

Henry J Lyons

CORNELSCOURT
RESIDENTIAL DEVELOPMENT

November 2021

CORNEL LIVING LTD.

Dual Aspect Analysis Report

CORNELSCOURT



Client

CORNEL LIVING LTD.

Architecture Henry J Lyons	Urban Design & Landscape 	Planning Consultant Declan Brassil & Company Ltd	Project Management 	Cost Management Consultants 
Services & Sustainability 	Access Consultancy 	Fire Safety Engineers 	Daylighting Analysis 	Ecological Services
	Architectural Visualisations 	Structure & Civil Engineering 	Arborist Consultant 	

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INTRODUCTION



1.1 SUMMARY OF OVERALL PROPOSED DEVELOPMENT

One of the key concepts of the revised development is the creation of a clearly defined and improved hierarchy of public, semi-public, and private spaces which provide legibility, permeability, and connectivity and make it easy for residents and visitors to find their way around and enjoy the significant open spaces contained within the scheme.

An underground car parking entrance is provided at the access to the site to ensure that cars do not need to cross the landscaped podium and securing a pedestrian environment at the podium level. To service the needs of a build to rent development in terms of parcel deliveries, taxi drop-off, and collections and similar, a sensitively designed drop off area is situated at the entrance to the scheme adjacent to the basement access ramp. This is a high quality landscaped area. The approach to severely limiting vehicular access to the podium gives priority to walking, cycling, and public transport.

The scheme is exemplary in minimising the need for cars by providing attractive paths and cycle routes that facilitate safe access by users of all ages and degrees of personal mobility. The proposed layout has been developed to encourage permeability within the site, providing pedestrian and bicycle path routes from the Central Garden Space and Linear Park. These routes further enhance the permeability and connectivity within the scheme.

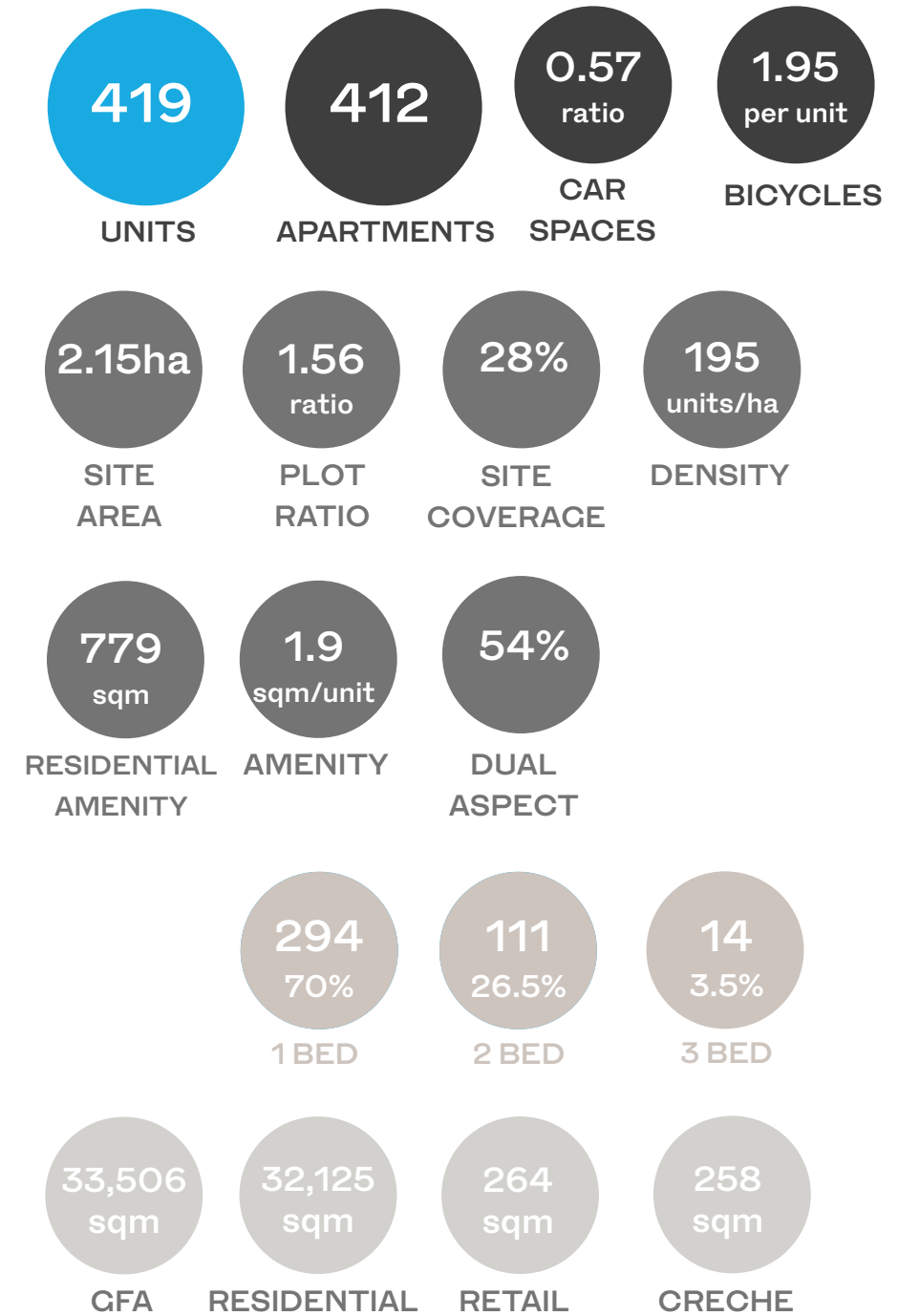
Each apartment building is designed with consideration that this shall be a Build to Rent Scheme. A broad mix of residential unit types including 1, 2 and 3 bedroom apartment units, is incorporated within each of the residential buildings. The individual residential cores connect from the ground directly to all private residential floors above to provide secure and efficient access. Apartments are then typically accessed via a central corridor spine in each building. Orientation is considered to maximise air circulation, sunlight, and daylight, as well as views. North facing units are kept to a minimum, and where they are found, an additional aspect is provided. Private balconies are provided with each apartment facing either east or West.

The scheme also includes two terraces of two storey houses. These houses are situated along the boundary to the Willow Park residential development. These houses benefit from dual aspect to the front and rear.

The proposed application includes all site landscaping works, green roofs, boundary treatments, PV panels at roof level, ESB Substations, lighting, servicing and utilities, signage, and associated and ancillary works, including site development works above and below ground.



CGI View - Block A Along N11 Corridor



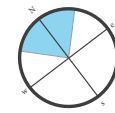
1.2 FOCUS OF DUAL ASPECT ANALYSIS REPORT

This report has been prepared by Henry J Lyons Architects under the appointment of the applicant Cornel Living Ltd. The statement forms part of a Strategic Housing Development Application to An Bord Pleanála for a project at Lands in Cornelscourt Village, Old Bray Road, Dublin 18.

This report should be read as part of a schedule of design statements as set out in Section 1.0 above.

The adjacent diagram identifies the dual aspect units within the residential blocks that form the overall scheme for Cornelscourt.

- This report includes Dual Aspect Analysis of units from all apartment blocks within the scheme. For a set of unit type and dual aspect drawings please refer to Appendices in the Architectural Design Report.



Keyplan - Residential Apartment Blocks

412

APARTMENTS

54%

DUAL ASPECT

295

1 BED

110

2 BED

7

3 BED

1.3 INTRODUCTION

This document presents five residential blocks which form an overall proposal for the provision of a high quality Build-to-Rent Scheme consisting of **412** residential apartments units arranged as one bed, two bed, three bed apartments together with three bed houses which are excluded from the analysis within this report. The development has been designed to comply with “Sustainable Urban Housing: Design Standards for New Apartments Decemeber 2020” and follows best international practices.

Dual Aspect Design Framework

A set of basic design principles incorporating the requirements of Sustainable Urban Housing: Design Standards for New Apartments, design standards established by ABP precedent and design solutions which have developed as a result of Henry J Lyons’ extensive experience, have been implemented across the proposed residential blocks to ensure a high degree of compliant dual aspect units are delivered resulting in a scheme of exemplary residential quality. These design parameters are as follows;

- Windows creating a dual aspect shall be a minimum of 1.2m wide x 2.4m high (2.88sq.m)
- Recessed facades less than 7.5m between opposing facades shall not have opposing windows
- Where facade setbacks are used to create a secondary aspect, the setback shall be a minimum of 3m back from the primary building line.
- Dual Aspect apartments should demonstrate improved quality of residential amenity above that of a single aspect apartment through ADF analysis accompanied with this report. A select number of units were analysed to exemplify this.
- Dual Aspect Approach shall be delivered through multiple unit typologies
- Apartments benefit from cross ventilation



Artist's Impression of Masterplan Layout - Site Area & Blocks Of Focus

1.4 DUAL ASPECT DESIGN FRAMEWORK

The proposed dual aspect apartments have been assessed on the following basis in the subsequent sections.

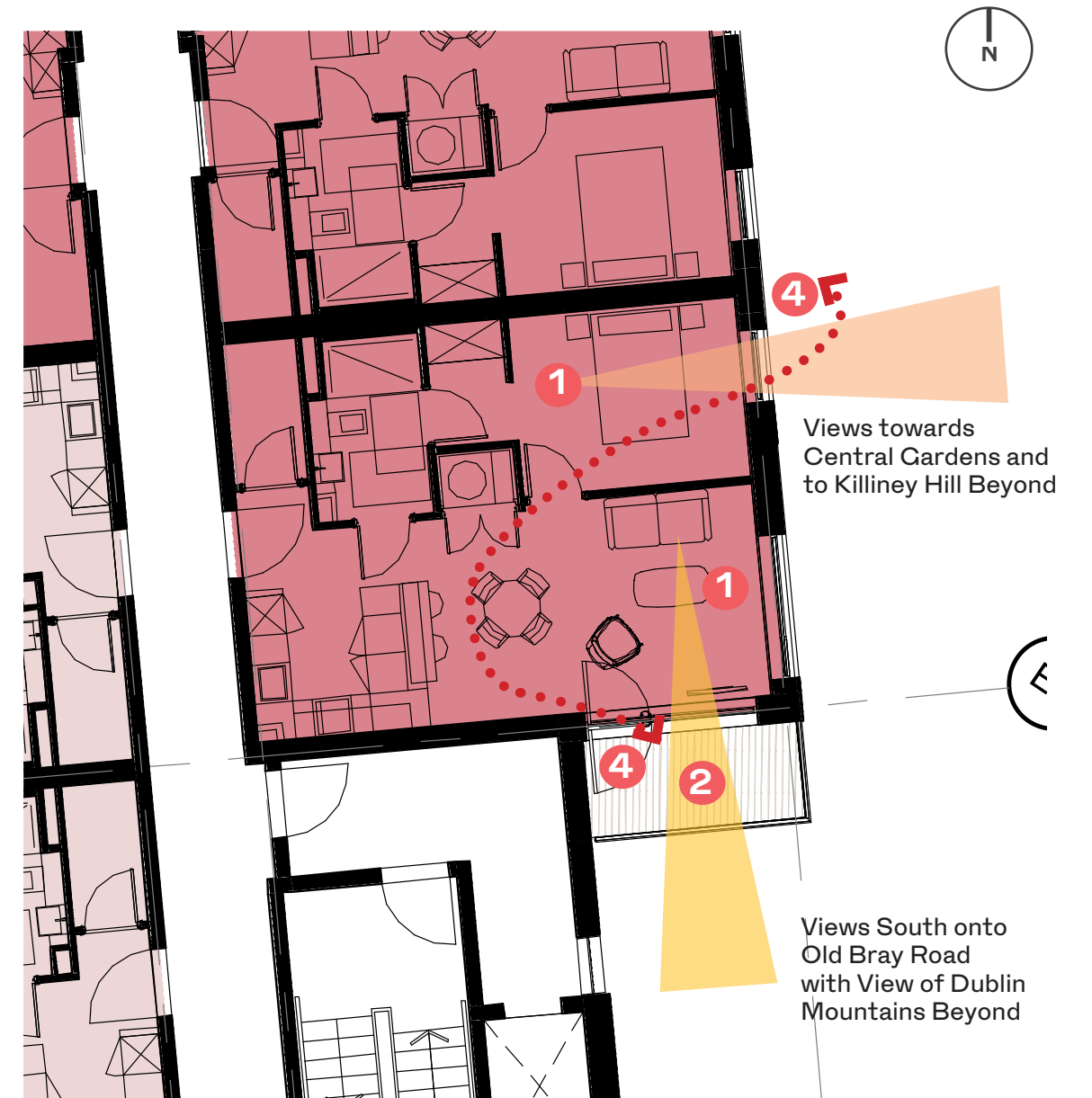
ASPECT & ORIENTATION

The aspects and orientations of each unit are identified according to the adjacent 16-wind compass rose. Each dual aspect unit benefits from at least two different aspects.

- 1 VIEW**
Nearby and sweeping views provided by the dual aspects of the apartments are identified. The dual aspect units achieve additional views that exceed the number of views achieved from a single aspect unit.
- 2 RETURN DEPTH**
The length of the return of the building facade that provides the apartment with an additional aspect.
- 3 WINDOW SIZE & AREA**
Window size and area is noted to identify the size of the glazing that provides additional light and ventilation above that of a single aspect apartment.
- 4 CROSS VENTILATION**
A note to indicate if the apartment benefits from cross ventilation.
- 5 OPPOSING WINDOWS**
The distance to an opposing window of another apartment if applicable.

Design Principle	Parameters Achieved
Unit Type	HJL-Type 1A (1Bed)
Aspect	East / South
Orientation (1) Aspect 1 (2) Aspect 2	(1) East (2) South
View	Central Garden, Old Bray Road
Return Depth	3.0m
Window Size + Area (1) Aspect 1 (2) Aspect 2	(1) 2.415m x 1.31m - 3.2 m ² (2) 2.415m x 3.06m - 7.4 m ² (2) 2.415m x 3.06m - 7.4 m ²
Enhanced ADF	N/A
Cross Ventilation	(Y)
Opposing windows	N/A

Table Illustrating the Parameters Achieved for Each Design Principle



Example Dual Aspect Unit Plan with Design Principles Identified

- (1) Aspect 1
- (2) Aspect 2



DUAL ASPECT ASSESSMENT



Dual Aspect Units

223
UNITS

**DUAL
ASPECT**

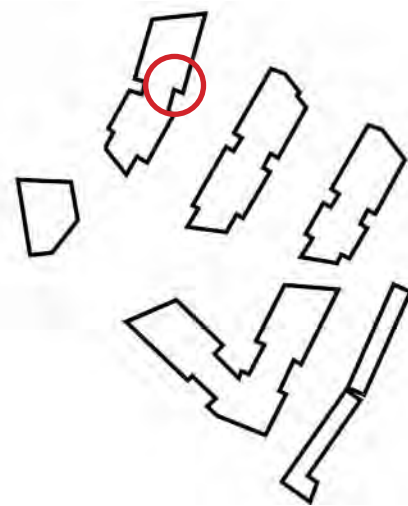


Plan - Typical Layout - Blocks A, B, C, D and E - Dual Aspect

Dual Aspect Unit Assessment

Design Principle	Parameters Achieved
Unit Type	HJL-Type 1A (1Bed)
Aspect	East South East / South South East
Orientation (1) Aspect 1 (2) Aspect 2	(1) East South East (2) South South East
View	Central Garden + Bray Head Great Lawn + Killiney Hill
Return Depth	6.065m
Window Size + Area* (1) Aspect 1 (2) Aspect 2	A. (1) 2.435m x 1.39m - 3.38m ² B. (1) 2.435m x 2.875m - 7.00m ² C. (2) 2.435m x 1.41m - 3.43m ²
Enhanced ADF	N/A
Cross Ventilation	(Y)
Opposing windows	N/A

* - Area of glazing increases by 9% at Ground Level



Plan - Site Keyplan



Views into the Great Lawn and towards Killiney Hill

View into Central Garden and towards Bray Head

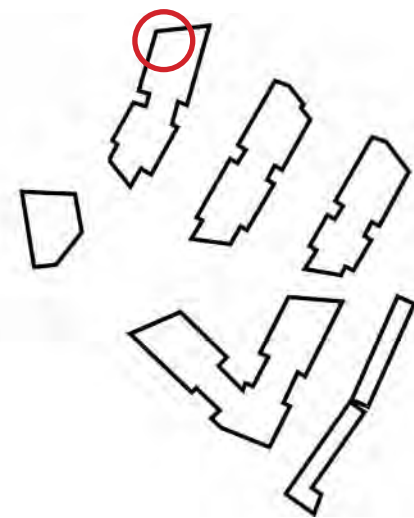
- (1) Aspect 1
- (2) Aspect 2



Dual Aspect Unit Assessment

Design Principle	Parameters Achieved
Unit Type	HJL-Type 2A (2Bed)
Aspect	West North West / North North East
Orientation (1) Aspect 1 (2) Aspect 2	(1) West North West (2) North North East
View	Dublin City Blackrock + Dublin Bay
Return Depth	N/A
Window Size + Area*(1) Aspect 1 (2) Aspect 2	A. (1) 2.435m x 1.39m - 3.38 _{m²} B. (1) 2.435m x 3.14m - 7.65 _{m²} C. (2) 2.435m x 3.07m - 7.48 _{m²} D. (2) 2.435m x 2.15m - 5.24 _{m²}
Enhanced ADF	N/A
Cross Ventilation	(Y)
Opposing windows	N/A

* - Area of glazing increases by 9% at Ground & LG levels



Plan - Site Keyplan



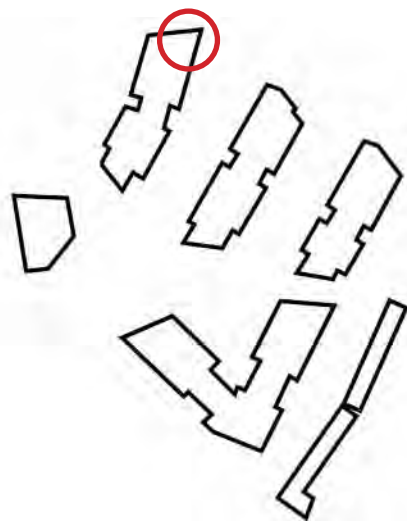
- (1) Aspect 1
- (2) Aspect 2



Dual Aspect Unit Assessment

Design Principle	Parameters Achieved
Unit Type	HJL-Type 2B (2Bed)
Aspect	East South East / North North East
Orientation (1) Aspect 1 (2) Aspect 2	(1) East South East (2) North North East
View	Great Lawn + Killiney Hill Blackrock + Dublin Bay
Return Depth	N/A
Window Size + Area* (1) Aspect 1 (2) Aspect 2	A. (1) 2.435m x 1.39m - 3.38 _m ² B. (1) 2.435m x 3.14m - 7.65 _m ² C. (1) 2.435m x 1.39m - 3.38 _m ² D. (2) 2.435m x 2.15m - 5.24 _m ² E. (2) 2.435m x 3.07m - 7.48 _m ²
Enhanced ADF	N/A
Cross Ventilation	(Y)
Opposing windows	N/A

* - Area of glazing increases by 9% at Ground & LG levels



Plan - Site Keyplan



- (1) Aspect 1
- (2) Aspect 2



Dual Aspect Unit Assessment

Design Principle	Parameters Achieved
Unit Type	HJL-Type 2D (2Bed)
Aspect	North West North / North
Orientation (1) Aspect 1 (2) Aspect 2	(1) North West North (2) North
View	Great Lawn+ Dublin City Central Garden + Dublin Mountains Central Garden + Bray Head
Return Depth	N/A
Window Size + Area* (1) Aspect 1 (2) Aspect 2	A. (1) 2.435m x 2.15m - 5.24m ² B. (1) 2.435m x 3.14m - 7.65m ² C. (1) 2.435m x 1.75m - 4.26m ² D. (2) 2.435m x 1.75m - 4.26m ² E. (3) 2.435m x 1.13m - 2.75m ²
Enhanced ADF	N/A
Cross Ventilation	(Y)
Opposing windows	N/A

* - Area of glazing increases by 9% at Ground & LG levels



Plan - Site Keyplan



Dual Aspect Unit Assessment

Design Principle	Parameters Achieved
Unit Type	HJL-Type 2F (Studio)
Aspect	South South West / West North West
Orientation (1) Aspect 1 (2) Aspect 2	(1) South South West (2) West North West
View	Central Garden + Dublin Mountains Resident's Lawn + Dublin City
Return Depth	10.80m
Window Size + Area* (1) Aspect 1 (2) Aspect 2	A. (1) 2.435m x 3.14m - 7.65m ² B. (1) 2.435m x 1.75m - 4.26m ² C. (1) 2.435m x 1.75m - 4.26m ² D. (2) 2.435m x 2.15m - 5.24m ²
Enhanced ADF	N/A
Cross Ventilation	(Y)
Opposing windows	N/A

* - Area of glazing increases by 9% at Ground & LG levels



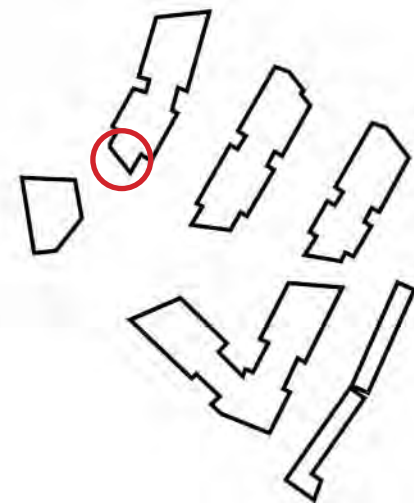
Plan - Site Keyplan



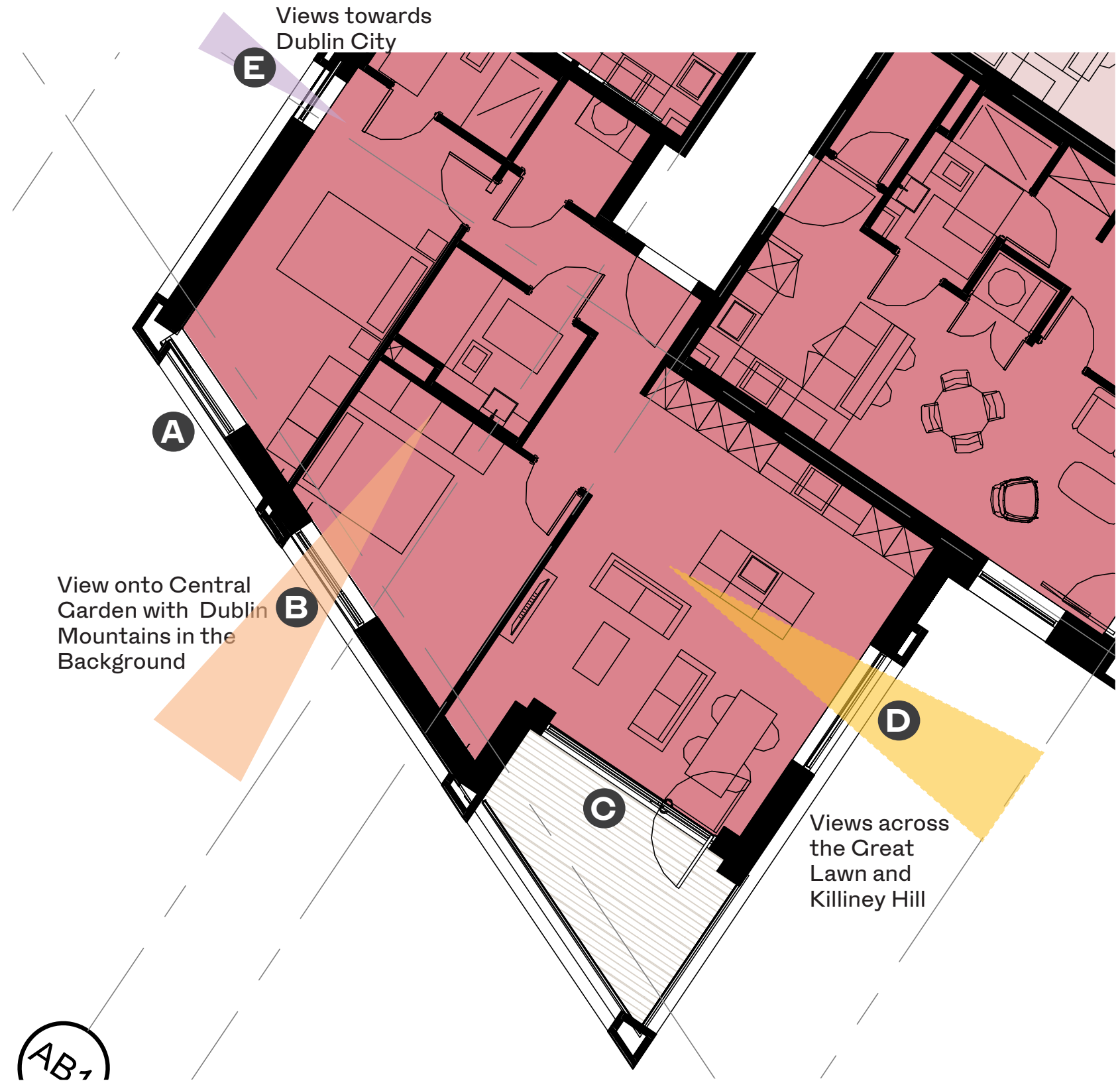
Dual Aspect Unit Assessment

Design Principle	Parameters Achieved
Unit Type	HJL-Type 2E (2Bed)
Aspect	South South East / East South East
Orientation (1) Aspect 1 (2) Aspect 2	(1) South South East (2) East South East
View	Central Garden + Dublin Mountains Great Lawn + Killiney Hill Dublin City
Return Depth	N/A
Window Size + Area* (1) Aspect 1 (2) Aspect 2	A. (1) 2.435m x 1.75m - 4.26m ² B. (1) 2.435m x 1.75m - 4.26m ² C. (1) 2.435m x 3.14m - 7.65m ² D. (2) 2.435m x 2.15m - 5.24m ² E. (3) 2.435m x 1.13m - 2.75m ²
Enhanced ADF	N/A
Cross Ventilation	(Y)
Opposing windows	N/A

* - Area of glazing increases by 9% at Ground & LG levels



Plan - Site Keyplan



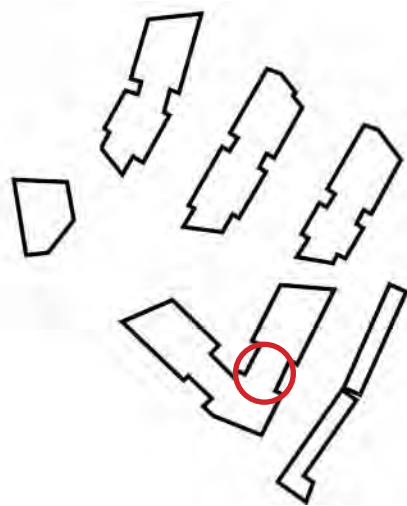
- (1) Aspect 1
- (2) Aspect 2
- (3) Aspect 3



Dual Aspect Unit Assessment

Design Principle	Parameters Achieved
Unit Type	HJL-Type 1C (1Bed)
Aspect	East South East / West North West
Orientation (1) Aspect 1 (2) Aspect 2	(1) East South East (2) West North West
View	Killiney Hill Central Garden
Return Depth	14.25mWW
Window Size + Area* (1) Aspect 1 (2) Aspect 2	A. (1) 2.435m x 3.14m - 7.65m ² B. (2) 2.435m x 2.30m - 5.60m ²
Enhanced ADF	N/A
Cross Ventilation	(Y)
Opposing windows	N/A

* - Area of glazing increases by 9% at Ground & LG Level



Plan - Site Keyplan

View onto Central Garden



Views towards Killiney Hill

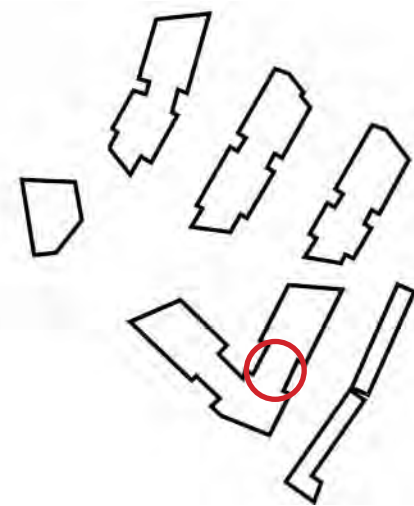
- (1) Aspect 1
- (2) Aspect 2



Dual Aspect Unit Assessment

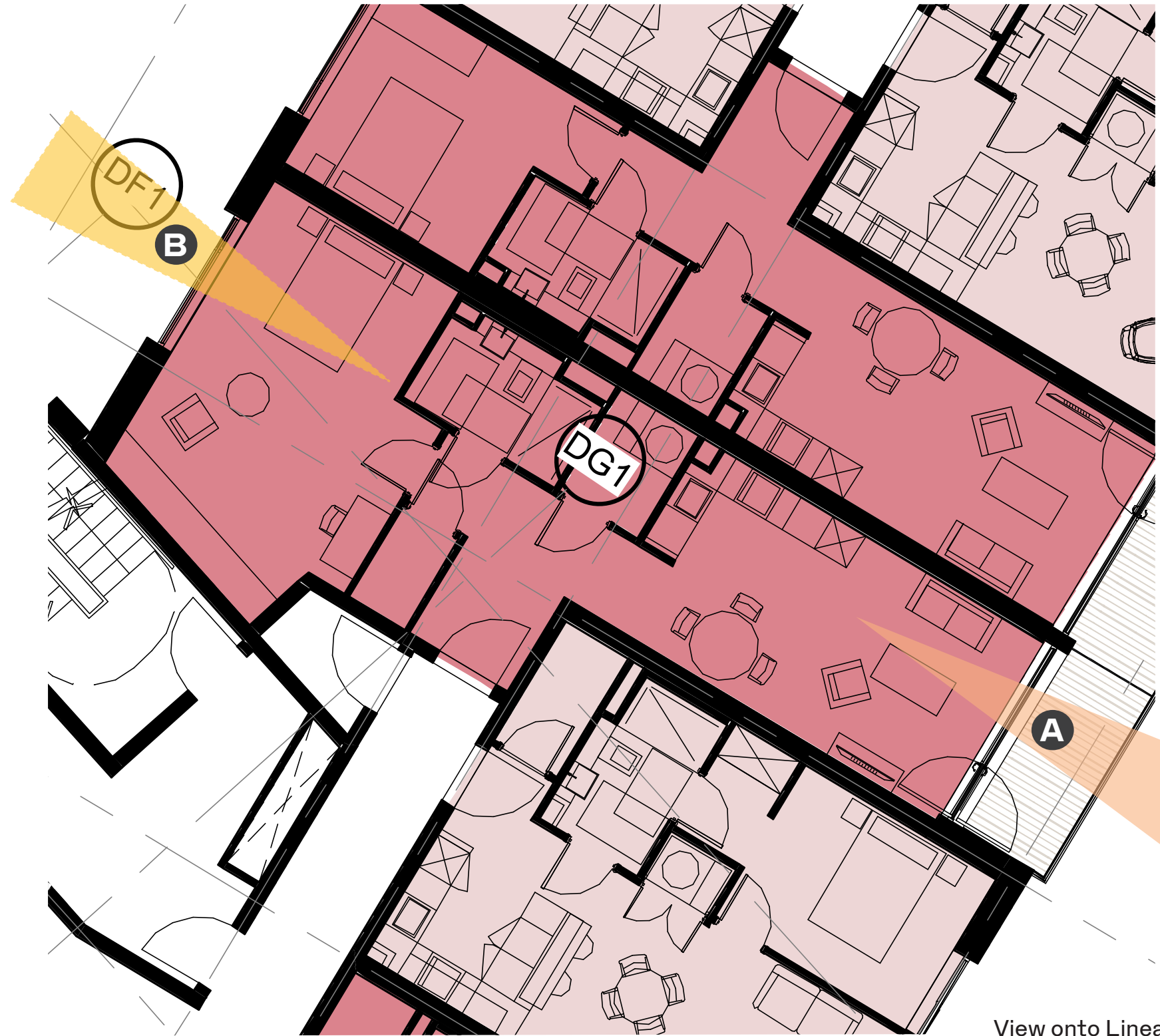
Design Principle	Parameters Achieved
Unit Type	HJL-Type 1D (1Bed)
Aspect	East South East / West North West
Orientation (1) Aspect 1 (2) Aspect 2	(1) East South East (2) West North West
View	Linear Park Central Garden
Return Depth	14.25m
Window Size + Area* (1) Aspect 1 (2) Aspect 2	A. (1) 2.435m x 3.14m - 7.65m ² B. (2) 2.435m x 2.30m - 5.60m ²
Enhanced ADF	N/A
Cross Ventilation	(Y)
Opposing windows	N/A

* - Area of glazing increases by 9% at Ground & LG Level



Plan - Site Keyplan

View onto
Central
Garden



View onto Linear
Park

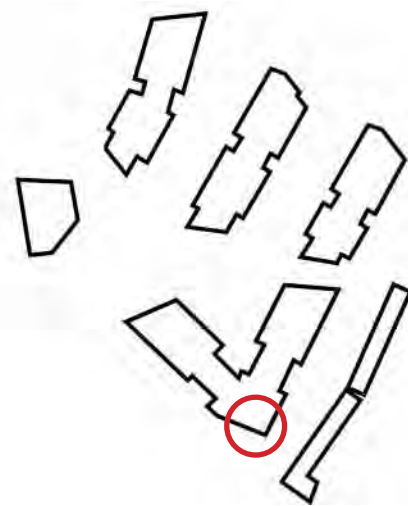
- (1) Aspect 1
- (2) Aspect 2



Dual Aspect Unit Assessment

Design Principle	Parameters Achieved
Unit Type	HJL-Type 2E (2Bed)
Aspect	East South East / South South West
Orientation (1) Aspect 1 (2) Aspect 2	(1) East South East (2) South South West
View	Killiney Hill Dublin Mountains
Return Depth	N/A
Window Size + Area* (1) Aspect 1 (2) Aspect 2	A. (1) 2.435m x 2.30m - 5.60m ² B. (2) 2.435m x 1.39m - 3.38m ² C. (2) 2.435m x 1.39m - 3.38m ² D. (2) 2.435m x 1.39m - 3.38m ² E. (2) 2.435m x 3.14m - 7.65m ²
Enhanced ADF	N/A
Cross Ventilation	(Y)
Opposing windows	N/A

* - Area of glazing increases by 9% at Ground Level



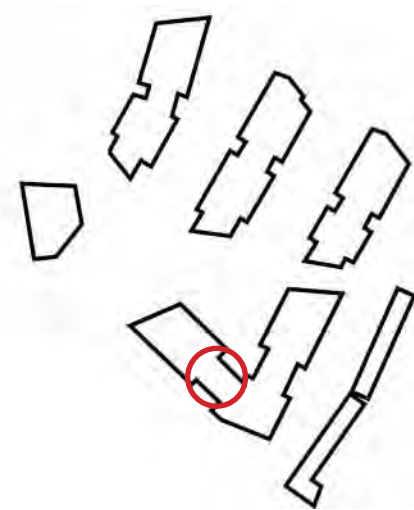
Plan - Site Keyplan



Dual Aspect Unit Assessment

Design Principle	Parameters Achieved
Unit Type	HJL-Type 2H (2Bed)
Aspect	South South West / North North East
Orientation (1) Aspect 1 (2) Aspect 2	(1) South South West (2) North North East
View	Dublin Mountains Central Garden
Return Depth	N/A
Window Size + Area* (1) Aspect 1 (2) Aspect 2	A. (1) 2.435m x 3.40m - 8.28m ² B. (1) 2.435m x 1.39m - 3.38m ² C. (2) 2.435m x 1.39m - 3.38m ²
Cross Ventilation	(Y)
Opposing windows	N/A

* - Area of glazing increases by 9% at Ground Level



Plan - Site Keyplan



View towards
Dublin Mountains

View onto
Central
Garden

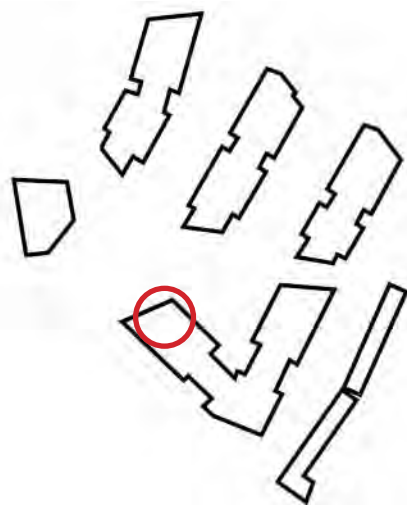
- (1) Aspect 1
- (2) Aspect 2



Dual Aspect Unit Assessment

Design Principle	Parameters Achieved
Unit Type	HJL-Type 2E (2Bed)
Aspect	North North East / North North West
Orientation (1) Aspect 1 (2) Aspect 2	(1) North North East (2) North North West
View	Central Garden Entrance Plaza
Return Depth	N/A
Window Size + Area* (1) Aspect 1 (2) Aspect 2	A. (1) 2.435m x 3.14m - 7.65m ² B. (1) 2.435m x 1.39m - 3.38m ² C. (1) 2.435m x 1.39m - 3.38m ² D. (2) 2.435m x 2.30m - 5.60m ² E. (2) 2.435m x 3.14m - 7.65m ²
Enhanced ADF	N/A
Cross Ventilation	(Y)
Opposing windows	N/A

* - Area of glazing increases by 9% at Ground Level



Plan - Site Keyplan



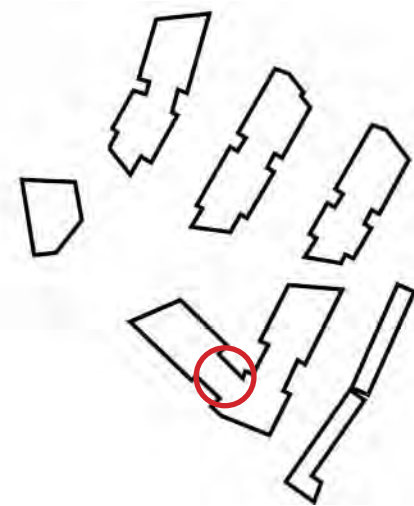
- (1) Aspect 1
- (2) Aspect 2



Dual Aspect Unit Assessment

Design Principle	Parameters Achieved
Unit Type	HJL-Type 2K (2Bed)
Aspect	South South West / North North East
Orientation (1) Aspect 1 (2) Aspect 2	(1) South South West (2) North North East
View	Dublin Mountains Dun Laoghaire + Dublin Bay
Return Depth	4.70m
Window Size + Area* (1) Aspect 1 (2) Aspect 2	A. (1) 2.435m x 3.375m - 8.22m ² B. (1) 2.435m x 7.28m - 17.73m ² C. (2) 2.435m x 1.39m - 3.38m ² D. (2) 2.435m x 1.39m - 3.38m ² E. (3) 2.435m x 2.15m - 5.24m ²
Enhanced ADF	N/A
Cross Ventilation	(Y)
Opposing windows	N/A

* - Area of glazing increases by 9% at Ground Level



Plan - Site Keyplan



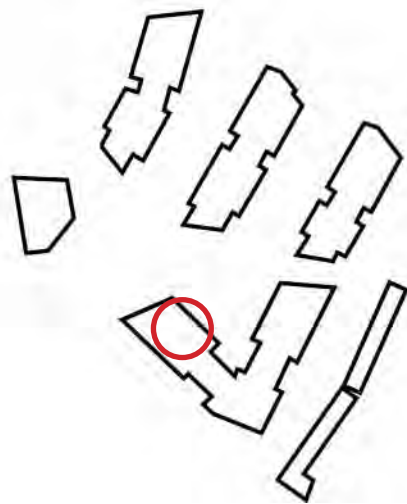
- (1) Aspect 1
- (2) Aspect 2
- (3) Aspect 3



Dual Aspect Unit Assessment

Design Principle	Parameters Achieved
Unit Type	HJL-Type 3A (3Bed)
Aspect	South South West / North North East
Orientation (1) Aspect 1 (2) Aspect 2	(1) South South West (2) North North East
View	Dublin Mountains Central Garden Dublin City
Return Depth	N/A
Window Size + Area* (1) Aspect 1 (2) Aspect 2	A. (1) 2.435m x 7.28m - 17.73m ² B. (2) 2.435m x 3.14m - 7.65m ² C. (2) 2.435m x 1.39m - 3.38 m ² D. (2) 2.435m x 1.39m - 3.38m ² E. (3) 2.435m x 1.925m - 4.69m ²
Enhanced ADF	N/A
Cross Ventilation	(Y)
Opposing windows	N/A

* - Area of glazing increases by 9% at Ground Levels



Plan - Site Keyplan



View towards
Dublin Mountains

View onto Central
Garden

Views toward
Dublin City
Beyond

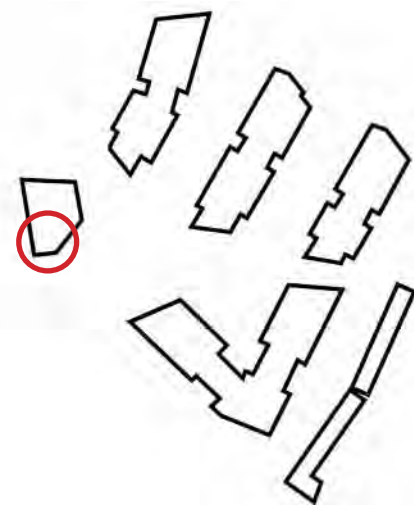
- (1) Aspect 1
- (2) Aspect 2
- (3) Aspect 3



Dual Aspect Unit Assessment

Design Principle	Parameters Achieved
Unit Type	HJL-Type 1C (1Bed)
Aspect	West South West / South South East
Orientation (1) Aspect 1 (2) Aspect 2	(1) West South West (2) South South East
View	Old Bray Road
Return Depth	4.718m
Window Size + Area* (1) Aspect 1 (2) Aspect 2	A. (1) 2.435m x 1.39m - 3.38m ² B. (1) 2.435m x 2.875m - 7.00m ² C. (2) 2.435m x 1.250m - 2.50 m ²
Enhanced ADF	N/A
Cross Ventilation	(Y)
Opposing windows	13.2m

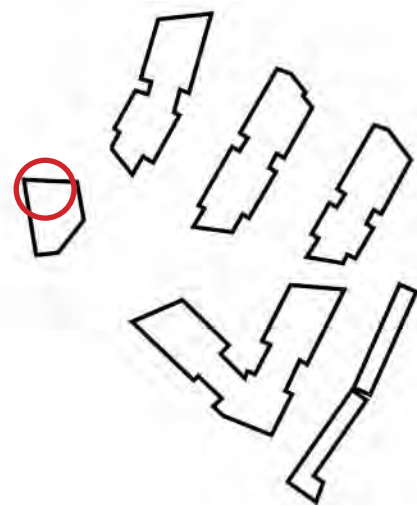
* - Area of glazing increases by 9% at Ground Levels



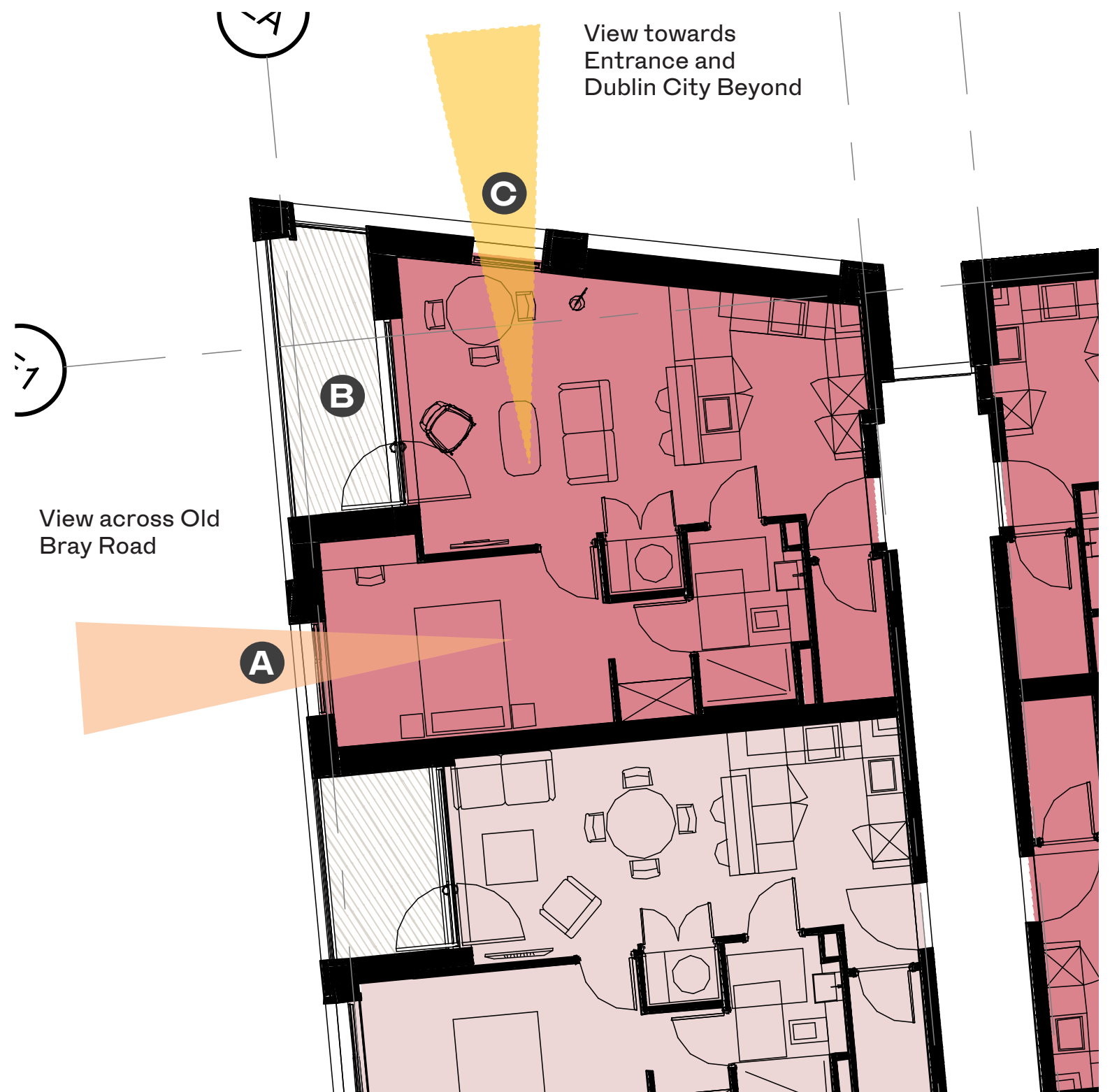
Dual Aspect Unit Assessment

Design Principle	Parameters Achieved
Unit Type	HJL-Type 1F (1Bed)
Aspect	West South West / North North West
Orientation (1) Aspect 1 (2) Aspect 2	(1) West South West (2) North North West
View	Old Bray Road Entrance + Dublin City Beyond
Return Depth	N/A
Window Size + Area* (1) Aspect 1 (2) Aspect 2	A. (1) 2.435m x 1.39m - 3.38m ² B. (1) 2.435m x 2.875m - 7.00m ² C. (2) 2.435m x 1.025m - 2.50 m ² C. (2) 2.435m x 1.250m - 2.50 m ²
Enhanced ADF	N/A
Cross Ventilation	(Y)
Opposing windows	N/A

* - Area of glazing increases by 9% at Ground Level



Plan - Site Keyplan



- (1) Aspect 1
- (2) Aspect 2



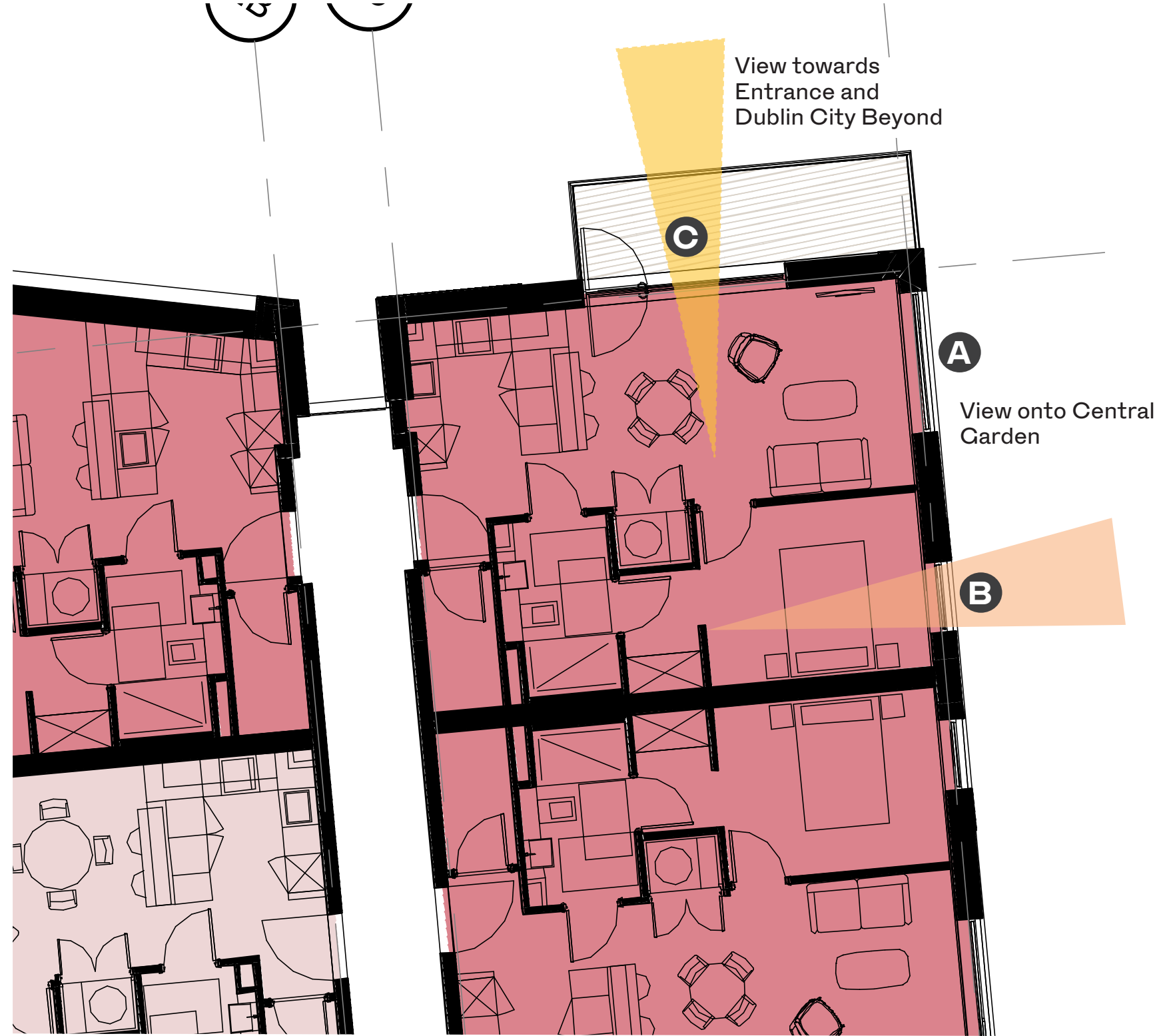
Dual Aspect Unit Assessment

Design Principle	Parameters Achieved
Unit Type	HJL-Type 1C (1Bed)
Aspect	East North East / North North West
Orientation (1) Aspect 1 (2) Aspect 2	(1) East North East (2) North North West
View	Central Garden Entrance + Dublin City
Return Depth	N/A
Window Size + Area*W (1) Aspect 1 (2) Aspect 2	A. (1) 2.435m x 2.15m - 5.24m ² B. (1) 2.435m x 1.025m - 2.50m ² C. (2) 2.435m x 3.14m - 7.65 m ²
Enhanced ADF	N/A
Cross Ventilation	(Y)
Opposing windows	13.2m

* - Area of glazing increases by 9% at Ground Level



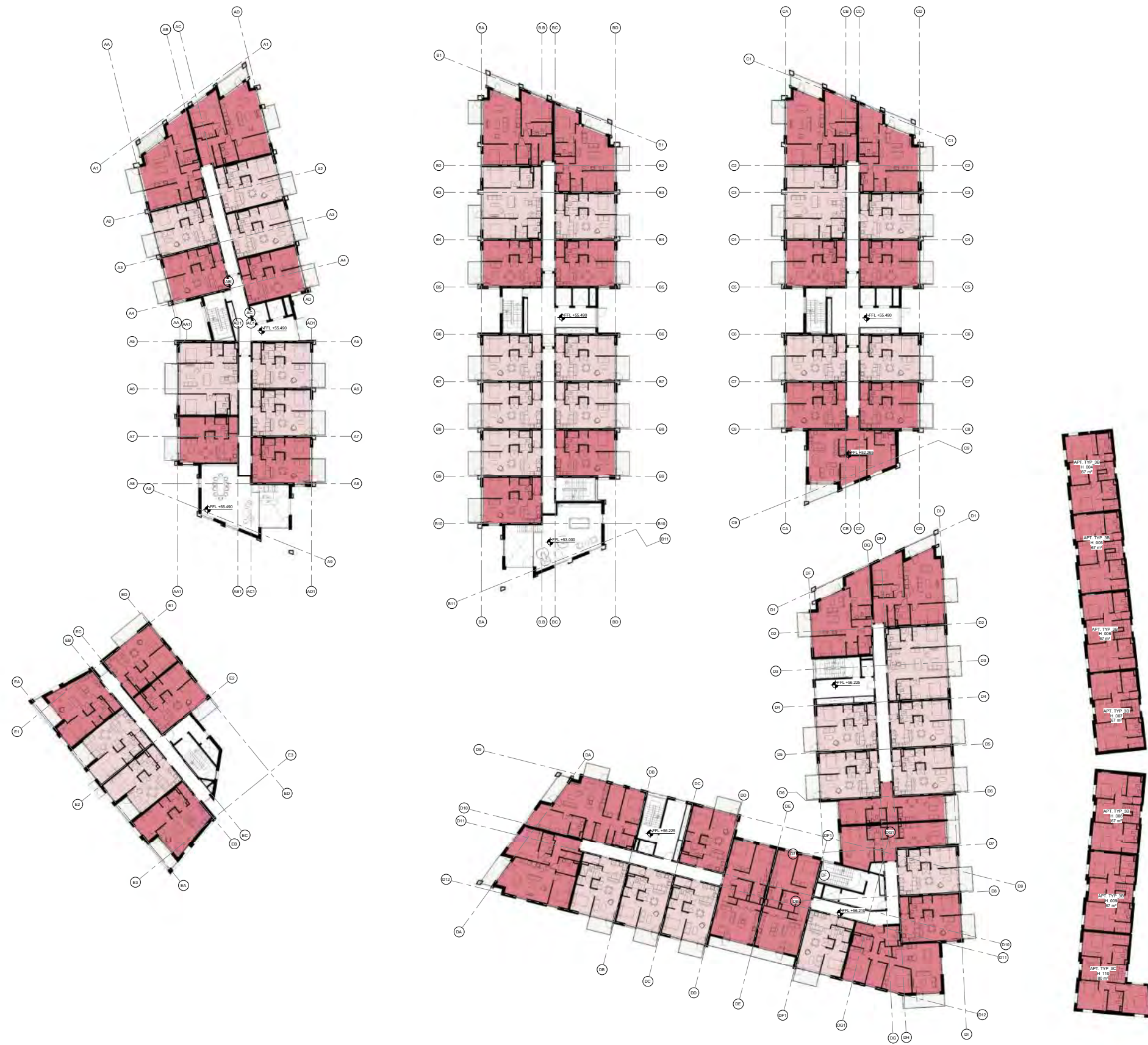
Plan - Site Keyplan



(1) Aspect 1
(2) Aspect 2



General Arrangements - Dual Aspect Layout - First Floor Plan



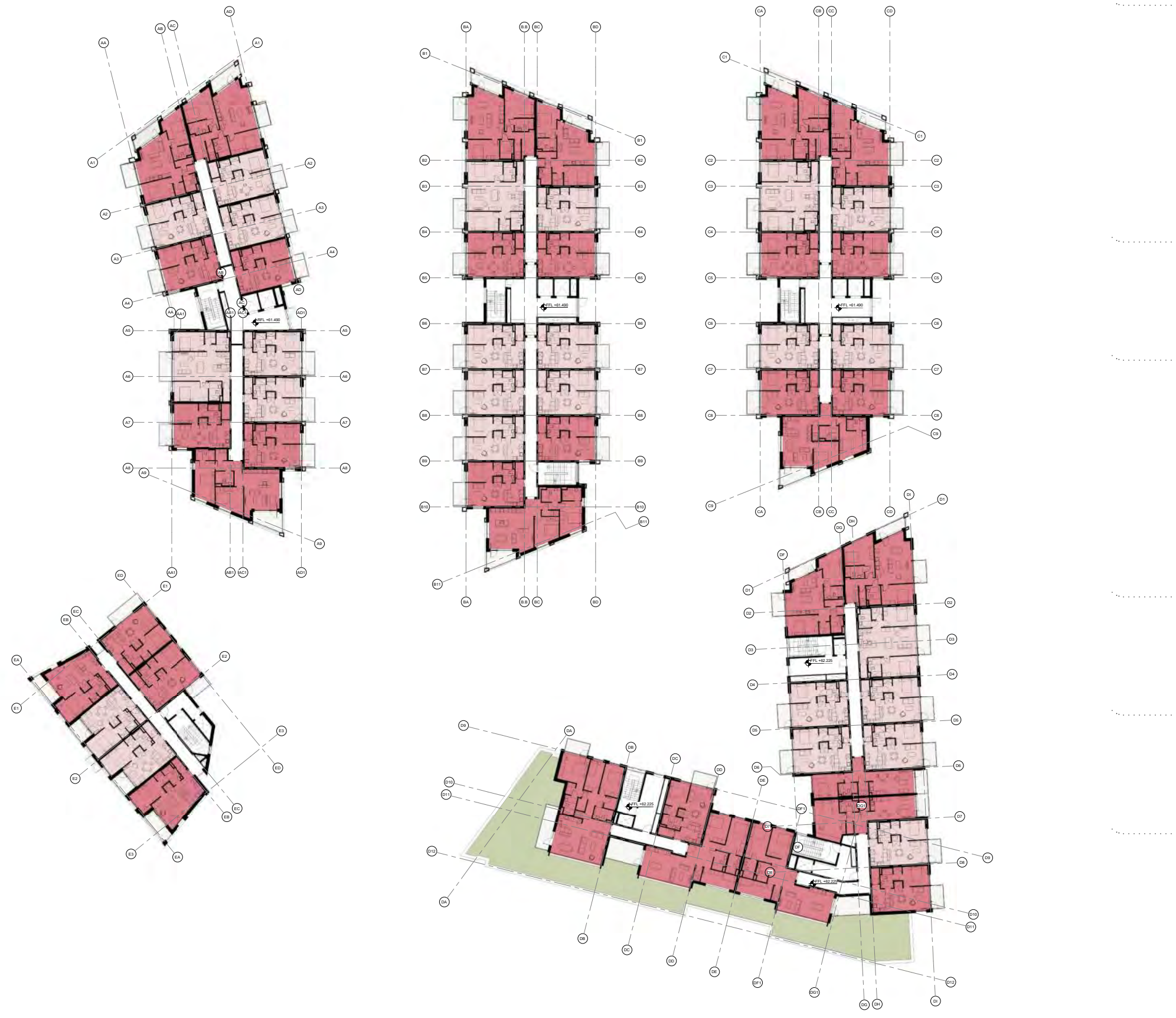
- Dual Aspect
- Single Aspect

General Arrangements - Dual Aspect Layout - Second Floor Plan



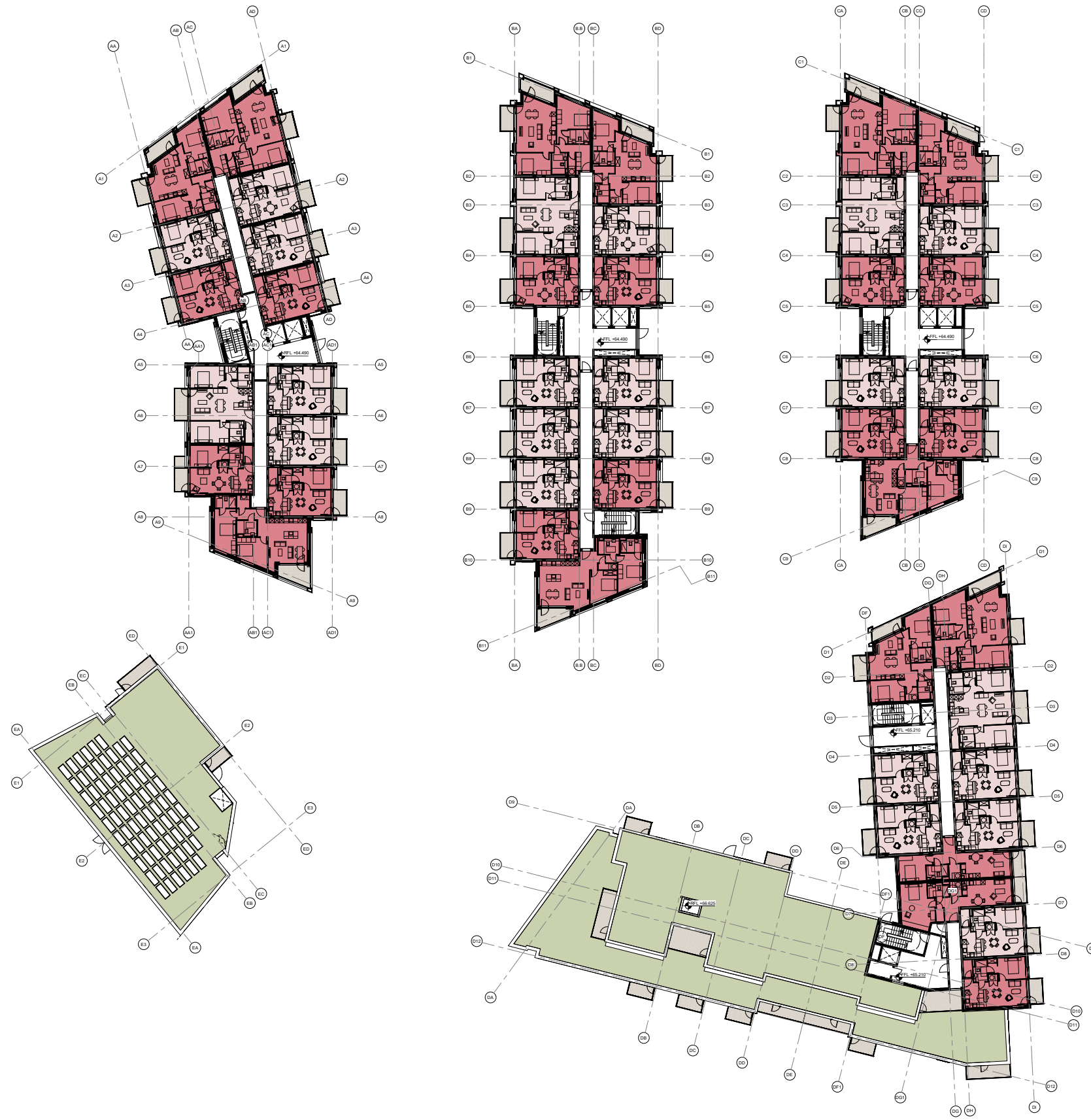
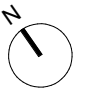
- Dual Aspect
- Single Aspect

General Arrangements - Dual Aspect Layout - Third Floor Plan



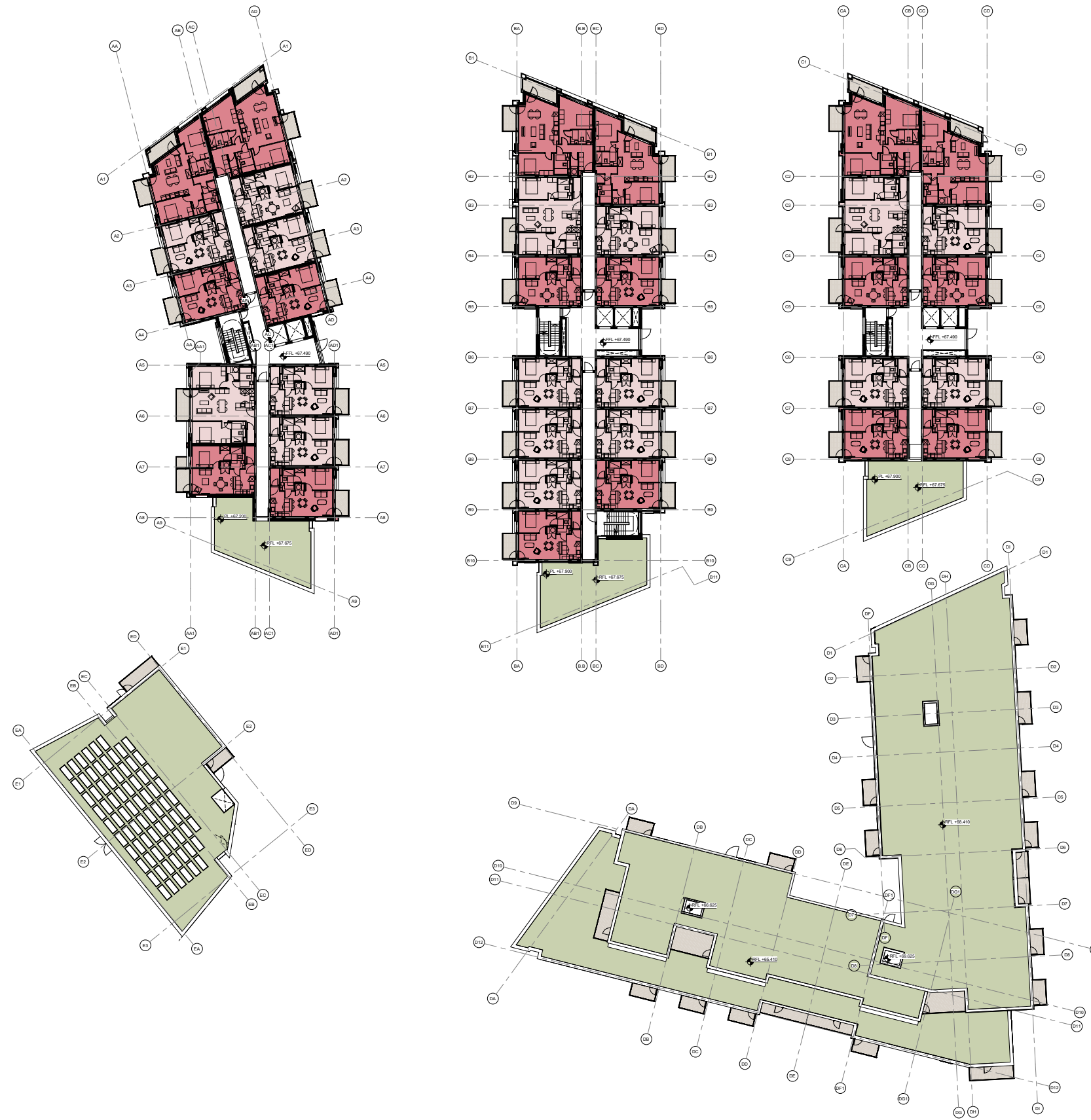
Dual Aspect
 Single Aspect

General Arrangements - Dual Aspect Layout - Fourth Floor Plan



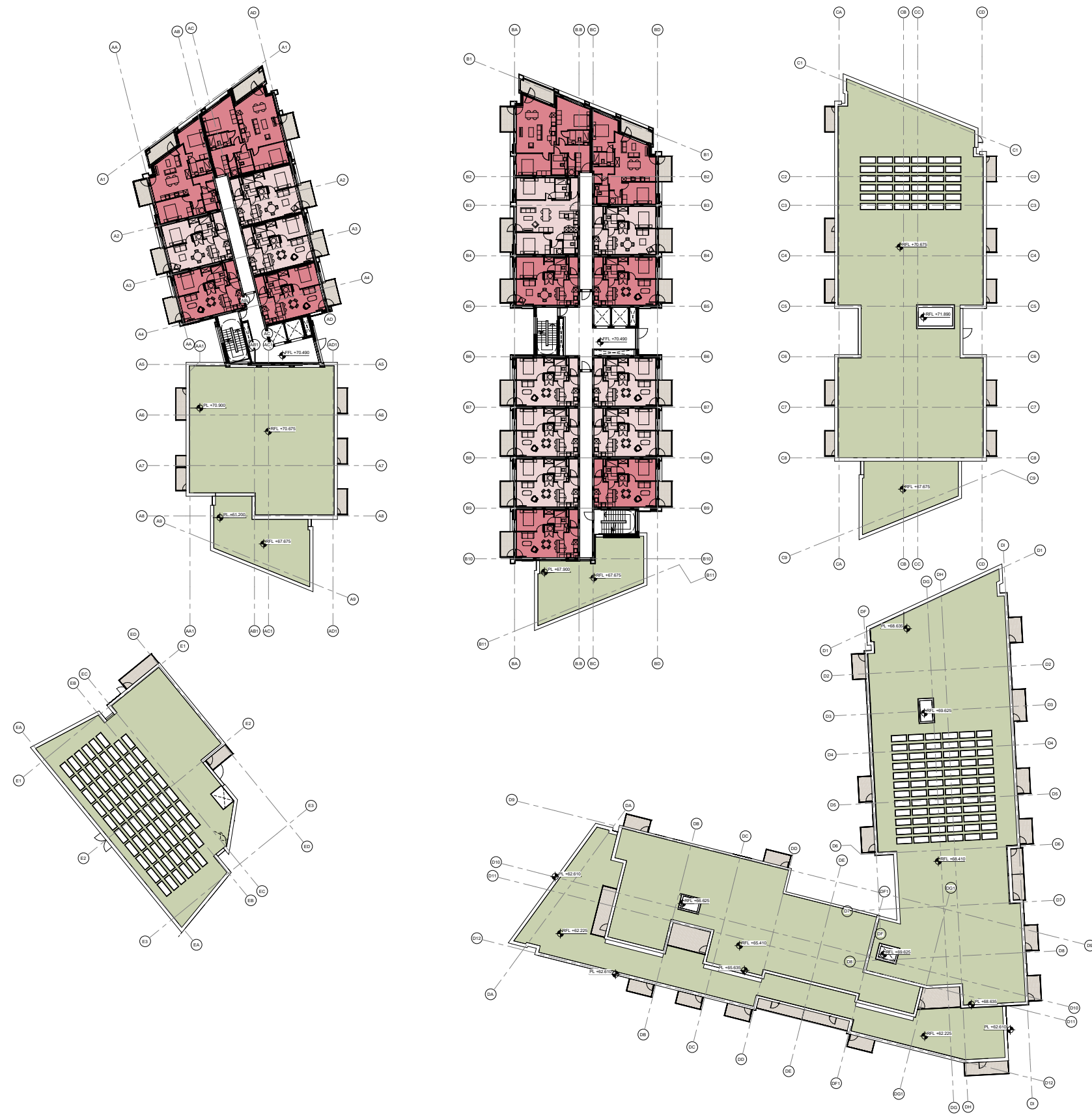
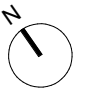
- Dual Aspect
- Single Aspect

General Arrangements - Dual Aspect Layout - Fifth Floor Plan



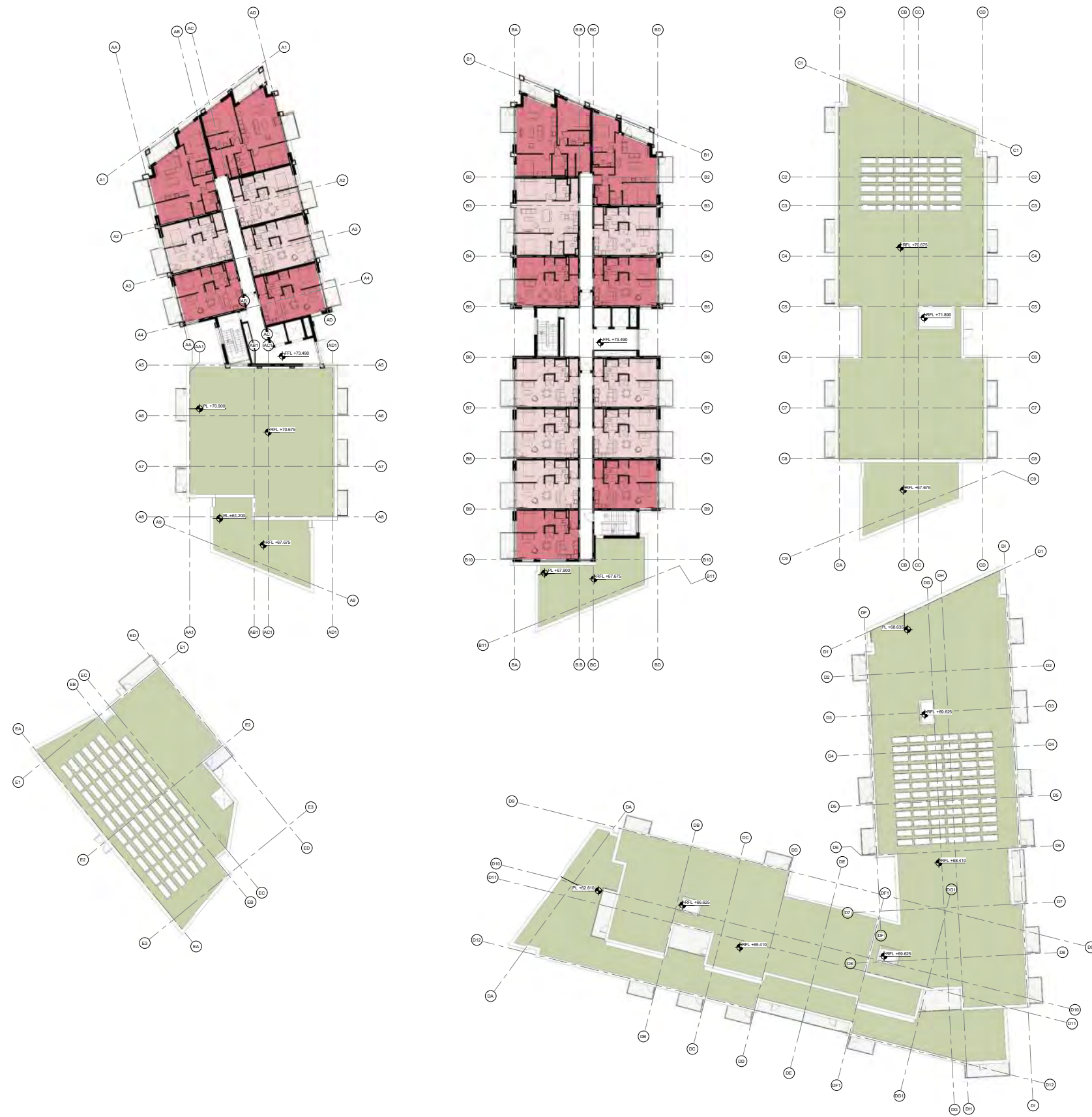
- Dual Aspect
- Single Aspect

General Arrangements - Dual Aspect Layout - Sixth Floor Plan



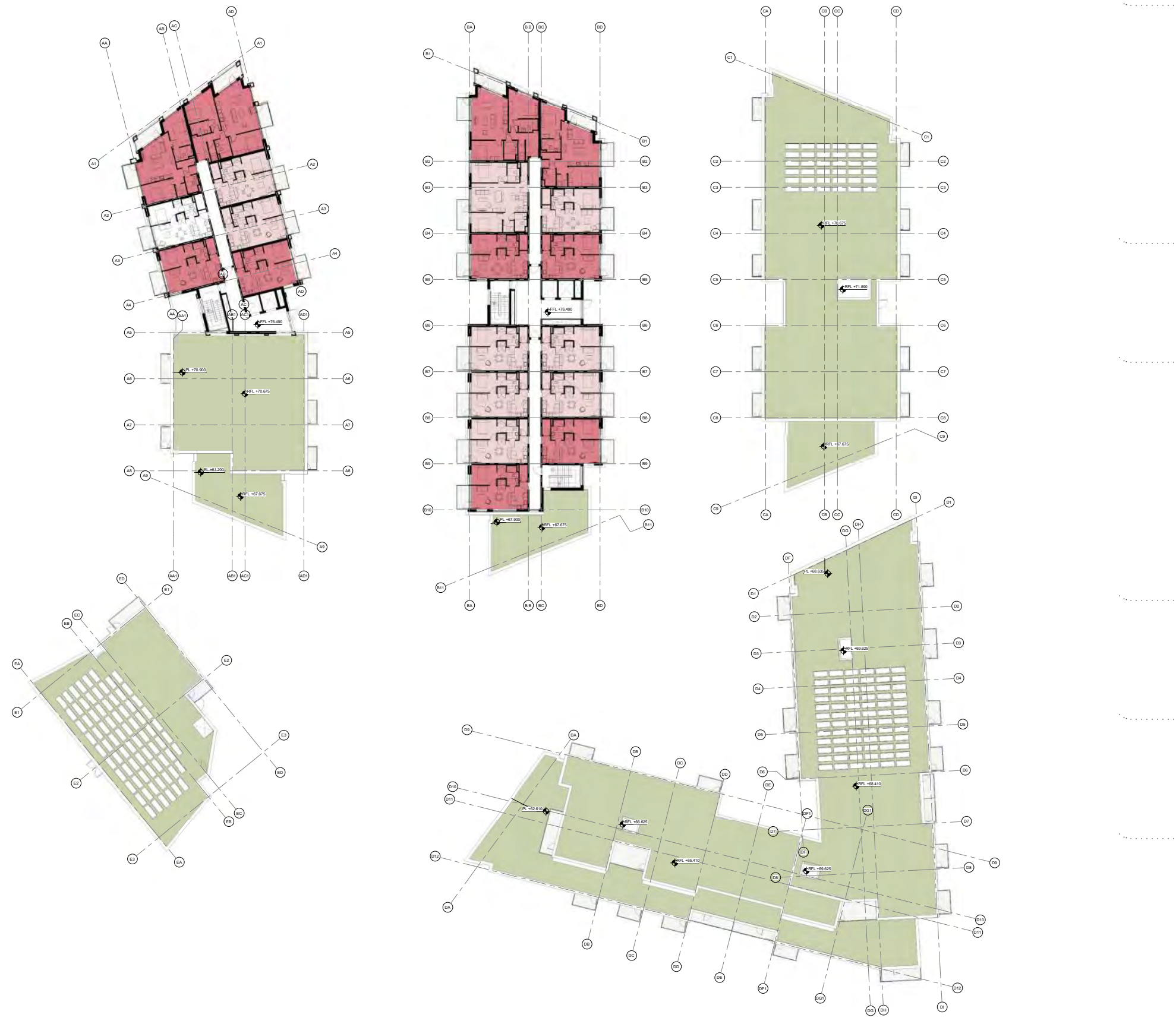
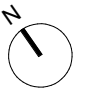
- Dual Aspect
- Single Aspect

General Arrangements - Dual Aspect Layout - Seventh Floor Plan



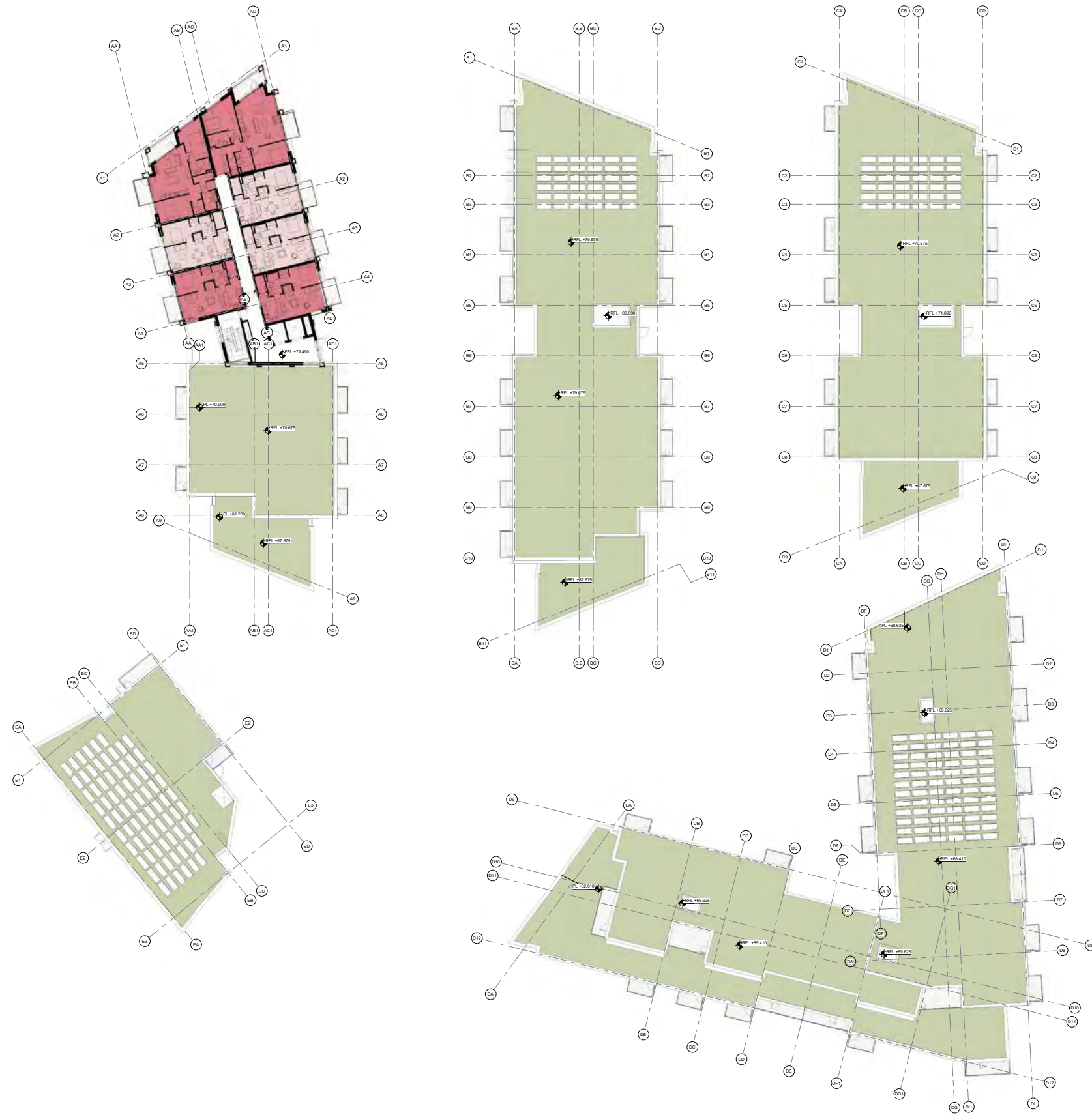
- Dual Aspect
- Single Aspect

General Arrangements - Dual Aspect Layout - Eight Floor Plan



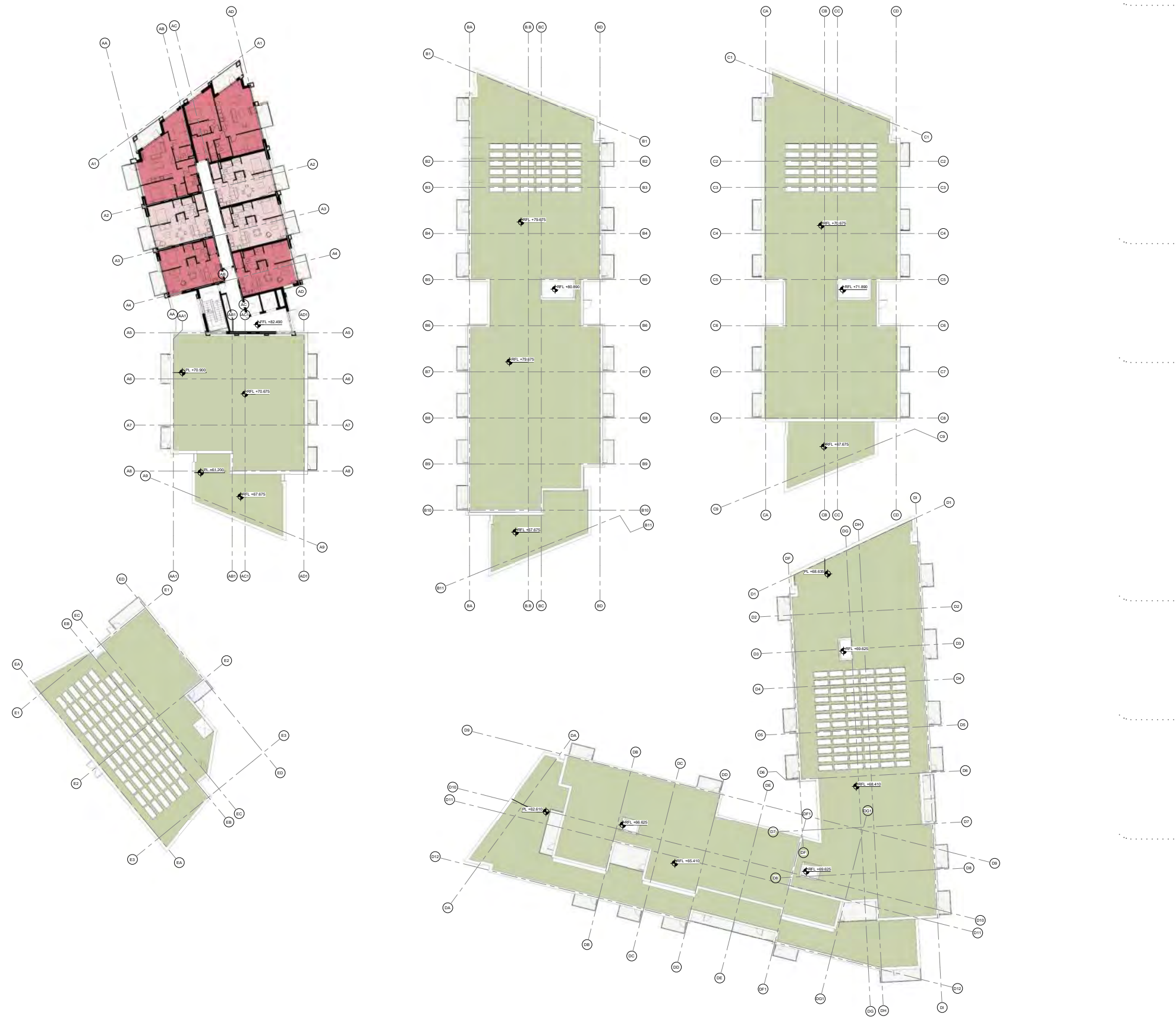
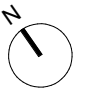
- Dual Aspect
- Single Aspect

General Arrangements - Dual Aspect Layout - Ninth Floor Plan



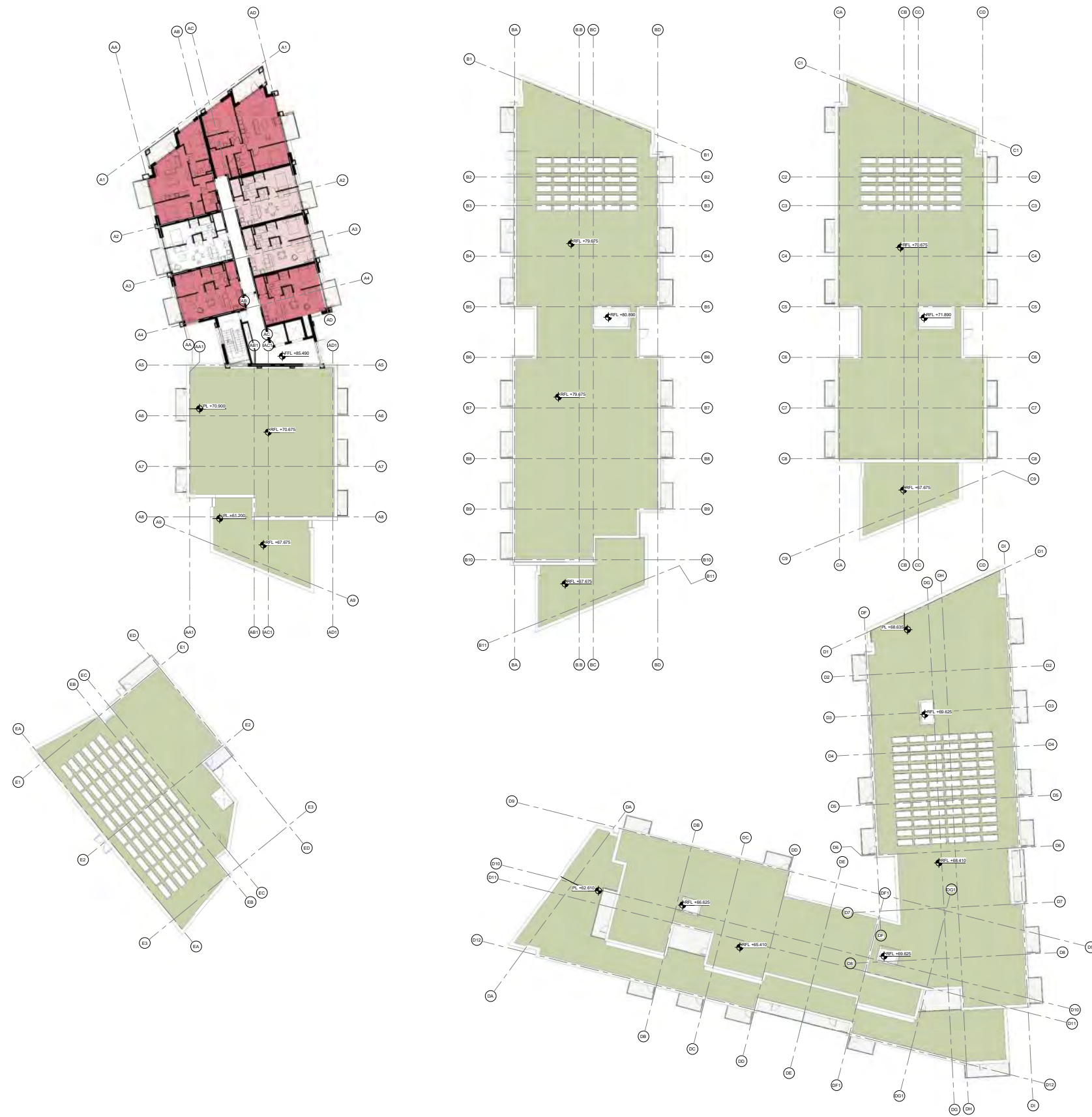
- Dual Aspect
- Single Aspect

General Arrangements - Dual Aspect Layout - Tenth Floor Plan



- Dual Aspect
- Single Aspect

General Arrangements - Dual Aspect Layout - Eleventh Floor Plan



- Dual Aspect
- Single Aspect

General Arrangements - Dual Aspect Layout - Lower Ground Floor Plan

