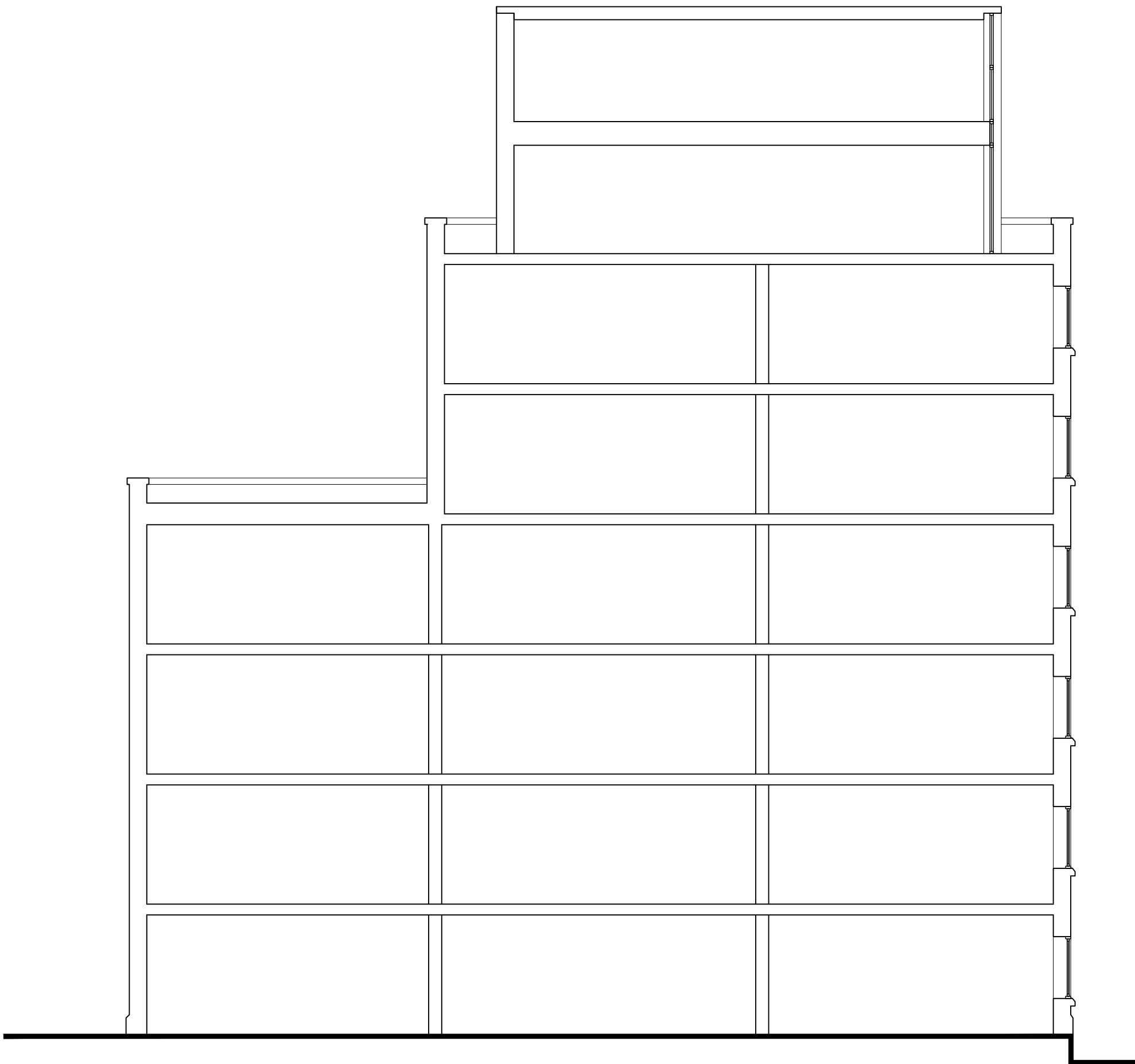


Northwest Elevation 7-7

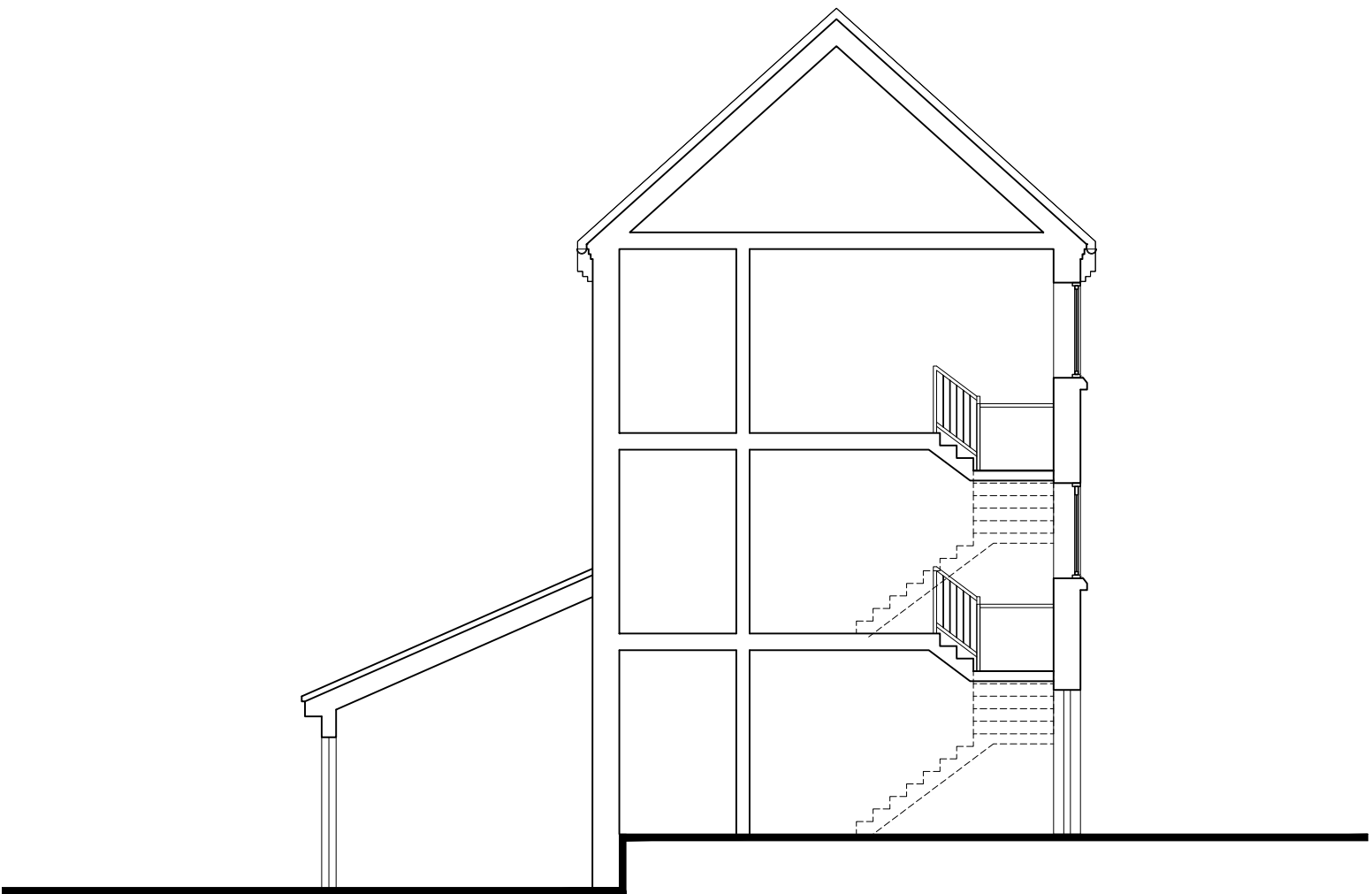




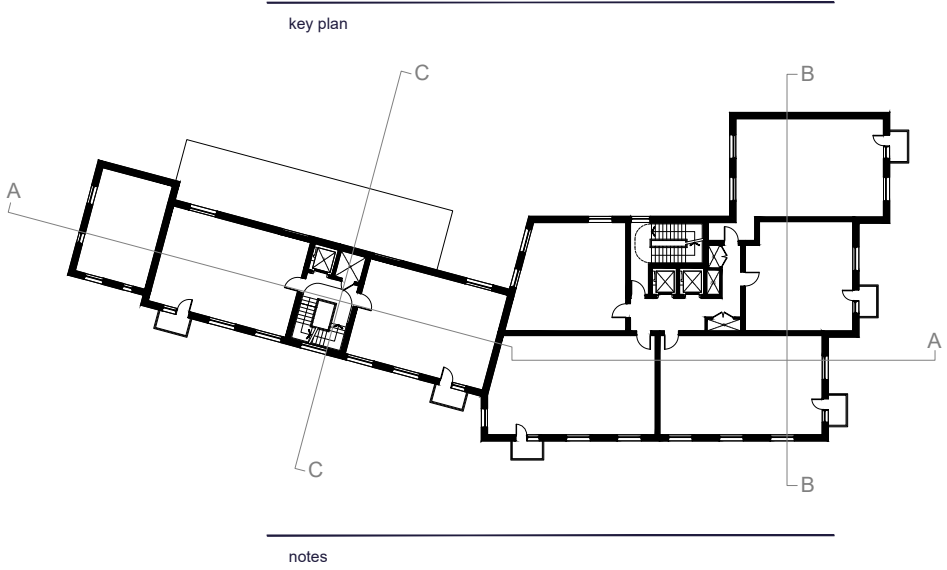
Section A-A



Section B-B



Section C-C



revision	date	prepared	description

Berkeley
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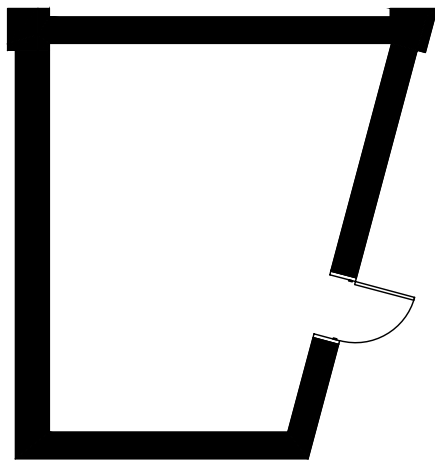
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project
Vastern Road
Reading

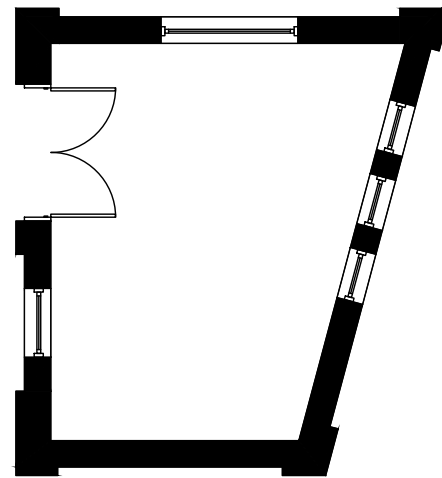
drawing
Block EFG
Section A-A, B-B and C-C

date	scale @ a1	drawn
October 2019	1:100	EE

drawing number	revision
448.PL.EFG.300	/



Lower Ground Floor



Ground Floor

key plan

notes

revision	date	prepared	description
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project
Vastern Road
Reading

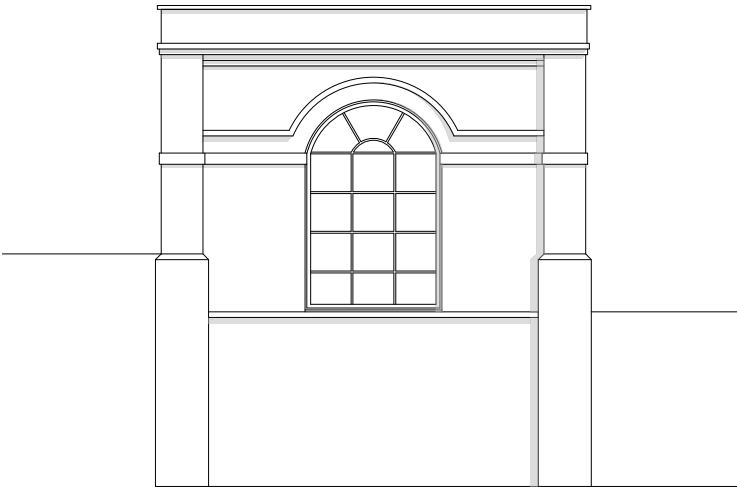
drawing
Caffe
Floor Plans

date	scale @ a3	drawn
October 2019	1:100	EE

drawing number	revision
448.PL.H.100	/

Cafe Floor Plans

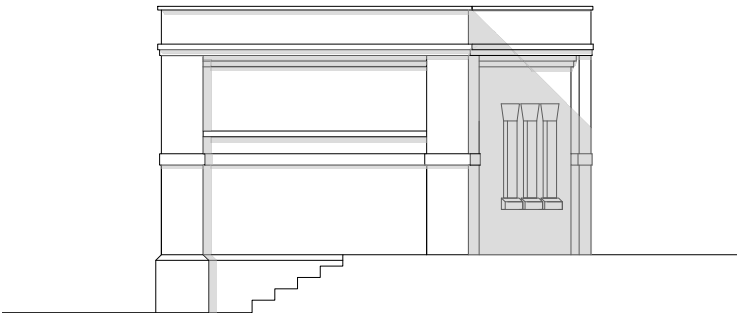




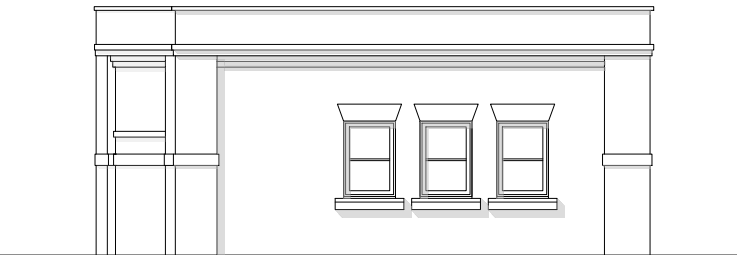
Northeast Elevation



Northwest Elevation



Southwest Elevation



Southeast Elevation



key plan

notes

revision	date	prepared	description

Berkeley

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project
Vastern Road
Reading

drawing
Caffe
Elevations

date	scale @ a3	drawn
October 2019	1:100	AB

drawing number	revision
448.PL.H.200	/

Cafe Elevations

Appendix B Guidance

Obtrusive Light

- The Institution of Lighting Professionals (ILP) Guidance Notes for the Reduction of Obtrusive Light (2011); and
 - This guidance provides advice on lighting including the recommendation to local planning authorities to specify Environmental Zones for exterior lighting based on the existing external ambient lighting levels in the area. These documents also provide design guidance including maximum obtrusive (lighting pollution) lighting level limits for each environmental zone – focusing on reflected light and glare in particular.
- ILP Professional Lighting Guide 04: Guidance on Undertaking Environmental Lighting Impact Assessments (2013).
 - This guidance outlines good practice in lighting design and provides practical guidance on the production and assessment of lighting impacts within new developments. The guide covers guidance on undertaking lighting surveys, taking photographs and measurements at night and what to cover in a Lighting Assessment Report.

Ecological

Guidance on obtrusive light in relation to bats as issued by the Bat Conservation Trust (BCT) and Eurobats is listed below:

- Landscape and Urban Design for Bats and Biodiversity (2012);
 - This document provides guidance on designing habitats for bats and the insects they feed off. It provides information on foraging, roosting and commuting and landscape connectivity.
- Artificial Lighting and Wildlife Interim Guidance: Recommendations to Help Minimise the Impact of Artificial Lighting (2014);
 - This document provides an overview of impacts on invertebrates, birds and mammals and recommendations to take into consideration during surveying and planning. It also outlines key design considerations to protect wildlife from adverse impacts from artificial lighting.
- Bat Conservation Trust and ILP – Bats and Artificial Lighting in the UK (2018); and
 - Bats and Artificial Lighting in the UK (August, 2018) provides guidance on general principles of lighting to mitigate adverse effects on areas where bats are known to be present and / or commuting to feeding areas. The document sets out advice for bat workers and lighting professionals to ensure that both parties work together to achieve the most effective solution in delivering an appropriate artificial lighting solution whilst reducing the adverse effects on bats.
- EUROBATS Advisory Committee. Publication Series No. 8: Guidelines for Consideration of Bats in Lighting (2018).
 - In October 2018, new Eurobats guidance on bats and artificial lighting was published. This was drafted by a panel of experts including BCT and uses the currently available research and knowledge to look at solutions to avoid, mitigate and compensate the negative impacts of artificial light. It is broad international guidance that complements the nationally drafted BCT / ILP guidance.

Appendix C ILP Lighting Specifications

Table C.1 - Obtrusive Light Limitations for Exterior Lighting Installations – General Observers

Environmental Zone	Sky Glow ULR [Max%]	Light intrusion (into Windows) Ev [Lux]		Luminaire Intensity I [candelas]		Building Luminance pre-curfew
		Pre Curfew	Post Curfew	Pre Curfew	Post Curfew	Average L [cd/m ²]
E0	0	0	0	0	0	0
E1	0	2	0(1*)	2500	0	0
E2	2.5	5	1	7500	500	5
E3	5.0	10	2	10,000	1,000	10
E4	15	25	5	25,000	2,500	25
Definitions ULR = Upward Light Ratio of the Installation is the maximum permitted percentage of luminaire flux for that goes directly into the sky. Ev = Vertical Illuminance in Lux and is measured flat on the glazing at the centre of the window I = Light Intensity in Cd L = Luminance in Candelas per Square Metre Cd/m² Curfew = The time after which stricter requirements (for the control of obtrusive light) will apply; often a condition of use of lighting applied by the local planning authority. (1) Upward Light Ratio – Some lighting schemes will require the deliberate and careful use of upward light – e.g. ground recessed luminaires, ground mounted floodlights, festive lighting – to which these limits cannot apply. However, care should always be taken to minimise any upward waste light by the proper application of suitably directional luminaires and light controlling attachments. (2) Light Intrusion (into Windows) – These values are suggested maxima and need to take account of existing light intrusion at the point of measurement. In the case of road lighting on public highways where building facades are adjacent to the lit highway, these levels may not be obtainable. In such cases where a specific complaint has been received, the Highway Authority should endeavour to reduce the light intrusion into the window down to the post curfew value by fitting a shield, replacing the luminaire, or by varying the lighting level. (3) Luminaire Intensity – This applies to each source in the potentially obtrusive direction, outside of the area being lit. The figures given are for general guidance only and for some sports lighting applications with limited mounting heights, may be difficult to achieve. (4) Building Luminance – This should be limited to avoid over lighting and related to the general district brightness. In this reference building luminance is applicable to buildings directly illuminated as a night-time feature as against the illumination of a building caused by spill light from adjacent luminaires or luminaires fixed to the building but used to light an adjacent area.						

Reproduced from the ILP Publication: Guidance Notes for the Reduction of Obtrusive Light – ILP, GN01:201

Table C.2 – Obtrusive Light Limitation for Exterior Lighting Installations – Road Users

Road Classification (1)	Threshold Increment (TI)	Veiling Luminance (Lv)
No road lighting	15% based on adaptation luminance of 0.1cd/m ²	0.04
ME6/ME5	15% based on adaptation luminance of 1cd/m ²	0.25
ME4/ME3	15% based on adaptation luminance of 2cd/m	0.40
ME2/ME1	15% based on adaptation luminance of 5cd/m ²	0.84
TI = Threshold Increment is a measure of the loss of visibility caused by the disability glare from the obtrusive light installation Lv = Veiling Luminance is a measure of the adaptation luminance caused by the disability glare from the obtrusive light installation (1) = Road Classifications as given in BS EN 13201 – 2: 2003 Road lighting Performance requirements. Limits apply where users of transport systems are subject to a reduction in the ability to see essential information. Values given are for relevant positions and for viewing directions in path of travel. For a more detailed description and methods for determining, calculating and measuring the above parameters see CIE Publication 150:2003.		

Appendix D Representative Photographs

A - View from site looking along western site boundary (Lynmouth Road)



Description:

Visible light source present along the western site boundary primarily relate to internal lighting from residential properties on Lynmouth Road which backs onto the site. Some external security wall mounted security lighting is visible on the properties however this was not switched on at the time of the survey. Column mounted lighting is also present within the car park on site, adjacent to the western site boundary, however this was also not in use at the time of survey.

Further south along the western boundary (out of shot), Light Emitting Diode (LED) street lighting is also visible along Lynmouth Road and further car park lighting is provided in Lynmouth Court.

B - View from site looking north towards River Thames and Christchurch Bridge



Description:
The northern section of the site is in part illuminated by High Pressure Sodium (HPS) flood lighting present on an SSE building which lies outside the site boundary and intrudes into the site. ~4m tall Light Emitting Diode (LED) column mounted luminaries are present along the Thames Path which abuts the northern site boundary. Colored architectural lighting and rail mounted lighting present along the Christchurch bridge is also clearly visible from the site. Further north amenity lighting is visible on a residential property on Fry's Island.

Out of view, Christmas lighting is also visible to the north west on other buildings on Fry's Island.

C - View from northern section of site looking south towards SSE Office Buildings and Vastern Road



Description:
Wall mounted High Pressure Sodium (HPS) flood lighting present on SSE building (which lies out with the site) which intrudes into the boundaries of the site. Metal Halide (MH) flood lighting and fluorescent wall mounted amenity lighting is present on the main SSE office building in the southern section of the site. Spherical column mounted lighting is visible along the eastern site boundary within the development on Norman Place. Internal lighting is also visible from within the office buildings in this development. Some filtering of lighting and screening is provided by vegetation and fencing along the eastern site boundary.

D - View from site looking towards the eastern site boundary



Description:

Distant Low-Pressure Sodium (LPS) column mounted street lighting is visible to the east along the B3345. As noted in the photograph above, spherical column mounted lighting is also visible in the car park to the east of the site. Some filtering of lighting and screening is provided by vegetation and fencing to the east.

E - View from site looking towards the south eastern site boundary



Description:
From this part of the site, lighting is also visible from the car park at Reading Train Station as is column mounted Light Emitting Diode (LED) Lighting (~8m tall) along Vastern Road. Advertisement lighting is visible to the south from the Range store on the opposite side of Vastern Road.

Out of view, Metal Halide (MH) security lighting and fluorescent wall mounted amenity lighting is present on the eastern side of the SSE office building.

F - View the southern site boundary from Vastern Road



Description:

Limited lighting present along southern site boundary. Pavement and building illuminated by Light Emitting Diode (LED) column mounted lighting present along Vastern Road.

G - View of Vastern Road from the southern site boundary



Description:

Column mounted (~8m tall) Light Emitting Diode (LED) street lighting present along Vastern Road. Commercial lighting associated with signage on retail outlets on the opposite side of Vastern Road visible as is internal lighting from the stores. High Pressure Sodium (HPS) spherical column mounted lighting is present within this car park. Further south beyond this, internal lighting is visible from Thames Tower.

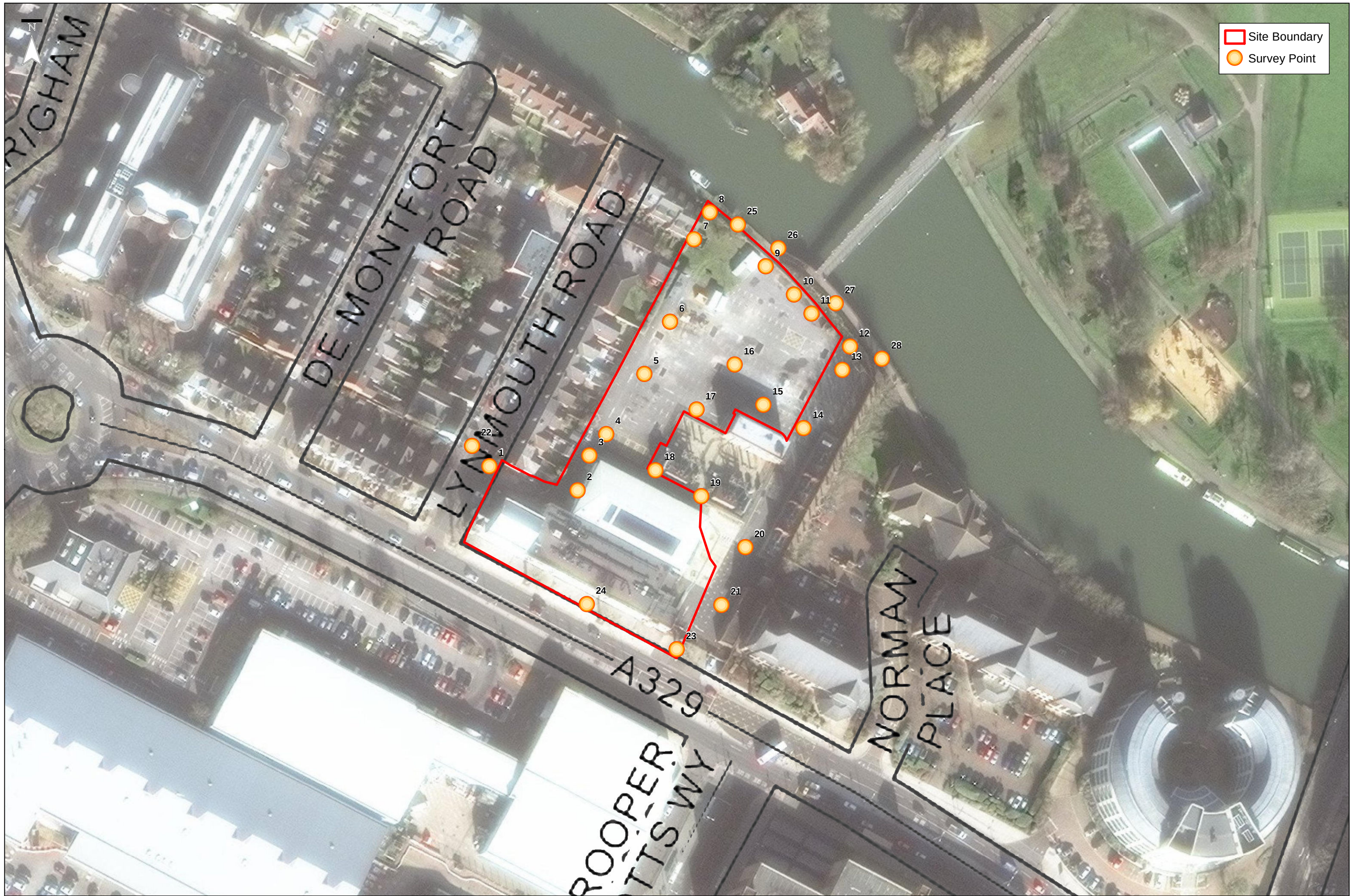
H - View of the site from Christchurch Bridge



Description:

HPS floodlighting and fluorescent amenity lighting on SSE buildings within and adjacent to the site are visible as in internal lighting from within the office building. Colored architectural lighting and rail mounted lighting visible on the Christchurch Bridge. To the south in the distance, a range of internal lighting is visible from office and tower buildings (including Thames Tower). Downward facing Light Emitting Diode (LED) column mounted lighting is visible along the Thames Path. LED column mounted street lighting along Vastern Road is visible as signage lighting on the Range store.

Appendix E Light Meter Reading Locations



 now part of 	Client Berkeley Homes (Oxford and Chiltern) Ltd	53-55 Vastern Road, Reading Light Meter Survey	0 50 100 m Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community. © Crown copyright and database rights 2016. Ordnance Survey 0100031673.	1:1,200 @ A3 Drawn: IB Figure 01	Date: 02/12/2019 Checked: SS Rev A
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Appendix F Illuminance Measurements

Location	Horizontal Illuminance Reading (Lux)	Vertical Illuminance Reading (Lux)			
		North	East	South	West
1	3.4	0.5	5.3	1.1	1.1
2	1.3	2.6	2.2	2.0	0.8
3	10.0	4.1	28.6	6.2	1.2
4	0.5	1.4	1.4	1.3	0.3
5	0.5	0.3	21.6	1.8	0.3
6	0.5	0.3	1.0	1.6	0.2
7	0.5	0.4	1.2	1.2	0.3
8	4.7	5.4	1.0	1.1	2.4
9	5.3	2.9	9.5	20.5	0.4
10	1.0	1.7	1.8	2.5	1.1
11	8.9	6.8	2.0	3.1	7.7
12	1.3	1.2	0.9	4.0	2.2
13	0.7	0.4	0.3	2.1	1.9
14	24.8	1.3	1.3	18.4	28.5
15	2.6	0.7	4.7	0.4	0.4
16	3.5	0.6	8.0	8.0	0.6
17	0.9	0.4	0.4	2.9	0.6
18	11.2	1.0	2.3	22.6	2.2
19	1.0	0.5	1.9	2.7	1.1
20	0.7	2.9	0.7	2.1	17.1
21	3.3	5.8	0.7	0.5	5.1
22	1.3	0.5	0.4	2.1	1.6
23	4.2	1.3	2.6	7.6	5.6
24	3.4	2.3	3.8	8.5	5.7
25	25.2	1.4	19.4	0.5	0.6

26	16.1	2.8	12.2	1.3	0.7
27	28.3	2.6	0.8	3.1	15.3
28	45.3	1.8	1.6	2.9	4.8